

Friday, January 15, 2010

**LOS ALAMOS**

**NATIONAL LABORATORY**

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

Please analyse the enclosed samples  
according to the schedule indicated:

SHIP DATE: 1/15/2010

TURNAROUND/REPORT DUE: 2/14/2010

TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:



PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
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SW-846.6020	1	1	RE15-10-7160	R	1/12/2010	
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	1	1	RE15-10-7161	R	1/12/2010	
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	1	1	RE15-10-7162	R	1/12/2010	
--	---	---	--------------	---	-----------	--

	1	1	RE15-10-7163	R	1/12/2010	
--	---	---	--------------	---	-----------	--

	1	1	RE15-10-7172	R	1/12/2010	
--	---	---	--------------	---	-----------	--

	1	1	RE15-10-7173	R	1/12/2010	
--	---	---	--------------	---	-----------	--

	1	1	RE15-10-7174	R	1/12/2010	
--	---	---	--------------	---	-----------	--

	1	1	RE15-10-7175	R	1/12/2010	
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	1	1	RE15-10-7218	R	1/12/2010	
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These Samples are on:

LANL Request Number: 10-1288

Per Agreement Number: 126310011

Project Cost Code: MR3A05529E00

Friday, January 15, 2010

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REQUEST NUMBER: 10-1288

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
SW-846:6020	1	1	RE15-10-7223	R	1/12/2010	
			RE15-10-7229	W	1/12/2010	
			RE15-10-7160	R	1/12/2010	
			RE15-10-7161	R	1/12/2010	
			RE15-10-7162	R	1/12/2010	
			RE15-10-7163	R	1/12/2010	
			RE15-10-7172	R	1/12/2010	
			RE15-10-7173	R	1/12/2010	
			RE15-10-7174	R	1/12/2010	
			RE15-10-7175	R	1/12/2010	
SW-846:6850	1	1	RE15-10-7218	R	1/12/2010	
			RE15-10-7229	R	1/12/2010	
			RE15-10-7229	W	1/12/2010	
			RE15-10-7229	W	1/12/2010	
			RE15-10-7160	R	1/12/2010	
			RE15-10-7161	R	1/12/2010	
			RE15-10-7162	R	1/12/2010	
			RE15-10-7163	R	1/12/2010	
			RE15-10-7172	R	1/12/2010	
			RE15-10-7173	R	1/12/2010	
SW-846:7470A	1	1	RE15-10-7174	R	1/12/2010	
			RE15-10-7175	R	1/12/2010	
			RE15-10-7218	R	1/12/2010	
			RE15-10-7229	R	1/12/2010	
			RE15-10-7160	R	1/12/2010	
			RE15-10-7161	R	1/12/2010	
			RE15-10-7162	R	1/12/2010	
			RE15-10-7163	R	1/12/2010	
			RE15-10-7172	R	1/12/2010	
			RE15-10-7173	R	1/12/2010	
SW-846:7471A	1	1	RE15-10-7174	R	1/12/2010	
			RE15-10-7175	R	1/12/2010	
			RE15-10-7218	R	1/12/2010	
			RE15-10-7223	R	1/12/2010	
			RE15-10-7160	R	1/12/2010	
			RE15-10-7161	R	1/12/2010	
			RE15-10-7162	R	1/12/2010	
			RE15-10-7163	R	1/12/2010	
			RE15-10-7172	R	1/12/2010	
			RE15-10-7173	R	1/12/2010	
SW-846:9012A	1	1	RE15-10-7174	R	1/12/2010	
			RE15-10-7175	R	1/12/2010	
			RE15-10-7218	R	1/12/2010	
			RE15-10-7223	R	1/12/2010	
			RE15-10-7160	R	1/12/2010	
			RE15-10-7161	R	1/12/2010	
			RE15-10-7162	R	1/12/2010	
			RE15-10-7163	R	1/12/2010	
			RE15-10-7172	R	1/12/2010	
			RE15-10-7173	R	1/12/2010	

Friday, January 15, 2010

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REQUEST NUMBER: 10-1288

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
SW-846:9012A						
		1	RE15-10-7172	R	1/12/2010	
		1	RE15-10-7173	R	1/12/2010	
		1	RE15-10-7174	R	1/12/2010	
		1	RE15-10-7175	R	1/12/2010	
		1	RE15-10-7218	R	1/12/2010	
		1	RE15-10-7223	R	1/12/2010	
		1	RE15-10-7229	W	1/12/2010	

Final Page of REQUEST NUMBER 10-1288

Friday, January 15, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1288

**LOS ALAMOS**

REQUEST NUMBER: 10-1288

**NATIONAL LABORATORY**

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/14/2010

General Engineering Laboratories, Inc.,  
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

**LAB REQUEST COMMENTS:**

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-7163	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7162	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7161	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7160	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7174	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7173	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7175	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7172	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7218	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7223	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7229	1	POLY	METALS+U-GEL	Nitric Acid	W
RE15-10-7229	1	POLY	SW-846:6850	Ice	W
RE15-10-7229	1	POLY	TCN	Sodium Hydroxide	W

**Relinquished By:****Date****Time****Received By:****Date****Time**

*[Signature]* 1/15/10 1400

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

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

Printed Name

Signature



## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7160

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/12/2010		MEDIA:		OBT3	
TIME COLLECTED (HH:MM)		1258		SUB-MEDIA:		TUFF 1	
PRS ID:	15-014(h)	OK		SAMPLE TECH CODE:		HA	
LOCATION ID:	15-610501	↓		FIELD QC TYPE:		NA	
LOCATION TYPE:	GENERIC	↓		FIELD PREP:		NA	
TOP DEPTH:	0	0.0		SAMPLE USAGE:		INV	
BOTTOM DEPTH:	0	0.5		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	SED		EXCAVATED: YES <input checked="" type="radio"/> NO <input type="radio"/> NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES <input checked="" type="radio"/> NO <input type="radio"/> NA			
BOREHOLE: YES <input checked="" type="radio"/> NO <input type="radio"/> NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Yes	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Yes	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Yes	
1		Met+U+CLO4+C N	1 GAL POLY Liter to 12/16/09	Ice	Yes	
1		8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Yes	
1	↓	H3	500 ML POLY	Ice	Yes	

SAMPLE DESC: moist dark brown silty sand, some clay, roots, and small rocks

FTB RE15-10-7235

SAMPLE COMMENTS:

NA

LOCATION DESC:

14h-2, drainage

FIELD SCREENING/MEASUREMENT RESULTS:

HE neg

Alpha ≤ 49 dpm  
Beta/Gamma ≤ 2150 dpmPID  $\frac{\text{Ambient}}{\text{Reading}} \frac{0.0}{0.0}$  ppm

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY (Printed Name) JOW MARIN (Signature) Jow Marin	Date/Time 1/13/10 8:13	RECEIVED BY (Printed Name) Jow Marin (Signature) Jow Marin	Date/Time 1/13/10 8:13
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7161

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/12/2010		MEDIA:		OBT3	
TIME COLLECTED (HH:MM)		1308		SUB-MEDIA:		TUFF 1	
PRS ID:	15-014(h)	OK		SAMPLE TECH CODE:		HA	
LOCATION ID:	15-610501	↓		FIELD QC TYPE:		NA	
LOCATION TYPE:	GENERIC	↓		FIELD PREP:		NA	
TOP DEPTH:	0	R30-12-10 0.5 1.0		SAMPLE USAGE:		INV	
BOTTOM DEPTH:	0	2.2		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	SED		EXCAVATED: YES/NO/NA		NA	
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA		NA	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA		NA	

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Yes	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Yes	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Yes	
1		Met+U+CLO4+C N	1 GAL POLY LITER RC 12/16/09	Ice	Yes	
1		8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Yes	
1		H3	500 ML POLY	Ice	Yes	

SAMPLE DESC: redish brown silty sand, some clay and white tuff fragments

FD: RE15-10-7223

SAMPLE COMMENTS:

NA

LOCATION DESC: 14h-2, drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha ≤ 38 dpm

Beta/Gamma ≤ 2340 dpm

PID  $\frac{\text{Ambient Reading}}{\text{D.D.}}$  ppm

COLLECTED BY (PRINT)

R. Saunders

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY (Printed Name) JON MARIN (Signature) Jon R. Marin	Date/Time 1/13/10 813	RECEIVED BY (Printed Name) Jay Wells (Signature) Jay Wells	Date/Time 1/13/10 813
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7162

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/12/2010		MEDIA:		OBT3	
TIME COLLECTED (HH:MM)		1334		SUB-MEDIA:		TUFF 1	
PRS ID: 15-014(h)		OK		SAMPLE TECH CODE:		HA	
LOCATION ID: 15-610502		↓		FIELD QC TYPE:		NA	
LOCATION TYPE: GENERIC		↓		FIELD PREP:		NA	
TOP DEPTH: 0		0.0		SAMPLE USAGE:		INV	
BOTTOM DEPTH: 0		0.5		SCREEN/PORT DESC:		NA	
FIELD MATRIX: R		SED		EXCAVATED: YES/NO/NA		NA	
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA		NA	
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA		NA	

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Yes	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Yes	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Yes	
1		Met+U+CLO4+C N	1 GAL POLY Liter 1/11/10	Ice	Yes	
1		8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Yes	
1	✓	H3	500 ML POLY	Ice	Yes	

SAMPLE DESC: Brown silty clay and white tuff fragments

SAMPLE COMMENTS: hit tuff at 0.5"

LOCATION DESC: 14h-3, drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha ≤ 44 dpm  
Beta/Gamma ≤ 2280 dpm

PID Ambient Reading 0.0 ppm

HE Neg

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) JON MARIN	1/13/10	(Printed Name) [Signature]	1/13/10
(Signature) [Signature]	8:14	(Signature) [Signature]	8:14
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7163

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/12/2010		MEDIA: QBT3		OK	
TIME COLLECTED(HH:MM)		1345		SUB-MEDIA: TUFF 1		↓	
PRS ID: 15-014(h)		OK		SAMPLE TECH CODE: HA		OK	
LOCATION ID: 15-610502		↓		FIELD QC TYPE: NA		↓	
LOCATION TYPE: GENERIC		↓		FIELD PREP: NA		↓	
TOP DEPTH: 0		1.0		SAMPLE USAGE: INV		↓	
BOTTOM DEPTH: 0		2.5		SCREEN/PORT DESC: NA			
FIELD MATRIX: R		OK		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA		WATER FLOWING: YES/NO/NA			
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA			

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Yes	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Yes	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Yes	
1		Met+U+CLO4+C N	1 GAL POLY Liter RC 12/16/09	Ice	Yes	
1		8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Yes	
1	↓	H3	500 ML POLY	Ice	Yes	

SAMPLE DESC: pinkish grey tuff, minor clay

SAMPLE COMMENTS:

NA

LOCATION DESC: 14h-3 drainage

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha ≤ 11 dpm  
Beta/Gamma ≤ 2730 dpm

PID Ambient Reading 0.0 ppm

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT) TL McFarland

RELINQUISHED BY (Printed Name) JON MARIN (Signature) Jon R. Marin	Date/Time 1/13/10 8:13	RECEIVED BY (Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	Date/Time 1/13/10 8:13
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7172

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/12/2010		MEDIA:	QBT3	ALLH	
TIME COLLECTED (HH:MM)		1424		SUB-MEDIA:	TUFF 1	NA	
PRS ID:	15-014(h)	OK		SAMPLE TECH CODE:	HA	OK	
LOCATION ID:	15-610507	↓		FIELD QC TYPE:	NA	↓	
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA	↓	
TOP DEPTH:	0	0.0		SAMPLE USAGE:	INV	↓	
BOTTOM DEPTH:	0	0.7		SCREEN/PORT DESC:		NA	
FIELD MATRIX:	R	S		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
BOREHOLE: YES/NO/NA	NO/NA			WATER FLOWING: YES/NO/NA	NO/NA		
BOREHOLE DECLINATION:	NA			BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Yes	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Yes	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Yes	
1		H3	500 ML POLY	Ice	Yes	
1		Met+U+CLO4+C N	1 GAL POLY Lite- 20 12/16/09	Ice	Yes	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Yes	

SAMPLE DESC: brown + black, silty clay, minor sand, Pine needles, roots

FR: RE15-10-7229

SAMPLE COMMENTS:

NA

LOCATION DESC: 14h-4 drainage  
25 01-12-10

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha ≤ 16 dpm  
Beta/Gamma ≤ 2640 dpmHE neg  
PID  $\frac{\text{Ambient Reading}}{0.0} = 0.0$  ppm

HE Neg.

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT)

Th McFarland

RELINQUISHED BY (Printed Name) JON MARIN (Signature) Jon R. Marin	Date/Time 1/15/10 8:12	RECEIVED BY (Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	Date/Time 1/13/10 812
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7173

WORK ORDER:

AS PLANNED		AS COLLECTED	AS PLANNED		AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/12/2010	MEDIA:		OBT3
TIME COLLECTED (HH:MM)		1430	SUB-MEDIA:		TUFF 1
PRS ID:	15-014(h)	OK	SAMPLE TECH CODE:		HA
LOCATION ID:	15-610507	↓	FIELD QC TYPE:		NA
LOCATION TYPE:	GENERIC	↓	FIELD PREP:		NA
TOP DEPTH:	0	1.0	SAMPLE USAGE:		INV
BOTTOM DEPTH:	0	2.6	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	S	EXCAVATED: YES/NO		NA
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA	WATER FLOWING: YES/NO		NA
BOREHOLE: YES/NO		NA	BOREHOLE DECLINATION: NA		BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Y	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY Liter AC 12/16/09	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: Light brown silty sand, numerous small tuff fragments

ED: RE15-10-7218

SAMPLE COMMENTS:

NA

LOCATION DESC: 14h-4

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  49 dpm  
Beta/Gamma  $\leq$  2240 dpm

PID Ambient Reading 0.0 ppm

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) JON MARIN	1/13/10	(Printed Name) Jay Williams	1/13/10
(Signature) Jon R. Marin	8:10	(Signature)	8:10
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7174

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/12/2010		MEDIA:	QBT3		ALLH
TIME COLLECTED (HH:MM)		1505		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-014(h)	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610508	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	0.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	1.0		SCREEN/PORT DESC:	NA		
FIELD MATRIX:	R	S		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		WATER FLOWING: YES/NO/NA
BOREHOLE: YES/NO/NA				BOREHOLE DECLINATION:	NA		BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Yes	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Yes	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Yes	
1		H3	500 ML POLY	Ice	Yes	
1		Met+U+CLO4+C N	1 GAE POLY Liter RC 12/16/09	Ice	Yes	
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Yes	

SAMPLE DESC: Dark brown clayey silt and light brown silt, some rock + roots

SAMPLE COMMENTS:

NA

LOCATION DESC: 14h-5

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  27 dpm  
Beta/Gamma  $\leq$  2390 dpm

PID  $\frac{\text{Ambient}}{\text{Reading}} \frac{0.0}{0.0}$  ppm

HE NEG

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY (Printed Name) JON MARIN (Signature) Jon R. Marin	Date/Time 1/17/10 08:10	RECEIVED BY (Printed Name) Jay Williams (Signature) Jay Williams	Date/Time 1/13/16 810
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7175

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/12/2010		MEDIA:	QBT3		OK
TIME COLLECTED (HH:MM)		1520		SUB-MEDIA:	TUFF 1		↓
PRS ID:	15-014(h)	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610508	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	1.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	2.0		SCREEN/PORT DESC:	NA		
FIELD MATRIX:	R	OK		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		WATER FLOWING: YES/NO/NA
BOREHOLE: YES/NO/NA				BOREHOLE DECLINATION:	NA		BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8260B	125 ML SEPTUM AMBER GLASS	Ice	Yes	
1		8270C+NMED Exp	500 ML AMBER GLASS	Ice	Yes	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Yes	
1		H3	500 ML POLY	Ice	Yes	
1		Met+U+CLO4+C N	1 GAL POLY Liter RC 12/16/09	Ice	Yes	
1	✓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Yes	

SAMPLE DESC: Weathered tuff pinkish grey

SAMPLE COMMENTS:

NA

LOCATION DESC: 14h-5

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 33 dpm  
Beta/Gamma = 2462 dpm

PID  $\frac{\text{Ambient } 0.0}{\text{Reading } 0.0}$  ppm

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RELINQUISHED BY (Printed Name) JON MARIN (Signature) Jon R. Marin	Date/Time 1/13/10 810	RECEIVED BY (Printed Name) Jay Williams (Signature) Jay Williams	Date/Time 1/13/10 810
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time



## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7218

WORK ORDER:

AS PLANNED		AS COLLECTED	AS PLANNED		AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/12/2010	MEDIA:		QBT3
TIME COLLECTED (HH:MM)		1430	SUB-MEDIA:		TUFF 1
PRS ID:	15-014(h)	OK	SAMPLE TECH CODE:		HA
LOCATION ID:	UNK	15-610507	FIELD QC TYPE:		ED
LOCATION TYPE:	GENERIC	OK	FIELD PREP:		NA
TOP DEPTH:	0	1.0	SAMPLE USAGE:		QC
BOTTOM DEPTH:	0	2.6	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	S	EXCAVATED: YES (NO) NA		
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA	WATER FLOWING: YES (NO) NA		
BOREHOLE: YES (NO) NA		BOREHOLE DECLINATION: NA	BOREHOLE DIRECTION: NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Yes	
1		8260B	125 ML SEPTUM AMBER GLASS	Ice	Yes	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Yes	
1		H3	500 ML POLY	Ice	Yes	
1		Met+U+CLO4+C N	1 GAL POLY Liter RC 12/17/09	Ice	Yes	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Yes	

SAMPLE DESC: QC Sample of RE15-10-7173

Light brown silty sand, numerous small tuff fragments

SAMPLE COMMENTS:

NA

LOCATION DESC: 14h-4

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha  $\leq$  49 dpm  
Beta/Gamma  $\leq$  2340 dpm

PID  $\frac{\text{Ambient}}{\text{Reading}} \frac{0.0}{0.0}$  ppm

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RELINQUISHED BY (Printed Name) JOW MARINX (Signature) Jow R. Marin	Date/Time 1/13/10 812	RECEIVED BY (Printed Name) Sherri Sherwood (Signature) Sherri Sherwood	Date/Time 1/13/10 812
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7223

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/12/2010		MEDIA:	QBT3		SED
TIME COLLECTED (HH:MM)		1308		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-014(h)	OK		SAMPLE TECH CODE:	HA		
LOCATION ID:	UNK	15-610501		FIELD QC TYPE:	ED		
LOCATION TYPE:	GENERIC	OK		FIELD PREP:	NA		
TOP DEPTH:	0	1.0		SAMPLE USAGE:	QC		
BOTTOM DEPTH:	0	2.2		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	SED		EXCAVATED: YES/NO/NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		WATER FLOWING: YES/NO/NA
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION:	NA	BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+8270+NME D-EXP	500 ML AMBER GLASS	Ice	Yes	
1		8260B	125 ML SEPTUM AMBER GLASS	Ice	Yes	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Yes	
1		H3	500 ML POLY	Ice	Yes	
1		Met+U+CLO4+C N	1 LITER POLY Liter xc 12/17/09	Ice	Yes	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Yes	

SAMPLE DESC: QC Sample of RE15-10-7161

redish brown silty sand, some clay and white tuff fragments

SAMPLE COMMENTS:  
NA

LOCATION DESC: 14h-2

## FIELD SCREENING/MEASUREMENT RESULTS:

$$\text{Alpha} \leq 98 \text{ dpm}$$

$$\text{Beta/Gamma} \leq 2340 \text{ dpm}$$

$$\text{PID} \frac{\text{Ambient Reading}}{0.0} = 0.0 \text{ ppm}$$

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REVIEWED BY (PRINT) T. McFarland

RELINQUISHED BY (Printed Name) JON MARRIN (Signature) Jon R. Marain	Date/Time 1/13/10 8:13	RECEIVED BY (Printed Name) Sherry Sherwood (Signature) Sherry Sherwood	Date/Time 1/13/10 8:13
RELINQUISHED BY (Printed Name)	Date/Time	RECEIVED BY (Printed Name)	Date/Time

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7229

WORK ORDER:

AS PLANNED		AS COLLECTED	AS PLANNED		AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/12/2010	MEDIA:		NA
TIME COLLECTED (HH:MM)		1445	SUB-MEDIA:		OTHER
PRS ID:	15-014(h)	ok	SAMPLE TECH CODE:		DC
LOCATION ID:	UNK	15-1610507	FIELD QC TYPE:		ER
LOCATION TYPE:	GENERIC	ok	FIELD PREP:		UF
TOP DEPTH:	0	↓	SAMPLE USAGE:		QC
BOTTOM DEPTH:	0	↓	SCREEN/PORT DESC:		NA
FIELD MATRIX:	W	w	EXCAVATED: YES/NO/NA		
COMPOSITE TYPE: NA		COMPOSITE TIME INTERVAL: NA	WATER FLOWING: YES/NO/NA		
BOREHOLE: YES/NO/NA		BOREHOLE DECLINATION: NA	BOREHOLE DIRECTION: NA		

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

SAMPLE DESC: QC Sample of RE15-10-717a

## SAMPLE COMMENTS:

Rinsate

LOCATION DESC: 14h-4

## FIELD SCREENING/MEASUREMENT RESULTS:

NA

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TL McFarland

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) JON MARIN	1/13/10	(Printed Name) Sherri Sherwood	1/13/10
(Signature) Jon R Marin	8:12	(Signature) Sherri Sherwood	8:12
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

## SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2479

EVENT NAME: 4th Qtr. FY09 - AOC 15-014(h) - Threemile Canyon

SAMPLE ID: RE15-10-7235

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/12/2010		MEDIA:	NA		ok
TIME COLLECTED (HH:MM)		1255		SUB-MEDIA:	OTHER		
PRS ID:	15-014(h)	ok		SAMPLE TECH CODE:	DC		
LOCATION ID:	UNK	15-610501		FIELD QC TYPE:	FTB		
LOCATION TYPE:	GENERIC	ok		FIELD PREP:	NA		
TOP DEPTH:	0			SAMPLE USAGE:	QC		
BOTTOM DEPTH:	0			SCREEN/PORT DESC:	NA		
FIELD MATRIX:	S			EXCAVATED: YES/NO/NA			
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
BOREHOLE: YES/NO/NA				WATER FLOWING: YES/NO/NA			
BOREHOLE DECLINATION:	NA			BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8260B Trip Blank	40 ML SEPTUM AMBER GLASS	Ice	Y	

SAMPLE DESC: QC Sample of RE15-10-7235 7160

734  
1/12/10

SAMPLE COMMENTS: FTB

LOCATION DESC: NA

FIELD SCREENING/MEASUREMENT RESULTS:

NA

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RELINQUISHED BY (Printed Name) JON MARIN (Signature) Jon A. Marin	Date/Time 1/13/10 8:13	RECEIVED BY (Printed Name) Jay W (Signature) Jay W	Date/Time 1/13/10 8:13
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

## Rad Screening Data Release Form

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

RE 12-10-7163

RE 12-10-7161

7218

"

7162

7223

7172

7173

7160

7174

7175

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

.....

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

RE 12-10-7229 FR  
7235 FTB

Reason:

.....

Print Last Name MARIN

Signature

John R. Marin

Date

1/13/00



2609 North River Road, Port Allen, Louisiana 70767

1 (800) 401-4277 FAX (225) 381-2996

1 of 3

ARS Sample Delivery Group: ARS1-10-00060

Analysis Description: Gross Alpha/Beta in (Soil, Sludge, Waste, Sediment (SOI))

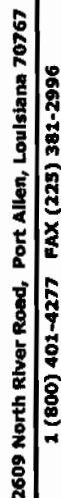
Analysis Test Method: GPC-A-003

Request or PO Number: N/A

Date Received: 1/14/2010

Report Date: 01/15/10 10:01

ARS Sample ID	Client Sample ID	Isotope	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery	Sample Matrix	Collection Date
ARS1-10-00060-001	RE16-10-1374	GROSS ALPHA	7.558	4.686	13.085	3.783	U	pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-001	RE16-10-1374	GROSS BETA	16.241	3.851	7.851	3.387		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-002	RE16-10-1376	GROSS ALPHA	23.939	7.972	13.415	3.921		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-002	RE16-10-1376	GROSS BETA	19.162	4.763	10.591	4.742		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-003	RE16-10-1378	GROSS ALPHA	9.494	5.272	14.237	4.512	U	pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-003	RE16-10-1378	GROSS BETA	25.257	4.872	7.690	3.302		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-004	RE16-10-1380	GROSS ALPHA	16.399	6.502	13.362	4.038		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-004	RE16-10-1380	GROSS BETA	18.415	4.133	7.641	3.274		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-005	RE16-10-1382	GROSS ALPHA	8.992	6.107	19.348	6.986	U	pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-005	RE16-10-1382	GROSS BETA	25.351	4.950	8.205	3.559		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-006	RE16-10-1396	GROSS ALPHA	1.535	3.471	15.114	4.887	U	pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-006	RE16-10-1396	GROSS BETA	18.015	3.977	7.697	3.318		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-007	RE16-10-1502	GROSS ALPHA	9.248	5.126	14.139	4.521	U	pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-007	RE16-10-1502	GROSS BETA	14.780	3.724	7.922	3.420		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-008	RE16-10-1504	GROSS ALPHA	-0.002	2.754	14.066	4.457	U	pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-008	RE16-10-1504	GROSS BETA	26.457	4.994	8.076	3.502		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-009	RE16-10-1506	GROSS ALPHA	17.355	6.792	14.064	4.414		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-009	RE16-10-1506	GROSS BETA	23.293	4.622	7.420	3.180		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-010	RE16-10-1510	GROSS ALPHA	2.063	3.696	15.319	4.839	U	pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-010	RE16-10-1510	GROSS BETA	18.484	4.131	8.190	3.549		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-011	RE16-10-1529	GROSS ALPHA	12.644	6.281	16.290	5.421	U	pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-011	RE16-10-1529	GROSS BETA	21.960	4.489	7.679	3.306		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-012	RE16-10-1531	GROSS ALPHA	7.586	4.889	14.201	4.486	U	pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-012	RE16-10-1531	GROSS BETA	26.910	5.024	7.615	3.273		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-013	RE16-10-1533	GROSS ALPHA	4.463	4.762	16.523	5.487	U	pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-013	RE16-10-1533	GROSS BETA	34.905	5.990	7.905	3.407		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-014	RE16-10-1535	GROSS ALPHA	6.098	5.030	16.514	5.761	U	pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-014	RE16-10-1535	GROSS BETA	31.741	5.644	8.076	3.497		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-015	RE16-10-1537	GROSS ALPHA	5.322	4.676	15.748	5.119	U	pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-015	RE16-10-1537	GROSS BETA	33.705	5.857	7.812	3.354		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-016	RE16-10-1539	GROSS ALPHA	8.641	5.333	15.349	5.039	U	pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-016	RE16-10-1539	GROSS BETA	29.563	5.381	7.824	3.367		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-017	RE16-10-1541	GROSS ALPHA	8.121	4.752	12.481	3.447	U	pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-017	RE16-10-1541	GROSS BETA	25.234	4.819	7.528	3.232		pCi/g	1/14/2010	CR	N/A	SO	
ARS1-10-00060-018	RE16-10-1549	GROSS ALPHA	12.026	5.396	11.009	2.859		pCi/g	1/14/2010	CR	N/A	SO	



ARS Sample Delivery Group:	ARS1-10-00060
Analysis Description:	Gross Alpha/Beta
Analysis Test Method:	GPC-A-003

Request or PO Number:	N/A
Date Received:	1/14/
Report Date:	01/1/

**Date Received:** 1/14/2010  
**Report Date:** 01/15/10 10:01

ARS Sample ID	Client Sample ID	Isotope	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Date/Time	Tracer/Chem Recovery	Sample Matrix	Collection Date
ARS1-10-00060-018	RE16-10-1549	GROSS BETA	30.498	5.449	7.667	3.309		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-019	RE16-10-943	GROSS ALPHA	2.952	3.511	13.421	4.021	U	pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-019	RE16-10-943	GROSS BETA	32.665	5.687	7.716	3.321		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-020	RE16-10-941	GROSS ALPHA	9.648	5.124	13.578	4.247	U	pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-020	RE16-10-941	GROSS BETA	14.991	3.651	7.549	3.257		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-021	RE16-10-945	GROSS ALPHA	14.025	5.856	11.236	2.948		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-021	RE16-10-945	GROSS BETA	33.627	5.899	8.051	3.482		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-022	RE16-10-2798	GROSS ALPHA	1.842	3.154	13.530	3.816	U	pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-022	RE16-10-2798	GROSS BETA	29.426	5.401	8.318	3.609		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-023	RE16-10-2797	GROSS ALPHA	5.495	4.127	12.955	3.745	U	pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-023	RE16-10-2797	GROSS BETA	31.476	5.566	7.982	3.467		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-024	RE15-10-7163	GROSS ALPHA	-0.281	2.151	12.918	3.644	U	pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-024	RE15-10-7163	GROSS BETA	32.626	5.724	8.211	3.567		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-025	RE15-10-7218	GROSS ALPHA	17.429	6.528	11.797	3.258		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-025	RE15-10-7218	GROSS BETA	18.644	4.281	8.556	3.746		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-026	RE15-10-7223	GROSS ALPHA	1.730	3.186	13.915	3.975	U	pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-026	RE15-10-7223	GROSS BETA	24.675	4.858	8.389	3.649		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-027	RE15-10-7172	GROSS ALPHA	16.315	6.701	13.883	4.058		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-027	RE15-10-7172	GROSS BETA	33.494	5.865	7.838	3.377		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-028	RE15-10-7173	GROSS ALPHA	5.674	4.062	12.334	3.479	U	pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-028	RE15-10-7173	GROSS BETA	22.517	4.732	9.115	4.022		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-029	RE15-10-7160	GROSS ALPHA	15.795	6.594	13.729	4.034		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-029	RE15-10-7160	GROSS BETA	25.552	4.957	7.960	3.443		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-030	RE15-10-7174	GROSS ALPHA	11.637	5.541	12.609	3.580	U	pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-030	RE15-10-7174	GROSS BETA	28.941	5.280	7.675	3.306		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-031	RE15-10-7175	GROSS ALPHA	4.091	3.555	11.788	3.179	U	pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-031	RE15-10-7175	GROSS BETA	29.055	5.248	7.574	3.254		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-032	RE15-10-7161	GROSS ALPHA	10.290	5.551	14.873	4.683	U	pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-032	RE15-10-7161	GROSS BETA	22.332	4.583	8.164	3.551		pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-033	RE15-10-7162	GROSS ALPHA	2.165	2.686	10.612	2.784	U	pCi/g	1/14/2010	CR	SO	
ARS1-10-00060-033	RE15-10-7162	GROSS BETA	30.579	5.361	7.386	3.179		pCi/g	1/14/2010	CR	SO	
NOTES:												



2609 North River Road, Port Allen, Louisiana 70767

1 (800) 401-4277 FAX (225) 381-2996

3 of 3

ARS Sample Delivery Group: ARS1-10-00060

Analysis Description: Gross Alpha/Beta In (Soil, Sludge, Waste, Sediment [SOI])

Analysis Test Method: GPC-A-003

Request or PO Number: N/A

Date Received: 1/14/2010

Report Date: 01/15/10 10:01

ARS Sample ID	Client Sample ID	Isotope	Analysis Results	Analysis Error +/- 2 s	MOC	DLC	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery	Sample Matrix	Collection Date
---------------	------------------	---------	------------------	------------------------	-----	-----	------	----------------	--------------------	---------------------	----------------------	---------------	-----------------

Project Manager Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

LELAP Certificate # 01949

NELAP Certificate # E87558



## DATA VALIDATION COVER SHEET

5121-1

## Data Validation Cover Sheet

Records Use only



## Section I.

REQUEST NUMBER: 10-1288 VALIDATION DATE: 2/22/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Allison Felix ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- |  |  |   |   |
|--|--|---|---|
| <input type="checkbox"/> TPH-GRO                 | <input type="checkbox"/> HIGH EXPLOSIVES | <input type="checkbox"/> DIOXIN FURANS          | <input checked="" type="checkbox"/> LCMSMS PERCHLORATES |
| <input type="checkbox"/> TPH-DRO                 | <input type="checkbox"/> METALS          | <input type="checkbox"/> PCB CONGENERS          | <input type="checkbox"/> ORGANOCHLORINE                 |
| <input type="checkbox"/> GENERAL CHEMISTRY       | <input type="checkbox"/> RADIOCHEMISTRY  | <input type="checkbox"/> LCMSMS HIGH EXPLOSIVES | PESTICIDES/POLYCHLORINATED BIPHENYLS                    |
| <input type="checkbox"/> OTHER (DESCRIBE): _____ |  |   |   |

## Section II. Completeness Check

- | YES                                 | NO                       | N/A                                 | (CHECK ONE)                 | YES                                 | NO                       | N/A                                 | (CHECK ONE)              |
|-------------------------------------|--------------------------|-------------------------------------|-----------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 1. CHAIN-OF-CUSTODY FORM(S) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 6. RAW/BSS DATA          |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 2. CASE NARRATIVE           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 7. QUALITY CONTROL FORMS |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 3. SAMPLE RESULT FORMS      | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 8. QUANTITATION REPORTS  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 4. SAMPLE CHROMATOGRAMS     | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 9. TICS FORMS            |
| <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 5. STANDARD CHROMATOGRAMS   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 10. TICS MASS SPECTRA    |

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

1. It should be noted that the soil MS/MSD analyses were performed on a LANL sample from another RN, and that the raw data for the parent sample was not included in the data package. No sample results were qualified.

Reviewed by: Mary Donovan


Level: I

Date: 02/23/10


VALIDATOR'S SIGNATURE:

Allison Felix


DATE: 2/22/10

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

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

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

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

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

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

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 944722  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7163  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921001  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 %Solids: 93.4

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.535	2.14	0.535	ug/kg	U	1	31-JAN-10 14:08	per0131015a
	Perchlorate Isotope Ratio						1	31-JAN-10 14:08	per0131015a
14797-73-0	Perchlorate-101	.535	2.14	0.535	ug/kg	U	1	31-JAN-10 14:08	per0131015a
	Perchlorate-O(18)			5.62	ug/kg		1	31-JAN-10 14:08	per0131015a

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

\*Concentration =  
 Instrument Value X Concentrated Extract Volume X  $\frac{1}{\% \text{Solids}}$   
 Aliquot

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944722

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7162

Date Received: 16-JAN-10

GEL Job No (SDG): 10-1288

GEL Sample ID: 244921002

Date Filtered: 29-JAN-10

Injection Volume (uL): 20

%Solids: 90.3

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.554	2.22	0.554	ug/kg	U	1	31-JAN-10 14:16	per0131016a
	Perchlorate Isotope Ratio						1	31-JAN-10 14:16	per0131016a
14797-73-0	Perchlorate-101	.554	2.22	0.554	ug/kg	U	1	31-JAN-10 14:16	per0131016a
	Perchlorate-O(18)			5.94	ug/kg		1	31-JAN-10 14:16	per0131016a

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

\*Concentration =

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

AMF 2/22/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 944722  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7161  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921003  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 %Solids: 89

CAS No.	Analyte <sup>a</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.561	2.24	0.561	ug/kg	U	1	31-JAN-10 14:23	per0131017a
	Perchlorate Isotope Ratio						1	31-JAN-10 14:23	per0131017a
14797-73-0	Perchlorate-101	.561	2.24	0.561	ug/kg	U	1	31-JAN-10 14:23	per0131017a
	Perchlorate-O(18)			5.67	ug/kg		1	31-JAN-10 14:23	per0131017a

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

\*Concentration =  
 Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$

AMF 2/22/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 244722

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7160

Date Received: 16-JAN-10

GEL Job No (SDG): 10-1288

GEL Sample ID: 244921004

Date Filtered: 29-JAN-10

Injection Volume (uL): 20

%Solids: 80

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.625	2.5	0.831	ug/kg	J	1	31-JAN-10 14:31	per0131018a
	Perchlorate Isotope Ratio			3			1	31-JAN-10 14:31	per0131018a
14797-73-0	Perchlorate-101	.625	2.5	0.825	ug/kg	J	1	31-JAN-10 14:31	per0131018a
	Perchlorate-O(18)			6.14	ug/kg		1	31-JAN-10 14:31	per0131018a

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

\*Concentration =  
Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$

AMF 2/22/10



Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 244722  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7174  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921005  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 %Solids: 80

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.623	2.49	1.20	ug/kg	J	1	31-JAN-10 14:38	per0131019a
	Perchlorate Isotope Ratio			2.96			1	31-JAN-10 14:38	per0131019a
14797-73-0	Perchlorate-101	.623	2.49	1.20	ug/kg	J	1	31-JAN-10 14:38	per0131019a
	Perchlorate-O(18)			6.36	ug/kg		1	31-JAN-10 14:38	per0131019a

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

\*Concentration =  
 Instrument Value X Concentrated Extract Volume X 1  
 Aliquot %Solids

AMF 2/22/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944722

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7173

Date Received: 16-JAN-10

GEL Job No (SDG): 10-1288

GEL Sample ID: 244921006

Date Filtered: 29-JAN-10

Injection Volume (uL): 20

%Solids: 90.2

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.554	2.22	1.10	ug/kg	J	1	31-JAN-10 14:46	per0131020a
	Perchlorate Isotope Ratio			2.86			1	31-JAN-10 14:46	per0131020a
14797-73-0	Perchlorate-101	.554	2.22	1.14	ug/kg	J	1	31-JAN-10 14:46	per0131020a
	Perchlorate-O(18)			5.77	ug/kg		1	31-JAN-10 14:46	per0131020a

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

\*Concentration =

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

AMF 2/22/10

Form I

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944722

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7175

Date Received: 16-JAN-10

GEL Job No (SDG): 10-1288

GEL Sample ID: 244921007

Date Filtered: 29-JAN-10

Injection Volume (uL): 20

%Solids: 90.7

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.551	2.21	2.84	ug/kg		1	31-JAN-10 15:16	per0131024a
	Perchlorate Isotope Ratio			2.96			1	31-JAN-10 15:16	per0131024a
14797-73-0	Perchlorate-101	.551	2.21	2.85	ug/kg		1	31-JAN-10 15:16	per0131024a
	Perchlorate-O(18)			5.97	ug/kg		1	31-JAN-10 15:16	per0131024a

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

\*Concentration =

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

AMF 2/22/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944722

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7172

Date Received: 16-JAN-10

GEL Job No (SDG): 10-1288

GEL Sample ID: 244921008

Date Filtered: 29-JAN-10

Injection Volume (uL): 20

%Solids: 79

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.635	2.54	0.650	ug/kg	J	1	31-JAN-10 15:24	per0131025a
	Perchlorate Isotope Ratio			3.28			1	31-JAN-10 15:24	per0131025a
14797-73-0	Perchlorate-101	.635	2.54	0.635	ug/kg	U	1	31-JAN-10 15:24	per0131025a
	Perchlorate-O(18)			6.27	ug/kg		1	31-JAN-10 15:24	per0131025a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X <sup>1</sup>  
Aliquot %Solids

AMF 2/22/10

P perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 944722  
 Extraction Type: Solid Prep  
 Client Sample No. RE15-10-7218  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921009  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 % Solids: 90.1

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.555	2.22	1.10	ug/kg	J	1	31-JAN-10 15:31	per0131026a
	Perchlorate Isotope Ratio			2.92			1	31-JAN-10 15:31	per0131026a
14797-73-0	Perchlorate-101	.555	2.22	1.12	ug/kg	J	1	31-JAN-10 15:31	per0131026a
	Perchlorate-O(18)			5.98	ug/kg		1	31-JAN-10 15:31	per0131026a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1  
 Aliquot %Solids

AMF 2/22/10

Form 1

Perchlorate Analysis Data Sheet

Client Sample No.

RE15-10-7223

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944722

Extraction Type: Solid Prep

Date Received: 16-JAN-10

GEL Job No (SDG): 10-1288

GEL Sample ID: 244921010

Date Filtered: 29-JAN-10

Injection Volume (uL): 20

%Solids: 89

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.56	2.24	0.560	ug/kg	U	1	31-JAN-10 15:39	per0131027a
	Perchlorate Isotope Ratio						1	31-JAN-10 15:39	per0131027a
14797-73-0	Perchlorate-101	.56	2.24	0.560	ug/kg	U	1	31-JAN-10 15:39	per0131027a
	Perchlorate-O(18)			5.38	ug/kg		1	31-JAN-10 15:39	per0131027a

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

\*Concentration =

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

AMF 2/22/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: WATER  
 Extraction Batch ID: 943783  
 Extraction Type: Filter/DAI  
 Sample Volume/Weight: 10.0 mL  
 Concentrated Extract Volume: 10.0  
 Client Sample No. RE15-10-7229  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288-1  
 GEL Sample ID: 244922001  
 Date Filtered: 21-JAN-10  
 Injection Volume (uL): 20  
 %Solids:

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	21-JAN-10 18:25	per0121038a
	Perchlorate Isotope Ratio						1	21-JAN-10 18:25	per0121038a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	21-JAN-10 18:25	per0121038a
	Perchlorate-O(18)			0.482	ug/L		1	21-JAN-10 18:25	per0121038a

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

\*Concentration =  
 Instrument Value X Concentrated Extract Volume X  $\frac{1}{\% \text{Solids}}$   
 Aliquot

AMF 2/22/10

## DATA VALIDATION COVER SHEET

5118-1

## Data Validation Cover Sheet

Records Use only



## Section I.

REQUEST NUMBER: 10-1288 VALIDATION DATE: 2/23/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Allison Felix ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO      ☐ HIGH EXPLOSIVES      ☐ DIOXIN FURANS      ☐ LCMSMS PERCHLORATES  
☐ TPH-DRO      ☒ METALS      ☐ PCB CONGENERS      ☐ ORGANOCHLORINE  
☐ GENERAL CHEMISTRY      ☐ RADIOCHEMISTRY      ☐ LCMSMS HIGH EXPLOSIVES      PESTICIDES/POLYCHLORINATED BIPHENYLS  
☐ OTHER (DESCRIBE): \_\_\_\_\_

## Section II. Completeness Check

- | YES                                 | NO                       | N/A                                 | (CHECK ONE)                 | YES                                 | NO                       | N/A                                 | (CHECK ONE)              |
|-------------------------------------|--------------------------|-------------------------------------|-----------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 1. CHAIN-OF-CUSTODY FORM(S) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 6. RAW/BSS DATA          |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 2. CASE NARRATIVE           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 7. QUALITY CONTROL FORMS |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 3. SAMPLE RESULT FORMS      | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 8. QUANTITATION REPORTS  |
| <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 4. SAMPLE CHROMATOGRAMS     | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 9. TICS FORMS            |
| <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 5. STANDARD CHROMATOGRAMS   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 10. TICS MASS SPECTRA    |

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


- Sb was detected in the ICB/CCBs associated with all soil samples. The Sb results for samples -7163, -7162, -7174, -7172, and -7223 were detects  $\leq 5X$  the greatest blank concentration and, thus, were qualified U,I4b. The remaining associated sample results were NDs and, thus, were not qualified.
- Al, Ba, Ca, Fe, Pb, Mg, Mn, K and Na were detected in FR blank - 7229, associated with all soil samples. The Na results for samples -7161, -7160, -7174, -7173, -7172, -7218, and -7223 were detects  $\leq 5X$  the FR blank concentration and, thus, were qualified U,I4d. All other associated sample results were detects  $> 5X$  the FR blank concentrations and, thus, were not qualified.
- The soil %Rs for Be, Ca, and Cr were  $<$  the laboratory LAL but  $\geq 10\%$ . The associated sample results were detects and, thus, were qualified J-I6a. The soil %Rs for Al, Mn, and Hg were outside the laboratory acceptance limits, however, the parent sample concentrations were  $> 4X$  the spike concentrations. The %R for Mn in the aqueous MS was  $<$  the laboratory LAL but  $\geq 10\%$ , however, the parent sample concentration was  $> 4X$  the spike concentration. Based on professional judgment, the associated Al, Mn and Hg sample results were not qualified.
- The duplicate RPD for Cr was  $> 35\%$  and the parent and duplicate results were  $\geq 5X$  the PQL. The associated sample results were detects and, thus, were qualified J,I10a.
- It should be noted that the aqueous matrix QC analyses for the ICP-AES and ICP-MS were performed on LANL samples from other RNs, and that the raw data for the parent samples was not included in the data package.


Reviewed by: Mary Donovan

Level: I


Date: 02/23/10




DATA VALIDATION COVER SHEET	
5118-1	Records Use only
Data Validation Cover Sheet	 Los Alamos NATIONAL LABORATORY EST. 1945
VALIDATOR'S SIGNATURE: <u>Allison Gelfx</u> DATE: <u>2/23/10</u>	
Form 5118-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
<b>5118-2</b>  <b>Metals Analytical Data Validation Checklist</b>	Records Use only  


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

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
<b>5118-2</b>  <b>Metals Analytical Data Validation Checklist</b>	Records Use only  

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

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
<b>5118-2</b>  <b>Metals Analytical Data Validation Checklist</b>	Records Use only  

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

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
<b>5118-2</b>  <b>Metals Analytical Data Validation Checklist</b>	Records Use only  

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

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

**SAMPLE ID:** 244921001      **BASIS:** Dry Weight      **DATE COLLECTED** 12-JAN-10  
**CLIENT ID:** RE15-10-7163      **LEVEL:** Low      **DATE RECEIVED** 16-JAN-10  
**MATRIX:** SOIL      **%SOLIDS:** 93.4

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5720000	ug/Kg	*	6960	20500	20500	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-36-0	Antimony U,14b	357	ug/Kg	J	338	1020	1020	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-38-2	Arsenic	1.18	mg/kg		0.211	1.06	1.06	2	MS	SKJ	01/28/10 16:26	100128-3	942665
7440-39-3	Barium	55400	ug/Kg	*	102	512	512	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-41-7	Beryllium J-,16a	0.557	mg/kg	N	0.0211	0.106	0.106	2	MS	RMJ	02/02/10 17:37	100201-4	942665
7440-43-9	Cadmium	133	ug/Kg	J	102	512	512	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-70-2	Calcium	1390000	ug/Kg	N	8190	25600	25600	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-47-3	Chromium J-,16a	48900	ug/Kg	*N	153	512	512	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-48-4	Cobalt J-,16a	2730	ug/Kg	*	153	512	512	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-50-8	Copper	7800	ug/Kg		307	1020	1020	1	P	HSC	01/29/10 11:05	012910-1	942675
7439-89-6	Iron	12300000	ug/Kg		8190	25600	25600	1	P	HSC	01/29/10 11:05	012910-1	942675
7439-92-1	Lead	12200	ug/Kg		256	1020	1020	1	P	HSC	01/29/10 11:05	012910-1	942675
7439-95-4	Magnesium	1490000	ug/Kg	N	8700	30700	30700	1	P	HSC	01/29/10 11:05	012910-1	942675
7439-96-5	Manganese	268000	ug/Kg		205	1020	1020	1	P	HSC	01/29/10 11:05	012910-1	942675
7439-97-6	Mercury	542	ug/kg		4.29	12.6	12.6	1	AV	JXL1	01/28/10 10:13	012810S1-6	943320
7440-02-0	Nickel	9.61	mg/kg		0.106	0.422	0.422	2	MS	RMJ	02/06/10 01:34	100205-5	942665
7440-09-7	Potassium	1130000	ug/Kg	N	6550	25600	25600	1	P	HSC	01/29/10 11:05	012910-1	942675
7782-49-2	Selenium	1.06	mg/kg	U	0.528	1.06	1.06	2	MS	SKJ	01/28/10 16:26	100128-3	942665
7440-22-4	Silver	4120	ug/Kg		102	512	512	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-23-5	Sodium	222000	ug/Kg		7160	25600	25600	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-28-0	Thallium	0.167	mg/kg	J	0.0633	0.211	0.211	2	MS	SKJ	01/28/10 16:26	100128-3	942665
7440-61-1	Uranium	0.895	mg/kg	*	0.0139	0.0422	0.0422	2	MS	SKJ	01/28/10 03:22	100127-2	942665
7440-62-2	Vanadium	14000	ug/Kg		102	512	512	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-66-6	Zinc	50400	ug/Kg		338	1020	1020	1	P	HSC	01/29/10 11:05	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.507	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.523	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.509	g	30	mL	01/27/10	TXB3

AMF  
2/23/10

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921002

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7162

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 90.3

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10200000	ug/Kg	*	7470	22000	22000	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-36-0	Antimony U,14b	439	ug/Kg	J	363	1100	1100	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-38-2	Arsenic	2.45	mg/kg		0.211	1.06	1.06	2	MS	SKJ	01/28/10 17:10	100128-3	942665
7440-39-3	Barium	138000	ug/Kg	*	110	550	550	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-41-7	Beryllium J-,16a	0.631	mg/kg	N	0.0211	0.106	0.106	2	MS	RMJ	02/02/10 17:57	100201-4	942665
7440-43-9	Cadmium	463	ug/Kg	J	110	550	550	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-70-2	Calcium J-,16a	2140000	ug/Kg	N	8790	27500	27500	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-47-3	Chromium J-,16a	25300	ug/Kg	*N	165	550	550	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-48-4	Cobalt	6100	ug/Kg	*	165	550	550	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-50-8	Copper	24300	ug/Kg		330	1100	1100	1	P	HSC	01/29/10 11:27	012910-1	942675
7439-89-6	Iron	15300000	ug/Kg		8790	27500	27500	1	P	HSC	01/29/10 11:27	012910-1	942675
7439-92-1	Lead	25100	ug/Kg		275	1100	1100	1	P	HSC	01/29/10 11:27	012910-1	942675
7439-95-4	Magnesium	2270000	ug/Kg	N	9340	33000	33000	1	P	HSC	01/29/10 11:27	012910-1	942675
7439-96-5	Manganese	445000	ug/Kg		220	1100	1100	1	P	HSC	01/29/10 11:27	012910-1	942675
7439-97-6	Mercury	1540	ug/kg		39.4	116	116	10	AV	JXL	01/28/10 13:10	012810S1-6	943320
7440-02-0	Nickel	9.5	mg/kg		0.106	0.422	0.422	2	MS	RMJ	02/06/10 01:51	100205-5	942665
7440-09-7	Potassium	1880000	ug/Kg	N	7030	27500	27500	1	P	HSC	01/29/10 11:27	012910-1	942675
7782-49-2	Selenium	1.06	mg/kg	U	0.528	1.06	1.06	2	MS	SKJ	01/28/10 17:10	100128-3	942665
7440-22-4	Silver	21000	ug/Kg		110	550	550	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-23-5	Sodium	164000	ug/Kg		7690	27500	27500	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-28-0	Thallium	0.230	mg/kg		0.0633	0.211	0.211	2	MS	SKJ	01/28/10 17:10	100128-3	942665
7440-61-1	Uranium	3.57	mg/kg	*	0.0139	0.0422	0.0422	2	MS	SKJ	01/28/10 04:06	100127-2	942665
7440-62-2	Vanadium	29100	ug/Kg		110	550	550	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-66-6	Zinc	60600	ug/Kg		363	1100	1100	1	P	HSC	01/29/10 11:27	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.525	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.504	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.573	g	30	mL	01/27/10	TXB3

AMF  
2/23/10

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921003

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7161

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	11700000	ug/Kg	*	7270	21400	21400	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-36-0	Antimony	1070	ug/Kg	U	353	1070	1070	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-38-2	Arsenic	2.37	mg/kg		0.221	1.1	1.1	2	MS	SKJ	01/28/10 17:16	100128-3	942665
7440-39-3	Barium	152000	ug/Kg	*	107	534	534	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-41-7	Beryllium J-,16a	0.757	mg/kg	N	0.0221	0.11	0.11	2	MS	RMJ	02/02/10 18:01	100201-4	942665
7440-43-9	Cadmium	115	ug/Kg	J	107	534	534	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-70-2	Calcium J-,16a	2110000	ug/Kg	N	8550	26700	26700	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-47-3	Chromium J-,16a	20700	ug/Kg	*N	160	534	534	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-48-4	Cobalt	4920	ug/Kg	*	160	534	534	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-50-8	Copper	15000	ug/Kg		321	1070	1070	1	P	HSC	01/29/10 11:38	012910-1	942675
7439-89-6	Iron	13200000	ug/Kg		8550	26700	26700	1	P	HSC	01/29/10 11:38	012910-1	942675
7439-92-1	Lead	13000	ug/Kg		267	1070	1070	1	P	HSC	01/29/10 11:38	012910-1	942675
7439-95-4	Magnesium	1830000	ug/Kg	N	9080	32100	32100	1	P	HSC	01/29/10 11:38	012910-1	942675
7439-96-5	Manganese	300000	ug/Kg		214	1070	1070	1	P	HSC	01/29/10 11:38	012910-1	942675
7439-97-6	Mercury	106	ug/kg		4.16	12.2	12.2	1	AV	JXL1	01/28/10 10:25	012810S1-6	943320
7440-02-0	Nickel	10.5	mg/kg		0.11	0.442	0.442	2	MS	RMJ	02/06/10 01:54	100205-5	942665
7440-09-7	Potassium	1550000	ug/Kg	N	6840	26700	26700	1	P	HSC	01/29/10 11:38	012910-1	942675
7782-49-2	Selenium	1.1	mg/kg	U	0.552	1.1	1.1	2	MS	SKJ	01/28/10 17:16	100128-3	942665
7440-22-4	Silver	3670	ug/Kg		107	534	534	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-23-5	Sodium U-,14d	99000	ug/Kg		7480	26700	26700	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-28-0	Thallium	0.260	mg/kg		0.0663	0.221	0.221	2	MS	SKJ	01/28/10 17:16	100128-3	942665
7440-61-1	Uranium	0.658	mg/kg	*	0.0146	0.0442	0.0442	2	MS	SKJ	01/28/10 04:12	100127-2	942665
7440-62-2	Vanadium	26000	ug/Kg		107	534	534	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-66-6	Zinc	42300	ug/Kg		353	1070	1070	1	P	HSC	01/29/10 11:38	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.508	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.525	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.55	g	30	mL	01/27/10	TXB3

AMF  
2/23/10



**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921004

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7160

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 80

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10800000	ug/Kg	*	8500	25000	25000	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-36-0	Antimony	1250	ug/Kg	U	412	1250	1250	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-38-2	Arsenic	2.05	mg/kg		0.245	1.23	1.23	2	MS	SKJ	01/28/10 17:22	100128-3	942665
7440-39-3	Barium	180000	ug/Kg	*	125	625	625	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-41-7	Beryllium J-,I6a	0.767	mg/kg	N	0.0245	0.123	0.123	2	MS	RMJ	02/02/10 18:04	100201-4	942665
7440-43-9	Cadmium	307	ug/Kg	J	125	625	625	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-70-2	Calcium J-,I6a	2360000	ug/Kg	N	10000	31200	31200	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-47-3	Chromium J-,I6a	15100	ug/Kg	*N	187	625	625	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-48-4	Cobalt	4960	ug/Kg	*	187	625	625	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-50-8	Copper	26600	ug/Kg		375	1250	1250	1	P	HSC	01/29/10 11:42	012910-1	942675
7439-89-6	Iron	13000000	ug/Kg		10000	31200	31200	1	P	HSC	01/29/10 11:42	012910-1	942675
7439-92-1	Lead	25900	ug/Kg		312	1250	1250	1	P	HSC	01/29/10 11:42	012910-1	942675
7439-95-4	Magnesium	1870000	ug/Kg	N	10600	37500	37500	1	P	HSC	01/29/10 11:42	012910-1	942675
7439-96-5	Manganese	319000	ug/Kg		250	1250	1250	1	P	HSC	01/29/10 11:42	012910-1	942675
7439-97-6	Mercury	644	ug/kg		5.05	14.8	14.8	1	AV	JXL1	01/28/10 10:27	012810S1-6	943320
7440-02-0	Nickel	9.94	mg/kg		0.123	0.49	0.49	2	MS	RMJ	02/06/10 01:57	100205-5	942665
7440-09-7	Potassium	1610000	ug/Kg	N	8000	31200	31200	1	P	HSC	01/29/10 11:42	012910-1	942675
7782-49-2	Selenium	1.23	mg/kg	U	0.613	1.23	1.23	2	MS	SKJ	01/28/10 17:22	100128-3	942665
7440-22-4	Silver	8470	ug/Kg		125	625	625	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-23-5	Sodium U,I4d	79300	ug/Kg		8750	31200	31200	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-28-0	Thallium	0.230	mg/kg	J	0.0735	0.245	0.245	2	MS	SKJ	01/28/10 17:22	100128-3	942665
7440-61-1	Uranium	1.97	mg/kg	*	0.0162	0.049	0.049	2	MS	SKJ	01/28/10 04:18	100127-2	942665
7440-62-2	Vanadium	25800	ug/Kg		125	625	625	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-66-6	Zinc	68400	ug/Kg		412	1250	1250	1	P	HSC	01/29/10 11:42	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.51	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.5	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.505	g	30	mL	01/27/10	TXB3

AMF  
2/23/10

**METALS**  
-1-  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921005

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7174

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 80

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10800000	ug/Kg	*	8170	24000	24000	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-36-0	Antimony U,14b	1180	ug/Kg	J	397	1200	1200	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-38-2	Arsenic	1.75	mg/kg		0.238	1.19	1.19	2	MS	SKJ	01/28/10 17:41	100128-3	942665
7440-39-3	Barium	167000	ug/Kg	*	120	601	601	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-41-7	Beryllium J-,16a	0.708	mg/kg	N	0.0238	0.119	0.119	2	MS	RMJ	02/02/10 18:07	100201-4	942665
7440-43-9	Cadmium	157	ug/Kg	J	120	601	601	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-70-2	Calcium J-,16a	2650000	ug/Kg	N	9620	30000	30000	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-47-3	Chromium J-,16a	15700	ug/Kg	*N	180	601	601	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-48-4	Cobalt	5240	ug/Kg	*	180	601	601	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-50-8	Copper	10400	ug/Kg		361	1200	1200	1	P	HSC	01/29/10 11:46	012910-1	942675
7439-89-6	Iron	11900000	ug/Kg		9620	30000	30000	1	P	HSC	01/29/10 11:46	012910-1	942675
7439-92-1	Lead	19400	ug/Kg		300	1200	1200	1	P	HSC	01/29/10 11:46	012910-1	942675
7439-95-4	Magnesium	1750000	ug/Kg	N	10200	36100	36100	1	P	HSC	01/29/10 11:46	012910-1	942675
7439-96-5	Manganese	433000	ug/Kg		240	1200	1200	1	P	HSC	01/29/10 11:46	012910-1	942675
7439-97-6	Mercury	18.1	ug/kg		4.8	14.1	14.1	1	AV	JXL	01/28/10 10:29	012810S1-6	943320
7440-02-0	Nickel	9.08	mg/kg		0.119	0.476	0.476	2	MS	RMJ	02/06/10 01:59	100205-5	942665
7440-09-7	Potassium	1850000	ug/Kg	N	7690	30000	30000	1	P	HSC	01/29/10 11:46	012910-1	942675
7782-49-2	Selenium	1.19	mg/kg	U	0.595	1.19	1.19	2	MS	SKJ	01/28/10 17:41	100128-3	942665
7440-22-4	Silver	601	ug/Kg	U	120	601	601	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-23-5	Sodium U,14d	79300	ug/Kg		8410	30000	30000	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-28-0	Thallium	0.182	mg/kg	J	0.0714	0.238	0.238	2	MS	SKJ	01/28/10 17:41	100128-3	942665
7440-61-1	Uranium	4.81	mg/kg	*	0.0157	0.0476	0.0476	2	MS	SKJ	01/28/10 04:24	100127-2	942665
7440-62-2	Vanadium	23800	ug/Kg		120	601	601	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-66-6	Zinc	30000	ug/Kg		397	1200	1200	1	P	HSC	01/29/10 11:46	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.523	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.518	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.529	g	30	mL	01/27/10	TXB3

AMF  
2/23/10

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921006

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7173

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 90.2

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	16100000	ug/Kg	*	7510	22100	22100	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-36-0	Antimony	1100	ug/Kg	U	364	1100	1100	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-38-2	Arsenic	2.08	mg/kg		0.22	1.1	1.1	2	MS	SKJ	01/28/10 17:47	100128-3	942665
7440-39-3	Barium	178000	ug/Kg	*	110	552	552	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-41-7	Beryllium J-,16a	1	mg/kg	N	0.022	0.11	0.11	2	MS	RMJ	02/02/10 18:10	100201-4	942665
7440-43-9	Cadmium	552	ug/Kg	U	110	552	552	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-70-2	Calcium J-,16a	2370000	ug/Kg	N	8830	27600	27600	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-47-3	Chromium J-,16a	16300	ug/Kg	*N	166	552	552	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-48-4	Cobalt	4280	ug/Kg	*	166	552	552	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-50-8	Copper	8190	ug/Kg		331	1100	1100	1	P	HSC	01/29/10 11:49	012910-1	942675
7439-89-6	Iron	13100000	ug/Kg		8830	27600	27600	1	P	HSC	01/29/10 11:49	012910-1	942675
7439-92-1	Lead	11900	ug/Kg		276	1100	1100	1	P	HSC	01/29/10 11:49	012910-1	942675
7439-95-4	Magnesium	2080000	ug/Kg	N	9390	33100	33100	1	P	HSC	01/29/10 11:49	012910-1	942675
7439-96-5	Manganese	254000	ug/Kg		221	1100	1100	1	P	HSC	01/29/10 11:49	012910-1	942675
7439-97-6	Mercury	20.4	ug/kg		4.45	13.1	13.1	1	AV	JXL	01/28/10 10:35	012810S1-6	943320
7440-02-0	Nickel	10.7	mg/kg		0.11	0.439	0.439	2	MS	RMJ	02/06/10 02:02	100205-5	942665
7440-09-7	Potassium	1970000	ug/Kg	N	7070	27600	27600	1	P	HSC	01/29/10 11:49	012910-1	942675
7782-49-2	Selenium	1.1	mg/kg	U	0.549	1.1	1.1	2	MS	SKJ	01/28/10 17:47	100128-3	942665
7440-22-4	Silver	552	ug/Kg	U	110	552	552	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-23-5	Sodium U,14d	127000	ug/Kg		7730	27600	27600	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-28-0	Thallium	0.231	mg/kg		0.0659	0.22	0.22	2	MS	SKJ	01/28/10 17:47	100128-3	942665
7440-61-1	Uranium	1.08	mg/kg	*	0.0145	0.0439	0.0439	2	MS	SKJ	01/28/10 04:43	100127-2	942665
7440-62-2	Vanadium	25200	ug/Kg		110	552	552	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-66-6	Zinc	25300	ug/Kg		364	1100	1100	1	P	HSC	01/29/10 11:49	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.505	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.502	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.508	g	30	mL	01/27/10	TXB3

AMF  
2/23/10

**METALS**  
-1-  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921007

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7175

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 90.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9680000	ug/Kg	*	7480	22000	22000	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-36-0	Antimony	1100	ug/Kg	U	363	1100	1100	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-38-2	Arsenic	1.89	mg/kg		0.221	1.1	1.1	2	MS	SKJ	01/28/10 17:53	100128-3	942665
7440-39-3	Barium	106000	ug/Kg	*	110	550	550	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-41-7	Beryllium J-,I6a	0.649	mg/kg	N	0.0221	0.11	0.11	2	MS	RMJ	02/02/10 18:13	100201-4	942665
7440-43-9	Cadmium	550	ug/Kg	U	110	550	550	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-70-2	Calcium J-,I6a	1500000	ug/Kg	N	8810	27500	27500	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-47-3	Chromium J-,I6a	24200	ug/Kg	*N	165	550	550	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-48-4	Cobalt	5910	ug/Kg	*	165	550	550	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-50-8	Copper	6200	ug/Kg		330	1100	1100	1	P	HSC	01/29/10 11:53	012910-1	942675
7439-89-6	Iron	14300000	ug/Kg		8810	27500	27500	1	P	HSC	01/29/10 11:53	012910-1	942675
7439-92-1	Lead	12500	ug/Kg		275	1100	1100	1	P	HSC	01/29/10 11:53	012910-1	942675
7439-95-4	Magnesium	1730000	ug/Kg	N	9360	33000	33000	1	P	HSC	01/29/10 11:53	012910-1	942675
7439-96-5	Manganese	477000	ug/Kg		220	1100	1100	1	P	HSC	01/29/10 11:53	012910-1	942675
7439-97-6	Mercury	15.5	ug/kg		4.05	11.9	11.9	1	AV	JXL1	01/28/10 10:37	01281051-6	943320
7440-02-0	Nickel	8.81	mg/kg		0.11	0.441	0.441	2	MS	RMJ	02/06/10 02:04	100205-5	942665
7440-09-7	Potassium	1760000	ug/Kg	N	7040	27500	27500	1	P	HSC	01/29/10 11:53	012910-1	942675
7782-49-2	Selenium	1.1	mg/kg	U	0.551	1.1	1.1	2	MS	SKJ	01/28/10 17:53	100128-3	942665
7440-22-4	Silver	550	ug/Kg	U	110	550	550	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-23-5	Sodium	237000	ug/Kg		7700	27500	27500	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-28-0	Thallium	0.185	mg/kg	J	0.0662	0.221	0.221	2	MS	SKJ	01/28/10 17:53	100128-3	942665
7440-61-1	Uranium	0.668	mg/kg	*	0.0146	0.0441	0.0441	2	MS	SKJ	01/28/10 04:49	100127-2	942665
7440-62-2	Vanadium	21400	ug/Kg		110	550	550	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-66-6	Zinc	40000	ug/Kg		363	1100	1100	1	P	HSC	01/29/10 11:53	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.5	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.501	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.555	g	30	mL	01/27/10	TXB3

AMF  
2/23/10

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921008

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7172

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 79

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10500000	ug/Kg	*	8600	25300	25300	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-36-0	Antimony U,14b	653	ug/Kg	J	417	1260	1260	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-38-2	Arsenic	1.96	mg/kg		0.249	1.25	1.25	2	MS	SKJ	01/28/10 18:12	100128-3	942665
7440-39-3	Barium	155000	ug/Kg	*	126	632	632	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-41-7	Beryllium J-,16a	0.898	mg/kg	N	0.0249	0.125	0.125	2	MS	RMJ	02/02/10 18:16	100201-4	942665
7440-43-9	Cadmium	174	ug/Kg	J	126	632	632	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-70-2	Calcium J-,16a	2410000	ug/Kg	N	10100	31600	31600	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-47-3	Chromium J-,16a	10800	ug/Kg	*N	190	632	632	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-48-4	Cobalt	4220	ug/Kg	*	190	632	632	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-50-8	Copper	7600	ug/Kg		379	1260	1260	1	P	HSC	01/29/10 11:57	012910-1	942675
7439-89-6	Iron	11000000	ug/Kg		10100	31600	31600	1	P	HSC	01/29/10 11:57	012910-1	942675
7439-92-1	Lead	17200	ug/Kg		316	1260	1260	1	P	HSC	01/29/10 11:57	012910-1	942675
7439-95-4	Magnesium	1680000	ug/Kg	N	10800	37900	37900	1	P	HSC	01/29/10 11:57	012910-1	942675
7439-96-5	Manganese	319000	ug/Kg		253	1260	1260	1	P	HSC	01/29/10 11:57	012910-1	942675
7439-97-6	Mercury	45.3	ug/kg		5.17	15.2	15.2	1	AV	JXL1	01/28/10 10:39	012810S1-6	943320
7440-02-0	Nickel	8.96	mg/kg		0.125	0.499	0.499	2	MS	RMJ	02/06/10 02:07	100205-5	942665
7440-09-7	Potassium	1710000	ug/Kg	N	8090	31600	31600	1	P	HSC	01/29/10 11:57	012910-1	942675
7782-49-2	Selenium	1.25	mg/kg	U	0.624	1.25	1.25	2	MS	SKJ	01/28/10 18:12	100128-3	942665
7440-22-4	Silver	196	ug/Kg	J	126	632	632	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-23-5	Sodium U,14d	86700	ug/Kg		8850	31600	31600	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-28-0	Thallium	0.183	mg/kg	J	0.0748	0.249	0.249	2	MS	SKJ	01/28/10 18:12	100128-3	942665
7440-61-1	Uranium	3.51	mg/kg	*	0.0165	0.0499	0.0499	2	MS	SKJ	01/28/10 04:55	100127-2	942665
7440-62-2	Vanadium	22500	ug/Kg		126	632	632	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-66-6	Zinc	33300	ug/Kg		417	1260	1260	1	P	HSC	01/29/10 11:57	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.509	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.502	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.501	g	30	mL	01/27/10	TXB3

AMF  
2/23/10

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921009

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7218

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 90.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	15200000	ug/Kg	*	7400	21800	21800	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-36-0	Antimony	1090	ug/Kg	U	359	1090	1090	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-38-2	Arsenic	1.96	mg/kg		0.213	1.06	1.06	2	MS	SKJ	01/28/10 18:18	100128-3	942665
7440-39-3	Barium	199000	ug/Kg	*	109	544	544	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-41-7	Beryllium J-,I6a	1.02	mg/kg	N	0.0213	0.106	0.106	2	MS	RMJ	02/02/10 18:19	100201-4	942665
7440-43-9	Cadmium	544	ug/Kg	U	109	544	544	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-70-2	Calcium J-,I6a	2350000	ug/Kg	N	8710	27200	27200	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-47-3	Chromium J-,I6a	17500	ug/Kg	*N	163	544	544	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-48-4	Cobalt	5210	ug/Kg	*	163	544	544	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-50-8	Copper	8540	ug/Kg		327	1090	1090	1	P	HSC	01/29/10 12:00	012910-1	942675
7439-89-6	Iron	13800000	ug/Kg		8710	27200	27200	1	P	HSC	01/29/10 12:00	012910-1	942675
7439-92-1	Lead	12100	ug/Kg		272	1090	1090	1	P	HSC	01/29/10 12:00	012910-1	942675
7439-95-4	Magnesium	2230000	ug/Kg	N	9250	32700	32700	1	P	HSC	01/29/10 12:00	012910-1	942675
7439-96-5	Manganese	295000	ug/Kg		218	1090	1090	1	P	HSC	01/29/10 12:00	012910-1	942675
7439-97-6	Mercury	17.5	ug/kg		4.42	13	13	1	AV	JXL1	01/28/10 10:41	012810S1-6	943320
7440-02-0	Nickel	11.6	mg/kg		0.106	0.425	0.425	2	MS	RMJ	02/06/10 02:10	100205-5	942665
7440-09-7	Potassium	1940000	ug/Kg	N	6970	27200	27200	1	P	HSC	01/29/10 12:00	012910-1	942675
7782-49-2	Selenium	1.06	mg/kg	U	0.532	1.06	1.06	2	MS	SKJ	01/28/10 18:18	100128-3	942665
7440-22-4	Silver	544	ug/Kg	U	109	544	544	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-23-5	Sodium U,I4d	146000	ug/Kg		7620	27200	27200	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-28-0	Thallium	0.219	mg/kg		0.0638	0.213	0.213	2	MS	SKJ	01/28/10 18:18	100128-3	942665
7440-61-1	Uranium	1.12	mg/kg	*	0.014	0.0425	0.0425	2	MS	SKJ	01/28/10 05:01	100127-2	942665
7440-62-2	Vanadium	27200	ug/Kg		109	544	544	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-66-6	Zinc	27100	ug/Kg		359	1090	1090	1	P	HSC	01/29/10 12:00	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.522	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.51	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.513	g	30	mL	01/27/10	TXB3

AMF  
2/23/10

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921010

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7223

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10900000	ug/Kg	*	7530	22200	22200	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-36-0	Antimony U,14b	731	ug/Kg	J	365	1110	1110	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-38-2	Arsenic	2.04	mg/kg		0.218	1.09	1.09	2	MS	SKJ	01/28/10 18:24	100128-3	942665
7440-39-3	Barium	129000	ug/Kg	*	111	554	554	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-41-7	Beryllium J-,16a	0.684	mg/kg	N	0.0218	0.109	0.109	2	MS	RMJ	02/02/10 18:22	100201-4	942665
7440-43-9	Cadmium	145	ug/Kg	J	111	554	554	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-70-2	Calcium J-,16a	2040000	ug/Kg	N	8860	27700	27700	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-47-3	Chromium J-,16a	21200	ug/Kg	*N	166	554	554	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-48-4	Cobalt	5920	ug/Kg	*	166	554	554	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-50-8	Copper	16900	ug/Kg		332	1110	1110	1	P	HSC	01/29/10 12:04	012910-1	942675
7439-89-6	Iron	13900000	ug/Kg		8860	27700	27700	1	P	HSC	01/29/10 12:04	012910-1	942675
7439-92-1	Lead	12900	ug/Kg		277	1110	1110	1	P	HSC	01/29/10 12:04	012910-1	942675
7439-95-4	Magnesium	1990000	ug/Kg	N	9410	33200	33200	1	P	HSC	01/29/10 12:04	012910-1	942675
7439-96-5	Manganese	447000	ug/Kg		222	1110	1110	1	P	HSC	01/29/10 12:04	012910-1	942675
7439-97-6	Mercury	139	ug/kg		4.34	12.8	12.8	1	AV	JXL1	01/28/10 10:43	012810S1-6	943320
7440-02-0	Nickel	9.54	mg/kg		0.109	0.435	0.435	2	MS	RMJ	02/06/10 02:12	100205-5	942665
7440-09-7	Potassium	1610000	ug/Kg	N	7090	27700	27700	1	P	HSC	01/29/10 12:04	012910-1	942675
7782-49-2	Selenium	1.09	mg/kg	U	0.544	1.09	1.09	2	MS	SKJ	01/28/10 18:24	100128-3	942665
7440-22-4	Silver	3300	ug/Kg		111	554	554	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-23-5	Sodium U,14d	77000	ug/Kg		7750	27700	27700	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-28-0	Thallium	0.231	mg/kg		0.0653	0.218	0.218	2	MS	SKJ	01/28/10 18:24	100128-3	942665
7440-61-1	Uranium	0.569	mg/kg	*	0.0144	0.0435	0.0435	2	MS	SKJ	01/28/10 05:08	100127-2	942665
7440-62-2	Vanadium	26700	ug/Kg		111	554	554	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-66-6	Zinc	43400	ug/Kg		365	1110	1110	1	P	HSC	01/29/10 12:04	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.515	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.506	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.527	g	30	mL	01/27/10	TXB3

AMF  
2/23/10

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244922001

BASIS: As Received

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7229

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: WATER

%SOLIDS: 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	405	ug/L		68	200	200	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	BAJ	01/28/10 08:52	100127-5	945922
7440-38-2	Arsenic	30	ug/L	U	5	30	30	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-39-3	Barium	4.81	ug/L	J	1	5	5	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	BAJ	01/25/10 12:05	100125-4	942514
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	BAJ	01/24/10 18:26	100124-3	942514
7440-70-2	Calcium	113	ug/L	J	50	200	200	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-47-3	Chromium	5	ug/L	U	1	5	5	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	01/26/10 18:47	012610-1	942466
7439-89-6	Iron	234	ug/L		30	100	100	1	P	HSC	01/26/10 18:47	012610-1	942466
7439-92-1	Lead	0.557	ug/L	J	0.5	2	2	1	MS	BAJ	01/24/10 18:26	100124-3	942514
7439-95-4	Magnesium	128	ug/L	J	85	300	300	1	P	HSC	01/26/10 18:47	012610-1	942466
7439-96-5	Manganese	4.36	ug/L	J	1	5	5	1	MS	BAJ	01/24/10 18:26	100124-3	942514
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	JXL1	01/20/10 10:41	012010W1-6	943087
7440-02-0	Nickel	5	ug/L	U	1.5	5	5	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-09-7	Potassium	291	ug/L		50	150	150	1	P	HSC	01/26/10 18:47	012610-1	942466
7782-49-2	Selenium	30	ug/L	U	5	30	30	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-23-5	Sodium	323	ug/L		100	300	300	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-28-0	Thallium	1	ug/L	U	0.3	1	1	1	MS	BAJ	01/24/10 18:26	100124-3	942514
7440-61-1	Uranium	0.20	ug/L	U	0.05	0.2	0.2	1	MS	SKJ	01/25/10 12:48	100125-2	942514
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-66-6	Zinc	10	ug/L	U	3.3	10	10	1	P	HSC	01/26/10 18:47	012610-1	942466

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942466	942449	SW846 3005A	50	mL	50	mL	01/19/10	FGA
942514	942490	SW846 3005A	50	mL	50	mL	01/19/10	FGA
943087	943086	SW846 7470A Prep	20	mL	20	mL	01/19/10	TXB3
945922	945920	SW846 3005A	25	mL	25	mL	01/27/10	AXG2

AMF  
2/23/10



## DATA VALIDATION COVER SHEET

5120-1

## Data Validation Cover Sheet

Records Use only



## Section I.

REQUEST NUMBER: 10-1288 VALIDATION DATE: 2/23/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Allison Felix ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

- ☐ TPH-GRO      ☐ HIGH EXPLOSIVES      ☐ DIOXIN FURANS      ☐ LCMSMS PERCHLORATES  
☐ TPH-DRO      ☐ METALS      ☐ PCB CONGENERS      ☐ ORGANOCHLORINE  
☒ GENERAL CHEMISTRY      ☐ RADIOCHEMISTRY      ☐ LCMSMS HIGH EXPLOSIVES      PESTICIDES/POLYCHLORINATED BIPHENYLS  
☐ OTHER (DESCRIBE): Total CN only

## Section II. Completeness Check

- | YES                                 | NO                       | N/A                                 | (CHECK ONE)                 | YES                                 | NO                       | N/A                                 | (CHECK ONE)              |
|-------------------------------------|--------------------------|-------------------------------------|-----------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 1. CHAIN-OF-CUSTODY FORM(S) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 6. RAW/BSS DATA          |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 2. CASE NARRATIVE           | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 7. QUALITY CONTROL FORMS |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 3. SAMPLE RESULT FORMS      | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | 8. QUANTITATION REPORTS  |
| <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 4. SAMPLE CHROMATOGRAMS     | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 9. TICS FORMS            |
| <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 5. STANDARD CHROMATOGRAMS   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 10. TICS MASS SPECTRA    |

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

- It should be noted that the matrix QC analyses associated with soil samples RE15-10-7163 and -7162 and aqueous sample -7229 were performed on LANL samples from other RNs. No sample results were qualified. The analyses included multiple matrix QC samples. For each batch, the QC sample most comparable to the matrix of this RN was selected for data validation purposes, and the extraneous QC samples were not evaluated.

Reviewed by: Mary Donovan Level: I Date: 02/23/10


VALIDATOR'S SIGNATURE:

A handwritten signature in cursive script that reads "Allison Felix".


DATE: 2/23/10

Form 5120-1, Revision 0.0


LOS ALAMOS  
Environmental Restoration Project

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2  General Chemistry Analytical Data Validation Checklist	Records Use only   EST. 1942

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

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
<b>5120-2</b>  <b>General Chemistry Analytical Data Validation Checklist</b>	Records Use only  

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

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
<b>5120-2</b>  <b>General Chemistry Analytical Data Validation Checklist</b>	Records Use only  

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

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

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7163  
Sample ID: 244921001  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 6.57%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	71.4	262	ug/kg	1	AXC2	01/18/10	1611	942457	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/18/10	1418	942455

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7162  
Sample ID: 244921002  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 9.75%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	J	205	72.4	266	ug/kg	1	AXC2	01/18/10	1611	942457	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/18/10	1418	942455

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7161  
Sample ID: 244921003  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 10.9%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	76.3	281	ug/kg	1	AXC2	01/25/10	1217	942461	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/22/10	1509	942460

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

AMF  
2/23/10

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

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7160  
Sample ID: 244921004  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 20%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	73.3	269	ug/kg	1	AXC2	01/25/10	1221	942461	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/22/10	1509	942460

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	



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

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7174  
Sample ID: 244921005  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 19.7%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	J	291	81.4	299	ug/kg	1	AXC2	01/25/10	1228	942461	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/22/10	1509	942460

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7173  
Sample ID: 244921006  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 9.8%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	75.4	277	ug/kg	1	AXC2	01/25/10	1229	942461	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/22/10	1509	942460

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

AMF  
2/23/10

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### Certificate of Analysis

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

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7175  
Sample ID: 244921007  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 9.33%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	72.1	265	ug/kg	1	AXC2	01/25/10	1230	942461	1

#### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/22/10	1509	942460

#### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7172  
Sample ID: 244921008  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 21.2%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total		316	78.5	289	ug/kg	1	AXC2	01/25/10	1231	942461	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/22/10	1509	942460

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7218  
Sample ID: 244921009  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 9.93%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	74.0	272	ug/kg	1	AXC2	01/25/10	1231	942461	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/22/10	1509	942460

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

AMF  
2/23/10

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

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7223  
Sample ID: 244921010  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 10.8%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	70.6	259	ug/kg	1	AXC2	01/25/10	1232	942461	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/22/10	1509	942460

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

**Certificate of Analysis**

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

Report Date: February 4, 2010

Client SDG: 10-1288-1

Client Sample ID: RE15-10-7229  
Sample ID: 244922001  
Matrix: W  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "As Received"</i>											
Cyanide, Total	U	ND	1.66	5.00	ug/L	1	AXC2	01/22/10	1034	942459	1

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/21/10	1600	942458

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 9012A	

Friday, January 15, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1288

LOS ALAMOS

REQUEST NUMBER: 10-1288

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/14/2010

General Engineering Laboratories, Inc.,  
Charleston, SC:

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

244921/, 244922/.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-7163	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7162	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7161	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7160	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7174	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7173	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7175	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7172	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7218	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7223	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7229	1	POLY	METALS+U-GEL	Nitric Acid	W
RE15-10-7229	1	POLY	SW-846:8850	Ice	W
RE15-10-7229	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature



Friday, January 15, 2010

**LOS ALAMOS  
NATIONAL LABORATORY**

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number: 10-1288

Per Agreement Number: 126310011

Project Cost Code: MR3A05529E00

REQUEST NUMBER: 10-1288

Please analyse the enclosed samples  
according to the schedule indicated:

SHIP DATE: 1/15/2010

TURNAROUND/REPORT DUE: 2/14/2010

TURNAROUND REQ'D: 30 Days

RAD SCREENING: Yes, Below Background

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SWI-948-8020					
1		1	RE15-10-7160	R	1/12/2010	
1		1	RE15-10-7161	R	1/12/2010	
1		1	RE15-10-7162	R	1/12/2010	
1		1	RE15-10-7163	R	1/12/2010	
1		1	RE15-10-7172	R	1/12/2010	
1		1	RE15-10-7173	R	1/12/2010	
1		1	RE15-10-7174	R	1/12/2010	
1		1	RE15-10-7175	R	1/12/2010	
1		1	RE15-10-7218	R	1/12/2010	

Friday, January 15, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846.5020	1	RE15-10-7223	R	1/12/2010	
		1	RE15-10-7229	W	1/12/2010	
	SW-846.6950	1	RE15-10-7160	R	1/12/2010	
		1	RE15-10-7161	R	1/12/2010	
		1	RE15-10-7162	R	1/12/2010	
		1	RE15-10-7163	R	1/12/2010	
		1	RE15-10-7172	R	1/12/2010	
		1	RE15-10-7173	R	1/12/2010	
		1	RE15-10-7174	R	1/12/2010	
		1	RE15-10-7175	R	1/12/2010	
		1	RE15-10-7218	R	1/12/2010	
		1	RE15-10-7223	R	1/12/2010	
	SW-846.7470A	1	RE15-10-7229	W	1/12/2010	
	SW-846.7471A	1	RE15-10-7229	W	1/12/2010	
		1	RE15-10-7160	R	1/12/2010	
		1	RE15-10-7161	R	1/12/2010	
		1	RE15-10-7162	R	1/12/2010	
		1	RE15-10-7163	R	1/12/2010	
		1	RE15-10-7172	R	1/12/2010	
		1	RE15-10-7173	R	1/12/2010	
		1	RE15-10-7174	R	1/12/2010	
		1	RE15-10-7175	R	1/12/2010	
		1	RE15-10-7218	R	1/12/2010	
		1	RE15-10-7223	R	1/12/2010	
	SW-846.9012A	1	RE15-10-7160	R	1/12/2010	
		1	RE15-10-7161	R	1/12/2010	
		1	RE15-10-7162	R	1/12/2010	
		1	RE15-10-7163	R	1/12/2010	

Page 3 of 3  
REQUEST NUMBER: 10-1288

Friday, January 15, 2010

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846-9012A	1	RE15-10-7172	R	1/12/2010	
		1	RE15-10-7173	R	1/12/2010	
		1	RE15-10-7174	R	1/12/2010	
		1	RE15-10-7175	R	1/12/2010	
		1	RE15-10-7218	R	1/12/2010	
		1	RE15-10-7223	R	1/12/2010	
		1	RE15-10-7229	W	1/12/2010	

Final Page of REQUEST NUMBER 10-1288



January 19, 2010

[www.gel.com](http://www.gel.com)

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

Re: LANL ER Project  
Work Orders: 244921 244922  
SDG: 10-1288

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on January 16, 2010, and analyzed for General Chemistry, Metals and Perchlorates by LCMSMS. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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

Sincerely,

Valerie Davis  
Project Manager

Purchase Order: 72733-001-09  
Chain of Custody: 10-1288  
Enclosures

**Los Alamos National Laboratory (72733-001-09)**  
**LANL ER Project**  
**Work Order #: 244921 and 244922**  
**SDG: 10-1288**

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# Case Narrative



**Case Narrative for  
Los Alamos National Laboratory (72733-001-09)  
LANL ER Project  
Workorder #: 244921 and 244922  
SDG # : 10-1288**

**January 19, 2010**

**Laboratory Identification:**

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

**Summary**

**Sample receipt** The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on January 16, 2010 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. Shipping container temperature was within specification (0 - 6C).

**Sample Identification** The laboratory received the following samples:

<b><u>Laboratory ID</u></b>	<b><u>Client ID</u></b>
244921001	RE15-10-7163
244921002	RE15-10-7162
244921003	RE15-10-7161
244921004	RE15-10-7160
244921005	RE15-10-7174
244921006	RE15-10-7173
244921007	RE15-10-7175
244921008	RE15-10-7172
244921009	RE15-10-7218
244921010	RE15-10-7223
244922001	RE15-10-7229

**Case Narrative**

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

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

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

  
Valerie Davis

Project Manager

**List of current GEL Certifications as of 19 January 2010**

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

# **Chain of Custody and Supporting Documentation**

Friday, January 15, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1288

**LOS ALAMOS**

REQUEST NUMBER: 10-1288

**NATIONAL LABORATORY**

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/14/2010

General Engineering Laboratories, Inc.,  
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

244921%, 244922%.

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-7163	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7162	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7161	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7160	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7174	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7173	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7175	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7172	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7218	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7223	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7229	1	POLY	METALS+U-GEL	Nitric Acid	W
RE15-10-7229	1	POLY	SW-846:6850	Ice	W
RE15-10-7229	1	POLY	TCN	Sodium Hydroxide	W

Relinquished By:

Date Time

Received By:

Date Time

*[Signature]* 1/15/10 1400

Greg Tyler *[Signature]* 1-16-10 0855

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date Time

Remarks:

Printed Name

Signature

Friday, January 15, 2010

**LOS ALAMOS**  
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

Please analyse the enclosed samples  
according to the schedule indicated:

**SHIP DATE: 1/15/2010**

**TURNAROUND/REPORT DUE: 2/14/2010**

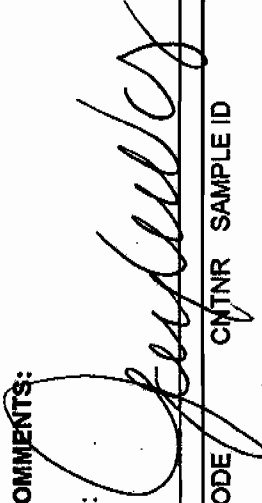
**TURNAROUND REQ'D: 30 Days**

**RAD SCREENING: Yes, Below Background**

**LAB REQUEST COMMENTS:**

LANL ER SMO CONTACT:

Signature:



These Samples are on:  
LANL Request Number: 10-1288  
Per Agreement Number: 126310011  
Project Cost Code: MR3A05529E00

Page 1 of 3  
REQUEST NUMBER: 10-1288

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6020	1	RE15-10-7160	R	1/12/2010	
		1	RE15-10-7161	R	1/12/2010	
		1	RE15-10-7162	R	1/12/2010	
		1	RE15-10-7163	R	1/12/2010	
		1	RE15-10-7172	R	1/12/2010	
		1	RE15-10-7173	R	1/12/2010	
		1	RE15-10-7174	R	1/12/2010	
		1	RE15-10-7175	R	1/12/2010	
		1	RE15-10-7218	R	1/12/2010	

Friday, January 15, 2010

Page 2 of 3

REQUEST NUMBER: 10-1288

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6020	1	RE15-10-7223	R	1/12/2010	
		1	RE15-10-7229	W	1/12/2010	
	SW-846:6850	1	RE15-10-7160	R	1/12/2010	
		1	RE15-10-7161	R	1/12/2010	
		1	RE15-10-7162	R	1/12/2010	
		1	RE15-10-7163	R	1/12/2010	
		1	RE15-10-7172	R	1/12/2010	
		1	RE15-10-7173	R	1/12/2010	
		1	RE15-10-7174	R	1/12/2010	
		1	RE15-10-7175	R	1/12/2010	
		1	RE15-10-7218	R	1/12/2010	
		1	RE15-10-7223	R	1/12/2010	
	SW-846:7470A	1	RE15-10-7229	W	1/12/2010	
	SW-846:7471A	1	RE15-10-7229	W	1/12/2010	
		1	RE15-10-7160	R	1/12/2010	
		1	RE15-10-7161	R	1/12/2010	
		1	RE15-10-7162	R	1/12/2010	
		1	RE15-10-7163	R	1/12/2010	
		1	RE15-10-7172	R	1/12/2010	
		1	RE15-10-7173	R	1/12/2010	
		1	RE15-10-7174	R	1/12/2010	
		1	RE15-10-7175	R	1/12/2010	
		1	RE15-10-7218	R	1/12/2010	
		1	RE15-10-7223	R	1/12/2010	
	SW-846:9012A	1	RE15-10-7160	R	1/12/2010	
		1	RE15-10-7161	R	1/12/2010	
		1	RE15-10-7162	R	1/12/2010	
		1	RE15-10-7163	R	1/12/2010	

Friday, January 15, 2010

Page 3 of 3

REQUEST NUMBER: 10-1288

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	RE15-10-7172	R	1/12/2010	
		1	RE15-10-7173	R	1/12/2010	
		1	RE15-10-7174	R	1/12/2010	
		1	RE15-10-7175	R	1/12/2010	
		1	RE15-10-7218	R	1/12/2010	
		1	RE15-10-7223	R	1/12/2010	
		1	RE15-10-7229	W	1/12/2010	

Final Page of REQUEST NUMBER 10-1288



**SAMPLE RECEIPT & REVIEW FORM**

Client: LANL		SDG/ARCOC/Work Order: 10-1288	
Received By: Greg Tyler		Date Received: 1/16/10	
Suspected Hazard Information	Yes	No	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.
COC/Samples marked as radioactive?		X	Maximum Counts Observed*: 60cpm
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

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

**Comments:**
**Fed Ex Tracking Numbers:**

7209 7849 5335 1C    7209 7849 5405 5C  
 7209 7849 5265 3C    7209 7849 5302 12C  
 7209 7849 5368 3C    7209 7849 5313 13C  
 7209 7849 5416 3C    7209 7849 5298 13C  
 7209 7849 5357 4C  
 7209 7849 5380 4C  
 7209 7849 5390 4C  
 7209 7849 5346 5C

PM (or PMA) review: Initials

Date

1/18/10

ORIGIN ID: SARA (505) 685-8858  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGO BLDG 1237 DPU 03  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 15 JAN 10  
ACTWT: 55.0 LB MAN  
CAD: 0014176/CAFE2449  
BILL SENDER

JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGO BLDG 1237 DPU 03  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 15 JAN 10  
ACTWT: 55.0 LB MAN  
CAD: 0014176/CAFE2449  
BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
(843) 556-8171  
REF: 6801AHR3A03529E00

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
(843) 556-8171  
REF: 6801AHR3A03529E00

3<sup>c</sup>



FedEx  
Express



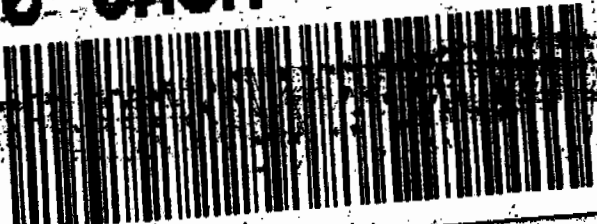
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Express



1 of 2  
TRKH 7209 7849 5335  
0201  
NN MASTER NN

### SATURDAY ### A1  
PRIORITY OVERNIGHT

X0 CHSA



1 of 3  
TRKH 7209 7849 5265  
0201  
NN MASTER NN

### SATURDAY ### A1  
PRIORITY OVERNIGHT

X0 CHSA



VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 15 JAN 10  
ACTWT: 55.0 LB MAN  
CAD: 0014176/CAFE2449  
BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD  
LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 15 JAN 10  
ACTWT: 55.0 LB MAN  
CAD: 0014176/CAFE2449  
BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
(843) 556-8171  
REF: 6801AHR3A03529E00

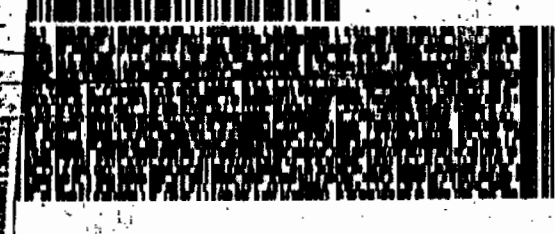
VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407  
(843) 556-8171  
REF: 6801AHR3A03529E00

3<sup>c</sup>



FedEx  
Express



FedEx  
Express



2 of 2  
TRKH 7209 7849 5368  
0201  
NN MASTER NN

### SATURDAY ### A1  
PRIORITY OVERNIGHT

X0 CHSA

29407  
SC-US  
CHS

TRKH 7209 7849 5416  
0201

### SATURDAY ### A1  
PRIORITY OVERNIGHT

X0 CHSA

29407  
SC-US  
CHS

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

SHIP DATE: 15JAN10  
ACTWGT: 58.0 LB MAN  
CAD: 0014176/CAFE2449

BILL SENDER

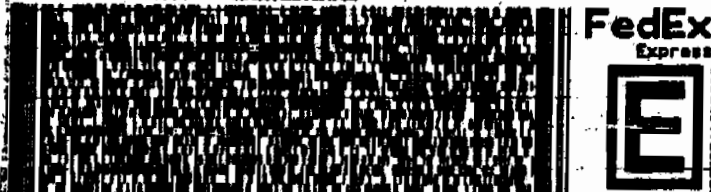
VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

REF: 6801AMR3A05529E00

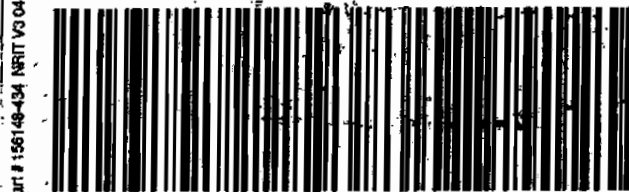
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1 of 2 TRK# 7209 7849 5357  
0201  
RM MASTER RM  
### SATURDAY ### A1  
PRIORITY OVERNIGHT

X0 CHSA

29407  
SC-US  
CHS



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

SHIP DATE: 15JAN10  
ACTWGT: 58.0 LB MAN  
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

REF: 6801AMR3A05529E00

4°



2 of 2 TRK# 7209 7849 5390  
0201  
### SATURDAY ### A1  
PRIORITY OVERNIGHT

X0 CHSA

29407  
SC-US  
CHS

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

SHIP DATE: 15JAN10  
ACTWGT: 58.0 LB MAN  
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171

REF: 6801AMR3A05529E00

4°



TRK# 7209 7849 5380  
0201  
### SATURDAY ### A1  
PRIORITY OVERNIGHT

X0 CHSA

29407  
SC-US  
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ORIGIN ID: SAFA (505) 665-9968  
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PSN 7209 7849 5346  
0201  
2 of 2 TRK# 7209 7849 5335  
0201  
### SATURDAY ### A1  
PRIORITY OVERNIGHT

X0 CHSA

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SC-US  
CHS

ORIGIN ID: SAFA (505) 665-9968  
JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGS BLDG 1237 DPU 63

LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 15JAN10  
ACTMGT: 68.0 LB MAN  
CRD: 0014176/CAFE2449

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JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGS BLDG 1237 DPU 63

LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 15JAN10  
ACTMGT: 68.0 LB MAN  
CRD: 0014176/CAFE2449

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JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGS BLDG 1237 DPU 63

LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 16JAN10  
ACTMGT: 68.0 LB MAN  
CRD: 0014176/CAFE2449

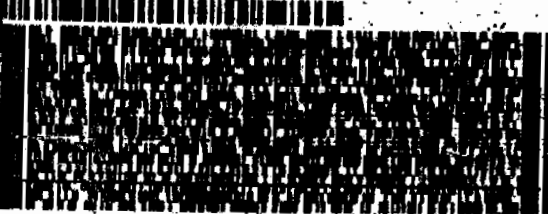
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0201  
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CHS



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JOYLENE VALDEZ  
LOS ALAMOS NATL LAB  
TAGS BLDG 1237 DPU 63

LOS ALAMOS, NM 87545  
UNITED STATES US

SHIP DATE: 16JAN10  
ACTMGT: 68.0 LB MAN  
CRD: 0014176/CAFE2449

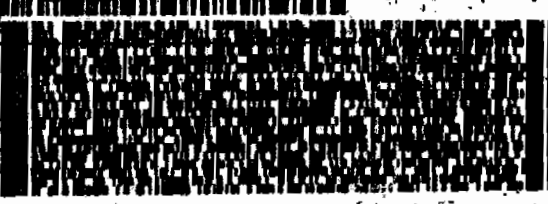
BILL SENDER

VALERIE DAVIS  
GENERAL ENGINEERING LAB  
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171  
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# **Data Review Qualifier Flag Definition Sheet**

## Data Review Qualifier Definitions

Qualifier    Explanation

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

# LC/MS/MS PERCHLORATE ANALYSIS

**Perchlorate by LC/MSMS  
Los Alamos National Laboratory (LANL)  
SDG 10-1288**

**Method/Analysis Information**

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

Analytical Method: SW846 6850 Modified

Prep Method: SW846 6850 Modified

Analytical Batch Number: 944723

Prep Batch Number: 944722

**Sample Analysis**

<b>Sample ID</b>	<b>Client ID</b>
244921001	RE15-10-7163
244921002	RE15-10-7162
244921003	RE15-10-7161
244921004	RE15-10-7160
244921005	RE15-10-7174
244921006	RE15-10-7173
244921007	RE15-10-7175
244921008	RE15-10-7172
244921009	RE15-10-7218
244921010	RE15-10-7223
1202023109	Interference Check Sample (ICS)
1202023105	Method Blank (MB)
1202023106	Laboratory Control Sample (LCS)
1202023107	245134001(RE46-10-10831) Matrix Spike (MS)
1202023108	245134001(RE46-10-10831) Matrix Spike Duplicate (MSD)

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

10-1288-PERLCMS

Page 1 of 4



### **Preparation/Analytical Method Verification**

#### **SOP Reference**

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

### **Calibration Information**

#### **Initial Calibration**

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

#### **CCV Requirements**

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

#### **CCB Requirements**

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

#### **CCV Requirements**

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

#### **Low Level Standard (CRI) Requirements**

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

### **Quality Control (QC) Information**

#### **Method Blank (MB) Statement**

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

#### **Interference Check Sample (ICS)**

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

#### **Laboratory Control Sample (LCS) Recovery**

The LCS spike recoveries met the acceptance limits.

#### **QC Sample Designation**

Client sample 245134001 (RE46-10-10831) from SDG 10-1300 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

#### **Matrix Spike (MS) Recovery Statement**

The MS recoveries were within the established acceptance limits.

#### **Matrix Spike Duplicate (MSD) Recovery Statement**

The MSD recoveries were within the established acceptance limits.

#### **MS/MSD Relative Percent Difference (RPD) Statement**

The RPD(s) between the MS and MSD met the acceptance limits.

#### **Retention Time Standard Area Acceptance**

The retention time standard areas were within the required acceptance criteria for all samples and QC.

10-1288-PERLCMS

Page 2 of 4

### **Retention Time**

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

### **Technical Information**

#### **Holding Time Specifications**

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

#### **Preparation/Analytical Method Verification**

All procedures were performed as stated in the SOP.

#### **Sample Dilutions**

The samples in this SDG did not require dilutions.

#### **Sample Re-extraction/Re-analysis**

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

### **Miscellaneous Information**

#### **Data Exception (DER) Documentation**

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

#### **Manual Integrations**

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

#### **Method Comments**

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

#### **Additional Comments**

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

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

### **Perchlorate Isotope Ratio**

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

### **System Configuration**

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

### **Chromatographic Columns**

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

Dionex: IonPac AG-16 2 x 50 mm.

### **Certification Statement**

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

### **Review Validation:**

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

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

Reviewer: Herbert M. Marek Date: 02/04/00

# SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944722

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7163

Date Received: 16-JAN-10

GEL Job No (SDG): 10-1288

GEL Sample ID: 244921001

Date Filtered: 29-JAN-10

Injection Volume (uL): 20

%Solids: 93.4

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.535	2.14	0.535	ug/kg	U	1	31-JAN-10 14:08	per0131015a
	Perchlorate Isotope Ratio						1	31-JAN-10 14:08	per0131015a
14797-73-0	Perchlorate-101	.535	2.14	0.535	ug/kg	U	1	31-JAN-10 14:08	per0131015a
	Perchlorate-O(18)			5.62	ug/kg		1	31-JAN-10 14:08	per0131015a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
Aliquot

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944722

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7162

Date Received: 16-JAN-10

GEL Job No (SDG): 10-1288

GEL Sample ID: 244921002

Date Filtered: 29-JAN-10

Injection Volume (uL): 20

%Solids: 90.3

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.554	2.22	0.554	ug/kg	U	1	31-JAN-10 14:16	per0131016a
	Perchlorate Isotope Ratio						1	31-JAN-10 14:16	per0131016a
14797-73-0	Perchlorate-101	.554	2.22	0.554	ug/kg	U	1	31-JAN-10 14:16	per0131016a
	Perchlorate-O(18)			5.94	ug/kg		1	31-JAN-10 14:16	per0131016a

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

\*Concentration =

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

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 944722  
 Extraction Type: Solid Prep  
 Client Sample No. RE15-10-7161  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921003  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 %Solids: 82

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.561	2.24	0.561	ug/kg	U	1	31-JAN-10 14:23	per0131017a
	Perchlorate Isotope Ratio						1	31-JAN-10 14:23	per0131017a
14797-73-0	Perchlorate-101	.561	2.24	0.561	ug/kg	U	1	31-JAN-10 14:23	per0131017a
	Perchlorate-O(18)			5.67	ug/kg		1	31-JAN-10 14:23	per0131017a

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

\*Concentration =

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

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 244722  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7160  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921004  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 %Solids: 80

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.625	2.5	0.831	ug/kg	J	1	31-JAN-10 14:31	per0131018a
	Perchlorate Isotope Ratio			3			1	31-JAN-10 14:31	per0131018a
14797-73-0	Perchlorate-101	.625	2.5	0.825	ug/kg	J	1	31-JAN-10 14:31	per0131018a
	Perchlorate-O(18)			6.14	ug/kg		1	31-JAN-10 14:31	per0131018a

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

\*Concentration =  
 Instrument Value X Concentrated Extract Volume X 1 %Solids  
 Aliquot



Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 244722

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7174

Date Received: 16-JAN-10

GEL Job No (SDG): 10-1288

GEL Sample ID: 244921005

Date Filtered: 29-JAN-10

Injection Volume (uL): 20

%Solids: 80

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.623	2.49	1.20	ug/kg	J	1	31-JAN-10 14:38	per0131019a
	Perchlorate Isotope Ratio			2.96			1	31-JAN-10 14:38	per0131019a
14797-73-0	Perchlorate-101	.623	2.49	1.20	ug/kg	J	1	31-JAN-10 14:38	per0131019a
	Perchlorate-O(18)			6.36	ug/kg		1	31-JAN-10 14:38	per0131019a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X <sup>1</sup>  
Aliquot %Solids

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 244722  
 Extraction Type: Solid Prep  
 Client Sample No. RE15-10-7173  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921006  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 %Solids: 90.2

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.554	2.22	1.10	ug/kg	J	1	31-JAN-10 14:46	per0131020a
	Perchlorate Isotope Ratio			2.86			1	31-JAN-10 14:46	per0131020a
14797-73-0	Perchlorate-101	.554	2.22	1.14	ug/kg	J	1	31-JAN-10 14:46	per0131020a
	Perchlorate-O(18)			5.77	ug/kg		1	31-JAN-10 14:46	per0131020a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1 %Solids  
 Aliquot

Perchlorate Analysis Data Sheet

**Lab Name:** GEL Laboratories LLC  
**Lab Code:** GEL  
**Instrument:** LCMSMS  
**Method:** SW846 6850 Modified  
**Matrix:** SOIL  
**Extraction Batch ID:** 944722  
**Extraction Type:** Solid Prep  
**Client Sample No.** RE15-10-7175  
**Date Received:** 16-JAN-10  
**GEL Job No (SDG):** 10-1288  
**GEL Sample ID:** 244921007  
**Date Filtered:** 29-JAN-10  
**Injection Volume (uL):** 20  
**%Solids:** 90.7

**Sample Volume/Weight:** 2.00 g

**Concentrated Extract Volume:** 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.551	2.21	2.84	ug/kg		1	31-JAN-10 15:16	per0131024a
	Perchlorate Isotope Ratio			2.96			1	31-JAN-10 15:16	per0131024a
14797-73-0	Perchlorate-101	.551	2.21	2.85	ug/kg		1	31-JAN-10 15:16	per0131024a
	Perchlorate-O(18)			5.97	ug/kg		1	31-JAN-10 15:16	per0131024a

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

\*Concentration =

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

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944722

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7172

Date Received: 16-JAN-10

GEL Job No (SDG): 10-1288

GEL Sample ID: 244921008

Date Filtered: 29-JAN-10

Injection Volume (uL): 20

% Solids: 79

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.635	2.54	0.650	ug/kg	J	1	31-JAN-10 15:24	per0131025a
	Perchlorate Isotope Ratio			3.28			1	31-JAN-10 15:24	per0131025a
14797-73-0	Perchlorate-101	.635	2.54	0.635	ug/kg	U	1	31-JAN-10 15:24	per0131025a
	Perchlorate-O(18)			6.27	ug/kg		1	31-JAN-10 15:24	per0131025a

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

\*Concentration =

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

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 944722  
 Extraction Type: Solid Prep  
 Client Sample No. RE15-10-7218  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921009  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 %Solids: 90.1

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.555	2.22	1.10	ug/kg	J	1	31-JAN-10 15:31	per0131026a
	Perchlorate Isotope Ratio			2.92			1	31-JAN-10 15:31	per0131026a
14797-73-0	Perchlorate-101	.555	2.22	1.12	ug/kg	J	1	31-JAN-10 15:31	per0131026a
	Perchlorate-O(18)			5.98	ug/kg		1	31-JAN-10 15:31	per0131026a

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

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

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 944722  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7223  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921010  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 %Solids: 89

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.56	2.24	0.560	ug/kg	U	1	31-JAN-10 15:39	per0131027a
	Perchlorate Isotope Ratio						1	31-JAN-10 15:39	per0131027a
14797-73-0	Perchlorate-101	.56	2.24	0.560	ug/kg	U	1	31-JAN-10 15:39	per0131027a
	Perchlorate-O(18)			5.38	ug/kg		1	31-JAN-10 15:39	per0131027a

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

\*Concentration =

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

# QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10-1288

Extract Batch Code: 944722

Date Filtered: 29-JAN-10

Matrix: SOIL

Sample ID: 1202023106

Analyte <sup>^</sup>	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.01	ug/kg	101		70 - 130
Perchlorate Isotope Ratio		2.68				-
Perchlorate-101	2.00	2.24	ug/kg	112		70 - 130
Perchlorate-O(18)		4.92	ug/kg			-

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



Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL GEL Job No. (SDG): 10-1288

Extract Batch Code: 944722 Date Filtered: 29-JAN-10

Matrix: SOIL Sample ID: 1202023109

Analyte <sup>^</sup>	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.24	ug/kg	112		70 - 130
Perchlorate Isotope Ratio		3.08				
Perchlorate-101	2.00	2.16	ug/kg	108		70 - 130
Perchlorate-O(18)		5	ug/kg			

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

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

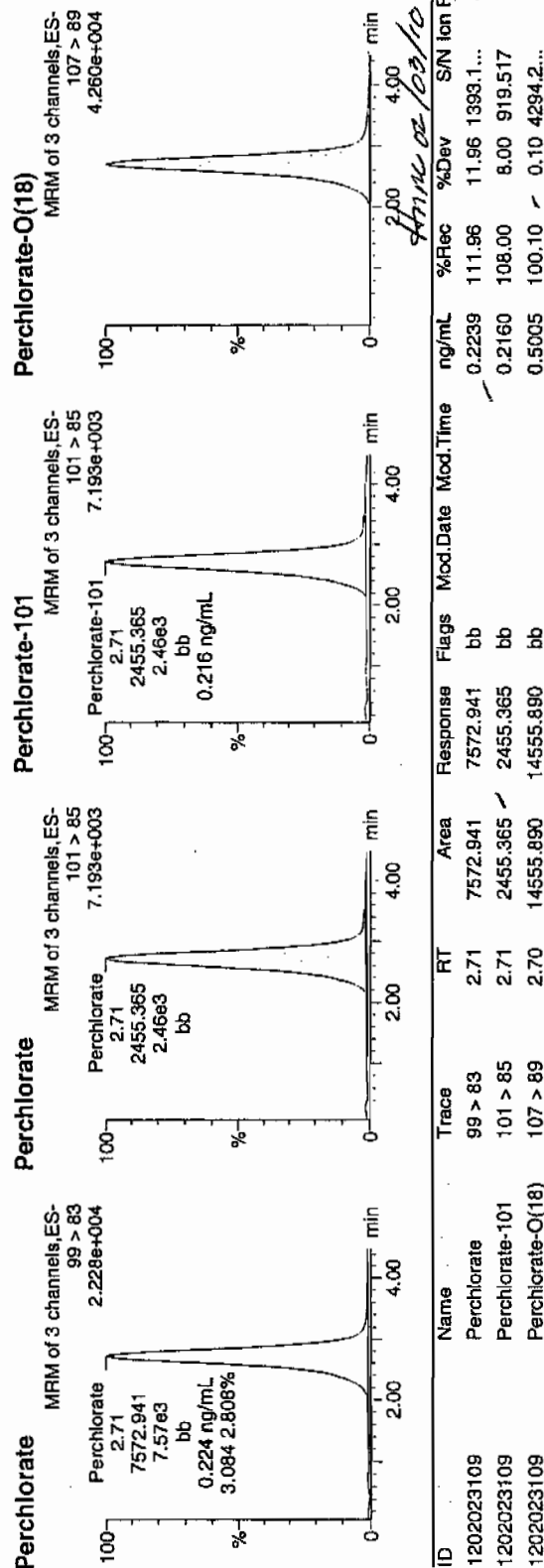
Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Name: per0131014a  
Date: 31-Jan-2010  
Time: 14:01:13  
ID: 1202023109  
Vial: 1:3,C

02-01-10

LANC | 944723 | 5020 | 125 | 1 |



Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 10-1288

Extract Batch Code: 944722

Date Extracted: 29-JAN-10

GEL MS/PS ID: 1202023107

Client ID: RE46-10-10831

GEL MSD/PSD ID: 1202023108

QC Type: MS

Compound <sup>^</sup>	Spike Added	Sample Conc	Units	MS Conc	MS Rec	#	MSD Conc	MSD Rec	#	RPD	#	RPD Limit	Recovery Limit
Perchlorate	2.49	0.072	ug/kg	2.60	101		2.68	104		3.04		30	75 - 125
Perchlorate Isotope Ratio	0	0.00		3.15			2.99			0			-
Perchlorate-101	2.49	0.0945	ug/kg	2.45	94.7		2.66	103		8.24		30	75 - 125
Perchlorate-O(18)	0	6.29	ug/kg	6.43			6.25			2.78			-

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

Comments:

Form 4

Perchlorate Initial Calibration Blank

GEL Job No.(SDG): 10-1288

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	31-JAN-10	per0131001a	IPB001
Perchlorate-101	0.00	0	NA	31-JAN-10	per0131001a	IPB001
Perchlorate	0.00	0	NA	31-JAN-10	per0131002a	IPB001
Perchlorate-101	0.00	0	NA	31-JAN-10	per0131002a	IPB001

unantify Sample Report MassLynx 4.0 SP4  
ne GEL Group, LLC Analyst: Charlers W. Wilson

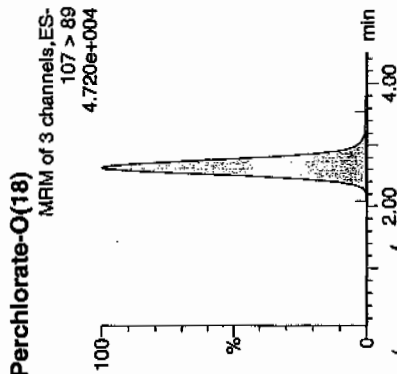
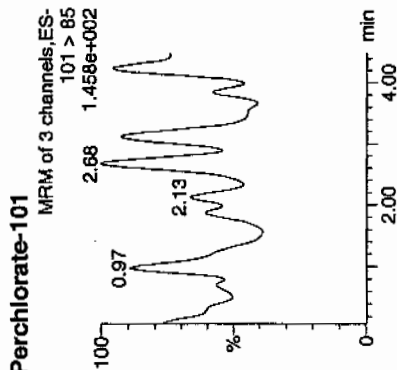
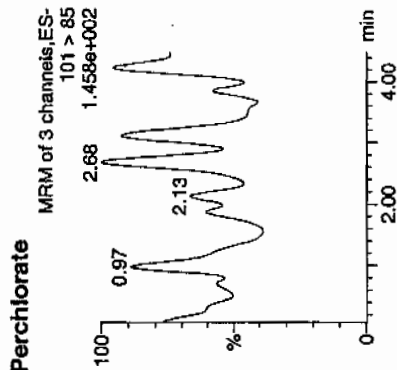
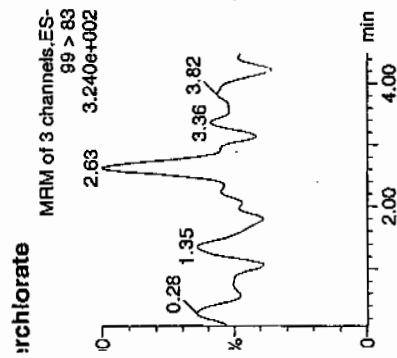
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st Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
inted: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

ethod: C:\MassLynx\Perchlorate.PRO\MethDB\per013110a.mdb 01 Feb 2010 10:44:50  
ilibration: C:\MassLynx\Perchlorate.PRO\CurvedB\per013110a.cdb 01 Feb 2010 10:45:05

ime: per0131001a  
ite: 31-Jan-2010  
me: 12:23:18  
: IPB001  
al: 1:1,A

02-01-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
Perchlorate	99 > 83											
Perchlorate-101	101 > 85											
Perchlorate-O(18)	107 > 89	2.64	14142.885	14142.885	bb			0.4863	97.26	-2.74	1262.8...	0.00

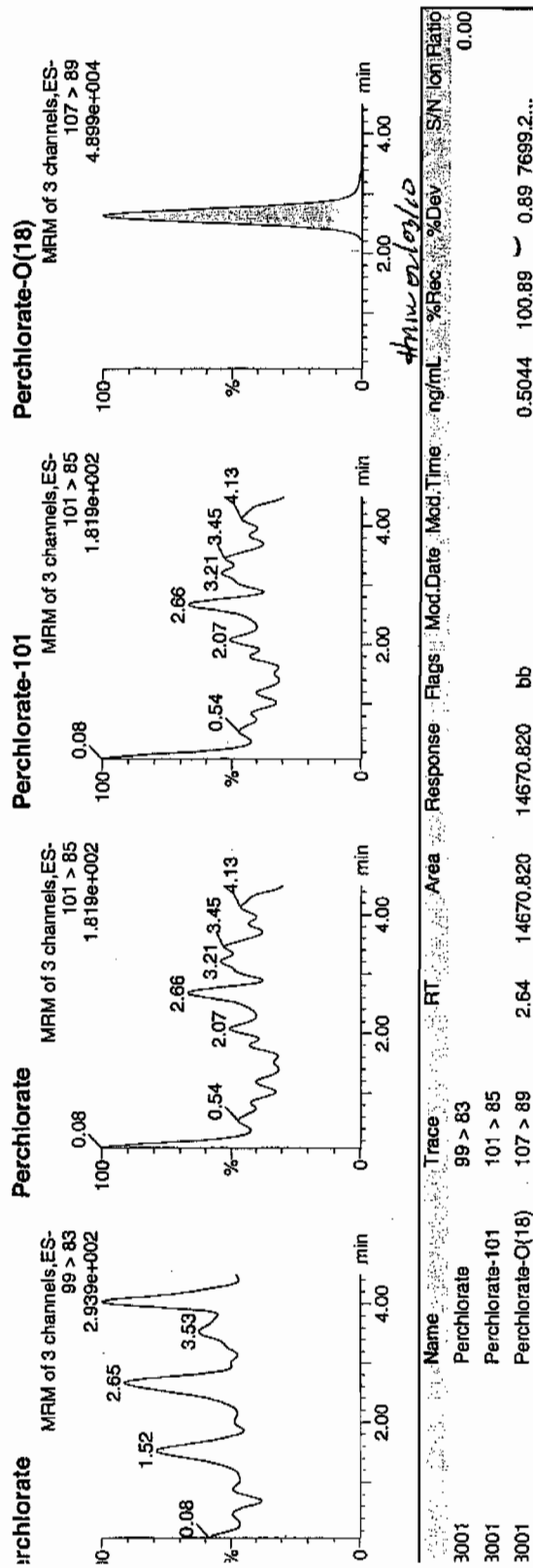
Identify Sample Report MassLynx 4.0 SP4  
 re GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

First Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
 First: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Sample Name: per0131002a  
 Date: 31-Jan-2010  
 Time: 12:30:50  
 : IPB001  
 al: 1:1,A

02-01-10



Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1288

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	31-JAN-10	per0131008a	IPB002
Perchlorate-101	0.00	0	NA	31-JAN-10	per0131008a	IPB002
Perchlorate	0.00	0	NA	31-JAN-10	per0131010a	IPB003
Perchlorate-101	0.00	0	NA	31-JAN-10	per0131010a	IPB003
Perchlorate	0.00	0	NA	31-JAN-10	per0131022a	IPB004
Perchlorate-101	0.00	0	NA	31-JAN-10	per0131022a	IPB004
Perchlorate	0.00	0	NA	31-JAN-10	per0131033a	IPB005
Perchlorate-101	0.00	0	NA	31-JAN-10	per0131033a	IPB005

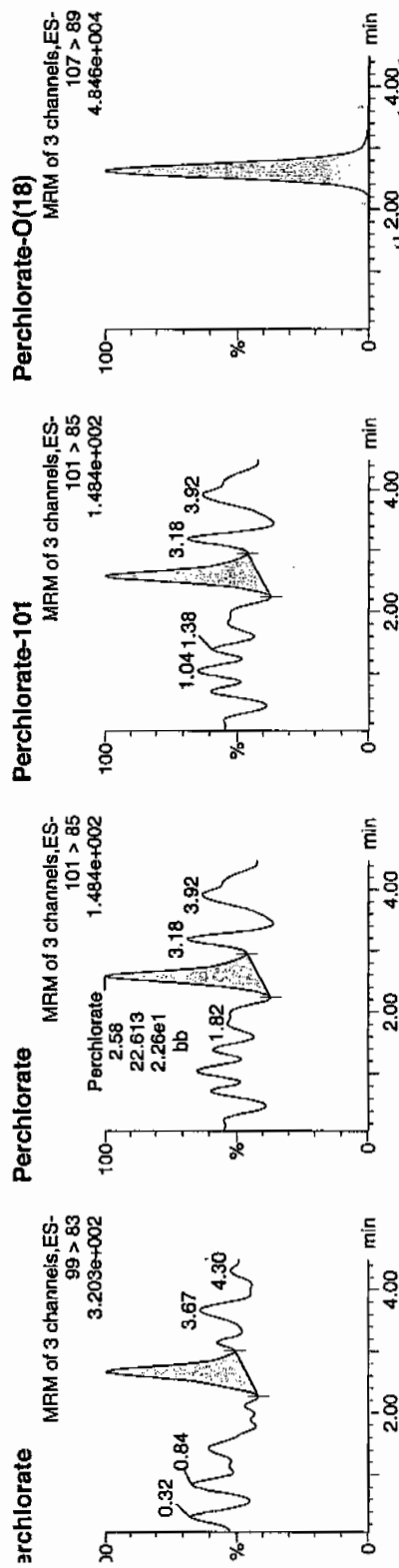
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

atset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

ast Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
rinted: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

ame: per0131008a  
ate: 31-Jan-2010  
ime: 13:15:57  
i: IPB002  
ial: 1:1,A

02-01-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
B002 Perchlorate	99 > 83	2.66	48.090	48.090	bb			0.0014			8.037	2.13
B002 Perchlorate-101	101 > 85	2.58	22.613	22.613	bb			0.0020			5.380	
B002 Perchlorate-O(18)	107 > 89	2.63	14490.285	14490.285	bb			0.4982	99.65	-0.35	1594.1...	

40.000  
40.000



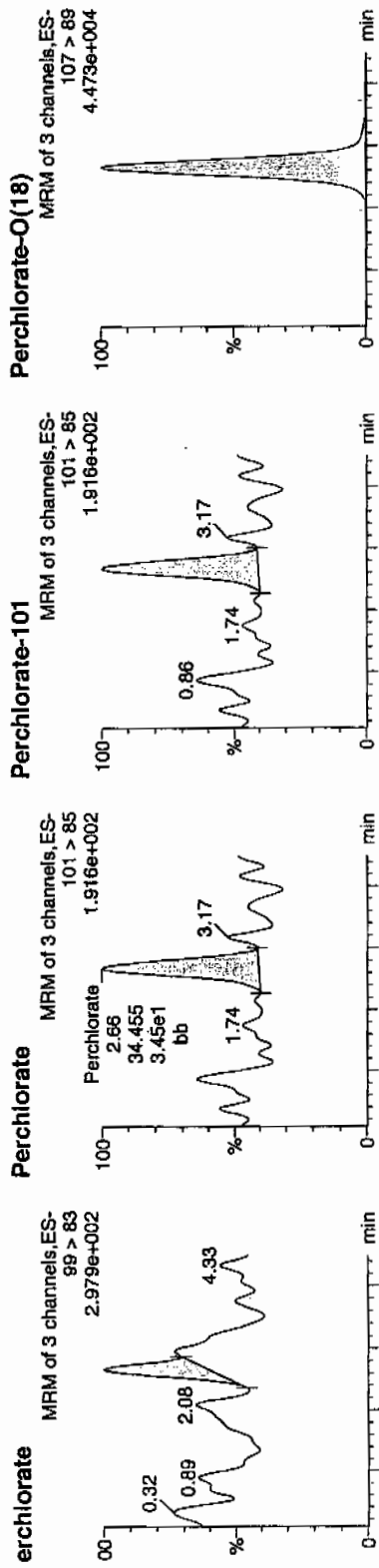
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Sample Name: per01311010a  
Date: 31-Jan-2010  
Time: 13:31:01  
Job: IPB003  
File: 1:1,A

Q2-01-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
B003	Perchlorate	2.66	27.957	27.957	bb			0.0008			6.487	0.81
B003	Perchlorate-101	2.66	34.455	34.455	bb			0.0030			10.133	
B003	Perchlorate-O(18)	2.65	14485.047	14485.047	bb			0.4981	99.61	-0.39	3915.2...	

0.004  
25.0500

Identify Sample Report MassLynx 4.0 SP4

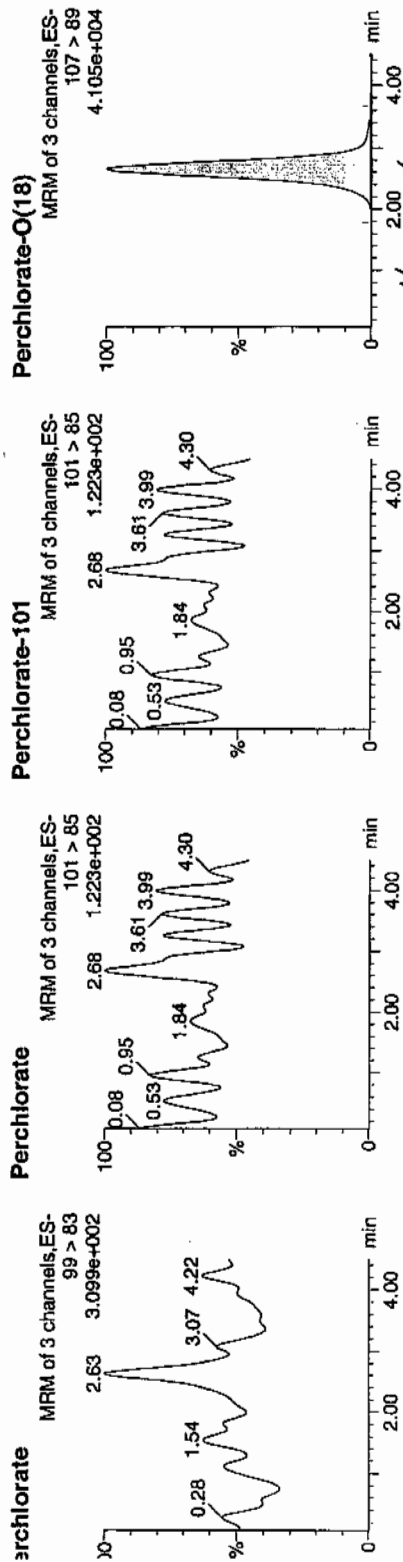
the GEL Group, LLC Analyst: Charliers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

First Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
 Intend: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Sample Name: per0131022a  
 Date: 31-Jan-2010  
 Time: 15:01:35  
 File: IPB004  
 Ali: 1:1,A

Q2-01-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
3004	Perchlorate	99 > 83										0.00
3004	Perchlorate-101	101 > 85										
3004	Perchlorate-O(18)	107 > 89	2.65	13877.979	13877.979	bb		0.4772	95.44	-4.56	576.575	

uantify Sample Report MassLynx 4.0 SP4  
he GEL Group, LLC Analyst: Charlers W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

ast Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
rinted: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

ame: per0131033a

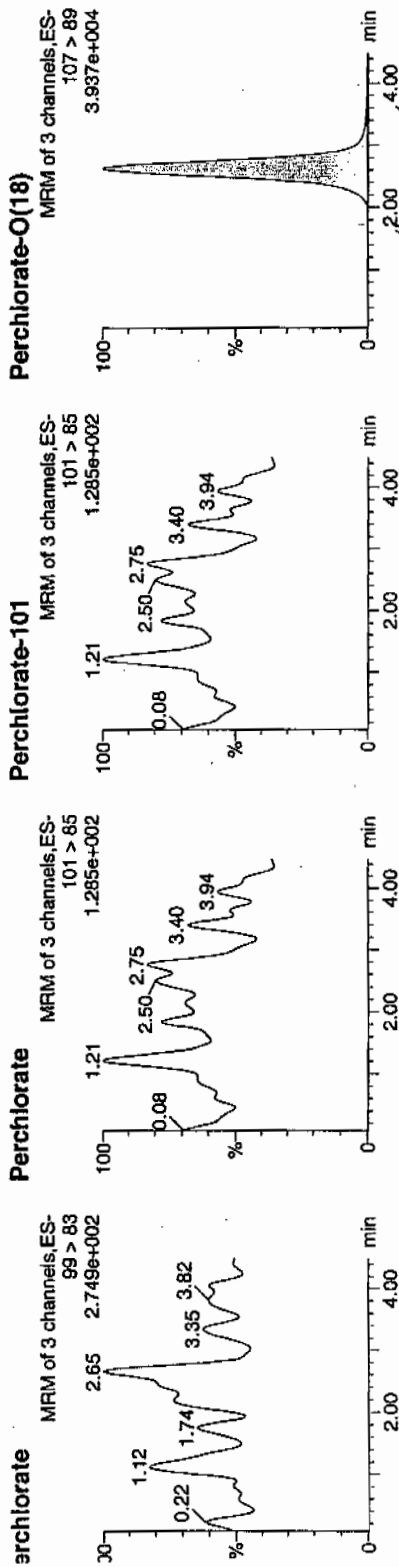
ate: 31-Jan-2010

ime: 16:24:34

i: IPB005

ial: 1:1,A

01-01-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
B005	Perchlorate	99 > 83										
B005	Perchlorate-101	101 > 85										
B005	Perchlorate-Q(18)	107 > 89	2.63	13136.926	bb	13136.926		0.4517	90.34	-9.66	4624.5...	0.00

Nairb.ref

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

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

QUANTO ULTIMA: nairb\_01\_08\_08.cal

Calibration Report - MS1 Static

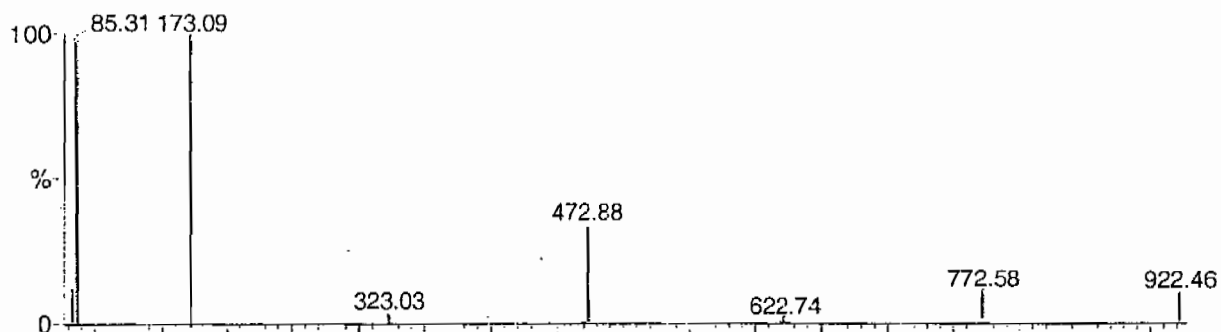
Page 1 of 1

Printed: Tue Jan 08 12:19:12 2008

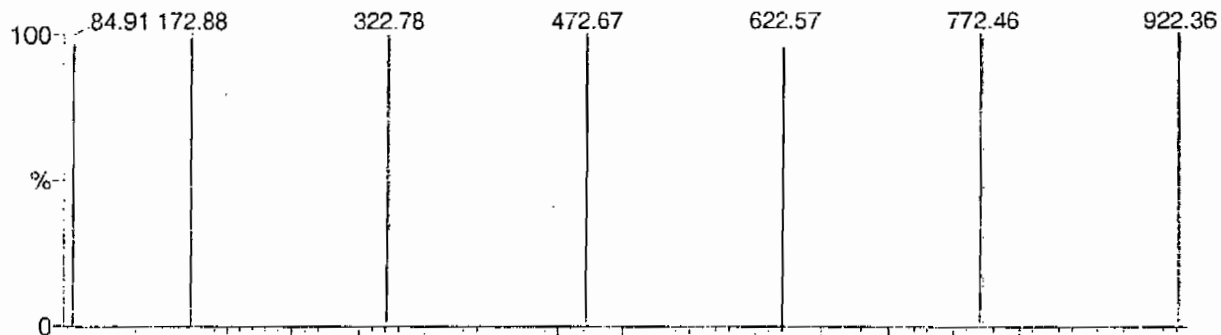
POINTS HIGHLIGHTED BY CURVED 01-09-08

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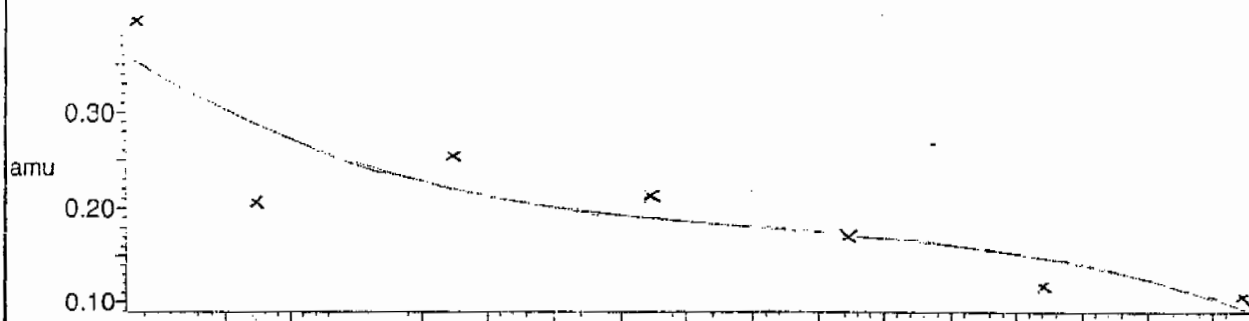
7 matches of 7 tested references



Reference file: Nairb

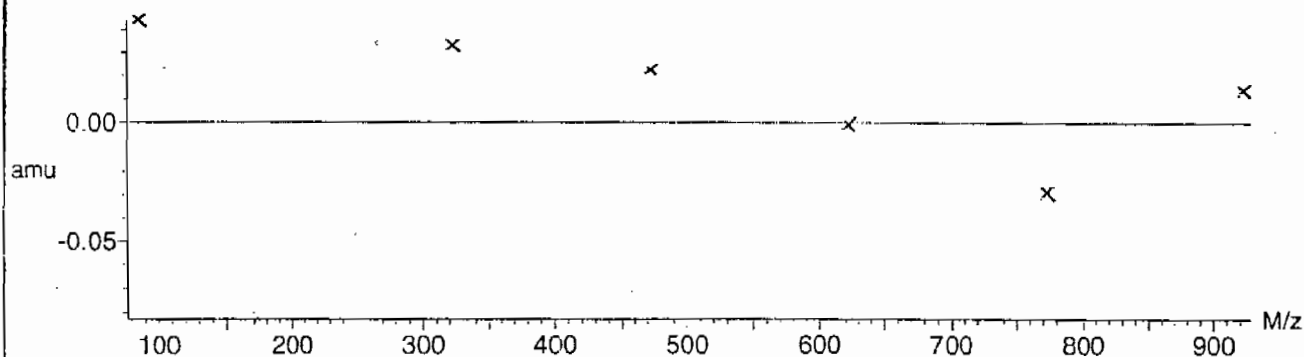


Mass difference (Raw - Ref mass)



Residuals

Mean residual =  $3.212012 \times 10^{-2} \pm 0.024108$



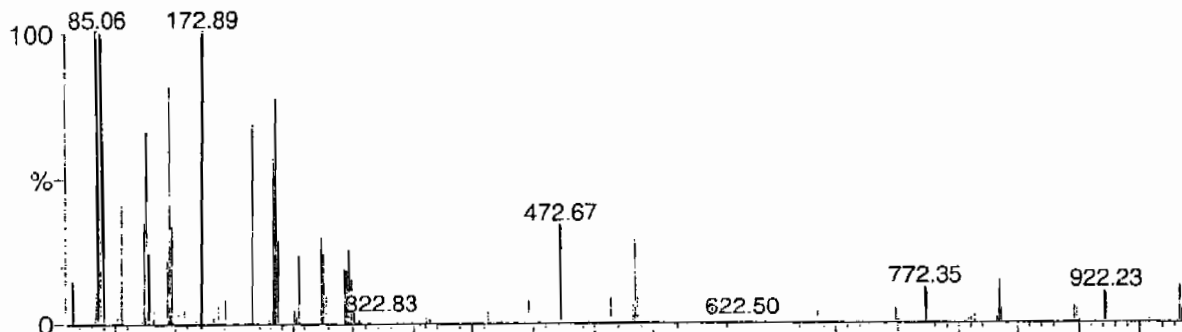
Calibration Report - MS1 Scanning

Page 1 of 1

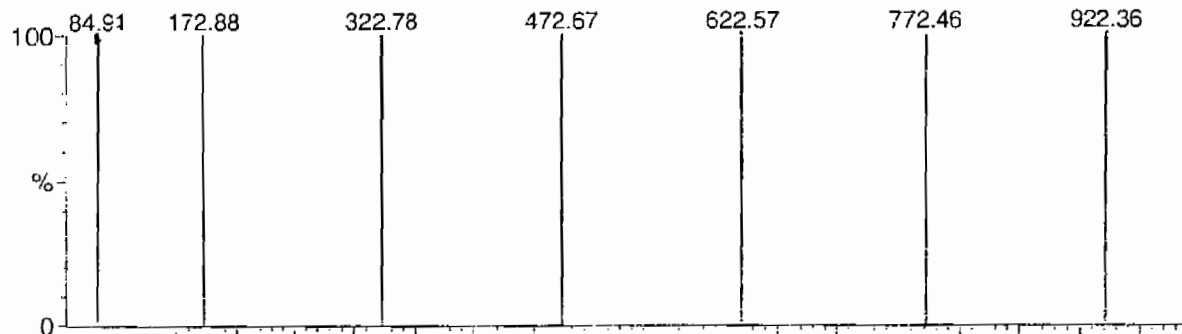
Printed: Tue Jan 08 12:20:09 2008

Data file: SCNMS1 - Uncalibrated

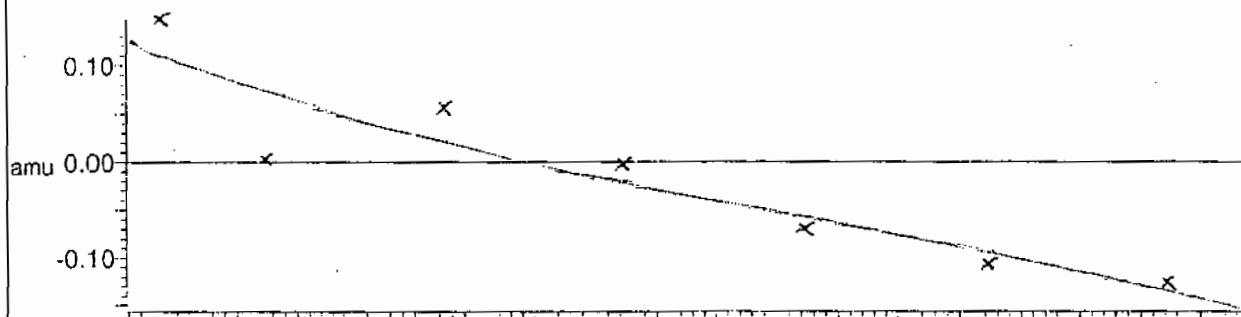
7 matches of 7 tested references



Reference file: Nairb

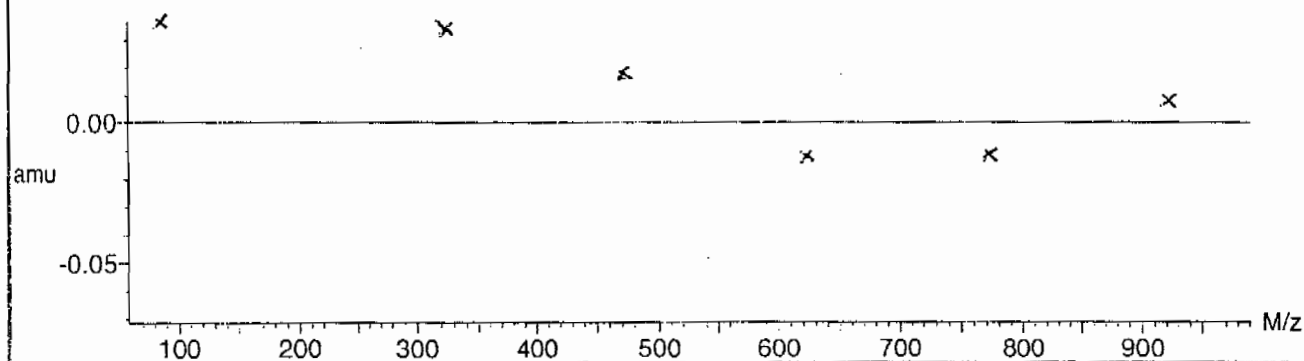


Mass difference (Raw - Ref mass)



Residuals

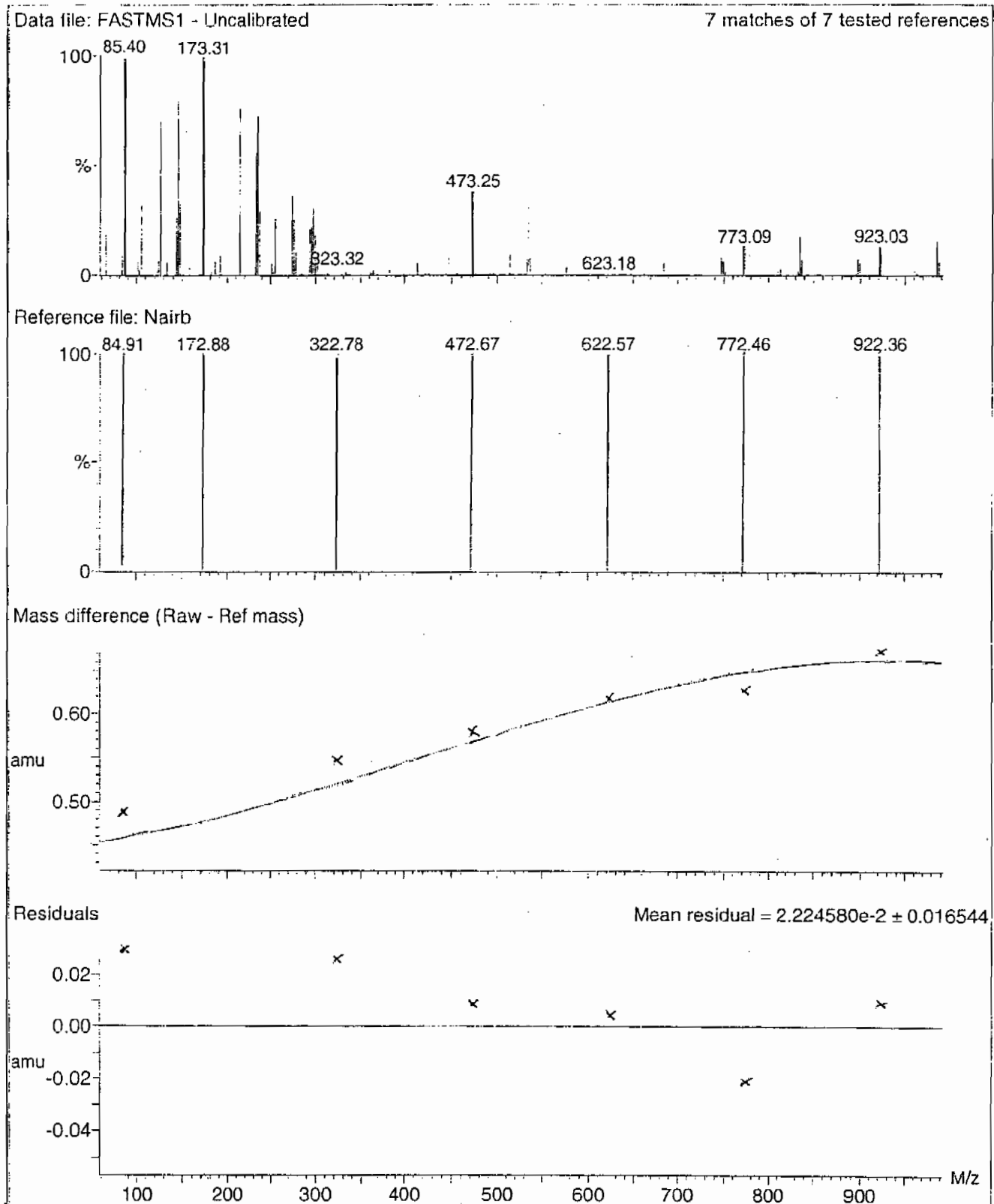
Mean residual =  $2.732691 \times 10^{-2} \pm 0.020653$



Calibration Report - MS1 Scan Speed Compensation

Page 1 of 1

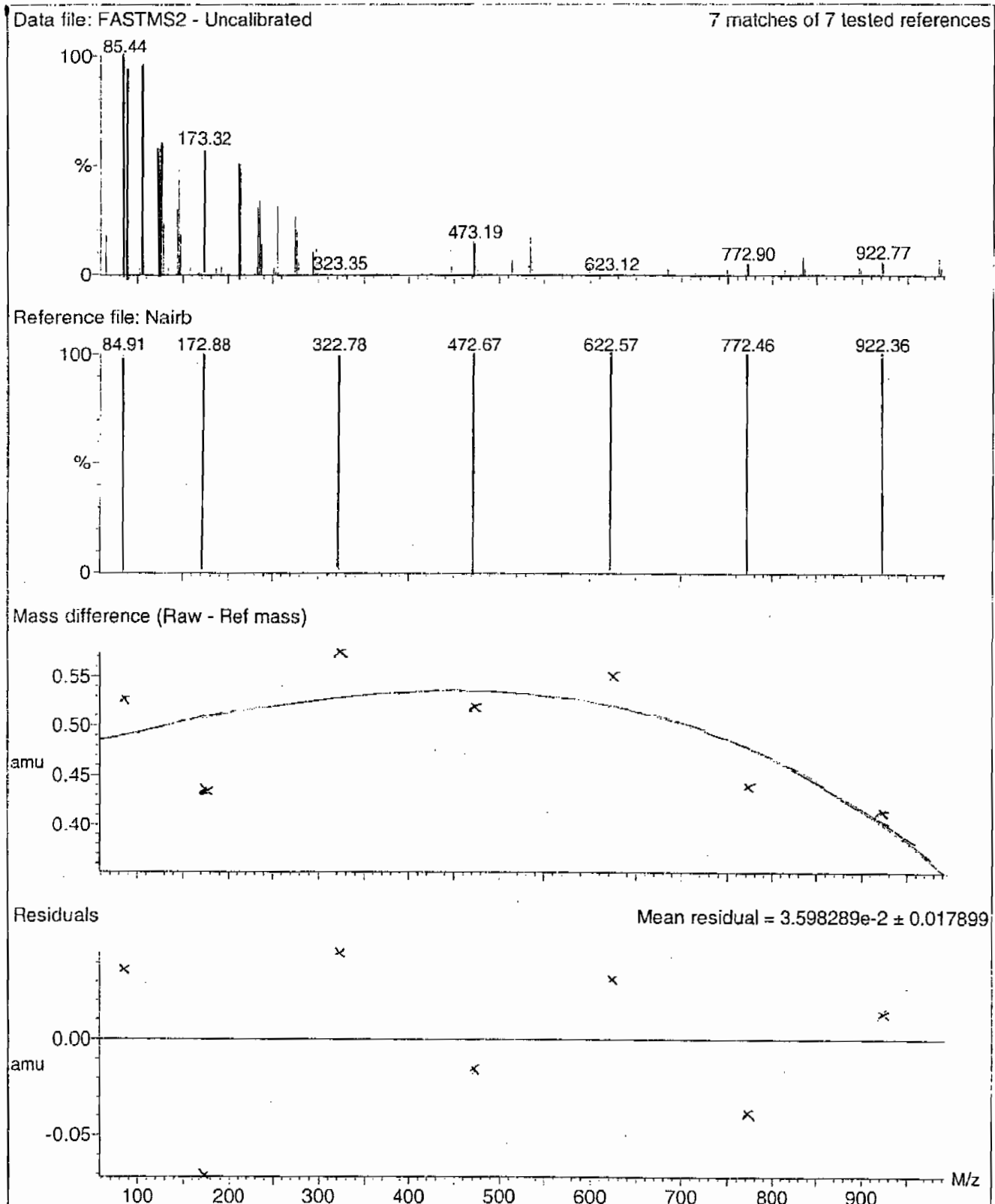
Printed: Tue Jan 08 12:21:04 2008



Calibration Report - MS2 Scan Speed Compensation

Page 1 of 1

Printed: Tue Jan 08 12:23:51 2008





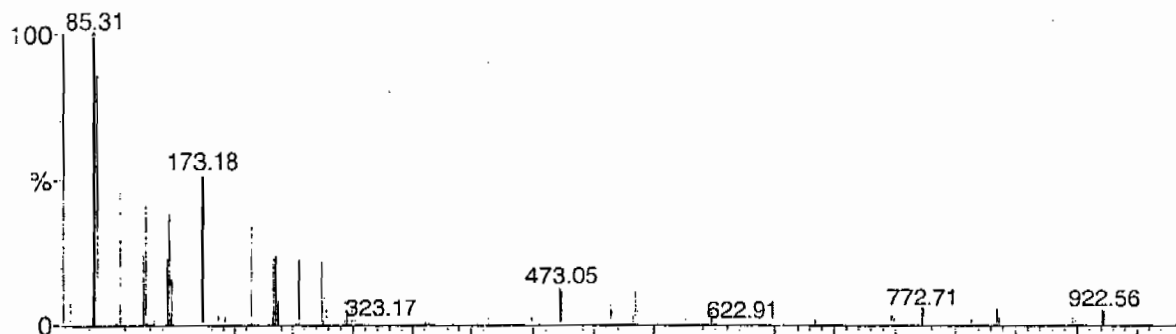
Calibration Report - MS2 Scanning

Page 1 of 1

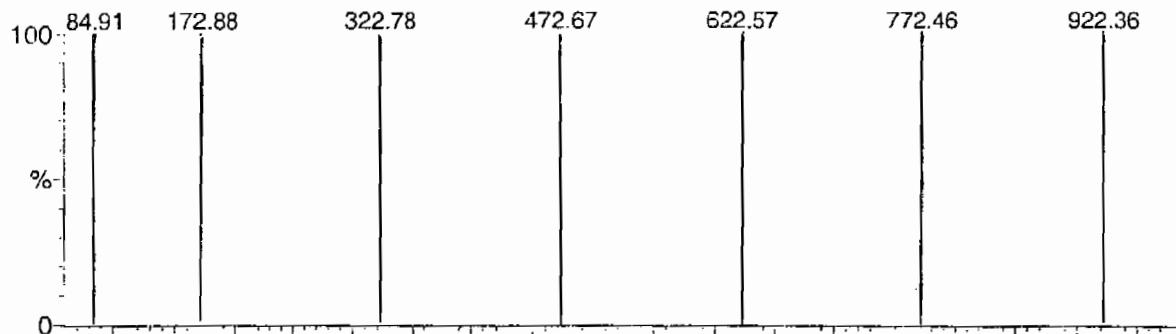
Printed: Tue Jan 08 12:22:56 2008

Data file: SCNMS2 - Uncalibrated

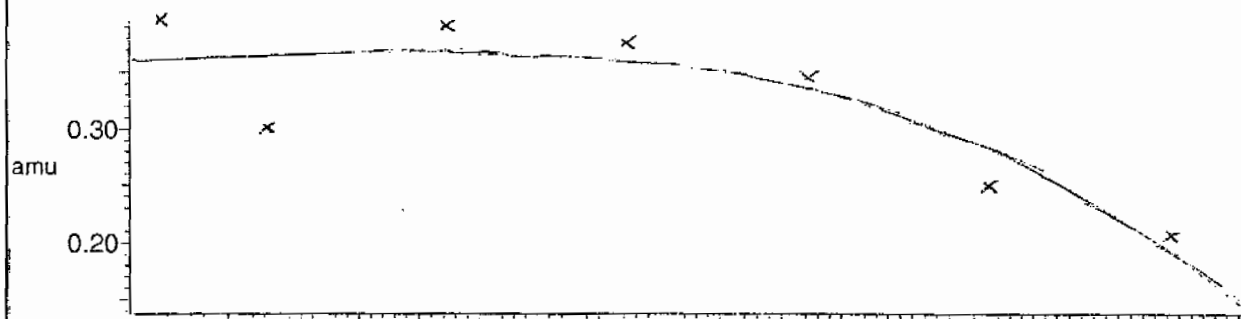
7 matches of 7 tested references



Reference file: Nairb

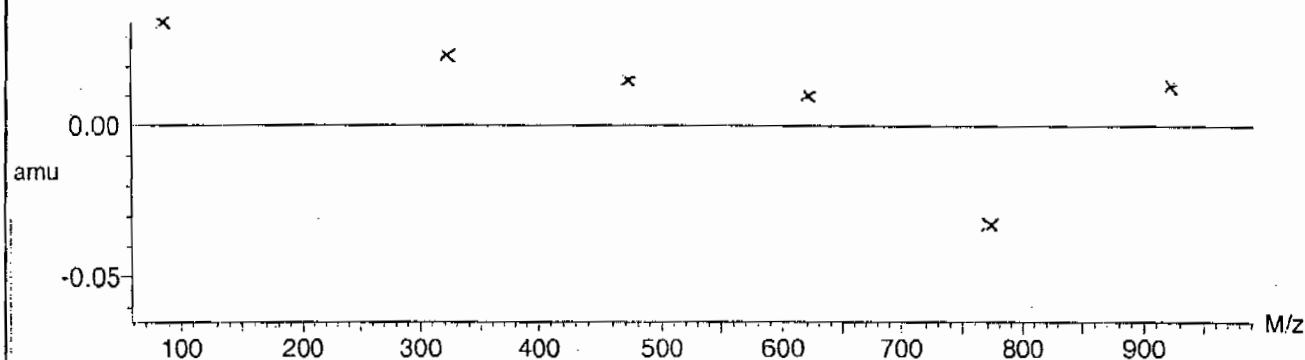


Mass difference (Raw - Ref mass)



Residuals

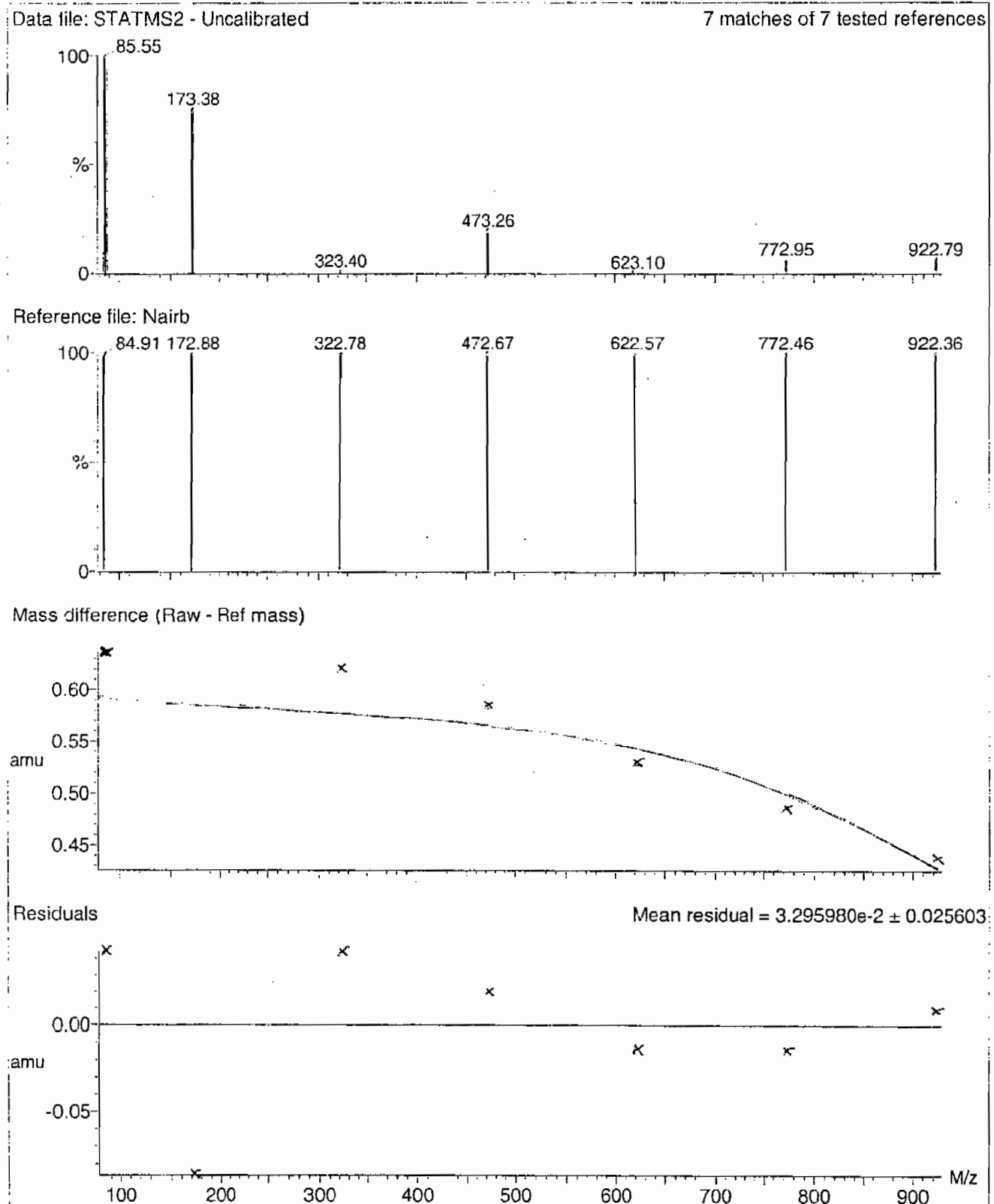
Mean residual =  $2.782494 \times 10^{-2} \pm 0.017442$



Calibration Report - MS2 Static

Page 1 of 1

Printed: Tue Jan 08 12:21:59 2008



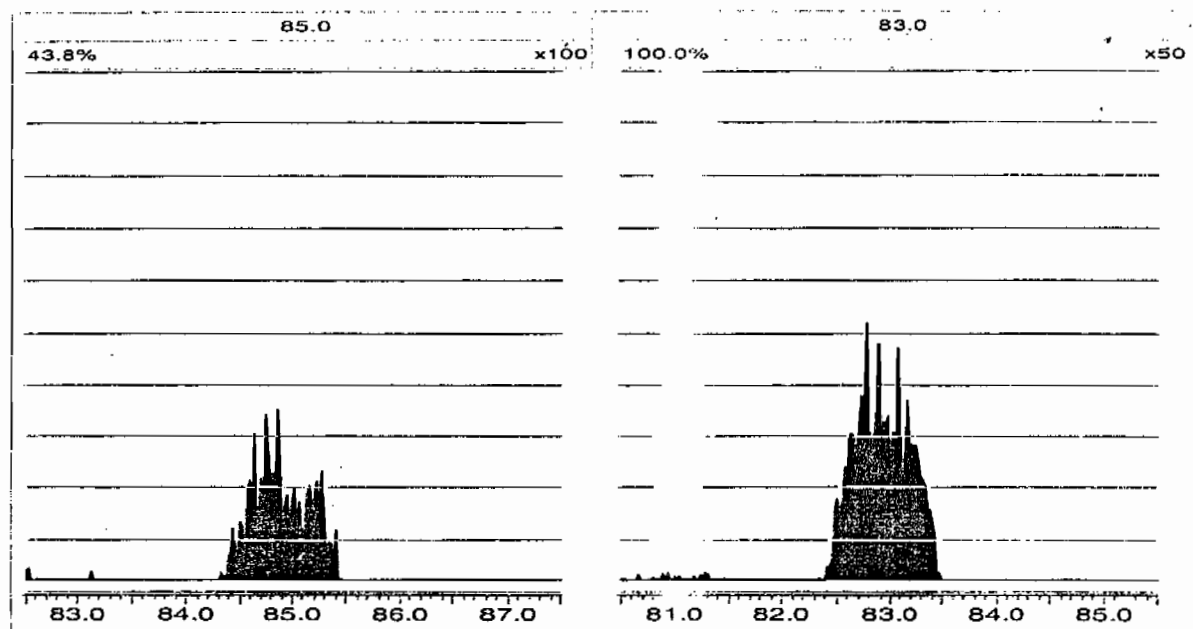
Tune Parameters

MassLynx 4.0 SP4

Page 1 of 1

File: C:\MassLynx\Perchlorate.PROVACQ\Perchlorate.IPR

Printed: Sunday, January 31, 2010 11:10:18 Eastern Standard Time



## Perchlorate RT And Area Summary

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

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1288

Lab Code: GEL

Instrument ID: LCMSMS

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

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	per0131006a	31-JAN-10	14758				
Lower Area Limit			7379				
Upper Area Limit			29516				
1202023105	per0131012a	31-JAN-10 13:46	14134.3	2.64	2.66292	1.009	
1202023106	per0131013a	31-JAN-10 13:53	14295.2	2.68	2.68785	1.003	
1202023109	per0131014a	31-JAN-10 14:01	14555.9	2.7	2.7126	1.005	
244921001	per0131015a	31-JAN-10 14:08	15281.3	2.65	2.68782	1.014	
244921002	per0131016a	31-JAN-10 14:16	15600.3	2.66	2.6754	1.006	
244921003	per0131017a	31-JAN-10 14:23	14682.3	2.66	2.67535	1.006	
244921004	per0131018a	31-JAN-10 14:31	14289	2.65	2.66292	1.005	
244921005	per0131019a	31-JAN-10 14:38	14859.8	2.65	2.66288	1.005	

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1288

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG-162 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	per0131006a	31-JAN-10	14758				
Lower Area Limit			7379				
Upper Area Limit			29516				
244921006	per0131020a	31-JAN-10 14:46	15141	2.65	2.66288	1.005	
244921007	per0131024a	31-JAN-10 15:16	15746.6	2.64	2.65058	1.004	
244921008	per0131025a	31-JAN-10 15:24	14359.4	2.65	2.66292	1.005	
244921009	per0131026a	31-JAN-10 15:31	15671.4	2.63	2.65053	1.008	
244921010	per0131027a	31-JAN-10 15:39	13953.8	2.63	2.65057	1.008	

# SAMPLE DATA

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 944722  
 Extraction Type: Solid Prep  
 Client Sample No. RE15-10-7163  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921001  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 %Solids: 93.4

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.535	2.14	0.535	ug/kg	U	1	31-JAN-10 14:08	per0131015a
	Perchlorate Isotope Ratio						1	31-JAN-10 14:08	per0131015a
14797-73-0	Perchlorate-101	.535	2.14	0.535	ug/kg	U	1	31-JAN-10 14:08	per0131015a
	Perchlorate-O(18)			5.62	ug/kg		1	31-JAN-10 14:08	per0131015a

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

\*Concentration =  
 Instrument Value X Concentrated Extract Volume X 1  
 Aliquot %Solids

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

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Name: per0131015a

Date: 31-Jan-2010

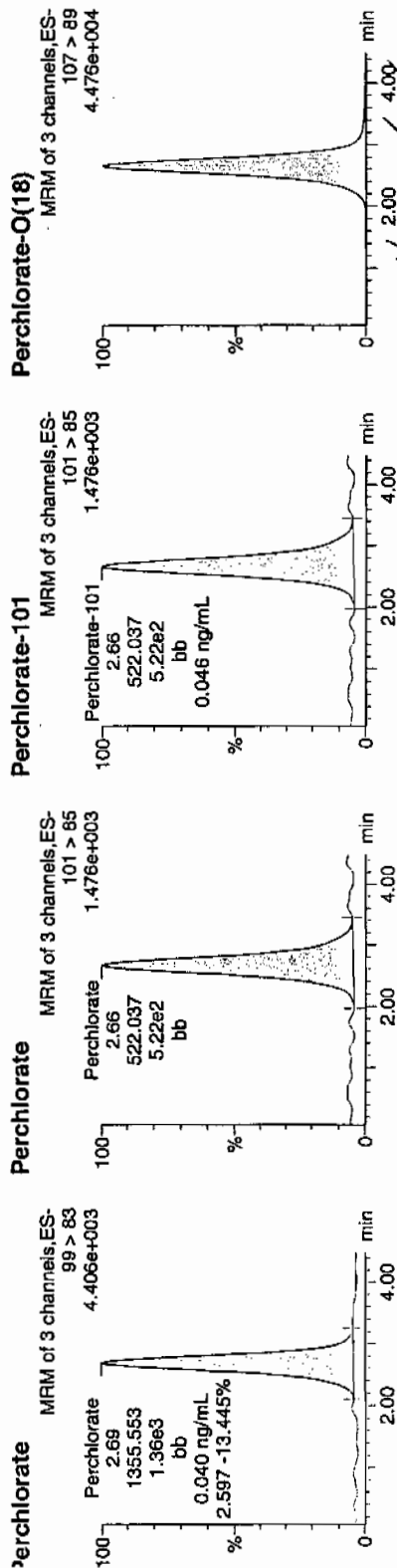
Time: 14:08:46

ID: 244921001

File: 1:3,D

LAU-1944723 | 3025 | 11

07-01-10



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
244921001	Perchlorate	99 > 83	2.69	1355.553	1355.553	bb			0.0401			151.065	2.60
244921001	Perchlorate-101	101 > 85	2.66	522.037	522.037	bb			0.0459			54.808	
244921001	Perchlorate-O(18)	107 > 89	2.65	15281.281	15281.281	bb			0.5254	105.09	✓	5.09	1030.1...

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



Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 244722  
 Extraction Type: Solid Prep  
 Client Sample No.: RE15-10-7162  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921002  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 Sample Volume/Weight: 2.00 g  
 %Solids: 90.3

Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.554	2.22	0.554	ug/kg	U	1	31-JAN-10 14:16	per0131016a
	Perchlorate Isotope Ratio						1	31-JAN-10 14:16	per0131016a
14797-73-0	Perchlorate-101	.554	2.22	0.554	ug/kg	U	1	31-JAN-10 14:16	per0131016a
	Perchlorate-O(18)			5.94	ug/kg		1	31-JAN-10 14:16	per0131016a

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

\*Concentration =  
 Instrument Value X Concentrated Extract Volume X 1  
 Aliquot %Solids

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

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Sample Name: per0131016a

Sample Date: 31-Jan-2010

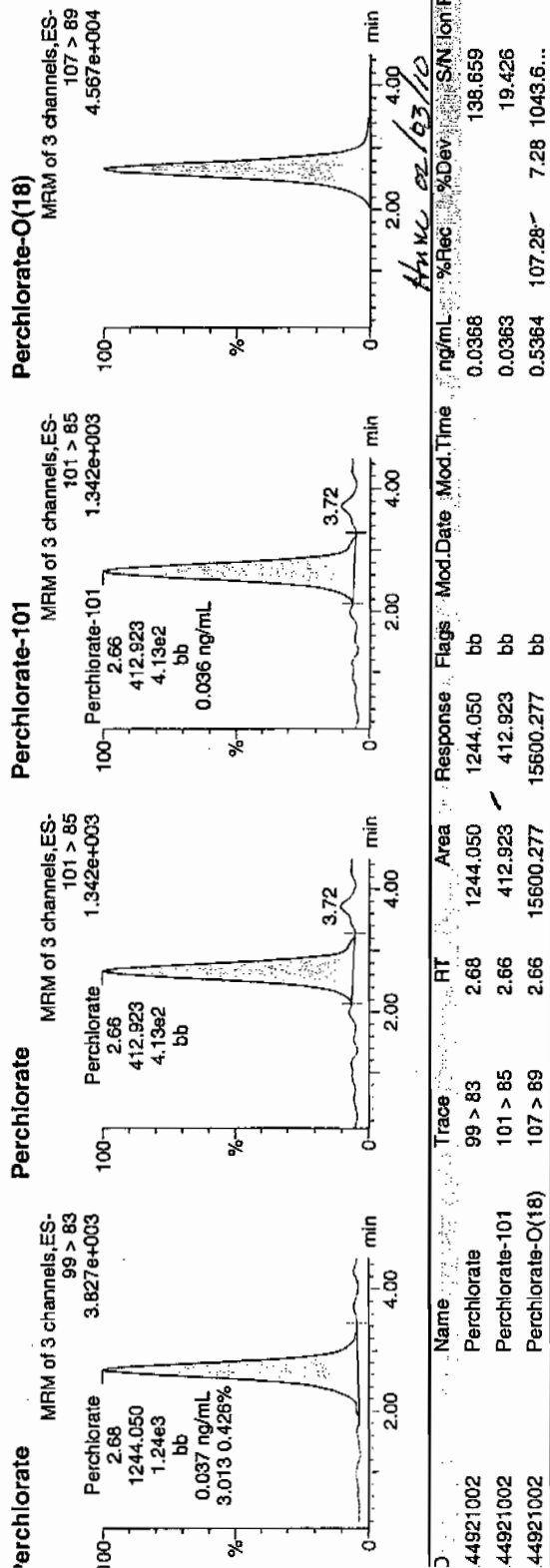
Sample Time: 14:16:18

Sample ID: 244921002

Sample Label: 1:3,E

02-01-10

1244-1244723 | 5025 | 11



Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 244722  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7161  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921003  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 % Solids: 82

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.561	2.24	0.561	ug/kg	U	1	31-JAN-10 14:23	per0131017a
	Perchlorate Isotope Ratio						1	31-JAN-10 14:23	per0131017a
14797-73-0	Perchlorate-101	.561	2.24	0.561	ug/kg	U	1	31-JAN-10 14:23	per0131017a
	Perchlorate-O(18)			5.67	ug/kg		1	31-JAN-10 14:23	per0131017a

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

\*Concentration =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Name: per0131017a

Date: 31-Jan-2010

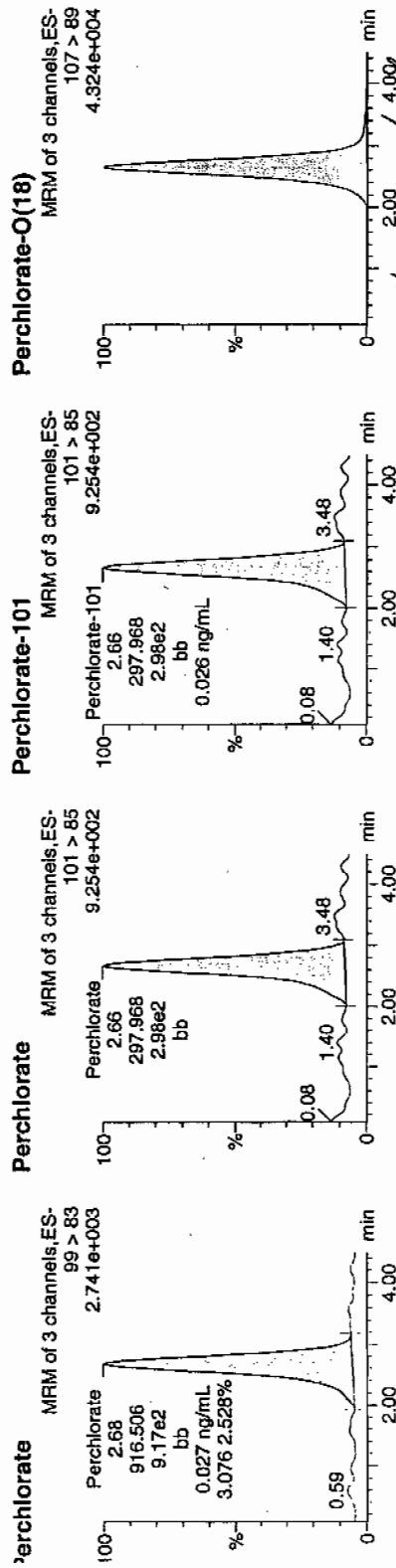
Time: 14:23:50

D: 244921003

Vial: 1-3,F

02-01-10

1244723 | 5020 | 11



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
44921003	Perchlorate	99 > 83	2.68	916.506	bb			0.0271	78.860	3.08		
44921003	Perchlorate-101	101 > 85	2.66	297.968	bb			0.0262	43.495			
44921003	Perchlorate-O(18)	107 > 89	2.66	14682.290	bb			0.5048	100.97	0.97	5122.0...	

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944722

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7160

Date Received: 16-JAN-10

GEL Job No (SDG): 10-1288

GEL Sample ID: 244921004

Date Filtered: 29-JAN-10

Injection Volume (uL): 20

%Solids: 80

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.625	2.5	0.831	ug/kg	J	1	31-JAN-10 14:31	per0131018a
	Perchlorate Isotope Ratio			3			1	31-JAN-10 14:31	per0131018a
14797-73-0	Perchlorate-101	.625	2.5	0.825	ug/kg	J	1	31-JAN-10 14:31	per0131018a
	Perchlorate-O(18)			6.14	ug/kg		1	31-JAN-10 14:31	per0131018a

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

\*Concentration =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qtd

Acquired: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Sample Name: per0131018a

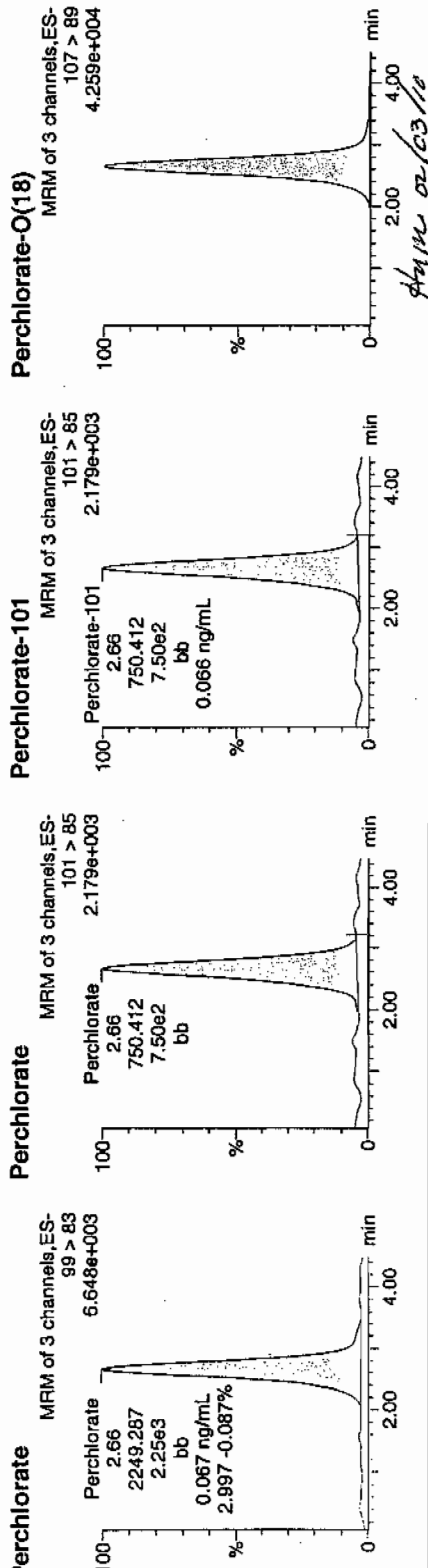
Acquired: 31-Jan-2010

Time: 14:31:22

ID: 244921004

Label: 1:4,A

144921004 | 94723 | 5020 | 11  
02-01-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
44921004	Perchlorate	99 > 83	2.66	2249.287	2249.287	bb			0.0665			107.580	3.00
44921004	Perchlorate-101	101 > 85	2.66	750.412	750.412	bb			0.0660			151.122	
44921004	Perchlorate-O(18)	107 > 89	2.66	14289.040	14289.040	bb			0.4913	98.26	-1.74	1354.0...	

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 244722  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7174  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921005  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 %Solids: 80

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.623	2.49	1.20	ug/kg	J	1	31-JAN-10 14:38	per0131019a
	Perchlorate Isotope Ratio			2.96			1	31-JAN-10 14:38	per0131019a
14797-73-0	Perchlorate-101	.623	2.49	1.20	ug/kg	J	1	31-JAN-10 14:38	per0131019a
	Perchlorate-O(18)			6.36	ug/kg		1	31-JAN-10 14:38	per0131019a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X <sup>1</sup> %Solids  
 Aliquot

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

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qtd

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Sample Name: per0131019a

Sample Date: 31-Jan-2010

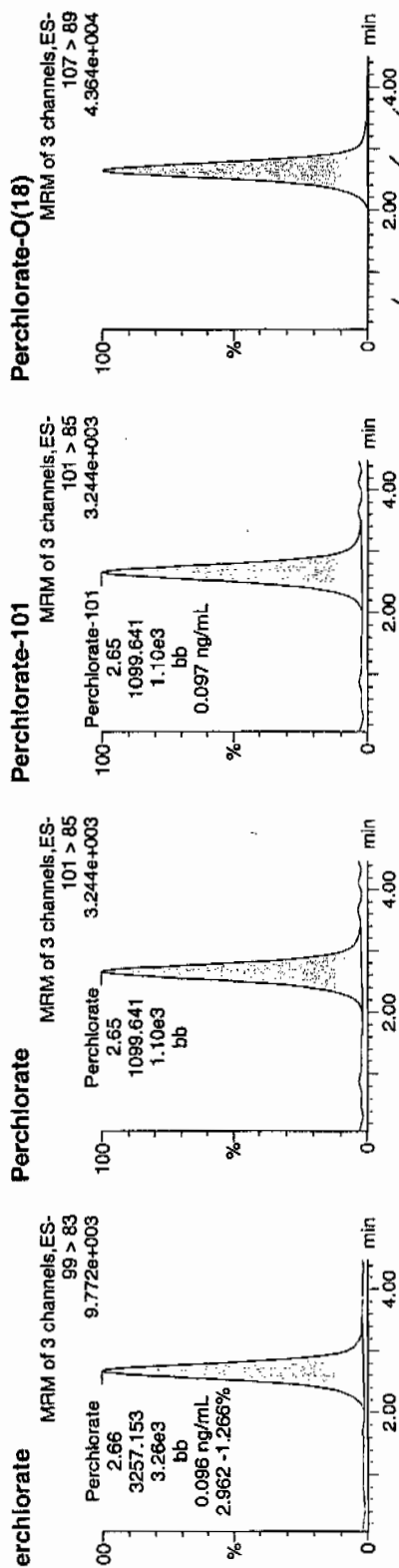
Time: 14:38:56

ID: 244921005

Label: 1:4,B

02-31-10

1944723 / 5020 / 11



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
44921005	Perchlorate	2.66	3257.153	3257.153	bb			0.0963			663.633	2.96
44921005	Perchlorate-101	2.65	1099.641	1099.641	bb			0.0967			244.575	
44921005	Perchlorate-O(18)	2.65	14859.806	14859.806	bb			0.5109	102.19	2.19	2879.1...	



Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 244722  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7173  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921006  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 %Solids: 90.2

CAS No.	Analyte <sup>a</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.554	2.22	1.10	ug/kg	J	1	31-JAN-10 14:46	per0131020a
	Perchlorate Isotope Ratio			2.86			1	31-JAN-10 14:46	per0131020a
14797-73-0	Perchlorate-101	.554	2.22	1.14	ug/kg	J	1	31-JAN-10 14:46	per0131020a
	Perchlorate-O(18)			5.77	ug/kg		1	31-JAN-10 14:46	per0131020a

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

\*Concentration =  
 Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$

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

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Sample Name: per0131020a

Date: 31-Jan-2010

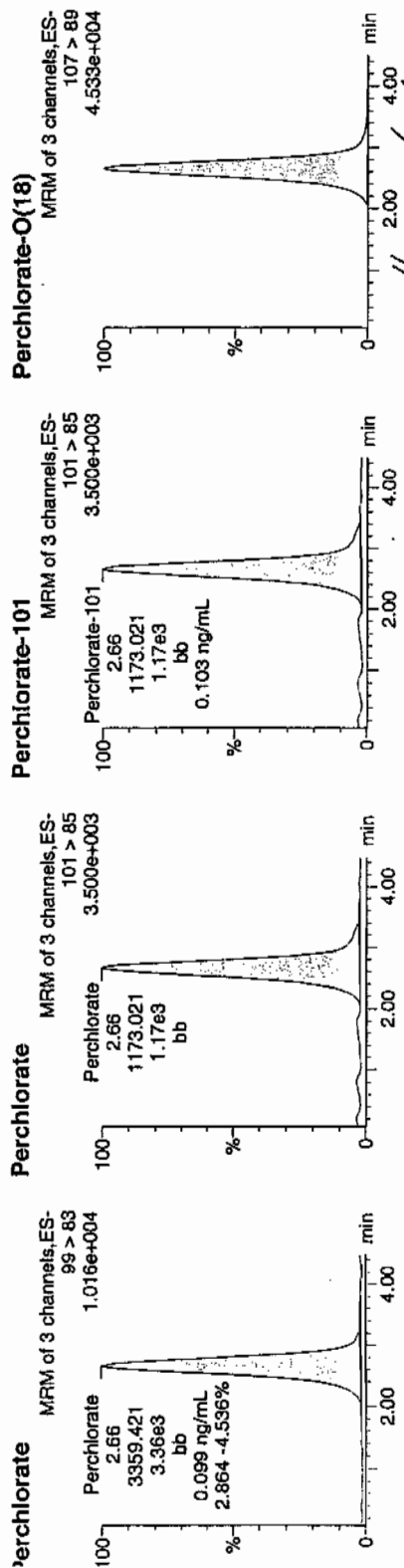
Time: 14:46:29

ID: 244921006

File: 1:4,C

000  
02-01-10

LAN-1944723 | 2020 | 11



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
44921006	Perchlorate	99 > 83	2.66	3359.421	3359.421	bb			0.0983			462.736	2.86
44921006	Perchlorate-101	101 > 85	2.66	1173.021	1173.021	bb			0.1032			151.018	
44921006	Perchlorate-O(18)	107 > 89	2.65	15141.028	15141.028	bb			0.5206	104.12	4.12	1015.3...	

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 244722  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7175  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921007  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 %Solids: 90.7

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.551	2.21	2.84	ug/kg		1	31-JAN-10 15:16	per0131024a
	Perchlorate Isotope Ratio			2.96			1	31-JAN-10 15:16	per0131024a
14797-73-0	Perchlorate-101	.551	2.21	2.85	ug/kg		1	31-JAN-10 15:16	per0131024a
	Perchlorate-O(18)			5.97	ug/kg		1	31-JAN-10 15:16	per0131024a

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

\*Concentration =  
 Instrument Value X Concentrated Extract Volume X 1  
 Aliquot %Solids

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

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Name: per0131024a

Date: 31-Jan-2010

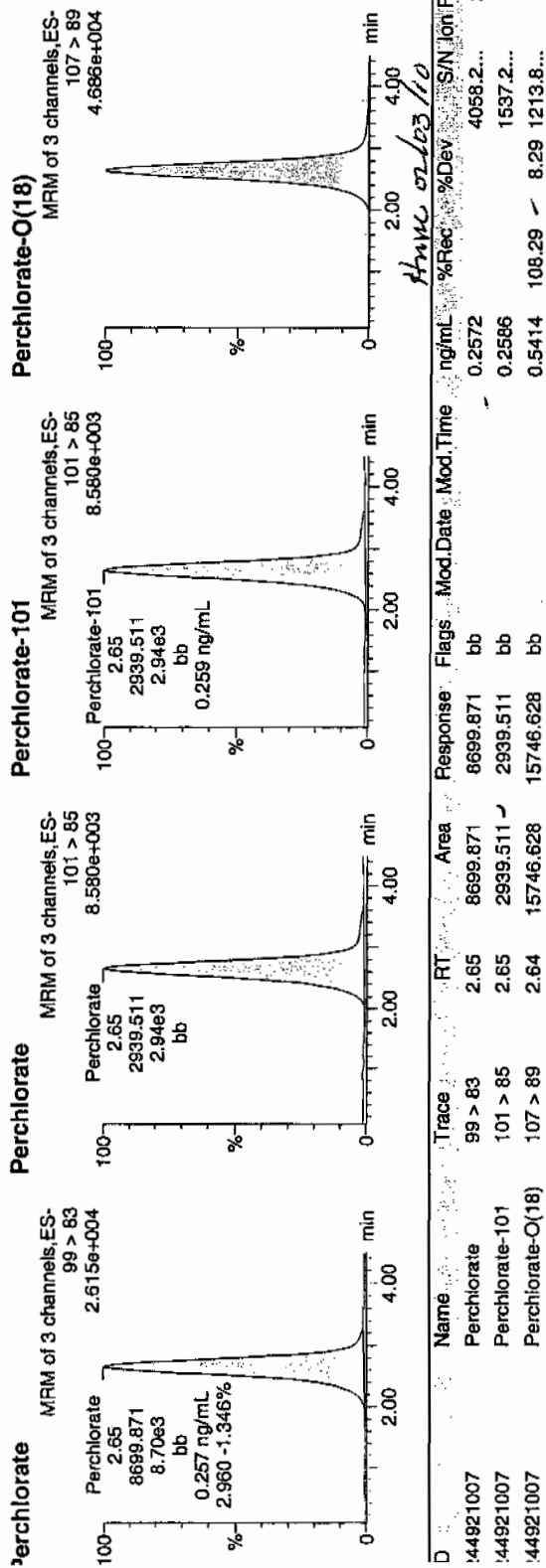
Time: 15:16:39

D: 244921007

/al: 1:4,D

02-01-10

1222/944723/5020/11



D	Name	Trace	RT	Area	Response	Flags	Mod. Date	Mod. Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
144921007	Perchlorate	99 > 83	2.65	8699.871	8699.871	bb			0.2572			4088.2...	2.96
144921007	Perchlorate-101	101 > 85	2.65	2939.511	2939.511	bb			0.2586			1537.2...	
144921007	Perchlorate-O(18)	107 > 89	2.64	15746.628	15746.628	bb			0.5414	108.29	8.29	1213.8...	

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 244722

Extraction Type: Solid Prep

Client Sample No.

RE15-10-7172

Date Received: 16-JAN-10

GEL Job No (SDG): 10-1288

GEL Sample ID: 244921008

Date Filtered: 29-JAN-10

Injection Volume (uL): 20

%Solids: 79

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.635	2.54	0.650	ug/kg	J	1	31-JAN-10 15:24	per0131025a
	Perchlorate Isotope Ratio			3.28			1	31-JAN-10 15:24	per0131025a
14797-73-0	Perchlorate-101	.635	2.54	0.635	ug/kg	U	1	31-JAN-10 15:24	per0131025a
	Perchlorate-O(18)			6.27	ug/kg		1	31-JAN-10 15:24	per0131025a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1  
Aliquot %Solids

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

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Sample Name: per0131025a

Date: 31-Jan-2010

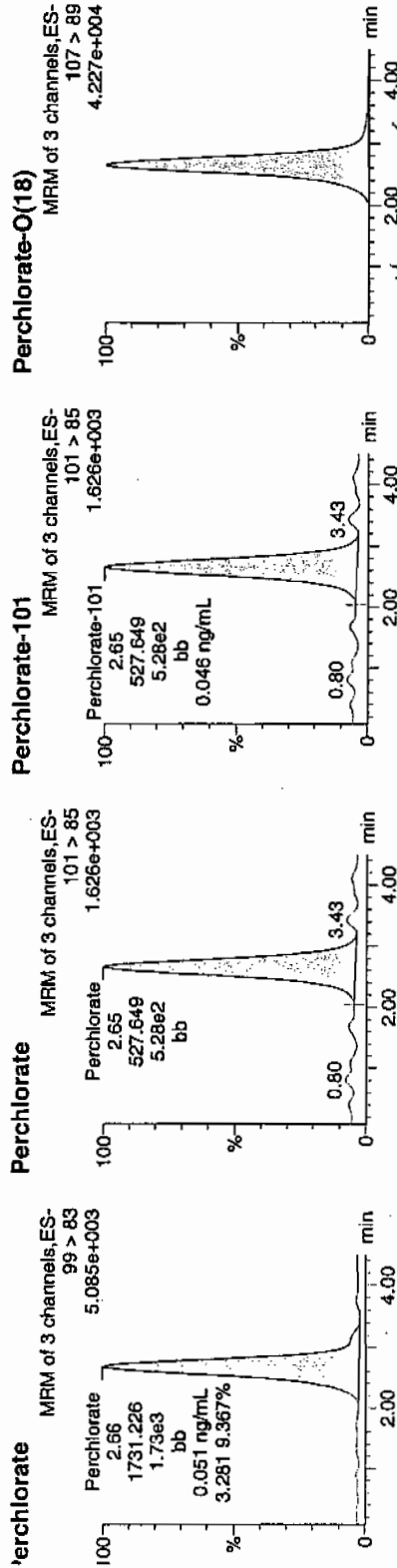
Time: 15:24:11

ID: 244921008

File: 1.4.E

663  
01-01-10

1944723 | 5020 | 11



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
44921008	Perchlorate	99 > 83	2.66	1731.226	bb			0.0512			119.710	3.28
44921008	Perchlorate-101	101 > 85	2.65	527.649	bb			0.0464			87.862	
44921008	Perchlorate-O(18)	107 > 89	2.65	14359.361	bb			0.4937	98.75	-1.25	3819.3...	

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 244722  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. RE15-10-7218  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921009  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 %Solids: 90.1

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.555	2.22	1.10	ug/kg	J	1	31-JAN-10 15:31	per0131026a
	Perchlorate Isotope Ratio			2.92			1	31-JAN-10 15:31	per0131026a
14797-73-0	Perchlorate-101	.555	2.22	1.12	ug/kg	J	1	31-JAN-10 15:31	per0131026a
	Perchlorate-O(18)			5.98	ug/kg		1	31-JAN-10 15:31	per0131026a

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

\*Concentration =  
 Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$

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

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Sample Name: per0131026a

Date: 31-Jan-2010

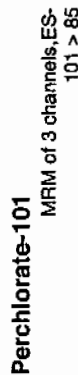
Time: 15:31:42

D: 244921009

Filial: 1:4,F

02-01-10

12700 | 944723 | 5025 | 11



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
44921009	Perchlorate	99 > 83	2.65	3343.797	bb			0.0989			337.088	2.92
44921009	Perchlorate-101	101 > 85	2.64	1144.124	bb			0.1007			199.257	
44921009	Perchlorate-O(18)	107 > 89	2.63	15671.432	bb			0.5389	107.77	7.77	3004.2...	



Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 244722  
 Extraction Type: Solid Prep  
 Client Sample No. RE15-10-7223  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 244921010  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 Sample Volume/Weight: 2.00 g  
 %Solids: 82  
 Concentrated Extract Volume: 20.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.56	2.24	0.560	ug/kg	U	1	31-JAN-10 15:39	per0131027a
	Perchlorate Isotope Ratio						1	31-JAN-10 15:39	per0131027a
14797-73-0	Perchlorate-101	.56	2.24	0.560	ug/kg	U	1	31-JAN-10 15:39	per0131027a
	Perchlorate-O(18)			5.38	ug/kg		1	31-JAN-10 15:39	per0131027a

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

\*Concentration =  
 Instrument Value X  $\frac{\text{Concentrated Extract Volume}}{\text{Aliquot}}$  X  $\frac{1}{\% \text{Solids}}$

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

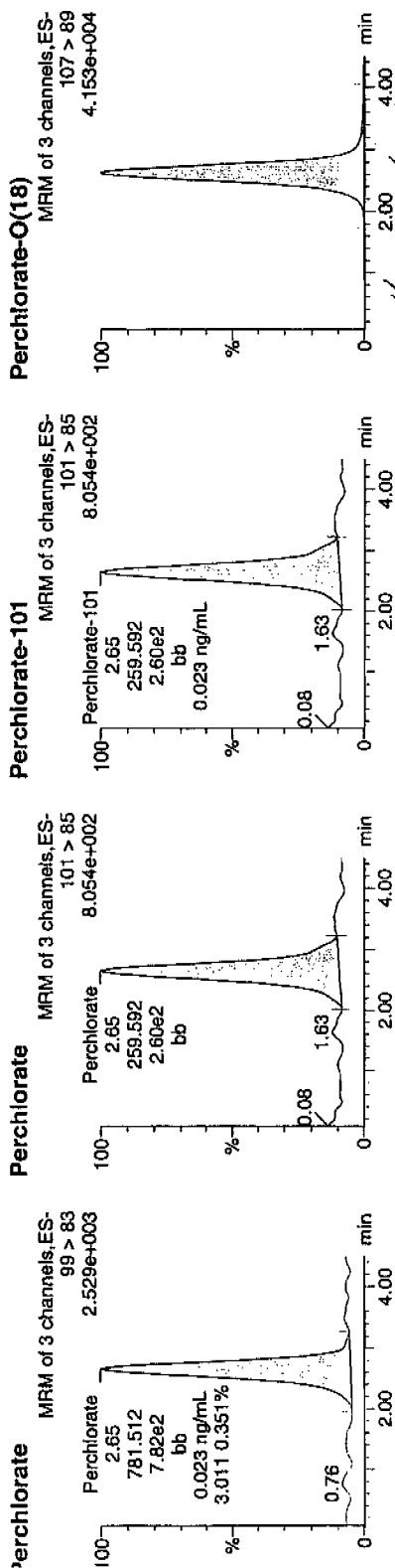
Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Sample Name: per0131027a  
Date: 31-Jan-2010  
Time: 15:39:14  
D: 244921010  
File: 1:5,A

02-01-10

1544723 | 5025 | 11



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
44921010	Perchlorate	99 > 83	2.65	781.512	bb			0.0231		216.047	3.01	
44921010	Perchlorate-101	101 > 85	2.65	259.592	bb			0.0228		63.649		
44921010	Perchlorate-O(18)	107 > 89	2.63	13953.798	bb			0.4798	95.96	-4.04	3488.0...	

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

# STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1288

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 31-JAN-10

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

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

Paramname Perchlorate

Coefficient of Determination:

Calibration Curve: 33819.9

Response Type: External Standard

Curve Type: RF

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1288

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 31-JAN-10

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

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

Parname Perchlorate-101

Coefficient of Determination:

Calibration Curve: 11367

Response Type: External Standard

Curve Type: RF

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

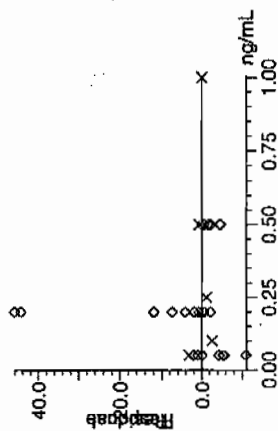
Page 1 of 2

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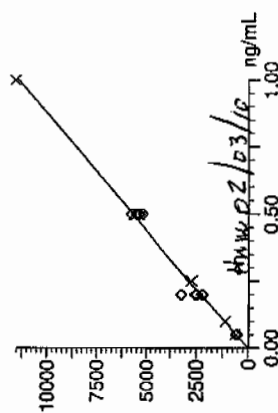
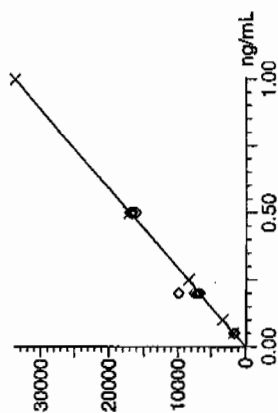
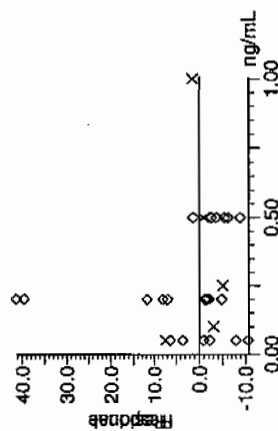
ast Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
rinted: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

ethod: C:\MassLynx\Perchlorate.PRO\MethDB\per013110a.mdb 01 Feb 2010 10:44:50  
alibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per013110a.cdb 01 Feb 2010 10:45:05

ompound name: Perchlorate  
esponse Factor: 33819.9  
RF SD: 737.507, % Relative SD: 2.18069  
esponse type: External Std, Area  
urve type: RF



ompound name: Perchlorate-101  
esponse Factor: 11367  
RF SD: 542.649, % Relative SD: 4.7739  
esponse type: External Std, Area  
urve type: RF



02-01-10

Quantify Calibration Report MassLynx 4.0 SP4

he GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
 Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

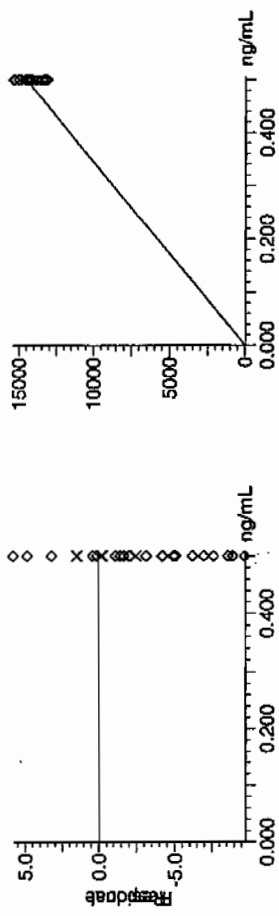
Compound name: Perchlorate-O(18)

Response Factor: 29083

RF SD: 471.184, % Relative SD: 1.62014

Response type: External Std, Area

Curve type: RF



Perchlorate Initial Calibration Verification

GEL Job No.(SDG): 10-1288

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.49	98.34	31-JAN-10 13:23	per0131009a
Perchlorate Isotope Ratio		2.89		31-JAN-10 13:23	per0131009a
Perchlorate-101	.5	.51	101.28	31-JAN-10 13:23	per0131009a



# Quantify Sample Report MassLynx 4.0 SP4

he GEL Group, LLC Analyst: Charlers W. Wilson

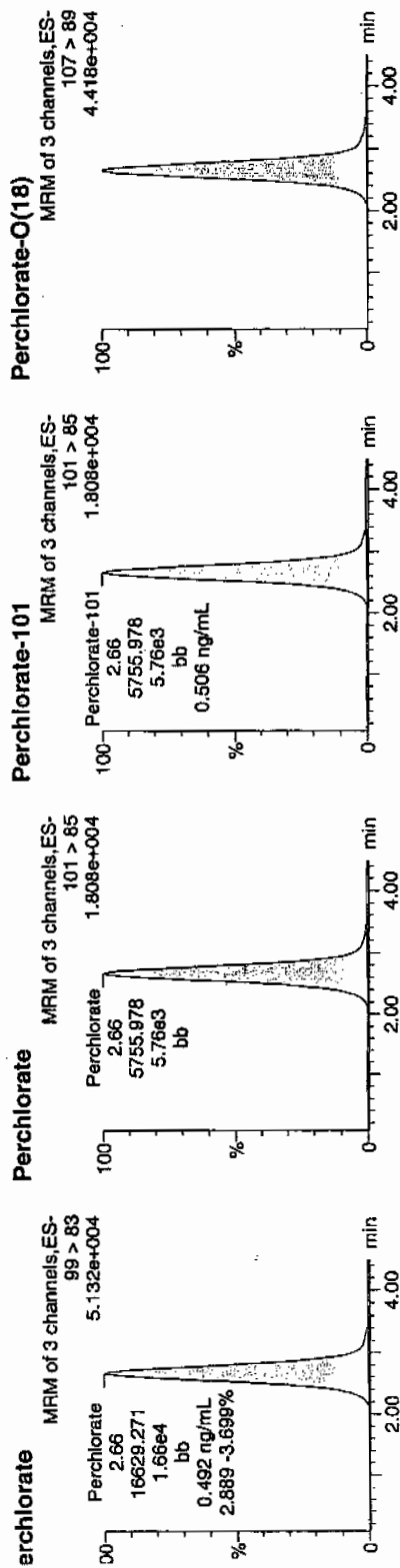
Page 9 of 79

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

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rinted: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

ame: per0131009a  
ate: 31-Jan-2010  
ime: 13:23:29  
): WCL100128-06ICV  
ial: 1:2,A

P<sub>0</sub>ao  
and  
02-01-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL100128-06ICV	Perchlorate	99 > 83	2.66	16629.271				0.4917	98.34	-1.66	1435.3...	2.89
CL100128-06ICV	Perchlorate-101	101 > 85	2.66	5755.978	bb			0.5064	101.28	1.28	591.471	
CL100128-06ICV	Perchlorate-O(18)	107 > 89	2.66	14373.936	bb			0.4942	98.85	-1.15	3087.1...	

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

Perchlorate Continuing Calibration Verification

GEL Job No.(SDG): 10-1288

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.48	95.54	31-JAN-10 14:54	per0131021a
Perchlorate Isotope Ratio		2.92		31-JAN-10 14:54	per0131021a
Perchlorate-101	.5	.49	97.46	31-JAN-10 14:54	per0131021a
Perchlorate	.5	.48	95.21	31-JAN-10 16:17	per0131032a
Perchlorate Isotope Ratio		3.02		31-JAN-10 16:17	per0131032a
Perchlorate-101	.5	.47	93.93	31-JAN-10 16:17	per0131032a

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

atset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

ast Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
rinted: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

ame: per0131021a

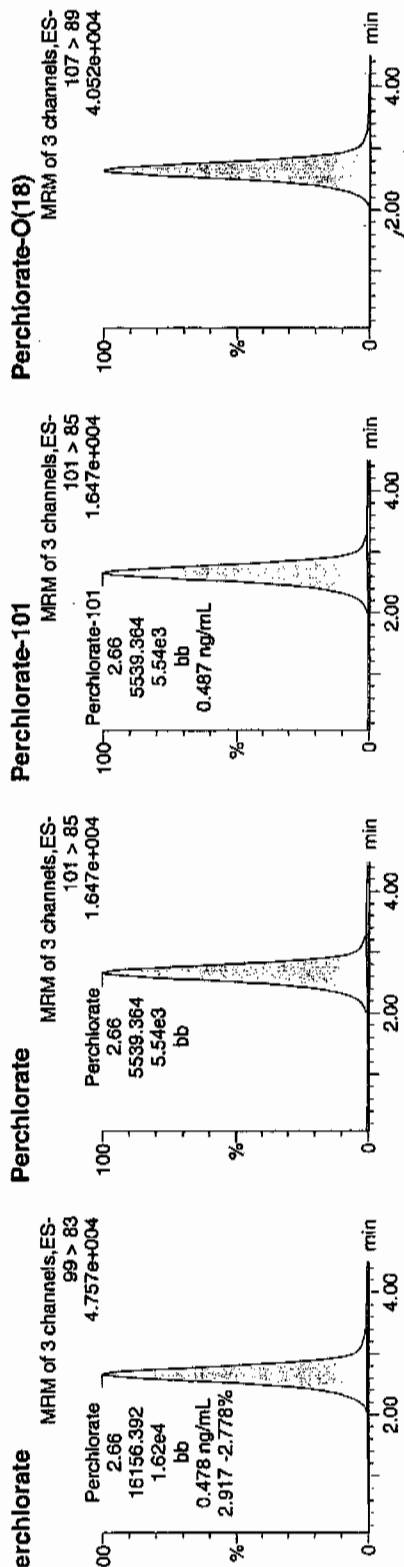
ate: 31-Jan-2010

ime: 14:54:02

>: WCL100128-06CCV

ial: 1:2,A

Pure  
and  
02-01-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
'CL100128-06CCV	Perchlorate	99 > 83	2.66	16156.392	16156.392	bb		0.4777	95.54	-4.46	559.772	2.92
'CL100128-06CCV	Perchlorate-101	101 > 85	2.66	5539.364	5539.364	bb		0.4873	97.46	-2.54	691.093	
'CL100128-06CCV	Perchlorate-O(18)	107 > 89	2.65	13809.432	13809.432	bb		0.4748	94.97	-5.03	2631.7...	

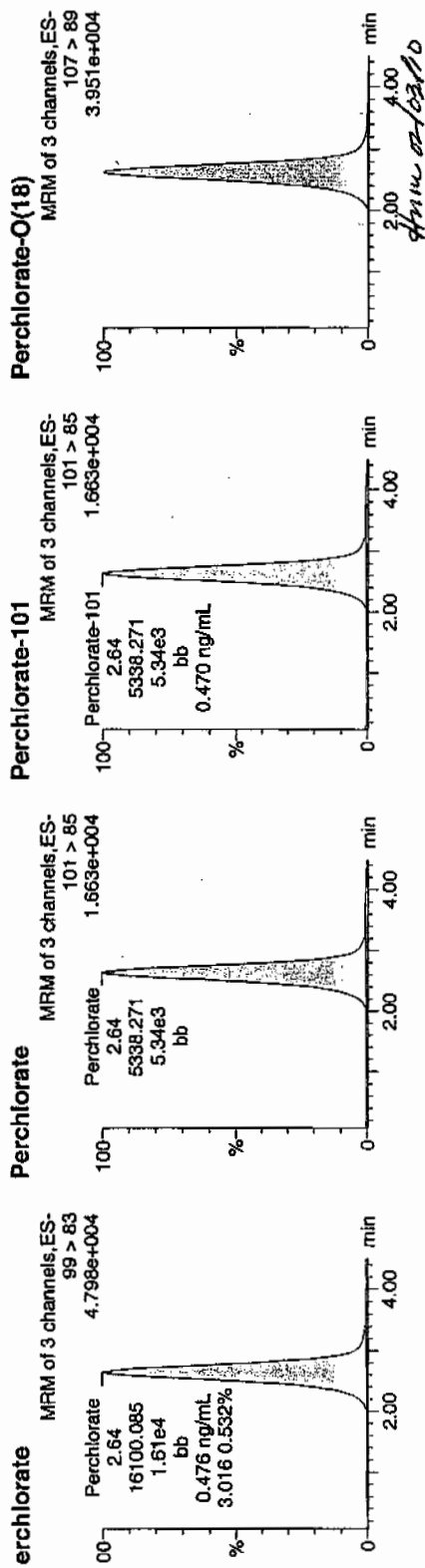
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Sample Name: per0131032a  
Date: 31-Jan-2010  
Time: 16:17:01  
File: WCL100128-06CCV  
Label: 1:2,A

Perchlorate  
01-01-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL100128-06CCV	99 > 83	2.64	16100.085	16100.085	bb			0.4761	95.21	-4.79	1980.2...	3.02
CL100128-06CCV	101 > 85	2.64	5338.271	5338.271	bb			0.4696	93.93	-6.07	931.388	
CL100128-06CCV	107 > 89	2.63	13123.846	13123.846	bb			0.4513	90.25	-9.75	686.121	

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

Perchlorate MDL Verification

GEL Job No.(SDG): 10-1288

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	99.8	31-JAN-10 13:38	per0131011a
Perchlorate Isotope Ratio		2.79		31-JAN-10 13:38	per0131011a
Perchlorate-101	.05	.05	106.42	31-JAN-10 13:38	per0131011a
Perchlorate	.05	.05	101.06	31-JAN-10 15:09	per0131023a
Perchlorate Isotope Ratio		3.03		31-JAN-10 15:09	per0131023a
Perchlorate-101	.05	.05	99.13	31-JAN-10 15:09	per0131023a
Perchlorate	.05	.05	94.76	31-JAN-10 16:32	per0131034a
Perchlorate Isotope Ratio		3.06		31-JAN-10 16:32	per0131034a
Perchlorate-101	.05	.05	92.11	31-JAN-10 16:32	per0131034a

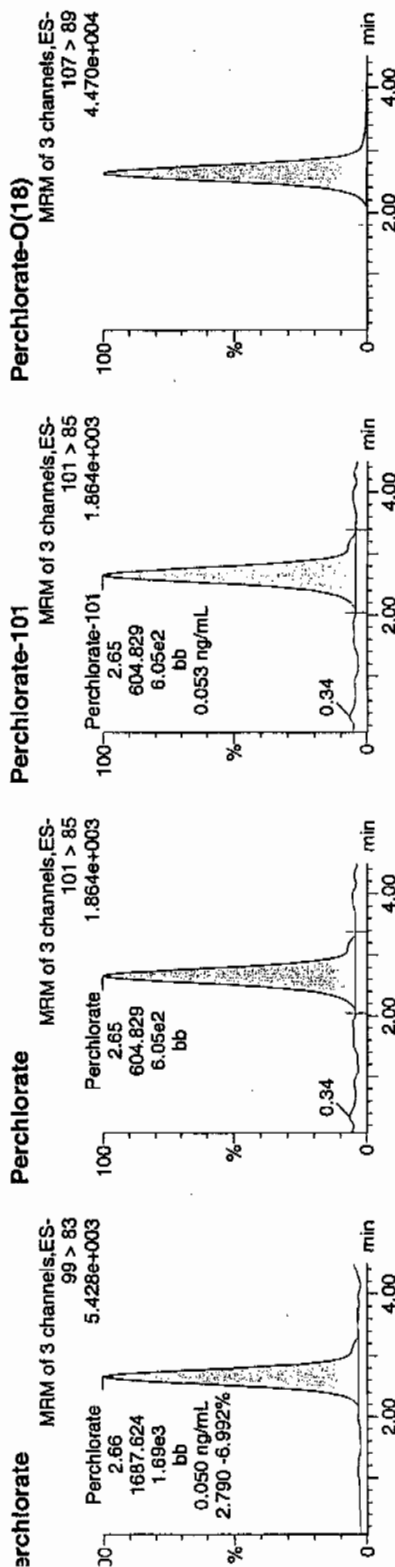
uantify Sample Report MassLynx 4.0 SP4  
he GEL Group, LLC Analyst: Charles W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

ast Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
rinted: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

ame: per0131011a  
ate: 31-Jan-2010  
ime: 13:38:34  
i: WCL100128-07CRI  
al: 1:2,B

Pers  
CWS  
02-01-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL100128-07CRI	Perchlorate	99 > 83	2.66	1687.624	bb			0.0499	99.80	-0.20	385.644	2.79
CL100128-07CRI	Perchlorate-101	101 > 85	2.65	604.829	bb			0.0532	106.42	6.42	201.132	
CL100128-07CRI	Perchlorate-O(18)	107 > 89	2.64	14329.497	bb			0.4927	98.54	-1.46	4076.8...	

4.470e+004

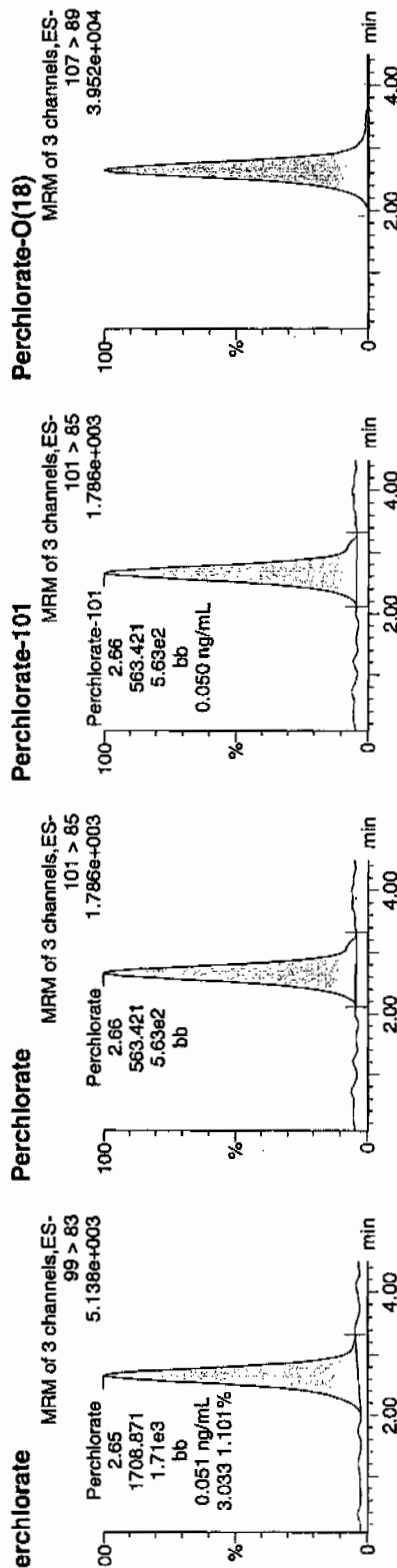
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Sample Name: per0131023a  
Date: 31-Jan-2010  
Time: 15:09:07  
Job: WCL100128-07CRI  
Label: 1:2,B

Pure  
and  
01-01-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL100128-07CRI	Perchlorate	2.65	1708.871	1708.871	bb			0.0505	101.06	1.06	90.206	3.03
CL100128-07CRI	Perchlorate-101	2.66	563.421	563.421	bb			0.0496	99.13	-0.87	234.947	
CL100128-07CRI	Perchlorate-O(18)	2.65	13430.074	13430.074	bb			0.4618	92.36	-7.64	1794.5...	

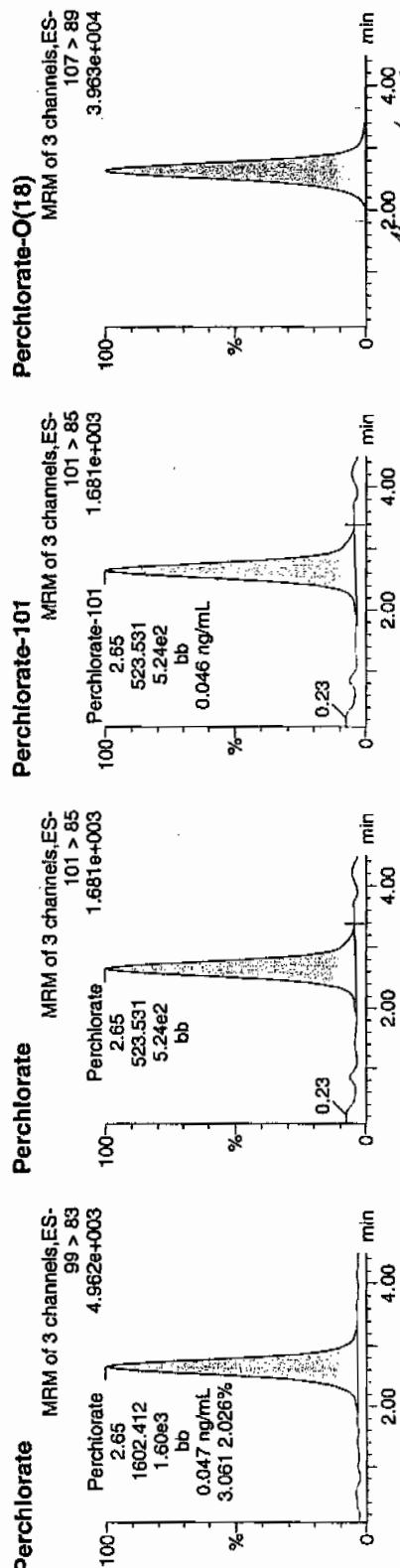
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\P perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Name: per0131034a  
Date: 31-Jan-2010  
Time: 16:32:06  
ID: WCL100128-07CRI  
Vial: 1:2,B

*Pass*  
*WCL*  
*01-01-10*



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
VCL100128-07CRI	Perchlorate	99 > 83	2.65	1602.412	bb			0.0474	94.76	-5.24	128.941	3.06
VCL100128-07CRI	Perchlorate-101	101 > 85	2.65	523.531	bb			0.0461	92.11	-7.89	148.998	
VCL100128-07CRI	Perchlorate-O(18)	107 > 89	2.64	13291.097	bb			0.4570	91.40	-8.60	3554.0...	



# QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944722

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

MB

Date Received: 29-JAN-10

GEL Job No (SDG): 10-1288

GEL Sample ID: 1202023105

Date Filtered: 29-JAN-10

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	0.500	ug/kg	U	1	31-JAN-10 13:46	per0131012a
	Perchlorate Isotope Ratio						1	31-JAN-10 13:46	per0131012a
14797-73-0	Perchlorate-101	.5	2	0.500	ug/kg	U	1	31-JAN-10 13:46	per0131012a
	Perchlorate-O(18)			4.86	ug/kg		1	31-JAN-10 13:46	per0131012a

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

\*Concentration =

Instrument Value X Concentrated Extract Volume X 1  
Aliquot %Solids

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

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Name: per0131012a

Date: 31-Jan-2010

Time: 13:46:08

ID: 1202023105

Vial: 1:3,A

02-01-10

144723 | 3020 | 103 | 11

Perchlorate

MRM of 3 channels, ES-

99 > 83

5.240e+002

Perchlorate

2.66

119.009

1.19e2

bb

0.004 ng/mL

4.000 33.339%

0.29 1.21

3.71

min

Perchlorate

MRM of 3 channels, ES-

101 > 85

1.838e+002

Perchlorate

2.64

29.751

2.98e1

bb

1.38

3.07

3.91

min

Perchlorate-101

MRM of 3 channels, ES-

101 > 85

1.838e+002

Perchlorate

0.08

1.38

3.07

3.91

min

Perchlorate-O(18)

MRM of 3 channels, ES-

107 > 89

4.545e+004

Perchlorate

0.0035

0.0026

0.4860

97.20

-2.80

8523.2...

min

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202023105	Perchlorate	99 > 83	2.66	119.009	119.009	bb			0.0035	20.314	4.00		
1202023105	Perchlorate-101	101 > 85	2.64	29.751	29.751	bb			0.0026	12.484			
1202023105	Perchlorate-O(18)	107 > 89	2.64	14134.292	14134.292	bb			0.4860	97.20	-2.80	8523.2...	

23.0500

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: EPA 6850 Modified  
 Matrix: SOIL  
 Extraction Batch ID: 244722  
 Extraction Type: Solid Prep  
 Sample Volume/Weight: 2.00 g  
 Concentrated Extract Volume: 20.0  
 Client Sample No. LCS  
 Date Received: 29-JAN-10  
 GEL Job No (SDG): 10-1288  
 GEL Sample ID: 1202023106  
 Date Filtered: 29-JAN-10  
 Injection Volume (uL): 20  
 %Solids: 100

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	2.01	ug/kg		1	31-JAN-10 13:53	per0131013a
	Perchlorate Isotope Ratio			2.68			1	31-JAN-10 13:53	per0131013a
14797-73-0	Perchlorate-101	.5	2	2.24	ug/kg		1	31-JAN-10 13:53	per0131013a
	Perchlorate-O(18)			4.92	ug/kg		1	31-JAN-10 13:53	per0131013a

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

\*Concentration =  
 Instrument Value X Concentrated Extract Volume X 1  
 Aliquot %Solids

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
 Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Name: per0131013a

Date: 31-Jan-2010

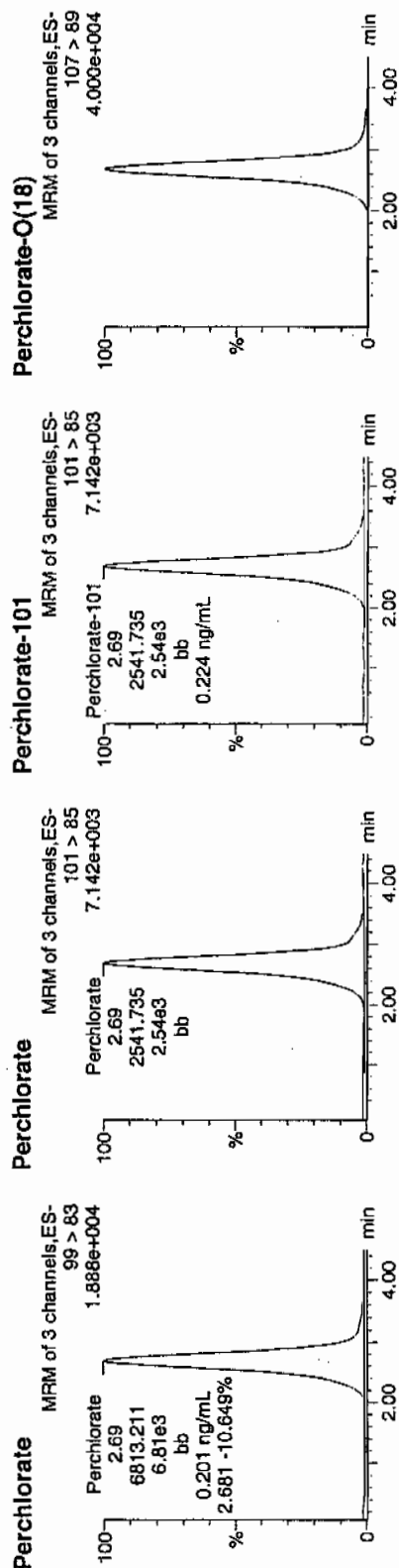
Time: 13:53:40

ID: 1202023106

Vial: 1:3,B

6500  
 02-01-10

1202023106 / 502D / LGS / 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202023106	Perchlorate	99 > 83	2.69	6813.211	6813.211	bb			0.2015	100.73	0.73	993.901	2.58
1202023106	Perchlorate-101	101 > 85	2.69	2541.735	2541.735	bb			0.2236	111.80	11.80	606.938	
1202023106	Perchlorate-O(18)	107 > 89	2.68	14295.202	14295.202	bb			0.4915	98.31	-1.69	436.112	

6513.211  
 33519.9 = 0.20145  
 Hms 103/10

# MISCELLANEOUS DATA

# Prep Logbook

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

Batch ID: 944722 Verified by: Lab SOP: GL-OA-E-067 REV# 6  
 Analyst: Jareth Shirley Instrument: MicroMass Quatro Ultima  
 Method: SW846 6850 Modified

Sample ID	Run Date	Allquot (g)	Prepped Aliquot (mL)	Serial Number	Spike Amt	Units	Comments
1202023105 MB	29-JAN-2010 15:02:52	2	20	UCLO91230-01.2	.4	mL	Desalting cartridges used: 090414-1-Ba & 091130-1-H
1202023106 LCS	29-JAN-2010 15:02:52	2	20	UCLO91230-01.2	.4	mL	
244921001	29-JAN-2010 15:02:52	2	20	UCLO91230-01.2	.4	mL	
244921002	29-JAN-2010 15:02:52	2	20	UCLO91230-01.2	.4	mL	
244921003	29-JAN-2010 15:02:52	2	20	UCLO91230-01.2	.4	mL	
244921004	29-JAN-2010 15:02:52	2	20				
244921005	29-JAN-2010 15:02:52	2	20				
244921006	29-JAN-2010 15:02:52	2	20				
244921007	29-JAN-2010 15:02:52	2	20				
244921008	29-JAN-2010 15:02:52	2	20				
244921009	29-JAN-2010 15:02:52	2	20				
244921010	29-JAN-2010 15:02:52	2	20				
245134001	29-JAN-2010 15:02:52	2	20				
1202023107 MS (245134001)	29-JAN-2010 15:02:52	2	20				
1202023108 MSD (245134001)	29-JAN-2010 15:02:52	2	20				
245134002	29-JAN-2010 15:02:52	2	20				
245134003	29-JAN-2010 15:02:52	2	20				
245134004	29-JAN-2010 15:02:52	2	20				
245134005	29-JAN-2010 15:02:52	2	20				
245134006	29-JAN-2010 15:02:52	2	20				
245134007	29-JAN-2010 15:02:52	2	20				
245134008	29-JAN-2010 15:02:52	2	20				
245134009	29-JAN-2010 15:02:52	2	20				
245134010	29-JAN-2010 15:02:52	2	20				
1202023109 ICS	29-JAN-2010 15:02:52	2	20				

Comments:

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments
ICS	1202023109	10 ug/L ICS/KCV Second Source	UCLO91230-01.2	.4	mL	
LCS	1202023106	10 ug/L ICS/KCV Second Source	UCLO91230-01.2	.4	mL	
MIS	1202023107	10 ug/L ICS/KCV Second Source	UCLO91230-01.2	.4	mL	
MSD	1202023108	10 ug/L ICS/KCV Second Source	UCLO91230-01.2	.4	mL	

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 01/31/10  
Extr. Injection Volume: 20uL  
Sequence Number: per013110a  
Initial Calibration Date: 01/31/10

Method: EPA 6850-Modified  
Int. Std.: UCL100122-01  
Mobile Phase Lot#: 1254342, 1246195  
Standard-Samp Reagent Lot#: 1233976

Reviewed BY: *Hann*  
Date: 02/23/10  
SOP: GL-OA-E-067 Rev.6  
Alt Check Std. ID: WCL100128-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0131001a	IPB001	CWW	1/31/2010 12:23			1		USE	B
per0131002a	IPB001	CWW	1/31/2010 12:30			1		USE	B
per0131003a	WCLICAL-01	CWW	1/31/2010 12:38			1		USE	I
per0131004a	WCLICAL-02	CWW	1/31/2010 12:45			1		USE	I
per0131005a	WCLICAL-03	CWW	1/31/2010 12:53			1		USE	I
per0131006a	WCLICAL-04	CWW	1/31/2010 13:00			1		USE	I
per0131007a	WCLICAL-05	CWW	1/31/2010 13:08			1		USE	I
per0131008a	IPB002	CWW	1/31/2010 13:15			1		USE	B
per0131009a	WCLICV	CWW	1/31/2010 13:23			1		USE	C
per0131010a	IPB003	CWW	1/31/2010 13:31			1		USE	B
per0131011a	WCLCRI	CWW	1/31/2010 13:38			1		USE	C
per0131012a	1202023105	CWW	1/31/2010 13:46	944723	VARIOUS	1	LANL	USE	S
per0131013a	1202023106	CWW	1/31/2010 13:53	944723	VARIOUS	1	LANL	USE	S
per0131014a	1202023109	CWW	1/31/2010 14:01	944723	VARIOUS	1	LANL	USE	S
per0131015a	244921001	CWW	1/31/2010 14:08	944723	10-1288	1	LANL	USE	S
per0131016a	244921002	CWW	1/31/2010 14:16	944723	10-1288	1	LANL	USE	S
per0131017a	244921003	CWW	1/31/2010 14:23	944723	10-1288	1	LANL	USE	S
per0131018a	244921004	CWW	1/31/2010 14:31	944723	10-1288	1	LANL	USE	S
per0131019a	244921005	CWW	1/31/2010 14:38	944723	10-1288	1	LANL	USE	S
per0131020a	244921006	CWW	1/31/2010 14:46	944723	10-1288	1	LANL	USE	S
per0131021a	WCLCCV	CWW	1/31/2010 14:54			1	LANL	USE	C
per0131022a	IPB004	CWW	1/31/2010 15:01			1	LANL	USE	B
per0131023a	WCLCRI	CWW	1/31/2010 15:09			1	LANL	USE	C
per0131024a	244921007	CWW	1/31/2010 15:16	944723	10-1288	1	LANL	USE	S
per0131025a	244921008	CWW	1/31/2010 15:24	944723	10-1288	1	LANL	USE	S
per0131026a	244921009	CWW	1/31/2010 15:31	944723	10-1288	1	LANL	USE	S
per0131027a	244921010	CWW	1/31/2010 15:39	944723	10-1288	1	LANL	USE	S
per0131028a	245134001	CWW	1/31/2010 15:46	944723	10-1300	1	LANL	USE	S
per0131029a	1202023107	CWW	1/31/2010 15:54	944723	10-1300	1	LANL	USE	S



per0131030a	1202023108	CWW	1/31/2010 16:01	944723	10-1300	1	LANL	USE	S
per0131031a	245134002	CWW	1/31/2010 16:09	944723	10-1300	1	LANL	USE	S
per0131032a	WCLCCV	CWW	1/31/2010 16:17			1	LANL	USE	C
per0131033a	IPB005	CWW	1/31/2010 16:24			1	LANL	USE	B
per0131034a	WCLCRI	CWW	1/31/2010 16:32			1	LANL	USE	C
per0131035a	245134003	CWW	1/31/2010 16:39	944723	10-1300	1	LANL	USE	S
per0131036a	245134004	CWW	1/31/2010 16:47	944723	10-1300	1	LANL	USE	S
per0131037a	245134005	CWW	1/31/2010 16:54	944723	10-1300	1	LANL	USE	S
per0131038a	245134006	CWW	1/31/2010 17:02	944723	10-1300	1	LANL	USE	S
per0131039a	245134007	CWW	1/31/2010 17:09	944723	10-1300	1	LANL	USE	S
per0131040a	245134008	CWW	1/31/2010 17:17	944723	10-1300	1	LANL	USE	S
per0131041a	245134009	CWW	1/31/2010 17:24	944723	10-1300	1	LANL	USE	S
per0131042a	245134010	CWW	1/31/2010 17:32	944723	10-1300	1	LANL	USE	S
per0131043a	WCLCCV	CWW	1/31/2010 17:40			1	LANL	USE	C
per0131044a	IPB006	CWW	1/31/2010 17:47			1	LANL	USE	B
per0131045a	WCLCRI	CWW	1/31/2010 17:55			1	LANL	USE	C
per0131046a	1202028960	CWW	1/31/2010 18:02	947199	VARIOUS	1	LANL	USE	S
per0131047a	1202028961	CWW	1/31/2010 18:10	947199	VARIOUS	1	LANL	USE	S
per0131048a	1202028966	CWW	1/31/2010 18:17	947199	VARIOUS	1	LANL	USE	S
per0131049a	245601001	CWW	1/31/2010 18:25	947199	10-1409	1	LANL	USE	S
per0131050a	245614001	CWW	1/31/2010 18:32	947199	10-1417-1	1	LANL	USE	S
per0131051a	1202028962	CWW	1/31/2010 18:40	947199	10-1417-1	1	LANL	USE	S
per0131052a	1202028963	CWW	1/31/2010 18:48	947199	10-1417-1	1	LANL	USE	S
per0131053a	245614002	CWW	1/31/2010 18:55	947199	10-1417-1	1	LANL	USE	S
per0131054a	WCLCCV	CWW	1/31/2010 19:03			1	LANL	USE	C
per0131055a	IPB007	CWW	1/31/2010 19:10			1	LANL	USE	B
per0131056a	WCLCRI	CWW	1/31/2010 19:18			1	LANL	USE	C
per0131057a	245618007	CWW	1/31/2010 19:25	947199	10-1422	1	LANL	USE	S
per0131058a	245619001	CWW	1/31/2010 19:33	947199	10-1423	1	LANL	USE	S
per0131059a	245625001	CWW	1/31/2010 19:41	947199	10-1425	1	LANL	USE	S
per0131060a	245676002	CWW	1/31/2010 19:48	947199	10-1446	1	LANL	USE	S
per0131061a	1202028964	CWW	1/31/2010 19:56	947199	10-1446	1	LANL	USE	S
per0131062a	1202028965	CWW	1/31/2010 20:03	947199	10-1446	1	LANL	USE	S
per0131063a	245676005	CWW	1/31/2010 20:11	947199	10-1446	1	LANL	USE	S
per0131064a	245681001	CWW	1/31/2010 20:18	947199	10-1450	1	LANL	USE	S
per0131065a	WCLCCV	CWW	1/31/2010 20:26			1	LANL	USE	C
per0131066a	IPB008	CWW	1/31/2010 20:34			1	LANL	USE	B

per0131067a	WCLCRI	CWW	1/31/2010 20:41			1	LANL	USE	C
per0131068a	245681002	CWW	1/31/2010 20:49	947199	10-1450	1	LANL	USE	S
per0131069a	245690001	CWW	1/31/2010 20:57	947199	10-1433-1	1	LANL	USE	S
per0131070a	245690002	CWW	1/31/2010 21:04	947199	10-1433-1	1	LANL	USE	S
per0131071a	245777001	CWW	1/31/2010 21:12	947199	10-1458	1	LANL	DUSE-DL	S
per0131072a	245777005	CWW	1/31/2010 21:19	947199	10-1458	1	LANL	DUSE-DL	S
per0131073a	245807001	CWW	1/31/2010 21:27	947199	10-1474-1	1	LANL	DUSE-RA	S
per0131074a	245807002	CWW	1/31/2010 21:34	947199	10-1474-1	1	LANL	USE	S
per0131075a	IPB009	CWW	1/31/2010 21:42	Screen	Inhouse	1	GEL	USE	B
per0131076a	1262643 Suppr	CWW	1/31/2010 21:50			1		DUSE	S
per0131077a	WCLCCV	CWW	1/31/2010 21:57			1		USE	C
per0131078a	IPB010	CWW	1/31/2010 22:05			1		USE	B
per0131079a	WCLCRI	CWW	1/31/2010 22:13			1		USE	C

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

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Name: per0131029a

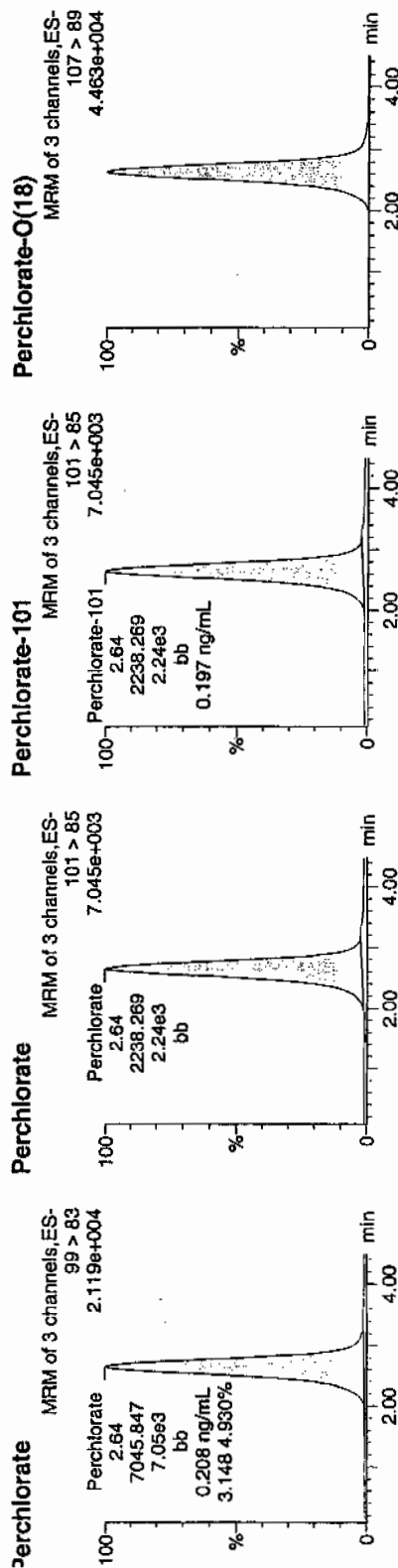
Date: 31-Jan-2010

Time: 15:54:22

D: 1202023107

Val: 1.5,C

17420-1944723 | 5020 | MS | 11 |  
MS-01-10



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202023107	Perchlorate	99 > 83	2.64	7045.847	7045.847	bb			0.2083	104.17	4.17	934.611	3.15
1202023107	Perchlorate-101	101 > 85	2.64	2238.269	2238.269	bb			0.1969	98.45	-1.55	608.505	
1202023107	Perchlorate-O(18)	107 > 89	2.64	15009.511	15009.511	bb			0.5161	103.22	3.22	2914.2...	

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per013110a.qld

Last Altered: Monday, February 01, 2010 10:45:07 AM Eastern Standard Time  
Printed: Monday, February 01, 2010 10:58:37 AM Eastern Standard Time

Name: per0131030a

Date: 31-Jan-2010

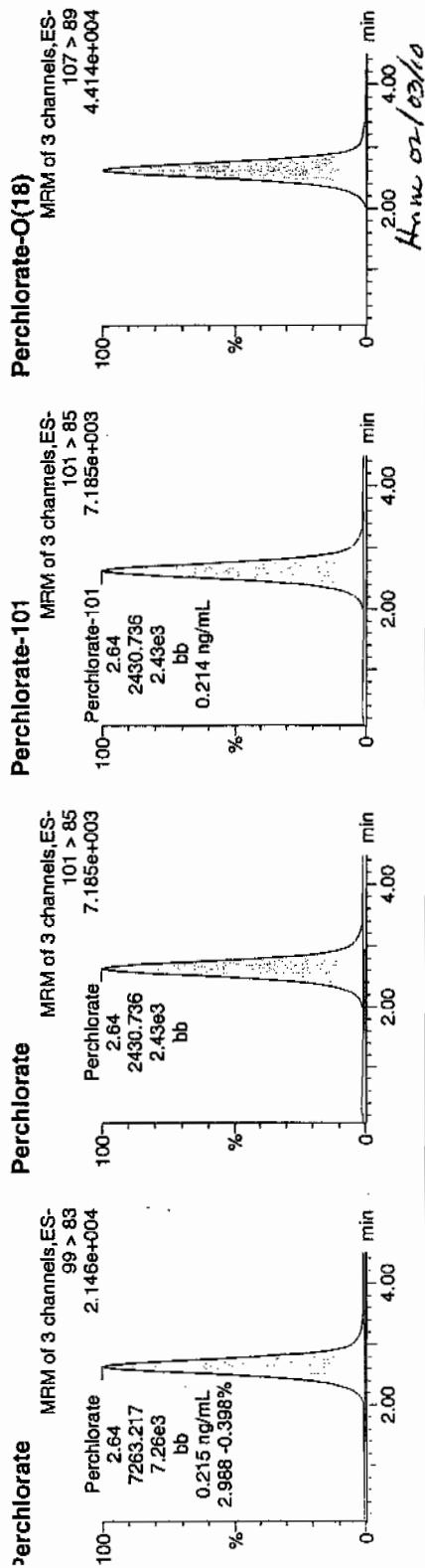
Time: 16:01:56

D: 1202023108

/lal: 1:5,D

02-01-10

11202023108/2020/MSD/11



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202023108	Perchlorate	99 > 83	2.64	7263.217	7263.217	bb			0.2148	107.38	7.38	1058.9...	2.99
1202023108	Perchlorate-101	101 > 85	2.64	2430.736	2430.736	bb			0.2138	106.92	6.92	540.936	
1202023108	Perchlorate-O(18)	107 > 89	2.63	14598.199	14598.199	bb			0.5020	100.39	0.39	4382.9...	

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

## Isotope Ratio Criteria

### Isotope Ratio $^{35}\text{Cl}/^{37}\text{Cl}$

2.31-3.85

## Tune Criteria

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

# LC/MS/MS PERCHLORATE ANALYSIS

**Perchlorate by LC/MSMS  
Los Alamos National Laboratory (LANL)  
SDG 10-1288-1**

**Method/Analysis Information**

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

**Analytical Method:** SW846 6850 Modified

**Prep Method:** SW846 6850 Modified

**Analytical Batch Number:** 943784

**Prep Batch Number:** 943783

**Sample Analysis**

<b>Sample ID</b>	<b>Client ID</b>
244922001	RE15-10-7229
1202020836	Interference Check Sample (ICS)
1202020832	Method Blank (MB)
1202020833	Laboratory Control Sample (LCS)
1202020834	244922001(RE15-10-7229) Matrix Spike (MS)
1202020835	244922001(RE15-10-7229) Matrix Spike Duplicate (MSD)

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

**Preparation/Analytical Method Verification**

**SOP Reference**

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

**Calibration Information**

**Initial Calibration**

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

10-1288-1-PERLCMS

Page 1 of 4

**CCV Requirements**

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

**CCB Requirements**

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

**CCV Requirements**

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

**Low Level Standard (CRI) Requirements**

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

**Quality Control (QC) Information****Method Blank (MB) Statement**

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

**Interference Check Sample (ICS)**

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

**Laboratory Control Sample (LCS) Recovery**

The LCS spike recoveries met the acceptance limits.

**QC Sample Designation**

Sample 244922001 (RE15-10-7229) was chosen for matrix spike and matrix spike duplicate analysis.

**Matrix Spike (MS) Recovery Statement**

The MS recoveries were within the established acceptance limits.

**Matrix Spike Duplicate (MSD) Recovery Statement**

The MSD recoveries were within the established acceptance limits.

**MS/MSD Relative Percent Difference (RPD) Statement**

The RPD(s) between the MS and MSD met the acceptance limits.

**Retention Time Standard Area Acceptance**

The retention time standard areas were within the required acceptance criteria for all samples and QC.

**Retention Time**

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



### **Technical Information**

#### **Holding Time Specifications**

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

#### **Preparation/Analytical Method Verification**

All procedures were performed as stated in the SOP.

#### **Sample Dilutions**

The samples in this SDG did not require dilutions.

#### **Sample Re-extraction/Re-analysis**

The SDG was re-extracted within holding due to a CVS failing acceptance criteria. The re-extraction and analysis passed acceptance criteria and is reported.

### **Miscellaneous Information**

#### **Data Exception (DER) Documentation**

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

#### **Manual Integrations**

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

#### **Method Comments**

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

#### **Additional Comments**

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

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

#### **Perchlorate Isotope Ratio**

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

### System Configuration

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

### Chromatographic Columns

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

Dionex: IonPac AG-16 2 x 50 mm.

### Certification Statement

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

### Review Validation:

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

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

Reviewer: Heather Mauer Date: 02/03/10

# SAMPLE DATA SUMMARY

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 943783

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.

RE15-10-7229

Date Received: 16-JAN-10

GEL Job No (SDG): 10-1288-1

GEL Sample ID: 244922001

Date Filtered: 21-JAN-10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	21-JAN-10 18:25	per0121038a
	Perchlorate Isotope Ratio						1	21-JAN-10 18:25	per0121038a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	21-JAN-10 18:25	per0121038a
	Perchlorate-O(18)			0.482	ug/L		1	21-JAN-10 18:25	per0121038a

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

\*Concentration =

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

# QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL GEL Job No. (SDG): 10-1288-1

Extract Batch Code: 943783 Date Filtered: 21-JAN-10

Matrix: WATER Sample ID: 1202020833

Analyte <sup>^</sup>	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.203	ug/L	102		85 - 115
Perchlorate Isotope Ratio		2.85				-
Perchlorate-101	0.200	.208	ug/L	104		85 - 115
Perchlorate-O(18)		.498	ug/L			-

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

Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10-1288-1

Extract Batch Code: 943783

Date Filtered: 21-JAN-10

Matrix: WATER

Sample ID: 1202020836

Analyte <sup>^</sup>	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.21	ug/L	105		70 - 130
Perchlorate Isotope Ratio		2.98				
Perchlorate-101	0.200	.205	ug/L	103		70 - 130
Perchlorate-O(18)		.483	ug/L			

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

Last Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
Printed: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Name: per0121014a

Date: 21-Jan-2010

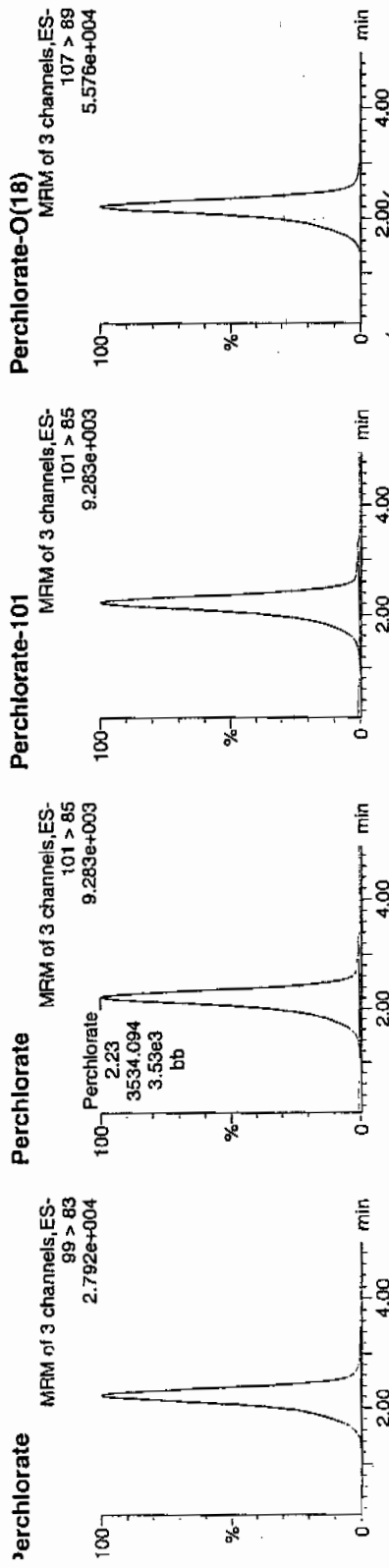
Time: 15:12:58

D: 1202020836

/ial: 1:3,C

1202020836 | 1202020836 | 1202020836

600  
01-22-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
202020836	Perchlorate	99 > 83	2.24	10525.255	bb			0.2095	104.75	4.75	2562.6...	2.98
202020836	Perchlorate-101	101 > 85	2.23	3534.094	bb			0.2051	102.54	2.54	298.706	
202020836	Perchlorate-O(18)	107 > 89	2.22	21014.701	bb			0.4828	96.56	-3.44	851.611	



Form 6

Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

Extract Batch Code: 943783

GEL MS/PS ID: 1202020834

GEL MSD/PSD ID: 1202020835

GEL Job No (SDG): 10-1288-1

Date Extracted: 21-JAN-10

Client ID: RE15-10-7222

QC Type: MS

Compound <sup>^</sup>	Spike Added	Sample Conc	Units	MS Conc	MS Rec	#	MSD Conc	MSD Rec	#	RPD	#	RPD Limit	Recovery Limit
Perchlorate	0.200	0.0027	ug/L	0.203	100		.209	103		2.96		30	75 - 125
Perchlorate Isotope Ratio	0	0.00		3.11			3.01			0			-
Perchlorate-101	0.200	0.00268	ug/L	0.191	93.9		.203	100		6.22		30	75 - 125
Perchlorate-O(18)	0	0.482	ug/L	0.458			.486			5.84			-

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

Comments:

Perchlorate Initial Calibration Blank

GEL Job No.(SDG): 10-1288-1

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	21-JAN-10	per0121001a	IPB001
Perchlorate-101	0.00	0	NA	21-JAN-10	per0121001a	IPB001
Perchlorate	0.00	0	NA	21-JAN-10	per0121002a	IPB001
Perchlorate-101	0.00	0	NA	21-JAN-10	per0121002a	IPB001

Identify Sample Report MassLynx 4.0 SP4  
e GEL Group, LLC Analyst: Charles W. Wilson

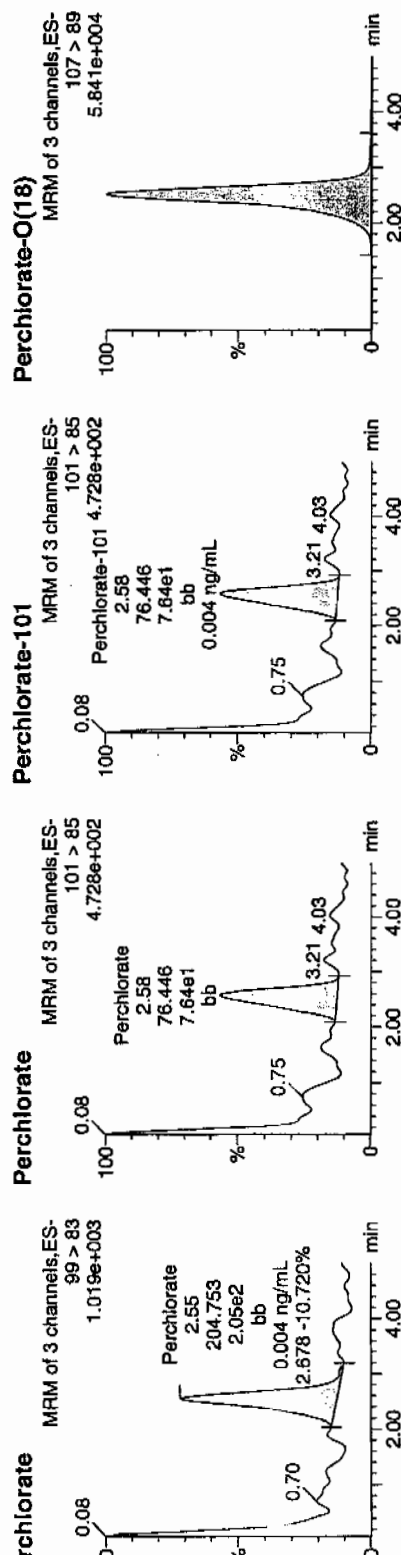
taset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

st Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
nted: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

ethod: C:\MassLynx\Perchlorate.PRO\MethDB\per012110a.mdb 22 Jan 2010 13:03:42  
ibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per012110a.cdb 22 Jan 2010 13:03:55

me: per0121001a  
te: 21-Jan-2010  
ne: 13:28:21  
IPB001  
il: 1:1,A

Curved  
01-21-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
Perchlorate	99 > 83	2.55	204.753	204.753	bb			0.0041			36.786	2.68
Perchlorate-101	101 > 85	2.58	76.446	76.446	bb			0.0044			19.217	
Perchlorate-O(18)	107 > 89	2.51	21984.707	21984.707	bb			0.5051	101.02	1.02	3540.1...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

First Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
 Initiated: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Sample Name: per0121002a

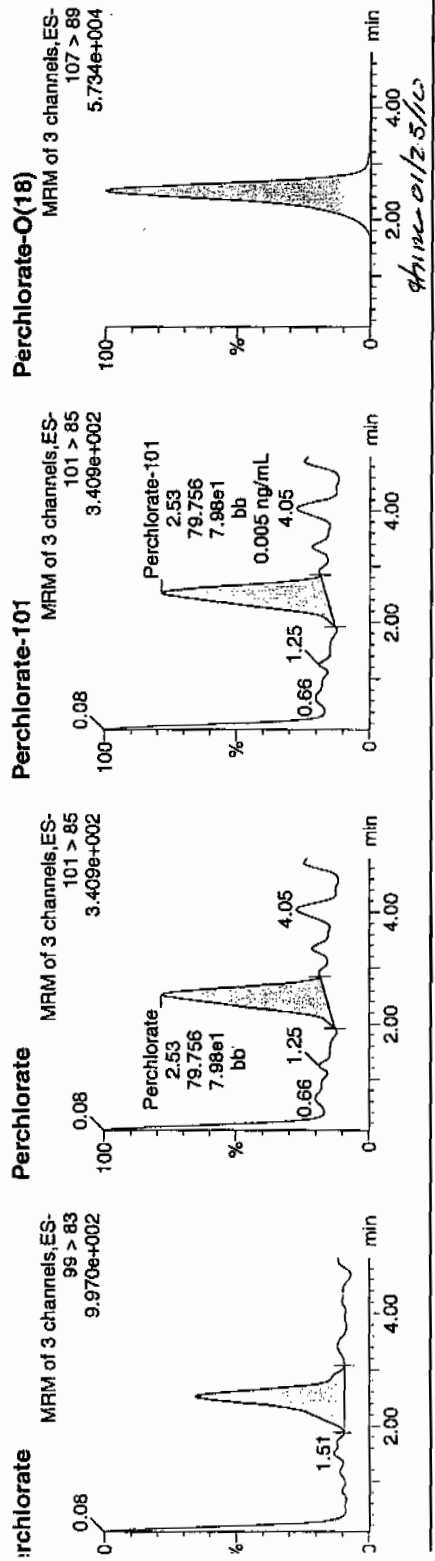
Acquisition Date: 21-Jan-2010

Sample Name: 13-36-33

Sample Name: IPB001

Sample Name: al: 1:1,A

01-22-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
Perchlorate	99 > 83	2.51	210.246	210.246	bb			0.0042	60.536		2.64	
Perchlorate-101	101 > 85	2.53	79.756	79.756	bb			0.0046	7.448			
Perchlorate-O(18)	107 > 89	2.51	21671.338	21671.338	bb			0.4978	99.58	-0.42	681.037	

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

Form 4

Perchlorate Continuing Calibration Blank

GEL Job No.(SDG): 10-1288-1

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	21-JAN-10	per0121008a	IPB002
Perchlorate-101	0.00	0	NA	21-JAN-10	per0121008a	IPB002
Perchlorate	0.00	0	NA	21-JAN-10	per0121010a	IPB003
Perchlorate-101	0.00	0	NA	21-JAN-10	per0121010a	IPB003
Perchlorate	0.00	0	NA	21-JAN-10	per0121021a	IPB004
Perchlorate-101	0.00	0	NA	21-JAN-10	per0121021a	IPB004
Perchlorate	0.00	0	NA	21-JAN-10	per0121032a	IPB005
Perchlorate-101	0.00	0	NA	21-JAN-10	per0121032a	IPB005
Perchlorate	0.00	0	NA	21-JAN-10	per0121043a	IPB006
Perchlorate-101	0.00	0	NA	21-JAN-10	per0121043a	IPB006

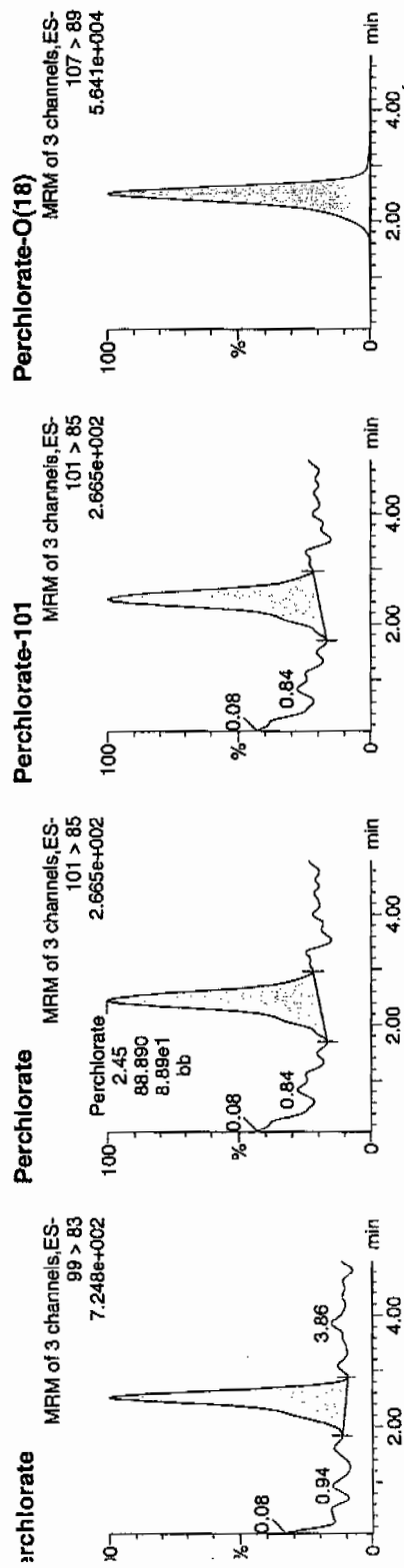
uantify Sample Report MassLynx 4.0 SP4  
 re GEL Group, LLC Analyst: Charlers W. Wilson

ataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

ast Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
 inted: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

ame: per0121008a  
 ate: 21-Jan-2010  
 me: 14:24:42  
 : IPB002  
 al: 1:1,A

01-22-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
Perchlorate	99 > 83	2.51	222.464	222.464	bb			0.0044			42.609	2.50
Perchlorate-101	101 > 85	2.45	88.890	88.890	bb			0.0052			32.880	
Perchlorate-O(18)	107 > 89	2.49	21012.908	21012.908	bb			0.4828	96.56	-3.44	1392.1...	

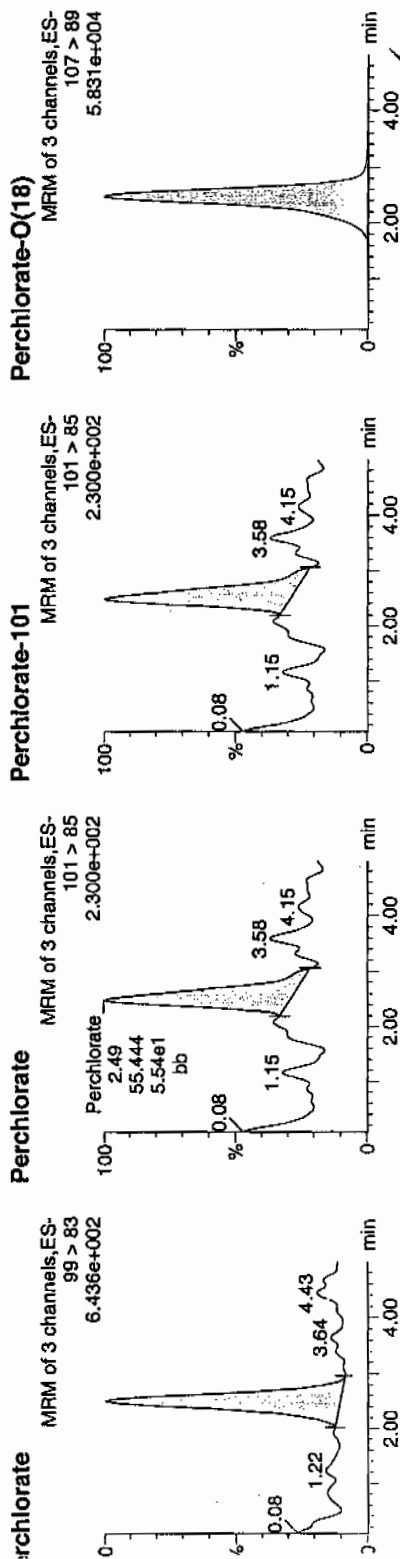
Quantify Sample Report MassLynx 4.0 SP4  
 the GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

First Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
 Method: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Sample Name: per01211010a  
 Date: 21-Jan-2010  
 Time: 14:40:46  
 File: IPB003  
 Label: 1:1,A

01-22-10



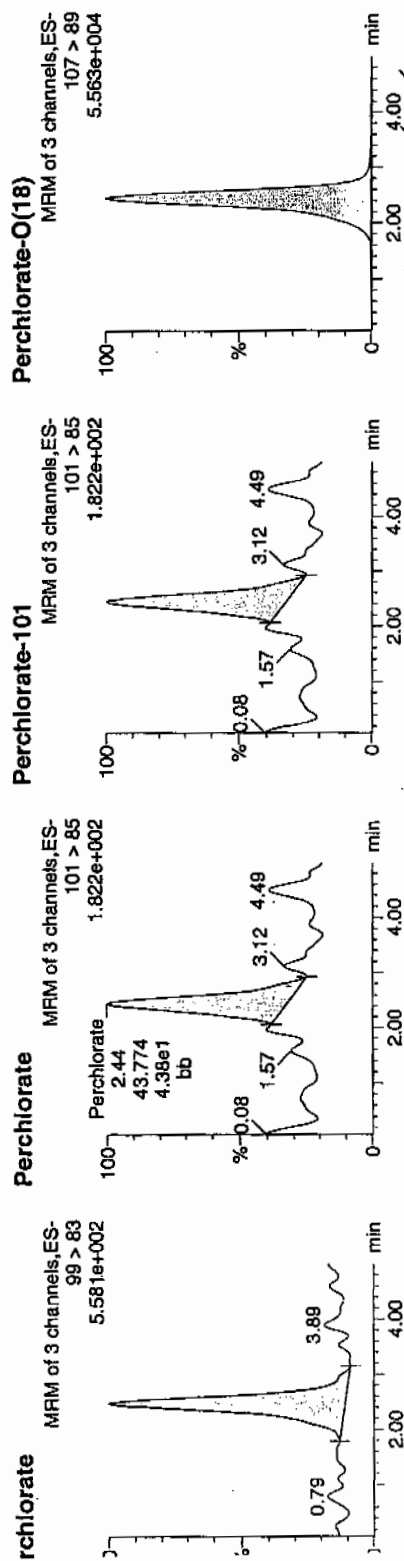
Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
Perchlorate	99 > 83	2.50	193.590	193.590	bb			0.0039	104.378		26.855	3.49
Perchlorate-101	101 > 85	2.49	55.444	55.444	bb			0.0032				
Perchlorate-O(18)	107 > 89	2.49	21401.723	21401.723	bb			0.4917	98.34	-1.66	6111.1...	

Identify Sample Report MassLynx 4.0 SP4  
e GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

File Name: per0121021a  
Date: 21-Jan-2010  
Time: 16:09:13  
IPB004  
File: 1:1.A

0000  
01-21-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
004 Perchlorate	99 > 83	2.46	180.474	180.474	bb			0.0036			41.034	4.12
004 Perchlorate-101	101 > 85	2.44	43.774	43.774	bb			0.0025			40.786	
004 Perchlorate-O(18)	107 > 89	2.45	20657.713	20657.713	bb			0.4746	94.92	-5.08	4317.2...	

4/11/10 01/25/10

0004  
0004



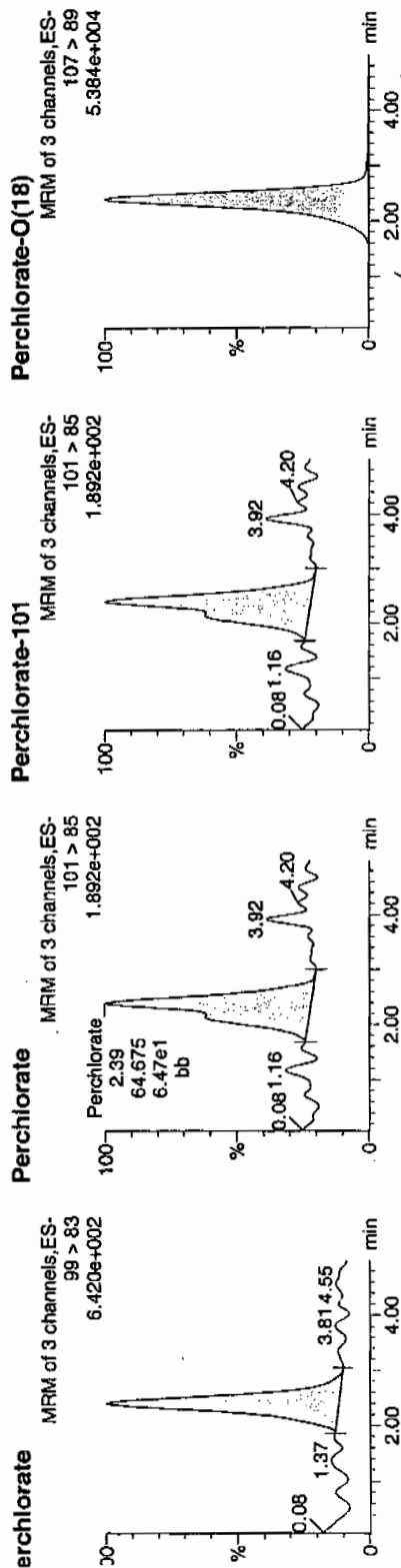
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

Acquired: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
Printed: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Sample Name: per0121032a  
Date: 21-Jan-2010  
Time: 17:37:38  
Injection: IPB005  
Injection Volume: 1:1,A

0122-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
Perchlorate	99 > 83	2.40	202.343	202.343	bb			0.0040			37.250	3.13
Perchlorate-101	101 > 85	2.39	64.675	64.675	bb			0.0038			58.231	
Perchlorate-O(18)	107 > 89	2.40	19935.807	19935.807	bb			0.4580	91.61	-8.39	6054.8...	

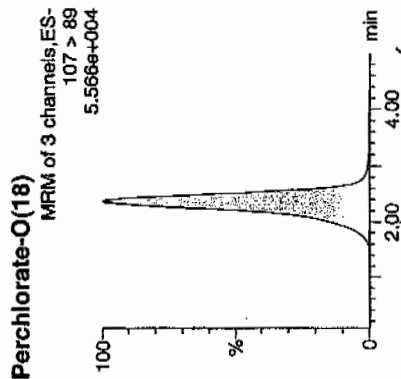
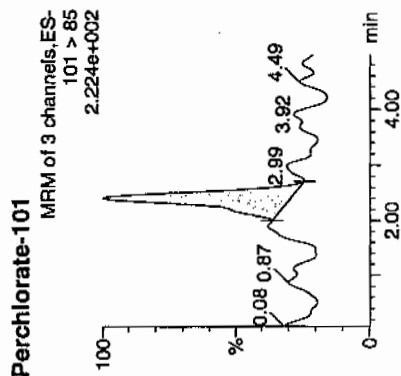
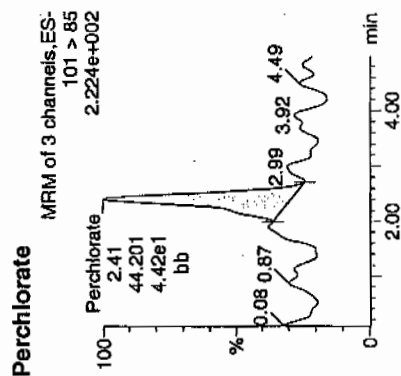
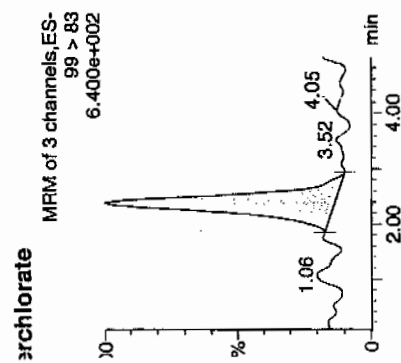
Quantify Sample Report MassLynx 4.0 SP4  
 ne GEL Group, LLC Analyst: Charles W. Wilson

atset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

st Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
 inted: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

ame: per0121043a  
 ate: 21-Jan-2010  
 me: 19:06:10  
 : IPB006  
 al: 1:1,A

01-27-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	ISN	Ion Ratio
3006	Perchlorate	99 > 83	2.38	198.120	bb			0.0039	39.917	4.48		
3006	Perchlorate-101	101 > 85	2.41	44.201	bb			0.0026	36.086			
3006	Perchlorate-O(18)	107 > 89	2.38	20708.193	bb			0.4758	95.16	-4.84	2496.8...	

0.0039  
 39.917  
 4.48

Nairb.ref

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

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

QUATRO ULTIMA: nairb\_01\_08\_08.cal

Calibration Report - MS1 Static

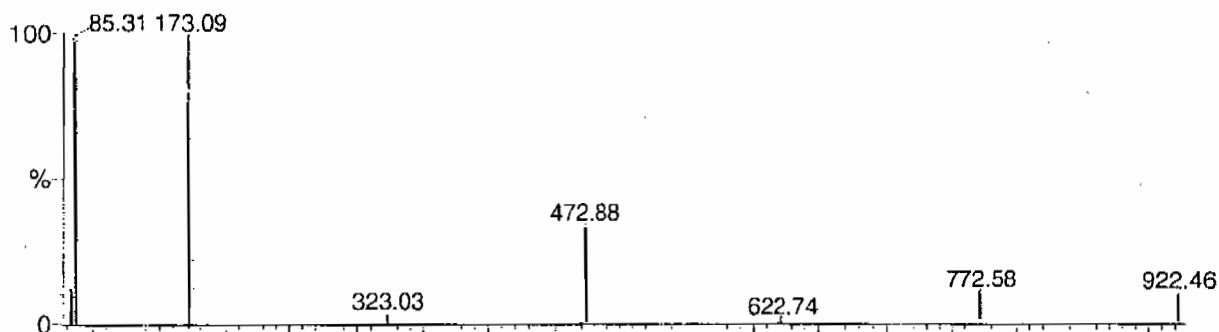
Page 1 of 1

Printed: Tue Jan 08 12:19:12 2008

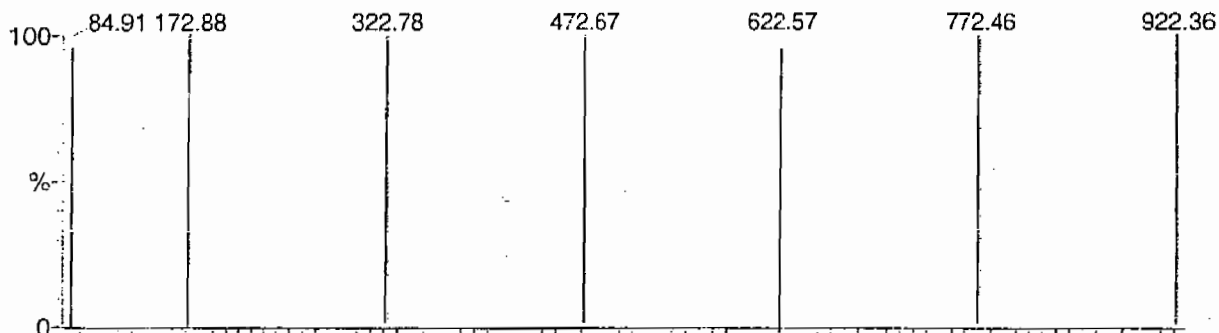
POINTS HIGHLIGHTED BY CURVED 01-07-03

Data file: STATMS1 - Uncalibrated

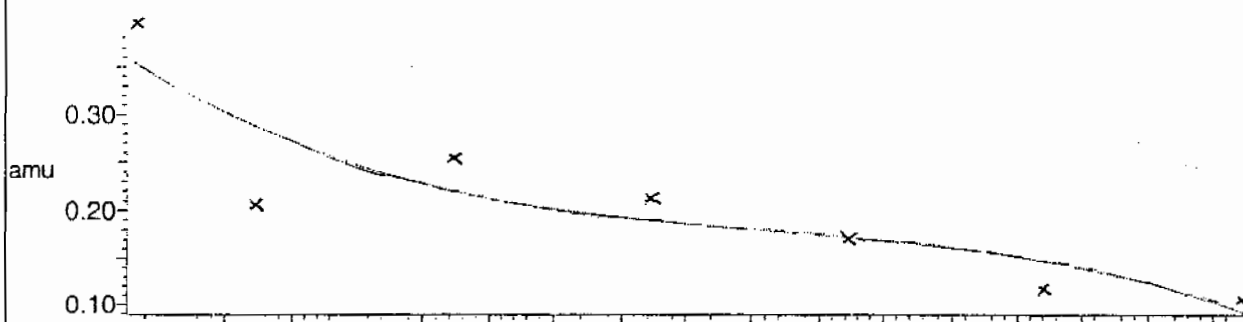
7 matches of 7 tested references



Reference file: Nairb

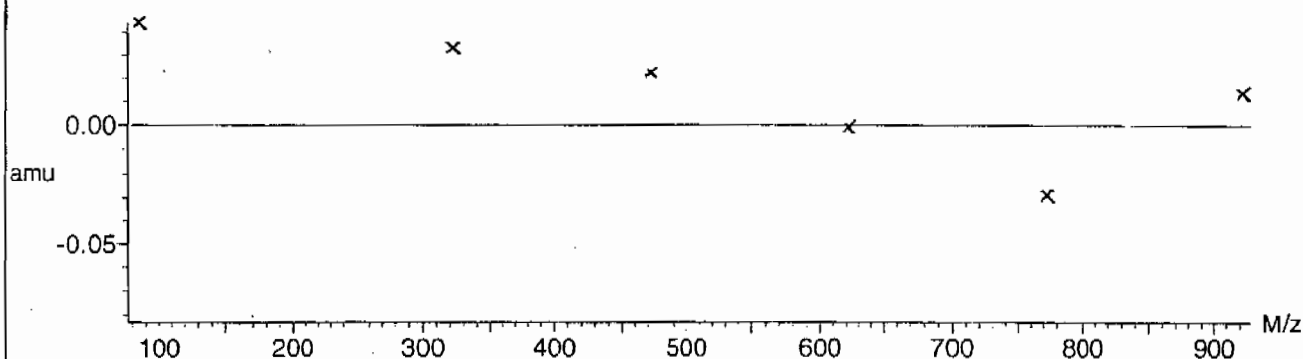


Mass difference (Raw - Ref mass)



Residuals

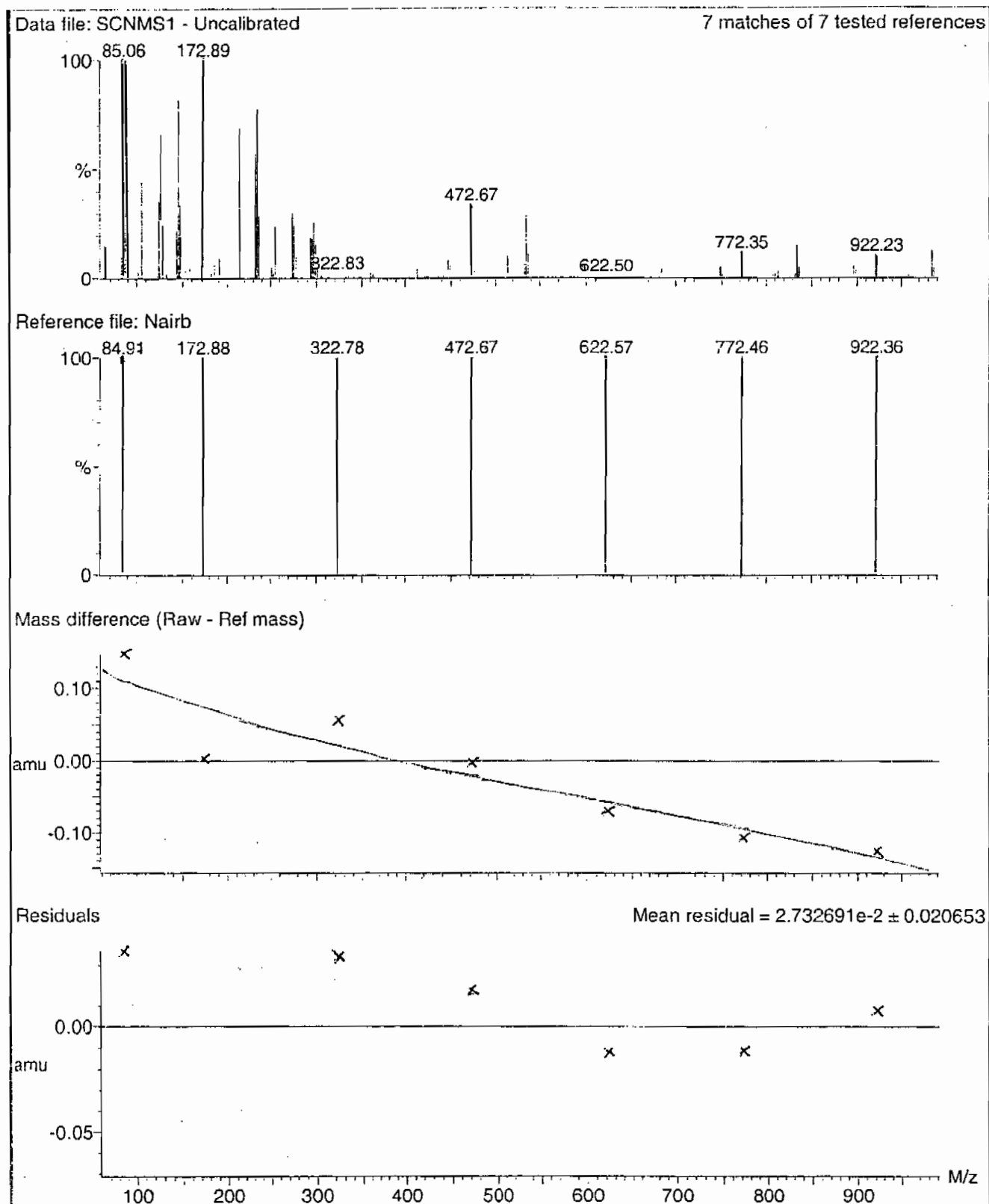
Mean residual =  $3.212012 \times 10^{-2} \pm 0.024108$



Calibration Report - MS1 Scanning

Page 1 of 1

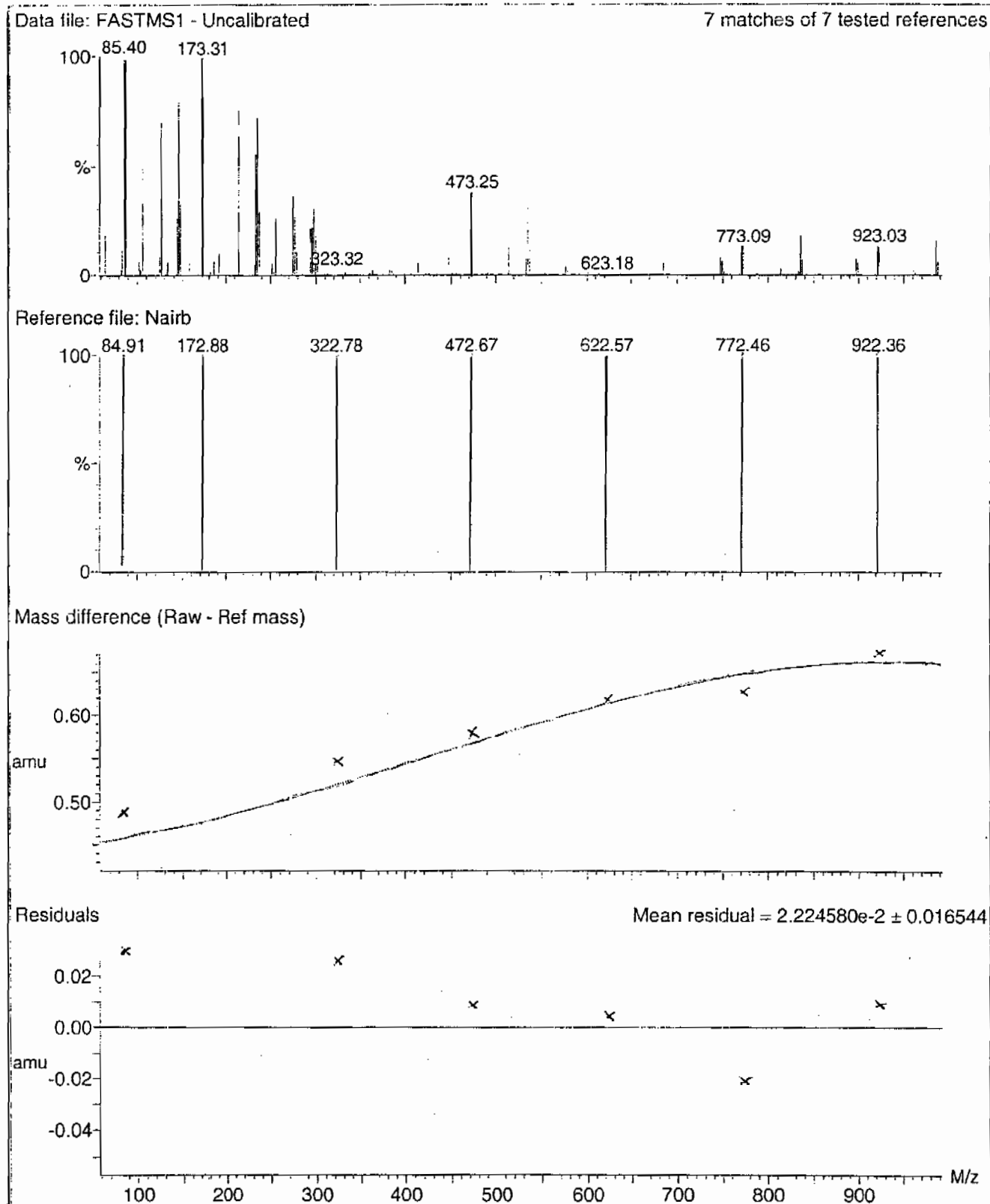
Printed: Tue Jan 08 12:20:09 2008



Calibration Report - MS1 Scan Speed Compensation

Page 1 of 1

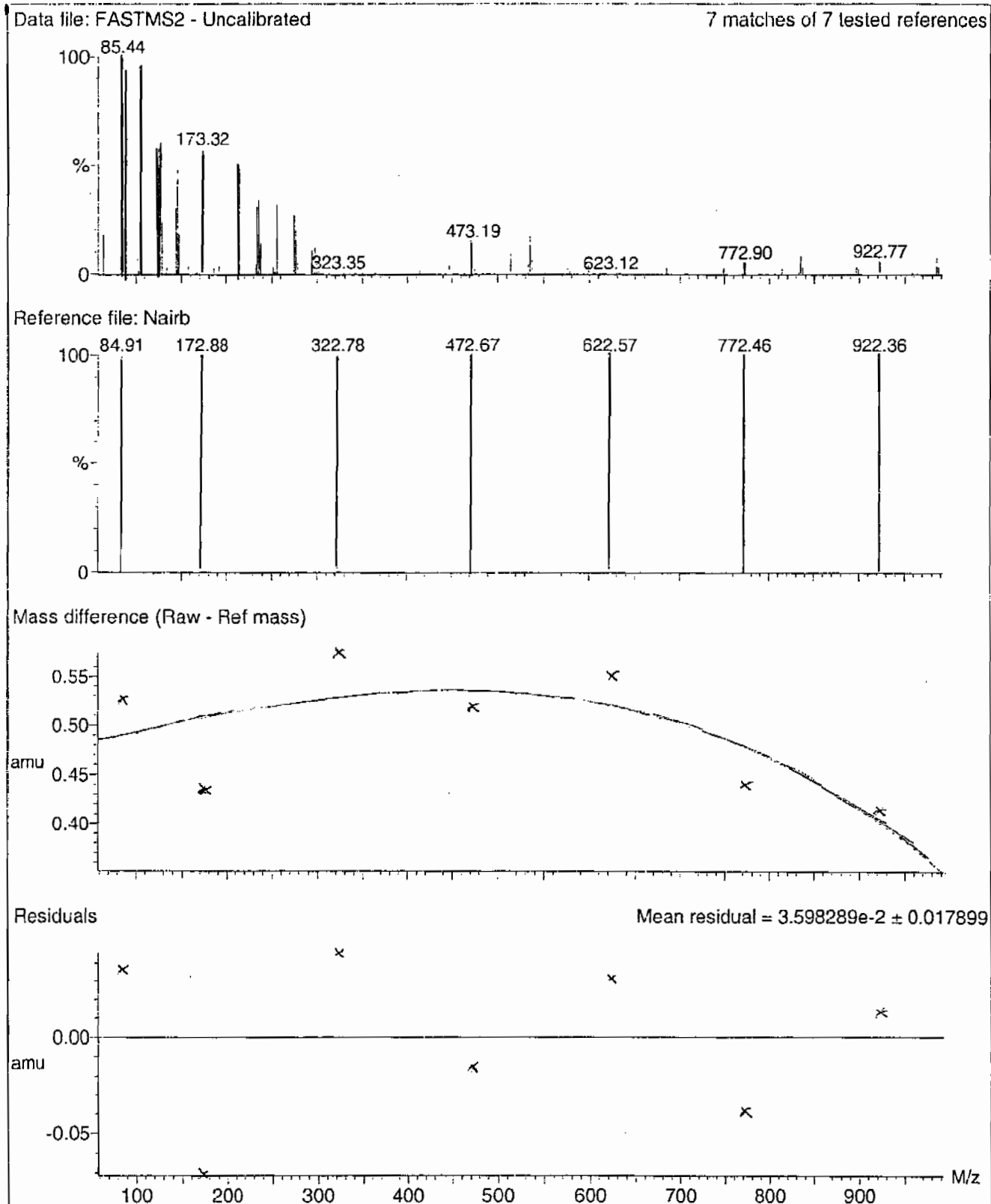
Printed: Tue Jan 08 12:21:04 2008



Calibration Report - MS2 Scan Speed Compensation

Page 1 of 1

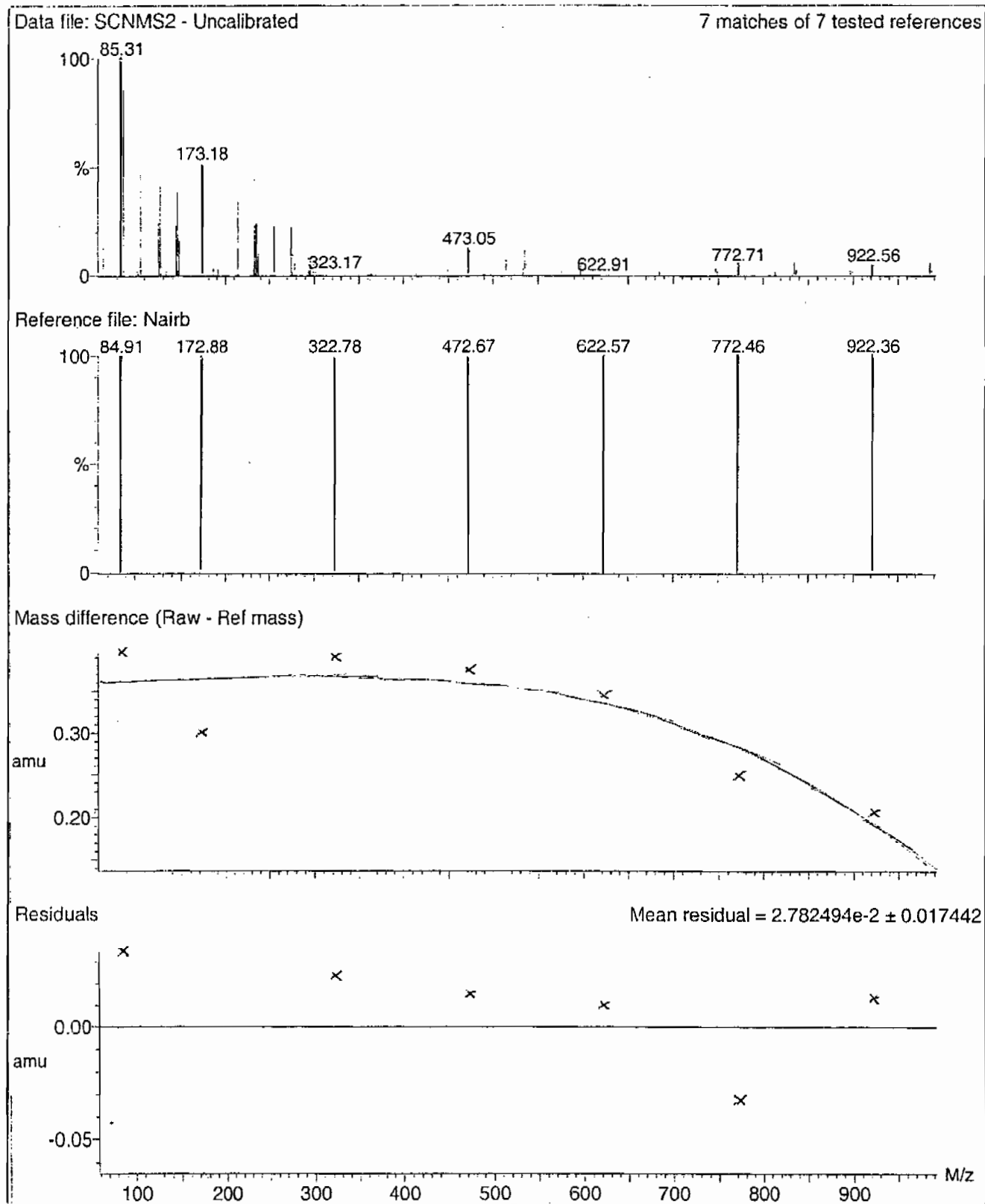
Printed: Tue Jan 08 12:23:51 2008



Calibration Report - MS2 Scanning

Page 1 of 1

Printed: Tue Jan 08 12:22:56 2008





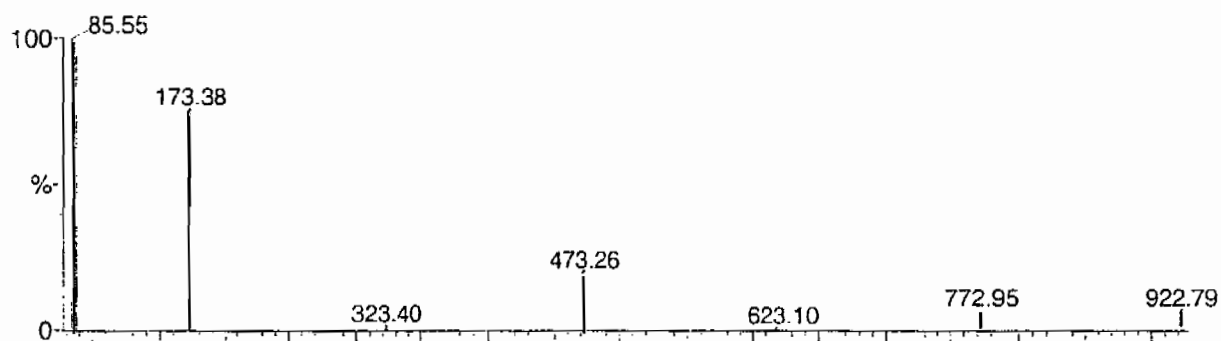
Calibration Report - MS2 Static

Page 1 of 1

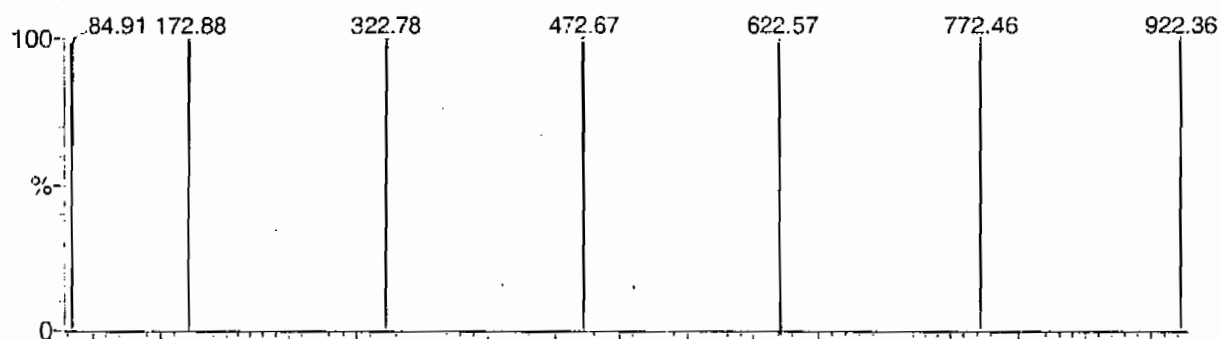
Printed: Tue Jan 08 12:21:59 2008

Data file: STATMS2 - Uncalibrated

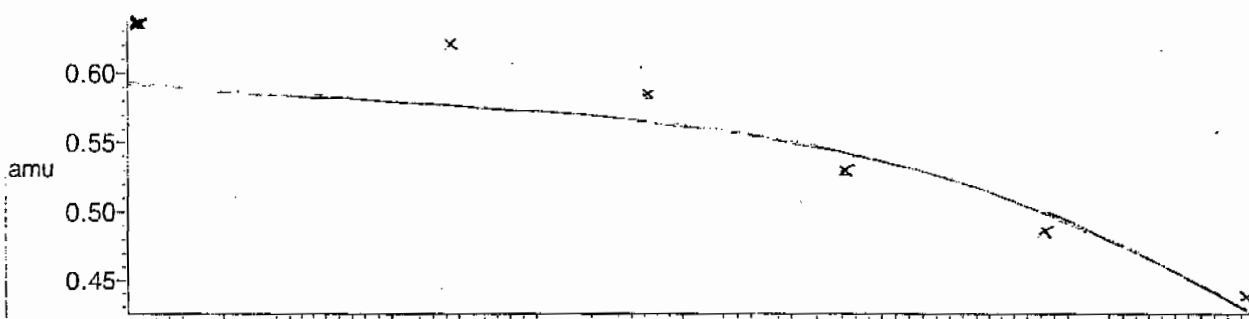
7 matches of 7 tested references



Reference file: Nairb

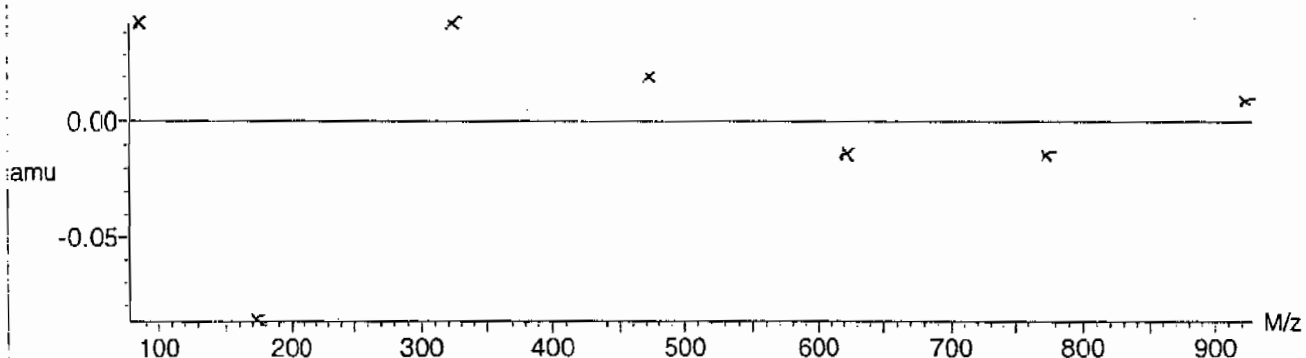


Mass difference (Raw - Ref mass)



Residuals

Mean residual =  $3.295980 \times 10^{-2} \pm 0.025603$



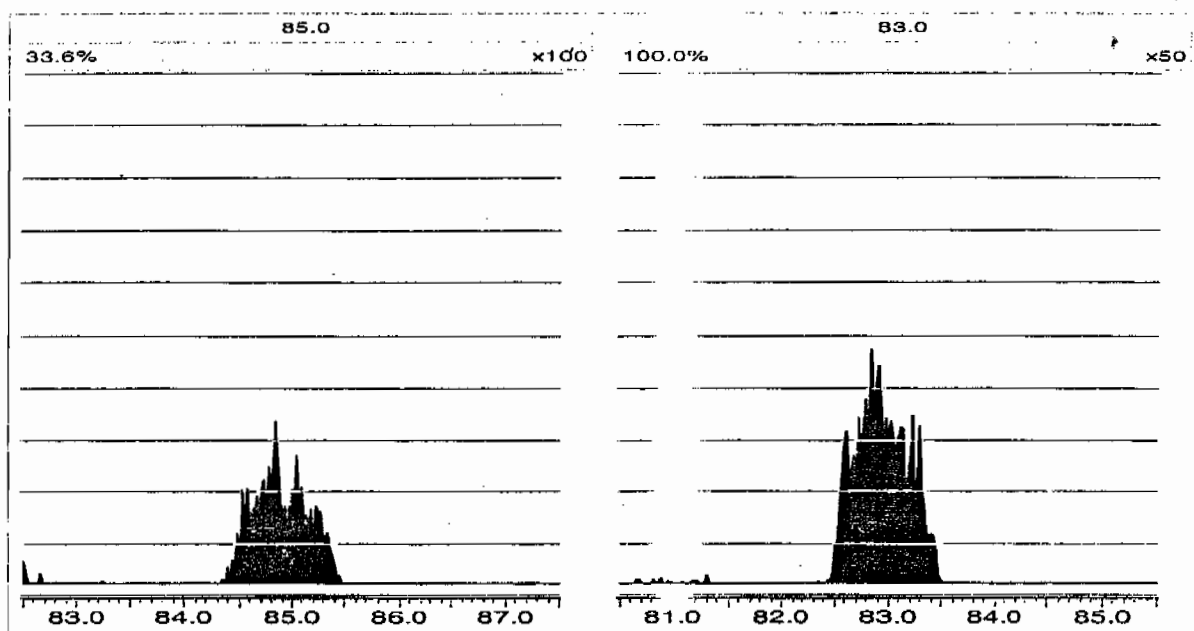
Tune Parameters

MassLynx 4.0 SP4

Page 1 of 1

File: C:\MassLynx\Perchlorate.PROVACQUDB\Perchlorate.IPR

Printed: Thursday, January 21, 2010 13:23:09 Eastern Standard Time



Perchlorate RT And Area Summary

GEL Job No.(SDG): 10-1288-1

Lab Name: General Engineering Laboratories

Lab Code: GEL

Instrument ID: LCMSMS

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

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	per0121006a	21-JAN-10	21436.2				
Lower Area Limit			10718.1				
Upper Area Limit			42872.4				
1202020832	per0121012a	21-JAN-10 14:56	21028	2.48	2.47653	.999	
1202020833	per0121013a	21-JAN-10 15:04	21689.9	2.48	2.48902	1.004	
1202020836	per0121014a	21-JAN-10 15:12	21014.7	2.22	2.2406	1.009	
244922001	per0121038a	21-JAN-10 18:25	20998.7	2.38	2.37728	.999	
1202020834	per0121039a	21-JAN-10 18:34	19942.9	2.36	2.38975	1.013	
1202020835	per0121040a	21-JAN-10 18:42	21143.5	2.36	2.38972	1.013	

# SAMPLE DATA

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: SW846 6850 Modified  
 Matrix: WATER  
 Extraction Batch ID: 243783  
 Extraction Type: Filter/DAI  
 Client Sample No. RE15-10-7229  
 Date Received: 16-JAN-10  
 GEL Job No (SDG): 10-1288-1  
 GEL Sample ID: 244922001  
 Date Filtered: 21-JAN-10  
 Injection Volume (uL): 20

Sample Volume/Weight: 10.0 mL

%Solids:

Concentrated Extract Volume: 10.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	21-JAN-10 18:25	per0121038a
	Perchlorate Isotope Ratio						1	21-JAN-10 18:25	per0121038a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	21-JAN-10 18:25	per0121038a
	Perchlorate-O(18)			0.482	ug/L		1	21-JAN-10 18:25	per0121038a

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

\*Concentration =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

Last Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
Printed: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Name: per0121038a

Date: 21-Jan-2010

Time: 18:25:56

ID: 244922001

Vial: 1:6,C

0000  
01-22-10

LANL 1943784 | L2Q | 11

Perchlorate

MRM of 3 channels, ES-

99 > 83

4.511e+002

0.56

3.45

min

2.00

4.00

min

100

%

0

100

min

2.00

4.00

min

100

%

0

100

min

2.00

4.00

min

100

%

0

100

min

2.00

4.00

min

100

%

0

100

min

2.00

4.00

min

Perchlorate

MRM of 3 channels, ES-

101 > 85

2.245e+002

0.08

1.87

3.17

4.75

min

2.00

4.00

min

100

%

0

100

min

2.00

4.00

min

100

%

0

100

min

2.00

4.00

min

100

%

0

100

min

2.00

4.00

min

100

%

0

100

min

2.00

4.00

min

Perchlorate-101

MRM of 3 channels, ES-

101 > 85

2.245e+002

0.08

1.87

3.17

4.75

min

2.00

4.00

min

100

%

0

100

min

2.00

4.00

min

100

%

0

100

min

2.00

4.00

min

100

%

0

100

min

2.00

4.00

min

100

%

0

100

min

2.00

4.00

min

Perchlorate-O(18)

MRM of 3 channels, ES-

107 > 89

5.746e+004

0.0027

0.0027

0.4824

96.49

-3.51

1268.1...

min

2.00

4.00

min

100

%

0

100

min

2.00

4.00

min

100

%

0

100

min

2.00

4.00

min

100

%

0

100

min

2.00

4.00

min

100

%

0

100

min

2.00

4.00

min

D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/ml	%Rec	%Dev	SN	Ion Ratio
244922001	Perchlorate	99 > 83	2.38	135.888	135.888	bb			0.0027			31.897	2.94
244922001	Perchlorate-101	101 > 85	2.40	46.247	46.247	bb			0.0027			69.146	
244922001	Perchlorate-O(18)	107 > 89	2.38	20998.652	20998.652	bb			0.4824	96.49	-3.51	1268.1...	

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

# STANDARDS DATA

Perchlorate Initial Calibration

GEL Job No.(SDG): 10-1288-1

Lab Name: General Engineering Laboratories

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 21-JAN-10

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

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

Paramname Perchlorate

Coefficient of Determination:

Calibration Curve: 50239.06

Response Type: External Standard

Curve Type: RF



Perchlorate Initial Calibration

GEL Job No.(SDG): 10-1288-1

Lab Name: General Engineering Laboratories

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 21-JAN-10

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

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

Paramname Perchlorate-101

Coefficient of Determination:

Calibration Curve: 17232.4

Response Type: External Standard

Curve Type: RF

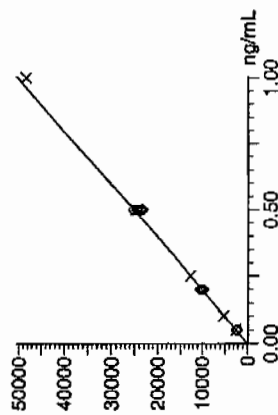
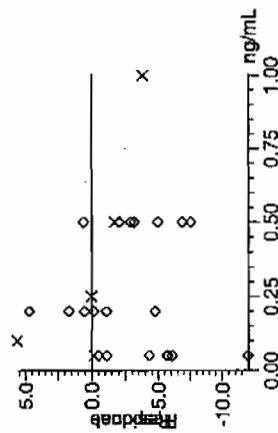
Quantify Calibration Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

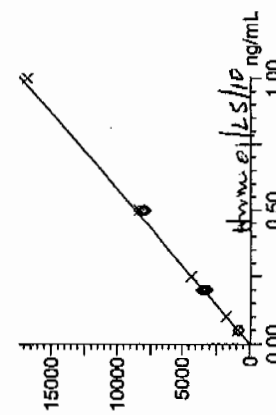
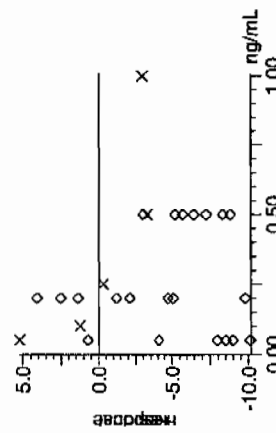
Last Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
Printed: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per012110a.mdb 22 Jan 2010 13:03:42  
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per012110a.cdb 22 Jan 2010 13:03:55

Compound name: Perchlorate  
Response Factor: 50239  
RF SD: 1769.18, % Relative SD: 3.52151  
Response type: External Std, Area  
Curve type: RF



Compound name: Perchlorate-101  
Response Factor: 17232.4  
RF SD: 596.582, % Relative SD: 3.46198  
Response type: External Std, Area  
Curve type: RF



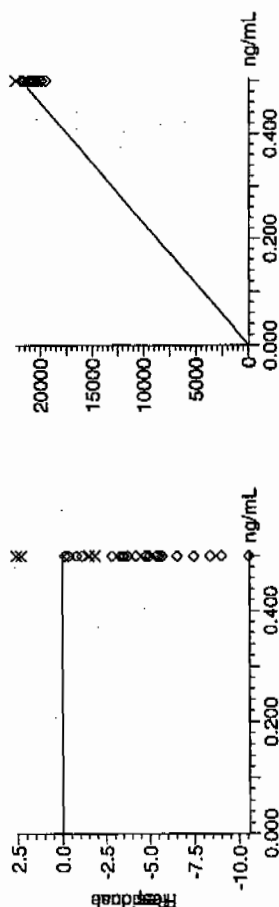
01-22-10

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

atset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

ast Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
rinted: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

ompound name: Perchlorate-O(18)  
esponse Factor: 43525.2  
RF SD: 974.018, % Relative SD: 2.23783  
esponse type: External Std, Area  
urve type: RF



51-22-10

Perchlorate Initial Calibration Verification

GEL Job No.(SDG): 10-1288-1

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.5	100.6	21-JAN-10 14:32	per0121009a
Perchlorate Isotope Ratio		3.02		21-JAN-10 14:32	per0121009a
Perchlorate-101	.5	.48	96.98	21-JAN-10 14:32	per0121009a

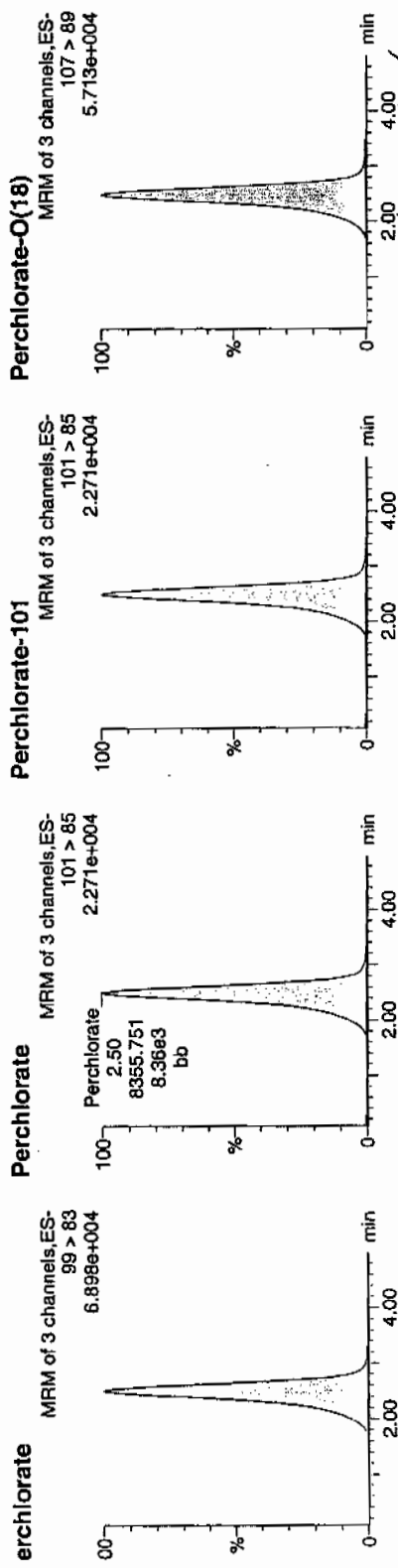
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charfers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

Last Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
Printed: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Sample Name: per0121009a  
Date: 21-Jan-2010  
Time: 14:32:44  
File: WCL100118-06ICV  
Label: 1:2,A

Pure  
CWS  
01-22-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL100118-06ICV	Perchlorate	2.50	25269.490	25269.490	bb			0.5030	100.60	0.60	4248.9...	3.02
CL100118-06ICV	Perchlorate-101	2.50	8355.751	8355.751	bb			0.4849	96.98	-3.02	240.922	
CL100118-06ICV	Perchlorate-O(18)	2.49	20988.775	20988.775	bb			0.4822	96.44	-3.56	177.662	

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1288-1

Lab Code: GEL

Reporting Units: ug/L

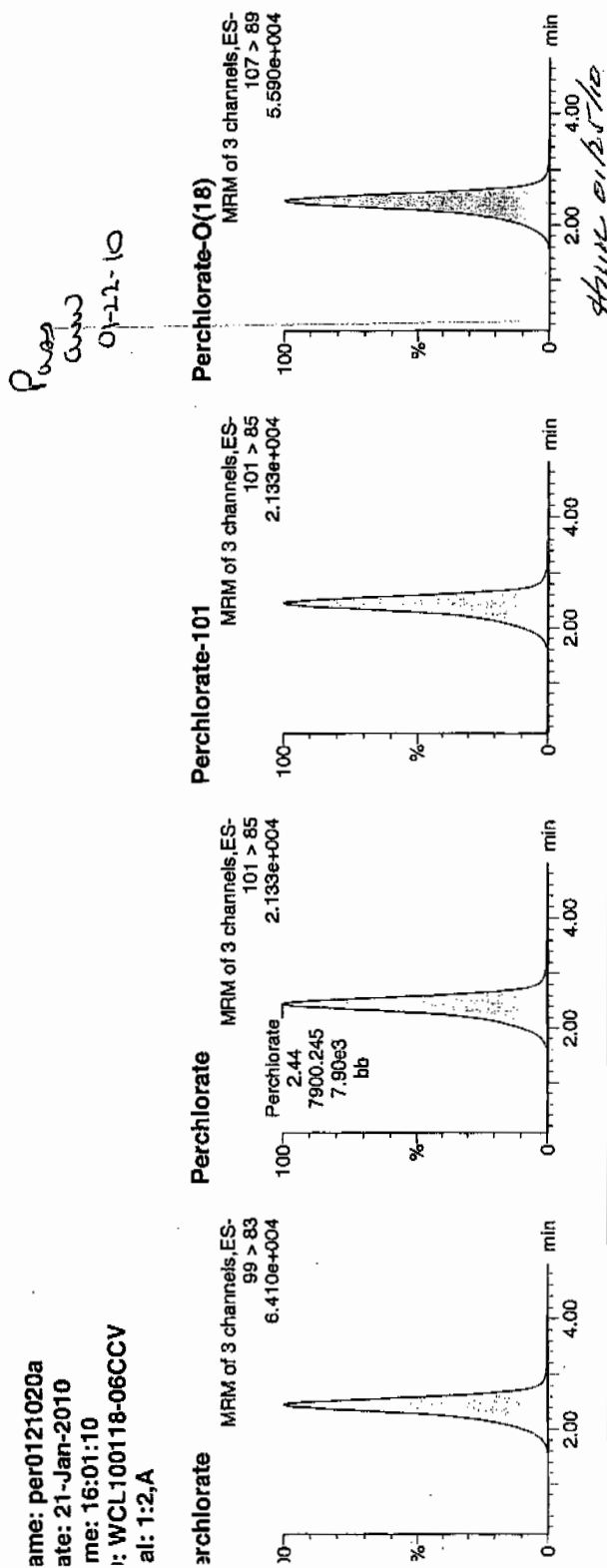
Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.48	95.02	21-JAN-10 16:01	per0121020a
Perchlorate Isotope Ratio		3.02		21-JAN-10 16:01	per0121020a
Perchlorate-101	.5	.46	91.69	21-JAN-10 16:01	per0121020a
Perchlorate	.5	.49	97.97	21-JAN-10 17:29	per0121031a
Perchlorate Isotope Ratio		3.01		21-JAN-10 17:29	per0121031a
Perchlorate-101	.5	.47	94.78	21-JAN-10 17:29	per0121031a
Perchlorate	.5	.48	96.84	21-JAN-10 18:58	per0121042a
Perchlorate Isotope Ratio		3.02		21-JAN-10 18:58	per0121042a
Perchlorate-101	.5	.47	93.55	21-JAN-10 18:58	per0121042a

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

Last Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
Printed: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Sample Name: per0121020a  
Date: 21-Jan-2010  
Time: 16:01:10  
File: WCL100118-06CCV  
Alt: 1:2,A



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

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

Last Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
Printed: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Sample Name: per0121031a

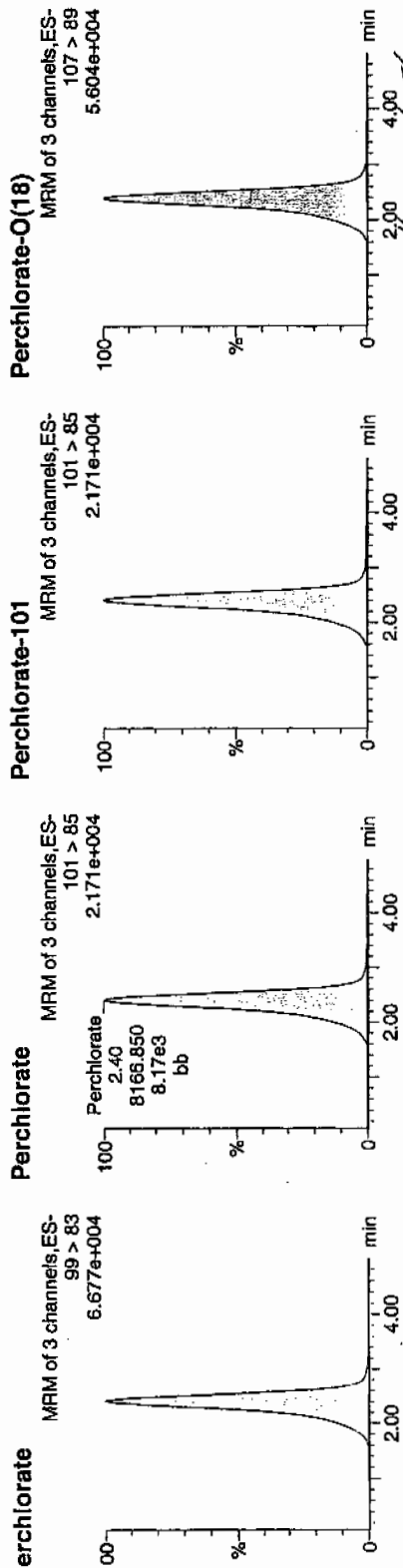
Sample Date: 21-Jan-2010

Sample Time: 17:29:35

Sample ID: WCL100118-06CCV

Sample Label: 1:2,A

*Pres*  
*WWS*  
*01-22-10*



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
CL100118-06CCV	Perchlorate	2.41	24610.193	24610.193	bb			0.4899	97.97	-2.03	4084.3...	3.01
CL100118-06CCV	Perchlorate-101	2.40	8166.850	8166.850	bb			0.4739	94.78	-5.22	3008.0...	
CL100118-06CCV	Perchlorate-O(18)	2.39	20595.035	20595.035	bb			0.4732	94.64	-5.36	2737.1...	



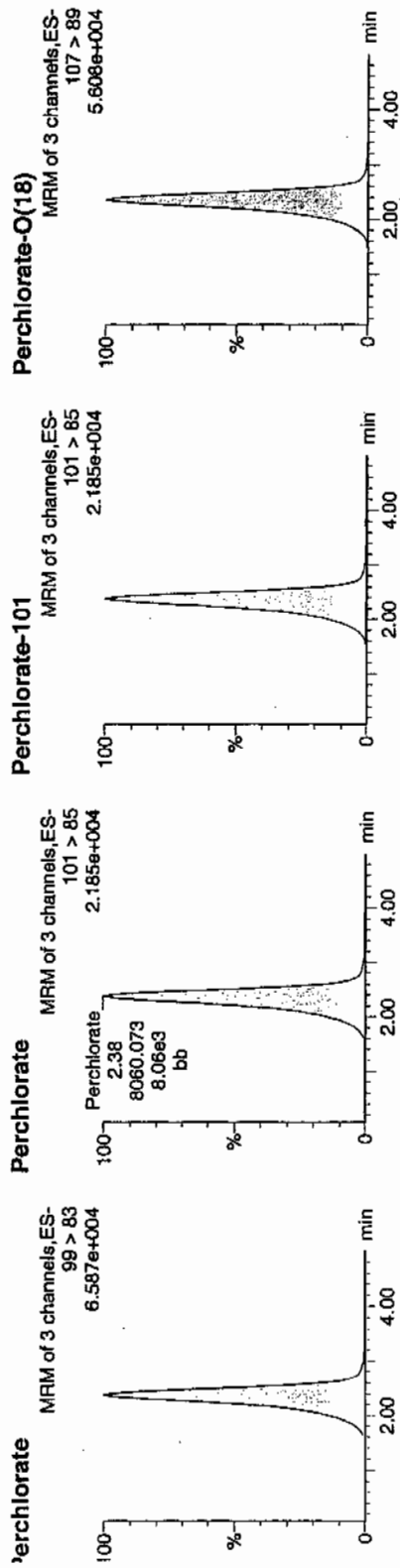
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

Last Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
Printed: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Sample Name: per0121042a  
Date: 21-Jan-2010  
Time: 18:58:08  
D: WCL100118-06CCV  
File: 1:2.A

*Pure*  
*01-22-10*



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL100118-06CCV	Perchlorate	99 > 83	2.38	24326.305	bb			0.4842	96.84	-3.16	4460.0...	3.02
CL100118-06CCV	Perchlorate-101	101 > 85	2.38	8060.073	bb			0.4677	93.55	-6.45	2422.8...	
CL100118-06CCV	Perchlorate-O(18)	107 > 89	2.35	20560.480	bb			0.4724	94.48	-5.52	2760.4...	

*think elute*

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1288-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	99.52	21-JAN-10 14:48	per0121011a
Perchlorate Isotope Ratio		3.23		21-JAN-10 14:48	per0121011a
Perchlorate-101	.05	.04	89.89	21-JAN-10 14:48	per0121011a
Perchlorate	.05	.05	95.71	21-JAN-10 16:17	per0121022a
Perchlorate Isotope Ratio		2.91		21-JAN-10 16:17	per0121022a
Perchlorate-101	.05	.05	95.94	21-JAN-10 16:17	per0121022a
Perchlorate	.05	.04	88.01	21-JAN-10 17:45	per0121033a
Perchlorate Isotope Ratio		2.81		21-JAN-10 17:45	per0121033a
Perchlorate-101	.05	.05	91.47	21-JAN-10 17:45	per0121033a
Perchlorate	.05	.05	94.38	21-JAN-10 19:14	per0121044a
Perchlorate Isotope Ratio		2.99		21-JAN-10 19:14	per0121044a

Perchlorate MDL Verification

GEL Job No.(SDG): 10-1288-1

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/L

Perchlorate-101	.05	.05	92.04	21-JAN-10 19:14	per0121044a
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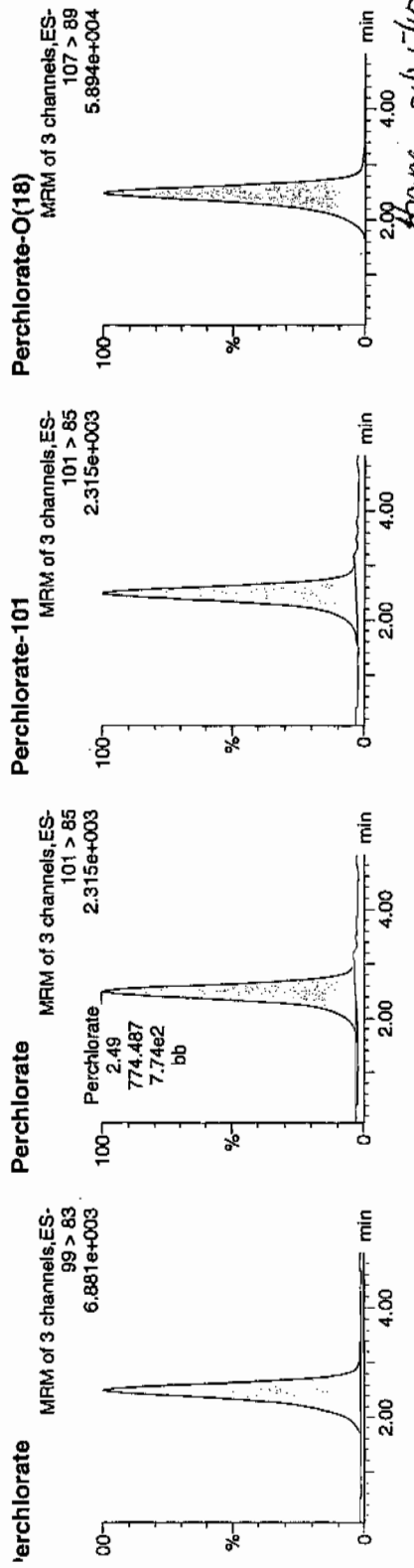
**Quantify Sample Report** MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

Last Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
Printed: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Sample Name: per0121011a  
Date: 21-Jan-2010  
Time: 14:48:48  
D: WCL100118-07CRI  
Vial: 1:2,B

*Pass and 01-22-10*



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
'CL100118-07CRI	Perchlorate	99 > 83	2.50	2499.918	bb			0.0498	99.52	-0.48	607.914	3.23
'CL100118-07CRI	Perchlorate-101	101 > 85	2.49	774.487	bb			0.0449	89.89	-10.11	129.026	
'CL100118-07CRI	Perchlorate-O(18)	107 > 89	2.49	21733.771	bb			0.4993	99.87	-0.13	6289.1...	

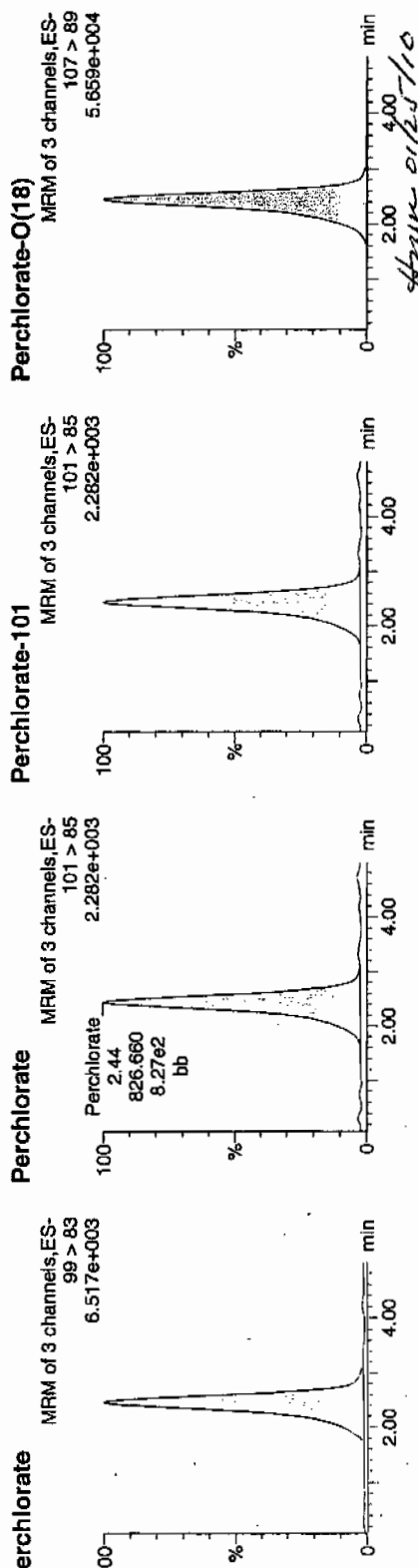
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

Last Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
Printed: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Sample Name: per0121022a  
Date: 21-Jan-2010  
Time: 16:17:15  
File: WCL100118-07CRI  
Tail: 1:2,B

Page 22  
01-22-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL100118-07CRI	Perchlorate	2.46	2404.126	2404.126	bb			0.0479	95.71	-4.29	1416.1...	2.91
CL100118-07CRI	Perchlorate-101	2.44	826.660	826.660	bb			0.0480	95.94	-4.06	220.967	
CL100118-07CRI	Perchlorate-O(18)	2.45	20843.346	20843.346	bb			0.4789	95.78	-4.22	6422.2...	

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

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Printed: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Name: per0121033a

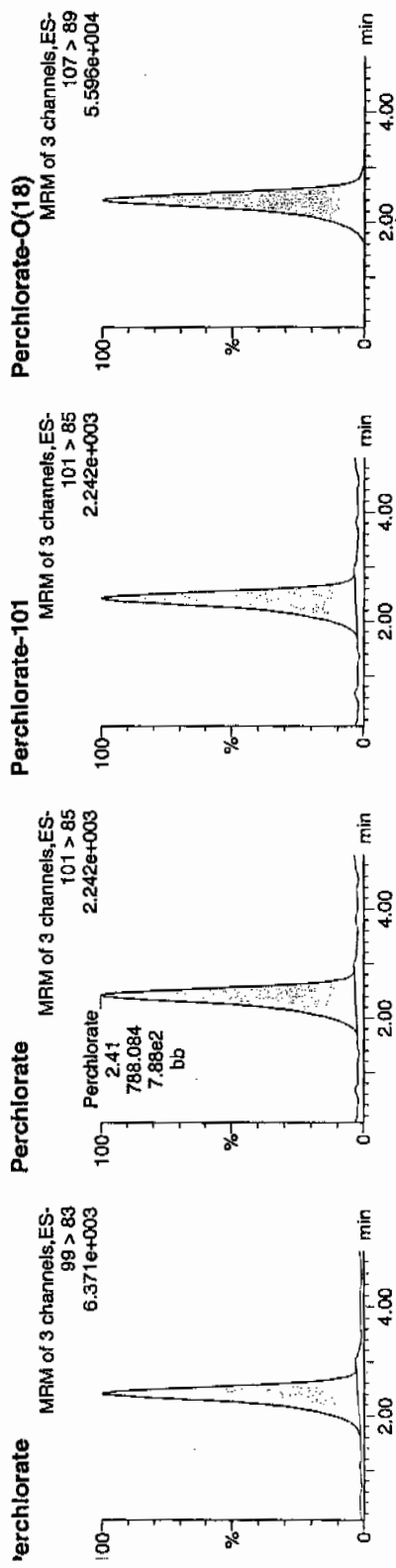
Date: 21-Jan-2010

Time: 17:45:40

D: WCL100118-07CRI

Vial: 1:2,B

Pass  
01-22-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL100118-07CRI	Perchlorate	99 > 83	2.41	2210.652	bb			0.0440	88.01	-11.99	1276.3...	2.81
CL100118-07CRI	Perchlorate-101	101 > 85	2.41	788.084	bb			0.0457	91.47	-8.53	244.908	
CL100118-07CRI	Perchlorate-Q(18)	107 > 89	2.40	20678.830	bb			0.4751	95.02	-4.98	2996.1...	

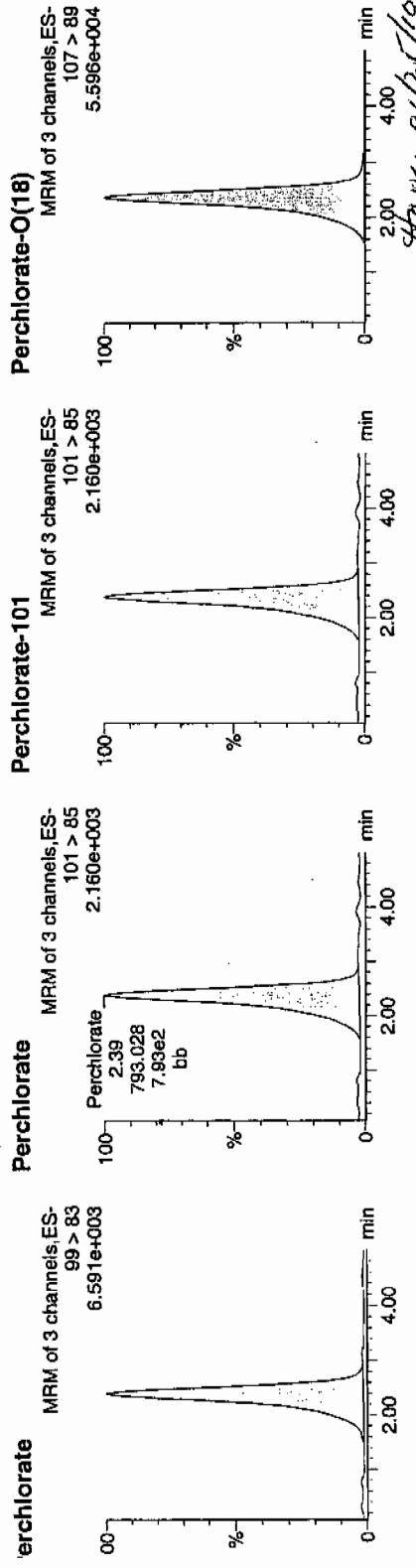
Quantify Sample Report MassLynx 4.0 SP4  
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

Last Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
Printed: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Sample Name: per0121044a  
Date: 21-Jan-2010  
Time: 19:14:12  
File: WCL100118-07CRI  
Label: 1:2,B

Per  
and  
9-17-10



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL100118-07CRI	Perchlorate	2.39	2370.722	2370.722	bb			0.0472	94.38	-5.62	291.307	2.99
CL100118-07CRI	Perchlorate-101	2.39	793.028	793.028	bb			0.0460	92.04	-7.96	115.670	
CL100118-07CRI	Perchlorate-O(18)	2.38	20985.957	20985.957	bb			0.4822	96.43	-3.57	648.883	

# QUALITY CONTROL



Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC  
 Lab Code: GEL  
 Instrument: LCMSMS  
 Method: EPA 6850 Modified  
 Matrix: WATER  
 Extraction Batch ID: 243783  
 Extraction Type: Filter/DAI  
 Client Sample No. MB  
 Date Received: 21-JAN-10  
 GEL Job No (SDG): 10-1288-1  
 GEL Sample ID: 1202020832  
 Date Filtered: 21-JAN-10  
 Injection Volume (uL): 20

Sample Volume/Weight: 10.0 mL

%Solids:

Concentrated Extract Volume: 10.0

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	21-JAN-10 14:56	per0121012a
	Perchlorate Isotope Ratio						1	21-JAN-10 14:56	per0121012a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	21-JAN-10 14:56	per0121012a
	Perchlorate-O(18)			0.483	ug/L		1	21-JAN-10 14:56	per0121012a

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

\*Concentration =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

Last Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
Printed: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Name: per0121012a

Date: 21-Jan-2010

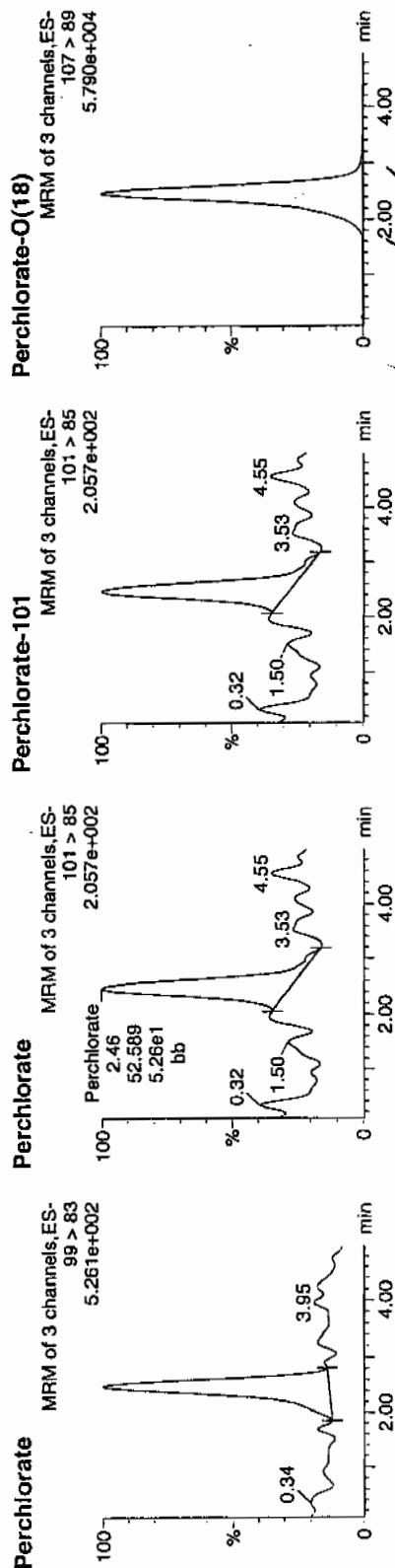
Time: 14:56:53

ID: 1202020832

Vial: 1:3,A

01-22-10

1202020832 / 1202020832 / 1202020832



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202020832	Perchlorate	99 > 83	2.48	153.537	153.537	bb			0.0031			40.015	2.92
1202020832	Perchlorate-101	101 > 85	2.46	52.589	52.589	bb			0.0031			24.000	
1202020832	Perchlorate-O(18)	107 > 89	2.48	21027.984	21027.984	bb			0.4831	96.62	-3.38	4021.1...	

3EL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: WATER

Extraction Batch ID: 943783

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.

LCS

Date Received: 21-JAN-10

GEL Job No (SDG): 10-1288-1

GEL Sample ID: 1202020833

Date Filtered: 21-JAN-10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.203	ug/L		1	21-JAN-10 15:04	per0121013a
	Perchlorate Isotope Ratio			2.85			1	21-JAN-10 15:04	per0121013a
14797-73-0	Perchlorate-101	.05	.2	0.208	ug/L		1	21-JAN-10 15:04	per0121013a
	Perchlorate-O(18)			0.498	ug/L		1	21-JAN-10 15:04	per0121013a

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

\*Concentration =

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

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

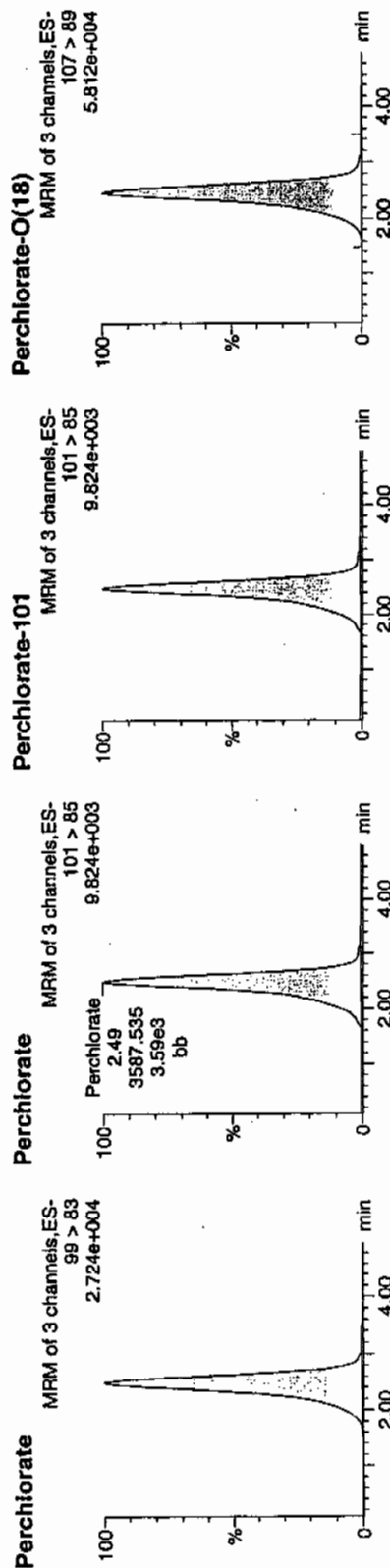
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Last Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
Printed: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Name: per0121013a  
Date: 21-Jan-2010  
Time: 15:04:55  
ID: 1202020833  
Vial: 1:3,B

01-22-10

1202020833 | 1202020833 | 1202020833



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
1202020833	Perchlorate	99 > 83	2.49	10216.783	10216.783	bb			0.2034	101.68	1.68	562.419	2.85
1202020833	Perchlorate-101	101 > 85	2.49	3587.535	3587.535	bb			0.2082	104.09	4.09	1450.1...	
1202020833	Perchlorate-O(18)	107 > 89	2.48	21689.895	21689.895	bb			0.4983	99.67	-0.33	2614.2...	

10216.783  
56239 = 0.2034  
HNNW  
01/25/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 943783

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.

RE15-10-7229MS

Date Received: 16-JAN-10

GEL Job No (SDG): 10-1288-1

GEL Sample ID: 1202020834

Date Filtered: 21-JAN-10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.203	ug/L		1	21-JAN-10 18:34	per0121039a
	Perchlorate Isotope Ratio			3.11			1	21-JAN-10 18:34	per0121039a
14797-73-0	Perchlorate-101	.05	.2	0.191	ug/L	J	1	21-JAN-10 18:34	per0121039a
	Perchlorate-O(18)			0.458	ug/L		1	21-JAN-10 18:34	per0121039a

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

\*Concentration =

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

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charliers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

Last Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time

Printed: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Name: per0121039a

Date: 21-Jan-2010

Time: 18:34:00

ID: 1202020834

Vial: 1:6,D

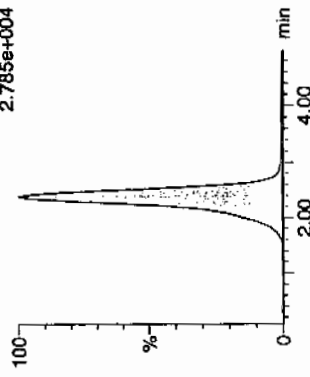
01-22-10

1202020834 | 1202020834 | 1202020834

## Perchlorate

MRM of 3 channels, ES-

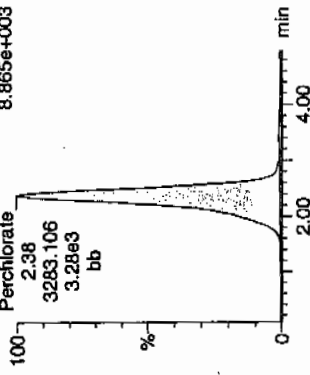
99 > 83  
2.785e+004



## Perchlorate

MRM of 3 channels, ES-

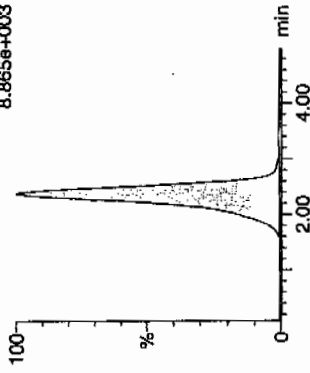
101 > 85  
8.865e+003



## Perchlorate-101

MRM of 3 channels, ES-

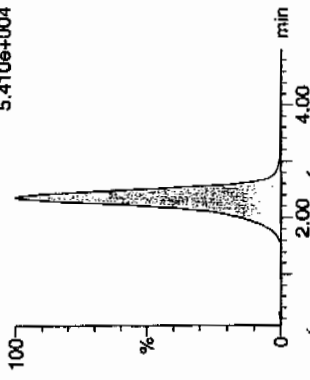
101 > 85  
8.865e+003



## Perchlorate-O(18)

MRM of 3 channels, ES-

107 > 89  
5.410e+004



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
1202020834	Perchlorate	99 > 83	2.38	10214.022	10214.022	bb			-0.2033	101.65	1.65	2934.4...	3.11
1202020834	Perchlorate-101	101 > 85	2.38	3283.106	3283.106	bb			0.1905	95.26	-4.74	2696.7...	
1202020834	Perchlorate-O(18)	107 > 89	2.36	19942.906	19942.906	bb			0.4582	91.64	-8.36	3312.7...	

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

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 243783

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.

RE15-10-7229MSD

Date Received: 16-JAN-10

GEL Job No (SDG): 10-1288-1

GEL Sample ID: 1202020835

Date Filtered: 21-JAN-10

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte <sup>^</sup>	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.209	ug/L		1	21-JAN-10 18:42	per0121040a
	Perchlorate Isotope Ratio			3.01			1	21-JAN-10 18:42	per0121040a
14797-73-0	Perchlorate-101	.05	.2	0.203	ug/L		1	21-JAN-10 18:42	per0121040a
	Perchlorate-O(18)			0.486	ug/L		1	21-JAN-10 18:42	per0121040a

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

\*Concentration =

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

# Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

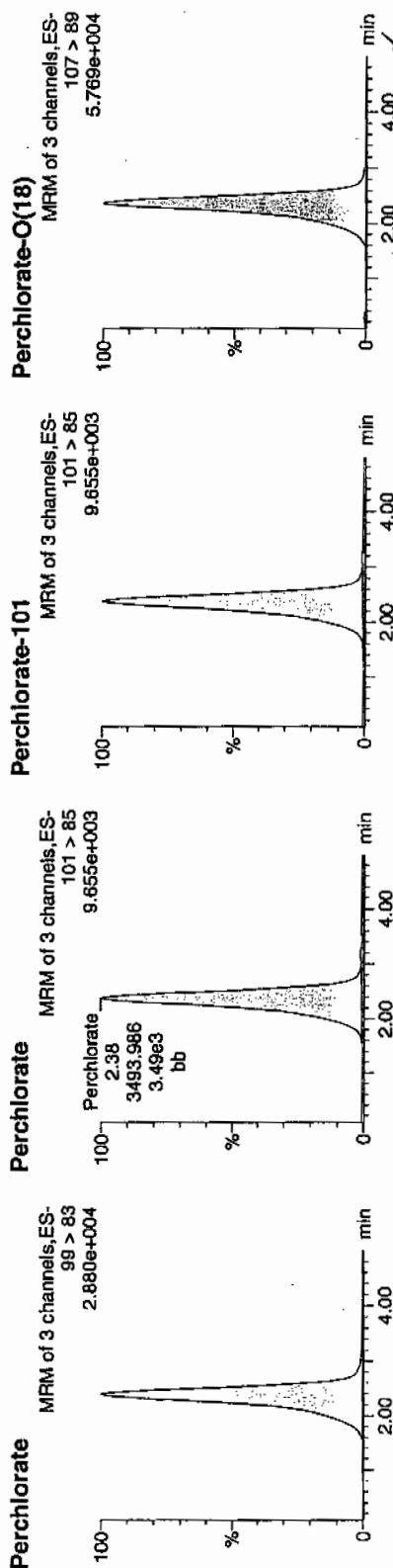
Dataset: C:\MassLynx\Perchlorate.PRO\per012110a.qld

Last Altered: Friday, January 22, 2010 1:03:56 PM Eastern Standard Time  
Printed: Friday, January 22, 2010 1:16:11 PM Eastern Standard Time

Name: per0121040a  
Date: 21-Jan-2010  
Time: 18:42:02  
ID: 1202020835  
Vial: 1:6,E

Q-22-10

1202020835 | L10 | MS0 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202020835	Perchlorate	99 > 83	2.38	10520.571	10520.571	bb			0.2094	104.71	4.71	1267.9...	3.01
1202020835	Perchlorate-101	101 > 85	2.38	3493.986	3493.986	bb			0.2028	101.38	1.38	447.198	
1202020835	Perchlorate-O(18)	107 > 89	2.36	21143.459	21143.459	bb			0.4858	97.16	-2.84	2783.1...	

$$\frac{10520.571}{50234} = 0.2094$$



# MISCELLANEOUS DATA

# Prep Logbook

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

Batch ID: 943783 Verified by: \_\_\_\_\_  
 Analyst: Charles Wilson Lab SOP: GL-OA-E-067 REV# 6  
 Method: SW846 6850 Modified Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
1202020832 MB	21-JAN-2010 11:26:13	10	10	1
1202020833 LCS	21-JAN-2010 11:26:13	10	10	1
244418001 - 2	21-JAN-2010 11:26:13	10	10	1
244602001 - 2	21-JAN-2010 11:26:13	10	10	1
244610001 - 2	21-JAN-2010 11:26:13	10	10	1
244614001 - 2	21-JAN-2010 11:26:13	10	10	1
244618001 - 2	21-JAN-2010 11:26:13	10	10	1
244719001 - 2	21-JAN-2010 11:26:13	10	10	1
244719002 - 2	21-JAN-2010 11:26:13	10	10	1
244719003 - 2	21-JAN-2010 11:26:13	10	10	1
244722001 - 2	21-JAN-2010 11:26:13	10	10	1
244722002 - 2	21-JAN-2010 11:26:13	10	10	1
244722003 - 2	21-JAN-2010 11:26:13	10	10	1
244722004 - 2	21-JAN-2010 11:26:13	10	10	1
244849001	21-JAN-2010 11:26:13	10	10	1
244880001 - 2	21-JAN-2010 11:26:13	10	10	1
244893001 - 2	21-JAN-2010 11:26:13	10	10	1
244912001 - 2	21-JAN-2010 11:26:13	10	10	1
244919001 - 2	21-JAN-2010 11:26:13	10	10	1
244922001 - 2	21-JAN-2010 11:26:13	10	10	1
1202020834 - 2 MS (244922001)	21-JAN-2010 11:26:13	10	10	1
1202020835 - 2 MSD (244922001)	21-JAN-2010 11:26:13	10	10	1
244925001 - 2	21-JAN-2010 11:26:13	10	10	1
1202020836 LCS	21-JAN-2010 11:26:13	10	10	1

Type	Sample Id	Description	Serial Number	Spike Amt	Units	Comments:
ICS	1202020836	10 ug/L ICV/CCV Second Source	UCL091230-01.1	.2	mL	Desalting cartridges used: B101/0211609 & B1000311609
LCS	1202020833	10 ug/L ICV/CCV Second Source	UCL091230-01.1	.2	mL	
MS	1202020834	10 ug/L ICV/CCV Second Source	UCL091230-01.1	.2	mL	
MSD	1202020835	10 ug/L ICV/CCV Second Source	UCL091230-01.1	.2	mL	
RGNT	All	500 ppm Carbonate, Bicarbonate, Chloride, Sulfate	1236492	10	mL	
RGNT	All	O2SI HPLC Grade Water	1246195	10	mL	

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 01/21/10

Extr. Injection Volume: 20uL

Sequence Number: per012110a

Initial Calibration Date: 01/21/10

Method: EPA 6850-Modified

Int. Std.: UCL091019-03.2

Mobile Phase Lot#: 1254342, 1246195

Standard-Samp Reagent Lot#: 1233976

Reviewed BY: *hmc*

Date: 01/25/10

SOP: GL-OA-E-067 Rev.6

Alt Check Std. ID: WCL100118-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0121001a	IPB001	CWW	1/21/2010 13:28			1		USE	B
per0121002a	IPB001	CWW	1/21/2010 13:36			1		USE	B
per0121003a	WCLICAL-01	CWW	1/21/2010 13:44			1		USE	I
per0121004a	WCLICAL-02	CWW	1/21/2010 13:52			1		USE	I
per0121005a	WCLICAL-03	CWW	1/21/2010 14:00			1		USE	I
per0121006a	WCLICAL-04	CWW	1/21/2010 14:08			1		USE	I
per0121007a	WCLICAL-05	CWW	1/21/2010 14:16			1		USE	I
per0121008a	IPB002	CWW	1/21/2010 14:24			1		USE	B
per0121009a	WCLICV	CWW	1/21/2010 14:32			1		USE	C
per0121010a	IPB003	CWW	1/21/2010 14:40			1		USE	B
per0121011a	WCLCRI	CWW	1/21/2010 14:48			1		USE	C
per0121012a	1202020832	CWW	1/21/2010 14:56	943784	VARIOUS	1	LANL	USE	S
per0121013a	1202020833	CWW	1/21/2010 15:04	943784	VARIOUS	1	LANL	USE	S
per0121014a	1202020836	CWW	1/21/2010 15:12	943784	VARIOUS	1	LANL	USE	S
per0121015a	244418001	CWW	1/21/2010 15:21	943784	10-1195-1	1	LANL	USE	S
per0121016a	244602001	CWW	1/21/2010 15:29	943784	10-1212-1	1	LANL	USE	S
per0121017a	244610001	CWW	1/21/2010 15:37	943784	10-1215	1	LANL	USE	S
per0121018a	244614001	CWW	1/21/2010 15:45	943784	10-1218-1	1	LANL	USE	S
per0121019a	244618001	CWW	1/21/2010 15:53	943784	10-1220	1	LANL	USE	S
per0121020a	WCLCCV	CWW	1/21/2010 16:01			1		USE	C
per0121021a	IPB004	CWW	1/21/2010 16:09			1		USE	B
per0121022a	WCLCRI	CWW	1/21/2010 16:17			1		USE	C
per0121023a	244719001	CWW	1/21/2010 16:25	943784	10-1239	1	LANL	USE	S
per0121024a	244719002	CWW	1/21/2010 16:33	943784	10-1239	1	LANL	USE	S
per0121025a	244719003	CWW	1/21/2010 16:41	943784	10-1239	1	LANL	USE	S
per0121026a	244722001	CWW	1/21/2010 16:49	943784	10-1234-1	1	LANL	USE	S
per0121027a	244722002	CWW	1/21/2010 16:57	943784	10-1234-1	1	LANL	USE	S
per0121028a	244722003	CWW	1/21/2010 17:05	943784	10-1234-1	1	LANL	USE	S
per0121029a	244722004	CWW	1/21/2010 17:13	943784	10-1234-1	1	LANL	USE	S

per0121030a	244849001	CWW	1/21/2010 17:21	943784	10-1262-1	1	LANL	USE	S
per0121031a	WCLCCV	CWW	1/21/2010 17:29			1		USE	C
per0121032a	IPB005	CWW	1/21/2010 17:37			1		USE	B
per0121033a	WCLCRI	CWW	1/21/2010 17:45			1		USE	C
per0121034a	244880001	CWW	1/21/2010 17:53	943784	10-1264	1	LANL	USE	S
per0121035a	244893001	CWW	1/21/2010 18:01	943784	10-1278-1	1	LANL	USE	S
per0121036a	244912001	CWW	1/21/2010 18:09	943784	10-1282	1	LANL	USE	S
per0121037a	244919001	CWW	1/21/2010 18:17	943784	10-1286	1	LANL	USE	S
per0121038a	244922001	CWW	1/21/2010 18:25	943784	10-1288-1	1	LANL	USE	S
per0121039a	1202020834	CWW	1/21/2010 18:34	943784	10-1288-1	1	LANL	USE	S
per0121040a	1202020835	CWW	1/21/2010 18:42	943784	10-1288-1	1	LANL	USE	S
per0121041a	244925001	CWW	1/21/2010 18:50	943784	10-1270	1	LANL	USE	S
per0121042a	WCLCCV	CWW	1/21/2010 18:58			1		USE	C
per0121043a	IPB006	CWW	1/21/2010 19:06			1		USE	B
per0121044a	WCLCRI	CWW	1/21/2010 19:14			1		USE	C
per0121045a	1202011842	CWW	1/21/2010 19:22	940151	10-1156	1	LANL	USE	S
per0121046a	1202011843	CWW	1/21/2010 19:30	940151	10-1156	1	LANL	USE	S
per0121047a	1202011846	CWW	1/21/2010 19:38	940151	10-1156	1	LANL	USE	S
per0121048a	244224001	CWW	1/21/2010 19:46	940151	10-1156	1	LANL	USE	S
per0121049a	1202011844	CWW	1/21/2010 19:54	940151	10-1156	1	LANL	USE	S
per0121050a	1202011845	CWW	1/21/2010 20:02	940151	10-1156	1	LANL	USE	S
per0121051a	244224002	CWW	1/21/2010 20:10	940151	10-1156	1	LANL	USE	S
per0121052a	244224003	CWW	1/21/2010 20:18	940151	10-1156	1	LANL	USE	S
per0121053a	244224004	CWW	1/21/2010 20:26	940151	10-1156	1	LANL	USE	S
per0121054a	WCLCCV	CWW	1/21/2010 20:34			1		USE	C
per0121055a	IPB007	CWW	1/21/2010 20:42			1		USE	B
per0121056a	WCLCRI	CWW	1/21/2010 20:50			1		USE	C
per0121057a	244224005	CWW	1/21/2010 20:59	940151	10-1156	1	LANL	USE	S
per0121058a	244224006	CWW	1/21/2010 21:07	940151	10-1156	1	LANL	USE	S
per0121059a	244224007	CWW	1/21/2010 21:15	940151	10-1156	1	LANL	USE	S
per0121060a	244224008	CWW	1/21/2010 21:23	940151	10-1156	1	LANL	USE	S
per0121061a	244224009	CWW	1/21/2010 21:31	940151	10-1156	1	LANL	USE	S
per0121062a	244224010	CWW	1/21/2010 21:39	940151	10-1156	1	LANL	USE	S
per0121063a	244224011	CWW	1/21/2010 21:47	940151	10-1156	1	LANL	USE	S
per0121064a	244224012	CWW	1/21/2010 21:55	940151	10-1156	1	LANL	USE	S
per0121065a	WCLCCV	CWW	1/21/2010 22:03			1		USE	C
per0121066a	IPB008	CWW	1/21/2010 22:11			1		USE	B

per0121067a	WCLCRI	CWW	1/21/2010 22:19	940151	10-1156	1	LANL	USE	C
per0121068a	244224013	CWW	1/21/2010 22:27	940151	10-1156	1	LANL	USE	S
per0121069a	244224014	CWW	1/21/2010 22:36	940151	10-1156	1	LANL	USE	S
per0121070a	244224015	CWW	1/21/2010 22:44	940151	10-1156	1	LANL	USE	S
per0121071a	244224016	CWW	1/21/2010 22:52	940151	10-1156	1	LANL	USE	S
per0121072a	244224017	CWW	1/21/2010 23:00	940151	10-1156	1	LANL	USE	S
per0121073a	244224018	CWW	1/21/2010 23:08	940151	10-1156	1	LANL	USE	S
per0121074a	244224019	CWW	1/21/2010 23:16	940151	10-1156	1	LANL	USE	S
per0121075a	244224020	CWW	1/21/2010 23:24	940151	10-1156	1	LANL	USE	S
per0121076a	WCLCCV	CWW	1/21/2010 23:32			1		USE	C
per0121077a	IPB009	CWW	1/21/2010 23:40			1		USE	B
per0121078a	WCLCRI	CWW	1/21/2010 23:48			1		USE	C

### Isotope Ratio Criteria

Isotope Ratio  $^{35}\text{Cl}/^{37}\text{Cl}$

2.31-3.85

### Tune Criteria

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

# **Metals Analysis**

# Case Narrative



**Metals Fractional Narrative  
Los Alamos National Laboratory (LANL)  
SDG 10-1288**

**Sample Analysis**

<b>Sample ID</b>	<b>Client ID</b>
244921001	RE15-10-7163
244921002	RE15-10-7162
244921003	RE15-10-7161
244921004	RE15-10-7160
244921005	RE15-10-7174
244921006	RE15-10-7173
244921007	RE15-10-7175
244921008	RE15-10-7172
244921009	RE15-10-7218
244921010	RE15-10-7223
1202018179	Method Blank (MB) ICP
1202018180	Laboratory Control Sample (LCS)
1202018183	244921001(RE15-10-7163L) Serial Dilution (SD)
1202018181	244921001(RE15-10-7163D) Sample Duplicate (DUP)
1202018182	244921001(RE15-10-7163S) Matrix Spike (MS)
1202018185	244921001(RE15-10-7163SD) Matrix Spike Duplicate (MSD)
1202018149	Method Blank (MB) ICP-MS
1202018150	Laboratory Control Sample (LCS)
1202018153	244921001(RE15-10-7163L) Serial Dilution (SD)
1202018151	244921001(RE15-10-7163D) Sample Duplicate (DUP)
1202018152	244921001(RE15-10-7163S) Matrix Spike (MS)
1202018154	244921001(RE15-10-7163SD) Matrix Spike Duplicate (MSD)
1202019779	Method Blank (MB) CVAA
1202019780	Laboratory Control Sample (LCS)
1202019783	244921001(RE15-10-7163L) Serial Dilution (SD)
1202019781	244921001(RE15-10-7163D) Sample Duplicate (DUP)
1202019782	244921001(RE15-10-7163S) Matrix Spike (MS)
1202019784	244921001(RE15-10-7163SD) Matrix Spike Duplicate (MSD)

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

#### **Method/Analysis Information**

<b>Analytical Batch:</b>	942675, 942665 and 943320
<b>Prep Batch :</b>	942673, 942662 and 943319
<b>Standard Operating Procedures:</b>	GL-MA-E-013 REV# 20, GL-MA-E-009 REV# 19, GL-MA-E-014 REV# 21 and GL-MA-E-010 REV# 23
<b>Analytical Method:</b>	SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A
<b>Prep Method :</b>	SW846 3050B and SW846 7471A Prep

#### **Preparation/Analytical Method Verification**

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

#### **System Configuration**

The Metals analysis-ICP was performed on a P E 4300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System

(FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

### **Calibration Information**

#### **Instrument Calibration**

All initial calibration requirements have been met for this sample delivery group (SDG).

#### **CRDL Requirements**

All CRDL standard(s) met the referenced advisory control limits.

#### **ICSA/ICSAB Statement**

All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

#### **Continuing Calibration Blank (CCB) Requirements**

All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

#### **Continuing Calibration Verification (CCV) Requirements**

All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

### **Quality Control (QC) Information**

#### **Method Blank (MB) Statement**

The MBs analyzed with this SDG met the acceptance criteria.

#### **Laboratory Control Sample (LCS) Recovery**

The LCS spike recoveries met the acceptance limits.

#### **Quality Control (QC) Sample Statement**

The following sample was selected as the quality control (QC) sample for this SDG: 244921001 (RE15-10-7163)-ICP, ICP-MS and CVAA.

#### **Matrix Spike (MS) Recovery Statement**

The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of beryllium, calcium and chromium as indicated by the "N" qualifiers.

#### **Matrix Spike Duplicate (MSD) Recovery Statement**

The percent recovery (%R) obtained from the MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MSD did not meet

the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of beryllium, chromium, magnesium and potassium as indicated by the "N" qualifiers.

#### **MS/MSD Relative Percent Difference (RPD) Statement**

The relative percent difference (RPD) obtained from the designated matrix spike duplicate (MSD) is evaluated based on acceptance criteria of 20%. The RPD between qualifying elements results in the MS and MSD were within the acceptance limits of 20% with the exception of aluminum as indicated by the "\*" qualifiers.

#### **Duplicate Relative Percent Difference (RPD) Statement**

The relative percent difference (RPD) obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is >5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the contract required detection limit (RL), a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements with the exceptions of uranium, aluminum, barium, chromium and cobalt as indicated by the "\*" qualifiers.

#### **Serial Dilution % Difference Statement**

The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

#### **Technical Information**

##### **Holding Time Specifications**

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

##### **Sample Dilutions**

Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG were diluted the standard 2x for solids on the ICPMS. The sample 244921002 for CVAA required dilution in order to bring over range concentrations within the linear calibration range of the instrument.

##### **Preparation Information**

The samples in this SDG were prepared exactly according to the cited SOP.

## **Miscellaneous Information**

### **Electronic Packaging Comment**

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

### **Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following DER was generated for this SDG: DER ID 787494 and 789336. A copy is included in the Miscellaneous Data section of this package.

### **Additional Comments**

Additional comments were not required for this SDG.

### **Certification Statement**

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

### **Review Validation:**

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

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

Reviewer: Nikhil A. Elmore Date: 2-11-10

# Sample Data Summary

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921001

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7163

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 93.4

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5720000	ug/Kg	*	6960	20500	20500	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-36-0	Antimony	357	ug/Kg	J	338	1020	1020	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-38-2	Arsenic	1.18	mg/kg		0.211	1.06	1.06	2	MS	SKJ	01/28/10 16:26	100128-3	942665
7440-39-3	Barium	55400	ug/Kg	*	102	512	512	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-41-7	Beryllium	0.557	mg/kg	N	0.0211	0.106	0.106	2	MS	RMJ	02/02/10 17:37	100201-4	942665
7440-43-9	Cadmium	133	ug/Kg	J	102	512	512	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-70-2	Calcium	1390000	ug/Kg	N	8190	25600	25600	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-47-3	Chromium	48900	ug/Kg	*N	153	512	512	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-48-4	Cobalt	2730	ug/Kg	*	153	512	512	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-50-8	Copper	7800	ug/Kg		307	1020	1020	1	P	HSC	01/29/10 11:05	012910-1	942675
7439-89-6	Iron	12300000	ug/Kg		8190	25600	25600	1	P	HSC	01/29/10 11:05	012910-1	942675
7439-92-1	Lead	12200	ug/Kg		256	1020	1020	1	P	HSC	01/29/10 11:05	012910-1	942675
7439-95-4	Magnesium	1490000	ug/Kg	N	8700	30700	30700	1	P	HSC	01/29/10 11:05	012910-1	942675
7439-96-5	Manganese	268000	ug/Kg		205	1020	1020	1	P	HSC	01/29/10 11:05	012910-1	942675
7439-97-6	Mercury	542	ug/kg		4.29	12.6	12.6	1	AV	JXL1	01/28/10 10:13	012810S1-6	943320
7440-02-0	Nickel	9.61	mg/kg		0.106	0.422	0.422	2	MS	RMJ	02/06/10 01:34	100205-5	942665
7440-09-7	Potassium	1130000	ug/Kg	N	6550	25600	25600	1	P	HSC	01/29/10 11:05	012910-1	942675
7782-49-2	Selenium	1.06	mg/kg	U	0.528	1.06	1.06	2	MS	SKJ	01/28/10 16:26	100128-3	942665
7440-22-4	Silver	4120	ug/Kg		102	512	512	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-23-5	Sodium	222000	ug/Kg		7160	25600	25600	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-28-0	Thallium	0.167	mg/kg	J	0.0633	0.211	0.211	2	MS	SKJ	01/28/10 16:26	100128-3	942665
7440-61-1	Uranium	0.895	mg/kg	*	0.0139	0.0422	0.0422	2	MS	SKJ	01/28/10 03:22	100127-2	942665
7440-62-2	Vanadium	14000	ug/Kg		102	512	512	1	P	HSC	01/29/10 11:05	012910-1	942675
7440-66-6	Zinc	50400	ug/Kg		338	1020	1020	1	P	HSC	01/29/10 11:05	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.507	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.523	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.509	g	30	mL	01/27/10	TXB3

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921002

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7162

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 90.3

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10200000	ug/Kg	*	7470	22000	22000	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-36-0	Antimony	439	ug/Kg	J	363	1100	1100	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-38-2	Arsenic	2.45	mg/kg		0.211	1.06	1.06	2	MS	SKJ	01/28/10 17:10	100128-3	942665
7440-39-3	Barium	138000	ug/Kg	*	110	550	550	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-41-7	Beryllium	0.631	mg/kg	N	0.0211	0.106	0.106	2	MS	RMJ	02/02/10 17:57	100201-4	942665
7440-43-9	Cadmium	463	ug/Kg	J	110	550	550	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-70-2	Calcium	2140000	ug/Kg	N	8790	27500	27500	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-47-3	Chromium	25300	ug/Kg	*N	165	550	550	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-48-4	Cobalt	6100	ug/Kg	*	165	550	550	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-50-8	Copper	24300	ug/Kg		330	1100	1100	1	P	HSC	01/29/10 11:27	012910-1	942675
7439-89-6	Iron	15300000	ug/Kg		8790	27500	27500	1	P	HSC	01/29/10 11:27	012910-1	942675
7439-92-1	Lead	25100	ug/Kg		275	1100	1100	1	P	HSC	01/29/10 11:27	012910-1	942675
7439-95-4	Magnesium	2270000	ug/Kg	N	9340	33000	33000	1	P	HSC	01/29/10 11:27	012910-1	942675
7439-96-5	Manganese	445000	ug/Kg		220	1100	1100	1	P	HSC	01/29/10 11:27	012910-1	942675
7439-97-6	Mercury	1540	ug/kg		39.4	116	116	10	AV	JXL1	01/28/10 13:10	012810S1-6	943320
7440-02-0	Nickel	9.5	mg/kg		0.106	0.422	0.422	2	MS	RMJ	02/06/10 01:51	100205-5	942665
7440-09-7	Potassium	1880000	ug/Kg	N	7030	27500	27500	1	P	HSC	01/29/10 11:27	012910-1	942675
7782-49-2	Selenium	1.06	mg/kg	U	0.528	1.06	1.06	2	MS	SKJ	01/28/10 17:10	100128-3	942665
7440-22-4	Silver	21000	ug/Kg		110	550	550	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-23-5	Sodium	164000	ug/Kg		7690	27500	27500	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-28-0	Thallium	0.230	mg/kg		0.0633	0.211	0.211	2	MS	SKJ	01/28/10 17:10	100128-3	942665
7440-61-1	Uranium	3.57	mg/kg	*	0.0139	0.0422	0.0422	2	MS	SKJ	01/28/10 04:06	100127-2	942665
7440-62-2	Vanadium	29100	ug/Kg		110	550	550	1	P	HSC	01/29/10 11:27	012910-1	942675
7440-66-6	Zinc	60600	ug/Kg		363	1100	1100	1	P	HSC	01/29/10 11:27	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.525	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.504	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.573	g	30	mL	01/27/10	TXB3



**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921003

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7161

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	11700000	ug/Kg	*	7270	21400	21400	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-36-0	Antimony	1070	ug/Kg	U	353	1070	1070	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-38-2	Arsenic	2.37	mg/kg		0.221	1.1	1.1	2	MS	SKJ	01/28/10 17:16	100128-3	942665
7440-39-3	Barium	152000	ug/Kg	*	107	534	534	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-41-7	Beryllium	0.757	mg/kg	N	0.0221	0.11	0.11	2	MS	RMJ	02/02/10 18:01	100201-4	942665
7440-43-9	Cadmium	115	ug/Kg	J	107	534	534	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-70-2	Calcium	2110000	ug/Kg	N	8550	26700	26700	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-47-3	Chromium	20700	ug/Kg	*N	160	534	534	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-48-4	Cobalt	4920	ug/Kg	*	160	534	534	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-50-8	Copper	15000	ug/Kg		321	1070	1070	1	P	HSC	01/29/10 11:38	012910-1	942675
7439-89-6	Iron	13200000	ug/Kg		8550	26700	26700	1	P	HSC	01/29/10 11:38	012910-1	942675
7439-92-1	Lead	13000	ug/Kg		267	1070	1070	1	P	HSC	01/29/10 11:38	012910-1	942675
7439-95-4	Magnesium	1830000	ug/Kg	N	9080	32100	32100	1	P	HSC	01/29/10 11:38	012910-1	942675
7439-96-5	Manganese	300000	ug/Kg		214	1070	1070	1	P	HSC	01/29/10 11:38	012910-1	942675
7439-97-6	Mercury	106	ug/kg		4.16	12.2	12.2	1	AV	JXL1	01/28/10 10:25	012810S1-6	943320
7440-02-0	Nickel	10.5	mg/kg		0.11	0.442	0.442	2	MS	RMJ	02/06/10 01:54	100205-5	942665
7440-09-7	Potassium	1550000	ug/Kg	N	6840	26700	26700	1	P	HSC	01/29/10 11:38	012910-1	942675
7782-49-2	Selenium	1.1	mg/kg	U	0.552	1.1	1.1	2	MS	SKJ	01/28/10 17:16	100128-3	942665
7440-22-4	Silver	3670	ug/Kg		107	534	534	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-23-5	Sodium	99000	ug/Kg		7480	26700	26700	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-28-0	Thallium	0.260	mg/kg		0.0663	0.221	0.221	2	MS	SKJ	01/28/10 17:16	100128-3	942665
7440-61-1	Uranium	0.658	mg/kg	*	0.0146	0.0442	0.0442	2	MS	SKJ	01/28/10 04:12	100127-2	942665
7440-62-2	Vanadium	26000	ug/Kg		107	534	534	1	P	HSC	01/29/10 11:38	012910-1	942675
7440-66-6	Zinc	42300	ug/Kg		353	1070	1070	1	P	HSC	01/29/10 11:38	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.508	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.525	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.55	g	30	mL	01/27/10	TXB3

**METALS**  
-1-  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921004

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7160

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 80

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10800000	ug/Kg	*	8500	25000	25000	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-36-0	Antimony	1250	ug/Kg	U	412	1250	1250	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-38-2	Arsenic	2.05	mg/kg		0.245	1.23	1.23	2	MS	SKJ	01/28/10 17:22	100128-3	942665
7440-39-3	Barium	180000	ug/Kg	*	125	625	625	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-41-7	Beryllium	0.767	mg/kg	N	0.0245	0.123	0.123	2	MS	RMJ	02/02/10 18:04	100201-4	942665
7440-43-9	Cadmium	307	ug/Kg	J	125	625	625	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-70-2	Calcium	2360000	ug/Kg	N	10000	31200	31200	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-47-3	Chromium	15100	ug/Kg	*N	187	625	625	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-48-4	Cobalt	4960	ug/Kg	*	187	625	625	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-50-8	Copper	26600	ug/Kg		375	1250	1250	1	P	HSC	01/29/10 11:42	012910-1	942675
7439-89-6	Iron	13000000	ug/Kg		10000	31200	31200	1	P	HSC	01/29/10 11:42	012910-1	942675
7439-92-1	Lead	25900	ug/Kg		312	1250	1250	1	P	HSC	01/29/10 11:42	012910-1	942675
7439-95-4	Magnesium	1870000	ug/Kg	N	10600	37500	37500	1	P	HSC	01/29/10 11:42	012910-1	942675
7439-96-5	Manganese	319000	ug/Kg		250	1250	1250	1	P	HSC	01/29/10 11:42	012910-1	942675
7439-97-6	Mercury	644	ug/kg		5.05	14.8	14.8	1	AV	JXL1	01/28/10 10:27	012810S1-6	943320
7440-02-0	Nickel	9.94	mg/kg		0.123	0.49	0.49	2	MS	RMJ	02/06/10 01:57	100205-5	942665
7440-09-7	Potassium	1610000	ug/Kg	N	8000	31200	31200	1	P	HSC	01/29/10 11:42	012910-1	942675
7782-49-2	Selenium	1.23	mg/kg	U	0.613	1.23	1.23	2	MS	SKJ	01/28/10 17:22	100128-3	942665
7440-22-4	Silver	8470	ug/Kg		125	625	625	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-23-5	Sodium	79300	ug/Kg		8750	31200	31200	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-28-0	Thallium	0.230	mg/kg	J	0.0735	0.245	0.245	2	MS	SKJ	01/28/10 17:22	100128-3	942665
7440-61-1	Uranium	1.97	mg/kg	*	0.0162	0.049	0.049	2	MS	SKJ	01/28/10 04:18	100127-2	942665
7440-62-2	Vanadium	25800	ug/Kg		125	625	625	1	P	HSC	01/29/10 11:42	012910-1	942675
7440-66-6	Zinc	68400	ug/Kg		412	1250	1250	1	P	HSC	01/29/10 11:42	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.51	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.5	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.505	g	30	mL	01/27/10	TXB3

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921005

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7174

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 80

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10800000	ug/Kg	*	8170	24000	24000	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-36-0	Antimony	1180	ug/Kg	J	397	1200	1200	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-38-2	Arsenic	1.75	mg/kg		0.238	1.19	1.19	2	MS	SKJ	01/28/10 17:41	100128-3	942665
7440-39-3	Barium	167000	ug/Kg	*	120	601	601	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-41-7	Beryllium	0.708	mg/kg	N	0.0238	0.119	0.119	2	MS	RMJ	02/02/10 18:07	100201-4	942665
7440-43-9	Cadmium	157	ug/Kg	J	120	601	601	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-70-2	Calcium	2650000	ug/Kg	N	9620	30000	30000	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-47-3	Chromium	15700	ug/Kg	*N	180	601	601	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-48-4	Cobalt	5240	ug/Kg	*	180	601	601	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-50-8	Copper	10400	ug/Kg		361	1200	1200	1	P	HSC	01/29/10 11:46	012910-1	942675
7439-89-6	Iron	11900000	ug/Kg		9620	30000	30000	1	P	HSC	01/29/10 11:46	012910-1	942675
7439-92-1	Lead	19400	ug/Kg		300	1200	1200	1	P	HSC	01/29/10 11:46	012910-1	942675
7439-95-4	Magnesium	1750000	ug/Kg	N	10200	36100	36100	1	P	HSC	01/29/10 11:46	012910-1	942675
7439-96-5	Manganese	433000	ug/Kg		240	1200	1200	1	P	HSC	01/29/10 11:46	012910-1	942675
7439-97-6	Mercury	18.1	ug/kg		4.8	14.1	14.1	1	AV	JXL1	01/28/10 10:29	012810S1-6	943320
7440-02-0	Nickel	9.08	mg/kg		0.119	0.476	0.476	2	MS	RMJ	02/06/10 01:59	100205-5	942665
7440-09-7	Potassium	1850000	ug/Kg	N	7690	30000	30000	1	P	HSC	01/29/10 11:46	012910-1	942675
7782-49-2	Selenium	1.19	mg/kg	U	0.595	1.19	1.19	2	MS	SKJ	01/28/10 17:41	100128-3	942665
7440-22-4	Silver	601	ug/Kg	U	120	601	601	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-23-5	Sodium	79300	ug/Kg		8410	30000	30000	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-28-0	Thallium	0.182	mg/kg	J	0.0714	0.238	0.238	2	MS	SKJ	01/28/10 17:41	100128-3	942665
7440-61-1	Uranium	4.81	mg/kg	*	0.0157	0.0476	0.0476	2	MS	SKJ	01/28/10 04:24	100127-2	942665
7440-62-2	Vanadium	23800	ug/Kg		120	601	601	1	P	HSC	01/29/10 11:46	012910-1	942675
7440-66-6	Zinc	30000	ug/Kg		397	1200	1200	1	P	HSC	01/29/10 11:46	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.523	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.518	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.529	g	30	mL	01/27/10	TXB3

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921006

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7173

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 90.2

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	16100000	ug/Kg	*	7510	22100	22100	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-36-0	Antimony	1100	ug/Kg	U	364	1100	1100	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-38-2	Arsenic	2.08	mg/kg		0.22	1.1	1.1	2	MS	SKJ	01/28/10 17:47	100128-3	942665
7440-39-3	Barium	178000	ug/Kg	*	110	552	552	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-41-7	Beryllium	1	mg/kg	N	0.022	0.11	0.11	2	MS	RMJ	02/02/10 18:10	100201-4	942665
7440-43-9	Cadmium	552	ug/Kg	U	110	552	552	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-70-2	Calcium	2370000	ug/Kg	N	8830	27600	27600	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-47-3	Chromium	16300	ug/Kg	*N	166	552	552	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-48-4	Cobalt	4280	ug/Kg	*	166	552	552	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-50-8	Copper	8190	ug/Kg		331	1100	1100	1	P	HSC	01/29/10 11:49	012910-1	942675
7439-89-6	Iron	13100000	ug/Kg		8830	27600	27600	1	P	HSC	01/29/10 11:49	012910-1	942675
7439-92-1	Lead	11900	ug/Kg		276	1100	1100	1	P	HSC	01/29/10 11:49	012910-1	942675
7439-95-4	Magnesium	2080000	ug/Kg	N	9390	33100	33100	1	P	HSC	01/29/10 11:49	012910-1	942675
7439-96-5	Manganese	254000	ug/Kg		221	1100	1100	1	P	HSC	01/29/10 11:49	012910-1	942675
7439-97-6	Mercury	20.4	ug/kg		4.45	13.1	13.1	1	AV	JXL1	01/28/10 10:35	012810S1-6	943320
7440-02-0	Nickel	10.7	mg/kg		0.11	0.439	0.439	2	MS	RMJ	02/06/10 02:02	100205-5	942665
7440-09-7	Potassium	1970000	ug/Kg	N	7070	27600	27600	1	P	HSC	01/29/10 11:49	012910-1	942675
7782-49-2	Selenium	1.1	mg/kg	U	0.549	1.1	1.1	2	MS	SKJ	01/28/10 17:47	100128-3	942665
7440-22-4	Silver	552	ug/Kg	U	110	552	552	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-23-5	Sodium	127000	ug/Kg		7730	27600	27600	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-28-0	Thallium	0.231	mg/kg		0.0659	0.22	0.22	2	MS	SKJ	01/28/10 17:47	100128-3	942665
7440-61-1	Uranium	1.08	mg/kg	*	0.0145	0.0439	0.0439	2	MS	SKJ	01/28/10 04:43	100127-2	942665
7440-62-2	Vanadium	25200	ug/Kg		110	552	552	1	P	HSC	01/29/10 11:49	012910-1	942675
7440-66-6	Zinc	25300	ug/Kg		364	1100	1100	1	P	HSC	01/29/10 11:49	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.505	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.502	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.508	g	30	mL	01/27/10	TXB3

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921007

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7175

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 90.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9680000	ug/Kg	*	7480	22000	22000	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-36-0	Antimony	1100	ug/Kg	U	363	1100	1100	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-38-2	Arsenic	1.89	mg/kg		0.221	1.1	1.1	2	MS	SKJ	01/28/10 17:53	100128-3	942665
7440-39-3	Barium	106000	ug/Kg	*	110	550	550	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-41-7	Beryllium	0.649	mg/kg	N	0.0221	0.11	0.11	2	MS	RMJ	02/02/10 18:13	100201-4	942665
7440-43-9	Cadmium	550	ug/Kg	U	110	550	550	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-70-2	Calcium	1500000	ug/Kg	N	8810	27500	27500	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-47-3	Chromium	24200	ug/Kg	*N	165	550	550	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-48-4	Cobalt	5910	ug/Kg	*	165	550	550	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-50-8	Copper	6200	ug/Kg		330	1100	1100	1	P	HSC	01/29/10 11:53	012910-1	942675
7439-89-6	Iron	14300000	ug/Kg		8810	27500	27500	1	P	HSC	01/29/10 11:53	012910-1	942675
7439-92-1	Lead	12500	ug/Kg		275	1100	1100	1	P	HSC	01/29/10 11:53	012910-1	942675
7439-95-4	Magnesium	1730000	ug/Kg	N	9360	33000	33000	1	P	HSC	01/29/10 11:53	012910-1	942675
7439-96-5	Manganese	477000	ug/Kg		220	1100	1100	1	P	HSC	01/29/10 11:53	012910-1	942675
7439-97-6	Mercury	15.5	ug/kg		4.05	11.9	11.9	1	AV	JXLI	01/28/10 10:37	012810S1-6	943320
7440-02-0	Nickel	8.81	mg/kg		0.11	0.441	0.441	2	MS	RMJ	02/06/10 02:04	100205-5	942665
7440-09-7	Potassium	1760000	ug/Kg	N	7040	27500	27500	1	P	HSC	01/29/10 11:53	012910-1	942675
7782-49-2	Selenium	1.1	mg/kg	U	0.551	1.1	1.1	2	MS	SKJ	01/28/10 17:53	100128-3	942665
7440-22-4	Silver	550	ug/Kg	U	110	550	550	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-23-5	Sodium	237000	ug/Kg		7700	27500	27500	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-28-0	Thallium	0.185	mg/kg	J	0.0662	0.221	0.221	2	MS	SKJ	01/28/10 17:53	100128-3	942665
7440-61-1	Uranium	0.668	mg/kg	*	0.0146	0.0441	0.0441	2	MS	SKJ	01/28/10 04:49	100127-2	942665
7440-62-2	Vanadium	21400	ug/Kg		110	550	550	1	P	HSC	01/29/10 11:53	012910-1	942675
7440-66-6	Zinc	40000	ug/Kg		363	1100	1100	1	P	HSC	01/29/10 11:53	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.5	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.501	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.555	g	30	mL	01/27/10	TXB3

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921008

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7172

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 79

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10500000	ug/Kg	*	8600	25300	25300	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-36-0	Antimony	653	ug/Kg	J	417	1260	1260	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-38-2	Arsenic	1.96	mg/kg		0.249	1.25	1.25	2	MS	SKJ	01/28/10 18:12	100128-3	942665
7440-39-3	Barium	155000	ug/Kg	*	126	632	632	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-41-7	Beryllium	0.898	mg/kg	N	0.0249	0.125	0.125	2	MS	RMJ	02/02/10 18:16	100201-4	942665
7440-43-9	Cadmium	174	ug/Kg	J	126	632	632	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-70-2	Calcium	2410000	ug/Kg	N	10100	31600	31600	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-47-3	Chromium	10800	ug/Kg	*N	190	632	632	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-48-4	Cobalt	4220	ug/Kg	*	190	632	632	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-50-8	Copper	7600	ug/Kg		379	1260	1260	1	P	HSC	01/29/10 11:57	012910-1	942675
7439-89-6	Iron	11000000	ug/Kg		10100	31600	31600	1	P	HSC	01/29/10 11:57	012910-1	942675
7439-92-1	Lead	17200	ug/Kg		316	1260	1260	1	P	HSC	01/29/10 11:57	012910-1	942675
7439-95-4	Magnesium	1680000	ug/Kg	N	10800	37900	37900	1	P	HSC	01/29/10 11:57	012910-1	942675
7439-96-5	Manganese	319000	ug/Kg		253	1260	1260	1	P	HSC	01/29/10 11:57	012910-1	942675
7439-97-6	Mercury	45.3	ug/kg		5.17	15.2	15.2	1	AV	JXL1	01/28/10 10:39	012810S1-6	943320
7440-02-0	Nickel	8.96	mg/kg		0.125	0.499	0.499	2	MS	RMJ	02/06/10 02:07	100205-5	942665
7440-09-7	Potassium	1710000	ug/Kg	N	8090	31600	31600	1	P	HSC	01/29/10 11:57	012910-1	942675
7782-49-2	Selenium	1.25	mg/kg	U	0.624	1.25	1.25	2	MS	SKJ	01/28/10 18:12	100128-3	942665
7440-22-4	Silver	196	ug/Kg	J	126	632	632	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-23-5	Sodium	86700	ug/Kg		8850	31600	31600	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-28-0	Thallium	0.183	mg/kg	J	0.0748	0.249	0.249	2	MS	SKJ	01/28/10 18:12	100128-3	942665
7440-61-1	Uranium	3.51	mg/kg	*	0.0165	0.0499	0.0499	2	MS	SKJ	01/28/10 04:55	100127-2	942665
7440-62-2	Vanadium	22500	ug/Kg		126	632	632	1	P	HSC	01/29/10 11:57	012910-1	942675
7440-66-6	Zinc	33300	ug/Kg		417	1260	1260	1	P	HSC	01/29/10 11:57	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.509	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.502	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.501	g	30	mL	01/27/10	TXB3

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921009

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7218

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 90.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	15200000	ug/Kg	*	7400	21800	21800	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-36-0	Antimony	1090	ug/Kg	U	359	1090	1090	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-38-2	Arsenic	1.96	mg/kg		0.213	1.06	1.06	2	MS	SKJ	01/28/10 18:18	100128-3	942665
7440-39-3	Barium	199000	ug/Kg	*	109	544	544	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-41-7	Beryllium	1.02	mg/kg	N	0.0213	0.106	0.106	2	MS	RMJ	02/02/10 18:19	100201-4	942665
7440-43-9	Cadmium	544	ug/Kg	U	109	544	544	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-70-2	Calcium	2350000	ug/Kg	N	8710	27200	27200	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-47-3	Chromium	17500	ug/Kg	*N	163	544	544	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-48-4	Cobalt	5210	ug/Kg	*	163	544	544	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-50-8	Copper	8540	ug/Kg		327	1090	1090	1	P	HSC	01/29/10 12:00	012910-1	942675
7439-89-6	Iron	13800000	ug/Kg		8710	27200	27200	1	P	HSC	01/29/10 12:00	012910-1	942675
7439-92-1	Lead	12100	ug/Kg		272	1090	1090	1	P	HSC	01/29/10 12:00	012910-1	942675
7439-95-4	Magnesium	2230000	ug/Kg	N	9250	32700	32700	1	P	HSC	01/29/10 12:00	012910-1	942675
7439-96-5	Manganese	295000	ug/Kg		218	1090	1090	1	P	HSC	01/29/10 12:00	012910-1	942675
7439-97-6	Mercury	17.5	ug/kg		4.42	13	13	1	AV	JXL1	01/28/10 10:41	012810S1-6	943320
7440-02-0	Nickel	11.6	mg/kg		0.106	0.425	0.425	2	MS	RMJ	02/06/10 02:10	100205-5	942665
7440-09-7	Potassium	1940000	ug/Kg	N	6970	27200	27200	1	P	HSC	01/29/10 12:00	012910-1	942675
7782-49-2	Selenium	1.06	mg/kg	U	0.532	1.06	1.06	2	MS	SKJ	01/28/10 18:18	100128-3	942665
7440-22-4	Silver	544	ug/Kg	U	109	544	544	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-23-5	Sodium	146000	ug/Kg		7620	27200	27200	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-28-0	Thallium	0.219	mg/kg		0.0638	0.213	0.213	2	MS	SKJ	01/28/10 18:18	100128-3	942665
7440-61-1	Uranium	1.12	mg/kg	*	0.014	0.0425	0.0425	2	MS	SKJ	01/28/10 05:01	100127-2	942665
7440-62-2	Vanadium	27200	ug/Kg		109	544	544	1	P	HSC	01/29/10 12:00	012910-1	942675
7440-66-6	Zinc	27100	ug/Kg		359	1090	1090	1	P	HSC	01/29/10 12:00	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.522	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.51	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.513	g	30	mL	01/27/10	TXB3

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244921010

BASIS: Dry Weight

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7223

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: SOIL

%SOLIDS: 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10900000	ug/Kg	*	7530	22200	22200	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-36-0	Antimony	731	ug/Kg	J	365	1110	1110	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-38-2	Arsenic	2.04	mg/kg		0.218	1.09	1.09	2	MS	SKJ	01/28/10 18:24	100128-3	942665
7440-39-3	Barium	129000	ug/Kg	*	111	554	554	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-41-7	Beryllium	0.684	mg/kg	N	0.0218	0.109	0.109	2	MS	RMJ	02/02/10 18:22	100201-4	942665
7440-43-9	Cadmium	145	ug/Kg	J	111	554	554	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-70-2	Calcium	2040000	ug/Kg	N	8860	27700	27700	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-47-3	Chromium	21200	ug/Kg	*N	166	554	554	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-48-4	Cobalt	5920	ug/Kg	*	166	554	554	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-50-8	Copper	16900	ug/Kg		332	1110	1110	1	P	HSC	01/29/10 12:04	012910-1	942675
7439-89-6	Iron	13900000	ug/Kg		8860	27700	27700	1	P	HSC	01/29/10 12:04	012910-1	942675
7439-92-1	Lead	12900	ug/Kg		277	1110	1110	1	P	HSC	01/29/10 12:04	012910-1	942675
7439-95-4	Magnesium	1990000	ug/Kg	N	9410	33200	33200	1	P	HSC	01/29/10 12:04	012910-1	942675
7439-96-5	Manganese	447000	ug/Kg		222	1110	1110	1	P	HSC	01/29/10 12:04	012910-1	942675
7439-97-6	Mercury	139	ug/kg		4.34	12.8	12.8	1	AV	JXL1	01/28/10 10:43	012810S1-6	943320
7440-02-0	Nickel	9.54	mg/kg		0.109	0.435	0.435	2	MS	RMJ	02/06/10 02:12	100205-5	942665
7440-09-7	Potassium	1610000	ug/Kg	N	7090	27700	27700	1	P	HSC	01/29/10 12:04	012910-1	942675
7782-49-2	Selenium	1.09	mg/kg	U	0.544	1.09	1.09	2	MS	SKJ	01/28/10 18:24	100128-3	942665
7440-22-4	Silver	3300	ug/Kg		111	554	554	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-23-5	Sodium	77000	ug/Kg		7750	27700	27700	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-28-0	Thallium	0.231	mg/kg		0.0653	0.218	0.218	2	MS	SKJ	01/28/10 18:24	100128-3	942665
7440-61-1	Uranium	0.569	mg/kg	*	0.0144	0.0435	0.0435	2	MS	SKJ	01/28/10 05:08	100127-2	942665
7440-62-2	Vanadium	26700	ug/Kg		111	554	554	1	P	HSC	01/29/10 12:04	012910-1	942675
7440-66-6	Zinc	43400	ug/Kg		365	1110	1110	1	P	HSC	01/29/10 12:04	012910-1	942675

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942665	942662	SW846 3050B	0.515	g	50	mL	01/21/10	FGA
942675	942673	SW846 3050B	0.506	g	50	mL	01/21/10	FGA
943320	943319	SW846 7471A Prep	0.527	g	30	mL	01/27/10	TXB3



# **Quality Control Summary**

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1288

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS6,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICV01										
	Uranium	53.1	ug/L	50	ug/L	106.2	90.0 - 110.0	MS	28-JAN-10 00:06	100127-2
	Mercury	5.08	ug/L	5	ug/L	101.7	90.0 - 110.0	AV	28-JAN-10 09:37	012810S1-6
	Arsenic	48	ug/L	50	ug/L	95.9	90.0 - 110.0	MS	28-JAN-10 13:53	100128-3
	Selenium	51.4	ug/L	50	ug/L	102.8	90.0 - 110.0	MS	28-JAN-10 13:53	100128-3
	Thallium	48.5	ug/L	50	ug/L	97	90.0 - 110.0	MS	28-JAN-10 13:53	100128-3
	Aluminum	5000	ug/L	5000	ug/L	100.1	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Antimony	494	ug/L	500	ug/L	98.7	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Barium	538	ug/L	500	ug/L	107.6	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Cadmium	532	ug/L	500	ug/L	106.4	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Calcium	4920	ug/L	5000	ug/L	98.5	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Chromium	520	ug/L	500	ug/L	104	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Cobalt	538	ug/L	500	ug/L	107.7	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Copper	539	ug/L	500	ug/L	107.8	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Iron	5060	ug/L	5000	ug/L	101.2	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Lead	528	ug/L	500	ug/L	105.5	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Magnesium	4810	ug/L	5000	ug/L	96.2	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Manganese	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Potassium	2430	ug/L	2500	ug/L	97.2	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Silver	258	ug/L	250	ug/L	103.2	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Sodium	2420	ug/L	2500	ug/L	97	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Vanadium	509	ug/L	500	ug/L	101.7	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Zinc	505	ug/L	500	ug/L	101	90.0 - 110.0	P	29-JAN-10 06:32	012910-1
	Beryllium	51.8	ug/L	50	ug/L	103.6	90.0 - 110.0	MS	02-FEB-10 17:09	100201-4
	Nickel	51.8	ug/L	50	ug/L	103.6	90.0 - 110.0	MS	06-FEB-10 01:08	100205-5
CCV01										
	Uranium	51.7	ug/L	50	ug/L	103.3	90.0 - 110.0	MS	28-JAN-10 00:36	100127-2
	Mercury	5.09	ug/L	5	ug/L	101.8	80.0 - 120.0	AV	28-JAN-10 09:43	012810S1-6
	Arsenic	47.3	ug/L	50	ug/L	94.7	90.0 - 110.0	MS	28-JAN-10 14:23	100128-3
	Selenium	50.5	ug/L	50	ug/L	100.9	90.0 - 110.0	MS	28-JAN-10 14:23	100128-3
	Thallium	50.5	ug/L	50	ug/L	101	90.0 - 110.0	MS	28-JAN-10 14:23	100128-3

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1288

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS6,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Aluminum	5060	ug/L	5000	ug/L	101.2	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Antimony	524	ug/L	500	ug/L	104.7	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Barium	525	ug/L	500	ug/L	105	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Cadmium	525	ug/L	500	ug/L	104.9	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Calcium	5080	ug/L	5000	ug/L	101.6	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Chromium	524	ug/L	500	ug/L	104.9	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Cobalt	526	ug/L	500	ug/L	105.1	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Copper	528	ug/L	500	ug/L	105.5	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Iron	5180	ug/L	5000	ug/L	103.6	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Lead	529	ug/L	500	ug/L	105.7	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Magnesium	5210	ug/L	5000	ug/L	104.1	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Manganese	526	ug/L	500	ug/L	105.3	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Potassium	5230	ug/L	5000	ug/L	104.6	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Silver	532	ug/L	500	ug/L	106.4	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Sodium	10100	ug/L	10000	ug/L	101.4	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Vanadium	531	ug/L	500	ug/L	106.2	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Zinc	523	ug/L	500	ug/L	104.6	90.0 - 110.0	P	29-JAN-10 07:10	012910-1
	Beryllium	50.7	ug/L	50	ug/L	101.4	90.0 - 110.0	MS	02-FEB-10 17:22	100201-4
	Nickel	53.2	ug/L	50	ug/L	106.3	90.0 - 110.0	MS	06-FEB-10 01:21	100205-5
CCV02	Uranium	53.3	ug/L	50	ug/L	106.7	90.0 - 110.0	MS	28-JAN-10 00:55	100127-2
	Mercury	5.19	ug/L	5	ug/L	103.7	80.0 - 120.0	AV	28-JAN-10 10:07	012810S1-6
	Arsenic	48.3	ug/L	50	ug/L	96.6	90.0 - 110.0	MS	28-JAN-10 14:42	100128-3
	Selenium	52.5	ug/L	50	ug/L	105	90.0 - 110.0	MS	28-JAN-10 14:42	100128-3
	Thallium	51.9	ug/L	50	ug/L	103.9	90.0 - 110.0	MS	28-JAN-10 14:42	100128-3
	Aluminum	5090	ug/L	5000	ug/L	101.7	90.0 - 110.0	P	29-JAN-10 07:21	012910-1
	Antimony	525	ug/L	500	ug/L	105.1	90.0 - 110.0	P	29-JAN-10 07:21	012910-1
	Barium	527	ug/L	500	ug/L	105.5	90.0 - 110.0	P	29-JAN-10 07:21	012910-1
	Cadmium	525	ug/L	500	ug/L	105	90.0 - 110.0	P	29-JAN-10 07:21	012910-1
	Calcium	5050	ug/L	5000	ug/L	101	90.0 - 110.0	P	29-JAN-10 07:21	012910-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1288

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS6,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Chromium	526	ug/L	500	ug/L	105.3	90.0 – 110.0	P	29-JAN-10 07:21	012910-1
	Cobalt	526	ug/L	500	ug/L	105.1	90.0 – 110.0	P	29-JAN-10 07:21	012910-1
	Copper	529	ug/L	500	ug/L	105.9	90.0 – 110.0	P	29-JAN-10 07:21	012910-1
	Iron	5100	ug/L	5000	ug/L	101.9	90.0 – 110.0	P	29-JAN-10 07:21	012910-1
	Lead	528	ug/L	500	ug/L	105.7	90.0 – 110.0	P	29-JAN-10 07:21	012910-1
	Magnesium	5210	ug/L	5000	ug/L	104.3	90.0 – 110.0	P	29-JAN-10 07:21	012910-1
	Manganese	527	ug/L	500	ug/L	105.5	90.0 – 110.0	P	29-JAN-10 07:21	012910-1
	Potassium	5200	ug/L	5000	ug/L	104	90.0 – 110.0	P	29-JAN-10 07:21	012910-1
	Silver	534	ug/L	500	ug/L	106.9	90.0 – 110.0	P	29-JAN-10 07:21	012910-1
	Sodium	10100	ug/L	10000	ug/L	101.4	90.0 – 110.0	P	29-JAN-10 07:21	012910-1
	Vanadium	533	ug/L	500	ug/L	106.5	90.0 – 110.0	P	29-JAN-10 07:21	012910-1
	Zinc	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	29-JAN-10 07:21	012910-1
	Beryllium	50.4	ug/L	50	ug/L	100.8	90.0 – 110.0	MS	02-FEB-10 17:52	100201-4
	Nickel	53	ug/L	50	ug/L	106	90.0 – 110.0	MS	06-FEB-10 01:46	100205-5
CCV03	Uranium	53	ug/L	50	ug/L	105.9	90.0 – 110.0	MS	28-JAN-10 01:44	100127-2
	Mercury	5.29	ug/L	5	ug/L	105.9	80.0 – 120.0	AV	28-JAN-10 10:31	012810S1-6
	Arsenic	47.4	ug/L	50	ug/L	94.8	90.0 – 110.0	MS	28-JAN-10 15:43	100128-3
	Selenium	50.3	ug/L	50	ug/L	100.5	90.0 – 110.0	MS	28-JAN-10 15:43	100128-3
	Thallium	51.6	ug/L	50	ug/L	103.2	90.0 – 110.0	MS	28-JAN-10 15:43	100128-3
	Aluminum	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	29-JAN-10 07:31	012910-1
	Antimony	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	29-JAN-10 07:31	012910-1
	Barium	514	ug/L	500	ug/L	102.9	90.0 – 110.0	P	29-JAN-10 07:31	012910-1
	Cadmium	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	29-JAN-10 07:31	012910-1
	Calcium	4990	ug/L	5000	ug/L	99.9	90.0 – 110.0	P	29-JAN-10 07:31	012910-1
	Chromium	514	ug/L	500	ug/L	102.7	90.0 – 110.0	P	29-JAN-10 07:31	012910-1
	Cobalt	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	29-JAN-10 07:31	012910-1
	Copper	517	ug/L	500	ug/L	103.3	90.0 – 110.0	P	29-JAN-10 07:31	012910-1
	Iron	5100	ug/L	5000	ug/L	101.9	90.0 – 110.0	P	29-JAN-10 07:31	012910-1
	Lead	516	ug/L	500	ug/L	103.2	90.0 – 110.0	P	29-JAN-10 07:31	012910-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1288

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS6,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Magnesium	5150	ug/L	5000	ug/L	102.9	90.0 – 110.0	P	29-JAN-10 07:31	012910-1
	Manganese	515	ug/L	500	ug/L	103	90.0 – 110.0	P	29-JAN-10 07:31	012910-1
	Potassium	5120	ug/L	5000	ug/L	102.4	90.0 – 110.0	P	29-JAN-10 07:31	012910-1
	Silver	523	ug/L	500	ug/L	104.6	90.0 – 110.0	P	29-JAN-10 07:31	012910-1
	Sodium	9990	ug/L	10000	ug/L	99.9	90.0 – 110.0	P	29-JAN-10 07:31	012910-1
	Vanadium	521	ug/L	500	ug/L	104.3	90.0 – 110.0	P	29-JAN-10 07:31	012910-1
	Zinc	511	ug/L	500	ug/L	102.3	90.0 – 110.0	P	29-JAN-10 07:31	012910-1
	Beryllium	50.8	ug/L	50	ug/L	101.6	90.0 – 110.0	MS	02-FEB-10 18:26	100201-4
	Nickel	53.9	ug/L	50	ug/L	107.8	90.0 – 110.0	MS	06-FEB-10 02:15	100205-5
CCV04	Uranium	52.7	ug/L	50	ug/L	105.5	90.0 – 110.0	MS	28-JAN-10 02:39	100127-2
	Mercury	5.41	ug/L	5	ug/L	108.1	80.0 – 120.0	AV	28-JAN-10 10:55	012810S1-6
	Arsenic	47.4	ug/L	50	ug/L	94.9	90.0 – 110.0	MS	28-JAN-10 16:14	100128-3
	Selenium	49.9	ug/L	50	ug/L	99.8	90.0 – 110.0	MS	28-JAN-10 16:14	100128-3
	Thallium	51.8	ug/L	50	ug/L	103.6	90.0 – 110.0	MS	28-JAN-10 16:14	100128-3
	Aluminum	5130	ug/L	5000	ug/L	102.6	90.0 – 110.0	P	29-JAN-10 08:11	012910-1
	Antimony	515	ug/L	500	ug/L	103	90.0 – 110.0	P	29-JAN-10 08:11	012910-1
	Barium	514	ug/L	500	ug/L	102.9	90.0 – 110.0	P	29-JAN-10 08:11	012910-1
	Cadmium	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	29-JAN-10 08:11	012910-1
	Calcium	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	29-JAN-10 08:11	012910-1
	Chromium	515	ug/L	500	ug/L	102.9	90.0 – 110.0	P	29-JAN-10 08:11	012910-1
	Cobalt	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	29-JAN-10 08:11	012910-1
	Copper	522	ug/L	500	ug/L	104.3	90.0 – 110.0	P	29-JAN-10 08:11	012910-1
	Iron	5180	ug/L	5000	ug/L	103.6	90.0 – 110.0	P	29-JAN-10 08:11	012910-1
	Lead	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	29-JAN-10 08:11	012910-1
	Magnesium	5200	ug/L	5000	ug/L	103.9	90.0 – 110.0	P	29-JAN-10 08:11	012910-1
	Manganese	517	ug/L	500	ug/L	103.5	90.0 – 110.0	P	29-JAN-10 08:11	012910-1
	Potassium	5200	ug/L	5000	ug/L	104.1	90.0 – 110.0	P	29-JAN-10 08:11	012910-1
	Silver	528	ug/L	500	ug/L	105.7	90.0 – 110.0	P	29-JAN-10 08:11	012910-1
	Sodium	10100	ug/L	10000	ug/L	100.9	90.0 – 110.0	P	29-JAN-10 08:11	012910-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1288

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS6,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Vanadium	523	ug/L	500	ug/L	104.6	90.0 - 110.0	P	29-JAN-10 08:11	012910-1
	Zinc	513	ug/L	500	ug/L	102.6	90.0 - 110.0	P	29-JAN-10 08:11	012910-1
CCV05										
	Uranium	53	ug/L	50	ug/L	106	90.0 - 110.0	MS	28-JAN-10 03:10	100127-2
	Mercury	5.17	ug/L	5	ug/L	103.3	80.0 - 120.0	AV	28-JAN-10 11:19	012810S1-6
	Arsenic	48.3	ug/L	50	ug/L	96.6	90.0 - 110.0	MS	28-JAN-10 16:57	100128-3
	Selenium	50.2	ug/L	50	ug/L	100.3	90.0 - 110.0	MS	28-JAN-10 16:57	100128-3
	Thallium	51.6	ug/L	50	ug/L	103.2	90.0 - 110.0	MS	28-JAN-10 16:57	100128-3
	Aluminum	5190	ug/L	5000	ug/L	103.8	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
	Antimony	524	ug/L	500	ug/L	104.8	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
	Barium	523	ug/L	500	ug/L	104.6	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
	Cadmium	518	ug/L	500	ug/L	103.6	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
	Calcium	5060	ug/L	5000	ug/L	101.1	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
	Chromium	522	ug/L	500	ug/L	104.4	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
	Cobalt	521	ug/L	500	ug/L	104.2	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
	Copper	527	ug/L	500	ug/L	105.5	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
	Iron	5230	ug/L	5000	ug/L	104.5	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
	Lead	521	ug/L	500	ug/L	104.2	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
	Magnesium	5300	ug/L	5000	ug/L	106.1	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
	Manganese	527	ug/L	500	ug/L	105.5	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
	Potassium	5310	ug/L	5000	ug/L	106.1	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
	Silver	534	ug/L	500	ug/L	106.8	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
	Sodium	10300	ug/L	10000	ug/L	102.5	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
	Vanadium	530	ug/L	500	ug/L	105.9	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
	Zinc	520	ug/L	500	ug/L	104	90.0 - 110.0	P	29-JAN-10 08:55	012910-1
CCV06										
	Uranium	51.4	ug/L	50	ug/L	102.8	90.0 - 110.0	MS	28-JAN-10 03:53	100127-2
	Mercury	5.19	ug/L	5	ug/L	103.9	80.0 - 120.0	AV	28-JAN-10 11:43	012810S1-6
	Arsenic	48.1	ug/L	50	ug/L	96.3	90.0 - 110.0	MS	28-JAN-10 17:28	100128-3
	Selenium	51.3	ug/L	50	ug/L	102.6	90.0 - 110.0	MS	28-JAN-10 17:28	100128-3

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1288

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS6,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Thallium	51.5	ug/L	50	ug/L	103	90.0 – 110.0	MS	28-JAN-10 17:28	100128-3
	Aluminum	5030	ug/L	5000	ug/L	100.6	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
	Antimony	516	ug/L	500	ug/L	103.2	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
	Barium	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
	Cadmium	520	ug/L	500	ug/L	104	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
	Calcium	4950	ug/L	5000	ug/L	98.9	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
	Chromium	519	ug/L	500	ug/L	103.8	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
	Cobalt	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
	Copper	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
	Iron	5090	ug/L	5000	ug/L	101.8	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
	Lead	517	ug/L	500	ug/L	103.5	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
	Magnesium	5140	ug/L	5000	ug/L	102.7	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
	Manganese	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
	Potassium	5150	ug/L	5000	ug/L	102.9	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
	Silver	530	ug/L	500	ug/L	105.9	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
	Sodium	9900	ug/L	10000	ug/L	99	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
	Vanadium	527	ug/L	500	ug/L	105.3	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
	Zinc	519	ug/L	500	ug/L	103.8	90.0 – 110.0	P	29-JAN-10 09:14	012910-1
CCV07										
	Uranium	51.2	ug/L	50	ug/L	102.4	90.0 – 110.0	MS	28-JAN-10 04:30	100127-2
	Mercury	5.24	ug/L	5	ug/L	104.8	80.0 – 120.0	AV	28-JAN-10 12:06	012810S1-6
	Arsenic	46.4	ug/L	50	ug/L	92.8	90.0 – 110.0	MS	28-JAN-10 17:59	100128-3
	Selenium	49.7	ug/L	50	ug/L	99.3	90.0 – 110.0	MS	28-JAN-10 17:59	100128-3
	Thallium	51.6	ug/L	50	ug/L	103.2	90.0 – 110.0	MS	28-JAN-10 17:59	100128-3
	Aluminum	5020	ug/L	5000	ug/L	100.3	90.0 – 110.0	P	29-JAN-10 09:46	012910-1
	Antimony	511	ug/L	500	ug/L	102.3	90.0 – 110.0	P	29-JAN-10 09:46	012910-1
	Barium	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	29-JAN-10 09:46	012910-1
	Cadmium	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	29-JAN-10 09:46	012910-1
	Calcium	4920	ug/L	5000	ug/L	98.5	90.0 – 110.0	P	29-JAN-10 09:46	012910-1
	Chromium	509	ug/L	500	ug/L	101.7	90.0 – 110.0	P	29-JAN-10 09:46	012910-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1288

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS6,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Cobalt	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	29-JAN-10 09:46	012910-1
	Copper	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	29-JAN-10 09:46	012910-1
	Iron	5090	ug/L	5000	ug/L	101.9	90.0 – 110.0	P	29-JAN-10 09:46	012910-1
	Lead	512	ug/L	500	ug/L	102.3	90.0 – 110.0	P	29-JAN-10 09:46	012910-1
	Magnesium	5180	ug/L	5000	ug/L	103.6	90.0 – 110.0	P	29-JAN-10 09:46	012910-1
	Manganese	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	29-JAN-10 09:46	012910-1
	Potassium	5130	ug/L	5000	ug/L	102.7	90.0 – 110.0	P	29-JAN-10 09:46	012910-1
	Silver	521	ug/L	500	ug/L	104.1	90.0 – 110.0	P	29-JAN-10 09:46	012910-1
	Sodium	9900	ug/L	10000	ug/L	99	90.0 – 110.0	P	29-JAN-10 09:46	012910-1
	Vanadium	516	ug/L	500	ug/L	103.3	90.0 – 110.0	P	29-JAN-10 09:46	012910-1
	Zinc	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	29-JAN-10 09:46	012910-1
CCV08	Uranium	51.7	ug/L	50	ug/L	103.4	90.0 – 110.0	MS	28-JAN-10 05:14	100127-2
	Mercury	5.31	ug/L	5	ug/L	106.2	80.0 – 120.0	AV	28-JAN-10 12:24	012810S1-6
	Arsenic	48.9	ug/L	50	ug/L	97.8	90.0 – 110.0	MS	28-JAN-10 18:30	100128-3
	Selenium	50	ug/L	50	ug/L	100	90.0 – 110.0	MS	28-JAN-10 18:30	100128-3
	Thallium	51.5	ug/L	50	ug/L	103	90.0 – 110.0	MS	28-JAN-10 18:30	100128-3
	Aluminum	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	29-JAN-10 10:19	012910-1
	Antimony	521	ug/L	500	ug/L	104.3	90.0 – 110.0	P	29-JAN-10 10:19	012910-1
	Barium	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	29-JAN-10 10:19	012910-1
	Cadmium	519	ug/L	500	ug/L	103.7	90.0 – 110.0	P	29-JAN-10 10:19	012910-1
	Calcium	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	29-JAN-10 10:19	012910-1
	Chromium	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	29-JAN-10 10:19	012910-1
	Cobalt	520	ug/L	500	ug/L	104	90.0 – 110.0	P	29-JAN-10 10:19	012910-1
	Copper	526	ug/L	500	ug/L	105.2	90.0 – 110.0	P	29-JAN-10 10:19	012910-1
	Iron	5200	ug/L	5000	ug/L	104.1	90.0 – 110.0	P	29-JAN-10 10:19	012910-1
	Lead	524	ug/L	500	ug/L	104.9	90.0 – 110.0	P	29-JAN-10 10:19	012910-1
	Magnesium	5250	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	29-JAN-10 10:19	012910-1
	Manganese	513	ug/L	500	ug/L	102.5	90.0 – 110.0	P	29-JAN-10 10:19	012910-1
	Potassium	5210	ug/L	5000	ug/L	104.2	90.0 – 110.0	P	29-JAN-10 10:19	012910-1



**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1288

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS6,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Silver	532	ug/L	500	ug/L	106.4	90.0 – 110.0	P	29-JAN-10 10:19	012910-1
	Sodium	10100	ug/L	10000	ug/L	100.5	90.0 – 110.0	P	29-JAN-10 10:19	012910-1
	Vanadium	529	ug/L	500	ug/L	105.7	90.0 – 110.0	P	29-JAN-10 10:19	012910-1
	Zinc	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	29-JAN-10 10:19	012910-1
CCV09										
	Mercury	5.22	ug/L	5	ug/L	104.5	80.0 – 120.0	AV	28-JAN-10 13:30	012810S1-6
	Aluminum	5110	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
	Antimony	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
	Barium	516	ug/L	500	ug/L	103.2	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
	Cadmium	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
	Calcium	4940	ug/L	5000	ug/L	98.8	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
	Chromium	517	ug/L	500	ug/L	103.3	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
	Cobalt	515	ug/L	500	ug/L	103	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
	Copper	522	ug/L	500	ug/L	104.4	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
	Iron	5180	ug/L	5000	ug/L	103.7	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
	Lead	514	ug/L	500	ug/L	102.7	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
	Magnesium	5280	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
	Manganese	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
	Potassium	5230	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
	Silver	528	ug/L	500	ug/L	105.6	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
	Sodium	10100	ug/L	10000	ug/L	100.7	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
	Vanadium	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
	Zinc	515	ug/L	500	ug/L	102.9	90.0 – 110.0	P	29-JAN-10 10:46	012910-1
CCV10										
	Aluminum	5150	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	29-JAN-10 11:31	012910-1
	Antimony	522	ug/L	500	ug/L	104.5	90.0 – 110.0	P	29-JAN-10 11:31	012910-1
	Barium	526	ug/L	500	ug/L	105.1	90.0 – 110.0	P	29-JAN-10 11:31	012910-1
	Cadmium	523	ug/L	500	ug/L	104.5	90.0 – 110.0	P	29-JAN-10 11:31	012910-1
	Calcium	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	29-JAN-10 11:31	012910-1
	Chromium	525	ug/L	500	ug/L	105.1	90.0 – 110.0	P	29-JAN-10 11:31	012910-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1288

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS6,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Cobalt	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	29-JAN-10 11:31	012910-1
	Copper	531	ug/L	500	ug/L	106.2	90.0 – 110.0	P	29-JAN-10 11:31	012910-1
	Iron	5240	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	29-JAN-10 11:31	012910-1
	Lead	524	ug/L	500	ug/L	104.7	90.0 – 110.0	P	29-JAN-10 11:31	012910-1
	Magnesium	5300	ug/L	5000	ug/L	106	90.0 – 110.0	P	29-JAN-10 11:31	012910-1
	Manganese	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	29-JAN-10 11:31	012910-1
	Potassium	5280	ug/L	5000	ug/L	105.7	90.0 – 110.0	P	29-JAN-10 11:31	012910-1
	Silver	537	ug/L	500	ug/L	107.4	90.0 – 110.0	P	29-JAN-10 11:31	012910-1
	Sodium	10100	ug/L	10000	ug/L	101.1	90.0 – 110.0	P	29-JAN-10 11:31	012910-1
	Vanadium	533	ug/L	500	ug/L	106.7	90.0 – 110.0	P	29-JAN-10 11:31	012910-1
	Zinc	524	ug/L	500	ug/L	104.9	90.0 – 110.0	P	29-JAN-10 11:31	012910-1
CCV11										
	Aluminum	5190	ug/L	5000	ug/L	103.8	90.0 – 110.0	P	29-JAN-10 12:08	012910-1
	Antimony	526	ug/L	500	ug/L	105.1	90.0 – 110.0	P	29-JAN-10 12:08	012910-1
	Barium	527	ug/L	500	ug/L	105.5	90.0 – 110.0	P	29-JAN-10 12:08	012910-1
	Cadmium	523	ug/L	500	ug/L	104.6	90.0 – 110.0	P	29-JAN-10 12:08	012910-1
	Calcium	5040	ug/L	5000	ug/L	100.9	90.0 – 110.0	P	29-JAN-10 12:08	012910-1
	Chromium	528	ug/L	500	ug/L	105.5	90.0 – 110.0	P	29-JAN-10 12:08	012910-1
	Cobalt	525	ug/L	500	ug/L	105.1	90.0 – 110.0	P	29-JAN-10 12:08	012910-1
	Copper	533	ug/L	500	ug/L	106.7	90.0 – 110.0	P	29-JAN-10 12:08	012910-1
	Iron	5260	ug/L	5000	ug/L	105.2	90.0 – 110.0	P	29-JAN-10 12:08	012910-1
	Lead	526	ug/L	500	ug/L	105.2	90.0 – 110.0	P	29-JAN-10 12:08	012910-1
	Magnesium	5310	ug/L	5000	ug/L	106.2	90.0 – 110.0	P	29-JAN-10 12:08	012910-1
	Manganese	530	ug/L	500	ug/L	106	90.0 – 110.0	P	29-JAN-10 12:08	012910-1
	Potassium	5280	ug/L	5000	ug/L	105.6	90.0 – 110.0	P	29-JAN-10 12:08	012910-1
	Silver	538	ug/L	500	ug/L	107.7	90.0 – 110.0	P	29-JAN-10 12:08	012910-1
	Sodium	10100	ug/L	10000	ug/L	101.4	90.0 – 110.0	P	29-JAN-10 12:08	012910-1
	Vanadium	536	ug/L	500	ug/L	107.2	90.0 – 110.0	P	29-JAN-10 12:08	012910-1
	Zinc	525	ug/L	500	ug/L	105	90.0 – 110.0	P	29-JAN-10 12:08	012910-1

**METALS**  
**-2b-**  
**CRDL Standard for AA & ICP**

SDG No: 10-1288

Contract: LANL01004

Lab Code: GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS4,ICPMS6,MER536,OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Advisory Limits (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
CRDL01										
	Uranium	.222	ug/L	.2	ug/L	111	70.0 – 130.0	MS	28-JAN-10 00:18	100127-2
	Mercury	.233	ug/L	.2	ug/L	116.4	70.0 – 130.0	AV	28-JAN-10 09:41	012810S1-6
	Thallium	1.08	ug/L	1	ug/L	107.6	70.0 – 130.0	MS	28-JAN-10 14:05	100128-3
	Arsenic	6.1	ug/L	5	ug/L	122.1	70.0 – 130.0	MS	28-JAN-10 14:05	100128-3
	Selenium	5.87	ug/L	5	ug/L	117.4	70.0 – 130.0	MS	28-JAN-10 14:05	100128-3
	Beryllium	.55	ug/L	.5	ug/L	110	70.0 – 130.0	MS	02-FEB-10 17:14	100201-4
	Nickel	2.23	ug/L	2	ug/L	111.7	70.0 – 130.0	MS	06-FEB-10 01:13	100205-5
PQL01										
	Iron	119	ug/L	100	ug/L	118.6	70.0 – 130.0	P	29-JAN-10 06:39	012910-1
	Lead	12.2	ug/L	10	ug/L	122.4	70.0 – 130.0	P	29-JAN-10 06:39	012910-1
	Magnesium	331	ug/L	300	ug/L	110.4	70.0 – 130.0	P	29-JAN-10 06:39	012910-1
	Manganese	11	ug/L	10	ug/L	109.7	70.0 – 130.0	P	29-JAN-10 06:39	012910-1
	Potassium	173	ug/L	150	ug/L	115.5	70.0 – 130.0	P	29-JAN-10 06:39	012910-1
	Silver	5.41	ug/L	5	ug/L	108.2	70.0 – 130.0	P	29-JAN-10 06:39	012910-1
	Sodium	310	ug/L	300	ug/L	103.3	70.0 – 130.0	P	29-JAN-10 06:39	012910-1
	Antimony	10.2	ug/L	10	ug/L	101.7	70.0 – 130.0	P	29-JAN-10 06:39	012910-1
	Barium	5.35	ug/L	5	ug/L	106.9	70.0 – 130.0	P	29-JAN-10 06:39	012910-1
	Aluminum	210	ug/L	200	ug/L	105	70.0 – 130.0	P	29-JAN-10 06:39	012910-1
	Cadmium	5.26	ug/L	5	ug/L	105.1	70.0 – 130.0	P	29-JAN-10 06:39	012910-1
	Chromium	6.19	ug/L	5	ug/L	123.7	70.0 – 130.0	P	29-JAN-10 06:39	012910-1
	Cobalt	5.2	ug/L	5	ug/L	104.1	70.0 – 130.0	P	29-JAN-10 06:39	012910-1
	Copper	11.3	ug/L	10	ug/L	112.7	70.0 – 130.0	P	29-JAN-10 06:39	012910-1
	Vanadium	5.59	ug/L	5	ug/L	111.9	70.0 – 130.0	P	29-JAN-10 06:39	012910-1
	Zinc	11	ug/L	10	ug/L	109.9	70.0 – 130.0	P	29-JAN-10 06:39	012910-1
	Calcium	211	ug/L	200	ug/L	105.4	70.0 – 130.0	P	29-JAN-10 06:39	012910-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1288

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
<b>ICB01</b>										
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	28-JAN-10 00:12	100127-2
	Mercury	-0.08	+/-2	J	0.068	0.2	SOL	AV	28-JAN-10 09:39	012810S1-6
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	28-JAN-10 13:59	100128-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	28-JAN-10 13:59	100128-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	28-JAN-10 13:59	100128-3
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	29-JAN-10 06:35	012910-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 06:35	012910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 06:35	012910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 06:35	012910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 06:35	012910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 06:35	012910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 06:35	012910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	29-JAN-10 06:35	012910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 06:35	012910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	29-JAN-10 06:35	012910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	29-JAN-10 06:35	012910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	29-JAN-10 06:35	012910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	29-JAN-10 06:35	012910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 06:35	012910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	29-JAN-10 06:35	012910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 06:35	012910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 06:35	012910-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	02-FEB-10 17:11	100201-4
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	06-FEB-10 01:10	100205-5
<b>CCB01</b>										
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	28-JAN-10 00:42	100127-2
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	28-JAN-10 09:45	012810S1-6
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	28-JAN-10 14:30	100128-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	28-JAN-10 14:30	100128-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	28-JAN-10 14:30	100128-3
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	29-JAN-10 07:13	012910-1

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**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1288

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result ug/L</u>	<u>Acceptance</u>	<u>Conc Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run</u>
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 07:13	012910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 07:13	012910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 07:13	012910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 07:13	012910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 07:13	012910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 07:13	012910-1
	Copper	3.11	+/-10	J	3.0	10.0	SOL	P	29-JAN-10 07:13	012910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 07:13	012910-1
	Lead	2.73	+/-10	J	2.5	10.0	SOL	P	29-JAN-10 07:13	012910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	29-JAN-10 07:13	012910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	29-JAN-10 07:13	012910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	29-JAN-10 07:13	012910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 07:13	012910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	29-JAN-10 07:13	012910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 07:13	012910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 07:13	012910-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	02-FEB-10 17:24	100201-4
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	06-FEB-10 01:23	100205-5
<b>CCB02</b>	Uranium	0.076	+/-2	J	0.066	0.2	SOL	MS	28-JAN-10 01:01	100127-2
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	28-JAN-10 10:09	012810S1-6
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	28-JAN-10 14:48	100128-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	28-JAN-10 14:48	100128-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	28-JAN-10 14:48	100128-3
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	29-JAN-10 07:24	012910-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 07:24	012910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 07:24	012910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 07:24	012910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 07:24	012910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 07:24	012910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 07:24	012910-1

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**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1288

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	29-JAN-10 07:24	012910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 07:24	012910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	29-JAN-10 07:24	012910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	29-JAN-10 07:24	012910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	29-JAN-10 07:24	012910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	29-JAN-10 07:24	012910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 07:24	012910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	29-JAN-10 07:24	012910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 07:24	012910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 07:24	012910-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	02-FEB-10 17:55	100201-4
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	06-FEB-10 01:49	100205-5
<b>CCB03</b>	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	28-JAN-10 01:50	100127-2
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	28-JAN-10 10:33	012810S1-6
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	28-JAN-10 15:49	100128-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	28-JAN-10 15:49	100128-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	28-JAN-10 15:49	100128-3
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	29-JAN-10 07:35	012910-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 07:35	012910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 07:35	012910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 07:35	012910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 07:35	012910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 07:35	012910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 07:35	012910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	29-JAN-10 07:35	012910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 07:35	012910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	29-JAN-10 07:35	012910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	29-JAN-10 07:35	012910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	29-JAN-10 07:35	012910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	29-JAN-10 07:35	012910-1

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**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1288

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result ng/L</u>	<u>Acceptance</u>	<u>Conc Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run</u>
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 07:35	012910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	29-JAN-10 07:35	012910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 07:35	012910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 07:35	012910-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	02-FEB-10 18:28	100201-4
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	06-FEB-10 02:17	100205-5
<b>CCB04</b>	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	28-JAN-10 02:45	100127-2
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	28-JAN-10 10:57	012810S1-6
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	28-JAN-10 16:20	100128-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	28-JAN-10 16:20	100128-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	28-JAN-10 16:20	100128-3
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	29-JAN-10 08:15	012910-1
	Antimony	4.01	+/-10	J	3.3	10.0	SOL	P	29-JAN-10 08:15	012910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 08:15	012910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 08:15	012910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 08:15	012910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 08:15	012910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 08:15	012910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	29-JAN-10 08:15	012910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 08:15	012910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	29-JAN-10 08:15	012910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	29-JAN-10 08:15	012910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	29-JAN-10 08:15	012910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	29-JAN-10 08:15	012910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 08:15	012910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	29-JAN-10 08:15	012910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 08:15	012910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 08:15	012910-1
<b>CCB05</b>	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	28-JAN-10 03:16	100127-2

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**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1288

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Mercury	-0.095	+/-2	J	0.068	0.2	SOL	AV	28-JAN-10 11:21	012810S1-6
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	28-JAN-10 17:04	100128-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	28-JAN-10 17:04	100128-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	28-JAN-10 17:04	100128-3
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	29-JAN-10 08:59	012910-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 08:59	012910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 08:59	012910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 08:59	012910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 08:59	012910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 08:59	012910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 08:59	012910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	29-JAN-10 08:59	012910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 08:59	012910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	29-JAN-10 08:59	012910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	29-JAN-10 08:59	012910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	29-JAN-10 08:59	012910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	29-JAN-10 08:59	012910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 08:59	012910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	29-JAN-10 08:59	012910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 08:59	012910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 08:59	012910-1
<b>CCB06</b>	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	28-JAN-10 03:59	100127-2
	Mercury	-0.084	+/-2	J	0.068	0.2	SOL	AV	28-JAN-10 11:45	012810S1-6
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	28-JAN-10 17:35	100128-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	28-JAN-10 17:35	100128-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	28-JAN-10 17:35	100128-3
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	29-JAN-10 09:18	012910-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 09:18	012910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 09:18	012910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 09:18	012910-1

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**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1288

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result ng/L</u>	<u>Acceptance</u>	<u>Conc Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run</u>
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 09:18	012910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 09:18	012910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 09:18	012910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	29-JAN-10 09:18	012910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 09:18	012910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	29-JAN-10 09:18	012910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	29-JAN-10 09:18	012910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	29-JAN-10 09:18	012910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	29-JAN-10 09:18	012910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 09:18	012910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	29-JAN-10 09:18	012910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 09:18	012910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 09:18	012910-1
<b>CCB07</b>	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	28-JAN-10 04:37	100127-2
	Mercury	-0.111	+/-2	J	0.068	0.2	SOL	AV	28-JAN-10 12:08	012810S1-6
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	28-JAN-10 18:05	100128-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	28-JAN-10 18:05	100128-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	28-JAN-10 18:05	100128-3
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	29-JAN-10 09:50	012910-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 09:50	012910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 09:50	012910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 09:50	012910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 09:50	012910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 09:50	012910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 09:50	012910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	29-JAN-10 09:50	012910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 09:50	012910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	29-JAN-10 09:50	012910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	29-JAN-10 09:50	012910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	29-JAN-10 09:50	012910-1

Metals  
-3a-  
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1288

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
CCB08	Potassium	64.0	+/-250	U	64.0	250	SOL	P	29-JAN-10 09:50	012910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 09:50	012910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	29-JAN-10 09:50	012910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 09:50	012910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 09:50	012910-1
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	28-JAN-10 05:20	100127-2
	Mercury	-0.125	+/-2	J	0.068	0.2	SOL	AV	28-JAN-10 12:26	012810S1-6
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	28-JAN-10 18:36	100128-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	28-JAN-10 18:36	100128-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	28-JAN-10 18:36	100128-3
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	29-JAN-10 10:23	012910-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 10:23	012910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 10:23	012910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 10:23	012910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 10:23	012910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 10:23	012910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 10:23	012910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	29-JAN-10 10:23	012910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 10:23	012910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	29-JAN-10 10:23	012910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	29-JAN-10 10:23	012910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	29-JAN-10 10:23	012910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	29-JAN-10 10:23	012910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 10:23	012910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	29-JAN-10 10:23	012910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 10:23	012910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 10:23	012910-1
CCB09	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	28-JAN-10 13:32	012810S1-6
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	29-JAN-10 10:50	012910-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1288

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 10:50	012910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 10:50	012910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 10:50	012910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 10:50	012910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 10:50	012910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 10:50	012910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	29-JAN-10 10:50	012910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 10:50	012910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	29-JAN-10 10:50	012910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	29-JAN-10 10:50	012910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	29-JAN-10 10:50	012910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	29-JAN-10 10:50	012910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 10:50	012910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	29-JAN-10 10:50	012910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 10:50	012910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 10:50	012910-1
CCB10	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	29-JAN-10 11:34	012910-1
	Antimony	3.35	+/-10	J	3.3	10.0	SOL	P	29-JAN-10 11:34	012910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 11:34	012910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 11:34	012910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 11:34	012910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 11:34	012910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 11:34	012910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	29-JAN-10 11:34	012910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 11:34	012910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	29-JAN-10 11:34	012910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	29-JAN-10 11:34	012910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	29-JAN-10 11:34	012910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	29-JAN-10 11:34	012910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 11:34	012910-1

SW846

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1288

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
CCB11	Sodium	70.0	+/-250	U	70.0	250	SOL	P	29-JAN-10 11:34	012910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 11:34	012910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 11:34	012910-1
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	29-JAN-10 12:11	012910-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 12:11	012910-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 12:11	012910-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 12:11	012910-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 12:11	012910-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 12:11	012910-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	29-JAN-10 12:11	012910-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	29-JAN-10 12:11	012910-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	29-JAN-10 12:11	012910-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	29-JAN-10 12:11	012910-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	29-JAN-10 12:11	012910-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	29-JAN-10 12:11	012910-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	29-JAN-10 12:11	012910-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 12:11	012910-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	29-JAN-10 12:11	012910-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	29-JAN-10 12:11	012910-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	29-JAN-10 12:11	012910-1

**METALS**  
**-3b-**  
**PREPARATION BLANK SUMMARY**

**SDG NO.** 10-1288  
**Contract:** LANL01004  
**Matrix:** SOIL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Acceptance Window</u>	<u>Conc Qual</u>	<u>M</u>	<u>MDL</u>	<u>RDL</u>
1202018149								
	Arsenic	0.195	mg/kg	+/-0.975	U	MS	0.195	0.975
	Beryllium	0.0195	mg/kg	+/-0.0975	U	MS	0.0195	0.0975
	Selenium	0.487	mg/kg	+/-0.975	U	MS	0.487	0.975
	Nickel	0.0975	mg/kg	+/-0.39	U	MS	0.0975	0.39
	Uranium	0.0129	mg/kg	+/-0.039	U	MS	0.0129	0.039
	Thallium	0.0585	mg/kg	+/-0.195	U	MS	0.0585	0.195
1202018179								
	Iron	7650	ug/Kg	+/-23900	U	P	7650	23900
	Lead	239	ug/Kg	+/-956	U	P	239	956
	Magnesium	8130	ug/Kg	+/-28700	U	P	8130	28700
	Copper	287	ug/Kg	+/-956	U	P	287	956
	Cobalt	143	ug/Kg	+/-478	U	P	143	478
	Chromium	143	ug/Kg	+/-478	U	P	143	478
	Calcium	7650	ug/Kg	+/-23900	U	P	7650	23900
	Cadmium	95.6	ug/Kg	+/-478	U	P	95.6	478
	Barium	95.6	ug/Kg	+/-478	U	P	95.6	478
	Antimony	315	ug/Kg	+/-956	U	P	315	956
	Aluminum	6500	ug/Kg	+/-19100	U	P	6500	19100
	Manganese	191	ug/Kg	+/-956	U	P	191	956
	Potassium	6120	ug/Kg	+/-23900	U	P	6120	23900
	Silver	95.6	ug/Kg	+/-478	U	P	95.6	478
	Sodium	6690	ug/Kg	+/-23900	U	P	6690	23900
	Vanadium	95.6	ug/Kg	+/-478	U	P	95.6	478
	Zinc	315	ug/Kg	+/-956	U	P	315	956
1202019779								
	Mercury	3.72	ug/kg	+/-10.9	U	AV	3.72	10.9

## METALS

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## Interference Check Sample

SDG No: 10-1288

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: OPTIMA1

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
<b>ICSA01</b>									
	Aluminum	517000	ug/L	500000	ug/L	103	80.0 - 120.0	29-JAN-10 06:42	012910-1
	Antimony	3.57	ug/L					29-JAN-10 06:42	012910-1
	Barium	7.1	ug/L					29-JAN-10 06:42	012910-1
	Cadmium	1.97	ug/L					29-JAN-10 06:42	012910-1
	Calcium	487000	ug/L	500000	ug/L	97.4	80.0 - 120.0	29-JAN-10 06:42	012910-1
	Chromium	-0.093	ug/L					29-JAN-10 06:42	012910-1
	Cobalt	1.74	ug/L					29-JAN-10 06:42	012910-1
	Copper	2.47	ug/L					29-JAN-10 06:42	012910-1
	Iron	192000	ug/L	200000	ug/L	96.2	80.0 - 120.0	29-JAN-10 06:42	012910-1
	Lead	-10.3	ug/L					29-JAN-10 06:42	012910-1
	Magnesium	498000	ug/L	500000	ug/L	99.5	80.0 - 120.0	29-JAN-10 06:42	012910-1
	Manganese	-3.2	ug/L					29-JAN-10 06:42	012910-1
	Potassium	-96.2	ug/L					29-JAN-10 06:42	012910-1
	Silver	-7.97	ug/L					29-JAN-10 06:42	012910-1
	Sodium	24.4	ug/L					29-JAN-10 06:42	012910-1
	Vanadium	2.53	ug/L					29-JAN-10 06:42	012910-1
	Zinc	0.91	ug/L					29-JAN-10 06:42	012910-1
<b>ICSAB01</b>									
	Aluminum	522000	ug/L	500000	ug/L	104	80.0 - 120.0	29-JAN-10 06:45	012910-1
	Antimony	535	ug/L	500	ug/L	107	80.0 - 120.0	29-JAN-10 06:45	012910-1
	Barium	530	ug/L	500	ug/L	106	80.0 - 120.0	29-JAN-10 06:45	012910-1
	Cadmium	490	ug/L	500	ug/L	98	80.0 - 120.0	29-JAN-10 06:45	012910-1
	Calcium	492000	ug/L	500000	ug/L	98.5	80.0 - 120.0	29-JAN-10 06:45	012910-1
	Chromium	515	ug/L	500	ug/L	103	80.0 - 120.0	29-JAN-10 06:45	012910-1
	Cobalt	466	ug/L	500	ug/L	93.2	80.0 - 120.0	29-JAN-10 06:45	012910-1
	Copper	586	ug/L	500	ug/L	117	80.0 - 120.0	29-JAN-10 06:45	012910-1
	Iron	192000	ug/L	200000	ug/L	95.9	80.0 - 120.0	29-JAN-10 06:45	012910-1
	Lead	506	ug/L	500	ug/L	101	80.0 - 120.0	29-JAN-10 06:45	012910-1
	Magnesium	498000	ug/L	500000	ug/L	99.6	80.0 - 120.0	29-JAN-10 06:45	012910-1

## METALS

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## Interference Check Sample

SDG No: 10-1288

Contract: LANL01004

Lab Code: GEL

ICS:

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Manganese	501	ug/L	500	ug/L	100	80.0 - 120.0	29-JAN-10 06:45	012910-1
	Potassium	5300	ug/L	5000	ug/L	106	80.0 - 120.0	29-JAN-10 06:45	012910-1
	Silver	268	ug/L	250	ug/L	107	80.0 - 120.0	29-JAN-10 06:45	012910-1
	Sodium	5170	ug/L	5000	ug/L	103	80.0 - 120.0	29-JAN-10 06:45	012910-1
	Vanadium	546	ug/L	500	ug/L	109	80.0 - 120.0	29-JAN-10 06:45	012910-1
	Zinc	499	ug/L	500	ug/L	99.7	80.0 - 120.0	29-JAN-10 06:45	012910-1

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**METALS**  
**-4-**  
**Interference Check Sample**

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SDG No: 10-1288

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS4

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<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Uranium	-0.012	ug/L					28-JAN-10 00:24	100127-2
ICSAB01	Uranium	19.8	ug/L	20	ug/L	99.2	80.0 - 120.0	28-JAN-10 00:30	100127-2

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## METALS

-4-

## Interference Check Sample

SDG No: 10-1288

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS4

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Arsenic	0.531	ug/L					28-JAN-10 14:11	100128-3
	Selenium	-0.564	ug/L					28-JAN-10 14:11	100128-3
	Thallium	0.012	ug/L					28-JAN-10 14:11	100128-3
ICSAB01	Arsenic	21.1	ug/L	20	ug/L	105	80.0 - 120.0	28-JAN-10 14:17	100128-3
	Selenium	21.6	ug/L	20	ug/L	108	80.0 - 120.0	28-JAN-10 14:17	100128-3
	Thallium	18.6	ug/L	20	ug/L	92.8	80.0 - 120.0	28-JAN-10 14:17	100128-3

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## METALS

-4-

## Interference Check Sample

SDG No: 10-1288

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS6

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (% R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Beryllium	0.087	ug/L					02-FEB-10 17:17	100201-4
ICSAB01	Beryllium	17.5	ug/L	20	ug/L	87.3	80.0 - 120.0	02-FEB-10 17:19	100201-4

## METALS

-4-

## Interference Check Sample

SDG No: 10-1288

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS6

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Nickel	4.91	ug/L					06-FEB-10 01:16	100205-5
ICSAB01	Nickel	23.9	ug/L	23.31	ug/L	102	80.0 - 120.0	06-FEB-10 01:18	100205-5

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1288 Client ID RE15-10-7163S

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 93.4

Sample ID: 244921001 Spike ID: 1202018152

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/kg	75-125	8.52		1.18		8.38	87.6		MS
Beryllium	mg/kg	75-125	4.29		0.557		5.24	71.2	N	MS
Nickel	mg/kg	75-125	14.1		9.61		5.24	86.2		MS
Selenium	mg/kg	75-125	1.9		0.528	U	2.09	84.7		MS
Thallium	mg/kg	75-125	9.34		0.167	J	10.5	87.6		MS
Uranium	mg/kg	75-125	6.41		0.895		5.24	105		MS

## METALS

-5a-

## Matrix Spike Duplicate Summary

SDG NO. 10-1288 Client ID: RE15-10-7163SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 93.4

Sample ID: 244921001 Spike ID: 1202018154

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/kg	75-125	8.2		1.18		8.19	85.7		MS
Beryllium	mg/kg	75-125	4.36		0.557		5.12	74.3	N	MS
Nickel	mg/kg	75-125	15.2		9.61		5.12	108		MS
Selenium	mg/kg	75-125	1.78		0.528	U	2.05	81.2		MS
Thallium	mg/kg	75-125	9.24		0.167	J	10.2	88.7		MS
Uranium	mg/kg	75-125	5.84		0.895		5.12	96.6		MS

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1288 Client ID RE15-10-7163S

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 93.4

Sample ID: 244921001 Spike ID: 1202018182

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		7790000		5720000		525000	395	N/A	P
Antimony	ug/Kg	75-125	46800		357	J	52500	88.4		P
Barium	ug/Kg	75-125	97200		55400		52500	79.7		P
Cadmium	ug/Kg	75-125	53500		133	J	52500	102		P
Calcium	ug/Kg	75-125	1780000		1390000		525000	74.2	N	P
Chromium	ug/Kg	75-125	76100		48900		52500	51.8	N	P
Cobalt	ug/Kg	75-125	54700		2730		52500	99		P
Copper	ug/Kg	75-125	63900		7800		52500	107		P
Iron	ug/Kg		12800000		12300000		525000	90.4	N/A	P
Lead	ug/Kg	75-125	64100		12200		52500	98.9		P
Magnesium	ug/Kg	75-125	2090000		1490000		525000	115		P
Manganese	ug/Kg		260000		268000		52500	-14.9	N/A	P
Potassium	ug/Kg	75-125	1730000		1130000		525000	115		P
Silver	ug/Kg	75-125	58500		4120		52500	104		P
Sodium	ug/Kg	75-125	707000		222000		525000	92.5		P
Vanadium	ug/Kg	75-125	67800		14000		52500	103		P
Zinc	ug/Kg	75-125	106000		50400		52500	105		P

## METALS

-5a-

## Matrix Spike Duplicate Summary

SDG NO. 10-1288 Client ID: RE15-10-7163SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 93.4

Sample ID: 244921001 Spike ID: 1202018185

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		9940000		5720000		516000	819	N/A	P
Antimony	ug/Kg	75-125	44500		357	J	51600	85.7		P
Barium	ug/Kg	75-125	104000		55400		51600	95		P
Cadmium	ug/Kg	75-125	52800		133	J	51600	102		P
Calcium	ug/Kg	75-125	1980000		1390000		516000	114		P
Chromium	ug/Kg	75-125	81600		48900		51600	63.3	N	P
Cobalt	ug/Kg	75-125	54700		2730		51600	101		P
Copper	ug/Kg	75-125	65500		7800		51600	112		P
Iron	ug/Kg		14500000		12300000		516000	419	N/A	P
Lead	ug/Kg	75-125	65800		12200		51600	104		P
Magnesium	ug/Kg	75-125	2440000		1490000		516000	185	N	P
Manganese	ug/Kg		295000		268000		51600	52.7	N/A	P
Potassium	ug/Kg	75-125	1990000		1130000		516000	168	N	P
Silver	ug/Kg	75-125	59800		4120		51600	108		P
Sodium	ug/Kg	75-125	723000		222000		516000	97.3		P
Vanadium	ug/Kg	75-125	69800		14000		51600	108		P
Zinc	ug/Kg	75-125	110000		50400		51600	116		P

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1288

Client ID RE15-10-7163S

Contract: LANL01004

Level: Low

Matrix: SOIL

% Solids: 93.4

Sample ID: 244921001

Spike ID: 1202019782

<u>Analyte</u>	<u>Units</u>	<u>Acceptance Limit</u>	<u>Spiked Result</u>	<u>C</u>	<u>Sample Result</u>	<u>C</u>	<u>Spike Added</u>	<u>% Recovery</u>	<u>Qual</u>	<u>M</u>
Mercury	ug/kg		818		542		126	220	N/A	AV



## METALS

-5a-

## Matrix Spike Duplicate Summary

SDG NO. 10-1288 Client ID RE15-10-7163SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 93.4

Sample ID: 244921001 Spike ID: 1202019784

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg		738		542		117	167	N/A	AV

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1288

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7163D

Sample ID: 244921001

Duplicate ID: 1202018151

Percent Solids for Dup: 93.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/-1.02	1.18		1.22		3.3		MS
Beryllium	mg/kg	+/-20%	0.557		0.554		.651		MS
Nickel	mg/kg	+/-20%	9.61		9.39		2.29		MS
Selenium	mg/kg		0.528 U		0.51 U				MS
Thallium	mg/kg	+/- .204	0.167 J		0.154 J		8.66		MS
Uranium	mg/kg	+/-20%	0.895		1.12		22	*	MS

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1288

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7163SD

Sample ID: 1202018152

Duplicate ID: 1202018154

Percent Solids for Dup: 93.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/-20	8.52		8.2		3.92		MS
Beryllium	mg/kg	+/-20	4.29		4.36		1.67		MS
Nickel	mg/kg	+/-20	14.1		15.2		7.03		MS
Selenium	mg/kg	+/-20	1.9		1.78		6.08		MS
Thallium	mg/kg	+/-20	9.34		9.24		1.11		MS
Uranium	mg/kg	+/-20	6.41		5.84		9.38		MS

Metals  
-6-  
Duplicate Sample Summary

SDG No.: 10-1288

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7163D

Sample ID: 244921001

Duplicate ID: 1202018181

Percent Solids for Dup: 93.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20%	5720000		4590000		21.9	*	P
Antimony	ug/Kg		357 J		342 U		200		P
Barium	ug/Kg	+/-20%	55400		44000		23	*	P
Cadmium	ug/Kg	+/-518	133 J		128 J		3.9		P
Calcium	ug/Kg	+/-20%	1390000		1210000		13.3		P
Chromium	ug/Kg	+/-20%	48900		22600		73.6	*	P
Cobalt	ug/Kg	+/-518	2730		2090		26.7	*	P
Copper	ug/Kg	+/-20%	7800		7100		9.42		P
Iron	ug/Kg	+/-20%	12300000		11200000		9.22		P
Lead	ug/Kg	+/-20%	12200		11700		4.73		P
Magnesium	ug/Kg	+/-20%	1490000		1260000		16.3		P
Manganese	ug/Kg	+/-20%	268000		236000		12.5		P
Potassium	ug/Kg	+/-20%	1130000		978000		14.2		P
Silver	ug/Kg	+/-20%	4120		4850		16.3		P
Sodium	ug/Kg	+/-20%	222000		206000		7.41		P
Vanadium	ug/Kg	+/-20%	14000		11700		17.7		P
Zinc	ug/Kg	+/-20%	50400		48300		4.43		P

**Metals**  
**-6-**  
**Duplicate Sample Summary**

SDG No.: 10-1288

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7163SD

Sample ID: 1202018182

Duplicate ID: 1202018185

Percent Solids for Dup: 93.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20	7790000		9940000		24.3	*	P
Antimony	ug/Kg	+/-20	46800		44500		4.89		P
Barium	ug/Kg	+/-20	97200		104000		7.15		P
Cadmium	ug/Kg	+/-20	53500		52800		1.33		P
Calcium	ug/Kg	+/-20	1780000		1980000		10.7		P
Chromium	ug/Kg	+/-20	76100		81600		6.92		P
Cobalt	ug/Kg	+/-20	54700		54700		.0234		P
Copper	ug/Kg	+/-20	63900		65500		2.37		P
Iron	ug/Kg	+/-20	12800000		14500000		12.4		P
Lead	ug/Kg	+/-20	64100		65800		2.64		P
Magnesium	ug/Kg	+/-20	2090000		2440000		15.4		P
Manganese	ug/Kg	+/-20	260000		295000		12.6		P
Potassium	ug/Kg	+/-20	1730000		1990000		13.9		P
Silver	ug/Kg	+/-20	58500		59800		2.16		P
Sodium	ug/Kg	+/-20	707000		723000		2.28		P
Vanadium	ug/Kg	+/-20	67800		69800		2.82		P
Zinc	ug/Kg	+/-20	106000		110000		4.01		P

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1288

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7163D

Sample ID: 244921001

Duplicate ID: 1202019781

Percent Solids for Dup: 93.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-20%	542		560		3.35		AV

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1288

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7163SD

Sample ID: 1202019782

Duplicate ID: 1202019784

Percent Solids for Dup: 93.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-20	818		738		10.3		AV

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1288

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202018150								
	Arsenic	mg/kg	104	104		100	83-120	MS
	Beryllium	mg/kg	77.6	66.1		85.2	81.2-126.8	MS
	Nickel	mg/kg	134	149		111	83.3-121.4	MS
	Selenium	mg/kg	286	288		101	80.2-125.9	MS
	Thallium	mg/kg	121	130		108	78-123.2	MS
	Uranium	mg/kg	2.13	1.88		88.2	61.9-130.7	MS



## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1288

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202018180								
	Aluminum	ug/Kg	10500000	8580000		81.7	56-144	P
	Antimony	ug/Kg	173000	145000		83.8	71-130	P
	Barium	ug/Kg	198000	190000		96	80-120	P
	Cadmium	ug/Kg	60700	58600		96.5	81-120	P
	Calcium	ug/Kg	9870000	9610000		97.4	83-117	P
	Chromium	ug/Kg	236000	241000		102	80-120	P
	Cobalt	ug/Kg	91200	92800		102	81-120	P
	Copper	ug/Kg	174000	185000		106	81-118	P
	Iron	ug/Kg	18000000	18300000		102	51-149	P
	Lead	ug/Kg	86000	87200		101	79-121	P
	Magnesium	ug/Kg	4000000	3730000		93.2	79-122	P
	Manganese	ug/Kg	558000	546000		97.8	81-119	P
	Potassium	ug/Kg	4300000	4080000		94.8	74-127	P
	Silver	ug/Kg	30100	30100		100	66-134	P
	Sodium	ug/Kg	1020000	956000		93.8	74-127	P
	Vanadium	ug/Kg	115000	125000		109	79-121	P
	Zinc	ug/Kg	594000	577000		97.2	80-121	P

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1288

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

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<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202019780	Mercury	ug/kg	5150	5830		113	71.6-128.3	AV

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## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1288 Client ID RE15-10-7163L

Contract: LANL01004

Matrix: SOLID Level: Low

Sample ID: 244921001 Serial Dilution ID: 1202018153

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	5.6		6.55	J	17			MS
Beryllium	2.64		2.84		7.58			MS
Nickel	45.5		50.5		11			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.793	J	2.82	J	256			MS
Uranium	4.24		4.41		4.01			MS

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1288

Client ID RE15-10-7163L

Contract: LANL01004

Matrix: SOLID

Level: Low

Sample ID: 244921001

Serial Dilution ID: 1202018183

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	55900		59000		5.55		10	P
Antimony	3.48	J	17.1	J	391			P
Barium	541		565		4.44		10	P
Cadmium	1.3	J	5	U	100			P
Calcium	13500		14400		6.3		10	P
Chromium	478		499		4.29		10	P
Cobalt	26.7		29.2		9.36			P
Copper	76.3		77.5		1.57			P
Iron	120000		129000		7.08		10	P
Lead	120		133		10.8			P
Magnesium	14600		15500		5.82		10	P
Manganese	2610		2740		4.98		10	P
Potassium	11000		11800		6.82		10	P
Silver	40.3		42.5		5.33			P
Sodium	2170		2000		8.06			P
Vanadium	137		142		3.28		10	P
Zinc	493		515		4.46		10	P

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1288 Client ID RE15-10-7163L

Contract: LANL01004

Matrix: SOLID Level: Low

Sample ID: 244921001 Serial Dilution ID: 1202019783

<u>Analyte</u>	<u>Initial Value ug/L</u>	<u>C</u>	<u>Serial Value ug/L</u>	<u>C</u>	<u>% Difference</u>	<u>Qual</u>	<u>Acceptance Limit</u>	<u>M</u>
Mercury	8.59		8.1		5.7		10	AV

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METALS  
-13-  
SAMPLE PREPARATION SUMMARY

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SDG No: 10-1288

Method Type: P

Contract: LANL01004

Lab Code: GEL

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<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number	942673						
1202018179	MB for batch 942673	MB	S	21-JAN-10	.523g	50mL	
1202018180	LCS for batch 942673	LCS	S	21-JAN-10	.52g	50mL	
1202018182	RE15-10-7163S	MS	S	21-JAN-10	.51g	50mL	
1202018185	RE15-10-7163SD	MSD	S	21-JAN-10	.519g	50mL	
1202018181	RE15-10-7163D	DUP	S	21-JAN-10	.517g	50mL	
244921001	RE15-10-7163	SAMPLE	S	21-JAN-10	.523g	50mL	
244921002	RE15-10-7162	SAMPLE	S	21-JAN-10	.504g	50mL	
244921003	RE15-10-7161	SAMPLE	S	21-JAN-10	.525g	50mL	
244921004	RE15-10-7160	SAMPLE	S	21-JAN-10	.5g	50mL	
244921005	RE15-10-7174	SAMPLE	S	21-JAN-10	.518g	50mL	
244921006	RE15-10-7173	SAMPLE	S	21-JAN-10	.502g	50mL	
244921007	RE15-10-7175	SAMPLE	S	21-JAN-10	.501g	50mL	
244921008	RE15-10-7172	SAMPLE	S	21-JAN-10	.502g	50mL	
244921009	RE15-10-7218	SAMPLE	S	21-JAN-10	.51g	50mL	
244921010	RE15-10-7223	SAMPLE	S	21-JAN-10	.506g	50mL	

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METALS  
-13-  
SAMPLE PREPARATION SUMMARY

SDG No: 10-1288

Method Type: MS

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number	942662						
1202018149	MB for batch 942662	MB	S	21-JAN-10	.513g	50mL	
1202018150	LCS for batch 942662	LCS	S	21-JAN-10	.525g	50mL	
1202018152	RE15-10-7163S	MS	S	21-JAN-10	.511g	50mL	
1202018154	RE15-10-7163SD	MSD	S	21-JAN-10	.523g	50mL	
1202018151	RE15-10-7163D	DUP	S	21-JAN-10	.525g	50mL	
244921001	RE15-10-7163	SAMPLE	S	21-JAN-10	.507g	50mL	
244921002	RE15-10-7162	SAMPLE	S	21-JAN-10	.525g	50mL	
244921003	RE15-10-7161	SAMPLE	S	21-JAN-10	.508g	50mL	
244921004	RE15-10-7160	SAMPLE	S	21-JAN-10	.51g	50mL	
244921005	RE15-10-7174	SAMPLE	S	21-JAN-10	.523g	50mL	
244921006	RE15-10-7173	SAMPLE	S	21-JAN-10	.505g	50mL	
244921007	RE15-10-7175	SAMPLE	S	21-JAN-10	.5g	50mL	
244921008	RE15-10-7172	SAMPLE	S	21-JAN-10	.509g	50mL	
244921009	RE15-10-7218	SAMPLE	S	21-JAN-10	.522g	50mL	
244921010	RE15-10-7223	SAMPLE	S	21-JAN-10	.515g	50mL	

SW846

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METALS  
-13-  
SAMPLE PREPARATION SUMMARY

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SDG No: 10-1288

Method Type: AV

Contract: LANL01004

Lab Code: GEL

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<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number 943319							
1202019779	MB for batch 943319	MB	S	27-JAN-10	.549g	30mL	
1202019780	LCS for batch 943319	LCS	S	27-JAN-10	.204g	30mL	
1202019782	RE15-10-7163S	MS	S	27-JAN-10	.51g	30mL	
1202019784	RE15-10-7163SD	MSD	S	27-JAN-10	.548g	30mL	
1202019781	RE15-10-7163D	DUP	S	27-JAN-10	.526g	30mL	
244921001	RE15-10-7163	SAMPLE	S	27-JAN-10	.509g	30mL	
244921002	RE15-10-7162	SAMPLE	S	27-JAN-10	.573g	30mL	
244921003	RE15-10-7161	SAMPLE	S	27-JAN-10	.55g	30mL	
244921004	RE15-10-7160	SAMPLE	S	27-JAN-10	.505g	30mL	
244921005	RE15-10-7174	SAMPLE	S	27-JAN-10	.529g	30mL	
244921006	RE15-10-7173	SAMPLE	S	27-JAN-10	.508g	30mL	
244921007	RE15-10-7175	SAMPLE	S	27-JAN-10	.555g	30mL	
244921008	RE15-10-7172	SAMPLE	S	27-JAN-10	.501g	30mL	
244921009	RE15-10-7218	SAMPLE	S	27-JAN-10	.513g	30mL	
244921010	RE15-10-7223	SAMPLE	S	27-JAN-10	.527g	30mL	

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SW846



**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS6

Start Date: 02-FEB-10

End Date: 02-FEB-10

Client Sdg: 10-1288

Method MS

Data File: 100201-4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	16:59					X																			
S10	1	17:03					X																			
S100	1	17:06					X																			
ICV01	1	17:09					X																			
ICB01	1	17:11					X																			
CRDL01	1	17:14					X																			
ICSA01	1	17:17					X																			
ICSAB01	1	17:19					X																			
CCV01	1	17:22					X																			
CCB01	1	17:24					X																			
1202018149	2	17:27					X																			
1202018150	40	17:30					X																			
ZZZZZZ	2	17:33																								
244921001	2	17:37					X																			
1202018151	2	17:40					X																			
1202018152	2	17:43					X																			
1202018154	2	17:46					X																			
1202018153	10	17:49					X																			
CCV02	1	17:52					X																			
CCB02	1	17:55					X																			
244921002	2	17:57					X																			
244921003	2	18:01					X																			
244921004	2	18:04					X																			
244921005	2	18:07					X																			
244921006	2	18:10					X																			
244921007	2	18:13					X																			
244921008	2	18:16					X																			
244921009	2	18:19					X																			
244921010	2	18:22					X																			
CCV03	1	18:26					X																			
CCB03	1	18:28					X																			

**Metals**  
**-14-**  
**Analysis Run Log**

**Contract:** LANL01004**Lab Code:** GEL**Inst Name:** ICPMS6**Start Date:** 06-FEB-10**End Date:** 06-FEB-10**Client Sdg:** 10-1288**Method:** MS**Data File:** 100205-5

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	01:00																X								
S10	1	01:03																X								
S100	1	01:05																X								
ICV01	1	01:08																X								
ICB01	1	01:10																X								
CRDL01	1	01:13																X								
ICSA01	1	01:16																X								
ICSAB01	1	01:18																X								
CCV01	1	01:21																X								
CCB01	1	01:23																X								
1202018149	2	01:26																X								
1202018150	40	01:28																X								
ZZZZZ	2	01:31																								
244921001	2	01:34																X								
1202018151	2	01:36																X								
1202018152	2	01:39																X								
1202018154	2	01:41																X								
1202018153	10	01:44																X								
CCV02	1	01:46																X								
CCB02	1	01:49																X								
244921002	2	01:51																X								
244921003	2	01:54																X								
244921004	2	01:57																X								
244921005	2	01:59																X								
244921006	2	02:02																X								
244921007	2	02:04																X								
244921008	2	02:07																X								
244921009	2	02:10																X								
244921010	2	02:12																X								
CCV03	1	02:15																X								
CCB03	1	02:17																X								

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: MER536

Start Date: 28-JAN-10

End Date: 28-JAN-10

Client Sdg: 10-1288

Method AV

Data File: 012810S1-6

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	09:25															X									
S0.2	1	09:27															X									
S0.5	1	09:29															X									
S2.0	1	09:31															X									
S5.0	1	09:33															X									
S10	1	09:35															X									
ICV01	1	09:37															X									
ICB01	1	09:39															X									
CRDL01	1	09:41															X									
CCV01	1	09:43															X									
CCB01	1	09:45															X									
1202019779	1	09:47															X									
1202019780	10	09:49															X									
ZZZZZZ	1	09:51																								
ZZZZZZ	1	09:53																								
ZZZZZZ	1	09:55																								
ZZZZZZ	1	09:57																								
ZZZZZZ	1	09:59																								
ZZZZZZ	1	10:01																								
ZZZZZZ	1	10:03																								
ZZZZZZ	1	10:05																								
CCV02	1	10:07															X									
CCB02	1	10:09															X									
ZZZZZZ	1	10:11																								
244921001	1	10:13															X									
1202019781	1	10:15															X									
1202019782	1	10:17															X									
1202019784	1	10:19															X									
1202019783	5	10:21															X									
ZZZZZZ	1	10:23																								
244921003	1	10:25															X									
244921004	1	10:27															X									
244921005	1	10:29															X									
CCV03	1	10:31															X									
CCB03	1	10:33															X									
244921006	1	10:35															X									
244921007	1	10:37															X									
244921008	1	10:39															X									
244921009	1	10:41															X									
244921010	1	10:43															X									

**Metals**  
**-14-**  
**Analysis Run Log**

Samp No.	D/F	Run Time
ZZZZZZ	1	10:45
ZZZZZZ	1	10:47
ZZZZZZ	1	10:49
ZZZZZZ	1	10:51
ZZZZZZ	1	10:53
CCV04	1	10:55
CCB04	1	10:57
ZZZZZZ	5	10:59
ZZZZZZ	1	11:01
ZZZZZZ	1	11:03
ZZZZZZ	1	11:05
ZZZZZZ	1	11:07
ZZZZZZ	1	11:09
ZZZZZZ	1	11:11
ZZZZZZ	5	11:13
ZZZZZZ	1	11:15
ZZZZZZ	1	11:17
CCV05	1	11:19
CCB05	1	11:21
ZZZZZZ	1	11:23
ZZZZZZ	1	11:25
ZZZZZZ	1	11:27
ZZZZZZ	1	11:29
ZZZZZZ	5	11:31
ZZZZZZ	1	11:33
ZZZZZZ	1	11:34
ZZZZZZ	1	11:36
ZZZZZZ	1	11:38
ZZZZZZ	1	11:40
CCV06	1	11:43
CCB06	1	11:45
ZZZZZZ	1	11:47
ZZZZZZ	1	11:49
ZZZZZZ	1	11:50
ZZZZZZ	1	11:52
ZZZZZZ	5	11:54
ZZZZZZ	1	11:56
ZZZZZZ	1	11:58
ZZZZZZ	1	12:00
ZZZZZZ	1	12:02

Metals  
-14-  
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
ZZZZZZ	1	12:04																								
CCV07	1	12:06															X									
CCB07	1	12:08															X									
ZZZZZZ	5	12:10																								
ZZZZZZ	1	12:12																								
ZZZZZZ	1	12:14																								
ZZZZZZ	1	12:16																								
ZZZZZZ	1	12:18																								
ZZZZZZ	1	12:20																								
ZZZZZZ	5	12:22																								
CCV08	1	12:24															X									
CCB08	1	12:26															X									
244921002	10	13:10															X									
ZZZZZZ	1	13:12																								
ZZZZZZ	1	13:14																								
ZZZZZZ	1	13:16																								
ZZZZZZ	5	13:18																								
ZZZZZZ	1	13:20																								
ZZZZZZ	1	13:22																								
ZZZZZZ	1	13:24																								
ZZZZZZ	1	13:26																								
ZZZZZZ	1	13:28																								
CCV09	1	13:30															X									
CCB09	1	13:32															X									

Metals  
-14-  
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS4

Start Date: 27-JAN-10

End Date: 28-JAN-10

Client Sdg: 10-1288

Method MS

Data File: 100127-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	23:47																						X		
S10	1	23:53																						X		
S100	1	23:59																						X		
ICV01	1	00:06																						X		
ICB01	1	00:12																						X		
CRDL01	1	00:18																						X		
ICSA01	1	00:24																						X		
ICSAB01	1	00:30																						X		
CCV01	1	00:36																						X		
CCB01	1	00:42																						X		
LR01	1	00:49																						X		
CCV02	1	00:55																						X		
CCB02	1	01:01																						X		
ZZZZZZ	1	01:07																								
ZZZZZZ	1	01:13																								
ZZZZZZ	1	01:19																								
ZZZZZZ	1	01:25																								
ZZZZZZ	1	01:32																								
ZZZZZZ	5	01:38																								
CCV03	1	01:44																						X		
CCB03	1	01:50																						X		
ZZZZZZ	1	01:56																								
ZZZZZZ	1	02:02																								
ZZZZZZ	1	02:08																								
ZZZZZZ	1	02:15																								
ZZZZZZ	1	02:21																								
ZZZZZZ	1	02:27																								
ZZZZZZ	1	02:33																								
CCV04	1	02:39																						X		
CCB04	1	02:45																						X		
1202018149	2	02:52																						X		
1202018150	40	02:58																						X		
ZZZZZZ	2	03:04																								
CCV05	1	03:10																						X		
CCB05	1	03:16																						X		
244921001	2	03:22																						X		
1202018151	2	03:29																						X		
1202018152	2	03:35																						X		
1202018154	2	03:41																						X		
1202018153	10	03:47																						X		

[illegible]

Metals  
-14-  
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS4

Start Date: 28-JAN-10

End Date: 28-JAN-10

Client Sdg: 10-1288

Method MS

Data File: 100128-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	13:34			X															X			X			
S10	1	13:41			X															X			X			
S100	1	13:47			X															X			X			
ICV01	1	13:53			X															X			X			
ICB01	1	13:59			X															X			X			
CRDL01	1	14:05			X															X			X			
ICSA01	1	14:11			X															X			X			
ICSAB01	1	14:17			X															X			X			
CCV01	1	14:23			X															X			X			
CCB01	1	14:30			X															X			X			
LR01	1	14:36			X															X			X			
CCV02	1	14:42			X															X			X			
CCB02	1	14:48			X															X			X			
ZZZZZZ	1	14:54																								
ZZZZZZ	1	15:00																								
ZZZZZZ	5	15:06																								
ZZZZZZ	5	15:13																								
ZZZZZZ	5	15:19																								
ZZZZZZ	25	15:25																								
ZZZZZZ	5	15:31																								
ZZZZZZ	5	15:37																								
CCV03	1	15:43			X															X			X			
CCB03	1	15:49			X															X			X			
1202018149	2	15:56			X															X			X			
1202018150	40	16:02			X															X			X			
ZZZZZZ	2	16:08																								
CCV04	1	16:14			X															X			X			
CCB04	1	16:20			X															X			X			
244921001	2	16:26			X															X			X			
1202018151	2	16:33			X															X			X			
1202018152	2	16:39			X															X			X			
1202018154	2	16:45			X															X			X			
1202018153	10	16:51			X															X			X			
CCV05	1	16:57			X															X			X			
CCB05	1	17:04			X															X			X			
244921002	2	17:10			X															X			X			
244921003	2	17:16			X															X			X			
244921004	2	17:22			X															X			X			
CCV06	1	17:28			X															X			X			
CCB06	1	17:35			X															X			X			



**Metals**  
**-14-**  
**Analysis Run Log**

Samp No.	D/F	Run Time
244921005	2	17:41
244921006	2	17:47
244921007	2	17:53
CCV07	1	17:59
CCB07	1	18:05
244921008	2	18:12
244921009	2	18:18
244921010	2	18:24
CCV08	1	18:30
CCB08	1	18:36

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: OPTIMA1

Start Date: 29-JAN-10

End Date: 29-JAN-10

Client Sdg: 10-1288

Method P

Data File: 012910-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	06:16	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S0.1	1	06:19		X		X		X		X	X	X		X		X			X		X				X	X
S0.5	1	06:22	X	X		X		X	X	X	X	X		X	X	X			X		X				X	X
SCAL	1	06:26	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S10	1	06:29	X					X					X		X							X				
ICV01	1	06:32	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICB01	1	06:35	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
PQL01	1	06:39	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSA01	1	06:42	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSAB01	1	06:45	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR01	1	06:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR02	1	06:51	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	06:54																								
ZZZZZZ	1	06:58																								
CCV01	1	07:10	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB01	1	07:13	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR03	1	07:17	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV02	1	07:21	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB02	1	07:24	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	5	07:28																								
CCV03	1	07:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB03	1	07:35	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	07:39																								
ZZZZZZ	1	07:42																								
ZZZZZZ	1	07:45																								
ZZZZZZ	1	07:49																								
ZZZZZZ	1	07:53																								
ZZZZZZ	1	07:56																								
ZZZZZZ	5	08:00																								
ZZZZZZ	1	08:04																								
ZZZZZZ	1	08:07																								
CCV04	1	08:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB04	1	08:15	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	08:18																								
ZZZZZZ	1	08:22																								
ZZZZZZ	1	08:26																								
ZZZZZZ	1	08:29																								
ZZZZZZ	1	08:33																								
ZZZZZZ	1	08:37																								
ZZZZZZ	1	08:40																								

[illegible]

**Metals**  
**-14-**  
**Analysis Run Log**

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
244921002	1	11:27	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV10	1	11:31	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB10	1	11:34	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244921003	1	11:38	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244921004	1	11:42	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244921005	1	11:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244921006	1	11:49	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244921007	1	11:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244921008	1	11:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244921009	1	12:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244921010	1	12:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV11	1	12:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB11	1	12:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X

# Standards

METALS  
-10-  
Instrument Detection Limits

SDG NO. 10-1288

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP/MS	<u>Analyte</u>	<u>Wavelength</u> <u>(nm)</u>	<u>MDL</u>	<u>RDL</u>
			<u>ug/L</u>	<u>ug/L</u>
SOLID	Aluminum		15.0	50
	Antimony		0.5	3
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Uranium		0.066	.2
	Vanadium		2.0	10
	Zinc		2.0	10

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METALS  
-10-  
Instrument Detection Limits

SDG NO. 10-1288

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 15-JUN-09

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		<u>Wavelength</u> <u>(nm)</u>	<u>MDL</u> <u>ug/L</u>	<u>RDL</u> <u>ug/L</u>
MERCURY	<u>Analyte</u>			
SOLID	Mercury		0.068	.2

METALS  
-10-  
Instrument Detection Limits

SDG NO. 10-1288

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP	Analyte	Wavelength	MDL	RDL
		(nm)	ug/L	ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5
	Cobalt	228.616	1.5	5
	Copper	324.752	3.0	10
	Iron	238.204	80.0	250
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20
	Uranium	409.014	10.0	50
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10



**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No:

10-1288

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-NOV-09

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.05500	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.28800	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.04600	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No: 10-1288

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-NOV-09

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	11.3250	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	-1.59900	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-21.2250	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	1.68400
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	1.19100	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	105.59
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	3.36300	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	-2.30400	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.61100

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No:

10-1288

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-NOV-09

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Iron	Lead	Magnesium	Manganese	Molybdenum
Parmname	Wavelength					
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	20.5430
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-16.3320
Arsenic	188.979	-0.05800	0.00000	0.00000	0.00000	1.97700
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.13300	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	-0.90500
Copper	324.752	-0.13900	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.03800	-2.87600	0.00000	0.00000	0.00000
Magnesium	279.077	1.07300	0.00000	0.00000	0.00000	-16.8110
Manganese	257.61	-0.13900	0.00000	0.04000	0.00000	0.00000
Molybdenum	202.031	-0.03800	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	-0.01300	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.81200	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.88200	0.00000	0.28200	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	-0.06300	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.03900	0.00000	0.00000	-4.11700	0.00000
Tin	189.927	-0.09200	0.00000	-0.19600	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.07900	0.00000	0.00000
Uranium	409.014	0.13900	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	-0.05300	0.00000	0.00000	0.00000	-7.71400
Zinc	213.857	0.14460	0.00000	0.02030	0.00000	0.00000

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GELGEL Job No: **10-1288**Contract: **LANL01004**Instrument: **OPTIMA1**Effective Dates: **01-NOV-09**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Nickel	Phosphorous	Selenium	Silicon	Silver
<b>Parmname</b>	<b>Wavelength</b>					
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.99900	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	4.41600	0.00000	0.00000	0.00000	0.00000

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No:

10-1288

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-NOV-09

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Sulfur	Thallium	Tin	Titanium	Uranium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.38100	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	2.08700	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	1.04000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	-14.8110	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-8.68900	-1.22400
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	-1.03900
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No: 10-1288

Contract: LANL01004

Instrument: OPTIMA1

Effective Dates: 01-NOV-09

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000
Antimony	206.836	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000
Barium	233.527	-1.80500	0.00000
Beryllium	313.107	0.00000	0.00000
Boron	249.677	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000
Chromium	267.716	-0.63000	0.00000
Cobalt	228.616	0.00000	0.00000
Copper	324.752	0.00000	0.00000
Iron	238.204	0.00000	0.00000
Lead	220.353	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000
Manganese	257.61	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000
Nickel	231.604	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000
Selenium	196.026	0.00000	0.00000
Silicon	251.611	0.00000	0.00000
Silver	328.068	-6.59800	0.00000
Sulfur	181.975	0.00000	0.00000
Thallium	190.801	0.00000	0.00000
Tin	189.927	0.00000	0.00000
Titanium	334.94	0.00000	0.00000
Uranium	409.014	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000
Zinc	213.857	0.00000	0.00000

METALS  
-12-  
Linear Ranges

SDG NO. 10-1288

Contract: LANL01004

Lab Code: GEL

Instrument ID ICPMS6

<u>Analyte</u>	<u>Integration Time (msec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	1	50000	ug/L	01-NOV-09
Antimony	1000	250	ug/L	01-NOV-09
Arsenic	1000	1000	ug/L	01-NOV-09
Barium	1000	1000	ug/L	01-NOV-09
Beryllium	1000	1000	ug/L	01-NOV-09
Cadmium	1000	1000	ug/L	01-NOV-09
Calcium	500	50000	ug/L	01-NOV-09
Chromium	1000	1000	ug/L	01-NOV-09
Cobalt	1000	1000	ug/L	01-NOV-09
Copper	1000	1000	ug/L	01-NOV-09
Iron	500	50000	ug/L	01-NOV-09
Lead	1000	5000	ug/L	01-NOV-09
Magnesium	1	50000	ug/L	01-NOV-09
Manganese	1000	1000	ug/L	01-NOV-09
Nickel	1000	1000	ug/L	01-NOV-09
Potassium	1	50000	ug/L	01-NOV-09
Selenium	1000	500	ug/L	01-NOV-09
Silver	1000	250	ug/L	01-NOV-09
Sodium	1	50000	ug/L	01-NOV-09
Thallium	1000	500	ug/L	01-NOV-09
Uranium	1000	5000	ug/L	01-NOV-09
Vanadium	1000	100	ug/L	01-NOV-09
Zinc	1000	2500	ug/L	01-NOV-09

**METALS**  
**-12-**  
**Linear Ranges**

SDG NO. 10-1288

Contract: LANL01004

Lab Code: GEL

Instrument ID ICPMS4

<u>Analyte</u>	<u>Integration Time (msec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Barium	1000	1000	ug/L	01-NOV-09
Beryllium	1000	1000	ug/L	01-NOV-09
Cadmium	1000	1000	ug/L	01-NOV-09
Calcium	500	50000	ug/L	01-NOV-09
Chromium	1000	1000	ug/L	01-NOV-09
Cobalt	1000	1000	ug/L	01-NOV-09
Copper	1000	1000	ug/L	01-NOV-09
Iron	500	50000	ug/L	01-NOV-09
Lead	1000	5000	ug/L	01-NOV-09
Magnesium	1	50000	ug/L	01-NOV-09
Manganese	1000	1000	ug/L	01-NOV-09
Nickel	1000	1000	ug/L	01-NOV-09
Potassium	1	50000	ug/L	01-NOV-09
Selenium	1000	500	ug/L	01-NOV-09
Silver	1000	250	ug/L	01-NOV-09
Sodium	1	50000	ug/L	01-NOV-09
Thallium	1000	500	ug/L	01-NOV-09
Uranium	1000	5000	ug/L	01-NOV-09
Vanadium	1000	100	ug/L	01-NOV-09
Zinc	1000	2500	ug/L	01-NOV-09
Aluminum	1	50000	ug/L	01-NOV-09
Antimony	1000	250	ug/L	01-NOV-09
Arsenic	1000	1000	ug/L	01-NOV-09



METALS  
-12-  
Linear Ranges

SDG NO. 10-1288

Contract: LANL01004

Lab Code: GEL

Instrument ID OPTIMA1

<u>Analyte</u>	<u>Integration Time (sec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	20	500000	ug/L	01-NOV-09
Antimony	20	10000	ug/L	01-NOV-09
Arsenic	20	10000	ug/L	01-NOV-09
Barium	20	15000	ug/L	01-NOV-09
Beryllium	20	3000	ug/L	01-NOV-09
Cadmium	20	10000	ug/L	01-NOV-09
Calcium	20	500000	ug/L	01-NOV-09
Chromium	20	25000	ug/L	01-NOV-09
Cobalt	20	10000	ug/L	01-NOV-09
Copper	20	20000	ug/L	01-NOV-09
Iron	20	500000	ug/L	01-NOV-09
Lead	20	25000	ug/L	01-NOV-09
Magnesium	20	500000	ug/L	01-NOV-09
Manganese	20	10000	ug/L	01-NOV-09
Nickel	20	10000	ug/L	01-NOV-09
Potassium	20	300000	ug/L	01-NOV-09
Selenium	20	10000	ug/L	01-NOV-09
Silver	20	1000	ug/L	01-NOV-09
Sodium	20	500000	ug/L	01-NOV-09
Thallium	20	10000	ug/L	01-NOV-09
Uranium	20	15000	ug/L	01-NOV-09
Vanadium	20	10000	ug/L	01-NOV-09
Zinc	20	15000	ug/L	01-NOV-09

# Raw Data

=====  
Analysis Begun

Start Time: 1/29/2010 06:16:09

Plasma On Time: 1/25/2010 05:31:26

Logged In Analyst: optima

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N1030502 Autosampler Model: AS-93plus

Sample Information File: C:\pe\optima1\Sample Information\012910.sif

Batch ID:

Results Data Set: 012910

Results Library: c:\pe\optima1\Results\Results.mdb

=====  
Sequence No.: 1

Autosampler Location: 8

Sample ID: S0

Date Collected: 1/29/2010 06:16:09

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:  
=====

## Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Analysis Time
1	Sc RADIAL	78453.6	78453.6	0.000 %	06:16:54
1	Al 396.153Radial†	-28.6	-28.6	[0.00] µg/L	06:16:54
1	Ca 317.933Radial†	254.4	254.5	[0.00] µg/L	06:17:15
1	Fe 238.204 Radial†	16.3	16.3	[0.00] µg/L	06:17:15
1	K 766.490 Radial†	361.8	361.9	[0.00] µg/L	06:16:54
1	Mg 279.077 IEC†	9.2	9.2	[0.00] µg/L	06:17:15
1	Na 589.592 Radial†	551.3	551.5	[0.00] µg/L	06:16:54
1	Sr 421.552†	632.6	632.8	[0.00] µg/L	06:16:54
1	Sc 361.383	2006976.9	2006976.9	0.0000 %	06:18:16
1	Y 371.029	1268565.6	1268565.6	0.0000 %	06:18:16
1	Ag 328.068†	-98.3	-96.8	[0.00] µg/L	06:18:22
1	As 188.979†	-2.6	-2.5	[0.00] µg/L	06:18:43
1	B 249.677†	368.9	363.3	[0.00] µg/L	06:18:22
1	Ba 233.527†	-25.4	-25.0	[0.00] µg/L	06:18:43
1	Be 313.107†	3819.6	3761.6	[0.00] µg/L	06:18:22
1	Cd 226.502†	-130.4	-128.4	[0.00] µg/L	06:18:43
1	Co 228.616†	-53.2	-52.4	[0.00] µg/L	06:18:43
1	Cr 267.716†	-73.7	-72.6	[0.00] µg/L	06:18:22
1	Cu 324.752†	3914.9	3855.3	[0.00] µg/L	06:18:22
1	Mn 257.610†	-156.1	-153.8	[0.00] µg/L	06:18:43
1	Mo 202.031†	14.6	14.3	[0.00] µg/L	06:18:43
1	Ni 231.604†	338.4	333.3	[0.00] µg/L	06:18:43
1	P 214.914†	218.9	215.6	[0.00] µg/L	06:18:43
1	Pb 220.353†	56.9	56.1	[0.00] µg/L	06:18:43
1	S 181.975 Axial†	23.2	22.9	[0.00] µg/L	06:18:43
1	Sb 206.836†	24.7	24.3	[0.00] µg/L	06:18:43
1	Se 196.026†	10.7	10.5	[0.00] µg/L	06:18:43
1	SiO2†	2371.3	2335.3	[0.00] µg/L	06:18:22
1	Si 251.611†	287.8	283.4	[0.00] µg/L	06:18:43
1	Sn 189.927†	24.8	24.5	[0.00] µg/L	06:18:43
1	Ti 334.940†	786.8	774.9	[0.00] µg/L	06:18:22
1	Tl 190.801†	-23.3	-23.0	[0.00] µg/L	06:18:43
1	U 409.014†	-208.4	-205.2	[0.00] µg/L	06:18:22
1	V 292.402†	-137.7	-135.6	[0.00] µg/L	06:18:22
1	Zn 213.857†	627.6	618.1	[0.00] µg/L	06:18:43
2	Sc RADIAL	78583.3	78583.3	0.000 %	06:17:20
2	Al 396.153Radial†	-47.9	-47.8	[0.00] µg/L	06:17:20
2	Ca 317.933Radial†	238.6	238.3	[0.00] µg/L	06:17:41
2	Fe 238.204 Radial†	15.6	15.6	[0.00] µg/L	06:17:41
2	K 766.490 Radial†	392.9	392.3	[0.00] µg/L	06:17:20
2	Mg 279.077 IEC†	9.9	9.9	[0.00] µg/L	06:17:41
2	Na 589.592 Radial†	568.9	568.2	[0.00] µg/L	06:17:20
2	Sr 421.552†	642.0	641.2	[0.00] µg/L	06:17:20
2	Sc 361.383	1939456.0	1939456.0	0.0000 %	06:18:49
2	Y 371.029	1225701.0	1225701.0	0.0000 %	06:18:49
2	Ag 328.068†	-93.9	-95.7	[0.00] µg/L	06:18:54
2	As 188.979†	-3.4	-3.4	[0.00] µg/L	06:19:15

2	B 249.677†	377.1	384.3	[0.00]	µg/L	06:18:54
2	Ba 233.527†	-21.3	-21.8	[0.00]	µg/L	06:19:15
2	Be 313.107†	3821.8	3894.7	[0.00]	µg/L	06:18:54
2	Cd 226.502†	-124.7	-127.1	[0.00]	µg/L	06:19:15
2	Co 228.616†	-46.5	-47.4	[0.00]	µg/L	06:19:15
2	Cr 267.716†	-115.3	-117.5	[0.00]	µg/L	06:18:54
2	Cu 324.752†	3884.3	3958.4	[0.00]	µg/L	06:18:54
2	Mn 257.610†	-138.9	-141.6	[0.00]	µg/L	06:19:15
2	Mo 202.031†	16.0	16.3	[0.00]	µg/L	06:19:15
2	Ni 231.604†	323.2	329.4	[0.00]	µg/L	06:19:15
2	P 214.914†	215.8	219.9	[0.00]	µg/L	06:19:15
2	Pb 220.353†	61.1	62.2	[0.00]	µg/L	06:19:15
2	S 181.975 Axial†	24.3	24.7	[0.00]	µg/L	06:19:15
2	Sb 206.836†	29.2	29.7	[0.00]	µg/L	06:19:15
2	Se 196.026†	9.6	9.8	[0.00]	µg/L	06:19:15
2	SiO2†	2394.1	2439.7	[0.00]	µg/L	06:18:54
2	Si 251.611†	273.9	279.1	[0.00]	µg/L	06:19:15
2	Sn 189.927†	22.1	22.5	[0.00]	µg/L	06:19:15
2	Ti 334.940†	638.9	651.1	[0.00]	µg/L	06:18:54
2	Tl 190.801†	-26.7	-27.2	[0.00]	µg/L	06:19:15
2	U 409.014†	-217.2	-221.3	[0.00]	µg/L	06:18:54
2	V 292.402†	-119.1	-121.3	[0.00]	µg/L	06:18:54
2	Zn 213.857†	637.6	649.8	[0.00]	µg/L	06:19:15
3	Sc RADIAL	78404.4	78404.4	0.000	%	06:17:46
3	Al 396.153Radial†	-12.0	-12.0	[0.00]	µg/L	06:17:46
3	Ca 317.933Radial†	248.6	248.8	[0.00]	µg/L	06:18:06
3	Fe 238.204 Radial†	17.2	17.2	[0.00]	µg/L	06:18:06
3	K 766.490 Radial†	441.4	441.9	[0.00]	µg/L	06:17:46
3	Mg 279.077 IEC†	5.4	5.4	[0.00]	µg/L	06:18:06
3	Na 589.592 Radial†	540.8	541.4	[0.00]	µg/L	06:17:46
3	Sr 421.552†	627.5	628.1	[0.00]	µg/L	06:17:46
3	Sc 361.383	1982931.6	1982931.6	0.0000	%	06:19:21
3	Y 371.029	1253063.7	1253063.7	0.0000	%	06:19:21
3	Ag 328.068†	-85.6	-85.3	[0.00]	µg/L	06:19:26
3	As 188.979†	-2.2	-2.2	[0.00]	µg/L	06:19:47
3	B 249.677†	363.4	362.2	[0.00]	µg/L	06:19:26
3	Ba 233.527†	-25.2	-25.1	[0.00]	µg/L	06:19:47
3	Be 313.107†	3857.7	3845.1	[0.00]	µg/L	06:19:26
3	Cd 226.502†	-120.7	-120.3	[0.00]	µg/L	06:19:47
3	Co 228.616†	-48.3	-48.1	[0.00]	µg/L	06:19:47
3	Cr 267.716†	-116.7	-116.3	[0.00]	µg/L	06:19:26
3	Cu 324.752†	3898.8	3886.1	[0.00]	µg/L	06:19:26
3	Mn 257.610†	-148.7	-148.2	[0.00]	µg/L	06:19:47
3	Mo 202.031†	7.1	7.1	[0.00]	µg/L	06:19:47
3	Ni 231.604†	332.7	331.6	[0.00]	µg/L	06:19:47
3	P 214.914†	224.8	224.0	[0.00]	µg/L	06:19:47
3	Pb 220.353†	65.4	65.2	[0.00]	µg/L	06:19:47
3	S 181.975 Axial†	21.8	21.8	[0.00]	µg/L	06:19:47
3	Sb 206.836†	18.1	18.0	[0.00]	µg/L	06:19:47
3	Se 196.026†	3.5	3.5	[0.00]	µg/L	06:19:47
3	SiO2†	2401.1	2393.2	[0.00]	µg/L	06:19:26
3	Si 251.611†	285.7	284.7	[0.00]	µg/L	06:19:47
3	Sn 189.927†	23.5	23.4	[0.00]	µg/L	06:19:47
3	Ti 334.940†	687.9	685.6	[0.00]	µg/L	06:19:26
3	Tl 190.801†	-23.5	-23.4	[0.00]	µg/L	06:19:47
3	U 409.014†	-132.6	-132.2	[0.00]	µg/L	06:19:26
3	V 292.402†	-89.3	-89.0	[0.00]	µg/L	06:19:26
3	Zn 213.857†	631.0	628.9	[0.00]	µg/L	06:19:47

## Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	1976454.8	34223.24	1.73%	0.0000	%
Sc RADIAL	78480.5	92.39	0.12%	0.000	%
Y 371.029	1249110.1	21704.06	1.74%	0.0000	%
Ag 328.068†	-92.6	6.36	6.87%	[0.00]	µg/L
Al 396.153Radial†	-29.5	17.91	60.70%	[0.00]	µg/L
As 188.979†	-2.7	0.62	22.88%	[0.00]	µg/L
B 249.677†	369.9	12.48	3.37%	[0.00]	µg/L
Ba 233.527†	-24.0	1.91	7.97%	[0.00]	µg/L

Be 313.107†	3833.8	67.30	1.76%	[0.00]	µg/L
Ca 317.933Radial†	247.2	8.20	3.32%	[0.00]	µg/L
Cd 226.502†	-125.3	4.33	3.45%	[0.00]	µg/L
Co 228.616†	-49.3	2.70	5.47%	[0.00]	µg/L
Cr 267.716†	-102.1	25.61	25.07%	[0.00]	µg/L
Cu 324.752†	3900.0	52.94	1.36%	[0.00]	µg/L
Fe 238.204 Radial†	16.3	0.81	4.96%	[0.00]	µg/L
K 766.490 Radial†	398.7	40.35	10.12%	[0.00]	µg/L
Mg 279.077 IEC†	8.2	2.39	29.31%	[0.00]	µg/L
Mn 257.610†	-147.8	6.11	4.13%	[0.00]	µg/L
Mo 202.031†	12.6	4.87	38.67%	[0.00]	µg/L
Na 589.592 Radial†	553.7	13.56	2.45%	[0.00]	µg/L
Ni 231.604†	331.4	1.95	0.59%	[0.00]	µg/L
P 214.914†	219.8	4.24	1.93%	[0.00]	µg/L
Pb 220.353†	61.2	4.66	7.61%	[0.00]	µg/L
S 181.975 Axial†	23.1	1.51	6.51%	[0.00]	µg/L
Sb 206.836†	24.0	5.86	24.40%	[0.00]	µg/L
Se 196.026†	7.9	3.83	48.28%	[0.00]	µg/L
SiO2†	2389.4	52.34	2.19%	[0.00]	µg/L
Si 251.611†	282.4	2.94	1.04%	[0.00]	µg/L
Sn 189.927†	23.5	0.99	4.23%	[0.00]	µg/L
Sr 421.552†	634.0	6.63	1.05%	[0.00]	µg/L
Ti 334.940†	703.9	63.85	9.07%	[0.00]	µg/L
Tl 190.801†	-24.5	2.34	9.52%	[0.00]	µg/L
U 409.014†	-186.2	47.51	25.52%	[0.00]	µg/L
V 292.402†	-115.3	23.90	20.72%	[0.00]	µg/L
Zn 213.857†	632.3	16.11	2.55%	[0.00]	µg/L

Sequence No.: 2  
 Sample ID: S0.1  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 2  
 Date Collected: 1/29/2010 06:19:56  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Analysis Time
1	Sc RADIAL	79236.4	79236.4	101 %	06:20:31
1	K 766.490 Radial†	1984.6	1566.9	[1000] µg/L	06:20:31
1	Sr 421.552†	18556.0	17744.9	[100] µg/L	06:20:31
1	Sc 361.383	1990329.2	1990329.2	100.70 %	06:20:53
1	Y 371.029	1257365.7	1257365.7	100.66 %	06:20:53
1	Ag 328.068†	12034.4	12043.1	[100] µg/L	06:20:58
1	As 188.979†	47.5	49.9	[100] µg/L	06:21:19
1	B 249.677†	2646.7	2258.3	[100] µg/L	06:20:58
1	Ba 233.527†	3932.5	3929.1	[100] µg/L	06:20:58
1	Be 313.107†	165533.1	160545.4	[100] µg/L	06:20:53
1	Cd 226.502†	3842.1	3940.6	[100] µg/L	06:20:58
1	Co 228.616†	1991.3	2026.7	[100] µg/L	06:21:19
1	Cr 267.716†	4922.2	4990.1	[100] µg/L	06:20:58
1	Cu 324.752†	19162.1	15128.5	[100] µg/L	06:20:58
1	Mn 257.610†	30905.3	30837.7	[100] µg/L	06:20:58
1	Mo 202.031†	916.2	897.2	[100] µg/L	06:21:19
1	Ni 231.604†	2158.1	1811.7	[100] µg/L	06:20:58
1	P 214.914†	466.1	243.0	[500] µg/L	06:21:19
1	Pb 220.353†	446.9	382.6	[100] µg/L	06:21:19
1	S 181.975 Axial†	69.4	45.8	[200] µg/L	06:21:19
1	Sb 206.836†	130.4	105.5	[100] µg/L	06:21:19
1	Se 196.026†	83.0	74.5	[100] µg/L	06:21:19
1	SiO2†	8177.4	5731.0	[1069.5] µg/L	06:20:58
1	Si 251.611†	7049.5	6717.9	[500] µg/L	06:20:58
1	Sn 189.927†	226.1	201.0	[100] µg/L	06:21:19
1	Ti 334.940†	45199.3	44180.4	[100] µg/L	06:20:58
1	Tl 190.801†	38.7	62.9	[100] µg/L	06:21:19
1	U 409.014†	1020.6	1199.7	[100] µg/L	06:20:58
1	V 292.402†	9195.2	9246.4	[100] µg/L	06:20:58
1	Zn 213.857†	4611.5	3947.1	[100] µg/L	06:20:58
2	Sc RADIAL	79037.1	79037.1	101 %	06:20:37
2	K 766.490 Radial†	1979.5	1566.8	[1000] µg/L	06:20:37
2	Sr 421.552†	18407.2	17643.5	[100] µg/L	06:20:37
2	Sc 361.383	1986550.7	1986550.7	100.51 %	06:21:25
2	Y 371.029	1255285.0	1255285.0	100.49 %	06:21:25
2	Ag 328.068†	11941.3	11973.2	[100] µg/L	06:21:31
2	As 188.979†	50.0	52.5	[100] µg/L	06:21:51
2	B 249.677†	2617.4	2234.2	[100] µg/L	06:21:31
2	Ba 233.527†	3882.7	3886.9	[100] µg/L	06:21:31
2	Be 313.107†	165391.7	160717.3	[100] µg/L	06:21:25
2	Cd 226.502†	3759.6	3865.8	[100] µg/L	06:21:31
2	Co 228.616†	1983.3	2022.6	[100] µg/L	06:21:51
2	Cr 267.716†	4830.6	4908.2	[100] µg/L	06:21:31
2	Cu 324.752†	19034.1	15037.4	[100] µg/L	06:21:31
2	Mn 257.610†	30541.6	30534.2	[100] µg/L	06:21:31
2	Mo 202.031†	910.6	893.4	[100] µg/L	06:21:51
2	Ni 231.604†	2160.4	1818.0	[100] µg/L	06:21:31
2	P 214.914†	453.9	231.8	[500] µg/L	06:21:51
2	Pb 220.353†	460.9	397.4	[100] µg/L	06:21:51
2	S 181.975 Axial†	61.7	38.3	[200] µg/L	06:21:51
2	Sb 206.836†	133.7	109.0	[100] µg/L	06:21:51
2	Se 196.026†	89.8	81.4	[100] µg/L	06:21:51
2	SiO2†	8088.6	5658.0	[1069.5] µg/L	06:21:31
2	Si 251.611†	6987.7	6669.7	[500] µg/L	06:21:31
2	Sn 189.927†	220.7	196.2	[100] µg/L	06:21:51
2	Ti 334.940†	44724.3	43793.2	[100] µg/L	06:21:31
2	Tl 190.801†	46.8	71.1	[100] µg/L	06:21:51
2	U 409.014†	1014.9	1195.9	[100] µg/L	06:21:31
2	V 292.402†	9034.2	9103.6	[100] µg/L	06:21:31

2	Zn 213.857†	4608.4	3952.8	[100] µg/L	06:21:31
3	Sc RADIAL	78912.9	78912.9	101 %	06:20:42
3	K 766.490 Radial†	1957.6	1548.1	[1000] µg/L	06:20:42
3	Sr 421.552†	18504.4	17768.9	[100] µg/L	06:20:42
3	Sc 361.383	1995586.1	1995586.1	100.97 %	06:21:57
3	Y 371.029	1260364.4	1260364.4	100.90 %	06:21:57
3	Ag 328.068†	11896.4	11874.9	[100] µg/L	06:22:03
3	As 188.979†	52.9	55.1	[100] µg/L	06:22:23
3	B 249.677†	2623.7	2228.6	[100] µg/L	06:22:03
3	Ba 233.527†	3892.3	3878.9	[100] µg/L	06:22:03
3	Be 313.107†	164759.1	159345.8	[100] µg/L	06:21:57
3	Cd 226.502†	3753.1	3842.4	[100] µg/L	06:22:03
3	Co 228.616†	1987.9	2018.1	[100] µg/L	06:22:23
3	Cr 267.716†	4833.6	4889.4	[100] µg/L	06:22:03
3	Cu 324.752†	19014.9	14932.7	[100] µg/L	06:22:03
3	Mn 257.610†	30577.7	30432.4	[100] µg/L	06:22:03
3	Mo 202.031†	910.3	889.0	[100] µg/L	06:22:23
3	Ni 231.604†	2172.5	1820.2	[100] µg/L	06:22:03
3	P 214.914†	462.5	238.2	[500] µg/L	06:22:23
3	Pb 220.353†	455.9	390.3	[100] µg/L	06:22:23
3	S 181.975 Axial†	66.1	42.4	[200] µg/L	06:22:23
3	Sb 206.836†	123.3	98.1	[100] µg/L	06:22:23
3	Se 196.026†	78.0	69.3	[100] µg/L	06:22:23
3	SiO2†	8090.8	5623.8	[1069.5] µg/L	06:22:03
3	Si 251.611†	6996.2	6646.7	[500] µg/L	06:22:03
3	Sn 189.927†	224.9	199.3	[100] µg/L	06:22:23
3	Ti 334.940†	44728.6	43596.0	[100] µg/L	06:22:03
3	Tl 190.801†	42.1	66.2	[100] µg/L	06:22:23
3	U 409.014†	1049.9	1226.1	[100] µg/L	06:22:03
3	V 292.402†	8986.4	9015.6	[100] µg/L	06:22:03
3	Zn 213.857†	4577.8	3901.6	[100] µg/L	06:22:03

## Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	1990822.0	4537.79	0.23%	100.73 %
Sc RADIAL	79062.1	163.17	0.21%	101 %
Y 371.029	1257671.7	2553.49	0.20%	100.69 %
Ag 328.068†	11963.7	84.50	0.71%	[100] µg/L
As 188.979†	52.5	2.64	5.03%	[100] µg/L
B 249.677†	2240.4	15.76	0.70%	[100] µg/L
Ba 233.527†	3898.3	26.94	0.69%	[100] µg/L
Be 313.107†	160202.9	747.18	0.47%	[100] µg/L
Cd 226.502†	3882.9	51.30	1.32%	[100] µg/L
Co 228.616†	2022.5	4.30	0.21%	[100] µg/L
Cr 267.716†	4929.2	53.53	1.09%	[100] µg/L
Cu 324.752†	15032.9	97.99	0.65%	[100] µg/L
K 766.490 Radial†	1560.6	10.82	0.69%	[1000] µg/L
Mn 257.610†	30601.5	210.85	0.69%	[100] µg/L
Mo 202.031†	893.2	4.10	0.46%	[100] µg/L
Ni 231.604†	1816.7	4.44	0.24%	[100] µg/L
P 214.914†	237.7	5.63	2.37%	[500] µg/L
Pb 220.353†	390.1	7.43	1.90%	[100] µg/L
S 181.975 Axial†	42.1	3.76	8.91%	[200] µg/L
Sb 206.836†	104.2	5.56	5.33%	[100] µg/L
Se 196.026†	75.1	6.07	8.09%	[100] µg/L
SiO2†	5671.0	54.74	0.97%	[1069.5] µg/L
Si 251.611†	6678.1	36.31	0.54%	[500] µg/L
Sn 189.927†	198.8	2.46	1.24%	[100] µg/L
Sr 421.552†	17719.1	66.58	0.38%	[100] µg/L
Ti 334.940†	43856.5	297.30	0.68%	[100] µg/L
Tl 190.801†	66.8	4.13	6.18%	[100] µg/L
U 409.014†	1207.2	16.42	1.36%	[100] µg/L
V 292.402†	9121.8	116.50	1.28%	[100] µg/L
Zn 213.857†	3933.8	28.03	0.71%	[100] µg/L

Sequence No.: 3

Sample ID: S0.5

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 3

Date Collected: 1/29/2010 06:22:33

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	79260.3	79260.3	101	%	06:23:05
1	Al 396.153Radial†	7595.8	7550.6	[5000]	µg/L	06:23:05
1	Ca 317.933Radial†	7090.2	6773.2	[5000]	µg/L	06:23:05
1	K 766.490 Radial†	8406.1	7924.7	[5000]	µg/L	06:23:05
1	Mg 279.077 IEC†	492.0	479.0	[5000]	µg/L	06:23:26
1	Sr 421.552†	85623.8	84147.2	[500]	µg/L	06:23:05
1	Sc 361.383	1988873.8	1988873.8	100.63	%	06:24:29
1	Y 371.029	1252566.3	1252566.3	100.28	%	06:24:29
1	Ag 328.068†	57050.4	56786.7	[500]	µg/L	06:24:34
1	As 188.979†	241.4	242.6	[500]	µg/L	06:24:55
1	B 249.677†	11152.2	10712.6	[500]	µg/L	06:24:34
1	Ba 233.527†	18598.2	18506.0	[500]	µg/L	06:24:34
1	Be 313.107†	771283.5	762633.7	[500]	µg/L	06:24:29
1	Cd 226.502†	18252.7	18264.0	[500]	µg/L	06:24:34
1	Co 228.616†	9815.6	9803.7	[500]	µg/L	06:24:34
1	Cr 267.716†	23336.2	23292.6	[500]	µg/L	06:24:34
1	Cu 324.752†	74989.9	70621.7	[500]	µg/L	06:24:34
1	Mn 257.610†	144696.5	143940.8	[500]	µg/L	06:24:34
1	Mo 202.031†	4300.7	4261.2	[500]	µg/L	06:24:55
1	Ni 231.604†	8943.4	8556.2	[500]	µg/L	06:24:34
1	P 214.914†	1370.9	1142.5	[2500]	µg/L	06:24:55
1	Pb 220.353†	1947.8	1874.4	[500]	µg/L	06:24:55
1	S 181.975 Axial†	212.1	187.6	[1000]	µg/L	06:24:55
1	Sb 206.836†	507.9	480.7	[500]	µg/L	06:24:55
1	Se 196.026†	361.6	351.4	[500]	µg/L	06:24:55
1	SiO2†	29660.5	27085.9	[5347.5]	µg/L	06:24:34
1	Si 251.611†	32390.3	31905.6	[2500]	µg/L	06:24:34
1	Sn 189.927†	976.1	946.6	[500]	µg/L	06:24:55
1	Ti 334.940†	213831.8	211792.7	[500]	µg/L	06:24:29
1	Tl 190.801†	288.1	310.8	[500]	µg/L	06:24:55
1	U 409.014†	5376.8	5529.5	[500]	µg/L	06:24:34
1	V 292.402†	43367.2	43211.7	[500]	µg/L	06:24:34
1	Zn 213.857†	19243.9	18491.5	[500]	µg/L	06:24:34
2	Sc RADIAL	79242.6	79242.6	101	%	06:23:31
2	Al 396.153Radial†	7589.8	7546.3	[5000]	µg/L	06:23:31
2	Ca 317.933Radial†	7103.7	6788.2	[5000]	µg/L	06:23:31
2	K 766.490 Radial†	8366.1	7887.0	[5000]	µg/L	06:23:31
2	Mg 279.077 IEC†	498.8	485.9	[5000]	µg/L	06:23:52
2	Sr 421.552†	85475.1	84018.9	[500]	µg/L	06:23:31
2	Sc 361.383	2001726.7	2001726.7	101.28	%	06:25:02
2	Y 371.029	1260859.9	1260859.9	100.94	%	06:25:02
2	Ag 328.068†	56354.2	55735.3	[500]	µg/L	06:25:07
2	As 188.979†	240.2	239.8	[500]	µg/L	06:25:28
2	B 249.677†	11056.9	10547.3	[500]	µg/L	06:25:07
2	Ba 233.527†	18377.0	18168.9	[500]	µg/L	06:25:07
2	Be 313.107†	757902.9	744500.6	[500]	µg/L	06:25:02
2	Cd 226.502†	18059.3	17956.6	[500]	µg/L	06:25:07
2	Co 228.616†	9675.3	9602.4	[500]	µg/L	06:25:07
2	Cr 267.716†	23017.8	22829.4	[500]	µg/L	06:25:07
2	Cu 324.752†	74220.6	69383.6	[500]	µg/L	06:25:07
2	Mn 257.610†	142920.4	141263.9	[500]	µg/L	06:25:07
2	Mo 202.031†	4222.2	4156.3	[500]	µg/L	06:25:28
2	Ni 231.604†	8885.1	8441.5	[500]	µg/L	06:25:07
2	P 214.914†	1361.0	1123.9	[2500]	µg/L	06:25:28
2	Pb 220.353†	1916.2	1830.8	[500]	µg/L	06:25:28
2	S 181.975 Axial†	207.6	181.9	[1000]	µg/L	06:25:28
2	Sb 206.836†	515.1	484.6	[500]	µg/L	06:25:28
2	Se 196.026†	357.7	345.2	[500]	µg/L	06:25:28
2	SiO2†	29361.6	26601.6	[5347.5]	µg/L	06:25:07



2	Si 251.611†	31999.0	31312.6	[2500] µg/L	06:25:07
2	Sn 189.927†	959.9	924.3	[500] µg/L	06:25:28
2	Ti 334.940†	210147.7	206790.7	[500] µg/L	06:25:02
2	Tl 190.801†	285.6	306.6	[500] µg/L	06:25:28
2	U 409.014†	5323.2	5442.2	[500] µg/L	06:25:07
2	V 292.402†	42784.9	42360.1	[500] µg/L	06:25:07
2	Zn 213.857†	19038.7	18166.1	[500] µg/L	06:25:07
3	Sc RADIAL	79210.5	79210.5	101 %	06:23:57
3	Al 396.153Radial†	7586.0	7545.5	[5000] µg/L	06:23:57
3	Ca 317.933Radial†	7095.8	6783.3	[5000] µg/L	06:23:57
3	K 766.490 Radial†	8305.4	7830.2	[5000] µg/L	06:23:57
3	Mg 279.077 IEC†	494.4	481.7	[5000] µg/L	06:24:18
3	Sr 421.552†	85515.6	84093.4	[500] µg/L	06:23:57
3	Sc 361.383	2014150.7	2014150.7	101.91 %	06:25:34
3	Y 371.029	1268615.6	1268615.6	101.56 %	06:25:34
3	Ag 328.068†	53430.5	52523.1	[500] µg/L	06:25:40
3	As 188.979†	203.6	202.5	[500] µg/L	06:26:01
3	B 249.677†	10417.9	9853.0	[500] µg/L	06:25:40
3	Ba 233.527†	16882.3	16590.3	[500] µg/L	06:25:40
3	Be 313.107†	724303.9	706914.4	[500] µg/L	06:25:34
3	Cd 226.502†	16532.1	16348.0	[500] µg/L	06:25:40
3	Co 228.616†	8787.2	8672.0	[500] µg/L	06:25:40
3	Cr 267.716†	20475.4	20194.4	[500] µg/L	06:25:40
3	Cu 324.752†	68035.6	62862.4	[500] µg/L	06:25:40
3	Mn 257.610†	129904.1	127620.7	[500] µg/L	06:25:40
3	Mo 202.031†	3601.8	3521.8	[500] µg/L	06:26:01
3	Ni 231.604†	8093.2	7610.3	[500] µg/L	06:25:40
3	P 214.914†	1203.9	961.5	[2500] µg/L	06:26:01
3	Pb 220.353†	1711.1	1617.9	[500] µg/L	06:26:01
3	S 181.975 Axial†	194.1	167.4	[1000] µg/L	06:26:01
3	Sb 206.836†	448.2	415.8	[500] µg/L	06:26:01
3	Se 196.026†	311.3	297.5	[500] µg/L	06:26:01
3	SiO2†	27493.1	24589.1	[5347.5] µg/L	06:25:40
3	Si 251.611†	29757.6	28918.2	[2500] µg/L	06:25:40
3	Sn 189.927†	805.9	767.4	[500] µg/L	06:26:01
3	Ti 334.940†	199664.7	195224.0	[500] µg/L	06:25:34
3	Tl 190.801†	262.5	282.1	[500] µg/L	06:26:01
3	U 409.014†	4825.0	4920.9	[500] µg/L	06:25:40
3	V 292.402†	38869.8	38257.6	[500] µg/L	06:25:40
3	Zn 213.857†	17442.2	16483.5	[500] µg/L	06:25:40

## Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib
Sc 361.383	2001583.8	12639.07	0.63%	101.27 %	
Sc RADIAL	79237.8	25.26	0.03%	101 %	
Y 371.029	1260680.6	8026.16	0.64%	100.93 %	
Ag 328.068†	55015.1	2221.20	4.04%	[500] µg/L	
Al 396.153Radial†	7547.5	2.72	0.04%	[5000] µg/L	
As 188.979†	228.3	22.38	9.80%	[500] µg/L	
B 249.677†	10371.0	456.14	4.40%	[500] µg/L	
Ba 233.527†	17755.1	1022.70	5.76%	[500] µg/L	
Be 313.107†	738016.2	28419.96	3.85%	[500] µg/L	
Ca 317.933Radial†	6781.5	7.61	0.11%	[5000] µg/L	
Cd 226.502†	17522.9	1029.06	5.87%	[500] µg/L	
Co 228.616†	9359.4	603.69	6.45%	[500] µg/L	
Cr 267.716†	22105.5	1671.17	7.56%	[500] µg/L	
Cu 324.752†	67622.6	4168.69	6.16%	[500] µg/L	
K 766.490 Radial†	7880.6	47.56	0.60%	[5000] µg/L	
Mg 279.077 IEC†	482.2	3.48	0.72%	[5000] µg/L	
Mn 257.610†	137608.5	8752.58	6.36%	[500] µg/L	
Mo 202.031†	3979.8	400.08	10.05%	[500] µg/L	
Ni 231.604†	8202.6	516.18	6.29%	[500] µg/L	
P 214.914†	1076.0	99.57	9.25%	[2500] µg/L	
Pb 220.353†	1774.4	137.27	7.74%	[500] µg/L	
S 181.975 Axial†	178.9	10.42	5.82%	[1000] µg/L	
Sb 206.836†	460.4	38.65	8.40%	[500] µg/L	
Se 196.026†	331.4	29.49	8.90%	[500] µg/L	
SiO2†	26092.2	1324.03	5.07%	[5347.5] µg/L	
Si 251.611†	30712.1	1581.63	5.15%	[2500] µg/L	

Sn 189.927†	879.4	97.67	11.11%	[500] µg/L
Sr 421.552†	84086.5	64.43	0.08%	[500] µg/L
Ti 334.940†	204602.5	8498.33	4.15%	[500] µg/L
Tl 190.801†	299.8	15.50	5.17%	[500] µg/L
U 409.014†	5297.5	329.06	6.21%	[500] µg/L
V 292.402†	41276.5	2648.86	6.42%	[500] µg/L
Zn 213.857†	17713.7	1077.77	6.08%	[500] µg/L

Sequence No.: 4  
 Sample ID: SCAL  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 4  
 Date Collected: 1/29/2010 06:26:11  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Analysis Time
1	Sc RADIAL	80422.4	80422.4	102 %		06:26:43
1	Al 396.153Radial†	15443.2	15099.8	[10000] µg/L		06:26:43
1	Ca 317.933Radial†	13844.6	13263.1	[10000] µg/L		06:27:04
1	Fe 238.204 Radial†	770.1	735.2	[10000] µg/L		06:27:04
1	K 766.490 Radial†	16743.3	15940.3	[10000] µg/L		06:26:43
1	Mg 279.077 IEC†	989.7	957.7	[10000] µg/L		06:27:04
1	Na 589.592 Radial†	38174.8	36699.3	[10000] µg/L		06:26:43
1	Sr 421.552†	172238.8	167445.7	[1000] µg/L		06:26:43
1	Sc 361.383	2025538.1	2025538.1	102.48 %		06:28:08
1	Y 371.029	1274375.3	1274375.3	102.02 %		06:28:08
1	Ag 328.068†	114457.3	111776.3	[1000] µg/L		06:28:13
1	As 188.979†	489.4	480.3	[1000] µg/L		06:28:34
1	B 249.677†	22326.6	21415.6	[1000] µg/L		06:28:13
1	Ba 233.527†	37399.8	36517.4	[1000] µg/L		06:28:13
1	Be 313.107†	1554768.1	1513258.9	[1000] µg/L		06:28:08
1	Cd 226.502†	36797.7	36031.3	[1000] µg/L		06:28:13
1	Co 228.616†	19631.9	19205.5	[1000] µg/L		06:28:13
1	Cr 267.716†	47065.9	46027.6	[1000] µg/L		06:28:13
1	Cu 324.752†	146844.3	139385.9	[1000] µg/L		06:28:13
1	Mn 257.610†	295323.0	288314.5	[1000] µg/L		06:28:08
1	Mo 202.031†	8742.7	8518.3	[1000] µg/L		06:28:13
1	Ni 231.604†	17650.7	16891.6	[1000] µg/L		06:28:13
1	P 214.914†	2551.9	2270.3	[5000] µg/L		06:28:34
1	Pb 220.353†	3878.6	3723.4	[1000] µg/L		06:28:34
1	S 181.975 Axial†	405.9	372.9	[2000] µg/L		06:28:34
1	Sb 206.836†	1043.0	993.7	[1000] µg/L		06:28:34
1	Se 196.026†	717.2	691.9	[1000] µg/L		06:28:34
1	SiO2†	56939.5	53170.4	[10695] µg/L		06:28:13
1	Si 251.611†	64538.5	62692.1	[5000] µg/L		06:28:13
1	Sn 189.927†	1956.0	1885.1	[1000] µg/L		06:28:34
1	Ti 334.940†	433187.5	421986.6	[1000] µg/L		06:28:08
1	Tl 190.801†	609.0	618.8	[1000] µg/L		06:28:34
1	U 409.014†	11136.7	11053.1	[1000] µg/L		06:28:13
1	V 292.402†	87279.2	85279.5	[1000] µg/L		06:28:13
1	Zn 213.857†	37892.2	36341.8	[1000] µg/L		06:28:13
2	Sc RADIAL	80394.1	80394.1	102 %		06:27:09
2	Al 396.153Radial†	15388.6	15051.8	[10000] µg/L		06:27:09
2	Ca 317.933Radial†	13761.5	13186.7	[10000] µg/L		06:27:30
2	Fe 238.204 Radial†	766.1	731.5	[10000] µg/L		06:27:30
2	K 766.490 Radial†	16645.7	15850.8	[10000] µg/L		06:27:09
2	Mg 279.077 IEC†	988.8	957.1	[10000] µg/L		06:27:30
2	Na 589.592 Radial†	37940.9	36484.1	[10000] µg/L		06:27:09
2	Sr 421.552†	171452.8	166737.7	[1000] µg/L		06:27:09
2	Sc 361.383	2005963.8	2005963.8	101.49 %		06:28:41
2	Y 371.029	1262095.6	1262095.6	101.04 %		06:28:41
2	Ag 328.068†	114499.9	112908.1	[1000] µg/L		06:28:46
2	As 188.979†	484.4	480.0	[1000] µg/L		06:29:07
2	B 249.677†	22337.7	21639.1	[1000] µg/L		06:28:46
2	Ba 233.527†	37326.1	36801.0	[1000] µg/L		06:28:46
2	Be 313.107†	1535483.2	1509061.5	[1000] µg/L		06:28:41
2	Cd 226.502†	36703.6	36288.9	[1000] µg/L		06:28:46
2	Co 228.616†	19648.8	19409.1	[1000] µg/L		06:28:46
2	Cr 267.716†	47002.7	46413.4	[1000] µg/L		06:28:46
2	Cu 324.752†	146724.2	140665.8	[1000] µg/L		06:28:46
2	Mn 257.610†	291677.7	287534.8	[1000] µg/L		06:28:41
2	Mo 202.031†	8720.7	8579.9	[1000] µg/L		06:28:46
2	Ni 231.604†	17632.0	17041.2	[1000] µg/L		06:28:46
2	P 214.914†	2525.0	2268.0	[5000] µg/L		06:29:07
2	Pb 220.353†	3839.4	3721.8	[1000] µg/L		06:29:07

2	S 181.975 Axial†	398.2	369.2	[2000]	µg/L	06:29:07
2	Sb 206.836†	1033.6	994.4	[1000]	µg/L	06:29:07
2	Se 196.026†	706.1	687.8	[1000]	µg/L	06:29:07
2	SiO2†	56849.3	53623.6	[10695]	µg/L	06:28:46
2	Si 251.611†	64443.7	63213.2	[5000]	µg/L	06:28:46
2	Sn 189.927†	1923.5	1871.8	[1000]	µg/L	06:29:07
2	Ti 334.940†	428029.5	421029.1	[1000]	µg/L	06:28:41
2	Tl 190.801†	607.5	623.1	[1000]	µg/L	06:29:07
2	U 409.014†	11121.9	11144.5	[1000]	µg/L	06:28:46
2	V 292.402†	87192.6	86025.2	[1000]	µg/L	06:28:46
2	Zn 213.857†	37875.2	36685.8	[1000]	µg/L	06:28:46
3	Sc RADIAL	80380.2	80380.2	102	%	06:27:35
3	Al 396.153Radial†	15313.9	14981.5	[10000]	µg/L	06:27:35
3	Ca 317.933Radial†	13841.7	13267.4	[10000]	µg/L	06:27:56
3	Fe 238.204 Radial†	772.1	737.5	[10000]	µg/L	06:27:56
3	K 766.490 Radial†	16625.3	15833.7	[10000]	µg/L	06:27:35
3	Mg 279.077 IEC†	991.4	959.9	[10000]	µg/L	06:27:56
3	Na 589.592 Radial†	37822.8	36375.3	[10000]	µg/L	06:27:35
3	Sr 421.552†	170950.2	166275.9	[1000]	µg/L	06:27:35
3	Sc 361.383	2007251.3	2007251.3	101.56	%	06:29:14
3	Y 371.029	1262998.2	1262998.2	101.11	%	06:29:14
3	Ag 328.068†	109571.5	107983.0	[1000]	µg/L	06:29:20
3	As 188.979†	419.4	415.7	[1000]	µg/L	06:29:40
3	B 249.677†	21215.0	20519.6	[1000]	µg/L	06:29:20
3	Ba 233.527†	34713.2	34204.5	[1000]	µg/L	06:29:20
3	Be 313.107†	1466974.8	1440633.8	[1000]	µg/L	06:29:14
3	Cd 226.502†	34039.6	33642.7	[1000]	µg/L	06:29:20
3	Co 228.616†	18023.7	17796.5	[1000]	µg/L	06:29:20
3	Cr 267.716†	42166.7	41621.9	[1000]	µg/L	06:29:20
3	Cu 324.752†	135506.4	129527.4	[1000]	µg/L	06:29:20
3	Mn 257.610†	279120.1	274985.5	[1000]	µg/L	06:29:14
3	Mo 202.031†	8001.7	7866.3	[1000]	µg/L	06:29:20
3	Ni 231.604†	16228.0	15647.6	[1000]	µg/L	06:29:20
3	P 214.914†	2231.9	1977.8	[5000]	µg/L	06:29:40
3	Pb 220.353†	3363.6	3250.9	[1000]	µg/L	06:29:40
3	S 181.975 Axial†	365.4	336.6	[2000]	µg/L	06:29:40
3	Sb 206.836†	901.8	863.9	[1000]	µg/L	06:29:40
3	Se 196.026†	633.1	615.4	[1000]	µg/L	06:29:40
3	SiO2†	53579.0	50367.6	[10695]	µg/L	06:29:20
3	Si 251.611†	60554.5	59343.0	[5000]	µg/L	06:29:20
3	Sn 189.927†	1618.7	1570.4	[1000]	µg/L	06:29:40
3	Ti 334.940†	407594.2	400636.8	[1000]	µg/L	06:29:14
3	Tl 190.801†	542.0	558.2	[1000]	µg/L	06:29:40
3	U 409.014†	10131.9	10162.6	[1000]	µg/L	06:29:20
3	V 292.402†	79295.9	78194.6	[1000]	µg/L	06:29:20
3	Zn 213.857†	34859.8	33692.7	[1000]	µg/L	06:29:20

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Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	2012917.7	10948.46	0.54%	101.84 %
Sc RADIAL	80398.9	21.55	0.03%	102 %
Y 371.029	1266489.7	6844.03	0.54%	101.39 %
Ag 328.068†	110889.1	2579.65	2.33%	[1000] µg/L
Al 396.153Radial†	15044.4	59.49	0.40%	[10000] µg/L
As 188.979†	458.6	37.21	8.11%	[1000] µg/L
B 249.677†	21191.5	592.46	2.80%	[1000] µg/L
Ba 233.527†	35841.0	1424.28	3.97%	[1000] µg/L
Be 313.107†	1487651.4	40772.47	2.74%	[1000] µg/L
Ca 317.933Radial†	13239.1	45.37	0.34%	[10000] µg/L
Cd 226.502†	35321.0	1459.14	4.13%	[1000] µg/L
Co 228.616†	18803.7	878.16	4.67%	[1000] µg/L
Cr 267.716†	44687.6	2662.01	5.96%	[1000] µg/L
Cu 324.752†	136526.4	6094.98	4.46%	[1000] µg/L
Fe 238.204 Radial†	734.7	3.00	0.41%	[10000] µg/L
K 766.490 Radial†	15874.9	57.28	0.36%	[10000] µg/L
Mg 279.077 IEC†	958.2	1.46	0.15%	[10000] µg/L
Mn 257.610†	283611.6	7480.60	2.64%	[1000] µg/L
Mo 202.031†	8321.5	395.38	4.75%	[1000] µg/L
Na 589.592 Radial†	36519.6	164.92	0.45%	[10000] µg/L

Ni 231.604†	16526.8	765.08	4.63%	[1000]	µg/L
P 214.914†	2172.0	168.22	7.75%	[5000]	µg/L
Pb 220.353†	3565.4	272.36	7.64%	[1000]	µg/L
S 181.975 Axial†	359.6	19.96	5.55%	[2000]	µg/L
Sb 206.836†	950.7	75.14	7.90%	[1000]	µg/L
Se 196.026†	665.0	43.02	6.47%	[1000]	µg/L
SiO2†	52387.2	1763.65	3.37%	[10695]	µg/L
Si 251.611†	61749.5	2100.29	3.40%	[5000]	µg/L
Sn 189.927†	1775.8	177.97	10.02%	[1000]	µg/L
Sr 421.552†	166819.8	589.18	0.35%	[1000]	µg/L
Ti 334.940†	414550.8	12059.39	2.91%	[1000]	µg/L
Tl 190.801†	600.0	36.24	6.04%	[1000]	µg/L
U 409.014†	10786.7	542.42	5.03%	[1000]	µg/L
V 292.402†	83166.5	4321.84	5.20%	[1000]	µg/L
Zn 213.857†	35573.4	1637.80	4.60%	[1000]	µg/L

Sequence No.: 5

Sample ID: S10

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 5

Date Collected: 1/29/2010 06:29:49

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Analysis Time
1	Sc RADIAL	79716.7	79716.7	102 %		06:30:22
1	Al 396.153Radial†	78496.7	77308.9	[50000] µg/L		06:30:22
1	Ca 317.933Radial†	70941.5	69594.2	[50000] µg/L		06:30:22
1	Fe 238.204 Radial†	1575.0	1534.3	[20000] µg/L		06:30:42
1	Mg 279.077 IEC†	5020.7	4934.7	[50000] µg/L		06:30:42
1	Na 589.592 Radial†	77315.4	75562.8	[20000] µg/L		06:30:22
1	Sc 361.383	2008171.4	2008171.4	101.60 %		06:31:45
1	Y 371.029	1255104.6	1255104.6	100.48 %		06:31:45
2	Sc RADIAL	79442.6	79442.6	101 %		06:30:47
2	Al 396.153Radial†	78081.7	77165.6	[50000] µg/L		06:30:47
2	Ca 317.933Radial†	70417.1	69317.1	[50000] µg/L		06:30:47
2	Fe 238.204 Radial†	1578.8	1543.3	[20000] µg/L		06:31:08
2	Mg 279.077 IEC†	4998.0	4929.3	[50000] µg/L		06:31:08
2	Na 589.592 Radial†	77062.9	75575.9	[20000] µg/L		06:30:47
2	Sc 361.383	2006995.9	2006995.9	101.55 %		06:31:53
2	Y 371.029	1254366.8	1254366.8	100.42 %		06:31:53
3	Sc RADIAL	79515.0	79515.0	101 %		06:31:13
3	Al 396.153Radial†	78405.5	77414.9	[50000] µg/L		06:31:13
3	Ca 317.933Radial†	70864.1	69695.0	[50000] µg/L		06:31:13
3	Fe 238.204 Radial†	1520.3	1484.2	[20000] µg/L		06:31:34
3	Mg 279.077 IEC†	4834.2	4763.1	[50000] µg/L		06:31:34
3	Na 589.592 Radial†	77349.0	75788.9	[20000] µg/L		06:31:13
3	Sc 361.383	1992141.0	1992141.0	100.79 %		06:32:01
3	Y 371.029	1245087.6	1245087.6	99.678 %		06:32:01

## Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib Units
Sc 361.383	2002436.1	8935.19	0.45%	101.31 %	
Sc RADIAL	79558.1	142.05	0.18%	101 %	
Y 371.029	1251519.7	5582.56	0.45%	100.19 %	
Al 396.153Radial†	77296.4	125.09	0.16%	[50000] µg/L	
Ca 317.933Radial†	69535.4	195.64	0.28%	[50000] µg/L	
Fe 238.204 Radial†	1520.6	31.85	2.09%	[20000] µg/L	
Mg 279.077 IEC†	4875.7	97.55	2.00%	[50000] µg/L	
Na 589.592 Radial†	75642.5	126.95	0.17%	[20000] µg/L	

## Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	110.8	0.00000	0.999970	
Al 396.153Radial	3	Lin Thru 0	0.0	1.544	0.00000	0.999984	
As 188.979	3	Lin Thru 0	0.0	0.4588	0.00000	0.999916	
B 249.677	3	Lin Thru 0	0.0	21.11	0.00000	0.999949	
Ba 233.527	3	Lin Thru 0	0.0	35.80	0.00000	0.999962	
Be 313.107	3	Lin Thru 0	0.0	1486	0.00000	0.999971	
Ca 317.933Radial	3	Lin Thru 0	0.0	1.388	0.00000	0.999955	
Cd 226.502	3	Lin Thru 0	0.0	35.29	0.00000	0.999955	
Co 228.616	3	Lin Thru 0	0.0	18.80	0.00000	0.999975	
Cr 267.716	3	Lin Thru 0	0.0	44.63	0.00000	0.999947	
Cu 324.752	3	Lin Thru 0	0.0	136.4	0.00000	0.999951	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.0755	0.00000	0.999908	
K 766.490 Radial	3	Lin Thru 0	0.0	1.585	0.00000	0.999995	
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0974	0.00000	0.999994	
Mn 257.610	3	Lin Thru 0	0.0	282.1	0.00000	0.999901	
Mo 202.031	3	Lin Thru 0	0.0	8.255	0.00000	0.999820	
Na 589.592 Radia	2	Lin Thru 0	0.0	3.756	0.00000	0.999904	

Ni 231.604	3	Lin Thru 0	0.0	16.52	0.00000	0.999956
P 214.914	3	Lin Thru 0	0.0	0.4339	0.00000	0.999957
Pb 220.353	3	Lin Thru 0	0.0	3.565	0.00000	0.999963
S 181.975 Axial	3	Lin Thru 0	0.0	0.1799	0.00000	0.999881
Sb 206.836	3	Lin Thru 0	0.0	0.9455	0.00000	0.999879
Se 196.026	3	Lin Thru 0	0.0	0.6653	0.00000	0.999933
SiO2	3	Lin Thru 0	0.0	4.898	0.00000	0.999971
Si 251.611	3	Lin Thru 0	0.0	12.34	0.00000	0.999971
Sn 189.927	3	Lin Thru 0	0.0	1.774	0.00000	0.999934
Sr 421.552	3	Lin Thru 0	0.0	167.2	0.00000	0.999980
Ti 334.940	3	Lin Thru 0	0.0	413.7	0.00000	0.999972
Tl 190.801	3	Lin Thru 0	0.0	0.6005	0.00000	0.999950
U 409.014	3	Lin Thru 0	0.0	10.76	0.00000	0.999915
V 292.402	3	Lin Thru 0	0.0	83.11	0.00000	0.999958
Zn 213.857	3	Lin Thru 0	0.0	35.57	0.00000	0.999954

Sequence No.: 6

Sample ID: ICV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 9

Date Collected: 1/29/2010 06:32:11

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	79928.9	79928.9	102 %		06:32:44
1	Al 396.153Radial†	7863.1	7750.1	5008.5 µg/L	5008.5 ppb	06:32:44
1	Ca 317.933Radial†	7191.5	6814.0	4909.8 µg/L	4909.8 ppb	06:32:44
1	Fe 238.204 Radial†	403.4	379.7	5039.9 µg/L	5039.9 ppb	06:33:04
1	K 766.490 Radial†	4314.2	3837.3	2421.0 µg/L	2421.0 ppb	06:32:44
1	Mg 279.077 IEC†	477.4	460.6	4730.4 µg/L	4730.4 ppb	06:33:04
1	Na 589.592 Radial†	9870.7	9138.1	2432.9 µg/L	2432.9 ppb	06:32:44
1	Sr 421.552†	91682.7	89387.2	534.71 µg/L	534.71 ppb	06:32:44
1	Sc 361.383	1987278.7	1987278.7	100.55 %		06:34:08
1	Y 371.029	1252104.6	1252104.6	100.24 %		06:34:08
1	Ag 328.068†	28322.5	28260.8	258.77 µg/L	258.77 ppb	06:34:13
1	As 188.979†	238.7	240.1	522.34 µg/L	522.34 ppb	06:34:34
1	B 249.677†	11991.7	11556.5	545.61 µg/L	545.61 ppb	06:34:13
1	Ba 233.527†	19458.7	19376.6	542.16 µg/L	542.16 ppb	06:34:13
1	Be 313.107†	389930.5	383972.9	258.16 µg/L	258.16 ppb	06:34:08
1	Cd 226.502†	18926.4	18948.6	536.81 µg/L	536.81 ppb	06:34:13
1	Co 228.616†	10250.1	10243.6	544.39 µg/L	544.39 ppb	06:34:13
1	Cr 267.716†	23613.0	23586.5	528.82 µg/L	528.82 ppb	06:34:13
1	Cu 324.752†	78591.2	74263.2	545.22 µg/L	545.22 ppb	06:34:13
1	Mn 257.610†	141474.8	140852.0	499.74 µg/L	499.74 ppb	06:34:13
1	Mo 202.031†	4459.9	4423.0	536.02 µg/L	536.02 ppb	06:34:34
1	Ni 231.604†	8653.6	8275.0	500.46 µg/L	500.46 ppb	06:34:13
1	P 214.914†	1442.0	1214.3	2746.4 µg/L	2746.4 ppb	06:34:34
1	Pb 220.353†	2032.6	1960.4	550.13 µg/L	550.13 ppb	06:34:34
1	S 181.975 Axial†	483.2	457.4	2543.0 µg/L	2543.0 ppb	06:34:34
1	Sb 206.836†	512.9	486.1	516.52 µg/L	516.52 ppb	06:34:34
1	Se 196.026†	1892.1	1873.8	2835.8 µg/L	2835.8 ppb	06:34:34
1	SiO2†	57325.7	54624.1	11153 µg/L	11153 ppb	06:34:13
1	Si 251.611†	64706.3	64071.5	5190.1 µg/L	5190.1 ppb	06:34:13
1	Sn 189.927†	1017.3	988.3	559.55 µg/L	559.55 ppb	06:34:34
1	Ti 334.940†	204780.4	202961.2	490.33 µg/L	490.33 ppb	06:34:08
1	Tl 190.801†	300.2	323.1	542.17 µg/L	542.17 ppb	06:34:34
1	U 409.014†	5086.1	5244.6	486.47 µg/L	486.47 ppb	06:34:13
1	V 292.402†	42507.4	42391.2	516.19 µg/L	516.19 ppb	06:34:13
1	Zn 213.857†	19016.5	18280.7	510.28 µg/L	510.28 ppb	06:34:13
2	Sc RADIAL	80932.1	80932.1	103 %		06:33:10
2	Al 396.153Radial†	7837.5	7629.6	4930.5 µg/L	4930.5 ppb	06:33:10
2	Ca 317.933Radial†	7204.8	6739.4	4856.0 µg/L	4856.0 ppb	06:33:10
2	Fe 238.204 Radial†	409.7	381.0	5056.4 µg/L	5056.4 ppb	06:33:30
2	K 766.490 Radial†	4336.8	3806.8	2401.7 µg/L	2401.7 ppb	06:33:10
2	Mg 279.077 IEC†	492.8	469.7	4824.2 µg/L	4824.2 ppb	06:33:30
2	Na 589.592 Radial†	9853.9	9001.7	2396.6 µg/L	2396.6 ppb	06:33:10
2	Sr 421.552†	91248.9	87850.7	525.52 µg/L	525.52 ppb	06:33:10
2	Sc 361.383	1984521.4	1984521.4	100.41 %		06:34:40
2	Y 371.029	1250390.4	1250390.4	100.10 %		06:34:40
2	Ag 328.068†	28694.2	28670.1	262.51 µg/L	262.51 ppb	06:34:46
2	As 188.979†	245.9	247.6	538.66 µg/L	538.66 ppb	06:35:06
2	B 249.677†	12257.5	11837.7	558.94 µg/L	558.94 ppb	06:34:46
2	Ba 233.527†	19731.6	19675.3	550.52 µg/L	550.52 ppb	06:34:46
2	Be 313.107†	393202.7	387770.6	260.72 µg/L	260.72 ppb	06:34:40
2	Cd 226.502†	19168.3	19215.7	544.38 µg/L	544.38 ppb	06:34:46
2	Co 228.616†	10409.0	10416.0	553.55 µg/L	553.55 ppb	06:34:46
2	Cr 267.716†	23953.2	23958.0	537.14 µg/L	537.14 ppb	06:34:46
2	Cu 324.752†	79714.3	75490.3	554.22 µg/L	554.22 ppb	06:34:46
2	Mn 257.610†	143465.5	143030.2	507.45 µg/L	507.45 ppb	06:34:46
2	Mo 202.031†	4436.5	4405.9	533.95 µg/L	533.95 ppb	06:35:06
2	Ni 231.604†	8774.6	8407.5	508.47 µg/L	508.47 ppb	06:34:46
2	P 214.914†	1436.2	1210.5	2736.7 µg/L	2736.7 ppb	06:35:06
2	Pb 220.353†	2007.1	1937.8	543.76 µg/L	543.76 ppb	06:35:06



2	S 181.975 Axial†	481.3	456.2	2536.2 µg/L	2536.2 ppb	06:35:06
2	Sb 206.836†	506.8	480.7	510.67 µg/L	510.67 ppb	06:35:06
2	Se 196.026†	1892.1	1876.5	2839.8 µg/L	2839.8 ppb	06:35:06
2	SiO2†	58117.8	55492.1	11330 µg/L	11330 ppb	06:34:46
2	Si 251.611†	65621.4	65072.3	5271.2 µg/L	5271.2 ppb	06:34:46
2	Sn 189.927†	1016.3	988.7	559.77 µg/L	559.77 ppb	06:35:06
2	Ti 334.940†	206425.7	204882.8	494.96 µg/L	494.96 ppb	06:34:40
2	Tl 190.801†	296.0	319.4	535.98 µg/L	535.98 ppb	06:35:06
2	U 409.014†	5189.5	5354.6	496.70 µg/L	496.70 ppb	06:34:46
2	V 292.402†	43059.1	42999.4	523.53 µg/L	523.53 ppb	06:34:46
2	Zn 213.857†	19315.0	18604.2	519.32 µg/L	519.32 ppb	06:34:46
3	Sc RADIAL	79818.3	79818.3	102 %		06:33:36
3	Al 396.153Radial†	7951.1	7847.3	5073.0 µg/L	5073.0 ppb	06:33:36
3	Ca 317.933Radial†	7319.9	6950.0	5007.8 µg/L	5007.8 ppb	06:33:36
3	Fe 238.204 Radial†	406.5	383.4	5087.7 µg/L	5087.7 ppb	06:33:56
3	K 766.490 Radial†	4382.6	3910.5	2467.1 µg/L	2467.1 ppb	06:33:36
3	Mg 279.077 IEC†	491.3	474.9	4875.7 µg/L	4875.7 ppb	06:33:56
3	Na 589.592 Radial†	9904.3	9184.7	2445.3 µg/L	2445.3 ppb	06:33:36
3	Sr 421.552†	92698.1	90510.4	541.43 µg/L	541.43 ppb	06:33:36
3	Sc 361.383	1982848.1	1982848.1	100.32 %		06:35:13
3	Y 371.029	1248683.6	1248683.6	99.966 %		06:35:13
3	Ag 328.068†	27621.7	27625.2	252.84 µg/L	252.84 ppb	06:35:19
3	As 188.979†	213.0	215.0	467.84 µg/L	467.84 ppb	06:35:39
3	B 249.677†	11681.8	11274.2	532.16 µg/L	532.16 ppb	06:35:19
3	Ba 233.527†	18671.7	18635.4	521.41 µg/L	521.41 ppb	06:35:19
3	Be 313.107†	379861.1	374802.5	252.00 µg/L	252.00 ppb	06:35:13
3	Cd 226.502†	18080.1	18147.0	514.07 µg/L	514.07 ppb	06:35:19
3	Co 228.616†	9710.9	9728.9	516.97 µg/L	516.97 ppb	06:35:19
3	Cr 267.716†	21991.7	22023.0	493.76 µg/L	493.76 ppb	06:35:19
3	Cu 324.752†	74691.9	70551.1	518.01 µg/L	518.01 ppb	06:35:19
3	Mn 257.610†	134263.1	133978.0	475.37 µg/L	475.37 ppb	06:35:19
3	Mo 202.031†	3848.5	3823.6	463.40 µg/L	463.40 ppb	06:35:39
3	Ni 231.604†	8223.5	7865.5	475.70 µg/L	475.70 ppb	06:35:19
3	P 214.914†	1280.7	1056.7	2385.0 µg/L	2385.0 ppb	06:35:39
3	Pb 220.353†	1810.1	1743.1	489.06 µg/L	489.06 ppb	06:35:39
3	S 181.975 Axial†	437.8	413.2	2297.3 µg/L	2297.3 ppb	06:35:39
3	Sb 206.836†	453.0	427.6	453.77 µg/L	453.77 ppb	06:35:39
3	Se 196.026†	1708.0	1694.6	2566.5 µg/L	2566.5 ppb	06:35:39
3	SiO2†	55274.1	52706.5	10761 µg/L	10761 ppb	06:35:19
3	Si 251.611†	62208.5	61725.5	5000.1 µg/L	5000.1 ppb	06:35:19
3	Sn 189.927†	866.4	840.2	476.10 µg/L	476.10 ppb	06:35:39
3	Ti 334.940†	198834.1	197489.1	477.09 µg/L	477.09 ppb	06:35:13
3	Tl 190.801†	263.7	287.4	482.44 µg/L	482.44 ppb	06:35:39
3	U 409.014†	4753.0	4923.9	456.65 µg/L	456.65 ppb	06:35:19
3	V 292.402†	39970.5	39956.9	486.23 µg/L	486.23 ppb	06:35:19
3	Zn 213.857†	18077.7	17387.2	485.30 µg/L	485.30 ppb	06:35:19

## Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1984882.7	100.43 %	0.113			0.11%
Sc RADIAL	80226.4	102 %	0.8			0.76%
Y 371.029	1250392.9	100.10 %	0.137			0.14%
Ag 328.068†	28185.4	258.04 µg/L	4.876	258.04 ppb	4.876	1.89%
QC value within limits for Ag 328.068 Recovery = 103.22%						
Al 396.153Radial†	7742.3	5004.0 µg/L	71.36	5004.0 ppb	71.36	1.43%
QC value within limits for Al 396.153Radial Recovery = 100.08%						
As 188.979†	234.2	509.62 µg/L	37.084	509.62 ppb	37.084	7.28%
QC value within limits for As 188.979 Recovery = 101.92%						
B 249.677†	11556.1	545.57 µg/L	13.388	545.57 ppb	13.388	2.45%
QC value within limits for B 249.677 Recovery = 109.11%						
Ba 233.527†	19229.1	538.03 µg/L	14.991	538.03 ppb	14.991	2.79%
QC value within limits for Ba 233.527 Recovery = 107.61%						
Be 313.107†	382182.0	256.96 µg/L	4.482	256.96 ppb	4.482	1.74%
QC value within limits for Be 313.107 Recovery = 102.78%						
Ca 317.933Radial†	6834.4	4924.5 µg/L	76.96	4924.5 ppb	76.96	1.56%
QC value within limits for Ca 317.933Radial Recovery = 98.49%						
Cd 226.502†	18770.4	531.75 µg/L	15.777	531.75 ppb	15.777	2.97%
QC value within limits for Cd 226.502 Recovery = 106.35%						
Co 228.616†	10129.5	538.30 µg/L	19.033	538.30 ppb	19.033	3.54%

QC value within limits for Co 228.616 Recovery = 107.66%							
Cr 267.716†	23189.1	519.91 µg/L	23.021	519.91 ppb	23.021	4.43%	
QC value within limits for Cr 267.716 Recovery = 103.98%							
Cu 324.752†	73434.9	539.15 µg/L	18.854	539.15 ppb	18.854	3.50%	
QC value within limits for Cu 324.752 Recovery = 107.83%							
Fe 238.204 Radial†	381.4	5061.4 µg/L	24.29	5061.4 ppb	24.29	0.48%	
QC value within limits for Fe 238.204 Radial Recovery = 101.23%							
K 766.490 Radial†	3851.5	2429.9 µg/L	33.62	2429.9 ppb	33.62	1.38%	
QC value within limits for K 766.490 Radial Recovery = 97.20%							
Mg 279.077 IEC†	468.4	4810.1 µg/L	73.68	4810.1 ppb	73.68	1.53%	
QC value within limits for Mg 279.077 IEC Recovery = 96.20%							
Mn 257.610†	139286.7	494.19 µg/L	16.746	494.19 ppb	16.746	3.39%	
QC value within limits for Mn 257.610 Recovery = 98.84%							
Mo 202.031†	4217.5	511.12 µg/L	41.341	511.12 ppb	41.341	8.09%	
QC value within limits for Mo 202.031 Recovery = 102.22%							
Na 589.592 Radial†	9108.2	2424.9 µg/L	25.31	2424.9 ppb	25.31	1.04%	
QC value within limits for Na 589.592 Radial Recovery = 97.00%							
Ni 231.604†	8182.7	494.87 µg/L	17.085	494.87 ppb	17.085	3.45%	
QC value within limits for Ni 231.604 Recovery = 98.97%							
P 214.914†	1160.5	2622.7 µg/L	205.94	2622.7 ppb	205.94	7.85%	
QC value within limits for P 214.914 Recovery = 104.91%							
Pb 220.353†	1880.4	527.65 µg/L	33.571	527.65 ppb	33.571	6.36%	
QC value within limits for Pb 220.353 Recovery = 105.53%							
S 181.975 Axial†	442.3	2458.8 µg/L	139.96	2458.8 ppb	139.96	5.69%	
QC value within limits for S 181.975 Axial Recovery = 98.35%							
Sb 206.836†	464.8	493.65 µg/L	34.665	493.65 ppb	34.665	7.02%	
QC value within limits for Sb 206.836 Recovery = 98.73%							
Se 196.026†	1815.0	2747.3 µg/L	156.63	2747.3 ppb	156.63	5.70%	
QC value within limits for Se 196.026 Recovery = 109.89%							
SiO2†	54274.2	11081 µg/L	291.0	11081 ppb	291.0	2.63%	
QC value within limits for SiO2 Recovery = 103.61%							
Si 251.611†	63623.1	5153.8 µg/L	139.15	5153.8 ppb	139.15	2.70%	
QC value within limits for Si 251.611 Recovery = 103.08%							
Sn 189.927†	939.1	531.81 µg/L	48.243	531.81 ppb	48.243	9.07%	
QC value within limits for Sn 189.927 Recovery = 106.36%							
Sr 421.552†	89249.4	533.88 µg/L	7.987	533.88 ppb	7.987	1.50%	
QC value within limits for Sr 421.552 Recovery = 106.78%							
Ti 334.940†	201777.7	487.46 µg/L	9.276	487.46 ppb	9.276	1.90%	
QC value within limits for Ti 334.940 Recovery = 97.49%							
Tl 190.801†	309.9	520.20 µg/L	32.842	520.20 ppb	32.842	6.31%	
QC value within limits for Tl 190.801 Recovery = 104.04%							
U 409.014†	5174.4	479.94 µg/L	20.807	479.94 ppb	20.807	4.34%	
QC value within limits for U 409.014 Recovery = 95.99%							
V 292.402†	41782.5	508.65 µg/L	19.757	508.65 ppb	19.757	3.88%	
QC value within limits for V 292.402 Recovery = 101.73%							
Zn 213.857†	18090.7	504.96 µg/L	17.617	504.96 ppb	17.617	3.49%	
QC value within limits for Zn 213.857 Recovery = 100.99%							
All analyte(s) passed QC.							

Sequence No.: 7

Sample ID: ICB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 10

Date Collected: 1/29/2010 06:35:50

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77995.9	77995.9	99.4 %		06:36:22
1	Al 396.153Radial†	-7.2	22.2	14.359 µg/L	14.359 ppb	06:36:22
1	Ca 317.933Radial†	252.4	6.8	4.9021 µg/L	4.9021 ppb	06:36:43
1	Fe 238.204 Radial†	17.6	1.3	17.681 µg/L	17.681 ppb	06:36:43
1	K 766.490 Radial†	396.0	-0.3	-0.1812 µg/L	-0.1812 ppb	06:36:22
1	Mg 279.077 IEC†	10.5	2.5	25.193 µg/L	25.193 ppb	06:36:43
1	Na 589.592 Radial†	519.5	-30.9	-8.2362 µg/L	-8.2362 ppb	06:36:22
1	Sr 421.552†	645.2	15.2	0.0908 µg/L	0.0908 ppb	06:36:22
1	Sc 361.383	1960605.6	1960605.6	99.198 %		06:37:45
1	Y 371.029	1239249.6	1239249.6	99.211 %		06:37:45
1	Ag 328.068†	-94.2	-2.3	-0.0208 µg/L	-0.0208 ppb	06:37:50
1	As 188.979†	-2.2	0.5	1.0624 µg/L	1.0624 ppb	06:38:11
1	B 249.677†	380.1	13.3	0.6192 µg/L	0.6192 ppb	06:37:50
1	Ba 233.527†	-20.1	3.7	0.1042 µg/L	0.1042 ppb	06:38:11
1	Be 313.107†	3907.2	105.0	0.0706 µg/L	0.0706 ppb	06:37:50
1	Cd 226.502†	-105.8	18.6	0.5264 µg/L	0.5264 ppb	06:38:11
1	Co 228.616†	-50.4	-1.5	-0.0807 µg/L	-0.0807 ppb	06:38:11
1	Cr 267.716†	-91.9	9.5	0.2138 µg/L	0.2138 ppb	06:37:50
1	Cu 324.752†	3935.5	67.4	0.4965 µg/L	0.4965 ppb	06:37:50
1	Mn 257.610†	-139.9	6.8	0.0255 µg/L	0.0255 ppb	06:38:11
1	Mo 202.031†	23.3	10.9	1.3231 µg/L	1.3231 ppb	06:38:11
1	Ni 231.604†	329.4	0.7	0.0426 µg/L	0.0426 ppb	06:38:11
1	P 214.914†	218.6	0.6	1.2664 µg/L	1.2664 ppb	06:38:11
1	Pb 220.353†	57.4	-3.3	-0.9263 µg/L	-0.9263 ppb	06:38:11
1	S 181.975 Axial†	21.0	-2.0	-10.861 µg/L	-10.861 ppb	06:38:11
1	Sb 206.836†	28.3	4.5	4.8136 µg/L	4.8136 ppb	06:38:11
1	Se 196.026†	5.1	-2.8	-4.1480 µg/L	-4.1480 ppb	06:38:11
1	SiO2†	2379.6	9.4	1.9247 µg/L	1.9247 ppb	06:37:50
1	Si 251.611†	300.7	20.7	1.6782 µg/L	1.6782 ppb	06:38:11
1	Sn 189.927†	30.0	6.8	3.8184 µg/L	3.8184 ppb	06:38:11
1	Ti 334.940†	737.3	39.3	0.0932 µg/L	0.0932 ppb	06:37:50
1	Tl 190.801†	-25.0	-0.6	-1.0624 µg/L	-1.0624 ppb	06:38:11
1	U 409.014†	-156.3	28.7	2.6636 µg/L	2.6636 ppb	06:37:50
1	V 292.402†	-126.2	-11.9	-0.1292 µg/L	-0.1292 ppb	06:37:50
1	Zn 213.857†	645.3	18.3	0.5104 µg/L	0.5104 ppb	06:38:11
2	Sc RADIAL	76938.5	76938.5	98.0 %		06:36:48
2	Al 396.153Radial†	-31.9	-3.1	-2.0123 µg/L	-2.0123 ppb	06:36:48
2	Ca 317.933Radial†	255.6	13.5	9.7238 µg/L	9.7238 ppb	06:37:09
2	Fe 238.204 Radial†	16.8	0.8	10.164 µg/L	10.164 ppb	06:37:09
2	K 766.490 Radial†	429.2	39.1	24.673 µg/L	24.673 ppb	06:36:48
2	Mg 279.077 IEC†	13.3	5.4	55.337 µg/L	55.337 ppb	06:37:09
2	Na 589.592 Radial†	529.9	-13.1	-3.4938 µg/L	-3.4938 ppb	06:36:48
2	Sr 421.552†	755.9	137.0	0.8198 µg/L	0.8198 ppb	06:36:48
2	Sc 361.383	1969612.5	1969612.5	99.654 %		06:38:17
2	Y 371.029	1244668.3	1244668.3	99.644 %		06:38:17
2	Ag 328.068†	-104.8	-12.6	-0.1102 µg/L	-0.1102 ppb	06:38:22
2	As 188.979†	0.6	3.3	7.1431 µg/L	7.1431 ppb	06:38:43
2	B 249.677†	374.4	5.7	0.2675 µg/L	0.2675 ppb	06:38:22
2	Ba 233.527†	-11.6	12.3	0.3443 µg/L	0.3443 ppb	06:38:43
2	Be 313.107†	3891.8	71.6	0.0480 µg/L	0.0480 ppb	06:38:22
2	Cd 226.502†	-103.3	21.6	0.6117 µg/L	0.6117 ppb	06:38:43
2	Co 228.616†	-40.5	8.7	0.4612 µg/L	0.4612 ppb	06:38:43
2	Cr 267.716†	-49.2	52.7	1.1821 µg/L	1.1821 ppb	06:38:22
2	Cu 324.752†	3969.6	83.5	0.6134 µg/L	0.6134 ppb	06:38:22
2	Mn 257.610†	-8.8	139.0	0.4918 µg/L	0.4918 ppb	06:38:43
2	Mo 202.031†	18.8	6.3	0.7600 µg/L	0.7600 ppb	06:38:43
2	Ni 231.604†	345.3	15.1	0.9134 µg/L	0.9134 ppb	06:38:43
2	P 214.914†	218.6	-0.5	-1.2611 µg/L	-1.2611 ppb	06:38:43
2	Pb 220.353†	72.4	11.5	3.2422 µg/L	3.2422 ppb	06:38:43

2	S 181.975 Axial†	27.2	4.2	23.371 µg/L	23.371 ppb	06:38:43
2	Sb 206.836†	25.6	1.7	1.8128 µg/L	1.8128 ppb	06:38:43
2	Se 196.026†	6.5	-1.5	-2.1619 µg/L	-2.1619 ppb	06:38:43
2	SiO2†	2374.0	-7.2	-1.4707 µg/L	-1.4707 ppb	06:38:22
2	Si 251.611†	348.3	67.0	5.4307 µg/L	5.4307 ppb	06:38:43
2	Sn 189.927†	26.4	3.1	1.7507 µg/L	1.7507 ppb	06:38:43
2	Ti 334.940†	808.5	107.4	0.2554 µg/L	0.2554 ppb	06:38:22
2	Tl 190.801†	-23.5	1.0	1.6427 µg/L	1.6427 ppb	06:38:43
2	U 409.014†	-267.1	-81.8	-7.6045 µg/L	-7.6045 ppb	06:38:22
2	V 292.402†	-80.6	34.4	0.4156 µg/L	0.4156 ppb	06:38:22
2	Zn 213.857†	662.3	32.4	0.9009 µg/L	0.9009 ppb	06:38:43
3	Sc RADIAL	76991.3	76991.3	98.1 %		06:37:14
3	Al 396.153Radial†	-12.3	16.9	10.942 µg/L	10.942 ppb	06:37:14
3	Ca 317.933Radial†	247.6	5.2	3.7205 µg/L	3.7205 ppb	06:37:34
3	Fe 238.204 Radial†	17.8	1.9	24.574 µg/L	24.574 ppb	06:37:34
3	K 766.490 Radial†	423.4	32.9	20.754 µg/L	20.754 ppb	06:37:14
3	Mg 279.077 IEC†	9.2	1.2	12.747 µg/L	12.747 ppb	06:37:34
3	Na 589.592 Radial†	518.4	-25.3	-6.7265 µg/L	-6.7265 ppb	06:37:14
3	Sr 421.552†	635.3	13.6	0.0813 µg/L	0.0813 ppb	06:37:14
3	Sc 361.383	1959006.8	1959006.8	99.117 %		06:38:49
3	Y 371.029	1238702.0	1238702.0	99.167 %		06:38:49
3	Ag 328.068†	-45.5	46.7	0.4229 µg/L	0.4229 ppb	06:38:54
3	As 188.979†	-4.3	-1.6	-3.4467 µg/L	-3.4467 ppb	06:39:15
3	B 249.677†	360.8	-6.0	-0.2929 µg/L	-0.2929 ppb	06:38:54
3	Ba 233.527†	-4.5	19.4	0.5413 µg/L	0.5413 ppb	06:39:15
3	Be 313.107†	4146.2	349.3	0.2349 µg/L	0.2349 ppb	06:38:54
3	Cd 226.502†	-104.8	19.5	0.5501 µg/L	0.5501 ppb	06:39:15
3	Co 228.616†	-46.6	2.3	0.1241 µg/L	0.1241 ppb	06:39:15
3	Cr 267.716†	-42.6	59.1	1.3247 µg/L	1.3247 ppb	06:38:54
3	Cu 324.752†	4021.8	157.7	1.1597 µg/L	1.1597 ppb	06:38:54
3	Mn 257.610†	-46.7	100.8	0.3600 µg/L	0.3600 ppb	06:39:15
3	Mo 202.031†	22.4	10.0	1.2150 µg/L	1.2150 ppb	06:39:15
3	Ni 231.604†	326.1	-2.4	-0.1473 µg/L	-0.1473 ppb	06:39:15
3	P 214.914†	215.3	-2.7	-6.2944 µg/L	-6.2944 ppb	06:39:15
3	Pb 220.353†	62.0	1.4	0.3900 µg/L	0.3900 ppb	06:39:15
3	S 181.975 Axial†	23.5	0.5	3.0563 µg/L	3.0563 ppb	06:39:15
3	Sb 206.836†	18.4	-5.5	-5.7930 µg/L	-5.7930 ppb	06:39:15
3	Se 196.026†	13.2	5.3	8.1326 µg/L	8.1326 ppb	06:39:15
3	SiO2†	2403.5	35.5	7.2565 µg/L	7.2565 ppb	06:38:54
3	Si 251.611†	312.7	33.0	2.6750 µg/L	2.6750 ppb	06:39:15
3	Sn 189.927†	22.4	-0.8	-0.4515 µg/L	-0.4515 ppb	06:39:15
3	Ti 334.940†	809.3	112.7	0.2714 µg/L	0.2714 ppb	06:38:54
3	Tl 190.801†	-19.3	5.1	8.4313 µg/L	8.4313 ppb	06:39:15
3	U 409.014†	-225.6	-41.4	-3.8526 µg/L	-3.8526 ppb	06:38:54
3	V 292.402†	-112.5	1.8	0.0319 µg/L	0.0319 ppb	06:38:54
3	Zn 213.857†	647.7	21.2	0.5936 µg/L	0.5936 ppb	06:39:15

## Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1963075.0	99.323 %	0.2893			0.29%
Sc RADIAL	77308.6	98.5 %	0.76			0.77%
Y 371.029	1240873.3	99.341 %	0.2640			0.27%
Ag 328.068†	10.6	0.0973 µg/L	0.28549	0.0973 ppb	0.28549	293.44%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	12.0	7.7628 µg/L	8.63614	7.7628 ppb	8.63614	111.25%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	0.7	1.5863 µg/L	5.31432	1.5863 ppb	5.31432	335.02%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	4.3	0.1979 µg/L	0.46001	0.1979 ppb	0.46001	232.42%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	11.8	0.3299 µg/L	0.21893	0.3299 ppb	0.21893	66.36%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	175.3	0.1179 µg/L	0.10202	0.1179 ppb	0.10202	86.55%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	8.5	6.1154 µg/L	3.18024	6.1154 ppb	3.18024	52.00%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	19.9	0.5627 µg/L	0.04400	0.5627 ppb	0.04400	7.82%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	3.2	0.1682 µg/L	0.27362	0.1682 ppb	0.27362	162.68%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	40.5	0.9069 µg/L	0.60444	0.9069 ppb	0.60444	66.65%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	102.8	0.7565 µg/L	0.35399	0.7565 ppb	0.35399	46.79%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	1.3	17.473 µg/L	7.2071	17.473 ppb	7.2071	41.25%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	23.9	15.082 µg/L	13.3626	15.082 ppb	13.3626	88.60%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	3.0	31.092 µg/L	21.8995	31.092 ppb	21.8995	70.43%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	82.2	0.2924 µg/L	0.24036	0.2924 ppb	0.24036	82.20%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	9.1	1.0994 µg/L	0.29883	1.0994 ppb	0.29883	27.18%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-23.1	-6.1522 µg/L	2.42277	-6.1522 ppb	2.42277	39.38%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	4.5	0.2696 µg/L	0.56559	0.2696 ppb	0.56559	209.82%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-0.9	-2.0964 µg/L	3.84901	-2.0964 ppb	3.84901	183.60%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	3.2	0.9020 µg/L	2.13087	0.9020 ppb	2.13087	236.25%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	0.9	5.1886 µg/L	17.21508	5.1886 ppb	17.21508	331.79%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	0.3	0.2778 µg/L	5.46740	0.2778 ppb	5.46740	>999.9%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	0.4	0.6075 µg/L	6.59210	0.6075 ppb	6.59210	>999.9%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	12.6	2.5701 µg/L	4.39926	2.5701 ppb	4.39926	171.17%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	40.3	3.2613 µg/L	1.94378	3.2613 ppb	1.94378	59.60%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	3.0	1.7059 µg/L	2.13530	1.7059 ppb	2.13530	125.17%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	55.3	0.3306 µg/L	0.42362	0.3306 ppb	0.42362	128.12%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	86.5	0.2067 µg/L	0.09861	0.2067 ppb	0.09861	47.71%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	1.8	3.0039 µg/L	4.89101	3.0039 ppb	4.89101	162.82%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-31.5	-2.9312 µg/L	5.19569	-2.9312 ppb	5.19569	177.25%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	8.1	0.1061 µg/L	0.27987	0.1061 ppb	0.27987	263.84%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	24.0	0.6683 µg/L	0.20568	0.6683 ppb	0.20568	30.78%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
All analyte(s) passed QC.							

Sequence No.: 8  
 Sample ID: PQL  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 101  
 Date Collected: 1/29/2010 06:39:24  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77426.3	77426.3	98.7 %		06:39:57
1	Al 396.153Radial†	302.9	336.5	217.71 µg/L	217.71 ppb	06:39:57
1	Ca 317.933Radial†	539.1	299.3	215.65 µg/L	215.65 ppb	06:40:17
1	Fe 238.204 Radial†	25.9	9.9	130.80 µg/L	130.80 ppb	06:40:17
1	K 766.490 Radial†	672.2	282.6	178.32 µg/L	178.32 ppb	06:39:57
1	Mg 279.077 IEC†	39.0	31.4	321.93 µg/L	321.93 ppb	06:40:17
1	Na 589.592 Radial†	1680.3	1149.5	306.03 µg/L	306.03 ppb	06:39:57
1	Sr 421.552†	1591.7	979.3	5.8582 µg/L	5.8582 ppb	06:39:57
1	Sc 361.383	1954707.3	1954707.3	98.900 %		06:41:19
1	Y 371.029	1236193.9	1236193.9	98.966 %		06:41:19
1	Ag 328.068†	499.6	597.8	5.4421 µg/L	5.4421 ppb	06:41:25
1	As 188.979†	13.6	16.5	35.909 µg/L	35.909 ppb	06:41:45
1	B 249.677†	1506.5	1153.3	54.570 µg/L	54.570 ppb	06:41:25
1	Ba 233.527†	170.3	196.2	5.4903 µg/L	5.4903 ppb	06:41:45
1	Be 313.107†	11759.9	8056.9	5.4189 µg/L	5.4189 ppb	06:41:25
1	Cd 226.502†	71.1	197.2	5.5787 µg/L	5.5787 ppb	06:41:45
1	Co 228.616†	60.5	110.5	5.8774 µg/L	5.8774 ppb	06:41:45
1	Cr 267.716†	166.7	270.7	6.0694 µg/L	6.0694 ppb	06:41:25
1	Cu 324.752†	5458.1	1618.9	11.888 µg/L	11.888 ppb	06:41:25
1	Mn 257.610†	2967.0	3147.8	11.162 µg/L	11.162 ppb	06:41:25
1	Mo 202.031†	107.0	95.6	11.591 µg/L	11.591 ppb	06:41:45
1	Ni 231.604†	426.2	99.5	6.0186 µg/L	6.0186 ppb	06:41:45
1	P 214.914†	297.8	81.3	186.15 µg/L	186.15 ppb	06:41:45
1	Pb 220.353†	108.4	48.4	13.544 µg/L	13.544 ppb	06:41:45
1	S 181.975 Axial†	43.7	21.1	117.06 µg/L	117.06 ppb	06:41:45
1	Sb 206.836†	34.8	11.2	11.962 µg/L	11.962 ppb	06:41:45
1	Se 196.026†	32.7	25.1	38.222 µg/L	38.222 ppb	06:41:45
1	SiO2†	3487.0	1136.4	232.02 µg/L	232.02 ppb	06:41:25
1	Si 251.611†	1623.0	1358.6	110.06 µg/L	110.06 ppb	06:41:45
1	Sn 189.927†	40.8	17.8	10.173 µg/L	10.173 ppb	06:41:45
1	Ti 334.940†	2944.1	2273.0	5.4726 µg/L	5.4726 ppb	06:41:25
1	Tl 190.801†	-10.6	13.8	23.028 µg/L	23.028 ppb	06:41:45
1	U 409.014†	448.0	639.2	59.378 µg/L	59.378 ppb	06:41:25
1	V 292.402†	364.0	483.4	5.9883 µg/L	5.9883 ppb	06:41:25
1	Zn 213.857†	1033.3	412.6	11.528 µg/L	11.528 ppb	06:41:45
2	Sc RADIAL	77597.2	77597.2	98.9 %		06:40:23
2	Al 396.153Radial†	291.4	324.2	209.74 µg/L	209.74 ppb	06:40:23
2	Ca 317.933Radial†	535.0	293.9	211.77 µg/L	211.77 ppb	06:40:43
2	Fe 238.204 Radial†	25.0	8.9	118.08 µg/L	118.08 ppb	06:40:43
2	K 766.490 Radial†	626.4	234.8	148.14 µg/L	148.14 ppb	06:40:23
2	Mg 279.077 IEC†	39.1	31.3	321.77 µg/L	321.77 ppb	06:40:43
2	Na 589.592 Radial†	1712.3	1178.1	313.66 µg/L	313.66 ppb	06:40:23
2	Sr 421.552†	1536.4	919.9	5.5025 µg/L	5.5025 ppb	06:40:23
2	Sc 361.383	1964316.1	1964316.1	99.386 %		06:41:51
2	Y 371.029	1242489.5	1242489.5	99.470 %		06:41:51
2	Ag 328.068†	528.3	624.2	5.6771 µg/L	5.6771 ppb	06:41:57
2	As 188.979†	14.9	17.7	38.614 µg/L	38.614 ppb	06:42:18
2	B 249.677†	1462.0	1101.1	52.106 µg/L	52.106 ppb	06:41:57
2	Ba 233.527†	171.6	196.6	5.5022 µg/L	5.5022 ppb	06:42:18
2	Be 313.107†	11787.7	8026.8	5.3986 µg/L	5.3986 ppb	06:41:57
2	Cd 226.502†	60.5	186.2	5.2674 µg/L	5.2674 ppb	06:42:18
2	Co 228.616†	51.7	101.3	5.3897 µg/L	5.3897 ppb	06:42:18
2	Cr 267.716†	191.7	295.1	6.6149 µg/L	6.6149 ppb	06:41:57
2	Cu 324.752†	5371.0	1504.3	11.046 µg/L	11.046 ppb	06:41:57
2	Mn 257.610†	2986.4	3152.7	11.178 µg/L	11.178 ppb	06:41:57
2	Mo 202.031†	105.1	93.1	11.285 µg/L	11.285 ppb	06:42:18
2	Ni 231.604†	424.6	95.9	5.7992 µg/L	5.7992 ppb	06:42:18
2	P 214.914†	291.2	73.1	167.55 µg/L	167.55 ppb	06:42:18
2	Pb 220.353†	103.2	42.7	11.930 µg/L	11.930 ppb	06:42:18

2	S 181.975 Axial†	41.4	18.6	103.13 µg/L	103.13 ppb	06:42:18
2	Sb 206.836†	34.3	10.5	11.162 µg/L	11.162 ppb	06:42:18
2	Se 196.026†	35.2	27.4	41.627 µg/L	41.627 ppb	06:42:18
2	SiO2†	3506.8	1139.1	232.57 µg/L	232.57 ppb	06:41:57
2	Si 251.611†	1612.1	1339.7	108.52 µg/L	108.52 ppb	06:42:18
2	Sn 189.927†	46.1	22.9	13.048 µg/L	13.048 ppb	06:42:18
2	Ti 334.940†	2927.3	2241.5	5.3965 µg/L	5.3965 ppb	06:41:57
2	Tl 190.801†	-8.0	16.5	27.543 µg/L	27.543 ppb	06:42:18
2	U 409.014†	446.7	635.7	59.052 µg/L	59.052 ppb	06:41:57
2	V 292.402†	329.8	447.1	5.5497 µg/L	5.5497 ppb	06:41:57
2	Zn 213.857†	1031.9	406.0	11.346 µg/L	11.346 ppb	06:42:18
3	Sc RADIAL	77065.9	77065.9	98.2 %		06:40:49
3	Al 396.153Radial†	278.6	313.2	202.64 µg/L	202.64 ppb	06:40:49
3	Ca 317.933Radial†	522.3	284.7	205.11 µg/L	205.11 ppb	06:41:09
3	Fe 238.204 Radial†	24.0	8.1	106.82 µg/L	106.82 ppb	06:41:09
3	K 766.490 Radial†	692.6	306.6	193.42 µg/L	193.42 ppb	06:40:49
3	Mg 279.077 IEC†	41.5	34.1	350.16 µg/L	350.16 ppb	06:41:09
3	Na 589.592 Radial†	1687.8	1165.2	310.20 µg/L	310.20 ppb	06:40:49
3	Sr 421.552†	1547.9	942.3	5.6367 µg/L	5.6367 ppb	06:40:49
3	Sc 361.383	1958720.9	1958720.9	99.103 %		06:42:24
3	Y 371.029	1238417.9	1238417.9	99.144 %		06:42:24
3	Ag 328.068†	465.2	562.0	5.1129 µg/L	5.1129 ppb	06:42:29
3	As 188.979†	12.2	15.1	32.828 µg/L	32.828 ppb	06:42:50
3	B 249.677†	1418.5	1061.4	50.227 µg/L	50.227 ppb	06:42:29
3	Ba 233.527†	154.9	180.3	5.0448 µg/L	5.0448 ppb	06:42:50
3	Be 313.107†	11325.3	7594.0	5.1076 µg/L	5.1076 ppb	06:42:29
3	Cd 226.502†	48.3	174.0	4.9235 µg/L	4.9235 ppb	06:42:50
3	Co 228.616†	32.1	81.7	4.3435 µg/L	4.3435 ppb	06:42:50
3	Cr 267.716†	158.5	262.1	5.8761 µg/L	5.8761 ppb	06:42:29
3	Cu 324.752†	5332.0	1480.4	10.869 µg/L	10.869 ppb	06:42:29
3	Mn 257.610†	2810.9	2984.2	10.578 µg/L	10.578 ppb	06:42:29
3	Mo 202.031†	92.0	80.2	9.7224 µg/L	9.7224 ppb	06:42:50
3	Ni 231.604†	407.3	79.5	4.8126 µg/L	4.8126 ppb	06:42:50
3	P 214.914†	284.4	67.1	153.62 µg/L	153.62 ppb	06:42:50
3	Pb 220.353†	100.5	40.2	11.253 µg/L	11.253 ppb	06:42:50
3	S 181.975 Axial†	44.1	21.4	118.97 µg/L	118.97 ppb	06:42:50
3	Sb 206.836†	30.6	6.9	7.3891 µg/L	7.3891 ppb	06:42:50
3	Se 196.026†	32.6	24.9	37.781 µg/L	37.781 ppb	06:42:50
3	SiO2†	3420.3	1061.9	216.81 µg/L	216.81 ppb	06:42:29
3	Si 251.611†	1481.5	1212.5	98.218 µg/L	98.218 ppb	06:42:50
3	Sn 189.927†	37.3	14.2	8.1292 µg/L	8.1292 ppb	06:42:50
3	Ti 334.940†	2772.0	2093.2	5.0355 µg/L	5.0355 ppb	06:42:29
3	Tl 190.801†	-8.0	16.5	27.582 µg/L	27.582 ppb	06:42:50
3	U 409.014†	361.0	550.5	51.143 µg/L	51.143 ppb	06:42:29
3	V 292.402†	305.2	423.3	5.2408 µg/L	5.2408 ppb	06:42:29
3	Zn 213.857†	984.3	360.9	10.082 µg/L	10.082 ppb	06:42:50

## Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1959248.1	99.129 %	0.2442			0.25%
Sc RADIAL	77363.1	98.6 %	0.35			0.35%
Y 371.029	1239033.8	99.193 %	0.2556			0.26%
Ag 328.068†	594.6	5.4107 µg/L	0.28341	5.4107 ppb	0.28341	5.24%
QC value within limits for Ag 328.068 Recovery = 108.21%						
Al 396.153Radial†	324.6	210.03 µg/L	7.536	210.03 ppb	7.536	3.59%
QC value within limits for Al 396.153Radial Recovery = 105.02%						
As 188.979†	16.4	35.784 µg/L	2.8949	35.784 ppb	2.8949	8.09%
QC value within limits for As 188.979 Recovery = 119.28%						
B 249.677†	1105.3	52.301 µg/L	2.1785	52.301 ppb	2.1785	4.17%
QC value within limits for B 249.677 Recovery = 104.60%						
Ba 233.527†	191.0	5.3458 µg/L	0.26070	5.3458 ppb	0.26070	4.88%
QC value within limits for Ba 233.527 Recovery = 106.92%						
Be 313.107†	7892.6	5.3084 µg/L	0.17417	5.3084 ppb	0.17417	3.28%
QC value within limits for Be 313.107 Recovery = 106.17%						
Ca 317.933Radial†	292.6	210.84 µg/L	5.330	210.84 ppb	5.330	2.53%
QC value within limits for Ca 317.933Radial Recovery = 105.42%						
Cd 226.502†	185.8	5.2566 µg/L	0.32773	5.2566 ppb	0.32773	6.23%
QC value within limits for Cd 226.502 Recovery = 105.13%						
Co 228.616†	97.8	5.2035 µg/L	0.78370	5.2035 ppb	0.78370	15.06%

QC value within limits for Co 228.616 Recovery = 104.07%							
Cr 267.716†	276.0	6.1868 µg/L	0.38316	6.1868 ppb	0.38316	6.19%	
QC value within limits for Cr 267.716 Recovery = 123.74%							
Cu 324.752†	1534.5	11.268 µg/L	0.5445	11.268 ppb	0.5445	4.83%	
QC value within limits for Cu 324.752 Recovery = 112.68%							
Fe 238.204 Radial†	8.9	118.57 µg/L	11.997	118.57 ppb	11.997	10.12%	
QC value within limits for Fe 238.204 Radial Recovery = 118.57%							
K 766.490 Radial†	274.7	173.29 µg/L	23.052	173.29 ppb	23.052	13.30%	
QC value within limits for K 766.490 Radial Recovery = 115.53%							
Mg 279.077 IEC†	32.3	331.28 µg/L	16.344	331.28 ppb	16.344	4.93%	
QC value within limits for Mg 279.077 IEC Recovery = 110.43%							
Mn 257.610†	3094.9	10.972 µg/L	0.3420	10.972 ppb	0.3420	3.12%	
QC value within limits for Mn 257.610 Recovery = 109.72%							
Mo 202.031†	89.7	10.866 µg/L	1.0025	10.866 ppb	1.0025	9.23%	
QC value within limits for Mo 202.031 Recovery = 108.66%							
Na 589.592 Radial†	1164.3	309.96 µg/L	3.823	309.96 ppb	3.823	1.23%	
QC value within limits for Na 589.592 Radial Recovery = 103.32%							
Ni 231.604†	91.6	5.5435 µg/L	0.64236	5.5435 ppb	0.64236	11.59%	
QC value within limits for Ni 231.604 Recovery = 110.87%							
P 214.914†	73.8	169.11 µg/L	16.318	169.11 ppb	16.318	9.65%	
QC value within limits for P 214.914 Recovery = 112.74%							
Pb 220.353†	43.8	12.242 µg/L	1.1773	12.242 ppb	1.1773	9.62%	
QC value within limits for Pb 220.353 Recovery = 122.42%							
S 181.975 Axial†	20.3	113.05 µg/L	8.646	113.05 ppb	8.646	7.65%	
QC value within limits for S 181.975 Axial Recovery = 113.05%							
Sb 206.836†	9.5	10.171 µg/L	2.4424	10.171 ppb	2.4424	24.01%	
QC value within limits for Sb 206.836 Recovery = 101.71%							
Se 196.026†	25.8	39.210 µg/L	2.1050	39.210 ppb	2.1050	5.37%	
QC value greater than the upper limit for Se 196.026 Recovery = 130.70%							
SiO2†	1112.4	227.13 µg/L	8.946	227.13 ppb	8.946	3.94%	
QC value within limits for SiO2 Recovery = 106.63%							
Si 251.611†	1303.6	105.60 µg/L	6.437	105.60 ppb	6.437	6.10%	
QC value within limits for Si 251.611 Recovery = 105.60%							
Sn 189.927†	18.3	10.450 µg/L	2.4710	10.450 ppb	2.4710	23.65%	
QC value within limits for Sn 189.927 Recovery = 104.50%							
Sr 421.552†	947.2	5.6658 µg/L	0.17963	5.6658 ppb	0.17963	3.17%	
QC value within limits for Sr 421.552 Recovery = 113.32%							
Ti 334.940†	2202.6	5.3015 µg/L	0.23350	5.3015 ppb	0.23350	4.40%	
QC value within limits for Ti 334.940 Recovery = 106.03%							
Tl 190.801†	15.6	26.051 µg/L	2.6180	26.051 ppb	2.6180	10.05%	
QC value greater than the upper limit for Tl 190.801 Recovery = 130.25%							
U 409.014†	608.5	56.524 µg/L	4.6634	56.524 ppb	4.6634	8.25%	
QC value within limits for U 409.014 Recovery = 113.05%							
V 292.402†	451.3	5.5929 µg/L	0.37562	5.5929 ppb	0.37562	6.72%	
QC value within limits for V 292.402 Recovery = 111.86%							
Zn 213.857†	393.2	10.985 µg/L	0.7873	10.985 ppb	0.7873	7.17%	
QC value within limits for Zn 213.857 Recovery = 109.85%							
QC Failed. Continue with analysis.							



Sequence No.: 9

Sample ID: ICSA

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 103

Date Collected: 1/29/2010 06:42:59

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	75709.8	75709.8	96.5 %		06:43:40
1	Al 396.153Radial†	766188.4	794257.4	514420 µg/L	514420 ppb	06:43:35
1	Ca 317.933Radial†	651112.5	674693.6	486150 µg/L	486150 ppb	06:43:35
1	Fe 238.204 Radial†	13998.6	14494.6	191930 µg/L	191930 ppb	06:43:40
1	K 766.490 Radial†	224.3	-166.2	-104.86 µg/L	-104.86 ppb	06:43:40
1	Mg 279.077 IEC†	46618.0	48315.9	495650 µg/L	495650 ppb	06:43:40
1	Na 589.592 Radial†	609.5	78.1	20.793 µg/L	20.793 ppb	06:43:40
1	Sr 421.552†	1222.5	633.2	3.7877 µg/L	3.7877 ppb	06:43:40
1	Sc 361.383	1844586.0	1844586.0	93.328 %		06:44:13
1	Y 371.029	1152552.6	1152552.6	92.270 %		06:44:13
1	Ag 328.068†	-2181.1	-2244.4	-8.2125 µg/L	-8.2125 ppb	06:44:18
1	As 188.979†	-6.5	-4.2	-23.328 µg/L	-23.328 ppb	06:44:39
1	B 249.677†	2701.5	2524.7	19.438 µg/L	19.438 ppb	06:44:18
1	Ba 233.527†	212.3	251.4	7.0107 µg/L	7.0107 ppb	06:44:39
1	Be 313.107†	3036.2	-580.5	-0.4011 µg/L	-0.4011 ppb	06:44:18
1	Cd 226.502†	655.7	827.9	1.7668 µg/L	1.7668 ppb	06:44:39
1	Co 228.616†	-15.6	32.6	1.6666 µg/L	1.6666 ppb	06:44:39
1	Cr 267.716†	-108.2	-13.8	-0.3136 µg/L	-0.3136 ppb	06:44:39
1	Cu 324.752†	546.1	-3314.8	2.3733 µg/L	2.3733 ppb	06:44:18
1	Mn 257.610†	-2468.2	-2496.8	-3.1571 µg/L	-3.1571 ppb	06:44:18
1	Mo 202.031†	-86.8	-105.6	-5.5005 µg/L	-5.5005 ppb	06:44:39
1	Ni 231.604†	300.6	-9.3	1.9309 µg/L	1.9309 ppb	06:44:39
1	P 214.914†	231.9	28.6	57.667 µg/L	57.667 ppb	06:44:39
1	Pb 220.353†	-45.6	-110.0	-9.8561 µg/L	-9.8561 ppb	06:44:39
1	S 181.975 Axial†	64.3	45.8	254.45 µg/L	254.45 ppb	06:44:39
1	Sb 206.836†	67.8	48.7	8.9817 µg/L	8.9817 ppb	06:44:39
1	Se 196.026†	-395.2	-431.4	16.506 µg/L	16.506 ppb	06:44:39
1	SiO2†	2116.0	-122.1	-24.934 µg/L	-24.934 ppb	06:44:39
1	Si 251.611†	380.6	125.3	10.154 µg/L	10.154 ppb	06:44:39
1	Sn 189.927†	-323.3	-369.9	11.842 µg/L	11.842 ppb	06:44:39
1	Ti 334.940†	11244.8	11344.9	-3.9702 µg/L	-3.9702 ppb	06:44:18
1	Tl 190.801†	20.0	46.0	-8.5499 µg/L	-8.5499 ppb	06:44:39
1	U 409.014†	-143.9	32.0	-53.356 µg/L	-53.356 ppb	06:44:18
1	V 292.402†	-641.3	-571.9	3.1952 µg/L	3.1952 ppb	06:44:18
1	Zn 213.857†	1865.6	1366.7	1.2276 µg/L	1.2276 ppb	06:44:39
2	Sc RADIAL	74864.5	74864.5	95.4 %		06:43:51
2	Al 396.153Radial†	765183.9	802171.8	519540 µg/L	519540 ppb	06:43:46
2	Ca 317.933Radial†	649077.7	680180.9	490100 µg/L	490100 ppb	06:43:46
2	Fe 238.204 Radial†	13896.0	14550.8	192680 µg/L	192680 ppb	06:43:51
2	K 766.490 Radial†	267.4	-118.3	-74.658 µg/L	-74.658 ppb	06:43:51
2	Mg 279.077 IEC†	46429.5	48663.9	499220 µg/L	499220 ppb	06:43:51
2	Na 589.592 Radial†	621.6	97.9	26.075 µg/L	26.075 ppb	06:43:51
2	Sr 421.552†	1193.8	617.4	3.6934 µg/L	3.6934 ppb	06:43:51
2	Sc 361.383	1835658.1	1835658.1	92.876 %		06:44:45
2	Y 371.029	1146805.4	1146805.4	91.810 %		06:44:45
2	Ag 328.068†	-2117.4	-2187.2	-7.6548 µg/L	-7.6548 ppb	06:44:51
2	As 188.979†	-2.8	-0.3	-15.025 µg/L	-15.025 ppb	06:45:11
2	B 249.677†	2613.3	2443.9	15.218 µg/L	15.218 ppb	06:44:51
2	Ba 233.527†	214.0	254.4	7.0911 µg/L	7.0911 ppb	06:45:11
2	Be 313.107†	3036.8	-564.1	-0.3901 µg/L	-0.3901 ppb	06:44:51
2	Cd 226.502†	669.2	845.8	2.1898 µg/L	2.1898 ppb	06:45:11
2	Co 228.616†	-20.7	27.0	1.3669 µg/L	1.3669 ppb	06:45:11
2	Cr 267.716†	-77.6	18.6	0.4120 µg/L	0.4120 ppb	06:45:11
2	Cu 324.752†	519.6	-3340.5	2.2882 µg/L	2.2882 ppb	06:44:51
2	Mn 257.610†	-2466.8	-2508.1	-3.2412 µg/L	-3.2412 ppb	06:44:51
2	Mo 202.031†	-90.8	-110.4	-6.0490 µg/L	-6.0490 ppb	06:45:11
2	Ni 231.604†	294.6	-14.2	1.6452 µg/L	1.6452 ppb	06:45:11
2	P 214.914†	224.5	21.9	42.771 µg/L	42.771 ppb	06:45:11
2	Pb 220.353†	-45.6	-110.2	-9.6741 µg/L	-9.6741 ppb	06:45:11

2	S 181.975 Axial†	61.6	43.2	240.32 µg/L	240.32 ppb	06:45:11
2	Sb 206.836†	49.4	29.2	-11.960 µg/L	-11.960 ppb	06:45:11
2	Se 196.026†	-381.0	-418.2	38.694 µg/L	38.694 ppb	06:45:11
2	SiO2†	2105.2	-122.8	-25.063 µg/L	-25.063 ppb	06:45:11
2	Si 251.611†	381.0	127.8	10.352 µg/L	10.352 ppb	06:45:11
2	Sn 189.927†	-354.7	-405.3	-6.5075 µg/L	-6.5075 ppb	06:45:11
2	Ti 334.940†	11278.1	11439.3	-3.9608 µg/L	-3.9608 ppb	06:44:51
2	Tl 190.801†	16.0	41.8	-16.175 µg/L	-16.175 ppb	06:45:11
2	U 409.014†	-38.2	145.1	-43.195 µg/L	-43.195 ppb	06:44:51
2	V 292.402†	-708.0	-647.0	2.3389 µg/L	2.3389 ppb	06:44:51
2	Zn 213.857†	1854.1	1364.0	0.9168 µg/L	0.9168 ppb	06:45:11
3	Sc RADIAL	74897.5	74897.5	95.4 %		06:44:03
3	Al 396.153Radial†	759712.9	796085.2	515600 µg/L	515600 ppb	06:43:57
3	Ca 317.933Radial†	642978.1	673489.3	485280 µg/L	485280 ppb	06:43:57
3	Fe 238.204 Radial†	13913.5	14562.8	192840 µg/L	192840 ppb	06:44:03
3	K 766.490 Radial†	215.3	-173.1	-109.21 µg/L	-109.21 ppb	06:44:03
3	Mg 279.077 IEC†	46363.0	48572.7	498290 µg/L	498290 ppb	06:44:03
3	Na 589.592 Radial†	623.2	99.3	26.449 µg/L	26.449 ppb	06:44:03
3	Sr 421.552†	1210.6	634.4	3.7951 µg/L	3.7951 ppb	06:44:03
3	Sc 361.383	1831604.9	1831604.9	92.671 %		06:45:17
3	Y 371.029	1144864.1	1144864.1	91.654 %		06:45:17
3	Ag 328.068†	-2154.8	-2232.6	-8.0568 µg/L	-8.0568 ppb	06:45:23
3	As 188.979†	-2.7	-0.2	-14.435 µg/L	-14.435 ppb	06:45:43
3	B 249.677†	2555.0	2387.2	12.449 µg/L	12.449 ppb	06:45:23
3	Ba 233.527†	217.5	258.7	7.2109 µg/L	7.2109 ppb	06:45:43
3	Be 313.107†	3034.3	-559.5	-0.3868 µg/L	-0.3868 ppb	06:45:23
3	Cd 226.502†	660.3	837.8	1.9464 µg/L	1.9464 ppb	06:45:43
3	Co 228.616†	-6.3	42.6	2.1956 µg/L	2.1956 ppb	06:45:43
3	Cr 267.716†	-110.1	-16.6	-0.3776 µg/L	-0.3776 ppb	06:45:43
3	Cu 324.752†	573.3	-3281.3	2.7447 µg/L	2.7447 ppb	06:45:23
3	Mn 257.610†	-2469.2	-2516.7	-3.2129 µg/L	-3.2129 ppb	06:45:23
3	Mo 202.031†	-91.9	-111.8	-6.2114 µg/L	-6.2114 ppb	06:45:43
3	Ni 231.604†	281.3	-27.9	0.8142 µg/L	0.8142 ppb	06:45:43
3	P 214.914†	235.4	34.2	70.075 µg/L	70.075 ppb	06:45:43
3	Pb 220.353†	-50.3	-115.4	-11.355 µg/L	-11.355 ppb	06:45:43
3	S 181.975 Axial†	63.4	45.3	251.62 µg/L	251.62 ppb	06:45:43
3	Sb 206.836†	71.4	53.1	13.677 µg/L	13.677 ppb	06:45:43
3	Se 196.026†	-397.0	-436.3	11.397 µg/L	11.397 ppb	06:45:43
3	SiO2†	2121.9	-99.7	-20.352 µg/L	-20.352 ppb	06:45:43
3	Si 251.611†	398.0	147.1	11.913 µg/L	11.913 ppb	06:45:43
3	Sn 189.927†	-335.2	-385.2	3.6265 µg/L	3.6265 ppb	06:45:43
3	Ti 334.940†	11038.4	11207.5	-4.5243 µg/L	-4.5243 ppb	06:45:23
3	Tl 190.801†	14.2	39.9	-18.536 µg/L	-18.536 ppb	06:45:43
3	U 409.014†	-107.3	70.4	-49.861 µg/L	-49.861 ppb	06:45:23
3	V 292.402†	-728.6	-670.9	2.0490 µg/L	2.0490 ppb	06:45:23
3	Zn 213.857†	1837.5	1350.5	0.5854 µg/L	0.5854 ppb	06:45:43

## Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1837283.0	92.959 %	0.3360			0.36%
Sc RADIAL	75157.3	95.8 %	0.61			0.64%
Y 371.029	1148074.0	91.911 %	0.3201			0.35%
Ag 328.068†	-2221.4	-7.9747 µg/L	0.28777	-7.9747 ppb	0.28777	3.61%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	797504.8	516520 µg/L	2683.8	516520 ppb	2683.8	0.52%
QC value within limits for Al 396.153Radial Recovery = 103.30%						
As 188.979†	-1.6	-17.596 µg/L	4.9726	-17.596 ppb	4.9726	28.26%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	2451.9	15.702 µg/L	3.5191	15.702 ppb	3.5191	22.41%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	254.8	7.1042 µg/L	0.10078	7.1042 ppb	0.10078	1.42%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-568.0	-0.3926 µg/L	0.00749	-0.3926 ppb	0.00749	1.91%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	676121.3	487180 µg/L	2570.2	487180 ppb	2570.2	0.53%
QC value within limits for Ca 317.933Radial Recovery = 97.44%						
Cd 226.502†	837.2	1.9677 µg/L	0.21234	1.9677 ppb	0.21234	10.79%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	34.1	1.7430 µg/L	0.41961	1.7430 ppb	0.41961	24.07%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-3.9	-0.0930 µg/L	0.43859	-0.0930 ppb	0.43859	471.40%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-3312.2	2.4688 µg/L	0.24275	2.4688 ppb	0.24275	9.83%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	14536.0	192480 µg/L	482.3	192480 ppb	482.3	0.25%	
QC value within limits for Fe 238.204 Radial Recovery = 96.24%							
K 766.490 Radial†	-152.5	-96.244 µg/L	18.8199	-96.244 ppb	18.8199	19.55%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	48517.5	497720 µg/L	1851.4	497720 ppb	1851.4	0.37%	
QC value within limits for Mg 279.077 IEC Recovery = 99.54%							
Mn 257.610†	-2507.2	-3.2038 µg/L	0.04278	-3.2038 ppb	0.04278	1.34%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	-109.2	-5.9203 µg/L	0.37249	-5.9203 ppb	0.37249	6.29%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	91.8	24.439 µg/L	3.1630	24.439 ppb	3.1630	12.94%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	-17.1	1.4634 µg/L	0.58014	1.4634 ppb	0.58014	39.64%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	28.2	56.838 µg/L	13.6711	56.838 ppb	13.6711	24.05%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-111.9	-10.295 µg/L	0.9225	-10.295 ppb	0.9225	8.96%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	44.8	248.80 µg/L	7.477	248.80 ppb	7.477	3.01%	
QC value greater than the upper limit for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	43.6	3.5664 µg/L	13.64944	3.5664 ppb	13.64944	382.72%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-428.6	22.199 µg/L	14.5116	22.199 ppb	14.5116	65.37%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	-114.9	-23.450 µg/L	2.6830	-23.450 ppb	2.6830	11.44%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	133.4	10.806 µg/L	0.9639	10.806 ppb	0.9639	8.92%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-386.8	2.9869 µg/L	9.19132	2.9869 ppb	9.19132	307.72%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	628.4	3.7587 µg/L	0.05670	3.7587 ppb	0.05670	1.51%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	11330.5	-4.1518 µg/L	0.32270	-4.1518 ppb	0.32270	7.77%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	42.5	-14.420 µg/L	5.2190	-14.420 ppb	5.2190	36.19%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	82.5	-48.804 µg/L	5.1627	-48.804 ppb	5.1627	10.58%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	-629.9	2.5277 µg/L	0.59596	2.5277 ppb	0.59596	23.58%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	1360.4	0.9099 µg/L	0.32113	0.9099 ppb	0.32113	35.29%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
QC Failed. Continue with analysis.							

Sequence No.: 10  
 Sample ID: ICSAB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 104  
 Date Collected: 1/29/2010 06:45:54  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	74813.4	74813.4	95.3 %		06:46:33
1	Al 396.153Radial†	776009.2	814075.0	527240 µg/L	527240 ppb	06:46:28
1	Ca 317.933Radial†	659319.7	691389.3	498180 µg/L	498180 ppb	06:46:28
1	Fe 238.204 Radial†	13849.9	14512.5	192180 µg/L	192180 ppb	06:46:33
1	K 766.490 Radial†	8385.2	8397.5	5298.0 µg/L	5298.0 ppb	06:46:33
1	Mg 279.077 IEC†	46333.9	48596.8	498540 µg/L	498540 ppb	06:46:33
1	Na 589.592 Radial†	19036.3	19415.7	5169.1 µg/L	5169.1 ppb	06:46:33
1	Sr 421.552†	86671.2	90285.4	540.08 µg/L	540.08 ppb	06:46:28
1	Sc 361.383	1832013.7	1832013.7	92.692 %		06:47:09
1	Y 371.029	1144827.4	1144827.4	91.651 %		06:47:09
1	Ag 328.068†	25713.4	27833.3	266.83 µg/L	266.83 ppb	06:47:09
1	As 188.979†	224.6	245.0	518.25 µg/L	518.25 ppb	06:47:30
1	B 249.677†	13211.7	13883.4	558.16 µg/L	558.16 ppb	06:47:09
1	Ba 233.527†	17531.7	18938.0	529.94 µg/L	529.94 ppb	06:47:09
1	Be 313.107†	350552.4	374357.1	251.67 µg/L	251.67 ppb	06:47:09
1	Cd 226.502†	16564.7	17996.0	488.63 µg/L	488.63 ppb	06:47:09
1	Co 228.616†	8025.2	8707.2	462.48 µg/L	462.48 ppb	06:47:30
1	Cr 267.716†	21150.8	22920.6	513.91 µg/L	513.91 ppb	06:47:09
1	Cu 324.752†	73985.3	75918.6	583.37 µg/L	583.37 ppb	06:47:09
1	Mn 257.610†	129370.7	139718.5	500.85 µg/L	500.85 ppb	06:47:09
1	Mo 202.031†	3826.7	4115.9	505.92 µg/L	505.92 ppb	06:47:30
1	Ni 231.604†	7381.8	7632.3	464.07 µg/L	464.07 ppb	06:47:30
1	P 214.914†	1309.1	1192.5	2690.0 µg/L	2690.0 ppb	06:47:30
1	Pb 220.353†	1637.7	1705.7	500.10 µg/L	500.10 ppb	06:47:30
1	S 181.975 Axial†	519.5	537.3	2987.0 µg/L	2987.0 ppb	06:47:30
1	Sb 206.836†	516.1	532.8	522.52 µg/L	522.52 ppb	06:47:30
1	Se 196.026†	1163.8	1247.6	2542.4 µg/L	2542.4 ppb	06:47:30
1	SiO2†	55242.3	57208.4	11681 µg/L	11681 ppb	06:47:09
1	Si 251.611†	62694.5	67355.1	5456.1 µg/L	5456.1 ppb	06:47:09
1	Sn 189.927†	557.7	578.2	549.47 µg/L	549.47 ppb	06:47:30
1	Ti 334.940†	214685.3	230907.8	526.75 µg/L	526.75 ppb	06:47:09
1	Tl 190.801†	286.5	333.6	474.42 µg/L	474.42 ppb	06:47:30
1	U 409.014†	5377.7	5988.0	499.46 µg/L	499.46 ppb	06:47:09
1	V 292.402†	40647.8	43967.9	544.83 µg/L	544.83 ppb	06:47:09
1	Zn 213.857†	18294.5	19104.7	496.69 µg/L	496.69 ppb	06:47:09
2	Sc RADIAL	74990.7	74990.7	95.6 %		06:46:45
2	Al 396.153Radial†	764565.6	800175.2	518240 µg/L	518240 ppb	06:46:40
2	Ca 317.933Radial†	648030.6	677940.4	488490 µg/L	488490 ppb	06:46:40
2	Fe 238.204 Radial†	13770.4	14394.9	190620 µg/L	190620 ppb	06:46:45
2	K 766.490 Radial†	8403.7	8396.0	5297.1 µg/L	5297.1 ppb	06:46:45
2	Mg 279.077 IEC†	46231.3	48374.6	496260 µg/L	496260 ppb	06:46:45
2	Na 589.592 Radial†	19011.9	19343.0	5149.8 µg/L	5149.8 ppb	06:46:45
2	Sr 421.552†	85360.4	88698.7	530.59 µg/L	530.59 ppb	06:46:40
2	Sc 361.383	1810753.6	1810753.6	91.616 %		06:47:37
2	Y 371.029	1131749.1	1131749.1	90.604 %		06:47:37
2	Ag 328.068†	25458.5	27880.8	267.16 µg/L	267.16 ppb	06:47:37
2	As 188.979†	223.6	246.8	522.53 µg/L	522.53 ppb	06:47:58
2	B 249.677†	13008.9	13829.4	556.41 µg/L	556.41 ppb	06:47:37
2	Ba 233.527†	17314.3	18922.7	529.52 µg/L	529.52 ppb	06:47:37
2	Be 313.107†	346550.3	374429.2	251.72 µg/L	251.72 ppb	06:47:37
2	Cd 226.502†	16381.2	18005.6	489.08 µg/L	489.08 ppb	06:47:37
2	Co 228.616†	8020.0	8803.2	467.60 µg/L	467.60 ppb	06:47:58
2	Cr 267.716†	20922.2	22939.0	514.32 µg/L	514.32 ppb	06:47:37
2	Cu 324.752†	73521.1	76349.0	586.31 µg/L	586.31 ppb	06:47:37
2	Mn 257.610†	127765.4	139605.0	500.33 µg/L	500.33 ppb	06:47:37
2	Mo 202.031†	3843.8	4183.0	513.99 µg/L	513.99 ppb	06:47:58
2	Ni 231.604†	7381.4	7725.4	469.68 µg/L	469.68 ppb	06:47:58
2	P 214.914†	1311.4	1211.6	2732.3 µg/L	2732.3 ppb	06:47:58
2	Pb 220.353†	1649.6	1739.4	509.13 µg/L	509.13 ppb	06:47:58

2	S	181.975 Axial†	523.5	548.3	3048.4 µg/L	3048.4 ppb	06:47:58
2	Sb	206.836†	518.3	541.7	532.92 µg/L	532.92 ppb	06:47:58
2	Se	196.026†	1149.0	1246.2	2533.1 µg/L	2533.1 ppb	06:47:58
2	SiO2†		54671.5	57285.1	11696 µg/L	11696 ppb	06:47:37
2	Si	251.611†	61867.1	67246.1	5447.2 µg/L	5447.2 ppb	06:47:37
2	Sn	189.927†	556.5	584.0	550.04 µg/L	550.04 ppb	06:47:58
2	Ti	334.940†	212489.4	231230.3	527.55 µg/L	527.55 ppb	06:47:37
2	Tl	190.801†	279.8	329.9	469.84 µg/L	469.84 ppb	06:47:58
2	U	409.014†	5355.4	6031.7	504.33 µg/L	504.33 ppb	06:47:37
2	V	292.402†	40174.5	43966.1	544.80 µg/L	544.80 ppb	06:47:37
2	Zn	213.857†	18147.0	19175.3	498.85 µg/L	498.85 ppb	06:47:37
3	Sc	RADIAL	74868.7	74868.7	95.4 %		06:46:57
3	Al	396.153Radial†	766045.0	803029.0	520090 µg/L	520090 ppb	06:46:51
3	Ca	317.933Radial†	649422.7	680504.1	490330 µg/L	490330 ppb	06:46:51
3	Fe	238.204 Radial†	13870.3	14523.1	192320 µg/L	192320 ppb	06:46:57
3	K	766.490 Radial†	8423.2	8430.8	5319.1 µg/L	5319.1 ppb	06:46:57
3	Mg	279.077 IEC†	46422.8	48654.1	499130 µg/L	499130 ppb	06:46:57
3	Na	589.592 Radial†	19118.2	19486.8	5188.0 µg/L	5188.0 ppb	06:46:57
3	Sr	421.552†	85516.2	89007.5	532.44 µg/L	532.44 ppb	06:46:51
3	Sc	361.383	1811735.0	1811735.0	91.666 %		06:48:05
3	Y	371.029	1132696.4	1132696.4	90.680 %		06:48:05
3	Ag	328.068†	25668.8	28095.2	269.23 µg/L	269.23 ppb	06:48:05
3	As	188.979†	222.9	245.9	520.68 µg/L	520.68 ppb	06:48:25
3	B	249.677†	13092.4	13912.8	559.48 µg/L	559.48 ppb	06:48:05
3	Ba	233.527†	17396.8	19002.5	531.75 µg/L	531.75 ppb	06:48:05
3	Be	313.107†	348353.7	376191.6	252.90 µg/L	252.90 ppb	06:48:05
3	Cd	226.502†	16486.0	18110.2	491.86 µg/L	491.86 ppb	06:48:05
3	Co	228.616†	8022.7	8801.5	467.50 µg/L	467.50 ppb	06:48:25
3	Cr	267.716†	21033.7	23048.2	516.77 µg/L	516.77 ppb	06:48:05
3	Cu	324.752†	73826.0	76638.1	588.67 µg/L	588.67 ppb	06:48:05
3	Mn	257.610†	128552.6	140388.2	503.22 µg/L	503.22 ppb	06:48:05
3	Mo	202.031†	3855.3	4193.3	515.31 µg/L	515.31 ppb	06:48:25
3	Ni	231.604†	7361.0	7698.9	468.10 µg/L	468.10 ppb	06:48:25
3	P	214.914†	1298.5	1196.7	2697.1 µg/L	2697.1 ppb	06:48:25
3	Pb	220.353†	1653.8	1743.0	510.19 µg/L	510.19 ppb	06:48:25
3	S	181.975 Axial†	522.5	546.9	3040.3 µg/L	3040.3 ppb	06:48:25
3	Sb	206.836†	532.9	557.3	549.27 µg/L	549.27 ppb	06:48:25
3	Se	196.026†	1159.9	1257.4	2555.9 µg/L	2555.9 ppb	06:48:25
3	SiO2†		54969.6	57577.9	11756 µg/L	11756 ppb	06:48:05
3	Si	251.611†	62233.7	67609.4	5476.7 µg/L	5476.7 ppb	06:48:05
3	Sn	189.927†	571.9	600.5	560.43 µg/L	560.43 ppb	06:48:25
3	Ti	334.940†	213290.8	231979.0	529.17 µg/L	529.17 ppb	06:48:05
3	Tl	190.801†	298.2	349.8	502.62 µg/L	502.62 ppb	06:48:25
3	U	409.014†	5350.4	6023.1	503.18 µg/L	503.18 ppb	06:48:05
3	V	292.402†	40513.0	44311.7	549.06 µg/L	549.06 ppb	06:48:05
3	Zn	213.857†	18210.1	19233.5	500.25 µg/L	500.25 ppb	06:48:05

## Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1818167.4	91.991 %	0.6072			0.66%
Sc RADIAL	74890.9	95.4 %	0.12			0.12%
Y 371.029	1136424.3	90.979 %	0.5838			0.64%
Ag 328.068†	27936.4	267.74 µg/L	1.301	267.74 ppb	1.301	0.49%
QC value within limits for Ag 328.068 Recovery = 107.09%						
Al 396.153Radial†	805759.7	521850 µg/L	4754.8	521850 ppb	4754.8	0.91%
QC value within limits for Al 396.153Radial Recovery = 104.37%						
As 188.979†	245.9	520.49 µg/L	2.145	520.49 ppb	2.145	0.41%
QC value within limits for As 188.979 Recovery = 104.10%						
B 249.677†	13875.2	558.02 µg/L	1.540	558.02 ppb	1.540	0.28%
QC value within limits for B 249.677 Recovery = 111.60%						
Ba 233.527†	18954.4	530.40 µg/L	1.187	530.40 ppb	1.187	0.22%
QC value within limits for Ba 233.527 Recovery = 106.08%						
Be 313.107†	374992.6	252.09 µg/L	0.699	252.09 ppb	0.699	0.28%
QC value within limits for Be 313.107 Recovery = 100.84%						
Ca 317.933Radial†	683277.9	492330 µg/L	5145.2	492330 ppb	5145.2	1.05%
QC value within limits for Ca 317.933Radial Recovery = 98.47%						
Cd 226.502†	18037.2	489.86 µg/L	1.745	489.86 ppb	1.745	0.36%
QC value within limits for Cd 226.502 Recovery = 97.97%						
Co 228.616†	8770.6	465.86 µg/L	2.925	465.86 ppb	2.925	0.63%

QC value within limits for Co 228.616 Recovery = 93.17%							
Cr 267.716†	22969.3	515.00 µg/L	1.548	515.00 ppb	1.548	0.30%	
QC value within limits for Cr 267.716 Recovery = 103.00%							
Cu 324.752†	76301.9	586.12 µg/L	2.653	586.12 ppb	2.653	0.45%	
QC value within limits for Cu 324.752 Recovery = 117.22%							
Fe 238.204 Radial†	14476.8	191710 µg/L	941.9	191710 ppb	941.9	0.49%	
QC value within limits for Fe 238.204 Radial Recovery = 95.85%							
K 766.490 Radial†	8408.1	5304.7 µg/L	12.42	5304.7 ppb	12.42	0.23%	
QC value within limits for K 766.490 Radial Recovery = 106.09%							
Mg 279.077 IEC†	48541.8	497980 µg/L	1514.2	497980 ppb	1514.2	0.30%	
QC value within limits for Mg 279.077 IEC Recovery = 99.60%							
Mn 257.610†	139903.9	501.46 µg/L	1.539	501.46 ppb	1.539	0.31%	
QC value within limits for Mn 257.610 Recovery = 100.29%							
Mo 202.031†	4164.0	511.74 µg/L	5.082	511.74 ppb	5.082	0.99%	
QC value within limits for Mo 202.031 Recovery = 102.35%							
Na 589.592 Radial†	19415.2	5169.0 µg/L	19.14	5169.0 ppb	19.14	0.37%	
QC value within limits for Na 589.592 Radial Recovery = 103.38%							
Ni 231.604†	7685.5	467.28 µg/L	2.892	467.28 ppb	2.892	0.62%	
QC value within limits for Ni 231.604 Recovery = 93.46%							
P 214.914†	1200.3	2706.5 µg/L	22.63	2706.5 ppb	22.63	0.84%	
QC value within limits for P 214.914 Recovery = 108.26%							
Pb 220.353†	1729.3	506.47 µg/L	5.545	506.47 ppb	5.545	1.09%	
QC value within limits for Pb 220.353 Recovery = 101.29%							
S 181.975 Axial†	544.2	3025.2 µg/L	33.36	3025.2 ppb	33.36	1.10%	
QC value greater than the upper limit for S 181.975 Axial Recovery = 121.01%							
Sb 206.836†	543.9	534.90 µg/L	13.485	534.90 ppb	13.485	2.52%	
QC value within limits for Sb 206.836 Recovery = 106.98%							
Se 196.026†	1250.4	2543.8 µg/L	11.48	2543.8 ppb	11.48	0.45%	
QC value within limits for Se 196.026 Recovery = 101.75%							
SiO2†	57357.1	11711 µg/L	39.8	11711 ppb	39.8	0.34%	
QC value within limits for SiO2 Recovery = 109.50%							
Si 251.611†	67403.5	5460.0 µg/L	15.10	5460.0 ppb	15.10	0.28%	
QC value within limits for Si 251.611 Recovery = 109.20%							
Sn 189.927†	587.6	553.31 µg/L	6.172	553.31 ppb	6.172	1.12%	
QC value within limits for Sn 189.927 Recovery = 110.66%							
Sr 421.552†	89330.5	534.37 µg/L	5.032	534.37 ppb	5.032	0.94%	
QC value within limits for Sr 421.552 Recovery = 106.87%							
Ti 334.940†	231372.4	527.82 µg/L	1.231	527.82 ppb	1.231	0.23%	
QC value within limits for Ti 334.940 Recovery = 105.56%							
Tl 190.801†	337.8	482.29 µg/L	17.751	482.29 ppb	17.751	3.68%	
QC value within limits for Tl 190.801 Recovery = 96.46%							
U 409.014†	6014.3	502.32 µg/L	2.548	502.32 ppb	2.548	0.51%	
QC value within limits for U 409.014 Recovery = 100.46%							
V 292.402†	44081.9	546.23 µg/L	2.451	546.23 ppb	2.451	0.45%	
QC value within limits for V 292.402 Recovery = 109.25%							
Zn 213.857†	19171.2	498.60 µg/L	1.791	498.60 ppb	1.791	0.36%	
QC value within limits for Zn 213.857 Recovery = 99.72%							
QC Failed. Continue with analysis.							

Sequence No.: 11  
 Sample ID: LRI  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 105  
 Date Collected: 1/29/2010 06:48:35  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: LRI

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	74780.8	74780.8	95.3 %		06:49:15
1	Al 396.153Radial†	763756.8	801571.8	519150 µg/L	519150 ppb	06:49:10
1	Ca 317.933Radial†	648687.8	680533.2	490360 µg/L	490360 ppb	06:49:10
1	Fe 238.204 Radial†	33775.9	35430.6	469160 µg/L	469160 ppb	06:49:15
1	K 766.490 Radial†	242.6	-144.1	-90.915 µg/L	-90.915 ppb	06:49:15
1	Mg 279.077 IEC†	46087.2	48359.1	495800 µg/L	495800 ppb	06:49:15
1	Na 589.592 Radial†	1774554.1	1861793.2	495670 µg/L	495670 ppb	06:49:10
1	Sr 421.552†	1476.2	915.3	5.4750 µg/L	5.4750 ppb	06:49:15
1	Sc 361.383	1811566.7	1811566.7	91.657 %		06:49:50
1	Y 371.029	1125478.5	1125478.5	90.102 %		06:49:50
1	Ag 328.068†	-4124.1	-4406.9	-10.469 µg/L	-10.469 ppb	06:49:50
1	As 188.979†	-14.1	-12.7	-25.901 µg/L	-25.901 ppb	06:50:11
1	B 249.677†	5896.9	6063.7	42.419 µg/L	42.419 ppb	06:49:50
1	Ba 233.527†	482.2	550.1	15.297 µg/L	15.297 ppb	06:50:11
1	Be 313.107†	-1125.3	-5061.5	-3.4186 µg/L	-3.4186 ppb	06:49:50
1	Cd 226.502†	1780.5	2067.8	5.5699 µg/L	5.5699 ppb	06:49:50
1	Co 228.616†	103.9	162.7	8.5549 µg/L	8.5549 ppb	06:50:11
1	Cr 267.716†	244.3	368.7	8.2372 µg/L	8.2372 ppb	06:50:11
1	Cu 324.752†	-4777.0	-9111.8	-1.5973 µg/L	-1.5973 ppb	06:49:50
1	Mn 257.610†	-13543.0	-14627.8	-9.3024 µg/L	-9.3024 ppb	06:49:50
1	Mo 202.031†	-210.9	-242.7	-11.575 µg/L	-11.575 ppb	06:50:11
1	Ni 231.604†	260.0	-47.8	3.1946 µg/L	3.1946 ppb	06:50:11
1	P 214.914†	407.4	224.7	289.68 µg/L	289.68 ppb	06:50:11
1	Pb 220.353†	73.2	18.7	0.8948 µg/L	0.8948 ppb	06:50:11
1	S 181.975 Axial†	60.0	42.3	235.08 µg/L	235.08 ppb	06:50:11
1	Sb 206.836†	63.5	45.3	4.6321 µg/L	4.6321 ppb	06:50:11
1	Se 196.026†	-1121.5	-1231.5	-80.772 µg/L	-80.772 ppb	06:50:11
1	SiO2†	1640.3	-599.8	-122.46 µg/L	-122.46 ppb	06:50:11
1	Si 251.611†	-292.1	-601.1	-48.690 µg/L	-48.690 ppb	06:50:11
1	Sn 189.927†	-379.2	-437.2	0.4313 µg/L	0.4313 ppb	06:50:11
1	Ti 334.940†	13627.4	14163.9	2.8767 µg/L	2.8767 ppb	06:49:50
1	Tl 190.801†	7.2	32.4	-26.494 µg/L	-26.494 ppb	06:50:11
1	U 409.014†	143175.3	156393.2	14441 µg/L	14441 ppb	06:49:50
1	V 292.402†	-2976.8	-3132.4	2.0701 µg/L	2.0701 ppb	06:49:50
1	Zn 213.857†	3082.1	2730.4	26.448 µg/L	26.448 ppb	06:50:11
2	Sc RADIAL	74865.0	74865.0	95.4 %		06:49:27
2	Al 396.153Radial†	763291.8	800182.6	518250 µg/L	518250 ppb	06:49:22
2	Ca 317.933Radial†	647106.8	678110.0	488610 µg/L	488610 ppb	06:49:22
2	Fe 238.204 Radial†	34069.9	35698.9	472710 µg/L	472710 ppb	06:49:27
2	K 766.490 Radial†	257.9	-128.4	-80.993 µg/L	-80.993 ppb	06:49:27
2	Mg 279.077 IEC†	46498.5	48735.9	499660 µg/L	499660 ppb	06:49:27
2	Na 589.592 Radial†	1772685.4	1857739.1	494590 µg/L	494590 ppb	06:49:22
2	Sr 421.552†	1442.0	877.6	5.2500 µg/L	5.2500 ppb	06:49:27
2	Sc 361.383	1810730.8	1810730.8	91.615 %		06:50:18
2	Y 371.029	1125386.0	1125386.0	90.095 %		06:50:18
2	Ag 328.068†	-4219.8	-4513.4	-11.209 µg/L	-11.209 ppb	06:50:18
2	As 188.979†	-12.3	-10.7	-21.162 µg/L	-21.162 ppb	06:50:38
2	B 249.677†	5924.9	6097.3	42.157 µg/L	42.157 ppb	06:50:18
2	Ba 233.527†	484.1	552.4	15.362 µg/L	15.362 ppb	06:50:38
2	Be 313.107†	-1033.1	-4961.4	-3.3519 µg/L	-3.3519 ppb	06:50:18
2	Cd 226.502†	1765.4	2052.2	4.7257 µg/L	4.7257 ppb	06:50:18
2	Co 228.616†	134.7	196.3	10.341 µg/L	10.341 ppb	06:50:38
2	Cr 267.716†	223.2	345.8	7.7232 µg/L	7.7232 ppb	06:50:38
2	Cu 324.752†	-4821.0	-9162.2	-1.4730 µg/L	-1.4730 ppb	06:50:18
2	Mn 257.610†	-13519.9	-14609.4	-8.9192 µg/L	-8.9192 ppb	06:50:18
2	Mo 202.031†	-225.7	-258.9	-13.406 µg/L	-13.406 ppb	06:50:38
2	Ni 231.604†	243.9	-65.2	2.1834 µg/L	2.1834 ppb	06:50:38
2	P 214.914†	389.9	205.8	243.06 µg/L	243.06 ppb	06:50:38
2	Pb 220.353†	75.6	21.3	1.3442 µg/L	1.3442 ppb	06:50:38

2	S 181.975 Axial†	54.0	35.8	199.11 µg/L	199.11 ppb	06:50:38
2	Sb 206.836†	46.6	26.8	-14.760 µg/L	-14.760 ppb	06:50:38
2	Se 196.026†	-1091.0	-1198.8	-19.322 µg/L	-19.322 ppb	06:50:38
2	SiO2†	1643.0	-596.0	-121.69 µg/L	-121.69 ppb	06:50:38
2	Si 251.611†	-337.3	-650.6	-52.700 µg/L	-52.700 ppb	06:50:38
2	Sn 189.927†	-375.7	-433.6	3.1545 µg/L	3.1545 ppb	06:50:38
2	Ti 334.940†	14291.1	14895.2	4.3110 µg/L	4.3110 ppb	06:50:18
2	Tl 190.801†	14.2	40.0	-13.627 µg/L	-13.627 ppb	06:50:38
2	U 409.014†	143959.3	157321.2	14527 µg/L	14527 ppb	06:50:18
2	V 292.402†	-3002.6	-3162.1	1.9750 µg/L	1.9750 ppb	06:50:18
2	Zn 213.857†	3071.1	2719.9	25.768 µg/L	25.768 ppb	06:50:38
3	Sc RADIAL	74475.6	74475.6	94.9 %		06:49:39
3	Al 396.153Radial†	761774.5	802768.2	519930 µg/L	519930 ppb	06:49:34
3	Ca 317.933Radial†	645404.8	679864.0	489870 µg/L	489870 ppb	06:49:34
3	Fe 238.204 Radial†	33791.6	35592.4	471300 µg/L	471300 ppb	06:49:39
3	K 766.490 Radial†	200.7	-187.2	-118.14 µg/L	-118.14 ppb	06:49:39
3	Mg 279.077 IEC†	46185.5	48661.0	498890 µg/L	498890 ppb	06:49:39
3	Na 589.592 Radial†	1771468.1	1866174.5	496840 µg/L	496840 ppb	06:49:34
3	Sr 421.552†	1422.7	865.2	5.1755 µg/L	5.1755 ppb	06:49:39
3	Sc 361.383	1804407.4	1804407.4	91.295 %		06:50:45
3	Y 371.029	1121643.5	1121643.5	89.795 %		06:50:45
3	Ag 328.068†	-4167.8	-4472.6	-10.933 µg/L	-10.933 ppb	06:50:45
3	As 188.979†	-11.8	-10.2	-20.205 µg/L	-20.205 ppb	06:51:06
3	B 249.677†	5967.4	6166.4	46.169 µg/L	46.169 ppb	06:50:45
3	Ba 233.527†	474.1	543.3	15.106 µg/L	15.106 ppb	06:51:06
3	Be 313.107†	-1103.9	-5042.9	-3.4076 µg/L	-3.4076 ppb	06:50:45
3	Cd 226.502†	1769.7	2063.8	5.2139 µg/L	5.2139 ppb	06:50:45
3	Co 228.616†	134.6	196.7	10.356 µg/L	10.356 ppb	06:51:06
3	Cr 267.716†	240.2	365.3	8.1609 µg/L	8.1609 ppb	06:51:06
3	Cu 324.752†	-4904.6	-9272.2	-2.4756 µg/L	-2.4756 ppb	06:50:45
3	Mn 257.610†	-13593.4	-14741.6	-9.5448 µg/L	-9.5448 ppb	06:50:45
3	Mo 202.031†	-224.1	-258.1	-13.352 µg/L	-13.352 ppb	06:51:06
3	Ni 231.604†	277.7	-27.2	4.4686 µg/L	4.4686 ppb	06:51:06
3	P 214.914†	389.2	206.5	246.44 µg/L	246.44 ppb	06:51:06
3	Pb 220.353†	75.0	21.0	1.2965 µg/L	1.2965 ppb	06:51:06
3	S 181.975 Axial†	72.1	55.8	310.39 µg/L	310.39 ppb	06:51:06
3	Sb 206.836†	63.7	45.7	5.1408 µg/L	5.1408 ppb	06:51:06
3	Se 196.026†	-1109.8	-1223.6	-61.666 µg/L	-61.666 ppb	06:51:06
3	SiO2†	1648.3	-583.9	-119.23 µg/L	-119.23 ppb	06:51:06
3	Si 251.611†	-334.3	-648.7	-52.544 µg/L	-52.544 ppb	06:51:06
3	Sn 189.927†	-369.6	-428.2	6.1554 µg/L	6.1554 ppb	06:51:06
3	Ti 334.940†	15027.1	15756.1	6.4730 µg/L	6.4730 ppb	06:50:45
3	Tl 190.801†	14.1	40.0	-13.697 µg/L	-13.697 ppb	06:51:06
3	U 409.014†	144347.5	158297.0	14618 µg/L	14618 ppb	06:50:45
3	V 292.402†	-3032.8	-3206.7	1.4594 µg/L	1.4594 ppb	06:50:45
3	Zn 213.857†	3090.3	2752.7	26.792 µg/L	26.792 ppb	06:51:06

## Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1808901.6	91.523 %	0.1981			0.22%
Sc RADIAL	74707.1	95.2 %	0.26			0.27%
Y 371.029	1124169.3	89.998 %	0.1752			0.19%
Ag 328.068†	-4464.3	-10.870 µg/L	0.3738	-10.870 ppb	0.3738	3.44%
Al 396.153Radial†	801507.5	519110 µg/L	838.1	519110 ppb	838.1	0.16%
QC value within limits for Al 396.153Radial Recovery = 103.82%						
As 188.979†	-11.2	-22.423 µg/L	3.0499	-22.423 ppb	3.0499	13.60%
B 249.677†	6109.1	43.582 µg/L	2.2445	43.582 ppb	2.2445	5.15%
Ba 233.527†	548.6	15.255 µg/L	0.1330	15.255 ppb	0.1330	0.87%
Be 313.107†	-5021.9	-3.3927 µg/L	0.03574	-3.3927 ppb	0.03574	1.05%
Ca 317.933Radial†	679502.4	489610 µg/L	901.7	489610 ppb	901.7	0.18%
QC value within limits for Ca 317.933Radial Recovery = 97.92%						
Cd 226.502†	2061.3	5.1699 µg/L	0.42382	5.1699 ppb	0.42382	8.20%
Co 228.616†	185.2	9.7509 µg/L	1.03582	9.7509 ppb	1.03582	10.62%
Cr 267.716†	359.9	8.0404 µg/L	0.27735	8.0404 ppb	0.27735	3.45%
Cu 324.752†	-9182.0	-1.8486 µg/L	0.54649	-1.8486 ppb	0.54649	29.56%
Fe 238.204 Radial†	35573.9	471060 µg/L	1788.7	471060 ppb	1788.7	0.38%
QC value within limits for Fe 238.204 Radial Recovery = 94.21%						
K 766.490 Radial†	-153.2	-96.681 µg/L	19.2309	-96.681 ppb	19.2309	19.89%
Mg 279.077 IEC†	48585.3	498120 µg/L	2045.3	498120 ppb	2045.3	0.41%



QC value within limits for Mg 279.077 IEC Recovery = 99.62%

Mn 257.610†	-14659.6	-9.2555 µg/L	0.31540	-9.2555 ppb	0.31540	3.41%
Mo 202.031†	-253.2	-12.778 µg/L	1.0419	-12.778 ppb	1.0419	8.15%
Na 589.592 Radial†	1861902.3	495700 µg/L	1123.2	495700 ppb	1123.2	0.23%

QC value within limits for Na 589.592 Radial Recovery = 99.14%

Ni 231.604†	-46.7	3.2822 µg/L	1.14508	3.2822 ppb	1.14508	34.89%
P 214.914†	212.3	259.73 µg/L	25.997	259.73 ppb	25.997	10.01%
Pb 220.353†	20.4	1.1785 µg/L	0.24686	1.1785 ppb	0.24686	20.95%
S 181.975 Axial†	44.6	248.19 µg/L	56.787	248.19 ppb	56.787	22.88%
Sb 206.836†	39.3	-1.6624 µg/L	11.34577	-1.6624 ppb	11.34577	682.50%
Se 196.026†	-1218.0	-53.920 µg/L	31.4488	-53.920 ppb	31.4488	58.33%
SiO2†	-593.2	-121.13 µg/L	1.691	-121.13 ppb	1.691	1.40%
Si 251.611†	-633.4	-51.312 µg/L	2.2715	-51.312 ppb	2.2715	4.43%
Sn 189.927†	-433.0	3.2471 µg/L	2.86317	3.2471 ppb	2.86317	88.18%
Sr 421.552†	886.0	5.3002 µg/L	0.15590	5.3002 ppb	0.15590	2.94%
Ti 334.940†	14938.4	4.5536 µg/L	1.81040	4.5536 ppb	1.81040	39.76%
Tl 190.801†	37.5	-17.939 µg/L	7.4086	-17.939 ppb	7.4086	41.30%
U 409.014†	157337.1	14529 µg/L	88.4	14529 ppb	88.4	0.61%

QC value within limits for U 409.014 Recovery = 96.86%

V 292.402†	-3167.1	1.8348 µg/L	0.32858	1.8348 ppb	0.32858	17.91%
Zn 213.857†	2734.3	26.336 µg/L	0.5209	26.336 ppb	0.5209	1.98%

All analyte(s) passed QC.

Sequence No.: 12

Sample ID: LR2

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 108

Date Collected: 1/29/2010 06:51:16

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77065.6	77065.6	98.2	%		06:51:58
1	Al 396.153Radial†	292.3	327.1	3.3367	µg/L	3.3367 ppb	06:51:58
1	Ca 317.933Radial†	318.3	77.0	55.474	µg/L	55.474 ppb	06:52:18
1	Fe 238.204 Radial†	-19.6	-36.3	-270.39	µg/L	-270.39 ppb	06:52:18
1	K 766.490 Radial†	490372.7	498976.8	314810	µg/L	314810 ppb	06:51:52
1	Mg 279.077 IEC†	-25.9	-34.5	-183.13	µg/L	-183.13 ppb	06:52:18
1	Na 589.592 Radial†	1829.3	1309.2	348.56	µg/L	348.56 ppb	06:51:58
1	Sr 421.552†	1674429.4	1704536.5	10196	µg/L	10196 ppb	06:51:52
1	Sc 361.383	1962801.1	1962801.1	99.309	%		06:53:50
1	Y 371.029	1230143.3	1230143.3	98.482	%		06:53:50
1	Ag 328.068†	-7188.6	-7146.0	4.5329	µg/L	4.5329 ppb	06:53:50
1	As 188.979†	4511.2	4545.3	9887.4	µg/L	9887.4 ppb	06:53:55
1	B 249.677†	105935.5	106302.4	5075.9	µg/L	5075.9 ppb	06:53:50
1	Ba 233.527†	478121.3	481471.2	13468	µg/L	13468 ppb	06:53:50
1	Be 313.107†	4397361.9	4424117.1	2972.8	µg/L	2972.8 ppb	06:53:39
1	Cd 226.502†	348359.7	350908.3	9952.5	µg/L	9952.5 ppb	06:53:50
1	Co 228.616†	184883.1	186218.5	9894.0	µg/L	9894.0 ppb	06:53:50
1	Cr 267.716†	1120265.5	1128160.4	25285	µg/L	25285 ppb	06:53:50
1	Cu 324.752†	2890397.7	2906604.0	21312	µg/L	21312 ppb	06:53:50
1	Mn 257.610†	2771028.8	2790452.5	9890.8	µg/L	9890.8 ppb	06:53:50
1	Mo 202.031†	83226.1	83792.5	10151	µg/L	10151 ppb	06:53:50
1	Ni 231.604†	165857.4	166679.7	10080	µg/L	10080 ppb	06:53:50
1	P 214.914†	8119.6	7956.3	16249	µg/L	16249 ppb	06:53:55
1	Pb 220.353†	92380.5	92962.0	26071	µg/L	26071 ppb	06:53:50
1	S 181.975 Axial†	9536.7	9579.9	53260	µg/L	53260 ppb	06:53:55
1	Sb 206.836†	9930.3	9975.3	10430	µg/L	10430 ppb	06:53:55
1	Se 196.026†	6767.1	6806.3	10229	µg/L	10229 ppb	06:53:55
1	SiO2†	502944.5	504053.7	102920	µg/L	102920 ppb	06:53:50
1	Si 251.611†	587130.6	590932.4	47868	µg/L	47868 ppb	06:53:50
1	Sn 189.927†	19539.2	19651.7	11077	µg/L	11077 ppb	06:53:55
1	Ti 334.940†	4209334.4	4237911.6	10244	µg/L	10244 ppb	06:53:39
1	Tl 190.801†	5935.6	6001.4	10091	µg/L	10091 ppb	06:53:55
1	U 409.014†	795.4	987.2	91.819	µg/L	91.819 ppb	06:53:50
1	V 292.402†	863819.5	869943.7	10604	µg/L	10604 ppb	06:53:50
1	Zn 213.857†	532190.9	535260.7	14967	µg/L	14967 ppb	06:53:50
2	Sc RADIAL	76960.2	76960.2	98.1	%		06:52:30
2	Al 396.153Radial†	312.8	348.5	22.133	µg/L	22.133 ppb	06:52:30
2	Ca 317.933Radial†	316.8	75.9	54.666	µg/L	54.666 ppb	06:52:50
2	Fe 238.204 Radial†	-18.7	-35.4	-263.08	µg/L	-263.08 ppb	06:52:50
2	K 766.490 Radial†	496745.8	506159.4	319340	µg/L	319340 ppb	06:52:24
2	Mg 279.077 IEC†	-22.1	-30.7	-148.39	µg/L	-148.39 ppb	06:52:50
2	Na 589.592 Radial†	1557.4	1034.5	275.41	µg/L	275.41 ppb	06:52:30
2	Sr 421.552†	1698938.4	1731864.0	10360	µg/L	10360 ppb	06:52:24
2	Sc 361.383	1982518.2	1982518.2	100.31	%		06:54:14
2	Y 371.029	1242163.2	1242163.2	99.444	%		06:54:14
2	Ag 328.068†	-7090.3	-6976.0	4.4474	µg/L	4.4474 ppb	06:54:14
2	As 188.979†	4367.1	4356.5	9476.2	µg/L	9476.2 ppb	06:54:20
2	B 249.677†	105005.2	104314.1	4980.7	µg/L	4980.7 ppb	06:54:14
2	Ba 233.527†	472823.0	471400.9	13186	µg/L	13186 ppb	06:54:14
2	Be 313.107†	4341654.7	4324542.2	2905.9	µg/L	2905.9 ppb	06:54:04
2	Cd 226.502†	344481.0	343552.7	9743.9	µg/L	9743.9 ppb	06:54:14
2	Co 228.616†	182422.3	181913.7	9665.3	µg/L	9665.3 ppb	06:54:14
2	Cr 267.716†	1103191.5	1099919.6	24652	µg/L	24652 ppb	06:54:14
2	Cu 324.752†	2845234.6	2832632.7	20770	µg/L	20770 ppb	06:54:14
2	Mn 257.610†	2734796.9	2726580.5	9664.4	µg/L	9664.4 ppb	06:54:14
2	Mo 202.031†	82073.7	81810.1	9910.9	µg/L	9910.9 ppb	06:54:14
2	Ni 231.604†	163687.8	162855.8	9849.1	µg/L	9849.1 ppb	06:54:14
2	P 214.914†	7822.2	7578.4	15428	µg/L	15428 ppb	06:54:20
2	Pb 220.353†	91432.3	91091.5	25547	µg/L	25547 ppb	06:54:14

2	S 181.975 Axial†	9279.4	9227.9	51303 µg/L	51303 ppb	06:54:20
2	Sb 206.836†	9614.8	9561.4	9995.7 µg/L	9995.7 ppb	06:54:20
2	Se 196.026†	6588.8	6560.7	9860.0 µg/L	9860.0 ppb	06:54:20
2	SiO2†	497707.6	493796.0	100820 µg/L	100820 ppb	06:54:14
2	Si 251.611†	580903.4	578844.3	46889 µg/L	46889 ppb	06:54:14
2	Sn 189.927†	18795.8	18714.9	10549 µg/L	10549 ppb	06:54:20
2	Ti 334.940†	4153305.5	4139899.0	10007 µg/L	10007 ppb	06:54:04
2	Tl 190.801†	5805.5	5812.3	9773.6 µg/L	9773.6 ppb	06:54:20
2	U 409.014†	825.5	1009.2	93.861 µg/L	93.861 ppb	06:54:14
2	V 292.402†	852022.4	849531.9	10355 µg/L	10355 ppb	06:54:14
2	Zn 213.857†	525348.3	523109.3	14628 µg/L	14628 ppb	06:54:14
3	Sc RADIAL	77519.2	77519.2	98.8 %		06:53:01
3	Al 396.153Radial†	395.1	429.5	95.898 µg/L	95.898 ppb	06:53:01
3	Ca 317.933Radial†	401.0	158.8	114.39 µg/L	114.39 ppb	06:53:22
3	Fe 238.204 Radial†	-18.7	-35.3	-283.75 µg/L	-283.75 ppb	06:53:22
3	K 766.490 Radial†	475994.2	481498.2	303780 µg/L	303780 ppb	06:52:56
3	Mg 279.077 IEC†	-15.1	-23.4	-90.914 µg/L	-90.914 ppb	06:53:22
3	Na 589.592 Radial†	1464.8	929.3	247.42 µg/L	247.42 ppb	06:53:01
3	Sr 421.552†	1623628.2	1643128.4	9829.1 µg/L	9829.1 ppb	06:52:56
3	Sc 361.383	1992712.7	1992712.7	100.82 %		06:54:39
3	Y 371.029	1248232.5	1248232.5	99.930 %		06:54:39
3	Ag 328.068†	-6369.3	-6224.8	3.9277 µg/L	3.9277 ppb	06:54:39
3	As 188.979†	4009.8	3979.8	8657.3 µg/L	8657.3 ppb	06:54:45
3	B 249.677†	97826.5	96658.4	4613.1 µg/L	4613.1 ppb	06:54:39
3	Ba 233.527†	428765.4	425291.2	11896 µg/L	11896 ppb	06:54:39
3	Be 313.107†	4087403.6	4050222.1	2721.5 µg/L	2721.5 ppb	06:54:29
3	Cd 226.502†	311837.7	309418.9	8775.7 µg/L	8775.7 ppb	06:54:39
3	Co 228.616†	163590.4	162305.0	8622.6 µg/L	8622.6 ppb	06:54:39
3	Cr 267.716†	969580.3	961772.0	21556 µg/L	21556 ppb	06:54:39
3	Cu 324.752†	2560933.8	2536140.1	18596 µg/L	18596 ppb	06:54:39
3	Mn 257.610†	2456079.8	2436189.3	8635.1 µg/L	8635.1 ppb	06:54:39
3	Mo 202.031†	73862.1	73246.9	8873.5 µg/L	8873.5 ppb	06:54:39
3	Ni 231.604†	146790.2	145261.2	8785.0 µg/L	8785.0 ppb	06:54:39
3	P 214.914†	7035.4	6758.2	13749 µg/L	13749 ppb	06:54:45
3	Pb 220.353†	83859.3	83113.9	23310 µg/L	23310 ppb	06:54:39
3	S 181.975 Axial†	8524.1	8431.4	46875 µg/L	46875 ppb	06:54:45
3	Sb 206.836†	8770.8	8675.3	9076.6 µg/L	9076.6 ppb	06:54:45
3	Se 196.026†	6034.6	5977.4	8983.2 µg/L	8983.2 ppb	06:54:45
3	SiO2†	458235.3	452107.3	92310 µg/L	92310 ppb	06:54:39
3	Si 251.611†	534935.9	530289.1	42956 µg/L	42956 ppb	06:54:39
3	Sn 189.927†	16656.0	16496.6	9298.6 µg/L	9298.6 ppb	06:54:45
3	Ti 334.940†	3913155.6	3880525.7	9380.5 µg/L	9380.5 ppb	06:54:29
3	Tl 190.801†	5445.0	5425.1	9122.8 µg/L	9122.8 ppb	06:54:45
3	U 409.014†	720.2	900.5	83.759 µg/L	83.759 ppb	06:54:39
3	V 292.402†	763681.1	757565.8	9233.5 µg/L	9233.5 ppb	06:54:39
3	Zn 213.857†	474042.1	469542.3	13130 µg/L	13130 ppb	06:54:39

## Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1979344.0	100.15 %	0.769			0.77%
Sc RADIAL	77181.7	98.3 %	0.38			0.38%
Y 371.029	1240179.7	99.285 %	0.7370			0.74%
Ag 328.068†	-6782.3	4.3027 µg/L	0.32755	4.3027 ppb	0.32755	7.61%
Al 396.153Radial†	368.4	40.456 µg/L	48.9253	40.456 ppb	48.9253	120.93%
As 188.979†	4293.9	9340.3 µg/L	626.21	9340.3 ppb	626.21	6.70%
QC value within limits for As 188.979 Recovery = 93.40%						
B 249.677†	102425.0	4889.9 µg/L	244.38	4889.9 ppb	244.38	5.00%
QC value within limits for B 249.677 Recovery = 97.80%						
Ba 233.527†	459387.8	12850 µg/L	838.0	12850 ppb	838.0	6.52%
QC value less than the lower limit for Ba 233.527 Recovery = 85.67%						
Be 313.107†	4266293.8	2866.7 µg/L	130.11	2866.7 ppb	130.11	4.54%
QC value within limits for Be 313.107 Recovery = 95.56%						
Ca 317.933Radial†	103.9	74.843 µg/L	34.2503	74.843 ppb	34.2503	45.76%
Cd 226.502†	334626.6	9490.7 µg/L	627.94	9490.7 ppb	627.94	6.62%
QC value within limits for Cd 226.502 Recovery = 94.91%						
Co 228.616†	176812.4	9394.0 µg/L	677.78	9394.0 ppb	677.78	7.22%
QC value within limits for Co 228.616 Recovery = 93.94%						
Cr 267.716†	1063284.0	23831 µg/L	1995.5	23831 ppb	1995.5	8.37%
QC value within limits for Cr 267.716 Recovery = 95.32%						

Cu 324.752†	2758458.9	20226 µg/L	1437.5	20226 ppb	1437.5	7.11%
QC value within limits for Cu 324.752 Recovery = 101.13%						
Fe 238.204 Radial†	-35.6	-272.40 µg/L	10.484	-272.40 ppb	10.484	3.85%
K 766.490 Radial†	495544.8	312640 µg/L	8002.3	312640 ppb	8002.3	2.56%
QC value within limits for K 766.490 Radial Recovery = 104.21%						
Mg 279.077 IEC†	-29.6	-140.81 µg/L	46.573	-140.81 ppb	46.573	33.07%
Mn 257.610†	2651074.1	9396.8 µg/L	669.27	9396.8 ppb	669.27	7.12%
QC value within limits for Mn 257.610 Recovery = 93.97%						
Mo 202.031†	79616.5	9645.2 µg/L	678.97	9645.2 ppb	678.97	7.04%
QC value within limits for Mo 202.031 Recovery = 96.45%						
Na 589.592 Radial†	1091.0	290.46 µg/L	52.222	290.46 ppb	52.222	17.98%
Ni 231.604†	158265.6	9571.5 µg/L	690.85	9571.5 ppb	690.85	7.22%
QC value within limits for Ni 231.604 Recovery = 95.72%						
P 214.914†	7430.9	15142 µg/L	1274.5	15142 ppb	1274.5	8.42%
QC value within limits for P 214.914 Recovery = 100.95%						
Pb 220.353†	89055.8	24976 µg/L	1466.7	24976 ppb	1466.7	5.87%
QC value within limits for Pb 220.353 Recovery = 99.90%						
S 181.975 Axial†	9079.7	50479 µg/L	3271.3	50479 ppb	3271.3	6.48%
QC value within limits for S 181.975 Axial Recovery = 100.96%						
Sb 206.836†	9404.0	9834.2 µg/L	691.15	9834.2 ppb	691.15	7.03%
QC value within limits for Sb 206.836 Recovery = 98.34%						
Se 196.026†	6448.1	9690.7 µg/L	639.92	9690.7 ppb	639.92	6.60%
QC value within limits for Se 196.026 Recovery = 96.91%						
SiO2†	483319.0	98682 µg/L	5617.4	98682 ppb	5617.4	5.69%
QC value within limits for SiO2 Recovery = 92.23%						
Si 251.611†	566688.6	45904 µg/L	2600.0	45904 ppb	2600.0	5.66%
QC value within limits for Si 251.611 Recovery = 91.81%						
Sn 189.927†	18287.7	10308 µg/L	913.3	10308 ppb	913.3	8.86%
QC value within limits for Sn 189.927 Recovery = 103.08%						
Sr 421.552†	1693176.3	10128 µg/L	271.9	10128 ppb	271.9	2.68%
QC value within limits for Sr 421.552 Recovery = 101.28%						
Ti 334.940†	4086112.1	9877.5 µg/L	446.40	9877.5 ppb	446.40	4.52%
QC value within limits for Ti 334.940 Recovery = 98.77%						
Tl 190.801†	5746.3	9662.4 µg/L	493.57	9662.4 ppb	493.57	5.11%
QC value within limits for Tl 190.801 Recovery = 96.62%						
U 409.014†	965.6	89.813 µg/L	5.3417	89.813 ppb	5.3417	5.95%
V 292.402†	825680.5	10064 µg/L	730.2	10064 ppb	730.2	7.25%
QC value within limits for V 292.402 Recovery = 100.64%						
Zn 213.857†	509304.1	14242 µg/L	977.6	14242 ppb	977.6	6.86%
QC value within limits for Zn 213.857 Recovery = 94.95%						
QC Failed. Continue with analysis.						

=====  
Analysis Begun

Start Time: 1/29/2010 07:10:05

Plasma On Time: 1/25/2010 05:31:26

Logged In Analyst: optima

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N1030502 Autosampler Model: AS-93plus

Sample Information File: C:\pe\optima1\Sample Information\012910.sif

Batch ID:

Results Data Set: 012910

Results Library: c:\pe\optima1\Results\Results.mdb

=====  
Method Loaded

Method Name: Gen Eng fast\_new Si

Method Last Saved: 1/29/2010 05:40:44

IEC File: 011510.iec

MSF File:

Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc RADIAL	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	No
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc RADIAL	No
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

=====  
Sequence No.: 1

Autosampler Location: 7

Sample ID: CCV

Date Collected: 1/29/2010 07:10:07

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

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Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	78460.5	78460.5	100.0 %		07:10:42
1	Al 396.153Radial†	7797.6	7829.1	5059.5 µg/L	5059.5 ppb	07:10:42
1	Ca 317.933Radial†	7291.2	7045.9	5076.9 µg/L	5076.9 ppb	07:10:42
1	Fe 238.204 Radial†	410.4	394.2	5231.0 µg/L	5231.0 ppb	07:11:02

1	K 766.490 Radial†	8680.9	8284.4	5226.6 µg/L	5226.6 ppb	07:10:42
1	Mg 279.077 IEC†	514.9	506.9	5205.9 µg/L	5205.9 ppb	07:11:02
1	Na 589.592 Radial†	38616.0	38072.1	10136 µg/L	10136 ppb	07:10:42
1	Sr 421.552†	87527.4	86915.6	519.92 µg/L	519.92 ppb	07:10:42
1	Sc 361.383	1978806.4	1978806.4	100.12 %		07:12:06
1	Y 371.029	1245705.5	1245705.5	99.727 %		07:12:06
1	Ag 328.068†	59341.3	59363.4	539.73 µg/L	539.73 ppb	07:12:11
1	As 188.979†	255.8	258.3	561.90 µg/L	561.90 ppb	07:12:32
1	B 249.677†	11582.1	11198.4	528.58 µg/L	528.58 ppb	07:12:11
1	Ba 233.527†	19247.7	19248.8	538.65 µg/L	538.65 ppb	07:12:11
1	Be 313.107†	796301.0	791520.9	532.36 µg/L	532.36 ppb	07:12:06
1	Cd 226.502†	18917.6	19020.4	538.86 µg/L	538.86 ppb	07:12:11
1	Co 228.616†	10146.5	10183.7	541.11 µg/L	541.11 ppb	07:12:11
1	Cr 267.716†	24165.2	24238.6	543.45 µg/L	543.45 ppb	07:12:11
1	Cu 324.752†	77809.0	73816.6	541.98 µg/L	541.98 ppb	07:12:11
1	Mn 257.610†	150718.3	150687.1	534.60 µg/L	534.60 ppb	07:12:06
1	Mo 202.031†	4492.1	4474.2	542.23 µg/L	542.23 ppb	07:12:32
1	Ni 231.604†	9290.3	8947.8	541.20 µg/L	541.20 ppb	07:12:11
1	P 214.914†	1412.1	1190.6	2692.2 µg/L	2692.2 ppb	07:12:32
1	Pb 220.353†	2034.8	1971.2	553.15 µg/L	553.15 ppb	07:12:32
1	S 181.975 Axial†	225.6	202.2	1124.1 µg/L	1124.1 ppb	07:12:32
1	Sb 206.836†	541.3	516.7	548.73 µg/L	548.73 ppb	07:12:32
1	Se 196.026†	372.6	364.2	567.18 µg/L	567.18 ppb	07:12:32
1	SiO2†	31162.4	28735.9	5867.2 µg/L	5867.2 ppb	07:12:11
1	Si 251.611†	34110.3	33787.4	2736.9 µg/L	2736.9 ppb	07:12:11
1	Sn 189.927†	1021.7	997.0	564.59 µg/L	564.59 ppb	07:12:32
1	Ti 334.940†	222867.7	221899.0	536.07 µg/L	536.07 ppb	07:12:06
1	Tl 190.801†	301.2	325.4	546.51 µg/L	546.51 ppb	07:12:32
1	U 409.014†	5593.1	5772.7	535.51 µg/L	535.51 ppb	07:12:11
1	V 292.402†	44947.7	45009.6	547.84 µg/L	547.84 ppb	07:12:11
1	Zn 213.857†	19928.4	19272.4	537.94 µg/L	537.94 ppb	07:12:11
2	Sc RADIAL	78520.4	78520.4	100 %		07:11:08
2	Al 396.153Radial†	7812.6	7838.1	5065.4 µg/L	5065.4 ppb	07:11:08
2	Ca 317.933Radial†	7292.7	7041.8	5074.0 µg/L	5074.0 ppb	07:11:08
2	Fe 238.204 Radial†	405.1	388.6	5157.0 µg/L	5157.0 ppb	07:11:28
2	K 766.490 Radial†	8719.5	8316.4	5246.8 µg/L	5246.8 ppb	07:11:08
2	Mg 279.077 IEC†	518.3	509.9	5236.2 µg/L	5236.2 ppb	07:11:28
2	Na 589.592 Radial†	38594.6	38021.3	10123 µg/L	10123 ppb	07:11:08
2	Sr 421.552†	87714.4	87035.8	520.64 µg/L	520.64 ppb	07:11:08
2	Sc 361.383	1968243.0	1968243.0	99.585 %		07:12:39
2	Y 371.029	1238826.5	1238826.5	99.177 %		07:12:39
2	Ag 328.068†	59023.1	59361.9	539.70 µg/L	539.70 ppb	07:12:44
2	As 188.979†	250.3	254.0	552.71 µg/L	552.71 ppb	07:13:05
2	B 249.677†	11453.5	11131.3	525.43 µg/L	525.43 ppb	07:12:44
2	Ba 233.527†	19096.2	19199.9	537.28 µg/L	537.28 ppb	07:12:44
2	Be 313.107†	794007.8	793486.7	533.68 µg/L	533.68 ppb	07:12:39
2	Cd 226.502†	18755.9	18959.5	537.14 µg/L	537.14 ppb	07:12:44
2	Co 228.616†	10052.9	10144.1	539.00 µg/L	539.00 ppb	07:12:44
2	Cr 267.716†	23998.3	24200.6	542.59 µg/L	542.59 ppb	07:12:44
2	Cu 324.752†	77334.9	73757.6	541.53 µg/L	541.53 ppb	07:12:44
2	Mn 257.610†	150282.7	151057.6	535.91 µg/L	535.91 ppb	07:12:39
2	Mo 202.031†	4466.5	4472.5	542.02 µg/L	542.02 ppb	07:13:05
2	Ni 231.604†	9201.8	8908.8	538.84 µg/L	538.84 ppb	07:12:44
2	P 214.914†	1410.9	1197.0	2707.0 µg/L	2707.0 ppb	07:13:05
2	Pb 220.353†	2030.4	1977.7	554.98 µg/L	554.98 ppb	07:13:05
2	S 181.975 Axial†	219.0	196.8	1094.1 µg/L	1094.1 ppb	07:13:05
2	Sb 206.836†	535.3	513.5	545.37 µg/L	545.37 ppb	07:13:05
2	Se 196.026†	374.3	367.9	572.52 µg/L	572.52 ppb	07:13:05
2	SiO2†	30891.9	28631.4	5845.8 µg/L	5845.8 ppb	07:12:44
2	Si 251.611†	33839.7	33698.5	2729.7 µg/L	2729.7 ppb	07:12:44
2	Sn 189.927†	1016.2	996.9	564.54 µg/L	564.54 ppb	07:13:05
2	Ti 334.940†	222369.5	222593.4	537.75 µg/L	537.75 ppb	07:12:39
2	Tl 190.801†	300.8	326.6	548.62 µg/L	548.62 ppb	07:13:05
2	U 409.014†	5570.3	5779.8	536.19 µg/L	536.19 ppb	07:12:44
2	V 292.402†	44585.1	44886.5	546.35 µg/L	546.35 ppb	07:12:44
2	Zn 213.857†	19795.6	19245.9	537.21 µg/L	537.21 ppb	07:12:44
3	Sc RADIAL	78784.5	78784.5	100 %		07:11:34
3	Al 396.153Radial†	7827.6	7826.9	5059.9 µg/L	5059.9 ppb	07:11:34
3	Ca 317.933Radial†	7341.1	7065.6	5091.1 µg/L	5091.1 ppb	07:11:34
3	Fe 238.204 Radial†	405.7	387.8	5145.0 µg/L	5145.0 ppb	07:11:54
3	K 766.490 Radial†	8707.2	8274.9	5220.7 µg/L	5220.7 ppb	07:11:34

3	Mg 279.077 IEC†	514.2	504.0	5174.9 µg/L	5174.9 ppb	07:11:54
3	Na 589.592 Radial†	38810.2	38106.7	10145 µg/L	10145 ppb	07:11:34
3	Sr 421.552†	88178.2	87203.8	521.65 µg/L	521.65 ppb	07:11:34
3	Sc 361.383	1976144.1	1976144.1	99.984 %		07:13:12
3	Y 371.029	1244071.7	1244071.7	99.597 %		07:13:12
3	Ag 328.068†	56791.1	56892.6	517.11 µg/L	517.11 ppb	07:13:18
3	As 188.979†	214.2	216.9	472.02 µg/L	472.02 ppb	07:13:38
3	B 249.677†	10969.1	10600.9	500.23 µg/L	500.23 ppb	07:13:18
3	Ba 233.527†	17818.2	17844.9	499.35 µg/L	499.35 ppb	07:13:18
3	Be 313.107†	755803.5	752088.6	505.84 µg/L	505.84 ppb	07:13:12
3	Cd 226.502†	17452.8	17580.8	498.04 µg/L	498.04 ppb	07:13:18
3	Co 228.616†	9302.4	9353.2	496.91 µg/L	496.91 ppb	07:13:18
3	Cr 267.716†	21611.7	21717.3	486.92 µg/L	486.92 ppb	07:13:18
3	Cu 324.752†	71865.9	67977.2	499.15 µg/L	499.15 ppb	07:13:18
3	Mn 257.610†	143205.0	143375.4	508.68 µg/L	508.68 ppb	07:13:12
3	Mo 202.031†	3748.7	3736.7	452.88 µg/L	452.88 ppb	07:13:38
3	Ni 231.604†	8527.7	8197.6	495.82 µg/L	495.82 ppb	07:13:18
3	P 214.914†	1230.1	1010.4	2280.0 µg/L	2280.0 ppb	07:13:38
3	Pb 220.353†	1764.0	1703.1	477.82 µg/L	477.82 ppb	07:13:38
3	S 181.975 Axial†	197.8	174.7	971.03 µg/L	971.03 ppb	07:13:38
3	Sb 206.836†	473.0	449.1	476.40 µg/L	476.40 ppb	07:13:38
3	Se 196.026†	319.0	311.1	487.05 µg/L	487.05 ppb	07:13:38
3	SiO2†	29289.0	26904.2	5493.2 µg/L	5493.2 ppb	07:13:18
3	Si 251.611†	31956.9	31679.5	2566.2 µg/L	2566.2 ppb	07:13:18
3	Sn 189.927†	842.3	819.0	464.22 µg/L	464.22 ppb	07:13:38
3	Ti 334.940†	210554.7	209883.9	507.03 µg/L	507.03 ppb	07:13:12
3	Tl 190.801†	277.1	301.7	506.82 µg/L	506.82 ppb	07:13:38
3	U 409.014†	4981.6	5168.6	479.38 µg/L	479.38 ppb	07:13:18
3	V 292.402†	40917.8	41039.5	499.19 µg/L	499.19 ppb	07:13:18
3	Zn 213.857†	18332.6	17703.2	494.11 µg/L	494.11 ppb	07:13:18

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1974397.8	99.896 %	0.2780			0.28%
Sc RADIAL	78588.5	100 %	0.2			0.22%
Y 371.029	1242867.9	99.500 %	0.2877			0.29%
Ag 328.068†	58539.3	532.18 µg/L	13.053	532.18 ppb	13.053	2.45%
QC value within limits for Ag 328.068 Recovery = 106.44%						
Al 396.153Radial†	7831.4	5061.6 µg/L	3.26	5061.6 ppb	3.26	0.06%
QC value within limits for Al 396.153Radial Recovery = 101.23%						
As 188.979†	243.1	528.88 µg/L	49.456	528.88 ppb	49.456	9.35%
QC value within limits for As 188.979 Recovery = 105.78%						
B 249.677†	10976.9	518.08 µg/L	15.541	518.08 ppb	15.541	3.00%
QC value within limits for B 249.677 Recovery = 103.62%						
Ba 233.527†	18764.5	525.09 µg/L	22.305	525.09 ppb	22.305	4.25%
QC value within limits for Ba 233.527 Recovery = 105.02%						
Be 313.107†	779032.1	523.96 µg/L	15.707	523.96 ppb	15.707	3.00%
QC value within limits for Be 313.107 Recovery = 104.79%						
Ca 317.933Radial†	7051.1	5080.6 µg/L	9.15	5080.6 ppb	9.15	0.18%
QC value within limits for Ca 317.933Radial Recovery = 101.61%						
Cd 226.502†	18520.2	524.68 µg/L	23.089	524.68 ppb	23.089	4.40%
QC value within limits for Cd 226.502 Recovery = 104.94%						
Co 228.616†	9893.7	525.68 µg/L	24.933	525.68 ppb	24.933	4.74%
QC value within limits for Co 228.616 Recovery = 105.14%						
Cr 267.716†	23385.5	524.32 µg/L	32.391	524.32 ppb	32.391	6.18%
QC value within limits for Cr 267.716 Recovery = 104.86%						
Cu 324.752†	71850.5	527.55 µg/L	24.600	527.55 ppb	24.600	4.66%
QC value within limits for Cu 324.752 Recovery = 105.51%						
Fe 238.204 Radial†	390.2	5177.7 µg/L	46.57	5177.7 ppb	46.57	0.90%
QC value within limits for Fe 238.204 Radial Recovery = 103.55%						
K 766.490 Radial†	8291.9	5231.4 µg/L	13.71	5231.4 ppb	13.71	0.26%
QC value within limits for K 766.490 Radial Recovery = 104.63%						
Mg 279.077 IEC†	506.9	5205.6 µg/L	30.69	5205.6 ppb	30.69	0.59%
QC value within limits for Mg 279.077 IEC Recovery = 104.11%						
Mn 257.610†	148373.4	526.39 µg/L	15.358	526.39 ppb	15.358	2.92%
QC value within limits for Mn 257.610 Recovery = 105.28%						
Mo 202.031†	4227.8	512.38 µg/L	51.525	512.38 ppb	51.525	10.06%
QC value within limits for Mo 202.031 Recovery = 102.48%						
Na 589.592 Radial†	38066.7	10135 µg/L	11.4	10135 ppb	11.4	0.11%

QC value within limits for Na 589.592 Radial Recovery = 101.35%

Ni 231.604†	8684.7	525.29 µg/L	25.542	525.29 ppb	25.542	4.86%
QC value within limits for Ni 231.604 Recovery = 105.06%						
P 214.914†	1132.7	2559.7 µg/L	242.36	2559.7 ppb	242.36	9.47%
QC value within limits for P 214.914 Recovery = 102.39%						
Pb 220.353†	1884.0	528.65 µg/L	44.032	528.65 ppb	44.032	8.33%
QC value within limits for Pb 220.353 Recovery = 105.73%						
S 181.975 Axial†	191.2	1063.1 µg/L	81.12	1063.1 ppb	81.12	7.63%
QC value within limits for S 181.975 Axial Recovery = 106.31%						
Sb 206.836†	493.1	523.50 µg/L	40.826	523.50 ppb	40.826	7.80%
QC value within limits for Sb 206.836 Recovery = 104.70%						
Se 196.026†	347.7	542.25 µg/L	47.881	542.25 ppb	47.881	8.83%
QC value within limits for Se 196.026 Recovery = 108.45%						
SiO2†	28090.5	5735.4 µg/L	210.04	5735.4 ppb	210.04	3.66%
QC value within limits for SiO2 Recovery = 107.25%						
Si 251.611†	33055.1	2677.6 µg/L	96.57	2677.6 ppb	96.57	3.61%
QC value within limits for Si 251.611 Recovery = 107.10%						
Sn 189.927†	937.6	531.11 µg/L	57.934	531.11 ppb	57.934	10.91%
QC value within limits for Sn 189.927 Recovery = 106.22%						
Sr 421.552†	87051.8	520.74 µg/L	0.866	520.74 ppb	0.866	0.17%
QC value within limits for Sr 421.552 Recovery = 104.15%						
Ti 334.940†	218125.4	526.95 µg/L	17.271	526.95 ppb	17.271	3.28%
QC value within limits for Ti 334.940 Recovery = 105.39%						
Tl 190.801†	317.9	533.98 µg/L	23.547	533.98 ppb	23.547	4.41%
QC value within limits for Tl 190.801 Recovery = 106.80%						
U 409.014†	5573.7	517.03 µg/L	32.606	517.03 ppb	32.606	6.31%
QC value within limits for U 409.014 Recovery = 103.41%						
V 292.402†	43645.2	531.13 µg/L	27.670	531.13 ppb	27.670	5.21%
QC value within limits for V 292.402 Recovery = 106.23%						
Zn 213.857†	18740.5	523.09 µg/L	25.100	523.09 ppb	25.100	4.80%
QC value within limits for Zn 213.857 Recovery = 104.62%						

All analyte(s) passed QC.



Sequence No.: 2  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 1/29/2010 07:13:49  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77610.3	77610.3	98.9 %		07:14:21
1	Al 396.153Radial†	-5.5	24.0	15.523 µg/L	15.523 ppb	07:14:21
1	Ca 317.933Radial†	299.9	56.1	40.418 µg/L	40.418 ppb	07:14:42
1	Fe 238.204 Radial†	17.9	1.7	22.812 µg/L	22.812 ppb	07:14:42
1	K 766.490 Radial†	402.6	8.4	5.2867 µg/L	5.2867 ppb	07:14:21
1	Mg 279.077 IEC†	7.7	-0.4	-3.9550 µg/L	-3.9550 ppb	07:14:42
1	Na 589.592 Radial†	577.6	30.4	8.0804 µg/L	8.0804 ppb	07:14:21
1	Sr 421.552†	667.2	40.6	0.2429 µg/L	0.2429 ppb	07:14:21
1	Sc 361.383	1958568.2	1958568.2	99.095 %		07:15:44
1	Y 371.029	1238167.9	1238167.9	99.124 %		07:15:44
1	Ag 328.068†	0.5	93.1	0.8440 µg/L	0.8440 ppb	07:15:49
1	As 188.979†	-3.0	-0.3	-0.6373 µg/L	-0.6373 ppb	07:16:10
1	B 249.677†	370.6	4.0	0.1802 µg/L	0.1802 ppb	07:15:49
1	Ba 233.527†	-13.5	10.4	0.2904 µg/L	0.2904 ppb	07:16:10
1	Be 313.107†	4435.7	642.4	0.4321 µg/L	0.4321 ppb	07:15:49
1	Cd 226.502†	-102.8	21.6	0.6093 µg/L	0.6093 ppb	07:16:10
1	Co 228.616†	-44.5	4.4	0.2350 µg/L	0.2350 ppb	07:16:10
1	Cr 267.716†	-59.8	41.8	0.9360 µg/L	0.9360 ppb	07:15:49
1	Cu 324.752†	4304.3	443.6	3.2559 µg/L	3.2559 ppb	07:15:49
1	Mn 257.610†	-28.9	118.7	0.4239 µg/L	0.4239 ppb	07:16:10
1	Mo 202.031†	17.9	5.5	0.6621 µg/L	0.6621 ppb	07:16:10
1	Ni 231.604†	338.4	10.1	0.6114 µg/L	0.6114 ppb	07:16:10
1	P 214.914†	217.2	-0.6	-1.7992 µg/L	-1.7992 ppb	07:16:10
1	Pb 220.353†	76.6	16.1	4.5249 µg/L	4.5249 ppb	07:16:10
1	S 181.975 Axial†	24.1	1.2	6.7481 µg/L	6.7481 ppb	07:16:10
1	Sb 206.836†	24.7	0.9	0.9329 µg/L	0.9329 ppb	07:16:10
1	Se 196.026†	6.2	-1.7	-2.4951 µg/L	-2.4951 ppb	07:16:10
1	SiO2†	2402.6	35.1	7.1686 µg/L	7.1686 ppb	07:15:49
1	Si 251.611†	302.2	22.6	1.8279 µg/L	1.8279 ppb	07:16:10
1	Sn 189.927†	25.2	1.9	1.1039 µg/L	1.1039 ppb	07:16:10
1	Ti 334.940†	852.1	156.0	0.3781 µg/L	0.3781 ppb	07:15:49
1	Tl 190.801†	-17.7	6.7	11.062 µg/L	11.062 ppb	07:16:10
1	U 409.014†	-272.4	-88.7	-8.2488 µg/L	-8.2488 ppb	07:15:49
1	V 292.402†	-84.6	29.9	0.3599 µg/L	0.3599 ppb	07:15:49
1	Zn 213.857†	684.7	58.7	1.6412 µg/L	1.6412 ppb	07:16:10
2	Sc RADIAL	77168.5	77168.5	98.3 %		07:14:47
2	Al 396.153Radial†	-28.6	0.5	0.2973 µg/L	0.2973 ppb	07:14:47
2	Ca 317.933Radial†	289.7	47.5	34.191 µg/L	34.191 ppb	07:15:08
2	Fe 238.204 Radial†	17.8	1.8	23.388 µg/L	23.388 ppb	07:15:08
2	K 766.490 Radial†	458.4	67.5	42.610 µg/L	42.610 ppb	07:14:47
2	Mg 279.077 IEC†	14.2	6.3	64.724 µg/L	64.724 ppb	07:15:08
2	Na 589.592 Radial†	559.3	15.1	4.0323 µg/L	4.0323 ppb	07:14:47
2	Sr 421.552†	711.9	89.9	0.5379 µg/L	0.5379 ppb	07:14:47
2	Sc 361.383	1947345.7	1947345.7	98.527 %		07:16:16
2	Y 371.029	1230773.7	1230773.7	98.532 %		07:16:16
2	Ag 328.068†	-41.9	50.1	0.4576 µg/L	0.4576 ppb	07:16:21
2	As 188.979†	-0.4	2.3	4.9615 µg/L	4.9615 ppb	07:16:42
2	B 249.677†	298.9	-66.6	-3.1646 µg/L	-3.1646 ppb	07:16:21
2	Ba 233.527†	-15.4	8.4	0.2351 µg/L	0.2351 ppb	07:16:42
2	Be 313.107†	4388.6	620.5	0.4173 µg/L	0.4173 ppb	07:16:21
2	Cd 226.502†	-112.0	11.6	0.3264 µg/L	0.3264 ppb	07:16:42
2	Co 228.616†	-31.8	17.0	0.9053 µg/L	0.9053 ppb	07:16:42
2	Cr 267.716†	-50.8	50.6	1.1347 µg/L	1.1347 ppb	07:16:21
2	Cu 324.752†	4233.6	396.9	2.9137 µg/L	2.9137 ppb	07:16:21
2	Mn 257.610†	-110.2	36.0	0.1283 µg/L	0.1283 ppb	07:16:42
2	Mo 202.031†	13.3	0.9	0.1092 µg/L	0.1092 ppb	07:16:42
2	Ni 231.604†	326.0	-0.6	-0.0360 µg/L	-0.0360 ppb	07:16:42
2	P 214.914†	212.5	-4.2	-9.9216 µg/L	-9.9216 ppb	07:16:42
2	Pb 220.353†	69.3	9.2	2.5598 µg/L	2.5598 ppb	07:16:42

2	S 181.975 Axial†	20.1	-2.7	-15.188 µg/L	-15.188 ppb	07:16:42
2	Sb 206.836†	23.4	-0.3	-0.2893 µg/L	-0.2893 ppb	07:16:42
2	Se 196.026†	11.3	3.5	5.3460 µg/L	5.3460 ppb	07:16:42
2	SiO2†	2391.9	38.3	7.8129 µg/L	7.8129 ppb	07:16:21
2	Si 251.611†	272.2	-6.2	-0.4987 µg/L	-0.4987 ppb	07:16:42
2	Sn 189.927†	26.6	3.5	1.9953 µg/L	1.9953 ppb	07:16:42
2	Ti 334.940†	901.5	211.2	0.5059 µg/L	0.5059 ppb	07:16:21
2	Tl 190.801†	-24.4	-0.2	-0.3991 µg/L	-0.3991 ppb	07:16:42
2	U 409.014†	-147.3	36.7	3.4091 µg/L	3.4091 ppb	07:16:21
2	V 292.402†	-60.5	53.9	0.6565 µg/L	0.6565 ppb	07:16:21
2	Zn 213.857†	678.2	56.1	1.5681 µg/L	1.5681 ppb	07:16:42
3	Sc RADIAL	77693.7	77693.7	99.0 %		07:15:13
3	Al 396.153Radial†	-23.7	5.6	3.6168 µg/L	3.6168 ppb	07:15:13
3	Ca 317.933Radial†	291.5	47.2	34.025 µg/L	34.025 ppb	07:15:33
3	Fe 238.204 Radial†	18.4	2.3	29.879 µg/L	29.879 ppb	07:15:33
3	K 766.490 Radial†	409.0	14.4	9.1115 µg/L	9.1115 ppb	07:15:13
3	Mg 279.077 IEC†	11.2	3.2	32.651 µg/L	32.651 ppb	07:15:33
3	Na 589.592 Radial†	570.2	22.3	5.9393 µg/L	5.9393 ppb	07:15:13
3	Sr 421.552†	639.6	12.1	0.0722 µg/L	0.0722 ppb	07:15:13
3	Sc 361.383	1947377.5	1947377.5	98.529 %		07:16:48
3	Y 371.029	1230920.2	1230920.2	98.544 %		07:16:48
3	Ag 328.068†	-47.8	44.1	0.4036 µg/L	0.4036 ppb	07:16:54
3	As 188.979†	-4.6	-2.0	-4.2753 µg/L	-4.2753 ppb	07:17:14
3	B 249.677†	311.4	-53.9	-2.5661 µg/L	-2.5661 ppb	07:16:54
3	Ba 233.527†	-27.2	-3.7	-0.1014 µg/L	-0.1014 ppb	07:17:14
3	Be 313.107†	4001.5	227.5	0.1529 µg/L	0.1529 ppb	07:16:54
3	Cd 226.502†	-123.2	0.2	0.0034 µg/L	0.0034 ppb	07:17:14
3	Co 228.616†	-44.7	4.0	0.2115 µg/L	0.2115 ppb	07:17:14
3	Cr 267.716†	-56.8	44.5	0.9965 µg/L	0.9965 ppb	07:16:54
3	Cu 324.752†	4265.7	429.5	3.1532 µg/L	3.1532 ppb	07:16:54
3	Mn 257.610†	-99.0	47.4	0.1706 µg/L	0.1706 ppb	07:17:14
3	Mo 202.031†	15.6	3.2	0.3922 µg/L	0.3922 ppb	07:17:14
3	Ni 231.604†	335.8	9.4	0.5670 µg/L	0.5670 ppb	07:17:14
3	P 214.914†	224.0	7.5	16.998 µg/L	16.998 ppb	07:17:14
3	Pb 220.353†	64.2	4.0	1.0976 µg/L	1.0976 ppb	07:17:14
3	S 181.975 Axial†	26.2	3.5	19.478 µg/L	19.478 ppb	07:17:14
3	Sb 206.836†	28.4	4.8	5.0405 µg/L	5.0405 ppb	07:17:14
3	Se 196.026†	11.5	3.8	5.7553 µg/L	5.7553 ppb	07:17:14
3	SiO2†	2384.6	30.8	6.2987 µg/L	6.2987 ppb	07:16:54
3	Si 251.611†	306.0	28.1	2.2798 µg/L	2.2798 ppb	07:17:14
3	Sn 189.927†	24.7	1.6	0.9115 µg/L	0.9115 ppb	07:17:14
3	Ti 334.940†	812.8	121.0	0.2906 µg/L	0.2906 ppb	07:16:54
3	Tl 190.801†	-21.0	3.2	5.2723 µg/L	5.2723 ppb	07:17:14
3	U 409.014†	-112.3	72.3	6.7129 µg/L	6.7129 ppb	07:16:54
3	V 292.402†	-63.3	51.1	0.6285 µg/L	0.6285 ppb	07:16:54
3	Zn 213.857†	673.6	51.4	1.4350 µg/L	1.4350 ppb	07:17:14

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1951097.1	98.717 %	0.3274			0.33%
Sc RADIAL	77490.9	98.7 %	0.36			0.36%
Y 371.029	1233287.3	98.733 %	0.3384			0.34%
Ag 328.068†	62.4	0.5684 µg/L	0.24020	0.5684 ppb	0.24020	42.26%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	10.0	6.4792 µg/L	8.00645	6.4792 ppb	8.00645	123.57%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	0.0	0.0163 µg/L	4.65296	0.0163 ppb	4.65296	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-38.8	-1.8502 µg/L	1.78360	-1.8502 ppb	1.78360	96.40%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	5.0	0.1414 µg/L	0.21205	0.1414 ppb	0.21205	150.00%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	496.8	0.3341 µg/L	0.15707	0.3341 ppb	0.15707	47.01%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	50.3	36.211 µg/L	3.6439	36.211 ppb	3.6439	10.06%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	11.1	0.3130 µg/L	0.30321	0.3130 ppb	0.30321	96.86%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	8.5	0.4506 µg/L	0.39392	0.4506 ppb	0.39392	87.42%

QC value within limits for Co 228.616 Recovery = Not calculated									
Cr 267.716†	45.6	1.0224 µg/L	0.10189	1.0224 ppb	0.10189	9.97%			
QC value within limits for Cr 267.716 Recovery = Not calculated									
Cu 324.752†	423.3	3.1076 µg/L	0.17561	3.1076 ppb	0.17561	5.65%			
QC value within limits for Cu 324.752 Recovery = Not calculated									
Fe 238.204 Radial†	1.9	25.360 µg/L	3.9245	25.360 ppb	3.9245	15.48%			
QC value within limits for Fe 238.204 Radial Recovery = Not calculated									
K 766.490 Radial†	30.1	19.003 µg/L	20.5338	19.003 ppb	20.5338	108.06%			
QC value within limits for K 766.490 Radial Recovery = Not calculated									
Mg 279.077 IEC†	3.0	31.140 µg/L	34.3644	31.140 ppb	34.3644	110.35%			
QC value within limits for Mg 279.077 IEC Recovery = Not calculated									
Mn 257.610†	67.4	0.2409 µg/L	0.15986	0.2409 ppb	0.15986	66.36%			
QC value within limits for Mn 257.610 Recovery = Not calculated									
Mo 202.031†	3.2	0.3878 µg/L	0.27650	0.3878 ppb	0.27650	71.29%			
QC value within limits for Mo 202.031 Recovery = Not calculated									
Na 589.592 Radial†	22.6	6.0173 µg/L	2.02517	6.0173 ppb	2.02517	33.66%			
QC value within limits for Na 589.592 Radial Recovery = Not calculated									
Ni 231.604†	6.3	0.3808 µg/L	0.36166	0.3808 ppb	0.36166	94.97%			
QC value within limits for Ni 231.604 Recovery = Not calculated									
P 214.914†	0.9	1.7591 µg/L	13.80819	1.7591 ppb	13.80819	784.94%			
QC value within limits for P 214.914 Recovery = Not calculated									
Pb 220.353†	9.7	2.7275 µg/L	1.71980	2.7275 ppb	1.71980	63.06%			
QC value within limits for Pb 220.353 Recovery = Not calculated									
S 181.975 Axial†	0.7	3.6792 µg/L	17.53577	3.6792 ppb	17.53577	476.62%			
QC value within limits for S 181.975 Axial Recovery = Not calculated									
Sb 206.836†	1.8	1.8947 µg/L	2.79205	1.8947 ppb	2.79205	147.36%			
QC value within limits for Sb 206.836 Recovery = Not calculated									
Se 196.026†	1.8	2.8687 µg/L	4.64968	2.8687 ppb	4.64968	162.08%			
QC value within limits for Se 196.026 Recovery = Not calculated									
SiO2†	34.7	7.0934 µg/L	0.75993	7.0934 ppb	0.75993	10.71%			
QC value within limits for SiO2 Recovery = Not calculated									
Si 251.611†	14.9	1.2030 µg/L	1.49094	1.2030 ppb	1.49094	123.94%			
QC value within limits for Si 251.611 Recovery = Not calculated									
Sn 189.927†	2.3	1.3369 µg/L	0.57827	1.3369 ppb	0.57827	43.25%			
QC value within limits for Sn 189.927 Recovery = Not calculated									
Sr 421.552†	47.5	0.2843 µg/L	0.23559	0.2843 ppb	0.23559	82.86%			
QC value within limits for Sr 421.552 Recovery = Not calculated									
Ti 334.940†	162.7	0.3915 µg/L	0.10826	0.3915 ppb	0.10826	27.65%			
QC value within limits for Ti 334.940 Recovery = Not calculated									
Tl 190.801†	3.2	5.3118 µg/L	5.73072	5.3118 ppb	5.73072	107.89%			
QC value within limits for Tl 190.801 Recovery = Not calculated									
U 409.014†	6.8	0.6244 µg/L	7.85994	0.6244 ppb	7.85994	>999.9%			
QC value within limits for U 409.014 Recovery = Not calculated									
V 292.402†	45.0	0.5483 µg/L	0.16377	0.5483 ppb	0.16377	29.87%			
QC value within limits for V 292.402 Recovery = Not calculated									
Zn 213.857†	55.4	1.5481 µg/L	0.10451	1.5481 ppb	0.10451	6.75%			
QC value within limits for Zn 213.857 Recovery = Not calculated									
All analyte(s) passed QC.									

Sequence No.: 3  
 Sample ID: LR2  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 113  
 Date Collected: 1/29/2010 07:17:24  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76586.7	76586.7	97.6 %		07:17:58
1	Al 396.153Radial†	-24.0	4.9	3.1787 µg/L	3.1787 ppb	07:17:58
1	Ca 317.933Radial†	298.4	58.6	42.250 µg/L	42.250 ppb	07:18:19
1	Fe 238.204 Radial†	15.1	-0.9	-11.972 µg/L	-11.972 ppb	07:18:19
1	K 766.490 Radial†	347.9	-42.2	-26.642 µg/L	-26.642 ppb	07:17:58
1	Mg 279.077 IEC†	12.8	5.0	51.394 µg/L	51.394 ppb	07:18:19
1	Na 589.592 Radial†	555.4	15.4	4.1060 µg/L	4.1060 ppb	07:17:58
1	Sr 421.552†	646.0	28.0	0.1672 µg/L	0.1672 ppb	07:17:58
1	Sc 361.383	1974406.3	1974406.3	99.896 %		07:19:21
1	Y 371.029	1249400.5	1249400.5	100.02 %		07:19:21
1	Ag 328.068†	-84.8	7.7	0.0680 µg/L	0.0680 ppb	07:19:27
1	As 188.979†	-2.4	0.3	0.7297 µg/L	0.7297 ppb	07:19:47
1	B 249.677†	301.6	-68.0	-3.2156 µg/L	-3.2156 ppb	07:19:47
1	Ba 233.527†	384904.1	385327.4	10763 µg/L	10763 ppb	07:19:21
1	Be 313.107†	3878.6	48.9	0.0328 µg/L	0.0328 ppb	07:19:27
1	Cd 226.502†	-121.2	4.0	0.1173 µg/L	0.1173 ppb	07:19:47
1	Co 228.616†	-338.9	-290.0	-15.426 µg/L	-15.426 ppb	07:19:47
1	Cr 267.716†	-69.0	33.1	0.7414 µg/L	0.7414 ppb	07:19:27
1	Cu 324.752†	4224.0	328.4	2.4063 µg/L	2.4063 ppb	07:19:27
1	Mn 257.610†	-81.1	66.7	0.2328 µg/L	0.2328 ppb	07:19:47
1	Mo 202.031†	14.6	2.0	0.2455 µg/L	0.2455 ppb	07:19:47
1	Ni 231.604†	383.4	52.4	3.1917 µg/L	3.1917 ppb	07:19:47
1	P 214.914†	218.1	-1.6	-3.8098 µg/L	-3.8098 ppb	07:19:47
1	Pb 220.353†	62.2	1.1	0.3205 µg/L	0.3205 ppb	07:19:47
1	S 181.975 Axial†	28.0	4.9	27.502 µg/L	27.502 ppb	07:19:47
1	Sb 206.836†	24.0	0.0	0.0372 µg/L	0.0372 ppb	07:19:47
1	Se 196.026†	10.4	2.5	3.7228 µg/L	3.7228 ppb	07:19:47
1	SiO2†	2380.6	-6.4	-1.2979 µg/L	-1.2979 ppb	07:19:27
1	Si 251.611†	286.4	4.2	0.3434 µg/L	0.3434 ppb	07:19:47
1	Sn 189.927†	25.0	1.6	0.8978 µg/L	0.8978 ppb	07:19:47
1	Ti 334.940†	733.4	30.3	0.0698 µg/L	0.0698 ppb	07:19:27
1	Tl 190.801†	-19.0	5.5	9.2328 µg/L	9.2328 ppb	07:19:47
1	U 409.014†	-193.0	-7.0	-0.6536 µg/L	-0.6536 ppb	07:19:27
1	V 292.402†	-121.4	-6.2	-0.0725 µg/L	-0.0725 ppb	07:19:27
1	Zn 213.857†	685.8	54.2	1.5041 µg/L	1.5041 ppb	07:19:47
2	Sc RADIAL	76788.0	76788.0	97.8 %		07:18:24
2	Al 396.153Radial†	-51.6	-23.2	-15.038 µg/L	-15.038 ppb	07:18:24
2	Ca 317.933Radial†	308.7	68.3	49.204 µg/L	49.204 ppb	07:18:45
2	Fe 238.204 Radial†	17.8	1.9	24.235 µg/L	24.235 ppb	07:18:45
2	K 766.490 Radial†	410.9	21.3	13.439 µg/L	13.439 ppb	07:18:24
2	Mg 279.077 IEC†	6.0	-2.1	-21.272 µg/L	-21.272 ppb	07:18:45
2	Na 589.592 Radial†	532.8	-9.2	-2.4403 µg/L	-2.4403 ppb	07:18:24
2	Sr 421.552†	631.9	11.8	0.0708 µg/L	0.0708 ppb	07:18:24
2	Sc 361.383	1954278.5	1954278.5	98.878 %		07:19:53
2	Y 371.029	1236366.9	1236366.9	98.980 %		07:19:53
2	Ag 328.068†	-40.7	51.4	0.4653 µg/L	0.4653 ppb	07:19:59
2	As 188.979†	3.6	6.4	13.906 µg/L	13.906 ppb	07:20:19
2	B 249.677†	287.1	-79.6	-3.7805 µg/L	-3.7805 ppb	07:20:19
2	Ba 233.527†	382916.7	387285.9	10818 µg/L	10818 ppb	07:19:53
2	Be 313.107†	3954.6	165.7	0.1114 µg/L	0.1114 ppb	07:19:59
2	Cd 226.502†	-121.7	2.2	0.0627 µg/L	0.0627 ppb	07:20:19
2	Co 228.616†	-335.4	-289.9	-15.419 µg/L	-15.419 ppb	07:20:19
2	Cr 267.716†	-24.5	77.3	1.7325 µg/L	1.7325 ppb	07:19:59
2	Cu 324.752†	4200.1	347.8	2.5536 µg/L	2.5536 ppb	07:19:59
2	Mn 257.610†	-81.8	65.2	0.2351 µg/L	0.2351 ppb	07:20:19
2	Mo 202.031†	15.3	2.9	0.3509 µg/L	0.3509 ppb	07:20:19
2	Ni 231.604†	372.6	45.4	2.7656 µg/L	2.7656 ppb	07:20:19
2	P 214.914†	211.8	-5.6	-13.159 µg/L	-13.159 ppb	07:20:19
2	Pb 220.353†	75.9	15.6	4.3750 µg/L	4.3750 ppb	07:20:19

2	S 181.975 Axial†	21.5	-1.4	-7.7451 µg/L	-7.7451 ppb	07:20:19
2	Sb 206.836†	26.0	2.3	2.4295 µg/L	2.4295 ppb	07:20:19
2	Se 196.026†	13.1	5.3	8.1228 µg/L	8.1228 ppb	07:20:19
2	SiO2†	2336.0	-26.9	-5.4894 µg/L	-5.4894 ppb	07:19:59
2	Si 251.611†	303.4	24.5	1.9810 µg/L	1.9810 ppb	07:20:19
2	Sn 189.927†	23.6	0.4	0.2459 µg/L	0.2459 ppb	07:20:19
2	Ti 334.940†	786.4	91.4	0.2235 µg/L	0.2235 ppb	07:19:59
2	Tl 190.801†	-21.8	2.5	4.1803 µg/L	4.1803 ppb	07:20:19
2	U 409.014†	-175.2	9.1	0.8355 µg/L	0.8355 ppb	07:19:59
2	V 292.402†	-118.9	-5.0	-0.0510 µg/L	-0.0510 ppb	07:19:59
2	Zn 213.857†	682.8	58.3	1.6212 µg/L	1.6212 ppb	07:20:19
3	Sc RADIAL	76868.6	76868.6	97.9 %		07:18:50
3	Al 396.153Radial†	-42.3	-13.7	-8.8774 µg/L	-8.8774 ppb	07:18:50
3	Ca 317.933Radial†	296.7	55.8	40.189 µg/L	40.189 ppb	07:19:11
3	Fe 238.204 Radial†	17.0	1.0	13.334 µg/L	13.334 ppb	07:19:11
3	K 766.490 Radial†	438.0	48.4	30.565 µg/L	30.565 ppb	07:18:50
3	Mg 279.077 IEC†	8.7	0.8	7.9249 µg/L	7.9249 ppb	07:19:11
3	Na 589.592 Radial†	598.0	56.8	15.132 µg/L	15.132 ppb	07:18:50
3	Sr 421.552†	650.9	30.5	0.1823 µg/L	0.1823 ppb	07:18:50
3	Sc 361.383	1961642.1	1961642.1	99.251 %		07:20:26
3	Y 371.029	1241196.8	1241196.8	99.366 %		07:20:26
3	Ag 328.068†	-59.6	32.6	0.2949 µg/L	0.2949 ppb	07:20:31
3	As 188.979†	-0.6	2.1	4.6822 µg/L	4.6822 ppb	07:20:52
3	B 249.677†	292.0	-75.7	-3.5904 µg/L	-3.5904 ppb	07:20:52
3	Ba 233.527†	370301.5	373121.6	10422 µg/L	10422 ppb	07:20:26
3	Be 313.107†	3909.0	104.8	0.0704 µg/L	0.0704 ppb	07:20:31
3	Cd 226.502†	-118.4	6.0	0.1709 µg/L	0.1709 ppb	07:20:52
3	Co 228.616†	-296.7	-249.6	-13.277 µg/L	-13.277 ppb	07:20:52
3	Cr 267.716†	-35.1	66.8	1.4973 µg/L	1.4973 ppb	07:20:31
3	Cu 324.752†	4182.3	313.9	2.3039 µg/L	2.3039 ppb	07:20:31
3	Mn 257.610†	-102.7	44.4	0.1587 µg/L	0.1587 ppb	07:20:52
3	Mo 202.031†	15.3	2.9	0.3465 µg/L	0.3465 ppb	07:20:52
3	Ni 231.604†	364.0	35.3	2.1561 µg/L	2.1561 ppb	07:20:52
3	P 214.914†	223.3	5.2	11.676 µg/L	11.676 ppb	07:20:52
3	Pb 220.353†	74.4	13.8	3.8583 µg/L	3.8583 ppb	07:20:52
3	S 181.975 Axial†	23.1	0.2	1.0242 µg/L	1.0242 ppb	07:20:52
3	Sb 206.836†	19.7	-4.2	-4.4214 µg/L	-4.4214 ppb	07:20:52
3	Se 196.026†	1.9	-6.0	-9.0150 µg/L	-9.0150 ppb	07:20:52
3	SiO2†	2363.9	-7.7	-1.5703 µg/L	-1.5703 ppb	07:20:31
3	Si 251.611†	285.1	4.8	0.3888 µg/L	0.3888 ppb	07:20:52
3	Sn 189.927†	20.0	-3.3	-1.8335 µg/L	-1.8335 ppb	07:20:52
3	Ti 334.940†	762.6	64.5	0.1558 µg/L	0.1558 ppb	07:20:31
3	Tl 190.801†	-19.1	5.3	8.8888 µg/L	8.8888 ppb	07:20:52
3	U 409.014†	-206.7	-22.1	-2.0552 µg/L	-2.0552 ppb	07:20:31
3	V 292.402†	-114.9	-0.4	-0.0004 µg/L	-0.0004 ppb	07:20:31
3	Zn 213.857†	680.4	53.3	1.4847 µg/L	1.4847 ppb	07:20:52

## Mean Data: LR2

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1963442.3	99.342 %	%	0.5153			0.52%
Sc RADIAL	76747.8	97.8 %	%	0.19			0.19%
Y 371.029	1242321.4	99.457 %	%	0.5275			0.53%
Ag 328.068†	30.6	0.2761 µg/L	µg/L	0.19935	0.2761 ppb	0.19935	72.22%
Al 396.153Radial†	-10.7	-6.9123 µg/L	µg/L	9.26598	-6.9123 ppb	9.26598	134.05%
As 188.979†	3.0	6.4393 µg/L	µg/L	6.76149	6.4393 ppb	6.76149	105.00%
B 249.677†	-74.4	-3.5288 µg/L	µg/L	0.28742	-3.5288 ppb	0.28742	8.14%
Ba 233.527†	381911.7	10668 µg/L	µg/L	214.4	10668 ppb	214.4	2.01%
Be 313.107†	106.4	0.0715 µg/L	µg/L	0.03928	0.0715 ppb	0.03928	54.90%
Ca 317.933Radial†	60.9	43.881 µg/L	µg/L	4.7238	43.881 ppb	4.7238	10.77%
Cd 226.502†	4.1	0.1170 µg/L	µg/L	0.05411	0.1170 ppb	0.05411	46.26%
Co 228.616†	-276.5	-14.707 µg/L	µg/L	1.2389	-14.707 ppb	1.2389	8.42%
Cr 267.716†	59.1	1.3238 µg/L	µg/L	0.51784	1.3238 ppb	0.51784	39.12%
Cu 324.752†	330.0	2.4213 µg/L	µg/L	0.12552	2.4213 ppb	0.12552	5.18%
Fe 238.204 Radial†	0.7	8.5322 µg/L	µg/L	18.57449	8.5322 ppb	18.57449	217.70%
K 766.490 Radial†	9.2	5.7876 µg/L	µg/L	29.36127	5.7876 ppb	29.36127	507.31%
Mg 279.077 IEC†	1.2	12.682 µg/L	µg/L	36.5656	12.682 ppb	36.5656	288.32%
Mn 257.610†	58.7	0.2089 µg/L	µg/L	0.04344	0.2089 ppb	0.04344	20.80%
Mo 202.031†	2.6	0.3143 µg/L	µg/L	0.05963	0.3143 ppb	0.05963	18.97%
Na 589.592 Radial†	21.0	5.5992 µg/L	µg/L	8.88079	5.5992 ppb	8.88079	158.61%

Ni 231.604†	44.4	2.7044 µg/L	0.52048	2.7044 ppb	0.52048	19.25%
P 214.914†	-0.6	-1.7644 µg/L	12.54335	-1.7644 ppb	12.54335	710.90%
Pb 220.353†	10.2	2.8513 µg/L	2.20688	2.8513 ppb	2.20688	77.40%
S 181.975 Axial†	1.2	6.9269 µg/L	18.34980	6.9269 ppb	18.34980	264.91%
Sb 206.836†	-0.6	-0.6516 µg/L	3.47701	-0.6516 ppb	3.47701	533.64%
Se 196.026†	0.6	0.9435 µg/L	8.90055	0.9435 ppb	8.90055	943.32%
SiO2†	-13.6	-2.7859 µg/L	2.34528	-2.7859 ppb	2.34528	84.19%
Si 251.611†	11.2	0.9044 µg/L	0.93263	0.9044 ppb	0.93263	103.12%
Sn 189.927†	-0.4	-0.2299 µg/L	1.42649	-0.2299 ppb	1.42649	620.42%
Sr 421.552†	23.4	0.1401 µg/L	0.06050	0.1401 ppb	0.06050	43.19%
Ti 334.940†	62.1	0.1497 µg/L	0.07705	0.1497 ppb	0.07705	51.47%
Tl 190.801†	4.4	7.4340 µg/L	2.82300	7.4340 ppb	2.82300	37.97%
U 409.014†	-6.7	-0.6245 µg/L	1.44555	-0.6245 ppb	1.44555	231.49%
V 292.402†	-3.9	-0.0413 µg/L	0.03700	-0.0413 ppb	0.03700	89.58%
Zn 213.857†	55.3	1.5367 µg/L	0.07387	1.5367 ppb	0.07387	4.81%

Sequence No.: 4  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 1/29/2010 07:21:01  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	78654.9	78654.9	100 %		07:21:37
1	Al 396.153Radial†	7834.4	7846.5	5070.8 µg/L	5070.8 ppb	07:21:37
1	Ca 317.933Radial†	7250.7	6987.5	5034.8 µg/L	5034.8 ppb	07:21:37
1	Fe 238.204 Radial†	400.6	383.4	5088.3 µg/L	5088.3 ppb	07:21:57
1	K 766.490 Radial†	8625.8	8208.0	5178.4 µg/L	5178.4 ppb	07:21:37
1	Mg 279.077 IEC†	521.5	512.2	5260.6 µg/L	5260.6 ppb	07:21:57
1	Na 589.592 Radial†	38537.1	37898.0	10090 µg/L	10090 ppb	07:21:37
1	Sr 421.552†	87537.0	86708.9	518.69 µg/L	518.69 ppb	07:21:37
1	Sc 361.383	1972402.7	1972402.7	99.795 %		07:23:01
1	Y 371.029	1242162.1	1242162.1	99.444 %		07:23:01
1	Ag 328.068†	59349.0	59563.5	541.53 µg/L	541.53 ppb	07:23:06
1	As 188.979†	251.8	255.1	554.94 µg/L	554.94 ppb	07:23:27
1	B 249.677†	11469.7	11123.3	525.10 µg/L	525.10 ppb	07:23:06
1	Ba 233.527†	19192.9	19256.3	538.86 µg/L	538.86 ppb	07:23:06
1	Be 313.107†	790323.0	788112.9	530.06 µg/L	530.06 ppb	07:23:01
1	Cd 226.502†	18826.1	18990.1	538.02 µg/L	538.02 ppb	07:23:06
1	Co 228.616†	10094.0	10164.0	540.07 µg/L	540.07 ppb	07:23:06
1	Cr 267.716†	24130.0	24281.7	544.41 µg/L	544.41 ppb	07:23:06
1	Cu 324.752†	77697.0	73956.7	542.98 µg/L	542.98 ppb	07:23:06
1	Mn 257.610†	149691.4	150146.8	532.67 µg/L	532.67 ppb	07:23:01
1	Mo 202.031†	4465.9	4462.5	540.80 µg/L	540.80 ppb	07:23:27
1	Ni 231.604†	9268.2	8955.8	541.68 µg/L	541.68 ppb	07:23:06
1	P 214.914†	1420.7	1203.8	2722.4 µg/L	2722.4 ppb	07:23:27
1	Pb 220.353†	2018.8	1961.8	550.51 µg/L	550.51 ppb	07:23:27
1	S 181.975 Axial†	218.3	195.6	1087.6 µg/L	1087.6 ppb	07:23:27
1	Sb 206.836†	542.0	519.1	551.26 µg/L	551.26 ppb	07:23:27
1	Se 196.026†	367.2	360.0	560.27 µg/L	560.27 ppb	07:23:27
1	SiO2†	30999.4	28673.7	5854.5 µg/L	5854.5 ppb	07:23:06
1	Si 251.611†	34056.9	33844.4	2741.6 µg/L	2741.6 ppb	07:23:06
1	Sn 189.927†	1009.6	988.2	559.62 µg/L	559.62 ppb	07:23:27
1	Ti 334.940†	221523.2	221274.4	534.56 µg/L	534.56 ppb	07:23:01
1	Tl 190.801†	303.0	328.2	551.21 µg/L	551.21 ppb	07:23:27
1	U 409.014†	5678.2	5876.1	545.15 µg/L	545.15 ppb	07:23:06
1	V 292.402†	44792.2	44999.6	547.72 µg/L	547.72 ppb	07:23:06
1	Zn 213.857†	19884.7	19293.3	538.53 µg/L	538.53 ppb	07:23:06
2	Sc RADIAL	78176.1	78176.1	99.6 %		07:22:03
2	Al 396.153Radial†	7807.4	7867.3	5084.3 µg/L	5084.3 ppb	07:22:03
2	Ca 317.933Radial†	7239.3	7020.3	5058.4 µg/L	5058.4 ppb	07:22:03
2	Fe 238.204 Radial†	401.5	386.8	5132.9 µg/L	5132.9 ppb	07:22:23
2	K 766.490 Radial†	8633.6	8268.5	5216.7 µg/L	5216.7 ppb	07:22:03
2	Mg 279.077 IEC†	515.0	508.9	5225.9 µg/L	5225.9 ppb	07:22:23
2	Na 589.592 Radial†	38603.4	38200.0	10170 µg/L	10170 ppb	07:22:03
2	Sr 421.552†	87529.6	87236.3	521.84 µg/L	521.84 ppb	07:22:03
2	Sc 361.383	1965086.5	1965086.5	99.425 %		07:23:34
2	Y 371.029	1238017.2	1238017.2	99.112 %		07:23:34
2	Ag 328.068†	59237.6	59672.9	542.53 µg/L	542.53 ppb	07:23:39
2	As 188.979†	252.1	256.3	557.53 µg/L	557.53 ppb	07:24:00
2	B 249.677†	11442.9	11139.1	525.83 µg/L	525.83 ppb	07:23:39
2	Ba 233.527†	19190.0	19325.0	540.78 µg/L	540.78 ppb	07:23:39
2	Be 313.107†	796804.8	797580.6	536.43 µg/L	536.43 ppb	07:23:34
2	Cd 226.502†	18775.0	19008.9	538.55 µg/L	538.55 ppb	07:23:39
2	Co 228.616†	10089.6	10197.3	541.83 µg/L	541.83 ppb	07:23:39
2	Cr 267.716†	24133.8	24375.5	546.52 µg/L	546.52 ppb	07:23:39
2	Cu 324.752†	77694.0	74243.5	545.09 µg/L	545.09 ppb	07:23:39
2	Mn 257.610†	150709.9	151729.7	538.28 µg/L	538.28 ppb	07:23:34
2	Mo 202.031†	4463.1	4476.4	542.49 µg/L	542.49 ppb	07:24:00
2	Ni 231.604†	9265.7	8987.9	543.62 µg/L	543.62 ppb	07:23:39
2	P 214.914†	1408.4	1196.7	2706.0 µg/L	2706.0 ppb	07:24:00
2	Pb 220.353†	2018.6	1969.1	552.55 µg/L	552.55 ppb	07:24:00

2	S 181.975 Axial†	222.4	200.6	1115.2 µg/L	1115.2 ppb	07:24:00
2	Sb 206.836†	537.4	516.5	548.56 µg/L	548.56 ppb	07:24:00
2	Se 196.026†	375.3	369.5	574.73 µg/L	574.73 ppb	07:24:00
2	SiO2†	30968.8	28758.6	5871.8 µg/L	5871.8 ppb	07:23:39
2	Si 251.611†	33986.7	33900.9	2746.1 µg/L	2746.1 ppb	07:23:39
2	Sn 189.927†	1014.8	997.2	564.70 µg/L	564.70 ppb	07:24:00
2	Ti 334.940†	223312.8	223900.8	540.91 µg/L	540.91 ppb	07:23:34
2	Tl 190.801†	298.9	325.2	546.25 µg/L	546.25 ppb	07:24:00
2	U 409.014†	5629.7	5848.5	542.58 µg/L	542.58 ppb	07:23:39
2	V 292.402†	44797.1	45171.6	549.80 µg/L	549.80 ppb	07:23:39
2	Zn 213.857†	19861.1	19343.7	539.93 µg/L	539.93 ppb	07:23:39
3	Sc RADIAL	78796.8	78796.8	100 %		07:22:29
3	Al 396.153Radial†	7897.2	7895.0	5103.9 µg/L	5103.9 ppb	07:22:29
3	Ca 317.933Radial†	7286.0	7009.6	5050.7 µg/L	5050.7 ppb	07:22:29
3	Fe 238.204 Radial†	399.9	382.0	5068.7 µg/L	5068.7 ppb	07:22:49
3	K 766.490 Radial†	8684.1	8250.6	5205.3 µg/L	5205.3 ppb	07:22:29
3	Mg 279.077 IEC†	512.5	502.3	5157.5 µg/L	5157.5 ppb	07:22:49
3	Na 589.592 Radial†	38810.7	38101.2	10144 µg/L	10144 ppb	07:22:29
3	Sr 421.552†	88075.1	87087.4	520.95 µg/L	520.95 ppb	07:22:29
3	Sc 361.383	1967406.9	1967406.9	99.542 %		07:24:07
3	Y 371.029	1239052.8	1239052.8	99.195 %		07:24:07
3	Ag 328.068†	56728.6	57082.1	518.82 µg/L	518.82 ppb	07:24:13
3	As 188.979†	214.2	217.9	474.11 µg/L	474.11 ppb	07:24:33
3	B 249.677†	10851.9	10531.8	497.00 µg/L	497.00 ppb	07:24:13
3	Ba 233.527†	17837.9	17943.9	502.12 µg/L	502.12 ppb	07:24:13
3	Be 313.107†	755448.3	755088.7	507.85 µg/L	507.85 ppb	07:24:07
3	Cd 226.502†	17393.4	17598.7	498.55 µg/L	498.55 ppb	07:24:13
3	Co 228.616†	9222.8	9314.5	494.85 µg/L	494.85 ppb	07:24:13
3	Cr 267.716†	21556.5	21757.8	487.83 µg/L	487.83 ppb	07:24:13
3	Cu 324.752†	71662.1	68091.7	499.98 µg/L	499.98 ppb	07:24:13
3	Mn 257.610†	143216.8	144023.3	510.96 µg/L	510.96 ppb	07:24:07
3	Mo 202.031†	3776.7	3781.5	458.31 µg/L	458.31 ppb	07:24:33
3	Ni 231.604†	8508.8	8216.5	496.97 µg/L	496.97 ppb	07:24:13
3	P 214.914†	1240.3	1026.2	2316.4 µg/L	2316.4 ppb	07:24:33
3	Pb 220.353†	1771.4	1718.4	482.12 µg/L	482.12 ppb	07:24:33
3	S 181.975 Axial†	198.2	175.9	978.20 µg/L	978.20 ppb	07:24:33
3	Sb 206.836†	470.7	448.8	476.22 µg/L	476.22 ppb	07:24:33
3	Se 196.026†	320.9	314.4	491.73 µg/L	491.73 ppb	07:24:33
3	SiO2†	29205.2	26950.1	5502.6 µg/L	5502.6 ppb	07:24:13
3	Si 251.611†	31919.4	31783.7	2574.6 µg/L	2574.6 ppb	07:24:13
3	Sn 189.927†	848.3	828.7	469.68 µg/L	469.68 ppb	07:24:33
3	Ti 334.940†	210692.7	210957.8	509.63 µg/L	509.63 ppb	07:24:07
3	Tl 190.801†	271.8	297.6	500.03 µg/L	500.03 ppb	07:24:33
3	U 409.014†	5088.1	5297.7	491.39 µg/L	491.39 ppb	07:24:13
3	V 292.402†	40808.7	41111.7	500.11 µg/L	500.11 ppb	07:24:13
3	Zn 213.857†	18211.0	17662.5	492.96 µg/L	492.96 ppb	07:24:13

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1968298.7	99.587 %	0.1892			0.19%
Sc RADIAL	78542.6	100 %	0.4			0.41%
Y 371.029	1239744.0	99.250 %	0.1727			0.17%
Ag 328.068†	58772.8	534.29 µg/L	13.409	534.29 ppb	13.409	2.51%
QC value within limits for Ag 328.068 Recovery = 106.86%						
Al 396.153Radial†	7869.6	5086.3 µg/L	16.65	5086.3 ppb	16.65	0.33%
QC value within limits for Al 396.153Radial Recovery = 101.73%						
As 188.979†	243.1	528.86 µg/L	47.435	528.86 ppb	47.435	8.97%
QC value within limits for As 188.979 Recovery = 105.77%						
B 249.677†	10931.4	515.97 µg/L	16.436	515.97 ppb	16.436	3.19%
QC value within limits for B 249.677 Recovery = 103.19%						
Ba 233.527†	18841.7	527.25 µg/L	21.790	527.25 ppb	21.790	4.13%
QC value within limits for Ba 233.527 Recovery = 105.45%						
Be 313.107†	780260.7	524.78 µg/L	15.003	524.78 ppb	15.003	2.86%
QC value within limits for Be 313.107 Recovery = 104.96%						
Ca 317.933Radial†	7005.8	5048.0 µg/L	12.06	5048.0 ppb	12.06	0.24%
QC value within limits for Ca 317.933Radial Recovery = 100.96%						
Cd 226.502†	18532.5	525.04 µg/L	22.940	525.04 ppb	22.940	4.37%
QC value within limits for Cd 226.502 Recovery = 105.01%						
Co 228.616†	9891.9	525.58 µg/L	26.627	525.58 ppb	26.627	5.07%



QC value within limits for Co 228.616 Recovery = 105.12%							
Cr 267.716†	23471.7	526.25 µg/L	33.292	526.25 ppb	33.292	6.33%	
QC value within limits for Cr 267.716 Recovery = 105.25%							
Cu 324.752†	72097.3	529.35 µg/L	25.461	529.35 ppb	25.461	4.81%	
QC value within limits for Cu 324.752 Recovery = 105.87%							
Fe 238.204 Radial†	384.0	5096.6 µg/L	32.88	5096.6 ppb	32.88	0.65%	
QC value within limits for Fe 238.204 Radial Recovery = 101.93%							
K 766.490 Radial†	8242.4	5200.1 µg/L	19.63	5200.1 ppb	19.63	0.38%	
QC value within limits for K 766.490 Radial Recovery = 104.00%							
Mg 279.077 IEC†	507.8	5214.7 µg/L	52.42	5214.7 ppb	52.42	1.01%	
QC value within limits for Mg 279.077 IEC Recovery = 104.29%							
Mn 257.610†	148633.3	527.30 µg/L	14.428	527.30 ppb	14.428	2.74%	
QC value within limits for Mn 257.610 Recovery = 105.46%							
Mo 202.031†	4240.1	513.87 µg/L	48.121	513.87 ppb	48.121	9.36%	
QC value within limits for Mo 202.031 Recovery = 102.77%							
Na 589.592 Radial†	38066.4	10135 µg/L	41.0	10135 ppb	41.0	0.40%	
QC value within limits for Na 589.592 Radial Recovery = 101.35%							
Ni 231.604†	8720.1	527.43 µg/L	26.391	527.43 ppb	26.391	5.00%	
QC value within limits for Ni 231.604 Recovery = 105.49%							
P 214.914†	1142.2	2581.6 µg/L	229.83	2581.6 ppb	229.83	8.90%	
QC value within limits for P 214.914 Recovery = 103.26%							
Pb 220.353†	1883.1	528.39 µg/L	40.088	528.39 ppb	40.088	7.59%	
QC value within limits for Pb 220.353 Recovery = 105.68%							
S 181.975 Axial†	190.7	1060.3 µg/L	72.43	1060.3 ppb	72.43	6.83%	
QC value within limits for S 181.975 Axial Recovery = 106.03%							
Sb 206.836†	494.8	525.35 µg/L	42.564	525.35 ppb	42.564	8.10%	
QC value within limits for Sb 206.836 Recovery = 105.07%							
Se 196.026†	348.0	542.25 µg/L	44.342	542.25 ppb	44.342	8.18%	
QC value within limits for Se 196.026 Recovery = 108.45%							
SiO2†	28127.5	5743.0 µg/L	208.36	5743.0 ppb	208.36	3.63%	
QC value within limits for SiO2 Recovery = 107.40%							
Si 251.611†	33176.3	2687.4 µg/L	97.72	2687.4 ppb	97.72	3.64%	
QC value within limits for Si 251.611 Recovery = 107.50%							
Sn 189.927†	938.1	531.34 µg/L	53.453	531.34 ppb	53.453	10.06%	
QC value within limits for Sn 189.927 Recovery = 106.27%							
Sr 421.552†	87010.9	520.49 µg/L	1.627	520.49 ppb	1.627	0.31%	
QC value within limits for Sr 421.552 Recovery = 104.10%							
Ti 334.940†	218711.0	528.36 µg/L	16.535	528.36 ppb	16.535	3.13%	
QC value within limits for Ti 334.940 Recovery = 105.67%							
Tl 190.801†	317.0	532.50 µg/L	28.227	532.50 ppb	28.227	5.30%	
QC value within limits for Tl 190.801 Recovery = 106.50%							
U 409.014†	5674.1	526.37 µg/L	30.321	526.37 ppb	30.321	5.76%	
QC value within limits for U 409.014 Recovery = 105.27%							
V 292.402†	43761.0	532.54 µg/L	28.106	532.54 ppb	28.106	5.28%	
QC value within limits for V 292.402 Recovery = 106.51%							
Zn 213.857†	18766.5	523.81 µg/L	26.723	523.81 ppb	26.723	5.10%	
QC value within limits for Zn 213.857 Recovery = 104.76%							
All analyte(s) passed QC.							

Sequence No.: 5

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 1/29/2010 07:24:43

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	78707.8	78707.8	100 %		07:25:16
1	Al 396.153Radial†	-33.9	-4.3	-2.8122 µg/L	-2.8122 ppb	07:25:16
1	Ca 317.933Radial†	300.7	52.7	37.968 µg/L	37.968 ppb	07:25:36
1	Fe 238.204 Radial†	19.0	2.6	34.117 µg/L	34.117 ppb	07:25:36
1	K 766.490 Radial†	380.5	-19.3	-12.179 µg/L	-12.179 ppb	07:25:16
1	Mg 279.077 IEC†	7.2	-1.0	-10.482 µg/L	-10.482 ppb	07:25:36
1	Na 589.592 Radial†	540.1	-15.1	-4.0262 µg/L	-4.0262 ppb	07:25:16
1	Sr 421.552†	665.8	29.8	0.1785 µg/L	0.1785 ppb	07:25:16
1	Sc 361.383	1993559.8	1993559.8	100.87 %		07:26:38
1	Y 371.029	1259885.1	1259885.1	100.86 %		07:26:38
1	Ag 328.068†	-32.5	60.4	0.5439 µg/L	0.5439 ppb	07:26:44
1	As 188.979†	-1.3	1.5	3.1619 µg/L	3.1619 ppb	07:27:04
1	B 249.677†	312.2	-60.4	-2.8782 µg/L	-2.8782 ppb	07:26:44
1	Ba 233.527†	-0.7	23.3	0.6487 µg/L	0.6487 ppb	07:27:04
1	Be 313.107†	3944.3	76.6	0.0516 µg/L	0.0516 ppb	07:26:44
1	Cd 226.502†	-123.9	2.4	0.0653 µg/L	0.0653 ppb	07:27:04
1	Co 228.616†	-44.1	5.6	0.2970 µg/L	0.2970 ppb	07:27:04
1	Cr 267.716†	-75.6	27.2	0.6084 µg/L	0.6084 ppb	07:26:44
1	Cu 324.752†	4160.0	224.3	1.6495 µg/L	1.6495 ppb	07:26:44
1	Mn 257.610†	-113.7	35.1	0.1293 µg/L	0.1293 ppb	07:27:04
1	Mo 202.031†	15.7	3.0	0.3599 µg/L	0.3599 ppb	07:27:04
1	Ni 231.604†	331.4	-2.9	-0.1753 µg/L	-0.1753 ppb	07:27:04
1	P 214.914†	226.2	4.4	9.9572 µg/L	9.9572 ppb	07:27:04
1	Pb 220.353†	74.7	12.9	3.6047 µg/L	3.6047 ppb	07:27:04
1	S 181.975 Axial†	25.9	2.5	14.056 µg/L	14.056 ppb	07:27:04
1	Sb 206.836†	22.6	-1.6	-1.6932 µg/L	-1.6932 ppb	07:27:04
1	Se 196.026†	13.5	5.4	8.2627 µg/L	8.2627 ppb	07:27:04
1	SiO2†	2363.9	-45.7	-9.3393 µg/L	-9.3393 ppb	07:26:44
1	Si 251.611†	300.8	15.8	1.2782 µg/L	1.2782 ppb	07:27:04
1	Sn 189.927†	23.8	0.1	0.0935 µg/L	0.0935 ppb	07:27:04
1	Ti 334.940†	701.2	-8.6	-0.0195 µg/L	-0.0195 ppb	07:26:44
1	Tl 190.801†	-27.1	-2.3	-3.8802 µg/L	-3.8802 ppb	07:27:04
1	U 409.014†	-192.4	-4.5	-0.4254 µg/L	-0.4254 ppb	07:26:44
1	V 292.402†	-157.3	-40.7	-0.4836 µg/L	-0.4836 ppb	07:26:44
1	Zn 213.857†	674.1	36.0	1.0098 µg/L	1.0098 ppb	07:27:04
2	Sc RADIAL	77968.2	77968.2	99.3 %		07:25:42
2	Al 396.153Radial†	-14.8	14.6	9.4323 µg/L	9.4323 ppb	07:25:42
2	Ca 317.933Radial†	298.5	53.3	38.393 µg/L	38.393 ppb	07:26:02
2	Fe 238.204 Radial†	17.5	1.2	16.303 µg/L	16.303 ppb	07:26:02
2	K 766.490 Radial†	385.8	-10.4	-6.5605 µg/L	-6.5605 ppb	07:25:42
2	Mg 279.077 IEC†	9.4	1.3	13.314 µg/L	13.314 ppb	07:26:02
2	Na 589.592 Radial†	550.2	0.2	0.0436 µg/L	0.0436 ppb	07:25:42
2	Sr 421.552†	645.7	15.9	0.0949 µg/L	0.0949 ppb	07:25:42
2	Sc 361.383	1984323.3	1984323.3	100.40 %		07:27:10
2	Y 371.029	1254156.6	1254156.6	100.40 %		07:27:10
2	Ag 328.068†	-91.7	1.2	0.0138 µg/L	0.0138 ppb	07:27:16
2	As 188.979†	-2.0	0.7	1.5896 µg/L	1.5896 ppb	07:27:36
2	B 249.677†	327.7	-43.5	-2.0701 µg/L	-2.0701 ppb	07:27:16
2	Ba 233.527†	8.2	32.2	0.8987 µg/L	0.8987 ppb	07:27:36
2	Be 313.107†	3933.9	84.5	0.0568 µg/L	0.0568 ppb	07:27:16
2	Cd 226.502†	-121.3	4.5	0.1251 µg/L	0.1251 ppb	07:27:36
2	Co 228.616†	-42.6	6.9	0.3661 µg/L	0.3661 ppb	07:27:36
2	Cr 267.716†	-73.6	28.8	0.6454 µg/L	0.6454 ppb	07:27:16
2	Cu 324.752†	4165.2	248.7	1.8257 µg/L	1.8257 ppb	07:27:16
2	Mn 257.610†	-112.9	35.4	0.1272 µg/L	0.1272 ppb	07:27:36
2	Mo 202.031†	13.3	0.7	0.0864 µg/L	0.0864 ppb	07:27:36
2	Ni 231.604†	332.6	-0.1	-0.0061 µg/L	-0.0061 ppb	07:27:36
2	P 214.914†	224.1	3.4	7.5764 µg/L	7.5764 ppb	07:27:36
2	Pb 220.353†	64.5	3.1	0.8559 µg/L	0.8559 ppb	07:27:36

2	S 181.975 Axial†	26.1	2.9	15.942 µg/L	15.942 ppb	07:27:36
2	Sb 206.836†	24.3	0.1	0.1462 µg/L	0.1462 ppb	07:27:36
2	Se 196.026†	7.8	-0.1	-0.1524 µg/L	-0.1524 ppb	07:27:36
2	SiO2†	2367.4	-31.4	-6.4014 µg/L	-6.4014 ppb	07:27:16
2	Si 251.611†	304.7	21.1	1.7092 µg/L	1.7092 ppb	07:27:36
2	Sn 189.927†	21.9	-1.6	-0.8944 µg/L	-0.8944 ppb	07:27:36
2	Ti 334.940†	813.4	106.3	0.2565 µg/L	0.2565 ppb	07:27:16
2	Tl 190.801†	-18.8	5.8	9.6376 µg/L	9.6376 ppb	07:27:36
2	U 409.014†	-106.4	80.2	7.4496 µg/L	7.4496 ppb	07:27:16
2	V 292.402†	-96.2	19.5	0.2450 µg/L	0.2450 ppb	07:27:16
2	Zn 213.857†	676.3	41.4	1.1595 µg/L	1.1595 ppb	07:27:36
3	Sc RADIAL	76993.6	76993.6	98.1 %		07:26:07
3	Al 396.153Radial†	-10.3	19.0	12.303 µg/L	12.303 ppb	07:26:07
3	Ca 317.933Radial†	293.4	51.9	37.393 µg/L	37.393 ppb	07:26:28
3	Fe 238.204 Radial†	17.3	1.3	17.492 µg/L	17.492 ppb	07:26:28
3	K 766.490 Radial†	466.1	76.4	48.198 µg/L	48.198 ppb	07:26:07
3	Mg 279.077 IEC†	10.8	2.8	29.071 µg/L	29.071 ppb	07:26:28
3	Na 589.592 Radial†	551.6	8.6	2.2850 µg/L	2.2850 ppb	07:26:07
3	Sr 421.552†	632.5	10.7	0.0640 µg/L	0.0640 ppb	07:26:07
3	Sc 361.383	1972184.2	1972184.2	99.784 %		07:27:43
3	Y 371.029	1246487.9	1246487.9	99.790 %		07:27:43
3	Ag 328.068†	-57.6	34.9	0.3175 µg/L	0.3175 ppb	07:27:48
3	As 188.979†	0.0	2.7	5.9595 µg/L	5.9595 ppb	07:28:09
3	B 249.677†	280.9	-88.4	-4.1962 µg/L	-4.1962 ppb	07:27:48
3	Ba 233.527†	1.2	25.2	0.7034 µg/L	0.7034 ppb	07:28:09
3	Be 313.107†	3982.5	157.4	0.1058 µg/L	0.1058 ppb	07:27:48
3	Cd 226.502†	-126.4	-1.4	-0.0421 µg/L	-0.0421 ppb	07:28:09
3	Co 228.616†	-46.7	2.5	0.1352 µg/L	0.1352 ppb	07:28:09
3	Cr 267.716†	-34.3	67.7	1.5179 µg/L	1.5179 ppb	07:27:48
3	Cu 324.752†	4151.3	260.4	1.9116 µg/L	1.9116 ppb	07:27:48
3	Mn 257.610†	-94.3	53.3	0.1901 µg/L	0.1901 ppb	07:28:09
3	Mo 202.031†	22.7	10.2	1.2333 µg/L	1.2333 ppb	07:28:09
3	Ni 231.604†	326.2	-4.5	-0.2701 µg/L	-0.2701 ppb	07:28:09
3	P 214.914†	217.7	-1.7	-4.1071 µg/L	-4.1071 ppb	07:28:09
3	Pb 220.353†	69.4	8.3	2.3391 µg/L	2.3391 ppb	07:28:09
3	S 181.975 Axial†	21.9	-1.2	-6.5578 µg/L	-6.5578 ppb	07:28:09
3	Sb 206.836†	28.9	4.9	5.2194 µg/L	5.2194 ppb	07:28:09
3	Se 196.026†	12.0	4.1	6.2467 µg/L	6.2467 ppb	07:28:09
3	SiO2†	2336.3	-48.1	-9.8119 µg/L	-9.8119 ppb	07:27:48
3	Si 251.611†	282.9	1.1	0.0914 µg/L	0.0914 ppb	07:28:09
3	Sn 189.927†	26.2	2.8	1.5693 µg/L	1.5693 ppb	07:28:09
3	Ti 334.940†	834.7	132.6	0.3188 µg/L	0.3188 ppb	07:27:48
3	Tl 190.801†	-17.5	7.0	11.616 µg/L	11.616 ppb	07:28:09
3	U 409.014†	-152.2	33.7	3.1235 µg/L	3.1235 ppb	07:27:48
3	V 292.402†	-96.0	19.1	0.2476 µg/L	0.2476 ppb	07:27:48
3	Zn 213.857†	668.2	37.4	1.0462 µg/L	1.0462 ppb	07:28:09

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1983355.7	100.35 %	0.542			0.54%
Sc RADIAL	77889.8	99.2 %	1.10			1.10%
Y 371.029	1253509.9	100.35 %	0.538			0.54%
Ag 328.068†	32.2	0.2917 µg/L	0.26601	0.2917 ppb	0.26601	91.18%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	9.8	6.3076 µg/L	8.02730	6.3076 ppb	8.02730	127.26%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	1.6	3.5704 µg/L	2.21339	3.5704 ppb	2.21339	61.99%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-64.1	-3.0482 µg/L	1.07320	-3.0482 ppb	1.07320	35.21%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	26.9	0.7503 µg/L	0.13142	0.7503 ppb	0.13142	17.52%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	106.2	0.0714 µg/L	0.02991	0.0714 ppb	0.02991	41.91%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	52.6	37.918 µg/L	0.5015	37.918 ppb	0.5015	1.32%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	1.8	0.0494 µg/L	0.08475	0.0494 ppb	0.08475	171.44%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	5.0	0.2661 µg/L	0.11848	0.2661 ppb	0.11848	44.53%

Cr	267.716†	41.2	0.9239 µg/L	0.51475	0.9239 ppb	0.51475	55.72%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	244.5	1.7956 µg/L	0.13360	1.7956 ppb	0.13360	7.44%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	1.7	22.638 µg/L	9.9594	22.638 ppb	9.9594	43.99%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	15.6	9.8193 µg/L	33.35541	9.8193 ppb	33.35541	339.69%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	1.0	10.635 µg/L	19.9122	10.635 ppb	19.9122	187.24%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	41.3	0.1489 µg/L	0.03575	0.1489 ppb	0.03575	24.02%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	4.6	0.5599 µg/L	0.59902	0.5599 ppb	0.59902	106.99%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	-2.1	-0.5659 µg/L	3.19943	-0.5659 ppb	3.19943	565.37%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	-2.5	-0.1505 µg/L	0.13376	-0.1505 ppb	0.13376	88.87%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	2.0	4.4755 µg/L	7.52743	4.4755 ppb	7.52743	168.19%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	8.1	2.2666 µg/L	1.37582	2.2666 ppb	1.37582	60.70%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	1.4	7.8136 µg/L	12.48166	7.8136 ppb	12.48166	159.74%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	1.2	1.2241 µg/L	3.58015	1.2241 ppb	3.58015	292.46%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	3.1	4.7856 µg/L	4.39371	4.7856 ppb	4.39371	91.81%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†		-41.7	-8.5176 µg/L	1.84779	-8.5176 ppb	1.84779	21.69%
QC value within limits for SiO2 Recovery = Not calculated							
Si	251.611†	12.7	1.0263 µg/L	0.83785	1.0263 ppb	0.83785	81.64%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	0.4	0.2561 µg/L	1.23985	0.2561 ppb	1.23985	484.11%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	18.8	0.1125 µg/L	0.05926	0.1125 ppb	0.05926	52.69%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	76.8	0.1853 µg/L	0.18004	0.1853 ppb	0.18004	97.16%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	3.5	5.7912 µg/L	8.43388	5.7912 ppb	8.43388	145.63%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	36.5	3.3826 µg/L	3.94392	3.3826 ppb	3.94392	116.59%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	-0.7	0.0030 µg/L	0.42143	0.0030 ppb	0.42143	>999.9%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	38.3	1.0718 µg/L	0.07806	1.0718 ppb	0.07806	7.28%
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 7

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 1/29/2010 07:31:57

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	78404.5	78404.5	99.9 %		07:32:33
1	Al 396.153Radial†	7731.1	7768.1	5020.1 µg/L	5020.1 ppb	07:32:33
1	Ca 317.933Radial†	7159.5	6919.2	4985.6 µg/L	4985.6 ppb	07:32:33
1	Fe 238.204 Radial†	403.0	387.0	5136.1 µg/L	5136.1 ppb	07:32:53
1	K 766.490 Radial†	8495.9	8105.4	5113.7 µg/L	5113.7 ppb	07:32:33
1	Mg 279.077 IEC†	513.2	505.5	5191.7 µg/L	5191.7 ppb	07:32:53
1	Na 589.592 Radial†	38220.9	37704.2	10038 µg/L	10038 ppb	07:32:33
1	Sr 421.552†	86574.7	86024.6	514.59 µg/L	514.59 ppb	07:32:33
1	Sc 361.383	1989532.0	1989532.0	100.66 %		07:33:57
1	Y 371.029	1252770.7	1252770.7	100.29 %		07:33:57
1	Ag 328.068†	58937.3	58642.5	533.16 µg/L	533.16 ppb	07:34:03
1	As 188.979†	248.5	249.6	543.09 µg/L	543.09 ppb	07:34:23
1	B 249.677†	11347.6	10903.0	514.62 µg/L	514.62 ppb	07:34:03
1	Ba 233.527†	19025.7	18924.6	529.58 µg/L	529.58 ppb	07:34:03
1	Be 313.107†	782703.9	773725.4	520.39 µg/L	520.39 ppb	07:33:57
1	Cd 226.502†	18632.2	18635.1	527.94 µg/L	527.94 ppb	07:34:03
1	Co 228.616†	9984.2	9967.9	529.65 µg/L	529.65 ppb	07:34:03
1	Cr 267.716†	23934.2	23879.0	535.39 µg/L	535.39 ppb	07:34:03
1	Cu 324.752†	77009.2	72603.0	533.06 µg/L	533.06 ppb	07:34:03
1	Mn 257.610†	148209.6	147383.3	522.88 µg/L	522.88 ppb	07:33:57
1	Mo 202.031†	4454.4	4412.5	534.75 µg/L	534.75 ppb	07:34:23
1	Ni 231.604†	9137.7	8746.2	529.01 µg/L	529.01 ppb	07:34:03
1	P 214.914†	1392.9	1163.9	2631.5 µg/L	2631.5 ppb	07:34:23
1	Pb 220.353†	2002.3	1928.0	541.02 µg/L	541.02 ppb	07:34:23
1	S 181.975 Axial†	216.5	191.9	1066.9 µg/L	1066.9 ppb	07:34:23
1	Sb 206.836†	535.0	507.5	539.00 µg/L	539.00 ppb	07:34:23
1	Se 196.026†	368.2	357.8	557.17 µg/L	557.17 ppb	07:34:23
1	SiO2†	30715.9	28124.6	5742.4 µg/L	5742.4 ppb	07:34:03
1	Si 251.611†	33704.7	33200.7	2689.4 µg/L	2689.4 ppb	07:34:03
1	Sn 189.927†	1017.2	987.1	558.95 µg/L	558.95 ppb	07:34:23
1	Ti 334.940†	219557.7	217410.7	525.22 µg/L	525.22 ppb	07:33:57
1	Tl 190.801†	300.0	322.5	541.68 µg/L	541.68 ppb	07:34:23
1	U 409.014†	5640.9	5790.1	537.15 µg/L	537.15 ppb	07:34:03
1	V 292.402†	44482.6	44305.5	539.29 µg/L	539.29 ppb	07:34:03
1	Zn 213.857†	19674.3	18912.7	527.91 µg/L	527.91 ppb	07:34:03
2	Sc RADIAL	79179.4	79179.4	101 %		07:32:59
2	Al 396.153Radial†	7802.9	7763.5	5017.3 µg/L	5017.3 ppb	07:32:59
2	Ca 317.933Radial†	7306.7	6995.0	5040.2 µg/L	5040.2 ppb	07:32:59
2	Fe 238.204 Radial†	403.6	383.7	5092.6 µg/L	5092.6 ppb	07:33:19
2	K 766.490 Radial†	8619.6	8144.8	5138.6 µg/L	5138.6 ppb	07:32:59
2	Mg 279.077 IEC†	512.1	499.4	5128.6 µg/L	5128.6 ppb	07:33:19
2	Na 589.592 Radial†	38542.7	37648.8	10023 µg/L	10023 ppb	07:32:59
2	Sr 421.552†	87581.6	86174.5	515.49 µg/L	515.49 ppb	07:32:59
2	Sc 361.383	1982168.5	1982168.5	100.29 %		07:34:30
2	Y 371.029	1248792.9	1248792.9	99.975 %		07:34:30
2	Ag 328.068†	58861.5	58784.4	534.45 µg/L	534.45 ppb	07:34:36
2	As 188.979†	244.4	246.4	536.02 µg/L	536.02 ppb	07:34:57
2	B 249.677†	11359.2	10956.5	517.18 µg/L	517.18 ppb	07:34:36
2	Ba 233.527†	18987.2	18956.5	530.47 µg/L	530.47 ppb	07:34:36
2	Be 313.107†	781864.4	775776.9	521.77 µg/L	521.77 ppb	07:34:30
2	Cd 226.502†	18634.3	18705.9	529.96 µg/L	529.96 ppb	07:34:36
2	Co 228.616†	10009.5	10030.0	532.94 µg/L	532.94 ppb	07:34:36
2	Cr 267.716†	23845.9	23879.3	535.39 µg/L	535.39 ppb	07:34:36
2	Cu 324.752†	76935.5	72813.7	534.60 µg/L	534.60 ppb	07:34:36
2	Mn 257.610†	147856.8	147578.5	523.57 µg/L	523.57 ppb	07:34:30
2	Mo 202.031†	4404.7	4379.4	530.74 µg/L	530.74 ppb	07:34:57
2	Ni 231.604†	9137.0	8779.3	531.00 µg/L	531.00 ppb	07:34:36
2	P 214.914†	1399.9	1176.1	2659.3 µg/L	2659.3 ppb	07:34:57
2	Pb 220.353†	1985.8	1918.9	538.45 µg/L	538.45 ppb	07:34:57

2	S 181.975 Axial†	222.0	198.2	1101.9 µg/L	1101.9 ppb	07:34:57
2	Sb 206.836†	532.5	507.0	538.42 µg/L	538.42 ppb	07:34:57
2	Se 196.026†	357.7	348.8	543.45 µg/L	543.45 ppb	07:34:57
2	SiO2†	30736.9	28258.9	5769.8 µg/L	5769.8 ppb	07:34:36
2	Si 251.611†	33642.0	33262.6	2694.4 µg/L	2694.4 ppb	07:34:36
2	Sn 189.927†	999.7	973.3	551.20 µg/L	551.20 ppb	07:34:57
2	Ti 334.940†	219234.7	217898.9	526.41 µg/L	526.41 ppb	07:34:30
2	Tl 190.801†	298.2	321.9	540.64 µg/L	540.64 ppb	07:34:57
2	U 409.014†	5560.2	5730.3	531.60 µg/L	531.60 ppb	07:34:36
2	V 292.402†	44426.5	44413.8	540.55 µg/L	540.55 ppb	07:34:36
2	Zn 213.857†	19632.3	18943.5	528.76 µg/L	528.76 ppb	07:34:36
3	Sc RADIAL	79551.9	79551.9	101 %		07:33:25
3	Al 396.153Radial†	7787.9	7712.5	4986.0 µg/L	4986.0 ppb	07:33:25
3	Ca 317.933Radial†	7220.6	6876.1	4954.6 µg/L	4954.6 ppb	07:33:25
3	Fe 238.204 Radial†	403.4	381.6	5063.0 µg/L	5063.0 ppb	07:33:45
3	K 766.490 Radial†	8610.1	8095.5	5107.5 µg/L	5107.5 ppb	07:33:25
3	Mg 279.077 IEC†	513.4	498.3	5116.1 µg/L	5116.1 ppb	07:33:45
3	Na 589.592 Radial†	38326.7	37256.8	9919.0 µg/L	9919.0 ppb	07:33:25
3	Sr 421.552†	87079.6	85272.7	510.09 µg/L	510.09 ppb	07:33:25
3	Sc 361.383	2003843.7	2003843.7	101.39 %		07:35:04
3	Y 371.029	1262538.1	1262538.1	101.08 %		07:35:04
3	Ag 328.068†	55898.8	55227.4	501.97 µg/L	501.97 ppb	07:35:09
3	As 188.979†	213.1	212.9	463.18 µg/L	463.18 ppb	07:35:30
3	B 249.677†	10733.6	10217.0	482.06 µg/L	482.06 ppb	07:35:09
3	Ba 233.527†	17469.3	17254.4	482.83 µg/L	482.83 ppb	07:35:09
3	Be 313.107†	748609.8	734543.9	494.04 µg/L	494.04 ppb	07:35:04
3	Cd 226.502†	17089.2	16980.9	481.03 µg/L	481.03 ppb	07:35:09
3	Co 228.616†	9092.8	9017.8	479.08 µg/L	479.08 ppb	07:35:09
3	Cr 267.716†	21147.3	20960.4	469.95 µg/L	469.95 ppb	07:35:09
3	Cu 324.752†	70522.8	65658.9	482.14 µg/L	482.14 ppb	07:35:09
3	Mn 257.610†	142084.2	140290.0	497.73 µg/L	497.73 ppb	07:35:04
3	Mo 202.031†	3719.5	3656.1	443.11 µg/L	443.11 ppb	07:35:30
3	Ni 231.604†	8328.3	7883.1	476.80 µg/L	476.80 ppb	07:35:09
3	P 214.914†	1226.5	989.9	2234.6 µg/L	2234.6 ppb	07:35:30
3	Pb 220.353†	1756.8	1671.6	468.99 µg/L	468.99 ppb	07:35:30
3	S 181.975 Axial†	199.0	173.1	962.52 µg/L	962.52 ppb	07:35:30
3	Sb 206.836†	465.2	434.8	461.36 µg/L	461.36 ppb	07:35:30
3	Se 196.026†	328.3	315.9	493.95 µg/L	493.95 ppb	07:35:30
3	SiO2†	28746.2	25963.9	5301.2 µg/L	5301.2 ppb	07:35:09
3	Si 251.611†	31317.2	30606.7	2479.3 µg/L	2479.3 ppb	07:35:09
3	Sn 189.927†	841.7	806.7	457.27 µg/L	457.27 ppb	07:35:30
3	Ti 334.940†	208790.2	205232.5	495.79 µg/L	495.79 ppb	07:35:04
3	Tl 190.801†	266.4	287.3	482.80 µg/L	482.80 ppb	07:35:30
3	U 409.014†	4897.8	5017.1	465.32 µg/L	465.32 ppb	07:35:09
3	V 292.402†	40212.7	39778.4	483.88 µg/L	483.88 ppb	07:35:09
3	Zn 213.857†	17981.6	17103.5	477.37 µg/L	477.37 ppb	07:35:09

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1991848.1	100.78 %	0.558			0.55%
Sc RADIAL	79045.3	101 %	0.7			0.74%
Y 371.029	1254700.6	100.45 %	0.566			0.56%
Ag 328.068†	57551.4	523.19 µg/L	18.390	523.19 ppb	18.390	3.51%
QC value within limits for Ag 328.068 Recovery = 104.64%						
Al 396.153Radial†	7748.0	5007.8 µg/L	18.92	5007.8 ppb	18.92	0.38%
QC value within limits for Al 396.153Radial Recovery = 100.16%						
As 188.979†	236.3	514.09 µg/L	44.237	514.09 ppb	44.237	8.60%
QC value within limits for As 188.979 Recovery = 102.82%						
B 249.677†	10692.2	504.62 µg/L	19.580	504.62 ppb	19.580	3.88%
QC value within limits for B 249.677 Recovery = 100.92%						
Ba 233.527†	18378.5	514.29 µg/L	27.252	514.29 ppb	27.252	5.30%
QC value within limits for Ba 233.527 Recovery = 102.86%						
Be 313.107†	761348.7	512.06 µg/L	15.628	512.06 ppb	15.628	3.05%
QC value within limits for Be 313.107 Recovery = 102.41%						
Ca 317.933Radial†	6930.1	4993.5 µg/L	43.35	4993.5 ppb	43.35	0.87%
QC value within limits for Ca 317.933Radial Recovery = 99.87%						
Cd 226.502†	18107.3	512.98 µg/L	27.684	512.98 ppb	27.684	5.40%
QC value within limits for Cd 226.502 Recovery = 102.60%						
Co 228.616†	9671.9	513.89 µg/L	30.189	513.89 ppb	30.189	5.87%

QC value within limits for Co 228.616 Recovery = 102.78%							
Cr 267.716†	22906.2	513.58 µg/L	37.779	513.58 ppb	37.779	7.36%	
QC value within limits for Cr 267.716 Recovery = 102.72%							
Cu 324.752†	70358.5	516.60 µg/L	29.857	516.60 ppb	29.857	5.78%	
QC value within limits for Cu 324.752 Recovery = 103.32%							
Fe 238.204 Radial†	384.1	5097.2 µg/L	36.76	5097.2 ppb	36.76	0.72%	
QC value within limits for Fe 238.204 Radial Recovery = 101.94%							
K 766.490 Radial†	8115.2	5119.9 µg/L	16.47	5119.9 ppb	16.47	0.32%	
QC value within limits for K 766.490 Radial Recovery = 102.40%							
Mg 279.077 IEC†	501.1	5145.5 µg/L	40.56	5145.5 ppb	40.56	0.79%	
QC value within limits for Mg 279.077 IEC Recovery = 102.91%							
Mn 257.610†	145083.9	514.73 µg/L	14.723	514.73 ppb	14.723	2.86%	
QC value within limits for Mn 257.610 Recovery = 102.95%							
Mo 202.031†	4149.3	502.87 µg/L	51.791	502.87 ppb	51.791	10.30%	
QC value within limits for Mo 202.031 Recovery = 100.57%							
Na 589.592 Radial†	37536.6	9993.5 µg/L	64.93	9993.5 ppb	64.93	0.65%	
QC value within limits for Na 589.592 Radial Recovery = 99.94%							
Ni 231.604†	8469.5	512.27 µg/L	30.731	512.27 ppb	30.731	6.00%	
QC value within limits for Ni 231.604 Recovery = 102.45%							
P 214.914†	1110.0	2508.5 µg/L	237.62	2508.5 ppb	237.62	9.47%	
QC value within limits for P 214.914 Recovery = 100.34%							
Pb 220.353†	1839.5	516.15 µg/L	40.866	516.15 ppb	40.866	7.92%	
QC value within limits for Pb 220.353 Recovery = 103.23%							
S 181.975 Axial†	187.7	1043.8 µg/L	72.49	1043.8 ppb	72.49	6.95%	
QC value within limits for S 181.975 Axial Recovery = 104.38%							
Sb 206.836†	483.1	512.93 µg/L	44.656	512.93 ppb	44.656	8.71%	
QC value within limits for Sb 206.836 Recovery = 102.59%							
Se 196.026†	340.8	531.52 µg/L	33.257	531.52 ppb	33.257	6.26%	
QC value within limits for Se 196.026 Recovery = 106.30%							
SiO2†	27449.1	5604.5 µg/L	262.98	5604.5 ppb	262.98	4.69%	
QC value within limits for SiO2 Recovery = 104.81%							
Si 251.611†	32356.7	2621.0 µg/L	122.79	2621.0 ppb	122.79	4.68%	
QC value within limits for Si 251.611 Recovery = 104.84%							
Sn 189.927†	922.4	522.47 µg/L	56.603	522.47 ppb	56.603	10.83%	
QC value within limits for Sn 189.927 Recovery = 104.49%							
Sr 421.552†	85823.9	513.39 µg/L	2.890	513.39 ppb	2.890	0.56%	
QC value within limits for Sr 421.552 Recovery = 102.68%							
Ti 334.940†	213514.0	515.81 µg/L	17.346	515.81 ppb	17.346	3.36%	
QC value within limits for Ti 334.940 Recovery = 103.16%							
Tl 190.801†	310.6	521.71 µg/L	33.698	521.71 ppb	33.698	6.46%	
QC value within limits for Tl 190.801 Recovery = 104.34%							
U 409.014†	5512.5	511.36 µg/L	39.968	511.36 ppb	39.968	7.82%	
QC value within limits for U 409.014 Recovery = 102.27%							
V 292.402†	42832.6	521.24 µg/L	32.361	521.24 ppb	32.361	6.21%	
QC value within limits for V 292.402 Recovery = 104.25%							
Zn 213.857†	18319.9	511.35 µg/L	29.428	511.35 ppb	29.428	5.76%	
QC value within limits for Zn 213.857 Recovery = 102.27%							
All analyte(s) passed QC.							

Sequence No.: 8

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 1/29/2010 07:35:40

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77019.7	77019.7	98.1 %		07:36:12
1	Al 396.153Radial†	-34.7	-5.8	-3.7856 µg/L	-3.7856 ppb	07:36:12
1	Ca 317.933Radial†	296.0	54.5	39.247 µg/L	39.247 ppb	07:36:32
1	Fe 238.204 Radial†	17.5	1.5	19.363 µg/L	19.363 ppb	07:36:32
1	K 766.490 Radial†	407.9	17.0	10.717 µg/L	10.717 ppb	07:36:12
1	Mg 279.077 IEC†	11.2	3.3	33.657 µg/L	33.657 ppb	07:36:32
1	Na 589.592 Radial†	538.8	-4.6	-1.2288 µg/L	-1.2288 ppb	07:36:12
1	Sr 421.552†	660.3	38.8	0.2318 µg/L	0.2318 ppb	07:36:12
1	Sc 361.383	1968002.7	1968002.7	99.572 %		07:37:34
1	Y 371.029	1244089.6	1244089.6	99.598 %		07:37:34
1	Ag 328.068†	-83.7	8.6	0.0747 µg/L	0.0747 ppb	07:37:40
1	As 188.979†	1.9	4.7	10.164 µg/L	10.164 ppb	07:38:01
1	B 249.677†	290.8	-77.9	-3.7004 µg/L	-3.7004 ppb	07:38:01
1	Ba 233.527†	-26.6	-2.8	-0.0787 µg/L	-0.0787 ppb	07:38:01
1	Be 313.107†	3872.5	55.4	0.0372 µg/L	0.0372 ppb	07:37:40
1	Cd 226.502†	-130.3	-5.5	-0.1594 µg/L	-0.1594 ppb	07:38:01
1	Co 228.616†	-45.8	3.3	0.1744 µg/L	0.1744 ppb	07:38:01
1	Cr 267.716†	-65.6	36.3	0.8119 µg/L	0.8119 ppb	07:37:40
1	Cu 324.752†	4069.3	186.8	1.3723 µg/L	1.3723 ppb	07:37:40
1	Mn 257.610†	-114.7	32.7	0.1170 µg/L	0.1170 ppb	07:38:01
1	Mo 202.031†	17.6	5.1	0.6237 µg/L	0.6237 ppb	07:38:01
1	Ni 231.604†	326.2	-3.9	-0.2333 µg/L	-0.2333 ppb	07:38:01
1	P 214.914†	215.1	-3.9	-9.0821 µg/L	-9.0821 ppb	07:38:01
1	Pb 220.353†	61.2	0.3	0.0943 µg/L	0.0943 ppb	07:38:01
1	S 181.975 Axial†	26.4	3.4	18.935 µg/L	18.935 ppb	07:38:01
1	Sb 206.836†	24.1	0.2	0.2314 µg/L	0.2314 ppb	07:38:01
1	Se 196.026†	11.7	3.8	5.7398 µg/L	5.7398 ppb	07:38:01
1	SiO2†	2299.7	-79.8	-16.296 µg/L	-16.296 ppb	07:37:40
1	Si 251.611†	278.4	-2.8	-0.2266 µg/L	-0.2266 ppb	07:38:01
1	Sn 189.927†	20.0	-3.3	-1.8645 µg/L	-1.8645 ppb	07:38:01
1	Ti 334.940†	738.6	37.9	0.0895 µg/L	0.0895 ppb	07:37:40
1	Tl 190.801†	-27.0	-2.6	-4.3559 µg/L	-4.3559 ppb	07:38:01
1	U 409.014†	-200.1	-14.7	-1.3734 µg/L	-1.3734 ppb	07:37:40
1	V 292.402†	-164.4	-49.8	-0.5928 µg/L	-0.5928 ppb	07:37:40
1	Zn 213.857†	667.8	38.4	1.0765 µg/L	1.0765 ppb	07:38:01
2	Sc RADIAL	76695.1	76695.1	97.7 %		07:36:38
2	Al 396.153Radial†	-17.9	11.2	7.2527 µg/L	7.2527 ppb	07:36:38
2	Ca 317.933Radial†	295.2	54.9	39.546 µg/L	39.546 ppb	07:36:58
2	Fe 238.204 Radial†	15.8	-0.1	-1.6866 µg/L	-1.6866 ppb	07:36:58
2	K 766.490 Radial†	418.4	29.4	18.569 µg/L	18.569 ppb	07:36:38
2	Mg 279.077 IEC†	9.0	1.0	10.497 µg/L	10.497 ppb	07:36:58
2	Na 589.592 Radial†	516.9	-24.7	-6.5805 µg/L	-6.5805 ppb	07:36:38
2	Sr 421.552†	666.5	47.9	0.2868 µg/L	0.2868 ppb	07:36:38
2	Sc 361.383	1982341.8	1982341.8	100.30 %		07:38:07
2	Y 371.029	1253153.4	1253153.4	100.32 %		07:38:07
2	Ag 328.068†	-23.7	68.9	0.6255 µg/L	0.6255 ppb	07:38:12
2	As 188.979†	-2.2	0.5	1.0761 µg/L	1.0761 ppb	07:38:33
2	B 249.677†	269.7	-101.1	-4.7860 µg/L	-4.7860 ppb	07:38:33
2	Ba 233.527†	-24.6	-0.6	-0.0157 µg/L	-0.0157 ppb	07:38:33
2	Be 313.107†	3923.3	77.9	0.0523 µg/L	0.0523 ppb	07:38:12
2	Cd 226.502†	-124.2	1.5	0.0420 µg/L	0.0420 ppb	07:38:33
2	Co 228.616†	-43.1	6.4	0.3390 µg/L	0.3390 ppb	07:38:33
2	Cr 267.716†	-74.0	28.3	0.6349 µg/L	0.6349 ppb	07:38:12
2	Cu 324.752†	4112.5	200.3	1.4686 µg/L	1.4686 ppb	07:38:12
2	Mn 257.610†	-103.5	44.7	0.1577 µg/L	0.1577 ppb	07:38:33
2	Mo 202.031†	19.2	6.6	0.7939 µg/L	0.7939 ppb	07:38:33
2	Ni 231.604†	323.8	-8.6	-0.5205 µg/L	-0.5205 ppb	07:38:33
2	P 214.914†	214.3	-6.2	-14.443 µg/L	-14.443 ppb	07:38:33
2	Pb 220.353†	64.5	3.2	0.8939 µg/L	0.8939 ppb	07:38:33



2	S 181.975 Axial†	25.5	2.3	12.570 µg/L	12.570 ppb	07:38:33
2	Sb 206.836†	25.6	1.5	1.5710 µg/L	1.5710 ppb	07:38:33
2	Se 196.026†	6.3	-1.7	-2.5664 µg/L	-2.5664 ppb	07:38:33
2	SiO2†	2336.2	-60.1	-12.272 µg/L	-12.272 ppb	07:38:12
2	Si 251.611†	300.6	17.3	1.4028 µg/L	1.4028 ppb	07:38:33
2	Sn 189.927†	22.8	-0.8	-0.4227 µg/L	-0.4227 ppb	07:38:33
2	Ti 334.940†	783.0	76.8	0.1856 µg/L	0.1856 ppb	07:38:12
2	Tl 190.801†	-21.7	2.9	4.7553 µg/L	4.7553 ppb	07:38:33
2	U 409.014†	-245.2	-58.2	-5.4122 µg/L	-5.4122 ppb	07:38:12
2	V 292.402†	-71.1	44.4	0.5365 µg/L	0.5365 ppb	07:38:12
2	Zn 213.857†	672.3	38.0	1.0680 µg/L	1.0680 ppb	07:38:33
3	Sc RADIAL	76626.5	76626.5	97.6 %		07:37:04
3	Al 396.153Radial†	-45.9	-17.5	-11.350 µg/L	-11.350 ppb	07:37:04
3	Ca 317.933Radial†	298.8	58.9	42.439 µg/L	42.439 ppb	07:37:24
3	Fe 238.204 Radial†	18.6	2.7	35.697 µg/L	35.697 ppb	07:37:24
3	K 766.490 Radial†	414.7	26.0	16.435 µg/L	16.435 ppb	07:37:04
3	Mg 279.077 IEC†	8.2	0.2	2.4057 µg/L	2.4057 ppb	07:37:24
3	Na 589.592 Radial†	488.4	-53.4	-14.228 µg/L	-14.228 ppb	07:37:04
3	Sr 421.552†	686.2	68.7	0.4112 µg/L	0.4112 ppb	07:37:04
3	Sc 361.383	1964755.1	1964755.1	99.408 %		07:38:39
3	Y 371.029	1241226.6	1241226.6	99.369 %		07:38:39
3	Ag 328.068†	-73.7	18.4	0.1727 µg/L	0.1727 ppb	07:38:44
3	As 188.979†	-4.9	-2.2	-4.8073 µg/L	-4.8073 ppb	07:39:05
3	B 249.677†	270.2	-98.1	-4.6640 µg/L	-4.6640 ppb	07:39:05
3	Ba 233.527†	-22.9	0.9	0.0268 µg/L	0.0268 ppb	07:39:05
3	Be 313.107†	3933.2	122.8	0.0826 µg/L	0.0826 ppb	07:38:44
3	Cd 226.502†	-110.9	13.7	0.3848 µg/L	0.3848 ppb	07:39:05
3	Co 228.616†	-57.8	-8.9	-0.4719 µg/L	-0.4719 ppb	07:39:05
3	Cr 267.716†	-74.4	27.3	0.6120 µg/L	0.6120 ppb	07:38:44
3	Cu 324.752†	4031.6	155.7	1.1466 µg/L	1.1466 ppb	07:38:44
3	Mn 257.610†	-123.7	23.4	0.0875 µg/L	0.0875 ppb	07:39:05
3	Mo 202.031†	20.0	7.6	0.9166 µg/L	0.9166 ppb	07:39:05
3	Ni 231.604†	331.1	1.7	0.1015 µg/L	0.1015 ppb	07:39:05
3	P 214.914†	213.6	-5.0	-11.532 µg/L	-11.532 ppb	07:39:05
3	Pb 220.353†	67.5	6.8	1.8967 µg/L	1.8967 ppb	07:39:05
3	S 181.975 Axial†	24.3	1.3	7.1232 µg/L	7.1232 ppb	07:39:05
3	Sb 206.836†	26.6	2.7	2.8820 µg/L	2.8820 ppb	07:39:05
3	Se 196.026†	8.1	0.2	0.4673 µg/L	0.4673 ppb	07:39:05
3	SiO2†	2358.1	-17.3	-3.5266 µg/L	-3.5266 ppb	07:38:44
3	Si 251.611†	296.5	15.8	1.2815 µg/L	1.2815 ppb	07:39:05
3	Sn 189.927†	27.8	4.5	2.5389 µg/L	2.5389 ppb	07:39:05
3	Ti 334.940†	793.1	93.9	0.2276 µg/L	0.2276 ppb	07:38:44
3	Tl 190.801†	-25.4	-1.0	-1.6725 µg/L	-1.6725 ppb	07:39:05
3	U 409.014†	-211.3	-26.4	-2.4568 µg/L	-2.4568 ppb	07:38:44
3	V 292.402†	-65.7	49.2	0.5998 µg/L	0.5998 ppb	07:38:44
3	Zn 213.857†	667.0	38.7	1.0840 µg/L	1.0840 ppb	07:39:05

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1971699.8	99.759 %	0.4735			0.47%
Sc RADIAL	76780.4	97.8 %	0.27			0.27%
Y 371.029	1246156.5	99.764 %	0.4985			0.50%
Ag 328.068†	32.0	0.2910 µg/L	0.29386	0.2910 ppb	0.29386	101.00%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-4.0	-2.6277 µg/L	9.35532	-2.6277 ppb	9.35532	356.03%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	1.0	2.1442 µg/L	7.54248	2.1442 ppb	7.54248	351.77%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-92.4	-4.3835 µg/L	0.59471	-4.3835 ppb	0.59471	13.57%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-0.8	-0.0225 µg/L	0.05308	-0.0225 ppb	0.05308	235.62%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	85.4	0.0574 µg/L	0.02310	0.0574 ppb	0.02310	40.26%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	56.1	40.411 µg/L	1.7627	40.411 ppb	1.7627	4.36%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	3.2	0.0891 µg/L	0.27515	0.0891 ppb	0.27515	308.77%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	0.3	0.0138 µg/L	0.42863	0.0138 ppb	0.42863	>999.9%

Cr	267.716†	30.6	0.6863 µg/L	0.10942	0.6863 ppb	0.10942	15.94%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	180.9	1.3292 µg/L	0.16528	1.3292 ppb	0.16528	12.44%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	1.3	17.791 µg/L	18.7413	17.791 ppb	18.7413	105.34%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	24.2	15.240 µg/L	4.0600	15.240 ppb	4.0600	26.64%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	1.5	15.520 µg/L	16.2201	15.520 ppb	16.2201	104.51%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	33.6	0.1207 µg/L	0.03522	0.1207 ppb	0.03522	29.18%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	6.4	0.7780 µg/L	0.14709	0.7780 ppb	0.14709	18.91%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	-27.6	-7.3458 µg/L	6.53336	-7.3458 ppb	6.53336	88.94%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	-3.6	-0.2174 µg/L	0.31130	-0.2174 ppb	0.31130	143.18%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	-5.0	-11.686 µg/L	2.6838	-11.686 ppb	2.6838	22.97%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	3.4	0.9617 µg/L	0.90310	0.9617 ppb	0.90310	93.91%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	2.3	12.876 µg/L	5.9118	12.876 ppb	5.9118	45.91%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	1.5	1.5615 µg/L	1.32534	1.5615 ppb	1.32534	84.88%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	0.8	1.2136 µg/L	4.20307	1.2136 ppb	4.20307	346.34%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†		-52.4	-10.698 µg/L	6.5285	-10.698 ppb	6.5285	61.02%
QC value within limits for SiO2 Recovery = Not calculated							
Si	251.611†	10.1	0.8192 µg/L	0.90774	0.8192 ppb	0.90774	110.80%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	0.1	0.0839 µg/L	2.24501	0.0839 ppb	2.24501	>999.9%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	51.8	0.3099 µg/L	0.09190	0.3099 ppb	0.09190	29.65%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	69.6	0.1675 µg/L	0.07078	0.1675 ppb	0.07078	42.25%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	-0.2	-0.4244 µg/L	4.68206	-0.4244 ppb	4.68206	>999.9%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	-33.1	-3.0808 µg/L	2.09046	-3.0808 ppb	2.09046	67.85%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	14.6	0.1811 µg/L	0.67103	0.1811 ppb	0.67103	370.48%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	38.4	1.0762 µg/L	0.00799	1.0762 ppb	0.00799	0.74%
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 18

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 1/29/2010 08:11:28

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77115.2	77115.2	98.3 %		08:12:06
1	Al 396.153Radial†	7765.7	7932.7	5126.8 µg/L	5126.8 ppb	08:12:06
1	Ca 317.933Radial†	6951.9	6827.8	4919.8 µg/L	4919.8 ppb	08:12:27
1	Fe 238.204 Radial†	401.4	392.2	5204.3 µg/L	5204.3 ppb	08:12:27
1	K 766.490 Radial†	8525.3	8277.5	5222.3 µg/L	5222.3 ppb	08:12:06
1	Mg 279.077 IEC†	508.6	509.4	5231.3 µg/L	5231.3 ppb	08:12:27
1	Na 589.592 Radial†	37777.7	37892.9	10088 µg/L	10088 ppb	08:12:06
1	Sr 421.552†	84968.0	85838.3	513.48 µg/L	513.48 ppb	08:12:06
1	Sc 361.383	1956039.0	1956039.0	98.967 %		08:13:30
1	Y 371.029	1232820.7	1232820.7	98.696 %		08:13:30
1	Ag 328.068†	58475.3	59178.2	538.01 µg/L	538.01 ppb	08:13:36
1	As 188.979†	247.1	252.5	549.26 µg/L	549.26 ppb	08:13:56
1	B 249.677†	11203.1	10950.1	516.82 µg/L	516.82 ppb	08:13:36
1	Ba 233.527†	18729.7	18949.2	530.27 µg/L	530.27 ppb	08:13:36
1	Be 313.107†	771890.5	776113.2	521.99 µg/L	521.99 ppb	08:13:30
1	Cd 226.502†	18236.9	18552.5	525.60 µg/L	525.60 ppb	08:13:36
1	Co 228.616†	9819.3	9971.1	529.80 µg/L	529.80 ppb	08:13:36
1	Cr 267.716†	23540.9	23888.7	535.60 µg/L	535.60 ppb	08:13:36
1	Cu 324.752†	76420.8	73318.4	538.32 µg/L	538.32 ppb	08:13:36
1	Mn 257.610†	146487.7	148164.5	525.66 µg/L	525.66 ppb	08:13:30
1	Mo 202.031†	4358.3	4391.2	532.17 µg/L	532.17 ppb	08:13:56
1	Ni 231.604†	9005.8	8768.3	530.34 µg/L	530.34 ppb	08:13:36
1	P 214.914†	1366.9	1161.4	2625.0 µg/L	2625.0 ppb	08:13:56
1	Pb 220.353†	1943.5	1902.6	533.88 µg/L	533.88 ppb	08:13:56
1	S 181.975 Axial†	215.1	194.2	1079.9 µg/L	1079.9 ppb	08:13:56
1	Sb 206.836†	529.8	511.3	543.00 µg/L	543.00 ppb	08:13:56
1	Se 196.026†	352.7	348.4	543.32 µg/L	543.32 ppb	08:13:56
1	SiO2†	30571.4	28501.1	5819.2 µg/L	5819.2 ppb	08:13:36
1	Si 251.611†	33557.4	33625.2	2723.8 µg/L	2723.8 ppb	08:13:36
1	Sn 189.927†	982.6	969.4	548.98 µg/L	548.98 ppb	08:13:56
1	Ti 334.940†	218110.7	219683.3	530.71 µg/L	530.71 ppb	08:13:30
1	Tl 190.801†	289.5	317.1	532.64 µg/L	532.64 ppb	08:13:56
1	U 409.014†	5622.9	5867.8	544.37 µg/L	544.37 ppb	08:13:36
1	V 292.402†	43889.7	44463.1	541.18 µg/L	541.18 ppb	08:13:36
1	Zn 213.857†	19414.5	18984.9	529.92 µg/L	529.92 ppb	08:13:36
2	Sc RADIAL	77548.0	77548.0	98.8 %		08:12:32
2	Al 396.153Radial†	7827.9	7951.5	5139.1 µg/L	5139.1 ppb	08:12:32
2	Ca 317.933Radial†	6962.2	6798.8	4898.8 µg/L	4898.8 ppb	08:12:53
2	Fe 238.204 Radial†	401.5	389.9	5174.8 µg/L	5174.8 ppb	08:12:53
2	K 766.490 Radial†	8488.1	8191.4	5168.0 µg/L	5168.0 ppb	08:12:32
2	Mg 279.077 IEC†	506.0	504.0	5175.5 µg/L	5175.5 ppb	08:12:53
2	Na 589.592 Radial†	38019.8	37923.3	10096 µg/L	10096 ppb	08:12:32
2	Sr 421.552†	85821.4	86219.3	515.76 µg/L	515.76 ppb	08:12:32
2	Sc 361.383	1948863.8	1948863.8	98.604 %		08:14:04
2	Y 371.029	1228108.1	1228108.1	98.319 %		08:14:04
2	Ag 328.068†	58077.5	58992.4	536.32 µg/L	536.32 ppb	08:14:09
2	As 188.979†	240.4	246.6	536.43 µg/L	536.43 ppb	08:14:30
2	B 249.677†	11073.8	10860.6	512.59 µg/L	512.59 ppb	08:14:09
2	Ba 233.527†	18542.3	18828.8	526.90 µg/L	526.90 ppb	08:14:09
2	Be 313.107†	769843.4	776908.7	522.53 µg/L	522.53 ppb	08:14:04
2	Cd 226.502†	18143.5	18525.6	524.84 µg/L	524.84 ppb	08:14:09
2	Co 228.616†	9748.7	9936.0	527.93 µg/L	527.93 ppb	08:14:09
2	Cr 267.716†	23366.4	23799.4	533.60 µg/L	533.60 ppb	08:14:09
2	Cu 324.752†	75843.9	73017.7	536.11 µg/L	536.11 ppb	08:14:09
2	Mn 257.610†	146079.7	148295.7	526.12 µg/L	526.12 ppb	08:14:04
2	Mo 202.031†	4318.0	4366.6	529.19 µg/L	529.19 ppb	08:14:30
2	Ni 231.604†	8930.8	8725.8	527.77 µg/L	527.77 ppb	08:14:09
2	P 214.914†	1367.3	1166.9	2637.9 µg/L	2637.9 ppb	08:14:30
2	Pb 220.353†	1942.3	1908.7	535.58 µg/L	535.58 ppb	08:14:30

2	S 181.975 Axial†	217.2	197.2	1096.2 µg/L	1096.2 ppb	08:14:30
2	Sb 206.836†	522.9	506.3	537.70 µg/L	537.70 ppb	08:14:30
2	Se 196.026†	346.2	343.1	535.26 µg/L	535.26 ppb	08:14:30
2	SiO2†	30353.0	28393.3	5797.2 µg/L	5797.2 ppb	08:14:09
2	Si 251.611†	33249.0	33437.3	2708.6 µg/L	2708.6 ppb	08:14:09
2	Sn 189.927†	978.6	969.0	548.77 µg/L	548.77 ppb	08:14:30
2	Ti 334.940†	217497.6	219873.0	531.17 µg/L	531.17 ppb	08:14:04
2	Tl 190.801†	287.1	315.6	530.31 µg/L	530.31 ppb	08:14:30
2	U 409.014†	5468.3	5731.9	531.75 µg/L	531.75 ppb	08:14:09
2	V 292.402†	43602.0	44334.6	539.59 µg/L	539.59 ppb	08:14:09
2	Zn 213.857†	19253.9	18894.2	527.39 µg/L	527.39 ppb	08:14:09
3	Sc RADIAL	77462.0	77462.0	98.7 %		08:12:58
3	Al 396.153Radial†	7785.1	7916.9	5118.4 µg/L	5118.4 ppb	08:12:58
3	Ca 317.933Radial†	6924.0	6767.8	4876.5 µg/L	4876.5 ppb	08:13:19
3	Fe 238.204 Radial†	400.1	389.0	5161.7 µg/L	5161.7 ppb	08:13:19
3	K 766.490 Radial†	8564.5	8278.4	5222.9 µg/L	5222.9 ppb	08:12:58
3	Mg 279.077 IEC†	506.5	505.0	5184.6 µg/L	5184.6 ppb	08:13:19
3	Na 589.592 Radial†	37907.2	37851.9	10077 µg/L	10077 ppb	08:12:58
3	Sr 421.552†	85674.5	86166.9	515.44 µg/L	515.44 ppb	08:12:58
3	Sc 361.383	1958617.8	1958617.8	99.098 %		08:14:37
3	Y 371.029	1234434.8	1234434.8	98.825 %		08:14:37
3	Ag 328.068†	55554.4	56152.9	510.36 µg/L	510.36 ppb	08:14:42
3	As 188.979†	202.9	207.5	451.44 µg/L	451.44 ppb	08:15:03
3	B 249.677†	10503.0	10228.7	482.57 µg/L	482.57 ppb	08:14:42
3	Ba 233.527†	17177.8	17358.2	485.73 µg/L	485.73 ppb	08:14:42
3	Be 313.107†	734382.9	737237.1	495.85 µg/L	495.85 ppb	08:14:37
3	Cd 226.502†	16703.5	16980.9	481.02 µg/L	481.02 ppb	08:14:42
3	Co 228.616†	8925.9	9056.5	481.13 µg/L	481.13 ppb	08:14:42
3	Cr 267.716†	20865.9	21158.1	474.39 µg/L	474.39 ppb	08:14:42
3	Cu 324.752†	70062.2	66800.2	490.52 µg/L	490.52 ppb	08:14:42
3	Mn 257.610†	139578.3	140997.2	500.25 µg/L	500.25 ppb	08:14:37
3	Mo 202.031†	3659.7	3680.5	446.07 µg/L	446.07 ppb	08:15:03
3	Ni 231.604†	8204.2	7947.5	480.70 µg/L	480.70 ppb	08:14:42
3	P 214.914†	1201.9	993.0	2240.6 µg/L	2240.6 ppb	08:15:03
3	Pb 220.353†	1708.0	1662.4	466.38 µg/L	466.38 ppb	08:15:03
3	S 181.975 Axial†	194.2	172.8	960.68 µg/L	960.68 ppb	08:15:03
3	Sb 206.836†	457.0	437.1	463.84 µg/L	463.84 ppb	08:15:03
3	Se 196.026†	316.3	311.2	487.29 µg/L	487.29 ppb	08:15:03
3	SiO2†	28545.7	26416.3	5393.6 µg/L	5393.6 ppb	08:14:42
3	Si 251.611†	31168.9	31170.4	2524.9 µg/L	2524.9 ppb	08:14:42
3	Sn 189.927†	817.3	801.3	454.22 µg/L	454.22 ppb	08:15:03
3	Ti 334.940†	206180.0	207353.8	500.91 µg/L	500.91 ppb	08:14:37
3	Tl 190.801†	263.5	290.5	488.10 µg/L	488.10 ppb	08:15:03
3	U 409.014†	4948.9	5180.2	480.46 µg/L	480.46 ppb	08:14:42
3	V 292.402†	39652.2	40128.6	488.15 µg/L	488.15 ppb	08:14:42
3	Zn 213.857†	17729.6	17258.8	481.69 µg/L	481.69 ppb	08:14:42

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1954506.9	98.890 %	0.2557			0.26%
Sc RADIAL	77375.1	98.6 %	0.29			0.30%
Y 371.029	1231787.9	98.613 %	0.2632			0.27%
Ag 328.068†	58107.8	528.23 µg/L	15.501	528.23 ppb	15.501	2.93%
QC value within limits for Ag 328.068 Recovery = 105.65%						
Al 396.153Radial†	7933.7	5128.1 µg/L	10.41	5128.1 ppb	10.41	0.20%
QC value within limits for Al 396.153Radial Recovery = 102.56%						
As 188.979†	235.5	512.38 µg/L	53.161	512.38 ppb	53.161	10.38%
QC value within limits for As 188.979 Recovery = 102.48%						
B 249.677†	10679.8	503.99 µg/L	18.673	503.99 ppb	18.673	3.71%
QC value within limits for B 249.677 Recovery = 100.80%						
Ba 233.527†	18378.7	514.30 µg/L	24.799	514.30 ppb	24.799	4.82%
QC value within limits for Ba 233.527 Recovery = 102.86%						
Be 313.107†	763419.6	513.46 µg/L	15.252	513.46 ppb	15.252	2.97%
QC value within limits for Be 313.107 Recovery = 102.69%						
Ca 317.933Radial†	6798.1	4898.4 µg/L	21.61	4898.4 ppb	21.61	0.44%
QC value within limits for Ca 317.933Radial Recovery = 97.97%						
Cd 226.502†	18019.7	510.49 µg/L	25.517	510.49 ppb	25.517	5.00%
QC value within limits for Cd 226.502 Recovery = 102.10%						
Co 228.616†	9654.5	512.96 µg/L	27.575	512.96 ppb	27.575	5.38%

QC value within limits for Co 228.616 Recovery = 102.59%							
Cr 267.716†	22948.7	514.53 µg/L	34.780	514.53 ppb	34.780	6.76%	
QC value within limits for Cr 267.716 Recovery = 102.91%							
Cu 324.752†	71045.5	521.65 µg/L	26.982	521.65 ppb	26.982	5.17%	
QC value within limits for Cu 324.752 Recovery = 104.33%							
Fe 238.204 Radial†	390.4	5180.3 µg/L	21.82	5180.3 ppb	21.82	0.42%	
QC value within limits for Fe 238.204 Radial Recovery = 103.61%							
K 766.490 Radial†	8249.1	5204.4 µg/L	31.51	5204.4 ppb	31.51	0.61%	
QC value within limits for K 766.490 Radial Recovery = 104.09%							
Mg 279.077 IEC†	506.1	5197.1 µg/L	29.93	5197.1 ppb	29.93	0.58%	
QC value within limits for Mg 279.077 IEC Recovery = 103.94%							
Mn 257.610†	145819.1	517.34 µg/L	14.805	517.34 ppb	14.805	2.86%	
QC value within limits for Mn 257.610 Recovery = 103.47%							
Mo 202.031†	4146.1	502.48 µg/L	48.870	502.48 ppb	48.870	9.73%	
QC value within limits for Mo 202.031 Recovery = 100.50%							
Na 589.592 Radial†	37889.3	10087 µg/L	9.5	10087 ppb	9.5	0.09%	
QC value within limits for Na 589.592 Radial Recovery = 100.87%							
Ni 231.604†	8480.6	512.94 µg/L	27.947	512.94 ppb	27.947	5.45%	
QC value within limits for Ni 231.604 Recovery = 102.59%							
P 214.914†	1107.1	2501.1 µg/L	225.73	2501.1 ppb	225.73	9.02%	
QC value within limits for P 214.914 Recovery = 100.05%							
Pb 220.353†	1824.6	511.95 µg/L	39.471	511.95 ppb	39.471	7.71%	
QC value within limits for Pb 220.353 Recovery = 102.39%							
S 181.975 Axial†	188.1	1045.6 µg/L	74.01	1045.6 ppb	74.01	7.08%	
QC value within limits for S 181.975 Axial Recovery = 104.56%							
Sb 206.836†	484.9	514.85 µg/L	44.249	514.85 ppb	44.249	8.59%	
QC value within limits for Sb 206.836 Recovery = 102.97%							
Se 196.026†	334.3	521.96 µg/L	30.290	521.96 ppb	30.290	5.80%	
QC value within limits for Se 196.026 Recovery = 104.39%							
SiO2†	27770.2	5670.0 µg/L	239.66	5670.0 ppb	239.66	4.23%	
QC value within limits for SiO2 Recovery = 106.03%							
Si 251.611†	32744.3	2652.4 µg/L	110.68	2652.4 ppb	110.68	4.17%	
QC value within limits for Si 251.611 Recovery = 106.10%							
Sn 189.927†	913.2	517.32 µg/L	54.648	517.32 ppb	54.648	10.56%	
QC value within limits for Sn 189.927 Recovery = 103.46%							
Sr 421.552†	86074.8	514.89 µg/L	1.235	514.89 ppb	1.235	0.24%	
QC value within limits for Sr 421.552 Recovery = 102.98%							
Ti 334.940†	215636.7	520.93 µg/L	17.341	520.93 ppb	17.341	3.33%	
QC value within limits for Ti 334.940 Recovery = 104.19%							
Tl 190.801†	307.7	517.02 µg/L	25.072	517.02 ppb	25.072	4.85%	
QC value within limits for Tl 190.801 Recovery = 103.40%							
U 409.014†	5593.3	518.86 µg/L	33.846	518.86 ppb	33.846	6.52%	
QC value within limits for U 409.014 Recovery = 103.77%							
V 292.402†	42975.4	522.97 µg/L	30.168	522.97 ppb	30.168	5.77%	
QC value within limits for V 292.402 Recovery = 104.59%							
Zn 213.857†	18379.3	513.00 µg/L	27.139	513.00 ppb	27.139	5.29%	
QC value within limits for Zn 213.857 Recovery = 102.60%							
All analyte(s) passed QC.							

Sequence No.: 19

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 1/29/2010 08:15:12

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	75911.1	75911.1	96.7 %		08:15:45
1	Al 396.153Radial†	-20.4	8.4	5.4243 µg/L	5.4243 ppb	08:15:45
1	Ca 317.933Radial†	288.7	51.3	36.952 µg/L	36.952 ppb	08:16:05
1	Fe 238.204 Radial†	18.0	2.3	30.179 µg/L	30.179 ppb	08:16:05
1	K 766.490 Radial†	405.1	20.1	12.689 µg/L	12.689 ppb	08:15:45
1	Mg 279.077 IEC†	8.7	0.9	8.7823 µg/L	8.7823 ppb	08:16:05
1	Na 589.592 Radial†	419.3	-120.1	-31.985 µg/L	-31.985 ppb	08:15:45
1	Sr 421.552†	627.5	14.7	0.0879 µg/L	0.0879 ppb	08:15:45
1	Sc 361.383	1956273.2	1956273.2	98.979 %		08:17:07
1	Y 371.029	1237425.9	1237425.9	99.065 %		08:17:07
1	Ag 328.068†	-102.0	-10.5	-0.0913 µg/L	-0.0913 ppb	08:17:13
1	As 188.979†	1.2	3.9	8.6083 µg/L	8.6083 ppb	08:17:33
1	B 249.677†	223.1	-144.5	-6.8606 µg/L	-6.8606 ppb	08:17:33
1	Ba 233.527†	-20.8	2.9	0.0827 µg/L	0.0827 ppb	08:17:33
1	Be 313.107†	3789.9	-4.8	-0.0033 µg/L	-0.0033 ppb	08:17:13
1	Cd 226.502†	-118.5	5.6	0.1553 µg/L	0.1553 ppb	08:17:33
1	Co 228.616†	-34.9	14.1	0.7483 µg/L	0.7483 ppb	08:17:33
1	Cr 267.716†	-74.9	26.5	0.5939 µg/L	0.5939 ppb	08:17:33
1	Cu 324.752†	3920.9	61.4	0.4547 µg/L	0.4547 ppb	08:17:13
1	Mn 257.610†	-100.3	46.5	0.1685 µg/L	0.1685 ppb	08:17:33
1	Mo 202.031†	15.0	2.6	0.3186 µg/L	0.3186 ppb	08:17:33
1	Ni 231.604†	330.0	2.0	0.1205 µg/L	0.1205 ppb	08:17:33
1	P 214.914†	217.2	-0.4	-0.9740 µg/L	-0.9740 ppb	08:17:33
1	Pb 220.353†	66.6	6.2	1.7338 µg/L	1.7338 ppb	08:17:33
1	S 181.975 Axial†	25.2	2.3	13.013 µg/L	13.013 ppb	08:17:33
1	Sb 206.836†	28.5	4.8	5.1060 µg/L	5.1060 ppb	08:17:33
1	Se 196.026†	12.5	4.7	7.1355 µg/L	7.1355 ppb	08:17:33
1	SiO2†	2340.3	-25.0	-5.0943 µg/L	-5.0943 ppb	08:17:13
1	Si 251.611†	335.2	56.2	4.5522 µg/L	4.5522 ppb	08:17:33
1	Sn 189.927†	27.4	4.2	2.4004 µg/L	2.4004 ppb	08:17:33
1	Ti 334.940†	772.2	76.3	0.1844 µg/L	0.1844 ppb	08:17:13
1	Tl 190.801†	-27.8	-3.5	-5.8852 µg/L	-5.8852 ppb	08:17:33
1	U 409.014†	-222.1	-38.2	-3.5541 µg/L	-3.5541 ppb	08:17:13
1	V 292.402†	-98.8	15.5	0.1886 µg/L	0.1886 ppb	08:17:13
1	Zn 213.857†	671.9	46.6	1.3058 µg/L	1.3058 ppb	08:17:33
2	Sc RADIAL	76310.4	76310.4	97.2 %		08:16:11
2	Al 396.153Radial†	-30.9	-2.3	-1.4927 µg/L	-1.4927 ppb	08:16:11
2	Ca 317.933Radial†	289.5	50.6	36.455 µg/L	36.455 ppb	08:16:31
2	Fe 238.204 Radial†	17.7	1.9	24.616 µg/L	24.616 ppb	08:16:31
2	K 766.490 Radial†	414.3	27.4	17.264 µg/L	17.264 ppb	08:16:11
2	Mg 279.077 IEC†	7.7	-0.2	-2.4036 µg/L	-2.4036 ppb	08:16:31
2	Na 589.592 Radial†	404.0	-138.2	-36.781 µg/L	-36.781 ppb	08:16:11
2	Sr 421.552†	664.7	49.6	0.2967 µg/L	0.2967 ppb	08:16:11
2	Sc 361.383	1957168.5	1957168.5	99.024 %		08:17:39
2	Y 371.029	1237997.5	1237997.5	99.110 %		08:17:39
2	Ag 328.068†	-58.2	33.8	0.3051 µg/L	0.3051 ppb	08:17:45
2	As 188.979†	-2.8	-0.1	-0.2312 µg/L	-0.2312 ppb	08:18:05
2	B 249.677†	221.9	-145.9	-6.9216 µg/L	-6.9216 ppb	08:18:05
2	Ba 233.527†	-17.0	6.8	0.1905 µg/L	0.1905 ppb	08:18:05
2	Be 313.107†	3908.4	113.1	0.0761 µg/L	0.0761 ppb	08:17:45
2	Cd 226.502†	-108.9	15.3	0.4313 µg/L	0.4313 ppb	08:18:05
2	Co 228.616†	-43.5	5.4	0.2859 µg/L	0.2859 ppb	08:18:05
2	Cr 267.716†	-70.9	30.5	0.6838 µg/L	0.6838 ppb	08:18:05
2	Cu 324.752†	3897.0	35.4	0.2632 µg/L	0.2632 ppb	08:17:45
2	Mn 257.610†	-85.7	61.3	0.2206 µg/L	0.2206 ppb	08:18:05
2	Mo 202.031†	12.7	0.2	0.0255 µg/L	0.0255 ppb	08:18:05
2	Ni 231.604†	335.7	7.6	0.4616 µg/L	0.4616 ppb	08:18:05
2	P 214.914†	207.6	-10.2	-23.426 µg/L	-23.426 ppb	08:18:05
2	Pb 220.353†	59.4	-1.2	-0.3216 µg/L	-0.3216 ppb	08:18:05

2	S 181.975 Axial†	25.5	2.6	14.395 µg/L	14.395 ppb	08:18:05
2	Sb 206.836†	23.8	0.1	0.0564 µg/L	0.0564 ppb	08:18:05
2	Se 196.026†	3.2	-4.7	-6.9075 µg/L	-6.9075 ppb	08:18:05
2	SiO2†	2371.6	5.5	1.1314 µg/L	1.1314 ppb	08:17:45
2	Si 251.611†	329.5	50.4	4.0794 µg/L	4.0794 ppb	08:18:05
2	Sn 189.927†	27.2	4.0	2.2482 µg/L	2.2482 ppb	08:18:05
2	Ti 334.940†	723.2	26.4	0.0646 µg/L	0.0646 ppb	08:17:45
2	Tl 190.801†	-22.9	1.4	2.3756 µg/L	2.3756 ppb	08:18:05
2	U 409.014†	-236.7	-52.8	-4.9172 µg/L	-4.9172 ppb	08:17:45
2	V 292.402†	-139.5	-25.5	-0.3091 µg/L	-0.3091 ppb	08:17:45
2	Zn 213.857†	673.1	47.5	1.3318 µg/L	1.3318 ppb	08:18:05
3	Sc RADIAL	76332.1	76332.1	97.3 %		08:16:37
3	Al 396.153Radial†	-44.6	-16.3	-10.573 µg/L	-10.573 ppb	08:16:37
3	Ca 317.933Radial†	287.6	48.6	34.990 µg/L	34.990 ppb	08:16:57
3	Fe 238.204 Radial†	17.7	1.9	25.283 µg/L	25.283 ppb	08:16:57
3	K 766.490 Radial†	368.1	-20.2	-12.771 µg/L	-12.771 ppb	08:16:37
3	Mg 279.077 IEC†	7.3	-0.7	-6.9373 µg/L	-6.9373 ppb	08:16:57
3	Na 589.592 Radial†	413.9	-128.1	-34.098 µg/L	-34.098 ppb	08:16:37
3	Sr 421.552†	626.6	10.2	0.0613 µg/L	0.0613 ppb	08:16:37
3	Sc 361.383	1959202.8	1959202.8	99.127 %		08:18:11
3	Y 371.029	1239004.7	1239004.7	99.191 %		08:18:11
3	Ag 328.068†	-80.0	11.9	0.1077 µg/L	0.1077 ppb	08:18:17
3	As 188.979†	-0.4	2.3	5.0437 µg/L	5.0437 ppb	08:18:38
3	B 249.677†	226.9	-141.1	-6.6935 µg/L	-6.6935 ppb	08:18:38
3	Ba 233.527†	-11.9	12.0	0.3336 µg/L	0.3336 ppb	08:18:38
3	Be 313.107†	3878.8	79.2	0.0532 µg/L	0.0532 ppb	08:18:17
3	Cd 226.502†	-116.5	7.7	0.2160 µg/L	0.2160 ppb	08:18:38
3	Co 228.616†	-54.9	-6.1	-0.3231 µg/L	-0.3231 ppb	08:18:38
3	Cr 267.716†	-60.8	40.8	0.9143 µg/L	0.9143 ppb	08:18:38
3	Cu 324.752†	3910.3	44.7	0.3316 µg/L	0.3316 ppb	08:18:17
3	Mn 257.610†	-92.5	54.5	0.1969 µg/L	0.1969 ppb	08:18:38
3	Mo 202.031†	14.9	2.4	0.2964 µg/L	0.2964 ppb	08:18:38
3	Ni 231.604†	330.0	1.5	0.0935 µg/L	0.0935 ppb	08:18:38
3	P 214.914†	214.8	-3.2	-7.3525 µg/L	-7.3525 ppb	08:18:38
3	Pb 220.353†	59.9	-0.7	-0.1920 µg/L	-0.1920 ppb	08:18:38
3	S 181.975 Axial†	22.2	-0.7	-3.8887 µg/L	-3.8887 ppb	08:18:38
3	Sb 206.836†	30.2	6.5	6.8653 µg/L	6.8653 ppb	08:18:38
3	Se 196.026†	10.4	2.6	4.0075 µg/L	4.0075 ppb	08:18:38
3	SiO2†	2363.4	-5.2	-1.0640 µg/L	-1.0640 ppb	08:18:17
3	Si 251.611†	335.5	56.0	4.5358 µg/L	4.5358 ppb	08:18:38
3	Sn 189.927†	21.4	-1.8	-1.0264 µg/L	-1.0264 ppb	08:18:38
3	Ti 334.940†	794.2	97.4	0.2365 µg/L	0.2365 ppb	08:18:17
3	Tl 190.801†	-20.0	4.4	7.2475 µg/L	7.2475 ppb	08:18:38
3	U 409.014†	-194.4	-9.9	-0.9215 µg/L	-0.9215 ppb	08:18:17
3	V 292.402†	-132.6	-18.5	-0.2175 µg/L	-0.2175 ppb	08:18:17
3	Zn 213.857†	669.4	43.0	1.2076 µg/L	1.2076 ppb	08:18:38

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1957548.2	99.043 %	0.0760			0.08%
Sc RADIAL	76184.5	97.1 %	0.30			0.31%
Y 371.029	1238142.7	99.122 %	0.0640			0.06%
Ag 328.068†	11.8	0.1071 µg/L	0.19818	0.1071 ppb	0.19818	184.98%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-3.4	-2.2138 µg/L	8.02303	-2.2138 ppb	8.02303	362.40%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	2.1	4.4736 µg/L	4.44724	4.4736 ppb	4.44724	99.41%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-143.8	-6.8252 µg/L	0.11811	-6.8252 ppb	0.11811	1.73%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	7.2	0.2023 µg/L	0.12588	0.2023 ppb	0.12588	62.24%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	62.5	0.0420 µg/L	0.04085	0.0420 ppb	0.04085	97.29%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	50.1	36.133 µg/L	1.0199	36.133 ppb	1.0199	2.82%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	9.5	0.2675 µg/L	0.14502	0.2675 ppb	0.14502	54.21%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	4.5	0.2370 µg/L	0.53736	0.2370 ppb	0.53736	226.73%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	32.6	0.7307 µg/L	0.16525	0.7307 ppb	0.16525	22.62%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	47.2	0.3498 µg/L	0.09701	0.3498 ppb	0.09701	27.73%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	2.0	26.693 µg/L	3.0374	26.693 ppb	3.0374	11.38%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	9.1	5.7274 µg/L	16.18258	5.7274 ppb	16.18258	282.54%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	-0.0	-0.1862 µg/L	8.09097	-0.1862 ppb	8.09097	>999.9%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	54.1	0.1953 µg/L	0.02606	0.1953 ppb	0.02606	13.34%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	1.8	0.2135 µg/L	0.16316	0.2135 ppb	0.16316	76.43%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-128.8	-34.288 µg/L	2.4040	-34.288 ppb	2.4040	7.01%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	3.7	0.2252 µg/L	0.20518	0.2252 ppb	0.20518	91.11%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-4.6	-10.584 µg/L	11.5698	-10.584 ppb	11.5698	109.31%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	1.4	0.4067 µg/L	1.15109	0.4067 ppb	1.15109	283.01%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	1.4	7.8399 µg/L	10.18073	7.8399 ppb	10.18073	129.86%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	3.8	4.0092 µg/L	3.53446	4.0092 ppb	3.53446	88.16%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	0.9	1.4119 µg/L	7.37255	1.4119 ppb	7.37255	522.19%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	-8.2	-1.6756 µg/L	3.15755	-1.6756 ppb	3.15755	188.44%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	54.2	4.3891 µg/L	0.26833	4.3891 ppb	0.26833	6.11%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	2.1	1.2074 µg/L	1.93605	1.2074 ppb	1.93605	160.35%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	24.8	0.1486 µg/L	0.12891	0.1486 ppb	0.12891	86.74%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	66.7	0.1618 µg/L	0.08812	0.1618 ppb	0.08812	54.45%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	0.8	1.2460 µg/L	6.63882	1.2460 ppb	6.63882	532.83%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-33.6	-3.1309 µg/L	2.03117	-3.1309 ppb	2.03117	64.87%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	-9.5	-0.1127 µg/L	0.26489	-0.1127 ppb	0.26489	235.11%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	45.7	1.2817 µg/L	0.06548	1.2817 ppb	0.06548	5.11%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
All analyte(s) passed QC.							



Sequence No.: 30

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 1/29/2010 08:55:43

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76506.0	76506.0	97.5 %		08:56:22
1	Al 396.153Radial†	7768.7	7998.7	5169.4 µg/L	5169.4 ppb	08:56:22
1	Ca 317.933Radial†	7066.6	7001.8	5045.1 µg/L	5045.1 ppb	08:56:22
1	Fe 238.204 Radial†	401.4	395.4	5247.0 µg/L	5247.0 ppb	08:56:42
1	K 766.490 Radial†	8581.0	8403.7	5301.9 µg/L	5301.9 ppb	08:56:22
1	Mg 279.077 IEC†	511.3	516.4	5302.7 µg/L	5302.7 ppb	08:56:42
1	Na 589.592 Radial†	38079.2	38508.3	10252 µg/L	10252 ppb	08:56:22
1	Sr 421.552†	85893.0	87475.6	523.27 µg/L	523.27 ppb	08:56:22
1	Sc 361.383	1945023.1	1945023.1	98.410 %		08:57:45
1	Y 371.029	1225010.3	1225010.3	98.071 %		08:57:45
1	Ag 328.068†	58796.2	59839.0	544.03 µg/L	544.03 ppb	08:57:51
1	As 188.979†	243.7	250.3	544.59 µg/L	544.59 ppb	08:58:12
1	B 249.677†	11215.7	11027.0	520.45 µg/L	520.45 ppb	08:57:51
1	Ba 233.527†	18908.9	19238.4	538.36 µg/L	538.36 ppb	08:57:51
1	Be 313.107†	782566.2	791378.7	532.26 µg/L	532.26 ppb	08:57:45
1	Cd 226.502†	18416.6	18839.5	533.73 µg/L	533.73 ppb	08:57:51
1	Co 228.616†	9925.9	10135.6	538.55 µg/L	538.55 ppb	08:57:51
1	Cr 267.716†	23714.4	24199.7	542.58 µg/L	542.58 ppb	08:57:51
1	Cu 324.752†	76742.2	74082.4	543.93 µg/L	543.93 ppb	08:57:51
1	Mn 257.610†	148334.2	150879.2	535.28 µg/L	535.28 ppb	08:57:45
1	Mo 202.031†	4412.2	4470.9	541.83 µg/L	541.83 ppb	08:58:12
1	Ni 231.604†	9085.2	8900.6	538.34 µg/L	538.34 ppb	08:57:51
1	P 214.914†	1377.1	1179.5	2666.3 µg/L	2666.3 ppb	08:58:12
1	Pb 220.353†	1970.1	1940.8	544.61 µg/L	544.61 ppb	08:58:12
1	S 181.975 Axial†	215.7	196.1	1090.3 µg/L	1090.3 ppb	08:58:12
1	Sb 206.836†	542.1	526.8	559.51 µg/L	559.51 ppb	08:58:12
1	Se 196.026†	363.5	361.5	563.08 µg/L	563.08 ppb	08:58:12
1	Si02†	30664.7	28770.8	5874.3 µg/L	5874.3 ppb	08:57:51
1	Si 251.611†	33626.4	33887.4	2745.0 µg/L	2745.0 ppb	08:57:51
1	Sn 189.927†	992.2	984.8	557.72 µg/L	557.72 ppb	08:58:12
1	Ti 334.940†	220872.3	223737.7	540.51 µg/L	540.51 ppb	08:57:45
1	Tl 190.801†	286.7	315.9	530.76 µg/L	530.76 ppb	08:58:12
1	U 409.014†	5472.0	5746.7	533.10 µg/L	533.10 ppb	08:57:51
1	V 292.402†	44196.8	45026.3	548.04 µg/L	548.04 ppb	08:57:51
1	Zn 213.857†	19548.6	19232.3	536.82 µg/L	536.82 ppb	08:57:51
2	Sc RADIAL	76962.6	76962.6	98.1 %		08:56:47
2	Al 396.153Radial†	7820.8	8004.6	5173.3 µg/L	5173.3 ppb	08:56:47
2	Ca 317.933Radial†	7127.1	7020.5	5058.6 µg/L	5058.6 ppb	08:56:47
2	Fe 238.204 Radial†	399.3	390.9	5187.3 µg/L	5187.3 ppb	08:57:08
2	K 766.490 Radial†	8661.9	8434.0	5321.1 µg/L	5321.1 ppb	08:56:47
2	Mg 279.077 IEC†	513.9	515.9	5298.0 µg/L	5298.0 ppb	08:57:08
2	Na 589.592 Radial†	38265.3	38466.3	10241 µg/L	10241 ppb	08:56:47
2	Sr 421.552†	86616.9	87691.2	524.56 µg/L	524.56 ppb	08:56:47
2	Sc 361.383	1951518.3	1951518.3	98.738 %		08:58:19
2	Y 371.029	1229223.6	1229223.6	98.408 %		08:58:19
2	Ag 328.068†	58813.3	59657.4	542.38 µg/L	542.38 ppb	08:58:24
2	As 188.979†	243.0	248.8	541.31 µg/L	541.31 ppb	08:58:45
2	B 249.677†	11270.2	11044.2	521.29 µg/L	521.29 ppb	08:58:24
2	Ba 233.527†	18908.5	19174.1	536.56 µg/L	536.56 ppb	08:58:24
2	Be 313.107†	788048.1	794284.0	534.21 µg/L	534.21 ppb	08:58:19
2	Cd 226.502†	18460.5	18821.7	533.23 µg/L	533.23 ppb	08:58:24
2	Co 228.616†	9902.5	10078.3	535.49 µg/L	535.49 ppb	08:58:24
2	Cr 267.716†	23755.4	24161.1	541.71 µg/L	541.71 ppb	08:58:24
2	Cu 324.752†	76858.6	73940.7	542.88 µg/L	542.88 ppb	08:58:24
2	Mn 257.610†	149358.7	151415.1	537.17 µg/L	537.17 ppb	08:58:19
2	Mo 202.031†	4383.5	4426.9	536.50 µg/L	536.50 ppb	08:58:45
2	Ni 231.604†	9112.6	8897.7	538.17 µg/L	538.17 ppb	08:58:24
2	P 214.914†	1373.8	1171.5	2647.9 µg/L	2647.9 ppb	08:58:45
2	Pb 220.353†	1972.5	1936.5	543.39 µg/L	543.39 ppb	08:58:45

2	S 181.975 Axial†	217.1	196.7	1093.6 µg/L	1093.6 ppb	08:58:45
2	Sb 206.836†	526.1	508.8	540.35 µg/L	540.35 ppb	08:58:45
2	Se 196.026†	359.0	355.7	554.18 µg/L	554.18 ppb	08:58:45
2	SiO2†	30732.4	28735.7	5867.1 µg/L	5867.1 ppb	08:58:24
2	Si 251.611†	33713.8	33862.2	2743.0 µg/L	2743.0 ppb	08:58:24
2	Sn 189.927†	984.5	973.7	551.43 µg/L	551.43 ppb	08:58:45
2	Ti 334.940†	222228.4	224364.2	542.02 µg/L	542.02 ppb	08:58:19
2	Tl 190.801†	292.6	320.9	539.19 µg/L	539.19 ppb	08:58:45
2	U 409.014†	5640.6	5898.9	547.25 µg/L	547.25 ppb	08:58:24
2	V 292.402†	44268.1	44949.1	547.08 µg/L	547.08 ppb	08:58:24
2	Zn 213.857†	19560.1	19177.8	535.29 µg/L	535.29 ppb	08:58:24
3	Sc RADIAL	76396.7	76396.7	97.3 %		08:57:13
3	Al 396.153Radial†	7832.6	8075.7	5221.1 µg/L	5221.1 ppb	08:57:13
3	Ca 317.933Radial†	7085.9	7032.0	5066.9 µg/L	5066.9 ppb	08:57:13
3	Fe 238.204 Radial†	400.7	395.3	5244.5 µg/L	5244.5 ppb	08:57:34
3	K 766.490 Radial†	8558.3	8393.0	5295.2 µg/L	5295.2 ppb	08:57:13
3	Mg 279.077 IEC†	511.2	516.9	5307.2 µg/L	5307.2 ppb	08:57:34
3	Na 589.592 Radial†	38078.1	38563.1	10267 µg/L	10267 ppb	08:57:13
3	Sr 421.552†	85973.7	87684.7	524.52 µg/L	524.52 ppb	08:57:13
3	Sc 361.383	1947793.1	1947793.1	98.550 %		08:58:52
3	Y 371.029	1227119.7	1227119.7	98.240 %		08:58:52
3	Ag 328.068†	55817.9	56731.9	515.63 µg/L	515.63 ppb	08:58:58
3	As 188.979†	208.5	214.3	466.30 µg/L	466.30 ppb	08:59:18
3	B 249.677†	10597.4	10383.4	489.87 µg/L	489.87 ppb	08:58:58
3	Ba 233.527†	17377.2	17656.8	494.09 µg/L	494.09 ppb	08:58:58
3	Be 313.107†	744793.0	751918.8	505.72 µg/L	505.72 ppb	08:58:52
3	Cd 226.502†	16843.3	17216.5	487.70 µg/L	487.70 ppb	08:58:58
3	Co 228.616†	9017.5	9199.6	488.73 µg/L	488.73 ppb	08:58:58
3	Cr 267.716†	21067.9	21480.1	481.60 µg/L	481.60 ppb	08:58:58
3	Cu 324.752†	70336.4	67471.5	495.45 µg/L	495.45 ppb	08:58:58
3	Mn 257.610†	141473.6	143703.3	509.85 µg/L	509.85 ppb	08:58:52
3	Mo 202.031†	3705.8	3747.7	454.22 µg/L	454.22 ppb	08:59:18
3	Ni 231.604†	8275.7	8066.1	487.87 µg/L	487.87 ppb	08:58:58
3	P 214.914†	1215.4	1013.5	2287.3 µg/L	2287.3 ppb	08:59:18
3	Pb 220.353†	1729.7	1694.0	475.28 µg/L	475.28 ppb	08:59:18
3	S 181.975 Axial†	197.5	177.3	985.45 µg/L	985.45 ppb	08:59:18
3	Sb 206.836†	462.6	445.4	472.62 µg/L	472.62 ppb	08:59:18
3	Se 196.026†	326.6	323.4	505.91 µg/L	505.91 ppb	08:59:18
3	SiO2†	28726.2	26759.5	5463.7 µg/L	5463.7 ppb	08:58:58
3	Si 251.611†	31274.3	31452.1	2547.8 µg/L	2547.8 ppb	08:58:58
3	Sn 189.927†	815.4	803.9	455.77 µg/L	455.77 ppb	08:59:18
3	Ti 334.940†	208831.6	211200.7	510.20 µg/L	510.20 ppb	08:58:52
3	Tl 190.801†	267.1	295.6	496.67 µg/L	496.67 ppb	08:59:18
3	U 409.014†	4964.0	5223.3	484.45 µg/L	484.45 ppb	08:58:58
3	V 292.402†	39901.5	40604.0	493.96 µg/L	493.96 ppb	08:58:58
3	Zn 213.857†	17847.8	17478.1	487.81 µg/L	487.81 ppb	08:58:58

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1948111.5	98.566 %	0.1649			0.17%
Sc RADIAL	76621.8	97.6 %	0.38			0.39%
Y 371.029	1227117.9	98.239 %	0.1687			0.17%
Ag 328.068†	58742.8	534.01 µg/L	15.940	534.01 ppb	15.940	2.98%
QC value within limits for Ag 328.068 Recovery = 106.80%						
Al 396.153Radial†	8026.3	5187.9 µg/L	28.77	5187.9 ppb	28.77	0.55%
QC value within limits for Al 396.153Radial Recovery = 103.76%						
As 188.979†	237.8	517.40 µg/L	44.287	517.40 ppb	44.287	8.56%
QC value within limits for As 188.979 Recovery = 103.48%						
B 249.677†	10818.2	510.54 µg/L	17.906	510.54 ppb	17.906	3.51%
QC value within limits for B 249.677 Recovery = 102.11%						
Ba 233.527†	18689.8	523.00 µg/L	25.058	523.00 ppb	25.058	4.79%
QC value within limits for Ba 233.527 Recovery = 104.60%						
Be 313.107†	779193.9	524.06 µg/L	15.916	524.06 ppb	15.916	3.04%
QC value within limits for Be 313.107 Recovery = 104.81%						
Ca 317.933Radial†	7018.1	5056.9 µg/L	10.95	5056.9 ppb	10.95	0.22%
QC value within limits for Ca 317.933Radial Recovery = 101.14%						
Cd 226.502†	18292.5	518.22 µg/L	26.436	518.22 ppb	26.436	5.10%
QC value within limits for Cd 226.502 Recovery = 103.64%						
Co 228.616†	9804.5	520.92 µg/L	27.919	520.92 ppb	27.919	5.36%

QC value within limits for Co 228.616 Recovery = 104.18%							
Cr 267.716†	23280.3	521.96 µg/L	34.955	521.96 ppb	34.955	6.70%	
QC value within limits for Cr 267.716 Recovery = 104.39%							
Cu 324.752†	71831.5	527.42 µg/L	27.689	527.42 ppb	27.689	5.25%	
QC value within limits for Cu 324.752 Recovery = 105.48%							
Fe 238.204 Radial†	393.8	5226.3 µg/L	33.75	5226.3 ppb	33.75	0.65%	
QC value within limits for Fe 238.204 Radial Recovery = 104.53%							
K 766.490 Radial†	8410.2	5306.1 µg/L	13.42	5306.1 ppb	13.42	0.25%	
QC value within limits for K 766.490 Radial Recovery = 106.12%							
Mg 279.077 IEC†	516.4	5302.6 µg/L	4.60	5302.6 ppb	4.60	0.09%	
QC value within limits for Mg 279.077 IEC Recovery = 106.05%							
Mn 257.610†	148665.8	527.43 µg/L	15.261	527.43 ppb	15.261	2.89%	
QC value within limits for Mn 257.610 Recovery = 105.49%							
Mo 202.031†	4215.2	510.85 µg/L	49.115	510.85 ppb	49.115	9.61%	
QC value within limits for Mo 202.031 Recovery = 102.17%							
Na 589.592 Radial†	38512.5	10253 µg/L	12.9	10253 ppb	12.9	0.13%	
QC value within limits for Na 589.592 Radial Recovery = 102.53%							
Ni 231.604†	8621.4	521.46 µg/L	29.089	521.46 ppb	29.089	5.58%	
QC value within limits for Ni 231.604 Recovery = 104.29%							
P 214.914†	1121.5	2533.9 µg/L	213.72	2533.9 ppb	213.72	8.43%	
QC value within limits for P 214.914 Recovery = 101.35%							
Pb 220.353†	1857.1	521.09 µg/L	39.681	521.09 ppb	39.681	7.62%	
QC value within limits for Pb 220.353 Recovery = 104.22%							
S 181.975 Axial†	190.0	1056.4 µg/L	61.50	1056.4 ppb	61.50	5.82%	
QC value within limits for S 181.975 Axial Recovery = 105.64%							
Sb 206.836†	493.7	524.16 µg/L	45.648	524.16 ppb	45.648	8.71%	
QC value within limits for Sb 206.836 Recovery = 104.83%							
Se 196.026†	346.9	541.06 µg/L	30.761	541.06 ppb	30.761	5.69%	
QC value within limits for Se 196.026 Recovery = 108.21%							
SiO2†	28088.7	5735.0 µg/L	235.05	5735.0 ppb	235.05	4.10%	
QC value within limits for SiO2 Recovery = 107.25%							
Si 251.611†	33067.2	2678.6 µg/L	113.31	2678.6 ppb	113.31	4.23%	
QC value within limits for Si 251.611 Recovery = 107.14%							
Sn 189.927†	920.8	521.64 µg/L	57.132	521.64 ppb	57.132	10.95%	
QC value within limits for Sn 189.927 Recovery = 104.33%							
Sr 421.552†	87617.2	524.12 µg/L	0.734	524.12 ppb	0.734	0.14%	
QC value within limits for Sr 421.552 Recovery = 104.82%							
Ti 334.940†	219767.5	530.91 µg/L	17.951	530.91 ppb	17.951	3.38%	
QC value within limits for Ti 334.940 Recovery = 106.18%							
Tl 190.801†	310.8	522.20 µg/L	22.514	522.20 ppb	22.514	4.31%	
QC value within limits for Tl 190.801 Recovery = 104.44%							
U 409.014†	5622.9	521.60 µg/L	32.941	521.60 ppb	32.941	6.32%	
QC value within limits for U 409.014 Recovery = 104.32%							
V 292.402†	43526.5	529.69 µg/L	30.948	529.69 ppb	30.948	5.84%	
QC value within limits for V 292.402 Recovery = 105.94%							
Zn 213.857†	18629.4	519.97 µg/L	27.865	519.97 ppb	27.865	5.36%	
QC value within limits for Zn 213.857 Recovery = 103.99%							
All analyte(s) passed QC.							

Sequence No.: 31  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 1/29/2010 08:59:27  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	74525.6	74525.6	95.0 %		09:00:00
1	Al 396.153Radial†	-8.0	21.1	13.675 µg/L	13.675 ppb	09:00:00
1	Ca 317.933Radial†	256.3	22.7	16.338 µg/L	16.338 ppb	09:00:20
1	Fe 238.204 Radial†	17.7	2.3	30.394 µg/L	30.394 ppb	09:00:20
1	K 766.490 Radial†	393.1	15.2	9.6105 µg/L	9.6105 ppb	09:00:00
1	Mg 279.077 IEC†	8.9	1.3	12.804 µg/L	12.804 ppb	09:00:20
1	Na 589.592 Radial†	338.1	-197.7	-52.626 µg/L	-52.626 ppb	09:00:00
1	Sr 421.552†	634.3	33.9	0.2031 µg/L	0.2031 ppb	09:00:00
1	Sc 361.383	1930152.3	1930152.3	97.657 %		09:01:22
1	Y 371.029	1221367.3	1221367.3	97.779 %		09:01:22
1	Ag 328.068†	-97.9	-7.6	-0.0657 µg/L	-0.0657 ppb	09:01:28
1	As 188.979†	-3.8	-1.2	-2.6515 µg/L	-2.6515 ppb	09:01:49
1	B 249.677†	197.8	-167.4	-7.9458 µg/L	-7.9458 ppb	09:01:49
1	Ba 233.527†	-12.5	11.2	0.3133 µg/L	0.3133 ppb	09:01:49
1	Be 313.107†	3906.3	166.2	0.1117 µg/L	0.1117 ppb	09:01:28
1	Cd 226.502†	-120.4	2.0	0.0546 µg/L	0.0546 ppb	09:01:49
1	Co 228.616†	-45.8	2.4	0.1281 µg/L	0.1281 ppb	09:01:49
1	Cr 267.716†	-71.0	29.5	0.6608 µg/L	0.6608 ppb	09:01:28
1	Cu 324.752†	3869.7	62.5	0.4627 µg/L	0.4627 ppb	09:01:28
1	Mn 257.610†	-82.1	63.7	0.2295 µg/L	0.2295 ppb	09:01:49
1	Mo 202.031†	12.6	0.3	0.0376 µg/L	0.0376 ppb	09:01:49
1	Ni 231.604†	333.6	10.2	0.6200 µg/L	0.6200 ppb	09:01:49
1	P 214.914†	213.5	-1.2	-2.7762 µg/L	-2.7762 ppb	09:01:49
1	Pb 220.353†	60.7	1.0	0.2895 µg/L	0.2895 ppb	09:01:49
1	S 181.975 Axial†	19.8	-2.8	-15.752 µg/L	-15.752 ppb	09:01:49
1	Sb 206.836†	26.8	3.5	3.6534 µg/L	3.6534 ppb	09:01:49
1	Se 196.026†	7.8	0.0	0.1301 µg/L	0.1301 ppb	09:01:49
1	SiO2†	2377.5	45.1	9.2043 µg/L	9.2043 ppb	09:01:28
1	Si 251.611†	309.4	34.4	2.7867 µg/L	2.7867 ppb	09:01:49
1	Sn 189.927†	23.8	0.9	0.5310 µg/L	0.5310 ppb	09:01:49
1	Ti 334.940†	824.1	140.0	0.3376 µg/L	0.3376 ppb	09:01:28
1	Tl 190.801†	-27.0	-3.1	-5.1380 µg/L	-5.1380 ppb	09:01:49
1	U 409.014†	-223.8	-43.0	-3.9986 µg/L	-3.9986 ppb	09:01:28
1	V 292.402†	-95.6	17.4	0.2084 µg/L	0.2084 ppb	09:01:28
1	Zn 213.857†	657.1	40.6	1.1366 µg/L	1.1366 ppb	09:01:49
2	Sc RADIAL	75147.2	75147.2	95.8 %		09:00:26
2	Al 396.153Radial†	17.0	47.3	30.596 µg/L	30.596 ppb	09:00:26
2	Ca 317.933Radial†	268.2	32.9	23.729 µg/L	23.729 ppb	09:00:46
2	Fe 238.204 Radial†	17.3	1.7	22.681 µg/L	22.681 ppb	09:00:46
2	K 766.490 Radial†	405.7	25.0	15.769 µg/L	15.769 ppb	09:00:26
2	Mg 279.077 IEC†	7.9	0.1	1.3434 µg/L	1.3434 ppb	09:00:46
2	Na 589.592 Radial†	355.2	-182.8	-48.659 µg/L	-48.659 ppb	09:00:26
2	Sr 421.552†	640.6	35.0	0.2094 µg/L	0.2094 ppb	09:00:26
2	Sc 361.383	1922141.8	1922141.8	97.252 %		09:01:55
2	Y 371.029	1216343.9	1216343.9	97.377 %		09:01:55
2	Ag 328.068†	-47.8	43.4	0.3937 µg/L	0.3937 ppb	09:02:00
2	As 188.979†	-1.8	0.8	1.8301 µg/L	1.8301 ppb	09:02:21
2	B 249.677†	200.4	-163.9	-7.7756 µg/L	-7.7756 ppb	09:02:21
2	Ba 233.527†	-24.7	-1.4	-0.0390 µg/L	-0.0390 ppb	09:02:21
2	Be 313.107†	3943.2	220.8	0.1485 µg/L	0.1485 ppb	09:02:00
2	Cd 226.502†	-123.3	-1.5	-0.0455 µg/L	-0.0455 ppb	09:02:21
2	Co 228.616†	-42.6	5.5	0.2944 µg/L	0.2944 ppb	09:02:21
2	Cr 267.716†	-75.8	24.2	0.5414 µg/L	0.5414 ppb	09:02:00
2	Cu 324.752†	3857.1	66.1	0.4879 µg/L	0.4879 ppb	09:02:00
2	Mn 257.610†	-89.8	55.5	0.1996 µg/L	0.1996 ppb	09:02:21
2	Mo 202.031†	16.3	4.1	0.5020 µg/L	0.5020 ppb	09:02:21
2	Ni 231.604†	331.8	9.7	0.5888 µg/L	0.5888 ppb	09:02:21
2	P 214.914†	221.3	7.7	17.750 µg/L	17.750 ppb	09:02:21
2	Pb 220.353†	71.7	12.5	3.5236 µg/L	3.5236 ppb	09:02:21

2	S 181.975 Axial†	21.4	-1.1	-6.1056 µg/L	-6.1056 ppb	09:02:21
2	Sb 206.836†	18.3	-5.2	-5.4984 µg/L	-5.4984 ppb	09:02:21
2	Se 196.026†	7.1	-0.6	-0.8601 µg/L	-0.8601 ppb	09:02:21
2	SiO2†	2359.9	37.2	7.5956 µg/L	7.5956 ppb	09:02:00
2	Si 251.611†	324.6	51.3	4.1574 µg/L	4.1574 ppb	09:02:21
2	Sn 189.927†	22.4	-0.4	-0.2405 µg/L	-0.2405 ppb	09:02:21
2	Ti 334.940†	781.1	99.3	0.2402 µg/L	0.2402 ppb	09:02:00
2	Tl 190.801†	-16.8	7.3	12.102 µg/L	12.102 ppb	09:02:21
2	U 409.014†	-256.1	-77.1	-7.1706 µg/L	-7.1706 ppb	09:02:00
2	V 292.402†	-108.8	3.5	0.0406 µg/L	0.0406 ppb	09:02:00
2	Zn 213.857†	651.8	38.0	1.0622 µg/L	1.0622 ppb	09:02:21
3	Sc RADIAL	74848.0	74848.0	95.4 %		09:00:52
3	Al 396.153Radial†	-39.8	-12.2	-7.9072 µg/L	-7.9072 ppb	09:00:52
3	Ca 317.933Radial†	265.0	30.7	22.095 µg/L	22.095 ppb	09:01:12
3	Fe 238.204 Radial†	19.5	4.1	54.252 µg/L	54.252 ppb	09:01:12
3	K 766.490 Radial†	381.2	1.0	0.6230 µg/L	0.6230 ppb	09:00:52
3	Mg 279.077 IEC†	12.4	4.8	49.151 µg/L	49.151 ppb	09:01:12
3	Na 589.592 Radial†	386.6	-148.3	-39.485 µg/L	-39.485 ppb	09:00:52
3	Sr 421.552†	653.4	51.1	0.3055 µg/L	0.3055 ppb	09:00:52
3	Sc 361.383	1941523.0	1941523.0	98.233 %		09:02:27
3	Y 371.029	1228880.2	1228880.2	98.380 %		09:02:27
3	Ag 328.068†	-44.4	47.4	0.4321 µg/L	0.4321 ppb	09:02:32
3	As 188.979†	-2.5	0.2	0.4877 µg/L	0.4877 ppb	09:02:53
3	B 249.677†	200.7	-165.7	-7.8740 µg/L	-7.8740 ppb	09:02:53
3	Ba 233.527†	-23.5	-0.0	-0.0002 µg/L	-0.0002 ppb	09:02:53
3	Be 313.107†	3844.0	79.3	0.0533 µg/L	0.0533 ppb	09:02:32
3	Cd 226.502†	-121.4	1.7	0.0432 µg/L	0.0432 ppb	09:02:53
3	Co 228.616†	-49.3	-0.9	-0.0484 µg/L	-0.0484 ppb	09:02:53
3	Cr 267.716†	-75.5	25.3	0.5675 µg/L	0.5675 ppb	09:02:32
3	Cu 324.752†	3883.2	53.1	0.3972 µg/L	0.3972 ppb	09:02:32
3	Mn 257.610†	-89.3	56.9	0.2070 µg/L	0.2070 ppb	09:02:53
3	Mo 202.031†	20.3	8.1	0.9872 µg/L	0.9872 ppb	09:02:53
3	Ni 231.604†	329.1	3.6	0.2175 µg/L	0.2175 ppb	09:02:53
3	P 214.914†	211.8	-4.2	-9.7380 µg/L	-9.7380 ppb	09:02:53
3	Pb 220.353†	55.8	-4.4	-1.2137 µg/L	-1.2137 ppb	09:02:53
3	S 181.975 Axial†	24.4	1.7	9.6767 µg/L	9.6767 ppb	09:02:53
3	Sb 206.836†	26.1	2.6	2.7531 µg/L	2.7531 ppb	09:02:53
3	Se 196.026†	3.4	-4.4	-6.4727 µg/L	-6.4727 ppb	09:02:53
3	SiO2†	2345.6	-1.6	-0.3292 µg/L	-0.3292 ppb	09:02:32
3	Si 251.611†	327.9	51.3	4.1591 µg/L	4.1591 ppb	09:02:53
3	Sn 189.927†	23.8	0.7	0.4395 µg/L	0.4395 ppb	09:02:53
3	Ti 334.940†	782.0	92.2	0.2193 µg/L	0.2193 ppb	09:02:32
3	Tl 190.801†	-22.0	2.2	3.6142 µg/L	3.6142 ppb	09:02:53
3	U 409.014†	-280.4	-99.2	-9.2323 µg/L	-9.2323 ppb	09:02:32
3	V 292.402†	-108.1	5.2	0.0652 µg/L	0.0652 ppb	09:02:32
3	Zn 213.857†	657.7	37.2	1.0397 µg/L	1.0397 ppb	09:02:53

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1931272.4	97.714 %	0.4928			0.50%
Sc RADIAL	74840.3	95.4 %	0.40			0.42%
Y 371.029	1222197.1	97.845 %	0.5051			0.52%
Ag 328.068†	27.7	0.2534 µg/L	0.27695	0.2534 ppb	0.27695	109.31%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	18.7	12.121 µg/L	19.2985	12.121 ppb	19.2985	159.21%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-0.1	-0.1112 µg/L	2.30008	-0.1112 ppb	2.30008	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-165.7	-7.8652 µg/L	0.08546	-7.8652 ppb	0.08546	1.09%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	3.3	0.0914 µg/L	0.19318	0.0914 ppb	0.19318	211.36%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	155.5	0.1045 µg/L	0.04801	0.1045 ppb	0.04801	45.94%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	28.8	20.721 µg/L	3.8827	20.721 ppb	3.8827	18.74%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	0.7	0.0174 µg/L	0.05482	0.0174 ppb	0.05482	314.37%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	2.3	0.1247 µg/L	0.17141	0.1247 ppb	0.17141	137.46%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	26.3	0.5899 µg/L	0.06279	0.5899 ppb	0.06279	10.64%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	60.6	0.4492 µg/L	0.04679	0.4492 ppb	0.04679	10.42%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	2.7	35.776 µg/L	16.4591	35.776 ppb	16.4591	46.01%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	13.7	8.6676 µg/L	7.61701	8.6676 ppb	7.61701	87.88%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	2.1	21.099 µg/L	24.9600	21.099 ppb	24.9600	118.30%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	58.7	0.2120 µg/L	0.01557	0.2120 ppb	0.01557	7.34%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	4.2	0.5090 µg/L	0.47487	0.5090 ppb	0.47487	93.30%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-176.2	-46.923 µg/L	6.7402	-46.923 ppb	6.7402	14.36%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	7.8	0.4754 µg/L	0.22392	0.4754 ppb	0.22392	47.10%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	0.8	1.7454 µg/L	14.29113	1.7454 ppb	14.29113	818.80%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	3.1	0.8665 µg/L	2.42078	0.8665 ppb	2.42078	279.39%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-0.7	-4.0603 µg/L	12.83710	-4.0603 ppb	12.83710	316.16%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	0.3	0.3027 µg/L	5.04404	0.3027 ppb	5.04404	>999.9%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-1.7	-2.4009 µg/L	3.56087	-2.4009 ppb	3.56087	148.31%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	26.9	5.4903 µg/L	5.10355	5.4903 ppb	5.10355	92.96%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	45.7	3.7011 µg/L	0.79188	3.7011 ppb	0.79188	21.40%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	0.4	0.2433 µg/L	0.42150	0.2433 ppb	0.42150	173.22%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	40.0	0.2393 µg/L	0.05738	0.2393 ppb	0.05738	23.97%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	110.5	0.2657 µg/L	0.06311	0.2657 ppb	0.06311	23.75%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	2.1	3.5261 µg/L	8.62036	3.5261 ppb	8.62036	244.47%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-73.1	-6.8005 µg/L	2.63641	-6.8005 ppb	2.63641	38.77%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	8.7	0.1047 µg/L	0.09063	0.1047 ppb	0.09063	86.53%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	38.6	1.0795 µg/L	0.05067	1.0795 ppb	0.05067	4.69%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
All analyte(s) passed QC.							

=====  
Analysis Begun

Start Time: 1/29/2010 09:14:22

Plasma On Time: 1/25/2010 05:31:26

Logged In Analyst: optima

Technique: ICP Continuous

Spectrometer Model: Optima 4300 DV, S/N 077N1030502 Autosampler Model: AS-93plus

Sample Information File: C:\pe\optima1\Sample Information\012910.sif

Batch ID:

Results Data Set: 012910

Results Library: c:\pe\optima1\Results\Results.mdb

=====  
Sequence No.: 1

Autosampler Location: 7

Sample ID: CCV

Date Collected: 1/29/2010 09:14:24

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:  
=====

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77859.5	77859.5	99.2 %		09:15:02
1	Al 396.153Radial†	7651.7	7742.2	5003.4 µg/L	5003.4 ppb	09:15:02
1	Ca 317.933Radial†	6976.5	6785.0	4888.9 µg/L	4888.9 ppb	09:15:02
1	Fe 238.204 Radial†	396.4	383.2	5086.1 µg/L	5086.1 ppb	09:15:22
1	K 766.490 Radial†	8438.2	8106.8	5114.6 µg/L	5114.6 ppb	09:15:02
1	Mg 279.077 IEC†	500.7	496.6	5099.8 µg/L	5099.8 ppb	09:15:22
1	Na 589.592 Radial†	36953.4	36694.4	9769.3 µg/L	9769.3 ppb	09:15:02
1	Sr 421.552†	83842.1	83876.7	501.74 µg/L	501.74 ppb	09:15:02
1	Sc 361.383	1957567.7	1957567.7	99.044 %		09:16:26
1	Y 371.029	1232943.9	1232943.9	98.706 %		09:16:26
1	Ag 328.068†	58517.9	59175.1	538.00 µg/L	538.00 ppb	09:16:32
1	As 188.979†	243.6	248.7	541.08 µg/L	541.08 ppb	09:16:52
1	B 249.677†	11232.9	10971.4	517.89 µg/L	517.89 ppb	09:16:32
1	Ba 233.527†	18934.5	19141.1	535.64 µg/L	535.64 ppb	09:16:32
1	Be 313.107†	780906.2	784606.8	527.71 µg/L	527.71 ppb	09:16:26
1	Cd 226.502†	18541.2	18845.4	533.92 µg/L	533.92 ppb	09:16:32
1	Co 228.616†	9947.0	10092.2	536.25 µg/L	536.25 ppb	09:16:32
1	Cr 267.716†	23746.6	24077.8	539.84 µg/L	539.84 ppb	09:16:32
1	Cu 324.752†	76226.4	73061.9	536.42 µg/L	536.42 ppb	09:16:32
1	Mn 257.610†	147702.7	149275.6	529.59 µg/L	529.59 ppb	09:16:26
1	Mo 202.031†	4386.4	4416.2	535.19 µg/L	535.19 ppb	09:16:52
1	Ni 231.604†	9150.5	8907.4	538.76 µg/L	538.76 ppb	09:16:32
1	P 214.914†	1389.0	1182.5	2674.1 µg/L	2674.1 ppb	09:16:52
1	Pb 220.353†	1968.3	1926.1	540.49 µg/L	540.49 ppb	09:16:52
1	S 181.975 Axial†	218.8	197.7	1099.4 µg/L	1099.4 ppb	09:16:52
1	Sb 206.836†	531.5	512.6	544.35 µg/L	544.35 ppb	09:16:52
1	Se 196.026†	362.7	358.2	557.65 µg/L	557.65 ppb	09:16:52
1	SiO2†	30595.5	28501.3	5819.3 µg/L	5819.3 ppb	09:16:32
1	Si 251.611†	33554.3	33595.6	2721.4 µg/L	2721.4 ppb	09:16:32
1	Sn 189.927†	1000.3	986.4	558.55 µg/L	558.55 ppb	09:16:52
1	Ti 334.940†	218829.2	220236.6	532.06 µg/L	532.06 ppb	09:16:26
1	Tl 190.801†	291.9	319.2	536.21 µg/L	536.21 ppb	09:16:52
1	U 409.014†	5435.4	5674.0	526.38 µg/L	526.38 ppb	09:16:32
1	V 292.402†	44179.8	44721.4	544.29 µg/L	544.29 ppb	09:16:32
1	Zn 213.857†	19617.2	19174.2	535.21 µg/L	535.21 ppb	09:16:32
2	Sc RADIAL	77571.7	77571.7	98.8 %		09:15:28
2	Al 396.153Radial†	7695.5	7815.2	5050.7 µg/L	5050.7 ppb	09:15:28
2	Ca 317.933Radial†	7060.3	6895.8	4968.7 µg/L	4968.7 ppb	09:15:28
2	Fe 238.204 Radial†	396.3	384.6	5104.3 µg/L	5104.3 ppb	09:15:48
2	K 766.490 Radial†	8521.6	8222.7	5187.8 µg/L	5187.8 ppb	09:15:28
2	Mg 279.077 IEC†	504.5	502.3	5158.2 µg/L	5158.2 ppb	09:15:48
2	Na 589.592 Radial†	37572.9	37459.4	9973.0 µg/L	9973.0 ppb	09:15:28
2	Sr 421.552†	85219.5	85583.8	511.95 µg/L	511.95 ppb	09:15:28
2	Sc 361.383	1949683.7	1949683.7	98.645 %		09:16:59
2	Y 371.029	1227951.6	1227951.6	98.306 %		09:16:59
2	Ag 328.068†	58637.6	59535.4	541.27 µg/L	541.27 ppb	09:17:05
2	As 188.979†	242.6	248.7	541.05 µg/L	541.05 ppb	09:17:25

2	B 249.677†	11221.8	11005.9	519.52 µg/L	519.52 ppb	09:17:05
2	Ba 233.527†	18938.4	19222.4	537.91 µg/L	537.91 ppb	09:17:05
2	Be 313.107†	779763.3	786636.4	529.07 µg/L	529.07 ppb	09:16:59
2	Cd 226.502†	18645.6	19026.9	539.06 µg/L	539.06 ppb	09:17:05
2	Co 228.616†	9970.9	10157.2	539.70 µg/L	539.70 ppb	09:17:05
2	Cr 267.716†	23743.6	24171.8	541.95 µg/L	541.95 ppb	09:17:05
2	Cu 324.752†	76354.4	73502.8	539.66 µg/L	539.66 ppb	09:17:05
2	Mn 257.610†	147491.9	149664.9	530.97 µg/L	530.97 ppb	09:16:59
2	Mo 202.031†	4331.1	4378.0	530.56 µg/L	530.56 ppb	09:17:25
2	Ni 231.604†	9139.3	8933.4	540.32 µg/L	540.32 ppb	09:17:05
2	P 214.914†	1381.8	1180.9	2669.9 µg/L	2669.9 ppb	09:17:25
2	Pb 220.353†	1966.5	1932.4	542.22 µg/L	542.22 ppb	09:17:25
2	S 181.975 Axial†	215.3	195.1	1084.9 µg/L	1084.9 ppb	09:17:25
2	Sb 206.836†	527.9	511.1	542.69 µg/L	542.69 ppb	09:17:25
2	Se 196.026†	362.5	359.6	559.74 µg/L	559.74 ppb	09:17:25
2	SiO2†	30658.0	28689.6	5857.7 µg/L	5857.7 ppb	09:17:05
2	Si 251.611†	33563.3	33741.8	2733.2 µg/L	2733.2 ppb	09:17:05
2	Sn 189.927†	984.3	974.3	551.77 µg/L	551.77 ppb	09:17:25
2	Ti 334.940†	218287.1	220580.5	532.89 µg/L	532.89 ppb	09:16:59
2	Tl 190.801†	286.7	315.2	529.53 µg/L	529.53 ppb	09:17:25
2	U 409.014†	5496.1	5757.8	534.16 µg/L	534.16 ppb	09:17:05
2	V 292.402†	44260.1	44983.2	547.42 µg/L	547.42 ppb	09:17:05
2	Zn 213.857†	19663.3	19301.0	538.76 µg/L	538.76 ppb	09:17:05
3	Sc RADIAL	77311.9	77311.9	98.5 %		09:15:54
3	Al 396.153Radial†	7651.8	7796.9	5040.6 µg/L	5040.6 ppb	09:15:54
3	Ca 317.933Radial†	7055.7	6915.1	4982.7 µg/L	4982.7 ppb	09:15:54
3	Fe 238.204 Radial†	393.2	382.8	5078.8 µg/L	5078.8 ppb	09:16:14
3	K 766.490 Radial†	8415.2	8143.7	5137.9 µg/L	5137.9 ppb	09:15:54
3	Mg 279.077 IEC†	501.9	501.4	5147.4 µg/L	5147.4 ppb	09:16:14
3	Na 589.592 Radial†	37422.6	37434.5	9966.4 µg/L	9966.4 ppb	09:15:54
3	Sr 421.552†	85023.8	85674.9	512.50 µg/L	512.50 ppb	09:15:54
3	Sc 361.383	1955609.9	1955609.9	98.945 %		09:17:32
3	Y 371.029	1231308.7	1231308.7	98.575 %		09:17:32
3	Ag 328.068†	55359.3	56042.0	509.35 µg/L	509.35 ppb	09:17:38
3	As 188.979†	204.7	209.6	455.99 µg/L	455.99 ppb	09:17:59
3	B 249.677†	10523.4	10265.6	484.37 µg/L	484.37 ppb	09:17:38
3	Ba 233.527†	17269.6	17477.6	489.07 µg/L	489.07 ppb	09:17:38
3	Be 313.107†	737490.4	741517.5	498.73 µg/L	498.73 ppb	09:17:32
3	Cd 226.502†	16909.0	17214.6	487.65 µg/L	487.65 ppb	09:17:38
3	Co 228.616†	9010.4	9155.7	486.42 µg/L	486.42 ppb	09:17:38
3	Cr 267.716†	20898.5	21223.4	475.85 µg/L	475.85 ppb	09:17:38
3	Cu 324.752†	69484.3	66325.0	487.02 µg/L	487.02 ppb	09:17:38
3	Mn 257.610†	139779.4	141417.2	501.73 µg/L	501.73 ppb	09:17:32
3	Mo 202.031†	3674.4	3701.0	448.55 µg/L	448.55 ppb	09:17:59
3	Ni 231.604†	8193.6	7949.5	480.82 µg/L	480.82 ppb	09:17:38
3	P 214.914†	1206.2	999.2	2255.4 µg/L	2255.4 ppb	09:17:59
3	Pb 220.353†	1714.8	1671.9	469.08 µg/L	469.08 ppb	09:17:59
3	S 181.975 Axial†	197.5	176.5	981.35 µg/L	981.35 ppb	09:17:59
3	Sb 206.836†	453.6	434.4	460.98 µg/L	460.98 ppb	09:17:59
3	Se 196.026†	321.8	317.3	496.12 µg/L	496.12 ppb	09:17:59
3	SiO2†	28497.6	26411.9	5392.7 µg/L	5392.7 ppb	09:17:38
3	Si 251.611†	31013.5	31061.6	2516.1 µg/L	2516.1 ppb	09:17:38
3	Sn 189.927†	818.0	803.2	455.32 µg/L	455.32 ppb	09:17:59
3	Ti 334.940†	205486.4	206972.8	499.99 µg/L	499.99 ppb	09:17:32
3	Tl 190.801†	262.8	290.1	487.49 µg/L	487.49 ppb	09:17:59
3	U 409.014†	4828.9	5066.6	469.91 µg/L	469.91 ppb	09:17:38
3	V 292.402†	39608.8	40146.4	488.37 µg/L	488.37 ppb	09:17:38
3	Zn 213.857†	17771.9	17329.0	483.68 µg/L	483.68 ppb	09:17:38

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1954287.1	98.878 %	0.2077			0.21%
Sc RADIAL	77581.0	98.9 %	0.35			0.35%
Y 371.029	1230734.7	98.529 %	0.2038			0.21%
Ag 328.068†	58250.8	529.54 µg/L	17.559	529.54 ppb	17.559	3.32%
QC value within limits for Ag 328.068 Recovery = 105.91%						
Al 396.153Radial†	7784.8	5031.6 µg/L	24.92	5031.6 ppb	24.92	0.50%
QC value within limits for Al 396.153Radial Recovery = 100.63%						
As 188.979†	235.7	512.71 µg/L	49.118	512.71 ppb	49.118	9.58%



QC value within limits for As 188.979 Recovery = 102.54%							
B 249.677†	10747.6	507.26 µg/L	19.845	507.26 ppb	19.845	3.91%	
QC value within limits for B 249.677 Recovery = 101.45%							
Ba 233.527†	18613.7	520.87 µg/L	27.565	520.87 ppb	27.565	5.29%	
QC value within limits for Ba 233.527 Recovery = 104.17%							
Be 313.107†	770920.2	518.50 µg/L	17.139	518.50 ppb	17.139	3.31%	
QC value within limits for Be 313.107 Recovery = 103.70%							
Ca 317.933Radial†	6865.3	4946.8 µg/L	50.59	4946.8 ppb	50.59	1.02%	
QC value within limits for Ca 317.933Radial Recovery = 98.94%							
Cd 226.502†	18362.3	520.21 µg/L	28.312	520.21 ppb	28.312	5.44%	
QC value within limits for Cd 226.502 Recovery = 104.04%							
Co 228.616†	9801.7	520.79 µg/L	29.815	520.79 ppb	29.815	5.72%	
QC value within limits for Co 228.616 Recovery = 104.16%							
Cr 267.716†	23157.7	519.21 µg/L	37.569	519.21 ppb	37.569	7.24%	
QC value within limits for Cr 267.716 Recovery = 103.84%							
Cu 324.752†	70963.2	521.03 µg/L	29.498	521.03 ppb	29.498	5.66%	
QC value within limits for Cu 324.752 Recovery = 104.21%							
Fe 238.204 Radial†	383.5	5089.7 µg/L	13.17	5089.7 ppb	13.17	0.26%	
QC value within limits for Fe 238.204 Radial Recovery = 101.79%							
K 766.490 Radial†	8157.8	5146.8 µg/L	37.36	5146.8 ppb	37.36	0.73%	
QC value within limits for K 766.490 Radial Recovery = 102.94%							
Mg 279.077 IEC†	500.1	5135.1 µg/L	31.08	5135.1 ppb	31.08	0.61%	
QC value within limits for Mg 279.077 IEC Recovery = 102.70%							
Mn 257.610†	146785.9	520.76 µg/L	16.496	520.76 ppb	16.496	3.17%	
QC value within limits for Mn 257.610 Recovery = 104.15%							
Mo 202.031†	4165.0	504.77 µg/L	48.740	504.77 ppb	48.740	9.66%	
QC value within limits for Mo 202.031 Recovery = 100.95%							
Na 589.592 Radial†	37196.1	9902.9 µg/L	115.72	9902.9 ppb	115.72	1.17%	
QC value within limits for Na 589.592 Radial Recovery = 99.03%							
Ni 231.604†	8596.8	519.97 µg/L	33.914	519.97 ppb	33.914	6.52%	
QC value within limits for Ni 231.604 Recovery = 103.99%							
P 214.914†	1120.9	2533.2 µg/L	240.55	2533.2 ppb	240.55	9.50%	
QC value within limits for P 214.914 Recovery = 101.33%							
Pb 220.353†	1843.5	517.26 µg/L	41.741	517.26 ppb	41.741	8.07%	
QC value within limits for Pb 220.353 Recovery = 103.45%							
S 181.975 Axial†	189.8	1055.2 µg/L	64.37	1055.2 ppb	64.37	6.10%	
QC value within limits for S 181.975 Axial Recovery = 105.52%							
Sb 206.836†	486.0	516.01 µg/L	47.664	516.01 ppb	47.664	9.24%	
QC value within limits for Sb 206.836 Recovery = 103.20%							
Se 196.026†	345.0	537.83 µg/L	36.145	537.83 ppb	36.145	6.72%	
QC value within limits for Se 196.026 Recovery = 107.57%							
SiO2†	27867.6	5689.9 µg/L	258.11	5689.9 ppb	258.11	4.54%	
QC value within limits for SiO2 Recovery = 106.40%							
Si 251.611†	32799.7	2656.9 µg/L	122.07	2656.9 ppb	122.07	4.59%	
QC value within limits for Si 251.611 Recovery = 106.28%							
Sn 189.927†	921.3	521.88 µg/L	57.745	521.88 ppb	57.745	11.06%	
QC value within limits for Sn 189.927 Recovery = 104.38%							
Sr 421.552†	85045.1	508.73 µg/L	6.059	508.73 ppb	6.059	1.19%	
QC value within limits for Sr 421.552 Recovery = 101.75%							
Ti 334.940†	215930.0	521.65 µg/L	18.756	521.65 ppb	18.756	3.60%	
QC value within limits for Ti 334.940 Recovery = 104.33%							
Tl 190.801†	308.2	517.75 µg/L	26.412	517.75 ppb	26.412	5.10%	
QC value within limits for Tl 190.801 Recovery = 103.55%							
U 409.014†	5499.5	510.15 µg/L	35.061	510.15 ppb	35.061	6.87%	
QC value within limits for U 409.014 Recovery = 102.03%							
V 292.402†	43283.6	526.70 µg/L	33.227	526.70 ppb	33.227	6.31%	
QC value within limits for V 292.402 Recovery = 105.34%							
Zn 213.857†	18601.4	519.22 µg/L	30.829	519.22 ppb	30.829	5.94%	
QC value within limits for Zn 213.857 Recovery = 103.84%							
All analyte(s) passed QC.							

Sequence No.: 2  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 1/29/2010 09:18:08  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76735.2	76735.2	97.8 %		09:18:41
1	Al 396.153Radial†	-33.9	-5.1	-3.3430 µg/L	-3.3430 ppb	09:18:41
1	Ca 317.933Radial†	269.5	28.5	20.516 µg/L	20.516 ppb	09:19:01
1	Fe 238.204 Radial†	18.1	2.1	28.382 µg/L	28.382 ppb	09:19:01
1	K 766.490 Radial†	389.4	-0.5	-0.2912 µg/L	-0.2912 ppb	09:18:41
1	Mg 279.077 IEC†	9.9	2.0	20.200 µg/L	20.200 ppb	09:19:01
1	Na 589.592 Radial†	390.4	-154.4	-41.117 µg/L	-41.117 ppb	09:18:41
1	Sr 421.552†	649.3	30.0	0.1795 µg/L	0.1795 ppb	09:18:41
1	Sc 361.383	1996537.0	1996537.0	101.02 %		09:20:03
1	Y 371.029	1262020.2	1262020.2	101.03 %		09:20:03
1	Ag 328.068†	-113.5	-19.8	-0.1761 µg/L	-0.1761 ppb	09:20:09
1	As 188.979†	-2.2	0.5	1.1857 µg/L	1.1857 ppb	09:20:29
1	B 249.677†	206.9	-165.1	-7.8318 µg/L	-7.8318 ppb	09:20:29
1	Ba 233.527†	-19.3	4.9	0.1364 µg/L	0.1364 ppb	09:20:29
1	Be 313.107†	3873.5	0.8	0.0005 µg/L	0.0005 ppb	09:20:09
1	Cd 226.502†	-126.9	-0.3	-0.0120 µg/L	-0.0120 ppb	09:20:29
1	Co 228.616†	-40.0	9.7	0.5194 µg/L	0.5194 ppb	09:20:29
1	Cr 267.716†	-46.9	55.7	1.2483 µg/L	1.2483 ppb	09:20:09
1	Cu 324.752†	3856.9	-81.8	-0.5960 µg/L	-0.5960 ppb	09:20:09
1	Mn 257.610†	-126.1	23.0	0.0846 µg/L	0.0846 ppb	09:20:29
1	Mo 202.031†	21.8	9.0	1.0924 µg/L	1.0924 ppb	09:20:29
1	Ni 231.604†	338.5	3.7	0.2227 µg/L	0.2227 ppb	09:20:29
1	P 214.914†	216.4	-5.6	-12.791 µg/L	-12.791 ppb	09:20:29
1	Pb 220.353†	50.3	-11.4	-3.1792 µg/L	-3.1792 ppb	09:20:29
1	S 181.975 Axial†	26.1	2.7	15.226 µg/L	15.226 ppb	09:20:29
1	Sb 206.836†	27.0	2.7	2.8469 µg/L	2.8469 ppb	09:20:29
1	Se 196.026†	4.5	-3.5	-5.1464 µg/L	-5.1464 ppb	09:20:29
1	SiO2†	2335.4	-77.5	-15.822 µg/L	-15.822 ppb	09:20:09
1	Si 251.611†	310.6	25.0	2.0285 µg/L	2.0285 ppb	09:20:29
1	Sn 189.927†	26.1	2.4	1.3472 µg/L	1.3472 ppb	09:20:29
1	Ti 334.940†	743.3	32.0	0.0761 µg/L	0.0761 ppb	09:20:09
1	Tl 190.801†	-23.9	0.8	1.3760 µg/L	1.3760 ppb	09:20:29
1	U 409.014†	-217.0	-28.6	-2.6640 µg/L	-2.6640 ppb	09:20:09
1	V 292.402†	-107.5	8.9	0.1168 µg/L	0.1168 ppb	09:20:09
1	Zn 213.857†	655.3	16.5	0.4605 µg/L	0.4605 ppb	09:20:29
2	Sc RADIAL	77394.0	77394.0	98.6 %		09:19:07
2	Al 396.153Radial†	-35.0	-5.9	-3.8725 µg/L	-3.8725 ppb	09:19:07
2	Ca 317.933Radial†	265.7	22.3	16.046 µg/L	16.046 ppb	09:19:27
2	Fe 238.204 Radial†	18.0	1.9	25.744 µg/L	25.744 ppb	09:19:27
2	K 766.490 Radial†	382.5	-10.8	-6.8291 µg/L	-6.8291 ppb	09:19:07
2	Mg 279.077 IEC†	5.2	-2.9	-29.688 µg/L	-29.688 ppb	09:19:27
2	Na 589.592 Radial†	408.1	-139.8	-37.231 µg/L	-37.231 ppb	09:19:07
2	Sr 421.552†	611.3	-14.1	-0.0844 µg/L	-0.0844 ppb	09:19:07
2	Sc 361.383	1995035.2	1995035.2	100.94 %		09:20:35
2	Y 371.029	1261365.6	1261365.6	100.98 %		09:20:35
2	Ag 328.068†	-50.6	42.4	0.3874 µg/L	0.3874 ppb	09:20:41
2	As 188.979†	-4.0	-1.2	-2.7021 µg/L	-2.7021 ppb	09:21:02
2	B 249.677†	200.4	-171.4	-8.1305 µg/L	-8.1305 ppb	09:21:02
2	Ba 233.527†	-26.8	-2.6	-0.0721 µg/L	-0.0721 ppb	09:21:02
2	Be 313.107†	3888.8	18.8	0.0126 µg/L	0.0126 ppb	09:20:41
2	Cd 226.502†	-128.9	-2.4	-0.0706 µg/L	-0.0706 ppb	09:21:02
2	Co 228.616†	-44.7	5.0	0.2681 µg/L	0.2681 ppb	09:21:02
2	Cr 267.716†	-66.8	36.0	0.8067 µg/L	0.8067 ppb	09:20:41
2	Cu 324.752†	3832.7	-103.0	-0.7515 µg/L	-0.7515 ppb	09:20:41
2	Mn 257.610†	-98.4	50.4	0.1831 µg/L	0.1831 ppb	09:21:02
2	Mo 202.031†	20.5	7.8	0.9413 µg/L	0.9413 ppb	09:21:02
2	Ni 231.604†	329.8	-4.7	-0.2851 µg/L	-0.2851 ppb	09:21:02
2	P 214.914†	211.5	-10.3	-23.806 µg/L	-23.806 ppb	09:21:02
2	Pb 220.353†	65.2	3.4	0.9573 µg/L	0.9573 ppb	09:21:02

2	S 181.975 Axial†	28.4	5.0	28.001 µg/L	28.001 ppb	09:21:02
2	Sb 206.836†	26.2	1.9	2.0186 µg/L	2.0186 ppb	09:21:02
2	Se 196.026†	13.3	5.2	7.9756 µg/L	7.9756 ppb	09:21:02
2	SiO2†	2317.4	-93.6	-19.106 µg/L	-19.106 ppb	09:20:41
2	Si 251.611†	296.2	11.0	0.8943 µg/L	0.8943 ppb	09:21:02
2	Sn 189.927†	20.2	-3.4	-1.9178 µg/L	-1.9178 ppb	09:21:02
2	Ti 334.940†	718.9	8.4	0.0228 µg/L	0.0228 ppb	09:20:41
2	Tl 190.801†	-23.1	1.7	2.7911 µg/L	2.7911 ppb	09:21:02
2	U 409.014†	-201.5	-13.4	-1.2479 µg/L	-1.2479 ppb	09:20:41
2	V 292.402†	-80.0	36.1	0.4435 µg/L	0.4435 ppb	09:20:41
2	Zn 213.857†	651.0	12.7	0.3599 µg/L	0.3599 ppb	09:21:02
3	Sc RADIAL	77334.7	77334.7	98.5 %		09:19:33
3	Al 396.153Radial†	-40.8	-11.9	-7.6826 µg/L	-7.6826 ppb	09:19:33
3	Ca 317.933Radial†	268.2	25.0	18.035 µg/L	18.035 ppb	09:19:53
3	Fe 238.204 Radial†	17.0	0.9	12.575 µg/L	12.575 ppb	09:19:53
3	K 766.490 Radial†	391.5	-1.4	-0.9002 µg/L	-0.9002 ppb	09:19:33
3	Mg 279.077 IEC†	14.3	6.3	64.967 µg/L	64.967 ppb	09:19:53
3	Na 589.592 Radial†	378.3	-169.8	-45.209 µg/L	-45.209 ppb	09:19:33
3	Sr 421.552†	663.4	39.2	0.2344 µg/L	0.2344 ppb	09:19:33
3	Sc 361.383	1984901.4	1984901.4	100.43 %		09:21:08
3	Y 371.029	1255339.1	1255339.1	100.50 %		09:21:08
3	Ag 328.068†	-89.0	4.0	0.0390 µg/L	0.0390 ppb	09:21:13
3	As 188.979†	-4.3	-1.5	-3.3782 µg/L	-3.3782 ppb	09:21:34
3	B 249.677†	199.8	-171.0	-8.1038 µg/L	-8.1038 ppb	09:21:34
3	Ba 233.527†	-12.3	11.7	0.3273 µg/L	0.3273 ppb	09:21:34
3	Be 313.107†	3906.7	56.3	0.0378 µg/L	0.0378 ppb	09:21:13
3	Cd 226.502†	-118.6	7.2	0.2019 µg/L	0.2019 ppb	09:21:34
3	Co 228.616†	-48.9	0.6	0.0328 µg/L	0.0328 ppb	09:21:34
3	Cr 267.716†	-93.1	9.5	0.2120 µg/L	0.2120 ppb	09:21:13
3	Cu 324.752†	3818.1	-98.1	-0.7178 µg/L	-0.7178 ppb	09:21:13
3	Mn 257.610†	-96.2	52.0	0.1835 µg/L	0.1835 ppb	09:21:34
3	Mo 202.031†	14.7	2.1	0.2524 µg/L	0.2524 ppb	09:21:34
3	Ni 231.604†	331.9	-0.9	-0.0554 µg/L	-0.0554 ppb	09:21:34
3	P 214.914†	217.2	-3.6	-8.1357 µg/L	-8.1357 ppb	09:21:34
3	Pb 220.353†	59.6	-1.8	-0.5179 µg/L	-0.5179 ppb	09:21:34
3	S 181.975 Axial†	25.1	1.9	10.299 µg/L	10.299 ppb	09:21:34
3	Sb 206.836†	27.2	3.1	3.2903 µg/L	3.2903 ppb	09:21:34
3	Se 196.026†	7.6	-0.4	-0.5974 µg/L	-0.5974 ppb	09:21:34
3	SiO2†	2333.1	-66.2	-13.516 µg/L	-13.516 ppb	09:21:13
3	Si 251.611†	302.9	19.2	1.5580 µg/L	1.5580 ppb	09:21:34
3	Sn 189.927†	24.7	1.1	0.6484 µg/L	0.6484 ppb	09:21:34
3	Ti 334.940†	803.8	96.5	0.2285 µg/L	0.2285 ppb	09:21:13
3	Tl 190.801†	-22.9	1.7	2.8628 µg/L	2.8628 ppb	09:21:34
3	U 409.014†	-181.2	5.8	0.5358 µg/L	0.5358 ppb	09:21:13
3	V 292.402†	-91.0	24.7	0.3005 µg/L	0.3005 ppb	09:21:13
3	Zn 213.857†	645.7	10.7	0.2982 µg/L	0.2982 ppb	09:21:34

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1992157.9	100.79 %	0.320			0.32%
Sc RADIAL	77154.6	98.3 %	0.46			0.47%
Y 371.029	1259575.0	100.84 %	0.295			0.29%
Ag 328.068†	8.9	0.0834 µg/L	0.28438	0.0834 ppb	0.28438	340.92%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-7.6	-4.9660 µg/L	2.36746	-4.9660 ppb	2.36746	47.67%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-0.7	-1.6315 µg/L	2.46307	-1.6315 ppb	2.46307	150.97%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-169.1	-8.0221 µg/L	0.16527	-8.0221 ppb	0.16527	2.06%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	4.7	0.1305 µg/L	0.19979	0.1305 ppb	0.19979	153.05%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	25.3	0.0170 µg/L	0.01904	0.0170 ppb	0.01904	112.11%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	25.3	18.199 µg/L	2.2398	18.199 ppb	2.2398	12.31%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	1.5	0.0398 µg/L	0.14343	0.0398 ppb	0.14343	360.66%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	5.1	0.2735 µg/L	0.24336	0.2735 ppb	0.24336	88.99%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	33.7	0.7557 µg/L	0.52006	0.7557 ppb	0.52006	68.82%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-94.3	-0.6885 µg/L	0.08180	-0.6885 ppb	0.08180	11.88%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	1.7	22.233 µg/L	8.4679	22.233 ppb	8.4679	38.09%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	-4.2	-2.6735 µg/L	3.61174	-2.6735 ppb	3.61174	135.09%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	1.8	18.493 µg/L	47.3503	18.493 ppb	47.3503	256.04%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	41.8	0.1504 µg/L	0.05698	0.1504 ppb	0.05698	37.88%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	6.3	0.7620 µg/L	0.44782	0.7620 ppb	0.44782	58.77%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-154.7	-41.186 µg/L	3.9896	-41.186 ppb	3.9896	9.69%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	-0.6	-0.0393 µg/L	0.25427	-0.0393 ppb	0.25427	647.58%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-6.5	-14.911 µg/L	8.0475	-14.911 ppb	8.0475	53.97%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-3.3	-0.9133 µg/L	2.09641	-0.9133 ppb	2.09641	229.55%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	3.2	17.842 µg/L	9.1367	17.842 ppb	9.1367	51.21%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	2.6	2.7186 µg/L	0.64547	2.7186 ppb	0.64547	23.74%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	0.4	0.7439 µg/L	6.66304	0.7439 ppb	6.66304	895.63%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	-79.1	-16.148 µg/L	2.8090	-16.148 ppb	2.8090	17.40%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	18.4	1.4936 µg/L	0.56986	1.4936 ppb	0.56986	38.15%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	0.0	0.0260 µg/L	1.71919	0.0260 ppb	1.71919	>999.9%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	18.4	0.1099 µg/L	0.17042	0.1099 ppb	0.17042	155.12%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	45.6	0.1091 µg/L	0.10677	0.1091 ppb	0.10677	97.83%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	1.4	2.3433 µg/L	0.83849	2.3433 ppb	0.83849	35.78%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-12.1	-1.1254 µg/L	1.60346	-1.1254 ppb	1.60346	142.48%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	23.2	0.2869 µg/L	0.16373	0.2869 ppb	0.16373	57.06%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	13.3	0.3729 µg/L	0.08194	0.3729 ppb	0.08194	21.98%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
All analyte(s) passed QC.							

Sequence No.: 10  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 1/29/2010 09:46:43  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77219.8	77219.8	98.4 %		09:47:21
1	Al 396.153Radial†	7615.5	7769.4	5021.1 µg/L	5021.1 ppb	09:47:21
1	Ca 317.933Radial†	6926.3	6792.2	4894.1 µg/L	4894.1 ppb	09:47:21
1	Fe 238.204 Radial†	395.2	385.3	5113.6 µg/L	5113.6 ppb	09:47:41
1	K 766.490 Radial†	8404.5	8143.0	5137.5 µg/L	5137.5 ppb	09:47:21
1	Mg 279.077 IEC†	508.3	508.4	5221.5 µg/L	5221.5 ppb	09:47:41
1	Na 589.592 Radial†	37110.6	37162.8	9894.0 µg/L	9894.0 ppb	09:47:21
1	Sr 421.552†	83986.3	84723.4	506.81 µg/L	506.81 ppb	09:47:21
1	Sc 361.383	1958602.0	1958602.0	99.097 %		09:48:45
1	Y 371.029	1233502.2	1233502.2	98.750 %		09:48:45
1	Ag 328.068†	57843.8	58463.6	531.51 µg/L	531.51 ppb	09:48:50
1	As 188.979†	240.2	245.1	533.24 µg/L	533.24 ppb	09:49:11
1	B 249.677†	11029.1	10759.7	507.84 µg/L	507.84 ppb	09:48:50
1	Ba 233.527†	18526.1	18718.9	523.82 µg/L	523.82 ppb	09:48:50
1	Be 313.107†	767379.9	770540.9	518.24 µg/L	518.24 ppb	09:48:45
1	Cd 226.502†	18154.0	18444.8	522.55 µg/L	522.55 ppb	09:48:50
1	Co 228.616†	9769.5	9907.9	526.45 µg/L	526.45 ppb	09:48:50
1	Cr 267.716†	23304.7	23619.2	529.56 µg/L	529.56 ppb	09:48:50
1	Cu 324.752†	75435.0	72222.7	530.27 µg/L	530.27 ppb	09:48:50
1	Mn 257.610†	145345.7	146818.4	520.87 µg/L	520.87 ppb	09:48:45
1	Mo 202.031†	4339.8	4366.8	529.21 µg/L	529.21 ppb	09:49:11
1	Ni 231.604†	8957.7	8708.0	526.69 µg/L	526.69 ppb	09:48:50
1	P 214.914†	1371.0	1163.7	2631.1 µg/L	2631.1 ppb	09:49:11
1	Pb 220.353†	1955.9	1912.6	536.70 µg/L	536.70 ppb	09:49:11
1	S 181.975 Axial†	211.1	189.9	1055.6 µg/L	1055.6 ppb	09:49:11
1	Sb 206.836†	525.5	506.2	537.67 µg/L	537.67 ppb	09:49:11
1	Se 196.026†	364.5	359.8	560.12 µg/L	560.12 ppb	09:49:11
1	SiO2†	30179.5	28065.2	5730.3 µg/L	5730.3 ppb	09:48:50
1	Si 251.611†	33006.0	33024.4	2675.1 µg/L	2675.1 ppb	09:48:50
1	Sn 189.927†	975.5	961.0	544.22 µg/L	544.22 ppb	09:49:11
1	Ti 334.940†	216021.4	217286.5	524.92 µg/L	524.92 ppb	09:48:45
1	Tl 190.801†	292.2	319.4	536.52 µg/L	536.52 ppb	09:49:11
1	U 409.014†	5473.7	5709.8	529.70 µg/L	529.70 ppb	09:48:50
1	V 292.402†	43375.3	43886.0	534.18 µg/L	534.18 ppb	09:48:50
1	Zn 213.857†	19220.0	18762.9	523.71 µg/L	523.71 ppb	09:48:50
2	Sc RADIAL	77850.1	77850.1	99.2 %		09:47:47
2	Al 396.153Radial†	7659.8	7751.4	5009.5 µg/L	5009.5 ppb	09:47:47
2	Ca 317.933Radial†	7014.4	6824.0	4917.0 µg/L	4917.0 ppb	09:47:47
2	Fe 238.204 Radial†	393.1	379.9	5042.0 µg/L	5042.0 ppb	09:48:07
2	K 766.490 Radial†	8401.9	8071.3	5092.2 µg/L	5092.2 ppb	09:47:47
2	Mg 279.077 IEC†	503.1	499.0	5124.4 µg/L	5124.4 ppb	09:48:07
2	Na 589.592 Radial†	37298.5	37046.9	9863.1 µg/L	9863.1 ppb	09:47:47
2	Sr 421.552†	84483.1	84533.2	505.67 µg/L	505.67 ppb	09:47:47
2	Sc 361.383	1968145.7	1968145.7	99.580 %		09:49:18
2	Y 371.029	1239656.3	1239656.3	99.243 %		09:49:18
2	Ag 328.068†	57578.2	57913.8	526.52 µg/L	526.52 ppb	09:49:23
2	As 188.979†	234.9	238.6	519.06 µg/L	519.06 ppb	09:49:44
2	B 249.677†	11000.4	10676.9	503.94 µg/L	503.94 ppb	09:49:23
2	Ba 233.527†	18469.2	18571.1	519.69 µg/L	519.69 ppb	09:49:23
2	Be 313.107†	769401.5	768816.0	517.09 µg/L	517.09 ppb	09:49:18
2	Cd 226.502†	18101.5	18303.2	518.54 µg/L	518.54 ppb	09:49:23
2	Co 228.616†	9729.7	9820.1	521.78 µg/L	521.78 ppb	09:49:23
2	Cr 267.716†	23240.7	23441.0	525.56 µg/L	525.56 ppb	09:49:23
2	Cu 324.752†	75068.3	71485.3	524.86 µg/L	524.86 ppb	09:49:23
2	Mn 257.610†	145595.7	146358.3	519.24 µg/L	519.24 ppb	09:49:18
2	Mo 202.031†	4317.3	4322.9	523.89 µg/L	523.89 ppb	09:49:44
2	Ni 231.604†	8919.1	8625.3	521.69 µg/L	521.69 ppb	09:49:23
2	P 214.914†	1354.7	1140.6	2578.3 µg/L	2578.3 ppb	09:49:44
2	Pb 220.353†	1952.2	1899.3	532.95 µg/L	532.95 ppb	09:49:44

2	S 181.975 Axial†	214.1	191.9	1066.6 µg/L	1066.6 ppb	09:49:44
2	Sb 206.836†	522.5	500.7	531.78 µg/L	531.78 ppb	09:49:44
2	Se 196.026†	350.2	343.7	535.68 µg/L	535.68 ppb	09:49:44
2	SiO2†	30020.3	27757.7	5667.5 µg/L	5667.5 ppb	09:49:23
2	Si 251.611†	32896.1	32752.5	2653.1 µg/L	2653.1 ppb	09:49:23
2	Sn 189.927†	965.6	946.2	535.87 µg/L	535.87 ppb	09:49:44
2	Ti 334.940†	216284.3	216493.5	523.01 µg/L	523.01 ppb	09:49:18
2	Tl 190.801†	290.8	316.6	531.78 µg/L	531.78 ppb	09:49:44
2	U 409.014†	5469.4	5678.7	526.81 µg/L	526.81 ppb	09:49:23
2	V 292.402†	43307.0	43605.1	530.74 µg/L	530.74 ppb	09:49:23
2	Zn 213.857†	19160.5	18609.1	519.42 µg/L	519.42 ppb	09:49:23
3	Sc RADIAL	77304.2	77304.2	98.5 %		09:48:13
3	Al 396.153Radial†	7620.8	7766.2	5020.8 µg/L	5020.8 ppb	09:48:13
3	Ca 317.933Radial†	7025.1	6884.8	4960.8 µg/L	4960.8 ppb	09:48:13
3	Fe 238.204 Radial†	396.7	386.4	5126.6 µg/L	5126.6 ppb	09:48:33
3	K 766.490 Radial†	8469.5	8199.7	5173.2 µg/L	5173.2 ppb	09:48:13
3	Mg 279.077 IEC†	505.6	505.2	5186.5 µg/L	5186.5 ppb	09:48:33
3	Na 589.592 Radial†	37305.7	37319.7	9935.8 µg/L	9935.8 ppb	09:48:13
3	Sr 421.552†	84623.5	85277.0	510.12 µg/L	510.12 ppb	09:48:13
3	Sc 361.383	1964006.1	1964006.1	99.370 %		09:49:51
3	Y 371.029	1236455.6	1236455.6	98.987 %		09:49:51
3	Ag 328.068†	55004.7	55445.9	503.95 µg/L	503.95 ppb	09:49:57
3	As 188.979†	205.2	209.2	455.21 µg/L	455.21 ppb	09:50:17
3	B 249.677†	10444.6	10140.9	478.42 µg/L	478.42 ppb	09:49:57
3	Ba 233.527†	17123.2	17255.7	482.86 µg/L	482.86 ppb	09:49:57
3	Be 313.107†	733708.2	734525.0	494.02 µg/L	494.02 ppb	09:49:51
3	Cd 226.502†	16739.2	16970.6	480.73 µg/L	480.73 ppb	09:49:57
3	Co 228.616†	8905.0	9010.8	478.71 µg/L	478.71 ppb	09:49:57
3	Cr 267.716†	20768.2	21002.0	470.89 µg/L	470.89 ppb	09:49:57
3	Cu 324.752†	69306.8	65846.1	483.52 µg/L	483.52 ppb	09:49:57
3	Mn 257.610†	139120.4	140150.0	497.24 µg/L	497.24 ppb	09:49:51
3	Mo 202.031†	3665.2	3675.9	445.51 µg/L	445.51 ppb	09:50:17
3	Ni 231.604†	8159.7	7880.0	476.62 µg/L	476.62 ppb	09:49:57
3	P 214.914†	1195.0	982.8	2217.8 µg/L	2217.8 ppb	09:50:17
3	Pb 220.353†	1708.8	1658.5	465.32 µg/L	465.32 ppb	09:50:17
3	S 181.975 Axial†	195.4	173.5	964.57 µg/L	964.57 ppb	09:50:17
3	Sb 206.836†	458.7	437.6	464.34 µg/L	464.34 ppb	09:50:17
3	Se 196.026†	314.8	308.9	483.63 µg/L	483.63 ppb	09:50:17
3	SiO2†	28323.6	26113.7	5331.8 µg/L	5331.8 ppb	09:49:57
3	Si 251.611†	30911.7	30825.2	2497.0 µg/L	2497.0 ppb	09:49:57
3	Sn 189.927†	814.4	796.1	451.29 µg/L	451.29 ppb	09:50:17
3	Ti 334.940†	205188.3	205785.0	497.12 µg/L	497.12 ppb	09:49:51
3	Tl 190.801†	254.9	281.0	472.28 µg/L	472.28 ppb	09:50:17
3	U 409.014†	4839.3	5056.2	468.94 µg/L	468.94 ppb	09:49:57
3	V 292.402†	39415.1	39780.2	483.93 µg/L	483.93 ppb	09:49:57
3	Zn 213.857†	17630.1	17109.6	477.53 µg/L	477.53 ppb	09:49:57

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1963584.6	99.349 %	0.2421			0.24%
Sc RADIAL	77458.0	98.7 %	0.44			0.44%
Y 371.029	1236538.0	98.994 %	0.2464			0.25%
Ag 328.068†	57274.5	520.66 µg/L	14.687	520.66 ppb	14.687	2.82%
QC value within limits for Ag 328.068 Recovery = 104.13%						
Al 396.153Radial†	7762.3	5017.1 µg/L	6.58	5017.1 ppb	6.58	0.13%
QC value within limits for Al 396.153Radial Recovery = 100.34%						
As 188.979†	231.0	502.51 µg/L	41.565	502.51 ppb	41.565	8.27%
QC value within limits for As 188.979 Recovery = 100.50%						
B 249.677†	10525.8	496.73 µg/L	15.978	496.73 ppb	15.978	3.22%
QC value within limits for B 249.677 Recovery = 99.35%						
Ba 233.527†	18181.9	508.79 µg/L	22.550	508.79 ppb	22.550	4.43%
QC value within limits for Ba 233.527 Recovery = 101.76%						
Be 313.107†	757960.6	509.78 µg/L	13.662	509.78 ppb	13.662	2.68%
QC value within limits for Be 313.107 Recovery = 101.96%						
Ca 317.933Radial†	6833.7	4924.0 µg/L	33.90	4924.0 ppb	33.90	0.69%
QC value within limits for Ca 317.933Radial Recovery = 98.48%						
Cd 226.502†	17906.2	507.28 µg/L	23.075	507.28 ppb	23.075	4.55%
QC value within limits for Cd 226.502 Recovery = 101.46%						
Co 228.616†	9579.6	508.98 µg/L	26.318	508.98 ppb	26.318	5.17%

QC value within limits for Co 228.616 Recovery = 101.80%							
Cr 267.716†	22687.4	508.67 µg/L	32.784	508.67 ppb	32.784	6.44%	
QC value within limits for Cr 267.716 Recovery = 101.73%							
Cu 324.752†	69851.3	512.88 µg/L	25.573	512.88 ppb	25.573	4.99%	
QC value within limits for Cu 324.752 Recovery = 102.58%							
Fe 238.204 Radial†	383.9	5094.1 µg/L	45.60	5094.1 ppb	45.60	0.90%	
QC value within limits for Fe 238.204 Radial Recovery = 101.88%							
K 766.490 Radial†	8138.0	5134.3 µg/L	40.61	5134.3 ppb	40.61	0.79%	
QC value within limits for K 766.490 Radial Recovery = 102.69%							
Mg 279.077 IEC†	504.2	5177.5 µg/L	49.21	5177.5 ppb	49.21	0.95%	
QC value within limits for Mg 279.077 IEC Recovery = 103.55%							
Mn 257.610†	144442.2	512.45 µg/L	13.198	512.45 ppb	13.198	2.58%	
QC value within limits for Mn 257.610 Recovery = 102.49%							
Mo 202.031†	4121.8	499.54 µg/L	46.865	499.54 ppb	46.865	9.38%	
QC value within limits for Mo 202.031 Recovery = 99.91%							
Na 589.592 Radial†	37176.5	9897.6 µg/L	36.45	9897.6 ppb	36.45	0.37%	
QC value within limits for Na 589.592 Radial Recovery = 98.98%							
Ni 231.604†	8404.4	508.33 µg/L	27.581	508.33 ppb	27.581	5.43%	
QC value within limits for Ni 231.604 Recovery = 101.67%							
P 214.914†	1095.7	2475.7 µg/L	224.95	2475.7 ppb	224.95	9.09%	
QC value within limits for P 214.914 Recovery = 99.03%							
Pb 220.353†	1823.5	511.66 µg/L	40.175	511.66 ppb	40.175	7.85%	
QC value within limits for Pb 220.353 Recovery = 102.33%							
S 181.975 Axial†	185.1	1028.9 µg/L	56.00	1028.9 ppb	56.00	5.44%	
QC value within limits for S 181.975 Axial Recovery = 102.89%							
Sb 206.836†	481.5	511.26 µg/L	40.743	511.26 ppb	40.743	7.97%	
QC value within limits for Sb 206.836 Recovery = 102.25%							
Se 196.026†	337.5	526.47 µg/L	39.065	526.47 ppb	39.065	7.42%	
QC value within limits for Se 196.026 Recovery = 105.29%							
SiO2†	27312.2	5576.5 µg/L	214.23	5576.5 ppb	214.23	3.84%	
QC value within limits for SiO2 Recovery = 104.28%							
Si 251.611†	32200.7	2608.4 µg/L	97.12	2608.4 ppb	97.12	3.72%	
QC value within limits for Si 251.611 Recovery = 104.34%							
Sn 189.927†	901.1	510.46 µg/L	51.413	510.46 ppb	51.413	10.07%	
QC value within limits for Sn 189.927 Recovery = 102.09%							
Sr 421.552†	84844.5	507.53 µg/L	2.312	507.53 ppb	2.312	0.46%	
QC value within limits for Sr 421.552 Recovery = 101.51%							
Ti 334.940†	213188.4	515.02 µg/L	15.528	515.02 ppb	15.528	3.02%	
QC value within limits for Ti 334.940 Recovery = 103.00%							
Tl 190.801†	305.7	513.53 µg/L	35.802	513.53 ppb	35.802	6.97%	
QC value within limits for Tl 190.801 Recovery = 102.71%							
U 409.014†	5481.6	508.48 µg/L	34.276	508.48 ppb	34.276	6.74%	
QC value within limits for U 409.014 Recovery = 101.70%							
V 292.402†	42423.8	516.28 µg/L	28.070	516.28 ppb	28.070	5.44%	
QC value within limits for V 292.402 Recovery = 103.26%							
Zn 213.857†	18160.5	506.89 µg/L	25.514	506.89 ppb	25.514	5.03%	
QC value within limits for Zn 213.857 Recovery = 101.38%							

All analyte(s) passed QC.

Sequence No.: 11  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 1/29/2010 09:50:26  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76577.5	76577.5	97.6 %		09:50:59
1	Al 396.153Radial†	-9.9	19.4	12.528 µg/L	12.528 ppb	09:50:59
1	Ca 317.933Radial†	274.4	34.0	24.489 µg/L	24.489 ppb	09:51:19
1	Fe 238.204 Radial†	18.3	2.4	31.434 µg/L	31.434 ppb	09:51:19
1	K 766.490 Radial†	383.4	-5.8	-3.6674 µg/L	-3.6674 ppb	09:50:59
1	Mg 279.077 IEC†	10.4	2.5	25.357 µg/L	25.357 ppb	09:51:19
1	Na 589.592 Radial†	378.9	-165.3	-44.015 µg/L	-44.015 ppb	09:50:59
1	Sr 421.552†	669.8	52.4	0.3135 µg/L	0.3135 ppb	09:50:59
1	Sc 361.383	1966588.9	1966588.9	99.501 %		09:52:21
1	Y 371.029	1242735.0	1242735.0	99.490 %		09:52:21
1	Ag 328.068†	-48.5	43.8	0.3981 µg/L	0.3981 ppb	09:52:26
1	As 188.979†	0.6	3.4	7.3401 µg/L	7.3401 ppb	09:52:47
1	B 249.677†	198.9	-170.1	-8.0700 µg/L	-8.0700 ppb	09:52:47
1	Ba 233.527†	-17.7	6.1	0.1717 µg/L	0.1717 ppb	09:52:47
1	Be 313.107†	4135.0	322.0	0.2165 µg/L	0.2165 ppb	09:52:26
1	Cd 226.502†	-111.5	13.3	0.3718 µg/L	0.3718 ppb	09:52:47
1	Co 228.616†	-44.8	4.2	0.2271 µg/L	0.2271 ppb	09:52:47
1	Cr 267.716†	-63.9	37.9	0.8494 µg/L	0.8494 ppb	09:52:26
1	Cu 324.752†	3849.0	-31.7	-0.2280 µg/L	-0.2280 ppb	09:52:26
1	Mn 257.610†	-19.1	128.7	0.4593 µg/L	0.4593 ppb	09:52:47
1	Mo 202.031†	28.7	16.3	1.9744 µg/L	1.9744 ppb	09:52:47
1	Ni 231.604†	326.9	-2.9	-0.1746 µg/L	-0.1746 ppb	09:52:47
1	P 214.914†	212.1	-6.7	-15.431 µg/L	-15.431 ppb	09:52:47
1	Pb 220.353†	68.6	7.8	2.1836 µg/L	2.1836 ppb	09:52:47
1	S 181.975 Axial†	21.9	-1.2	-6.4841 µg/L	-6.4841 ppb	09:52:47
1	Sb 206.836†	24.1	0.2	0.2029 µg/L	0.2029 ppb	09:52:47
1	Se 196.026†	10.9	3.0	4.6137 µg/L	4.6137 ppb	09:52:47
1	SiO2†	2371.3	-6.2	-1.2693 µg/L	-1.2693 ppb	09:52:26
1	Si 251.611†	364.3	83.7	6.7807 µg/L	6.7807 ppb	09:52:47
1	Sn 189.927†	24.2	0.9	0.4983 µg/L	0.4983 ppb	09:52:47
1	Ti 334.940†	821.8	122.0	0.2934 µg/L	0.2934 ppb	09:52:26
1	Tl 190.801†	-24.2	0.2	0.2739 µg/L	0.2739 ppb	09:52:47
1	U 409.014†	-146.4	39.0	3.6225 µg/L	3.6225 ppb	09:52:26
1	V 292.402†	-109.2	5.5	0.0893 µg/L	0.0893 ppb	09:52:26
1	Zn 213.857†	655.9	26.9	0.7542 µg/L	0.7542 ppb	09:52:47
2	Sc RADIAL	76688.1	76688.1	97.7 %		09:51:25
2	Al 396.153Radial†	-25.5	3.4	2.2212 µg/L	2.2212 ppb	09:51:25
2	Ca 317.933Radial†	270.3	29.5	21.243 µg/L	21.243 ppb	09:51:45
2	Fe 238.204 Radial†	18.9	3.0	39.528 µg/L	39.528 ppb	09:51:45
2	K 766.490 Radial†	384.8	-4.9	-3.0744 µg/L	-3.0744 ppb	09:51:25
2	Mg 279.077 IEC†	12.3	4.5	45.689 µg/L	45.689 ppb	09:51:45
2	Na 589.592 Radial†	385.3	-159.3	-42.417 µg/L	-42.417 ppb	09:51:25
2	Sr 421.552†	659.8	41.2	0.2463 µg/L	0.2463 ppb	09:51:25
2	Sc 361.383	1983946.8	1983946.8	100.38 %		09:52:53
2	Y 371.029	1254051.0	1254051.0	100.40 %		09:52:53
2	Ag 328.068†	-40.7	52.0	0.4738 µg/L	0.4738 ppb	09:52:58
2	As 188.979†	-0.9	1.8	3.9499 µg/L	3.9499 ppb	09:53:19
2	B 249.677†	185.3	-185.4	-8.8003 µg/L	-8.8003 ppb	09:53:19
2	Ba 233.527†	-12.0	12.0	0.3363 µg/L	0.3363 ppb	09:53:19
2	Be 313.107†	4084.4	235.2	0.1581 µg/L	0.1581 ppb	09:52:58
2	Cd 226.502†	-117.4	8.4	0.2327 µg/L	0.2327 ppb	09:53:19
2	Co 228.616†	-51.2	-1.7	-0.0896 µg/L	-0.0896 ppb	09:53:19
2	Cr 267.716†	-66.6	35.8	0.8014 µg/L	0.8014 ppb	09:52:58
2	Cu 324.752†	3831.2	-83.2	-0.6045 µg/L	-0.6045 ppb	09:52:58
2	Mn 257.610†	-71.9	76.2	0.2737 µg/L	0.2737 ppb	09:53:19
2	Mo 202.031†	17.4	4.7	0.5754 µg/L	0.5754 ppb	09:53:19
2	Ni 231.604†	334.4	1.8	0.1068 µg/L	0.1068 ppb	09:53:19
2	P 214.914†	222.9	2.2	5.1573 µg/L	5.1573 ppb	09:53:19
2	Pb 220.353†	62.5	1.1	0.3061 µg/L	0.3061 ppb	09:53:19



2	S 181.975 Axial†	22.4	-0.9	-4.8176 µg/L	-4.8176 ppb	09:53:19
2	Sb 206.836†	23.6	-0.5	-0.5753 µg/L	-0.5753 ppb	09:53:19
2	Se 196.026†	7.6	-0.4	-0.3957 µg/L	-0.3957 ppb	09:53:19
2	SiO2†	2372.4	-25.9	-5.2974 µg/L	-5.2974 ppb	09:52:58
2	Si 251.611†	352.2	68.5	5.5461 µg/L	5.5461 ppb	09:53:19
2	Sn 189.927†	25.7	2.1	1.2209 µg/L	1.2209 ppb	09:53:19
2	Ti 334.940†	825.0	118.1	0.2821 µg/L	0.2821 ppb	09:52:58
2	Tl 190.801†	-26.1	-1.5	-2.4946 µg/L	-2.4946 ppb	09:53:19
2	U 409.014†	-193.9	-7.0	-0.6560 µg/L	-0.6560 ppb	09:52:58
2	V 292.402†	-90.6	25.1	0.3096 µg/L	0.3096 ppb	09:52:58
2	Zn 213.857†	647.8	13.1	0.3654 µg/L	0.3654 ppb	09:53:19
3	Sc RADIAL	77058.9	77058.9	98.2 %		09:51:50
3	Al 396.153Radial†	-21.7	7.4	4.7789 µg/L	4.7789 ppb	09:51:50
3	Ca 317.933Radial†	271.1	28.9	20.815 µg/L	20.815 ppb	09:52:11
3	Fe 238.204 Radial†	18.6	2.6	34.881 µg/L	34.881 ppb	09:52:11
3	K 766.490 Radial†	421.8	30.9	19.483 µg/L	19.483 ppb	09:51:50
3	Mg 279.077 IEC†	8.4	0.4	4.4727 µg/L	4.4727 ppb	09:52:11
3	Na 589.592 Radial†	363.7	-183.3	-48.801 µg/L	-48.801 ppb	09:51:50
3	Sr 421.552†	622.6	0.1	0.0003 µg/L	0.0003 ppb	09:51:50
3	Sc 361.383	1981661.5	1981661.5	100.26 %		09:53:25
3	Y 371.029	1252898.4	1252898.4	100.30 %		09:53:25
3	Ag 328.068†	-86.2	6.6	0.0611 µg/L	0.0611 ppb	09:53:30
3	As 188.979†	1.3	4.0	8.7646 µg/L	8.7646 ppb	09:53:51
3	B 249.677†	200.0	-170.5	-8.0916 µg/L	-8.0916 ppb	09:53:51
3	Ba 233.527†	-20.9	3.1	0.0871 µg/L	0.0871 ppb	09:53:51
3	Be 313.107†	4057.4	213.0	0.1433 µg/L	0.1433 ppb	09:53:30
3	Cd 226.502†	-115.8	9.8	0.2735 µg/L	0.2735 ppb	09:53:51
3	Co 228.616†	-43.8	5.6	0.2976 µg/L	0.2976 ppb	09:53:51
3	Cr 267.716†	-69.8	32.5	0.7287 µg/L	0.7287 ppb	09:53:30
3	Cu 324.752†	3845.5	-64.5	-0.4682 µg/L	-0.4682 ppb	09:53:30
3	Mn 257.610†	-86.0	62.0	0.2243 µg/L	0.2243 ppb	09:53:51
3	Mo 202.031†	13.3	0.7	0.0859 µg/L	0.0859 ppb	09:53:51
3	Ni 231.604†	324.3	-8.0	-0.4819 µg/L	-0.4819 ppb	09:53:51
3	P 214.914†	211.8	-8.6	-19.834 µg/L	-19.834 ppb	09:53:51
3	Pb 220.353†	58.9	-2.4	-0.6843 µg/L	-0.6843 ppb	09:53:51
3	S 181.975 Axial†	23.9	0.7	4.0743 µg/L	4.0743 ppb	09:53:51
3	Sb 206.836†	28.3	4.3	4.4988 µg/L	4.4988 ppb	09:53:51
3	Se 196.026†	8.8	0.9	1.4456 µg/L	1.4456 ppb	09:53:51
3	SiO2†	2362.2	-33.4	-6.8201 µg/L	-6.8201 ppb	09:53:30
3	Si 251.611†	351.7	68.3	5.5339 µg/L	5.5339 ppb	09:53:51
3	Sn 189.927†	22.7	-0.8	-0.4394 µg/L	-0.4394 ppb	09:53:51
3	Ti 334.940†	743.7	37.9	0.0916 µg/L	0.0916 ppb	09:53:30
3	Tl 190.801†	-20.6	4.0	6.6248 µg/L	6.6248 ppb	09:53:51
3	U 409.014†	-201.5	-14.8	-1.3771 µg/L	-1.3771 ppb	09:53:30
3	V 292.402†	-127.8	-12.2	-0.1439 µg/L	-0.1439 ppb	09:53:30
3	Zn 213.857†	657.4	23.4	0.6587 µg/L	0.6587 ppb	09:53:51

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1977399.1	100.05 %	0.477			0.48%
Sc RADIAL	76774.8	97.8 %	0.32			0.33%
Y 371.029	1249894.8	100.06 %	0.499			0.50%
Ag 328.068†	34.2	0.3110 µg/L	0.21975	0.3110 ppb	0.21975	70.65%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	10.1	6.5094 µg/L	5.36686	6.5094 ppb	5.36686	82.45%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	3.1	6.6849 µg/L	2.47335	6.6849 ppb	2.47335	37.00%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-175.3	-8.3206 µg/L	0.41558	-8.3206 ppb	0.41558	4.99%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	7.1	0.1984 µg/L	0.12671	0.1984 ppb	0.12671	63.88%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	256.7	0.1726 µg/L	0.03873	0.1726 ppb	0.03873	22.44%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	30.8	22.183 µg/L	2.0092	22.183 ppb	2.0092	9.06%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	10.5	0.2927 µg/L	0.07148	0.2927 ppb	0.07148	24.42%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	2.7	0.1451 µg/L	0.20626	0.1451 ppb	0.20626	142.19%

Cr	267.716†	QC value within limits for Co 228.616 Recovery = Not calculated	35.4	0.7932 µg/L	0.06077	0.7932 ppb	0.06077	7.66%
Cu	324.752†	QC value within limits for Cr 267.716 Recovery = Not calculated	-59.8	-0.4336 µg/L	0.19060	-0.4336 ppb	0.19060	43.96%
Fe	238.204 Radial†	QC value within limits for Cu 324.752 Recovery = Not calculated	2.7	35.281 µg/L	4.0620	35.281 ppb	4.0620	11.51%
K	766.490 Radial†	QC value within limits for Fe 238.204 Radial Recovery = Not calculated	6.7	4.2470 µg/L	13.19800	4.2470 ppb	13.19800	310.76%
Mg	279.077 IEC†	QC value within limits for K 766.490 Radial Recovery = Not calculated	2.5	25.173 µg/L	20.6087	25.173 ppb	20.6087	81.87%
Mn	257.610†	QC value within limits for Mg 279.077 IEC Recovery = Not calculated	89.0	0.3191 µg/L	0.12391	0.3191 ppb	0.12391	38.83%
Mo	202.031†	QC value within limits for Mn 257.610 Recovery = Not calculated	7.2	0.8786 µg/L	0.98005	0.8786 ppb	0.98005	111.55%
Na	589.592 Radial†	QC value within limits for Mo 202.031 Recovery = Not calculated	-169.3	-45.078 µg/L	3.3220	-45.078 ppb	3.3220	7.37%
Ni	231.604†	QC value within limits for Na 589.592 Radial Recovery = Not calculated	-3.0	-0.1832 µg/L	0.29442	-0.1832 ppb	0.29442	160.67%
P	214.914†	QC value within limits for Ni 231.604 Recovery = Not calculated	-4.4	-10.036 µg/L	13.3408	-10.036 ppb	13.3408	132.93%
Pb	220.353†	QC value within limits for P 214.914 Recovery = Not calculated	2.1	0.6018 µg/L	1.45661	0.6018 ppb	1.45661	242.04%
S	181.975 Axial†	QC value within limits for Pb 220.353 Recovery = Not calculated	-0.4	-2.4091 µg/L	5.67634	-2.4091 ppb	5.67634	235.62%
Sb	206.836†	QC value within limits for S 181.975 Axial Recovery = Not calculated	1.3	1.3755 µg/L	2.73276	1.3755 ppb	2.73276	198.68%
Se	196.026†	QC value within limits for Sb 206.836 Recovery = Not calculated	1.2	1.8879 µg/L	2.53383	1.8879 ppb	2.53383	134.22%
SiO2†		QC value within limits for Se 196.026 Recovery = Not calculated	-21.9	-4.4623 µg/L	2.86810	-4.4623 ppb	2.86810	64.27%
Si	251.611†	QC value within limits for SiO2 Recovery = Not calculated	73.5	5.9536 µg/L	0.71635	5.9536 ppb	0.71635	12.03%
Sn	189.927†	QC value within limits for Si 251.611 Recovery = Not calculated	0.7	0.4266 µg/L	0.83249	0.4266 ppb	0.83249	195.15%
Sr	421.552†	QC value within limits for Sn 189.927 Recovery = Not calculated	31.2	0.1867 µg/L	0.16487	0.1867 ppb	0.16487	88.30%
Ti	334.940†	QC value within limits for Sr 421.552 Recovery = Not calculated	92.7	0.2224 µg/L	0.11337	0.2224 ppb	0.11337	50.98%
Tl	190.801†	QC value within limits for Ti 334.940 Recovery = Not calculated	0.9	1.4680 µg/L	4.67552	1.4680 ppb	4.67552	318.49%
U	409.014†	QC value within limits for Tl 190.801 Recovery = Not calculated	5.8	0.5298 µg/L	2.70253	0.5298 ppb	2.70253	510.08%
V	292.402†	QC value within limits for U 409.014 Recovery = Not calculated	6.1	0.0850 µg/L	0.22676	0.0850 ppb	0.22676	266.91%
Zn	213.857†	QC value within limits for V 292.402 Recovery = Not calculated	21.1	0.5928 µg/L	0.20260	0.5928 ppb	0.20260	34.18%
		QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 19

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 1/29/2010 10:19:55

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77091.8	77091.8	98.2 %			10:20:32
1	Al 396.153Radial†	7767.3	7936.7	5129.3 µg/L		5129.3 ppb	10:20:32
1	Ca 317.933Radial†	7091.1	6971.6	5023.4 µg/L		5023.4 ppb	10:20:32
1	Fe 238.204 Radial†	403.8	394.7	5237.9 µg/L		5237.9 ppb	10:20:52
1	K 766.490 Radial†	8574.9	8330.7	5255.9 µg/L		5255.9 ppb	10:20:32
1	Mg 279.077 IEC†	510.7	511.7	5255.1 µg/L		5255.1 ppb	10:20:52
1	Na 589.592 Radial†	37737.0	37863.0	10080 µg/L		10080 ppb	10:20:32
1	Sr 421.552†	85672.0	86581.2	517.92 µg/L		517.92 ppb	10:20:32
1	Sc 361.383	1952077.5	1952077.5	98.767 %			10:21:56
1	Y 371.029	1229532.4	1229532.4	98.433 %			10:21:56
1	Ag 328.068†	58259.6	59079.7	537.13 µg/L		537.13 ppb	10:22:01
1	As 188.979†	247.5	253.3	551.07 µg/L		551.07 ppb	10:22:22
1	B 249.677†	11117.2	10886.1	513.77 µg/L		513.77 ppb	10:22:01
1	Ba 233.527†	18680.4	18937.6	529.95 µg/L		529.95 ppb	10:22:01
1	Be 313.107†	781423.3	787347.8	529.55 µg/L		529.55 ppb	10:21:56
1	Cd 226.502†	18325.4	18679.5	529.19 µg/L		529.19 ppb	10:22:01
1	Co 228.616†	9811.2	9983.1	530.44 µg/L		530.44 ppb	10:22:01
1	Cr 267.716†	23525.8	23921.8	536.34 µg/L		536.34 ppb	10:22:01
1	Cu 324.752†	76047.0	73096.7	536.70 µg/L		536.70 ppb	10:22:01
1	Mn 257.610†	145679.2	147646.3	523.82 µg/L		523.82 ppb	10:22:01
1	Mo 202.031†	4424.2	4466.9	541.34 µg/L		541.34 ppb	10:22:22
1	Ni 231.604†	9001.4	8782.4	531.19 µg/L		531.19 ppb	10:22:01
1	P 214.914†	1388.2	1185.7	2681.2 µg/L		2681.2 ppb	10:22:22
1	Pb 220.353†	1979.3	1942.9	545.20 µg/L		545.20 ppb	10:22:22
1	S 181.975 Axial†	219.8	199.4	1108.4 µg/L		1108.4 ppb	10:22:22
1	Sb 206.836†	536.0	518.6	550.89 µg/L		550.89 ppb	10:22:22
1	Se 196.026†	364.3	360.9	562.24 µg/L		562.24 ppb	10:22:22
1	SiO2†	30471.5	28462.6	5811.4 µg/L		5811.4 ppb	10:22:01
1	Si 251.611†	33391.1	33525.7	2715.7 µg/L		2715.7 ppb	10:22:01
1	Sn 189.927†	991.4	980.3	555.15 µg/L		555.15 ppb	10:22:22
1	Ti 334.940†	220037.2	222081.1	536.51 µg/L		536.51 ppb	10:21:56
1	Tl 190.801†	295.9	324.1	544.40 µg/L		544.40 ppb	10:22:22
1	U 409.014†	5555.8	5811.4	539.11 µg/L		539.11 ppb	10:22:01
1	V 292.402†	43824.2	44486.7	541.53 µg/L		541.53 ppb	10:22:01
1	Zn 213.857†	19337.1	18946.3	528.83 µg/L		528.83 ppb	10:22:01
2	Sc RADIAL	78333.6	78333.6	99.8 %			10:20:58
2	Al 396.153Radial†	7810.8	7854.9	5076.4 µg/L		5076.4 ppb	10:20:58
2	Ca 317.933Radial†	7147.7	6913.9	4981.8 µg/L		4981.8 ppb	10:20:58
2	Fe 238.204 Radial†	403.9	388.3	5153.2 µg/L		5153.2 ppb	10:21:18
2	K 766.490 Radial†	8520.9	8138.2	5134.4 µg/L		5134.4 ppb	10:20:58
2	Mg 279.077 IEC†	513.8	506.6	5203.0 µg/L		5203.0 ppb	10:21:18
2	Na 589.592 Radial†	37885.2	37402.5	9957.8 µg/L		9957.8 ppb	10:20:58
2	Sr 421.552†	86075.4	85602.7	512.07 µg/L		512.07 ppb	10:20:58
2	Sc 361.383	1957342.3	1957342.3	99.033 %			10:22:28
2	Y 371.029	1232587.7	1232587.7	98.677 %			10:22:28
2	Ag 328.068†	58420.7	59083.7	537.16 µg/L		537.16 ppb	10:22:34
2	As 188.979†	245.7	250.9	545.79 µg/L		545.79 ppb	10:22:55
2	B 249.677†	11168.1	10907.2	514.81 µg/L		514.81 ppb	10:22:34
2	Ba 233.527†	18768.0	18975.3	531.00 µg/L		531.00 ppb	10:22:34
2	Be 313.107†	775786.6	779528.0	524.29 µg/L		524.29 ppb	10:22:28
2	Cd 226.502†	18374.6	18679.3	529.20 µg/L		529.20 ppb	10:22:34
2	Co 228.616†	9856.9	10002.5	531.48 µg/L		531.48 ppb	10:22:34
2	Cr 267.716†	23615.7	23948.5	536.94 µg/L		536.94 ppb	10:22:34
2	Cu 324.752†	76319.2	73164.4	537.18 µg/L		537.18 ppb	10:22:34
2	Mn 257.610†	146287.7	147864.0	524.59 µg/L		524.59 ppb	10:22:34
2	Mo 202.031†	4399.3	4429.6	536.83 µg/L		536.83 ppb	10:22:55
2	Ni 231.604†	9051.7	8808.7	532.78 µg/L		532.78 ppb	10:22:34
2	P 214.914†	1388.5	1182.2	2673.3 µg/L		2673.3 ppb	10:22:55
2	Pb 220.353†	1996.2	1954.6	548.48 µg/L		548.48 ppb	10:22:55

2	S 181.975 Axial†	217.7	196.6	1093.3 µg/L	1093.3 ppb	10:22:55
2	Sb 206.836†	530.6	511.8	543.59 µg/L	543.59 ppb	10:22:55
2	Se 196.026†	368.8	364.4	567.21 µg/L	567.21 ppb	10:22:55
2	SiO2†	30587.1	28496.3	5818.3 µg/L	5818.3 ppb	10:22:34
2	Si 251.611†	33517.3	33562.2	2718.7 µg/L	2718.7 ppb	10:22:34
2	Sn 189.927†	996.2	982.5	556.38 µg/L	556.38 ppb	10:22:55
2	Ti 334.940†	218386.1	219814.7	531.03 µg/L	531.03 ppb	10:22:28
2	Tl 190.801†	300.0	327.4	549.91 µg/L	549.91 ppb	10:22:55
2	U 409.014†	5462.5	5702.1	528.97 µg/L	528.97 ppb	10:22:34
2	V 292.402†	43940.7	44485.1	541.46 µg/L	541.46 ppb	10:22:34
2	Zn 213.857†	19428.8	18986.2	529.95 µg/L	529.95 ppb	10:22:34
3	Sc RADIAL	77020.8	77020.8	98.1 %		10:21:24
3	Al 396.153Radial†	7760.8	7937.3	5131.4 µg/L	5131.4 ppb	10:21:24
3	Ca 317.933Radial†	7083.3	6970.3	5022.4 µg/L	5022.4 ppb	10:21:24
3	Fe 238.204 Radial†	401.9	393.1	5216.4 µg/L	5216.4 ppb	10:21:44
3	K 766.490 Radial†	8549.0	8312.3	5244.3 µg/L	5244.3 ppb	10:21:24
3	Mg 279.077 IEC†	512.4	514.0	5277.2 µg/L	5277.2 ppb	10:21:44
3	Na 589.592 Radial†	37851.8	38015.4	10121 µg/L	10121 ppb	10:21:24
3	Sr 421.552†	85717.3	86707.8	518.68 µg/L	518.68 ppb	10:21:24
3	Sc 361.383	1941030.9	1941030.9	98.208 %		10:23:01
3	Y 371.029	1221920.3	1221920.3	97.823 %		10:23:01
3	Ag 328.068†	56271.3	57390.9	521.63 µg/L	521.63 ppb	10:23:07
3	As 188.979†	212.3	218.9	476.25 µg/L	476.25 ppb	10:23:27
3	B 249.677†	10664.4	10489.1	494.90 µg/L	494.90 ppb	10:23:07
3	Ba 233.527†	17572.0	17916.6	501.36 µg/L	501.36 ppb	10:23:07
3	Be 313.107†	742090.2	751799.5	505.64 µg/L	505.64 ppb	10:23:01
3	Cd 226.502†	17125.0	17562.8	497.52 µg/L	497.52 ppb	10:23:07
3	Co 228.616†	9148.1	9364.4	497.50 µg/L	497.50 ppb	10:23:07
3	Cr 267.716†	21376.6	21868.9	490.32 µg/L	490.32 ppb	10:23:07
3	Cu 324.752†	71168.1	68567.0	503.48 µg/L	503.48 ppb	10:23:07
3	Mn 257.610†	135284.7	137901.5	489.28 µg/L	489.28 ppb	10:23:07
3	Mo 202.031†	3723.7	3779.1	458.02 µg/L	458.02 ppb	10:23:27
3	Ni 231.604†	8383.7	8205.3	496.29 µg/L	496.29 ppb	10:23:07
3	P 214.914†	1224.3	1026.8	2317.4 µg/L	2317.4 ppb	10:23:27
3	Pb 220.353†	1737.0	1707.6	479.05 µg/L	479.05 ppb	10:23:27
3	S 181.975 Axial†	194.4	174.8	971.64 µg/L	971.64 ppb	10:23:27
3	Sb 206.836†	458.3	442.7	469.70 µg/L	469.70 ppb	10:23:27
3	Se 196.026†	318.7	316.5	495.45 µg/L	495.45 ppb	10:23:27
3	SiO2†	29084.9	27226.3	5559.0 µg/L	5559.0 ppb	10:23:07
3	Si 251.611†	31730.1	32026.7	2594.3 µg/L	2594.3 ppb	10:23:07
3	Sn 189.927†	828.1	819.7	464.67 µg/L	464.67 ppb	10:23:27
3	Ti 334.940†	208122.8	211217.2	510.24 µg/L	510.24 ppb	10:23:01
3	Tl 190.801†	264.6	293.9	493.87 µg/L	493.87 ppb	10:23:27
3	U 409.014†	5091.4	5370.5	498.14 µg/L	498.14 ppb	10:23:07
3	V 292.402†	40477.7	41331.7	502.78 µg/L	502.78 ppb	10:23:07
3	Zn 213.857†	18068.3	17765.7	495.85 µg/L	495.85 ppb	10:23:07

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1950150.2	98.669 %	0.4212			0.43%
Sc RADIAL	77482.1	98.7 %	0.94			0.95%
Y 371.029	1228013.5	98.311 %	0.4398			0.45%
Ag 328.068†	58518.1	531.97 µg/L	8.955	531.97 ppb	8.955	1.68%
QC value within limits for Ag 328.068 Recovery = 106.39%						
Al 396.153Radial†	7909.7	5112.3 µg/L	31.17	5112.3 ppb	31.17	0.61%
QC value within limits for Al 396.153Radial Recovery = 102.25%						
As 188.979†	241.0	524.37 µg/L	41.758	524.37 ppb	41.758	7.96%
QC value within limits for As 188.979 Recovery = 104.87%						
B 249.677†	10760.8	507.83 µg/L	11.207	507.83 ppb	11.207	2.21%
QC value within limits for B 249.677 Recovery = 101.57%						
Ba 233.527†	18609.8	520.77 µg/L	16.817	520.77 ppb	16.817	3.23%
QC value within limits for Ba 233.527 Recovery = 104.15%						
Be 313.107†	772891.8	519.83 µg/L	12.563	519.83 ppb	12.563	2.42%
QC value within limits for Be 313.107 Recovery = 103.97%						
Ca 317.933Radial†	6952.0	5009.2 µg/L	23.74	5009.2 ppb	23.74	0.47%
QC value within limits for Ca 317.933Radial Recovery = 100.18%						
Cd 226.502†	18307.2	518.64 µg/L	18.288	518.64 ppb	18.288	3.53%
QC value within limits for Cd 226.502 Recovery = 103.73%						
Co 228.616†	9783.3	519.81 µg/L	19.322	519.81 ppb	19.322	3.72%

QC value within limits for Co	228.616	Recovery = 103.96%			
Cr 267.716†	23246.4	521.20 µg/L	26.746	521.20 ppb	26.746 5.13%
QC value within limits for Cr	267.716	Recovery = 104.24%			
Cu 324.752†	71609.4	525.79 µg/L	19.319	525.79 ppb	19.319 3.67%
QC value within limits for Cu	324.752	Recovery = 105.16%			
Fe 238.204 Radial†	392.1	5202.5 µg/L	44.04	5202.5 ppb	44.04 0.85%
QC value within limits for Fe	238.204 Radial	Recovery = 104.05%			
K 766.490 Radial†	8260.4	5211.5 µg/L	67.03	5211.5 ppb	67.03 1.29%
QC value within limits for K	766.490 Radial	Recovery = 104.23%			
Mg 279.077 IEC†	510.8	5245.1 µg/L	38.07	5245.1 ppb	38.07 0.73%
QC value within limits for Mg	279.077 IEC	Recovery = 104.90%			
Mn 257.610†	144470.6	512.56 µg/L	20.168	512.56 ppb	20.168 3.93%
QC value within limits for Mn	257.610	Recovery = 102.51%			
Mo 202.031†	4225.2	512.06 µg/L	46.856	512.06 ppb	46.856 9.15%
QC value within limits for Mo	202.031	Recovery = 102.41%			
Na 589.592 Radial†	37760.3	10053 µg/L	85.0	10053 ppb	85.0 0.85%
QC value within limits for Na	589.592 Radial	Recovery = 100.53%			
Ni 231.604†	8598.8	520.09 µg/L	20.627	520.09 ppb	20.627 3.97%
QC value within limits for Ni	231.604	Recovery = 104.02%			
P 214.914†	1131.6	2557.3 µg/L	207.80	2557.3 ppb	207.80 8.13%
QC value within limits for P	214.914	Recovery = 102.29%			
Pb 220.353†	1868.3	524.24 µg/L	39.173	524.24 ppb	39.173 7.47%
QC value within limits for Pb	220.353	Recovery = 104.85%			
S 181.975 Axial†	190.3	1057.8 µg/L	74.97	1057.8 ppb	74.97 7.09%
QC value within limits for S	181.975 Axial	Recovery = 105.78%			
Sb 206.836†	491.0	521.39 µg/L	44.911	521.39 ppb	44.911 8.61%
QC value within limits for Sb	206.836	Recovery = 104.28%			
Se 196.026†	347.3	541.63 µg/L	40.069	541.63 ppb	40.069 7.40%
QC value within limits for Se	196.026	Recovery = 108.33%			
SiO2†	28061.8	5729.5 µg/L	147.77	5729.5 ppb	147.77 2.58%
QC value within limits for SiO2		Recovery = 107.14%			
Si 251.611†	33038.2	2676.2 µg/L	70.97	2676.2 ppb	70.97 2.65%
QC value within limits for Si	251.611	Recovery = 107.05%			
Sn 189.927†	927.5	525.40 µg/L	52.598	525.40 ppb	52.598 10.01%
QC value within limits for Sn	189.927	Recovery = 105.08%			
Sr 421.552†	86297.2	516.22 µg/L	3.618	516.22 ppb	3.618 0.70%
QC value within limits for Sr	421.552	Recovery = 103.24%			
Ti 334.940†	217704.3	525.93 µg/L	13.856	525.93 ppb	13.856 2.63%
QC value within limits for Ti	334.940	Recovery = 105.19%			
Tl 190.801†	315.2	529.39 µg/L	30.888	529.39 ppb	30.888 5.83%
QC value within limits for Tl	190.801	Recovery = 105.88%			
U 409.014†	5628.0	522.08 µg/L	21.338	522.08 ppb	21.338 4.09%
QC value within limits for U	409.014	Recovery = 104.42%			
V 292.402†	43434.5	528.59 µg/L	22.356	528.59 ppb	22.356 4.23%
QC value within limits for V	292.402	Recovery = 105.72%			
Zn 213.857†	18566.1	518.21 µg/L	19.372	518.21 ppb	19.372 3.74%
QC value within limits for Zn	213.857	Recovery = 103.64%			

All analyte(s) passed QC.

Sequence No.: 20

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 1/29/2010 10:23:36

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	75015.0	75015.0	95.6 %		10:24:09
1	Al 396.153Radial†	-1.9	27.5	17.813 µg/L	17.813 ppb	10:24:09
1	Ca 317.933Radial†	266.8	31.9	22.989 µg/L	22.989 ppb	10:24:30
1	Fe 238.204 Radial†	19.3	3.8	50.360 µg/L	50.360 ppb	10:24:30
1	K 766.490 Radial†	328.8	-54.7	-34.507 µg/L	-34.507 ppb	10:24:09
1	Mg 279.077 IEC†	12.0	4.4	45.513 µg/L	45.513 ppb	10:24:30
1	Na 589.592 Radial†	389.1	-146.6	-39.036 µg/L	-39.036 ppb	10:24:09
1	Sr 421.552†	654.0	50.2	0.3005 µg/L	0.3005 ppb	10:24:09
1	Sc 361.383	1953221.6	1953221.6	98.825 %		10:25:32
1	Y 371.029	1234699.5	1234699.5	98.846 %		10:25:32
1	Ag 328.068†	-76.1	15.6	0.1452 µg/L	0.1452 ppb	10:25:37
1	As 188.979†	-1.8	0.9	1.9873 µg/L	1.9873 ppb	10:25:58
1	B 249.677†	174.5	-193.3	-9.1820 µg/L	-9.1820 ppb	10:25:37
1	Ba 233.527†	-17.2	6.5	0.1821 µg/L	0.1821 ppb	10:25:58
1	Be 313.107†	3913.7	126.4	0.0848 µg/L	0.0848 ppb	10:25:37
1	Cd 226.502†	-124.6	-0.8	-0.0292 µg/L	-0.0292 ppb	10:25:58
1	Co 228.616†	-44.0	4.8	0.2557 µg/L	0.2557 ppb	10:25:58
1	Cr 267.716†	-57.1	44.3	0.9937 µg/L	0.9937 ppb	10:25:37
1	Cu 324.752†	3848.2	-6.0	-0.0369 µg/L	-0.0369 ppb	10:25:37
1	Mn 257.610†	56.9	205.4	0.7329 µg/L	0.7329 ppb	10:25:58
1	Mo 202.031†	24.0	11.7	1.4135 µg/L	1.4135 ppb	10:25:58
1	Ni 231.604†	328.4	0.9	0.0526 µg/L	0.0526 ppb	10:25:58
1	P 214.914†	210.5	-6.8	-15.742 µg/L	-15.742 ppb	10:25:58
1	Pb 220.353†	63.8	3.4	0.9684 µg/L	0.9684 ppb	10:25:58
1	S 181.975 Axial†	20.7	-2.2	-12.229 µg/L	-12.229 ppb	10:25:58
1	Sb 206.836†	25.9	2.2	2.2852 µg/L	2.2852 ppb	10:25:58
1	Se 196.026†	5.1	-2.7	-3.9327 µg/L	-3.9327 ppb	10:25:58
1	SiO2†	2406.4	45.6	9.3147 µg/L	9.3147 ppb	10:25:37
1	Si 251.611†	384.1	106.3	8.6069 µg/L	8.6069 ppb	10:25:58
1	Sn 189.927†	20.9	-2.3	-1.2650 µg/L	-1.2650 ppb	10:25:58
1	Ti 334.940†	997.5	305.5	0.7352 µg/L	0.7352 ppb	10:25:37
1	Tl 190.801†	-18.3	6.0	9.9321 µg/L	9.9321 ppb	10:25:58
1	U 409.014†	-291.0	-108.3	-10.071 µg/L	-10.071 ppb	10:25:37
1	V 292.402†	-94.9	19.3	0.2380 µg/L	0.2380 ppb	10:25:37
1	Zn 213.857†	654.0	29.5	0.8251 µg/L	0.8251 ppb	10:25:58
2	Sc RADIAL	75306.2	75306.2	96.0 %		10:24:35
2	Al 396.153Radial†	1.4	31.0	20.039 µg/L	20.039 ppb	10:24:35
2	Ca 317.933Radial†	256.8	20.4	14.719 µg/L	14.719 ppb	10:24:56
2	Fe 238.204 Radial†	18.5	3.0	39.160 µg/L	39.160 ppb	10:24:56
2	K 766.490 Radial†	354.2	-29.5	-18.631 µg/L	-18.631 ppb	10:24:35
2	Mg 279.077 IEC†	7.2	-0.7	-6.7510 µg/L	-6.7510 ppb	10:24:56
2	Na 589.592 Radial†	372.9	-165.1	-43.955 µg/L	-43.955 ppb	10:24:35
2	Sr 421.552†	663.9	57.9	0.3463 µg/L	0.3463 ppb	10:24:35
2	Sc 361.383	1949311.6	1949311.6	98.627 %		10:26:04
2	Y 371.029	1231487.7	1231487.7	98.589 %		10:26:04
2	Ag 328.068†	-61.3	30.4	0.2791 µg/L	0.2791 ppb	10:26:09
2	As 188.979†	-2.0	0.7	1.4560 µg/L	1.4560 ppb	10:26:30
2	B 249.677†	196.9	-170.3	-8.0857 µg/L	-8.0857 ppb	10:26:09
2	Ba 233.527†	-18.4	5.3	0.1483 µg/L	0.1483 ppb	10:26:30
2	Be 313.107†	3990.5	212.2	0.1426 µg/L	0.1426 ppb	10:26:09
2	Cd 226.502†	-117.2	6.5	0.1797 µg/L	0.1797 ppb	10:26:30
2	Co 228.616†	-43.5	5.2	0.2765 µg/L	0.2765 ppb	10:26:30
2	Cr 267.716†	-52.1	49.4	1.1064 µg/L	1.1064 ppb	10:26:09
2	Cu 324.752†	3816.2	-30.6	-0.2188 µg/L	-0.2188 ppb	10:26:09
2	Mn 257.610†	62.0	210.7	0.7524 µg/L	0.7524 ppb	10:26:30
2	Mo 202.031†	19.0	6.7	0.8119 µg/L	0.8119 ppb	10:26:30
2	Ni 231.604†	332.8	6.0	0.3656 µg/L	0.3656 ppb	10:26:30
2	P 214.914†	213.7	-3.2	-7.3184 µg/L	-7.3184 ppb	10:26:30
2	Pb 220.353†	52.6	-7.9	-2.2084 µg/L	-2.2084 ppb	10:26:30

2	S 181.975 Axial†	27.5	4.8	26.599 µg/L	26.599 ppb	10:26:30
2	Sb 206.836†	26.9	3.2	3.4369 µg/L	3.4369 ppb	10:26:30
2	Se 196.026†	13.1	5.3	8.1916 µg/L	8.1916 ppb	10:26:30
2	SiO2†	2423.0	67.3	13.749 µg/L	13.749 ppb	10:26:09
2	Si 251.611†	385.9	108.8	8.8156 µg/L	8.8156 ppb	10:26:30
2	Sn 189.927†	20.1	-3.0	-1.7111 µg/L	-1.7111 ppb	10:26:30
2	Ti 334.940†	968.9	278.6	0.6741 µg/L	0.6741 ppb	10:26:09
2	Tl 190.801†	-21.5	2.7	4.4728 µg/L	4.4728 ppb	10:26:30
2	U 409.014†	-167.3	16.6	1.5386 µg/L	1.5386 ppb	10:26:09
2	V 292.402†	-91.2	22.9	0.2880 µg/L	0.2880 ppb	10:26:09
2	Zn 213.857†	651.1	27.9	0.7808 µg/L	0.7808 ppb	10:26:30
3	Sc RADIAL	74766.8	74766.8	95.3 %		10:25:01
3	Al 396.153Radial†	16.9	47.2	30.559 µg/L	30.559 ppb	10:25:01
3	Ca 317.933Radial†	260.3	26.1	18.806 µg/L	18.806 ppb	10:25:22
3	Fe 238.204 Radial†	20.5	5.2	68.435 µg/L	68.435 ppb	10:25:22
3	K 766.490 Radial†	434.2	57.1	36.029 µg/L	36.029 ppb	10:25:01
3	Mg 279.077 IEC†	12.4	4.8	49.429 µg/L	49.429 ppb	10:25:22
3	Na 589.592 Radial†	345.9	-190.6	-50.748 µg/L	-50.748 ppb	10:25:01
3	Sr 421.552†	644.0	42.0	0.2512 µg/L	0.2512 ppb	10:25:01
3	Sc 361.383	1955986.0	1955986.0	98.964 %		10:26:36
3	Y 371.029	1236621.5	1236621.5	99.000 %		10:26:36
3	Ag 328.068†	-56.8	35.2	0.3216 µg/L	0.3216 ppb	10:26:42
3	As 188.979†	0.8	3.5	7.6575 µg/L	7.6575 ppb	10:27:02
3	B 249.677†	185.0	-183.0	-8.7024 µg/L	-8.7024 ppb	10:26:42
3	Ba 233.527†	-19.7	4.0	0.1126 µg/L	0.1126 ppb	10:27:02
3	Be 313.107†	3994.4	202.4	0.1360 µg/L	0.1360 ppb	10:26:42
3	Cd 226.502†	-125.0	-1.0	-0.0372 µg/L	-0.0372 ppb	10:27:02
3	Co 228.616†	-34.8	14.1	0.7513 µg/L	0.7513 ppb	10:27:02
3	Cr 267.716†	-80.4	20.9	0.4683 µg/L	0.4683 ppb	10:26:42
3	Cu 324.752†	3794.8	-65.4	-0.4702 µg/L	-0.4702 ppb	10:26:42
3	Mn 257.610†	-7.8	139.9	0.5032 µg/L	0.5032 ppb	10:27:02
3	Mo 202.031†	21.3	8.9	1.0823 µg/L	1.0823 ppb	10:27:02
3	Ni 231.604†	326.0	-2.0	-0.1225 µg/L	-0.1225 ppb	10:27:02
3	P 214.914†	219.1	1.6	3.6891 µg/L	3.6891 ppb	10:27:02
3	Pb 220.353†	53.8	-6.8	-1.8884 µg/L	-1.8884 ppb	10:27:02
3	S 181.975 Axial†	23.5	0.6	3.3783 µg/L	3.3783 ppb	10:27:02
3	Sb 206.836†	27.4	3.7	3.8730 µg/L	3.8730 ppb	10:27:02
3	Se 196.026†	8.4	0.5	1.0337 µg/L	1.0337 ppb	10:27:02
3	SiO2†	2384.5	20.1	4.1023 µg/L	4.1023 ppb	10:26:42
3	Si 251.611†	353.4	74.7	6.0520 µg/L	6.0520 ppb	10:27:02
3	Sn 189.927†	28.0	4.8	2.7514 µg/L	2.7514 ppb	10:27:02
3	Ti 334.940†	892.0	197.5	0.4738 µg/L	0.4738 ppb	10:26:42
3	Tl 190.801†	-21.9	2.4	3.9788 µg/L	3.9788 ppb	10:27:02
3	U 409.014†	-323.4	-140.6	-13.077 µg/L	-13.077 ppb	10:26:42
3	V 292.402†	-114.8	-0.7	-0.0089 µg/L	-0.0089 ppb	10:26:42
3	Zn 213.857†	653.7	28.2	0.7890 µg/L	0.7890 ppb	10:27:02

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1952839.7	98.805 %	0.1697			0.17%
Sc RADIAL	75029.3	95.6 %	0.34			0.36%
Y 371.029	1234269.6	98.812 %	0.2076			0.21%
Ag 328.068†	27.1	0.2486 µg/L	0.09208	0.2486 ppb	0.09208	37.04%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	35.2	22.804 µg/L	6.8082	22.804 ppb	6.8082	29.86%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	1.7	3.7003 µg/L	3.43738	3.7003 ppb	3.43738	92.90%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-182.2	-8.6567 µg/L	0.54958	-8.6567 ppb	0.54958	6.35%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	5.3	0.1477 µg/L	0.03478	0.1477 ppb	0.03478	23.55%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	180.4	0.1211 µg/L	0.03163	0.1211 ppb	0.03163	26.11%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	26.1	18.838 µg/L	4.1353	18.838 ppb	4.1353	21.95%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	1.5	0.0377 µg/L	0.12298	0.0377 ppb	0.12298	325.90%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	8.0	0.4278 µg/L	0.28034	0.4278 ppb	0.28034	65.52%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	38.2	0.8561 µg/L	0.34058	0.8561 ppb	0.34058	39.78%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-34.0	-0.2420 µg/L	0.21755	-0.2420 ppb	0.21755	89.91%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	4.0	52.652 µg/L	14.7712	52.652 ppb	14.7712	28.05%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	-9.0	-5.7029 µg/L	37.00217	-5.7029 ppb	37.00217	648.83%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	2.9	29.397 µg/L	31.3665	29.397 ppb	31.3665	106.70%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	185.4	0.6628 µg/L	0.13860	0.6628 ppb	0.13860	20.91%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	9.1	1.1026 µg/L	0.30132	1.1026 ppb	0.30132	27.33%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-167.4	-44.580 µg/L	5.8806	-44.580 ppb	5.8806	13.19%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	1.6	0.0986 µg/L	0.24727	0.0986 ppb	0.24727	250.78%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-2.8	-6.4572 µg/L	9.74431	-6.4572 ppb	9.74431	150.91%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-3.8	-1.0428 µg/L	1.74908	-1.0428 ppb	1.74908	167.73%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	1.1	5.9163 µg/L	19.53789	5.9163 ppb	19.53789	330.24%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	3.0	3.1984 µg/L	0.82033	3.1984 ppb	0.82033	25.65%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	1.0	1.7642 µg/L	6.09506	1.7642 ppb	6.09506	345.48%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	44.4	9.0554 µg/L	4.82867	9.0554 ppb	4.82867	53.32%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	96.6	7.8248 µg/L	1.53884	7.8248 ppb	1.53884	19.67%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-0.2	-0.0749 µg/L	2.45776	-0.0749 ppb	2.45776	>999.9%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	50.0	0.2993 µg/L	0.04755	0.2993 ppb	0.04755	15.89%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	260.5	0.6277 µg/L	0.13672	0.6277 ppb	0.13672	21.78%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	3.7	6.1279 µg/L	3.30380	6.1279 ppb	3.30380	53.91%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-77.4	-7.2033 µg/L	7.71842	-7.2033 ppb	7.71842	107.15%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	13.8	0.1723 µg/L	0.15897	0.1723 ppb	0.15897	92.24%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	28.5	0.7983 µg/L	0.02361	0.7983 ppb	0.02361	2.96%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
All analyte(s) passed QC.							



Sequence No.: 2  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 1/29/2010 10:46:42  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77187.2	77187.2	98.4 %		10:47:19
1	Al 396.153Radial†	7793.1	7953.2	5140.1 µg/L	5140.1 ppb	10:47:19
1	Ca 317.933Radial†	6976.4	6846.1	4932.9 µg/L	4932.9 ppb	10:47:39
1	Fe 238.204 Radial†	401.1	391.5	5195.5 µg/L	5195.5 ppb	10:47:39
1	K 766.490 Radial†	8552.8	8297.4	5234.9 µg/L	5234.9 ppb	10:47:19
1	Mg 279.077 IEC†	515.8	516.3	5302.2 µg/L	5302.2 ppb	10:47:39
1	Na 589.592 Radial†	37818.4	37898.4	10090 µg/L	10090 ppb	10:47:19
1	Sr 421.552†	85822.4	86626.4	518.19 µg/L	518.19 ppb	10:47:19
1	Sc 361.383	1959443.1	1959443.1	99.139 %		10:48:42
1	Y 371.029	1234949.1	1234949.1	98.866 %		10:48:42
1	Ag 328.068†	58663.3	59265.2	538.81 µg/L	538.81 ppb	10:48:48
1	As 188.979†	240.2	245.0	533.12 µg/L	533.12 ppb	10:49:08
1	B 249.677†	11281.2	11009.2	519.62 µg/L	519.62 ppb	10:48:48
1	Ba 233.527†	18782.0	18969.0	530.83 µg/L	530.83 ppb	10:48:48
1	Be 313.107†	772768.0	775643.3	521.68 µg/L	521.68 ppb	10:48:42
1	Cd 226.502†	18385.0	18669.9	528.93 µg/L	528.93 ppb	10:48:48
1	Co 228.616†	9869.5	10004.5	531.58 µg/L	531.58 ppb	10:48:48
1	Cr 267.716†	23668.3	23975.9	537.56 µg/L	537.56 ppb	10:48:48
1	Cu 324.752†	76618.8	73384.0	538.80 µg/L	538.80 ppb	10:48:48
1	Mn 257.610†	146510.8	147930.6	524.82 µg/L	524.82 ppb	10:48:48
1	Mo 202.031†	4356.7	4381.9	531.05 µg/L	531.05 ppb	10:49:08
1	Ni 231.604†	9048.4	8795.6	531.99 µg/L	531.99 ppb	10:48:48
1	P 214.914†	1357.9	1149.9	2598.3 µg/L	2598.3 ppb	10:49:08
1	Pb 220.353†	1960.0	1915.9	537.61 µg/L	537.61 ppb	10:49:08
1	S 181.975 Axial†	213.2	191.9	1067.0 µg/L	1067.0 ppb	10:49:08
1	Sb 206.836†	522.9	503.4	534.63 µg/L	534.63 ppb	10:49:08
1	Se 196.026†	355.0	350.2	545.88 µg/L	545.88 ppb	10:49:08
1	SiO2†	30540.3	28416.1	5801.9 µg/L	5801.9 ppb	10:48:48
1	Si 251.611†	33419.9	33427.6	2707.8 µg/L	2707.8 ppb	10:48:48
1	Sn 189.927†	974.5	959.5	543.40 µg/L	543.40 ppb	10:49:08
1	Ti 334.940†	218107.4	219297.1	529.77 µg/L	529.77 ppb	10:48:42
1	Tl 190.801†	295.0	322.1	540.96 µg/L	540.96 ppb	10:49:08
1	U 409.014†	5491.8	5725.7	531.16 µg/L	531.16 ppb	10:48:48
1	V 292.402†	44089.9	44588.0	542.66 µg/L	542.66 ppb	10:48:48
1	Zn 213.857†	19516.0	19053.2	531.82 µg/L	531.82 ppb	10:48:48
2	Sc RADIAL	76862.3	76862.3	97.9 %		10:47:45
2	Al 396.153Radial†	7684.4	7875.7	5089.9 µg/L	5089.9 ppb	10:47:45
2	Ca 317.933Radial†	6935.2	6834.0	4924.2 µg/L	4924.2 ppb	10:48:05
2	Fe 238.204 Radial†	399.1	391.1	5190.4 µg/L	5190.4 ppb	10:48:05
2	K 766.490 Radial†	8521.3	8302.0	5237.7 µg/L	5237.7 ppb	10:47:45
2	Mg 279.077 IEC†	509.0	511.6	5253.4 µg/L	5253.4 ppb	10:48:05
2	Na 589.592 Radial†	37574.3	37811.7	10067 µg/L	10067 ppb	10:47:45
2	Sr 421.552†	85032.3	86188.5	515.57 µg/L	515.57 ppb	10:47:45
2	Sc 361.383	1955069.4	1955069.4	98.918 %		10:49:15
2	Y 371.029	1231601.4	1231601.4	98.598 %		10:49:15
2	Ag 328.068†	57843.2	58568.5	532.48 µg/L	532.48 ppb	10:49:21
2	As 188.979†	236.5	241.8	526.02 µg/L	526.02 ppb	10:49:41
2	B 249.677†	11068.0	10819.1	510.61 µg/L	510.61 ppb	10:49:21
2	Ba 233.527†	18553.7	18780.6	525.55 µg/L	525.55 ppb	10:49:21
2	Be 313.107†	776368.4	781026.8	525.30 µg/L	525.30 ppb	10:49:15
2	Cd 226.502†	18127.2	18450.8	522.71 µg/L	522.71 ppb	10:49:21
2	Co 228.616†	9761.4	9917.5	526.95 µg/L	526.95 ppb	10:49:21
2	Cr 267.716†	23356.3	23713.9	531.68 µg/L	531.68 ppb	10:49:21
2	Cu 324.752†	75679.8	72607.7	533.11 µg/L	533.11 ppb	10:49:21
2	Mn 257.610†	144505.0	146233.5	518.81 µg/L	518.81 ppb	10:49:21
2	Mo 202.031†	4353.0	4388.0	531.79 µg/L	531.79 ppb	10:49:41
2	Ni 231.604†	8930.4	8696.7	526.01 µg/L	526.01 ppb	10:49:21
2	P 214.914†	1356.4	1151.4	2602.5 µg/L	2602.5 ppb	10:49:41
2	Pb 220.353†	1952.7	1912.9	536.80 µg/L	536.80 ppb	10:49:41

2	S 181.975 Axial†	213.8	193.0	1073.2 µg/L	1073.2 ppb	10:49:41
2	Sb 206.836†	521.2	502.9	534.16 µg/L	534.16 ppb	10:49:41
2	Se 196.026†	348.7	344.6	537.48 µg/L	537.48 ppb	10:49:41
2	SiO2†	30194.2	28135.1	5744.5 µg/L	5744.5 ppb	10:49:21
2	Si 251.611†	33052.5	33131.6	2683.8 µg/L	2683.8 ppb	10:49:21
2	Sn 189.927†	983.6	970.9	549.85 µg/L	549.85 ppb	10:49:41
2	Ti 334.940†	218851.7	220541.7	532.78 µg/L	532.78 ppb	10:49:15
2	Tl 190.801†	292.5	320.2	537.87 µg/L	537.87 ppb	10:49:41
2	U 409.014†	5392.5	5637.7	522.99 µg/L	522.99 ppb	10:49:21
2	V 292.402†	43460.7	44051.4	536.19 µg/L	536.19 ppb	10:49:21
2	Zn 213.857†	19198.1	18775.8	524.07 µg/L	524.07 ppb	10:49:21
3	Sc RADIAL	77014.4	77014.4	98.1 %		10:48:10
3	Al 396.153Radial†	7722.6	7899.1	5106.8 µg/L	5106.8 ppb	10:48:10
3	Ca 317.933Radial†	6995.8	6881.7	4958.6 µg/L	4958.6 ppb	10:48:31
3	Fe 238.204 Radial†	398.3	389.6	5168.7 µg/L	5168.7 ppb	10:48:31
3	K 766.490 Radial†	8524.6	8288.2	5229.1 µg/L	5229.1 ppb	10:48:10
3	Mg 279.077 IEC†	512.1	513.7	5273.8 µg/L	5273.8 ppb	10:48:31
3	Na 589.592 Radial†	37546.1	37707.2	10039 µg/L	10039 ppb	10:48:10
3	Sr 421.552†	85057.3	86042.4	514.70 µg/L	514.70 ppb	10:48:10
3	Sc 361.383	1952862.5	1952862.5	98.806 %		10:49:48
3	Y 371.029	1230319.7	1230319.7	98.496 %		10:49:48
3	Ag 328.068†	55678.4	56443.7	513.02 µg/L	513.02 ppb	10:49:53
3	As 188.979†	205.9	211.1	459.27 µg/L	459.27 ppb	10:50:14
3	B 249.677†	10591.0	10349.0	488.28 µg/L	488.28 ppb	10:49:53
3	Ba 233.527†	17332.5	17565.8	491.54 µg/L	491.54 ppb	10:49:53
3	Be 313.107†	736813.5	741881.0	498.97 µg/L	498.97 ppb	10:49:48
3	Cd 226.502†	16867.5	17196.6	487.14 µg/L	487.14 ppb	10:49:53
3	Co 228.616†	9011.3	9169.5	487.14 µg/L	487.14 ppb	10:49:53
3	Cr 267.716†	21083.4	21440.2	480.71 µg/L	480.71 ppb	10:49:53
3	Cu 324.752†	70314.4	67263.9	493.92 µg/L	493.92 ppb	10:49:53
3	Mn 257.610†	133480.1	135240.5	479.84 µg/L	479.84 ppb	10:49:53
3	Mo 202.031†	3679.0	3710.8	449.75 µg/L	449.75 ppb	10:50:14
3	Ni 231.604†	8278.6	8047.2	486.73 µg/L	486.73 ppb	10:49:53
3	P 214.914†	1212.6	1007.4	2273.5 µg/L	2273.5 ppb	10:50:14
3	Pb 220.353†	1703.4	1662.8	466.51 µg/L	466.51 ppb	10:50:14
3	S 181.975 Axial†	189.8	168.9	939.16 µg/L	939.16 ppb	10:50:14
3	Sb 206.836†	458.6	440.1	467.00 µg/L	467.00 ppb	10:50:14
3	Se 196.026†	311.3	307.2	481.15 µg/L	481.15 ppb	10:50:14
3	SiO2†	28622.4	26578.8	5426.8 µg/L	5426.8 ppb	10:49:53
3	Si 251.611†	31165.6	31259.7	2532.2 µg/L	2532.2 ppb	10:49:53
3	Sn 189.927†	821.4	807.8	457.93 µg/L	457.93 ppb	10:50:14
3	Ti 334.940†	206961.7	208758.1	504.30 µg/L	504.30 ppb	10:49:48
3	Tl 190.801†	260.7	288.4	484.56 µg/L	484.56 ppb	10:50:14
3	U 409.014†	4928.9	5174.7	479.95 µg/L	479.95 ppb	10:49:53
3	V 292.402†	39966.1	40564.3	493.44 µg/L	493.44 ppb	10:49:53
3	Zn 213.857†	17902.6	17486.6	488.06 µg/L	488.06 ppb	10:49:53

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1955791.7	98.955 %	0.1695			0.17%
Sc RADIAL	77021.3	98.1 %	0.21			0.21%
Y 371.029	1232290.1	98.653 %	0.1914			0.19%
Ag 328.068†	58092.5	528.10 µg/L	13.440	528.10 ppb	13.440	2.54%
QC value within limits for Ag 328.068 Recovery = 105.62%						
Al 396.153Radial†	7909.3	5112.3 µg/L	25.54	5112.3 ppb	25.54	0.50%
QC value within limits for Al 396.153Radial Recovery = 102.25%						
As 188.979†	232.6	506.14 µg/L	40.741	506.14 ppb	40.741	8.05%
QC value within limits for As 188.979 Recovery = 101.23%						
B 249.677†	10725.8	506.17 µg/L	16.139	506.17 ppb	16.139	3.19%
QC value within limits for B 249.677 Recovery = 101.23%						
Ba 233.527†	18438.5	515.97 µg/L	21.321	515.97 ppb	21.321	4.13%
QC value within limits for Ba 233.527 Recovery = 103.19%						
Be 313.107†	766183.7	515.31 µg/L	14.270	515.31 ppb	14.270	2.77%
QC value within limits for Be 313.107 Recovery = 103.06%						
Ca 317.933Radial†	6854.0	4938.6 µg/L	17.87	4938.6 ppb	17.87	0.36%
QC value within limits for Ca 317.933Radial Recovery = 98.77%						
Cd 226.502†	18105.8	512.93 µg/L	22.546	512.93 ppb	22.546	4.40%
QC value within limits for Cd 226.502 Recovery = 102.59%						
Co 228.616†	9697.2	515.22 µg/L	24.431	515.22 ppb	24.431	4.74%

QC value within limits for Co 228.616 Recovery = 103.04%							
Cr 267.716†	23043.4	516.65 µg/L	31.263	516.65 ppb	31.263	6.05%	
QC value within limits for Cr 267.716 Recovery = 103.33%							
Cu 324.752†	71085.2	521.94 µg/L	24.434	521.94 ppb	24.434	4.68%	
QC value within limits for Cu 324.752 Recovery = 104.39%							
Fe 238.204 Radial†	390.7	5184.9 µg/L	14.24	5184.9 ppb	14.24	0.27%	
QC value within limits for Fe 238.204 Radial Recovery = 103.70%							
K 766.490 Radial†	8295.9	5233.9 µg/L	4.42	5233.9 ppb	4.42	0.08%	
QC value within limits for K 766.490 Radial Recovery = 104.68%							
Mg 279.077 IEC†	513.9	5276.5 µg/L	24.52	5276.5 ppb	24.52	0.46%	
QC value within limits for Mg 279.077 IEC Recovery = 105.53%							
Mn 257.610†	143134.9	507.82 µg/L	24.421	507.82 ppb	24.421	4.81%	
QC value within limits for Mn 257.610 Recovery = 101.56%							
Mo 202.031†	4160.3	504.19 µg/L	47.153	504.19 ppb	47.153	9.35%	
QC value within limits for Mo 202.031 Recovery = 100.84%							
Na 589.592 Radial†	37805.7	10065 µg/L	25.5	10065 ppb	25.5	0.25%	
QC value within limits for Na 589.592 Radial Recovery = 100.65%							
Ni 231.604†	8513.2	514.91 µg/L	24.587	514.91 ppb	24.587	4.77%	
QC value within limits for Ni 231.604 Recovery = 102.98%							
P 214.914†	1102.9	2491.4 µg/L	188.75	2491.4 ppb	188.75	7.58%	
QC value within limits for P 214.914 Recovery = 99.66%							
Pb 220.353†	1830.5	513.64 µg/L	40.816	513.64 ppb	40.816	7.95%	
QC value within limits for Pb 220.353 Recovery = 102.73%							
S 181.975 Axial†	184.6	1026.5 µg/L	75.68	1026.5 ppb	75.68	7.37%	
QC value within limits for S 181.975 Axial Recovery = 102.65%							
Sb 206.836†	482.2	511.93 µg/L	38.911	511.93 ppb	38.911	7.60%	
QC value within limits for Sb 206.836 Recovery = 102.39%							
Se 196.026†	334.0	521.50 µg/L	35.199	521.50 ppb	35.199	6.75%	
QC value within limits for Se 196.026 Recovery = 104.30%							
SiO2†	27710.0	5657.7 µg/L	202.06	5657.7 ppb	202.06	3.57%	
QC value within limits for SiO2 Recovery = 105.80%							
Si 251.611†	32606.3	2641.3 µg/L	95.22	2641.3 ppb	95.22	3.61%	
QC value within limits for Si 251.611 Recovery = 105.65%							
Sn 189.927†	912.7	517.06 µg/L	51.308	517.06 ppb	51.308	9.92%	
QC value within limits for Sn 189.927 Recovery = 103.41%							
Sr 421.552†	86285.8	516.15 µg/L	1.818	516.15 ppb	1.818	0.35%	
QC value within limits for Sr 421.552 Recovery = 103.23%							
Ti 334.940†	216199.0	522.29 µg/L	15.649	522.29 ppb	15.649	3.00%	
QC value within limits for Ti 334.940 Recovery = 104.46%							
Tl 190.801†	310.2	521.13 µg/L	31.708	521.13 ppb	31.708	6.08%	
QC value within limits for Tl 190.801 Recovery = 104.23%							
U 409.014†	5512.7	511.37 µg/L	27.513	511.37 ppb	27.513	5.38%	
QC value within limits for U 409.014 Recovery = 102.27%							
V 292.402†	43067.9	524.10 µg/L	26.750	524.10 ppb	26.750	5.10%	
QC value within limits for V 292.402 Recovery = 104.82%							
Zn 213.857†	18438.6	514.65 µg/L	23.350	514.65 ppb	23.350	4.54%	
QC value within limits for Zn 213.857 Recovery = 102.93%							

All analyte(s) passed QC.

Sequence No.: 3  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 1/29/2010 10:50:24  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	75231.2	75231.2	95.9 %		10:50:56
1	Al 396.153Radial†	-11.2	17.8	11.554 µg/L	11.554 ppb	10:50:56
1	Ca 317.933Radial†	266.9	31.3	22.541 µg/L	22.541 ppb	10:51:17
1	Fe 238.204 Radial†	16.7	1.1	14.367 µg/L	14.367 ppb	10:51:17
1	K 766.490 Radial†	420.6	40.0	25.258 µg/L	25.258 ppb	10:50:56
1	Mg 279.077 IEC†	8.7	1.0	9.8006 µg/L	9.8006 ppb	10:51:17
1	Na 589.592 Radial†	390.2	-146.6	-39.031 µg/L	-39.031 ppb	10:50:56
1	Sr 421.552†	684.6	80.1	0.4792 µg/L	0.4792 ppb	10:50:56
1	Sc 361.383	1945581.1	1945581.1	98.438 %		10:52:18
1	Y 371.029	1229700.5	1229700.5	98.446 %		10:52:18
1	Ag 328.068†	-78.5	12.8	0.1182 µg/L	0.1182 ppb	10:52:24
1	As 188.979†	-1.7	1.0	2.0903 µg/L	2.0903 ppb	10:52:45
1	B 249.677†	223.4	-143.0	-6.7797 µg/L	-6.7797 ppb	10:52:45
1	Ba 233.527†	-23.5	0.1	0.0037 µg/L	0.0037 ppb	10:52:45
1	Be 313.107†	3968.8	198.0	0.1331 µg/L	0.1331 ppb	10:52:24
1	Cd 226.502†	-112.3	11.3	0.3182 µg/L	0.3182 ppb	10:52:45
1	Co 228.616†	-48.2	0.4	0.0205 µg/L	0.0205 ppb	10:52:45
1	Cr 267.716†	-49.6	51.8	1.1610 µg/L	1.1610 ppb	10:52:24
1	Cu 324.752†	3841.7	2.7	0.0218 µg/L	0.0218 ppb	10:52:24
1	Mn 257.610†	-39.0	108.2	0.3851 µg/L	0.3851 ppb	10:52:45
1	Mo 202.031†	13.5	1.1	0.1366 µg/L	0.1366 ppb	10:52:45
1	Ni 231.604†	342.6	16.6	1.0047 µg/L	1.0047 ppb	10:52:45
1	P 214.914†	215.8	-0.7	-1.4841 µg/L	-1.4841 ppb	10:52:45
1	Pb 220.353†	65.5	5.3	1.5112 µg/L	1.5112 ppb	10:52:45
1	S 181.975 Axial†	21.4	-1.4	-7.9165 µg/L	-7.9165 ppb	10:52:45
1	Sb 206.836†	28.4	4.8	5.0830 µg/L	5.0830 ppb	10:52:45
1	Se 196.026†	6.6	-1.3	-1.8741 µg/L	-1.8741 ppb	10:52:45
1	SiO2†	2319.8	-32.8	-6.6877 µg/L	-6.6877 ppb	10:52:24
1	Si 251.611†	303.3	25.7	2.0829 µg/L	2.0829 ppb	10:52:45
1	Sn 189.927†	27.2	4.2	2.3657 µg/L	2.3657 ppb	10:52:45
1	Ti 334.940†	788.5	97.1	0.2344 µg/L	0.2344 ppb	10:52:24
1	Tl 190.801†	-19.5	4.7	7.8674 µg/L	7.8674 ppb	10:52:45
1	U 409.014†	-286.2	-104.6	-9.7227 µg/L	-9.7227 ppb	10:52:24
1	V 292.402†	-96.2	17.6	0.2064 µg/L	0.2064 ppb	10:52:24
1	Zn 213.857†	672.5	50.9	1.4260 µg/L	1.4260 ppb	10:52:45
2	Sc RADIAL	75327.1	75327.1	96.0 %		10:51:22
2	Al 396.153Radial†	-11.4	17.7	11.432 µg/L	11.432 ppb	10:51:22
2	Ca 317.933Radial†	277.4	41.8	30.142 µg/L	30.142 ppb	10:51:42
2	Fe 238.204 Radial†	20.4	4.9	65.402 µg/L	65.402 ppb	10:51:42
2	K 766.490 Radial†	426.6	45.7	28.838 µg/L	28.838 ppb	10:51:22
2	Mg 279.077 IEC†	13.3	5.7	57.941 µg/L	57.941 ppb	10:51:42
2	Na 589.592 Radial†	381.4	-156.3	-41.609 µg/L	-41.609 ppb	10:51:22
2	Sr 421.552†	729.6	126.2	0.7547 µg/L	0.7547 ppb	10:51:22
2	Sc 361.383	1930357.7	1930357.7	97.668 %		10:52:50
2	Y 371.029	1220252.1	1220252.1	97.690 %		10:52:50
2	Ag 328.068†	-94.7	-4.4	-0.0353 µg/L	-0.0353 ppb	10:52:56
2	As 188.979†	-2.6	0.0	0.0602 µg/L	0.0602 ppb	10:53:16
2	B 249.677†	212.4	-152.5	-7.2569 µg/L	-7.2569 ppb	10:53:16
2	Ba 233.527†	-27.9	-4.6	-0.1297 µg/L	-0.1297 ppb	10:53:16
2	Be 313.107†	3898.5	157.8	0.1060 µg/L	0.1060 ppb	10:52:56
2	Cd 226.502†	-124.3	-2.0	-0.0639 µg/L	-0.0639 ppb	10:53:16
2	Co 228.616†	-48.5	-0.4	-0.0206 µg/L	-0.0206 ppb	10:53:16
2	Cr 267.716†	-56.0	44.8	1.0034 µg/L	1.0034 ppb	10:52:56
2	Cu 324.752†	3868.5	61.0	0.4561 µg/L	0.4561 ppb	10:52:56
2	Mn 257.610†	-38.7	108.2	0.3900 µg/L	0.3900 ppb	10:53:16
2	Mo 202.031†	18.7	6.6	0.7974 µg/L	0.7974 ppb	10:53:16
2	Ni 231.604†	330.1	6.6	0.3994 µg/L	0.3994 ppb	10:53:16
2	P 214.914†	218.8	4.1	9.4400 µg/L	9.4400 ppb	10:53:16
2	Pb 220.353†	62.5	2.8	0.7895 µg/L	0.7895 ppb	10:53:16

2	S 181.975 Axial†	27.3	4.9	27.048 µg/L	27.048 ppb	10:53:16
2	Sb 206.836†	26.6	3.2	3.3907 µg/L	3.3907 ppb	10:53:16
2	Se 196.026†	8.4	0.6	1.1883 µg/L	1.1883 ppb	10:53:16
2	SiO2†	2323.1	-10.8	-2.2012 µg/L	-2.2012 ppb	10:52:56
2	Si 251.611†	312.8	37.9	3.0672 µg/L	3.0672 ppb	10:53:16
2	Sn 189.927†	21.0	-2.0	-1.1040 µg/L	-1.1040 ppb	10:53:16
2	Ti 334.940†	822.8	138.6	0.3309 µg/L	0.3309 ppb	10:52:56
2	Tl 190.801†	-21.5	2.5	4.1199 µg/L	4.1199 ppb	10:53:16
2	U 409.014†	-240.2	-59.7	-5.5623 µg/L	-5.5623 ppb	10:52:56
2	V 292.402†	-108.6	4.2	0.0563 µg/L	0.0563 ppb	10:52:56
2	Zn 213.857†	675.9	59.8	1.6716 µg/L	1.6716 ppb	10:53:16
3	Sc RADIAL	75139.4	75139.4	95.7 %		10:51:48
3	Al 396.153Radial†	-18.7	9.9	6.4256 µg/L	6.4256 ppb	10:51:48
3	Ca 317.933Radial†	266.8	31.5	22.665 µg/L	22.665 ppb	10:52:08
3	Fe 238.204 Radial†	18.9	3.4	45.202 µg/L	45.202 ppb	10:52:08
3	K 766.490 Radial†	353.6	-29.4	-18.566 µg/L	-18.566 ppb	10:51:48
3	Mg 279.077 IEC†	8.4	0.6	6.5688 µg/L	6.5688 ppb	10:52:08
3	Na 589.592 Radial†	377.2	-159.7	-42.520 µg/L	-42.520 ppb	10:51:48
3	Sr 421.552†	675.9	71.9	0.4301 µg/L	0.4301 ppb	10:51:48
3	Sc 361.383	1940930.1	1940930.1	98.203 %		10:53:22
3	Y 371.029	1226535.3	1226535.3	98.193 %		10:53:22
3	Ag 328.068†	-125.7	-35.4	-0.3154 µg/L	-0.3154 ppb	10:53:28
3	As 188.979†	3.2	6.0	13.066 µg/L	13.066 ppb	10:53:48
3	B 249.677†	207.0	-159.2	-7.5630 µg/L	-7.5630 ppb	10:53:48
3	Ba 233.527†	-19.9	3.7	0.1050 µg/L	0.1050 ppb	10:53:48
3	Be 313.107†	3949.1	187.6	0.1260 µg/L	0.1260 ppb	10:53:28
3	Cd 226.502†	-117.1	6.0	0.1646 µg/L	0.1646 ppb	10:53:48
3	Co 228.616†	-42.1	6.5	0.3450 µg/L	0.3450 ppb	10:53:48
3	Cr 267.716†	-63.4	37.6	0.8435 µg/L	0.8435 ppb	10:53:28
3	Cu 324.752†	3845.7	16.1	0.1245 µg/L	0.1245 ppb	10:53:28
3	Mn 257.610†	-47.2	99.8	0.3596 µg/L	0.3596 ppb	10:53:48
3	Mo 202.031†	16.9	4.6	0.5602 µg/L	0.5602 ppb	10:53:48
3	Ni 231.604†	318.2	-7.4	-0.4450 µg/L	-0.4450 ppb	10:53:48
3	P 214.914†	213.2	-2.7	-6.3285 µg/L	-6.3285 ppb	10:53:48
3	Pb 220.353†	57.2	-2.9	-0.8102 µg/L	-0.8102 ppb	10:53:48
3	S 181.975 Axial†	17.2	-5.6	-31.179 µg/L	-31.179 ppb	10:53:48
3	Sb 206.836†	22.8	-0.8	-0.8682 µg/L	-0.8682 ppb	10:53:48
3	Se 196.026†	7.1	-0.7	-0.8702 µg/L	-0.8702 ppb	10:53:48
3	SiO2†	2318.6	-28.3	-5.7827 µg/L	-5.7827 ppb	10:53:28
3	Si 251.611†	327.7	51.3	4.1527 µg/L	4.1527 ppb	10:53:48
3	Sn 189.927†	27.8	4.8	2.7165 µg/L	2.7165 ppb	10:53:48
3	Ti 334.940†	864.0	176.0	0.4253 µg/L	0.4253 ppb	10:53:28
3	Tl 190.801†	-19.3	4.9	8.1730 µg/L	8.1730 ppb	10:53:48
3	U 409.014†	-208.2	-25.8	-2.4070 µg/L	-2.4070 ppb	10:53:28
3	V 292.402†	-92.9	20.7	0.2553 µg/L	0.2553 ppb	10:53:28
3	Zn 213.857†	666.8	46.7	1.3119 µg/L	1.3119 ppb	10:53:48

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1938956.3	98.103 %	0.3947			0.40%
Sc RADIAL	75232.6	95.9 %	0.12			0.12%
Y 371.029	1225496.0	98.110 %	0.3850			0.39%
Ag 328.068†	-9.0	-0.0775 µg/L	0.21989	-0.0775 ppb	0.21989	283.78%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	15.2	9.8037 µg/L	2.92610	9.8037 ppb	2.92610	29.85%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	2.3	5.0722 µg/L	6.99693	5.0722 ppb	6.99693	137.95%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-151.6	-7.1999 µg/L	0.39473	-7.1999 ppb	0.39473	5.48%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-0.3	-0.0070 µg/L	0.11775	-0.0070 ppb	0.11775	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	181.1	0.1217 µg/L	0.01405	0.1217 ppb	0.01405	11.54%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	34.9	25.116 µg/L	4.3535	25.116 ppb	4.3535	17.33%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	5.1	0.1397 µg/L	0.19227	0.1397 ppb	0.19227	137.67%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	2.2	0.1150 µg/L	0.20024	0.1150 ppb	0.20024	174.16%

QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	44.7	1.0026 µg/L	0.15872	1.0026 ppb	0.15872	15.83%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	26.6	0.2008 µg/L	0.22697	0.2008 ppb	0.22697	113.03%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	3.1	41.657 µg/L	25.7017	41.657 ppb	25.7017	61.70%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	18.8	11.844 µg/L	26.3964	11.844 ppb	26.3964	222.87%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	2.4	24.770 µg/L	28.7723	24.770 ppb	28.7723	116.16%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	105.4	0.3782 µg/L	0.01632	0.3782 ppb	0.01632	4.32%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	4.1	0.4981 µg/L	0.33476	0.4981 ppb	0.33476	67.21%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-154.2	-41.053 µg/L	1.8096	-41.053 ppb	1.8096	4.41%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	5.3	0.3197 µg/L	0.72810	0.3197 ppb	0.72810	227.76%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	0.2	0.5425 µg/L	8.07723	0.5425 ppb	8.07723	>999.9%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	1.7	0.4969 µg/L	1.18803	0.4969 ppb	1.18803	239.11%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-0.7	-4.0157 µg/L	29.30903	-4.0157 ppb	29.30903	729.86%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	2.4	2.5352 µg/L	3.06641	2.5352 ppb	3.06641	120.96%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-0.5	-0.5187 µg/L	1.56120	-0.5187 ppb	1.56120	301.01%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	-24.0	-4.8905 µg/L	2.37257	-4.8905 ppb	2.37257	48.51%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	38.3	3.1009 µg/L	1.03533	3.1009 ppb	1.03533	33.39%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	2.3	1.3260 µg/L	2.11181	1.3260 ppb	2.11181	159.26%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	92.7	0.5546 µg/L	0.17494	0.5546 ppb	0.17494	31.54%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	137.2	0.3302 µg/L	0.09544	0.3302 ppb	0.09544	28.91%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	4.0	6.7201 µg/L	2.25705	6.7201 ppb	2.25705	33.59%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-63.4	-5.8973 µg/L	3.66930	-5.8973 ppb	3.66930	62.22%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	14.2	0.1727 µg/L	0.10374	0.1727 ppb	0.10374	60.08%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	52.5	1.4698 µg/L	0.18384	1.4698 ppb	0.18384	12.51%	
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

## =====

Analysis Begun

Start Time: 1/29/2010 10:58:47      Plasma On Time: 1/25/2010 05:31:26  
 Logged In Analyst: optima      Technique: ICP Continuous  
 Spectrometer Model: Optima 4300 DV, S/N 077N1030502 Autosampler Model: AS-93plus

Sample Information File: C:\pe\optimal\Sample Information\012910.sif

Batch ID:

Results Data Set: 012910

Results Library: c:\pe\optimal\Results\Results.mdb

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Sequence No.: 1

Autosampler Location: 301

Sample ID: 1202018179|942675|1

Date Collected: 1/29/2010 10:58:47

Analyst: HSC

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

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Replicate Data: 1202018179|942675|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	73566.5	73566.5	93.7 %		10:59:31
1	Al 396.153Radial†	8.4	38.4	24.900 µg/L	24.900 ppb	10:59:31
1	Ca 317.933Radial†	317.2	91.2	65.704 µg/L	65.704 ppb	10:59:51
1	Fe 238.204 Radial†	20.8	5.8	76.955 µg/L	76.955 ppb	10:59:51
1	K 766.490 Radial†	403.2	31.4	19.827 µg/L	19.827 ppb	10:59:31
1	Mg 279.077 IEC†	6.7	-1.0	-10.129 µg/L	-10.129 ppb	10:59:51
1	Na 589.592 Radial†	510.2	-9.4	-2.4988 µg/L	-2.4988 ppb	10:59:31
1	Sr 421.552†	711.6	125.1	0.7485 µg/L	0.7485 ppb	10:59:31
1	Sc 361.383	1923110.2	1923110.2	97.301 %		11:00:53
1	Y 371.029	1214399.3	1214399.3	97.221 %		11:00:53
1	Ag 328.068†	-138.8	-50.1	-0.4486 µg/L	-0.4486 ppb	11:00:59
1	As 188.979†	-2.4	0.2	0.5166 µg/L	0.5166 ppb	11:01:20
1	B 249.677†	232.9	-130.6	-6.2240 µg/L	-6.2240 ppb	11:01:20
1	Ba 233.527†	-14.3	9.2	0.2571 µg/L	0.2571 ppb	11:01:20
1	Be 313.107†	3902.2	176.7	0.1186 µg/L	0.1186 ppb	11:00:59
1	Cd 226.502†	-128.4	-6.7	-0.1974 µg/L	-0.1974 ppb	11:01:20
1	Co 228.616†	-45.3	2.8	0.1453 µg/L	0.1453 ppb	11:01:20
1	Cr 267.716†	-63.7	36.7	0.8224 µg/L	0.8224 ppb	11:01:20
1	Cu 324.752†	3809.8	15.6	0.1248 µg/L	0.1248 ppb	11:00:59
1	Mn 257.610†	225.8	379.9	1.3572 µg/L	1.3572 ppb	11:01:20
1	Mo 202.031†	12.1	-0.1	-0.0128 µg/L	-0.0128 ppb	11:01:20
1	Ni 231.604†	336.8	14.8	0.8948 µg/L	0.8948 ppb	11:01:20
1	P 214.914†	210.6	-3.4	-8.0007 µg/L	-8.0007 ppb	11:01:20
1	Pb 220.353†	52.3	-7.4	-2.0556 µg/L	-2.0556 ppb	11:01:20
1	S 181.975 Axial†	24.4	2.0	11.052 µg/L	11.052 ppb	11:01:20
1	Sb 206.836†	21.4	-2.0	-2.1187 µg/L	-2.1187 ppb	11:01:20
1	Se 196.026†	13.1	5.5	8.5548 µg/L	8.5548 ppb	11:01:20
1	SiO2†	2428.2	106.1	21.666 µg/L	21.666 ppb	11:00:59
1	Si 251.611†	425.4	154.8	12.539 µg/L	12.539 ppb	11:01:20
1	Sn 189.927†	20.0	-2.9	-1.6014 µg/L	-1.6014 ppb	11:01:20
1	Ti 334.940†	960.7	283.5	0.6871 µg/L	0.6871 ppb	11:00:59
1	Tl 190.801†	-27.1	-3.3	-5.5307 µg/L	-5.5307 ppb	11:01:20
1	U 409.014†	-315.6	-138.1	-12.853 µg/L	-12.853 ppb	11:00:59
1	V 292.402†	-129.8	-18.1	-0.2249 µg/L	-0.2249 ppb	11:00:59
1	Zn 213.857†	705.5	92.8	2.6018 µg/L	2.6018 ppb	11:01:20
2	Sc RADIAL	74315.8	74315.8	94.7 %		10:59:57
2	Al 396.153Radial†	21.0	51.7	33.451 µg/L	33.451 ppb	10:59:57
2	Ca 317.933Radial†	318.7	89.4	64.430 µg/L	64.430 ppb	11:00:17
2	Fe 238.204 Radial†	20.2	5.0	65.670 µg/L	65.670 ppb	11:00:17
2	K 766.490 Radial†	409.0	33.2	20.969 µg/L	20.969 ppb	10:59:57
2	Mg 279.077 IEC†	8.5	0.8	8.1388 µg/L	8.1388 ppb	11:00:17
2	Na 589.592 Radial†	506.0	-19.4	-5.1571 µg/L	-5.1571 ppb	10:59:57
2	Sr 421.552†	704.2	109.6	0.6557 µg/L	0.6557 ppb	10:59:57
2	Sc 361.383	1914233.5	1914233.5	96.852 %		11:01:26
2	Y 371.029	1208054.5	1208054.5	96.713 %		11:01:26
2	Ag 328.068†	-87.8	1.9	0.0239 µg/L	0.0239 ppb	11:01:31
2	As 188.979†	-2.9	-0.3	-0.5757 µg/L	-0.5757 ppb	11:01:52

2	B 249.677†	205.5	-157.8	-7.5074 µg/L	-7.5074 ppb	11:01:52
2	Ba 233.527†	-16.6	6.8	0.1906 µg/L	0.1906 ppb	11:01:52
2	Be 313.107†	3941.6	236.0	0.1585 µg/L	0.1585 ppb	11:01:31
2	Cd 226.502†	-121.8	-0.4	-0.0190 µg/L	-0.0190 ppb	11:01:52
2	Co 228.616†	-39.5	8.6	0.4543 µg/L	0.4543 ppb	11:01:52
2	Cr 267.716†	-70.5	29.4	0.6586 µg/L	0.6586 ppb	11:01:52
2	Cu 324.752†	3869.8	95.7	0.7106 µg/L	0.7106 ppb	11:01:31
2	Mn 257.610†	213.4	368.2	1.3134 µg/L	1.3134 ppb	11:01:52
2	Mo 202.031†	16.7	4.6	0.5636 µg/L	0.5636 ppb	11:01:52
2	Ni 231.604†	333.9	13.3	0.8064 µg/L	0.8064 ppb	11:01:52
2	P 214.914†	206.8	-6.3	-14.619 µg/L	-14.619 ppb	11:01:52
2	Pb 220.353†	66.2	7.2	2.0202 µg/L	2.0202 ppb	11:01:52
2	S 181.975 Axial†	24.1	1.8	9.8510 µg/L	9.8510 ppb	11:01:52
2	Sb 206.836†	22.6	-0.7	-0.6921 µg/L	-0.6921 ppb	11:01:52
2	Se 196.026†	12.7	5.2	8.0850 µg/L	8.0850 ppb	11:01:52
2	SiO2†	2432.8	122.4	25.000 µg/L	25.000 ppb	11:01:31
2	Si 251.611†	435.3	167.0	13.527 µg/L	13.527 ppb	11:01:52
2	Sn 189.927†	26.4	3.8	2.1392 µg/L	2.1392 ppb	11:01:52
2	Ti 334.940†	907.1	232.7	0.5629 µg/L	0.5629 ppb	11:01:31
2	Tl 190.801†	-25.6	-1.9	-3.1277 µg/L	-3.1277 ppb	11:01:52
2	U 409.014†	-238.3	-59.8	-5.5692 µg/L	-5.5692 ppb	11:01:31
2	V 292.402†	-82.5	30.1	0.3657 µg/L	0.3657 ppb	11:01:31
2	Zn 213.857†	714.1	105.0	2.9439 µg/L	2.9439 ppb	11:01:52
3	Sc RADIAL	73717.4	73717.4	93.9 %		11:00:23
3	Al 396.153Radial†	-8.8	20.2	13.054 µg/L	13.054 ppb	11:00:23
3	Ca 317.933Radial†	315.1	88.3	63.593 µg/L	63.593 ppb	11:00:43
3	Fe 238.204 Radial†	20.2	5.1	67.857 µg/L	67.857 ppb	11:00:43
3	K 766.490 Radial†	426.9	55.8	35.188 µg/L	35.188 ppb	11:00:23
3	Mg 279.077 IEC†	6.2	-1.5	-15.762 µg/L	-15.762 ppb	11:00:43
3	Na 589.592 Radial†	500.2	-21.2	-5.6367 µg/L	-5.6367 ppb	11:00:23
3	Sr 421.552†	696.0	106.9	0.6395 µg/L	0.6395 ppb	11:00:23
3	Sc 361.383	1918176.2	1918176.2	97.051 %		11:01:58
3	Y 371.029	1211160.6	1211160.6	96.962 %		11:01:58
3	Ag 328.068†	-49.0	42.1	0.3857 µg/L	0.3857 ppb	11:02:03
3	As 188.979†	-0.0	2.7	5.8344 µg/L	5.8344 ppb	11:02:24
3	B 249.677†	216.9	-146.5	-6.9730 µg/L	-6.9730 ppb	11:02:24
3	Ba 233.527†	-12.5	11.1	0.3101 µg/L	0.3101 ppb	11:02:24
3	Be 313.107†	3910.7	195.7	0.1315 µg/L	0.1315 ppb	11:02:03
3	Cd 226.502†	-130.3	-8.9	-0.2606 µg/L	-0.2606 ppb	11:02:24
3	Co 228.616†	-45.5	2.4	0.1288 µg/L	0.1288 ppb	11:02:24
3	Cr 267.716†	-67.9	32.2	0.7209 µg/L	0.7209 ppb	11:02:24
3	Cu 324.752†	3804.0	19.6	0.1532 µg/L	0.1532 ppb	11:02:03
3	Mn 257.610†	220.7	375.2	1.3396 µg/L	1.3396 ppb	11:02:24
3	Mo 202.031†	15.9	3.8	0.4603 µg/L	0.4603 ppb	11:02:24
3	Ni 231.604†	329.5	8.1	0.4882 µg/L	0.4882 ppb	11:02:24
3	P 214.914†	213.0	-0.3	-0.8371 µg/L	-0.8371 ppb	11:02:24
3	Pb 220.353†	63.4	4.2	1.1789 µg/L	1.1789 ppb	11:02:24
3	S 181.975 Axial†	26.8	4.5	24.976 µg/L	24.976 ppb	11:02:24
3	Sb 206.836†	26.4	3.2	3.4092 µg/L	3.4092 ppb	11:02:24
3	Se 196.026†	10.7	3.0	4.8645 µg/L	4.8645 ppb	11:02:24
3	SiO2†	2431.8	116.2	23.734 µg/L	23.734 ppb	11:02:03
3	Si 251.611†	426.0	156.6	12.682 µg/L	12.682 ppb	11:02:24
3	Sn 189.927†	23.1	0.4	0.2336 µg/L	0.2336 ppb	11:02:24
3	Ti 334.940†	917.3	241.3	0.5855 µg/L	0.5855 ppb	11:02:03
3	Tl 190.801†	-24.0	-0.2	-0.3761 µg/L	-0.3761 ppb	11:02:24
3	U 409.014†	-247.3	-68.6	-6.3880 µg/L	-6.3880 ppb	11:02:03
3	V 292.402†	-99.7	12.6	0.1539 µg/L	0.1539 ppb	11:02:03
3	Zn 213.857†	703.5	92.6	2.5994 µg/L	2.5994 ppb	11:02:24

Mean Data: 1202018179|942675|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1918506.7	97.068	%	0.2250			0.23%
Sc RADIAL	73866.6	94.1	%	0.50			0.54%
Y 371.029	1211204.8	96.965	%	0.2540			0.26%
Ag 328.068†	-2.0	-0.0130	µg/L	0.41838	-0.0130 ppb	0.41838	>999.9%
Al 396.153Radial†	36.8	23.802	µg/L	10.2430	23.802 ppb	10.2430	43.03%
As 188.979†	0.9	1.9251	µg/L	3.42931	1.9251 ppb	3.42931	178.13%
B 249.677†	-145.0	-6.9015	µg/L	0.64471	-6.9015 ppb	0.64471	9.34%
Ba 233.527†	9.0	0.2526	µg/L	0.05989	0.2526 ppb	0.05989	23.71%



Be 313.107†	202.8	0.1362 µg/L	0.02038	0.1362 ppb	0.02038	14.96%
Ca 317.933Radial†	89.6	64.575 µg/L	1.0633	64.575 ppb	1.0633	1.65%
Cd 226.502†	-5.4	-0.1590 µg/L	0.12530	-0.1590 ppb	0.12530	78.80%
Co 228.616†	4.6	0.2428 µg/L	0.18336	0.2428 ppb	0.18336	75.52%
Cr 267.716†	32.8	0.7340 µg/L	0.08269	0.7340 ppb	0.08269	11.27%
Cu 324.752†	43.6	0.3295 µg/L	0.33030	0.3295 ppb	0.33030	100.23%
Fe 238.204 Radial†	5.3	70.160 µg/L	5.9847	70.160 ppb	5.9847	8.53%
K 766.490 Radial†	40.1	25.328 µg/L	8.5582	25.328 ppb	8.5582	33.79%
Mg 279.077 IEC†	-0.6	-5.9176 µg/L	12.49478	-5.9176 ppb	12.49478	211.15%
Mn 257.610†	374.4	1.3367 µg/L	0.02205	1.3367 ppb	0.02205	1.65%
Mo 202.031†	2.8	0.3370 µg/L	0.30735	0.3370 ppb	0.30735	91.20%
Na 589.592 Radial†	-16.6	-4.4309 µg/L	1.69033	-4.4309 ppb	1.69033	38.15%
Ni 231.604†	12.0	0.7298 µg/L	0.21386	0.7298 ppb	0.21386	29.30%
P 214.914†	-3.4	-7.8189 µg/L	6.89274	-7.8189 ppb	6.89274	88.15%
Pb 220.353†	1.3	0.3812 µg/L	2.15181	0.3812 ppb	2.15181	564.53%
S 181.975 Axial†	2.8	15.293 µg/L	8.4074	15.293 ppb	8.4074	54.98%
Sb 206.836†	0.2	0.1994 µg/L	2.86977	0.1994 ppb	2.86977	>999.9%
Se 196.026†	4.6	7.1681 µg/L	2.00880	7.1681 ppb	2.00880	28.02%
SiO2†	114.9	23.467 µg/L	1.6827	23.467 ppb	1.6827	7.17%
Si 251.611†	159.4	12.916 µg/L	0.5340	12.916 ppb	0.5340	4.13%
Sn 189.927†	0.4	0.2572 µg/L	1.87045	0.2572 ppb	1.87045	727.36%
Sr 421.552†	113.9	0.6813 µg/L	0.05881	0.6813 ppb	0.05881	8.63%
Ti 334.940†	252.5	0.6118 µg/L	0.06613	0.6118 ppb	0.06613	10.81%
Tl 190.801†	-1.8	-3.0115 µg/L	2.57930	-3.0115 ppb	2.57930	85.65%
U 409.014†	-88.8	-8.2701 µg/L	3.99011	-8.2701 ppb	3.99011	48.25%
V 292.402†	8.2	0.0982 µg/L	0.29921	0.0982 ppb	0.29921	304.65%
Zn 213.857†	96.8	2.7151 µg/L	0.19821	2.7151 ppb	0.19821	7.30%

Sequence No.: 2  
 Sample ID: 1202018180|942675|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 302  
 Date Collected: 1/29/2010 11:02:33  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 1202018180|942675|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76187.2	76187.2	97.1 %		11:03:12
1	Al 396.153Radial†	134091.8	138157.5	89469 µg/L	89469 ppb	11:03:07
1	Ca 317.933Radial†	135618.4	139453.4	100480 µg/L	100480 ppb	11:03:07
1	Fe 238.204 Radial†	13989.5	14394.3	190630 µg/L	190630 ppb	11:03:12
1	K 766.490 Radial†	65797.1	67378.9	42510 µg/L	42510 ppb	11:03:07
1	Mg 279.077 IEC†	3680.4	3783.0	38628 µg/L	38628 ppb	11:03:12
1	Na 589.592 Radial†	36842.5	37397.8	9956.6 µg/L	9956.6 ppb	11:03:07
1	Sr 421.552†	375354.8	386019.0	2309.1 µg/L	2309.1 ppb	11:03:07
1	Sc 361.383	1940377.0	1940377.0	98.175 %		11:03:48
1	Y 371.029	1251599.0	1251599.0	100.20 %		11:03:48
1	Ag 328.068†	31699.5	32381.5	312.70 µg/L	312.70 ppb	11:03:53
1	As 188.979†	494.0	505.9	1107.4 µg/L	1107.4 ppb	11:04:14
1	B 249.677†	34316.2	34584.3	1542.7 µg/L	1542.7 ppb	11:03:53
1	Ba 233.527†	69139.3	70448.8	1970.1 µg/L	1970.1 ppb	11:03:53
1	Be 313.107†	1174754.8	1192737.5	800.30 µg/L	800.30 ppb	11:03:48
1	Cd 226.502†	21632.2	22159.7	607.71 µg/L	607.71 ppb	11:03:53
1	Co 228.616†	17906.3	18288.5	961.17 µg/L	961.17 ppb	11:03:53
1	Cr 267.716†	109258.3	111391.9	2496.7 µg/L	2496.7 ppb	11:03:53
1	Cu 324.752†	257216.8	258099.3	1919.0 µg/L	1919.0 ppb	11:03:53
1	Mn 257.610†	1563708.1	1592930.3	5670.0 µg/L	5670.0 ppb	11:03:48
1	Mo 202.031†	4332.4	4400.3	540.33 µg/L	540.33 ppb	11:04:14
1	Ni 231.604†	22897.1	22991.4	1393.4 µg/L	1393.4 ppb	11:03:53
1	P 214.914†	4354.0	4215.1	9399.9 µg/L	9399.9 ppb	11:04:14
1	Pb 220.353†	3232.0	3230.9	902.46 µg/L	902.46 ppb	11:04:14
1	S 181.975 Axial†	745.8	736.5	4094.7 µg/L	4094.7 ppb	11:04:14
1	Sb 206.836†	1445.4	1448.3	1503.5 µg/L	1503.5 ppb	11:04:14
1	Se 196.026†	1544.2	1565.0	3117.0 µg/L	3117.0 ppb	11:04:14
1	SiO2†	291302.5	294329.3	60095 µg/L	60095 ppb	11:03:53
1	Si 251.611†	337329.7	343319.3	27810 µg/L	27810 ppb	11:03:53
1	Sn 189.927†	1796.2	1806.1	1065.0 µg/L	1065.0 ppb	11:04:14
1	Ti 334.940†	2375134.0	2418591.5	5845.1 µg/L	5845.1 ppb	11:03:48
1	Tl 190.801†	716.5	754.4	1302.3 µg/L	1302.3 ppb	11:04:14
1	U 409.014†	-1031.2	-864.2	-112.95 µg/L	-112.95 ppb	11:03:53
1	V 292.402†	103861.0	105907.4	1294.2 µg/L	1294.2 ppb	11:03:53
1	Zn 213.857†	210489.4	213770.8	5988.7 µg/L	5988.7 ppb	11:03:53
2	Sc RADIAL	76518.3	76518.3	97.5 %		11:03:24
2	Al 396.153Radial†	134722.5	138206.7	89501 µg/L	89501 ppb	11:03:18
2	Ca 317.933Radial†	136040.8	139282.0	100360 µg/L	100360 ppb	11:03:18
2	Fe 238.204 Radial†	14040.9	14384.6	190500 µg/L	190500 ppb	11:03:24
2	K 766.490 Radial†	66153.7	67451.4	42555 µg/L	42555 ppb	11:03:18
2	Mg 279.077 IEC†	3728.0	3815.4	38962 µg/L	38962 ppb	11:03:24
2	Na 589.592 Radial†	37092.6	37490.1	9981.1 µg/L	9981.1 ppb	11:03:18
2	Sr 421.552†	377167.0	386204.6	2310.2 µg/L	2310.2 ppb	11:03:18
2	Sc 361.383	1935005.1	1935005.1	97.903 %		11:04:21
2	Y 371.029	1247806.1	1247806.1	99.896 %		11:04:21
2	Ag 328.068†	31693.4	32464.9	313.49 µg/L	313.49 ppb	11:04:27
2	As 188.979†	489.8	503.0	1101.1 µg/L	1101.1 ppb	11:04:47
2	B 249.677†	34496.7	34865.7	1556.1 µg/L	1556.1 ppb	11:04:27
2	Ba 233.527†	69325.9	70834.9	1980.9 µg/L	1980.9 ppb	11:04:27
2	Be 313.107†	1171029.6	1192280.5	799.98 µg/L	799.98 ppb	11:04:21
2	Cd 226.502†	21695.0	22285.1	611.28 µg/L	611.28 ppb	11:04:27
2	Co 228.616†	17982.6	18417.1	968.02 µg/L	968.02 ppb	11:04:27
2	Cr 267.716†	109509.7	111957.7	2509.4 µg/L	2509.4 ppb	11:04:27
2	Cu 324.752†	257839.5	259462.7	1929.0 µg/L	1929.0 ppb	11:04:27
2	Mn 257.610†	1558717.2	1592254.3	5667.6 µg/L	5667.6 ppb	11:04:21
2	Mo 202.031†	4320.9	4400.9	540.39 µg/L	540.39 ppb	11:04:47
2	Ni 231.604†	22970.9	23131.5	1401.9 µg/L	1401.9 ppb	11:04:27
2	P 214.914†	4354.5	4228.0	9428.9 µg/L	9428.9 ppb	11:04:47
2	Pb 220.353†	3255.1	3263.7	911.62 µg/L	911.62 ppb	11:04:47

2	S 181.975 Axial†	750.9	743.9	4135.8 µg/L	4135.8 ppb	11:04:47
2	Sb 206.836†	1448.7	1455.7	1511.3 µg/L	1511.3 ppb	11:04:47
2	Se 196.026†	1538.0	1563.0	3113.4 µg/L	3113.4 ppb	11:04:47
2	SiO2†	292029.1	295895.3	60415 µg/L	60415 ppb	11:04:27
2	Si 251.611†	338302.6	345267.0	27968 µg/L	27968 ppb	11:04:27
2	Sn 189.927†	1817.5	1833.0	1080.2 µg/L	1080.2 ppb	11:04:47
2	Ti 334.940†	2367645.2	2417658.7	5842.8 µg/L	5842.8 ppb	11:04:21
2	Tl 190.801†	715.9	755.8	1304.7 µg/L	1304.7 ppb	11:04:47
2	U 409.014†	-888.5	-721.3	-99.638 µg/L	-99.638 ppb	11:04:27
2	V 292.402†	104099.0	106444.2	1300.7 µg/L	1300.7 ppb	11:04:27
2	Zn 213.857†	211091.8	214981.3	6022.6 µg/L	6022.6 ppb	11:04:27
3	Sc RADIAL	76508.6	76508.6	97.5 %		11:03:35
3	Al 396.153Radial†	133559.4	137031.1	88740 µg/L	88740 ppb	11:03:30
3	Ca 317.933Radial†	134326.9	137541.7	99105 µg/L	99105 ppb	11:03:30
3	Fe 238.204 Radial†	14085.2	14431.8	191120 µg/L	191120 ppb	11:03:35
3	K 766.490 Radial†	65556.5	66847.4	42174 µg/L	42174 ppb	11:03:30
3	Mg 279.077 IEC†	3700.0	3787.2	38671 µg/L	38671 ppb	11:03:35
3	Na 589.592 Radial†	36792.9	37187.4	9900.6 µg/L	9900.6 ppb	11:03:30
3	Sr 421.552†	373324.6	382312.1	2287.0 µg/L	2287.0 ppb	11:03:30
3	Sc 361.383	1932435.0	1932435.0	97.773 %		11:04:55
3	Y 371.029	1245815.3	1245815.3	99.736 %		11:04:55
3	Ag 328.068†	31649.6	32463.1	313.50 µg/L	313.50 ppb	11:05:00
3	As 188.979†	489.2	503.1	1101.5 µg/L	1101.5 ppb	11:05:21
3	B 249.677†	34367.9	34780.8	1551.7 µg/L	1551.7 ppb	11:05:00
3	Ba 233.527†	69134.4	70733.2	1978.1 µg/L	1978.1 ppb	11:05:00
3	Be 313.107†	1172906.2	1195790.6	802.33 µg/L	802.33 ppb	11:04:55
3	Cd 226.502†	21593.3	22210.5	609.10 µg/L	609.10 ppb	11:05:00
3	Co 228.616†	17950.6	18408.8	967.54 µg/L	967.54 ppb	11:05:00
3	Cr 267.716†	109178.7	111767.9	2505.2 µg/L	2505.2 ppb	11:05:00
3	Cu 324.752†	257169.9	259128.2	1926.6 µg/L	1926.6 ppb	11:05:00
3	Mn 257.610†	1561724.1	1597447.1	5686.1 µg/L	5686.1 ppb	11:04:55
3	Mo 202.031†	4330.5	4416.6	542.31 µg/L	542.31 ppb	11:05:21
3	Ni 231.604†	22855.7	23044.9	1396.7 µg/L	1396.7 ppb	11:05:00
3	P 214.914†	4374.6	4254.4	9489.3 µg/L	9489.3 ppb	11:05:21
3	Pb 220.353†	3238.6	3251.2	908.10 µg/L	908.10 ppb	11:05:21
3	S 181.975 Axial†	753.9	747.9	4158.1 µg/L	4158.1 ppb	11:05:21
3	Sb 206.836†	1443.1	1452.0	1507.5 µg/L	1507.5 ppb	11:05:21
3	Se 196.026†	1541.8	1569.0	3124.7 µg/L	3124.7 ppb	11:05:21
3	SiO2†	291248.5	295493.5	60333 µg/L	60333 ppb	11:05:00
3	Si 251.611†	337386.4	344789.5	27930 µg/L	27930 ppb	11:05:00
3	Sn 189.927†	1797.7	1815.2	1069.9 µg/L	1069.9 ppb	11:05:21
3	Ti 334.940†	2371561.6	2424880.6	5860.2 µg/L	5860.2 ppb	11:04:55
3	Tl 190.801†	714.5	755.3	1304.3 µg/L	1304.3 ppb	11:05:21
3	U 409.014†	-1027.9	-865.1	-113.02 µg/L	-113.02 ppb	11:05:00
3	V 292.402†	103794.5	106274.2	1298.7 µg/L	1298.7 ppb	11:05:00
3	Zn 213.857†	210209.1	214365.3	6005.3 µg/L	6005.3 ppb	11:05:00

Mean Data: 1202018180|942675|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1935939.0	97.950 %	0.2050			0.21%
Sc RADIAL	76404.7	97.4 %	0.24			0.25%
Y 371.029	1248406.8	99.944 %	0.2352			0.24%
Ag 328.068†	32436.5	313.23 µg/L	0.457	313.23 ppb	0.457	0.15%
Al 396.153Radial†	137798.4	89237 µg/L	430.7	89237 ppb	430.7	0.48%
As 188.979†	504.0	1103.3 µg/L	3.54	1103.3 ppb	3.54	0.32%
B 249.677†	34743.6	1550.2 µg/L	6.85	1550.2 ppb	6.85	0.44%
Ba 233.527†	70672.3	1976.4 µg/L	5.60	1976.4 ppb	5.60	0.28%
Be 313.107†	1193611.5	800.87 µg/L	1.276	800.87 ppb	1.276	0.16%
Ca 317.933Radial†	138759.0	99982 µg/L	762.1	99982 ppb	762.1	0.76%
Cd 226.502†	22218.4	609.36 µg/L	1.803	609.36 ppb	1.803	0.30%
Co 228.616†	18371.5	965.58 µg/L	3.822	965.58 ppb	3.822	0.40%
Cr 267.716†	111705.8	2503.8 µg/L	6.45	2503.8 ppb	6.45	0.26%
Cu 324.752†	258896.7	1924.8 µg/L	5.21	1924.8 ppb	5.21	0.27%
Fe 238.204 Radial†	14403.6	190750 µg/L	330.3	190750 ppb	330.3	0.17%
K 766.490 Radial†	67225.9	42413 µg/L	208.1	42413 ppb	208.1	0.49%
Mg 279.077 IEC†	3795.2	38754 µg/L	181.4	38754 ppb	181.4	0.47%
Mn 257.610†	1594210.6	5674.6 µg/L	10.05	5674.6 ppb	10.05	0.18%
Mo 202.031†	4406.0	541.01 µg/L	1.129	541.01 ppb	1.129	0.21%
Na 589.592 Radial†	37358.4	9946.1 µg/L	41.30	9946.1 ppb	41.30	0.42%

Ni 231.604†	23056.0	1397.3 µg/L	4.27	1397.3 ppb	4.27	0.31%
P 214.914†	4232.5	9439.4 µg/L	45.59	9439.4 ppb	45.59	0.48%
Pb 220.353†	3248.6	907.39 µg/L	4.625	907.39 ppb	4.625	0.51%
S 181.975 Axial†	742.8	4129.5 µg/L	32.16	4129.5 ppb	32.16	0.78%
Sb 206.836†	1452.0	1507.4 µg/L	3.90	1507.4 ppb	3.90	0.26%
Se 196.026†	1565.7	3118.3 µg/L	5.80	3118.3 ppb	5.80	0.19%
SiO2†	295239.4	60281 µg/L	166.1	60281 ppb	166.1	0.28%
Si 251.611†	344458.6	27903 µg/L	82.2	27903 ppb	82.2	0.29%
Sn 189.927†	1818.1	1071.7 µg/L	7.74	1071.7 ppb	7.74	0.72%
Sr 421.552†	384845.2	2302.1 µg/L	13.13	2302.1 ppb	13.13	0.57%
Ti 334.940†	2420376.9	5849.4 µg/L	9.49	5849.4 ppb	9.49	0.16%
Tl 190.801†	755.2	1303.8 µg/L	1.25	1303.8 ppb	1.25	0.10%
U 409.014†	-816.9	-108.53 µg/L	7.703	-108.53 ppb	7.703	7.10%
V 292.402†	106208.6	1297.9 µg/L	3.32	1297.9 ppb	3.32	0.26%
Zn 213.857†	214372.5	6005.6 µg/L	16.98	6005.6 ppb	16.98	0.28%

Sequence No.: 3  
 Sample ID: 244921001|942675|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 303  
 Date Collected: 1/29/2010 11:05:31  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 244921001|942675|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	78129.5	78129.5	99.6 %			11:06:03
1	Al 396.153Radial†	85714.5	86129.1	55783 µg/L		55783 ppb	11:06:03
1	Ca 317.933Radial†	19077.5	18916.0	13630 µg/L		13630 ppb	11:06:24
1	Fe 238.204 Radial†	9099.9	9124.5	120820 µg/L		120820 ppb	11:06:24
1	K 766.490 Radial†	17788.6	17469.8	11022 µg/L		11022 ppb	11:06:03
1	Mg 279.077 IEC†	1442.6	1440.9	14658 µg/L		14658 ppb	11:06:24
1	Na 589.592 Radial†	8720.9	8206.4	2184.8 µg/L		2184.8 ppb	11:06:24
1	Sr 421.552†	18586.5	18035.9	107.89 µg/L		107.89 ppb	11:06:03
1	Sc 361.383	1996292.8	1996292.8	101.00 %			11:07:29
1	Y 371.029	1319561.2	1319561.2	105.64 %			11:07:29
1	Ag 328.068†	3500.8	3558.6	40.593 µg/L		40.593 ppb	11:07:34
1	As 188.979†	9.5	12.1	32.763 µg/L		32.763 ppb	11:07:54
1	B 249.677†	1897.3	1508.5	9.1800 µg/L		9.1800 ppb	11:07:34
1	Ba 233.527†	19634.0	19462.9	543.89 µg/L		543.89 ppb	11:07:34
1	Be 313.107†	16385.9	12389.3	7.1226 µg/L		7.1226 ppb	11:07:34
1	Cd 226.502†	411.5	532.7	1.6699 µg/L		1.6699 ppb	11:07:54
1	Co 228.616†	599.2	642.6	27.544 µg/L		27.544 ppb	11:07:54
1	Cr 267.716†	21709.0	21595.4	483.96 µg/L		483.96 ppb	11:07:34
1	Cu 324.752†	12255.5	8233.7	77.167 µg/L		77.167 ppb	11:07:34
1	Mn 257.610†	743512.5	736271.8	2625.2 µg/L		2625.2 ppb	11:07:29
1	Mo 202.031†	91.9	78.4	14.095 µg/L		14.095 ppb	11:07:54
1	Ni 231.604†	4186.8	3813.8	232.45 µg/L		232.45 ppb	11:07:54
1	P 214.914†	1199.5	967.7	2141.4 µg/L		2141.4 ppb	11:07:54
1	Pb 220.353†	505.6	439.4	121.80 µg/L		121.80 ppb	11:07:54
1	S 181.975 Axial†	113.1	88.9	494.00 µg/L		494.00 ppb	11:07:54
1	Sb 206.836†	32.4	8.1	2.0384 µg/L		2.0384 ppb	11:07:54
1	Se 196.026†	-303.3	-308.3	14.969 µg/L		14.969 ppb	11:07:54
1	SiO2†	275057.7	269934.9	55114 µg/L		55114 ppb	11:07:29
1	Si 251.611†	317577.9	314139.6	25447 µg/L		25447 ppb	11:07:29
1	Sn 189.927†	-9.2	-32.6	-1.3797 µg/L		-1.3797 ppb	11:07:54
1	Ti 334.940†	1331372.9	1317438.6	3183.7 µg/L		3183.7 ppb	11:07:29
1	Tl 190.801†	-42.8	-17.8	1.5049 µg/L		1.5049 ppb	11:07:54
1	U 409.014†	-1529.3	-1327.9	-141.05 µg/L		-141.05 ppb	11:07:29
1	V 292.402†	10827.9	10835.6	137.84 µg/L		137.84 ppb	11:07:34
1	Zn 213.857†	18748.4	17929.8	496.31 µg/L		496.31 ppb	11:07:34
2	Sc RADIAL	78664.1	78664.1	100 %			11:06:29
2	Al 396.153Radial†	86490.4	86318.0	55905 µg/L		55905 ppb	11:06:29
2	Ca 317.933Radial†	19084.8	18793.1	13541 µg/L		13541 ppb	11:06:50
2	Fe 238.204 Radial†	9121.2	9083.6	120280 µg/L		120280 ppb	11:06:50
2	K 766.490 Radial†	17944.7	17504.1	11043 µg/L		11043 ppb	11:06:29
2	Mg 279.077 IEC†	1438.0	1426.5	14511 µg/L		14511 ppb	11:06:50
2	Na 589.592 Radial†	8714.9	8140.8	2167.4 µg/L		2167.4 ppb	11:06:50
2	Sr 421.552†	18599.8	17922.3	107.21 µg/L		107.21 ppb	11:06:29
2	Sc 361.383	1982708.3	1982708.3	100.32 %			11:08:02
2	Y 371.029	1311483.3	1311483.3	104.99 %			11:08:02
2	Ag 328.068†	3482.7	3564.3	40.618 µg/L		40.618 ppb	11:08:08
2	As 188.979†	9.4	12.1	32.698 µg/L		32.698 ppb	11:08:28
2	B 249.677†	1924.3	1548.3	11.349 µg/L		11.349 ppb	11:08:08
2	Ba 233.527†	19656.2	19618.2	548.23 µg/L		548.23 ppb	11:08:08
2	Be 313.107†	16312.9	12427.6	7.1448 µg/L		7.1448 ppb	11:08:08
2	Cd 226.502†	394.9	519.0	1.3450 µg/L		1.3450 ppb	11:08:28
2	Co 228.616†	589.0	636.5	27.202 µg/L		27.202 ppb	11:08:28
2	Cr 267.716†	21634.5	21668.4	485.60 µg/L		485.60 ppb	11:08:08
2	Cu 324.752†	12138.3	8200.0	76.845 µg/L		76.845 ppb	11:08:08
2	Mn 257.610†	740879.9	738691.0	2633.7 µg/L		2633.7 ppb	11:08:02
2	Mo 202.031†	87.4	74.5	13.600 µg/L		13.600 ppb	11:08:28
2	Ni 231.604†	4182.4	3837.8	233.90 µg/L		233.90 ppb	11:08:28
2	P 214.914†	1194.6	971.0	2149.5 µg/L		2149.5 ppb	11:08:28
2	Pb 220.353†	507.1	444.3	123.19 µg/L		123.19 ppb	11:08:28

2	S 181.975 Axial†	112.6	89.1	495.30 µg/L	495.30 ppb	11:08:28
2	Sb 206.836†	35.9	11.8	5.9732 µg/L	5.9732 ppb	11:08:28
2	Se 196.026†	-299.7	-306.7	15.155 µg/L	15.155 ppb	11:08:28
2	SiO2†	274042.0	270788.3	55289 µg/L	55289 ppb	11:08:02
2	Si 251.611†	316305.2	315025.2	25518 µg/L	25518 ppb	11:08:02
2	Sn 189.927†	-6.4	-29.9	0.0350 µg/L	0.0350 ppb	11:08:28
2	Ti 334.940†	1326169.6	1321283.0	3193.0 µg/L	3193.0 ppb	11:08:02
2	Tl 190.801†	-34.7	-10.1	14.569 µg/L	14.569 ppb	11:08:28
2	U 409.014†	-1470.0	-1279.2	-136.44 µg/L	-136.44 ppb	11:08:02
2	V 292.402†	10847.5	10928.6	138.94 µg/L	138.94 ppb	11:08:08
2	Zn 213.857†	18711.9	18020.6	498.90 µg/L	498.90 ppb	11:08:08
3	Sc RADIAL	79196.8	79196.8	101 %		11:06:55
3	Al 396.153Radial†	87094.0	86335.8	55917 µg/L	55917 ppb	11:06:55
3	Ca 317.933Radial†	19099.8	18679.8	13460 µg/L	13460 ppb	11:07:16
3	Fe 238.204 Radial†	9125.3	9026.4	119530 µg/L	119530 ppb	11:07:16
3	K 766.490 Radial†	18005.4	17443.9	11005 µg/L	11005 ppb	11:06:55
3	Mg 279.077 IEC†	1446.1	1424.9	14495 µg/L	14495 ppb	11:07:16
3	Na 589.592 Radial†	8733.8	8101.2	2156.8 µg/L	2156.8 ppb	11:07:16
3	Sr 421.552†	18693.5	17890.4	107.02 µg/L	107.02 ppb	11:06:55
3	Sc 361.383	1993551.8	1993551.8	100.87 %		11:08:36
3	Y 371.029	1316420.7	1316420.7	105.39 %		11:08:36
3	Ag 328.068†	3405.3	3468.7	39.672 µg/L	39.672 ppb	11:08:42
3	As 188.979†	9.2	11.8	31.962 µg/L	31.962 ppb	11:09:03
3	B 249.677†	1815.0	1429.5	6.0869 µg/L	6.0869 ppb	11:08:42
3	Ba 233.527†	19141.3	19001.1	530.98 µg/L	530.98 ppb	11:08:42
3	Be 313.107†	15997.3	12026.3	6.9006 µg/L	6.9006 ppb	11:08:42
3	Cd 226.502†	377.9	499.9	0.8762 µg/L	0.8762 ppb	11:09:03
3	Co 228.616†	554.5	599.1	25.352 µg/L	25.352 ppb	11:09:03
3	Cr 267.716†	20831.5	20755.0	465.13 µg/L	465.13 ppb	11:08:42
3	Cu 324.752†	11940.5	7938.2	74.819 µg/L	74.819 ppb	11:08:42
3	Mn 257.610†	731271.3	725147.6	2585.6 µg/L	2585.6 ppb	11:08:36
3	Mo 202.031†	84.2	70.9	13.133 µg/L	13.133 ppb	11:09:03
3	Ni 231.604†	3959.5	3594.1	219.13 µg/L	219.13 ppb	11:09:03
3	P 214.914†	1144.1	914.4	2019.9 µg/L	2019.9 ppb	11:09:03
3	Pb 220.353†	475.6	410.4	113.72 µg/L	113.72 ppb	11:09:03
3	S 181.975 Axial†	108.3	84.3	468.45 µg/L	468.45 ppb	11:09:03
3	Sb 206.836†	32.6	8.3	2.4429 µg/L	2.4429 ppb	11:09:03
3	Se 196.026†	-271.3	-277.0	56.881 µg/L	56.881 ppb	11:09:03
3	SiO2†	271472.7	266755.1	54465 µg/L	54465 ppb	11:08:36
3	Si 251.611†	313477.3	310506.5	25152 µg/L	25152 ppb	11:08:36
3	Sn 189.927†	-10.5	-33.9	-2.3336 µg/L	-2.3336 ppb	11:09:03
3	Ti 334.940†	1305106.9	1293210.3	3125.2 µg/L	3125.2 ppb	11:08:36
3	Tl 190.801†	-37.4	-12.6	9.6540 µg/L	9.6540 ppb	11:09:03
3	U 409.014†	-1521.6	-1322.3	-140.34 µg/L	-140.34 ppb	11:08:36
3	V 292.402†	10465.1	10490.7	133.57 µg/L	133.57 ppb	11:08:42
3	Zn 213.857†	18272.7	17483.7	483.91 µg/L	483.91 ppb	11:08:42

Mean Data: 244921001|942675|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1990851.0	100.73 %	%	0.363			0.36%
Sc RADIAL	78663.5	100 %	%	0.7			0.68%
Y 371.029	1315821.7	105.34 %	%	0.326			0.31%
Ag 328.068†	3530.5	40.294 µg/L	µg/L	0.5388	40.294 ppb	0.5388	1.34%
Al 396.153Radial†	86261.0	55868 µg/L	µg/L	74.2	55868 ppb	74.2	0.13%
As 188.979†	12.0	32.474 µg/L	µg/L	0.4451	32.474 ppb	0.4451	1.37%
B 249.677†	1495.4	8.8719 µg/L	µg/L	2.64444	8.8719 ppb	2.64444	29.81%
Ba 233.527†	19360.7	541.03 µg/L	µg/L	8.971	541.03 ppb	8.971	1.66%
Be 313.107†	12281.1	7.0560 µg/L	µg/L	0.13500	7.0560 ppb	0.13500	1.91%
Ca 317.933Radial†	18796.3	13544 µg/L	µg/L	85.1	13544 ppb	85.1	0.63%
Cd 226.502†	517.2	1.2970 µg/L	µg/L	0.39901	1.2970 ppb	0.39901	30.76%
Co 228.616†	626.0	26.699 µg/L	µg/L	1.1795	26.699 ppb	1.1795	4.42%
Cr 267.716†	21339.6	478.23 µg/L	µg/L	11.375	478.23 ppb	11.375	2.38%
Cu 324.752†	8124.0	76.277 µg/L	µg/L	1.2727	76.277 ppb	1.2727	1.67%
Fe 238.204 Radial†	9078.2	120210 µg/L	µg/L	652.4	120210 ppb	652.4	0.54%
K 766.490 Radial†	17472.6	11024 µg/L	µg/L	19.1	11024 ppb	19.1	0.17%
Mg 279.077 IEC†	1430.8	14555 µg/L	µg/L	89.9	14555 ppb	89.9	0.62%
Mn 257.610†	733370.1	2614.9 µg/L	µg/L	25.67	2614.9 ppb	25.67	0.98%
Mo 202.031†	74.6	13.609 µg/L	µg/L	0.4812	13.609 ppb	0.4812	3.54%
Na 589.592 Radial†	8149.5	2169.7 µg/L	µg/L	14.15	2169.7 ppb	14.15	0.65%

Ni 231.604†	3748.6	228.49 µg/L	8.138	228.49 ppb	8.138	3.56%
P 214.914†	951.0	2103.6 µg/L	72.62	2103.6 ppb	72.62	3.45%
Pb 220.353†	431.4	119.57 µg/L	5.115	119.57 ppb	5.115	4.28%
S 181.975 Axial†	87.4	485.92 µg/L	15.139	485.92 ppb	15.139	3.12%
Sb 206.836†	9.4	3.4848 µg/L	2.16448	3.4848 ppb	2.16448	62.11%
Se 196.026†	-297.3	29.002 µg/L	24.1446	29.002 ppb	24.1446	83.25%
SiO2†	269159.4	54956 µg/L	434.0	54956 ppb	434.0	0.79%
Si 251.611†	313223.7	25373 µg/L	194.0	25373 ppb	194.0	0.76%
Sn 189.927†	-32.1	-1.2261 µg/L	1.19173	-1.2261 ppb	1.19173	97.20%
Sr 421.552†	17949.6	107.37 µg/L	0.458	107.37 ppb	0.458	0.43%
Ti 334.940†	1310644.0	3167.3 µg/L	36.79	3167.3 ppb	36.79	1.16%
Tl 190.801†	-13.5	8.5761 µg/L	6.59862	8.5761 ppb	6.59862	76.94%
U 409.014†	-1309.8	-139.28 µg/L	2.482	-139.28 ppb	2.482	1.78%
V 292.402†	10751.6	136.78 µg/L	2.834	136.78 ppb	2.834	2.07%
Zn 213.857†	17811.4	493.04 µg/L	8.013	493.04 ppb	8.013	1.63%

Sequence No.: 4

Sample ID: 1202018181|942675|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 304

Date Collected: 1/29/2010 11:09:13

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202018181|942675|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	78993.5	78993.5	101 %		11:09:45
1	Al 396.153Radial†	68422.2	68007.3	44046 µg/L	44046 ppb	11:09:45
1	Ca 317.933Radial†	16540.2	16185.6	11662 µg/L	11662 ppb	11:09:45
1	Fe 238.204 Radial†	8227.7	8157.9	108030 µg/L	108030 ppb	11:10:05
1	K 766.490 Radial†	15371.9	14873.4	9383.7 µg/L	9383.7 ppb	11:09:45
1	Mg 279.077 IEC†	1211.1	1195.1	12149 µg/L	12149 ppb	11:10:05
1	Na 589.592 Radial†	8033.5	7427.7	1977.5 µg/L	1977.5 ppb	11:09:45
1	Sr 421.552†	15182.8	14450.1	86.439 µg/L	86.439 ppb	11:09:45
1	Sc 361.383	2000481.6	2000481.6	101.22 %		11:11:10
1	Y 371.029	1319390.9	1319390.9	105.63 %		11:11:10
1	Ag 328.068†	4357.8	4398.1	47.216 µg/L	47.216 ppb	11:11:16
1	As 188.979†	8.8	11.4	30.522 µg/L	30.522 ppb	11:11:36
1	B 249.677†	1668.8	1278.9	4.5607 µg/L	4.5607 ppb	11:11:16
1	Ba 233.527†	15480.1	15318.1	428.07 µg/L	428.07 ppb	11:11:16
1	Be 313.107†	14734.9	10724.1	6.0777 µg/L	6.0777 ppb	11:11:16
1	Cd 226.502†	365.7	486.6	1.6994 µg/L	1.6994 ppb	11:11:36
1	Co 228.616†	463.3	507.0	20.745 µg/L	20.745 ppb	11:11:36
1	Cr 267.716†	9858.0	9841.7	220.59 µg/L	220.59 ppb	11:11:16
1	Cu 324.752†	11391.2	7354.5	68.941 µg/L	68.941 ppb	11:11:16
1	Mn 257.610†	651827.2	644146.3	2297.1 µg/L	2297.1 ppb	11:11:10
1	Mo 202.031†	58.2	44.9	9.5503 µg/L	9.5503 ppb	11:11:36
1	Ni 231.604†	2324.8	1965.4	120.38 µg/L	120.38 ppb	11:11:36
1	P 214.914†	1098.6	865.5	1913.7 µg/L	1913.7 ppb	11:11:36
1	Pb 220.353†	484.3	417.3	115.43 µg/L	115.43 ppb	11:11:36
1	S 181.975 Axial†	101.5	77.1	428.76 µg/L	428.76 ppb	11:11:36
1	Sb 206.836†	31.3	7.0	3.9282 µg/L	3.9282 ppb	11:11:36
1	Se 196.026†	-262.6	-267.3	26.086 µg/L	26.086 ppb	11:11:36
1	SiO2†	264800.6	259230.8	52929 µg/L	52929 ppb	11:11:10
1	Si 251.611†	305589.9	301637.2	24434 µg/L	24434 ppb	11:11:10
1	Sn 189.927†	-5.5	-28.9	-1.4095 µg/L	-1.4095 ppb	11:11:36
1	Ti 334.940†	1251114.7	1235384.3	2985.5 µg/L	2985.5 ppb	11:11:10
1	Tl 190.801†	-35.0	-10.0	12.243 µg/L	12.243 ppb	11:11:36
1	U 409.014†	-1495.3	-1291.1	-135.73 µg/L	-135.73 ppb	11:11:10
1	V 292.402†	8968.5	8976.1	114.15 µg/L	114.15 ppb	11:11:16
1	Zn 213.857†	17779.4	16933.6	469.57 µg/L	469.57 ppb	11:11:16
2	Sc RADIAL	78658.4	78658.4	100 %		11:10:11
2	Al 396.153Radial†	68647.0	68521.2	44379 µg/L	44379 ppb	11:10:11
2	Ca 317.933Radial†	16559.2	16274.6	11727 µg/L	11727 ppb	11:10:11
2	Fe 238.204 Radial†	8238.1	8203.1	108620 µg/L	108620 ppb	11:10:32
2	K 766.490 Radial†	15416.9	14983.3	9453.0 µg/L	9453.0 ppb	11:10:11
2	Mg 279.077 IEC†	1210.1	1199.2	12191 µg/L	12191 ppb	11:10:32
2	Na 589.592 Radial†	8052.0	7480.1	1991.5 µg/L	1991.5 ppb	11:10:11
2	Sr 421.552†	15254.4	14585.8	87.251 µg/L	87.251 ppb	11:10:11
2	Sc 361.383	1998325.4	1998325.4	101.11 %		11:11:44
2	Y 371.029	1317689.4	1317689.4	105.49 %		11:11:44
2	Ag 328.068†	4337.7	4382.8	47.128 µg/L	47.128 ppb	11:11:49
2	As 188.979†	6.6	9.2	25.778 µg/L	25.778 ppb	11:12:10
2	B 249.677†	1713.8	1325.1	6.4442 µg/L	6.4442 ppb	11:11:49
2	Ba 233.527†	15710.7	15562.7	434.91 µg/L	434.91 ppb	11:11:49
2	Be 313.107†	14836.9	10840.7	6.1540 µg/L	6.1540 ppb	11:11:49
2	Cd 226.502†	360.9	482.2	1.5071 µg/L	1.5071 ppb	11:12:10
2	Co 228.616†	468.2	512.4	21.020 µg/L	21.020 ppb	11:12:10
2	Cr 267.716†	10033.5	10025.9	224.72 µg/L	224.72 ppb	11:11:49
2	Cu 324.752†	11511.4	7485.5	69.985 µg/L	69.985 ppb	11:11:49
2	Mn 257.610†	652574.7	645580.5	2302.2 µg/L	2302.2 ppb	11:11:44
2	Mo 202.031†	63.7	50.4	10.239 µg/L	10.239 ppb	11:12:10
2	Ni 231.604†	2322.0	1965.2	120.37 µg/L	120.37 ppb	11:12:10
2	P 214.914†	1117.4	885.4	1958.9 µg/L	1958.9 ppb	11:12:10
2	Pb 220.353†	480.9	414.4	114.61 µg/L	114.61 ppb	11:12:10



2	S 181.975 Axial†	103.2	79.0	439.11 µg/L	439.11 ppb	11:12:10
2	Sb 206.836†	28.9	4.5	1.3396 µg/L	1.3396 ppb	11:12:10
2	Se 196.026†	-270.4	-275.4	16.335 µg/L	16.335 ppb	11:12:10
2	SiO2†	265030.7	259740.6	53033 µg/L	53033 ppb	11:11:44
2	Si 251.611†	305702.4	302074.2	24469 µg/L	24469 ppb	11:11:44
2	Sn 189.927†	3.2	-20.3	3.4894 µg/L	3.4894 ppb	11:12:10
2	Ti 334.940†	1252228.6	1237819.8	2991.4 µg/L	2991.4 ppb	11:11:44
2	Tl 190.801†	-42.5	-17.5	-0.1503 µg/L	-0.1503 ppb	11:12:10
2	U 409.014†	-1387.6	-1186.1	-126.06 µg/L	-126.06 ppb	11:11:44
2	V 292.402†	9102.8	9118.5	115.93 µg/L	115.93 ppb	11:11:49
2	Zn 213.857†	18082.9	17252.7	478.50 µg/L	478.50 ppb	11:11:49
3	Sc RADIAL	78568.0	78568.0	100 %		11:10:37
3	Al 396.153Radial†	68924.9	68877.6	44610 µg/L	44610 ppb	11:10:37
3	Ca 317.933Radial†	16595.9	16330.2	11767 µg/L	11767 ppb	11:10:37
3	Fe 238.204 Radial†	8214.8	8189.3	108440 µg/L	108440 ppb	11:10:57
3	K 766.490 Radial†	15506.4	15090.4	9520.6 µg/L	9520.6 ppb	11:10:37
3	Mg 279.077 IEC†	1219.8	1210.3	12304 µg/L	12304 ppb	11:10:57
3	Na 589.592 Radial†	8096.4	7533.7	2005.7 µg/L	2005.7 ppb	11:10:37
3	Sr 421.552†	15328.3	14677.2	87.797 µg/L	87.797 ppb	11:10:37
3	Sc 361.383	2018162.8	2018162.8	102.11 %		11:12:18
3	Y 371.029	1329498.1	1329498.1	106.44 %		11:12:18
3	Ag 328.068†	4295.5	4299.3	46.320 µg/L	46.320 ppb	11:12:23
3	As 188.979†	7.1	9.7	26.793 µg/L	26.793 ppb	11:12:44
3	B 249.677†	1617.8	1214.4	1.2748 µg/L	1.2748 ppb	11:12:23
3	Ba 233.527†	14986.3	14700.5	410.81 µg/L	410.81 ppb	11:12:23
3	Be 313.107†	14279.3	10150.4	5.7197 µg/L	5.7197 ppb	11:12:23
3	Cd 226.502†	327.5	446.0	0.4928 µg/L	0.4928 ppb	11:12:44
3	Co 228.616†	426.0	466.6	18.745 µg/L	18.745 ppb	11:12:44
3	Cr 267.716†	9454.5	9361.3	209.82 µg/L	209.82 ppb	11:12:23
3	Cu 324.752†	11205.3	7073.8	66.941 µg/L	66.941 ppb	11:12:23
3	Mn 257.610†	642747.1	629611.8	2245.6 µg/L	2245.6 ppb	11:12:18
3	Mo 202.031†	58.8	45.0	9.5694 µg/L	9.5694 ppb	11:12:44
3	Ni 231.604†	2200.0	1823.2	111.77 µg/L	111.77 ppb	11:12:44
3	P 214.914†	1048.0	806.5	1777.7 µg/L	1777.7 ppb	11:12:44
3	Pb 220.353†	462.0	391.3	108.16 µg/L	108.16 ppb	11:12:44
3	S 181.975 Axial†	94.4	69.3	385.41 µg/L	385.41 ppb	11:12:44
3	Sb 206.836†	27.6	3.0	-0.1345 µg/L	-0.1345 ppb	11:12:44
3	Se 196.026†	-246.4	-249.3	54.870 µg/L	54.870 ppb	11:12:44
3	SiO2†	262482.1	254668.2	51997 µg/L	51997 ppb	11:12:18
3	Si 251.611†	302771.9	296232.3	23996 µg/L	23996 ppb	11:12:18
3	Sn 189.927†	-1.7	-25.1	0.8236 µg/L	0.8236 ppb	11:12:44
3	Ti 334.940†	1231212.2	1205063.8	2912.2 µg/L	2912.2 ppb	11:12:18
3	Tl 190.801†	-36.5	-11.2	9.4192 µg/L	9.4192 ppb	11:12:44
3	U 409.014†	-1493.1	-1276.0	-134.39 µg/L	-134.39 ppb	11:12:18
3	V 292.402†	8652.3	8588.8	109.49 µg/L	109.49 ppb	11:12:23
3	Zn 213.857†	17250.1	16261.4	450.68 µg/L	450.68 ppb	11:12:23

Mean Data: 1202018181|942675|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	2005656.6	101.48 %	0.551			0.54%
Sc RADIAL	78740.0	100 %	0.3			0.28%
Y 371.029	1322192.8	105.85 %	0.511			0.48%
Ag 328.068†	4360.1	46.888 µg/L	0.4936	46.888 ppb	0.4936	1.05%
Al 396.153Radial†	68468.7	44345 µg/L	283.4	44345 ppb	283.4	0.64%
As 188.979†	10.1	27.698 µg/L	2.4980	27.698 ppb	2.4980	9.02%
B 249.677†	1272.8	4.0932 µg/L	2.61619	4.0932 ppb	2.61619	63.91%
Ba 233.527†	15193.8	424.60 µg/L	12.417	424.60 ppb	12.417	2.92%
Be 313.107†	10571.8	5.9838 µg/L	0.23188	5.9838 ppb	0.23188	3.88%
Ca 317.933Radial†	16263.5	11719 µg/L	52.6	11719 ppb	52.6	0.45%
Cd 226.502†	471.6	1.2331 µg/L	0.64827	1.2331 ppb	0.64827	52.57%
Co 228.616†	495.3	20.170 µg/L	1.2418	20.170 ppb	1.2418	6.16%
Cr 267.716†	9743.0	218.37 µg/L	7.690	218.37 ppb	7.690	3.52%
Cu 324.752†	7304.6	68.622 µg/L	1.5469	68.622 ppb	1.5469	2.25%
Fe 238.204 Radial†	8183.4	108360 µg/L	306.6	108360 ppb	306.6	0.28%
K 766.490 Radial†	14982.3	9452.4 µg/L	68.46	9452.4 ppb	68.46	0.72%
Mg 279.077 IEC†	1201.5	12215 µg/L	80.3	12215 ppb	80.3	0.66%
Mn 257.610†	639779.5	2281.6 µg/L	31.31	2281.6 ppb	31.31	1.37%
Mo 202.031†	46.8	9.7863 µg/L	0.39231	9.7863 ppb	0.39231	4.01%
Na 589.592 Radial†	7480.5	1991.6 µg/L	14.12	1991.6 ppb	14.12	0.71%

Ni 231.604†	1917.9	117.50 µg/L	4.967	117.50 ppb	4.967	4.23%
P 214.914†	852.5	1883.4 µg/L	94.32	1883.4 ppb	94.32	5.01%
Pb 220.353†	407.7	112.74 µg/L	3.980	112.74 ppb	3.980	3.53%
S 181.975 Axial†	75.1	417.76 µg/L	28.487	417.76 ppb	28.487	6.82%
Sb 206.836†	4.8	1.7111 µg/L	2.05667	1.7111 ppb	2.05667	120.20%
Se 196.026†	-264.0	32.430 µg/L	20.0360	32.430 ppb	20.0360	61.78%
SiO2†	257879.9	52653 µg/L	570.3	52653 ppb	570.3	1.08%
Si 251.611†	299981.2	24300 µg/L	263.6	24300 ppb	263.6	1.08%
Sn 189.927†	-24.8	0.9678 µg/L	2.45267	0.9678 ppb	2.45267	253.42%
Sr 421.552†	14571.0	87.163 µg/L	0.6833	87.163 ppb	0.6833	0.78%
Ti 334.940†	1226089.3	2963.1 µg/L	44.12	2963.1 ppb	44.12	1.49%
Tl 190.801†	-12.9	7.1707 µg/L	6.49551	7.1707 ppb	6.49551	90.58%
U 409.014†	-1251.1	-132.06 µg/L	5.238	-132.06 ppb	5.238	3.97%
V 292.402†	8894.5	113.19 µg/L	3.322	113.19 ppb	3.322	2.94%
Zn 213.857†	16815.9	466.25 µg/L	14.204	466.25 ppb	14.204	3.05%

Sequence No.: 5  
 Sample ID: 1202018182|942675|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 305  
 Date Collected: 1/29/2010 11:12:53  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: 1202018182|942675|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	78918.9	78918.9	101 %		11:13:26
1	Al 396.153Radial†	114657.4	114049.9	73856 µg/L	73856 ppb	11:13:26
1	Ca 317.933Radial†	23655.0	23276.4	16772 µg/L	16772 ppb	11:13:46
1	Fe 238.204 Radial†	9175.9	9108.6	120620 µg/L	120620 ppb	11:13:46
1	K 766.490 Radial†	26644.2	26097.5	16465 µg/L	16465 ppb	11:13:26
1	Mg 279.077 IEC†	1957.7	1938.7	19775 µg/L	19775 ppb	11:13:46
1	Na 589.592 Radial†	25879.8	25182.4	6704.4 µg/L	6704.4 ppb	11:13:26
1	Sr 421.552†	98889.1	97705.7	584.47 µg/L	584.47 ppb	11:13:26
1	Sc 361.383	1971856.0	1971856.0	99.767 %		11:14:52
1	Y 371.029	1304970.0	1304970.0	104.47 %		11:14:52
1	Ag 328.068†	60335.0	60568.3	558.52 µg/L	558.52 ppb	11:14:57
1	As 188.979†	237.0	240.2	528.78 µg/L	528.78 ppb	11:15:18
1	B 249.677†	12747.6	12407.3	525.93 µg/L	525.93 ppb	11:14:57
1	Ba 233.527†	33339.9	33441.6	935.27 µg/L	935.27 ppb	11:14:57
1	Be 313.107†	788929.1	786935.3	527.88 µg/L	527.88 ppb	11:14:52
1	Cd 226.502†	18356.3	18524.4	511.87 µg/L	511.87 ppb	11:14:57
1	Co 228.616†	9979.3	10051.9	526.47 µg/L	526.47 ppb	11:14:57
1	Cr 267.716†	32598.9	32777.1	734.83 µg/L	734.83 ppb	11:14:57
1	Cu 324.752†	85129.1	81427.7	613.82 µg/L	613.82 ppb	11:14:57
1	Mn 257.610†	696038.6	697809.7	2488.7 µg/L	2488.7 ppb	11:14:52
1	Mo 202.031†	4167.0	4164.2	509.05 µg/L	509.05 ppb	11:15:18
1	Ni 231.604†	10888.6	10582.6	641.69 µg/L	641.69 ppb	11:14:57
1	P 214.914†	1417.1	1200.5	2634.8 µg/L	2634.8 ppb	11:15:18
1	Pb 220.353†	2276.6	2220.7	622.48 µg/L	622.48 ppb	11:15:18
1	S 181.975 Axial†	1044.9	1024.2	5694.2 µg/L	5694.2 ppb	11:15:18
1	Sb 206.836†	453.6	430.7	453.97 µg/L	453.97 ppb	11:15:18
1	Se 196.026†	54.9	47.1	546.88 µg/L	546.88 ppb	11:15:18
1	SiO2†	290556.8	288845.0	58975 µg/L	58975 ppb	11:14:52
1	Si 251.611†	335403.9	335903.7	27210 µg/L	27210 ppb	11:14:52
1	Sn 189.927†	962.6	941.4	549.26 µg/L	549.26 ppb	11:15:18
1	Ti 334.940†	1723998.8	1727315.6	4174.2 µg/L	4174.2 ppb	11:14:52
1	Tl 190.801†	266.9	292.1	524.30 µg/L	524.30 ppb	11:15:18
1	U 409.014†	4023.4	4219.0	374.36 µg/L	374.36 ppb	11:14:52
1	V 292.402†	52946.8	53185.6	652.34 µg/L	652.34 ppb	11:14:57
1	Zn 213.857†	37009.7	36463.8	1014.4 µg/L	1014.4 ppb	11:14:57
2	Sc RADIAL	78407.3	78407.3	99.9 %		11:13:52
2	Al 396.153Radial†	114518.2	114654.6	74248 µg/L	74248 ppb	11:13:52
2	Ca 317.933Radial†	23604.6	23379.4	16846 µg/L	16846 ppb	11:14:12
2	Fe 238.204 Radial†	9173.9	9166.1	121390 µg/L	121390 ppb	11:14:12
2	K 766.490 Radial†	26546.0	26172.1	16512 µg/L	16512 ppb	11:13:52
2	Mg 279.077 IEC†	1955.7	1949.3	19884 µg/L	19884 ppb	11:14:12
2	Na 589.592 Radial†	25857.0	25327.5	6743.0 µg/L	6743.0 ppb	11:13:52
2	Sr 421.552†	98610.4	98068.4	586.64 µg/L	586.64 ppb	11:13:52
2	Sc 361.383	1952788.0	1952788.0	98.803 %		11:15:26
2	Y 371.029	1292603.5	1292603.5	103.48 %		11:15:26
2	Ag 328.068†	60493.6	61319.3	565.40 µg/L	565.40 ppb	11:15:31
2	As 188.979†	243.5	249.1	548.21 µg/L	548.21 ppb	11:15:52
2	B 249.677†	12776.6	12561.5	532.85 µg/L	532.85 ppb	11:15:31
2	Ba 233.527†	33228.1	33654.8	941.24 µg/L	941.24 ppb	11:15:31
2	Be 313.107†	784711.0	790387.6	530.20 µg/L	530.20 ppb	11:15:26
2	Cd 226.502†	18398.7	18747.0	518.09 µg/L	518.09 ppb	11:15:31
2	Co 228.616†	9969.5	10139.7	531.10 µg/L	531.10 ppb	11:15:31
2	Cr 267.716†	32567.1	33063.9	741.26 µg/L	741.26 ppb	11:15:31
2	Cu 324.752†	85351.2	82485.7	621.69 µg/L	621.69 ppb	11:15:31
2	Mn 257.610†	692481.8	701022.2	2500.1 µg/L	2500.1 ppb	11:15:26
2	Mo 202.031†	4138.0	4175.6	510.47 µg/L	510.47 ppb	11:15:52
2	Ni 231.604†	10874.4	10674.7	647.27 µg/L	647.27 ppb	11:15:31
2	P 214.914†	1404.3	1201.5	2635.6 µg/L	2635.6 ppb	11:15:52
2	Pb 220.353†	2260.8	2227.0	624.24 µg/L	624.24 ppb	11:15:52

2	S 181.975 Axial†	1051.6	1041.3	5788.9 µg/L	5788.9 ppb	11:15:52
2	Sb 206.836†	447.6	429.0	452.19 µg/L	452.19 ppb	11:15:52
2	Se 196.026†	56.6	49.4	553.27 µg/L	553.27 ppb	11:15:52
2	SiO2†	288975.6	290088.5	59229 µg/L	59229 ppb	11:15:26
2	Si 251.611†	333843.2	337606.8	27348 µg/L	27348 ppb	11:15:26
2	Sn 189.927†	949.8	937.9	547.38 µg/L	547.38 ppb	11:15:52
2	Ti 334.940†	1715828.8	1735919.9	4195.0 µg/L	4195.0 ppb	11:15:26
2	Tl 190.801†	262.3	290.0	521.08 µg/L	521.08 ppb	11:15:52
2	U 409.014†	3922.6	4156.3	368.42 µg/L	368.42 ppb	11:15:26
2	V 292.402†	53078.5	53837.1	660.24 µg/L	660.24 ppb	11:15:31
2	Zn 213.857†	37131.6	36949.3	1027.9 µg/L	1027.9 ppb	11:15:31
3	Sc RADIAL	77725.8	77725.8	99.0 %		11:14:18
3	Al 396.153Radial†	113939.5	115075.3	74521 µg/L	74521 ppb	11:14:18
3	Ca 317.933Radial†	23794.6	23778.5	17134 µg/L	17134 ppb	11:14:38
3	Fe 238.204 Radial†	9230.4	9303.7	123210 µg/L	123210 ppb	11:14:38
3	K 766.490 Radial†	26370.6	26228.0	16547 µg/L	16547 ppb	11:14:18
3	Mg 279.077 IEC†	1969.6	1980.5	20202 µg/L	20202 ppb	11:14:38
3	Na 589.592 Radial†	25732.4	25428.6	6770.0 µg/L	6770.0 ppb	11:14:18
3	Sr 421.552†	97936.1	98252.9	587.74 µg/L	587.74 ppb	11:14:18
3	Sc 361.383	1970936.1	1970936.1	99.721 %		11:16:00
3	Y 371.029	1302308.2	1302308.2	104.26 %		11:16:00
3	Ag 328.068†	59186.2	59444.5	548.37 µg/L	548.37 ppb	11:16:06
3	As 188.979†	233.8	237.2	522.37 µg/L	522.37 ppb	11:16:26
3	B 249.677†	12388.6	12053.3	507.76 µg/L	507.76 ppb	11:16:06
3	Ba 233.527†	32111.9	32225.8	901.26 µg/L	901.26 ppb	11:16:06
3	Be 313.107†	771257.3	769583.1	516.25 µg/L	516.25 ppb	11:16:00
3	Cd 226.502†	17884.6	18060.0	498.39 µg/L	498.39 ppb	11:16:06
3	Co 228.616†	9576.3	9652.4	505.39 µg/L	505.39 ppb	11:16:06
3	Cr 267.716†	31056.8	31245.9	700.50 µg/L	700.50 ppb	11:16:06
3	Cu 324.752†	82066.3	78396.1	591.95 µg/L	591.95 ppb	11:16:06
3	Mn 257.610†	681303.7	683359.3	2437.8 µg/L	2437.8 ppb	11:16:00
3	Mo 202.031†	3891.8	3890.1	475.95 µg/L	475.95 ppb	11:16:26
3	Ni 231.604†	10456.0	10153.8	615.79 µg/L	615.79 ppb	11:16:06
3	P 214.914†	1342.9	1126.8	2464.6 µg/L	2464.6 ppb	11:16:26
3	Pb 220.353†	2146.3	2091.1	586.02 µg/L	586.02 ppb	11:16:26
3	S 181.975 Axial†	1009.1	988.8	5497.4 µg/L	5497.4 ppb	11:16:26
3	Sb 206.836†	431.6	408.8	430.61 µg/L	430.61 ppb	11:16:26
3	Se 196.026†	66.5	58.7	574.53 µg/L	574.53 ppb	11:16:26
3	SiO2†	284492.2	282899.4	57761 µg/L	57761 ppb	11:16:00
3	Si 251.611†	328755.5	329393.6	26682 µg/L	26682 ppb	11:16:00
3	Sn 189.927†	881.8	860.8	504.26 µg/L	504.26 ppb	11:16:26
3	Ti 334.940†	1683164.1	1687173.2	4077.1 µg/L	4077.1 ppb	11:16:00
3	Tl 190.801†	260.4	285.6	512.41 µg/L	512.41 ppb	11:16:26
3	U 409.014†	3966.6	4163.9	368.85 µg/L	368.85 ppb	11:16:00
3	V 292.402†	50776.0	51033.5	626.24 µg/L	626.24 ppb	11:16:06
3	Zn 213.857†	35820.0	35288.1	981.31 µg/L	981.31 ppb	11:16:06

Mean Data: 1202018182|942675|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1965193.4	99.430 %		0.5441			0.55%
Sc RADIAL	78350.6	99.8 %		0.76			0.76%
Y 371.029	1299960.6	104.07 %		0.521			0.50%
Ag 328.068†	60444.0	557.43 µg/L		8.567	557.43 ppb	8.567	1.54%
Al 396.153Radial†	114593.3	74208 µg/L		334.1	74208 ppb	334.1	0.45%
As 188.979†	242.2	533.12 µg/L		13.456	533.12 ppb	13.456	2.52%
B 249.677†	12340.7	522.18 µg/L		12.958	522.18 ppb	12.958	2.48%
Ba 233.527†	33107.4	925.92 µg/L		21.566	925.92 ppb	21.566	2.33%
Be 313.107†	782302.0	524.78 µg/L		7.478	524.78 ppb	7.478	1.42%
Ca 317.933Radial†	23478.1	16917 µg/L		191.1	16917 ppb	191.1	1.13%
Cd 226.502†	18443.8	509.45 µg/L		10.071	509.45 ppb	10.071	1.98%
Co 228.616†	9948.0	520.99 µg/L		13.701	520.99 ppb	13.701	2.63%
Cr 267.716†	32362.3	725.53 µg/L		21.911	725.53 ppb	21.911	3.02%
Cu 324.752†	80769.8	609.15 µg/L		15.407	609.15 ppb	15.407	2.53%
Fe 238.204 Radial†	9192.8	121740 µg/L		1327.2	121740 ppb	1327.2	1.09%
K 766.490 Radial†	26165.8	16508 µg/L		41.3	16508 ppb	41.3	0.25%
Mg 279.077 IEC†	1956.2	19954 µg/L		221.7	19954 ppb	221.7	1.11%
Mn 257.610†	694063.7	2475.5 µg/L		33.20	2475.5 ppb	33.20	1.34%
Mo 202.031†	4076.6	498.49 µg/L		19.531	498.49 ppb	19.531	3.92%
Na 589.592 Radial†	25312.8	6739.1 µg/L		32.95	6739.1 ppb	32.95	0.49%

Ni 231.604†	10470.4	634.92 µg/L	16.801	634.92 ppb	16.801	2.65%
P 214.914†	1176.3	2578.3 µg/L	98.51	2578.3 ppb	98.51	3.82%
Pb 220.353†	2179.6	610.91 µg/L	21.577	610.91 ppb	21.577	3.53%
S 181.975 Axial†	1018.1	5660.2 µg/L	148.72	5660.2 ppb	148.72	2.63%
Sb 206.836†	422.8	445.59 µg/L	13.004	445.59 ppb	13.004	2.92%
Se 196.026†	51.7	558.23 µg/L	14.473	558.23 ppb	14.473	2.59%
SiO2†	287277.6	58655 µg/L	784.5	58655 ppb	784.5	1.34%
Si 251.611†	334301.3	27080 µg/L	351.1	27080 ppb	351.1	1.30%
Sn 189.927†	913.4	533.63 µg/L	25.456	533.63 ppb	25.456	4.77%
Sr 421.552†	98009.0	586.28 µg/L	1.665	586.28 ppb	1.665	0.28%
Ti 334.940†	1716802.9	4148.8 µg/L	62.91	4148.8 ppb	62.91	1.52%
Tl 190.801†	289.2	519.26 µg/L	6.151	519.26 ppb	6.151	1.18%
U 409.014†	4179.8	370.54 µg/L	3.310	370.54 ppb	3.310	0.89%
V 292.402†	52685.4	646.27 µg/L	17.792	646.27 ppb	17.792	2.75%
Zn 213.857†	36233.7	1007.9 µg/L	23.98	1007.9 ppb	23.98	2.38%

Sequence No.: 6

Sample ID: 1202018185|942675|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 306

Date Collected: 1/29/2010 11:16:35

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202018185|942675|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77553.1	77553.1	98.8 %		11:17:08
1	Al 396.153Radial†	146678.1	148461.6	96143 µg/L	96143 ppb	11:17:08
1	Ca 317.933Radial†	26589.3	26660.1	19210 µg/L	19210 ppb	11:17:28
1	Fe 238.204 Radial†	10508.4	10617.7	140610 µg/L	140610 ppb	11:17:28
1	K 766.490 Radial†	30595.9	30563.1	19282 µg/L	19282 ppb	11:17:08
1	Mg 279.077 IEC†	2312.6	2332.1	23792 µg/L	23792 ppb	11:17:28
1	Na 589.592 Radial†	26482.9	26245.9	6987.5 µg/L	6987.5 ppb	11:17:08
1	Sr 421.552†	102971.5	103568.8	619.54 µg/L	619.54 ppb	11:17:08
1	Sc 361.383	1959544.7	1959544.7	99.144 %		11:18:33
1	Y 371.029	1297023.1	1297023.1	103.84 %		11:18:33
1	Ag 328.068†	62703.3	63337.0	584.99 µg/L	584.99 ppb	11:18:39
1	As 188.979†	242.5	247.3	545.16 µg/L	545.16 ppb	11:18:59
1	B 249.677†	13168.0	12911.7	539.51 µg/L	539.51 ppb	11:18:39
1	Ba 233.527†	36392.5	36730.5	1027.2 µg/L	1027.2 ppb	11:18:39
1	Be 313.107†	794604.8	797628.2	535.01 µg/L	535.01 ppb	11:18:33
1	Cd 226.502†	18529.1	18814.3	517.86 µg/L	517.86 ppb	11:18:39
1	Co 228.616†	10150.6	10287.5	538.64 µg/L	538.64 ppb	11:18:39
1	Cr 267.716†	35525.3	35934.0	805.59 µg/L	805.59 ppb	11:18:39
1	Cu 324.752†	88286.6	85148.5	643.88 µg/L	643.88 ppb	11:18:39
1	Mn 257.610†	799186.4	806230.9	2875.5 µg/L	2875.5 ppb	11:18:33
1	Mo 202.031†	4205.3	4229.0	517.67 µg/L	517.67 ppb	11:18:59
1	Ni 231.604†	11447.0	11214.4	680.19 µg/L	680.19 ppb	11:18:39
1	P 214.914†	1367.6	1159.6	2527.7 µg/L	2527.7 ppb	11:18:59
1	Pb 220.353†	2347.7	2306.8	647.08 µg/L	647.08 ppb	11:18:59
1	S 181.975 Axial†	1081.2	1067.4	5934.4 µg/L	5934.4 ppb	11:18:59
1	Sb 206.836†	446.1	425.9	448.05 µg/L	448.05 ppb	11:18:59
1	Se 196.026†	13.1	5.3	562.54 µg/L	562.54 ppb	11:18:59
1	SiO2†	282168.4	282214.0	57621 µg/L	57621 ppb	11:18:33
1	Si 251.611†	325711.6	328240.0	26589 µg/L	26589 ppb	11:18:33
1	Sn 189.927†	957.3	942.1	552.85 µg/L	552.85 ppb	11:18:59
1	Ti 334.940†	1787416.8	1802137.6	4354.8 µg/L	4354.8 ppb	11:18:33
1	Tl 190.801†	271.6	298.5	537.15 µg/L	537.15 ppb	11:18:59
1	U 409.014†	3920.1	4140.2	364.10 µg/L	364.10 ppb	11:18:33
1	V 292.402†	55330.2	55923.0	686.55 µg/L	686.55 ppb	11:18:39
1	Zn 213.857†	39183.8	38889.7	1081.2 µg/L	1081.2 ppb	11:18:39
2	Sc RADIAL	78149.6	78149.6	99.6 %		11:17:34
2	Al 396.153Radial†	148368.5	149026.1	96509 µg/L	96509 ppb	11:17:34
2	Ca 317.933Radial†	26720.6	26586.6	19157 µg/L	19157 ppb	11:17:54
2	Fe 238.204 Radial†	10556.6	10584.9	140170 µg/L	140170 ppb	11:17:54
2	K 766.490 Radial†	30926.7	30658.9	19343 µg/L	19343 ppb	11:17:34
2	Mg 279.077 IEC†	2319.0	2320.6	23674 µg/L	23674 ppb	11:17:54
2	Na 589.592 Radial†	26824.3	26384.2	7024.4 µg/L	7024.4 ppb	11:17:34
2	Sr 421.552†	104220.1	104027.3	622.28 µg/L	622.28 ppb	11:17:34
2	Sc 361.383	1956826.8	1956826.8	99.007 %		11:19:08
2	Y 371.029	1295199.0	1295199.0	103.69 %		11:19:08
2	Ag 328.068†	62052.5	62767.5	579.79 µg/L	579.79 ppb	11:19:13
2	As 188.979†	244.9	250.1	551.31 µg/L	551.31 ppb	11:19:34
2	B 249.677†	12975.0	12735.2	531.36 µg/L	531.36 ppb	11:19:13
2	Ba 233.527†	35978.1	36363.0	1016.9 µg/L	1016.9 ppb	11:19:13
2	Be 313.107†	795880.6	800029.9	536.62 µg/L	536.62 ppb	11:19:08
2	Cd 226.502†	18316.8	18625.8	512.56 µg/L	512.56 ppb	11:19:13
2	Co 228.616†	10026.9	10176.8	532.72 µg/L	532.72 ppb	11:19:13
2	Cr 267.716†	35110.9	35565.2	797.32 µg/L	797.32 ppb	11:19:13
2	Cu 324.752†	87460.3	84437.6	638.61 µg/L	638.61 ppb	11:19:13
2	Mn 257.610†	800457.0	808633.8	2883.9 µg/L	2883.9 ppb	11:19:08
2	Mo 202.031†	4187.9	4217.3	516.23 µg/L	516.23 ppb	11:19:34
2	Ni 231.604†	11343.3	11125.7	674.82 µg/L	674.82 ppb	11:19:13
2	P 214.914†	1357.2	1151.0	2508.8 µg/L	2508.8 ppb	11:19:34
2	Pb 220.353†	2351.7	2314.1	649.18 µg/L	649.18 ppb	11:19:34

2	S 181.975 Axial†	1077.3	1065.0	5920.8 µg/L	5920.8 ppb	11:19:34
2	Sb 206.836†	437.9	418.3	440.11 µg/L	440.11 ppb	11:19:34
2	Se 196.026†	17.5	9.7	567.52 µg/L	567.52 ppb	11:19:34
2	SiO2†	282091.5	282531.6	57686 µg/L	57686 ppb	11:19:08
2	Si 251.611†	325890.9	328877.3	26641 µg/L	26641 ppb	11:19:08
2	Sn 189.927†	946.1	932.1	547.13 µg/L	547.13 ppb	11:19:34
2	Ti 334.940†	1790079.3	1807330.9	4367.3 µg/L	4367.3 ppb	11:19:08
2	Tl 190.801†	277.8	305.2	548.43 µg/L	548.43 ppb	11:19:34
2	U 409.014†	3918.8	4144.3	364.55 µg/L	364.55 ppb	11:19:08
2	V 292.402†	54818.1	55483.3	681.21 µg/L	681.21 ppb	11:19:13
2	Zn 213.857†	38897.4	38655.3	1074.6 µg/L	1074.6 ppb	11:19:13
3	Sc RADIAL	78471.7	78471.7	100.0 %		11:18:00
3	Al 396.153Radial†	149041.6	149087.8	96549 µg/L	96549 ppb	11:18:00
3	Ca 317.933Radial†	26750.0	26505.8	19099 µg/L	19099 ppb	11:18:20
3	Fe 238.204 Radial†	10585.3	10570.2	139980 µg/L	139980 ppb	11:18:20
3	K 766.490 Radial†	31026.4	30631.2	19325 µg/L	19325 ppb	11:18:00
3	Mg 279.077 IEC†	2323.0	2315.1	23617 µg/L	23617 ppb	11:18:20
3	Na 589.592 Radial†	26984.7	26434.1	7037.7 µg/L	7037.7 ppb	11:18:00
3	Sr 421.552†	104728.4	104106.1	622.75 µg/L	622.75 ppb	11:18:00
3	Sc 361.383	1960382.4	1960382.4	99.187 %		11:19:42
3	Y 371.029	1295598.3	1295598.3	103.72 %		11:19:42
3	Ag 328.068†	61564.8	62162.1	574.19 µg/L	574.19 ppb	11:19:47
3	As 188.979†	235.2	239.8	528.88 µg/L	528.88 ppb	11:20:08
3	B 249.677†	12816.9	12552.0	522.75 µg/L	522.75 ppb	11:19:47
3	Ba 233.527†	35169.6	35481.9	992.28 µg/L	992.28 ppb	11:19:47
3	Be 313.107†	777641.0	780182.7	523.31 µg/L	523.31 ppb	11:19:42
3	Cd 226.502†	18063.7	18337.1	504.39 µg/L	504.39 ppb	11:19:47
3	Co 228.616†	9782.5	9912.0	518.84 µg/L	518.84 ppb	11:19:47
3	Cr 267.716†	34009.2	34390.1	770.98 µg/L	770.98 ppb	11:19:47
3	Cu 324.752†	85358.0	82157.9	621.87 µg/L	621.87 ppb	11:19:47
3	Mn 257.610†	782870.9	789437.1	2815.9 µg/L	2815.9 ppb	11:19:42
3	Mo 202.031†	3947.0	3966.8	485.87 µg/L	485.87 ppb	11:20:08
3	Ni 231.604†	11017.1	10776.0	653.66 µg/L	653.66 ppb	11:19:47
3	P 214.914†	1308.1	1098.9	2390.4 µg/L	2390.4 ppb	11:20:08
3	Pb 220.353†	2248.6	2205.9	618.76 µg/L	618.76 ppb	11:20:08
3	S 181.975 Axial†	1035.0	1020.4	5673.0 µg/L	5673.0 ppb	11:20:08
3	Sb 206.836†	408.1	387.4	407.25 µg/L	407.25 ppb	11:20:08
3	Se 196.026†	29.0	21.3	584.16 µg/L	584.16 ppb	11:20:08
3	SiO2†	276122.3	275996.8	56352 µg/L	56352 ppb	11:19:42
3	Si 251.611†	318877.6	321209.5	26019 µg/L	26019 ppb	11:19:42
3	Sn 189.927†	896.4	880.3	517.85 µg/L	517.85 ppb	11:20:08
3	Ti 334.940†	1746858.3	1760476.2	4254.1 µg/L	4254.1 ppb	11:19:42
3	Tl 190.801†	255.0	281.6	507.99 µg/L	507.99 ppb	11:20:08
3	U 409.014†	3909.1	4127.4	363.01 µg/L	363.01 ppb	11:19:42
3	V 292.402†	53332.9	53885.5	661.67 µg/L	661.67 ppb	11:19:47
3	Zn 213.857†	37998.6	37677.9	1047.3 µg/L	1047.3 ppb	11:19:47

Mean Data: 1202018185|942675|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1958918.0	99.113 %	0.0940			0.09%
Sc RADIAL	78058.1	99.5 %	0.59			0.60%
Y 371.029	1295940.1	103.75 %	0.077			0.07%
Ag 328.068†	62755.5	579.66 µg/L	5.404	579.66 ppb	5.404	0.93%
Al 396.153Radial†	148858.5	96401 µg/L	223.7	96401 ppb	223.7	0.23%
As 188.979†	245.7	541.78 µg/L	11.594	541.78 ppb	11.594	2.14%
B 249.677†	12733.0	531.21 µg/L	8.382	531.21 ppb	8.382	1.58%
Ba 233.527†	36191.8	1012.1 µg/L	17.95	1012.1 ppb	17.95	1.77%
Be 313.107†	792613.6	531.65 µg/L	7.265	531.65 ppb	7.265	1.37%
Ca 317.933Radial†	26584.2	19155 µg/L	55.6	19155 ppb	55.6	0.29%
Cd 226.502†	18592.4	511.60 µg/L	6.789	511.60 ppb	6.789	1.33%
Co 228.616†	10125.4	530.06 µg/L	10.162	530.06 ppb	10.162	1.92%
Cr 267.716†	35296.4	791.29 µg/L	18.074	791.29 ppb	18.074	2.28%
Cu 324.752†	83914.7	634.79 µg/L	11.495	634.79 ppb	11.495	1.81%
Fe 238.204 Radial†	10590.9	140250 µg/L	322.4	140250 ppb	322.4	0.23%
K 766.490 Radial†	30617.7	19317 µg/L	31.1	19317 ppb	31.1	0.16%
Mg 279.077 IEC†	2322.6	23695 µg/L	89.0	23695 ppb	89.0	0.38%
Mn 257.610†	801434.0	2858.4 µg/L	37.10	2858.4 ppb	37.10	1.30%
Mo 202.031†	4137.7	506.59 µg/L	17.956	506.59 ppb	17.956	3.54%
Na 589.592 Radial†	26354.7	7016.5 µg/L	25.96	7016.5 ppb	25.96	0.37%

Ni 231.604†	11038.7	669.56 µg/L	14.026	669.56 ppb	14.026	2.09%
P 214.914†	1136.5	2475.7 µg/L	74.41	2475.7 ppb	74.41	3.01%
Pb 220.353†	2275.6	638.34 µg/L	16.986	638.34 ppb	16.986	2.66%
S 181.975 Axial†	1050.9	5842.7 µg/L	147.15	5842.7 ppb	147.15	2.52%
Sb 206.836†	410.6	431.80 µg/L	21.635	431.80 ppb	21.635	5.01%
Se 196.026†	12.1	571.41 µg/L	11.322	571.41 ppb	11.322	1.98%
SiO2†	280247.4	57220 µg/L	752.3	57220 ppb	752.3	1.31%
Si 251.611†	326108.9	26416 µg/L	344.7	26416 ppb	344.7	1.30%
Sn 189.927†	918.2	539.28 µg/L	18.774	539.28 ppb	18.774	3.48%
Sr 421.552†	103900.7	621.53 µg/L	1.736	621.53 ppb	1.736	0.28%
Ti 334.940†	1789981.6	4325.4 µg/L	62.08	4325.4 ppb	62.08	1.44%
Tl 190.801†	295.1	531.19 µg/L	20.870	531.19 ppb	20.870	3.93%
U 409.014†	4137.3	363.88 µg/L	0.793	363.88 ppb	0.793	0.22%
V 292.402†	55097.3	676.48 µg/L	13.095	676.48 ppb	13.095	1.94%
Zn 213.857†	38407.6	1067.7 µg/L	17.97	1067.7 ppb	17.97	1.68%



Sequence No.: 7

Sample ID: 1202018183|942675|5

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 307

Date Collected: 1/29/2010 11:20:17

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202018183|942675|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	75622.9	75622.9	96.4 %		11:20:50
1	Al 396.153Radial†	17422.7	18110.5	11730 µg/L	11730 ppb	11:20:50
1	Ca 317.933Radial†	4070.8	3977.4	2865.9 µg/L	2865.9 ppb	11:21:10
1	Fe 238.204 Radial†	1886.1	1941.1	25703 µg/L	25703 ppb	11:21:10
1	K 766.490 Radial†	3932.1	3682.0	2323.0 µg/L	2323.0 ppb	11:20:50
1	Mg 279.077 IEC†	299.2	302.3	3075.2 µg/L	3075.2 ppb	11:21:10
1	Na 589.592 Radial†	1966.2	1486.9	395.85 µg/L	395.85 ppb	11:20:50
1	Sr 421.552†	4209.6	3734.6	22.340 µg/L	22.340 ppb	11:20:50
1	Sc 361.383	1946107.6	1946107.6	98.465 %		11:22:13
1	Y 371.029	1240118.9	1240118.9	99.280 %		11:22:13
1	Ag 328.068†	659.5	762.4	8.6820 µg/L	8.6820 ppb	11:22:19
1	As 188.979†	0.0	2.7	7.3071 µg/L	7.3071 ppb	11:22:39
1	B 249.677†	514.4	152.5	-6.0284 µg/L	-6.0284 ppb	11:22:19
1	Ba 233.527†	3978.5	4064.5	113.58 µg/L	113.58 ppb	11:22:19
1	Be 313.107†	6517.0	2784.8	1.6199 µg/L	1.6199 ppb	11:22:19
1	Cd 226.502†	-18.6	106.4	0.1593 µg/L	0.1593 ppb	11:22:39
1	Co 228.616†	86.4	137.1	5.9055 µg/L	5.9055 ppb	11:22:39
1	Cr 267.716†	4343.9	4513.8	101.16 µg/L	101.16 ppb	11:22:19
1	Cu 324.752†	5471.3	1656.6	15.720 µg/L	15.720 ppb	11:22:19
1	Mn 257.610†	152303.7	154826.5	552.08 µg/L	552.08 ppb	11:22:13
1	Mo 202.031†	32.0	20.0	3.3936 µg/L	3.3936 ppb	11:22:39
1	Ni 231.604†	1121.4	807.4	49.214 µg/L	49.214 ppb	11:22:39
1	P 214.914†	409.2	195.7	432.22 µg/L	432.22 ppb	11:22:39
1	Pb 220.353†	158.1	99.4	27.570 µg/L	27.570 ppb	11:22:39
1	S 181.975 Axial†	40.5	18.0	99.979 µg/L	99.979 ppb	11:22:39
1	Sb 206.836†	28.8	5.3	4.2362 µg/L	4.2362 ppb	11:22:39
1	Se 196.026†	-51.6	-60.4	11.045 µg/L	11.045 ppb	11:22:39
1	SiO2†	56790.0	55286.2	11288 µg/L	11288 ppb	11:22:19
1	Si 251.611†	63866.1	64579.6	5231.2 µg/L	5231.2 ppb	11:22:19
1	Sn 189.927†	20.2	-3.0	1.9284 µg/L	1.9284 ppb	11:22:39
1	Ti 334.940†	272103.8	275643.0	666.12 µg/L	666.12 ppb	11:22:13
1	Tl 190.801†	-24.7	-0.6	5.5589 µg/L	5.5589 ppb	11:22:39
1	U 409.014†	-601.3	-424.4	-43.195 µg/L	-43.195 ppb	11:22:19
1	V 292.402†	2133.5	2282.1	29.032 µg/L	29.032 ppb	11:22:19
1	Zn 213.857†	4327.5	3762.7	104.14 µg/L	104.14 ppb	11:22:19
2	Sc RADIAL	75910.9	75910.9	96.7 %		11:21:16
2	Al 396.153Radial†	17567.9	18192.0	11782 µg/L	11782 ppb	11:21:16
2	Ca 317.933Radial†	4059.9	3950.1	2846.2 µg/L	2846.2 ppb	11:21:36
2	Fe 238.204 Radial†	1879.1	1926.4	25509 µg/L	25509 ppb	11:21:36
2	K 766.490 Radial†	3972.1	3707.9	2339.3 µg/L	2339.3 ppb	11:21:16
2	Mg 279.077 IEC†	300.3	302.4	3075.7 µg/L	3075.7 ppb	11:21:36
2	Na 589.592 Radial†	2009.5	1523.9	405.70 µg/L	405.70 ppb	11:21:16
2	Sr 421.552†	4260.1	3770.3	22.554 µg/L	22.554 ppb	11:21:16
2	Sc 361.383	1968672.1	1968672.1	99.606 %		11:22:46
2	Y 371.029	1254236.7	1254236.7	100.41 %		11:22:46
2	Ag 328.068†	611.3	706.3	8.1601 µg/L	8.1601 ppb	11:22:52
2	As 188.979†	1.4	4.1	10.318 µg/L	10.318 ppb	11:23:12
2	B 249.677†	479.4	111.4	-7.8739 µg/L	-7.8739 ppb	11:22:52
2	Ba 233.527†	4034.2	4074.1	113.85 µg/L	113.85 ppb	11:22:52
2	Be 313.107†	6579.5	2771.7	1.6115 µg/L	1.6115 ppb	11:22:52
2	Cd 226.502†	-10.5	114.8	0.4170 µg/L	0.4170 ppb	11:23:12
2	Co 228.616†	89.4	139.1	6.0138 µg/L	6.0138 ppb	11:23:12
2	Cr 267.716†	4409.8	4529.4	101.51 µg/L	101.51 ppb	11:22:52
2	Cu 324.752†	5437.9	1559.4	14.980 µg/L	14.980 ppb	11:22:52
2	Mn 257.610†	153699.0	154454.5	550.74 µg/L	550.74 ppb	11:22:46
2	Mo 202.031†	25.7	13.2	2.5708 µg/L	2.5708 ppb	11:23:12
2	Ni 231.604†	1124.5	797.6	48.614 µg/L	48.614 ppb	11:23:12
2	P 214.914†	408.4	190.2	419.61 µg/L	419.61 ppb	11:23:12
2	Pb 220.353†	157.6	97.1	26.939 µg/L	26.939 ppb	11:23:12

2	S 181.975 Axial†	37.7	14.7	81.949 µg/L	81.949 ppb	11:23:12
2	Sb 206.836†	26.4	2.5	1.2424 µg/L	1.2424 ppb	11:23:12
2	Se 196.026†	-55.5	-63.6	5.3410 µg/L	5.3410 ppb	11:23:12
2	SiO2†	57243.8	55080.7	11246 µg/L	11246 ppb	11:22:52
2	Si 251.611†	64386.1	64358.2	5213.3 µg/L	5213.3 ppb	11:22:52
2	Sn 189.927†	16.2	-7.2	-0.4771 µg/L	-0.4771 ppb	11:23:12
2	Ti 334.940†	274739.8	275122.1	664.86 µg/L	664.86 ppb	11:22:46
2	Tl 190.801†	-23.9	0.5	7.3868 µg/L	7.3868 ppb	11:23:12
2	U 409.014†	-674.6	-491.1	-49.362 µg/L	-49.362 ppb	11:22:52
2	V 292.402†	2111.8	2235.5	28.449 µg/L	28.449 ppb	11:22:52
2	Zn 213.857†	4361.7	3746.7	103.70 µg/L	103.70 ppb	11:22:52
3	Sc RADIAL	75366.0	75366.0	96.0 %		11:21:42
3	Al 396.153Radial†	17475.6	18227.3	11805 µg/L	11805 ppb	11:21:42
3	Ca 317.933Radial†	4080.4	4001.8	2883.5 µg/L	2883.5 ppb	11:22:02
3	Fe 238.204 Radial†	1882.5	1944.0	25742 µg/L	25742 ppb	11:22:02
3	K 766.490 Radial†	3994.7	3761.1	2372.9 µg/L	2372.9 ppb	11:21:42
3	Mg 279.077 IEC†	301.5	305.8	3110.9 µg/L	3110.9 ppb	11:22:02
3	Na 589.592 Radial†	1953.9	1480.9	394.28 µg/L	394.28 ppb	11:21:42
3	Sr 421.552†	4205.1	3744.8	22.401 µg/L	22.401 ppb	11:21:42
3	Sc 361.383	1950179.0	1950179.0	98.671 %		11:23:19
3	Y 371.029	1242282.4	1242282.4	99.453 %		11:23:19
3	Ag 328.068†	657.4	758.9	8.6413 µg/L	8.6413 ppb	11:23:25
3	As 188.979†	2.2	4.9	12.040 µg/L	12.040 ppb	11:23:45
3	B 249.677†	490.9	127.5	-7.2374 µg/L	-7.2374 ppb	11:23:25
3	Ba 233.527†	3879.7	3956.0	110.55 µg/L	110.55 ppb	11:23:25
3	Be 313.107†	6460.9	2714.2	1.5788 µg/L	1.5788 ppb	11:23:25
3	Cd 226.502†	-21.2	103.8	0.0762 µg/L	0.0762 ppb	11:23:45
3	Co 228.616†	80.6	131.0	5.6131 µg/L	5.6131 ppb	11:23:45
3	Cr 267.716†	4149.3	4307.3	96.529 µg/L	96.529 ppb	11:23:25
3	Cu 324.752†	5487.2	1661.2	15.758 µg/L	15.758 ppb	11:23:25
3	Mn 257.610†	149321.1	151480.8	540.23 µg/L	540.23 ppb	11:23:19
3	Mo 202.031†	27.8	15.6	2.8731 µg/L	2.8731 ppb	11:23:45
3	Ni 231.604†	1037.8	720.4	43.944 µg/L	43.944 ppb	11:23:45
3	P 214.914†	392.7	178.2	391.74 µg/L	391.74 ppb	11:23:45
3	Pb 220.353†	150.5	91.3	25.319 µg/L	25.319 ppb	11:23:45
3	S 181.975 Axial†	38.7	16.1	89.655 µg/L	89.655 ppb	11:23:45
3	Sb 206.836†	29.4	5.8	4.7805 µg/L	4.7805 ppb	11:23:45
3	Se 196.026†	-47.5	-56.1	17.600 µg/L	17.600 ppb	11:23:45
3	SiO2†	55322.5	53678.5	10960 µg/L	10960 ppb	11:23:25
3	Si 251.611†	62092.5	62646.7	5074.7 µg/L	5074.7 ppb	11:23:25
3	Sn 189.927†	19.3	-3.9	1.3971 µg/L	1.3971 ppb	11:23:45
3	Ti 334.940†	265787.2	268664.4	649.25 µg/L	649.25 ppb	11:23:19
3	Tl 190.801†	-21.2	3.1	11.393 µg/L	11.393 ppb	11:23:45
3	U 409.014†	-598.3	-420.1	-42.801 µg/L	-42.801 ppb	11:23:25
3	V 292.402†	1994.8	2137.0	27.274 µg/L	27.274 ppb	11:23:25
3	Zn 213.857†	4208.6	3633.0	100.51 µg/L	100.51 ppb	11:23:25

Mean Data: 1202018183|942675|5

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1954986.2	98.914 %		0.6085			0.62%
Sc RADIAL	75633.3	96.4 %		0.35			0.36%
Y 371.029	1245546.0	99.715 %		0.6087			0.61%
Ag 328.068†	742.5	8.4945 µg/L		0.29027	8.4945 ppb	0.29027	3.42%
Al 396.153Radial†	18176.6	11772 µg/L		38.8	11772 ppb	38.8	0.33%
As 188.979†	3.9	9.8884 µg/L		2.39546	9.8884 ppb	2.39546	24.22%
B 249.677†	130.4	-7.0466 µg/L		0.93743	-7.0466 ppb	0.93743	13.30%
Ba 233.527†	4031.5	112.66 µg/L		1.834	112.66 ppb	1.834	1.63%
Be 313.107†	2756.9	1.6034 µg/L		0.02172	1.6034 ppb	0.02172	1.35%
Ca 317.933Radial†	3976.5	2865.2 µg/L		18.65	2865.2 ppb	18.65	0.65%
Cd 226.502†	108.3	0.2175 µg/L		0.17773	0.2175 ppb	0.17773	81.72%
Co 228.616†	135.7	5.8441 µg/L		0.20727	5.8441 ppb	0.20727	3.55%
Cr 267.716†	4450.2	99.731 µg/L		2.7778	99.731 ppb	2.7778	2.79%
Cu 324.752†	1625.7	15.486 µg/L		0.4389	15.486 ppb	0.4389	2.83%
Fe 238.204 Radial†	1937.2	25651 µg/L		124.9	25651 ppb	124.9	0.49%
K 766.490 Radial†	3717.0	2345.1 µg/L		25.45	2345.1 ppb	25.45	1.09%
Mg 279.077 IEC†	303.5	3087.3 µg/L		20.43	3087.3 ppb	20.43	0.66%
Mn 257.610†	153587.3	547.68 µg/L		6.491	547.68 ppb	6.491	1.19%
Mo 202.031†	16.3	2.9458 µg/L		0.41619	2.9458 ppb	0.41619	14.13%
Na 589.592 Radial†	1497.2	398.61 µg/L		6.192	398.61 ppb	6.192	1.55%

Ni 231.604†	775.1	47.257 µg/L	2.8850	47.257 ppb	2.8850	6.10%
P 214.914†	188.0	414.53 µg/L	20.713	414.53 ppb	20.713	5.00%
Pb 220.353†	95.9	26.609 µg/L	1.1614	26.609 ppb	1.1614	4.36%
S 181.975 Axial†	16.3	90.528 µg/L	9.0470	90.528 ppb	9.0470	9.99%
Sb 206.836†	4.5	3.4197 µg/L	1.90513	3.4197 ppb	1.90513	55.71%
Se 196.026†	-60.0	11.329 µg/L	6.1346	11.329 ppb	6.1346	54.15%
SiO2†	54681.8	11165 µg/L	178.6	11165 ppb	178.6	1.60%
Si 251.611†	63861.5	5173.1 µg/L	85.69	5173.1 ppb	85.69	1.66%
Sn 189.927†	-4.7	0.9495 µg/L	1.26365	0.9495 ppb	1.26365	133.09%
Sr 421.552†	3749.9	22.432 µg/L	0.1098	22.432 ppb	0.1098	0.49%
Ti 334.940†	273143.2	660.08 µg/L	9.399	660.08 ppb	9.399	1.42%
Tl 190.801†	1.0	8.1128 µg/L	2.98402	8.1128 ppb	2.98402	36.78%
U 409.014†	-445.2	-45.119 µg/L	3.6797	-45.119 ppb	3.6797	8.16%
V 292.402†	2218.2	28.252 µg/L	0.8954	28.252 ppb	0.8954	3.17%
Zn 213.857†	3714.2	102.78 µg/L	1.980	102.78 ppb	1.980	1.93%

Sequence No.: 9

Sample ID: 244921002|942675|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 309

Date Collected: 1/29/2010 11:27:31

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 244921002|942675|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77725.7	77725.7	99.0 %		11:28:04
1	Al 396.153Radial†	141558.3	142962.4	92592 µg/L	92592 ppb	11:28:04
1	Ca 317.933Radial†	27217.3	27234.4	19624 µg/L	19624 ppb	11:28:24
1	Fe 238.204 Radial†	10511.1	10596.8	140320 µg/L	140320 ppb	11:28:24
1	K 766.490 Radial†	27363.3	27230.3	17180 µg/L	17180 ppb	11:28:04
1	Mg 279.077 IEC†	2029.1	2040.6	20792 µg/L	20792 ppb	11:28:24
1	Na 589.592 Radial†	6127.5	5633.4	1499.8 µg/L	1499.8 ppb	11:28:24
1	Sr 421.552†	39397.1	39145.6	234.17 µg/L	234.17 ppb	11:28:04
1	Sc 361.383	1939697.1	1939697.1	98.140 %		11:29:29
1	Y 371.029	1267424.1	1267424.1	101.47 %		11:29:29
1	Ag 328.068†	19676.3	20141.7	192.37 µg/L	192.37 ppb	11:29:35
1	As 188.979†	18.5	21.6	54.201 µg/L	54.201 ppb	11:29:55
1	B 249.677†	2262.0	1934.9	18.806 µg/L	18.806 ppb	11:29:35
1	Ba 233.527†	44604.8	45474.0	1270.7 µg/L	1270.7 ppb	11:29:35
1	Be 313.107†	18894.9	15419.2	9.2833 µg/L	9.2833 ppb	11:29:35
1	Cd 226.502†	567.6	703.7	4.1779 µg/L	4.1779 ppb	11:29:35
1	Co 228.616†	1124.5	1195.1	57.595 µg/L	57.595 ppb	11:29:55
1	Cr 267.716†	10208.4	10504.0	235.52 µg/L	235.52 ppb	11:29:35
1	Cu 324.752†	31395.9	28090.9	225.48 µg/L	225.48 ppb	11:29:35
1	Mn 257.610†	1119308.9	1140667.9	4061.0 µg/L	4061.0 ppb	11:29:29
1	Mo 202.031†	-12.4	-25.2	2.2753 µg/L	2.2753 ppb	11:29:55
1	Ni 231.604†	1889.2	1593.6	98.237 µg/L	98.237 ppb	11:29:55
1	P 214.914†	699.1	492.6	1025.5 µg/L	1025.5 ppb	11:29:55
1	Pb 220.353†	879.2	834.7	233.61 µg/L	233.61 ppb	11:29:55
1	S 181.975 Axial†	187.7	168.1	934.74 µg/L	934.74 ppb	11:29:55
1	Sb 206.836†	30.6	7.2	3.1668 µg/L	3.1668 ppb	11:29:55
1	Se 196.026†	-340.0	-354.4	22.127 µg/L	22.127 ppb	11:29:55
1	SiO2†	301300.9	304621.3	62196 µg/L	62196 ppb	11:29:29
1	Si 251.611†	347898.6	354209.0	28693 µg/L	28693 ppb	11:29:29
1	Sn 189.927†	-42.3	-66.5	-16.224 µg/L	-16.224 ppb	11:29:55
1	Ti 334.940†	1163459.4	1184803.4	2862.7 µg/L	2862.7 ppb	11:29:29
1	Tl 190.801†	-46.1	-22.5	-4.4779 µg/L	-4.4779 ppb	11:29:55
1	U 409.014†	-684.8	-511.5	-68.246 µg/L	-68.246 ppb	11:29:29
1	V 292.402†	21270.4	21788.8	270.08 µg/L	270.08 ppb	11:29:35
1	Zn 213.857†	20538.1	20295.0	561.88 µg/L	561.88 ppb	11:29:35
2	Sc RADIAL	78223.3	78223.3	99.7 %		11:28:30
2	Al 396.153Radial†	142513.7	143011.8	92624 µg/L	92624 ppb	11:28:30
2	Ca 317.933Radial†	27176.8	27018.9	19468 µg/L	19468 ppb	11:28:50
2	Fe 238.204 Radial†	10494.3	10512.5	139200 µg/L	139200 ppb	11:28:50
2	K 766.490 Radial†	27506.9	27198.6	17160 µg/L	17160 ppb	11:28:30
2	Mg 279.077 IEC†	2022.3	2020.8	20590 µg/L	20590 ppb	11:28:50
2	Na 589.592 Radial†	6115.8	5582.2	1486.2 µg/L	1486.2 ppb	11:28:50
2	Sr 421.552†	39649.8	39146.2	234.17 µg/L	234.17 ppb	11:28:30
2	Sc 361.383	1959279.6	1959279.6	99.131 %		11:30:03
2	Y 371.029	1280530.4	1280530.4	102.52 %		11:30:03
2	Ag 328.068†	19672.4	19937.4	190.44 µg/L	190.44 ppb	11:30:09
2	As 188.979†	15.0	17.9	46.053 µg/L	46.053 ppb	11:30:29
2	B 249.677†	2220.2	1869.8	16.300 µg/L	16.300 ppb	11:30:09
2	Ba 233.527†	44616.4	45031.4	1258.3 µg/L	1258.3 ppb	11:30:09
2	Be 313.107†	18459.6	14787.6	8.8555 µg/L	8.8555 ppb	11:30:09
2	Cd 226.502†	574.1	704.4	4.3231 µg/L	4.3231 ppb	11:30:09
2	Co 228.616†	1115.0	1174.1	56.462 µg/L	56.462 ppb	11:30:29
2	Cr 267.716†	10182.3	10373.7	232.60 µg/L	232.60 ppb	11:30:09
2	Cu 324.752†	31387.3	27762.5	222.91 µg/L	222.91 ppb	11:30:09
2	Mn 257.610†	1135780.8	1145885.0	4079.3 µg/L	4079.3 ppb	11:30:03
2	Mo 202.031†	-1.8	-14.4	3.5493 µg/L	3.5493 ppb	11:30:29
2	Ni 231.604†	1879.2	1564.3	96.450 µg/L	96.450 ppb	11:30:29
2	P 214.914†	693.0	479.3	996.00 µg/L	996.00 ppb	11:30:29
2	Pb 220.353†	883.1	829.7	232.25 µg/L	232.25 ppb	11:30:29

2	S 181.975 Axial†	183.2	161.7	898.97 µg/L	898.97 ppb	11:30:29
2	Sb 206.836†	30.1	6.3	2.3318 µg/L	2.3318 ppb	11:30:29
2	Se 196.026†	-341.6	-352.5	20.467 µg/L	20.467 ppb	11:30:29
2	SiO2†	305355.2	305642.6	62405 µg/L	62405 ppb	11:30:03
2	Si 251.611†	352808.8	355619.2	28807 µg/L	28807 ppb	11:30:03
2	Sn 189.927†	-49.2	-73.1	-20.100 µg/L	-20.100 ppb	11:30:29
2	Ti 334.940†	1178335.4	1187960.9	2870.4 µg/L	2870.4 ppb	11:30:03
2	Tl 190.801†	-37.9	-13.7	10.305 µg/L	10.305 ppb	11:30:29
2	U 409.014†	-577.7	-396.5	-57.395 µg/L	-57.395 ppb	11:30:03
2	V 292.402†	21206.0	21507.2	266.65 µg/L	266.65 ppb	11:30:09
2	Zn 213.857†	20480.5	20027.7	554.45 µg/L	554.45 ppb	11:30:09
3	Sc RADIAL	78203.9	78203.9	99.6 %		11:28:56
3	Al 396.153Radial†	142551.8	143085.5	92672 µg/L	92672 ppb	11:28:56
3	Ca 317.933Radial†	27007.5	26855.9	19351 µg/L	19351 ppb	11:29:16
3	Fe 238.204 Radial†	10437.4	10458.0	138480 µg/L	138480 ppb	11:29:16
3	K 766.490 Radial†	27407.7	27105.9	17101 µg/L	17101 ppb	11:28:56
3	Mg 279.077 IEC†	2021.9	2020.9	20592 µg/L	20592 ppb	11:29:16
3	Na 589.592 Radial†	6126.9	5594.9	1489.6 µg/L	1489.6 ppb	11:29:16
3	Sr 421.552†	39594.0	39100.0	233.89 µg/L	233.89 ppb	11:28:56
3	Sc 361.383	1967740.2	1967740.2	99.559 %		11:30:37
3	Y 371.029	1284620.1	1284620.1	102.84 %		11:30:37
3	Ag 328.068†	19627.1	19806.6	189.15 µg/L	189.15 ppb	11:30:43
3	As 188.979†	16.5	19.3	48.998 µg/L	48.998 ppb	11:31:03
3	B 249.677†	2196.3	1836.1	15.069 µg/L	15.069 ppb	11:30:43
3	Ba 233.527†	43632.6	43849.8	1225.3 µg/L	1225.3 ppb	11:30:43
3	Be 313.107†	18083.8	14330.1	8.5717 µg/L	8.5717 ppb	11:30:43
3	Cd 226.502†	567.5	695.3	4.1408 µg/L	4.1408 ppb	11:30:43
3	Co 228.616†	1041.9	1095.8	52.433 µg/L	52.433 ppb	11:31:03
3	Cr 267.716†	9826.9	9972.5	223.61 µg/L	223.61 ppb	11:30:43
3	Cu 324.752†	30546.1	26781.4	215.62 µg/L	215.62 ppb	11:30:43
3	Mn 257.610†	1118206.1	1123306.2	3999.2 µg/L	3999.2 ppb	11:30:37
3	Mo 202.031†	6.2	-6.3	4.4943 µg/L	4.4943 ppb	11:31:03
3	Ni 231.604†	1789.5	1466.0	90.497 µg/L	90.497 ppb	11:31:03
3	P 214.914†	669.0	452.1	934.89 µg/L	934.89 ppb	11:31:03
3	Pb 220.353†	836.2	778.8	218.01 µg/L	218.01 ppb	11:31:03
3	S 181.975 Axial†	179.9	157.6	876.21 µg/L	876.21 ppb	11:31:03
3	Sb 206.836†	34.0	10.1	6.4813 µg/L	6.4813 ppb	11:31:03
3	Se 196.026†	-325.7	-335.0	43.858 µg/L	43.858 ppb	11:31:03
3	SiO2†	302112.1	301060.7	61469 µg/L	61469 ppb	11:30:37
3	Si 251.611†	348882.9	350145.6	28363 µg/L	28363 ppb	11:30:37
3	Sn 189.927†	-44.3	-68.0	-17.308 µg/L	-17.308 ppb	11:31:03
3	Ti 334.940†	1157395.6	1161817.5	2807.2 µg/L	2807.2 ppb	11:30:37
3	Tl 190.801†	-39.4	-15.1	7.2607 µg/L	7.2607 ppb	11:31:03
3	U 409.014†	-641.6	-458.3	-63.023 µg/L	-63.023 ppb	11:30:37
3	V 292.402†	20559.2	20765.6	257.66 µg/L	257.66 ppb	11:30:43
3	Zn 213.857†	20015.5	19471.9	538.90 µg/L	538.90 ppb	11:30:43

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Mean Data: 244921002|942675|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1955572.3	98.943 %	0.7278			0.74%
Sc RADIAL	78050.9	99.5 %	0.36			0.36%
Y 371.029	1277524.9	102.27 %	0.719			0.70%
Ag 328.068†	19961.9	190.65 µg/L	1.622	190.65 ppb	1.622	0.85%
Al 396.153Radial†	143019.9	92629 µg/L	40.1	92629 ppb	40.1	0.04%
As 188.979†	19.6	49.751 µg/L	4.1257	49.751 ppb	4.1257	8.29%
B 249.677†	1880.3	16.725 µg/L	1.9045	16.725 ppb	1.9045	11.39%
Ba 233.527†	44785.1	1251.4 µg/L	23.47	1251.4 ppb	23.47	1.88%
Be 313.107†	14845.6	8.9035 µg/L	0.35823	8.9035 ppb	0.35823	4.02%
Ca 317.933Radial†	27036.4	19481 µg/L	136.8	19481 ppb	136.8	0.70%
Cd 226.502†	701.1	4.2139 µg/L	0.09633	4.2139 ppb	0.09633	2.29%
Co 228.616†	1155.0	55.497 µg/L	2.7130	55.497 ppb	2.7130	4.89%
Cr 267.716†	10283.4	230.58 µg/L	6.210	230.58 ppb	6.210	2.69%
Cu 324.752†	27544.9	221.34 µg/L	5.114	221.34 ppb	5.114	2.31%
Fe 238.204 Radial†	10522.4	139340 µg/L	926.4	139340 ppb	926.4	0.66%
K 766.490 Radial†	27178.3	17147 µg/L	40.8	17147 ppb	40.8	0.24%
Mg 279.077 IEC†	2027.4	20658 µg/L	116.3	20658 ppb	116.3	0.56%
Mn 257.610†	1136619.7	4046.5 µg/L	41.98	4046.5 ppb	41.98	1.04%
Mo 202.031†	-15.3	3.4397 µg/L	1.11355	3.4397 ppb	1.11355	32.37%
Na 589.592 Radial†	5603.5	1491.8 µg/L	7.09	1491.8 ppb	7.09	0.48%

Ni 231.604†	1541.3	95.061 µg/L	4.0529	95.061 ppb	4.0529	4.26%
P 214.914†	474.7	985.47 µg/L	46.224	985.47 ppb	46.224	4.69%
Pb 220.353†	814.4	227.95 µg/L	8.640	227.95 ppb	8.640	3.79%
S 181.975 Axial†	162.5	903.31 µg/L	29.506	903.31 ppb	29.506	3.27%
Sb 206.836†	7.9	3.9933 µg/L	2.19472	3.9933 ppb	2.19472	54.96%
Se 196.026†	-347.3	28.817 µg/L	13.0523	28.817 ppb	13.0523	45.29%
SiO2†	303774.8	62024 µg/L	491.1	62024 ppb	491.1	0.79%
Si 251.611†	353324.6	28621 µg/L	230.2	28621 ppb	230.2	0.80%
Sn 189.927†	-69.2	-17.877 µg/L	1.9996	-17.877 ppb	1.9996	11.19%
Sr 421.552†	39130.6	234.08 µg/L	0.158	234.08 ppb	0.158	0.07%
Ti 334.940†	1178193.9	2846.7 µg/L	34.49	2846.7 ppb	34.49	1.21%
Tl 190.801†	-17.1	4.3627 µg/L	7.80602	4.3627 ppb	7.80602	178.93%
U 409.014†	-455.4	-62.888 µg/L	5.4268	-62.888 ppb	5.4268	8.63%
V 292.402†	21353.9	264.80 µg/L	6.410	264.80 ppb	6.410	2.42%
Zn 213.857†	19931.5	551.74 µg/L	11.731	551.74 ppb	11.731	2.13%

Sequence No.: 10  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 1/29/2010 11:31:12  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76971.1	76971.1	98.1 %		11:31:52
1	Al 396.153Radial†	7811.1	7993.7	5166.1 µg/L	5166.1 ppb	11:31:52
1	Ca 317.933Radial†	7086.9	6978.6	5028.4 µg/L	5028.4 ppb	11:31:52
1	Fe 238.204 Radial†	401.1	392.6	5210.1 µg/L	5210.1 ppb	11:32:12
1	K 766.490 Radial†	8567.9	8337.2	5260.0 µg/L	5260.0 ppb	11:31:52
1	Mg 279.077 IEC†	513.7	515.6	5295.5 µg/L	5295.5 ppb	11:32:12
1	Na 589.592 Radial†	37715.1	37901.0	10091 µg/L	10091 ppb	11:31:52
1	Sr 421.552†	85484.4	86526.7	517.59 µg/L	517.59 ppb	11:31:52
1	Sc 361.383	1937795.6	1937795.6	98.044 %		11:33:16
1	Y 371.029	1220068.3	1220068.3	97.675 %		11:33:16
1	Ag 328.068†	58696.3	59959.9	545.13 µg/L	545.13 ppb	11:33:21
1	As 188.979†	245.2	252.9	550.12 µg/L	550.12 ppb	11:33:42
1	B 249.677†	11183.3	11036.5	520.92 µg/L	520.92 ppb	11:33:21
1	Ba 233.527†	18848.9	19248.9	538.66 µg/L	538.66 ppb	11:33:21
1	Be 313.107†	775384.1	787019.4	529.33 µg/L	529.33 ppb	11:33:16
1	Cd 226.502†	18413.2	18905.9	535.62 µg/L	535.62 ppb	11:33:21
1	Co 228.616†	9870.3	10116.5	537.54 µg/L	537.54 ppb	11:33:21
1	Cr 267.716†	23651.1	24225.1	543.15 µg/L	543.15 ppb	11:33:21
1	Cu 324.752†	76721.0	74351.6	545.90 µg/L	545.90 ppb	11:33:21
1	Mn 257.610†	146912.8	149991.6	532.13 µg/L	532.13 ppb	11:33:16
1	Mo 202.031†	4410.4	4485.8	543.64 µg/L	543.64 ppb	11:33:42
1	Ni 231.604†	9084.6	8934.4	540.39 µg/L	540.39 ppb	11:33:21
1	P 214.914†	1384.6	1192.4	2695.8 µg/L	2695.8 ppb	11:33:42
1	Pb 220.353†	1968.7	1946.8	546.30 µg/L	546.30 ppb	11:33:42
1	S 181.975 Axial†	213.1	194.2	1079.5 µg/L	1079.5 ppb	11:33:42
1	Sb 206.836†	530.8	517.4	549.57 µg/L	549.57 ppb	11:33:42
1	Se 196.026†	356.7	355.9	554.57 µg/L	554.57 ppb	11:33:42
1	SiO2†	30586.2	28807.0	5881.7 µg/L	5881.7 ppb	11:33:21
1	Si 251.611†	33521.0	33907.4	2746.7 µg/L	2746.7 ppb	11:33:21
1	Sn 189.927†	988.7	984.9	557.79 µg/L	557.79 ppb	11:33:42
1	Ti 334.940†	218562.4	222218.9	536.84 µg/L	536.84 ppb	11:33:16
1	Tl 190.801†	300.4	331.0	555.83 µg/L	555.83 ppb	11:33:42
1	U 409.014†	5464.0	5759.2	534.27 µg/L	534.27 ppb	11:33:21
1	V 292.402†	44189.0	45185.8	549.97 µg/L	549.97 ppb	11:33:21
1	Zn 213.857†	19549.8	19307.5	538.92 µg/L	538.92 ppb	11:33:21
2	Sc RADIAL	76409.5	76409.5	97.4 %		11:32:18
2	Al 396.153Radial†	7718.9	7957.6	5142.8 µg/L	5142.8 ppb	11:32:18
2	Ca 317.933Radial†	7075.7	7020.3	5058.4 µg/L	5058.4 ppb	11:32:18
2	Fe 238.204 Radial†	403.5	398.1	5283.3 µg/L	5283.3 ppb	11:32:38
2	K 766.490 Radial†	8571.8	8405.4	5303.0 µg/L	5303.0 ppb	11:32:18
2	Mg 279.077 IEC†	510.1	515.7	5296.4 µg/L	5296.4 ppb	11:32:38
2	Na 589.592 Radial†	37580.6	38045.5	10129 µg/L	10129 ppb	11:32:18
2	Sr 421.552†	85253.8	86930.5	520.01 µg/L	520.01 ppb	11:32:18
2	Sc 361.383	1927407.1	1927407.1	97.518 %		11:33:49
2	Y 371.029	1214105.6	1214105.6	97.198 %		11:33:49
2	Ag 328.068†	58376.6	59954.7	545.08 µg/L	545.08 ppb	11:33:54
2	As 188.979†	242.2	251.1	546.32 µg/L	546.32 ppb	11:34:15
2	B 249.677†	11091.1	11003.4	519.31 µg/L	519.31 ppb	11:33:54
2	Ba 233.527†	18723.5	19223.9	537.96 µg/L	537.96 ppb	11:33:54
2	Be 313.107†	770467.7	786240.4	528.80 µg/L	528.80 ppb	11:33:49
2	Cd 226.502†	18278.0	18868.4	534.55 µg/L	534.55 ppb	11:33:54
2	Co 228.616†	9848.3	10148.2	539.22 µg/L	539.22 ppb	11:33:54
2	Cr 267.716†	23581.2	24283.4	544.45 µg/L	544.45 ppb	11:33:54
2	Cu 324.752†	76131.7	74169.1	544.57 µg/L	544.57 ppb	11:33:54
2	Mn 257.610†	146043.7	149908.0	531.84 µg/L	531.84 ppb	11:33:49
2	Mo 202.031†	4351.5	4449.6	539.26 µg/L	539.26 ppb	11:34:15
2	Ni 231.604†	9051.3	8950.2	541.35 µg/L	541.35 ppb	11:33:54
2	P 214.914†	1372.3	1187.4	2684.3 µg/L	2684.3 ppb	11:34:15
2	Pb 220.353†	1964.9	1953.8	548.23 µg/L	548.23 ppb	11:34:15

2	S 181.975 Axial†	214.4	196.7	1093.5 µg/L	1093.5 ppb	11:34:15
2	Sb 206.836†	519.3	508.5	540.02 µg/L	540.02 ppb	11:34:15
2	Se 196.026†	356.3	357.4	557.19 µg/L	557.19 ppb	11:34:15
2	SiO2†	30415.3	28799.9	5880.3 µg/L	5880.3 ppb	11:33:54
2	Si 251.611†	33325.4	33891.0	2745.3 µg/L	2745.3 ppb	11:33:54
2	Sn 189.927†	978.8	980.2	555.13 µg/L	555.13 ppb	11:34:15
2	Ti 334.940†	216999.7	221817.9	535.87 µg/L	535.87 ppb	11:33:49
2	Tl 190.801†	299.4	331.6	556.82 µg/L	556.82 ppb	11:34:15
2	U 409.014†	5485.0	5810.8	539.05 µg/L	539.05 ppb	11:33:54
2	V 292.402†	43865.2	45096.8	548.88 µg/L	548.88 ppb	11:33:54
2	Zn 213.857†	19437.8	19300.1	538.71 µg/L	538.71 ppb	11:33:54
3	Sc RADIAL	76742.1	76742.1	97.8 %		11:32:44
3	Al 396.153Radial†	7769.4	7974.9	5155.7 µg/L	5155.7 ppb	11:32:44
3	Ca 317.933Radial†	7076.8	6990.0	5036.6 µg/L	5036.6 ppb	11:32:44
3	Fe 238.204 Radial†	401.9	394.6	5236.0 µg/L	5236.0 ppb	11:33:04
3	K 766.490 Radial†	8586.4	8382.2	5288.4 µg/L	5288.4 ppb	11:32:44
3	Mg 279.077 IEC†	513.4	516.9	5306.9 µg/L	5306.9 ppb	11:33:04
3	Na 589.592 Radial†	37652.4	37951.6	10104 µg/L	10104 ppb	11:32:44
3	Sr 421.552†	85507.0	86809.9	519.29 µg/L	519.29 ppb	11:32:44
3	Sc 361.383	1936491.3	1936491.3	97.978 %		11:34:22
3	Y 371.029	1219218.7	1219218.7	97.607 %		11:34:22
3	Ag 328.068†	56015.0	57263.5	520.48 µg/L	520.48 ppb	11:34:28
3	As 188.979†	213.8	220.9	480.74 µg/L	480.74 ppb	11:34:48
3	B 249.677†	10652.0	10501.9	495.49 µg/L	495.49 ppb	11:34:28
3	Ba 233.527†	17500.5	17885.7	500.49 µg/L	500.49 ppb	11:34:28
3	Be 313.107†	738595.5	750004.2	504.43 µg/L	504.43 ppb	11:34:22
3	Cd 226.502†	17091.7	17569.7	497.71 µg/L	497.71 ppb	11:34:28
3	Co 228.616†	9093.1	9330.1	495.68 µg/L	495.68 ppb	11:34:28
3	Cr 267.716†	21253.0	21793.8	488.64 µg/L	488.64 ppb	11:34:28
3	Cu 324.752†	70887.4	68450.3	502.63 µg/L	502.63 ppb	11:34:28
3	Mn 257.610†	140102.7	143141.8	507.86 µg/L	507.86 ppb	11:34:22
3	Mo 202.031†	3707.1	3771.1	457.05 µg/L	457.05 ppb	11:34:48
3	Ni 231.604†	8354.3	8195.3	495.69 µg/L	495.69 ppb	11:34:28
3	P 214.914†	1214.1	1019.3	2300.2 µg/L	2300.2 ppb	11:34:48
3	Pb 220.353†	1724.4	1698.8	476.61 µg/L	476.61 ppb	11:34:48
3	S 181.975 Axial†	192.8	173.6	965.29 µg/L	965.29 ppb	11:34:48
3	Sb 206.836†	464.3	449.9	477.30 µg/L	477.30 ppb	11:34:48
3	Se 196.026†	316.3	314.9	493.04 µg/L	493.04 ppb	11:34:48
3	SiO2†	28840.4	27046.2	5522.2 µg/L	5522.2 ppb	11:34:28
3	Si 251.611†	31474.0	31841.1	2579.3 µg/L	2579.3 ppb	11:34:28
3	Sn 189.927†	828.0	821.6	465.72 µg/L	465.72 ppb	11:34:48
3	Ti 334.940†	207072.5	210642.0	508.85 µg/L	508.85 ppb	11:34:22
3	Tl 190.801†	263.5	293.5	493.13 µg/L	493.13 ppb	11:34:48
3	U 409.014†	4986.2	5275.3	489.29 µg/L	489.29 ppb	11:34:28
3	V 292.402†	40281.5	41228.1	501.51 µg/L	501.51 ppb	11:34:28
3	Zn 213.857†	18011.3	17750.7	495.43 µg/L	495.43 ppb	11:34:28

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1933898.0	97.847 %	0.2863			0.29%
Sc RADIAL	76707.6	97.7 %	0.36			0.37%
Y 371.029	1217797.5	97.493 %	0.2582			0.26%
Ag 328.068†	59059.4	536.89 µg/L	14.218	536.89 ppb	14.218	2.65%
QC value within limits for Ag 328.068 Recovery = 107.38%						
Al 396.153Radial†	7975.4	5154.9 µg/L	11.67	5154.9 ppb	11.67	0.23%
QC value within limits for Al 396.153Radial Recovery = 103.10%						
As 188.979†	241.6	525.73 µg/L	39.005	525.73 ppb	39.005	7.42%
QC value within limits for As 188.979 Recovery = 105.15%						
B 249.677†	10847.3	511.91 µg/L	14.238	511.91 ppb	14.238	2.78%
QC value within limits for B 249.677 Recovery = 102.38%						
Ba 233.527†	18786.2	525.70 µg/L	21.836	525.70 ppb	21.836	4.15%
QC value within limits for Ba 233.527 Recovery = 105.14%						
Be 313.107†	774421.3	520.85 µg/L	14.224	520.85 ppb	14.224	2.73%
QC value within limits for Be 313.107 Recovery = 104.17%						
Ca 317.933Radial†	6996.3	5041.2 µg/L	15.51	5041.2 ppb	15.51	0.31%
QC value within limits for Ca 317.933Radial Recovery = 100.82%						
Cd 226.502†	18448.0	522.63 µg/L	21.583	522.63 ppb	21.583	4.13%
QC value within limits for Cd 226.502 Recovery = 104.53%						
Co 228.616†	9864.9	524.15 µg/L	24.665	524.15 ppb	24.665	4.71%



QC value within limits for Co 228.616 Recovery = 104.83%							
Cr 267.716†	23434.1	525.41 µg/L	31.853	525.41 ppb	31.853	6.06%	
QC value within limits for Cr 267.716 Recovery = 105.08%							
Cu 324.752†	72323.7	531.03 µg/L	24.606	531.03 ppb	24.606	4.63%	
QC value within limits for Cu 324.752 Recovery = 106.21%							
Fe 238.204 Radial†	395.1	5243.1 µg/L	37.10	5243.1 ppb	37.10	0.71%	
QC value within limits for Fe 238.204 Radial Recovery = 104.86%							
K 766.490 Radial†	8374.9	5283.8 µg/L	21.88	5283.8 ppb	21.88	0.41%	
QC value within limits for K 766.490 Radial Recovery = 105.68%							
Mg 279.077 IEC†	516.1	5299.6 µg/L	6.37	5299.6 ppb	6.37	0.12%	
QC value within limits for Mg 279.077 IEC Recovery = 105.99%							
Mn 257.610†	147680.5	523.94 µg/L	13.934	523.94 ppb	13.934	2.66%	
QC value within limits for Mn 257.610 Recovery = 104.79%							
Mo 202.031†	4235.5	513.31 µg/L	48.777	513.31 ppb	48.777	9.50%	
QC value within limits for Mo 202.031 Recovery = 102.66%							
Na 589.592 Radial†	37966.0	10108 µg/L	19.5	10108 ppb	19.5	0.19%	
QC value within limits for Na 589.592 Radial Recovery = 101.08%							
Ni 231.604†	8693.3	525.81 µg/L	26.088	525.81 ppb	26.088	4.96%	
QC value within limits for Ni 231.604 Recovery = 105.16%							
P 214.914†	1133.0	2560.1 µg/L	225.18	2560.1 ppb	225.18	8.80%	
QC value within limits for P 214.914 Recovery = 102.40%							
Pb 220.353†	1866.5	523.72 µg/L	40.805	523.72 ppb	40.805	7.79%	
QC value within limits for Pb 220.353 Recovery = 104.74%							
S 181.975 Axial†	188.2	1046.1 µg/L	70.34	1046.1 ppb	70.34	6.72%	
QC value within limits for S 181.975 Axial Recovery = 104.61%							
Sb 206.836†	491.9	522.30 µg/L	39.258	522.30 ppb	39.258	7.52%	
QC value within limits for Sb 206.836 Recovery = 104.46%							
Se 196.026†	342.7	534.93 µg/L	36.306	534.93 ppb	36.306	6.79%	
QC value within limits for Se 196.026 Recovery = 106.99%							
SiO2†	28217.7	5761.4 µg/L	207.15	5761.4 ppb	207.15	3.60%	
QC value within limits for SiO2 Recovery = 107.74%							
Si 251.611†	33213.1	2690.4 µg/L	96.26	2690.4 ppb	96.26	3.58%	
QC value within limits for Si 251.611 Recovery = 107.62%							
Sn 189.927†	928.9	526.22 µg/L	52.405	526.22 ppb	52.405	9.96%	
QC value within limits for Sn 189.927 Recovery = 105.24%							
Sr 421.552†	86755.7	518.97 µg/L	1.240	518.97 ppb	1.240	0.24%	
QC value within limits for Sr 421.552 Recovery = 103.79%							
Ti 334.940†	218226.3	527.19 µg/L	15.885	527.19 ppb	15.885	3.01%	
QC value within limits for Ti 334.940 Recovery = 105.44%							
Tl 190.801†	318.7	535.26 µg/L	36.487	535.26 ppb	36.487	6.82%	
QC value within limits for Tl 190.801 Recovery = 107.05%							
U 409.014†	5615.1	520.87 µg/L	27.456	520.87 ppb	27.456	5.27%	
QC value within limits for U 409.014 Recovery = 104.17%							
V 292.402†	43836.9	533.45 µg/L	27.668	533.45 ppb	27.668	5.19%	
QC value within limits for V 292.402 Recovery = 106.69%							
Zn 213.857†	18786.1	524.35 µg/L	25.051	524.35 ppb	25.051	4.78%	
QC value within limits for Zn 213.857 Recovery = 104.87%							

All analyte(s) passed QC.

Sequence No.: 11  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 1/29/2010 11:34:57  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	75715.3	75715.3	96.5 %		11:35:30
1	Al 396.153Radial†	-14.8	14.1	9.1296 µg/L	9.1296 ppb	11:35:30
1	Ca 317.933Radial†	259.1	21.3	15.370 µg/L	15.370 ppb	11:35:50
1	Fe 238.204 Radial†	17.9	2.2	29.035 µg/L	29.035 ppb	11:35:50
1	K 766.490 Radial†	331.1	-55.5	-35.014 µg/L	-35.014 ppb	11:35:30
1	Mg 279.077 IEC†	10.2	2.4	24.773 µg/L	24.773 ppb	11:35:50
1	Na 589.592 Radial†	382.4	-157.3	-41.869 µg/L	-41.869 ppb	11:35:30
1	Sr 421.552†	641.5	30.9	0.1849 µg/L	0.1849 ppb	11:35:30
1	Sc 361.383	1928783.8	1928783.8	97.588 %		11:36:52
1	Y 371.029	1219113.1	1219113.1	97.599 %		11:36:52
1	Ag 328.068†	-44.5	47.0	0.4269 µg/L	0.4269 ppb	11:36:58
1	As 188.979†	-3.0	-0.3	-0.6596 µg/L	-0.6596 ppb	11:37:18
1	B 249.677†	182.0	-183.5	-8.7047 µg/L	-8.7047 ppb	11:37:18
1	Ba 233.527†	-21.6	1.9	0.0522 µg/L	0.0522 ppb	11:37:18
1	Be 313.107†	3892.5	154.9	0.1042 µg/L	0.1042 ppb	11:36:58
1	Cd 226.502†	-128.0	-5.9	-0.1709 µg/L	-0.1709 ppb	11:37:18
1	Co 228.616†	-44.0	4.2	0.2230 µg/L	0.2230 ppb	11:37:18
1	Cr 267.716†	-73.0	27.4	0.6130 µg/L	0.6130 ppb	11:36:58
1	Cu 324.752†	3848.5	43.6	0.3240 µg/L	0.3240 ppb	11:36:58
1	Mn 257.610†	-113.3	31.7	0.1154 µg/L	0.1154 ppb	11:37:18
1	Mo 202.031†	16.7	4.6	0.5546 µg/L	0.5546 ppb	11:37:18
1	Ni 231.604†	327.0	3.7	0.2233 µg/L	0.2233 ppb	11:37:18
1	P 214.914†	220.7	6.3	14.486 µg/L	14.486 ppb	11:37:18
1	Pb 220.353†	57.9	-1.8	-0.5141 µg/L	-0.5141 ppb	11:37:18
1	S 181.975 Axial†	22.4	-0.2	-1.2557 µg/L	-1.2557 ppb	11:37:18
1	Sb 206.836†	22.2	-1.3	-1.3317 µg/L	-1.3317 ppb	11:37:18
1	Se 196.026†	4.4	-3.4	-5.0249 µg/L	-5.0249 ppb	11:37:18
1	SiO2†	2329.4	-2.4	-0.4927 µg/L	-0.4927 ppb	11:36:58
1	Si 251.611†	314.0	39.3	3.1827 µg/L	3.1827 ppb	11:37:18
1	Sn 189.927†	21.9	-1.0	-0.5456 µg/L	-0.5456 ppb	11:37:18
1	Ti 334.940†	747.1	61.7	0.1475 µg/L	0.1475 ppb	11:36:58
1	Tl 190.801†	-21.3	2.7	4.4737 µg/L	4.4737 ppb	11:37:18
1	U 409.014†	-222.9	-42.2	-3.9278 µg/L	-3.9278 ppb	11:36:58
1	V 292.402†	-103.4	9.3	0.1153 µg/L	0.1153 ppb	11:36:58
1	Zn 213.857†	651.6	35.5	0.9930 µg/L	0.9930 ppb	11:37:18
2	Sc RADIAL	75337.3	75337.3	96.0 %		11:35:56
2	Al 396.153Radial†	-13.6	15.4	9.9309 µg/L	9.9309 ppb	11:35:56
2	Ca 317.933Radial†	255.5	19.0	13.691 µg/L	13.691 ppb	11:36:16
2	Fe 238.204 Radial†	17.9	2.3	30.321 µg/L	30.321 ppb	11:36:16
2	K 766.490 Radial†	439.3	58.9	37.182 µg/L	37.182 ppb	11:35:56
2	Mg 279.077 IEC†	8.8	1.0	10.612 µg/L	10.612 ppb	11:36:16
2	Na 589.592 Radial†	352.3	-186.7	-49.698 µg/L	-49.698 ppb	11:35:56
2	Sr 421.552†	599.0	-10.0	-0.0598 µg/L	-0.0598 ppb	11:35:56
2	Sc 361.383	1934472.0	1934472.0	97.876 %		11:37:24
2	Y 371.029	1222662.1	1222662.1	97.883 %		11:37:24
2	Ag 328.068†	-64.6	26.6	0.2447 µg/L	0.2447 ppb	11:37:30
2	As 188.979†	-0.1	2.6	5.7453 µg/L	5.7453 ppb	11:37:51
2	B 249.677†	157.7	-208.9	-9.9068 µg/L	-9.9068 ppb	11:37:51
2	Ba 233.527†	-21.1	2.4	0.0674 µg/L	0.0674 ppb	11:37:51
2	Be 313.107†	3902.4	153.3	0.1031 µg/L	0.1031 ppb	11:37:30
2	Cd 226.502†	-125.1	-2.5	-0.0742 µg/L	-0.0742 ppb	11:37:51
2	Co 228.616†	-39.6	8.9	0.4725 µg/L	0.4725 ppb	11:37:51
2	Cr 267.716†	-38.2	63.1	1.4135 µg/L	1.4135 ppb	11:37:30
2	Cu 324.752†	3805.8	-11.6	-0.0808 µg/L	-0.0808 ppb	11:37:30
2	Mn 257.610†	-90.5	55.4	0.1999 µg/L	0.1999 ppb	11:37:51
2	Mo 202.031†	22.5	10.4	1.2585 µg/L	1.2585 ppb	11:37:51
2	Ni 231.604†	331.7	7.4	0.4504 µg/L	0.4504 ppb	11:37:51
2	P 214.914†	216.3	1.2	2.6825 µg/L	2.6825 ppb	11:37:51
2	Pb 220.353†	58.1	-1.8	-0.5055 µg/L	-0.5055 ppb	11:37:51

2	S 181.975 Axial†	25.5	2.9	16.343 µg/L	16.343 ppb	11:37:51
2	Sb 206.836†	32.3	9.0	9.5190 µg/L	9.5190 ppb	11:37:51
2	Se 196.026†	10.3	2.6	4.0391 µg/L	4.0391 ppb	11:37:51
2	SiO2†	2309.7	-29.6	-6.0342 µg/L	-6.0342 ppb	11:37:30
2	Si 251.611†	315.2	39.6	3.2114 µg/L	3.2114 ppb	11:37:51
2	Sn 189.927†	25.4	2.5	1.3912 µg/L	1.3912 ppb	11:37:51
2	Ti 334.940†	751.0	63.4	0.1526 µg/L	0.1526 ppb	11:37:30
2	Tl 190.801†	8.0	32.7	54.411 µg/L	54.411 ppb	11:37:51
2	U 409.014†	-250.9	-70.2	-6.5266 µg/L	-6.5266 ppb	11:37:30
2	V 292.402†	-83.0	30.6	0.3754 µg/L	0.3754 ppb	11:37:30
2	Zn 213.857†	649.4	31.2	0.8728 µg/L	0.8728 ppb	11:37:51
3	Sc RADIAL	75331.0	75331.0	96.0 %		11:36:22
3	Al 396.153Radial†	-41.6	-13.8	-8.9884 µg/L	-8.9884 ppb	11:36:22
3	Ca 317.933Radial†	264.1	28.0	20.140 µg/L	20.140 ppb	11:36:42
3	Fe 238.204 Radial†	18.0	2.4	32.302 µg/L	32.302 ppb	11:36:42
3	K 766.490 Radial†	411.6	30.1	18.985 µg/L	18.985 ppb	11:36:22
3	Mg 279.077 IEC†	9.3	1.5	15.369 µg/L	15.369 ppb	11:36:42
3	Na 589.592 Radial†	363.3	-175.1	-46.630 µg/L	-46.630 ppb	11:36:22
3	Sr 421.552†	603.6	-5.2	-0.0313 µg/L	-0.0313 ppb	11:36:22
3	Sc 361.383	1934376.1	1934376.1	97.871 %		11:37:56
3	Y 371.029	1222642.5	1222642.5	97.881 %		11:37:56
3	Ag 328.068†	-27.5	64.5	0.5846 µg/L	0.5846 ppb	11:38:02
3	As 188.979†	-2.2	0.4	0.9272 µg/L	0.9272 ppb	11:38:23
3	B 249.677†	170.6	-195.6	-9.2829 µg/L	-9.2829 ppb	11:38:23
3	Ba 233.527†	-18.4	5.1	0.1434 µg/L	0.1434 ppb	11:38:23
3	Be 313.107†	3943.6	195.6	0.1315 µg/L	0.1315 ppb	11:38:02
3	Cd 226.502†	-130.9	-8.5	-0.2439 µg/L	-0.2439 ppb	11:38:23
3	Co 228.616†	-44.0	4.4	0.2336 µg/L	0.2336 ppb	11:38:23
3	Cr 267.716†	-82.6	17.7	0.3977 µg/L	0.3977 ppb	11:38:02
3	Cu 324.752†	3805.2	-12.0	-0.0832 µg/L	-0.0832 ppb	11:38:02
3	Mn 257.610†	-106.5	39.0	0.1420 µg/L	0.1420 ppb	11:38:23
3	Mo 202.031†	22.5	10.4	1.2672 µg/L	1.2672 ppb	11:38:23
3	Ni 231.604†	331.5	7.3	0.4413 µg/L	0.4413 ppb	11:38:23
3	P 214.914†	220.1	5.1	11.591 µg/L	11.591 ppb	11:38:23
3	Pb 220.353†	70.1	10.4	2.9319 µg/L	2.9319 ppb	11:38:23
3	S 181.975 Axial†	22.2	-0.4	-2.2913 µg/L	-2.2913 ppb	11:38:23
3	Sb 206.836†	25.2	1.7	1.8562 µg/L	1.8562 ppb	11:38:23
3	Se 196.026†	9.4	1.7	2.6787 µg/L	2.6787 ppb	11:38:23
3	SiO2†	2326.1	-12.7	-2.5984 µg/L	-2.5984 ppb	11:38:02
3	Si 251.611†	310.4	34.7	2.8119 µg/L	2.8119 ppb	11:38:23
3	Sn 189.927†	19.3	-3.7	-2.0873 µg/L	-2.0873 ppb	11:38:23
3	Ti 334.940†	756.2	68.8	0.1654 µg/L	0.1654 ppb	11:38:02
3	Tl 190.801†	-23.7	0.4	0.5940 µg/L	0.5940 ppb	11:38:23
3	U 409.014†	-210.8	-29.1	-2.7131 µg/L	-2.7131 ppb	11:38:02
3	V 292.402†	-103.6	9.5	0.1237 µg/L	0.1237 ppb	11:38:02
3	Zn 213.857†	648.6	30.5	0.8525 µg/L	0.8525 ppb	11:38:23

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1932544.0	97.778 %	0.1648			0.17%
Sc RADIAL	75461.2	96.2 %	0.28			0.29%
Y 371.029	1221472.6	97.787 %	0.1636			0.17%
Ag 328.068†	46.0	0.4187 µg/L	0.17007	0.4187 ppb	0.17007	40.61%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	5.2	3.3574 µg/L	10.69928	3.3574 ppb	10.69928	318.68%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	0.9	2.0043 µg/L	3.33553	2.0043 ppb	3.33553	166.42%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-196.0	-9.2981 µg/L	0.60121	-9.2981 ppb	0.60121	6.47%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	3.1	0.0877 µg/L	0.04891	0.0877 ppb	0.04891	55.80%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	167.9	0.1129 µg/L	0.01612	0.1129 ppb	0.01612	14.27%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	22.8	16.400 µg/L	3.3459	16.400 ppb	3.3459	20.40%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	-5.6	-0.1630 µg/L	0.08512	-0.1630 ppb	0.08512	52.23%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	5.8	0.3097 µg/L	0.14110	0.3097 ppb	0.14110	45.56%

Cr	267.716†	QC value within limits for Co 228.616	Recovery = Not calculated				
		36.1	0.8081 µg/L	0.53524	0.8081 ppb	0.53524	66.24%
Cu	324.752†	QC value within limits for Cr 267.716	Recovery = Not calculated				
		6.7	0.0534 µg/L	0.23439	0.0534 ppb	0.23439	439.29%
Fe	238.204 Radial†	QC value within limits for Cu 324.752	Recovery = Not calculated				
		2.3	30.553 µg/L	1.6462	30.553 ppb	1.6462	5.39%
K	766.490 Radial†	QC value within limits for Fe 238.204 Radial	Recovery = Not calculated				
		11.2	7.0509 µg/L	37.54847	7.0509 ppb	37.54847	532.53%
Mg	279.077 IEC†	QC value within limits for K 766.490 Radial	Recovery = Not calculated				
		1.6	16.918 µg/L	7.2064	16.918 ppb	7.2064	42.60%
Mn	257.610†	QC value within limits for Mg 279.077 IEC	Recovery = Not calculated				
		42.0	0.1524 µg/L	0.04324	0.1524 ppb	0.04324	28.37%
Mo	202.031†	QC value within limits for Mn 257.610	Recovery = Not calculated				
		8.5	1.0268 µg/L	0.40891	1.0268 ppb	0.40891	39.83%
Na	589.592 Radial†	QC value within limits for Mo 202.031	Recovery = Not calculated				
		-173.0	-46.066 µg/L	3.9448	-46.066 ppb	3.9448	8.56%
Ni	231.604†	QC value within limits for Na 589.592 Radial	Recovery = Not calculated				
		6.1	0.3717 µg/L	0.12861	0.3717 ppb	0.12861	34.60%
P	214.914†	QC value within limits for Ni 231.604	Recovery = Not calculated				
		4.2	9.5863 µg/L	6.15160	9.5863 ppb	6.15160	64.17%
Pb	220.353†	QC value within limits for P 214.914	Recovery = Not calculated				
		2.2	0.6374 µg/L	1.98708	0.6374 ppb	1.98708	311.73%
S	181.975 Axial†	QC value within limits for Pb 220.353	Recovery = Not calculated				
		0.8	4.2652 µg/L	10.47222	4.2652 ppb	10.47222	245.52%
Sb	206.836†	QC value within limits for S 181.975 Axial	Recovery = Not calculated				
		3.2	3.3478 µg/L	5.57703	3.3478 ppb	5.57703	166.59%
Se	196.026†	QC value within limits for Sb 206.836	Recovery = Not calculated				
		0.3	0.5643 µg/L	4.88794	0.5643 ppb	4.88794	866.19%
SiO2†		QC value within limits for Se 196.026	Recovery = Not calculated				
		-14.9	-3.0418 µg/L	2.79724	-3.0418 ppb	2.79724	91.96%
Si	251.611†	QC value within limits for SiO2	Recovery = Not calculated				
		37.9	3.0687 µg/L	0.22287	3.0687 ppb	0.22287	7.26%
Sn	189.927†	QC value within limits for Si 251.611	Recovery = Not calculated				
		-0.8	-0.4139 µg/L	1.74299	-0.4139 ppb	1.74299	421.13%
Sr	421.552†	QC value within limits for Sn 189.927	Recovery = Not calculated				
		5.2	0.0312 µg/L	0.13382	0.0312 ppb	0.13382	428.29%
Ti	334.940†	QC value within limits for Sr 421.552	Recovery = Not calculated				
		64.6	0.1552 µg/L	0.00923	0.1552 ppb	0.00923	5.95%
Tl	190.801†	QC value within limits for Ti 334.940	Recovery = Not calculated				
		11.9	19.826 µg/L	30.0142	19.826 ppb	30.0142	151.39%
U	409.014†	QC value within limits for Tl 190.801	Recovery = Not calculated				
		-47.2	-4.3892 µg/L	1.94813	-4.3892 ppb	1.94813	44.38%
V	292.402†	QC value within limits for U 409.014	Recovery = Not calculated				
		16.5	0.2048 µg/L	0.14780	0.2048 ppb	0.14780	72.16%
Zn	213.857†	QC value within limits for V 292.402	Recovery = Not calculated				
		32.4	0.9061 µg/L	0.07596	0.9061 ppb	0.07596	8.38%
		QC value within limits for Zn 213.857	Recovery = Not calculated				

All analyte(s) passed QC.

Sequence No.: 12

Sample ID: 244921003|942675|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 310

Date Collected: 1/29/2010 11:38:32

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 244921003|942675|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77145.3	77145.3	98.3 %		11:39:11
1	Al 396.153Radial†	165665.9	168562.5	109170 µg/L	109170 ppb	11:39:11
1	Ca 317.933Radial†	27169.8	27392.8	19738 µg/L	19738 ppb	11:39:32
1	Fe 238.204 Radial†	9205.3	9348.2	123790 µg/L	123790 ppb	11:39:32
1	K 766.490 Radial†	22882.6	22879.9	14435 µg/L	14435 ppb	11:39:11
1	Mg 279.077 IEC†	1655.4	1675.9	17066 µg/L	17066 ppb	11:39:32
1	Na 589.592 Radial†	3961.8	3476.7	925.62 µg/L	925.62 ppb	11:39:32
1	Sr 421.552†	37127.4	37135.9	222.14 µg/L	222.14 ppb	11:39:11
1	Sc 361.383	1953046.8	1953046.8	98.816 %		11:40:37
1	Y 371.029	1277444.0	1277444.0	102.27 %		11:40:37
1	Ag 328.068†	2612.9	2736.8	34.066 µg/L	34.066 ppb	11:40:42
1	As 188.979†	10.7	13.5	35.584 µg/L	35.584 ppb	11:41:03
1	B 249.677†	2023.2	1677.5	15.177 µg/L	15.177 ppb	11:40:42
1	Ba 233.527†	50178.6	50803.9	1419.5 µg/L	1419.5 ppb	11:40:42
1	Be 313.107†	19369.0	15767.3	9.2957 µg/L	9.2957 ppb	11:40:42
1	Cd 226.502†	408.9	539.1	1.4058 µg/L	1.4058 ppb	11:41:03
1	Co 228.616†	965.3	1026.2	47.399 µg/L	47.399 ppb	11:41:03
1	Cr 267.716†	8480.6	8684.3	194.74 µg/L	194.74 ppb	11:40:42
1	Cu 324.752†	20518.2	16864.1	140.86 µg/L	140.86 ppb	11:40:42
1	Mn 257.610†	777993.5	787465.9	2807.0 µg/L	2807.0 ppb	11:40:37
1	Mo 202.031†	27.1	14.9	6.5034 µg/L	6.5034 ppb	11:41:03
1	Ni 231.604†	2266.4	1962.2	120.35 µg/L	120.35 ppb	11:41:03
1	P 214.914†	859.4	649.8	1414.6 µg/L	1414.6 ppb	11:41:03
1	Pb 220.353†	487.7	432.4	122.47 µg/L	122.47 ppb	11:41:03
1	S 181.975 Axial†	98.9	77.0	427.98 µg/L	427.98 ppb	11:41:03
1	Sb 206.836†	24.9	1.2	-2.6226 µg/L	-2.6226 ppb	11:41:03
1	Se 196.026†	-294.6	-306.1	30.369 µg/L	30.369 ppb	11:41:03
1	SiO2†	275377.1	276288.2	56411 µg/L	56411 ppb	11:40:37
1	Si 251.611†	317927.3	321455.3	26039 µg/L	26039 ppb	11:40:37
1	Sn 189.927†	-75.1	-99.5	-37.045 µg/L	-37.045 ppb	11:41:03
1	Ti 334.940†	1409509.5	1425699.1	3445.3 µg/L	3445.3 ppb	11:40:37
1	Tl 190.801†	-36.8	-12.7	12.720 µg/L	12.720 ppb	11:41:03
1	U 409.014†	-914.1	-738.8	-87.081 µg/L	-87.081 ppb	11:40:37
1	V 292.402†	19352.8	19700.1	243.99 µg/L	243.99 ppb	11:40:42
1	Zn 213.857†	14854.1	14399.9	397.20 µg/L	397.20 ppb	11:40:42
2	Sc RADIAL	77598.5	77598.5	98.9 %		11:39:37
2	Al 396.153Radial†	167256.4	169186.8	109580 µg/L	109580 ppb	11:39:37
2	Ca 317.933Radial†	27328.9	27392.3	19737 µg/L	19737 ppb	11:39:58
2	Fe 238.204 Radial†	9247.1	9335.9	123620 µg/L	123620 ppb	11:39:58
2	K 766.490 Radial†	23104.6	22968.5	14491 µg/L	14491 ppb	11:39:37
2	Mg 279.077 IEC†	1664.3	1675.1	17058 µg/L	17058 ppb	11:39:58
2	Na 589.592 Radial†	3988.5	3480.1	926.52 µg/L	926.52 ppb	11:39:58
2	Sr 421.552†	37451.4	37243.0	222.78 µg/L	222.78 ppb	11:39:37
2	Sc 361.383	1927879.3	1927879.3	97.542 %		11:41:10
2	Y 371.029	1260894.3	1260894.3	100.94 %		11:41:10
2	Ag 328.068†	2635.4	2794.4	34.598 µg/L	34.598 ppb	11:41:16
2	As 188.979†	13.9	17.0	43.185 µg/L	43.185 ppb	11:41:36
2	B 249.677†	2024.5	1705.6	16.599 µg/L	16.599 ppb	11:41:16
2	Ba 233.527†	50308.1	51599.6	1441.8 µg/L	1441.8 ppb	11:41:16
2	Be 313.107†	19369.6	16023.9	9.4664 µg/L	9.4664 ppb	11:41:16
2	Cd 226.502†	409.5	545.1	1.5959 µg/L	1.5959 ppb	11:41:36
2	Co 228.616†	949.5	1022.8	47.208 µg/L	47.208 ppb	11:41:36
2	Cr 267.716†	8507.8	8824.3	197.88 µg/L	197.88 ppb	11:41:16
2	Cu 324.752†	20460.0	17075.6	142.39 µg/L	142.39 ppb	11:41:16
2	Mn 257.610†	767961.4	787459.1	2806.9 µg/L	2806.9 ppb	11:41:10
2	Mo 202.031†	34.7	23.0	7.4840 µg/L	7.4840 ppb	11:41:36
2	Ni 231.604†	2266.4	1992.1	122.16 µg/L	122.16 ppb	11:41:36
2	P 214.914†	867.5	669.5	1460.1 µg/L	1460.1 ppb	11:41:36
2	Pb 220.353†	484.0	435.0	123.23 µg/L	123.23 ppb	11:41:36

2	S 181.975 Axial†	92.1	71.3	396.33 µg/L	396.33 ppb	11:41:36
2	Sb 206.836†	36.0	12.9	9.7095 µg/L	9.7095 ppb	11:41:36
2	Se 196.026†	-298.3	-313.8	18.140 µg/L	18.140 ppb	11:41:36
2	SiO2†	271995.8	276459.7	56446 µg/L	56446 ppb	11:41:10
2	Si 251.611†	314079.0	321710.2	26060 µg/L	26060 ppb	11:41:10
2	Sn 189.927†	-67.3	-92.4	-33.062 µg/L	-33.062 ppb	11:41:36
2	Ti 334.940†	1393326.4	1427729.2	3450.2 µg/L	3450.2 ppb	11:41:10
2	Tl 190.801†	-40.8	-17.3	5.0260 µg/L	5.0260 ppb	11:41:36
2	U 409.014†	-842.5	-677.5	-81.358 µg/L	-81.358 ppb	11:41:10
2	V 292.402†	19384.6	19988.3	247.47 µg/L	247.47 ppb	11:41:16
2	Zn 213.857†	14783.7	14524.0	400.69 µg/L	400.69 ppb	11:41:16
3	Sc RADIAL	77321.7	77321.7	98.5 %		11:40:03
3	Al 396.153Radial†	166655.9	169183.0	109570 µg/L	109570 ppb	11:40:03
3	Ca 317.933Radial†	27252.3	27413.6	19753 µg/L	19753 ppb	11:40:24
3	Fe 238.204 Radial†	9233.1	9355.2	123880 µg/L	123880 ppb	11:40:24
3	K 766.490 Radial†	22994.9	22940.9	14474 µg/L	14474 ppb	11:40:03
3	Mg 279.077 IEC†	1665.1	1681.9	17128 µg/L	17128 ppb	11:40:24
3	Na 589.592 Radial†	3969.7	3475.5	925.30 µg/L	925.30 ppb	11:40:24
3	Sr 421.552†	37295.1	37220.0	222.65 µg/L	222.65 ppb	11:40:03
3	Sc 361.383	1941630.5	1941630.5	98.238 %		11:41:44
3	Y 371.029	1269752.5	1269752.5	101.65 %		11:41:44
3	Ag 328.068†	2643.8	2783.9	34.457 µg/L	34.457 ppb	11:41:50
3	As 188.979†	18.0	21.1	52.040 µg/L	52.040 ppb	11:42:10
3	B 249.677†	1906.3	1570.5	10.054 µg/L	10.054 ppb	11:41:50
3	Ba 233.527†	48982.2	49884.7	1393.8 µg/L	1393.8 ppb	11:41:50
3	Be 313.107†	18821.5	15325.3	8.9969 µg/L	8.9969 ppb	11:41:50
3	Cd 226.502†	365.9	497.8	0.2169 µg/L	0.2169 ppb	11:42:10
3	Co 228.616†	889.5	954.8	43.593 µg/L	43.593 ppb	11:42:10
3	Cr 267.716†	8186.9	8435.9	189.17 µg/L	189.17 ppb	11:41:50
3	Cu 324.752†	19949.0	16406.8	137.52 µg/L	137.52 ppb	11:41:50
3	Mn 257.610†	774174.4	788207.5	2809.6 µg/L	2809.6 ppb	11:41:44
3	Mo 202.031†	24.6	12.4	6.2141 µg/L	6.2141 ppb	11:42:10
3	Ni 231.604†	2142.4	1849.4	113.53 µg/L	113.53 ppb	11:42:10
3	P 214.914†	820.3	615.2	1335.3 µg/L	1335.3 ppb	11:42:10
3	Pb 220.353†	470.8	418.1	118.48 µg/L	118.48 ppb	11:42:10
3	S 181.975 Axial†	96.0	74.6	414.96 µg/L	414.96 ppb	11:42:10
3	Sb 206.836†	26.6	3.0	-0.6289 µg/L	-0.6289 ppb	11:42:10
3	Se 196.026†	-272.9	-285.7	61.263 µg/L	61.263 ppb	11:42:10
3	SiO2†	274357.5	276888.9	56534 µg/L	56534 ppb	11:41:44
3	Si 251.611†	316829.6	322229.7	26102 µg/L	26102 ppb	11:41:44
3	Sn 189.927†	-61.5	-86.1	-29.440 µg/L	-29.440 ppb	11:42:10
3	Ti 334.940†	1402742.1	1427197.3	3448.9 µg/L	3448.9 ppb	11:41:44
3	Tl 190.801†	-36.5	-12.6	12.898 µg/L	12.898 ppb	11:42:10
3	U 409.014†	-895.9	-725.7	-85.878 µg/L	-85.878 ppb	11:41:44
3	V 292.402†	18759.2	19211.0	238.10 µg/L	238.10 ppb	11:41:50
3	Zn 213.857†	14482.8	14110.3	389.09 µg/L	389.09 ppb	11:41:50

Mean Data: 244921003|942675|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1940852.2	98.199 %	0.6376			0.65%
Sc RADIAL	77355.2	98.6 %	0.29			0.30%
Y 371.029	1269363.6	101.62 %	0.663			0.65%
Ag 328.068†	2771.7	34.374 µg/L	0.2761	34.374 ppb	0.2761	0.80%
Al 396.153Radial†	168977.4	109440 µg/L	232.7	109440 ppb	232.7	0.21%
As 188.979†	17.2	43.603 µg/L	8.2363	43.603 ppb	8.2363	18.89%
B 249.677†	1651.2	13.943 µg/L	3.4425	13.943 ppb	3.4425	24.69%
Ba 233.527†	50762.8	1418.4 µg/L	23.98	1418.4 ppb	23.98	1.69%
Be 313.107†	15705.5	9.2530 µg/L	0.23765	9.2530 ppb	0.23765	2.57%
Ca 317.933Radial†	27399.6	19743 µg/L	8.7	19743 ppb	8.7	0.04%
Cd 226.502†	527.3	1.0728 µg/L	0.74735	1.0728 ppb	0.74735	69.66%
Co 228.616†	1001.2	46.067 µg/L	2.1444	46.067 ppb	2.1444	4.66%
Cr 267.716†	8648.2	193.93 µg/L	4.411	193.93 ppb	4.411	2.27%
Cu 324.752†	16782.2	140.26 µg/L	2.490	140.26 ppb	2.490	1.78%
Fe 238.204 Radial†	9346.4	123760 µg/L	129.6	123760 ppb	129.6	0.10%
K 766.490 Radial†	22929.8	14466 µg/L	28.6	14466 ppb	28.6	0.20%
Mg 279.077 IEC†	1677.6	17084 µg/L	38.3	17084 ppb	38.3	0.22%
Mn 257.610†	787710.8	2807.8 µg/L	1.54	2807.8 ppb	1.54	0.05%
Mo 202.031†	16.8	6.7338 µg/L	0.66555	6.7338 ppb	0.66555	9.88%
Na 589.592 Radial†	3477.4	925.81 µg/L	0.635	925.81 ppb	0.635	0.07%

Ni 231.604†	1934.6	118.68 µg/L	4.552	118.68 ppb	4.552	3.84%
P 214.914†	644.9	1403.3 µg/L	63.18	1403.3 ppb	63.18	4.50%
Pb 220.353†	428.5	121.39 µg/L	2.556	121.39 ppb	2.556	2.11%
S 181.975 Axial†	74.3	413.09 µg/L	15.910	413.09 ppb	15.910	3.85%
Sb 206.836†	5.7	2.1527 µg/L	6.61993	2.1527 ppb	6.61993	307.52%
Se 196.026†	-301.9	36.590 µg/L	22.2244	36.590 ppb	22.2244	60.74%
SiO2†	276545.6	56464 µg/L	63.2	56464 ppb	63.2	0.11%
Si 251.611†	321798.4	26067 µg/L	32.0	26067 ppb	32.0	0.12%
Sn 189.927†	-92.7	-33.182 µg/L	3.8042	-33.182 ppb	3.8042	11.46%
Sr 421.552†	37199.6	222.52 µg/L	0.337	222.52 ppb	0.337	0.15%
Ti 334.940†	1426875.2	3448.2 µg/L	2.54	3448.2 ppb	2.54	0.07%
Tl 190.801†	-14.2	10.215 µg/L	4.4945	10.215 ppb	4.4945	44.00%
U 409.014†	-714.0	-84.772 µg/L	3.0174	-84.772 ppb	3.0174	3.56%
V 292.402†	19633.1	243.19 µg/L	4.738	243.19 ppb	4.738	1.95%
Zn 213.857†	14344.7	395.66 µg/L	5.951	395.66 ppb	5.951	1.50%

Sequence No.: 13

Sample ID: 244921004|942675|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 311

Date Collected: 1/29/2010 11:42:19

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 244921004|942675|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77739.8	77739.8	99.1 %		11:42:52
1	Al 396.153Radial†	131221.9	132501.6	85817 µg/L	85817 ppb	11:42:52
1	Ca 317.933Radial†	26142.0	26143.9	18838 µg/L	18838 ppb	11:43:13
1	Fe 238.204 Radial†	7802.5	7860.5	104090 µg/L	104090 ppb	11:43:13
1	K 766.490 Radial†	20626.3	20424.1	12886 µg/L	12886 ppb	11:42:52
1	Mg 279.077 IEC†	1461.2	1467.0	14944 µg/L	14944 ppb	11:43:13
1	Na 589.592 Radial†	2907.4	2381.4	634.01 µg/L	634.01 ppb	11:43:13
1	Sr 421.552†	34477.8	34172.2	204.42 µg/L	204.42 ppb	11:42:52
1	Sc 361.383	1952081.3	1952081.3	98.767 %		11:44:17
1	Y 371.029	1257246.6	1257246.6	100.65 %		11:44:17
1	Ag 328.068†	6501.3	6675.1	68.143 µg/L	68.143 ppb	11:44:23
1	As 188.979†	8.8	11.7	30.458 µg/L	30.458 ppb	11:44:43
1	B 249.677†	1827.1	1479.9	15.982 µg/L	15.982 ppb	11:44:23
1	Ba 233.527†	51071.0	51732.6	1445.4 µg/L	1445.4 ppb	11:44:23
1	Be 313.107†	18268.9	14663.2	8.3015 µg/L	8.3015 ppb	11:44:23
1	Cd 226.502†	386.4	516.5	2.9420 µg/L	2.9420 ppb	11:44:43
1	Co 228.616†	862.5	922.6	40.510 µg/L	40.510 ppb	11:44:43
1	Cr 267.716†	5269.5	5437.4	121.96 µg/L	121.96 ppb	11:44:23
1	Cu 324.752†	30827.2	27312.1	214.73 µg/L	214.73 ppb	11:44:23
1	Mn 257.610†	711150.3	720177.5	2565.9 µg/L	2565.9 ppb	11:44:17
1	Mo 202.031†	5.1	-7.5	3.0515 µg/L	3.0515 ppb	11:44:43
1	Ni 231.604†	1450.8	1137.5	70.170 µg/L	70.170 ppb	11:44:43
1	P 214.914†	767.8	557.6	1203.5 µg/L	1203.5 ppb	11:44:43
1	Pb 220.353†	788.0	736.7	207.09 µg/L	207.09 ppb	11:44:43
1	S 181.975 Axial†	181.5	160.6	893.05 µg/L	893.05 ppb	11:44:43
1	Sb 206.836†	26.7	3.0	0.1783 µg/L	0.1783 ppb	11:44:43
1	Se 196.026†	-249.6	-260.7	20.722 µg/L	20.722 ppb	11:44:43
1	SiO2†	291422.6	292671.9	59757 µg/L	59757 ppb	11:44:17
1	Si 251.611†	336618.4	340539.0	27585 µg/L	27585 ppb	11:44:17
1	Sn 189.927†	-42.7	-66.7	-20.985 µg/L	-20.985 ppb	11:44:43
1	Ti 334.940†	1678282.3	1698533.3	4105.0 µg/L	4105.0 ppb	11:44:17
1	Tl 190.801†	-46.6	-22.7	1.6446 µg/L	1.6446 ppb	11:44:43
1	U 409.014†	-184.0	-0.1	-15.626 µg/L	-15.626 ppb	11:44:17
1	V 292.402†	16492.0	16813.3	208.09 µg/L	208.09 ppb	11:44:23
1	Zn 213.857†	20181.4	19801.1	550.19 µg/L	550.19 ppb	11:44:23
2	Sc RADIAL	77585.7	77585.7	98.9 %		11:43:18
2	Al 396.153Radial†	131531.6	133078.0	86190 µg/L	86190 ppb	11:43:18
2	Ca 317.933Radial†	26182.7	26237.4	18905 µg/L	18905 ppb	11:43:38
2	Fe 238.204 Radial†	7821.3	7895.2	104550 µg/L	104550 ppb	11:43:38
2	K 766.490 Radial†	20606.9	20445.8	12899 µg/L	12899 ppb	11:43:18
2	Mg 279.077 IEC†	1458.8	1467.4	14948 µg/L	14948 ppb	11:43:38
2	Na 589.592 Radial†	2905.5	2385.4	635.07 µg/L	635.07 ppb	11:43:38
2	Sr 421.552†	34449.8	34213.0	204.66 µg/L	204.66 ppb	11:43:18
2	Sc 361.383	1949897.3	1949897.3	98.656 %		11:44:51
2	Y 371.029	1254907.6	1254907.6	100.46 %		11:44:51
2	Ag 328.068†	6413.7	6593.6	67.442 µg/L	67.442 ppb	11:44:57
2	As 188.979†	8.2	11.0	29.148 µg/L	29.148 ppb	11:45:17
2	B 249.677†	1844.0	1499.1	16.653 µg/L	16.653 ppb	11:44:57
2	Ba 233.527†	51277.8	52000.1	1452.9 µg/L	1452.9 ppb	11:44:57
2	Be 313.107†	18082.7	14495.2	8.1906 µg/L	8.1906 ppb	11:44:57
2	Cd 226.502†	377.5	508.0	2.6478 µg/L	2.6478 ppb	11:45:17
2	Co 228.616†	861.6	922.7	40.526 µg/L	40.526 ppb	11:45:17
2	Cr 267.716†	5301.4	5475.7	122.82 µg/L	122.82 ppb	11:44:57
2	Cu 324.752†	30830.2	27350.2	215.07 µg/L	215.07 ppb	11:44:57
2	Mn 257.610†	708427.6	718224.2	2559.1 µg/L	2559.1 ppb	11:44:51
2	Mo 202.031†	18.5	6.2	4.7193 µg/L	4.7193 ppb	11:45:17
2	Ni 231.604†	1450.4	1138.7	70.248 µg/L	70.248 ppb	11:45:17
2	P 214.914†	777.8	568.5	1228.4 µg/L	1228.4 ppb	11:45:17
2	Pb 220.353†	806.2	756.0	212.51 µg/L	212.51 ppb	11:45:17



2	S 181.975 Axial†	190.8	170.2	946.42 µg/L	946.42 ppb	11:45:17
2	Sb 206.836†	25.0	1.3	-1.6639 µg/L	-1.6639 ppb	11:45:17
2	Se 196.026†	-249.9	-261.2	21.818 µg/L	21.818 ppb	11:45:17
2	SiO2†	290564.1	292132.2	59646 µg/L	59646 ppb	11:44:51
2	Si 251.611†	335590.6	339878.9	27532 µg/L	27532 ppb	11:44:51
2	Sn 189.927†	-38.6	-62.5	-18.578 µg/L	-18.578 ppb	11:45:17
2	Ti 334.940†	1674187.1	1696285.5	4099.6 µg/L	4099.6 ppb	11:44:51
2	Tl 190.801†	-37.3	-13.3	17.101 µg/L	17.101 ppb	11:45:17
2	U 409.014†	-190.6	-7.0	-16.337 µg/L	-16.337 ppb	11:44:51
2	V 292.402†	16543.1	16883.8	208.98 µg/L	208.98 ppb	11:44:57
2	Zn 213.857†	20257.9	19901.5	552.99 µg/L	552.99 ppb	11:44:57
3	Sc RADIAL	77843.4	77843.4	99.2 %		11:43:44
3	Al 396.153Radial†	131937.1	133046.4	86170 µg/L	86170 ppb	11:43:44
3	Ca 317.933Radial†	26251.7	26219.3	18892 µg/L	18892 ppb	11:44:04
3	Fe 238.204 Radial†	7834.5	7882.3	104380 µg/L	104380 ppb	11:44:04
3	K 766.490 Radial†	20693.9	20464.5	12911 µg/L	12911 ppb	11:43:44
3	Mg 279.077 IEC†	1461.0	1464.8	14921 µg/L	14921 ppb	11:44:04
3	Na 589.592 Radial†	2909.8	2379.9	633.61 µg/L	633.61 ppb	11:44:04
3	Sr 421.552†	34558.6	34207.4	204.63 µg/L	204.63 ppb	11:43:44
3	Sc 361.383	1939291.3	1939291.3	98.120 %		11:45:25
3	Y 371.029	1248257.0	1248257.0	99.932 %		11:45:25
3	Ag 328.068†	6405.4	6620.8	67.634 µg/L	67.634 ppb	11:45:31
3	As 188.979†	7.4	10.2	27.392 µg/L	27.392 ppb	11:45:51
3	B 249.677†	1784.1	1448.3	14.327 µg/L	14.327 ppb	11:45:31
3	Ba 233.527†	49832.5	50811.4	1419.7 µg/L	1419.7 ppb	11:45:31
3	Be 313.107†	17596.1	14099.5	7.9483 µg/L	7.9483 ppb	11:45:31
3	Cd 226.502†	345.3	477.2	1.7913 µg/L	1.7913 ppb	11:45:51
3	Co 228.616†	808.9	873.7	38.049 µg/L	38.049 ppb	11:45:51
3	Cr 267.716†	5080.5	5280.1	118.43 µg/L	118.43 ppb	11:45:31
3	Cu 324.752†	29965.1	26639.4	209.84 µg/L	209.84 ppb	11:45:31
3	Mn 257.610†	696372.5	709865.3	2529.4 µg/L	2529.4 ppb	11:45:25
3	Mo 202.031†	6.5	-5.9	3.2458 µg/L	3.2458 ppb	11:45:51
3	Ni 231.604†	1361.5	1056.2	65.252 µg/L	65.252 ppb	11:45:51
3	P 214.914†	742.8	537.2	1157.0 µg/L	1157.0 ppb	11:45:51
3	Pb 220.353†	765.8	719.3	202.23 µg/L	202.23 ppb	11:45:51
3	S 181.975 Axial†	173.6	153.8	855.17 µg/L	855.17 ppb	11:45:51
3	Sb 206.836†	30.3	6.9	4.2530 µg/L	4.2530 ppb	11:45:51
3	Se 196.026†	-236.1	-248.6	40.097 µg/L	40.097 ppb	11:45:51
3	SiO2†	286669.0	289773.2	59165 µg/L	59165 ppb	11:45:25
3	Si 251.611†	331128.4	337191.6	27314 µg/L	27314 ppb	11:45:25
3	Sn 189.927†	-34.6	-58.8	-16.467 µg/L	-16.467 ppb	11:45:51
3	Ti 334.940†	1639506.3	1670221.1	4036.6 µg/L	4036.6 ppb	11:45:25
3	Tl 190.801†	-38.0	-14.2	14.974 µg/L	14.974 ppb	11:45:51
3	U 409.014†	-229.3	-47.4	-20.069 µg/L	-20.069 ppb	11:45:25
3	V 292.402†	15924.9	16345.4	202.47 µg/L	202.47 ppb	11:45:31
3	Zn 213.857†	19676.8	19421.6	539.54 µg/L	539.54 ppb	11:45:31

Mean Data: 244921004|942675|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1947090.0	98.514 %		0.3462			0.35%
Sc RADIAL	77723.0	99.0 %		0.17			0.17%
Y 371.029	1253470.4	100.35 %		0.373			0.37%
Ag 328.068†	6629.8	67.740 µg/L		0.3623	67.740 ppb	0.3623	0.53%
Al 396.153Radial†	132875.3	86059 µg/L		209.9	86059 ppb	209.9	0.24%
As 188.979†	11.0	29.000 µg/L		1.5385	29.000 ppb	1.5385	5.31%
B 249.677†	1475.8	15.654 µg/L		1.1969	15.654 ppb	1.1969	7.65%
Ba 233.527†	51514.7	1439.3 µg/L		17.42	1439.3 ppb	17.42	1.21%
Be 313.107†	14419.3	8.1468 µg/L		0.18062	8.1468 ppb	0.18062	2.22%
Ca 317.933Radial†	26200.2	18878 µg/L		35.8	18878 ppb	35.8	0.19%
Cd 226.502†	500.6	2.4604 µg/L		0.59777	2.4604 ppb	0.59777	24.30%
Co 228.616†	906.3	39.695 µg/L		1.4252	39.695 ppb	1.4252	3.59%
Cr 267.716†	5397.7	121.07 µg/L		2.326	121.07 ppb	2.326	1.92%
Cu 324.752†	27100.6	213.21 µg/L		2.929	213.21 ppb	2.929	1.37%
Fe 238.204 Radial†	7879.3	104340 µg/L		232.5	104340 ppb	232.5	0.22%
K 766.490 Radial†	20444.8	12899 µg/L		12.8	12899 ppb	12.8	0.10%
Mg 279.077 IEC†	1466.4	14938 µg/L		14.2	14938 ppb	14.2	0.10%
Mn 257.610†	716089.0	2551.5 µg/L		19.41	2551.5 ppb	19.41	0.76%
Mo 202.031†	-2.4	3.6722 µg/L		0.91201	3.6722 ppb	0.91201	24.84%
Na 589.592 Radial†	2382.2	634.23 µg/L		0.753	634.23 ppb	0.753	0.12%

Ni 231.604†	1110.8	68.556 µg/L	2.8622	68.556 ppb	2.8622	4.18%
P 214.914†	554.4	1196.3 µg/L	36.20	1196.3 ppb	36.20	3.03%
Pb 220.353†	737.3	207.28 µg/L	5.143	207.28 ppb	5.143	2.48%
S 181.975 Axial†	161.6	898.21 µg/L	45.841	898.21 ppb	45.841	5.10%
Sb 206.836†	3.7	0.9225 µg/L	3.02786	0.9225 ppb	3.02786	328.24%
Se 196.026†	-256.8	27.546 µg/L	10.8837	27.546 ppb	10.8837	39.51%
SiO2†	291525.7	59523 µg/L	314.7	59523 ppb	314.7	0.53%
Si 251.611†	339203.1	27477 µg/L	143.6	27477 ppb	143.6	0.52%
Sn 189.927†	-62.7	-18.677 µg/L	2.2603	-18.677 ppb	2.2603	12.10%
Sr 421.552†	34197.5	204.57 µg/L	0.132	204.57 ppb	0.132	0.06%
Ti 334.940†	1688346.6	4080.4 µg/L	38.04	4080.4 ppb	38.04	0.93%
Tl 190.801†	-16.7	11.240 µg/L	8.3775	11.240 ppb	8.3775	74.53%
U 409.014†	-18.2	-17.344 µg/L	2.3867	-17.344 ppb	2.3867	13.76%
V 292.402†	16680.8	206.52 µg/L	3.532	206.52 ppb	3.532	1.71%
Zn 213.857†	19708.1	547.57 µg/L	7.096	547.57 ppb	7.096	1.30%

Sequence No.: 14

Sample ID: 244921005|942675|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 312

Date Collected: 1/29/2010 11:46:00

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 244921005|942675|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76298.2	76298.2	97.2 %		11:46:33
1	Al 396.153Radial†	134656.0	138536.9	89726 µg/L	89726 ppb	11:46:33
1	Ca 317.933Radial†	30265.9	30884.4	22254 µg/L	22254 ppb	11:46:53
1	Fe 238.204 Radial†	7326.2	7519.4	99571 µg/L	99571 ppb	11:46:53
1	K 766.490 Radial†	23970.0	24256.9	15304 µg/L	15304 ppb	11:46:33
1	Mg 279.077 IEC†	1410.9	1443.1	14704 µg/L	14704 ppb	11:46:53
1	Na 589.592 Radial†	2968.2	2499.4	665.43 µg/L	665.43 ppb	11:46:53
1	Sr 421.552†	35257.4	35631.8	213.15 µg/L	213.15 ppb	11:46:33
1	Sc 361.383	1930829.4	1930829.4	97.692 %		11:47:57
1	Y 371.029	1242328.4	1242328.4	99.457 %		11:47:57
1	Ag 328.068†	-1050.1	-982.3	-1.3200 µg/L	-1.3200 ppb	11:48:03
1	As 188.979†	4.4	7.2	20.263 µg/L	20.263 ppb	11:48:24
1	B 249.677†	1810.0	1482.8	18.489 µg/L	18.489 ppb	11:48:03
1	Ba 233.527†	48466.3	49635.5	1386.8 µg/L	1386.8 ppb	11:48:03
1	Be 313.107†	18602.2	15207.9	8.5562 µg/L	8.5562 ppb	11:48:03
1	Cd 226.502†	310.0	442.6	1.3675 µg/L	1.3675 ppb	11:48:24
1	Co 228.616†	929.4	1000.7	44.054 µg/L	44.054 ppb	11:48:24
1	Cr 267.716†	5607.2	5841.8	131.02 µg/L	131.02 ppb	11:48:03
1	Cu 324.752†	13491.3	9910.2	86.505 µg/L	86.505 ppb	11:48:03
1	Mn 257.610†	995997.0	1019680.3	3627.0 µg/L	3627.0 ppb	11:47:57
1	Mo 202.031†	30.6	18.8	6.0589 µg/L	6.0589 ppb	11:48:24
1	Ni 231.604†	1595.4	1301.7	80.049 µg/L	80.049 ppb	11:48:24
1	P 214.914†	847.5	647.7	1429.2 µg/L	1429.2 ppb	11:48:24
1	Pb 220.353†	619.1	572.6	161.64 µg/L	161.64 ppb	11:48:24
1	S 181.975 Axial†	166.7	147.5	820.28 µg/L	820.28 ppb	11:48:24
1	Sb 206.836†	37.1	13.9	11.341 µg/L	11.341 ppb	11:48:24
1	Se 196.026†	-229.8	-243.2	29.841 µg/L	29.841 ppb	11:48:24
1	SiO2†	235145.7	238312.8	48658 µg/L	48658 ppb	11:47:57
1	Si 251.611†	271264.5	277392.0	22470 µg/L	22470 ppb	11:47:57
1	Sn 189.927†	-73.5	-98.7	-38.716 µg/L	-38.716 ppb	11:48:24
1	Ti 334.940†	1778688.9	1820015.4	4398.8 µg/L	4398.8 ppb	11:47:57
1	Tl 190.801†	-48.6	-25.2	4.0257 µg/L	4.0257 ppb	11:48:24
1	U 409.014†	144.0	333.7	15.816 µg/L	15.816 ppb	11:48:03
1	V 292.402†	15555.9	16038.8	198.61 µg/L	198.61 ppb	11:48:03
1	Zn 213.857†	9485.2	9077.1	249.12 µg/L	249.12 ppb	11:48:03
2	Sc RADIAL	76848.5	76848.5	97.9 %		11:46:59
2	Al 396.153Radial†	136589.2	139519.3	90362 µg/L	90362 ppb	11:46:59
2	Ca 317.933Radial†	30096.1	30488.1	21968 µg/L	21968 ppb	11:47:19
2	Fe 238.204 Radial†	7300.5	7439.2	98509 µg/L	98509 ppb	11:47:19
2	K 766.490 Radial†	24276.4	24393.2	15390 µg/L	15390 ppb	11:46:59
2	Mg 279.077 IEC†	1394.3	1415.7	14423 µg/L	14423 ppb	11:47:19
2	Na 589.592 Radial†	2943.8	2452.6	652.98 µg/L	652.98 ppb	11:47:19
2	Sr 421.552†	35674.2	35797.7	214.14 µg/L	214.14 ppb	11:46:59
2	Sc 361.383	1922975.7	1922975.7	97.294 %		11:48:31
2	Y 371.029	1237579.4	1237579.4	99.077 %		11:48:31
2	Ag 328.068†	-1023.7	-959.6	-1.1784 µg/L	-1.1784 ppb	11:48:36
2	As 188.979†	4.0	6.8	19.465 µg/L	19.465 ppb	11:48:57
2	B 249.677†	1776.0	1455.5	17.750 µg/L	17.750 ppb	11:48:36
2	Ba 233.527†	48623.7	49999.9	1397.0 µg/L	1397.0 ppb	11:48:36
2	Be 313.107†	18639.6	15324.2	8.6486 µg/L	8.6486 ppb	11:48:36
2	Cd 226.502†	314.4	448.5	1.6544 µg/L	1.6544 ppb	11:48:57
2	Co 228.616†	926.1	1001.2	44.159 µg/L	44.159 ppb	11:48:57
2	Cr 267.716†	5622.0	5880.5	131.88 µg/L	131.88 ppb	11:48:36
2	Cu 324.752†	13542.2	10018.8	87.154 µg/L	87.154 ppb	11:48:36
2	Mn 257.610†	982985.3	1010470.6	3594.2 µg/L	3594.2 ppb	11:48:31
2	Mo 202.031†	31.3	19.6	6.1221 µg/L	6.1221 ppb	11:48:57
2	Ni 231.604†	1603.1	1316.3	80.914 µg/L	80.914 ppb	11:48:57
2	P 214.914†	850.1	653.9	1444.3 µg/L	1444.3 ppb	11:48:57
2	Pb 220.353†	617.1	573.1	161.86 µg/L	161.86 ppb	11:48:57

2	S 181.975 Axial†	165.2	146.7	815.45 µg/L	815.45 ppb	11:48:57
2	Sb 206.836†	34.3	11.3	8.5616 µg/L	8.5616 ppb	11:48:57
2	Se 196.026†	-229.3	-243.7	24.967 µg/L	24.967 ppb	11:48:57
2	SiO2†	232195.5	236263.6	48239 µg/L	48239 ppb	11:48:31
2	Si 251.611†	267996.4	275167.1	22290 µg/L	22290 ppb	11:48:31
2	Sn 189.927†	-73.7	-99.2	-39.224 µg/L	-39.224 ppb	11:48:57
2	Ti 334.940†	1756449.3	1804593.4	4361.5 µg/L	4361.5 ppb	11:48:31
2	Tl 190.801†	-46.1	-22.8	7.6271 µg/L	7.6271 ppb	11:48:57
2	U 409.014†	-13.7	172.2	0.9706 µg/L	0.9706 ppb	11:48:36
2	V 292.402†	15542.1	16089.7	199.16 µg/L	199.16 ppb	11:48:36
2	Zn 213.857†	9501.9	9133.9	250.78 µg/L	250.78 ppb	11:48:36
3	Sc RADIAL	76622.9	76622.9	97.6 %		11:47:25
3	Al 396.153Radial†	136682.4	140025.4	90690 µg/L	90690 ppb	11:47:25
3	Ca 317.933Radial†	30026.9	30507.6	21982 µg/L	21982 ppb	11:47:45
3	Fe 238.204 Radial†	7270.6	7430.5	98394 µg/L	98394 ppb	11:47:45
3	K 766.490 Radial†	24291.0	24481.2	15445 µg/L	15445 ppb	11:47:25
3	Mg 279.077 IEC†	1395.9	1421.6	14484 µg/L	14484 ppb	11:47:45
3	Na 589.592 Radial†	2961.9	2480.0	660.27 µg/L	660.27 ppb	11:47:45
3	Sr 421.552†	35641.4	35871.4	214.58 µg/L	214.58 ppb	11:47:25
3	Sc 361.383	1905216.5	1905216.5	96.396 %		11:49:04
3	Y 371.029	1226038.2	1226038.2	98.153 %		11:49:04
3	Ag 328.068†	-1023.2	-968.9	-1.2852 µg/L	-1.2852 ppb	11:49:10
3	As 188.979†	8.0	11.0	28.489 µg/L	28.489 ppb	11:49:31
3	B 249.677†	1779.3	1475.8	18.770 µg/L	18.770 ppb	11:49:10
3	Ba 233.527†	47418.0	49215.0	1375.1 µg/L	1375.1 ppb	11:49:10
3	Be 313.107†	18284.9	15134.8	8.5237 µg/L	8.5237 ppb	11:49:10
3	Cd 226.502†	285.3	421.2	0.8938 µg/L	0.8938 ppb	11:49:31
3	Co 228.616†	890.6	973.2	42.683 µg/L	42.683 ppb	11:49:31
3	Cr 267.716†	5448.6	5754.5	129.06 µg/L	129.06 ppb	11:49:10
3	Cu 324.752†	13333.8	9932.4	86.505 µg/L	86.505 ppb	11:49:10
3	Mn 257.610†	972731.9	1009251.3	3589.8 µg/L	3589.8 ppb	11:49:04
3	Mo 202.031†	24.7	13.0	5.3168 µg/L	5.3168 ppb	11:49:31
3	Ni 231.604†	1553.9	1280.6	78.756 µg/L	78.756 ppb	11:49:31
3	P 214.914†	818.8	629.6	1388.5 µg/L	1388.5 ppb	11:49:31
3	Pb 220.353†	607.3	568.8	160.68 µg/L	160.68 ppb	11:49:31
3	S 181.975 Axial†	166.3	149.4	830.56 µg/L	830.56 ppb	11:49:31
3	Sb 206.836†	34.9	12.2	9.6015 µg/L	9.6015 ppb	11:49:31
3	Se 196.026†	-215.1	-231.1	43.320 µg/L	43.320 ppb	11:49:31
3	SiO2†	230256.7	236476.9	48283 µg/L	48283 ppb	11:49:04
3	Si 251.611†	266030.6	275695.4	22333 µg/L	22333 ppb	11:49:04
3	Sn 189.927†	-72.9	-99.1	-39.182 µg/L	-39.182 ppb	11:49:31
3	Ti 334.940†	1737579.6	1801845.8	4354.8 µg/L	4354.8 ppb	11:49:04
3	Tl 190.801†	-39.4	-16.3	18.357 µg/L	18.357 ppb	11:49:31
3	U 409.014†	-9.5	176.4	1.3789 µg/L	1.3789 ppb	11:49:10
3	V 292.402†	15202.3	15886.1	196.69 µg/L	196.69 ppb	11:49:10
3	Zn 213.857†	9363.9	9081.7	249.33 µg/L	249.33 ppb	11:49:10

Mean Data: 244921005|942675|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1919673.9	97.127 %	0.6639			0.68%
Sc RADIAL	76589.9	97.6 %	0.35			0.36%
Y 371.029	1235315.3	98.896 %	0.6707			0.68%
Ag 328.068†	-970.3	-1.2612 µg/L	0.07378	-1.2612 ppb	0.07378	5.85%
Al 396.153Radial†	139360.5	90259 µg/L	490.2	90259 ppb	490.2	0.54%
As 188.979†	8.3	22.739 µg/L	4.9957	22.739 ppb	4.9957	21.97%
B 249.677†	1471.4	18.336 µg/L	0.5268	18.336 ppb	0.5268	2.87%
Ba 233.527†	49616.8	1386.3 µg/L	10.97	1386.3 ppb	10.97	0.79%
Be 313.107†	15222.3	8.5761 µg/L	0.06482	8.5761 ppb	0.06482	0.76%
Ca 317.933Radial†	30626.7	22068 µg/L	161.0	22068 ppb	161.0	0.73%
Cd 226.502†	437.4	1.3052 µg/L	0.38409	1.3052 ppb	0.38409	29.43%
Co 228.616†	991.7	43.632 µg/L	0.8239	43.632 ppb	0.8239	1.89%
Cr 267.716†	5825.6	130.65 µg/L	1.447	130.65 ppb	1.447	1.11%
Cu 324.752†	9953.8	86.721 µg/L	0.3748	86.721 ppb	0.3748	0.43%
Fe 238.204 Radial†	7463.0	98825 µg/L	649.0	98825 ppb	649.0	0.66%
K 766.490 Radial†	24377.1	15380 µg/L	71.3	15380 ppb	71.3	0.46%
Mg 279.077 IEC†	1426.8	14537 µg/L	147.5	14537 ppb	147.5	1.01%
Mn 257.610†	1013134.1	3603.7 µg/L	20.29	3603.7 ppb	20.29	0.56%
Mo 202.031†	17.1	5.8326 µg/L	0.44779	5.8326 ppb	0.44779	7.68%
Na 589.592 Radial†	2477.4	659.56 µg/L	6.257	659.56 ppb	6.257	0.95%

Ni 231.604†	1299.5	79.906 µg/L	1.0861	79.906 ppb	1.0861	1.36%
P 214.914†	643.7	1420.7 µg/L	28.85	1420.7 ppb	28.85	2.03%
Pb 220.353†	571.5	161.39 µg/L	0.625	161.39 ppb	0.625	0.39%
S 181.975 Axial†	147.9	822.09 µg/L	7.716	822.09 ppb	7.716	0.94%
Sb 206.836†	12.5	9.8345 µg/L	1.40405	9.8345 ppb	1.40405	14.28%
Se 196.026†	-239.3	32.709 µg/L	9.5067	32.709 ppb	9.5067	29.06%
SiO2†	237017.8	48393 µg/L	230.0	48393 ppb	230.0	0.48%
Si 251.611†	276084.8	22364 µg/L	94.2	22364 ppb	94.2	0.42%
Sn 189.927†	-99.0	-39.041 µg/L	0.2817	-39.041 ppb	0.2817	0.72%
Sr 421.552†	35767.0	213.95 µg/L	0.734	213.95 ppb	0.734	0.34%
Ti 334.940†	1808818.2	4371.7 µg/L	23.67	4371.7 ppb	23.67	0.54%
Tl 190.801†	-21.4	10.003 µg/L	7.4553	10.003 ppb	7.4553	74.53%
U 409.014†	227.4	6.0552 µg/L	8.45567	6.0552 ppb	8.45567	139.64%
V 292.402†	16004.9	198.15 µg/L	1.297	198.15 ppb	1.297	0.65%
Zn 213.857†	9097.5	249.74 µg/L	0.904	249.74 ppb	0.904	0.36%

Sequence No.: 15

Sample ID: 244921006|942675|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 313

Date Collected: 1/29/2010 11:49:40

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 244921006|942675|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76267.3	76267.3	97.2 %		11:50:13
1	Al 396.153Radial†	218018.5	224374.6	145320 µg/L	145320 ppb	11:50:13
1	Ca 317.933Radial†	29263.3	29865.3	21519 µg/L	21519 ppb	11:50:34
1	Fe 238.204 Radial†	8771.6	9009.8	119310 µg/L	119310 ppb	11:50:34
1	K 766.490 Radial†	27811.9	28220.3	17804 µg/L	17804 ppb	11:50:13
1	Mg 279.077 IEC†	1809.9	1854.2	18901 µg/L	18901 ppb	11:50:34
1	Na 589.592 Radial†	4746.2	4330.2	1152.9 µg/L	1152.9 ppb	11:50:34
1	Sr 421.552†	42826.6	43435.3	259.83 µg/L	259.83 ppb	11:50:13
1	Sc 361.383	1928503.9	1928503.9	97.574 %		11:51:39
1	Y 371.029	1254141.0	1254141.0	100.40 %		11:51:39
1	Ag 328.068†	-1240.1	-1178.4	-1.6463 µg/L	-1.6463 ppb	11:51:44
1	As 188.979†	10.9	13.9	36.086 µg/L	36.086 ppb	11:52:05
1	B 249.677†	1995.1	1674.7	17.310 µg/L	17.310 ppb	11:51:44
1	Ba 233.527†	56511.8	57940.9	1618.8 µg/L	1618.8 ppb	11:51:44
1	Be 313.107†	24478.7	21253.6	12.319 µg/L	12.319 ppb	11:51:44
1	Cd 226.502†	365.0	499.3	0.7622 µg/L	0.7622 ppb	11:52:05
1	Co 228.616†	872.5	943.5	39.335 µg/L	39.335 ppb	11:52:05
1	Cr 267.716†	6368.5	6629.0	148.68 µg/L	148.68 ppb	11:51:44
1	Cu 324.752†	11477.5	7862.9	74.237 µg/L	74.237 ppb	11:51:44
1	Mn 257.610†	632223.4	648091.1	2312.3 µg/L	2312.3 ppb	11:51:39
1	Mo 202.031†	8.8	-3.6	4.1026 µg/L	4.1026 ppb	11:52:05
1	Ni 231.604†	1878.2	1593.5	97.972 µg/L	97.972 ppb	11:52:05
1	P 214.914†	626.0	421.7	909.82 µg/L	909.82 ppb	11:52:05
1	Pb 220.353†	425.3	374.7	108.54 µg/L	108.54 ppb	11:52:05
1	S 181.975 Axial†	156.7	137.5	764.27 µg/L	764.27 ppb	11:52:05
1	Sb 206.836†	28.2	4.9	1.6168 µg/L	1.6168 ppb	11:52:05
1	Se 196.026†	-277.4	-292.2	32.948 µg/L	32.948 ppb	11:52:05
1	SiO2†	249831.7	253654.2	51790 µg/L	51790 ppb	11:51:39
1	Si 251.611†	288478.7	295369.1	23926 µg/L	23926 ppb	11:51:39
1	Sn 189.927†	-90.3	-116.0	-46.036 µg/L	-46.036 ppb	11:52:05
1	Ti 334.940†	2099968.1	2151478.5	5199.7 µg/L	5199.7 ppb	11:51:39
1	Tl 190.801†	-41.5	-18.0	17.464 µg/L	17.464 ppb	11:52:05
1	U 409.014†	-850.2	-685.2	-81.579 µg/L	-81.579 ppb	11:51:39
1	V 292.402†	18001.9	18564.9	229.98 µg/L	229.98 ppb	11:51:44
1	Zn 213.857†	8882.1	8470.7	230.85 µg/L	230.85 ppb	11:51:44
2	Sc RADIAL	76805.2	76805.2	97.9 %		11:50:39
2	Al 396.153Radial†	219806.5	224630.4	145490 µg/L	145490 ppb	11:50:39
2	Ca 317.933Radial†	29369.4	29762.8	21445 µg/L	21445 ppb	11:51:00
2	Fe 238.204 Radial†	8801.9	8977.5	118880 µg/L	118880 ppb	11:51:00
2	K 766.490 Radial†	27993.7	28205.5	17795 µg/L	17795 ppb	11:50:39
2	Mg 279.077 IEC†	1815.6	1847.0	18828 µg/L	18828 ppb	11:51:00
2	Na 589.592 Radial†	4759.5	4309.6	1147.4 µg/L	1147.4 ppb	11:51:00
2	Sr 421.552†	43319.3	43630.1	260.99 µg/L	260.99 ppb	11:50:39
2	Sc 361.383	1937704.2	1937704.2	98.039 %		11:52:13
2	Y 371.029	1260252.7	1260252.7	100.89 %		11:52:13
2	Ag 328.068†	-1242.0	-1174.2	-1.6406 µg/L	-1.6406 ppb	11:52:18
2	As 188.979†	11.3	14.3	36.853 µg/L	36.853 ppb	11:52:39
2	B 249.677†	1976.4	1645.9	16.169 µg/L	16.169 ppb	11:52:18
2	Ba 233.527†	56511.6	57665.6	1611.2 µg/L	1611.2 ppb	11:52:18
2	Be 313.107†	24423.8	21078.5	12.212 µg/L	12.212 ppb	11:52:18
2	Cd 226.502†	375.7	508.5	1.0719 µg/L	1.0719 ppb	11:52:39
2	Co 228.616†	879.6	946.5	39.559 µg/L	39.559 ppb	11:52:39
2	Cr 267.716†	6379.1	6608.8	148.22 µg/L	148.22 ppb	11:52:18
2	Cu 324.752†	11522.2	7852.7	74.103 µg/L	74.103 ppb	11:52:18
2	Mn 257.610†	632105.3	644894.2	2300.9 µg/L	2300.9 ppb	11:52:13
2	Mo 202.031†	11.7	-0.7	4.4353 µg/L	4.4353 ppb	11:52:39
2	Ni 231.604†	1896.1	1602.7	98.524 µg/L	98.524 ppb	11:52:39
2	P 214.914†	617.5	410.0	883.27 µg/L	883.27 ppb	11:52:39
2	Pb 220.353†	425.6	372.9	108.06 µg/L	108.06 ppb	11:52:39

2	S 181.975 Axial†	158.5	138.6	770.45 µg/L	770.45 ppb	11:52:39
2	Sb 206.836†	26.6	3.1	-0.2302 µg/L	-0.2302 ppb	11:52:39
2	Se 196.026†	-280.7	-294.3	28.166 µg/L	28.166 ppb	11:52:39
2	SiO2†	249576.3	252178.0	51489 µg/L	51489 ppb	11:52:13
2	Si 251.611†	288231.9	293713.6	23792 µg/L	23792 ppb	11:52:13
2	Sn 189.927†	-88.8	-114.0	-44.950 µg/L	-44.950 ppb	11:52:39
2	Ti 334.940†	2097775.1	2139023.0	5169.6 µg/L	5169.6 ppb	11:52:13
2	Tl 190.801†	-46.6	-23.0	8.9568 µg/L	8.9568 ppb	11:52:39
2	U 409.014†	-721.6	-549.8	-68.937 µg/L	-68.937 ppb	11:52:13
2	V 292.402†	18027.8	18503.7	229.23 µg/L	229.23 ppb	11:52:18
2	Zn 213.857†	8847.1	8391.7	228.65 µg/L	228.65 ppb	11:52:18
3	Sc RADIAL	77000.3	77000.3	98.1 %		11:51:06
3	Al 396.153Radial†	220647.4	224918.4	145670 µg/L	145670 ppb	11:51:06
3	Ca 317.933Radial†	29331.0	29647.6	21362 µg/L	21362 ppb	11:51:26
3	Fe 238.204 Radial†	8790.6	8943.2	118420 µg/L	118420 ppb	11:51:26
3	K 766.490 Radial†	28127.0	28268.9	17835 µg/L	17835 ppb	11:51:06
3	Mg 279.077 IEC†	1819.7	1846.5	18823 µg/L	18823 ppb	11:51:26
3	Na 589.592 Radial†	4754.0	4291.7	1142.6 µg/L	1142.6 ppb	11:51:26
3	Sr 421.552†	43398.5	43598.7	260.80 µg/L	260.80 ppb	11:51:06
3	Sc 361.383	1923516.2	1923516.2	97.322 %		11:52:47
3	Y 371.029	1250740.0	1250740.0	100.13 %		11:52:47
3	Ag 328.068†	-1216.2	-1157.1	-1.5376 µg/L	-1.5376 ppb	11:52:52
3	As 188.979†	9.4	12.4	32.720 µg/L	32.720 ppb	11:53:13
3	B 249.677†	1925.6	1608.6	14.635 µg/L	14.635 ppb	11:52:52
3	Ba 233.527†	55635.7	57190.9	1597.9 µg/L	1597.9 ppb	11:52:52
3	Be 313.107†	24073.7	20902.5	12.109 µg/L	12.109 ppb	11:52:52
3	Cd 226.502†	335.5	470.0	0.0278 µg/L	0.0278 ppb	11:53:13
3	Co 228.616†	830.8	902.9	37.324 µg/L	37.324 ppb	11:53:13
3	Cr 267.716†	6198.3	6471.0	145.13 µg/L	145.13 ppb	11:52:52
3	Cu 324.752†	11448.6	7863.7	74.121 µg/L	74.121 ppb	11:52:52
3	Mn 257.610†	623184.1	640483.1	2285.2 µg/L	2285.2 ppb	11:52:47
3	Mo 202.031†	11.5	-0.8	4.4058 µg/L	4.4058 ppb	11:53:13
3	Ni 231.604†	1812.3	1530.7	94.166 µg/L	94.166 ppb	11:53:13
3	P 214.914†	608.7	405.6	873.56 µg/L	873.56 ppb	11:53:13
3	Pb 220.353†	414.2	364.5	105.73 µg/L	105.73 ppb	11:53:13
3	S 181.975 Axial†	155.1	136.2	757.46 µg/L	757.46 ppb	11:53:13
3	Sb 206.836†	28.0	4.8	1.5845 µg/L	1.5845 ppb	11:53:13
3	Se 196.026†	-275.3	-290.8	31.494 µg/L	31.494 ppb	11:53:13
3	SiO2†	246801.3	251204.3	51290 µg/L	51290 ppb	11:52:47
3	Si 251.611†	285218.8	292786.1	23717 µg/L	23717 ppb	11:52:47
3	Sn 189.927†	-85.8	-111.6	-43.675 µg/L	-43.675 ppb	11:53:13
3	Ti 334.940†	2066634.6	2122808.2	5130.4 µg/L	5130.4 ppb	11:52:47
3	Tl 190.801†	-32.5	-8.9	32.084 µg/L	32.084 ppb	11:53:13
3	U 409.014†	-863.8	-701.3	-82.949 µg/L	-82.949 ppb	11:52:47
3	V 292.402†	17616.0	18216.1	225.73 µg/L	225.73 ppb	11:52:52
3	Zn 213.857†	8758.9	8367.7	228.02 µg/L	228.02 ppb	11:52:52

Mean Data: 244921006|942675|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1929908.1	97.645 %	0.3642			0.37%
Sc RADIAL	76690.9	97.7 %	0.48			0.50%
Y 371.029	1255044.6	100.48 %	0.386			0.38%
Ag 328.068†	-1169.9	-1.6082 µg/L	0.06115	-1.6082 ppb	0.06115	3.80%
Al 396.153Radial†	224641.1	145490 µg/L	176.2	145490 ppb	176.2	0.12%
As 188.979†	13.5	35.220 µg/L	2.1984	35.220 ppb	2.1984	6.24%
B 249.677†	1643.1	16.038 µg/L	1.3427	16.038 ppb	1.3427	8.37%
Ba 233.527†	57599.1	1609.3 µg/L	10.60	1609.3 ppb	10.60	0.66%
Be 313.107†	21078.2	12.213 µg/L	0.1049	12.213 ppb	0.1049	0.86%
Ca 317.933Radial†	29758.6	21442 µg/L	78.5	21442 ppb	78.5	0.37%
Cd 226.502†	492.6	0.6206 µg/L	0.53623	0.6206 ppb	0.53623	86.40%
Co 228.616†	931.0	38.739 µg/L	1.2307	38.739 ppb	1.2307	3.18%
Cr 267.716†	6569.6	147.34 µg/L	1.928	147.34 ppb	1.928	1.31%
Cu 324.752†	7859.8	74.154 µg/L	0.0732	74.154 ppb	0.0732	0.10%
Fe 238.204 Radial†	8976.8	118870 µg/L	441.0	118870 ppb	441.0	0.37%
K 766.490 Radial†	28231.6	17811 µg/L	20.9	17811 ppb	20.9	0.12%
Mg 279.077 IEC†	1849.2	18851 µg/L	43.9	18851 ppb	43.9	0.23%
Mn 257.610†	644489.4	2299.5 µg/L	13.60	2299.5 ppb	13.60	0.59%
Mo 202.031†	-1.7	4.3146 µg/L	0.18417	4.3146 ppb	0.18417	4.27%
Na 589.592 Radial†	4310.5	1147.6 µg/L	5.13	1147.6 ppb	5.13	0.45%

Ni 231.604†	1575.6	96.887 µg/L	2.3726	96.887 ppb	2.3726	2.45%
P 214.914†	412.5	888.89 µg/L	18.772	888.89 ppb	18.772	2.11%
Pb 220.353†	370.7	107.44 µg/L	1.504	107.44 ppb	1.504	1.40%
S 181.975 Axial†	137.4	764.06 µg/L	6.497	764.06 ppb	6.497	0.85%
Sb 206.836†	4.3	0.9904 µg/L	1.05719	0.9904 ppb	1.05719	106.75%
Se 196.026†	-292.4	30.869 µg/L	2.4518	30.869 ppb	2.4518	7.94%
SiO2†	252345.5	51523 µg/L	251.8	51523 ppb	251.8	0.49%
Si 251.611†	293956.2	23812 µg/L	106.0	23812 ppb	106.0	0.45%
Sn 189.927†	-113.9	-44.887 µg/L	1.1815	-44.887 ppb	1.1815	2.63%
Sr 421.552†	43554.7	260.54 µg/L	0.626	260.54 ppb	0.626	0.24%
Ti 334.940†	2137769.9	5166.5 µg/L	34.75	5166.5 ppb	34.75	0.67%
Tl 190.801†	-16.6	19.502 µg/L	11.6975	19.502 ppb	11.6975	59.98%
U 409.014†	-645.4	-77.821 µg/L	7.7248	-77.821 ppb	7.7248	9.93%
V 292.402†	18428.2	228.31 µg/L	2.270	228.31 ppb	2.270	0.99%
Zn 213.857†	8410.1	229.17 µg/L	1.486	229.17 ppb	1.486	0.65%



Sequence No.: 16

Sample ID: 244921007|942675|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 314

Date Collected: 1/29/2010 11:53:23

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 244921007|942675|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	78004.0	78004.0	99.4 %			11:53:55
1	Al 396.153Radial†	134700.8	135553.0	87793 µg/L		87793 ppb	11:53:55
1	Ca 317.933Radial†	19007.2	18876.1	13601 µg/L		13601 ppb	11:54:16
1	Fe 238.204 Radial†	9727.8	9770.8	129380 µg/L		129380 ppb	11:54:16
1	K 766.490 Radial†	25535.4	25292.7	15957 µg/L		15957 ppb	11:53:55
1	Mg 279.077 IEC†	1541.1	1542.3	15690 µg/L		15690 ppb	11:54:16
1	Na 589.592 Radial†	8582.1	8080.8	2151.4 µg/L		2151.4 ppb	11:54:16
1	Sr 421.552†	29831.1	29379.3	175.74 µg/L		175.74 ppb	11:53:55
1	Sc 361.383	1941404.7	1941404.7	98.227 %			11:55:20
1	Y 371.029	1253569.9	1253569.9	100.36 %			11:55:20
1	Ag 328.068†	-1368.1	-1300.2	-2.3353 µg/L		-2.3353 ppb	11:55:26
1	As 188.979†	9.3	12.2	33.425 µg/L		33.425 ppb	11:55:46
1	B 249.677†	2020.4	1687.0	12.748 µg/L		12.748 ppb	11:55:26
1	Ba 233.527†	34087.0	34726.4	970.34 µg/L		970.34 ppb	11:55:26
1	Be 313.107†	17520.7	14003.2	8.0034 µg/L		8.0034 ppb	11:55:26
1	Cd 226.502†	413.3	546.1	0.9846 µg/L		0.9846 ppb	11:55:46
1	Co 228.616†	1107.8	1177.1	54.855 µg/L		54.855 ppb	11:55:46
1	Cr 267.716†	9615.5	9891.2	221.75 µg/L		221.75 ppb	11:55:26
1	Cu 324.752†	9024.5	5287.4	56.754 µg/L		56.754 ppb	11:55:26
1	Mn 257.610†	1197918.4	1219693.4	4339.8 µg/L		4339.8 ppb	11:55:20
1	Mo 202.031†	48.2	36.5	9.3421 µg/L		9.3421 ppb	11:55:46
1	Ni 231.604†	2491.9	2205.5	135.14 µg/L		135.14 ppb	11:55:46
1	P 214.914†	537.0	326.9	668.80 µg/L		668.80 ppb	11:55:46
1	Pb 220.353†	461.7	408.9	114.65 µg/L		114.65 ppb	11:55:46
1	S 181.975 Axial†	157.4	137.1	762.43 µg/L		762.43 ppb	11:55:46
1	Sb 206.836†	30.5	7.1	3.8529 µg/L		3.8529 ppb	11:55:46
1	Se 196.026†	-309.6	-323.1	26.295 µg/L		26.295 ppb	11:55:46
1	SiO2†	296799.2	299768.2	61206 µg/L		61206 ppb	11:55:20
1	Si 251.611†	342689.3	348593.8	28238 µg/L		28238 ppb	11:55:20
1	Sn 189.927†	-52.3	-76.7	-25.264 µg/L		-25.264 ppb	11:55:46
1	Ti 334.940†	1513474.1	1540094.5	3721.9 µg/L		3721.9 ppb	11:55:20
1	Tl 190.801†	-46.8	-23.1	4.4936 µg/L		4.4936 ppb	11:55:46
1	U 409.014†	-1054.5	-887.4	-101.29 µg/L		-101.29 ppb	11:55:20
1	V 292.402†	15348.3	15740.7	196.72 µg/L		196.72 ppb	11:55:26
1	Zn 213.857†	13711.5	13326.8	366.92 µg/L		366.92 ppb	11:55:26
2	Sc RADIAL	77732.9	77732.9	99.0 %			11:54:21
2	Al 396.153Radial†	134806.2	136132.1	88168 µg/L		88168 ppb	11:54:21
2	Ca 317.933Radial†	19015.5	18951.2	13655 µg/L		13655 ppb	11:54:41
2	Fe 238.204 Radial†	9751.2	9828.7	130150 µg/L		130150 ppb	11:54:41
2	K 766.490 Radial†	25578.8	25426.1	16041 µg/L		16041 ppb	11:54:21
2	Mg 279.077 IEC†	1540.9	1547.6	15743 µg/L		15743 ppb	11:54:41
2	Na 589.592 Radial†	8586.7	8115.6	2160.7 µg/L		2160.7 ppb	11:54:41
2	Sr 421.552†	29873.5	29526.8	176.63 µg/L		176.63 ppb	11:54:21
2	Sc 361.383	1947887.7	1947887.7	98.555 %			11:55:54
2	Y 371.029	1257210.3	1257210.3	100.65 %			11:55:54
2	Ag 328.068†	-1334.2	-1261.2	-1.9422 µg/L		-1.9422 ppb	11:55:59
2	As 188.979†	7.9	10.8	30.299 µg/L		30.299 ppb	11:56:20
2	B 249.677†	2022.3	1682.0	12.112 µg/L		12.112 ppb	11:55:59
2	Ba 233.527†	34036.5	34559.6	965.68 µg/L		965.68 ppb	11:55:59
2	Be 313.107†	17418.4	13840.1	7.8978 µg/L		7.8978 ppb	11:55:59
2	Cd 226.502†	430.4	562.0	1.3491 µg/L		1.3491 ppb	11:56:20
2	Co 228.616†	1116.3	1182.0	55.134 µg/L		55.134 ppb	11:56:20
2	Cr 267.716†	9625.6	9868.9	221.25 µg/L		221.25 ppb	11:55:59
2	Cu 324.752†	9050.7	5283.4	56.831 µg/L		56.831 ppb	11:55:59
2	Mn 257.610†	1198711.4	1216439.2	4328.4 µg/L		4328.4 ppb	11:55:54
2	Mo 202.031†	37.1	25.1	7.9850 µg/L		7.9850 ppb	11:56:20
2	Ni 231.604†	2504.3	2209.6	135.40 µg/L		135.40 ppb	11:56:20
2	P 214.914†	532.9	320.9	654.39 µg/L		654.39 ppb	11:56:20
2	Pb 220.353†	464.6	410.3	115.02 µg/L		115.02 ppb	11:56:20

2	S 181.975 Axial†	153.1	132.2	735.14 µg/L	735.14 ppb	11:56:20
2	Sb 206.836†	22.3	-1.4	-5.0762 µg/L	-5.0762 ppb	11:56:20
2	Se 196.026†	-313.5	-326.1	24.948 µg/L	24.948 ppb	11:56:20
2	SiO2†	296777.9	298740.9	60996 µg/L	60996 ppb	11:55:54
2	Si 251.611†	342880.5	347626.7	28159 µg/L	28159 ppb	11:55:54
2	Sn 189.927†	-62.3	-86.7	-30.814 µg/L	-30.814 ppb	11:56:20
2	Ti 334.940†	1514007.3	1535507.4	3710.8 µg/L	3710.8 ppb	11:55:54
2	Tl 190.801†	-42.4	-18.5	11.988 µg/L	11.988 ppb	11:56:20
2	U 409.014†	-996.1	-824.5	-95.561 µg/L	-95.561 ppb	11:55:54
2	V 292.402†	15304.3	15644.1	195.59 µg/L	195.59 ppb	11:55:59
2	Zn 213.857†	13729.2	13298.3	366.08 µg/L	366.08 ppb	11:55:59
3	Sc RADIAL	77841.0	77841.0	99.2 %		11:54:47
3	Al 396.153Radial†	134711.5	135847.6	87984 µg/L	87984 ppb	11:54:47
3	Ca 317.933Radial†	18979.2	18887.9	13610 µg/L	13610 ppb	11:55:07
3	Fe 238.204 Radial†	9719.9	9783.4	129550 µg/L	129550 ppb	11:55:07
3	K 766.490 Radial†	25598.9	25410.5	16032 µg/L	16032 ppb	11:54:47
3	Mg 279.077 IEC†	1537.8	1542.3	15689 µg/L	15689 ppb	11:55:07
3	Na 589.592 Radial†	8560.9	8077.5	2150.5 µg/L	2150.5 ppb	11:55:07
3	Sr 421.552†	29779.5	29390.1	175.81 µg/L	175.81 ppb	11:54:47
3	Sc 361.383	1948291.3	1948291.3	98.575 %		11:56:28
3	Y 371.029	1257968.7	1257968.7	100.71 %		11:56:28
3	Ag 328.068†	-1314.1	-1240.5	-1.8319 µg/L	-1.8319 ppb	11:56:33
3	As 188.979†	8.6	11.5	31.762 µg/L	31.762 ppb	11:56:54
3	B 249.677†	1980.2	1638.9	10.376 µg/L	10.376 ppb	11:56:33
3	Ba 233.527†	33286.1	33791.2	944.21 µg/L	944.21 ppb	11:56:33
3	Be 313.107†	17200.2	13615.0	7.7473 µg/L	7.7473 ppb	11:56:33
3	Cd 226.502†	376.1	506.8	-0.1542 µg/L	-0.1542 ppb	11:56:54
3	Co 228.616†	1041.0	1105.4	51.065 µg/L	51.065 ppb	11:56:54
3	Cr 267.716†	9374.3	9612.0	215.49 µg/L	215.49 ppb	11:56:33
3	Cu 324.752†	8878.0	5106.4	55.449 µg/L	55.449 ppb	11:56:33
3	Mn 257.610†	1199556.6	1217044.6	4330.5 µg/L	4330.5 ppb	11:56:28
3	Mo 202.031†	57.4	45.7	10.455 µg/L	10.455 ppb	11:56:54
3	Ni 231.604†	2351.8	2054.3	126.00 µg/L	126.00 ppb	11:56:54
3	P 214.914†	512.2	299.7	606.34 µg/L	606.34 ppb	11:56:54
3	Pb 220.353†	451.3	396.6	111.23 µg/L	111.23 ppb	11:56:54
3	S 181.975 Axial†	151.9	130.9	727.85 µg/L	727.85 ppb	11:56:54
3	Sb 206.836†	28.2	4.6	1.3659 µg/L	1.3659 ppb	11:56:54
3	Se 196.026†	-292.8	-305.0	54.286 µg/L	54.286 ppb	11:56:54
3	SiO2†	297072.1	298977.0	61044 µg/L	61044 ppb	11:56:28
3	Si 251.611†	343324.1	348004.6	28190 µg/L	28190 ppb	11:56:28
3	Sn 189.927†	-45.9	-70.0	-21.468 µg/L	-21.468 ppb	11:56:54
3	Ti 334.940†	1513333.7	1534505.9	3708.4 µg/L	3708.4 ppb	11:56:28
3	Tl 190.801†	-44.4	-20.5	8.6284 µg/L	8.6284 ppb	11:56:54
3	U 409.014†	-1120.6	-950.6	-107.19 µg/L	-107.19 ppb	11:56:28
3	V 292.402†	14829.7	15159.3	189.72 µg/L	189.72 ppb	11:56:33
3	Zn 213.857†	13403.5	12965.0	356.79 µg/L	356.79 ppb	11:56:33

Mean Data: 244921007|942675|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1945861.2	98.452 %	0.1955			0.20%
Sc RADIAL	77859.3	99.2 %	0.17			0.18%
Y 371.029	1256249.7	100.57 %	0.188			0.19%
Ag 328.068†	-1267.3	-2.0365 µg/L	0.26462	-2.0365 ppb	0.26462	12.99%
Al 396.153Radial†	135844.2	87982 µg/L	187.6	87982 ppb	187.6	0.21%
As 188.979†	11.5	31.828 µg/L	1.5639	31.828 ppb	1.5639	4.91%
B 249.677†	1669.3	11.745 µg/L	1.2280	11.745 ppb	1.2280	10.46%
Ba 233.527†	34359.1	960.08 µg/L	13.940	960.08 ppb	13.940	1.45%
Be 313.107†	13819.4	7.8829 µg/L	0.12867	7.8829 ppb	0.12867	1.63%
Ca 317.933Radial†	18905.0	13622 µg/L	29.1	13622 ppb	29.1	0.21%
Cd 226.502†	538.3	0.7265 µg/L	0.78418	0.7265 ppb	0.78418	107.94%
Co 228.616†	1154.8	53.684 µg/L	2.2730	53.684 ppb	2.2730	4.23%
Cr 267.716†	9790.7	219.49 µg/L	3.479	219.49 ppb	3.479	1.59%
Cu 324.752†	5225.7	56.344 µg/L	0.7764	56.344 ppb	0.7764	1.38%
Fe 238.204 Radial†	9794.3	129690 µg/L	402.9	129690 ppb	402.9	0.31%
K 766.490 Radial†	25376.4	16010 µg/L	46.0	16010 ppb	46.0	0.29%
Mg 279.077 IEC†	1544.1	15707 µg/L	31.0	15707 ppb	31.0	0.20%
Mn 257.610†	1217725.8	4332.9 µg/L	6.09	4332.9 ppb	6.09	0.14%
Mo 202.031†	35.8	9.2606 µg/L	1.23683	9.2606 ppb	1.23683	13.36%
Na 589.592 Radial†	8091.3	2154.2 µg/L	5.62	2154.2 ppb	5.62	0.26%

Ni 231.604†	2156.5	132.18 µg/L	5.355	132.18 ppb	5.355	4.05%
P 214.914†	315.8	643.18 µg/L	32.708	643.18 ppb	32.708	5.09%
Pb 220.353†	405.3	113.63 µg/L	2.089	113.63 ppb	2.089	1.84%
S 181.975 Axial†	133.4	741.81 µg/L	18.227	741.81 ppb	18.227	2.46%
Sb 206.836†	3.4	0.0475 µg/L	4.60823	0.0475 ppb	4.60823	>999.9%
Se 196.026†	-318.0	35.176 µg/L	16.5636	35.176 ppb	16.5636	47.09%
SiO2†	299162.0	61082 µg/L	109.9	61082 ppb	109.9	0.18%
Si 251.611†	348075.0	28196 µg/L	39.5	28196 ppb	39.5	0.14%
Sn 189.927†	-77.8	-25.849 µg/L	4.7004	-25.849 ppb	4.7004	18.18%
Sr 421.552†	29432.1	176.06 µg/L	0.492	176.06 ppb	0.492	0.28%
Ti 334.940†	1536702.6	3713.7 µg/L	7.20	3713.7 ppb	7.20	0.19%
Tl 190.801†	-20.7	8.3699 µg/L	3.75365	8.3699 ppb	3.75365	44.85%
U 409.014†	-887.5	-101.35 µg/L	5.816	-101.35 ppb	5.816	5.74%
V 292.402†	15514.7	194.01 µg/L	3.757	194.01 ppb	3.757	1.94%
Zn 213.857†	13196.7	363.26 µg/L	5.625	363.26 ppb	5.625	1.55%

Sequence No.: 17

Sample ID: 244921008|942675|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 315

Date Collected: 1/29/2010 11:57:03

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 244921008|942675|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	75878.7	75878.7	96.7 %		11:57:36
1	Al 396.153Radial†	123701.7	127972.8	82884 µg/L	82884 ppb	11:57:36
1	Ca 317.933Radial†	25790.2	26427.4	19042 µg/L	19042 ppb	11:57:56
1	Fe 238.204 Radial†	6369.2	6571.3	87016 µg/L	87016 ppb	11:57:56
1	K 766.490 Radial†	20983.0	21303.8	13441 µg/L	13441 ppb	11:57:36
1	Mg 279.077 IEC†	1275.2	1310.8	13359 µg/L	13359 ppb	11:57:56
1	Na 589.592 Radial†	3019.1	2568.9	683.93 µg/L	683.93 ppb	11:57:56
1	Sr 421.552†	30940.7	31367.6	187.64 µg/L	187.64 ppb	11:57:36
1	Sc 361.383	1921485.0	1921485.0	97.219 %		11:59:00
1	Y 371.029	1238277.8	1238277.8	99.133 %		11:59:00
1	Ag 328.068†	-654.2	-580.3	1.3802 µg/L	1.3802 ppb	11:59:06
1	As 188.979†	8.0	10.9	27.831 µg/L	27.831 ppb	11:59:26
1	B 249.677†	1652.7	1330.1	17.735 µg/L	17.735 ppb	11:59:06
1	Ba 233.527†	42449.5	43687.9	1220.6 µg/L	1220.6 ppb	11:59:06
1	Be 313.107†	17827.5	14503.8	8.2610 µg/L	8.2610 ppb	11:59:06
1	Cd 226.502†	270.1	403.1	1.6424 µg/L	1.6424 ppb	11:59:26
1	Co 228.616†	713.8	783.5	33.477 µg/L	33.477 ppb	11:59:26
1	Cr 267.716†	3669.5	3876.7	86.972 µg/L	86.972 ppb	11:59:26
1	Cu 324.752†	10120.6	6510.2	59.830 µg/L	59.830 ppb	11:59:06
1	Mn 257.610†	688719.2	708569.9	2522.6 µg/L	2522.6 ppb	11:59:00
1	Mo 202.031†	-0.7	-13.4	1.6888 µg/L	1.6888 ppb	11:59:26
1	Ni 231.604†	1189.3	891.9	55.083 µg/L	55.083 ppb	11:59:26
1	P 214.914†	774.8	577.1	1277.4 µg/L	1277.4 ppb	11:59:26
1	Pb 220.353†	520.2	473.9	134.15 µg/L	134.15 ppb	11:59:26
1	S 181.975 Axial†	167.9	149.6	831.82 µg/L	831.82 ppb	11:59:26
1	Sb 206.836†	28.5	5.3	2.9070 µg/L	2.9070 ppb	11:59:26
1	Se 196.026†	-197.4	-211.0	28.075 µg/L	28.075 ppb	11:59:26
1	SiO2†	248372.0	253088.0	51675 µg/L	51675 ppb	11:59:00
1	Si 251.611†	286800.0	294722.4	23874 µg/L	23874 ppb	11:59:00
1	Sn 189.927†	-70.9	-96.4	-39.559 µg/L	-39.559 ppb	11:59:26
1	Ti 334.940†	1581485.2	1626024.4	3929.9 µg/L	3929.9 ppb	11:59:00
1	Tl 190.801†	-41.8	-18.5	7.5260 µg/L	7.5260 ppb	11:59:26
1	U 409.014†	-527.5	-356.4	-46.382 µg/L	-46.382 ppb	11:59:06
1	V 292.402†	13805.7	14315.9	177.02 µg/L	177.02 ppb	11:59:06
1	Zn 213.857†	9880.7	9531.1	262.71 µg/L	262.71 ppb	11:59:06
2	Sc RADIAL	75917.3	75917.3	96.7 %		11:58:02
2	Al 396.153Radial†	124595.7	128831.9	83440 µg/L	83440 ppb	11:58:02
2	Ca 317.933Radial†	25869.4	26495.6	19091 µg/L	19091 ppb	11:58:22
2	Fe 238.204 Radial†	6392.1	6591.6	87285 µg/L	87285 ppb	11:58:22
2	K 766.490 Radial†	21197.6	21514.5	13574 µg/L	13574 ppb	11:58:02
2	Mg 279.077 IEC†	1267.9	1302.5	13274 µg/L	13274 ppb	11:58:22
2	Na 589.592 Radial†	3012.8	2560.9	681.80 µg/L	681.80 ppb	11:58:22
2	Sr 421.552†	31039.6	31453.5	188.15 µg/L	188.15 ppb	11:58:02
2	Sc 361.383	1916603.4	1916603.4	96.972 %		11:59:34
2	Y 371.029	1234183.4	1234183.4	98.805 %		11:59:34
2	Ag 328.068†	-649.9	-577.7	1.4313 µg/L	1.4313 ppb	11:59:39
2	As 188.979†	1.7	4.5	13.907 µg/L	13.907 ppb	12:00:00
2	B 249.677†	1629.5	1310.4	16.665 µg/L	16.665 ppb	11:59:39
2	Ba 233.527†	42489.4	43840.2	1224.9 µg/L	1224.9 ppb	11:59:39
2	Be 313.107†	17864.3	14588.4	8.3162 µg/L	8.3162 ppb	11:59:39
2	Cd 226.502†	264.5	398.0	1.4686 µg/L	1.4686 ppb	12:00:00
2	Co 228.616†	721.0	792.8	33.962 µg/L	33.962 ppb	12:00:00
2	Cr 267.716†	3659.5	3875.9	86.955 µg/L	86.955 ppb	12:00:00
2	Cu 324.752†	10175.8	6593.6	60.479 µg/L	60.479 ppb	11:59:39
2	Mn 257.610†	687221.5	708829.8	2523.6 µg/L	2523.6 ppb	11:59:34
2	Mo 202.031†	11.4	-0.9	3.2127 µg/L	3.2127 ppb	12:00:00
2	Ni 231.604†	1193.2	899.0	55.520 µg/L	55.520 ppb	12:00:00
2	P 214.914†	780.2	584.7	1294.8 µg/L	1294.8 ppb	12:00:00
2	Pb 220.353†	532.6	488.1	138.13 µg/L	138.13 ppb	12:00:00

2	S 181.975 Axial†	165.7	147.7	821.17 µg/L	821.17 ppb	12:00:00
2	Sb 206.836†	29.2	6.1	3.8513 µg/L	3.8513 ppb	12:00:00
2	Se 196.026†	-194.5	-208.5	32.965 µg/L	32.965 ppb	12:00:00
2	SiO2†	247718.2	253064.5	51670 µg/L	51670 ppb	11:59:34
2	Si 251.611†	286132.2	294785.1	23879 µg/L	23879 ppb	11:59:34
2	Sn 189.927†	-66.5	-92.0	-37.083 µg/L	-37.083 ppb	12:00:00
2	Ti 334.940†	1579319.2	1627934.0	3934.5 µg/L	3934.5 ppb	11:59:34
2	Tl 190.801†	-41.9	-18.6	7.3340 µg/L	7.3340 ppb	12:00:00
2	U 409.014†	-474.2	-302.8	-41.440 µg/L	-41.440 ppb	11:59:39
2	V 292.402†	13891.9	14441.0	178.56 µg/L	178.56 ppb	11:59:39
2	Zn 213.857†	9836.1	9511.0	262.13 µg/L	262.13 ppb	11:59:39
3	Sc RADIAL	75935.7	75935.7	96.8 %		11:58:28
3	Al 396.153Radial†	124155.2	128345.4	83125 µg/L	83125 ppb	11:58:28
3	Ca 317.933Radial†	25650.9	26263.3	18924 µg/L	18924 ppb	11:58:48
3	Fe 238.204 Radial†	6332.8	6528.6	86451 µg/L	86451 ppb	11:58:48
3	K 766.490 Radial†	21180.5	21491.6	13559 µg/L	13559 ppb	11:58:28
3	Mg 279.077 IEC†	1264.3	1298.5	13233 µg/L	13233 ppb	11:58:48
3	Na 589.592 Radial†	3044.1	2592.4	690.20 µg/L	690.20 ppb	11:58:48
3	Sr 421.552†	30911.7	31313.6	187.32 µg/L	187.32 ppb	11:58:28
3	Sc 361.383	1914786.3	1914786.3	96.880 %		12:00:07
3	Y 371.029	1233518.8	1233518.8	98.752 %		12:00:07
3	Ag 328.068†	-598.4	-525.1	1.8491 µg/L	1.8491 ppb	12:00:12
3	As 188.979†	7.0	9.9	25.604 µg/L	25.604 ppb	12:00:33
3	B 249.677†	1653.1	1336.4	18.323 µg/L	18.323 ppb	12:00:12
3	Ba 233.527†	42460.6	43852.0	1225.2 µg/L	1225.2 ppb	12:00:12
3	Be 313.107†	17786.9	14526.0	8.2845 µg/L	8.2845 ppb	12:00:12
3	Cd 226.502†	245.5	378.7	1.0136 µg/L	1.0136 ppb	12:00:33
3	Co 228.616†	696.7	768.5	32.725 µg/L	32.725 ppb	12:00:33
3	Cr 267.716†	3481.5	3695.7	82.918 µg/L	82.918 ppb	12:00:33
3	Cu 324.752†	10097.8	6523.1	59.846 µg/L	59.846 ppb	12:00:12
3	Mn 257.610†	682803.9	704942.4	2509.7 µg/L	2509.7 ppb	12:00:07
3	Mo 202.031†	13.0	0.9	3.3899 µg/L	3.3899 ppb	12:00:33
3	Ni 231.604†	1147.8	853.4	52.746 µg/L	52.746 ppb	12:00:33
3	P 214.914†	762.8	567.5	1255.8 µg/L	1255.8 ppb	12:00:33
3	Pb 220.353†	521.9	477.5	135.21 µg/L	135.21 ppb	12:00:33
3	S 181.975 Axial†	162.4	144.5	803.10 µg/L	803.10 ppb	12:00:33
3	Sb 206.836†	33.6	10.7	8.7411 µg/L	8.7411 ppb	12:00:33
3	Se 196.026†	-179.1	-192.8	53.211 µg/L	53.211 ppb	12:00:33
3	SiO2†	246856.8	252417.8	51538 µg/L	51538 ppb	12:00:07
3	Si 251.611†	285015.2	293912.1	23808 µg/L	23808 ppb	12:00:07
3	Sn 189.927†	-63.7	-89.2	-35.609 µg/L	-35.609 ppb	12:00:33
3	Ti 334.940†	1566993.2	1616756.7	3907.5 µg/L	3907.5 ppb	12:00:07
3	Tl 190.801†	-41.2	-18.0	8.1255 µg/L	8.1255 ppb	12:00:33
3	U 409.014†	-537.5	-368.6	-47.428 µg/L	-47.428 ppb	12:00:12
3	V 292.402†	13831.0	14391.7	177.91 µg/L	177.91 ppb	12:00:12
3	Zn 213.857†	9933.7	9621.3	265.29 µg/L	265.29 ppb	12:00:12

Mean Data: 244921008|942675|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1917624.9	97.023 %	0.1753			0.18%
Sc RADIAL	75910.6	96.7 %	0.04			0.04%
Y 371.029	1235326.7	98.897 %	0.2063			0.21%
Ag 328.068†	-561.0	1.5535 µg/L	0.25727	1.5535 ppb	0.25727	16.56%
Al 396.153Radial†	128383.4	83150 µg/L	279.0	83150 ppb	279.0	0.34%
As 188.979†	8.4	22.447 µg/L	7.4795	22.447 ppb	7.4795	33.32%
B 249.677†	1325.6	17.575 µg/L	0.8405	17.575 ppb	0.8405	4.78%
Ba 233.527†	43793.4	1223.6 µg/L	2.56	1223.6 ppb	2.56	0.21%
Be 313.107†	14539.4	8.2873 µg/L	0.02769	8.2873 ppb	0.02769	0.33%
Ca 317.933Radial†	26395.4	19019 µg/L	86.0	19019 ppb	86.0	0.45%
Cd 226.502†	393.3	1.3749 µg/L	0.32472	1.3749 ppb	0.32472	23.62%
Co 228.616†	781.6	33.388 µg/L	0.6233	33.388 ppb	0.6233	1.87%
Cr 267.716†	3816.1	85.615 µg/L	2.3356	85.615 ppb	2.3356	2.73%
Cu 324.752†	6542.3	60.052 µg/L	0.3704	60.052 ppb	0.3704	0.62%
Fe 238.204 Radial†	6563.8	86917 µg/L	425.4	86917 ppb	425.4	0.49%
K 766.490 Radial†	21436.6	13524 µg/L	73.0	13524 ppb	73.0	0.54%
Mg 279.077 IEC†	1303.9	13288 µg/L	64.0	13288 ppb	64.0	0.48%
Mn 257.610†	707447.4	2518.6 µg/L	7.76	2518.6 ppb	7.76	0.31%
Mo 202.031†	-4.4	2.7638 µg/L	0.93515	2.7638 ppb	0.93515	33.84%
Na 589.592 Radial†	2574.1	685.31 µg/L	4.368	685.31 ppb	4.368	0.64%

Ni 231.604†	881.4	54.450 µg/L	1.4914	54.450 ppb	1.4914	2.74%
P 214.914†	576.5	1276.0 µg/L	19.54	1276.0 ppb	19.54	1.53%
Pb 220.353†	479.8	135.83 µg/L	2.061	135.83 ppb	2.061	1.52%
S 181.975 Axial†	147.3	818.70 µg/L	14.518	818.70 ppb	14.518	1.77%
Sb 206.836†	7.4	5.1665 µg/L	3.13153	5.1665 ppb	3.13153	60.61%
Se 196.026†	-204.1	38.083 µg/L	13.3268	38.083 ppb	13.3268	34.99%
SiO2†	252856.8	51627 µg/L	77.7	51627 ppb	77.7	0.15%
Si 251.611†	294473.2	23854 µg/L	39.4	23854 ppb	39.4	0.17%
Sn 189.927†	-92.5	-37.417 µg/L	1.9961	-37.417 ppb	1.9961	5.33%
Sr 421.552†	31378.2	187.70 µg/L	0.422	187.70 ppb	0.422	0.22%
Ti 334.940†	1623571.7	3923.9 µg/L	14.45	3923.9 ppb	14.45	0.37%
Tl 190.801†	-18.4	7.6618 µg/L	0.41282	7.6618 ppb	0.41282	5.39%
U 409.014†	-342.6	-45.084 µg/L	3.1986	-45.084 ppb	3.1986	7.09%
V 292.402†	14382.9	177.83 µg/L	0.771	177.83 ppb	0.771	0.43%
Zn 213.857†	9554.5	263.38 µg/L	1.682	263.38 ppb	1.682	0.64%

Sequence No.: 18

Sample ID: 244921009|942675|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 316

Date Collected: 1/29/2010 12:00:43

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 244921009|942675|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76848.6	76848.6	97.9 %		12:01:16
1	Al 396.153Radial†	210084.3	214574.9	138970 µg/L	138970 ppb	12:01:16
1	Ca 317.933Radial†	29514.9	29894.4	21540 µg/L	21540 ppb	12:01:36
1	Fe 238.204 Radial†	9391.7	9574.8	126790 µg/L	126790 ppb	12:01:36
1	K 766.490 Radial†	27984.9	28180.4	17779 µg/L	17779 ppb	12:01:16
1	Mg 279.077 IEC†	1963.9	1997.4	20363 µg/L	20363 ppb	12:01:36
1	Na 589.592 Radial†	5458.6	5020.9	1336.7 µg/L	1336.7 ppb	12:01:36
1	Sr 421.552†	45486.4	45818.2	274.08 µg/L	274.08 ppb	12:01:16
1	Sc 361.383	1937609.7	1937609.7	98.035 %		12:02:41
1	Y 371.029	1263586.5	1263586.5	101.16 %		12:02:41
1	Ag 328.068†	-1333.6	-1267.8	-1.8568 µg/L	-1.8568 ppb	12:02:47
1	As 188.979†	7.1	9.9	27.908 µg/L	27.908 ppb	12:03:08
1	B 249.677†	2107.3	1779.6	18.393 µg/L	18.393 ppb	12:02:47
1	Ba 233.527†	63975.8	65282.3	1824.0 µg/L	1824.0 ppb	12:02:47
1	Be 313.107†	24132.6	20782.7	11.908 µg/L	11.908 ppb	12:02:47
1	Cd 226.502†	407.8	541.2	1.1203 µg/L	1.1203 ppb	12:03:08
1	Co 228.616†	1048.1	1118.4	48.128 µg/L	48.128 ppb	12:03:08
1	Cr 267.716†	6909.0	7149.7	160.35 µg/L	160.35 ppb	12:02:47
1	Cu 324.752†	11905.1	8243.8	78.070 µg/L	78.070 ppb	12:02:47
1	Mn 257.610†	747005.5	762129.3	2717.4 µg/L	2717.4 ppb	12:02:41
1	Mo 202.031†	16.3	4.0	5.3060 µg/L	5.3060 ppb	12:03:08
1	Ni 231.604†	2147.7	1859.3	114.16 µg/L	114.16 ppb	12:03:08
1	P 214.914†	642.0	435.0	932.06 µg/L	932.06 ppb	12:03:08
1	Pb 220.353†	437.8	385.4	110.90 µg/L	110.90 ppb	12:03:08
1	S 181.975 Axial†	153.7	133.6	743.00 µg/L	743.00 ppb	12:03:08
1	Sb 206.836†	37.0	13.7	10.802 µg/L	10.802 ppb	12:03:08
1	Se 196.026†	-294.0	-307.8	38.687 µg/L	38.687 ppb	12:03:08
1	SiO2†	282366.0	285637.5	58320 µg/L	58320 ppb	12:02:41
1	Si 251.611†	326050.1	332304.4	26918 µg/L	26918 ppb	12:02:41
1	Sn 189.927†	-100.7	-126.2	-50.764 µg/L	-50.764 ppb	12:03:08
1	Ti 334.940†	2209508.6	2253100.9	5445.2 µg/L	5445.2 ppb	12:02:41
1	Tl 190.801†	-38.2	-14.4	26.835 µg/L	26.835 ppb	12:03:08
1	U 409.014†	-891.4	-723.1	-86.145 µg/L	-86.145 ppb	12:02:41
1	V 292.402†	19629.7	20138.6	249.34 µg/L	249.34 ppb	12:02:47
1	Zn 213.857†	9508.1	9066.4	247.08 µg/L	247.08 ppb	12:02:47
2	Sc RADIAL	76391.1	76391.1	97.3 %		12:01:42
2	Al 396.153Radial†	209851.7	215620.7	139650 µg/L	139650 ppb	12:01:42
2	Ca 317.933Radial†	29418.7	29976.1	21599 µg/L	21599 ppb	12:02:02
2	Fe 238.204 Radial†	9343.3	9582.5	126890 µg/L	126890 ppb	12:02:02
2	K 766.490 Radial†	27927.8	28293.0	17850 µg/L	17850 ppb	12:01:42
2	Mg 279.077 IEC†	1972.6	2018.4	20578 µg/L	20578 ppb	12:02:02
2	Na 589.592 Radial†	5459.1	5054.7	1345.7 µg/L	1345.7 ppb	12:02:02
2	Sr 421.552†	45326.7	45932.4	274.76 µg/L	274.76 ppb	12:01:42
2	Sc 361.383	1933849.9	1933849.9	97.844 %		12:03:16
2	Y 371.029	1260415.9	1260415.9	100.91 %		12:03:16
2	Ag 328.068†	-1282.7	-1218.4	-1.3862 µg/L	-1.3862 ppb	12:03:21
2	As 188.979†	9.2	12.1	32.578 µg/L	32.578 ppb	12:03:41
2	B 249.677†	2157.8	1835.4	20.987 µg/L	20.987 ppb	12:03:21
2	Ba 233.527†	64535.9	65981.7	1843.5 µg/L	1843.5 ppb	12:03:21
2	Be 313.107†	24234.6	20934.7	12.010 µg/L	12.010 ppb	12:03:21
2	Cd 226.502†	409.2	543.5	1.1714 µg/L	1.1714 ppb	12:03:41
2	Co 228.616†	1056.2	1128.8	48.677 µg/L	48.677 ppb	12:03:41
2	Cr 267.716†	7007.5	7264.1	162.92 µg/L	162.92 ppb	12:03:21
2	Cu 324.752†	11959.9	8323.4	78.668 µg/L	78.668 ppb	12:03:21
2	Mn 257.610†	745236.0	761802.3	2716.3 µg/L	2716.3 ppb	12:03:16
2	Mo 202.031†	14.6	2.3	5.1025 µg/L	5.1025 ppb	12:03:41
2	Ni 231.604†	2120.3	1835.6	112.72 µg/L	112.72 ppb	12:03:41
2	P 214.914†	641.8	436.1	934.79 µg/L	934.79 ppb	12:03:41
2	Pb 220.353†	437.0	385.5	110.95 µg/L	110.95 ppb	12:03:41

2	S 181.975 Axial†	150.4	130.6	725.80 µg/L	725.80 ppb	12:03:41
2	Sb 206.836†	25.2	1.8	-1.8434 µg/L	-1.8434 ppb	12:03:41
2	Se 196.026†	-308.9	-323.7	15.212 µg/L	15.212 ppb	12:03:41
2	SiO2†	281984.2	285807.2	58355 µg/L	58355 ppb	12:03:16
2	Si 251.611†	325614.0	332505.2	26934 µg/L	26934 ppb	12:03:16
2	Sn 189.927†	-93.0	-118.5	-46.351 µg/L	-46.351 ppb	12:03:41
2	Ti 334.940†	2206120.3	2254019.8	5447.4 µg/L	5447.4 ppb	12:03:16
2	Tl 190.801†	-51.1	-27.7	4.7683 µg/L	4.7683 ppb	12:03:41
2	U 409.014†	-752.0	-582.3	-73.078 µg/L	-73.078 ppb	12:03:16
2	V 292.402†	19819.8	20371.8	252.17 µg/L	252.17 ppb	12:03:21
2	Zn 213.857†	9608.9	9188.3	250.49 µg/L	250.49 ppb	12:03:21
3	Sc RADIAL	76873.1	76873.1	98.0 %		12:02:08
3	Al 396.153Radial†	211674.1	216129.6	139980 µg/L	139980 ppb	12:02:08
3	Ca 317.933Radial†	29547.8	29918.5	21558 µg/L	21558 ppb	12:02:29
3	Fe 238.204 Radial†	9391.4	9571.4	126740 µg/L	126740 ppb	12:02:29
3	K 766.490 Radial†	28185.5	28376.1	17903 µg/L	17903 ppb	12:02:08
3	Mg 279.077 IEC†	1971.7	2004.8	20439 µg/L	20439 ppb	12:02:29
3	Na 589.592 Radial†	5471.2	5032.0	1339.7 µg/L	1339.7 ppb	12:02:29
3	Sr 421.552†	45742.5	46064.9	275.56 µg/L	275.56 ppb	12:02:08
3	Sc 361.383	1927264.0	1927264.0	97.511 %		12:03:49
3	Y 371.029	1256430.6	1256430.6	100.59 %		12:03:49
3	Ag 328.068†	-1283.1	-1223.3	-1.4667 µg/L	-1.4667 ppb	12:03:55
3	As 188.979†	10.7	13.7	36.160 µg/L	36.160 ppb	12:04:15
3	B 249.677†	2035.0	1717.0	15.450 µg/L	15.450 ppb	12:03:55
3	Ba 233.527†	63439.7	65082.9	1818.4 µg/L	1818.4 ppb	12:03:55
3	Be 313.107†	23813.3	20587.3	11.794 µg/L	11.794 ppb	12:03:55
3	Cd 226.502†	372.0	506.8	0.1436 µg/L	0.1436 ppb	12:04:15
3	Co 228.616†	1013.7	1088.9	46.656 µg/L	46.656 ppb	12:04:15
3	Cr 267.716†	6841.9	7118.6	159.66 µg/L	159.66 ppb	12:03:55
3	Cu 324.752†	11918.0	8322.3	78.639 µg/L	78.639 ppb	12:03:55
3	Mn 257.610†	737665.2	756640.9	2698.0 µg/L	2698.0 ppb	12:03:49
3	Mo 202.031†	11.8	-0.5	4.7601 µg/L	4.7601 ppb	12:04:15
3	Ni 231.604†	2054.9	1775.9	109.11 µg/L	109.11 ppb	12:04:15
3	P 214.914†	623.7	419.7	897.28 µg/L	897.28 ppb	12:04:15
3	Pb 220.353†	433.4	383.3	110.37 µg/L	110.37 ppb	12:04:15
3	S 181.975 Axial†	148.9	129.6	720.60 µg/L	720.60 ppb	12:04:15
3	Sb 206.836†	24.7	1.3	-2.3168 µg/L	-2.3168 ppb	12:04:15
3	Se 196.026†	-288.9	-304.2	43.958 µg/L	43.958 ppb	12:04:15
3	SiO2†	279776.2	284527.7	58094 µg/L	58094 ppb	12:03:49
3	Si 251.611†	323509.2	331483.9	26852 µg/L	26852 ppb	12:03:49
3	Sn 189.927†	-88.2	-113.9	-43.838 µg/L	-43.838 ppb	12:04:15
3	Ti 334.940†	2179245.7	2234164.2	5399.4 µg/L	5399.4 ppb	12:03:49
3	Tl 190.801†	-52.2	-29.0	2.0815 µg/L	2.0815 ppb	12:04:15
3	U 409.014†	-758.4	-591.5	-73.913 µg/L	-73.913 ppb	12:03:49
3	V 292.402†	19419.8	20030.8	248.05 µg/L	248.05 ppb	12:03:55
3	Zn 213.857†	9526.3	9137.1	249.09 µg/L	249.09 ppb	12:03:55

Mean Data: 244921009[942675]1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1932907.8	97.797 %	0.2650			0.27%
Sc RADIAL	76704.3	97.7 %	0.35			0.35%
Y 371.029	1260144.4	100.88 %	0.287			0.28%
Ag 328.068†	-1236.5	-1.5699 µg/L	0.25173	-1.5699 ppb	0.25173	16.03%
Al 396.153Radial†	215441.7	139530 µg/L	513.4	139530 ppb	513.4	0.37%
As 188.979†	11.9	32.216 µg/L	4.1380	32.216 ppb	4.1380	12.84%
B 249.677†	1777.3	18.277 µg/L	2.7701	18.277 ppb	2.7701	15.16%
Ba 233.527†	65449.0	1828.6 µg/L	13.19	1828.6 ppb	13.19	0.72%
Be 313.107†	20768.2	11.904 µg/L	0.1078	11.904 ppb	0.1078	0.91%
Ca 317.933Radial†	29929.7	21566 µg/L	30.3	21566 ppb	30.3	0.14%
Cd 226.502†	530.5	0.8118 µg/L	0.57923	0.8118 ppb	0.57923	71.35%
Co 228.616†	1112.0	47.821 µg/L	1.0449	47.821 ppb	1.0449	2.18%
Cr 267.716†	7177.5	160.98 µg/L	1.717	160.98 ppb	1.717	1.07%
Cu 324.752†	8296.5	78.459 µg/L	0.3371	78.459 ppb	0.3371	0.43%
Fe 238.204 Radial†	9576.3	126810 µg/L	75.6	126810 ppb	75.6	0.06%
K 766.490 Radial†	28283.2	17844 µg/L	62.0	17844 ppb	62.0	0.35%
Mg 279.077 IEC†	2006.9	20460 µg/L	108.8	20460 ppb	108.8	0.53%
Mn 257.610†	760190.8	2710.6 µg/L	10.92	2710.6 ppb	10.92	0.40%
Mo 202.031†	2.0	5.0562 µg/L	0.27587	5.0562 ppb	0.27587	5.46%
Na 589.592 Radial†	5035.8	1340.7 µg/L	4.60	1340.7 ppb	4.60	0.34%



Ni 231.604†	1823.6	112.00 µg/L	2.602	112.00 ppb	2.602	2.32%
P 214.914†	430.3	921.38 µg/L	20.909	921.38 ppb	20.909	2.27%
Pb 220.353†	384.7	110.74 µg/L	0.320	110.74 ppb	0.320	0.29%
S 181.975 Axial†	131.3	729.80 µg/L	11.720	729.80 ppb	11.720	1.61%
Sb 206.836†	5.6	2.2141 µg/L	7.44145	2.2141 ppb	7.44145	336.10%
Se 196.026†	-311.9	32.619 µg/L	15.3038	32.619 ppb	15.3038	46.92%
SiO2†	285324.1	58256 µg/L	141.9	58256 ppb	141.9	0.24%
Si 251.611†	332097.8	26901 µg/L	43.8	26901 ppb	43.8	0.16%
Sn 189.927†	-119.5	-46.984 µg/L	3.5064	-46.984 ppb	3.5064	7.46%
Sr 421.552†	45938.5	274.80 µg/L	0.738	274.80 ppb	0.738	0.27%
Ti 334.940†	2247095.0	5430.7 µg/L	27.09	5430.7 ppb	27.09	0.50%
Tl 190.801†	-23.7	11.228 µg/L	13.5822	11.228 ppb	13.5822	120.97%
U 409.014†	-632.3	-77.712 µg/L	7.3155	-77.712 ppb	7.3155	9.41%
V 292.402†	20180.4	249.85 µg/L	2.108	249.85 ppb	2.108	0.84%
Zn 213.857†	9130.6	248.89 µg/L	1.717	248.89 ppb	1.717	0.69%

Sequence No.: 19

Sample ID: 244921010|942675|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 317

Date Collected: 1/29/2010 12:04:25

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 244921010|942675|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	77283.9	77283.9	98.5 %		12:04:58
1	Al 396.153Radial†	148980.8	151316.9	98003 µg/L	98003 ppb	12:04:58
1	Ca 317.933Radial†	25313.4	25458.2	18344 µg/L	18344 ppb	12:05:19
1	Fe 238.204 Radial†	9303.3	9431.0	124880 µg/L	124880 ppb	12:05:19
1	K 766.490 Radial†	23001.6	22959.1	14485 µg/L	14485 ppb	12:04:58
1	Mg 279.077 IEC†	1740.7	1759.5	17923 µg/L	17923 ppb	12:05:19
1	Na 589.592 Radial†	3109.8	2604.2	693.33 µg/L	693.33 ppb	12:05:19
1	Sr 421.552†	35738.4	35657.6	213.30 µg/L	213.30 ppb	12:04:58
1	Sc 361.383	1956716.8	1956716.8	99.001 %		12:06:24
1	Y 371.029	1290176.6	1290176.6	103.29 %		12:06:24
1	Ag 328.068†	2133.1	2247.2	29.713 µg/L	29.713 ppb	12:06:29
1	As 188.979†	14.1	17.0	43.299 µg/L	43.299 ppb	12:06:50
1	B 249.677†	2060.0	1710.9	16.185 µg/L	16.185 ppb	12:06:29
1	Ba 233.527†	41570.3	42013.6	1174.0 µg/L	1174.0 ppb	12:06:29
1	Be 313.107†	19674.7	16039.4	9.4504 µg/L	9.4504 ppb	12:06:29
1	Cd 226.502†	433.0	562.6	1.9506 µg/L	1.9506 ppb	12:06:50
1	Co 228.616†	1106.0	1166.4	54.702 µg/L	54.702 ppb	12:06:50
1	Cr 267.716†	8445.6	8632.9	193.58 µg/L	193.58 ppb	12:06:29
1	Cu 324.752†	22400.8	18726.8	154.67 µg/L	154.67 ppb	12:06:29
1	Mn 257.610†	1130064.7	1141611.9	4062.4 µg/L	4062.4 ppb	12:06:24
1	Mo 202.031†	7.5	-5.0	4.1407 µg/L	4.1407 ppb	12:06:50
1	Ni 231.604†	2302.0	1993.8	122.27 µg/L	122.27 ppb	12:06:50
1	P 214.914†	812.5	600.8	1296.1 µg/L	1296.1 ppb	12:06:50
1	Pb 220.353†	477.3	420.9	118.56 µg/L	118.56 ppb	12:06:50
1	S 181.975 Axial†	93.8	71.6	398.22 µg/L	398.22 ppb	12:06:50
1	Sb 206.836†	29.2	5.5	2.0524 µg/L	2.0524 ppb	12:06:50
1	Se 196.026†	-296.6	-307.6	31.822 µg/L	31.822 ppb	12:06:50
1	SiO2†	282577.4	283038.5	57790 µg/L	57790 ppb	12:06:24
1	Si 251.611†	326234.5	329242.9	26670 µg/L	26670 ppb	12:06:24
1	Sn 189.927†	-78.0	-102.2	-38.620 µg/L	-38.620 ppb	12:06:50
1	Ti 334.940†	1442633.4	1456481.8	3519.7 µg/L	3519.7 ppb	12:06:24
1	Tl 190.801†	-45.4	-21.3	4.1008 µg/L	4.1008 ppb	12:06:50
1	U 409.014†	-940.9	-764.2	-89.508 µg/L	-89.508 ppb	12:06:24
1	V 292.402†	19364.6	19675.2	243.73 µg/L	243.73 ppb	12:06:29
1	Zn 213.857†	14802.0	14319.0	394.80 µg/L	394.80 ppb	12:06:29
2	Sc RADIAL	76813.5	76813.5	97.9 %		12:05:24
2	Al 396.153Radial†	148831.5	152090.9	98504 µg/L	98504 ppb	12:05:24
2	Ca 317.933Radial†	25399.3	25703.4	18520 µg/L	18520 ppb	12:05:45
2	Fe 238.204 Radial†	9325.1	9511.1	125950 µg/L	125950 ppb	12:05:45
2	K 766.490 Radial†	23000.5	23100.9	14574 µg/L	14574 ppb	12:05:24
2	Mg 279.077 IEC†	1750.4	1780.2	18135 µg/L	18135 ppb	12:05:45
2	Na 589.592 Radial†	3124.3	2638.4	702.44 µg/L	702.44 ppb	12:05:45
2	Sr 421.552†	35683.9	35824.3	214.30 µg/L	214.30 ppb	12:05:24
2	Sc 361.383	1952332.9	1952332.9	98.780 %		12:06:57
2	Y 371.029	1286818.5	1286818.5	103.02 %		12:06:57
2	Ag 328.068†	2113.8	2232.5	29.651 µg/L	29.651 ppb	12:07:03
2	As 188.979†	11.6	14.5	37.963 µg/L	37.963 ppb	12:07:23
2	B 249.677†	2033.9	1689.1	14.598 µg/L	14.598 ppb	12:07:03
2	Ba 233.527†	41590.7	42128.6	1177.2 µg/L	1177.2 ppb	12:07:03
2	Be 313.107†	19646.6	16055.5	9.4693 µg/L	9.4693 ppb	12:07:03
2	Cd 226.502†	424.1	554.6	1.6040 µg/L	1.6040 ppb	12:07:23
2	Co 228.616†	1106.5	1169.5	54.908 µg/L	54.908 ppb	12:07:23
2	Cr 267.716†	8458.0	8664.7	194.30 µg/L	194.30 ppb	12:07:03
2	Cu 324.752†	22290.3	18665.8	154.37 µg/L	154.37 ppb	12:07:03
2	Mn 257.610†	1121313.4	1135315.6	4040.2 µg/L	4040.2 ppb	12:06:57
2	Mo 202.031†	14.0	1.6	4.9763 µg/L	4.9763 ppb	12:07:23
2	Ni 231.604†	2305.3	2002.4	122.80 µg/L	122.80 ppb	12:07:23
2	P 214.914†	810.0	600.1	1293.8 µg/L	1293.8 ppb	12:07:23
2	Pb 220.353†	482.6	427.4	120.37 µg/L	120.37 ppb	12:07:23

2	S 181.975 Axial†	91.6	69.6	386.75 µg/L	386.75 ppb	12:07:23
2	Sb 206.836†	37.3	13.7	10.734 µg/L	10.734 ppb	12:07:23
2	Se 196.026†	-297.7	-309.3	33.378 µg/L	33.378 ppb	12:07:23
2	SiO2†	280124.5	281196.2	57414 µg/L	57414 ppb	12:06:57
2	Si 251.611†	323398.4	327111.7	26498 µg/L	26498 ppb	12:06:57
2	Sn 189.927†	-75.2	-99.6	-36.966 µg/L	-36.966 ppb	12:07:23
2	Ti 334.940†	1430775.6	1447749.6	3498.5 µg/L	3498.5 ppb	12:06:57
2	Tl 190.801†	-43.9	-19.9	6.1275 µg/L	6.1275 ppb	12:07:23
2	U 409.014†	-875.8	-700.4	-83.738 µg/L	-83.738 ppb	12:06:57
2	V 292.402†	19367.4	19722.0	244.36 µg/L	244.36 ppb	12:07:03
2	Zn 213.857†	14835.9	14386.9	396.64 µg/L	396.64 ppb	12:07:03
3	Sc RADIAL	76894.0	76894.0	98.0 %		12:05:50
3	Al 396.153Radial†	148396.1	151487.2	98113 µg/L	98113 ppb	12:05:50
3	Ca 317.933Radial†	25363.9	25640.0	18475 µg/L	18475 ppb	12:06:11
3	Fe 238.204 Radial†	9300.6	9476.1	125480 µg/L	125480 ppb	12:06:11
3	K 766.490 Radial†	22969.9	23045.2	14539 µg/L	14539 ppb	12:05:50
3	Mg 279.077 IEC†	1737.2	1764.9	17978 µg/L	17978 ppb	12:06:11
3	Na 589.592 Radial†	3084.5	2594.5	690.75 µg/L	690.75 ppb	12:06:11
3	Sr 421.552†	35601.3	35701.8	213.57 µg/L	213.57 ppb	12:05:50
3	Sc 361.383	1948491.0	1948491.0	98.585 %		12:07:31
3	Y 371.029	1283581.5	1283581.5	102.76 %		12:07:31
3	Ag 328.068†	2147.8	2271.2	29.909 µg/L	29.909 ppb	12:07:37
3	As 188.979†	16.7	19.6	49.102 µg/L	49.102 ppb	12:07:57
3	B 249.677†	1980.3	1638.8	12.446 µg/L	12.446 ppb	12:07:37
3	Ba 233.527†	40278.7	40880.8	1142.3 µg/L	1142.3 ppb	12:07:37
3	Be 313.107†	19038.3	15477.7	9.1011 µg/L	9.1011 ppb	12:07:37
3	Cd 226.502†	378.6	509.4	0.3645 µg/L	0.3645 ppb	12:07:57
3	Co 228.616†	1026.3	1090.3	50.810 µg/L	50.810 ppb	12:07:57
3	Cr 267.716†	8087.3	8305.5	186.24 µg/L	186.24 ppb	12:07:37
3	Cu 324.752†	21625.8	18036.2	149.69 µg/L	149.69 ppb	12:07:37
3	Mn 257.610†	1106103.3	1122125.4	3993.4 µg/L	3993.4 ppb	12:07:31
3	Mo 202.031†	8.0	-4.5	4.2214 µg/L	4.2214 ppb	12:07:57
3	Ni 231.604†	2154.3	1853.8	113.81 µg/L	113.81 ppb	12:07:57
3	P 214.914†	763.5	554.6	1189.8 µg/L	1189.8 ppb	12:07:57
3	Pb 220.353†	447.6	392.9	110.68 µg/L	110.68 ppb	12:07:57
3	S 181.975 Axial†	97.0	75.3	418.55 µg/L	418.55 ppb	12:07:57
3	Sb 206.836†	33.7	10.2	7.0255 µg/L	7.0255 ppb	12:07:57
3	Se 196.026†	-269.5	-281.3	73.754 µg/L	73.754 ppb	12:07:57
3	SiO2†	277652.0	279247.3	57016 µg/L	57016 ppb	12:07:31
3	Si 251.611†	320562.9	324881.1	26317 µg/L	26317 ppb	12:07:31
3	Sn 189.927†	-67.8	-92.3	-32.902 µg/L	-32.902 ppb	12:07:57
3	Ti 334.940†	1405905.1	1425378.1	3444.5 µg/L	3444.5 ppb	12:07:31
3	Tl 190.801†	-42.5	-18.5	7.8051 µg/L	7.8051 ppb	12:07:57
3	U 409.014†	-897.8	-724.5	-85.904 µg/L	-85.904 ppb	12:07:31
3	V 292.402†	18555.7	18937.3	234.87 µg/L	234.87 ppb	12:07:37
3	Zn 213.857†	14408.1	13982.6	385.36 µg/L	385.36 ppb	12:07:37

Mean Data: 244921010|942675|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1952513.6	98.789 %		0.2082			0.21%
Sc RADIAL	76997.1	98.1 %		0.32			0.33%
Y 371.029	1286858.9	103.02 %		0.264			0.26%
Ag 328.068†	2250.3	29.758 µg/L		0.1346	29.758 ppb	0.1346	0.45%
Al 396.153Radial†	151631.7	98207 µg/L		263.4	98207 ppb	263.4	0.27%
As 188.979†	17.0	43.455 µg/L		5.5713	43.455 ppb	5.5713	12.82%
B 249.677†	1679.6	14.410 µg/L		1.8765	14.410 ppb	1.8765	13.02%
Ba 233.527†	41674.3	1164.5 µg/L		19.27	1164.5 ppb	19.27	1.66%
Be 313.107†	15857.5	9.3403 µg/L		0.20732	9.3403 ppb	0.20732	2.22%
Ca 317.933Radial†	25600.5	18446 µg/L		91.7	18446 ppb	91.7	0.50%
Cd 226.502†	542.2	1.3064 µg/L		0.83385	1.3064 ppb	0.83385	63.83%
Co 228.616†	1142.1	53.473 µg/L		2.3087	53.473 ppb	2.3087	4.32%
Cr 267.716†	8534.4	191.37 µg/L		4.458	191.37 ppb	4.458	2.33%
Cu 324.752†	18476.2	152.91 µg/L		2.793	152.91 ppb	2.793	1.83%
Fe 238.204 Radial†	9472.7	125440 µg/L		532.3	125440 ppb	532.3	0.42%
K 766.490 Radial†	23035.0	14533 µg/L		45.1	14533 ppb	45.1	0.31%
Mg 279.077 IEC†	1768.2	18012 µg/L		110.1	18012 ppb	110.1	0.61%
Mn 257.610†	1133017.6	4032.0 µg/L		35.22	4032.0 ppb	35.22	0.87%
Mo 202.031†	-2.6	4.4461 µg/L		0.46089	4.4461 ppb	0.46089	10.37%
Na 589.592 Radial†	2612.4	695.51 µg/L		6.141	695.51 ppb	6.141	0.88%

Ni 231.604†	1950.0	119.63 µg/L	5.045	119.63 ppb	5.045	4.22%
P 214.914†	585.2	1259.9 µg/L	60.74	1259.9 ppb	60.74	4.82%
Pb 220.353†	413.7	116.54 µg/L	5.153	116.54 ppb	5.153	4.42%
S 181.975 Axial†	72.2	401.17 µg/L	16.105	401.17 ppb	16.105	4.01%
Sb 206.836†	9.8	6.6041 µg/L	4.35627	6.6041 ppb	4.35627	65.96%
Se 196.026†	-299.4	46.318 µg/L	23.7729	46.318 ppb	23.7729	51.33%
SiO2†	281160.6	57406 µg/L	387.1	57406 ppb	387.1	0.67%
Si 251.611†	327078.6	26495 µg/L	176.7	26495 ppb	176.7	0.67%
Sn 189.927†	-98.0	-36.163 µg/L	2.9425	-36.163 ppb	2.9425	8.14%
Sr 421.552†	35727.9	213.72 µg/L	0.516	213.72 ppb	0.516	0.24%
Ti 334.940†	1443203.2	3487.6 µg/L	38.78	3487.6 ppb	38.78	1.11%
Tl 190.801†	-19.9	6.0111 µg/L	1.85489	6.0111 ppb	1.85489	30.86%
U 409.014†	-729.7	-86.383 µg/L	2.9144	-86.383 ppb	2.9144	3.37%
V 292.402†	19444.9	240.98 µg/L	5.307	240.98 ppb	5.307	2.20%
Zn 213.857†	14229.5	392.27 µg/L	6.055	392.27 ppb	6.055	1.54%

Sequence No.: 20

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 1/29/2010 12:08:06

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	76567.7	76567.7	97.6 %		12:08:44
1	Al 396.153Radial†	7787.2	8011.3	5177.5 µg/L	5177.5 ppb	12:08:44
1	Ca 317.933Radial†	7026.0	6954.4	5010.9 µg/L	5010.9 ppb	12:08:44
1	Fe 238.204 Radial†	401.8	395.5	5248.3 µg/L	5248.3 ppb	12:09:04
1	K 766.490 Radial†	8496.2	8309.7	5242.7 µg/L	5242.7 ppb	12:08:44
1	Mg 279.077 IEC†	509.0	513.5	5273.6 µg/L	5273.6 ppb	12:09:04
1	Na 589.592 Radial†	37580.4	37965.5	10108 µg/L	10108 ppb	12:08:44
1	Sr 421.552†	85197.0	86691.3	518.58 µg/L	518.58 ppb	12:08:44
1	Sc 361.383	1927779.1	1927779.1	97.537 %		12:10:08
1	Y 371.029	1213389.5	1213389.5	97.140 %		12:10:08
1	Ag 328.068†	58863.5	60442.4	549.51 µg/L	549.51 ppb	12:10:14
1	As 188.979†	239.8	248.6	540.90 µg/L	540.90 ppb	12:10:34
1	B 249.677†	11142.4	11053.8	521.72 µg/L	521.72 ppb	12:10:14
1	Ba 233.527†	18921.3	19423.0	543.53 µg/L	543.53 ppb	12:10:14
1	Be 313.107†	775396.6	791141.3	532.10 µg/L	532.10 ppb	12:10:08
1	Cd 226.502†	18455.9	19047.2	539.62 µg/L	539.62 ppb	12:10:14
1	Co 228.616†	9926.0	10225.9	543.35 µg/L	543.35 ppb	12:10:14
1	Cr 267.716†	23748.0	24449.8	548.18 µg/L	548.18 ppb	12:10:14
1	Cu 324.752†	76868.8	74909.8	549.99 µg/L	549.99 ppb	12:10:14
1	Mn 257.610†	147433.0	151303.5	536.79 µg/L	536.79 ppb	12:10:08
1	Mo 202.031†	4396.4	4494.8	544.73 µg/L	544.73 ppb	12:10:34
1	Ni 231.604†	9085.5	8983.5	543.36 µg/L	543.36 ppb	12:10:14
1	P 214.914†	1383.3	1198.4	2709.3 µg/L	2709.3 ppb	12:10:34
1	Pb 220.353†	1972.9	1961.6	550.44 µg/L	550.44 ppb	12:10:34
1	S 181.975 Axial†	219.0	201.4	1119.7 µg/L	1119.7 ppb	12:10:34
1	Sb 206.836†	531.5	520.9	553.25 µg/L	553.25 ppb	12:10:34
1	Se 196.026†	357.9	359.0	559.40 µg/L	559.40 ppb	12:10:34
1	SiO2†	30723.8	29110.1	5943.6 µg/L	5943.6 ppb	12:10:14
1	Si 251.611†	33647.4	34214.6	2771.5 µg/L	2771.5 ppb	12:10:14
1	Sn 189.927†	991.6	993.2	562.43 µg/L	562.43 ppb	12:10:34
1	Ti 334.940†	219188.5	224019.1	541.19 µg/L	541.19 ppb	12:10:08
1	Tl 190.801†	293.3	325.3	546.38 µg/L	546.38 ppb	12:10:34
1	U 409.014†	5527.2	5853.0	542.98 µg/L	542.98 ppb	12:10:14
1	V 292.402†	44277.3	45510.6	553.91 µg/L	553.91 ppb	12:10:14
1	Zn 213.857†	19520.9	19381.5	540.98 µg/L	540.98 ppb	12:10:14
2	Sc RADIAL	76859.3	76859.3	97.9 %		12:09:10
2	Al 396.153Radial†	7846.4	8041.4	5197.1 µg/L	5197.1 ppb	12:09:10
2	Ca 317.933Radial†	7109.9	7012.6	5052.9 µg/L	5052.9 ppb	12:09:10
2	Fe 238.204 Radial†	407.7	400.0	5308.0 µg/L	5308.0 ppb	12:09:30
2	K 766.490 Radial†	8609.3	8392.2	5294.7 µg/L	5294.7 ppb	12:09:10
2	Mg 279.077 IEC†	516.7	519.4	5334.2 µg/L	5334.2 ppb	12:09:30
2	Na 589.592 Radial†	37862.0	38107.0	10145 µg/L	10145 ppb	12:09:10
2	Sr 421.552†	86056.4	87237.5	521.85 µg/L	521.85 ppb	12:09:10
2	Sc 361.383	1927231.9	1927231.9	97.510 %		12:10:41
2	Y 371.029	1213744.1	1213744.1	97.169 %		12:10:41
2	Ag 328.068†	58524.9	60112.3	546.52 µg/L	546.52 ppb	12:10:47
2	As 188.979†	238.0	246.8	536.87 µg/L	536.87 ppb	12:11:07
2	B 249.677†	11053.0	10965.4	517.50 µg/L	517.50 ppb	12:10:47
2	Ba 233.527†	18781.2	19284.8	539.66 µg/L	539.66 ppb	12:10:47
2	Be 313.107†	775591.7	791567.1	532.39 µg/L	532.39 ppb	12:10:41
2	Cd 226.502†	18333.2	18926.7	536.20 µg/L	536.20 ppb	12:10:47
2	Co 228.616†	9857.6	10158.6	539.77 µg/L	539.77 ppb	12:10:47
2	Cr 267.716†	23609.0	24314.1	545.14 µg/L	545.14 ppb	12:10:47
2	Cu 324.752†	76440.1	74492.5	546.94 µg/L	546.94 ppb	12:10:47
2	Mn 257.610†	147424.9	151338.1	536.92 µg/L	536.92 ppb	12:10:41
2	Mo 202.031†	4360.8	4459.6	540.46 µg/L	540.46 ppb	12:11:07
2	Ni 231.604†	9019.9	8918.8	539.45 µg/L	539.45 ppb	12:10:47
2	P 214.914†	1377.4	1192.7	2696.3 µg/L	2696.3 ppb	12:11:07
2	Pb 220.353†	1968.1	1957.2	549.20 µg/L	549.20 ppb	12:11:07

2	S 181.975 Axial†	218.1	200.5	1114.7 µg/L	1114.7 ppb	12:11:07
2	Sb 206.836†	527.5	516.9	548.98 µg/L	548.98 ppb	12:11:07
2	Se 196.026†	362.2	363.5	566.43 µg/L	566.43 ppb	12:11:07
2	SiO2†	30580.7	28972.4	5915.5 µg/L	5915.5 ppb	12:10:47
2	Si 251.611†	33533.5	34107.5	2762.9 µg/L	2762.9 ppb	12:10:47
2	Sn 189.927†	973.5	974.9	552.16 µg/L	552.16 ppb	12:11:07
2	Ti 334.940†	219286.8	224183.7	541.58 µg/L	541.58 ppb	12:10:41
2	Tl 190.801†	295.2	327.3	549.76 µg/L	549.76 ppb	12:11:07
2	U 409.014†	5522.1	5849.3	542.63 µg/L	542.63 ppb	12:10:47
2	V 292.402†	44023.6	45263.4	550.90 µg/L	550.90 ppb	12:10:47
2	Zn 213.857†	19458.8	19323.6	539.37 µg/L	539.37 ppb	12:10:47
3	Sc RADIAL	77202.7	77202.7	98.4 %		12:09:36
3	Al 396.153Radial†	7877.3	8037.2	5196.0 µg/L	5196.0 ppb	12:09:36
3	Ca 317.933Radial†	7160.4	7031.8	5066.7 µg/L	5066.7 ppb	12:09:36
3	Fe 238.204 Radial†	403.5	393.8	5225.5 µg/L	5225.5 ppb	12:09:56
3	K 766.490 Radial†	8669.1	8413.9	5308.4 µg/L	5308.4 ppb	12:09:36
3	Mg 279.077 IEC†	518.5	518.9	5327.5 µg/L	5327.5 ppb	12:09:56
3	Na 589.592 Radial†	38080.1	38156.7	10159 µg/L	10159 ppb	12:09:36
3	Sr 421.552†	86582.8	87381.8	522.71 µg/L	522.71 ppb	12:09:36
3	Sc 361.383	1946543.9	1946543.9	98.487 %		12:11:15
3	Y 371.029	1225273.1	1225273.1	98.092 %		12:11:15
3	Ag 328.068†	56113.2	57068.0	518.72 µg/L	518.72 ppb	12:11:20
3	As 188.979†	207.5	213.4	464.33 µg/L	464.33 ppb	12:11:41
3	B 249.677†	10571.0	10363.5	488.95 µg/L	488.95 ppb	12:11:20
3	Ba 233.527†	17535.0	17828.4	498.89 µg/L	498.89 ppb	12:11:20
3	Be 313.107†	751378.3	759090.4	510.54 µg/L	510.54 ppb	12:11:15
3	Cd 226.502†	17043.3	17430.5	493.77 µg/L	493.77 ppb	12:11:20
3	Co 228.616†	9095.0	9284.0	493.22 µg/L	493.22 ppb	12:11:20
3	Cr 267.716†	21412.4	21843.6	489.76 µg/L	489.76 ppb	12:11:20
3	Cu 324.752†	71325.0	68521.0	503.15 µg/L	503.15 ppb	12:11:20
3	Mn 257.610†	143135.5	145482.8	516.15 µg/L	516.15 ppb	12:11:15
3	Mo 202.031†	3737.5	3782.3	458.41 µg/L	458.41 ppb	12:11:41
3	Ni 231.604†	8385.2	8182.7	494.93 µg/L	494.93 ppb	12:11:20
3	P 214.914†	1227.8	1026.8	2317.4 µg/L	2317.4 ppb	12:11:41
3	Pb 220.353†	1739.0	1704.6	478.23 µg/L	478.23 ppb	12:11:41
3	S 181.975 Axial†	199.1	179.0	995.09 µg/L	995.09 ppb	12:11:41
3	Sb 206.836†	464.4	447.6	474.88 µg/L	474.88 ppb	12:11:41
3	Se 196.026†	322.8	319.8	500.38 µg/L	500.38 ppb	12:11:41
3	SiO2†	28985.8	27041.8	5521.3 µg/L	5521.3 ppb	12:11:20
3	Si 251.611†	31660.7	31864.8	2581.2 µg/L	2581.2 ppb	12:11:20
3	Sn 189.927†	832.8	822.1	466.03 µg/L	466.03 ppb	12:11:41
3	Ti 334.940†	211520.8	214067.1	517.13 µg/L	517.13 ppb	12:11:15
3	Tl 190.801†	262.6	291.1	489.35 µg/L	489.35 ppb	12:11:41
3	U 409.014†	5026.1	5289.6	490.61 µg/L	490.61 ppb	12:11:20
3	V 292.402†	40590.2	41329.2	502.74 µg/L	502.74 ppb	12:11:20
3	Zn 213.857†	18074.6	17720.0	494.57 µg/L	494.57 ppb	12:11:20

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1933851.7	97.844 %	0.5563			0.57%
Sc RADIAL	76876.6	98.0 %	0.41			0.41%
Y 371.029	1217468.9	97.467 %	0.5413			0.56%
Ag 328.068†	59207.6	538.25 µg/L	16.979	538.25 ppb	16.979	3.15%
QC value within limits for Ag 328.068 Recovery = 107.65%						
Al 396.153Radial†	8029.9	5190.2 µg/L	11.03	5190.2 ppb	11.03	0.21%
QC value within limits for Al 396.153Radial Recovery = 103.80%						
As 188.979†	236.3	514.03 µg/L	43.091	514.03 ppb	43.091	8.38%
QC value within limits for As 188.979 Recovery = 102.81%						
B 249.677†	10794.2	509.39 µg/L	17.831	509.39 ppb	17.831	3.50%
QC value within limits for B 249.677 Recovery = 101.88%						
Ba 233.527†	18845.4	527.36 µg/L	24.729	527.36 ppb	24.729	4.69%
QC value within limits for Ba 233.527 Recovery = 105.47%						
Be 313.107†	780599.6	525.01 µg/L	12.529	525.01 ppb	12.529	2.39%
QC value within limits for Be 313.107 Recovery = 105.00%						
Ca 317.933Radial†	6999.6	5043.5 µg/L	29.05	5043.5 ppb	29.05	0.58%
QC value within limits for Ca 317.933Radial Recovery = 100.87%						
Cd 226.502†	18468.1	523.19 µg/L	25.542	523.19 ppb	25.542	4.88%
QC value within limits for Cd 226.502 Recovery = 104.64%						
Co 228.616†	9889.5	525.44 µg/L	27.968	525.44 ppb	27.968	5.32%

QC value within limits for Co 228.616 Recovery = 105.09%							
Cr 267.716†	23535.8	527.69 µg/L	32.890	527.69 ppb	32.890	6.23%	
QC value within limits for Cr 267.716 Recovery = 105.54%							
Cu 324.752†	72641.1	533.36 µg/L	26.211	533.36 ppb	26.211	4.91%	
QC value within limits for Cu 324.752 Recovery = 106.67%							
Fe 238.204 Radial†	396.4	5260.6 µg/L	42.63	5260.6 ppb	42.63	0.81%	
QC value within limits for Fe 238.204 Radial Recovery = 105.21%							
K 766.490 Radial†	8371.9	5281.9 µg/L	34.66	5281.9 ppb	34.66	0.66%	
QC value within limits for K 766.490 Radial Recovery = 105.64%							
Mg 279.077 IEC†	517.3	5311.8 µg/L	33.20	5311.8 ppb	33.20	0.63%	
QC value within limits for Mg 279.077 IEC Recovery = 106.24%							
Mn 257.610†	149374.8	529.95 µg/L	11.952	529.95 ppb	11.952	2.26%	
QC value within limits for Mn 257.610 Recovery = 105.99%							
Mo 202.031†	4245.6	514.53 µg/L	48.649	514.53 ppb	48.649	9.46%	
QC value within limits for Mo 202.031 Recovery = 102.91%							
Na 589.592 Radial†	38076.4	10137 µg/L	26.4	10137 ppb	26.4	0.26%	
QC value within limits for Na 589.592 Radial Recovery = 101.37%							
Ni 231.604†	8695.0	525.91 µg/L	26.904	525.91 ppb	26.904	5.12%	
QC value within limits for Ni 231.604 Recovery = 105.18%							
P 214.914†	1139.3	2574.3 µg/L	222.58	2574.3 ppb	222.58	8.65%	
QC value within limits for P 214.914 Recovery = 102.97%							
Pb 220.353†	1874.5	525.96 µg/L	41.334	525.96 ppb	41.334	7.86%	
QC value within limits for Pb 220.353 Recovery = 105.19%							
S 181.975 Axial†	193.6	1076.5 µg/L	70.55	1076.5 ppb	70.55	6.55%	
QC value within limits for S 181.975 Axial Recovery = 107.65%							
Sb 206.836†	495.2	525.71 µg/L	44.069	525.71 ppb	44.069	8.38%	
QC value within limits for Sb 206.836 Recovery = 105.14%							
Se 196.026†	347.4	542.07 µg/L	36.277	542.07 ppb	36.277	6.69%	
QC value within limits for Se 196.026 Recovery = 108.41%							
SiO2†	28374.8	5793.4 µg/L	236.12	5793.4 ppb	236.12	4.08%	
QC value within limits for SiO2 Recovery = 108.34%							
Si 251.611†	33395.6	2705.2 µg/L	107.48	2705.2 ppb	107.48	3.97%	
QC value within limits for Si 251.611 Recovery = 108.21%							
Sn 189.927†	930.1	526.87 µg/L	52.939	526.87 ppb	52.939	10.05%	
QC value within limits for Sn 189.927 Recovery = 105.37%							
Sr 421.552†	87103.5	521.05 µg/L	2.179	521.05 ppb	2.179	0.42%	
QC value within limits for Sr 421.552 Recovery = 104.21%							
Ti 334.940†	220756.6	533.30 µg/L	14.006	533.30 ppb	14.006	2.63%	
QC value within limits for Ti 334.940 Recovery = 106.66%							
Tl 190.801†	314.6	528.50 µg/L	33.946	528.50 ppb	33.946	6.42%	
QC value within limits for Tl 190.801 Recovery = 105.70%							
U 409.014†	5664.0	525.41 µg/L	30.134	525.41 ppb	30.134	5.74%	
QC value within limits for U 409.014 Recovery = 105.08%							
V 292.402†	44034.4	535.85 µg/L	28.712	535.85 ppb	28.712	5.36%	
QC value within limits for V 292.402 Recovery = 107.17%							
Zn 213.857†	18808.4	524.97 µg/L	26.346	524.97 ppb	26.346	5.02%	
QC value within limits for Zn 213.857 Recovery = 104.99%							
All analyte(s) passed QC.							

Sequence No.: 21

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 1/29/2010 12:11:50

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc RADIAL	74400.5	74400.5	94.8 %		12:12:23
1	Al 396.153Radial†	7.0	36.9	23.871 µg/L	23.871 ppb	12:12:23
1	Ca 317.933Radial†	257.9	24.8	17.882 µg/L	17.882 ppb	12:12:43
1	Fe 238.204 Radial†	18.8	3.4	45.600 µg/L	45.600 ppb	12:12:43
1	K 766.490 Radial†	315.9	-65.4	-41.291 µg/L	-41.291 ppb	12:12:23
1	Mg 279.077 IEC†	10.8	3.3	33.363 µg/L	33.363 ppb	12:12:43
1	Na 589.592 Radial†	317.0	-219.3	-58.373 µg/L	-58.373 ppb	12:12:23
1	Sr 421.552†	610.8	10.3	0.0616 µg/L	0.0616 ppb	12:12:23
1	Sc 361.383	1935514.4	1935514.4	97.929 %		12:13:45
1	Y 371.029	1222824.5	1222824.5	97.896 %		12:13:45
1	Ag 328.068†	-83.5	7.3	0.0704 µg/L	0.0704 ppb	12:13:51
1	As 188.979†	-2.1	0.6	1.1996 µg/L	1.1996 ppb	12:14:11
1	B 249.677†	179.3	-186.8	-8.8723 µg/L	-8.8723 ppb	12:14:11
1	Ba 233.527†	-21.3	2.2	0.0633 µg/L	0.0633 ppb	12:14:11
1	Be 313.107†	3795.9	42.4	0.0283 µg/L	0.0283 ppb	12:13:51
1	Cd 226.502†	-117.3	5.5	0.1507 µg/L	0.1507 ppb	12:14:11
1	Co 228.616†	-41.1	7.3	0.3901 µg/L	0.3901 ppb	12:14:11
1	Cr 267.716†	-63.7	37.1	0.8315 µg/L	0.8315 ppb	12:13:51
1	Cu 324.752†	3788.2	-31.6	-0.2253 µg/L	-0.2253 ppb	12:13:51
1	Mn 257.610†	-51.4	95.4	0.3429 µg/L	0.3429 ppb	12:14:11
1	Mo 202.031†	19.9	7.8	0.9449 µg/L	0.9449 ppb	12:14:11
1	Ni 231.604†	324.7	0.1	0.0091 µg/L	0.0091 ppb	12:14:11
1	P 214.914†	214.9	-0.4	-1.0539 µg/L	-1.0539 ppb	12:14:11
1	Pb 220.353†	62.0	2.2	0.6160 µg/L	0.6160 ppb	12:14:11
1	S 181.975 Axial†	21.1	-1.5	-8.6076 µg/L	-8.6076 ppb	12:14:11
1	Sb 206.836†	25.8	2.3	2.4214 µg/L	2.4214 ppb	12:14:11
1	Se 196.026†	-2.4	-10.4	-15.388 µg/L	-15.388 ppb	12:14:11
1	SiO2†	2309.9	-30.7	-6.2636 µg/L	-6.2636 ppb	12:13:51
1	Si 251.611†	319.1	43.5	3.5209 µg/L	3.5209 ppb	12:14:11
1	Sn 189.927†	19.6	-3.4	-1.9156 µg/L	-1.9156 ppb	12:14:11
1	Ti 334.940†	916.4	231.9	0.5581 µg/L	0.5581 ppb	12:13:51
1	Tl 190.801†	-21.6	2.4	4.0508 µg/L	4.0508 ppb	12:14:11
1	U 409.014†	-141.6	41.6	3.8600 µg/L	3.8600 ppb	12:13:51
1	V 292.402†	-90.5	22.9	0.2916 µg/L	0.2916 ppb	12:13:51
1	Zn 213.857†	638.9	20.2	0.5640 µg/L	0.5640 ppb	12:14:11
2	Sc RADIAL	74847.4	74847.4	95.4 %		12:12:49
2	Al 396.153Radial†	-11.9	17.0	11.015 µg/L	11.015 ppb	12:12:49
2	Ca 317.933Radial†	264.9	30.6	22.056 µg/L	22.056 ppb	12:13:09
2	Fe 238.204 Radial†	18.8	3.4	44.382 µg/L	44.382 ppb	12:13:09
2	K 766.490 Radial†	389.6	9.8	6.1890 µg/L	6.1890 ppb	12:12:49
2	Mg 279.077 IEC†	11.8	4.2	43.352 µg/L	43.352 ppb	12:13:09
2	Na 589.592 Radial†	328.3	-209.4	-55.751 µg/L	-55.751 ppb	12:12:49
2	Sr 421.552†	645.2	42.5	0.2540 µg/L	0.2540 ppb	12:12:49
2	Sc 361.383	1940937.6	1940937.6	98.203 %		12:14:17
2	Y 371.029	1226568.3	1226568.3	98.195 %		12:14:17
2	Ag 328.068†	-68.4	23.0	0.2097 µg/L	0.2097 ppb	12:14:23
2	As 188.979†	-6.8	-4.2	-9.1195 µg/L	-9.1195 ppb	12:14:43
2	B 249.677†	158.9	-208.1	-9.8783 µg/L	-9.8783 ppb	12:14:43
2	Ba 233.527†	-18.1	5.5	0.1530 µg/L	0.1530 ppb	12:14:43
2	Be 313.107†	3805.1	41.0	0.0274 µg/L	0.0274 ppb	12:14:23
2	Cd 226.502†	-124.8	-1.8	-0.0563 µg/L	-0.0563 ppb	12:14:43
2	Co 228.616†	-44.9	3.6	0.1925 µg/L	0.1925 ppb	12:14:43
2	Cr 267.716†	-54.1	47.1	1.0551 µg/L	1.0551 ppb	12:14:23
2	Cu 324.752†	3746.7	-84.7	-0.6150 µg/L	-0.6150 ppb	12:14:23
2	Mn 257.610†	-47.6	99.4	0.3564 µg/L	0.3564 ppb	12:14:43
2	Mo 202.031†	19.8	7.5	0.9145 µg/L	0.9145 ppb	12:14:43
2	Ni 231.604†	319.2	-6.4	-0.3880 µg/L	-0.3880 ppb	12:14:43
2	P 214.914†	219.8	3.9	9.1180 µg/L	9.1180 ppb	12:14:43
2	Pb 220.353†	59.4	-0.6	-0.1713 µg/L	-0.1713 ppb	12:14:43



2	S 181.975 Axial†	24.7	2.0	11.390 µg/L	11.390 ppb	12:14:43
2	Sb 206.836†	25.1	1.5	1.6259 µg/L	1.6259 ppb	12:14:43
2	Se 196.026†	6.8	-1.0	-1.3276 µg/L	-1.3276 ppb	12:14:43
2	SiO2†	2278.3	-69.4	-14.172 µg/L	-14.172 ppb	12:14:23
2	Si 251.611†	308.7	31.9	2.5840 µg/L	2.5840 ppb	12:14:43
2	Sn 189.927†	22.6	-0.4	-0.2282 µg/L	-0.2282 ppb	12:14:43
2	Ti 334.940†	818.9	130.0	0.3112 µg/L	0.3112 ppb	12:14:23
2	Tl 190.801†	-22.0	2.1	3.5576 µg/L	3.5576 ppb	12:14:43
2	U 409.014†	-231.5	-49.5	-4.6129 µg/L	-4.6129 ppb	12:14:23
2	V 292.402†	-118.5	-5.4	-0.0577 µg/L	-0.0577 ppb	12:14:23
2	Zn 213.857†	655.8	35.6	0.9981 µg/L	0.9981 ppb	12:14:43
3	Sc RADIAL	75227.7	75227.7	95.9 %		12:13:15
3	Al 396.153Radial†	20.0	50.4	32.633 µg/L	32.633 ppb	12:13:15
3	Ca 317.933Radial†	250.1	13.8	9.9155 µg/L	9.9155 ppb	12:13:35
3	Fe 238.204 Radial†	19.0	3.5	46.428 µg/L	46.428 ppb	12:13:35
3	K 766.490 Radial†	414.9	34.2	21.554 µg/L	21.554 ppb	12:13:15
3	Mg 279.077 IEC†	10.8	3.1	32.062 µg/L	32.062 ppb	12:13:35
3	Na 589.592 Radial†	323.5	-216.2	-57.568 µg/L	-57.568 ppb	12:13:15
3	Sr 421.552†	628.8	22.0	0.1313 µg/L	0.1313 ppb	12:13:15
3	Sc 361.383	1939127.9	1939127.9	98.111 %		12:14:49
3	Y 371.029	1225246.4	1225246.4	98.090 %		12:14:49
3	Ag 328.068†	-51.0	40.6	0.3686 µg/L	0.3686 ppb	12:14:55
3	As 188.979†	0.0	2.8	6.0438 µg/L	6.0438 ppb	12:15:15
3	B 249.677†	146.0	-221.1	-10.497 µg/L	-10.497 ppb	12:15:15
3	Ba 233.527†	-29.3	-5.9	-0.1649 µg/L	-0.1649 ppb	12:15:15
3	Be 313.107†	3770.6	9.4	0.0062 µg/L	0.0062 ppb	12:14:55
3	Cd 226.502†	-116.0	7.0	0.1930 µg/L	0.1930 ppb	12:15:15
3	Co 228.616†	-46.8	1.6	0.0856 µg/L	0.0856 ppb	12:15:15
3	Cr 267.716†	-60.8	40.2	0.8996 µg/L	0.8996 ppb	12:14:55
3	Cu 324.752†	3779.6	-47.6	-0.3428 µg/L	-0.3428 ppb	12:14:55
3	Mn 257.610†	-72.3	74.1	0.2676 µg/L	0.2676 ppb	12:15:15
3	Mo 202.031†	18.2	6.0	0.7303 µg/L	0.7303 ppb	12:15:15
3	Ni 231.604†	320.2	-5.0	-0.3032 µg/L	-0.3032 ppb	12:15:15
3	P 214.914†	216.3	0.6	1.4891 µg/L	1.4891 ppb	12:15:15
3	Pb 220.353†	66.1	6.2	1.7566 µg/L	1.7566 ppb	12:15:15
3	S 181.975 Axial†	20.6	-2.1	-11.724 µg/L	-11.724 ppb	12:15:15
3	Sb 206.836†	27.0	3.6	3.7609 µg/L	3.7609 ppb	12:15:15
3	Se 196.026†	10.1	2.4	3.7289 µg/L	3.7289 ppb	12:15:15
3	SiO2†	2273.7	-71.9	-14.679 µg/L	-14.679 ppb	12:14:55
3	Si 251.611†	399.6	124.8	10.113 µg/L	10.113 ppb	12:15:15
3	Sn 189.927†	23.2	0.2	0.1432 µg/L	0.1432 ppb	12:15:15
3	Ti 334.940†	770.6	81.6	0.1948 µg/L	0.1948 ppb	12:14:55
3	Tl 190.801†	-16.7	7.5	12.416 µg/L	12.416 ppb	12:15:15
3	U 409.014†	-229.3	-47.5	-4.4231 µg/L	-4.4231 ppb	12:14:55
3	V 292.402†	-123.4	-10.4	-0.1202 µg/L	-0.1202 ppb	12:14:55
3	Zn 213.857†	648.0	28.2	0.7905 µg/L	0.7905 ppb	12:15:15

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	1938526.6	98.081 %	0.1397			0.14%
Sc RADIAL	74825.2	95.3 %	0.53			0.55%
Y 371.029	1224879.8	98.060 %	0.1520			0.16%
Ag 328.068†	23.6	0.2162 µg/L	0.14920	0.2162 ppb	0.14920	69.00%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	34.8	22.506 µg/L	10.8733	22.506 ppb	10.8733	48.31%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	-0.3	-0.6254 µg/L	7.74463	-0.6254 ppb	7.74463	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-205.4	-9.7491 µg/L	0.81990	-9.7491 ppb	0.81990	8.41%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	0.6	0.0172 µg/L	0.16391	0.0172 ppb	0.16391	955.14%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	30.9	0.0207 µg/L	0.01252	0.0207 ppb	0.01252	60.58%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	23.1	16.618 µg/L	6.1680	16.618 ppb	6.1680	37.12%
QC value within limits for Ca 317.933Radial Recovery = Not calculated						
Cd 226.502†	3.6	0.0958 µg/L	0.13341	0.0958 ppb	0.13341	139.23%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	4.2	0.2227 µg/L	0.15451	0.2227 ppb	0.15451	69.37%

Cr	267.716†	41.4	0.9287 µg/L	0.11461	0.9287 ppb	0.11461	12.34%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	-54.6	-0.3944 µg/L	0.19992	-0.3944 ppb	0.19992	50.69%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	3.4	45.470 µg/L	1.0292	45.470 ppb	1.0292	2.26%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	-7.2	-4.5160 µg/L	32.76168	-4.5160 ppb	32.76168	725.45%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	3.5	36.259 µg/L	6.1771	36.259 ppb	6.1771	17.04%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	89.6	0.3223 µg/L	0.04789	0.3223 ppb	0.04789	14.86%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	7.1	0.8632 µg/L	0.11609	0.8632 ppb	0.11609	13.45%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	-215.0	-57.231 µg/L	1.3428	-57.231 ppb	1.3428	2.35%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	-3.8	-0.2274 µg/L	0.20914	-0.2274 ppb	0.20914	91.99%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	1.4	3.1844 µg/L	5.29364	3.1844 ppb	5.29364	166.24%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	2.6	0.7338 µg/L	0.96933	0.7338 ppb	0.96933	132.10%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	-0.5	-2.9807 µg/L	12.54235	-2.9807 ppb	12.54235	420.79%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	2.5	2.6028 µg/L	1.07900	2.6028 ppb	1.07900	41.46%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	-3.0	-4.3290 µg/L	9.90558	-4.3290 ppb	9.90558	228.82%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†		-57.3	-11.705 µg/L	4.7190	-11.705 ppb	4.7190	40.32%
QC value within limits for SiO2 Recovery = Not calculated							
Si	251.611†	66.7	5.4059 µg/L	4.10320	5.4059 ppb	4.10320	75.90%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	-1.2	-0.6669 µg/L	1.09724	-0.6669 ppb	1.09724	164.53%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	24.9	0.1490 µg/L	0.09742	0.1490 ppb	0.09742	65.39%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	147.8	0.3547 µg/L	0.18553	0.3547 ppb	0.18553	52.30%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	4.0	6.6746 µg/L	4.97786	6.6746 ppb	4.97786	74.58%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	-18.5	-1.7254 µg/L	4.83800	-1.7254 ppb	4.83800	280.41%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	2.4	0.0379 µg/L	0.22187	0.0379 ppb	0.22187	585.24%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	28.0	0.7842 µg/L	0.21710	0.7842 ppb	0.21710	27.68%
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

## Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Wednesday, January 27, 2010 16:00:29

Sample Description:

Method File: c:\elandata\Method\daily2.mth

Dataset File: c:\elandata\Dataset\100125\Sample.212

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

### Summary

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
Be	9.0	787.8	787.822	28.148	3.6
Mg	24.0	15294.8	15294.783	55.973	0.4
Co	58.9	39378.8	39378.800	117.176	0.3
Rh	102.9	78069.7	78069.744	396.584	0.5
In	114.9	103630.5	103630.525	534.534	0.5
Pb	208.0	39540.2	39540.249	420.185	1.1
[> Ba	137.9	80010.4	80010.385	531.900	0.7
[ Ba++	69.0	1209.8	0.015	0.000	2.6
[> Ce	139.9	93704.5	93704.519	400.903	0.4
[ CeO	155.9	2457.7	0.026	0.000	1.6
Bkgd	220.0	3.9	3.900	1.387	35.6

### Current Optimization File Data

Current Value	Description
0.93	Nebulizer Gas Flow
9.00	Lens Voltage
1000.00	ICP RF Power
-2000.00	Analog Stage Voltage
1100.00	Pulse Stage Voltage
50.00	Discriminator Threshold
-2.00	AC Rod Offset

### Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	21	8.0	1226.4
Co	59	21	9.0	28409.6
In	115	21	10.5	67842.7

## ICPMS #4 TUNING REPORT

File Name: default2.tun  
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	602	2060	0.663
Be	9.0	9.0	2033	2045	0.711
Mg	24.0	24.0	5666	2065	0.617
Mg	25.0	25.0	5989	2080	0.750
Mg	26.0	25.9	6104	2085	0.654
Co	58.9	58.9	14183	2140	0.650
Rh	102.9	102.9	24873	2230	0.649
In	114.9	114.9	27777	2255	0.679
Ce	139.9	139.9	33847	2310	0.636
Pb	206.0	206.0	49935	2500	0.629
Pb	207.0	207.0	50113	2375	0.630
Pb	208.0	208.0	50436	2570	0.606
U	238.1	238.0	57690	2510	0.644

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Report Date/Time: Wednesday, January 27, 2010 15:56:50

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## ICPMS#4 - Summary Report

Sample ID: Blank

Sample Date/Time: Wednesday, January 27, 2010 23:47:43

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\Blank.097

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li 7		ug/L		15	
Be 9		ug/L		2	
B 11		ug/L		409	
Na 23		ug/L		26692	
Mg 24		ug/L		2667	
Al 27		ug/L		3334	
P 31		ug/L		3189	
K 39		ug/L		222727	
Ca 43		ug/L		147	
> Sc 45		ug/L		247999	
Ti 47		ug/L		76	
V 51		ug/L		-10504	
Cr 52		ug/L		5657	
Cr 53		ug/L		54181	
Mn 55		ug/L		516	
Fe 57		ug/L		4677	
Co 59		ug/L		72	
Ni 60		ug/L		43	
Cu 63		ug/L		89	
Cu 65		ug/L		59	
Zn 66		ug/L		179	
Zn 67		ug/L		3532	
Zn 68		ug/L		434	
> Ge 74		ug/L		147464	
As 75		ug/L		-589	
Se 77		ug/L		4194	
Se 82		ug/L		0	
Kr 83		ug/L		30	
Sr 88		ug/L		115	
Y 89		ug/L		13	
Zr 90		ug/L		456	
Mo 98		ug/L		40	
Ag 107		ug/L		51	
Cd 111		ug/L		9	
Cd 114		ug/L		23	
> In 115		ug/L		100380	
Sn 120		ug/L		227	
Sb 121		ug/L		308	
Sb 123		ug/L		222	
Ba 135		ug/L		10	
Ba 137		ug/L		20	
Ho 165		ug/L		3	
> Lu 175		ug/L		100267	
Tl 205		ug/L		155	
Pb 208		ug/L		241	
Th 232		ug/L		501	
U 238		ug/L		115	

Sample ID: Blank

Report Date/Time: Wednesday, January 27, 2010 23:50:28

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Simple Linear	1.0000
Be	9Simple Linear	
B	11Linear Thru Zero	1.0000
Na	23Simple Linear	
Mg	24Simple Linear	1.0000
Al	27Simple Linear	
P	31Simple Linear	1.0000
K	39Simple Linear	
Ca	43Simple Linear	1.0000
Sc	45Linear Thru Zero	
Ti	47Simple Linear	1.0000
V	51Simple Linear	
Cr	52Simple Linear	1.0000
Cr	53Simple Linear	
Mn	55Simple Linear	1.0000
Fe	57Simple Linear	
Co	59Simple Linear	1.0000
Ni	60Simple Linear	
Cu	63Simple Linear	1.0000
Cu	65Simple Linear	
Zn	66Simple Linear	1.0000
Zn	67Simple Linear	
Zn	68Simple Linear	1.0000
Ge	74Simple Linear	
As	75Simple Linear	1.0000
Se	77Simple Linear	
Se	82Simple Linear	1.0000
Kr	83Simple Linear	
Sr	88Simple Linear	1.0000
Y	89Simple Linear	
Zr	90Simple Linear	1.0000
Mo	98Simple Linear	
Ag	107Simple Linear	1.0000
Cd	111Simple Linear	
Cd	114Simple Linear	1.0000
In	115Simple Linear	
Sn	120Simple Linear	1.0000
Sb	121Simple Linear	
Sb	123Simple Linear	1.0000
Ba	135Simple Linear	
Ba	137Simple Linear	1.0000
Ho	165Simple Linear	
Lu	175Simple Linear	1.0000
Tl	205Simple Linear	
Pb	208Simple Linear	1.0000
Th	232Simple Linear	
U	238Simple Linear	1.0000

Sample ID: Blank

Report Date/Time: Wednesday, January 27, 2010 23:50:28

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#4 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Wednesday, January 27, 2010 23:53:52

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\Standard 1.098

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	10.000	ug/L	0.465	4537	0.018
Be	9	10.000	ug/L	2.880	1423	0.006
B	11	20.000	ug/L	1.853	4011	0.014
Na	23	1000.000	ug/L	6.069	1792306	6.946
Mg	24	1000.000	ug/L	4.208	1213849	4.766
Al	27	1000.000	ug/L	1.622	1717790	6.745
P	31	1000.000	ug/L	0.622	98927	0.376
K	39	1000.000	ug/L	3.686	3113613	11.350
Ca	43	1000.000	ug/L	1.567	6076	0.023
> Sc	45		ug/L		254159	254158.575
Ti	47	10.000	ug/L	0.493	2850	0.011
V	51	10.000	ug/L	5.830	19267	0.118
Cr	52	10.000	ug/L	1.840	29833	0.095
Cr	53		ug/L		50685	-0.019
Mn	55	10.000	ug/L	0.374	41898	0.163
Fe	57	1000.000	ug/L	1.731	90503	0.337
Co	59	10.000	ug/L	1.664	32458	0.127
Ni	60	10.000	ug/L	0.436	6851	0.027
Cu	63		ug/L		14865	0.058
Cu	65	10.000	ug/L	2.174	7026	0.027
Zn	66	10.000	ug/L	1.323	3924	0.025
Zn	67		ug/L		3695	0.000
Zn	68		ug/L		3098	0.017
> Ge	74		ug/L		152353	152353.310
As	75	10.000	ug/L	6.430	3969	0.030
Se	77		ug/L		3973	-0.002
Se	82	10.000	ug/L	6.886	497	0.003
Kr	83		ug/L		25	-0.000
Sr	88	10.000	ug/L	0.237	61947	0.593
Y	89		ug/L		21	0.000
Zr	90	10.000	ug/L	1.032	32314	0.305
Mo	98	10.000	ug/L	0.909	13445	0.129
Ag	107	10.000	ug/L	1.536	26043	0.249
Cd	111	10.000	ug/L	1.882	5864	0.056
Cd	114		ug/L		13765	0.132
> In	115		ug/L		104242	104241.587
Sn	120	10.000	ug/L	0.459	24727	0.235
Sb	121	10.000	ug/L	6.780	15654	0.147
Sb	123		ug/L		11922	0.112
Ba	135		ug/L		5462	0.054
Ba	137	10.000	ug/L	1.420	9378	0.092
Ho	165		ug/L		4	0.000
> Lu	175		ug/L		101781	101781.313
Tl	205	10.000	ug/L	0.388	16477	0.160
Pb	208	10.000	ug/L	0.584	62462	0.611
Th	232	10.000	ug/L	1.773	72227	0.705
U	238	10.000	ug/L	0.432	79689	0.782

Sample ID: Standard 1

Report Date/Time: Wednesday, January 27, 2010 23:56:34

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## Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7				
	Be	9				
	B	11				
	Na	23				
	Mg	24				
	Al	27				
	P	31				
	K	39				
	Ca	43				
>	Sc	45				
	Ti	47				
	V	51				
	Cr	52				
	Cr	53				
	Mn	55				
	Fe	57				
	Co	59				
	Ni	60				
	Cu	63				
[	Cu	65				
	Zn	66				
	Zn	67				
	Zn	68				
>	Ge	74				
	As	75				
	Se	77				
	Se	82				
[	Kr	83				
	Sr	88				
	Y	89				
	Zr	90				
	Mo	98				
	Ag	107				
	Cd	111				
	Cd	114				
>	In	115				
	Sn	120				
	Sb	121				
[	Sb	123				
	Ba	135				
	Ba	137				
	Ho	165				
>	Lu	175				
	Tl	205				
	Pb	208				
	Th	232				
[	U	238				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: Standard 1

Report Date/Time: Wednesday, January 27, 2010 23:56:34

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## ICPMS#4 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Wednesday, January 27, 2010 23:59:58

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\Standard 2.099

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	99.956	ug/L	2.186	43371	0.170
Be	9	99.959	ug/L	0.788	13660	0.054
B	11	200.020	ug/L	1.451	36749	0.143
Na	23	10001.092	ug/L	3.636	17907768	70.237
Mg	24	10005.971	ug/L	6.117	12909223	50.713
Al	27	9998.669	ug/L	4.231	16947755	66.552
P	31	9997.683	ug/L	0.482	939451	3.678
K	39	9996.206	ug/L	3.005	28057033	109.311
Ca	43	9998.435	ug/L	0.457	58577	0.230
Sc	45		ug/L		254560	254560.258
Ti	47	99.991	ug/L	0.634	27592	0.108
V	51	99.836	ug/L	2.361	247387	1.014
Cr	52	100.007	ug/L	1.276	248354	0.953
Cr	53		ug/L		73645	0.071
Mn	55	99.974	ug/L	0.465	404098	1.585
Fe	57	9997.067	ug/L	0.789	838600	3.275
Co	59	99.968	ug/L	1.202	314231	1.234
Ni	60	99.968	ug/L	0.482	66087	0.259
Cu	63		ug/L		139604	0.548
Cu	65	99.951	ug/L	1.054	66536	0.261
Zn	66	99.995	ug/L	0.881	36787	0.244
Zn	67		ug/L		9026	0.036
Zn	68		ug/L		26708	0.175
Ge	74		ug/L		149896	149895.885
As	75	99.943	ug/L	0.740	41996	0.284
Se	77		ug/L		7021	0.018
Se	82	99.976	ug/L	1.100	4773	0.032
Kr	83		ug/L		29	-0.000
Sr	88	100.004	ug/L	1.369	613387	5.955
Y	89		ug/L		70	0.001
Zr	90	100.008	ug/L	1.037	317702	3.081
Mo	98	100.038	ug/L	0.732	137797	1.338
Ag	107	99.979	ug/L	1.331	251411	2.441
Cd	111	99.999	ug/L	0.725	57802	0.561
Cd	114		ug/L		138042	1.340
In	115		ug/L		102988	102987.655
Sn	120	99.988	ug/L	1.024	239220	2.321
Sb	121	100.056	ug/L	3.844	160894	1.558
Sb	123		ug/L		123778	1.199
Ba	135		ug/L		53893	0.529
Ba	137	99.972	ug/L	1.422	91031	0.894
Ho	165		ug/L		5	0.000
Lu	175		ug/L		101841	101841.072
Tl	205	99.991	ug/L	1.474	161926	1.588
Pb	208	99.966	ug/L	0.828	602206	5.911
Th	232	100.015	ug/L	0.319	729104	7.154
U	238	99.979	ug/L	0.783	780150	7.659

Sample ID: Standard 2

Report Date/Time: Thursday, January 28, 2010 00:02:40

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: Standard 2

Report Date/Time: Thursday, January 28, 2010 00:02:40

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### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7				
	Be	9				
	B	11				
	Na	23				
	Mg	24				
	Al	27				
	P	31				
	K	39				
	Ca	43				
>	Sc	45				
	Ti	47				
	V	51				
	Cr	52				
	Cr	53				
	Mn	55				
	Fe	57				
	Co	59				
	Ni	60				
	Cu	63				
	Cu	65				
[	Zn	66				
	Zn	67				
	Zn	68				
>	Ge	74				
	As	75				
	Se	77				
	Se	82				
	Kr	83				
[	Sr	88				
	Y	89				
	Zr	90				
	Mo	98				
	Ag	107				
	Cd	111				
	Cd	114				
>	In	115				
	Sn	120				
	Sb	121				
	Sb	123				
[	Ba	135				
	Ba	137				
	Ho	165				
>	Lu	175				
	Tl	205				
	Pb	208				
	Th	232				
	U	238				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: Standard 2

Report Date/Time: Thursday, January 28, 2010 00:02:40

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# ICPMS#4 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Thursday, January 28, 2010 00:06:04

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 1.100

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	52.483	ug/L	3.454	22669	0.089
Be	9	52.251	ug/L	1.067	7108	0.028
B	11	101.365	ug/L	0.218	18742	0.072
Na	23	5017.618	ug/L	2.146	8955256	35.238
Mg	24	4795.672	ug/L	6.055	6160950	24.306
Al	27	5287.513	ug/L	2.204	8920040	35.194
P	31	5073.413	ug/L	0.374	476080	1.866
K	39	5061.529	ug/L	1.077	14249438	55.349
Ca	43	5021.608	ug/L	1.285	29357	0.115
Sc	45		ug/L		253354	253354.186
Ti	47	50.938	ug/L	0.485	14027	0.055
V	51	51.211	ug/L	3.231	121036	0.520
Cr	52	51.910	ug/L	1.011	131072	0.495
Cr	53		ug/L		60109	0.019
Mn	55	52.045	ug/L	0.744	209633	0.825
Fe	57	5177.872	ug/L	1.438	434609	1.696
Co	59	50.785	ug/L	0.628	158915	0.627
Ni	60	52.249	ug/L	0.676	34396	0.136
Cu	63		ug/L		72194	0.285
Cu	65	51.659	ug/L	0.624	34253	0.135
Zn	66	52.395	ug/L	0.907	19509	0.128
Zn	67		ug/L		6148	0.017
Zn	68		ug/L		14220	0.091
Ge	74		ug/L		151031	151031.066
As	75	48.095	ug/L	1.204	20050	0.137
Se	77		ug/L		5253	0.006
Se	82	48.237	ug/L	1.337	2321	0.015
Kr	83		ug/L		19	-0.000
Sr	88	51.254	ug/L	1.270	315542	3.052
Y	89		ug/L		28	0.000
Zr	90	49.406	ug/L	1.385	157743	1.522
Mo	98	49.574	ug/L	1.415	68545	0.663
Ag	107	51.242	ug/L	1.608	129342	1.251
Cd	111	50.944	ug/L	1.511	29554	0.286
Cd	114		ug/L		70469	0.682
In	115		ug/L		103338	103338.309
Sn	120	51.402	ug/L	1.515	123527	1.193
Sb	121	50.958	ug/L	5.370	82346	0.794
Sb	123		ug/L		62283	0.600
Ba	135		ug/L		27080	0.263
Ba	137	50.552	ug/L	1.237	46469	0.452
Ho	165		ug/L		9	0.000
Lu	175		ug/L		102784	102783.792
Tl	205	48.507	ug/L	1.502	79362	0.771
Pb	208	50.533	ug/L	0.808	307356	2.988
Th	232	51.223	ug/L	1.095	377115	3.664
U	238	53.110	ug/L	0.735	418314	4.069

Sample ID: QC Std 1

Report Date/Time: Thursday, January 28, 2010 00:08:47

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: QC Std 1

Report Date/Time: Thursday, January 28, 2010 00:08:47

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	104.965				
Be	9	104.502				
B	11	101.365				
Na	23	100.352				
Mg	24	95.913				
Al	27	104.703				
P	31	101.468				
K	39	101.231				
Ca	43	100.432				
> Sc	45		102.2			
Ti	47	101.876				
V	51	102.421				
Cr	52	103.820				
Cr	53					
Mn	55	104.091				
Fe	57	103.557				
Co	59	101.571				
Ni	60	104.499				
Cu	63					
Cu	65	103.318				
Zn	66	104.790				
Zn	67					
Zn	68					
> Ge	74		102.4			
As	75	96.190				
Se	77					
Se	82	96.475				
Kr	83					
Sr	88	102.509				
Y	89					
Zr	90	98.812				
Mo	98	99.147				
Ag	107	102.484				
Cd	111	101.888				
Cd	114					
> In	115		102.9			
Sn	120	102.804				
Sb	121	101.916				
Sb	123					
Ba	135					
Ba	137	101.105				
Ho	165					
> Lu	175		102.5			
Tl	205	97.014				
Pb	208	101.067				
Th	232	102.447				
U	238	106.219				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 1

Report Date/Time: Thursday, January 28, 2010 00:08:47

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## ICPMS#4 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Thursday, January 28, 2010 00:12:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 2.101

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	-0.001	ug/L	285.898	14	-0.000
Be	9	0.017	ug/L	100.680	5	0.000
B	11	3.422	ug/L	16.314	1033	0.002
Na	23	-3.112	ug/L	156.909	21685	-0.022
Mg	24	-1.599	ug/L	56.611	667	-0.008
Al	27	-1.230	ug/L	26.807	1333	-0.008
P	31	-0.157	ug/L	858.019	3236	-0.000
K	39	-0.519	ug/L	1073.081	225435	-0.006
Ca	43	-0.625	ug/L	507.327	147	-0.000
> Sc	45		ug/L		252751	252751.102
Ti	47	0.022	ug/L	222.115	84	0.000
V	51	0.591	ug/L	112.600	-9184	0.006
Cr	52	-0.270	ug/L	6.311	5115	-0.003
Cr	53		ug/L		50746	-0.018
Mn	55	-0.008	ug/L	122.525	495	-0.000
Fe	57	0.796	ug/L	138.578	4832	0.000
Co	59	0.005	ug/L	63.558	89	0.000
Ni	60	0.010	ug/L	126.141	51	0.000
Cu	63		ug/L		106	0.000
Cu	65	0.001	ug/L	1075.785	61	0.000
Zn	66	0.012	ug/L	203.769	186	0.000
Zn	67		ug/L		3318	-0.002
Zn	68		ug/L		402	-0.000
> Ge	74		ug/L		149696	149696.472
As	75	0.495	ug/L	100.763	-385	0.001
Se	77		ug/L		3949	-0.002
Se	82	0.000	ug/L	70224.986	0	0.000
Kr	83		ug/L		24	-0.000
Sr	88	-0.002	ug/L	108.564	107	-0.000
Y	89		ug/L		11	-0.000
Zr	90	0.219	ug/L	8.586	1160	0.007
Mo	98	0.052	ug/L	30.143	112	0.001
Ag	107	0.017	ug/L	19.823	96	0.000
Cd	111	0.006	ug/L	211.302	12	0.000
Cd	114		ug/L		34	0.000
> In	115		ug/L		102769	102768.870
Sn	120	0.297	ug/L	12.387	941	0.007
Sb	121	0.944	ug/L	17.785	1826	0.015
Sb	123		ug/L		1454	0.012
Ba	135		ug/L		11	0.000
Ba	137	-0.002	ug/L	126.731	19	-0.000
Ho	165		ug/L		4	0.000
> Lu	175		ug/L		100927	100926.672
Tl	205	0.193	ug/L	30.258	464	0.003
Pb	208	0.011	ug/L	35.262	310	0.001
Th	232	0.178	ug/L	30.473	1787	0.013
U	238	0.011	ug/L	25.178	202	0.001

Sample ID: QC Std 2

Report Date/Time: Thursday, January 28, 2010 00:14:58

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		101.9			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		101.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		102.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.7			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 2

Report Date/Time: Thursday, January 28, 2010 00:14:58

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## ICPMS#4 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Thursday, January 28, 2010 00:18:22

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 3.102

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	11.308	ug/L	4.086	4976	0.019
Be	9	0.542	ug/L	6.340	77	0.000
B	11	16.109	ug/L	0.425	3385	0.011
Na	23	276.758	ug/L	7.630	528292	1.944
Mg	24	13.456	ug/L	17.259	20348	0.068
Al	27	34.466	ug/L	34.313	62479	0.229
P	31	47.208	ug/L	2.928	7784	0.017
K	39	343.447	ug/L	8.195	1197971	3.756
Ca	43	216.734	ug/L	3.490	1434	0.005
> Sc	45		ug/L		257524	257523.852
Ti	47	8.705	ug/L	1.251	2502	0.009
V	51	12.259	ug/L	4.776	21153	0.125
Cr	52	10.335	ug/L	0.660	31231	0.098
Cr	53		ug/L		49325	-0.027
Mn	55	5.615	ug/L	1.060	23468	0.089
Fe	57	106.820	ug/L	3.789	13869	0.035
Co	59	1.078	ug/L	1.904	3502	0.013
Ni	60	2.135	ug/L	2.121	1471	0.006
Cu	63		ug/L		1726	0.006
Cu	65	1.134	ug/L	3.617	824	0.003
Zn	66	10.749	ug/L	2.185	4239	0.026
Zn	67		ug/L		3604	-0.001
Zn	68		ug/L		3285	0.018
> Ge	74		ug/L		154344	154343.508
As	75	5.910	ug/L	4.647	1977	0.017
Se	77		ug/L		3633	-0.005
Se	82	5.368	ug/L	13.848	264	0.002
Kr	83		ug/L		20	-0.000
Sr	88	10.888	ug/L	0.683	68271	0.648
Y	89		ug/L		15	0.000
Zr	90	1.811	ug/L	5.267	6342	0.056
Mo	98	0.531	ug/L	0.632	789	0.007
Ag	107	1.035	ug/L	0.323	2710	0.025
Cd	111	1.099	ug/L	2.745	658	0.006
Cd	114		ug/L		1554	0.015
> In	115		ug/L		105110	105109.766
Sn	120	5.322	ug/L	1.973	13220	0.124
Sb	121	2.999	ug/L	7.154	5235	0.047
Sb	123		ug/L		4048	0.036
Ba	135		ug/L		1159	0.011
Ba	137	2.097	ug/L	1.611	1958	0.019
Ho	165		ug/L		4	0.000
> Lu	175		ug/L		103353	103353.220
Tl	205	1.098	ug/L	5.307	1962	0.017
Pb	208	2.202	ug/L	0.584	13708	0.130
Th	232	1.047	ug/L	4.326	8258	0.075
U	238	0.222	ug/L	3.997	1873	0.017

Sample ID: QC Std 3

Report Date/Time: Thursday, January 28, 2010 00:21:05

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: QC Std 3

Report Date/Time: Thursday, January 28, 2010 00:21:05

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	113.084				
Be	9	108.342				
B	11	107.391				
Na	23	110.703				
Mg	24	89.706				
Al	27	114.887				
P	31	94.416				
K	39	114.482				
Ca	43	108.367				
> Sc	45		103.8			
Ti	47	87.054				
V	51	122.590				
Cr	52	103.351				
Cr	53					
Mn	55	112.306				
Fe	57	106.820				
Co	59	107.823				
Ni	60	106.736				
Cu	63					
Cu	65	113.386				
Zn	66	107.490				
Zn	67					
Zn	68					
> Ge	74		104.7			
As	75	118.201				
Se	77					
Se	82	107.354				
Kr	83					
Sr	88	108.879				
Y	89					
Zr	90	90.549				
Mo	98	106.280				
Ag	107	103.540				
Cd	111	109.932				
Cd	114					
> In	115		104.7			
Sn	120	106.431				
Sb	121	99.967				
Sb	123					
Ba	135					
Ba	137	104.841				
Ho	165					
> Lu	175		103.1			
Tl	205	109.763				
Pb	208	110.121				
Th	232	104.732				
U	238	110.854				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message.

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 3

Report Date/Time: Thursday, January 28, 2010 00:21:05

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# ICPMS#4 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Thursday, January 28, 2010 00:24:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 4.103

## Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li 7	0.017	ug/L	24.627	22	0.000
Be 9	0.040	ug/L	77.490	8	0.000
B 11	1.224	ug/L	17.857	632	0.001
Na 23	100381.987	ug/L	1.487	176619755	704.973
Mg 24	89625.525	ug/L	1.099	113809985	454.243
Al 27	99516.999	ug/L	6.549	165882571	662.395
P 31	92268.025	ug/L	1.550	8505324	33.940
K 39	103312.492	ug/L	1.848	283221389	1129.751
Ca 43	96249.738	ug/L	0.652	553641	2.209
> Sc 45		ug/L		250523	250522.548
Ti 47	1782.496	ug/L	1.393	482706	1.927
V 51	1.776	ug/L	29.294	-6085	0.018
Cr 52	5.079	ug/L	1.534	17836	0.048
Cr 53		ug/L		40919	-0.055
Mn 55	5.698	ug/L	0.748	23154	0.090
Fe 57	99123.696	ug/L	2.079	8139560	32.476
Co 59	0.235	ug/L	3.298	800	0.003
Ni 60	4.489	ug/L	5.178	2961	0.012
Cu 63		ug/L		4796	0.019
Cu 65	3.327	ug/L	0.737	2238	0.009
Zn 66	4.804	ug/L	2.962	1870	0.012
Zn 67		ug/L		3193	-0.002
Zn 68		ug/L		569	0.001
> Ge 74		ug/L		144453	144453.436
As 75	0.069	ug/L	472.298	-549	0.000
Se 77		ug/L		4412	0.002
Se 82	-0.616	ug/L	38.030	-28	-0.000
Kr 83		ug/L		70	0.000
Sr 88	3.018	ug/L	0.272	17735	0.180
Y 89		ug/L		154	0.001
Zr 90	0.730	ug/L	53.544	2650	0.022
Mo 98	2125.665	ug/L	1.032	2786875	28.424
Ag 107	0.080	ug/L	9.708	242	0.002
Cd 111	0.362	ug/L	61.342	207	0.002
Cd 114		ug/L		3567	0.036
> In 115		ug/L		98050	98049.683
Sn 120	0.392	ug/L	5.757	1115	0.009
Sb 121	0.218	ug/L	12.478	635	0.003
Sb 123		ug/L		480	0.003
Ba 135		ug/L		407	0.004
Ba 137	0.709	ug/L	2.849	680	0.006
Ho 165		ug/L		2527	0.024
> Lu 175		ug/L		103977	103977.070
Tl 205	0.011	ug/L	61.954	179	0.000
Pb 208	0.187	ug/L	3.634	1403	0.011
Th 232	0.184	ug/L	40.076	1887	0.013
U 238	-0.012	ug/L	5.891	24	-0.001

Sample ID: QC Std 4

Report Date/Time: Thursday, January 28, 2010 00:27:13

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: QC Std 4

Report Date/Time: Thursday, January 28, 2010 00:27:13

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23	100.382				
Mg	24	89.626				
Al	27	99.517				
P	31	92.268				
K	39	103.312				
Ca	43	96.250				
> Sc	45		101.0			
Ti	47	89.125				
V	51					
Cr	52	153.911				
Cr	53					
Mn	55	98.234				
Fe	57	99.124				
Co	59	100.138				
Ni	60	135.627				
Cu	63					
Cu	65	99.624				
Zn	66	127.772				
Zn	67					
Zn	68					
> Ge	74		98.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88	101.964				
Y	89					
Zr	90					
Mo	98	106.283				
Ag	107					
Cd	111	81.494				
Cd	114					
> In	115		97.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137	88.849				
Ho	165					
> Lu	175		103.7			
Tl	205					
Pb	208	99.196				
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 4

Report Date/Time: Thursday, January 28, 2010 00:27:13

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## ICPMS#4 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Thursday, January 28, 2010 00:30:38

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 5.104

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	20.589	ug/L	1.519	8422	0.035
Be	9	18.311	ug/L	1.988	2358	0.010
B	11	18.578	ug/L	1.231	3572	0.013
Na	23	102928.478	ug/L	7.272	173283994	722.857
Mg	24	92030.602	ug/L	6.260	111816649	466.433
Al	27	99672.177	ug/L	2.039	159000755	663.428
P	31	92889.408	ug/L	0.479	8191419	34.168
K	39	108090.679	ug/L	2.146	283442311	1182.002
Ca	43	95505.682	ug/L	0.923	525505	2.192
> Sc	45		ug/L		239644	239644.447
Ti	47	1811.472	ug/L	0.986	469320	1.958
V	51	20.973	ug/L	3.534	40910	0.213
Cr	52	24.999	ug/L	0.363	62541	0.238
Cr	53		ug/L		43619	-0.036
Mn	55	25.875	ug/L	0.194	98828	0.410
Fe	57	102386.041	ug/L	1.066	8043907	33.545
Co	59	19.867	ug/L	0.827	58845	0.245
Ni	60	23.762	ug/L	1.651	14819	0.062
Cu	63		ug/L		28669	0.119
Cu	65	21.603	ug/L	0.973	13582	0.056
Zn	66	22.219	ug/L	1.603	7793	0.054
Zn	67		ug/L		3980	0.004
Zn	68		ug/L		4900	0.032
> Ge	74		ug/L		140475	140474.679
As	75	21.123	ug/L	1.424	7876	0.060
Se	77		ug/L		4865	0.006
Se	82	20.353	ug/L	1.459	911	0.006
Kr	83		ug/L		82	0.000
Sr	88	23.937	ug/L	0.795	138654	1.426
Y	89		ug/L		159	0.002
Zr	90	21.706	ug/L	0.393	65421	0.669
Mo	98	2090.611	ug/L	0.591	2716890	27.956
Ag	107	18.122	ug/L	0.593	43051	0.442
Cd	111	18.630	ug/L	0.131	10170	0.105
Cd	114		ug/L		27601	0.284
> In	115		ug/L		97187	97186.787
Sn	120	20.561	ug/L	0.309	46602	0.477
Sb	121	21.714	ug/L	1.300	33171	0.338
Sb	123		ug/L		25270	0.258
Ba	135		ug/L		10732	0.106
Ba	137	19.799	ug/L	0.790	17988	0.177
Ho	165		ug/L		2344	0.023
> Lu	175		ug/L		101517	101516.768
Tl	205	17.167	ug/L	1.625	27842	0.273
Pb	208	18.167	ug/L	0.261	109295	1.074
Th	232	19.417	ug/L	1.120	141507	1.389
U	238	19.829	ug/L	1.193	154327	1.519

Sample ID: QC Std 5

Report Date/Time: Thursday, January 28, 2010 00:33:22

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7	102.947			
	Be	9	91.555			
	B	11	92.888			
	Na	23	102.928			
	Mg	24	92.031			
	Al	27	99.672			
	P	31	92.889			
	K	39	108.091			
	Ca	43	95.506			
>	Sc	45		96.6		
	Ti	47	90.574			
	V	51	104.864			
	Cr	52	107.290			
	Cr	53				
	Mn	55	100.292			
	Fe	57	102.386			
	Co	59	98.181			
	Ni	60	101.937			
	Cu	63				
	Cu	65	92.558			
[	Zn	66	93.516			
	Zn	67				
	Zn	68				
>	Ge	74		95.3		
	As	75	105.616			
	Se	77				
	Se	82	101.767			
	Kr	83				
[	Sr	88	104.257			
	Y	89				
	Zr	90	108.528			
	Mo	98	104.531			
	Ag	107	90.609			
	Cd	111	91.129			
	Cd	114				
>	In	115		96.8		
	Sn	120	102.806			
	Sb	121	108.572			
	Sb	123				
[	Ba	135				
	Ba	137	95.199			
	Ho	165				
>	Lu	175		101.2		
	Tl	205	85.834			
	Pb	208	89.987			
	Th	232	97.086			
	U	238	99.145			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 5

Report Date/Time: Thursday, January 28, 2010 00:33:22

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 00:36:47

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 6.105

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	56.139	ug/L	1.683	22764	0.096
Be	9	52.245	ug/L	0.538	6672	0.028
B	11	100.572	ug/L	1.623	17460	0.072
Na	23	4988.084	ug/L	3.226	8355861	35.031
Mg	24	5020.815	ug/L	2.055	6054164	25.447
Al	27	5205.337	ug/L	3.002	8244377	34.647
P	31	5009.318	ug/L	1.273	441305	1.843
K	39	5438.058	ug/L	6.577	14359899	59.467
Ca	43	4962.160	ug/L	0.875	27230	0.114
> Sc	45		ug/L		237825	237825.382
Ti	47	53.527	ug/L	1.307	13834	0.058
V	51	50.229	ug/L	1.848	111273	0.510
Cr	52	51.116	ug/L	0.317	121242	0.487
Cr	53		ug/L		56229	0.018
Mn	55	51.388	ug/L	0.195	194296	0.815
Fe	57	5092.390	ug/L	0.602	401280	1.668
Co	59	50.470	ug/L	0.421	148246	0.623
Ni	60	52.892	ug/L	0.698	32687	0.137
Cu	63		ug/L		68301	0.287
Cu	65	52.213	ug/L	1.500	32500	0.136
Zn	66	50.099	ug/L	0.114	18111	0.122
Zn	67		ug/L		5744	0.015
Zn	68		ug/L		13249	0.087
> Ge	74		ug/L		146582	146582.349
As	75	48.591	ug/L	2.622	19667	0.138
Se	77		ug/L		5165	0.007
Se	82	48.692	ug/L	1.932	2273	0.016
Kr	83		ug/L		22	-0.000
Sr	88	51.672	ug/L	0.168	299564	3.077
Y	89		ug/L		24	0.000
Zr	90	49.407	ug/L	1.844	148556	1.522
Mo	98	49.647	ug/L	0.559	64641	0.664
Ag	107	50.452	ug/L	0.437	119921	1.232
Cd	111	49.601	ug/L	1.064	27097	0.278
Cd	114		ug/L		65147	0.669
> In	115		ug/L		97313	97312.867
Sn	120	50.280	ug/L	0.799	113787	1.167
Sb	121	50.910	ug/L	4.101	77480	0.793
Sb	123		ug/L		59083	0.605
Ba	135		ug/L		25470	0.260
Ba	137	49.535	ug/L	0.995	43452	0.443
Ho	165		ug/L		7	0.000
> Lu	175		ug/L		98091	98091.325
Tl	205	47.352	ug/L	1.606	73942	0.752
Pb	208	49.558	ug/L	1.582	287620	2.930
Th	232	49.487	ug/L	1.782	347677	3.540
U	238	51.663	ug/L	2.111	388257	3.958

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 00:39:31

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	112.278				
Be	9	104.490				
B	11	100.572				
Na	23	99.762				
Mg	24	100.416				
Al	27	103.076				
P	31	100.186				
K	39	108.761				
Ca	43	99.243				
> Sc	45		95.9			
Ti	47	107.055				
V	51	100.457				
Cr	52	102.232				
Cr	53					
Mn	55	102.776				
Fe	57	101.848				
Co	59	100.939				
Ni	60	105.785				
Cu	63					
Cu	65	104.425				
Zn	66	100.198				
Zn	67					
Zn	68					
> Ge	74		99.4			
As	75	97.182				
Se	77					
Se	82	97.384				
Kr	83					
Sr	88	103.345				
Y	89					
Zr	90	98.813				
Mo	98	99.294				
Ag	107	100.905				
Cd	111	99.201				
Cd	114					
> In	115		96.9			
Sn	120	100.559				
Sb	121	101.819				
Sb	123					
Ba	135					
Ba	137	99.071				
Ho	165					
> Lu	175		97.8			
Tl	205	94.704				
Pb	208	99.116				
Th	232	98.973				
U	238	103.326				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message  
 QC Std 6 Li 7CCV is out of limits ( +/- 10%)

### QC Action

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 00:42:57

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 7.106

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.002	ug/L	608.248	15	0.000
Be	9	0.006	ug/L	133.632	3	0.000
B	11	1.815	ug/L	22.369	697	0.001
Na	23	-0.456	ug/L	798.951	24689	-0.003
Mg	24	-0.466	ug/L	351.588	2000	-0.002
Al	27	0.092	ug/L	1048.464	3334	0.001
P	31	-1.091	ug/L	120.610	2952	-0.000
K	39	-7.038	ug/L	45.292	194653	-0.077
Ca	43	2.906	ug/L	118.257	157	0.000
> Sc	45		ug/L		236954	236953.961
Ti	47	1.167	ug/L	8.301	372	0.001
V	51	1.187	ug/L	51.715	-7192	0.012
Cr	52	-0.062	ug/L	42.646	5264	-0.001
Cr	53		ug/L		48571	-0.013
Mn	55	-0.004	ug/L	116.292	479	-0.000
Fe	57	4.988	ug/L	60.030	4855	0.002
Co	59	0.004	ug/L	193.952	79	0.000
Ni	60	0.028	ug/L	16.907	59	0.000
Cu	63		ug/L		100	0.000
Cu	65	0.004	ug/L	528.250	59	0.000
Zn	66	-0.046	ug/L	68.250	158	-0.000
Zn	67		ug/L		3049	-0.003
Zn	68		ug/L		358	-0.000
> Ge	74		ug/L		143786	143786.444
As	75	0.493	ug/L	66.050	-373	0.001
Se	77		ug/L		4112	0.000
Se	82	0.075	ug/L	106.309	4	0.000
Kr	83		ug/L		24	-0.000
Sr	88	0.003	ug/L	85.443	129	0.000
Y	89		ug/L		15	0.000
Zr	90	0.209	ug/L	17.300	1051	0.006
Mo	98	0.095	ug/L	20.609	159	0.001
Ag	107	0.012	ug/L	27.948	77	0.000
Cd	111	-0.006	ug/L	62.579	5	-0.000
Cd	114		ug/L		34	0.000
> In	115		ug/L		95808	95807.947
Sn	120	0.242	ug/L	13.643	755	0.006
Sb	121	0.578	ug/L	23.254	1156	0.009
Sb	123		ug/L		909	0.007
Ba	135		ug/L		13	0.000
Ba	137	-0.001	ug/L	824.622	19	-0.000
Ho	165		ug/L		5	0.000
> Lu	175		ug/L		96413	96412.541
Tl	205	0.241	ug/L	19.326	519	0.004
Pb	208	0.007	ug/L	13.665	272	0.000
Th	232	0.133	ug/L	33.301	1398	0.010
U	238	0.009	ug/L	31.922	179	0.001

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 00:45:42

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# Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		95.5			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		97.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		95.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.2			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 00:45:42

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## ICPMS#4 - Summary Report

Sample ID: QC Std 10

Sample Date/Time: Thursday, January 28, 2010 00:49:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 10.107

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	978.815	ug/L	4.774	388803	1.668
Be	9	966.716	ug/L	2.127	120998	0.519
B	11	0.275	ug/L	79.626	430	0.000
Na	23	50516.347	ug/L	0.952	82779537	354.771
Mg	24	45991.570	ug/L	2.637	54389593	233.096
Al	27	50785.732	ug/L	3.151	78884096	338.035
P	31	23386.219	ug/L	2.560	2010136	8.602
K	39	52835.514	ug/L	4.083	134983049	577.771
Ca	43	48305.149	ug/L	0.337	258761	1.109
> Sc	45		ug/L		233247	233247.274
Ti	47	42.219	ug/L	0.762	10715	0.046
V	51	999.464	ug/L	0.589	2358155	10.152
Cr	52	1005.942	ug/L	0.273	2240692	9.584
Cr	53		ug/L		295865	1.050
Mn	55	1007.230	ug/L	0.772	3726332	15.972
Fe	57	50640.880	ug/L	0.523	3874571	16.592
Co	59	961.548	ug/L	0.911	2768983	11.870
Ni	60	918.524	ug/L	0.934	555964	2.384
Cu	63		ug/L		1119489	4.800
Cu	65	887.109	ug/L	1.686	540514	2.318
Zn	66	2247.369	ug/L	0.809	753426	5.488
Zn	67		ug/L		120326	0.853
Zn	68		ug/L		538939	3.924
> Ge	74		ug/L		137251	137250.880
As	75	878.655	ug/L	0.788	342320	2.498
Se	77		ug/L		18655	0.107
Se	82	464.123	ug/L	1.215	20289	0.148
Kr	83		ug/L		55	0.000
Sr	88	1060.152	ug/L	2.135	5803436	63.134
Y	89		ug/L		202	0.002
Zr	90	519.222	ug/L	1.977	1470665	15.994
Mo	98	1031.629	ug/L	1.948	1268090	13.795
Ag	107	240.744	ug/L	2.373	540359	5.878
Cd	111	969.398	ug/L	1.852	500095	5.440
Cd	114		ug/L		1184255	12.883
> In	115		ug/L		91935	91935.440
Sn	120	1087.543	ug/L	2.721	2320556	25.243
Sb	121	249.728	ug/L	6.032	357821	3.890
Sb	123		ug/L		273505	2.973
Ba	135		ug/L		476533	4.844
Ba	137	921.132	ug/L	1.245	810069	8.234
Ho	165		ug/L		95	0.001
> Lu	175		ug/L		98370	98369.847
Tl	205	462.398	ug/L	0.576	722749	7.346
Pb	208	4846.862	ug/L	1.010	28192897	286.587
Th	232	2530.736	ug/L	0.618	17808482	181.029
U	238	5253.249	ug/L	1.246	39591205	402.452

Sample ID: QC Std 10

Report Date/Time: Thursday, January 28, 2010 00:51:48

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	97.882				
Be	9	96.672				
B	11					
Na	23	101.033				
Mg	24	91.983				
Al	27	101.571				
P	31	93.545				
K	39	105.671				
Ca	43	96.610				
> Sc	45		94.1			
Ti	47					
V	51	99.946				
Cr	52	100.594				
Cr	53					
Mn	55	100.723				
Fe	57	101.282				
Co	59	96.155				
Ni	60	91.852				
Cu	63					
Cu	65	88.711				
Zn	66	89.895				
Zn	67					
Zn	68					
> Ge	74		93.1			
As	75	87.865				
Se	77					
Se	82	92.825				
Kr	83					
Sr	88	106.015				
Y	89					
Zr	90	103.844				
Mo	98	103.163				
Ag	107	96.298				
Cd	111	96.940				
Cd	114					
> In	115		91.6			
Sn	120	108.754				
Sb	121	99.891				
Sb	123					
Ba	135					
Ba	137	92.113				
Ho	165					
> Lu	175		98.1			
Tl	205	92.480				
Pb	208	96.937				
Th	232	101.229				
U	238	105.065				

## QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
QC Std 10	Cu	65LRS is out of limits ( +/- 10%)
QC Std 10	Zn	66LRS is out of limits ( +/- 10%)
QC Std 10	As	75LRS is out of limits ( +/- 10%)

## QC Action

Sample ID: QC Std 10

Report Date/Time: Thursday, January 28, 2010 00:51:48

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QC Action Line: Continue

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Sample ID: QC Std 10

Report Date/Time: Thursday, January 28, 2010 00:51:48

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# ICPMS#4 - Summary Report

Sample ID: QC Std 11

Sample Date/Time: Thursday, January 28, 2010 00:55:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 11.108

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	52.686	ug/L	2.802	21641	0.090
Be	9	52.198	ug/L	1.455	6753	0.028
B	11	102.143	ug/L	1.759	17956	0.073
Na	23	5180.856	ug/L	3.847	8789291	36.385
Mg	24	5277.149	ug/L	4.314	6445713	26.746
Al	27	5399.295	ug/L	1.238	8664861	35.938
P	31	5090.095	ug/L	0.764	454258	1.872
K	39	5365.233	ug/L	4.328	14359899	58.670
Ca	43	5051.315	ug/L	0.536	28084	0.116
> Sc	45		ug/L		240979	240979.179
Ti	47	49.986	ug/L	1.007	13093	0.054
V	51	50.212	ug/L	2.135	112674	0.510
Cr	52	51.135	ug/L	1.729	122866	0.487
Cr	53		ug/L		54105	0.006
Mn	55	51.610	ug/L	0.726	197701	0.818
Fe	57	5085.560	ug/L	1.145	406000	1.666
Co	59	50.427	ug/L	1.854	150054	0.623
Ni	60	52.230	ug/L	2.408	32695	0.136
Cu	63		ug/L		68183	0.283
Cu	65	51.343	ug/L	2.084	32373	0.134
Zn	66	52.079	ug/L	2.472	18449	0.127
Zn	67		ug/L		5455	0.014
Zn	68		ug/L		13516	0.091
> Ge	74		ug/L		143741	143741.186
As	75	48.899	ug/L	1.327	19412	0.139
Se	77		ug/L		4912	0.006
Se	82	49.205	ug/L	3.154	2252	0.016
Kr	83		ug/L		22	-0.000
Sr	88	50.616	ug/L	0.167	297004	3.014
Y	89		ug/L		22	0.000
Zr	90	53.928	ug/L	3.523	164038	1.661
Mo	98	49.830	ug/L	1.070	65668	0.666
Ag	107	51.024	ug/L	0.989	122746	1.246
Cd	111	50.373	ug/L	1.265	27852	0.283
Cd	114		ug/L		66664	0.677
> In	115		ug/L		98494	98494.487
Sn	120	54.112	ug/L	0.414	123931	1.256
Sb	121	53.099	ug/L	2.578	81774	0.827
Sb	123		ug/L		62300	0.630
Ba	135		ug/L		25432	0.258
Ba	137	49.966	ug/L	1.647	44072	0.447
Ho	165		ug/L		11	0.000
> Lu	175		ug/L		98619	98619.219
Tl	205	48.836	ug/L	0.611	76665	0.776
Pb	208	51.300	ug/L	0.455	299376	3.033
Th	232	52.613	ug/L	0.905	371635	3.764
U	238	53.326	ug/L	0.827	403007	4.085

Sample ID: QC Std 11

Report Date/Time: Thursday, January 28, 2010 00:57:55

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7	105.372				
	Be	9	104.397				
	B	11	102.143				
	Na	23	103.617				
	Mg	24	105.543				
	Al	27	106.917				
	P	31	101.802				
	K	39	107.305				
	Ca	43	101.026				
>	Sc	45		97.2			
	Ti	47	99.972				
	V	51	100.425				
	Cr	52	102.269				
	Cr	53					
	Mn	55	103.221				
	Fe	57	101.711				
	Co	59	100.853				
	Ni	60	104.459				
	Cu	63					
[	Cu	65	102.686				
	Zn	66	104.159				
	Zn	67					
	Zn	68					
>	Ge	74		97.5			
	As	75	97.799				
	Se	77					
	Se	82	98.411				
[	Kr	83					
	Sr	88	101.232				
	Y	89					
	Zr	90	107.856				
	Mo	98	99.660				
	Ag	107	102.048				
	Cd	111	100.747				
	Cd	114					
>	In	115		98.1			
	Sn	120	108.224				
	Sb	121	106.197				
[	Sb	123					
	Ba	135					
	Ba	137	99.933				
	Ho	165					
>	Lu	175		98.4			
	Tl	205	97.673				
	Pb	208	102.600				
	Th	232	105.226				
[	U	238	106.652				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 11

Report Date/Time: Thursday, January 28, 2010 00:57:55

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## ICPMS#4 - Summary Report

Sample ID: QC Std 12

Sample Date/Time: Thursday, January 28, 2010 01:01:21

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 12.109

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.032	ug/L	31.150	28	0.000
Be	9	0.023	ug/L	48.671	5	0.000
B	11	1.696	ug/L	27.585	691	0.001
Na	23	-0.427	ug/L	728.692	25357	-0.003
Mg	24	-0.495	ug/L	432.655	2000	-0.003
Al	27	0.871	ug/L	105.711	4667	0.006
P	31	-2.861	ug/L	29.317	2857	-0.001
K	39	-11.269	ug/L	42.514	187561	-0.123
Ca	43	-1.772	ug/L	238.958	134	-0.000
Sc	45		ug/L		242004	242003.547
Ti	47	0.251	ug/L	11.711	140	0.000
V	51	1.425	ug/L	25.431	-6750	0.014
Cr	52	-0.088	ug/L	85.783	5318	-0.001
Cr	53		ug/L		47876	-0.021
Mn	55	-0.008	ug/L	22.735	471	-0.000
Fe	57	1.213	ug/L	152.195	4660	0.000
Co	59	0.003	ug/L	204.318	79	0.000
Ni	60	0.008	ug/L	98.357	47	0.000
Cu	63		ug/L		137	0.000
Cu	65	0.037	ug/L	19.108	81	0.000
Zn	66	0.071	ug/L	31.882	198	0.000
Zn	67		ug/L		3032	-0.003
Zn	68		ug/L		376	-0.000
Ge	74		ug/L		142626	142626.210
As	75	0.930	ug/L	110.821	-191	0.003
Se	77		ug/L		3821	-0.002
Se	82	0.031	ug/L	325.069	2	0.000
Kr	83		ug/L		24	-0.000
Sr	88	0.004	ug/L	75.601	137	0.000
Y	89		ug/L		12	-0.000
Zr	90	0.364	ug/L	8.283	1543	0.011
Mo	98	0.161	ug/L	11.740	250	0.002
Ag	107	0.026	ug/L	12.615	112	0.001
Cd	111	0.025	ug/L	50.122	22	0.000
Cd	114		ug/L		42	0.000
In	115		ug/L		98042	98042.396
Sn	120	1.517	ug/L	5.846	3676	0.035
Sb	121	1.669	ug/L	12.590	2849	0.026
Sb	123		ug/L		2238	0.021
Ba	135		ug/L		17	0.000
Ba	137	0.003	ug/L	215.079	22	0.000
Ho	165		ug/L		4	0.000
Lu	175		ug/L		97010	97010.239
Tl	205	0.463	ug/L	15.422	864	0.007
Pb	208	0.172	ug/L	10.629	1218	0.010
Th	232	0.391	ug/L	16.445	3197	0.028
U	238	0.076	ug/L	14.715	673	0.006

Sample ID: QC Std 12

Report Date/Time: Thursday, January 28, 2010 01:04:06

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
Sc	45		97.6			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
Ge	74		96.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
In	115		97.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
Lu	175		96.8			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

## QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 12

Report Date/Time: Thursday, January 28, 2010 01:04:06

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 01:44:20

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 6.116

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	52.026	ug/L	2.622	22041	0.089
Be	9	52.486	ug/L	0.957	7003	0.028
B	11	99.878	ug/L	1.120	18119	0.071
Na	23	5203.123	ug/L	8.124	9103390	36.541
Mg	24	5041.509	ug/L	5.855	6349309	25.552
Al	27	4982.981	ug/L	1.247	8245982	33.167
P	31	4978.843	ug/L	1.315	458300	1.831
K	39	5444.810	ug/L	8.740	15022663	59.541
Ca	43	4955.217	ug/L	0.879	28415	0.114
Sc	45		ug/L		248495	248494.574
Ti	47	50.639	ug/L	0.959	13677	0.055
V	51	48.612	ug/L	2.413	112194	0.494
Cr	52	49.366	ug/L	0.193	122537	0.470
Cr	53		ug/L		59637	0.022
Mn	55	50.575	ug/L	0.362	199807	0.802
Fe	57	4969.737	ug/L	0.771	409294	1.628
Co	59	48.884	ug/L	0.851	150023	0.603
Ni	60	50.501	ug/L	1.053	32608	0.131
Cu	63		ug/L		68614	0.276
Cu	65	50.563	ug/L	0.664	32884	0.132
Zn	66	51.000	ug/L	0.300	18520	0.125
Zn	67		ug/L		6118	0.018
Zn	68		ug/L		13315	0.087
Ge	74		ug/L		147267	147266.666
As	75	47.208	ug/L	0.838	19178	0.134
Se	77		ug/L		4975	0.005
Se	82	48.303	ug/L	0.704	2266	0.015
Kr	83		ug/L		32	0.000
Sr	88	49.992	ug/L	0.930	302581	2.977
Y	89		ug/L		27	0.000
Zr	90	47.832	ug/L	1.388	150180	1.473
Mo	98	48.493	ug/L	0.703	65922	0.648
Ag	107	49.947	ug/L	0.551	123954	1.220
Cd	111	49.386	ug/L	0.901	28168	0.277
Cd	114		ug/L		67706	0.666
In	115		ug/L		101604	101604.211
Sn	120	49.801	ug/L	0.851	117675	1.156
Sb	121	49.757	ug/L	3.586	79063	0.775
Sb	123		ug/L		60239	0.591
Ba	135		ug/L		26115	0.254
Ba	137	48.487	ug/L	0.974	44504	0.433
Ho	165		ug/L		7	0.000
Lu	175		ug/L		102627	102627.336
Tl	205	48.282	ug/L	1.875	78875	0.767
Pb	208	50.525	ug/L	0.230	306842	2.987
Th	232	50.696	ug/L	0.699	372675	3.626
U	238	52.970	ug/L	1.039	416584	4.058

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 01:47:04

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	104.051				
Be	9	104.971				
B	11	99.878				
Na	23	104.062				
Mg	24	100.830				
Al	27	98.673				
P	31	99.577				
K	39	108.896				
Ca	43	99.104				
Sc	45		100.2			
Ti	47	101.278				
V	51	97.224				
Cr	52	98.731				
Cr	53					
Mn	55	101.150				
Fe	57	99.395				
Co	59	97.769				
Ni	60	101.002				
Cu	63					
Cu	65	101.127				
Zn	66	102.000				
Zn	67					
Zn	68					
Ge	74		99.9			
As	75	94.416				
Se	77					
Se	82	96.606				
Kr	83					
Sr	88	99.984				
Y	89					
Zr	90	95.665				
Mo	98	96.986				
Ag	107	99.895				
Cd	111	98.773				
Cd	114					
In	115		101.2			
Sn	120	99.603				
Sb	121	99.514				
Sb	123					
Ba	135					
Ba	137	96.974				
Ho	165					
Lu	175		102.4			
Tl	205	96.564				
Pb	208	101.050				
Th	232	101.391				
U	238	105.941				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 01:47:04

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 01:50:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 7.117

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.026	ug/L	47.479	26	0.000
Be	9	0.020	ug/L	62.950	5	0.000
B	11	2.942	ug/L	18.253	926	0.002
Na	23	1.196	ug/L	253.340	28696	0.008
Mg	24	0.541	ug/L	224.489	3334	0.003
Al	27	-1.005	ug/L	35.259	1667	-0.007
P	31	-0.697	ug/L	126.461	3115	-0.000
K	39	-10.363	ug/L	28.105	193977	-0.113
Ca	43	-2.380	ug/L	34.936	133	-0.000
> Sc	45		ug/L		247090	247089.905
Ti	47	0.045	ug/L	24.948	88	0.000
V	51	1.539	ug/L	40.414	-6615	0.016
Cr	52	-0.414	ug/L	10.763	4663	-0.004
Cr	53		ug/L		51413	-0.010
Mn	55	-0.018	ug/L	31.480	442	-0.000
Fe	57	-1.534	ug/L	55.735	4536	-0.001
Co	59	-0.000	ug/L	4179.363	71	-0.000
Ni	60	0.016	ug/L	117.878	53	0.000
Cu	63		ug/L		113	0.000
Cu	65	0.002	ug/L	359.502	61	0.000
Zn	66	0.000	ug/L	86668.361	175	0.000
Zn	67		ug/L		3394	-0.000
Zn	68		ug/L		429	0.000
> Ge	74		ug/L		143774	143773.712
As	75	-0.066	ug/L	584.827	-600	-0.000
Se	77		ug/L		3917	-0.001
Se	82	0.228	ug/L	59.290	11	0.000
Kr	83		ug/L		16	-0.000
Sr	88	0.005	ug/L	19.327	144	0.000
Y	89		ug/L		11	-0.000
Zr	90	0.267	ug/L	15.016	1278	0.008
Mo	98	0.044	ug/L	28.703	99	0.001
Ag	107	0.020	ug/L	27.700	100	0.000
Cd	111	0.009	ug/L	114.704	14	0.000
Cd	114		ug/L		39	0.000
> In	115		ug/L		100224	100224.198
Sn	120	0.224	ug/L	16.635	748	0.005
Sb	121	0.652	ug/L	23.969	1325	0.010
Sb	123		ug/L		970	0.007
Ba	135		ug/L		12	0.000
Ba	137	-0.001	ug/L	452.081	19	-0.000
Ho	165		ug/L		3	-0.000
> Lu	175		ug/L		99634	99634.233
Tl	205	0.380	ug/L	8.470	756	0.006
Pb	208	0.036	ug/L	5.463	455	0.002
Th	232	0.258	ug/L	26.120	2334	0.018
U	238	0.022	ug/L	13.851	279	0.002

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 01:53:15

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 01:53:15

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## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		99.6			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		97.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		99.8			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		99.4			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

## QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 01:53:15

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# ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 02:39:40

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 6.125

## Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li 7	50.295	ug/L	3.015	21422	0.086
Be 9	52.602	ug/L	2.289	7055	0.028
B 11	99.886	ug/L	1.136	18222	0.071
Na 23	4956.258	ug/L	4.510	8722082	34.807
Mg 24	4974.081	ug/L	2.391	6300365	25.210
Al 27	5050.217	ug/L	0.895	8403262	33.615
P 31	5014.728	ug/L	1.541	464051	1.845
K 39	5458.800	ug/L	4.137	15133124	59.694
Ca 43	4970.967	ug/L	1.990	28655	0.114
> Sc 45		ug/L		249879	249878.891
Ti 47	50.378	ug/L	2.278	13679	0.054
V 51	48.868	ug/L	2.643	113428	0.496
Cr 52	49.237	ug/L	2.965	122895	0.469
Cr 53		ug/L		58574	0.016
Mn 55	50.695	ug/L	1.721	201365	0.804
Fe 57	4972.133	ug/L	1.116	411763	1.629
Co 59	48.673	ug/L	1.048	150208	0.601
Ni 60	49.633	ug/L	0.837	32226	0.129
Cu 63		ug/L		67432	0.270
Cu 65	48.965	ug/L	1.186	32021	0.128
Zn 66	51.202	ug/L	0.372	18459	0.125
Zn 67		ug/L		6126	0.018
Zn 68		ug/L		13551	0.090
> Ge 74		ug/L		146209	146209.199
As 75	48.228	ug/L	1.392	19464	0.137
Se 77		ug/L		4823	0.005
Se 82	48.646	ug/L	0.682	2266	0.015
Kr 83		ug/L		21	-0.000
Sr 88	50.503	ug/L	0.454	300403	3.008
Y 89		ug/L		24	0.000
Zr 90	48.320	ug/L	0.620	149079	1.488
Mo 98	49.061	ug/L	0.729	65540	0.656
Ag 107	50.661	ug/L	1.268	123560	1.237
Cd 111	50.162	ug/L	0.647	28117	0.282
Cd 114		ug/L		67444	0.675
> In 115		ug/L		99848	99847.851
Sn 120	50.032	ug/L	1.618	116169	1.161
Sb 121	50.085	ug/L	3.331	78216	0.780
Sb 123		ug/L		59985	0.598
Ba 135		ug/L		25713	0.253
Ba 137	48.135	ug/L	1.283	43732	0.430
Ho 165		ug/L		8	0.000
> Lu 175		ug/L		101585	101584.585
Tl 205	48.808	ug/L	1.571	78926	0.775
Pb 208	50.732	ug/L	0.252	304967	3.000
Th 232	51.093	ug/L	0.980	371784	3.655
U 238	52.735	ug/L	1.754	410515	4.040

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 02:42:24

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	100.589				
Be	9	105.205				
B	11	99.886				
Na	23	99.125				
Mg	24	99.482				
Al	27	100.004				
P	31	100.295				
K	39	109.176				
Ca	43	99.419				
> Sc	45		100.8			
Ti	47	100.757				
V	51	97.736				
Cr	52	98.473				
Cr	53					
Mn	55	101.390				
Fe	57	99.443				
Co	59	97.346				
Ni	60	99.265				
Cu	63					
Cu	65	97.930				
Zn	66	102.403				
Zn	67					
Zn	68					
> Ge	74		99.1			
As	75	96.456				
Se	77					
Se	82	97.292				
Kr	83					
Sr	88	101.006				
Y	89					
Zr	90	96.640				
Mo	98	98.121				
Ag	107	101.323				
Cd	111	100.325				
Cd	114					
> In	115		99.5			
Sn	120	100.064				
Sb	121	100.169				
Sb	123					
Ba	135					
Ba	137	96.271				
Ho	165					
> Lu	175		101.3			
Tl	205	97.616				
Pb	208	101.464				
Th	232	102.186				
U	238	105.470				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 02:42:24

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 02:45:50

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 7.126

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.004	ug/L	114.398	17	0.000
Be	9	-0.003	ug/L	298.236	2	-0.000
B	11	3.491	ug/L	13.957	1035	0.002
Na	23	-0.337	ug/L	269.099	26358	-0.002
Mg	24	-0.255	ug/L	795.859	2334	-0.001
Al	27	0.191	ug/L	387.532	3667	0.001
P	31	-1.374	ug/L	28.623	3092	-0.001
K	39	-3.465	ug/L	40.686	215278	-0.038
Ca	43	-2.232	ug/L	107.117	136	-0.000
> Sc	45		ug/L		250210	250210.194
Ti	47	0.022	ug/L	108.248	83	0.000
V	51	0.941	ug/L	41.118	-8201	0.010
Cr	52	-0.671	ug/L	9.561	4106	-0.006
Cr	53		ug/L		50225	-0.018
Mn	55	-0.015	ug/L	55.993	462	-0.000
Fe	57	-3.048	ug/L	37.481	4468	-0.001
Co	59	-0.000	ug/L	1255.581	72	-0.000
Ni	60	-0.003	ug/L	213.118	42	-0.000
Cu	63		ug/L		126	0.000
Cu	65	-0.005	ug/L	277.513	57	-0.000
Zn	66	-0.002	ug/L	1581.440	177	-0.000
Zn	67		ug/L		3403	-0.001
Zn	68		ug/L		417	-0.000
> Ge	74		ug/L		146499	146498.819
As	75	0.316	ug/L	203.542	-454	0.001
Se	77		ug/L		3626	-0.004
Se	82	0.175	ug/L	217.236	8	0.000
Kr	83		ug/L		20	-0.000
Sr	88	0.006	ug/L	4.165	149	0.000
Y	89		ug/L		15	0.000
Zr	90	0.263	ug/L	15.423	1264	0.008
Mo	98	0.056	ug/L	19.149	115	0.001
Ag	107	0.023	ug/L	20.374	107	0.001
Cd	111	0.015	ug/L	45.126	17	0.000
Cd	114		ug/L		30	0.000
> In	115		ug/L		100111	100111.201
Sn	120	0.219	ug/L	16.138	734	0.005
Sb	121	0.546	ug/L	23.453	1156	0.008
Sb	123		ug/L		891	0.007
Ba	135		ug/L		13	0.000
Ba	137	-0.001	ug/L	499.001	19	-0.000
Ho	165		ug/L		2	-0.000
> Lu	175		ug/L		101421	101421.218
Tl	205	0.240	ug/L	21.280	543	0.004
Pb	208	0.018	ug/L	8.561	352	0.001
Th	232	0.182	ug/L	32.150	1828	0.013
U	238	0.015	ug/L	21.119	234	0.001

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 02:48:35

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7				
	Be	9				
	B	11				
	Na	23				
	Mg	24				
	Al	27				
	P	31				
	K	39				
	Ca	43				
>	Sc	45	100.9			
	Ti	47				
	V	51				
	Cr	52				
	Cr	53				
	Mn	55				
	Fe	57				
	Co	59				
	Ni	60				
	Cu	63				
	Cu	65				
[	Zn	66				
	Zn	67				
	Zn	68				
>	Ge	74	99.3			
	As	75				
	Se	77				
	Se	82				
	Kr	83				
[	Sr	88				
	Y	89				
	Zr	90				
	Mo	98				
	Ag	107				
	Cd	111				
	Cd	114				
>	In	115	99.7			
	Sn	120				
	Sb	121				
	Sb	123				
[	Ba	135				
	Ba	137				
	Ho	165				
>	Lu	175	101.2			
	Tl	205				
	Pb	208				
	Th	232				
	U	238				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 02:48:35

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# ICPMS#4 - Summary Report

Sample ID: 1202018149

Sample Date/Time: Thursday, January 28, 2010 02:52:00

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 942665[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\1202018149.127

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	-0.020	ug/L	14.385	7	-0.000
Be	9	0.013	ug/L	80.845	4	0.000
B	11	1.307	ug/L	14.870	674	0.001
Na	23	4.306	ug/L	118.698	36048	0.030
Mg	24	-0.119	ug/L	951.718	2667	-0.001
Al	27	7.954	ug/L	11.077	17344	0.053
P	31	25.648	ug/L	8.514	5827	0.009
K	39	-9.275	ug/L	22.775	208174	-0.101
Ca	43	5.139	ug/L	53.656	186	0.000
> Sc	45		ug/L		261288	261288.444
Ti	47	0.711	ug/L	23.131	281	0.001
V	51	1.685	ug/L	34.561	-6582	0.017
Cr	52	-0.102	ug/L	6.257	5706	-0.001
Cr	53		ug/L		37167	-0.076
Mn	55	0.269	ug/L	2.625	1657	0.004
Fe	57	24.878	ug/L	6.866	7056	0.008
Co	59	-0.003	ug/L	105.641	67	-0.000
Ni	60	0.275	ug/L	10.099	232	0.001
Cu	63		ug/L		359	0.001
Cu	65	0.175	ug/L	15.918	182	0.000
Zn	66	4.958	ug/L	2.458	1960	0.012
Zn	67		ug/L		2756	-0.005
Zn	68		ug/L		1624	0.008
> Ge	74		ug/L		147160	147160.277
As	75	0.335	ug/L	46.934	-448	0.001
Se	77		ug/L		2714	-0.010
Se	82	0.337	ug/L	13.318	16	0.000
Kr	83		ug/L		15	-0.000
Sr	88	0.031	ug/L	3.289	315	0.002
Y	89		ug/L		40	0.000
Zr	90	0.727	ug/L	39.121	2823	0.022
Mo	98	0.050	ug/L	29.596	111	0.001
Ag	107	0.002	ug/L	20.067	58	0.000
Cd	111	0.049	ug/L	32.515	38	0.000
Cd	114		ug/L		106	0.001
> In	115		ug/L		104967	104966.507
Sn	120	0.266	ug/L	1.716	887	0.006
Sb	121	0.048	ug/L	35.561	400	0.001
Sb	123		ug/L		287	0.001
Ba	135		ug/L		90	0.001
Ba	137	0.131	ug/L	2.532	144	0.001
Ho	165		ug/L		6	0.000
> Lu	175		ug/L		105045	105044.897
Tl	205	0.084	ug/L	24.905	303	0.001
Pb	208	0.044	ug/L	6.575	529	0.003
Th	232	0.106	ug/L	28.211	1321	0.008
U	238	-0.007	ug/L	17.210	65	-0.001

Sample ID: 1202018149

Report Date/Time: Thursday, January 28, 2010 02:54:44

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		105.4			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		99.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		104.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		104.8			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202018149

Report Date/Time: Thursday, January 28, 2010 02:54:44

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## ICPMS#4 - Summary Report

Sample ID: 1202018150

Sample Date/Time: Thursday, January 28, 2010 02:58:10

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 942665|40|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\1202018150.128

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	2.750	ug/L	3.626	1193	0.005
Be	9	20.512	ug/L	2.411	2770	0.011
B	11	38.155	ug/L	4.052	7258	0.027
Na	23	272.779	ug/L	16.650	508713	1.916
Mg	24	1042.301	ug/L	0.795	1330544	5.283
Al	27	3523.236	ug/L	3.741	5898011	23.451
P	31	200.659	ug/L	1.272	21784	0.074
K	39	1341.334	ug/L	2.601	3912727	14.668
Ca	43	2670.411	ug/L	0.335	15557	0.061
> Sc	45		ug/L		251354	251354.167
Ti	47	124.033	ug/L	1.160	33776	0.134
V	51	26.002	ug/L	4.028	55747	0.264
Cr	52	62.312	ug/L	0.999	154949	0.594
Cr	53		ug/L		60986	0.024
Mn	55	145.248	ug/L	0.175	579461	2.303
Fe	57	4452.106	ug/L	1.697	371366	1.459
Co	59	24.362	ug/L	1.872	75663	0.301
Ni	60	36.014	ug/L	0.744	23536	0.093
Cu	63		ug/L		61092	0.243
Cu	65	44.699	ug/L	0.530	29414	0.117
Zn	66	155.180	ug/L	0.842	54295	0.379
Zn	67		ug/L		11005	0.053
Zn	68		ug/L		38789	0.269
> Ge	74		ug/L		142816	142815.743
As	75	27.633	ug/L	1.319	10650	0.079
Se	77		ug/L		5508	0.010
Se	82	70.326	ug/L	1.298	3199	0.022
Kr	83		ug/L		24	-0.000
Sr	88	60.304	ug/L	0.932	356695	3.591
Y	89		ug/L		17796	0.179
Zr	90	2.043	ug/L	0.849	6700	0.063
Mo	98	13.129	ug/L	3.070	17471	0.176
Ag	107	1.392	ug/L	0.880	3425	0.034
Cd	111	15.338	ug/L	2.645	8555	0.086
Cd	114		ug/L		20218	0.203
> In	115		ug/L		99295	99294.749
Sn	120	9.967	ug/L	1.372	23197	0.231
Sb	121	15.205	ug/L	0.705	23822	0.237
Sb	123		ug/L		18488	0.184
Ba	135		ug/L		27707	0.273
Ba	137	51.800	ug/L	1.012	47048	0.463
Ho	165		ug/L		790	0.008
> Lu	175		ug/L		101558	101558.068
Tl	205	32.459	ug/L	1.350	52525	0.516
Pb	208	21.845	ug/L	0.715	131419	1.292
Th	232	2.583	ug/L	3.574	19274	0.185
U	238	0.493	ug/L	3.403	3954	0.038

Sample ID: 1202018150

Report Date/Time: Thursday, January 28, 2010 03:00:54

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		101.4			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		96.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		98.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		101.3			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
	Ti	47Sample is out of limits (over linear range)_

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202018150

Report Date/Time: Thursday, January 28, 2010 03:00:54

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 03:10:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 6.130

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	51.684	ug/L	3.780	21713	0.088
Be	9	53.114	ug/L	2.122	7028	0.029
B	11	98.893	ug/L	1.476	17795	0.071
Na	23	5087.035	ug/L	5.605	8829068	35.726
Mg	24	5018.155	ug/L	0.566	6270702	25.433
Al	27	5315.403	ug/L	3.812	8725847	35.380
P	31	5031.350	ug/L	0.637	459272	1.851
K	39	5447.952	ug/L	6.319	14912203	59.575
Ca	43	5002.180	ug/L	1.182	28445	0.115
Sc	45		ug/L		246448	246448.010
Ti	47	50.652	ug/L	1.585	13567	0.055
V	51	49.806	ug/L	3.714	114202	0.506
Cr	52	49.818	ug/L	2.888	122566	0.475
Cr	53		ug/L		53552	-0.001
Mn	55	50.912	ug/L	1.351	199452	0.807
Fe	57	4988.168	ug/L	2.310	407331	1.634
Co	59	48.582	ug/L	1.717	147854	0.600
Ni	60	50.165	ug/L	1.534	32124	0.130
Cu	63		ug/L		66910	0.271
Cu	65	49.377	ug/L	0.919	31849	0.129
Zn	66	50.698	ug/L	1.397	18065	0.124
Zn	67		ug/L		5411	0.013
Zn	68		ug/L		13244	0.089
Ge	74		ug/L		144507	144506.658
As	75	48.117	ug/L	2.575	19194	0.137
Se	77		ug/L		4678	0.004
Se	82	48.481	ug/L	1.649	2232	0.015
Kr	83		ug/L		23	-0.000
Sr	88	50.494	ug/L	0.373	297233	3.007
Y	89		ug/L		35	0.000
Zr	90	48.213	ug/L	1.941	147203	1.485
Mo	98	49.291	ug/L	1.319	65168	0.659
Ag	107	50.781	ug/L	0.738	122559	1.240
Cd	111	50.209	ug/L	1.935	27852	0.282
Cd	114		ug/L		65986	0.668
In	115		ug/L		98808	98808.101
Sn	120	50.120	ug/L	0.052	115170	1.163
Sb	121	50.388	ug/L	4.428	77864	0.785
Sb	123		ug/L		59411	0.599
Ba	135		ug/L		25262	0.254
Ba	137	48.584	ug/L	1.286	43207	0.434
Ho	165		ug/L		9	0.000
Lu	175		ug/L		99442	99441.934
Tl	205	49.239	ug/L	0.553	77943	0.782
Pb	208	50.728	ug/L	1.434	298482	2.999
Th	232	51.089	ug/L	0.482	363894	3.655
U	238	53.009	ug/L	0.865	403934	4.061

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 03:13:14

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	103.369				
Be	9	106.229				
B	11	98.893				
Na	23	101.741				
Mg	24	100.363				
Al	27	105.256				
P	31	100.627				
K	39	108.959				
Ca	43	100.044				
Sc	45		99.4			
Ti	47	101.303				
V	51	99.612				
Cr	52	99.636				
Cr	53					
Mn	55	101.823				
Fe	57	99.763				
Co	59	97.163				
Ni	60	100.331				
Cu	63					
Cu	65	98.754				
Zn	66	101.396				
Zn	67					
Zn	68					
Ge	74		98.0			
As	75	96.234				
Se	77					
Se	82	96.961				
Kr	83					
Sr	88	100.988				
Y	89					
Zr	90	96.426				
Mo	98	98.582				
Ag	107	101.562				
Cd	111	100.417				
Cd	114					
In	115		98.4			
Sn	120	100.239				
Sb	121	100.776				
Sb	123					
Ba	135					
Ba	137	97.169				
Ho	165					
Lu	175		99.2			
Tl	205	98.478				
Pb	208	101.455				
Th	232	102.178				
U	238	106.018				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 03:13:14

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 03:16:40

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 7.131

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.010	ug/L	15.681	18	0.000
Be	9	0.013	ug/L	115.220	4	0.000
B	11	1.742	ug/L	30.738	699	0.001
Na	23	-5.491	ug/L	97.721	16678	-0.039
Mg	24	-0.489	ug/L	289.289	2000	-0.002
Al	27	0.262	ug/L	494.945	3667	0.002
P	31	-0.884	ug/L	149.371	3029	-0.000
K	39	-5.497	ug/L	90.746	202428	-0.060
Ca	43	-5.081	ug/L	19.432	115	-0.000
> Sc	45		ug/L		241591	241591.106
Ti	47	0.092	ug/L	21.893	98	0.000
V	51	1.594	ug/L	29.533	-6323	0.016
Cr	52	-0.488	ug/L	15.383	4387	-0.005
Cr	53		ug/L		45903	-0.028
Mn	55	-0.008	ug/L	54.648	471	-0.000
Fe	57	-1.725	ug/L	70.360	4420	-0.001
Co	59	0.006	ug/L	60.349	89	0.000
Ni	60	0.012	ug/L	99.806	50	0.000
Cu	63		ug/L		105	0.000
Cu	65	0.002	ug/L	742.747	59	0.000
Zn	66	0.005	ug/L	722.425	173	0.000
Zn	67		ug/L		2986	-0.003
Zn	68		ug/L		383	-0.000
> Ge	74		ug/L		140760	140760.161
As	75	0.971	ug/L	43.979	-174	0.003
Se	77		ug/L		3457	-0.004
Se	82	0.255	ug/L	58.596	12	0.000
Kr	83		ug/L		22	-0.000
Sr	88	0.002	ug/L	59.500	121	0.000
Y	89		ug/L		10	-0.000
Zr	90	0.257	ug/L	22.317	1204	0.008
Mo	98	0.054	ug/L	19.415	108	0.001
Ag	107	0.015	ug/L	43.583	85	0.000
Cd	111	0.008	ug/L	21.871	13	0.000
Cd	114		ug/L		33	0.000
> In	115		ug/L		96706	96705.946
Sn	120	0.211	ug/L	24.995	691	0.005
Sb	121	0.499	ug/L	29.586	1048	0.008
Sb	123		ug/L		795	0.006
Ba	135		ug/L		15	0.000
Ba	137	0.002	ug/L	278.816	21	0.000
Ho	165		ug/L		4	0.000
> Lu	175		ug/L		98103	98103.342
Tl	205	0.345	ug/L	19.506	690	0.005
Pb	208	0.015	ug/L	19.152	325	0.001
Th	232	0.191	ug/L	30.780	1828	0.014
U	238	0.019	ug/L	8.006	251	0.001

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 03:19:25

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		97.4			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		95.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		96.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		97.8			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 03:19:25

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## ICPMS#4 - Summary Report

Sample ID: 244921001

Sample Date/Time: Thursday, January 28, 2010 03:22:51

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\244921001.132

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	55.571	ug/L	3.206	30506	0.095
Be	9	2.393	ug/L	2.818	417	0.001
B	11	7.400	ug/L	1.602	2232	0.005
Na	23	1351.848	ug/L	2.326	3092985	9.494
Mg	24	6817.964	ug/L	5.500	11129459	34.555
Al	27	34212.106	ug/L	1.264	73337558	227.719
P	31	664.961	ug/L	1.227	82930	0.245
K	39	6317.701	ug/L	1.918	22533995	69.086
Ca	43	5548.650	ug/L	0.751	41209	0.127
> Sc	45		ug/L		322064	322064.262
Ti	47	944.421	ug/L	0.703	328842	1.021
V	51	44.329	ug/L	1.641	131342	0.450
Cr	52	43.325	ug/L	0.402	140272	0.413
Cr	53		ug/L		46484	-0.074
Mn	55	1083.850	ug/L	0.717	5536380	17.187
Fe	57	39006.889	ug/L	0.460	4122076	12.780
Co	59	9.747	ug/L	0.301	38845	0.120
Ni	60	28.424	ug/L	0.669	23811	0.074
Cu	63		ug/L		42664	0.132
Cu	65	24.667	ug/L	2.032	20827	0.064
Zn	66	178.513	ug/L	1.530	62079	0.436
Zn	67		ug/L		11863	0.060
Zn	68		ug/L		45197	0.315
> Ge	74		ug/L		142041	142040.997
As	75	5.296	ug/L	20.692	1574	0.015
Se	77		ug/L		2560	-0.010
Se	82	0.969	ug/L	0.725	44	0.000
Kr	83		ug/L		90	0.000
Sr	88	49.939	ug/L	1.894	310749	2.974
Y	89		ug/L		588885	5.638
Zr	90	87.050	ug/L	2.039	280553	2.682
Mo	98	3.029	ug/L	1.382	4273	0.041
Ag	107	18.474	ug/L	0.717	47165	0.451
Cd	111	1.226	ug/L	10.256	728	0.007
Cd	114		ug/L		612	0.006
> In	115		ug/L		104447	104446.899
Sn	120	9.858	ug/L	1.378	24136	0.229
Sb	121	0.466	ug/L	4.489	1080	0.007
Sb	123		ug/L		838	0.006
Ba	135		ug/L		127764	1.168
Ba	137	222.356	ug/L	1.468	217511	1.988
Ho	165		ug/L		27243	0.249
> Lu	175		ug/L		109431	109431.353
Tl	205	0.802	ug/L	1.786	1564	0.013
Pb	208	59.272	ug/L	1.016	383812	3.505
Th	232	22.006	ug/L	0.750	172797	1.574
U	238	4.240	ug/L	0.522	35670	0.325

Sample ID: 244921001

Report Date/Time: Thursday, January 28, 2010 03:25:36

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7				
	Be	9				
	B	11				
	Na	23				
	Mg	24				
	Al	27				
	P	31				
	K	39				
	Ca	43				
>	Sc	45	129.9			
	Ti	47				
	V	51				
	Cr	52				
	Cr	53				
	Mn	55				
	Fe	57				
	Co	59				
	Ni	60				
	Cu	63				
	Cu	65				
	Zn	66				
	Zn	67				
	Zn	68				
>	Ge	74	96.3			
	As	75				
	Se	77				
	Se	82				
	Kr	83				
	Sr	88				
	Y	89				
	Zr	90				
	Mo	98				
	Ag	107				
	Cd	111				
	Cd	114				
>	In	115	104.1			
	Sn	120				
	Sb	121				
	Sb	123				
	Ba	135				
	Ba	137				
	Ho	165				
>	Lu	175	109.1			
	Tl	205				
	Pb	208				
	Th	232				
	U	238				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
Sc 45 Int Std for sanSc		45
	Ti	47Sample is out of limits (over linear range)_
	Mn	55Sample is out of limits (over linear range)

### QC Action

Sample ID: 244921001  
 Report Date/Time: Thursday, January 28, 2010 03:25:36  
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QC Action Line: Continue

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Sample ID: 244921001

Report Date/Time: Thursday, January 28, 2010 03:25:36

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## ICPMS#4 - Summary Report

Sample ID: 1202018151  
 Sample Date/Time: Thursday, January 28, 2010 03:29:02  
 Sample Type:  
 Sample Description: LANL 6020 DUP  
 Number of Replicates: 3  
 Batch ID: 942665|2|skj  
 Method File: c:\elandata\Method\6020.mth  
 Dataset File: c:\elandata\Dataset\100127\1202018151.133

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	55.782	ug/L	3.244	30237	0.095
Be	9	2.604	ug/L	3.370	447	0.001
B	11	9.135	ug/L	0.680	2597	0.007
Na	23	1445.810	ug/L	5.287	3264437	10.154
Mg	24	7420.274	ug/L	3.039	11960015	37.608
Al	27	39691.494	ug/L	4.065	84019779	264.191
P	31	645.505	ug/L	0.574	79594	0.237
K	39	7132.193	ug/L	7.544	25074593	77.993
Ca	43	5809.817	ug/L	0.709	42595	0.133
> Sc	45		ug/L		317984	317983.891
Ti	47	906.071	ug/L	1.536	311517	0.979
V	51	49.300	ug/L	2.090	145764	0.501
Cr	52	50.187	ug/L	1.799	159280	0.478
Cr	53		ug/L		46529	-0.072
Mn	55	971.451	ug/L	1.118	4898690	15.405
Fe	57	41421.396	ug/L	0.357	4321400	13.571
Co	59	9.938	ug/L	0.553	39103	0.123
Ni	60	30.668	ug/L	1.077	25363	0.080
Cu	63		ug/L		51768	0.162
Cu	65	29.906	ug/L	1.275	24921	0.078
Zn	66	177.620	ug/L	0.983	62036	0.434
Zn	67		ug/L		11837	0.059
Zn	68		ug/L		45554	0.316
> Ge	74		ug/L		142634	142634.057
As	75	7.026	ug/L	4.887	2280	0.020
Se	77		ug/L		2468	-0.011
Se	82	1.044	ug/L	47.857	48	0.000
Kr	83		ug/L		73	0.000
Sr	88	58.826	ug/L	1.018	362525	3.503
Y	89		ug/L		561104	5.424
Zr	90	89.204	ug/L	0.404	284734	2.748
Mo	98	3.069	ug/L	1.484	4287	0.041
Ag	107	26.916	ug/L	0.855	68036	0.657
Cd	111	1.428	ug/L	8.123	838	0.008
Cd	114		ug/L		850	0.008
> In	115		ug/L		103450	103449.959
Sn	120	8.052	ug/L	2.826	19569	0.187
Sb	121	0.376	ug/L	8.446	924	0.006
Sb	123		ug/L		715	0.005
Ba	135		ug/L		139264	1.285
Ba	137	246.210	ug/L	0.439	238531	2.201
Ho	165		ug/L		26087	0.241
> Lu	175		ug/L		108371	108371.359
Tl	205	0.774	ug/L	5.703	1499	0.012
Pb	208	67.129	ug/L	1.724	430315	3.969
Th	232	23.694	ug/L	1.740	184172	1.695
U	238	5.476	ug/L	0.322	45583	0.419

## Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		128.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		96.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		103.1			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		108.1			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
Sc 45 Int Std for sanSc	Ti	45 47Sample is out of limits (over linear range)_

### QC Action

QC Action Line: Continue

Sample ID: 1202018151  
 Report Date/Time: Thursday, January 28, 2010 03:31:48  
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## ICPMS#4 - Summary Report

Sample ID: 1202018152

Sample Date/Time: Thursday, January 28, 2010 03:35:14

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\1202018152.134

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	76.568	ug/L	2.459	38791	0.130
Be	9	21.239	ug/L	1.185	3391	0.011
B	11	48.513	ug/L	3.708	10780	0.035
Na	23	2197.630	ug/L	2.931	4618218	15.434
Mg	24	7882.508	ug/L	0.321	11876959	39.950
Al	27	38568.129	ug/L	4.650	76316254	256.713
P	31	1276.463	ug/L	0.410	143374	0.470
K	39	6883.918	ug/L	3.388	22644456	75.278
Ca	43	6035.261	ug/L	0.538	41352	0.139
> Sc	45		ug/L		297207	297206.891
Ti	47	952.993	ug/L	0.396	306233	1.030
V	51	64.939	ug/L	0.641	183455	0.660
Cr	52	81.025	ug/L	0.346	236196	0.772
Cr	53		ug/L		54892	-0.034
Mn	55	979.988	ug/L	0.750	4619055	15.540
Fe	57	39743.365	ug/L	0.759	3875531	13.021
Co	59	27.195	ug/L	0.550	99860	0.336
Ni	60	47.762	ug/L	0.636	36891	0.124
Cu	63		ug/L		86872	0.292
Cu	65	53.903	ug/L	1.893	41921	0.141
Zn	66	204.493	ug/L	1.325	68958	0.499
Zn	67		ug/L		12773	0.069
Zn	68		ug/L		50249	0.362
> Ge	74		ug/L		137770	137769.582
As	75	37.555	ug/L	1.780	14159	0.107
Se	77		ug/L		2638	-0.009
Se	82	8.282	ug/L	3.979	364	0.003
Kr	83		ug/L		71	0.000
Sr	88	76.496	ug/L	0.694	450004	4.555
Y	89		ug/L		508836	5.152
Zr	90	108.472	ug/L	0.413	330446	3.341
Mo	98	25.392	ug/L	1.069	33574	0.340
Ag	107	27.087	ug/L	1.650	65359	0.661
Cd	111	5.909	ug/L	4.564	3283	0.033
Cd	114		ug/L		6554	0.066
> In	115		ug/L		98761	98761.342
Sn	120	25.452	ug/L	1.214	58571	0.591
Sb	121	46.414	ug/L	1.702	71701	0.723
Sb	123		ug/L		55093	0.556
Ba	135		ug/L		138334	1.318
Ba	137	248.773	ug/L	1.226	233477	2.224
Ho	165		ug/L		23394	0.223
> Lu	175		ug/L		104978	104978.351
Tl	205	42.504	ug/L	1.037	71045	0.675
Pb	208	149.430	ug/L	0.654	927790	8.836
Th	232	43.208	ug/L	1.004	324980	3.091
U	238	30.621	ug/L	0.237	246383	2.346

Sample ID: 1202018152

Report Date/Time: Thursday, January 28, 2010 03:38:00

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: 1202018152

Report Date/Time: Thursday, January 28, 2010 03:38:00

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## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			119.8		
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74			93.4		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			98.4		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			104.7		
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
	Ti	47Sample is out of limits (over linear range)_

## QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202018152

Report Date/Time: Thursday, January 28, 2010 03:38:00

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# ICPMS#4 - Summary Report

Sample ID: 1202018154

Sample Date/Time: Thursday, January 28, 2010 03:41:27

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\1202018154.135

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	84.035	ug/L	3.699	42818	0.143
Be	9	22.383	ug/L	2.338	3594	0.012
B	11	51.865	ug/L	1.311	11560	0.037
Na	23	2340.697	ug/L	1.940	4947405	16.438
Mg	24	8392.592	ug/L	7.045	12719381	42.536
Al	27	40556.872	ug/L	4.717	80732942	269.951
P	31	1375.226	ug/L	1.143	155096	0.506
K	39	7412.354	ug/L	5.154	24522289	81.056
Ca	43	6611.836	ug/L	0.669	45557	0.152
> Sc	45		ug/L		299015	299015.052
Ti	47	931.700	ug/L	0.421	301204	1.007
V	51	63.345	ug/L	1.723	179682	0.643
Cr	52	76.691	ug/L	0.813	225265	0.731
Cr	53		ug/L		50882	-0.048
Mn	55	886.098	ug/L	0.823	4202352	14.051
Fe	57	40818.720	ug/L	2.020	4005234	13.374
Co	59	26.893	ug/L	1.874	99345	0.332
Ni	60	48.866	ug/L	2.767	37961	0.127
Cu	63		ug/L		77804	0.260
Cu	65	48.010	ug/L	3.388	37560	0.125
Zn	66	191.555	ug/L	0.652	63451	0.468
Zn	67		ug/L		11976	0.065
Zn	68		ug/L		46542	0.341
> Ge	74		ug/L		135297	135296.769
As	75	38.304	ug/L	2.050	14193	0.109
Se	77		ug/L		2617	-0.009
Se	82	7.823	ug/L	6.198	337	0.002
Kr	83		ug/L		85	0.000
Sr	88	81.478	ug/L	1.527	475306	4.852
Y	89		ug/L		596054	6.086
Zr	90	117.782	ug/L	0.625	355792	3.628
Mo	98	25.489	ug/L	0.797	33419	0.341
Ag	107	24.951	ug/L	1.344	59710	0.609
Cd	111	5.644	ug/L	2.375	3111	0.032
Cd	114		ug/L		6210	0.063
> In	115		ug/L		97942	97941.951
Sn	120	25.784	ug/L	0.543	58834	0.598
Sb	121	47.648	ug/L	1.836	72978	0.742
Sb	123		ug/L		55672	0.566
Ba	135		ug/L		150245	1.431
Ba	137	272.794	ug/L	1.251	256091	2.439
Ho	165		ug/L		27783	0.265
> Lu	175		ug/L		104997	104996.862
Tl	205	42.592	ug/L	1.774	71203	0.677
Pb	208	138.737	ug/L	1.309	861516	8.203
Th	232	43.972	ug/L	0.932	330764	3.145
U	238	28.533	ug/L	0.418	229632	2.186

Sample ID: 1202018154

Report Date/Time: Thursday, January 28, 2010 03:44:13

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: 1202018154

Report Date/Time: Thursday, January 28, 2010 03:44:13

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		120.6			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		91.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		97.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		104.7			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte  
Sc 45 Int Std for sanSc  
Ti

MassOut of Limits Message

45

47Sample is out of limits (over linear range)\_

### QC Action

QC Action Line: Continue

Sample ID: 1202018154

Report Date/Time: Thursday, January 28, 2010 03:44:13

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## ICPMS#4 - Summary Report

Sample ID: 1202018153

Sample Date/Time: Thursday, January 28, 2010 03:47:38

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 942665|10|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\1202018153.136

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	17.021	ug/L	0.768	6717	0.029
Be	9	0.759	ug/L	15.166	96	0.000
B	11	3.332	ug/L	7.259	930	0.002
Na	23	367.536	ug/L	5.268	621236	2.581
Mg	24	1878.316	ug/L	1.384	2202458	9.520
Al	27	8143.343	ug/L	3.086	12531067	54.203
P	31	181.126	ug/L	0.974	18369	0.067
K	39	1494.765	ug/L	2.328	3985217	16.346
Ca	43	1375.170	ug/L	2.104	7432	0.032
> Sc	45		ug/L		231099	231098.580
Ti	47	233.256	ug/L	0.499	58336	0.252
V	51	12.903	ug/L	4.153	20500	0.131
Cr	52	10.724	ug/L	1.202	28882	0.102
Cr	53		ug/L		36727	-0.060
Mn	55	261.116	ug/L	1.220	957347	4.141
Fe	57	9484.128	ug/L	0.991	722429	3.107
Co	59	2.489	ug/L	0.486	7168	0.031
Ni	60	7.947	ug/L	2.311	4806	0.021
Cu	63		ug/L		8282	0.035
Cu	65	6.529	ug/L	1.664	3997	0.017
Zn	66	44.298	ug/L	1.613	14346	0.108
Zn	67		ug/L		4416	0.010
Zn	68		ug/L		10501	0.077
> Ge	74		ug/L		131139	131139.143
As	75	1.846	ug/L	13.194	165	0.005
Se	77		ug/L		3021	-0.005
Se	82	0.305	ug/L	47.181	13	0.000
Kr	83		ug/L		26	-0.000
Sr	88	10.431	ug/L	1.475	56509	0.621
Y	89		ug/L		107377	1.182
Zr	90	17.695	ug/L	1.101	49910	0.545
Mo	98	0.622	ug/L	4.859	791	0.008
Ag	107	3.941	ug/L	0.703	8783	0.096
Cd	111	0.250	ug/L	16.106	135	0.001
Cd	114		ug/L		113	0.001
> In	115		ug/L		90809	90809.153
Sn	120	2.042	ug/L	0.997	4510	0.047
Sb	121	0.214	ug/L	14.662	582	0.003
Sb	123		ug/L		416	0.002
Ba	135		ug/L		23072	0.240
Ba	137	45.938	ug/L	0.335	39424	0.411
Ho	165		ug/L		5055	0.053
> Lu	175		ug/L		95954	95954.134
Tl	205	0.509	ug/L	8.136	925	0.008
Pb	208	12.528	ug/L	0.876	71308	0.741
Th	232	4.496	ug/L	0.858	31341	0.322
U	238	0.882	ug/L	0.540	6592	0.068

Sample ID: 1202018153

Report Date/Time: Thursday, January 28, 2010 03:50:23

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		93.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		88.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		90.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		95.7			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
	Ti	47Sample is out of limits (over linear range)_

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202018153

Report Date/Time: Thursday, January 28, 2010 03:50:23

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 03:53:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 6.137

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	60.173	ug/L	5.179	23233	0.103
Be	9	56.767	ug/L	3.507	6905	0.030
B	11	106.103	ug/L	0.969	17536	0.076
Na	23	5529.129	ug/L	4.331	8831811	38.831
Mg	24	4956.862	ug/L	4.228	5698212	25.123
Al	27	5417.361	ug/L	3.553	8175366	36.058
P	31	5091.604	ug/L	1.622	427401	1.873
K	39	5348.328	ug/L	7.611	13476213	58.485
Ca	43	4867.481	ug/L	0.785	25465	0.112
> Sc	45		ug/L		226691	226690.568
Ti	47	49.849	ug/L	0.408	12284	0.054
V	51	50.617	ug/L	2.002	106902	0.514
Cr	52	51.362	ug/L	1.408	116076	0.489
Cr	53		ug/L		49487	-0.000
Mn	55	50.830	ug/L	1.174	183149	0.806
Fe	57	5025.436	ug/L	1.685	377397	1.647
Co	59	50.477	ug/L	1.378	141297	0.623
Ni	60	52.538	ug/L	1.827	30936	0.136
Cu	63		ug/L		64449	0.284
Cu	65	51.686	ug/L	1.215	30661	0.135
Zn	66	50.020	ug/L	0.668	17211	0.122
Zn	67		ug/L		5114	0.013
Zn	68		ug/L		12502	0.087
> Ge	74		ug/L		139521	139521.230
As	75	47.820	ug/L	0.614	18413	0.136
Se	77		ug/L		4815	0.006
Se	82	48.820	ug/L	1.709	2170	0.016
Kr	83		ug/L		20	-0.000
Sr	88	50.909	ug/L	0.997	282820	3.032
Y	89		ug/L		37	0.000
Zr	90	49.942	ug/L	2.129	143887	1.538
Mo	98	49.668	ug/L	2.469	61971	0.664
Ag	107	50.557	ug/L	1.022	115137	1.234
Cd	111	49.828	ug/L	1.625	26084	0.280
Cd	114		ug/L		62445	0.669
> In	115		ug/L		93244	93244.070
Sn	120	50.217	ug/L	0.462	108897	1.166
Sb	121	50.572	ug/L	3.897	73756	0.788
Sb	123		ug/L		56155	0.600
Ba	135		ug/L		24331	0.249
Ba	137	47.583	ug/L	1.668	41570	0.425
Ho	165		ug/L		9	0.000
> Lu	175		ug/L		97688	97688.222
Tl	205	48.420	ug/L	1.932	75294	0.769
Pb	208	49.140	ug/L	1.842	284050	2.906
Th	232	49.207	ug/L	1.304	344331	3.520
U	238	51.395	ug/L	0.680	384732	3.937

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 03:56:32

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# Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	120.346				
Be	9	113.533				
B	11	106.103				
Na	23	110.583				
Mg	24	99.137				
Al	27	107.274				
P	31	101.832				
K	39	106.967				
Ca	43	97.350				
> Sc	45		91.4			
Ti	47	99.697				
V	51	101.235				
Cr	52	102.724				
Cr	53					
Mn	55	101.660				
Fe	57	100.509				
Co	59	100.955				
Ni	60	105.075				
Cu	63					
Cu	65	103.371				
Zn	66	100.039				
Zn	67					
Zn	68					
> Ge	74		94.6			
As	75	95.639				
Se	77					
Se	82	97.640				
Kr	83					
Sr	88	101.819				
Y	89					
Zr	90	99.883				
Mo	98	99.336				
Ag	107	101.113				
Cd	111	99.657				
Cd	114					
> In	115		92.9			
Sn	120	100.435				
Sb	121	101.144				
Sb	123					
Ba	135					
Ba	137	95.165				
Ho	165					
> Lu	175		97.4			
Tl	205	96.841				
Pb	208	98.280				
Th	232	98.413				
U	238	102.790				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Li	7CCV is out of limits ( +/- 10%)
QC Std 6	Be	9CCV is out of limits ( +/- 10%)
QC Std 6	Na	23CCV is out of limits ( +/- 10%)

### QC Action

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QC Action Line: Continue

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Sample ID: QC Std 6

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 03:59:58

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 7.138

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.045	ug/L	26.604	31	0.000
Be	9	0.010	ug/L	333.909	3	0.000
B	11	2.028	ug/L	35.236	693	0.001
Na	23	-5.387	ug/L	43.340	15676	-0.038
Mg	24	1.085	ug/L	118.966	3667	0.005
Al	27	1.332	ug/L	149.724	5001	0.009
P	31	-1.263	ug/L	145.312	2783	-0.000
K	39	-6.260	ug/L	17.177	186206	-0.068
Ca	43	-2.335	ug/L	26.052	121	-0.000
> Sc	45		ug/L		224442	224441.714
Ti	47	0.165	ug/L	46.829	109	0.000
V	51	0.903	ug/L	36.632	-7438	0.009
Cr	52	0.038	ug/L	94.337	5201	0.000
Cr	53		ug/L		42791	-0.028
Mn	55	0.004	ug/L	9.319	482	0.000
Fe	57	2.864	ug/L	64.883	4442	0.001
Co	59	0.002	ug/L	158.575	71	0.000
Ni	60	0.008	ug/L	222.738	44	0.000
Cu	63		ug/L		98	0.000
Cu	65	-0.008	ug/L	161.602	49	-0.000
Zn	66	-0.018	ug/L	122.591	160	-0.000
Zn	67		ug/L		2638	-0.005
Zn	68		ug/L		343	-0.000
> Ge	74		ug/L		136631	136630.989
As	75	1.272	ug/L	62.573	-50	0.004
Se	77		ug/L		3718	-0.001
Se	82	0.071	ug/L	195.215	3	0.000
Kr	83		ug/L		22	-0.000
Sr	88	0.005	ug/L	98.817	127	0.000
Y	89		ug/L		14	0.000
Zr	90	0.274	ug/L	11.486	1169	0.008
Mo	98	0.046	ug/L	27.150	92	0.001
Ag	107	0.020	ug/L	5.223	90	0.000
Cd	111	0.010	ug/L	157.614	13	0.000
Cd	114		ug/L		34	0.000
> In	115		ug/L		90147	90146.580
Sn	120	0.227	ug/L	15.165	679	0.005
Sb	121	0.521	ug/L	24.193	1008	0.008
Sb	123		ug/L		790	0.007
Ba	135		ug/L		12	0.000
Ba	137	-0.002	ug/L	67.180	17	-0.000
Ho	165		ug/L		4	0.000
> Lu	175		ug/L		95333	95332.742
Tl	205	0.368	ug/L	19.258	703	0.006
Pb	208	0.015	ug/L	4.879	312	0.001
Th	232	0.147	ug/L	32.592	1475	0.011
U	238	0.018	ug/L	11.183	243	0.001

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 04:02:43

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		90.5			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
L Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		92.7			
As	75					
Se	77					
Se	82					
L Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		89.8			
Sn	120					
Sb	121					
L Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		95.1			
Tl	205					
Pb	208					
Th	232					
L U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 04:02:43

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## ICPMS#4 - Summary Report

Sample ID: 244921002

Sample Date/Time: Thursday, January 28, 2010 04:06:09

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\244921002.139

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	46.904	ug/L	2.084	21850	0.080
Be	9	3.248	ug/L	5.467	479	0.002
B	11	14.685	ug/L	4.497	3314	0.010
Na	23	746.449	ug/L	5.110	1461980	5.242
Mg	24	9799.490	ug/L	2.176	13573668	49.666
Al	27	60640.680	ug/L	6.640	110314477	403.630
P	31	367.729	ug/L	1.912	40471	0.135
K	39	9086.358	ug/L	3.688	27394269	99.362
Ca	43	7246.968	ug/L	0.497	45610	0.166
> Sc	45		ug/L		273198	273198.116
Ti	47	881.883	ug/L	0.589	260508	0.953
V	51	83.484	ug/L	0.917	220104	0.848
Cr	52	83.029	ug/L	1.494	222353	0.791
Cr	53		ug/L		53036	-0.024
Mn	55	1193.493	ug/L	2.016	5171550	18.926
Fe	57	47042.307	ug/L	2.618	4216597	15.413
Co	59	20.389	ug/L	0.811	68844	0.252
Ni	60	31.066	ug/L	1.618	22073	0.081
Cu	63		ug/L		124129	0.454
Cu	65	82.753	ug/L	0.192	59131	0.216
Zn	66	216.947	ug/L	0.961	69150	0.530
Zn	67		ug/L		13355	0.079
Zn	68		ug/L		51721	0.394
> Ge	74		ug/L		130228	130227.545
As	75	11.003	ug/L	7.007	3552	0.031
Se	77		ug/L		2332	-0.011
Se	82	0.526	ug/L	78.558	22	0.000
Kr	83		ug/L		67	0.000
Sr	88	104.427	ug/L	2.077	564330	6.219
Y	89		ug/L		363949	4.011
Zr	90	55.262	ug/L	1.009	154883	1.702
Mo	98	1.936	ug/L	1.819	2385	0.026
Ag	107	35.822	ug/L	0.348	79422	0.875
Cd	111	2.290	ug/L	2.167	1175	0.013
Cd	114		ug/L		2100	0.023
> In	115		ug/L		90756	90756.375
Sn	120	2.542	ug/L	2.964	5560	0.059
Sb	121	0.454	ug/L	4.471	920	0.007
Sb	123		ug/L		712	0.006
Ba	135		ug/L		244305	2.489
Ba	137	473.012	ug/L	0.757	415112	4.228
Ho	165		ug/L		15724	0.160
> Lu	175		ug/L		98165	98165.440
Tl	205	1.116	ug/L	3.226	1893	0.018
Pb	208	95.300	ug/L	0.568	553400	5.635
Th	232	26.989	ug/L	0.404	190005	1.931
U	238	16.915	ug/L	1.087	127325	1.296

Sample ID: 244921002

Report Date/Time: Thursday, January 28, 2010 04:08:53

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: 244921002

Report Date/Time: Thursday, January 28, 2010 04:08:53

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		110.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		88.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		90.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		97.9			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)
	Mn	55	Sample is out of limits (over linear range)

### QC Action

Sample ID: 244921002

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QC Action Line: Continue

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Sample ID: 244921002

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## ICPMS#4 - Summary Report

Sample ID: 244921003

Sample Date/Time: Thursday, January 28, 2010 04:12:19

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\244921003.140

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	49.774	ug/L	1.848	23475	0.085
Be	9	3.634	ug/L	2.352	542	0.002
B	11	15.140	ug/L	2.286	3444	0.011
Na	23	618.951	ug/L	2.393	1231930	4.347
Mg	24	9885.228	ug/L	2.303	13858430	50.101
Al	27	75889.222	ug/L	5.516	139793299	505.126
P	31	482.896	ug/L	2.715	52702	0.178
K	39	9410.594	ug/L	2.806	28719798	102.908
Ca	43	8012.332	ug/L	1.042	51043	0.184
> Sc	45		ug/L		276605	276605.249
Ti	47	923.697	ug/L	1.048	276234	0.998
V	51	83.513	ug/L	1.164	222921	0.848
Cr	52	42.968	ug/L	1.255	119552	0.409
Cr	53		ug/L		38159	-0.080
Mn	55	989.697	ug/L	1.475	4342131	15.694
Fe	57	45621.112	ug/L	2.120	4139883	14.947
Co	59	17.022	ug/L	1.880	58197	0.210
Ni	60	33.025	ug/L	1.100	23753	0.086
Cu	63		ug/L		70028	0.253
Cu	65	46.525	ug/L	0.543	33686	0.122
Zn	66	171.173	ug/L	1.139	54139	0.418
Zn	67		ug/L		11082	0.062
Zn	68		ug/L		41150	0.316
> Ge	74		ug/L		129135	129134.662
As	75	10.464	ug/L	3.626	3326	0.030
Se	77		ug/L		2188	-0.011
Se	82	0.334	ug/L	136.187	14	0.000
Kr	83		ug/L		69	0.000
Sr	88	108.341	ug/L	0.909	589643	6.452
Y	89		ug/L		346261	3.789
Zr	90	63.007	ug/L	1.652	177766	1.941
Mo	98	1.524	ug/L	2.210	1898	0.020
Ag	107	14.928	ug/L	1.934	33349	0.364
Cd	111	0.995	ug/L	7.435	518	0.006
Cd	114		ug/L		486	0.005
> In	115		ug/L		91370	91370.259
Sn	120	0.950	ug/L	1.913	2221	0.022
Sb	121	0.177	ug/L	13.345	533	0.003
Sb	123		ug/L		433	0.003
Ba	135		ug/L		283402	2.894
Ba	137	545.007	ug/L	0.369	477136	4.872
Ho	165		ug/L		14969	0.153
> Lu	175		ug/L		97930	97929.519
Tl	205	1.177	ug/L	1.356	1983	0.019
Pb	208	44.884	ug/L	1.376	260124	2.654
Th	232	28.942	ug/L	1.205	203219	2.070
U	238	2.979	ug/L	1.684	22463	0.228

Sample ID: 244921003

Report Date/Time: Thursday, January 28, 2010 04:15:05

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: 244921003

Report Date/Time: Thursday, January 28, 2010 04:15:05

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		111.5			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		87.6			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		91.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		97.7			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
	Al	27Sample is out of limits (over linear range)
	Ti	47Sample is out of limits (over linear range)_

### QC Action

QC Action Line: Continue

Sample ID: 244921003

Report Date/Time: Thursday, January 28, 2010 04:15:05

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# ICPMS#4 - Summary Report

Sample ID: 244921004

Sample Date/Time: Thursday, January 28, 2010 04:18:31

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\244921004.141

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	57.786	ug/L	0.993	25595	0.098
Be	9	3.364	ug/L	2.284	472	0.002
B	11	15.534	ug/L	4.245	3309	0.011
Na	23	613.271	ug/L	10.762	1147687	4.307
Mg	24	8325.078	ug/L	2.803	10964830	42.193
Al	27	68875.311	ug/L	7.344	119147853	458.441
P	31	511.771	ug/L	0.534	52243	0.188
K	39	8275.395	ug/L	3.699	23749063	90.494
Ca	43	8609.041	ug/L	0.752	51495	0.198
> Sc	45		ug/L		259783	259782.619
Ti	47	1257.607	ug/L	0.855	353225	1.359
V	51	72.535	ug/L	1.142	180413	0.737
Cr	52	43.495	ug/L	0.879	113579	0.414
Cr	53		ug/L		37211	-0.075
Mn	55	996.755	ug/L	0.834	4106964	15.806
Fe	57	40880.073	ug/L	1.090	3484352	13.394
Co	59	17.692	ug/L	0.331	56811	0.218
Ni	60	29.063	ug/L	2.411	19639	0.075
Cu	63		ug/L		122224	0.470
Cu	65	85.994	ug/L	0.702	58424	0.225
Zn	66	242.058	ug/L	0.540	76865	0.591
Zn	67		ug/L		14497	0.088
Zn	68		ug/L		57994	0.444
> Ge	74		ug/L		129767	129767.442
As	75	8.682	ug/L	3.718	2684	0.025
Se	77		ug/L		2138	-0.012
Se	82	-0.082	ug/L	368.745	-3	-0.000
Kr	83		ug/L		73	0.000
Sr	88	104.591	ug/L	0.328	577890	6.229
Y	89		ug/L		260416	2.807
Zr	90	74.570	ug/L	0.477	213501	2.297
Mo	98	1.528	ug/L	2.146	1932	0.020
Ag	107	30.170	ug/L	1.467	68371	0.737
Cd	111	1.573	ug/L	7.020	827	0.009
Cd	114		ug/L		1360	0.014
> In	115		ug/L		92766	92765.831
Sn	120	3.607	ug/L	1.186	7977	0.084
Sb	121	0.307	ug/L	17.716	729	0.005
Sb	123		ug/L		525	0.003
Ba	135		ug/L		343984	3.564
Ba	137	676.302	ug/L	0.523	583659	6.046
Ho	165		ug/L		11353	0.118
> Lu	175		ug/L		96545	96545.218
Tl	205	0.901	ug/L	3.446	1532	0.014
Pb	208	78.929	ug/L	1.441	450717	4.667
Th	232	25.820	ug/L	0.812	178776	1.847
U	238	8.033	ug/L	0.220	59525	0.615

Sample ID: 244921004

Report Date/Time: Thursday, January 28, 2010 04:21:16

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## Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: 244921004

Report Date/Time: Thursday, January 28, 2010 04:21:16

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		104.8			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		88.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		92.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.3			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
	Al	27Sample is out of limits (over linear range)
	Ti	47Sample is out of limits (over linear range)_

### QC Action

QC Action Line: Continue

Sample ID: 244921004

Report Date/Time: Thursday, January 28, 2010 04:21:16

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# ICPMS#4 - Summary Report

Sample ID: 244921005

Sample Date/Time: Thursday, January 28, 2010 04:24:43

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\244921005.142

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	48.395	ug/L	3.325	20229	0.082
Be	9	3.405	ug/L	8.603	450	0.002
B	11	15.640	ug/L	4.654	3140	0.011
Na	23	542.750	ug/L	10.852	961556	3.812
Mg	24	7100.562	ug/L	6.595	8829113	35.987
Al	27	57588.626	ug/L	1.737	93983004	383.316
P	31	535.611	ug/L	1.956	51459	0.197
K	39	7786.859	ug/L	1.188	21098005	85.152
Ca	43	8503.775	ug/L	1.194	48007	0.195
> Sc	45		ug/L		245215	245214.853
Ti	47	1158.187	ug/L	1.870	307003	1.252
V	51	57.310	ug/L	3.208	132321	0.582
Cr	52	33.432	ug/L	1.409	83685	0.319
Cr	53		ug/L		32818	-0.085
Mn	55	1185.085	ug/L	1.462	4608045	18.792
Fe	57	33082.087	ug/L	2.140	2661887	10.839
Co	59	16.446	ug/L	2.959	49838	0.203
Ni	60	27.653	ug/L	0.955	17638	0.072
Cu	63		ug/L		45929	0.187
Cu	65	34.580	ug/L	1.209	22209	0.090
Zn	66	100.915	ug/L	1.698	31454	0.246
Zn	67		ug/L		7257	0.033
Zn	68		ug/L		25078	0.194
> Ge	74		ug/L		127012	127012.422
As	75	6.726	ug/L	10.147	1920	0.019
Se	77		ug/L		2095	-0.012
Se	82	0.308	ug/L	69.221	13	0.000
Kr	83		ug/L		57	0.000
Sr	88	95.648	ug/L	2.308	503879	5.696
Y	89		ug/L		209892	2.373
Zr	90	67.765	ug/L	0.473	185037	2.087
Mo	98	1.648	ug/L	3.832	1984	0.022
Ag	107	0.366	ug/L	5.644	836	0.009
Cd	111	0.938	ug/L	7.683	474	0.005
Cd	114		ug/L		534	0.006
> In	115		ug/L		88452	88451.830
Sn	120	1.038	ug/L	2.434	2331	0.024
Sb	121	0.135	ug/L	20.816	458	0.002
Sb	123		ug/L		338	0.002
Ba	135		ug/L		268801	2.866
Ba	137	541.800	ug/L	0.615	454248	4.843
Ho	165		ug/L		9205	0.098
> Lu	175		ug/L		93785	93784.782
Tl	205	0.711	ug/L	3.718	1204	0.011
Pb	208	58.696	ug/L	1.213	325730	3.471
Th	232	25.301	ug/L	1.207	170213	1.810
U	238	20.195	ug/L	1.133	145212	1.547

Sample ID: 244921005

Report Date/Time: Thursday, January 28, 2010 04:27:29

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		98.9			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		86.1			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		88.1			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		93.5			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)_
	Mn	55	Sample is out of limits (over linear range)

### QC Action

Sample ID: 244921005

Report Date/Time: Thursday, January 28, 2010 04:27:29

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QC Action Line: Continue

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Sample ID: 244921005

Report Date/Time: Thursday, January 28, 2010 04:27:29

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 04:30:53

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 6.143

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	60.834	ug/L	1.101	23005	0.104
Be	9	58.447	ug/L	1.778	6959	0.031
B	11	115.772	ug/L	0.823	18691	0.083
Na	23	5422.133	ug/L	2.141	8468334	38.079
Mg	24	5375.765	ug/L	2.982	6048232	27.246
Al	27	5366.095	ug/L	5.698	7928211	35.717
P	31	5115.058	ug/L	0.636	420225	1.882
K	39	5532.908	ug/L	7.065	13616015	60.504
Ca	43	4963.164	ug/L	0.389	25404	0.114
> Sc	45		ug/L		221816	221816.110
Ti	47	48.972	ug/L	1.820	11811	0.053
V	51	51.098	ug/L	3.646	105787	0.519
Cr	52	52.089	ug/L	0.630	115145	0.496
Cr	53		ug/L		46102	-0.011
Mn	55	51.437	ug/L	0.347	181392	0.816
Fe	57	5124.947	ug/L	0.439	376658	1.679
Co	59	51.417	ug/L	0.491	140849	0.635
Ni	60	53.268	ug/L	0.613	30704	0.138
Cu	63		ug/L		64218	0.289
Cu	65	52.553	ug/L	0.248	30508	0.137
Zn	66	50.271	ug/L	0.881	16970	0.123
Zn	67		ug/L		4865	0.012
Zn	68		ug/L		12387	0.088
> Ge	74		ug/L		136895	136894.996
As	75	47.836	ug/L	0.974	18074	0.136
Se	77		ug/L		4558	0.005
Se	82	46.862	ug/L	1.234	2043	0.015
Kr	83		ug/L		26	-0.000
Sr	88	50.646	ug/L	0.869	276541	3.016
Y	89		ug/L		52	0.000
Zr	90	49.238	ug/L	1.355	139443	1.517
Mo	98	49.184	ug/L	1.253	60320	0.658
Ag	107	50.635	ug/L	1.955	113336	1.236
Cd	111	50.379	ug/L	2.035	25924	0.283
Cd	114		ug/L		61411	0.670
> In	115		ug/L		91656	91656.296
Sn	120	50.270	ug/L	2.189	107143	1.167
Sb	121	49.920	ug/L	4.469	71569	0.778
Sb	123		ug/L		54905	0.597
Ba	135		ug/L		23843	0.251
Ba	137	47.482	ug/L	1.324	40401	0.424
Ho	165		ug/L		10	0.000
> Lu	175		ug/L		95149	95149.151
Tl	205	48.015	ug/L	2.131	72740	0.763
Pb	208	49.514	ug/L	0.583	278810	2.928
Th	232	49.464	ug/L	0.126	337136	3.538
U	238	51.218	ug/L	0.328	373463	3.924

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 04:33:38

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	121.668				
Be	9	116.893				
B	11	115.772				
Na	23	108.443				
Mg	24	107.515				
Al	27	106.259				
P	31	102.301				
K	39	110.658				
Ca	43	99.263				
> Sc	45		89.4			
Ti	47	97.944				
V	51	102.197				
Cr	52	104.178				
Cr	53					
Mn	55	102.874				
Fe	57	102.499				
Co	59	102.834				
Ni	60	106.536				
Cu	63					
Cu	65	105.107				
Zn	66	100.542				
Zn	67					
Zn	68					
> Ge	74		92.8			
As	75	95.672				
Se	77					
Se	82	93.725				
Kr	83					
Sr	88	101.291				
Y	89					
Zr	90	98.475				
Mo	98	98.369				
Ag	107	101.269				
Cd	111	100.759				
Cd	114					
> In	115		91.3			
Sn	120	100.540				
Sb	121	99.839				
Sb	123					
Ba	135					
Ba	137	94.964				
Ho	165					
> Lu	175		94.9			
Tl	205	96.030				
Pb	208	99.027				
Th	232	98.928				
U	238	102.436				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Li	7CCV is out of limits ( +/- 10%)
QC Std 6	Be	9CCV is out of limits ( +/- 10%)
QC Std 6	B	11CCV is out of limits ( +/- 10%)
QC Std 6	K	39CCV is out of limits ( +/- 10%)

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 04:33:38

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## QC Action

QC Action Line: Continue

# ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 04:37:03

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 7.144

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.038	ug/L	59.985	26	0.000
Be	9	0.026	ug/L	56.772	5	0.000
B	11	1.961	ug/L	18.353	650	0.001
Na	23	-2.903	ug/L	191.809	18681	-0.020
Mg	24	-0.565	ug/L	346.083	1667	-0.003
Al	27	-0.130	ug/L	1149.433	2667	-0.001
P	31	-1.963	ug/L	31.067	2591	-0.001
K	39	-3.958	ug/L	184.582	182499	-0.043
Ca	43	-3.323	ug/L	175.459	111	-0.000
> Sc	45		ug/L		213432	213432.155
Ti	47	0.370	ug/L	14.729	151	0.000
V	51	0.460	ug/L	145.930	-8034	0.005
Cr	52	0.171	ug/L	23.904	5216	0.002
Cr	53		ug/L		38492	-0.038
Mn	55	0.006	ug/L	156.162	463	0.000
Fe	57	3.949	ug/L	71.171	4300	0.001
Co	59	0.008	ug/L	21.963	82	0.000
Ni	60	0.011	ug/L	10.304	43	0.000
Cu	63		ug/L		104	0.000
Cu	65	-0.007	ug/L	55.556	47	-0.000
Zn	66	-0.022	ug/L	143.117	154	-0.000
Zn	67		ug/L		2507	-0.005
Zn	68		ug/L		274	-0.001
> Ge	74		ug/L		132488	132488.179
As	75	1.030	ug/L	36.965	-141	0.003
Se	77		ug/L		3432	-0.003
Se	82	0.106	ug/L	37.338	5	0.000
Kr	83		ug/L		17	-0.000
Sr	88	0.006	ug/L	21.872	134	0.000
Y	89		ug/L		12	0.000
Zr	90	0.241	ug/L	15.153	1051	0.007
Mo	98	0.051	ug/L	15.491	95	0.001
Ag	107	0.018	ug/L	49.043	83	0.000
Cd	111	0.006	ug/L	159.711	11	0.000
Cd	114		ug/L		29	0.000
> In	115		ug/L		87861	87860.689
Sn	120	0.216	ug/L	21.385	640	0.005
Sb	121	0.537	ug/L	26.227	1005	0.008
Sb	123		ug/L		726	0.006
Ba	135		ug/L		17	0.000
Ba	137	0.002	ug/L	323.514	21	0.000
Ho	165		ug/L		2	-0.000
> Lu	175		ug/L		91953	91953.276
Tl	205	0.240	ug/L	30.007	493	0.004
Pb	208	0.019	ug/L	43.133	322	0.001
Th	232	0.133	ug/L	29.832	1333	0.010
U	238	0.016	ug/L	28.155	218	0.001

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 04:39:49

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45			86.1		
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74			89.8		
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115			87.5		
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175			91.7		
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 04:39:49

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## ICPMS#4 - Summary Report

Sample ID: 244921006

Sample Date/Time: Thursday, January 28, 2010 04:43:15

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\244921006.145

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	64.809	ug/L	2.560	28315	0.110
Be	9	4.913	ug/L	4.591	679	0.003
B	11	15.300	ug/L	2.487	3221	0.011
Na	23	729.419	ug/L	1.671	1340803	5.123
Mg	24	10591.076	ug/L	1.570	13763509	53.678
Al	27	85314.993	ug/L	2.162	145545265	567.865
P	31	323.730	ug/L	0.901	33823	0.119
K	39	10286.366	ug/L	4.060	29051180	112.484
Ca	43	9159.905	ug/L	1.018	54047	0.210
> Sc	45		ug/L		256325	256324.898
Ti	47	1422.312	ug/L	0.177	394151	1.537
V	51	81.074	ug/L	1.487	200252	0.823
Cr	52	39.666	ug/L	0.963	102721	0.378
Cr	53		ug/L		35396	-0.080
Mn	55	1109.530	ug/L	0.590	4510050	17.594
Fe	57	46499.884	ug/L	0.612	3909769	15.235
Co	59	18.923	ug/L	0.644	59951	0.234
Ni	60	33.484	ug/L	1.127	22316	0.087
Cu	63		ug/L		39417	0.153
Cu	65	28.747	ug/L	0.899	19311	0.075
Zn	66	110.044	ug/L	0.795	33185	0.269
Zn	67		ug/L		8201	0.043
Zn	68		ug/L		27052	0.217
> Ge	74		ug/L		122938	122938.100
As	75	9.513	ug/L	3.364	2833	0.027
Se	77		ug/L		2172	-0.011
Se	82	-0.616	ug/L	41.834	-24	-0.000
Kr	83		ug/L		104	0.001
Sr	88	133.258	ug/L	1.086	696996	7.936
Y	89		ug/L		341553	3.890
Zr	90	85.561	ug/L	0.351	231872	2.636
Mo	98	1.611	ug/L	3.059	1927	0.022
Ag	107	0.688	ug/L	2.650	1520	0.017
Cd	111	0.824	ug/L	12.947	414	0.005
Cd	114		ug/L		277	0.003
> In	115		ug/L		87830	87829.801
Sn	120	0.945	ug/L	1.288	2127	0.022
Sb	121	0.231	ug/L	9.222	585	0.004
Sb	123		ug/L		475	0.003
Ba	135		ug/L		380236	4.003
Ba	137	759.270	ug/L	0.745	644760	6.787
Ho	165		ug/L		14832	0.156
> Lu	175		ug/L		94988	94988.100
Tl	205	1.047	ug/L	5.248	1726	0.017
Pb	208	46.247	ug/L	1.144	259963	2.735
Th	232	32.828	ug/L	0.604	223522	2.348
U	238	4.903	ug/L	0.706	35784	0.376

Sample ID: 244921006

Report Date/Time: Thursday, January 28, 2010 04:46:01

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		103.4			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		83.4			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		87.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		94.7			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)
	Mn	55	Sample is out of limits (over linear range)

### QC Action

Sample ID: 244921006  
 Report Date/Time: Thursday, January 28, 2010 04:46:01  
 Page 3

QC Action Line: Continue

# ICPMS#4 - Summary Report

Sample ID: 244921007

Sample Date/Time: Thursday, January 28, 2010 04:49:29

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\244921007.146

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	62.596	ug/L	1.689	27862	0.107
Be	9	3.253	ug/L	1.879	458	0.002
B	11	12.954	ug/L	0.824	2844	0.009
Na	23	1292.458	ug/L	7.542	2398950	9.077
Mg	24	8542.966	ug/L	0.463	11307435	43.298
Al	27	61114.632	ug/L	1.344	106205931	406.785
P	31	243.566	ug/L	1.087	26750	0.090
K	39	8977.012	ug/L	6.271	25847818	98.166
Ca	43	6027.093	ug/L	1.352	36273	0.138
Sc	45		ug/L		261096	261096.083
Ti	47	1054.917	ug/L	0.184	297800	1.140
V	51	69.710	ug/L	2.308	173836	0.708
Cr	52	38.089	ug/L	0.606	100702	0.363
Cr	53		ug/L		33941	-0.088
Mn	55	1070.375	ug/L	1.285	4432456	16.973
Fe	57	46283.060	ug/L	0.244	3964119	15.164
Co	59	15.758	ug/L	1.707	50864	0.195
Ni	60	27.919	ug/L	1.229	18962	0.072
Cu	63		ug/L		29348	0.112
Cu	65	20.838	ug/L	1.390	14275	0.054
Zn	66	130.562	ug/L	1.149	39708	0.319
Zn	67		ug/L		8389	0.044
Zn	68		ug/L		30080	0.239
Ge	74		ug/L		124082	124081.879
As	75	7.680	ug/L	6.925	2215	0.022
Se	77		ug/L		2019	-0.012
Se	82	0.698	ug/L	52.828	28	0.000
Kr	83		ug/L		66	0.000
Sr	88	88.720	ug/L	3.268	470092	5.283
Y	89		ug/L		304621	3.424
Zr	90	78.420	ug/L	0.833	215352	2.416
Mo	98	2.040	ug/L	2.772	2463	0.027
Ag	107	0.386	ug/L	6.325	883	0.009
Cd	111	0.781	ug/L	12.878	398	0.004
Cd	114		ug/L		215	0.002
In	115		ug/L		88986	88986.460
Sn	120	1.974	ug/L	4.439	4279	0.046
Sb	121	0.150	ug/L	2.737	481	0.002
Sb	123		ug/L		403	0.002
Ba	135		ug/L		193547	2.041
Ba	137	385.089	ug/L	0.664	326408	3.442
Ho	165		ug/L		14032	0.148
Lu	175		ug/L		94813	94812.895
Tl	205	0.783	ug/L	4.101	1326	0.012
Pb	208	43.659	ug/L	0.542	244995	2.581
Th	232	27.732	ug/L	1.282	188574	1.984
U	238	3.027	ug/L	1.149	22095	0.232

Sample ID: 244921007

Report Date/Time: Thursday, January 28, 2010 04:52:15

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		105.3			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		84.1			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		88.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		94.6			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)
	Mn	55	Sample is out of limits (over linear range)

## QC Action

Sample ID: 244921007

Report Date/Time: Thursday, January 28, 2010 04:52:15

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QC Action Line: Continue

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Sample ID: 244921007

Report Date/Time: Thursday, January 28, 2010 04:52:15

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## ICPMS#4 - Summary Report

Sample ID: 244921008

Sample Date/Time: Thursday, January 28, 2010 04:55:41

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\244921008.147

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	56.390	ug/L	3.156	23285	0.096
Be	9	4.220	ug/L	4.703	551	0.002
B	11	17.269	ug/L	4.066	3387	0.012
Na	23	605.245	ug/L	7.500	1055747	4.251
Mg	24	7638.712	ug/L	2.302	9385290	38.715
Al	27	70959.223	ug/L	1.947	114423024	472.312
P	31	492.501	ug/L	1.019	47002	0.181
K	39	8419.961	ug/L	4.961	22533995	92.075
Ca	43	8965.135	ug/L	0.574	50003	0.206
Sc	45		ug/L		242279	242278.884
Ti	47	1177.515	ug/L	0.770	308416	1.273
V	51	60.548	ug/L	2.005	138698	0.615
Cr	52	27.644	ug/L	2.292	69313	0.263
Cr	53		ug/L		30316	-0.093
Mn	55	938.498	ug/L	0.219	3606026	14.882
Fe	57	36491.050	ug/L	0.328	2901274	11.956
Co	59	14.232	ug/L	1.142	42635	0.176
Ni	60	25.645	ug/L	0.351	16166	0.067
Cu	63		ug/L		33708	0.139
Cu	65	25.757	ug/L	3.482	16355	0.067
Zn	66	118.562	ug/L	0.868	35164	0.290
Zn	67		ug/L		7930	0.042
Zn	68		ug/L		27732	0.226
Ge	74		ug/L		120950	120949.778
As	75	7.751	ug/L	7.403	2181	0.022
Se	77		ug/L		2046	-0.012
Se	82	0.281	ug/L	45.086	11	0.000
Kr	83		ug/L		55	0.000
Sr	88	98.211	ug/L	1.332	506963	5.849
Y	89		ug/L		227823	2.628
Zr	90	83.280	ug/L	0.943	222713	2.565
Mo	98	1.170	ug/L	0.497	1391	0.016
Ag	107	1.561	ug/L	2.512	3347	0.038
Cd	111	1.090	ug/L	10.025	538	0.006
Cd	114		ug/L		557	0.006
In	115		ug/L		86664	86664.228
Sn	120	1.007	ug/L	1.541	2223	0.023
Sb	121	0.151	ug/L	17.080	469	0.002
Sb	123		ug/L		354	0.002
Ba	135		ug/L		273507	2.944
Ba	137	559.487	ug/L	0.604	464684	5.001
Ho	165		ug/L		9997	0.108
Lu	175		ug/L		92909	92909.439
Tl	205	0.683	ug/L	3.629	1153	0.011
Pb	208	60.403	ug/L	0.358	332053	3.572
Th	232	27.673	ug/L	0.421	184386	1.980
U	238	14.056	ug/L	0.408	100155	1.077

Sample ID: 244921008

Report Date/Time: Thursday, January 28, 2010 04:58:25

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		97.7			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		82.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		86.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		92.7			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)_

## QC Action

QC Action Line: Continue

Sample ID: 244921008

Report Date/Time: Thursday, January 28, 2010 04:58:25

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## ICPMS#4 - Summary Report

Sample ID: 244921009

Sample Date/Time: Thursday, January 28, 2010 05:01:51

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\244921009.148

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	66.436	ug/L	3.674	29143	0.113
Be	9	4.964	ug/L	2.401	688	0.003
B	11	16.050	ug/L	2.920	3373	0.011
Na	23	815.311	ug/L	3.835	1502971	5.726
Mg	24	10693.314	ug/L	3.227	13953351	54.196
Al	27	88917.879	ug/L	4.028	152427080	591.846
P	31	367.411	ug/L	0.880	38103	0.135
K	39	10113.011	ug/L	3.295	28719798	110.589
Ca	43	10235.910	ug/L	0.738	60641	0.235
Sc	45		ug/L		257468	257467.589
Ti	47	1430.615	ug/L	0.196	398217	1.546
V	51	86.270	ug/L	1.001	214729	0.876
Cr	52	43.051	ug/L	1.723	111465	0.410
Cr	53		ug/L		34665	-0.084
Mn	55	1150.627	ug/L	1.710	4696895	18.246
Fe	57	48409.515	ug/L	1.547	4088081	15.861
Co	59	19.879	ug/L	1.688	63245	0.245
Ni	60	36.789	ug/L	1.292	24620	0.095
Cu	63		ug/L		44075	0.171
Cu	65	31.665	ug/L	0.763	21360	0.083
Zn	66	113.081	ug/L	2.411	34134	0.276
Zn	67		ug/L		8317	0.044
Zn	68		ug/L		28238	0.226
Ge	74		ug/L		123118	123117.740
As	75	9.393	ug/L	3.415	2798	0.027
Se	77		ug/L		2019	-0.012
Se	82	0.010	ug/L	4222.134	1	0.000
Kr	83		ug/L		92	0.001
Sr	88	148.290	ug/L	0.814	787279	8.831
Y	89		ug/L		386662	4.338
Zr	90	89.443	ug/L	2.439	246009	2.755
Mo	98	1.760	ug/L	0.281	2134	0.024
Ag	107	0.832	ug/L	1.487	1856	0.020
Cd	111	0.931	ug/L	12.404	473	0.005
Cd	114		ug/L		302	0.003
In	115		ug/L		89137	89136.627
Sn	120	0.925	ug/L	1.342	2116	0.021
Sb	121	0.123	ug/L	7.145	445	0.002
Sb	123		ug/L		368	0.002
Ba	135		ug/L		441164	4.573
Ba	137	871.297	ug/L	0.769	751408	7.789
Ho	165		ug/L		16854	0.175
Lu	175		ug/L		96460	96459.940
Tl	205	0.922	ug/L	2.152	1562	0.015
Pb	208	47.913	ug/L	0.841	273513	2.833
Th	232	34.705	ug/L	0.504	239952	2.483
U	238	5.271	ug/L	0.963	39061	0.404

Sample ID: 244921009

Report Date/Time: Thursday, January 28, 2010 05:04:36

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
Sc	45		103.8			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
Ge	74		83.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
In	115		88.8			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
Lu	175		96.2			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)
	Mn	55	Sample is out of limits (over linear range)

## QC Action

Sample ID: 244921009

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QC Action Line: Continue

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Sample ID: 244921009

Report Date/Time: Thursday, January 28, 2010 05:04:36

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## ICPMS#4 - Summary Report

Sample ID: 244921010

Sample Date/Time: Thursday, January 28, 2010 05:08:03

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\244921010.149

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	46.595	ug/L	0.847	19754	0.079
Be	9	3.522	ug/L	3.363	472	0.002
B	11	13.116	ug/L	5.567	2737	0.009
Na	23	554.121	ug/L	1.581	994093	3.892
Mg	24	9937.869	ug/L	8.264	12529540	50.367
Al	27	65354.890	ug/L	2.781	108157490	435.009
P	31	526.278	ug/L	1.154	51325	0.194
K	39	8651.943	ug/L	5.809	23749063	94.611
Ca	43	8060.895	ug/L	1.683	46150	0.185
> Sc	45		ug/L		248595	248594.886
Ti	47	799.777	ug/L	0.948	214980	0.864
V	51	79.757	ug/L	1.175	190874	0.810
Cr	52	40.554	ug/L	0.343	101714	0.386
Cr	53		ug/L		32489	-0.088
Mn	55	896.708	ug/L	0.279	3535367	14.219
Fe	57	43131.554	ug/L	0.262	3517642	14.131
Co	59	17.501	ug/L	0.415	53778	0.216
Ni	60	30.964	ug/L	1.508	20018	0.080
Cu	63		ug/L		61774	0.248
Cu	65	44.599	ug/L	2.503	29021	0.117
Zn	66	141.940	ug/L	0.643	41804	0.347
Zn	67		ug/L		8690	0.048
Zn	68		ug/L		32399	0.267
> Ge	74		ug/L		120186	120186.319
As	75	8.905	ug/L	1.708	2563	0.025
Se	77		ug/L		1902	-0.013
Se	82	0.167	ug/L	188.513	7	0.000
Kr	83		ug/L		65	0.000
Sr	88	99.178	ug/L	0.858	502682	5.906
Y	89		ug/L		337423	3.965
Zr	90	40.449	ug/L	0.914	106419	1.246
Mo	98	1.085	ug/L	2.639	1269	0.015
Ag	107	9.046	ug/L	0.283	18839	0.221
Cd	111	0.754	ug/L	4.708	368	0.004
Cd	114		ug/L		355	0.004
> In	115		ug/L		85100	85099.875
Sn	120	0.700	ug/L	5.959	1576	0.016
Sb	121	0.062	ug/L	7.163	344	0.001
Sb	123		ug/L		279	0.001
Ba	135		ug/L		222481	2.413
Ba	137	459.249	ug/L	1.944	378568	4.105
Ho	165		ug/L		14203	0.154
> Lu	175		ug/L		92225	92224.691
Tl	205	0.950	ug/L	2.767	1534	0.015
Pb	208	40.394	ug/L	1.570	220467	2.388
Th	232	24.766	ug/L	1.575	163817	1.772
U	238	2.615	ug/L	2.406	18578	0.200

Sample ID: 244921010

Report Date/Time: Thursday, January 28, 2010 05:10:48

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		100.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		81.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		84.8			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		92.0			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)

## QC Action

QC Action Line: Continue

Sample ID: 244921010

Report Date/Time: Thursday, January 28, 2010 05:10:48

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 05:14:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 6.150

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	60.335	ug/L	1.779	21993	0.103
Be	9	57.962	ug/L	1.570	6654	0.031
B	11	112.728	ug/L	2.060	17555	0.080
Na	23	5430.583	ug/L	2.592	8176180	38.138
Mg	24	5558.220	ug/L	2.610	6025985	28.170
Al	27	5328.313	ug/L	4.821	7589577	35.466
P	31	5097.516	ug/L	0.816	403704	1.875
K	39	5095.914	ug/L	8.577	12112713	55.725
Ca	43	4856.442	ug/L	1.682	23967	0.111
> Sc	45		ug/L		213818	213818.258
Ti	47	48.402	ug/L	1.840	11252	0.052
V	51	49.928	ug/L	1.768	99396	0.507
Cr	52	51.031	ug/L	0.791	108835	0.486
Cr	53		ug/L		42644	-0.019
Mn	55	51.137	ug/L	0.388	173830	0.811
Fe	57	5062.414	ug/L	0.388	358685	1.659
Co	59	50.389	ug/L	0.649	133069	0.622
Ni	60	52.177	ug/L	0.850	28991	0.135
Cu	63		ug/L		61211	0.286
Cu	65	52.220	ug/L	0.898	29224	0.136
Zn	66	50.708	ug/L	1.761	16160	0.124
Zn	67		ug/L		4544	0.011
Zn	68		ug/L		11562	0.087
> Ge	74		ug/L		129246	129245.730
As	75	47.012	ug/L	0.603	16760	0.134
Se	77		ug/L		4162	0.004
Se	82	47.546	ug/L	3.324	1957	0.015
Kr	83		ug/L		27	0.000
Sr	88	49.255	ug/L	1.450	258294	2.933
Y	89		ug/L		93	0.001
Zr	90	49.474	ug/L	2.234	134550	1.524
Mo	98	48.909	ug/L	1.723	57603	0.654
Ag	107	50.179	ug/L	1.233	107889	1.225
Cd	111	49.570	ug/L	3.640	24492	0.278
Cd	114		ug/L		59158	0.672
> In	115		ug/L		88028	88028.263
Sn	120	50.723	ug/L	0.883	103844	1.177
Sb	121	50.132	ug/L	4.815	69021	0.781
Sb	123		ug/L		52869	0.598
Ba	135		ug/L		22999	0.250
Ba	137	47.770	ug/L	0.269	39220	0.427
Ho	165		ug/L		13	0.000
> Lu	175		ug/L		91799	91798.602
Tl	205	47.877	ug/L	1.249	69968	0.761
Pb	208	49.206	ug/L	0.538	267306	2.909
Th	232	49.643	ug/L	0.351	326449	3.551
U	238	51.685	ug/L	0.405	363594	3.960

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 05:16:57

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	120.669				
Be	9	115.924				
B	11	112.728				
Na	23	108.612				
Mg	24	111.164				
Al	27	105.511				
P	31	101.950				
K	39	101.918				
Ca	43	97.129				
> Sc	45		86.2			
Ti	47	96.804				
V	51	99.856				
Cr	52	102.061				
Cr	53					
Mn	55	102.273				
Fe	57	101.248				
Co	59	100.777				
Ni	60	104.354				
Cu	63					
Cu	65	104.439				
Zn	66	101.416				
Zn	67					
Zn	68					
> Ge	74		87.6			
As	75	94.024				
Se	77					
Se	82	95.093				
Kr	83					
Sr	88	98.511				
Y	89					
Zr	90	98.949				
Mo	98	97.817				
Ag	107	100.357				
Cd	111	99.139				
Cd	114					
> In	115		87.7			
Sn	120	101.446				
Sb	121	100.264				
Sb	123					
Ba	135					
Ba	137	95.540				
Ho	165					
> Lu	175		91.6			
Tl	205	95.754				
Pb	208	98.412				
Th	232	99.287				
U	238	103.370				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	7CCV is out of limits ( +/- 10%)
QC Std 6	Be	9	9CCV is out of limits ( +/- 10%)
QC Std 6	B	11	11CCV is out of limits ( +/- 10%)
QC Std 6	Mg	24	24CCV is out of limits ( +/- 10%)

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 05:16:57

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## QC Action

QC Action Line: Continue

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Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 05:16:57

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 05:20:23

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 7.151

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.031	ug/L	70.153	22	0.000
Be	9	0.020	ug/L	126.435	4	0.000
B	11	1.971	ug/L	14.023	614	0.001
Na	23	-3.289	ug/L	139.772	17011	-0.023
Mg	24	0.822	ug/L	2.580	3000	0.004
Al	27	1.965	ug/L	109.722	5335	0.013
P	31	-2.408	ug/L	16.141	2408	-0.001
K	39	-12.321	ug/L	37.187	153489	-0.135
Ca	43	-3.344	ug/L	74.205	104	-0.000
Sc	45		ug/L		201082	201082.010
Ti	47	0.268	ug/L	27.141	120	0.000
V	51	1.869	ug/L	6.246	-4698	0.019
Cr	52	0.079	ug/L	67.160	4738	0.001
Cr	53		ug/L		34451	-0.047
Mn	55	0.006	ug/L	65.392	438	0.000
Fe	57	4.198	ug/L	47.080	4069	0.001
Co	59	0.004	ug/L	93.363	68	0.000
Ni	60	0.014	ug/L	80.416	42	0.000
Cu	63		ug/L		96	0.000
Cu	65	0.004	ug/L	327.901	50	0.000
Zn	66	-0.007	ug/L	44.086	148	-0.000
Zn	67		ug/L		2306	-0.005
Zn	68		ug/L		244	-0.001
Ge	74		ug/L		123417	123417.386
As	75	0.512	ug/L	68.339	-313	0.001
Se	77		ug/L		3033	-0.004
Se	82	0.012	ug/L	2038.925	1	0.000
Kr	83		ug/L		21	-0.000
Sr	88	0.006	ug/L	27.186	128	0.000
Y	89		ug/L		15	0.000
Zr	90	0.252	ug/L	12.226	1037	0.008
Mo	98	0.040	ug/L	53.983	78	0.001
Ag	107	0.022	ug/L	27.073	88	0.001
Cd	111	0.008	ug/L	208.247	11	0.000
Cd	114		ug/L		29	0.000
In	115		ug/L		84200	84200.075
Sn	120	0.193	ug/L	14.012	568	0.004
Sb	121	0.489	ug/L	25.477	901	0.008
Sb	123		ug/L		679	0.006
Ba	135		ug/L		13	0.000
Ba	137	0.003	ug/L	160.779	20	0.000
Ho	165		ug/L		4	0.000
Lu	175		ug/L		86777	86776.980
Tl	205	0.182	ug/L	22.981	384	0.003
Pb	208	0.016	ug/L	27.560	292	0.001
Th	232	0.121	ug/L	39.403	1179	0.009
U	238	0.016	ug/L	17.264	204	0.001

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 05:23:08

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		81.1			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		83.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		83.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		86.5			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 05:23:08

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## Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Thursday, January 28, 2010 11:01:05

Sample Description:

Method File: c:\elandata\Method\daily2.mth

Dataset File: c:\elandata\Dataset\100125\Sample.227

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

### Summary

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
Be	9.0	222.8	222.802	9.524	4.3
Mg	24.0	7547.2	7547.193	115.658	1.5
Co	58.9	25086.8	25086.812	369.932	1.5
Rh	102.9	46995.8	46995.784	603.396	1.3
In	114.9	64932.4	64932.445	651.096	1.0
Pb	208.0	26262.7	26262.720	271.268	1.0
[> Ba	137.9	50435.4	50435.362	219.725	0.4
[ Ba++	69.0	706.1	0.014	0.000	3.4
[> Ce	139.9	59147.2	59147.192	229.200	0.4
[ CeO	155.9	1386.4	0.023	0.001	3.0
Bkgd	220.0	2.2	2.200	1.441	65.5

### Current Optimization File Data

Current Value	Description
0.93	Nebulizer Gas Flow
9.00	Lens Voltage
1000.00	ICP RF Power
-2000.00	Analog Stage Voltage
1100.00	Pulse Stage Voltage
50.00	Discriminator Threshold
-2.00	AC Rod Offset

### Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	21	6.8	935.4
Co	59	21	7.8	17235.1
In	115	21	10.0	43644.6

## ICPMS #4 TUNING REPORT

File Name: default2.tun  
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	603	2060	0.669
Be	9.0	9.1	2048	2045	0.700
Mg	24.0	24.0	5664	2065	0.603
Mg	25.0	24.9	5963	2080	0.792
Mg	26.0	26.1	6126	2085	0.632
Co	58.9	58.9	14169	2140	0.619
Rh	102.9	102.9	24866	2230	0.648
In	114.9	114.9	27782	2255	0.658
Ce	139.9	139.9	33852	2310	0.624
Pb	206.0	206.0	49936	2500	0.624
Pb	207.0	207.0	50113	2375	0.592
Pb	208.0	208.0	50436	2570	0.600
U	238.1	238.0	57684	2510	0.645

## ICPMS#4 - Summary Report

Sample ID: Blank

Sample Date/Time: Thursday, January 28, 2010 13:34:52

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\Blank.039

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7		ug/L		6	
Be	9		ug/L		3	
B	11		ug/L		211	
Na	23		ug/L		19013	
Mg	24		ug/L		667	
Al	27		ug/L		333	
P	31		ug/L		1686	
K	39		ug/L		132953	
Ca	43		ug/L		87	
Sc	45		ug/L		186715	
Ti	47		ug/L		44	
V	51		ug/L		-4030	
Cr	52		ug/L		3578	
Cr	53		ug/L		28304	
Mn	55		ug/L		275	
Fe	57		ug/L		2608	
Co	59		ug/L		31	
Ni	60		ug/L		132	
Cu	63		ug/L		81	
Cu	65		ug/L		39	
Zn	66		ug/L		706	
Zn	67		ug/L		1585	
Zn	68		ug/L		608	
Ge	74		ug/L		103232	
As	75		ug/L		-330	
Se	77		ug/L		2349	
Se	82		ug/L		3	
Kr	83		ug/L		19	
Sr	88		ug/L		49	
Y	89		ug/L		9	
Zr	90		ug/L		177	
Mo	98		ug/L		17	
Ag	107		ug/L		26	
Cd	111		ug/L		3	
Cd	114		ug/L		13	
In	115		ug/L		73004	
Sn	120		ug/L		102	
Sb	121		ug/L		184	
Sb	123		ug/L		138	
Ba	135		ug/L		6	
Ba	137		ug/L		6	
Ho	165		ug/L		5	
Lu	175		ug/L		75880	
Tl	205		ug/L		67	
Pb	208		ug/L		145	
Th	232		ug/L		371	
U	238		ug/L		37	

Sample ID: Blank

Report Date/Time: Thursday, January 28, 2010 13:37:37

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Simple Linear	
Be	9Simple Linear	
B	11Simple Linear	
Na	23Simple Linear	
Mg	24Simple Linear	
Al	27Simple Linear	
P	31Simple Linear	
K	39Simple Linear	
Ca	43Simple Linear	
Sc	45Linear Thru Zero	
Ti	47Simple Linear	
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Simple Linear	
Fe	57Simple Linear	
Co	59Simple Linear	
Ni	60Simple Linear	
Cu	63Simple Linear	
Cu	65Simple Linear	
Zn	66Simple Linear	
Zn	67Simple Linear	
Zn	68Simple Linear	
Ge	74Simple Linear	
As	75Simple Linear	
Se	77Simple Linear	
Se	82Simple Linear	
Kr	83Simple Linear	
Sr	88Simple Linear	
Y	89Simple Linear	
Zr	90Simple Linear	
Mo	98Simple Linear	
Ag	107Simple Linear	
Cd	111Simple Linear	
Cd	114Simple Linear	
In	115Simple Linear	
Sn	120Simple Linear	
Sb	121Simple Linear	
Sb	123Simple Linear	
Ba	135Simple Linear	
Ba	137Simple Linear	
Ho	165Simple Linear	
Lu	175Simple Linear	
Tl	205Simple Linear	
Pb	208Simple Linear	
Th	232Simple Linear	
U	238Simple Linear	

Sample ID: Blank

Report Date/Time: Thursday, January 28, 2010 13:37:37

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: Blank

Report Date/Time: Thursday, January 28, 2010 13:37:37

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## ICPMS#4 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Thursday, January 28, 2010 13:41:00

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\Standard 1.040

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	10.000	ug/L	10.667	1645	0.009
Be	9	10.000	ug/L	1.793	964	0.005
B	11	20.000	ug/L	4.213	3054	0.015
Na	23	1000.000	ug/L	7.866	1525210	7.871
Mg	24	1000.000	ug/L	11.203	1127453	5.890
Al	27	1000.000	ug/L	4.383	1470400	7.682
P	31	1000.000	ug/L	0.538	79541	0.407
K	39	1000.000	ug/L	2.640	2374912	11.701
Ca	43	1000.000	ug/L	1.494	4610	0.024
> Sc	45		ug/L		191346	191346.228
Ti	47	10.000	ug/L	3.395	2013	0.010
V	51	10.000	ug/L	4.291	11646	0.082
Cr	52	10.000	ug/L	1.578	21411	0.093
Cr	53		ug/L		35921	0.036
Mn	55	10.000	ug/L	0.139	28390	0.147
Fe	57	1000.000	ug/L	1.626	60739	0.303
Co	59	10.000	ug/L	0.947	21586	0.113
Ni	60	10.000	ug/L	1.655	4663	0.024
Cu	63		ug/L		9720	0.050
Cu	65	10.000	ug/L	0.974	4735	0.025
Zn	66	10.000	ug/L	1.749	3210	0.024
Zn	67		ug/L		2203	0.006
Zn	68		ug/L		2356	0.017
> Ge	74		ug/L		104020	104020.404
As	75	10.000	ug/L	5.524	2316	0.025
Se	77		ug/L		3255	0.009
Se	82	10.000	ug/L	7.920	29	0.003
Kr	83		ug/L		19	-0.000
Sr	88	10.000	ug/L	0.933	40588	0.561
Y	89		ug/L		14	0.000
Zr	90	10.000	ug/L	1.629	21112	0.290
Mo	98	10.000	ug/L	0.668	9171	0.127
Ag	107	10.000	ug/L	0.286	17360	0.240
Cd	111	10.000	ug/L	1.774	4013	0.056
Cd	114		ug/L		9649	0.133
> In	115		ug/L		72231	72231.060
Sn	120	10.000	ug/L	0.841	17205	0.237
Sb	121	10.000	ug/L	5.823	10723	0.146
Sb	123		ug/L		8244	0.112
Ba	135		ug/L		3775	0.050
Ba	137	10.000	ug/L	2.261	6426	0.085
Ho	165		ug/L		2	-0.000
> Lu	175		ug/L		75691	75691.423
Tl	205	10.000	ug/L	0.914	11481	0.151
Pb	208	10.000	ug/L	0.413	46021	0.606
Th	232	10.000	ug/L	2.375	51324	0.673
U	238	10.000	ug/L	0.973	55198	0.729

Sample ID: Standard 1

Report Date/Time: Thursday, January 28, 2010 13:43:42

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## Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: Standard 1

Report Date/Time: Thursday, January 28, 2010 13:43:42

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## QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[	Li	7				
	Be	9				
	B	11				
	Na	23				
	Mg	24				
	Al	27				
	P	31				
	K	39				
	Ca	43				
>	Sc	45				
	Ti	47				
	V	51				
	Cr	52				
	Cr	53				
	Mn	55				
	Fe	57				
	Co	59				
	Ni	60				
	Cu	63				
[	Cu	65				
[	Zn	66				
	Zn	67				
	Zn	68				
>	Ge	74				
	As	75				
	Se	77				
	Se	82				
[	Kr	83				
[	Sr	88				
	Y	89				
	Zr	90				
	Mo	98				
	Ag	107				
	Cd	111				
	Cd	114				
>	In	115				
	Sn	120				
	Sb	121				
[	Sb	123				
[	Ba	135				
	Ba	137				
	Ho	165				
>	Lu	175				
	Tl	205				
	Pb	208				
	Th	232				
[	U	238				

## QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

## QC Action

QC Action Line: No QC out of limits detected

Sample ID: Standard 1

Report Date/Time: Thursday, January 28, 2010 13:43:42

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## ICPMS#4 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Thursday, January 28, 2010 13:47:06

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\Standard 2.041

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	99.977	ug/L	8.602	16317	0.084
Be	9	99.985	ug/L	0.762	9651	0.049
B	11	200.006	ug/L	1.730	29222	0.149
Na	23	9999.365	ug/L	7.216	15274421	78.208
Mg	24	9995.813	ug/L	5.915	11019971	56.505
Al	27	9997.324	ug/L	5.278	14584856	74.797
P	31	9998.449	ug/L	0.531	782511	4.004
K	39	10005.941	ug/L	2.149	24411888	124.474
Ca	43	9997.544	ug/L	0.692	45040	0.231
> Sc	45		ug/L		194986	194986.312
Ti	47	99.993	ug/L	0.801	19952	0.102
V	51	100.085	ug/L	1.007	171654	0.902
Cr	52	99.945	ug/L	1.106	175110	0.879
Cr	53		ug/L		54125	0.126
Mn	55	99.989	ug/L	1.349	283575	1.453
Fe	57	9998.024	ug/L	1.001	582905	2.975
Co	59	99.989	ug/L	0.158	217177	1.114
Ni	60	99.985	ug/L	0.457	45606	0.233
Cu	63		ug/L		95732	0.491
Cu	65	99.952	ug/L	1.452	45654	0.234
Zn	66	99.989	ug/L	0.857	25769	0.238
Zn	67		ug/L		5885	0.040
Zn	68		ug/L		18582	0.170
> Ge	74		ug/L		105453	105453.197
As	75	100.045	ug/L	0.631	27789	0.267
Se	77		ug/L		5367	0.028
Se	82	100.026	ug/L	1.405	3030	0.029
Kr	83		ug/L		20	-0.000
Sr	88	100.026	ug/L	0.929	414856	5.766
Y	89		ug/L		52	0.001
Zr	90	100.023	ug/L	0.789	213717	2.969
Mo	98	100.019	ug/L	0.865	92965	1.292
Ag	107	99.994	ug/L	0.914	171547	2.384
Cd	111	99.989	ug/L	1.377	39489	0.549
Cd	114		ug/L		95087	1.322
> In	115		ug/L		71936	71936.005
Sn	120	100.021	ug/L	0.606	174216	2.420
Sb	121	100.069	ug/L	3.782	113020	1.568
Sb	123		ug/L		86143	1.195
Ba	135		ug/L		38198	0.493
Ba	137	99.989	ug/L	0.566	64949	0.839
Ho	165		ug/L		4	-0.000
> Lu	175		ug/L		77432	77431.748
Tl	205	99.967	ug/L	2.489	113067	1.460
Pb	208	99.966	ug/L	1.798	453579	5.857
Th	232	100.020	ug/L	1.007	532202	6.869
U	238	99.990	ug/L	1.433	558567	7.214

Sample ID: Standard 2

Report Date/Time: Thursday, January 28, 2010 13:49:49

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: Standard 2

Report Date/Time: Thursday, January 28, 2010 13:49:49

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
L Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
As	75					
Se	77					
Se	82					
L Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					
Sn	120					
Sb	121					
L Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
Tl	205					
Pb	208					
Th	232					
L U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: Standard 2

Report Date/Time: Thursday, January 28, 2010 13:49:49

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## ICPMS#4 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Thursday, January 28, 2010 13:53:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 1.042

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Li	7	52.889 ug/L	11.349	8541	0.044
	Be	9	51.424 ug/L	1.597	4911	0.025
	B	11	101.277 ug/L	1.640	14742	0.075
	Na	23	4957.329 ug/L	2.506	7497305	38.773
	Mg	24	5254.279 ug/L	4.669	5729436	29.702
	Al	27	5429.453 ug/L	3.448	7834867	40.622
	P	31	4982.680 ug/L	0.756	386578	1.995
	K	39	4691.933 ug/L	7.375	11393020	58.368
	Ca	43	4940.510 ug/L	0.381	22060	0.114
>	Sc	45	ug/L		192862	192861.707
	Ti	47	51.174 ug/L	1.442	10122	0.052
	V	51	49.806 ug/L	0.748	82397	0.449
	Cr	52	51.574 ug/L	1.415	91161	0.454
	Cr	53	ug/L		44616	0.080
	Mn	55	51.278 ug/L	1.276	143976	0.745
	Fe	57	5040.393 ug/L	0.882	291983	1.500
	Co	59	49.456 ug/L	0.433	106267	0.551
	Ni	60	51.229 ug/L	1.333	23178	0.119
	Cu	63	ug/L		48111	0.249
	Cu	65	50.974 ug/L	1.334	23049	0.119
[	Zn	66	51.854 ug/L	0.814	13574	0.123
	Zn	67	ug/L		3832	0.021
	Zn	68	ug/L		9926	0.089
>	Ge	74	ug/L		104396	104396.108
	As	75	47.967 ug/L	2.207	13015	0.128
	Se	77	ug/L		4181	0.017
	Se	82	51.378 ug/L	2.574	1542	0.015
[	Kr	83	ug/L		17	-0.000
[	Sr	88	49.936 ug/L	0.751	207971	2.879
	Y	89	ug/L		18	0.000
	Zr	90	48.847 ug/L	0.751	104881	1.450
	Mo	98	48.564 ug/L	1.281	45327	0.627
	Ag	107	49.714 ug/L	1.294	85640	1.185
	Cd	111	49.932 ug/L	0.269	19802	0.274
	Cd	114	ug/L		47737	0.661
>	In	115	ug/L		72227	72226.575
	Sn	120	49.614 ug/L	1.034	86816	1.201
	Sb	121	49.272 ug/L	3.560	55966	0.772
[	Sb	123	ug/L		43134	0.595
[	Ba	135	ug/L		19287	0.252
	Ba	137	50.661 ug/L	0.329	32559	0.425
	Ho	165	ug/L		6	0.000
>	Lu	175	ug/L		76603	76603.297
	Tl	205	48.517 ug/L	0.908	54327	0.708
	Pb	208	50.306 ug/L	1.415	225891	2.947
	Th	232	50.571 ug/L	1.107	266388	3.473
[	U	238	52.494 ug/L	1.136	290126	3.787

Sample ID: QC Std 1

Report Date/Time: Thursday, January 28, 2010 13:55:55

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	105.779				
Be	9	102.849				
B	11	101.277				
Na	23	99.147				
Mg	24	105.086				
Al	27	107.514				
P	31	99.654				
K	39	93.839				
Ca	43	98.810				
> Sc	45		103.3			
Ti	47	102.348				
V	51	99.611				
Cr	52	103.147				
Cr	53					
Mn	55	102.557				
Fe	57	100.808				
Co	59	98.912				
Ni	60	102.459				
Cu	63					
Cu	65	101.949				
Zn	66	103.707				
Zn	67					
Zn	68					
> Ge	74		101.1			
As	75	95.934				
Se	77					
Se	82	102.757				
Kr	83					
Sr	88	99.873				
Y	89					
Zr	90	97.694				
Mo	98	97.128				
Ag	107	99.428				
Cd	111	99.863				
Cd	114					
> In	115		98.9			
Sn	120	99.227				
Sb	121	98.544				
Sb	123					
Ba	135					
Ba	137	101.323				
Ho	165					
> Lu	175		101.0			
Tl	205	97.034				
Pb	208	100.612				
Th	232	101.143				
U	238	104.989				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 1

Report Date/Time: Thursday, January 28, 2010 13:55:55

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## ICPMS#4 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Thursday, January 28, 2010 13:59:21

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 2.043

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.027	ug/L	89.062	11	0.000
Be	9	0.027	ug/L	97.570	6	0.000
B	11	3.085	ug/L	16.333	662	0.002
Na	23	1.323	ug/L	353.142	21684	0.010
Mg	24	1.808	ug/L	28.930	2667	0.010
Al	27	2.752	ug/L	57.310	4334	0.021
P	31	1.372	ug/L	41.158	1852	0.001
K	39	7.271	ug/L	45.158	155173	0.090
Ca	43	1.256	ug/L	283.364	96	0.000
> Sc	45		ug/L		193329	193329.318
Ti	47	0.049	ug/L	107.598	56	0.000
V	51	0.226	ug/L	94.154	-3779	0.002
Cr	52	0.092	ug/L	67.544	3860	0.001
Cr	53		ug/L		28756	-0.003
Mn	55	0.014	ug/L	78.930	324	0.000
Fe	57	3.118	ug/L	46.191	2880	0.001
Co	59	0.023	ug/L	47.174	82	0.000
Ni	60	0.018	ug/L	69.914	144	0.000
Cu	63		ug/L		102	0.000
Cu	65	0.001	ug/L	1278.524	41	0.000
Zn	66	0.100	ug/L	129.333	758	0.000
Zn	67		ug/L		1565	-0.001
Zn	68		ug/L		605	-0.000
> Ge	74		ug/L		107163	107163.171
As	75	0.946	ug/L	41.045	-73	0.003
Se	77		ug/L		2400	-0.000
Se	82	-0.101	ug/L	355.030	-0	-0.000
Kr	83		ug/L		18	-0.000
Sr	88	0.021	ug/L	56.357	140	0.001
Y	89		ug/L		11	0.000
Zr	90	0.096	ug/L	17.153	389	0.003
Mo	98	0.068	ug/L	33.555	81	0.001
Ag	107	0.034	ug/L	19.724	86	0.001
Cd	111	0.031	ug/L	54.634	16	0.000
Cd	114		ug/L		33	0.000
> In	115		ug/L		73880	73879.632
Sn	120	0.132	ug/L	4.782	339	0.003
Sb	121	0.797	ug/L	9.158	1109	0.012
Sb	123		ug/L		864	0.010
Ba	135		ug/L		14	0.000
Ba	137	0.028	ug/L	71.418	24	0.000
Ho	165		ug/L		2	-0.000
> Lu	175		ug/L		76758	76757.759
Tl	205	0.109	ug/L	34.956	189	0.002
Pb	208	0.023	ug/L	44.954	248	0.001
Th	232	0.150	ug/L	18.282	1163	0.010
U	238	0.029	ug/L	44.757	197	0.002

Sample ID: QC Std 2

Report Date/Time: Thursday, January 28, 2010 14:02:06

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		103.5			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		103.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		101.2			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		101.2			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 2

Report Date/Time: Thursday, January 28, 2010 14:02:06

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## ICPMS#4 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Thursday, January 28, 2010 14:05:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 3.044

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	11.180	ug/L	11.015	1780	0.009
Be	9	0.572	ug/L	13.213	57	0.000
B	11	16.780	ug/L	1.875	2581	0.012
Na	23	284.297	ug/L	10.663	441083	2.224
Mg	24	14.336	ug/L	29.608	16009	0.081
Al	27	31.027	ug/L	15.267	44403	0.232
P	31	61.355	ug/L	5.751	6371	0.025
K	39	308.328	ug/L	4.706	862639	3.836
Ca	43	226.645	ug/L	2.458	1080	0.005
> Sc	45		ug/L		189707	189706.678
Ti	47	8.989	ug/L	2.962	1786	0.009
V	51	10.498	ug/L	7.327	13842	0.095
Cr	52	11.328	ug/L	2.508	22528	0.100
Cr	53		ug/L		36862	0.043
Mn	55	5.670	ug/L	2.736	15905	0.082
Fe	57	113.014	ug/L	3.556	9028	0.034
Co	59	1.061	ug/L	2.058	2272	0.012
Ni	60	1.939	ug/L	1.439	991	0.005
Cu	63		ug/L		1145	0.006
Cu	65	1.145	ug/L	9.322	548	0.003
Zn	66	9.512	ug/L	1.813	3024	0.023
Zn	67		ug/L		2150	0.006
Zn	68		ug/L		2237	0.016
> Ge	74		ug/L		102725	102725.049
As	75	6.104	ug/L	24.375	1343	0.016
Se	77		ug/L		3126	0.008
Se	82	5.869	ug/L	7.432	176	0.002
Kr	83		ug/L		16	-0.000
Sr	88	10.698	ug/L	1.169	44375	0.617
Y	89		ug/L		8	-0.000
Zr	90	2.034	ug/L	2.866	4514	0.060
Mo	98	0.551	ug/L	10.076	528	0.007
Ag	107	1.017	ug/L	3.010	1768	0.024
Cd	111	1.118	ug/L	7.328	444	0.006
Cd	114		ug/L		1003	0.014
> In	115		ug/L		71878	71878.064
Sn	120	5.152	ug/L	1.043	9061	0.125
Sb	121	3.276	ug/L	3.378	3871	0.051
Sb	123		ug/L		2979	0.040
Ba	135		ug/L		814	0.011
Ba	137	2.148	ug/L	7.088	1356	0.018
Ho	165		ug/L		2	-0.000
> Lu	175		ug/L		75013	75013.219
Tl	205	1.076	ug/L	6.704	1245	0.016
Pb	208	2.216	ug/L	2.243	9879	0.130
Th	232	1.100	ug/L	0.188	6034	0.076
U	238	0.230	ug/L	5.757	1282	0.017

Sample ID: QC Std 3

Report Date/Time: Thursday, January 28, 2010 14:08:13

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	111.805				
Be	9	114.343				
B	11	111.868				
Na	23	113.719				
Mg	24	95.570				
Al	27	103.425				
P	31	122.711				
K	39	102.776				
Ca	43	113.323				
> Sc	45		101.6			
Ti	47	89.892				
V	51	104.982				
Cr	52	113.278				
Cr	53					
Mn	55	113.400				
Fe	57	113.014				
Co	59	106.053				
Ni	60	96.930				
Cu	63					
Cu	65	114.521				
Zn	66	95.122				
Zn	67					
Zn	68					
> Ge	74		99.5			
As	75	122.072				
Se	77					
Se	82	117.382				
Kr	83					
Sr	88	106.976				
Y	89					
Zr	90	101.717				
Mo	98	110.182				
Ag	107	101.669				
Cd	111	111.822				
Cd	114					
> In	115		98.5			
Sn	120	103.034				
Sb	121	109.191				
Sb	123					
Ba	135					
Ba	137	107.375				
Ho	165					
> Lu	175		98.9			
Tl	205	107.644				
Pb	208	110.785				
Th	232	110.021				
U	238	115.167				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 3

Report Date/Time: Thursday, January 28, 2010 14:08:13

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## ICPMS#4 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Thursday, January 28, 2010 14:11:38

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 4.045

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.032	ug/L	40.359	12	0.000
Be	9	0.031	ug/L	123.349	6	0.000
B	11	1.129	ug/L	28.952	377	0.001
Na	23	87582.813	ug/L	0.276	131237126	685.015
Mg	24	87989.465	ug/L	2.644	95277083	497.389
Al	27	91302.804	ug/L	4.387	130852863	683.103
P	31	89542.364	ug/L	0.948	6870621	35.859
K	39	94090.400	ug/L	1.718	224346357	1170.483
Ca	43	96247.577	ug/L	0.824	425184	2.219
> Sc	45		ug/L		191554	191554.273
Ti	47	1801.825	ug/L	8.671	352427	1.840
V	51	0.045	ug/L	1689.841	-4057	0.000
Cr	52	5.918	ug/L	0.996	13639	0.052
Cr	53		ug/L		27520	-0.008
Mn	55	5.707	ug/L	0.449	16166	0.083
Fe	57	99492.825	ug/L	0.271	5674337	29.609
Co	59	0.227	ug/L	3.979	517	0.003
Ni	60	4.623	ug/L	3.214	2200	0.011
Cu	63		ug/L		2881	0.015
Cu	65	3.045	ug/L	4.455	1405	0.007
Zn	66	4.183	ug/L	2.798	1677	0.010
Zn	67		ug/L		1735	0.002
Zn	68		ug/L		651	0.001
> Ge	74		ug/L		99954	99954.473
As	75	0.531	ug/L	156.256	-180	0.001
Se	77		ug/L		3546	0.013
Se	82	-0.564	ug/L	16.091	-13	-0.000
Kr	83		ug/L		52	0.000
Sr	88	2.872	ug/L	0.258	12268	0.166
Y	89		ug/L		132	0.002
Zr	90	0.739	ug/L	49.090	1793	0.022
Mo	98	1999.690	ug/L	0.459	1906193	25.833
Ag	107	0.088	ug/L	18.800	181	0.002
Cd	111	0.320	ug/L	22.710	132	0.002
Cd	114		ug/L		2696	0.036
> In	115		ug/L		73787	73786.763
Sn	120	0.370	ug/L	3.767	763	0.009
Sb	121	0.290	ug/L	26.482	521	0.005
Sb	123		ug/L		427	0.004
Ba	135		ug/L		319	0.004
Ba	137	0.722	ug/L	2.566	483	0.006
Ho	165		ug/L		1867	0.024
> Lu	175		ug/L		78780	78780.133
Tl	205	0.012	ug/L	30.621	83	0.000
Pb	208	0.206	ug/L	4.086	1100	0.012
Th	232	0.248	ug/L	46.049	1719	0.017
U	238	-0.001	ug/L	144.413	30	-0.000

Sample ID: QC Std 4

Report Date/Time: Thursday, January 28, 2010 14:14:21

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: QC Std 4

Report Date/Time: Thursday, January 28, 2010 14:14:21

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23	87.583				
Mg	24	87.989				
Al	27	91.303				
P	31	89.542				
K	39	94.090				
Ca	43	96.248				
> Sc	45		102.6			
Ti	47	90.091				
V	51					
Cr	52	179.338				
Cr	53					
Mn	55	98.395				
Fe	57	99.493				
Co	59	96.644				
Ni	60	139.657				
Cu	63					
Cu	65	91.167				
Zn	66	111.258				
Zn	67					
Zn	68					
> Ge	74		96.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88	97.041				
Y	89					
Zr	90					
Mo	98	99.984				
Ag	107					
Cd	111	72.078				
Cd	114					
> In	115		101.1			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137	90.461				
Ho	165					
> Lu	175		103.8			
Tl	205					
Pb	208	108.817				
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 4

Report Date/Time: Thursday, January 28, 2010 14:14:21

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## ICPMS#4 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Thursday, January 28, 2010 14:17:46

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 5.046

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	14.530	ug/L	15.652	2293	0.012
Be	9	14.585	ug/L	5.250	1362	0.007
B	11	15.827	ug/L	2.814	2429	0.012
Na	23	85169.625	ug/L	3.277	125443380	666.141
Mg	24	83509.049	ug/L	1.505	88918951	472.062
Al	27	91712.042	ug/L	2.395	129209499	686.165
P	31	90384.816	ug/L	1.546	6818485	36.196
K	39	92205.318	ug/L	1.914	216172241	1147.032
Ca	43	96282.087	ug/L	0.929	418199	2.220
> Sc	45		ug/L		188361	188361.153
Ti	47	1887.919	ug/L	1.323	363068	1.927
V	51	20.700	ug/L	2.366	31061	0.187
Cr	52	25.691	ug/L	2.006	46153	0.226
Cr	53		ug/L		29771	0.006
Mn	55	25.465	ug/L	1.338	69960	0.370
Fe	57	101759.167	ug/L	1.058	5706104	30.283
Co	59	19.759	ug/L	0.641	41483	0.220
Ni	60	23.423	ug/L	2.231	10421	0.055
Cu	63		ug/L		19484	0.103
Cu	65	20.982	ug/L	0.760	9289	0.049
Zn	66	22.265	ug/L	0.422	5901	0.053
Zn	67		ug/L		2321	0.008
Zn	68		ug/L		3605	0.031
> Ge	74		ug/L		98795	98794.769
As	75	21.072	ug/L	3.620	5233	0.056
Se	77		ug/L		3758	0.015
Se	82	21.610	ug/L	6.501	615	0.006
Kr	83		ug/L		52	0.000
Sr	88	23.388	ug/L	1.784	98152	1.348
Y	89		ug/L		128	0.002
Zr	90	21.442	ug/L	1.571	46479	0.636
Mo	98	2008.672	ug/L	1.913	1888015	25.949
Ag	107	18.102	ug/L	2.127	31431	0.432
Cd	111	18.992	ug/L	1.905	7589	0.104
Cd	114		ug/L		20311	0.279
> In	115		ug/L		72774	72773.735
Sn	120	19.799	ug/L	0.283	34968	0.479
Sb	121	20.890	ug/L	0.310	24011	0.327
Sb	123		ug/L		18505	0.252
Ba	135		ug/L		7911	0.101
Ba	137	20.686	ug/L	0.952	13546	0.174
Ho	165		ug/L		1798	0.023
> Lu	175		ug/L		78038	78038.049
Tl	205	18.551	ug/L	1.512	21207	0.271
Pb	208	19.436	ug/L	1.019	89010	1.139
Th	232	21.167	ug/L	0.286	113817	1.454
U	238	21.330	ug/L	1.359	120117	1.539

Sample ID: QC Std 5

Report Date/Time: Thursday, January 28, 2010 14:20:30

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	72.648				
Be	9	72.926				
B	11	79.133				
Na	23	85.170				
Mg	24	83.509				
Al	27	91.712				
P	31	90.385				
K	39	92.205				
Ca	43	96.282				
> Sc	45		100.9			
Ti	47	94.396				
V	51	103.499				
Cr	52	110.263				
Cr	53					
Mn	55	98.703				
Fe	57	101.759				
Co	59	97.650				
Ni	60	100.485				
Cu	63					
Cu	65	89.895				
Zn	66	93.708				
Zn	67					
Zn	68					
> Ge	74		95.7			
As	75	105.360				
Se	77					
Se	82	108.048				
Kr	83					
Sr	88	101.863				
Y	89					
Zr	90	107.210				
Mo	98	100.434				
Ag	107	90.510				
Cd	111	92.898				
Cd	114					
> In	115		99.7			
Sn	120	98.994				
Sb	121	104.452				
Sb	123					
Ba	135					
Ba	137	99.461				
Ho	165					
> Lu	175		102.8			
Tl	205	92.756				
Pb	208	96.272				
Th	232	105.835				
U	238	106.652				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 5	Li	7ICSAB is out of limits
QC Std 5	Be	9ICSAB is out of limits
QC Std 5	B	11ICSAB is out of limits

### QC Action

Sample ID: QC Std 5  
 Report Date/Time: Thursday, January 28, 2010 14:20:30  
 Page 3

QC Action Line: Continue

## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 14:23:55

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 6.047

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	40.745	ug/L	14.825	6674	0.034
Be	9	42.359	ug/L	4.389	4106	0.021
B	11	84.993	ug/L	3.117	12592	0.063
Na	23	4831.370	ug/L	7.510	7413636	37.788
Mg	24	4910.091	ug/L	12.558	5429916	27.756
Al	27	5122.996	ug/L	6.341	7505873	38.329
P	31	4875.836	ug/L	1.669	384021	1.953
K	39	4524.566	ug/L	2.081	11161742	56.286
Ca	43	5001.469	ug/L	0.374	22671	0.115
> Sc	45		ug/L		195793	195793.031
Ti	47	54.944	ug/L	1.091	11028	0.056
V	51	50.575	ug/L	2.037	85023	0.456
Cr	52	51.018	ug/L	0.654	91585	0.449
Cr	53		ug/L		41344	0.060
Mn	55	51.357	ug/L	0.917	146376	0.746
Fe	57	5110.789	ug/L	0.664	300509	1.521
Co	59	50.073	ug/L	0.562	109221	0.558
Ni	60	51.833	ug/L	0.865	23805	0.121
Cu	63		ug/L		49496	0.252
Cu	65	51.383	ug/L	1.808	23585	0.120
Zn	66	51.934	ug/L	0.558	13980	0.123
Zn	67		ug/L		3669	0.019
Zn	68		ug/L		9883	0.086
> Ge	74		ug/L		107358	107357.674
As	75	47.344	ug/L	0.261	13206	0.126
Se	77		ug/L		4225	0.017
Se	82	50.446	ug/L	2.716	1557	0.014
Kr	83		ug/L		21	0.000
Sr	88	49.288	ug/L	1.646	211274	2.841
Y	89		ug/L		22	0.000
Zr	90	48.422	ug/L	0.362	107019	1.437
Mo	98	49.037	ug/L	2.018	47102	0.633
Ag	107	49.516	ug/L	1.928	87789	1.181
Cd	111	49.695	ug/L	2.370	20280	0.273
Cd	114		ug/L		49126	0.661
> In	115		ug/L		74344	74344.282
Sn	120	49.294	ug/L	0.916	88776	1.193
Sb	121	48.299	ug/L	3.562	56490	0.757
Sb	123		ug/L		43218	0.579
Ba	135		ug/L		20012	0.258
Ba	137	51.896	ug/L	0.379	33787	0.435
Ho	165		ug/L		7	0.000
> Lu	175		ug/L		77598	77598.304
Tl	205	50.500	ug/L	1.745	57287	0.737
Pb	208	51.449	ug/L	0.659	234054	3.014
Th	232	52.222	ug/L	0.407	278679	3.586
U	238	54.078	ug/L	0.433	302795	3.902

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 14:26:39

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	81.491				
Be	9	84.718				
B	11	84.993				
Na	23	96.627				
Mg	24	98.202				
Al	27	101.445				
P	31	97.517				
K	39	90.491				
Ca	43	100.029				
Sc	45		104.9			
Ti	47	109.889				
V	51	101.151				
Cr	52	102.036				
Cr	53					
Mn	55	102.713				
Fe	57	102.216				
Co	59	100.146				
Ni	60	103.667				
Cu	63					
Cu	65	102.766				
Zn	66	103.868				
Zn	67					
Zn	68					
Ge	74		104.0			
As	75	94.688				
Se	77					
Se	82	100.892				
Kr	83					
Sr	88	98.576				
Y	89					
Zr	90	96.844				
Mo	98	98.075				
Ag	107	99.033				
Cd	111	99.390				
Cd	114					
In	115		101.8			
Sn	120	98.587				
Sb	121	96.598				
Sb	123					
Ba	135					
Ba	137	103.791				
Ho	165					
Lu	175		102.3			
Tl	205	100.999				
Pb	208	102.898				
Th	232	104.444				
U	238	108.156				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
QC Std 6	Li	7CCV is out of limits (+/- 10%)
QC Std 6	Be	9CCV is out of limits (+/- 10%)
QC Std 6	B	11CCV is out of limits (+/- 10%)

### QC Action

Sample ID: QC Std 6  
 Report Date/Time: Thursday, January 28, 2010 14:26:39  
 Page 3

QC Action Line: Continue



## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 14:30:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 7.048

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.014	ug/L	184.365	9	0.000
Be	9	-0.012	ug/L	86.822	2	-0.000
B	11	1.403	ug/L	17.605	427	0.001
Na	23	-0.002	ug/L	238284.422	20015	-0.000
Mg	24	2.360	ug/L	78.558	3334	0.013
Al	27	4.070	ug/L	25.880	6335	0.030
P	31	1.321	ug/L	232.936	1880	0.001
K	39	12.239	ug/L	74.948	170018	0.152
Ca	43	-6.159	ug/L	44.738	64	-0.000
> Sc	45		ug/L		196595	196594.862
Ti	47	0.666	ug/L	16.213	180	0.001
V	51	-0.338	ug/L	177.491	-4842	-0.003
Cr	52	-0.176	ug/L	17.884	3464	-0.002
Cr	53		ug/L		28274	-0.008
Mn	55	0.004	ug/L	414.595	302	0.000
Fe	57	7.481	ug/L	24.810	3184	0.002
Co	59	0.018	ug/L	52.586	72	0.000
Ni	60	0.015	ug/L	112.373	146	0.000
Cu	63		ug/L		85	0.000
Cu	65	-0.005	ug/L	591.864	39	-0.000
Zn	66	0.110	ug/L	75.864	780	0.000
Zn	67		ug/L		1460	-0.002
Zn	68		ug/L		610	-0.000
> Ge	74		ug/L		109925	109924.734
As	75	0.129	ug/L	600.682	-314	0.000
Se	77		ug/L		2463	-0.000
Se	82	-0.037	ug/L	254.001	2	-0.000
Kr	83		ug/L		19	-0.000
Sr	88	0.016	ug/L	56.913	117	0.001
Y	89		ug/L		9	0.000
Zr	90	0.068	ug/L	17.586	331	0.002
Mo	98	0.119	ug/L	11.420	132	0.002
Ag	107	0.029	ug/L	24.309	78	0.001
Cd	111	0.022	ug/L	24.934	12	0.000
Cd	114		ug/L		30	0.000
> In	115		ug/L		74536	74535.531
Sn	120	0.089	ug/L	6.705	265	0.002
Sb	121	0.538	ug/L	12.085	816	0.008
Sb	123		ug/L		641	0.007
Ba	135		ug/L		8	0.000
Ba	137	0.020	ug/L	93.721	19	0.000
Ho	165		ug/L		3	-0.000
> Lu	175		ug/L		77387	77387.165
Tl	205	0.108	ug/L	12.568	190	0.002
Pb	208	0.020	ug/L	34.862	238	0.001
Th	232	0.069	ug/L	18.767	743	0.005
U	238	0.019	ug/L	45.416	145	0.001

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 14:32:50

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		105.3			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		106.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		102.1			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		102.0			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 14:32:50

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## ICPMS#4 - Summary Report

Sample ID: QC Std 10

Sample Date/Time: Thursday, January 28, 2010 14:36:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 10.049

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	685.859	ug/L	13.131	104393	0.574
Be	9	706.594	ug/L	6.741	63581	0.350
B	11	0.243	ug/L	61.888	238	0.000
Na	23	46911.280	ug/L	8.063	66715864	366.909
Mg	24	44694.700	ug/L	1.944	45930387	252.651
Al	27	45763.746	ug/L	2.972	62242414	342.392
P	31	22131.722	ug/L	1.473	1612831	8.863
K	39	46600.341	ug/L	4.578	105490286	579.707
Ca	43	48429.648	ug/L	0.135	203067	1.117
> Sc	45		ug/L		181778	181778.036
Ti	47	45.045	ug/L	0.772	8403	0.046
V	51	1045.692	ug/L	0.346	1709017	9.423
Cr	52	971.980	ug/L	0.220	1557126	8.547
Cr	53		ug/L		214514	1.029
Mn	55	1021.194	ug/L	1.983	2697205	14.838
Fe	57	52435.845	ug/L	1.594	2838963	15.605
Co	59	945.641	ug/L	1.315	1914495	10.532
Ni	60	966.832	ug/L	1.221	409991	2.255
Cu	63		ug/L		822868	4.526
Cu	65	932.587	ug/L	0.584	396776	2.183
Zn	66	2395.819	ug/L	0.707	569750	5.692
Zn	67		ug/L		87732	0.862
Zn	68		ug/L		399713	3.992
> Ge	74		ug/L		99984	99983.668
As	75	922.108	ug/L	0.417	245469	2.458
Se	77		ug/L		13386	0.111
Se	82	505.986	ug/L	1.446	14522	0.145
Kr	83		ug/L		29	0.000
Sr	88	1034.107	ug/L	1.182	4203869	59.615
Y	89		ug/L		127	0.002
Zr	90	513.025	ug/L	0.583	1073838	15.226
Mo	98	1013.806	ug/L	0.859	923556	13.097
Ag	107	236.297	ug/L	0.297	397347	5.635
Cd	111	974.795	ug/L	0.431	377369	5.352
Cd	114		ug/L		915166	12.978
> In	115		ug/L		70514	70514.323
Sn	120	1000.588	ug/L	0.667	1707485	24.213
Sb	121	249.059	ug/L	4.763	275444	3.903
Sb	123		ug/L		209458	2.968
Ba	135		ug/L		374905	4.865
Ba	137	988.439	ug/L	1.890	638883	8.291
Ho	165		ug/L		79	0.001
> Lu	175		ug/L		77067	77067.119
Tl	205	495.557	ug/L	0.325	557670	7.235
Pb	208	5169.255	ug/L	0.437	23340083	302.858
Th	232	2767.610	ug/L	0.816	14647278	190.067
U	238	5699.231	ug/L	0.722	31686675	411.185

Sample ID: QC Std 10

Report Date/Time: Thursday, January 28, 2010 14:38:56

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	68.586				
Be	9	70.659				
B	11					
Na	23	93.823				
Mg	24	89.389				
Al	27	91.527				
P	31	88.527				
K	39	93.201				
Ca	43	96.859				
> Sc	45		97.4			
Ti	47					
V	51	104.569				
Cr	52	97.198				
Cr	53					
Mn	55	102.119				
Fe	57	104.872				
Co	59	94.564				
Ni	60	96.683				
Cu	63					
Cu	65	93.259				
Zn	66	95.833				
Zn	67					
Zn	68					
> Ge	74		96.9			
As	75	92.211				
Se	77					
Se	82	101.197				
Kr	83					
Sr	88	103.411				
Y	89					
Zr	90	102.605				
Mo	98	101.381				
Ag	107	94.519				
Cd	111	97.480				
Cd	114					
> In	115		96.6			
Sn	120	100.059				
Sb	121	99.624				
Sb	123					
Ba	135					
Ba	137	98.844				
Ho	165					
> Lu	175		101.6			
Tl	205	99.111				
Pb	208	103.385				
Th	232	110.704				
U	238	113.985				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 10	Li	7LRS is out of limits ( +/- 10%)
QC Std 10	Be	9LRS is out of limits ( +/- 10%)
QC Std 10	Mg	24LRS is out of limits ( +/- 10%)
QC Std 10	P	31LRS is out of limits ( +/- 10%)
QC Std 10	Th	232LRS is out of limits ( +/- 10%)
QC Std 10	U	238LRS is out of limits ( +/- 10%)

Sample ID: QC Std 10

Report Date/Time: Thursday, January 28, 2010 14:38:56

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## QC Action

QC Action Line: Continue

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Sample ID: QC Std 10

Report Date/Time: Thursday, January 28, 2010 14:38:56

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## ICPMS#4 - Summary Report

Sample ID: QC Std 11

Sample Date/Time: Thursday, January 28, 2010 14:42:20

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 11.050

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	35.247	ug/L	12.247	5688	0.029
Be	9	36.618	ug/L	3.537	3494	0.018
B	11	77.102	ug/L	1.398	11264	0.057
Na	23	4515.824	ug/L	3.578	6825208	35.320
Mg	24	4394.685	ug/L	4.082	4787875	24.842
Al	27	4933.769	ug/L	5.965	7112685	36.913
P	31	4696.099	ug/L	0.605	364060	1.881
K	39	4663.238	ug/L	2.849	11311900	58.011
Ca	43	4891.955	ug/L	1.600	21821	0.113
Sc	45		ug/L		192665	192665.142
Ti	47	52.128	ug/L	0.857	10299	0.053
V	51	51.966	ug/L	1.456	86057	0.468
Cr	52	52.016	ug/L	0.686	91812	0.457
Cr	53		ug/L		38801	0.050
Mn	55	51.858	ug/L	1.038	145445	0.753
Fe	57	5190.663	ug/L	1.757	300295	1.545
Co	59	51.296	ug/L	2.063	110097	0.571
Ni	60	53.149	ug/L	1.337	24017	0.124
Cu	63		ug/L		49901	0.259
Cu	65	52.504	ug/L	1.183	23714	0.123
Zn	66	52.513	ug/L	1.526	14024	0.125
Zn	67		ug/L		3591	0.018
Zn	68		ug/L		10025	0.088
Ge	74		ug/L		106576	106576.480
As	75	48.307	ug/L	2.274	13383	0.129
Se	77		ug/L		3871	0.014
Se	82	52.502	ug/L	3.462	1609	0.015
Kr	83		ug/L		20	-0.000
Sr	88	49.893	ug/L	1.328	214064	2.876
Y	89		ug/L		19	0.000
Zr	90	51.751	ug/L	3.281	114434	1.536
Mo	98	49.619	ug/L	0.624	47712	0.641
Ag	107	50.767	ug/L	1.426	90093	1.211
Cd	111	50.572	ug/L	2.045	20660	0.278
Cd	114		ug/L		49741	0.668
In	115		ug/L		74410	74410.324
Sn	120	52.122	ug/L	0.996	93949	1.261
Sb	121	52.714	ug/L	2.038	61674	0.826
Sb	123		ug/L		47648	0.638
Ba	135		ug/L		20017	0.258
Ba	137	52.619	ug/L	0.430	34254	0.441
Ho	165		ug/L		7	0.000
Lu	175		ug/L		77592	77591.598
Tl	205	51.932	ug/L	1.025	58900	0.758
Pb	208	53.371	ug/L	1.254	242759	3.127
Th	232	55.652	ug/L	0.436	296923	3.822
U	238	56.498	ug/L	0.971	316303	4.076

Sample ID: QC Std 11

Report Date/Time: Thursday, January 28, 2010 14:45:03

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	70.494				
Be	9	73.236				
B	11	77.102				
Na	23	90.316				
Mg	24	87.894				
Al	27	97.698				
P	31	93.922				
K	39	93.265				
Ca	43	97.839				
> Sc	45		103.2			
Ti	47	104.257				
V	51	103.931				
Cr	52	104.031				
Cr	53					
Mn	55	103.717				
Fe	57	103.813				
Co	59	102.593				
Ni	60	106.298				
Cu	63					
Cu	65	105.008				
Zn	66	105.025				
Zn	67					
Zn	68					
> Ge	74		103.2			
As	75	96.613				
Se	77					
Se	82	105.005				
Kr	83					
Sr	88	99.786				
Y	89					
Zr	90	103.503				
Mo	98	99.238				
Ag	107	101.535				
Cd	111	101.144				
Cd	114					
> In	115		101.9			
Sn	120	104.244				
Sb	121	105.428				
Sb	123					
Ba	135					
Ba	137	105.239				
Ho	165					
> Lu	175		102.3			
Tl	205	103.865				
Pb	208	106.743				
Th	232	111.304				
U	238	112.996				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 11	Li	7	7CCV is out of limits ( +/- 10%)
QC Std 11	Be	9	9CCV is out of limits ( +/- 10%)
QC Std 11	B	11	11CCV is out of limits ( +/- 10%)
QC Std 11	Mg	24	24CCV is out of limits ( +/- 10%)
QC Std 11	Th	232	232CCV is out of limits ( +/- 10%)
QC Std 11	U	238	238CCV is out of limits ( +/- 10%)

Sample ID: QC Std 11

Report Date/Time: Thursday, January 28, 2010 14:45:03

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## QC Action

QC Action Line: Continue

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Sample ID: QC Std 11

Report Date/Time: Thursday, January 28, 2010 14:45:03

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## ICPMS#4 - Summary Report

Sample ID: QC Std 12

Sample Date/Time: Thursday, January 28, 2010 14:48:29

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 12.051

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.048	ug/L	61.970	15	0.000
Be	9	-0.002	ug/L	1876.742	3	-0.000
B	11	1.174	ug/L	23.341	397	0.001
Na	23	1.423	ug/L	211.852	22351	0.011
Mg	24	2.941	ug/L	1.347	4001	0.017
Al	27	3.384	ug/L	103.518	5335	0.025
P	31	1.096	ug/L	207.133	1874	0.000
K	39	10.277	ug/L	55.121	166299	0.128
Ca	43	-5.093	ug/L	37.771	69	-0.000
> Sc	45		ug/L		198091	198091.024
Ti	47	0.177	ug/L	29.648	83	0.000
V	51	0.409	ug/L	159.265	-3536	0.004
Cr	52	-0.255	ug/L	21.646	3352	-0.002
Cr	53		ug/L		25818	-0.021
Mn	55	0.029	ug/L	85.839	375	0.000
Fe	57	5.405	ug/L	69.633	3084	0.002
Co	59	0.036	ug/L	53.921	113	0.000
Ni	60	0.056	ug/L	70.607	165	0.000
Cu	63		ug/L		117	0.000
Cu	65	0.044	ug/L	33.053	62	0.000
Zn	66	0.086	ug/L	39.392	799	0.000
Zn	67		ug/L		1476	-0.002
Zn	68		ug/L		692	0.000
> Ge	74		ug/L		113510	113509.978
As	75	0.630	ug/L	149.820	-172	0.002
Se	77		ug/L		2238	-0.003
Se	82	0.146	ug/L	91.257	8	0.000
Kr	83		ug/L		14	-0.000
Sr	88	0.037	ug/L	61.799	220	0.002
Y	89		ug/L		8	-0.000
Zr	90	0.130	ug/L	23.768	488	0.004
Mo	98	0.155	ug/L	17.684	174	0.002
Ag	107	0.046	ug/L	28.214	114	0.001
Cd	111	0.063	ug/L	38.487	30	0.000
Cd	114		ug/L		62	0.001
> In	115		ug/L		77889	77889.280
Sn	120	0.583	ug/L	6.745	1208	0.014
Sb	121	1.280	ug/L	11.594	1759	0.020
Sb	123		ug/L		1369	0.016
Ba	135		ug/L		27	0.000
Ba	137	0.049	ug/L	45.625	39	0.000
Ho	165		ug/L		3	-0.000
> Lu	175		ug/L		80616	80615.628
Tl	205	0.255	ug/L	11.954	371	0.004
Pb	208	0.263	ug/L	24.736	1396	0.015
Th	232	0.251	ug/L	4.679	1785	0.017
U	238	0.153	ug/L	36.376	928	0.011

Sample ID: QC Std 12

Report Date/Time: Thursday, January 28, 2010 14:51:14

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
Sc	45		106.1			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
Ge	74		110.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
In	115		106.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
Lu	175		106.2			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

## QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 12

Report Date/Time: Thursday, January 28, 2010 14:51:14

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 15:43:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 6.060

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	33.756	ug/L	11.300	5525	0.028
Be	9	37.759	ug/L	3.047	3652	0.019
B	11	80.141	ug/L	1.897	11857	0.060
Na	23	4547.372	ug/L	4.316	6963743	35.567
Mg	24	4506.828	ug/L	1.646	4976187	25.476
Al	27	4915.902	ug/L	0.518	7183298	36.779
P	31	4686.145	ug/L	1.256	368232	1.877
K	39	4472.951	ug/L	4.020	11004680	55.643
Ca	43	4890.781	ug/L	1.215	22118	0.113
> Sc	45		ug/L		195304	195304.130
Ti	47	52.525	ug/L	0.425	10519	0.054
V	51	51.023	ug/L	2.241	85566	0.460
Cr	52	50.712	ug/L	2.195	90821	0.446
Cr	53		ug/L		42100	0.064
Mn	55	51.824	ug/L	1.938	147331	0.753
Fe	57	5085.632	ug/L	1.765	298273	1.513
Co	59	50.287	ug/L	1.976	109395	0.560
Ni	60	52.058	ug/L	1.052	23847	0.121
Cu	63		ug/L		50067	0.256
Cu	65	52.232	ug/L	1.330	23912	0.122
Zn	66	52.226	ug/L	0.950	14236	0.124
Zn	67		ug/L		4014	0.022
Zn	68		ug/L		10139	0.087
> Ge	74		ug/L		108739	108739.393
As	75	47.406	ug/L	1.023	13394	0.126
Se	77		ug/L		4027	0.014
Se	82	50.263	ug/L	2.841	1571	0.014
Kr	83		ug/L		16	-0.000
Sr	88	49.663	ug/L	1.125	213590	2.863
Y	89		ug/L		15	0.000
Zr	90	48.911	ug/L	0.810	108467	1.452
Mo	98	49.003	ug/L	0.961	47233	0.633
Ag	107	49.488	ug/L	0.740	88045	1.180
Cd	111	49.924	ug/L	1.303	20445	0.274
Cd	114		ug/L		49185	0.659
> In	115		ug/L		74592	74591.745
Sn	120	49.568	ug/L	0.567	89577	1.199
Sb	121	48.726	ug/L	3.819	57168	0.764
Sb	123		ug/L		43578	0.582
Ba	135		ug/L		20220	0.254
Ba	137	50.815	ug/L	1.917	33957	0.426
Ho	165		ug/L		5	0.000
> Lu	175		ug/L		79665	79665.014
Tl	205	51.622	ug/L	0.706	60110	0.754
Pb	208	52.552	ug/L	1.690	245389	3.079
Th	232	53.056	ug/L	1.723	290620	3.644
U	238	54.847	ug/L	0.728	315254	3.957

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 15:46:32

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	67.513				
Be	9	75.518				
B	11	80.141				
Na	23	90.947				
Mg	24	90.137				
Al	27	97.345				
P	31	93.723				
K	39	89.459				
Ca	43	97.816				
> Sc	45		104.6			
Ti	47	105.049				
V	51	102.045				
Cr	52	101.423				
Cr	53					
Mn	55	103.648				
Fe	57	101.713				
Co	59	100.573				
Ni	60	104.116				
Cu	63					
Cu	65	104.463				
Zn	66	104.452				
Zn	67					
Zn	68					
> Ge	74		105.3			
As	75	94.811				
Se	77					
Se	82	100.527				
Kr	83					
Sr	88	99.326				
Y	89					
Zr	90	97.823				
Mo	98	98.005				
Ag	107	98.977				
Cd	111	99.848				
Cd	114					
> In	115		102.2			
Sn	120	99.136				
Sb	121	97.452				
Sb	123					
Ba	135					
Ba	137	101.630				
Ho	165					
> Lu	175		105.0			
Tl	205	103.245				
Pb	208	105.104				
Th	232	106.111				
U	238	109.694				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	7CCV is out of limits ( +/- 10%)
QC Std 6	Be	9	9CCV is out of limits ( +/- 10%)
QC Std 6	B	11	11CCV is out of limits ( +/- 10%)
QC Std 6	K	39	39CCV is out of limits ( +/- 10%)

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 15:46:32

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## QC Action

QC Action Line: Continue

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Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 15:46:32

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# ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 15:49:58

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 7.061

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	-0.014	ug/L	139.476	4	-0.000
Be	9	-0.015	ug/L	38.608	2	-0.000
B	11	1.383	ug/L	26.128	424	0.001
Na	23	-3.029	ug/L	88.087	15342	-0.024
Mg	24	1.161	ug/L	203.724	2000	0.007
Al	27	2.935	ug/L	12.990	4667	0.022
P	31	-0.023	ug/L	4144.503	1772	-0.000
K	39	3.060	ug/L	107.695	147425	0.038
Ca	43	-3.964	ug/L	70.645	74	-0.000
Sc	45		ug/L		196509	196509.303
Ti	47	-0.018	ug/L	237.714	43	-0.000
V	51	0.320	ug/L	91.911	-3675	0.003
Cr	52	-0.444	ug/L	11.227	2998	-0.004
Cr	53		ug/L		27697	-0.011
Mn	55	0.003	ug/L	351.123	298	0.000
Fe	57	1.570	ug/L	150.249	2837	0.000
Co	59	0.016	ug/L	23.662	67	0.000
Ni	60	0.007	ug/L	349.119	142	0.000
Cu	63		ug/L		81	-0.000
Cu	65	0.016	ug/L	38.692	48	0.000
Zn	66	0.133	ug/L	219.136	798	0.000
Zn	67		ug/L		1520	-0.002
Zn	68		ug/L		640	-0.000
Ge	74		ug/L		111521	111521.428
As	75	-0.303	ug/L	104.065	-447	-0.001
Se	77		ug/L		2341	-0.002
Se	82	0.068	ug/L	227.655	5	0.000
Kr	83		ug/L		13	-0.000
Sr	88	0.009	ug/L	82.404	90	0.001
Y	89		ug/L		6	-0.000
Zr	90	0.076	ug/L	16.131	361	0.002
Mo	98	0.044	ug/L	11.371	61	0.001
Ag	107	0.022	ug/L	51.906	67	0.001
Cd	111	0.038	ug/L	15.921	19	0.000
Cd	114		ug/L		25	0.000
In	115		ug/L		76981	76980.891
Sn	120	0.090	ug/L	13.338	275	0.002
Sb	121	0.570	ug/L	18.521	881	0.009
Sb	123		ug/L		683	0.007
Ba	135		ug/L		14	0.000
Ba	137	0.014	ug/L	77.541	16	0.000
Ho	165		ug/L		1	-0.000
Lu	175		ug/L		80336	80336.059
Tl	205	0.135	ug/L	7.872	229	0.002
Pb	208	0.031	ug/L	16.259	300	0.002
Th	232	0.109	ug/L	20.409	995	0.008
U	238	0.020	ug/L	20.412	158	0.001

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 15:52:43

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 15:52:43

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		105.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		108.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		105.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		105.9			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#4 - Summary Report

Sample ID: 1202018149

Sample Date/Time: Thursday, January 28, 2010 15:56:08

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\1202018149.062

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	-0.015	ug/L	58.816	4	-0.000
Be	9	-0.019	ug/L	60.015	1	-0.000
B	11	0.271	ug/L	26.119	269	0.000
Na	23	2.364	ug/L	62.773	24354	0.018
Mg	24	1.114	ug/L	135.732	2000	0.006
Al	27	10.113	ug/L	9.439	15675	0.076
P	31	33.068	ug/L	2.718	4506	0.013
K	39	9.369	ug/L	13.196	167645	0.117
Ca	43	7.591	ug/L	36.146	130	0.000
> Sc	45		ug/L		202336	202335.540
Ti	47	0.660	ug/L	36.924	184	0.001
V	51	0.607	ug/L	99.435	-3262	0.005
Cr	52	0.283	ug/L	6.906	4382	0.002
Cr	53		ug/L		24779	-0.029
Mn	55	0.324	ug/L	5.135	1251	0.005
Fe	57	34.716	ug/L	1.587	4917	0.010
Co	59	0.006	ug/L	85.902	47	0.000
Ni	60	0.062	ug/L	47.426	172	0.000
Cu	63		ug/L		273	0.001
Cu	65	0.194	ug/L	14.270	134	0.000
Zn	66	2.954	ug/L	6.591	1512	0.007
Zn	67		ug/L		1509	-0.002
Zn	68		ug/L		1188	0.005
> Ge	74		ug/L		109182	109182.463
As	75	-0.012	ug/L	2054.213	-352	-0.000
Se	77		ug/L		2135	-0.003
Se	82	-0.143	ug/L	110.215	-2	-0.000
Kr	83		ug/L		19	-0.000
Sr	88	0.039	ug/L	1.660	225	0.002
Y	89		ug/L		25	0.000
Zr	90	0.600	ug/L	32.189	1562	0.018
Mo	98	0.066	ug/L	35.946	83	0.001
Ag	107	0.007	ug/L	73.689	40	0.000
Cd	111	0.067	ug/L	22.665	32	0.000
Cd	114		ug/L		77	0.001
> In	115		ug/L		77332	77332.494
Sn	120	0.281	ug/L	3.536	633	0.007
Sb	121	0.149	ug/L	26.896	375	0.002
Sb	123		ug/L		285	0.002
Ba	135		ug/L		78	0.001
Ba	137	0.157	ug/L	4.166	115	0.001
Ho	165		ug/L		2	-0.000
> Lu	175		ug/L		82463	82462.916
Tl	205	0.065	ug/L	27.541	150	0.001
Pb	208	0.060	ug/L	8.496	445	0.003
Th	232	0.159	ug/L	38.169	1299	0.011
U	238	0.003	ug/L	74.500	58	0.000

Sample ID: 1202018149

Report Date/Time: Thursday, January 28, 2010 15:58:53

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		108.4			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		105.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		105.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		108.7			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202018149

Report Date/Time: Thursday, January 28, 2010 15:58:53

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# ICPMS#4 - Summary Report

Sample ID: 1202018150

Sample Date/Time: Thursday, January 28, 2010 16:02:18

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 942665|40|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\1202018150.063

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	1.926	ug/L	8.387	332	0.002
Be	9	15.431	ug/L	3.294	1545	0.008
B	11	32.781	ug/L	1.535	5148	0.024
Na	23	249.770	ug/L	5.874	414955	1.954
Mg	24	1117.878	ug/L	4.200	1276316	6.319
Al	27	3326.560	ug/L	6.764	5024778	24.888
P	31	205.010	ug/L	0.463	18393	0.082
K	39	1166.211	ug/L	10.643	3070472	14.508
Ca	43	2707.307	ug/L	1.071	12693	0.062
> Sc	45		ug/L		201837	201836.547
Ti	47	134.776	ug/L	2.562	27818	0.138
V	51	24.221	ug/L	5.053	39691	0.218
Cr	52	64.492	ug/L	1.188	118324	0.567
Cr	53		ug/L		44804	0.070
Mn	55	150.804	ug/L	0.838	442548	2.191
Fe	57	4683.626	ug/L	1.485	284145	1.394
Co	59	25.937	ug/L	0.565	58339	0.289
Ni	60	38.520	ug/L	1.398	18274	0.090
Cu	63		ug/L		47275	0.234
Cu	65	48.224	ug/L	2.240	22820	0.113
Zn	66	165.542	ug/L	0.897	43859	0.393
Zn	67		ug/L		8089	0.058
Zn	68		ug/L		31298	0.280
> Ge	74		ug/L		109616	109616.035
As	75	27.353	ug/L	2.515	7642	0.073
Se	77		ug/L		4656	0.020
Se	82	75.493	ug/L	3.046	2378	0.022
Kr	83		ug/L		12	-0.000
Sr	88	60.268	ug/L	1.058	265538	3.474
Y	89		ug/L		13540	0.177
Zr	90	2.116	ug/L	2.317	4986	0.063
Mo	98	13.178	ug/L	1.283	13027	0.170
Ag	107	1.411	ug/L	0.607	2599	0.034
Cd	111	15.352	ug/L	2.351	6444	0.084
Cd	114		ug/L		15824	0.207
> In	115		ug/L		76417	76416.974
Sn	120	10.060	ug/L	0.873	18708	0.243
Sb	121	15.437	ug/L	1.630	18681	0.242
Sb	123		ug/L		14326	0.186
Ba	135		ug/L		22602	0.276
Ba	137	55.258	ug/L	0.728	37976	0.464
Ho	165		ug/L		646	0.008
> Lu	175		ug/L		81914	81914.338
Tl	205	34.165	ug/L	1.478	40936	0.499
Pb	208	23.175	ug/L	0.653	111381	1.358
Th	232	2.794	ug/L	2.991	16122	0.192
U	238	0.539	ug/L	2.471	3225	0.039

Sample ID: 1202018150

Report Date/Time: Thursday, January 28, 2010 16:05:03

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		108.1			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		106.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		104.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		108.0			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
	Ti	47Sample is out of limits (over linear range)_

### QC Action

QC Action Line: No QC out of limits detected

# ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 16:14:38

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 6.065

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	37.180	ug/L	13.549	6183	0.031
Be	9	40.195	ug/L	6.924	3953	0.020
B	11	81.375	ug/L	4.487	12243	0.061
Na	23	4812.921	ug/L	3.605	7497305	37.643
Mg	24	4666.148	ug/L	2.689	5240121	26.377
Al	27	5005.690	ug/L	1.467	7440074	37.451
P	31	4766.619	ug/L	0.463	381028	1.909
K	39	4469.129	ug/L	2.804	11187631	55.596
Ca	43	4924.910	ug/L	0.562	22653	0.114
> Sc	45		ug/L		198669	198669.280
Ti	47	51.079	ug/L	1.639	10407	0.052
V	51	50.943	ug/L	1.811	86904	0.459
Cr	52	51.746	ug/L	0.939	94212	0.455
Cr	53		ug/L		41505	0.057
Mn	55	51.397	ug/L	0.844	148649	0.747
Fe	57	5052.346	ug/L	0.653	301485	1.504
Co	59	50.014	ug/L	0.836	110698	0.557
Ni	60	51.938	ug/L	1.305	24204	0.121
Cu	63		ug/L		50588	0.254
Cu	65	51.968	ug/L	1.613	24202	0.122
Zn	66	51.760	ug/L	1.572	14269	0.123
Zn	67		ug/L		3687	0.018
Zn	68		ug/L		10128	0.086
> Ge	74		ug/L		109920	109920.045
As	75	47.433	ug/L	1.339	13547	0.126
Se	77		ug/L		4225	0.016
Se	82	49.883	ug/L	2.733	1577	0.014
Kr	83		ug/L		13	-0.000
Sr	88	49.347	ug/L	0.628	213528	2.845
Y	89		ug/L		28	0.000
Zr	90	49.036	ug/L	1.293	109396	1.455
Mo	98	48.934	ug/L	0.839	47456	0.632
Ag	107	50.310	ug/L	1.161	90053	1.200
Cd	111	49.880	ug/L	0.685	20552	0.274
Cd	114		ug/L		49780	0.663
> In	115		ug/L		75041	75041.299
Sn	120	49.948	ug/L	0.293	90806	1.209
Sb	121	49.234	ug/L	5.075	58099	0.772
Sb	123		ug/L		44411	0.590
Ba	135		ug/L		20055	0.251
Ba	137	51.204	ug/L	0.547	34248	0.430
Ho	165		ug/L		7	0.000
> Lu	175		ug/L		79722	79722.299
Tl	205	51.780	ug/L	1.244	60345	0.756
Pb	208	52.158	ug/L	0.098	243769	3.056
Th	232	53.126	ug/L	0.612	291262	3.648
U	238	54.755	ug/L	0.595	314985	3.950

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 16:17:22

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	74.359				
Be	9	80.391				
B	11	81.375				
Na	23	96.258				
Mg	24	93.323				
Al	27	99.123				
P	31	95.332				
K	39	89.383				
Ca	43	98.498				
> Sc	45		106.4			
Ti	47	102.157				
V	51	101.885				
Cr	52	103.493				
Cr	53					
Mn	55	102.795				
Fe	57	101.047				
Co	59	100.028				
Ni	60	103.876				
Cu	63					
Cu	65	103.936				
Zn	66	103.520				
Zn	67					
Zn	68					
> Ge	74		106.5			
As	75	94.865				
Se	77					
Se	82	99.767				
Kr	83					
Sr	88	98.694				
Y	89					
Zr	90	98.072				
Mo	98	97.869				
Ag	107	100.619				
Cd	111	99.760				
Cd	114					
> In	115		102.8			
Sn	120	99.895				
Sb	121	98.467				
Sb	123					
Ba	135					
Ba	137	102.407				
Ho	165					
> Lu	175		105.1			
Tl	205	103.561				
Pb	208	104.315				
Th	232	106.253				
U	238	109.509				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Li	7CCV is out of limits ( +/- 10%)
QC Std 6	Be	9CCV is out of limits ( +/- 10%)
QC Std 6	B	11CCV is out of limits ( +/- 10%)
QC Std 6	K	39CCV is out of limits ( +/- 10%)

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 16:17:22

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## QC Action

QC Action Line: Continue

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Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 16:17:22

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 16:20:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 7.066

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	-0.008	ug/L	116.449	5	-0.000
Be	9	-0.015	ug/L	103.141	2	-0.000
B	11	1.195	ug/L	21.109	398	0.001
Na	23	-3.695	ug/L	55.766	14341	-0.029
Mg	24	0.868	ug/L	120.309	1667	0.005
Al	27	3.168	ug/L	75.350	5001	0.024
P	31	0.468	ug/L	58.870	1815	0.000
K	39	3.772	ug/L	26.040	149444	0.047
Ca	43	-3.239	ug/L	69.037	77	-0.000
> Sc	45		ug/L		196908	196907.814
Ti	47	0.040	ug/L	165.762	55	0.000
V	51	0.222	ug/L	59.049	-3855	0.002
Cr	52	0.049	ug/L	81.760	3858	0.000
Cr	53		ug/L		28135	-0.009
Mn	55	0.007	ug/L	155.114	310	0.000
Fe	57	4.070	ug/L	20.143	2989	0.001
Co	59	0.014	ug/L	77.332	64	0.000
Ni	60	-0.004	ug/L	92.942	137	-0.000
Cu	63		ug/L		78	-0.000
Cu	65	0.008	ug/L	128.197	45	0.000
Zn	66	-0.004	ug/L	2153.174	757	-0.000
Zn	67		ug/L		1508	-0.002
Zn	68		ug/L		637	-0.000
> Ge	74		ug/L		110827	110826.686
As	75	-0.324	ug/L	72.217	-450	-0.001
Se	77		ug/L		2353	-0.002
Se	82	0.570	ug/L	42.258	21	0.000
Kr	83		ug/L		17	-0.000
Sr	88	0.014	ug/L	43.259	113	0.001
Y	89		ug/L		9	-0.000
Zr	90	0.073	ug/L	21.865	348	0.002
Mo	98	0.046	ug/L	26.104	62	0.001
Ag	107	0.021	ug/L	29.924	64	0.000
Cd	111	0.022	ug/L	22.912	12	0.000
Cd	114		ug/L		30	0.000
> In	115		ug/L		75808	75808.074
Sn	120	0.087	ug/L	5.163	266	0.002
Sb	121	0.409	ug/L	19.694	678	0.006
Sb	123		ug/L		542	0.005
Ba	135		ug/L		16	0.000
Ba	137	0.019	ug/L	43.322	19	0.000
Ho	165		ug/L		1	-0.000
> Lu	175		ug/L		78956	78956.057
Tl	205	0.182	ug/L	9.986	280	0.003
Pb	208	0.025	ug/L	36.273	267	0.001
Th	232	0.090	ug/L	32.065	875	0.006
U	238	0.019	ug/L	32.408	147	0.001

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 16:23:33

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		105.5			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		107.4			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		103.8			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		104.1			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 16:23:33

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# ICPMS#4 - Summary Report

Sample ID: 244921001

Sample Date/Time: Thursday, January 28, 2010 16:26:59

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\244921001.067

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	41.078	ug/L	12.633	8506	0.034
Be	9	1.962	ug/L	7.742	244	0.001
B	11	7.159	ug/L	3.528	1595	0.005
Na	23	1263.496	ug/L	8.662	2467554	9.882
Mg	24	6753.120	ug/L	3.108	9436370	38.174
Al	27	34601.051	ug/L	7.542	63988488	258.876
P	31	668.976	ug/L	0.990	68448	0.268
K	39	6084.901	ug/L	14.957	18888837	75.696
Ca	43	5654.338	ug/L	0.829	32339	0.130
Sc	45		ug/L		247164	247164.275
Ti	47	1006.756	ug/L	0.381	254102	1.028
V	51	44.959	ug/L	1.068	94803	0.405
Cr	52	44.318	ug/L	1.502	101057	0.390
Cr	53		ug/L		31469	-0.024
Mn	55	1112.535	ug/L	0.722	3995679	16.165
Fe	57	40289.776	ug/L	1.402	2966938	11.990
Co	59	10.118	ug/L	1.187	27894	0.113
Ni	60	29.372	ug/L	1.031	17105	0.069
Cu	63		ug/L		31064	0.125
Cu	65	26.059	ug/L	0.988	15125	0.061
Zn	66	194.533	ug/L	0.635	47529	0.462
Zn	67		ug/L		8477	0.068
Zn	68		ug/L		34100	0.331
Ge	74		ug/L		101347	101346.908
As	75	5.598	ug/L	11.883	1188	0.015
Se	77		ug/L		1901	-0.004
Se	82	0.576	ug/L	58.318	20	0.000
Kr	83		ug/L		55	0.000
Sr	88	50.383	ug/L	1.271	219247	2.905
Y	89		ug/L		426311	5.649
Zr	90	88.001	ug/L	2.106	197274	2.612
Mo	98	3.076	ug/L	4.439	3015	0.040
Ag	107	18.550	ug/L	1.189	33410	0.442
Cd	111	1.267	ug/L	14.082	528	0.007
Cd	114		ug/L		428	0.005
In	115		ug/L		75474	75474.382
Sn	120	9.890	ug/L	2.587	18165	0.239
Sb	121	0.635	ug/L	4.368	942	0.010
Sb	123		ug/L		716	0.008
Ba	135		ug/L		97490	1.154
Ba	137	232.969	ug/L	0.814	165073	1.954
Ho	165		ug/L		20930	0.248
Lu	175		ug/L		84464	84464.474
Tl	205	0.793	ug/L	4.658	1053	0.012
Pb	208	62.644	ug/L	0.851	310167	3.670
Th	232	23.413	ug/L	1.103	136226	1.608
U	238	4.493	ug/L	0.301	27421	0.324

Sample ID: 244921001

Report Date/Time: Thursday, January 28, 2010 16:29:44

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		132.4			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		98.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		103.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		111.3			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for samSc		45	
	Ti	47	Sample is out of limits (over linear range)
	Mn	55	Sample is out of limits (over linear range)

### QC Action

Sample ID: 244921001  
 Report Date/Time: Thursday, January 28, 2010 16:29:44  
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QC Action Line: Continue

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Sample ID: 244921001

Report Date/Time: Thursday, January 28, 2010 16:29:44

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# ICPMS#4 - Summary Report

Sample ID: 1202018151

Sample Date/Time: Thursday, January 28, 2010 16:33:11

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\1202018151.068

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	41.419	ug/L	18.251	8461	0.035
Be	9	2.147	ug/L	10.593	263	0.001
B	11	8.739	ug/L	6.535	1864	0.006
Na	23	1243.747	ug/L	4.967	2403088	9.728
Mg	24	8056.873	ug/L	9.274	11128214	45.544
Al	27	41750.424	ug/L	6.560	76313718	312.365
P	31	653.341	ug/L	2.533	66178	0.262
K	39	6666.376	ug/L	7.709	20435291	82.930
Ca	43	6035.124	ug/L	1.152	34156	0.139
> Sc	45		ug/L		244610	244609.603
Ti	47	966.694	ug/L	0.585	241452	0.987
V	51	51.527	ug/L	2.068	108276	0.464
Cr	52	50.406	ug/L	2.406	113060	0.443
Cr	53		ug/L		31418	-0.023
Mn	55	981.205	ug/L	1.820	3486547	14.257
Fe	57	41998.755	ug/L	1.372	3059918	12.499
Co	59	10.110	ug/L	2.195	27572	0.113
Ni	60	31.120	ug/L	0.944	17923	0.073
Cu	63		ug/L		36220	0.148
Cu	65	30.606	ug/L	1.554	17567	0.072
Zn	66	192.392	ug/L	1.273	46446	0.457
Zn	67		ug/L		8279	0.067
Zn	68		ug/L		33393	0.328
> Ge	74		ug/L		100135	100135.464
As	75	5.991	ug/L	7.398	1277	0.016
Se	77		ug/L		1679	-0.006
Se	82	0.441	ug/L	16.587	15	0.000
Kr	83		ug/L		66	0.000
Sr	88	59.744	ug/L	0.719	254036	3.444
Y	89		ug/L		404231	5.482
Zr	90	89.147	ug/L	0.678	195270	2.646
Mo	98	3.011	ug/L	1.618	2885	0.039
Ag	107	26.807	ug/L	0.903	47164	0.639
Cd	111	1.339	ug/L	17.149	545	0.007
Cd	114		ug/L		595	0.008
> In	115		ug/L		73740	73739.956
Sn	120	8.000	ug/L	0.273	14378	0.194
Sb	121	0.400	ug/L	6.307	648	0.006
Sb	123		ug/L		525	0.005
Ba	135		ug/L		103728	1.251
Ba	137	252.391	ug/L	0.904	175508	2.117
Ho	165		ug/L		19701	0.238
> Lu	175		ug/L		82893	82892.656
Tl	205	0.753	ug/L	3.947	985	0.011
Pb	208	70.102	ug/L	0.741	340599	4.107
Th	232	24.838	ug/L	1.296	141800	1.706
U	238	5.694	ug/L	0.801	34093	0.411

Sample ID: 1202018151

Report Date/Time: Thursday, January 28, 2010 16:35:56

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		131.0			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		97.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		101.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		109.2			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
Sc 45 Int Std for sanSc	Ti	45 47Sample is out of limits (over linear range)_

### QC Action

QC Action Line: Continue

Sample ID: 1202018151  
 Report Date/Time: Thursday, January 28, 2010 16:35:56  
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## ICPMS#4 - Summary Report

Sample ID: 1202018152

Sample Date/Time: Thursday, January 28, 2010 16:39:23

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\1202018152.069

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	55.068	ug/L	14.516	10836	0.046
Be	9	16.458	ug/L	3.296	1919	0.008
B	11	42.797	ug/L	0.279	7752	0.032
Na	23	2024.252	ug/L	7.644	3750024	15.832
Mg	24	7711.854	ug/L	4.373	10253378	43.594
Al	27	36946.522	ug/L	4.509	65015590	276.424
P	31	1274.381	ug/L	0.476	122181	0.510
K	39	6625.688	ug/L	3.887	19551603	82.423
Ca	43	6119.143	ug/L	1.180	33303	0.141
> Sc	45		ug/L		235239	235238.501
Ti	47	1010.612	ug/L	0.575	242765	1.032
V	51	66.118	ug/L	0.780	135085	0.596
Cr	52	80.682	ug/L	0.588	171396	0.709
Cr	53		ug/L		38848	0.014
Mn	55	988.859	ug/L	0.517	3380313	14.368
Fe	57	39968.457	ug/L	0.244	2801315	11.894
Co	59	27.419	ug/L	0.598	71880	0.305
Ni	60	47.740	ug/L	1.388	26359	0.111
Cu	63		ug/L		62389	0.265
Cu	65	54.538	ug/L	0.247	30074	0.128
Zn	66	221.951	ug/L	1.770	53000	0.527
Zn	67		ug/L		9302	0.078
Zn	68		ug/L		38146	0.378
> Ge	74		ug/L		99249	99248.639
As	75	40.700	ug/L	0.099	10451	0.109
Se	77		ug/L		1791	-0.005
Se	82	9.053	ug/L	5.866	261	0.003
Kr	83		ug/L		49	0.000
Sr	88	75.655	ug/L	0.739	317456	4.361
Y	89		ug/L		368866	5.068
Zr	90	107.616	ug/L	0.607	232620	3.194
Mo	98	25.300	ug/L	2.223	23803	0.327
Ag	107	26.541	ug/L	0.247	46083	0.633
Cd	111	5.788	ug/L	1.134	2315	0.032
Cd	114		ug/L		5003	0.069
> In	115		ug/L		72775	72774.921
Sn	120	24.581	ug/L	1.085	43392	0.595
Sb	121	46.132	ug/L	1.156	52802	0.723
Sb	123		ug/L		40312	0.552
Ba	135		ug/L		105893	1.302
Ba	137	263.005	ug/L	1.786	179477	2.206
Ho	165		ug/L		18119	0.223
> Lu	175		ug/L		81356	81356.492
Tl	205	44.610	ug/L	3.024	53055	0.651
Pb	208	157.901	ug/L	2.394	752707	9.251
Th	232	46.036	ug/L	2.099	257580	3.162
U	238	32.380	ug/L	2.303	190077	2.336

Sample ID: 1202018152

Report Date/Time: Thursday, January 28, 2010 16:42:08

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		126.0			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		96.1			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		99.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		107.2			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	
	Ti	47	Sample is out of limits (over linear range)_

## QC Action

QC Action Line: Continue

Sample ID: 1202018152  
 Report Date/Time: Thursday, January 28, 2010 16:42:08  
 Page 3

## ICPMS#4 - Summary Report

Sample ID: 1202018154

Sample Date/Time: Thursday, January 28, 2010 16:45:35

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 942665[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\1202018154.070

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	57.919	ug/L	11.958	11782	0.048
Be	9	17.598	ug/L	5.838	2121	0.009
B	11	44.383	ug/L	2.428	8300	0.033
Na	23	2058.174	ug/L	6.295	3937937	16.098
Mg	24	8158.654	ug/L	3.663	11221629	46.119
Al	27	39530.230	ug/L	5.230	71897177	295.755
P	31	1377.265	ug/L	0.506	136342	0.552
K	39	7358.400	ug/L	5.977	22423590	91.538
Ca	43	6755.691	ug/L	1.408	38003	0.156
Sc	45		ug/L		243230	243229.939
Ti	47	1003.754	ug/L	0.511	249313	1.025
V	51	64.783	ug/L	2.348	136774	0.584
Cr	52	76.943	ug/L	0.556	169238	0.677
Cr	53		ug/L		37737	0.004
Mn	55	892.977	ug/L	0.588	3156243	12.975
Fe	57	41219.031	ug/L	0.792	2987063	12.267
Co	59	26.882	ug/L	1.273	72870	0.299
Ni	60	49.518	ug/L	1.462	28260	0.115
Cu	63		ug/L		57198	0.235
Cu	65	48.665	ug/L	2.029	27754	0.114
Zn	66	210.001	ug/L	1.653	50447	0.499
Zn	67		ug/L		8912	0.074
Zn	68		ug/L		36686	0.362
Ge	74		ug/L		99767	99767.223
As	75	40.053	ug/L	2.865	10330	0.107
Se	77		ug/L		1784	-0.005
Se	82	8.719	ug/L	4.457	252	0.003
Kr	83		ug/L		63	0.000
Sr	88	82.327	ug/L	0.410	349393	4.746
Y	89		ug/L		444543	6.039
Zr	90	118.246	ug/L	1.032	258509	3.509
Mo	98	25.639	ug/L	1.512	24398	0.331
Ag	107	24.781	ug/L	1.316	43525	0.591
Cd	111	5.783	ug/L	2.720	2340	0.032
Cd	114		ug/L		4773	0.065
In	115		ug/L		73608	73608.448
Sn	120	25.347	ug/L	1.133	45254	0.613
Sb	121	48.155	ug/L	0.237	55739	0.755
Sb	123		ug/L		42541	0.576
Ba	135		ug/L		116751	1.399
Ba	137	281.181	ug/L	0.531	196895	2.359
Ho	165		ug/L		21770	0.261
Lu	175		ug/L		83472	83472.019
Tl	205	45.155	ug/L	0.501	55107	0.659
Pb	208	146.655	ug/L	0.817	717368	8.592
Th	232	46.841	ug/L	1.787	268935	3.217
U	238	30.455	ug/L	1.095	183468	2.197

Sample ID: 1202018154

Report Date/Time: Thursday, January 28, 2010 16:48:21

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## Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: 1202018154

Report Date/Time: Thursday, January 28, 2010 16:48:21

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		130.3			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		96.6			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		100.8			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		110.0			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sanSc	Ti	45	47Sample is out of limits (over linear range)_

### QC Action

QC Action Line: Continue

Sample ID: 1202018154  
 Report Date/Time: Thursday, January 28, 2010 16:48:21  
 Page 3

## ICPMS#4 - Summary Report

Sample ID: 1202018153

Sample Date/Time: Thursday, January 28, 2010 16:51:47

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 942665|10|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\1202018153.071

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	11.529	ug/L	13.658	1894	0.010
Be	9	0.453	ug/L	27.213	47	0.000
B	11	2.946	ug/L	13.300	650	0.002
Na	23	317.767	ug/L	5.335	506505	2.485
Mg	24	1703.144	ug/L	2.334	1885844	9.628
Al	27	8014.653	ug/L	5.815	11736251	59.963
P	31	189.419	ug/L	0.722	16618	0.076
K	39	1328.165	ug/L	1.753	3374239	16.522
Ca	43	1374.374	ug/L	1.548	6295	0.032
> Sc	45		ug/L		195777	195776.758
Ti	47	247.010	ug/L	1.638	49413	0.252
V	51	11.305	ug/L	2.438	15719	0.102
Cr	52	10.515	ug/L	0.797	21853	0.092
Cr	53		ug/L		27181	-0.013
Mn	55	266.260	ug/L	0.181	757684	3.869
Fe	57	9614.889	ug/L	2.011	562898	2.861
Co	59	2.503	ug/L	0.819	5490	0.028
Ni	60	7.519	ug/L	3.478	3571	0.018
Cu	63		ug/L		6316	0.032
Cu	65	6.608	ug/L	1.053	3069	0.015
Zn	66	46.515	ug/L	0.410	11629	0.111
Zn	67		ug/L		3086	0.016
Zn	68		ug/L		8444	0.079
> Ge	74		ug/L		99104	99104.233
As	75	1.307	ug/L	57.104	28	0.003
Se	77		ug/L		2156	-0.001
Se	82	0.122	ug/L	514.022	6	0.000
Kr	83		ug/L		19	0.000
Sr	88	10.307	ug/L	0.891	41694	0.594
Y	89		ug/L		80615	1.150
Zr	90	17.295	ug/L	0.630	36145	0.513
Mo	98	0.617	ug/L	0.600	574	0.008
Ag	107	3.910	ug/L	1.407	6559	0.093
Cd	111	0.209	ug/L	18.393	83	0.001
Cd	114		ug/L		78	0.001
> In	115		ug/L		70090	70090.311
Sn	120	2.073	ug/L	3.938	3613	0.050
Sb	121	0.223	ug/L	7.965	422	0.003
Sb	123		ug/L		337	0.003
Ba	135		ug/L		18622	0.246
Ba	137	49.304	ug/L	0.220	31350	0.414
Ho	165		ug/L		3978	0.052
> Lu	175		ug/L		75789	75788.946
Tl	205	0.564	ug/L	8.600	690	0.008
Pb	208	13.372	ug/L	0.877	59518	0.783
Th	232	4.878	ug/L	1.440	25763	0.335
U	238	0.945	ug/L	2.973	5206	0.068

Sample ID: 1202018153

Report Date/Time: Thursday, January 28, 2010 16:54:31

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		104.9			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		96.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		96.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		99.9			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message  
Ti 47Sample is out of limits (over linear range)\_

## QC Action

QC Action Line: No QC out of limits detected

## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 16:57:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 6.072

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	40.885	ug/L	13.603	6541	0.034
Be	9	44.278	ug/L	4.136	4193	0.022
B	11	88.257	ug/L	1.636	12771	0.066
Na	23	4984.804	ug/L	2.298	7480845	38.988
Mg	24	4986.612	ug/L	6.550	5389881	28.188
Al	27	5181.375	ug/L	6.867	7411187	38.766
P	31	4853.343	ug/L	1.254	373533	1.944
K	39	4689.908	ug/L	2.623	11298092	58.342
Ca	43	4963.847	ug/L	0.427	21989	0.114
> Sc	45		ug/L		191331	191331.022
Ti	47	50.588	ug/L	1.322	9927	0.052
V	51	50.132	ug/L	1.732	82319	0.452
Cr	52	50.398	ug/L	1.450	88447	0.443
Cr	53		ug/L		38376	0.049
Mn	55	50.910	ug/L	0.542	141799	0.740
Fe	57	5041.328	ug/L	0.575	289707	1.500
Co	59	49.653	ug/L	0.477	105842	0.553
Ni	60	51.247	ug/L	0.236	23002	0.120
Cu	63		ug/L		47769	0.249
Cu	65	50.756	ug/L	0.213	22767	0.119
Zn	66	52.298	ug/L	0.717	13625	0.124
Zn	67		ug/L		3615	0.019
Zn	68		ug/L		9752	0.088
> Ge	74		ug/L		103941	103940.828
As	75	48.296	ug/L	2.526	13049	0.129
Se	77		ug/L		3671	0.013
Se	82	50.171	ug/L	3.041	1499	0.014
Kr	83		ug/L		12	-0.000
Sr	88	49.037	ug/L	1.393	203436	2.827
Y	89		ug/L		34	0.000
Zr	90	49.023	ug/L	0.390	104863	1.455
Mo	98	48.482	ug/L	0.565	45083	0.626
Ag	107	49.194	ug/L	0.757	84432	1.173
Cd	111	49.509	ug/L	1.259	19559	0.272
Cd	114		ug/L		47369	0.658
> In	115		ug/L		71951	71951.234
Sn	120	48.554	ug/L	1.337	84649	1.175
Sb	121	48.665	ug/L	4.175	55075	0.763
Sb	123		ug/L		42407	0.587
Ba	135		ug/L		19082	0.251
Ba	137	50.840	ug/L	1.211	32375	0.426
Ho	165		ug/L		4	-0.000
> Lu	175		ug/L		75904	75904.244
Tl	205	51.618	ug/L	0.271	57273	0.754
Pb	208	52.259	ug/L	0.977	232522	3.062
Th	232	53.095	ug/L	0.805	277162	3.646
U	238	54.652	ug/L	0.186	299328	3.943

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 17:00:40

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 17:00:40

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	81.769				
Be	9	88.556				
B	11	88.257				
Na	23	99.696				
Mg	24	99.732				
Al	27	102.601				
P	31	97.067				
K	39	93.798				
Ca	43	99.277				
> Sc	45		102.5			
Ti	47	101.176				
V	51	100.263				
Cr	52	100.796				
Cr	53					
Mn	55	101.820				
Fe	57	100.827				
Co	59	99.307				
Ni	60	102.494				
Cu	63					
Cu	65	101.511				
Zn	66	104.596				
Zn	67					
Zn	68					
> Ge	74		100.7			
As	75	96.593				
Se	77					
Se	82	100.342				
Kr	83					
Sr	88	98.075				
Y	89					
Zr	90	98.045				
Mo	98	96.963				
Ag	107	98.389				
Cd	111	99.019				
Cd	114					
> In	115		98.6			
Sn	120	97.108				
Sb	121	97.329				
Sb	123					
Ba	135					
Ba	137	101.679				
Ho	165					
> Lu	175		100.0			
Tl	205	103.235				
Pb	208	104.518				
Th	232	106.190				
U	238	109.305				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Li	7CCV is out of limits ( +/- 10%)
QC Std 6	Be	9CCV is out of limits ( +/- 10%)
QC Std 6	B	11CCV is out of limits ( +/- 10%)

### QC Action

Sample ID: QC Std 6  
 Report Date/Time: Thursday, January 28, 2010 17:00:40  
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QC Action Line: Continue

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Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 17:00:40

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**Page 631 of 1328**

# ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 17:04:06

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 7.073

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.024	ug/L	130.010	10	0.000
Be	9	0.014	ug/L	164.062	4	0.000
B	11	1.636	ug/L	14.184	447	0.001
Na	23	-0.713	ug/L	329.307	18345	-0.006
Mg	24	2.152	ug/L	42.850	3000	0.012
Al	27	2.567	ug/L	54.537	4001	0.019
P	31	0.433	ug/L	66.933	1754	0.000
K	39	1.959	ug/L	17.243	140353	0.024
Ca	43	-4.052	ug/L	45.776	71	-0.000
> Sc	45		ug/L		190588	190587.805
Ti	47	0.084	ug/L	46.504	62	0.000
V	51	0.239	ug/L	116.920	-3701	0.002
Cr	52	-0.401	ug/L	2.967	2980	-0.004
Cr	53		ug/L		24823	-0.021
Mn	55	0.019	ug/L	66.524	334	0.000
Fe	57	4.609	ug/L	28.480	2924	0.001
Co	59	0.021	ug/L	47.803	76	0.000
Ni	60	0.011	ug/L	244.049	139	0.000
Cu	63		ug/L		79	-0.000
Cu	65	0.007	ug/L	189.621	43	0.000
Zn	66	0.039	ug/L	135.173	731	0.000
Zn	67		ug/L		1329	-0.003
Zn	68		ug/L		590	-0.000
> Ge	74		ug/L		105411	105411.237
As	75	0.163	ug/L	58.540	-291	0.000
Se	77		ug/L		1977	-0.004
Se	82	0.319	ug/L	35.987	13	0.000
Kr	83		ug/L		13	-0.000
Sr	88	0.014	ug/L	42.552	109	0.001
Y	89		ug/L		17	0.000
Zr	90	0.096	ug/L	17.691	382	0.003
Mo	98	0.035	ug/L	18.092	49	0.000
Ag	107	0.027	ug/L	7.725	72	0.001
Cd	111	0.036	ug/L	29.388	17	0.000
Cd	114		ug/L		27	0.000
> In	115		ug/L		72663	72662.514
Sn	120	0.109	ug/L	12.389	293	0.003
Sb	121	0.538	ug/L	21.183	795	0.008
Sb	123		ug/L		634	0.007
Ba	135		ug/L		11	0.000
Ba	137	0.019	ug/L	60.792	19	0.000
Ho	165		ug/L		1	-0.000
> Lu	175		ug/L		77580	77579.524
Tl	205	0.289	ug/L	10.438	395	0.004
Pb	208	0.032	ug/L	11.227	294	0.002
Th	232	0.081	ug/L	21.078	808	0.006
U	238	0.023	ug/L	26.855	167	0.002

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 17:06:51

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45				102.1	
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
L Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74				102.1	
As	75					
Se	77					
Se	82					
L Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115				99.5	
Sn	120					
Sb	121					
L Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175				102.2	
Tl	205					
Pb	208					
Th	232					
L U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 17:06:51

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# ICPMS#4 - Summary Report

Sample ID: 244921002

Sample Date/Time: Thursday, January 28, 2010 17:10:17

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\244921002.074

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	32.449	ug/L	15.142	6189	0.027
Be	9	2.643	ug/L	6.668	302	0.001
B	11	13.070	ug/L	3.972	2472	0.010
Na	23	664.727	ug/L	8.115	1207448	5.199
Mg	24	10167.592	ug/L	2.893	13095854	57.476
Al	27	61095.895	ug/L	2.514	104148197	457.103
P	31	382.561	ug/L	0.529	36967	0.153
K	39	8514.174	ug/L	3.466	24301427	105.916
Ca	43	7477.280	ug/L	0.325	39394	0.172
> Sc	45		ug/L		227876	227875.844
Ti	47	950.498	ug/L	0.118	221182	0.970
V	51	88.395	ug/L	0.593	176594	0.797
Cr	52	85.470	ug/L	0.466	175629	0.752
Cr	53		ug/L		39522	0.022
Mn	55	1204.862	ug/L	0.374	3989558	17.506
Fe	57	47477.264	ug/L	1.178	3223045	14.129
Co	59	20.457	ug/L	0.440	51961	0.228
Ni	60	31.741	ug/L	1.260	17030	0.074
Cu	63		ug/L		94454	0.414
Cu	65	85.134	ug/L	0.614	45448	0.199
Zn	66	239.015	ug/L	1.042	55689	0.568
Zn	67		ug/L		9994	0.088
Zn	68		ug/L		40893	0.416
> Ge	74		ug/L		96917	96916.649
As	75	11.614	ug/L	2.952	2690	0.031
Se	77		ug/L		1696	-0.005
Se	82	-0.253	ug/L	194.937	-5	-0.000
Kr	83		ug/L		58	0.000
Sr	88	103.153	ug/L	1.279	416898	5.947
Y	89		ug/L		275862	3.935
Zr	90	55.005	ug/L	2.160	114597	1.633
Mo	98	1.890	ug/L	1.763	1728	0.024
Ag	107	35.554	ug/L	1.299	59455	0.848
Cd	111	2.164	ug/L	1.465	836	0.012
Cd	114		ug/L		1588	0.022
> In	115		ug/L		70101	70100.887
Sn	120	2.500	ug/L	1.637	4339	0.061
Sb	121	0.595	ug/L	1.454	830	0.009
Sb	123		ug/L		651	0.007
Ba	135		ug/L		193907	2.497
Ba	137	512.009	ug/L	2.045	333548	4.295
Ho	165		ug/L		12583	0.162
> Lu	175		ug/L		77660	77659.626
Tl	205	1.089	ug/L	1.607	1303	0.016
Pb	208	100.625	ug/L	0.979	457989	5.895
Th	232	29.154	ug/L	1.223	155868	2.002
U	238	18.143	ug/L	0.730	101694	1.309

Sample ID: 244921002

Report Date/Time: Thursday, January 28, 2010 17:13:02

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		122.0			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		93.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		96.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		102.3			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
Sc 45 Int Std for sanSc		45	
	Ti	47	Sample is out of limits (over linear range)
	Mn	55	Sample is out of limits (over linear range)

Sample ID: 244921002

Report Date/Time: Thursday, January 28, 2010 17:13:02

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## QC Action

QC Action Line: Continue

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Sample ID: 244921002

Report Date/Time: Thursday, January 28, 2010 17:13:02

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## ICPMS#4 - Summary Report

Sample ID: 244921003

Sample Date/Time: Thursday, January 28, 2010 17:16:28

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\244921003.075

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	34.029	ug/L	14.723	6707	0.028
Be	9	2.679	ug/L	4.901	316	0.001
B	11	13.156	ug/L	1.361	2571	0.010
Na	23	568.724	ug/L	9.766	1070842	4.448
Mg	24	9193.075	ug/L	2.093	12241777	51.967
Al	27	68843.412	ug/L	2.609	121300809	515.068
P	31	489.329	ug/L	0.117	48288	0.196
K	39	8575.027	ug/L	0.712	25295576	106.673
Ca	43	8305.442	ug/L	0.364	45221	0.191
Sc	45		ug/L		235561	235561.165
Ti	47	978.879	ug/L	0.537	235479	0.999
V	51	86.075	ug/L	1.284	177633	0.776
Cr	52	42.975	ug/L	0.337	93531	0.378
Cr	53		ug/L		27607	-0.034
Mn	55	978.661	ug/L	0.665	3350047	14.220
Fe	57	45240.802	ug/L	0.606	3174947	13.463
Co	59	16.713	ug/L	0.830	43886	0.186
Ni	60	32.516	ug/L	0.677	18029	0.076
Cu	63		ug/L		52394	0.222
Cu	65	45.621	ug/L	1.103	25199	0.107
Zn	66	183.718	ug/L	0.598	42917	0.436
Zn	67		ug/L		8146	0.069
Zn	68		ug/L		32140	0.326
Ge	74		ug/L		96821	96820.669
As	75	10.730	ug/L	4.280	2460	0.029
Se	77		ug/L		1539	-0.007
Se	82	0.237	ug/L	76.802	9	0.000
Kr	83		ug/L		52	0.000
Sr	88	109.012	ug/L	1.372	438159	6.284
Y	89		ug/L		264159	3.789
Zr	90	63.897	ug/L	0.408	132377	1.896
Mo	98	1.539	ug/L	1.868	1402	0.020
Ag	107	15.137	ug/L	0.594	25189	0.361
Cd	111	0.934	ug/L	8.619	360	0.005
Cd	114		ug/L		379	0.005
In	115		ug/L		69715	69715.017
Sn	120	1.001	ug/L	2.067	1786	0.024
Sb	121	0.253	ug/L	6.779	452	0.004
Sb	123		ug/L		350	0.003
Ba	135		ug/L		224309	2.824
Ba	137	570.424	ug/L	1.550	380055	4.785
Ho	165		ug/L		11981	0.151
Lu	175		ug/L		79427	79426.664
Tl	205	1.178	ug/L	1.835	1436	0.017
Pb	208	47.107	ug/L	0.958	219361	2.760
Th	232	30.949	ug/L	0.041	169204	2.125
U	238	3.183	ug/L	0.809	18279	0.230

Sample ID: 244921003

Report Date/Time: Thursday, January 28, 2010 17:19:13

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## Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		126.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		93.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		95.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		104.7			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
Sc 45 Int Std for sanSc		45	
	Ti	47	Sample is out of limits (over linear range)_

### QC Action

Sample ID: 244921003  
 Report Date/Time: Thursday, January 28, 2010 17:19:13  
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QC Action Line: Continue

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Sample ID: 244921003

Report Date/Time: Thursday, January 28, 2010 17:19:13

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## ICPMS#4 - Summary Report

Sample ID: 244921004

Sample Date/Time: Thursday, January 28, 2010 17:22:39

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\244921004.076

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	39.928	ug/L	14.055	7342	0.033
Be	9	2.656	ug/L	6.518	292	0.001
B	11	13.492	ug/L	6.533	2453	0.010
Na	23	491.201	ug/L	7.609	866557	3.842
Mg	24	7803.122	ug/L	3.914	9706234	44.110
Al	27	65171.555	ug/L	2.561	107229505	487.596
P	31	527.709	ug/L	1.186	48462	0.211
K	39	7169.803	ug/L	1.522	19772525	89.192
Ca	43	8853.287	ug/L	1.066	44997	0.204
> Sc	45		ug/L		219954	219953.734
Ti	47	1338.781	ug/L	0.508	300695	1.367
V	51	75.330	ug/L	1.767	144602	0.679
Cr	52	43.429	ug/L	0.157	88214	0.382
Cr	53		ug/L		27471	-0.027
Mn	55	999.495	ug/L	0.560	3194423	14.522
Fe	57	40780.926	ug/L	0.679	2672399	12.136
Co	59	17.549	ug/L	0.177	43028	0.195
Ni	60	28.612	ug/L	2.454	14827	0.067
Cu	63		ug/L		90987	0.413
Cu	65	85.204	ug/L	2.313	43893	0.199
Zn	66	263.603	ug/L	0.544	62053	0.626
Zn	67		ug/L		10970	0.097
Zn	68		ug/L		45869	0.462
> Ge	74		ug/L		98025	98025.207
As	75	8.360	ug/L	4.620	1872	0.022
Se	77		ug/L		1491	-0.008
Se	82	-0.067	ug/L	320.431	1	-0.000
Kr	83		ug/L		54	0.000
Sr	88	105.357	ug/L	1.150	431586	6.074
Y	89		ug/L		196797	2.770
Zr	90	74.483	ug/L	0.819	157237	2.211
Mo	98	1.590	ug/L	0.340	1475	0.021
Ag	107	30.721	ug/L	1.358	52072	0.733
Cd	111	1.579	ug/L	5.407	619	0.009
Cd	114		ug/L		1013	0.014
> In	115		ug/L		71056	71056.191
Sn	120	3.605	ug/L	2.852	6297	0.087
Sb	121	0.345	ug/L	7.914	563	0.005
Sb	123		ug/L		402	0.004
Ba	135		ug/L		272181	3.489
Ba	137	702.533	ug/L	1.348	459693	5.893
Ho	165		ug/L		9118	0.117
> Lu	175		ug/L		78011	78011.226
Tl	205	0.940	ug/L	7.282	1140	0.014
Pb	208	83.740	ug/L	0.649	382873	4.906
Th	232	27.480	ug/L	0.137	147600	1.887
U	238	8.586	ug/L	0.198	48363	0.619

Sample ID: 244921004

Report Date/Time: Thursday, January 28, 2010 17:25:25

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		117.8			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		95.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		97.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		102.8			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
	Al	27Sample is out of limits (over linear range)
	Ti	47Sample is out of limits (over linear range)_

## QC Action

QC Action Line: Continue

Sample ID: 244921004

Report Date/Time: Thursday, January 28, 2010 17:25:25

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 17:28:50

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 6.077

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	40.392	ug/L	13.158	6495	0.034
Be	9	41.717	ug/L	5.752	3968	0.021
B	11	86.255	ug/L	2.733	12541	0.064
Na	23	4840.113	ug/L	4.643	7295676	37.856
Mg	24	4992.552	ug/L	4.940	5426950	28.222
Al	27	5301.656	ug/L	3.240	7621422	39.666
P	31	4848.218	ug/L	0.281	374859	1.942
K	39	4332.854	ug/L	1.401	10495524	53.901
Ca	43	4917.112	ug/L	1.576	21881	0.113
> Sc	45		ug/L		192181	192181.128
Ti	47	51.346	ug/L	1.620	10121	0.052
V	51	50.821	ug/L	1.723	83873	0.458
Cr	52	51.039	ug/L	1.106	89930	0.449
Cr	53		ug/L		37004	0.041
Mn	55	51.012	ug/L	0.294	142722	0.741
Fe	57	5070.322	ug/L	0.123	292665	1.509
Co	59	49.815	ug/L	0.364	106657	0.555
Ni	60	51.504	ug/L	0.317	23220	0.120
Cu	63		ug/L		48079	0.250
Cu	65	51.463	ug/L	0.815	23186	0.120
Zn	66	51.197	ug/L	0.957	13406	0.122
Zn	67		ug/L		3465	0.018
Zn	68		ug/L		9717	0.087
> Ge	74		ug/L		104362	104361.588
As	75	48.133	ug/L	0.864	13059	0.128
Se	77		ug/L		3538	0.011
Se	82	51.275	ug/L	1.642	1539	0.015
Kr	83		ug/L		21	0.000
Sr	88	48.984	ug/L	1.594	204594	2.824
Y	89		ug/L		47	0.001
Zr	90	49.480	ug/L	1.928	106544	1.469
Mo	98	49.170	ug/L	1.524	46027	0.635
Ag	107	49.915	ug/L	1.184	86241	1.190
Cd	111	49.452	ug/L	1.413	19668	0.271
Cd	114		ug/L		48457	0.669
> In	115		ug/L		72435	72434.529
Sn	120	49.382	ug/L	1.762	86659	1.195
Sb	121	48.663	ug/L	5.731	55423	0.763
Sb	123		ug/L		42514	0.585
Ba	135		ug/L		19244	0.249
Ba	137	50.338	ug/L	0.801	32603	0.422
Ho	165		ug/L		8	0.000
> Lu	175		ug/L		77194	77194.445
Tl	205	51.504	ug/L	0.906	58118	0.752
Pb	208	51.545	ug/L	1.099	233278	3.020
Th	232	52.639	ug/L	1.867	279453	3.615
U	238	54.847	ug/L	0.620	305510	3.957

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 17:31:34

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	80.783				
Be	9	83.433				
B	11	86.255				
Na	23	96.802				
Mg	24	99.851				
Al	27	104.983				
P	31	96.964				
K	39	86.657				
Ca	43	98.342				
> Sc	45		102.9			
Ti	47	102.691				
V	51	101.643				
Cr	52	102.079				
Cr	53					
Mn	55	102.024				
Fe	57	101.406				
Co	59	99.631				
Ni	60	103.008				
Cu	63					
Cu	65	102.925				
Zn	66	102.395				
Zn	67					
Zn	68					
> Ge	74		101.1			
As	75	96.267				
Se	77					
Se	82	102.550				
Kr	83					
Sr	88	97.969				
Y	89					
Zr	90	98.959				
Mo	98	98.339				
Ag	107	99.830				
Cd	111	98.903				
Cd	114					
> In	115		99.2			
Sn	120	98.764				
Sb	121	97.325				
Sb	123					
Ba	135					
Ba	137	100.676				
Ho	165					
> Lu	175		101.7			
Tl	205	103.008				
Pb	208	103.090				
Th	232	105.278				
U	238	109.694				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Li	7CCV is out of limits ( +/- 10%)
QC Std 6	Be	9CCV is out of limits ( +/- 10%)
QC Std 6	B	11CCV is out of limits ( +/- 10%)
QC Std 6	K	39CCV is out of limits ( +/- 10%)

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 17:31:34

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## QC Action

QC Action Line: Continue

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Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 17:31:34

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# ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 17:35:00

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 7.078

## Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li 7	0.026	ug/L	55.717	11	0.000
Be 9	-0.012	ug/L	157.594	2	-0.000
B 11	1.510	ug/L	24.589	434	0.001
Na 23	-3.066	ug/L	20.594	15008	-0.024
Mg 24	3.035	ug/L	51.713	4001	0.017
Al 27	3.233	ug/L	43.361	5001	0.024
P 31	-0.059	ug/L	1652.238	1736	-0.000
K 39	10.416	ug/L	76.207	162258	0.130
Ca 43	-5.145	ug/L	66.802	67	-0.000
> Sc 45		ug/L		192757	192756.986
Ti 47	0.137	ug/L	22.944	73	0.000
V 51	0.352	ug/L	247.803	-3548	0.003
Cr 52	-0.355	ug/L	9.771	3093	-0.003
Cr 53		ug/L		24269	-0.026
Mn 55	0.024	ug/L	67.421	350	0.000
Fe 57	4.417	ug/L	45.056	2946	0.001
Co 59	0.013	ug/L	56.451	61	0.000
Ni 60	-0.006	ug/L	350.736	133	-0.000
Cu 63		ug/L		89	0.000
Cu 65	0.013	ug/L	98.673	46	0.000
Zn 66	0.094	ug/L	65.502	761	0.000
Zn 67		ug/L		1328	-0.003
Zn 68		ug/L		610	-0.000
> Ge 74		ug/L		107749	107748.925
As 75	-0.463	ug/L	119.157	-478	-0.001
Se 77		ug/L		1987	-0.004
Se 82	0.072	ug/L	93.126	5	0.000
Kr 83		ug/L		18	-0.000
Sr 88	0.012	ug/L	29.428	98	0.001
Y 89		ug/L		16	0.000
Zr 90	0.081	ug/L	13.881	356	0.002
Mo 98	0.033	ug/L	47.461	48	0.000
Ag 107	0.015	ug/L	58.127	53	0.000
Cd 111	0.020	ug/L	38.916	11	0.000
Cd 114		ug/L		27	0.000
> In 115		ug/L		73439	73438.872
Sn 120	0.099	ug/L	8.005	278	0.002
Sb 121	0.484	ug/L	15.483	742	0.008
Sb 123		ug/L		538	0.005
Ba 135		ug/L		15	0.000
Ba 137	0.034	ug/L	21.184	28	0.000
Ho 165		ug/L		3	-0.000
> Lu 175		ug/L		77233	77233.020
Tl 205	0.166	ug/L	16.516	255	0.002
Pb 208	0.031	ug/L	14.961	287	0.002
Th 232	0.062	ug/L	33.579	708	0.004
U 238	0.018	ug/L	42.071	138	0.001

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 17:37:45

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		103.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		104.4			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		100.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		101.8			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

## QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 17:37:45

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## ICPMS#4 - Summary Report

Sample ID: 244921005

Sample Date/Time: Thursday, January 28, 2010 17:41:11

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\244921005.079

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li 7	33.033	ug/L	14.164	5938	0.028
Be 9	2.682	ug/L	7.680	288	0.001
B 11	13.784	ug/L	3.358	2444	0.010
Na 23	529.838	ug/L	0.604	911871	4.144
Mg 24	6660.967	ug/L	1.142	8088529	37.653
Al 27	57018.903	ug/L	1.503	91617546	426.600
P 31	555.592	ug/L	0.380	49726	0.222
K 39	7302.089	ug/L	5.096	19662064	90.838
Ca 43	8819.946	ug/L	0.778	43777	0.203
> Sc 45		ug/L		214776	214775.768
Ti 47	1226.712	ug/L	0.800	269020	1.252
V 51	58.130	ug/L	1.375	107858	0.524
Cr 52	33.104	ug/L	0.769	66631	0.291
Cr 53		ug/L		26105	-0.030
Mn 55	1180.528	ug/L	0.404	3684288	17.153
Fe 57	30692.174	ug/L	0.504	1964813	9.134
Co 59	16.028	ug/L	0.678	38380	0.179
Ni 60	27.179	ug/L	1.530	13763	0.063
Cu 63		ug/L		35582	0.165
Cu 65	34.107	ug/L	1.503	17188	0.080
Zn 66	110.298	ug/L	1.821	26035	0.262
Zn 67		ug/L		5624	0.043
Zn 68		ug/L		20315	0.204
> Ge 74		ug/L		96848	96847.521
As 75	7.339	ug/L	6.664	1585	0.020
Se 77		ug/L		1546	-0.007
Se 82	0.324	ug/L	142.377	12	0.000
Kr 83		ug/L		45	0.000
Sr 88	96.913	ug/L	0.932	383460	5.587
Y 89		ug/L		163667	2.385
Zr 90	68.958	ug/L	1.059	140612	2.047
Mo 98	1.727	ug/L	0.886	1547	0.022
Ag 107	0.376	ug/L	2.966	639	0.009
Cd 111	0.950	ug/L	7.560	361	0.005
Cd 114		ug/L		403	0.006
> In 115		ug/L		68628	68627.938
Sn 120	1.104	ug/L	1.319	1929	0.027
Sb 121	0.416	ug/L	6.977	620	0.007
Sb 123		ug/L		494	0.005
Ba 135		ug/L		216061	2.841
Ba 137	572.360	ug/L	0.653	365111	4.801
Ho 165		ug/L		7486	0.098
> Lu 175		ug/L		76045	76045.300
Tl 205	0.766	ug/L	2.859	917	0.011
Pb 208	62.541	ug/L	1.208	278771	3.664
Th 232	27.810	ug/L	0.985	145612	1.910
U 238	21.707	ug/L	1.009	119131	1.566

Sample ID: 244921005

Report Date/Time: Thursday, January 28, 2010 17:43:57

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		115.0			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		93.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		94.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.2			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)
	Mn	55	Sample is out of limits (over linear range)

### QC Action

Sample ID: 244921005

Report Date/Time: Thursday, January 28, 2010 17:43:57

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QC Action Line: Continue

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Sample ID: 244921005

Report Date/Time: Thursday, January 28, 2010 17:43:57

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## ICPMS#4 - Summary Report

Sample ID: 244921006

Sample Date/Time: Thursday, January 28, 2010 17:47:24

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\244921006.080

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	43.257	ug/L	12.574	8356	0.036
Be	9	3.595	ug/L	5.591	414	0.002
B	11	12.545	ug/L	1.214	2415	0.009
Na	23	683.260	ug/L	3.779	1257373	5.344
Mg	24	10465.534	ug/L	2.042	13665239	59.160
Al	27	83150.406	ug/L	4.472	143691645	622.109
P	31	336.195	ug/L	0.329	33176	0.135
K	39	9093.096	ug/L	3.133	26289726	113.118
Ca	43	9415.064	ug/L	0.902	50241	0.217
> Sc	45		ug/L		230925	230925.061
Ti	47	1510.995	ug/L	0.583	356299	1.543
V	51	82.703	ug/L	1.765	167114	0.745
Cr	52	38.677	ug/L	1.030	82962	0.340
Cr	53		ug/L		26318	-0.038
Mn	55	1094.700	ug/L	0.560	3673505	15.906
Fe	57	45707.362	ug/L	1.386	3144432	13.602
Co	59	18.466	ug/L	1.716	47532	0.206
Ni	60	32.698	ug/L	1.372	17773	0.076
Cu	63		ug/L		31113	0.134
Cu	65	27.929	ug/L	0.766	15142	0.065
Zn	66	115.880	ug/L	0.384	27690	0.275
Zn	67		ug/L		6327	0.049
Zn	68		ug/L		22068	0.219
> Ge	74		ug/L		98148	98148.015
As	75	9.489	ug/L	3.254	2168	0.025
Se	77		ug/L		1562	-0.007
Se	82	-0.139	ug/L	347.559	-1	-0.000
Kr	83		ug/L		65	0.000
Sr	88	134.566	ug/L	0.681	538639	7.758
Y	89		ug/L		270953	3.902
Zr	90	87.725	ug/L	2.042	180941	2.604
Mo	98	1.714	ug/L	3.111	1553	0.022
Ag	107	0.651	ug/L	2.867	1103	0.016
Cd	111	0.943	ug/L	6.328	362	0.005
Cd	114		ug/L		228	0.003
> In	115		ug/L		69425	69425.158
Sn	120	0.963	ug/L	3.877	1714	0.023
Sb	121	0.226	ug/L	5.144	421	0.004
Sb	123		ug/L		325	0.003
Ba	135		ug/L		314254	4.019
Ba	137	814.226	ug/L	1.434	534105	6.830
Ho	165		ug/L		12276	0.157
> Lu	175		ug/L		78199	78198.913
Tl	205	1.053	ug/L	5.020	1271	0.015
Pb	208	48.991	ug/L	1.663	224608	2.870
Th	232	35.717	ug/L	0.951	192206	2.453
U	238	5.260	ug/L	0.566	29715	0.379

Sample ID: 244921006

Report Date/Time: Thursday, January 28, 2010 17:50:10

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		123.7			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		95.1			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		95.1			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		103.1			
Tl	205					
Pb	208					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
Sc 45 Int Std for sam	Sc	45	
	Ti	47	Sample is out of limits (over linear range)
	Mn	55	Sample is out of limits (over linear range)

Sample ID: 244921006

Report Date/Time: Thursday, January 28, 2010 17:50:10

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## QC Action

QC Action Line: Continue

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Sample ID: 244921006

Report Date/Time: Thursday, January 28, 2010 17:50:10

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# ICPMS#4 - Summary Report

Sample ID: 244921007

Sample Date/Time: Thursday, January 28, 2010 17:53:37

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\244921007.081

## Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li 7	41.016	ug/L	12.960	7990	0.034
Be 9	2.420	ug/L	11.002	282	0.001
B 11	10.735	ug/L	5.083	2121	0.008
Na 23	1086.241	ug/L	8.521	2002373	8.496
Mg 24	8024.262	ug/L	5.598	10569208	45.360
Al 27	57224.293	ug/L	2.006	99731656	428.137
P 31	257.121	ug/L	1.197	26083	0.103
K 39	8520.847	ug/L	0.706	24853732	105.999
Ca 43	6136.590	ug/L	1.593	33067	0.141
> Sc 45		ug/L		232891	232890.989
Ti 47	1114.180	ug/L	0.683	264989	1.138
V 51	70.886	ug/L	1.015	143728	0.639
Cr 52	37.783	ug/L	1.253	81839	0.332
Cr 53		ug/L		26315	-0.039
Mn 55	1061.729	ug/L	0.564	3592959	15.427
Fe 57	45468.808	ug/L	0.805	3154382	13.531
Co 59	15.439	ug/L	0.144	40087	0.172
Ni 60	27.144	ug/L	0.366	14907	0.063
Cu 63		ug/L		22781	0.097
Cu 65	20.302	ug/L	0.463	11114	0.048
Zn 66	137.244	ug/L	0.907	32727	0.326
Zn 67		ug/L		6434	0.050
Zn 68		ug/L		24618	0.245
> Ge 74		ug/L		98318	98317.879
As 75	8.578	ug/L	5.662	1932	0.023
Se 77		ug/L		1479	-0.008
Se 82	0.428	ug/L	119.140	15	0.000
Kr 83		ug/L		48	0.000
Sr 88	91.012	ug/L	1.118	366234	5.247
Y 89		ug/L		243207	3.485
Zr 90	80.250	ug/L	0.440	166388	2.382
Mo 98	2.069	ug/L	1.599	1882	0.027
Ag 107	0.386	ug/L	4.259	667	0.009
Cd 111	0.826	ug/L	9.452	319	0.005
Cd 114		ug/L		172	0.002
> In 115		ug/L		69791	69790.802
Sn 120	1.998	ug/L	2.155	3472	0.048
Sb 121	0.190	ug/L	5.275	383	0.003
Sb 123		ug/L		290	0.002
Ba 135		ug/L		158066	2.020
Ba 137	406.935	ug/L	0.590	267070	3.414
Ho 165		ug/L		11569	0.148
> Lu 175		ug/L		78238	78238.116
Tl 205	0.839	ug/L	7.470	1028	0.012
Pb 208	45.381	ug/L	1.237	208173	2.659
Th 232	29.421	ug/L	1.360	158466	2.020
U 238	3.178	ug/L	1.913	17975	0.229

Sample ID: 244921007

Report Date/Time: Thursday, January 28, 2010 17:56:23

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		124.7			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		95.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		95.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		103.1			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
Sc 45 Int Std for sanSc		45	
	Ti	47	Sample is out of limits (over linear range)_
	Mn	55	Sample is out of limits (over linear range)

Sample ID: 244921007

Report Date/Time: Thursday, January 28, 2010 17:56:23

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## QC Action

QC Action Line: Continue

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Sample ID: 244921007

Report Date/Time: Thursday, January 28, 2010 17:56:23

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 17:59:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 6.082

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	40.577	ug/L	13.470	6510	0.034
Be	9	42.107	ug/L	4.670	3995	0.021
B	11	86.481	ug/L	0.916	12536	0.064
Na	23	4923.670	ug/L	7.654	7397176	38.510
Mg	24	5200.543	ug/L	6.591	5631573	29.398
Al	27	5219.404	ug/L	6.220	7480195	39.050
P	31	4856.637	ug/L	1.405	374305	1.945
K	39	4777.384	ug/L	4.603	11520741	59.431
Ca	43	4907.434	ug/L	1.377	21765	0.113
> Sc	45		ug/L		191570	191569.824
Ti	47	51.502	ug/L	1.596	10118	0.053
V	51	49.758	ug/L	1.084	81764	0.448
Cr	52	50.174	ug/L	0.804	88193	0.441
Cr	53		ug/L		37218	0.043
Mn	55	50.954	ug/L	0.104	142110	0.740
Fe	57	5074.375	ug/L	1.162	291968	1.510
Co	59	48.968	ug/L	1.170	104514	0.545
Ni	60	50.811	ug/L	0.696	22836	0.119
Cu	63		ug/L		47264	0.246
Cu	65	50.298	ug/L	1.582	22591	0.118
Zn	66	51.727	ug/L	1.955	13307	0.123
Zn	67		ug/L		3429	0.018
Zn	68		ug/L		9514	0.087
> Ge	74		ug/L		102581	102581.364
As	75	46.382	ug/L	2.216	12358	0.124
Se	77		ug/L		3445	0.011
Se	82	49.662	ug/L	0.362	1465	0.014
Kr	83		ug/L		17	-0.000
Sr	88	49.352	ug/L	1.514	201344	2.845
Y	89		ug/L		61	0.001
Zr	90	49.939	ug/L	0.816	105044	1.482
Mo	98	48.945	ug/L	1.499	44757	0.632
Ag	107	49.316	ug/L	0.395	83234	1.176
Cd	111	50.295	ug/L	0.640	19539	0.276
Cd	114		ug/L		47164	0.666
> In	115		ug/L		70758	70758.007
Sn	120	48.736	ug/L	1.321	83539	1.179
Sb	121	48.997	ug/L	2.768	54519	0.768
Sb	123		ug/L		41801	0.589
Ba	135		ug/L		18661	0.251
Ba	137	50.802	ug/L	2.019	31673	0.426
Ho	165		ug/L		8	0.000
> Lu	175		ug/L		74315	74314.891
Tl	205	51.597	ug/L	0.193	56049	0.753
Pb	208	51.883	ug/L	0.681	226028	3.040
Th	232	53.422	ug/L	0.121	273005	3.669
U	238	55.037	ug/L	0.355	295125	3.971

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 18:02:32

Page 1



## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	81.155				
Be	9	84.214				
B	11	86.481				
Na	23	98.473				
Mg	24	104.011				
Al	27	103.355				
P	31	97.133				
K	39	95.548				
Ca	43	98.149				
Sc	45		102.6			
Ti	47	103.003				
V	51	99.516				
Cr	52	100.349				
Cr	53					
Mn	55	101.908				
Fe	57	101.487				
Co	59	97.937				
Ni	60	101.622				
Cu	63					
Cu	65	100.596				
Zn	66	103.454				
Zn	67					
Zn	68					
Ge	74		99.4			
As	75	92.764				
Se	77					
Se	82	99.325				
Kr	83					
Sr	88	98.704				
Y	89					
Zr	90	99.879				
Mo	98	97.891				
Ag	107	98.632				
Cd	111	100.589				
Cd	114					
In	115		96.9			
Sn	120	97.472				
Sb	121	97.994				
Sb	123					
Ba	135					
Ba	137	101.604				
Ho	165					
Lu	175		97.9			
Tl	205	103.193				
Pb	208	103.766				
Th	232	106.843				
U	238	110.075				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 6	Li	7CCV is out of limits ( +/- 10%)
QC Std 6	Be	9CCV is out of limits ( +/- 10%)
QC Std 6	B	11CCV is out of limits ( +/- 10%)
QC Std 6	U	238CCV is out of limits ( +/- 10%)

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 18:02:32

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## QC Action

QC Action Line: Continue

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Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 18:02:32

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# ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 18:05:58

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 7.083

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.015	ug/L	123.365	9	0.000
Be	9	-0.015	ug/L	39.692	2	-0.000
B	11	1.527	ug/L	36.535	438	0.001
Na	23	-3.559	ug/L	62.238	14341	-0.028
Mg	24	1.195	ug/L	153.735	2000	0.007
Al	27	2.519	ug/L	46.925	4001	0.019
P	31	0.447	ug/L	192.440	1782	0.000
K	39	8.525	ug/L	64.889	158208	0.106
Ca	43	-5.633	ug/L	26.836	65	-0.000
> Sc	45		ug/L		193501	193501.037
Ti	47	0.212	ug/L	28.623	88	0.000
V	51	0.175	ug/L	27.648	-3871	0.002
Cr	52	-0.501	ug/L	16.755	2856	-0.004
Cr	53		ug/L		23985	-0.028
Mn	55	0.025	ug/L	33.715	355	0.000
Fe	57	5.266	ug/L	7.933	3006	0.002
Co	59	0.012	ug/L	24.246	58	0.000
Ni	60	-0.020	ug/L	199.730	127	-0.000
Cu	63		ug/L		85	0.000
Cu	65	0.006	ug/L	29.429	43	0.000
Zn	66	-0.042	ug/L	345.564	720	-0.000
Zn	67		ug/L		1290	-0.003
Zn	68		ug/L		590	-0.000
> Ge	74		ug/L		106879	106879.078
As	75	-0.135	ug/L	546.639	-382	-0.000
Se	77		ug/L		1867	-0.005
Se	82	0.108	ug/L	279.823	6	0.000
Kr	83		ug/L		16	-0.000
Sr	88	0.012	ug/L	42.104	97	0.001
Y	89		ug/L		16	0.000
Zr	90	0.082	ug/L	20.111	353	0.002
Mo	98	0.035	ug/L	7.622	49	0.000
Ag	107	0.022	ug/L	33.391	63	0.001
Cd	111	0.013	ug/L	112.089	8	0.000
Cd	114		ug/L		25	0.000
> In	115		ug/L		72603	72603.257
Sn	120	0.094	ug/L	20.811	266	0.002
Sb	121	0.492	ug/L	21.959	743	0.008
Sb	123		ug/L		596	0.006
Ba	135		ug/L		11	0.000
Ba	137	0.025	ug/L	44.535	22	0.000
Ho	165		ug/L		3	-0.000
> Lu	175		ug/L		76072	76072.461
Tl	205	0.145	ug/L	7.576	228	0.002
Pb	208	0.023	ug/L	18.170	247	0.001
Th	232	0.061	ug/L	40.124	691	0.004
U	238	0.020	ug/L	33.103	145	0.001

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 18:08:43

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		103.6			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		103.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		99.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.3			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 18:08:43

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# ICPMS#4 - Summary Report

Sample ID: 244921008

Sample Date/Time: Thursday, January 28, 2010 18:12:09

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2|sk]

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\244921008.084

## Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li 7	40.080	ug/L	15.681	7263	0.034
Be 9	3.330	ug/L	9.459	361	0.002
B 11	15.694	ug/L	1.563	2777	0.012
Na 23	576.059	ug/L	2.355	999091	4.506
Mg 24	7658.320	ug/L	3.078	9393369	43.291
Al 27	73729.561	ug/L	5.513	119554735	551.625
P 31	510.206	ug/L	1.151	46273	0.204
K 39	8045.574	ug/L	1.512	21871284	100.087
Ca 43	9273.589	ug/L	1.487	46475	0.214
> Sc 45		ug/L		216929	216929.201
Ti 47	1227.044	ug/L	0.817	271790	1.253
V 51	59.442	ug/L	3.201	111472	0.536
Cr 52	26.658	ug/L	1.873	54999	0.234
Cr 53		ug/L		24130	-0.040
Mn 55	923.484	ug/L	0.676	2910704	13.418
Fe 57	35853.823	ug/L	0.605	2317447	10.670
Co 59	13.716	ug/L	0.636	33173	0.153
Ni 60	24.465	ug/L	1.029	12528	0.057
Cu 63		ug/L		25856	0.119
Cu 65	24.726	ug/L	1.223	12599	0.058
Zn 66	128.208	ug/L	1.130	29269	0.305
Zn 67		ug/L		6050	0.049
Zn 68		ug/L		22407	0.233
> Ge 74		ug/L		94002	94002.007
As 75	7.868	ug/L	4.515	1672	0.021
Se 77		ug/L		1519	-0.007
Se 82	-0.491	ug/L	172.380	-10	-0.000
Kr 83		ug/L		51	0.000
Sr 88	102.325	ug/L	0.525	391889	5.899
Y 89		ug/L		178964	2.694
Zr 90	86.166	ug/L	1.584	170043	2.557
Mo 98	1.207	ug/L	5.189	1052	0.016
Ag 107	1.634	ug/L	1.617	2612	0.039
Cd 111	0.964	ug/L	25.728	354	0.005
Cd 114		ug/L		445	0.007
> In 115		ug/L		66430	66429.569
Sn 120	1.055	ug/L	1.373	1789	0.026
Sb 121	0.417	ug/L	11.942	601	0.007
Sb 123		ug/L		468	0.005
Ba 135		ug/L		221934	2.958
Ba 137	594.578	ug/L	1.776	374250	4.988
Ho 165		ug/L		8044	0.107
> Lu 175		ug/L		75043	75043.380
Tl 205	0.732	ug/L	5.941	868	0.011
Pb 208	64.052	ug/L	1.097	281756	3.753
Th 232	29.722	ug/L	0.946	153539	2.041
U 238	14.966	ug/L	0.760	81062	1.080

Sample ID: 244921008

Report Date/Time: Thursday, January 28, 2010 18:14:54

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000



### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		116.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		91.1			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		91.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.9			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)_

### QC Action

QC Action Line: Continue

Sample ID: 244921008

Report Date/Time: Thursday, January 28, 2010 18:14:54

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## ICPMS#4 - Summary Report

Sample ID: 244921009  
 Sample Date/Time: Thursday, January 28, 2010 18:18:20  
 Sample Type:  
 Sample Description: LANL 6020  
 Number of Replicates: 3  
 Batch ID: 942665[2]skj  
 Method File: c:\elandata\Method\6020.mth  
 Dataset File: C:\elandata\Dataset\100128\244921009.085

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	45.598	ug/L	15.947	8765	0.038
Be	9	4.024	ug/L	10.463	461	0.002
B	11	14.205	ug/L	3.836	2688	0.011
Na	23	760.188	ug/L	9.475	1390545	5.946
Mg	24	10516.196	ug/L	4.889	13665239	59.446
Al	27	89215.974	ug/L	5.754	153551829	667.490
P	31	378.794	ug/L	0.345	36963	0.152
K	39	9367.132	ug/L	5.602	26952492	116.527
Ca	43	10714.742	ug/L	0.965	56923	0.247
> Sc	45		ug/L		229975	229975.058
Ti	47	1499.416	ug/L	0.362	352099	1.531
V	51	87.887	ug/L	0.875	177152	0.792
Cr	52	41.835	ug/L	0.666	89001	0.368
Cr	53		ug/L		27084	-0.034
Mn	55	1128.879	ug/L	0.834	3772027	16.402
Fe	57	47416.620	ug/L	0.036	3248374	14.111
Co	59	18.971	ug/L	0.480	48628	0.211
Ni	60	35.339	ug/L	1.463	19117	0.082
Cu	63		ug/L		33670	0.146
Cu	65	30.580	ug/L	1.363	16509	0.072
Zn	66	121.891	ug/L	0.489	28353	0.290
Zn	67		ug/L		6331	0.051
Zn	68		ug/L		22942	0.234
> Ge	74		ug/L		95653	95652.813
As	75	9.209	ug/L	6.869	2041	0.025
Se	77		ug/L		1510	-0.007
Se	82	0.030	ug/L	358.330	3	0.000
Kr	83		ug/L		61	0.000
Sr	88	154.622	ug/L	0.776	608091	8.914
Y	89		ug/L		304211	4.460
Zr	90	92.979	ug/L	0.601	188409	2.760
Mo	98	1.852	ug/L	2.265	1648	0.024
Ag	107	0.834	ug/L	3.051	1380	0.020
Cd	111	0.950	ug/L	11.230	358	0.005
Cd	114		ug/L		227	0.003
> In	115		ug/L		68221	68221.466
Sn	120	0.975	ug/L	2.047	1705	0.024
Sb	121	0.221	ug/L	12.261	409	0.003
Sb	123		ug/L		321	0.003
Ba	135		ug/L		350673	4.533
Ba	137	922.538	ug/L	0.796	598613	7.739
Ho	165		ug/L		13729	0.177
> Lu	175		ug/L		77359	77359.027
Tl	205	1.029	ug/L	2.072	1231	0.015
Pb	208	51.315	ug/L	1.430	232741	3.006
Th	232	37.484	ug/L	1.389	199545	2.574
U	238	5.583	ug/L	1.321	31200	0.403

Sample ID: 244921009  
 Report Date/Time: Thursday, January 28, 2010 18:21:05  
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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		123.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		92.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		93.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		101.9			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
Sc 45 Int Std for sam	Sc	45	
	Ti	47	Sample is out of limits (over linear range)_
	Mn	55	Sample is out of limits (over linear range)

Sample ID: 244921009

Report Date/Time: Thursday, January 28, 2010 18:21:05

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## QC Action

QC Action Line: Continue

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Sample ID: 244921009

Report Date/Time: Thursday, January 28, 2010 18:21:05

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## ICPMS#4 - Summary Report

Sample ID: 244921010

Sample Date/Time: Thursday, January 28, 2010 18:24:31

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2]skj

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\244921010.086

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	32.071	ug/L	14.814	6151	0.027
Be	9	2.665	ug/L	3.752	306	0.001
B	11	11.220	ug/L	1.364	2172	0.008
Na	23	505.334	ug/L	6.669	928966	3.952
Mg	24	9073.865	ug/L	6.137	11767289	51.293
Al	27	63351.481	ug/L	1.348	108667448	473.979
P	31	540.353	ug/L	1.407	51681	0.216
K	39	7959.979	ug/L	1.313	22865434	99.022
Ca	43	8238.808	ug/L	0.204	43662	0.190
> Sc	45		ug/L		229284	229284.318
Ti	47	837.381	ug/L	0.444	196064	0.855
V	51	80.355	ug/L	1.512	161053	0.724
Cr	52	38.989	ug/L	1.013	82997	0.343
Cr	53		ug/L		26113	-0.038
Mn	55	891.555	ug/L	1.155	2970262	12.954
Fe	57	42251.222	ug/L	1.851	2885653	12.574
Co	59	16.805	ug/L	1.939	42947	0.187
Ni	60	29.296	ug/L	0.951	15827	0.068
Cu	63		ug/L		48404	0.211
Cu	65	43.328	ug/L	1.817	23293	0.101
Zn	66	157.956	ug/L	0.840	36445	0.375
Zn	67		ug/L		7047	0.059
Zn	68		ug/L		27461	0.282
> Ge	74		ug/L		95380	95379.975
As	75	9.379	ug/L	5.704	2080	0.025
Se	77		ug/L		1395	-0.008
Se	82	0.501	ug/L	113.305	16	0.000
Kr	83		ug/L		44	0.000
Sr	88	102.125	ug/L	0.975	400992	5.887
Y	89		ug/L		273211	4.012
Zr	90	41.267	ug/L	1.347	83579	1.225
Mo	98	1.090	ug/L	7.042	975	0.014
Ag	107	9.045	ug/L	2.035	14711	0.216
Cd	111	0.681	ug/L	10.466	257	0.004
Cd	114		ug/L		293	0.004
> In	115		ug/L		68101	68101.001
Sn	120	0.699	ug/L	3.246	1247	0.017
Sb	121	0.137	ug/L	14.794	317	0.002
Sb	123		ug/L		258	0.002
Ba	135		ug/L		184432	2.417
Ba	137	489.602	ug/L	0.651	313418	4.107
Ho	165		ug/L		12192	0.160
> Lu	175		ug/L		76317	76316.772
Tl	205	1.062	ug/L	4.515	1250	0.016
Pb	208	42.285	ug/L	1.051	189196	2.477
Th	232	26.134	ug/L	0.191	137346	1.795
U	238	2.727	ug/L	0.345	15049	0.197

Sample ID: 244921010

Report Date/Time: Thursday, January 28, 2010 18:27:16

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		122.8			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		92.4			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		93.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.6			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Al	27	Sample is out of limits (over linear range)
Sc 45 Int Std for sanSc		45	
	Ti	47	Sample is out of limits (over linear range)

### QC Action

Sample ID: 244921010  
 Report Date/Time: Thursday, January 28, 2010 18:27:16  
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QC Action Line: Continue

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Sample ID: 244921010

Report Date/Time: Thursday, January 28, 2010 18:27:16

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# ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 18:30:40

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 6.087

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	42.789	ug/L	13.353	6709	0.036
Be	9	43.009	ug/L	6.044	3992	0.021
B	11	90.077	ug/L	0.715	12776	0.067
Na	23	4995.375	ug/L	4.063	7343683	39.071
Mg	24	5015.235	ug/L	5.762	5317225	28.350
Al	27	5329.735	ug/L	5.825	7475381	39.876
P	31	4949.341	ug/L	0.904	373442	1.982
K	39	4919.927	ug/L	13.696	11629476	61.204
Ca	43	4931.835	ug/L	0.379	21418	0.114
> Sc	45		ug/L		187584	187583.534
Ti	47	50.614	ug/L	0.935	9739	0.052
V	51	50.721	ug/L	0.624	81687	0.457
Cr	52	50.873	ug/L	0.340	87504	0.447
Cr	53		ug/L		36301	0.042
Mn	55	50.989	ug/L	1.215	139222	0.741
Fe	57	5011.947	ug/L	0.801	282373	1.492
Co	59	49.089	ug/L	0.946	102576	0.547
Ni	60	50.624	ug/L	0.615	22277	0.118
Cu	63		ug/L		46118	0.245
Cu	65	50.693	ug/L	1.323	22290	0.119
Zn	66	51.964	ug/L	1.189	13220	0.123
Zn	67		ug/L		3447	0.019
Zn	68		ug/L		9500	0.088
> Ge	74		ug/L		101478	101477.883
As	75	48.917	ug/L	2.807	12905	0.130
Se	77		ug/L		3368	0.010
Se	82	49.984	ug/L	1.679	1459	0.014
Kr	83		ug/L		14	-0.000
Sr	88	49.922	ug/L	0.588	197823	2.878
Y	89		ug/L		72	0.001
Zr	90	50.260	ug/L	1.039	102672	1.492
Mo	98	49.664	ug/L	0.396	44104	0.642
Ag	107	49.496	ug/L	1.031	81133	1.180
Cd	111	50.112	ug/L	0.760	18908	0.275
Cd	114		ug/L		45648	0.664
> In	115		ug/L		68719	68719.092
Sn	120	49.355	ug/L	0.388	82173	1.194
Sb	121	48.931	ug/L	4.497	52892	0.767
Sb	123		ug/L		40622	0.589
Ba	135		ug/L		18265	0.249
Ba	137	50.428	ug/L	0.190	31028	0.423
Ho	165		ug/L		11	0.000
> Lu	175		ug/L		73336	73335.833
Tl	205	51.476	ug/L	1.324	55186	0.752
Pb	208	51.364	ug/L	1.196	220852	3.009
Th	232	52.381	ug/L	0.613	264173	3.597
U	238	54.118	ug/L	0.371	286375	3.904

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 18:33:25

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7	85.578				
Be	9	86.018				
B	11	90.077				
Na	23	99.907				
Mg	24	100.305				
Al	27	105.539				
P	31	98.987				
K	39	98.399				
Ca	43	98.637				
> Sc	45		100.5			
Ti	47	101.227				
V	51	101.441				
Cr	52	101.745				
Cr	53					
Mn	55	101.978				
Fe	57	100.239				
Co	59	98.178				
Ni	60	101.248				
Cu	63					
Cu	65	101.385				
Zn	66	103.927				
Zn	67					
Zn	68					
> Ge	74		98.3			
As	75	97.834				
Se	77					
Se	82	99.967				
Kr	83					
Sr	88	99.844				
Y	89					
Zr	90	100.520				
Mo	98	99.328				
Ag	107	98.993				
Cd	111	100.223				
Cd	114					
> In	115		94.1			
Sn	120	98.710				
Sb	121	97.862				
Sb	123					
Ba	135					
Ba	137	100.856				
Ho	165					
> Lu	175		96.6			
Tl	205	102.952				
Pb	208	102.729				
Th	232	104.762				
U	238	108.236				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
QC Std 6	Li	7CCV is out of limits ( +/- 10%)
QC Std 6	Be	9CCV is out of limits ( +/- 10%)

### QC Action

QC Action Line: Continue

Sample ID: QC Std 6  
 Report Date/Time: Thursday, January 28, 2010 18:33:25  
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# ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 18:36:50

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020.mth

Dataset File: C:\elandata\Dataset\100128\QC Std 7.088

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.015	ug/L	67.173	9	0.000
Be	9	-0.011	ug/L	97.012	2	-0.000
B	11	1.602	ug/L	13.633	437	0.001
Na	23	-4.867	ug/L	69.392	12006	-0.038
Mg	24	1.248	ug/L	150.798	2000	0.007
Al	27	3.789	ug/L	28.817	5668	0.028
P	31	-0.788	ug/L	37.463	1639	-0.000
K	39	6.887	ug/L	102.995	150125	0.086
Ca	43	-1.533	ug/L	235.763	81	-0.000
> Sc	45		ug/L		188159	188158.563
Ti	47	0.153	ug/L	42.930	74	0.000
V	51	0.394	ug/L	55.388	-3392	0.004
Cr	52	-0.534	ug/L	15.663	2722	-0.005
Cr	53		ug/L		23174	-0.028
Mn	55	0.017	ug/L	70.388	325	0.000
Fe	57	3.652	ug/L	47.274	2833	0.001
Co	59	0.011	ug/L	43.349	55	0.000
Ni	60	-0.001	ug/L	683.508	132	-0.000
Cu	63		ug/L		80	-0.000
Cu	65	-0.015	ug/L	115.655	33	-0.000
Zn	66	0.102	ug/L	74.094	733	0.000
Zn	67		ug/L		1259	-0.003
Zn	68		ug/L		590	-0.000
> Ge	74		ug/L		103452	103452.283
As	75	0.195	ug/L	347.744	-277	0.001
Se	77		ug/L		1729	-0.006
Se	82	0.101	ug/L	118.820	6	0.000
Kr	83		ug/L		17	-0.000
Sr	88	0.008	ug/L	47.395	79	0.000
Y	89		ug/L		16	0.000
Zr	90	0.069	ug/L	29.984	316	0.002
Mo	98	0.027	ug/L	2.872	41	0.000
Ag	107	0.017	ug/L	38.108	53	0.000
Cd	111	0.012	ug/L	69.734	7	0.000
Cd	114		ug/L		22	0.000
> In	115		ug/L		70429	70429.234
Sn	120	0.084	ug/L	8.112	241	0.002
Sb	121	0.513	ug/L	14.720	744	0.008
Sb	123		ug/L		551	0.006
Ba	135		ug/L		14	0.000
Ba	137	0.019	ug/L	38.167	18	0.000
Ho	165		ug/L		2	-0.000
> Lu	175		ug/L		73494	73493.963
Tl	205	0.121	ug/L	4.648	194	0.002
Pb	208	0.019	ug/L	16.927	223	0.001
Th	232	0.051	ug/L	26.133	617	0.004
U	238	0.014	ug/L	20.918	110	0.001

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 18:39:35

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Zr	90Linear Thru Zero	1.0000
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 18:39:35

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		100.8			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		100.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Zr	90					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		96.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.9			
Tl	205					
Pb	208					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 18:39:35

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## ICPMS #6 Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Monday, February 01, 2010 21:00:29

Sample Description:

Method File: C:\elandata\Method\Daily2.mth

Dataset File: c:\elandata\Dataset\100129\Sample.339

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Number of Replicates: 5

### Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD
Be	9.0		1827.9		1827.917		54.341		3.0
Mg	24.0		18221.2		18221.216		344.213		1.9
Co	58.9		31736.0		31736.013		185.862		0.6
Rh	102.9		59965.4		59965.401		591.356		1.0
In	114.9		69837.1		69837.104		800.888		1.1
Pb	208.0		44162.4		44162.360		378.682		0.9
[> Ba	137.9		64499.1		64499.118		682.246		1.1
[ Ba++	69.0		1443.3		0.022		0.001		2.5
[> Ce	139.9		82616.4		82616.411		545.713		0.7
[ CeO	155.9		1737.9		0.021		0.000		1.6
Bkgd	220.0		23.3		23.300		2.168		9.3

### Current Optimization File Data

Current Value	Description
0.79	Nebulizer Gas Flow
14.50	Lens Voltage
1450.00	ICP RF Power
-1781.25	Analog Stage Voltage
900.00	Pulse Stage Voltage
25.00	Discriminator Threshold
-6.00	AC Rod Offset

### Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	21	12.5	4442.4
Co	59	21	13.5	42003.3
In	115	21	14.8	92548.1



## ICPMS #6 Instrument Tuning Report

File Name: default2.tun  
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	584	2080	0.668
Be	9.0	9.1	2039	2080	0.664
Mg	24.0	24.0	5680	2120	0.614
Mg	25.0	25.0	5934	2080	0.720
Mg	26.0	26.0	6149	2120	0.683
Co	58.9	58.9	14164	2170	0.638
Rh	102.9	102.9	24844	2230	0.691
In	114.9	114.9	27769	2260	0.682
Ce	139.9	139.9	33846	2280	0.737
Pb	206.0	205.9	49936	2430	0.722
Pb	207.0	207.0	50135	2385	0.685
Pb	208.0	208.0	50451	2430	0.714
U	238.1	238.1	57737	2470	0.710

## ICPMS#6 - Summary Report

Sample ID: Blank

Sample Date/Time: Tuesday, February 02, 2010 16:59:54

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\benl.mth

Dataset File: C:\elandata\Dataset\100201\Blank.222

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9		ug/L		11	
Sc	45		ug/L		518146	
Ni	60		ug/L		70	

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45					
Ni	60					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Tuesday, February 02, 2010 17:03:01

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\Standard 1.223

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	10.000	ug/L	3.854	5092	0.012
Sc	45		ug/L		436739	436738.644
Ni	60	10.000	ug/L	1.436	8271	0.019

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Duplicate Rel. % Difference
Be	9					
Sc	45					
Ni	60					

### QC Out Of Limits

Measurement Type    Analyte    Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Tuesday, February 02, 2010 17:06:06

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\Standard 2.224

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	99.252	ug/L	2.012	28260	0.066
Sc	45		ug/L		427203	427203.463
Ni	60	99.289	ug/L	0.777	46675	0.109

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9972
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	0.9975

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45					
Ni	60					

### QC Out Of Limits

Measurement Type    Analyte    Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Tuesday, February 02, 2010 17:09:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\QC Std 1.225

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	51.816	ug/L	2.362	14559	0.035
Sc	45		ug/L		421513	421513.297
Ni	60	52.033	ug/L	1.758	24158	0.057

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9972
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	0.9975

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9	103.633				
Sc	45		81.4			
Ni	60	104.066				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Tuesday, February 02, 2010 17:11:50

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\QC Std 2.226

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.014 ug/L	40.072	15	0.000
>	Sc	45	ug/L		493988	493987.511
[	Ni	60	-0.014 ug/L	60.631	59	-0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45		95.3		
[	Ni	60				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Tuesday, February 02, 2010 17:14:28

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\QC Std 3.227

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.550	ug/L	17.413	172	0.000
Sc	45		ug/L		442223	442223.037
Ni	60	1.990	ug/L	3.394	1027	0.002

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9972
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	0.9975

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Be	9	110.096				
Sc	45		85.3			
Ni	60	99.501				

### QC Out Of Limits

Measurement Type: Analyte      Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Tuesday, February 02, 2010 17:17:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\QC Std 4.228

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.087 ug/L	25.256	38	0.000
>	Sc	45	ug/L		474529	474528.898
[	Ni	60	2.744 ug/L	2.850	1495	0.003

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45		91.6		
[	Ni	60	82.908			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#6 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Tuesday, February 02, 2010 17:19:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\benl.mth

Dataset File: C:\elandata\Dataset\100201\QC Std 5.229

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	17.450	ug/L	4.567	5614	0.012
Sc	45		ug/L		482376	482376.335
Ni	60	19.394	ug/L	3.517	10338	0.021

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9972
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	0.9975

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Be	9	87.249				
Sc	45		93.1			
Ni	60	85.438				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 02, 2010 17:22:19

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\QC Std 6.230

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean	
[	Be	9	50.681	ug/L	3.624	14582	0.034
>	Sc	45	ug/L		431784	431784.457	
[	Ni	60	50.134	ug/L	2.064	23840	0.055

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9	101.362			
>	Sc	45		83.3		
[	Ni	60	100.267			

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 02, 2010 17:24:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\QC Std 7.231

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.011 ug/L	111.048	14	0.000
>	Sc	45	ug/L		508365	508364.555
[	Ni	60	0.010 ug/L	36.912	74	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[	Be	9					
>	Sc	45		98.1			
[	Ni	60					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202018149

Sample Date/Time: Tuesday, February 02, 2010 17:27:35

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 942665|2|rm|

Method File: c:\elandata\Method\benl.mth

Dataset File: C:\elandata\Dataset\100201\1202018149.232

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	-0.005 ug/L	225.858	9	-0.000
>	Sc	45	ug/L		507331	507330.502
[	Ni	60	0.232 ug/L	5.213	197	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9			
>	Sc	45	97.9		
[	Ni	60			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202018150

Sample Date/Time: Tuesday, February 02, 2010 17:30:44

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 942665|40|rmj

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\1202018150.233

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	17.353 ug/L	0.725	6401	0.012
>	Sc	45	ug/L		552556	552556.159
[	Ni	60	29.190 ug/L	1.301	17798	0.032

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45		106.6		
[	Ni	60				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921001

Sample Date/Time: Tuesday, February 02, 2010 17:37:00

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|rmj

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\244921001.235

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	2.640 ug/L	1.527	993	0.002
>	Sc	45	ug/L		557799	557798.730
[	Ni	60	27.641 ug/L	0.693	17019	0.030

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45	107.7			
[	Ni	60				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202018151

Sample Date/Time: Tuesday, February 02, 2010 17:40:08

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 942665[2]rmj

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\1202018151.236

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	2.716	ug/L	0.964	1012	0.002
Sc	45		ug/L		552705	552704.971
Ni	60	29.003	ug/L	0.586	17691	0.032

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9972
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	0.9975

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45		106.7			
Ni	60					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202018152

Sample Date/Time: Tuesday, February 02, 2010 17:43:17

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 942665|2|rmj

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\1202018152.237

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	20.464 ug/L	2.246	7571	0.014
>	Sc	45	ug/L		554507	554506.672
[	Ni	60	42.574 ug/L	1.066	26017	0.047

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[	Be	9					
>	Sc	45	107.0				
[	Ni	60					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#6 - Summary Report

Sample ID: 1202018154

Sample Date/Time: Tuesday, February 02, 2010 17:46:26

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 942665[2]rm]

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\1202018154.238

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	21.297 ug/L	2.501	8060	0.014
> Sc	45	ug/L		567317	567317.468
[ Ni	60	45.081 ug/L	1.122	28180	0.050

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[ Be	9				
> Sc	45	109.5			
[ Ni	60				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202018153

Sample Date/Time: Tuesday, February 02, 2010 17:49:35

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 942665|10|rmj

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\1202018153.239

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.568 ug/L	11.624	220	0.000
Sc	45	ug/L		551549	551548.858
Ni	60	6.273 ug/L	5.026	3876	0.007

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9				
Sc	45	106.4			
Ni	60				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 02, 2010 17:52:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\QC Std 6.240

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	50.392	ug/L	0.882	14492	0.034
Sc	45		ug/L		431328	431328.103
Ni	60	49.812	ug/L	1.269	23669	0.055

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9972
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	0.9975

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Be	9	100.784				
Sc	45		83.2			
Ni	60	99.624				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 02, 2010 17:55:20

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\benl.mth

Dataset File: C:\elandata\Dataset\100201\QC Std 7.241

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.023	ug/L	41.555	19	0.000
Sc	45		ug/L		524473	524472.711
Ni	60	0.002	ug/L	518.070	72	0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9972
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	0.9975

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
Sc	45		101.2			
Ni	60					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921002

Sample Date/Time: Tuesday, February 02, 2010 17:57:59

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|rmj

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\244921002.242

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	2.989	ug/L	7.736	1128	0.002
Sc	45		ug/L		561501	561501.025
Ni	60	27.598	ug/L	3.705	17094	0.030

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9972
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	0.9975

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45		108.4			
Ni	60					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921003

Sample Date/Time: Tuesday, February 02, 2010 18:01:08

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2]rm]

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\244921003.243

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.427 ug/L	0.105	1284	0.002
>	Sc	45	ug/L		557295	557294.830
[	Ni	60	29.477 ug/L	1.710	18127	0.032

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45		107.6		
[	Ni	60				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921004

Sample Date/Time: Tuesday, February 02, 2010 18:04:15

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2]rmj

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\244921004.244

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	3.131 ug/L	3.421	1134	0.002
> Sc	45	ug/L		538254	538254.458
[ Ni	60	25.357 ug/L	1.677	15069	0.028

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9				
> Sc	45	103.9			
[ Ni	60				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921005

Sample Date/Time: Tuesday, February 02, 2010 18:07:21

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2]rmj

Method File: c:\elandata\Method\benl.mth

Dataset File: C:\elandata\Dataset\100201\244921005.245

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	2.973 ug/L	8.399	1079	0.002
> Sc	45	ug/L		538966	538965.978
[ Ni	60	23.433 ug/L	1.234	13951	0.026

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9				
> Sc	45	104.0			
[ Ni	60				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#6 - Summary Report

Sample ID: 244921006

Sample Date/Time: Tuesday, February 02, 2010 18:10:27

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2]rmj

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\244921006.246

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	4.574 ug/L	3.926	1668	0.003
>	Sc	45	ug/L		543783	543783.436
[	Ni	60	29.862 ug/L	0.853	17918	0.033

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45	104.9			
[	Ni	60				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921007

Sample Date/Time: Tuesday, February 02, 2010 18:13:33

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|rm|

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\244921007.247

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	2.943	ug/L	3.238	1087	0.002
Sc	45		ug/L		548206	548205.960
Ni	60	24.621	ug/L	0.179	14908	0.027

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9972
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	0.9975

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Duplicate Rel. % Difference
Be	9					
Sc	45		105.8			
Ni	60					

### QC Out Of Limits

Measurement Type    Analyte    Mass    Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921008

Sample Date/Time: Tuesday, February 02, 2010 18:16:40

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|rm|

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\244921008.248

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.599 ug/L	3.655	1286	0.002
>	Sc	45	ug/L		531622	531622.360
[	Ni	60	22.059 ug/L	1.902	12963	0.024

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9			
>	Sc	45	102.6		
[	Ni	60			

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921009

Sample Date/Time: Tuesday, February 02, 2010 18:19:47

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|rmj

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\244921009.249

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	4.806 ug/L	2.132	1730	0.003
>	Sc	45	ug/L		536651	536651.480
[	Ni	60	32.495 ug/L	1.482	19233	0.036

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45	103.6			
[	Ni	60				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921010

Sample Date/Time: Tuesday, February 02, 2010 18:22:54

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2|rm]

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\244921010.250

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	3.141 ug/L	3.201	1147	0.002
>	Sc	45	ug/L		542698	542698.147
[	Ni	60	26.750 ug/L	1.337	16024	0.029

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45	104.7			
[	Ni	60				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 02, 2010 18:26:00

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\QC Std 6.251

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	50.804	ug/L	1.975	14481	0.034
Sc	45		ug/L		427617	427617.439
Ni	60	49.364	ug/L	2.485	23248	0.054

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	0.9972
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	0.9975

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Be	9	101.608				
Sc	45		82.5			
Ni	60	98.728				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Tuesday, February 02, 2010 18:28:38

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\beni.mth

Dataset File: C:\elandata\Dataset\100201\QC Std 7.252

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	0.013 ug/L	22.531	15	0.000
>	Sc	45	ug/L		506016	506016.254
[	Ni	60	-0.002 ug/L	378.257	67	-0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	0.9972
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	0.9975

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[	Be	9				
>	Sc	45	97.7			
[	Ni	60				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS #6 Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Friday, February 05, 2010 20:12:20

### Sample Description:

Method File: C:\elandata\Method\Daily2.mth

Dataset File: c:\elandata\Dataset\100204\Sample.307

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Number of Replicates: 5

### Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD
Be	9.0		2607.2		2607.238		68.595		2.6
Mg	24.0		19493.3		19493.291		170.246		0.9
Co	58.9		31612.9		31612.945		459.299		1.5
Rh	102.9		53294.6		53294.636		583.854		1.1
In	114.9		57155.3		57155.321		703.966		1.2
Pb	208.0		30232.4		30232.359		347.113		1.1
[> Ba	137.9		51114.6		51114.633		702.844		1.4
[ Ba++	69.0		2184.8		0.043		0.001		1.8
[> Ce	139.9		67301.0		67300.963		462.770		0.7
[ CeO	155.9		1743.7		0.026		0.001		2.5
Bkgd	220.0		8.7		8.700		3.290		37.8

### Current Optimization File Data

Current Value	Description
0.87	Nebulizer Gas Flow
14.00	Lens Voltage
1450.00	ICP RF Power
-1781.25	Analog Stage Voltage
900.00	Pulse Stage Voltage
40.00	Discriminator Threshold
-6.00	AC Rod Offset

### Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	21	14.3	2936.0
Co	59	21	15.0	30268.4
In	115	21	16.0	57306.4



## ICPMS #6 Instrument Tuning Report

File Name: default2.tun  
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	581	2080	0.666
Be	9.0	9.0	2032	2080	0.674
Mg	24.0	24.0	5682	2120	0.648
Mg	25.0	24.9	5900	2080	0.680
Mg	26.0	25.9	6152	2120	0.716
Co	58.9	58.9	14166	2170	0.662
Rh	102.9	102.9	24857	2230	0.705
In	114.9	114.9	27785	2260	0.693
Ce	139.9	139.9	33847	2280	0.766
Pb	206.0	205.9	49936	2430	0.751
Pb	207.0	206.9	50123	2385	0.731
Pb	208.0	208.0	50439	2430	0.741
U	238.1	238.0	57730	2470	0.738

## ICPMS#6 - Summary Report

Sample ID: Blank

Sample Date/Time: Saturday, February 06, 2010 01:00:40

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\vi.mth

Dataset File: c:\elandata\dataset\100205\Blank.070

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Sc	45	ug/L		743433	
[ Ni	60	ug/L		51	

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Simple Linear	

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[> Sc	45					
[ Ni	60					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Saturday, February 06, 2010 01:03:15

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\mi.mth

Dataset File: c:\elandata\dataset\100205\Standard 1.071

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45	ug/L		738711	738711.432
[	Ni	60	10.000 ug/L	2.321	4777	0.006

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45				
[	Ni	60				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Saturday, February 06, 2010 01:05:47

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\vi.mth

Dataset File: c:\elandata\dataset\100205\Standard 2.072

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Sc	45		ug/L		709042	709042.001
[ Ni	60	100.027	ug/L	1.045	46698	0.066

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[> Sc	45					
[ Ni	60					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Saturday, February 06, 2010 01:08:20

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\ni.mth

Dataset File: c:\elandata\dataset\100205\QC Std 1.073

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Sc	45		ug/L		703239	703239.244
[ Ni	60	51.788	ug/L	1.870	24002	0.034

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[> Sc	45			94.6		
[ Ni	60	103.577				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Saturday, February 06, 2010 01:10:55

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\ni.mth

Dataset File: c:\elandata\dataset\100205\QC Std 2.074

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Sc 45		ug/L		711303	711303.401
[ Ni 60	0.013	ug/L	47.849	55	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
[> Sc 45			95.7		
[ Ni 60					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Saturday, February 06, 2010 01:13:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\vi.mth

Dataset File: c:\elandata\dataset\100205\QC Std 3.075

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45	ug/L		713807	713807.488
[	Ni	60	ug/L	5.357	1097	0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45		96.0		
[	Ni	60	111.670			

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Saturday, February 06, 2010 01:16:04

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\ml.mth

Dataset File: c:\elandata\dataset\100205\QC Std 4.076

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45	ug/L		676793	676792.557
[	Ni	60	ug/L	2.849	2231	0.003

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std	% Recovery	Int Std	% Recovery	Spike	% Recovery	Dilution	% Dil	Duplicate	Rel. % Difference
>	Sc	45				91.0					
[	Ni	60	148.263								

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#6 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Saturday, February 06, 2010 01:18:38

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\ml.mth

Dataset File: c:\elandata\dataset\100205\QC Std 5.077

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45	ug/L		679476	679476.499
[	Ni	60	23.877 ug/L	0.845	10718	0.016

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45		91.4		
[	Ni	60	105.184			

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 06, 2010 01:21:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\mi.mth

Dataset File: c:\elandata\dataset\100205\QC Std 6.078

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45	ug/L		700580	700580.314
[	Ni	60	53.148 ug/L	2.251	24527	0.035

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Duplicate Rel. % Difference
[>	Sc	45		94.2		
[	Ni	60	106.295			

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 06, 2010 01:23:47

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\vi.mth

Dataset File: c:\elandata\dataset\100205\QC Std 7.079

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45	ug/L		730992	730991.580
[	Ni	60	ug/L	30.586	54	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std	% Recovery	Int Std	% Recovery	Spike	% Recovery	Dilution	% Dil	Duplicate	Rel. % Difference
[>	Sc	45				98.3					
[	Ni	60									

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202018149

Sample Date/Time: Saturday, February 06, 2010 01:26:21

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 942665|2|rmj

Method File: c:\elandata\Method\vi.mth

Dataset File: c:\elandata\dataset\100205\1202018149.080

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Sc 45		ug/L		653861	653860.649
[ Ni 60	0.454	ug/L	8.960	240	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[> Sc 45		88.0			
[ Ni 60					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202018150

Sample Date/Time: Saturday, February 06, 2010 01:28:54

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 942665[40]rmj

Method File: c:\elandata\Method\ni.mth

Dataset File: c:\elandata\dataset\100205\1202018150.081

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45	ug/L		763671	763670.517
[	Ni	60	39.002 ug/L	1.913	19642	0.026

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45		102.7		
[	Ni	60				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921001

Sample Date/Time: Saturday, February 06, 2010 01:34:01

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|rmj

Method File: c:\elandata\Method\ml.mth

Dataset File: c:\elandata\dataset\100205\244921001.083

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Sc 45		ug/L		706749	706749.202
[ Ni 60	45.535	ug/L	0.328	21217	0.030

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[> Sc 45		95.1			
[ Ni 60					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202018151

Sample Date/Time: Saturday, February 06, 2010 01:36:35

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 942665[2]rmj

Method File: c:\elandata\Method\ml.mth

Dataset File: c:\elandata\dataset\100205\1202018151.084

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Sc	45		ug/L		701258	701258.357
[ Ni	60	46.082	ug/L	0.740	21306	0.030

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[> Sc	45			94.3		
[ Ni	60					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202018152

Sample Date/Time: Saturday, February 06, 2010 01:39:10

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 942665|2|rmj

Method File: c:\elandata\Method\vi.mth

Dataset File: c:\elandata\dataset\100205\1202018152.085

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45	ug/L		695640	695639.593
[	Ni	60	ug/L	1.283	30914	0.044

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel.	% Difference
[>	Sc	45		93.6			
[	Ni	60					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#6 - Summary Report

Sample ID: 1202018154

Sample Date/Time: Saturday, February 06, 2010 01:41:44

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 942665[2]rmj

Method File: c:\elandata\Method\vi.mth

Dataset File: c:\elandata\dataset\100205\1202018154.086

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45	ug/L		699907	699906.710
[	Ni	60	ug/L	0.113	34149	0.049

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45		94.1		
[	Ni	60				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 1202018153

Sample Date/Time: Saturday, February 06, 2010 01:44:16

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 942665[10]rmj

Method File: c:\elandata\Method\mi.mth

Dataset File: c:\elandata\dataset\100205\1202018153.087

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Sc 45		ug/L		687773	687773.084
[ Ni 60	10.083	ug/L	2.160	4609	0.007

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[> Sc 45		92.5			
[ Ni 60					

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 06, 2010 01:46:49

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\mi.mth

Dataset File: c:\elandata\dataset\100205\QC Std 6.088

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45	ug/L		740831	740830.553
[	Ni	60	ug/L	1.132	25888	0.035

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std	% Recovery	Int Std	% Recovery	Spike	% Recovery	Dilution	% Dil	Duplicate	Rel. % Difference
>	Sc	45				99.6					
[	Ni	60	106.042								

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 06, 2010 01:49:24

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\ni.mth

Dataset File: c:\elandata\dataset\100205\QC Std 7.089

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45	ug/L		752075	752074.912
[	Ni	60	0.013 ug/L	52.722	58	0.000

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std	% Recovery	Int Std	% Recovery	Spike	% Recovery	Dilution	% Dil	Duplicate	Rel. % Difference
[>	Sc	45			101.2						
[	Ni	60									

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921002

Sample Date/Time: Saturday, February 06, 2010 01:51:59

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|rmj

Method File: c:\elandata\Method\ni.mth

Dataset File: c:\elandata\dataset\100205\244921002.090

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45	ug/L		700790	700790.175
[	Ni	60	45.033 ug/L	1.370	20806	0.030

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45		94.3		
[	Ni	60				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921003

Sample Date/Time: Saturday, February 06, 2010 01:54:32

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|rmj

Method File: c:\elandata\Method\ni.mth

Dataset File: c:\elandata\dataset\100205\244921003.091

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45	ug/L		698208	698207.864
[	Ni	60	47.472 ug/L	0.549	21850	0.031

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
[>	Sc	45		93.9		
[	Ni	60				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921004

Sample Date/Time: Saturday, February 06, 2010 01:57:06

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2]rm]

Method File: c:\elandata\Method\ml.mth

Dataset File: c:\elandata\dataset\100205\244921004.092

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45	ug/L		669146	669146.108
[	Ni	60	40.581 ug/L	2.091	17905	0.027

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45		90.0		
[	Ni	60				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921005

Sample Date/Time: Saturday, February 06, 2010 01:59:40

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2]rmj

Method File: c:\elandata\Method\ml.mth

Dataset File: c:\elandata\dataset\100205\244921005.093

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Sc 45		ug/L		660652	660652.298
[ Ni 60	38.141	ug/L	2.448	16618	0.025

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel.	% Difference
[> Sc 45			88.9			
[ Ni 60						

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#6 - Summary Report

Sample ID: 244921006

Sample Date/Time: Saturday, February 06, 2010 02:02:15

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2]rmj

Method File: c:\elandata\Method\ni.mth

Dataset File: c:\elandata\dataset\100205\244921006.094

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45	ug/L		663955	663955.286
[	Ni	60	48.899 ug/L	2.355	21397	0.032

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45		89.3		
[	Ni	60				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921007

Sample Date/Time: Saturday, February 06, 2010 02:04:51

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|rmj

Method File: c:\elandata\Method\ml.mth

Dataset File: c:\elandata\dataset\100205\244921007.095

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Sc	45		ug/L		684371	684371.238
[ Ni	60	39.954	ug/L	1.074	18034	0.026

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[> Sc	45			92.1		
[ Ni	60					

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921008

Sample Date/Time: Saturday, February 06, 2010 02:07:29

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665|2|rm|

Method File: c:\elandata\Method\vi.mth

Dataset File: c:\elandata\dataset\100205\244921008.096

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45	ug/L		659635	659634.843
[	Ni	60	ug/L	2.181	15626	0.024

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Sc	45		88.7		
[	Ni	60				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921009

Sample Date/Time: Saturday, February 06, 2010 02:10:06

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2]rmj

Method File: c:\elandata\Method\mi.mth

Dataset File: c:\elandata\dataset\100205\244921009.097

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Sc 45		ug/L		668299	668299.045
[ Ni 60	54.604	ug/L	0.534	24050	0.036

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[> Sc 45		89.9			
[ Ni 60					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: 244921010

Sample Date/Time: Saturday, February 06, 2010 02:12:43

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942665[2]rmj

Method File: c:\elandata\Method\ni.mth

Dataset File: c:\elandata\dataset\100205\244921010.098

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Sc 45		ug/L		672291	672290.590
[ Ni 60	43.848	ug/L	2.565	19436	0.029

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[> Sc 45			90.4		
[ Ni 60					

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
------------------	---------	----------------------------

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 06, 2010 02:15:18

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\mi.mth

Dataset File: c:\elandata\dataset\100205\QC Std 6.099

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Sc 45		ug/L		700300	700299.953
[ Ni 60	53.894	ug/L	1.425	24872	0.035

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[> Sc 45			94.2		
[ Ni 60	107.789				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#6 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 06, 2010 02:17:53

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\ni.mth

Dataset File: c:\elandata\dataset\100205\QC Std 7.100

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45	ug/L		719784	719783.503
[	Ni	60	0.005 ug/L	306.180	52	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dif	Duplicate Rel. % Difference
[>	Sc	45		96.8		
[	Ni	60				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Method Name: SOIL  
 Method Description: 7471A, ILM04 ANALYST JXL1  
 Element: Hg

Date: 01/28/2010  
 Technique: FI-MHS  
 Calibration Type:  
 Hg, Calc. Intercept : Linear  
 Wavelength: 253.7 nm  
 Sample Info Name: 012810S1.SIF

Results Data Set Name: 012810S1

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 01/28/2010  
 Sample ID: Calib Blank

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0044	0.0044	09:24:47	No
2			0.0043	0.0043	09:25:22	No
Mean:			0.0044			
SD :			0.0001			
%RSD:			2.2347			

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 01/28/2010  
 Sample ID: S0.2

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0023	0.0067	09:26:44	No
2			0.0023	0.0066	09:27:19	No
Mean:			0.0023			
SD :			0.0001			
%RSD:			2.4484			

[Hg] Standard number 1 applied. [0.200]  
 Correlation Coefficient: 1.00000 Slope: 0.01152  
 Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 01/28/2010  
 Sample ID: S0.5

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0054	0.0098	09:28:43	No
2			0.0053	0.0097	09:29:18	No
Mean:			0.0054			
SD :			0.0001			
%RSD:			1.1557			

[Hg] Standard number 2 applied. [0.500]  
 Correlation Coefficient: 0.99940 Slope: 0.01067  
 Intercept : 0.00006

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 01/28/2010  
 Sample ID: S2.0

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0209	0.0253	09:30:42	No
2			0.0209	0.0253	09:31:16	No
Mean:			0.0209			
SD :			0.0000			
%RSD:			0.1942			

[Hg] Standard number 3 applied. [2.000]



Correlation Coefficient: 0.99995  
Intercept : 0.00012

Slope: 0.01041

=====

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 01/28/2010  
Sample ID: S5.0

-----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0526	0.0570	09:32:41	No
2			0.0512	0.0556	09:33:16	No
Mean:			0.0519			
SD :			0.0010			
%RSD:			1.9476			

[Hg] Standard number 4 applied. [5.000]

Correlation Coefficient: 0.99999

Slope: 0.01036

Intercept : 0.00014

=====

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 01/28/2010  
Sample ID: S10

-----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1004	0.1048	09:34:43	No
2			0.1017	0.1061	09:35:18	No
Mean:			0.1011			
SD :			0.0009			
%RSD:			0.9079			

[Hg] Standard number 5 applied. [10.00]

Correlation Coefficient: 0.99991

Slope: 0.01012

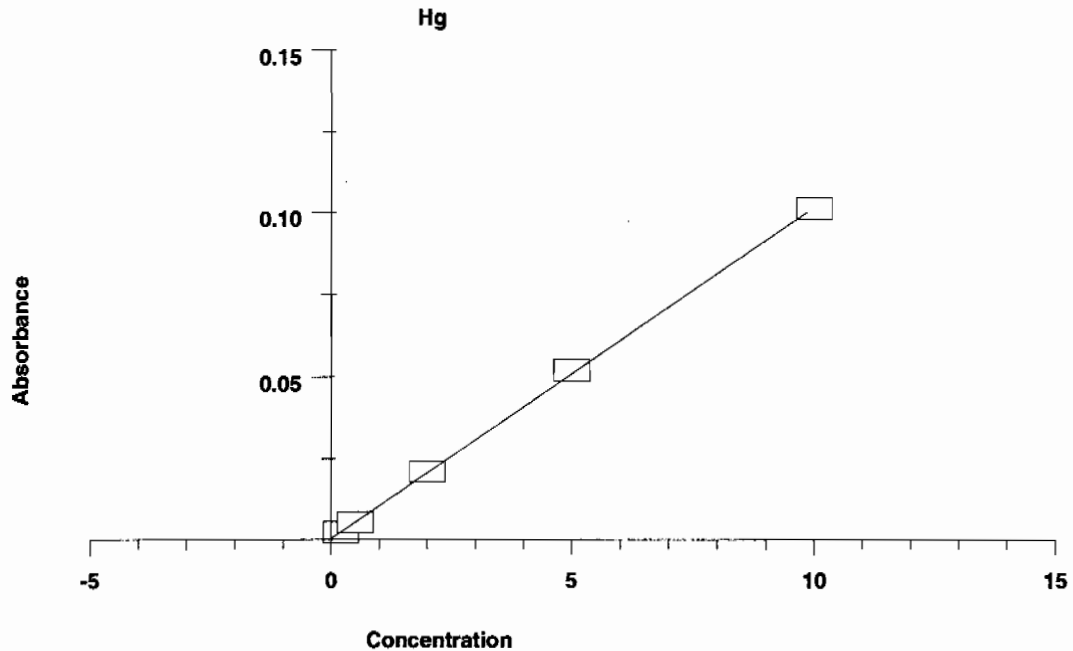
Intercept : 0.00042

-----

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0044	---	---	---	---
S0.2	0.0023	0.200	0.186	0.0001	2.4
S0.5	0.0054	0.500	0.488	0.0001	1.2
S2.0	0.0209	2.000	2.026	0.0000	0.2
S5.0	0.0519	5.000	5.091	0.0010	1.9
S10	0.1011	10.000	9.950	0.0009	0.9
Correlation Coefficient: 0.99991		Slope:	0.01012	Intercept: 0.0004	

-----



=====

Element: Hg    Seq. No.: 7    AS Loc.: 9    Date: 01/28/2010  
 Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.084	5.084	0.0519	0.0562	09:36:46	No
2	5.084	5.084	0.0519	0.0562	09:37:21	No
Mean:	5.084	5.084	0.0519			
SD :	0.0001	0.0001	0.0000			
%RSD:						

QC value within specified limits.

=====

Element: Hg    Seq. No.: 8    AS Loc.: 10    Date: 01/28/2010  
 Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.076	-0.076	-0.0004	0.0040	09:38:43	No
2	-0.084	-0.084	-0.0004	0.0039	09:39:18	No
Mean:	-0.080	-0.080	-0.0004			
SD :	0.0055	0.0055	0.0001			
%RSD:	6.8	6.8	14.1838			

QC value within specified limits.

=====

Element: Hg    Seq. No.: 9    AS Loc.: 11    Date: 01/28/2010  
 Sample ID: CRDL

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.237	0.237	0.0028	0.0072	09:40:41	No
2	0.228	0.228	0.0027	0.0071	09:41:16	No
Mean:	0.233	0.233	0.0028			
SD :	0.0062	0.0062	0.0001			
%RSD:	2.7	2.7	2.2622			

QC value within specified limits.

=====

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 01/28/2010  
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	5.091	5.091	0.0519	0.0563	09:42:41	No
2	5.092	5.092	0.0519	0.0563	09:43:16	No
Mean:	5.092	5.092	0.0519			
SD :	0.0003	0.0003	0.0000			
%RSD:						

QC value within specified limits.

=====

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 01/28/2010  
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.024	-0.024	0.0002	0.0045	09:44:45	No
2	-0.026	-0.026	0.0002	0.0045	09:45:20	No
Mean:	-0.025	-0.025	0.0002			
SD :	0.0014	0.0014	0.0000			
%RSD:	5.6	5.6	8.7615			

QC value within specified limits.

=====

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 01/28/2010  
Sample ID: 1202019779|i||943320|MB

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.041	-0.041	0.0000	0.0044	09:46:46	No
2	-0.036	-0.036	0.0001	0.0044	09:47:21	No
Mean:	-0.039	-0.039	0.0000			
SD :	0.0033	0.0033	0.0000			
%RSD:	8.5	8.5	110.3043			

=====

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 01/28/2010  
Sample ID: 1202019780|i|10||LCS

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	4.011	4.011	0.0410	0.0454	09:48:46	No
2	3.919	3.919	0.0401	0.0444	09:49:20	No
Mean:	3.965	3.965	0.0405			
SD :	0.0650	0.0650	0.0007			
%RSD:	1.6	1.6	1.6231			

=====

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 01/28/2010  
Sample ID: 244852001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.098	0.098	0.0014	0.0058	09:50:46	No
2	0.079	0.079	0.0012	0.0056	09:51:20	No
Mean:	0.088	0.088	0.0013			
SD :	0.0138	0.0138	0.0001			
%RSD:	15.6	15.6	10.6195			

=====

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 01/28/2010  
Sample ID: 244852002|i|||

%RSD: 2.8 2.8 1.7632

=====  
 Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 01/28/2010  
 Sample ID: 244881004|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.296	0.296	0.0034	0.0078	10:05:02	No
2	0.299	0.299	0.0034	0.0078	10:05:37	No
Mean:	0.297	0.297	0.0034			
SD :	0.0019	0.0019	0.0000			
%RSD:	0.6	0.6	0.5560			

=====  
 Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 01/28/2010  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.204	5.204	0.0531	0.0574	10:07:03	No
2	5.167	5.167	0.0527	0.0571	10:07:38	No
Mean:	5.186	5.186	0.0529			
SD :	0.0265	0.0265	0.0003			
%RSD:	0.5	0.5	0.5064			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 01/28/2010  
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.054	-0.054	-0.0001	0.0042	10:09:06	No
2	-0.049	-0.049	-0.0001	0.0043	10:09:41	No
Mean:	-0.052	-0.052	-0.0001			
SD :	0.0033	0.0033	0.0000			
%RSD:	6.4	6.4	32.2812			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 01/28/2010  
 Sample ID: 244902001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.565	0.565	0.0061	0.0105	10:11:06	No
2	0.555	0.555	0.0060	0.0104	10:11:41	No
Mean:	0.560	0.560	0.0061			
SD :	0.0072	0.0072	0.0001			
%RSD:	1.3	1.3	1.1914			

=====  
 Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 01/28/2010  
 Sample ID: 244921001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	8.588	8.588	0.0873	0.0917	10:13:04	No
2	8.590	8.590	0.0873	0.0917	10:13:39	No
Mean:	8.589	8.589	0.0873			
SD :	0.0019	0.0019	0.0000			
%RSD:						

=====  
 Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 01/28/2010  
 Sample ID: 1202019781|i||| DUP

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time  Peak
#      µg/L      µg/L      Signal    Height    Stored
1      9.276     9.276     0.0943    0.0986    10:15:03  No
2      9.080     9.080     0.0923    0.0966    10:15:38  No
Mean:   9.178     9.178     0.0933
SD :    0.1388     0.1388     0.0014
%RSD:   1.5       1.5       1.5053
-----

```

```

=====
Element: Hg      Seq. No.: 27      AS Loc.: 25      Date: 01/28/2010
Sample ID: 1202019782|i|||MS
-----

```

```

Repl  SampleConc  StndConc  BlnkCorr  Peak      Time  Peak
#      µg/L      µg/L      Signal    Height    Stored
1      13.09     13.09     0.1328    0.1372    10:17:02  No
Sample absorbance is greater than that of the highest standard.
2      12.90     12.90     0.1310    0.1353    10:17:36  No
Sample absorbance is greater than that of the highest standard.
Mean:   13.00     13.00     0.1319
SD :    0.1305     0.1305     0.0013
%RSD:   1.0       1.0       1.0006
Sample absorbance is greater than that of the highest standard.
-----

```

```

=====
Element: Hg      Seq. No.: 28      AS Loc.: 26      Date: 01/28/2010
Sample ID: 1202019784|i|||MSD
-----

```

```

Repl  SampleConc  StndConc  BlnkCorr  Peak      Time  Peak
#      µg/L      µg/L      Signal    Height    Stored
1      12.58     12.58     0.1277    0.1321    10:19:01  No
Sample absorbance is greater than that of the highest standard.
2      12.61     12.61     0.1279    0.1323    10:19:36  No
Sample absorbance is greater than that of the highest standard.
Mean:   12.59     12.59     0.1278
SD :    0.0157     0.0157     0.0002
%RSD:   0.1       0.1       0.1241
Sample absorbance is greater than that of the highest standard.
-----

```

```

=====
Element: Hg      Seq. No.: 29      AS Loc.: 27      Date: 01/28/2010
Sample ID: 1202019783|i|5||SDILT
-----

```

```

Repl  SampleConc  StndConc  BlnkCorr  Peak      Time  Peak
#      µg/L      µg/L      Signal    Height    Stored
1      1.615     1.615     0.0168    0.0211    10:21:01  No
2      1.622     1.622     0.0168    0.0212    10:21:36  No
Mean:   1.619     1.619     0.0168
SD :    0.0048     0.0048     0.0000
%RSD:   0.3       0.3       0.2885
-----

```

```

=====
Element: Hg      Seq. No.: 30      AS Loc.: 28      Date: 01/28/2010
Sample ID: 244921002|i|||
-----

```

```

Repl  SampleConc  StndConc  BlnkCorr  Peak      Time  Peak
#      µg/L      µg/L      Signal    Height    Stored
1      23.31     23.31     0.2363    0.2406    10:23:02  No
Sample absorbance is greater than that of the highest standard.
2      23.24     23.24     0.2355    0.2399    10:23:37  No
Sample absorbance is greater than that of the highest standard.
Mean:   23.28     23.28     0.2359
SD :    0.0511     0.0511     0.0005
%RSD:   0.2       0.2       0.2191
Sample absorbance is greater than that of the highest standard.
-----

```

Element: Hg Seq. No.: 31 AS Loc.: 29 Date: 01/28/2010  
 Sample ID: 244921003|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	1.736	1.736	0.0180	0.0223	10:25:03	No
2	1.735	1.735	0.0180	0.0223	10:25:37	No
Mean:	1.735	1.735	0.0180			
SD :	0.0008	0.0008	0.0000			
%RSD:						

Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 01/28/2010  
 Sample ID: 244921004|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	8.787	8.787	0.0893	0.0937	10:27:03	No
2	8.570	8.570	0.0871	0.0915	10:27:38	No
Mean:	8.679	8.679	0.0882			
SD :	0.1533	0.1533	0.0016			
%RSD:	1.8	1.8	1.7577			

Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 01/28/2010  
 Sample ID: 244921005|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.273	0.273	0.0032	0.0075	10:29:06	No
2	0.238	0.238	0.0028	0.0072	10:29:41	No
Mean:	0.256	0.256	0.0030			
SD :	0.0248	0.0248	0.0003			
%RSD:	9.7	9.7	8.3529			

Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 01/28/2010  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.291	5.291	0.0539	0.0583	10:31:08	No
2	5.298	5.298	0.0540	0.0584	10:31:44	No
Mean:	5.295	5.295	0.0540			
SD :	0.0046	0.0046	0.0000			
%RSD:						

QC value within specified limits.

Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 01/28/2010  
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.055	-0.055	-0.0001	0.0042	10:33:12	No
2	-0.061	-0.061	-0.0002	0.0042	10:33:47	No
Mean:	-0.058	-0.058	-0.0002			
SD :	0.0042	0.0042	0.0000			
%RSD:	7.2	7.2	25.7862			

QC value within specified limits.

Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 01/28/2010  
 Sample ID: 244921006|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
--------	--------------------	-----------------	-------------------	----------------	------	----------------

1	0.310	0.310	0.0036	0.0079	10:35:11	No
2	0.313	0.313	0.0036	0.0079	10:35:46	No
Mean:	0.311	0.311	0.0036			
SD :	0.0018	0.0018	0.0000			
%RSD:	0.6	0.6	0.4959			

=====  
 Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 01/28/2010  
 Sample ID: 244921007|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.272	0.272	0.0032	0.0075	10:37:06	No
2	0.250	0.250	0.0029	0.0073	10:37:41	No
Mean:	0.261	0.261	0.0031			
SD :	0.0157	0.0157	0.0002			
%RSD:	6.0	6.0	5.1869			

=====  
 Element: Hg Seq. No.: 38 AS Loc.: 34 Date: 01/28/2010  
 Sample ID: 244921008|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.597	0.597	0.0065	0.0108	10:39:01	No
2	0.596	0.596	0.0064	0.0108	10:39:36	No
Mean:	0.596	0.596	0.0065			
SD :	0.0006	0.0006	0.0000			
%RSD:	0.1	0.1				

=====  
 Element: Hg Seq. No.: 39 AS Loc.: 35 Date: 01/28/2010  
 Sample ID: 244921009|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.270	0.270	0.0032	0.0075	10:40:58	No
2	0.270	0.270	0.0032	0.0075	10:41:32	No
Mean:	0.270	0.270	0.0032			
SD :	0.0001	0.0001	0.0000			
%RSD:						

=====  
 Element: Hg Seq. No.: 40 AS Loc.: 36 Date: 01/28/2010  
 Sample ID: 244921010|i|||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	2.169	2.169	0.0224	0.0267	10:42:54	No
2	2.192	2.192	0.0226	0.0270	10:43:28	No
Mean:	2.181	2.181	0.0225			
SD :	0.0159	0.0159	0.0002			
%RSD:	0.7	0.7	0.7156			

=====  
 Element: Hg Seq. No.: 41 AS Loc.: 37 Date: 01/28/2010  
 Sample ID: 1202024842|i||945437|MB

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	-0.044	-0.044	0.0000	0.0043	10:44:50	No
2	-0.058	-0.058	-0.0002	0.0042	10:45:25	No
Mean:	-0.051	-0.051	-0.0001			
SD :	0.0098	0.0098	0.0001			
%RSD:	19.0	19.0	100.5381			

Element: Hg Seq. No.: 42 AS Loc.: 38 Date: 01/28/2010  
 Sample ID: 1202024843|i||LCS

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	2.155	2.155	0.0222	0.0266	10:46:47	No
2	2.151	2.151	0.0222	0.0265	10:47:22	No
Mean:	2.153	2.153	0.0222			
SD :	0.0029	0.0029	0.0000			
%RSD:	0.1	0.1	0.1319			

Element: Hg Seq. No.: 43 AS Loc.: 39 Date: 01/28/2010  
 Sample ID: 245151001|i||

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	0.305	0.305	0.0035	0.0079	10:48:44	No
2	0.303	0.303	0.0035	0.0078	10:49:19	No
Mean:	0.304	0.304	0.0035			
SD :	0.0017	0.0017	0.0000			
%RSD:	0.6	0.6	0.4925			

Element: Hg Seq. No.: 44 AS Loc.: 40 Date: 01/28/2010  
 Sample ID: 1202024844|i||MS

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	2.484	2.484	0.0256	0.0299	10:50:43	No
2	2.517	2.517	0.0259	0.0302	10:51:18	No
Mean:	2.500	2.500	0.0257			
SD :	0.0227	0.0227	0.0002			
%RSD:	0.9	0.9	0.8947			

Element: Hg Seq. No.: 45 AS Loc.: 41 Date: 01/28/2010  
 Sample ID: 1202024845|i||MSD

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	2.542	2.542	0.0261	0.0305	10:52:43	No
2	2.527	2.527	0.0260	0.0303	10:53:18	No
Mean:	2.534	2.534	0.0261			
SD :	0.0106	0.0106	0.0001			
%RSD:	0.4	0.4	0.4117			

Element: Hg Seq. No.: 46 AS Loc.: 7 Date: 01/28/2010  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	5.427	5.427	0.0553	0.0597	10:54:42	No
2	5.386	5.386	0.0549	0.0593	10:55:17	No
Mean:	5.407	5.407	0.0551			
SD :	0.0291	0.0291	0.0003			
%RSD:	0.5	0.5	0.5345			

QC value within specified limits.

Element: Hg Seq. No.: 47 AS Loc.: 8 Date: 01/28/2010  
 Sample ID: CCB

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	-0.057	-0.057	-0.0002	0.0042	10:56:45	No



```

2      -0.063   -0.063   -0.0002   0.0041   10:57:20   No
Mean:   -0.060   -0.060   -0.0002
SD :    0.0038   0.0038   0.0000
%RSD:    6.3     6.3     20.6198
QC value within specified limits.

```

```

=====
Element: Hg      Seq. No.: 48      AS Loc.: 42      Date: 01/28/2010
Sample ID: 1202024846|i|5||SDILT

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      -0.061     -0.061    -0.0002   0.0042    10:58:46   No
2      -0.080     -0.080    -0.0004   0.0040    10:59:21   No
Mean:   -0.071     -0.071    -0.0003
SD :    0.0135     0.0135    0.0001
%RSD:    19.1      19.1      46.1245

```

```

=====
Element: Hg      Seq. No.: 49      AS Loc.: 43      Date: 01/28/2010
Sample ID: 245151002|i|||

```

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-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      0.415      0.415     0.0046    0.0090    11:00:46   No
2      0.423      0.423     0.0047    0.0091    11:01:20   No
Mean:   0.419      0.419     0.0047
SD :    0.0057     0.0057    0.0001
%RSD:    1.4       1.4       1.2414

```

```

=====
Element: Hg      Seq. No.: 50      AS Loc.: 44      Date: 01/28/2010
Sample ID: 1202025851|i||945848|MB

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      -0.155     -0.155    -0.0011   0.0032    11:02:46   No
2      -0.164     -0.164    -0.0012   0.0031    11:03:22   No
Mean:   -0.159     -0.159    -0.0012
SD :    0.0062     0.0062    0.0001
%RSD:    3.9       3.9       5.2764

```

```

=====
Element: Hg      Seq. No.: 51      AS Loc.: 45      Date: 01/28/2010
Sample ID: 1202025852|i|||LCS

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      2.117      2.117     0.0218    0.0262    11:04:48   No
2      2.090      2.090     0.0216    0.0259    11:05:23   No
Mean:   2.103      2.103     0.0217
SD :    0.0189     0.0189    0.0002
%RSD:    0.9       0.9       0.8790

```

```

=====
Element: Hg      Seq. No.: 52      AS Loc.: 46      Date: 01/28/2010
Sample ID: 245521001|i|||

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      0.389      0.389     0.0044    0.0087    11:06:49   No
2      0.394      0.394     0.0044    0.0088    11:07:25   No
Mean:   0.392      0.392     0.0044
SD :    0.0037     0.0037    0.0000
%RSD:    0.9       0.9       0.8577

```

Element: Hg Seq. No.: 53 AS Loc.: 47 Date: 01/28/2010  
 Sample ID: 1202025853|i||MS

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	2.396	2.396	0.0247	0.0290	11:08:52	No
2	2.403	2.403	0.0247	0.0291	11:09:27	No
Mean:	2.399	2.399	0.0247			
SD :	0.0053	0.0053	0.0001			
%RSD:	0.2	0.2	0.2173			

Element: Hg Seq. No.: 54 AS Loc.: 48 Date: 01/28/2010  
 Sample ID: 1202025854|i||MSD

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	2.493	2.493	0.0256	0.0300	11:10:51	No
2	2.435	2.435	0.0251	0.0294	11:11:26	No
Mean:	2.464	2.464	0.0253			
SD :	0.0413	0.0413	0.0004			
%RSD:	1.7	1.7	1.6498			

Element: Hg Seq. No.: 55 AS Loc.: 49 Date: 01/28/2010  
 Sample ID: 1202025855|i|5||SDILT

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.063	-0.063	-0.0002	0.0041	11:12:46	No
2	-0.069	-0.069	-0.0003	0.0041	11:13:21	No
Mean:	-0.066	-0.066	-0.0002			
SD :	0.0041	0.0041	0.0000			
%RSD:	6.3	6.3	17.1363			

Element: Hg Seq. No.: 56 AS Loc.: 50 Date: 01/28/2010  
 Sample ID: 1202019696|i||943283|MB

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.123	-0.123	-0.0008	0.0035	11:14:41	No
2	-0.135	-0.135	-0.0009	0.0034	11:15:16	No
Mean:	-0.129	-0.129	-0.0009			
SD :	0.0088	0.0088	0.0001			
%RSD:	6.8	6.8	10.0175			

Element: Hg Seq. No.: 57 AS Loc.: 51 Date: 01/28/2010  
 Sample ID: 1202019697|i||LCS

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	2.126	2.126	0.0219	0.0263	11:16:37	No
2	2.101	2.101	0.0217	0.0260	11:17:12	No
Mean:	2.113	2.113	0.0218			
SD :	0.0175	0.0175	0.0002			
%RSD:	0.8	0.8	0.8124			

Element: Hg Seq. No.: 58 AS Loc.: 7 Date: 01/28/2010  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	5.209	5.209	0.0531	0.0575	11:18:36	No
2	5.122	5.122	0.0522	0.0566	11:19:11	No

Mean: 5.165 5.165 0.0527  
 SD : 0.0618 0.0618 0.0006  
 %RSD: 1.2 1.2 1.1873  
 QC value within specified limits.

=====  
 Element: Hg Seq. No.: 59 AS Loc.: 8 Date: 01/28/2010  
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.093	-0.093	-0.0005	0.0038	11:20:39	No
2	-0.098	-0.098	-0.0006	0.0038	11:21:14	No
Mean:	-0.095	-0.095	-0.0005			
SD :	0.0036	0.0036	0.0000			
%RSD:	3.8	3.8	6.6734			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 60 AS Loc.: 52 Date: 01/28/2010  
 Sample ID: 244940001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.569	0.569	0.0062	0.0105	11:22:39	No
2	0.572	0.572	0.0062	0.0106	11:23:14	No
Mean:	0.571	0.571	0.0062			
SD :	0.0024	0.0024	0.0000			
%RSD:	0.4	0.4	0.3895			

=====  
 Element: Hg Seq. No.: 61 AS Loc.: 53 Date: 01/28/2010  
 Sample ID: 1202019698|i|||DUP

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.693	0.693	0.0074	0.0118	11:24:35	No
2	0.660	0.660	0.0071	0.0115	11:25:10	No
Mean:	0.676	0.676	0.0073			
SD :	0.0230	0.0230	0.0002			
%RSD:	3.4	3.4	3.1988			

=====  
 Element: Hg Seq. No.: 62 AS Loc.: 54 Date: 01/28/2010  
 Sample ID: 1202019699|i|||MS

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.982	2.982	0.0306	0.0349	11:26:32	No
2	2.885	2.885	0.0296	0.0340	11:27:07	No
Mean:	2.933	2.933	0.0301			
SD :	0.0691	0.0691	0.0007			
%RSD:	2.4	2.4	2.3212			

=====  
 Element: Hg Seq. No.: 63 AS Loc.: 55 Date: 01/28/2010  
 Sample ID: 1202019701|i|||MSD

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.825	2.825	0.0290	0.0334	11:28:29	No
2	2.852	2.852	0.0293	0.0336	11:29:03	No
Mean:	2.839	2.839	0.0291			
SD :	0.0187	0.0187	0.0002			
%RSD:	0.7	0.7	0.6504			

Mean: -0.165 -0.165 -0.0012  
 SD : 0.0088 0.0088 0.0001  
 %RSD: 5.4 5.4 7.1756

=====  
 Element: Hg Seq. No.: 70 AS Loc.: 7 Date: 01/28/2010  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.221	5.221	0.0532	0.0576	11:42:26	No
2	5.169	5.169	0.0527	0.0571	11:43:00	No
Mean:	5.195	5.195	0.0530			
SD :	0.0372	0.0372	0.0004			
%RSD:	0.7	0.7	0.7110			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 71 AS Loc.: 8 Date: 01/28/2010  
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.075	-0.075	-0.0003	0.0040	11:44:28	No
2	-0.092	-0.092	-0.0005	0.0038	11:45:03	No
Mean:	-0.084	-0.084	-0.0004			
SD :	0.0121	0.0121	0.0001			
%RSD:	14.4	14.4	28.5673			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 72 AS Loc.: 62 Date: 01/28/2010  
 Sample ID: 1202021162|i||LCS

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.113	2.113	0.0218	0.0262	11:46:30	No
2	2.115	2.115	0.0218	0.0262	11:47:05	No
Mean:	2.114	2.114	0.0218			
SD :	0.0014	0.0014	0.0000			
%RSD:						

=====  
 Element: Hg Seq. No.: 73 AS Loc.: 63 Date: 01/28/2010  
 Sample ID: 245117001|i|||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.203	-0.203	-0.0016	0.0027	11:48:28	No
2	-0.209	-0.209	-0.0017	0.0027	11:49:03	No
Mean:	-0.206	-0.206	-0.0017			
SD :	0.0043	0.0043	0.0000			
%RSD:	2.1	2.1	2.5969			

=====  
 Element: Hg Seq. No.: 74 AS Loc.: 64 Date: 01/28/2010  
 Sample ID: 1202021163|i||MS

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.091	2.091	0.0216	0.0259	11:50:23	No
2	2.104	2.104	0.0217	0.0261	11:50:57	No
Mean:	2.098	2.098	0.0216			
SD :	0.0095	0.0095	0.0001			
%RSD:	0.5	0.5	0.4430			

=====  
 =====

Mean: 6.570 6.570 0.0669  
 SD : 0.0662 0.0662 0.0007  
 %RSD: 1.0 1.0 1.0006

=====  
 Element: Hg Seq. No.: 81 AS Loc.: 71 Date: 01/28/2010  
 Sample ID: 1202022130|i||MSD

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	6.714	6.714	0.0683	0.0727	12:04:00	No
2	6.856	6.856	0.0698	0.0741	12:04:35	No
Mean:	6.785	6.785	0.0691			
SD :	0.1006	0.1006	0.0010			
%RSD:	1.5	1.5	1.4737			

=====  
 Element: Hg Seq. No.: 82 AS Loc.: 7 Date: 01/28/2010  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.319	5.319	0.0542	0.0586	12:06:00	No
2	5.155	5.155	0.0526	0.0569	12:06:34	No
Mean:	5.237	5.237	0.0534			
SD :	0.1162	0.1162	0.0012			
%RSD:	2.2	2.2	2.2011			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 83 AS Loc.: 8 Date: 01/28/2010  
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.107	-0.107	-0.0007	0.0037	12:08:01	No
2	-0.115	-0.115	-0.0007	0.0036	12:08:36	No
Mean:	-0.111	-0.111	-0.0007			
SD :	0.0058	0.0058	0.0001			
%RSD:	5.2	5.2	8.3707			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 84 AS Loc.: 72 Date: 01/28/2010  
 Sample ID: 1202022131|i|5||SDILT

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.987	0.987	0.0104	0.0148	12:10:01	No
2	0.982	0.982	0.0104	0.0147	12:10:36	No
Mean:	0.985	0.985	0.0104			
SD :	0.0034	0.0034	0.0000			
%RSD:	0.3	0.3	0.3315			

=====  
 Element: Hg Seq. No.: 85 AS Loc.: 73 Date: 01/28/2010  
 Sample ID: 1202025843|i||945846|MB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.207	-0.207	-0.0017	0.0027	12:12:00	No
2	-0.211	-0.211	-0.0017	0.0026	12:12:35	No
Mean:	-0.209	-0.209	-0.0017			
SD :	0.0027	0.0027	0.0000			
%RSD:	1.3	1.3	1.6196			

Element: Hg Seq. No.: 86 AS Loc.: 74 Date: 01/28/2010  
 Sample ID: 1202025844|i||LCS

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	2.121	2.121	0.0219	0.0262	12:14:00	No
2	2.161	2.161	0.0223	0.0266	12:14:36	No
Mean:	2.141	2.141	0.0221			
SD :	0.0286	0.0286	0.0003			
%RSD:	1.3	1.3	1.3111			

Element: Hg Seq. No.: 87 AS Loc.: 75 Date: 01/28/2010  
 Sample ID: 245528002|i||

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	3.904	3.904	0.0399	0.0443	12:16:01	No
2	3.810	3.810	0.0390	0.0433	12:16:36	No
Mean:	3.857	3.857	0.0394			
SD :	0.0666	0.0666	0.0007			
%RSD:	1.7	1.7	1.7095			

Element: Hg Seq. No.: 88 AS Loc.: 76 Date: 01/28/2010  
 Sample ID: 1202025845|i||MS

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	4.100	4.100	0.0419	0.0463	12:18:02	No
2	4.124	4.124	0.0421	0.0465	12:18:37	No
Mean:	4.112	4.112	0.0420			
SD :	0.0174	0.0174	0.0002			
%RSD:	0.4	0.4	0.4201			

Element: Hg Seq. No.: 89 AS Loc.: 77 Date: 01/28/2010  
 Sample ID: 1202025846|i||MSD

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	4.494	4.494	0.0459	0.0502	12:20:03	No
2	4.514	4.514	0.0461	0.0504	12:20:37	No
Mean:	4.504	4.504	0.0460			
SD :	0.0142	0.0142	0.0001			
%RSD:	0.3	0.3	0.3129			

Element: Hg Seq. No.: 90 AS Loc.: 78 Date: 01/28/2010  
 Sample ID: 1202028547|i|5|SDILT

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	0.655	0.655	0.0071	0.0114	12:21:59	No
2	0.640	0.640	0.0069	0.0113	12:22:34	No
Mean:	0.648	0.648	0.0070			
SD :	0.0111	0.0111	0.0001			
%RSD:	1.7	1.7	1.6121			

Element: Hg Seq. No.: 91 AS Loc.: 7 Date: 01/28/2010  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlncCorr Signal	Peak Height	Time	Peak Stored
1	5.284	5.284	0.0539	0.0582	12:23:57	No
2	5.336	5.336	0.0544	0.0588	12:24:32	No

Mean: 5.310 5.310 0.0541  
SD : 0.0368 0.0368 0.0004  
%RSD: 0.7 0.7 0.6883  
QC value within specified limits.

=====

Element: Hg Seq. No.: 92 AS Loc.: 8 Date: 01/28/2010  
Sample ID: CCB

-----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.119	-0.119	-0.0008	0.0036	12:26:01	No
2	-0.131	-0.131	-0.0009	0.0035	12:26:36	No
Mean:	-0.125	-0.125	-0.0008			
SD :	0.0081	0.0081	0.0001			
%RSD:	6.4	6.4	9.6376			

QC value within specified limits.

=====  
Element: Hg Seq. No.: 93 AS Loc.: 28 Date: 01/28/2010  
Sample ID: 244921002|i|10|943320|  
=====

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.710	2.710	0.0278	0.0322	13:09:52	No
2	2.598	2.598	0.0267	0.0311	13:10:27	No
Mean:	2.654	2.654	0.0273			
SD :	0.0789	0.0789	0.0008			
%RSD:	3.0	3.0	2.9260			

=====  
Element: Hg Seq. No.: 94 AS Loc.: 63 Date: 01/28/2010  
Sample ID: 245117001|i||943905|  
=====

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.162	-0.162	-0.0012	0.0031	13:11:50	No
2	-0.159	-0.159	-0.0012	0.0032	13:12:25	No
Mean:	-0.160	-0.160	-0.0012			
SD :	0.0021	0.0021	0.0000			
%RSD:	1.3	1.3	1.7755			

=====  
Element: Hg Seq. No.: 95 AS Loc.: 64 Date: 01/28/2010  
Sample ID: 1202021163|i||MS  
=====

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	1.968	1.968	0.0203	0.0247	13:13:45	No
2	1.979	1.979	0.0204	0.0248	13:14:20	No
Mean:	1.974	1.974	0.0204			
SD :	0.0076	0.0076	0.0001			
%RSD:	0.4	0.4	0.3754			

=====  
Element: Hg Seq. No.: 96 AS Loc.: 65 Date: 01/28/2010  
Sample ID: 1202021164|i||MSD  
=====

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	1.975	1.975	0.0204	0.0248	13:15:40	No
2	1.967	1.967	0.0203	0.0247	13:16:15	No
Mean:	1.971	1.971	0.0204			
SD :	0.0053	0.0053	0.0001			
%RSD:	0.3	0.3	0.2615			

=====  
Element: Hg Seq. No.: 97 AS Loc.: 66 Date: 01/28/2010  
Sample ID: 1202021165|i|5||SDILT  
=====

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.207	-0.207	-0.0017	0.0027	13:17:35	No
2	-0.214	-0.214	-0.0017	0.0026	13:18:10	No
Mean:	-0.210	-0.210	-0.0017			
SD :	0.0056	0.0056	0.0001			
%RSD:	2.7	2.7	3.3176			

=====  
Element: Hg Seq. No.: 98 AS Loc.: 73 Date: 01/28/2010  
Sample ID: 1202025843|i||945846|MB  
=====

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.146	-0.146	-0.0011	0.0033	13:19:32	No
2	-0.144	-0.144	-0.0010	0.0033	13:20:07	No
Mean:	-0.145	-0.145	-0.0010			



SD : 0.0015 0.0015 0.0000  
 %RSD: 1.0 1.0 1.4620

=====  
 Element: Hg Seq. No.: 99 AS Loc.: 74 Date: 01/28/2010  
 Sample ID: 1202025844|i||LCS

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	1.986	1.986	0.0205	0.0249	13:21:31	No
2	2.053	2.053	0.0212	0.0255	13:22:06	No
Mean:	2.019	2.019	0.0208			
SD :	0.0471	0.0471	0.0005			
%RSD:	2.3	2.3	2.2859			

=====  
 Element: Hg Seq. No.: 100 AS Loc.: 75 Date: 01/28/2010  
 Sample ID: 245528002|i||

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	3.808	3.808	0.0389	0.0433	13:23:32	No
2	3.857	3.857	0.0394	0.0438	13:24:07	No
Mean:	3.833	3.833	0.0392			
SD :	0.0349	0.0349	0.0004			
%RSD:	0.9	0.9	0.9005			

=====  
 Element: Hg Seq. No.: 101 AS Loc.: 76 Date: 01/28/2010  
 Sample ID: 1202025845|i||MS

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	4.138	4.138	0.0423	0.0466	13:25:33	No
2	4.121	4.121	0.0421	0.0465	13:26:08	No
Mean:	4.129	4.129	0.0422			
SD :	0.0119	0.0119	0.0001			
%RSD:	0.3	0.3	0.2857			

=====  
 Element: Hg Seq. No.: 102 AS Loc.: 77 Date: 01/28/2010  
 Sample ID: 1202025846|i||MSD

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	4.349	4.349	0.0444	0.0488	13:27:34	No
2	4.352	4.352	0.0444	0.0488	13:28:08	No
Mean:	4.351	4.351	0.0444			
SD :	0.0017	0.0017	0.0000			
%RSD:						

=====  
 Element: Hg Seq. No.: 103 AS Loc.: 7 Date: 01/28/2010  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.246	5.246	0.0535	0.0578	13:29:34	No
2	5.203	5.203	0.0531	0.0574	13:30:08	No
Mean:	5.224	5.224	0.0533			
SD :	0.0302	0.0302	0.0003			
%RSD:	0.6	0.6	0.5728			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 104 AS Loc.: 8 Date: 01/28/2010  
 Sample ID: CCB

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      0.038      0.038      0.0008    0.0052    13:31:36  No
2      0.025      0.025      0.0007    0.0050    13:32:10  No
Mean:   0.032      0.032      0.0007
SD :    0.0089      0.0089      0.0001
%RSD:   28.0        28.0      12.1284
QC value within specified limits.

```

```

=====
Element: Hg      Seq. No.: 105      AS Loc.: 78      Date: 01/28/2010
Sample ID: 1202028547|i|5||SDILT

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      0.606      0.606      0.0065    0.0109    13:33:33  No
2      0.605      0.605      0.0065    0.0109    13:34:08  No
Mean:   0.605      0.605      0.0065
SD :    0.0006      0.0006      0.0000
%RSD:   0.1         0.1

```

```

=====
Element: Hg      Seq. No.: 106      AS Loc.: 7      Date: 01/28/2010
Sample ID: CCV

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      5.172      5.172      0.0527    0.0571    13:35:31  No
2      5.303      5.303      0.0541    0.0584    13:36:07  No
Mean:   5.237      5.237      0.0534
SD :    0.0926      0.0926      0.0009
%RSD:   1.8         1.8      1.7537
QC value within specified limits.

```

```

=====
Element: Hg      Seq. No.: 107      AS Loc.: 8      Date: 01/28/2010
Sample ID: CCB

```

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      ug/L      ug/L      Signal    Height    Height    Stored
1      0.017      0.017      0.0006    0.0049    13:37:34  No
2      0.036      0.036      0.0008    0.0051    13:38:09  No
Mean:   0.026      0.026      0.0007
SD :    0.0134      0.0134      0.0001
%RSD:   51.5        51.5      19.8468
QC value within specified limits.

```

# Miscellaneous

# Prep LogBook

Analyst: FGA  
 Batch: 942662  
 Lab SOP: GL-MA-E-009 REV# 19

Verified by: \_\_\_\_\_

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Spike Amount	Spike Units
MB	1202018149		SW846 3050B	21-JAN-2010 13:00	0.513 g	50 mL	97.46589	.525	g
LCS	1202018150		SW846 3050B	21-JAN-2010 13:00	0.525 g	50 mL	95.2381	.5	mL
SAMPLE	244902001		SW846 3050B	21-JAN-2010 13:00	0.514 g	50 mL	97.27626	.5	mL
SAMPLE	244921001		SW846 3050B	21-JAN-2010 13:00	0.507 g	50 mL	98.61933	.5	mL
DUP	1202018151	244921001	SW846 3050B	21-JAN-2010 13:00	0.525 g	50 mL	95.2381	.5	mL
MS	1202018152	244921001	SW846 3050B	21-JAN-2010 13:00	0.511 g	50 mL	97.84736	.5	mL
MSD	1202018154	244921001	SW846 3050B	21-JAN-2010 13:00	0.523 g	50 mL	95.60229	.5	mL
SDILT	1202018153	244921001	SW846 3050B	21-JAN-2010 13:00	0.507 g	50 mL	98.61933	.5	mL
SAMPLE	244921002		SW846 3050B	21-JAN-2010 13:00	0.525 g	50 mL	95.2381	.5	mL
SAMPLE	244921003		SW846 3050B	21-JAN-2010 13:00	0.508 g	50 mL	98.4252	.5	mL
SAMPLE	244921004		SW846 3050B	21-JAN-2010 13:00	0.51 g	50 mL	98.03922	.5	mL
SAMPLE	244921005		SW846 3050B	21-JAN-2010 13:00	0.523 g	50 mL	95.60229	.5	mL
SAMPLE	244921006		SW846 3050B	21-JAN-2010 13:00	0.505 g	50 mL	99.0099	.5	mL
SAMPLE	244921007		SW846 3050B	21-JAN-2010 13:00	0.5 g	50 mL	100	.5	mL
SAMPLE	244921008		SW846 3050B	21-JAN-2010 13:00	0.509 g	50 mL	98.23183	.5	mL
SAMPLE	244921009		SW846 3050B	21-JAN-2010 13:00	0.522 g	50 mL	95.78544	.5	mL
SAMPLE	244921010		SW846 3050B	21-JAN-2010 13:00	0.515 g	50 mL	97.08738	.5	mL

Comments: Brown, powder-like soil.

Reagent/Solvent Lot ID  
 1203655-02  
 1234886

Amount  
 1.5 mL  
 5 mL

Description  
 Hydrogen Peroxide 30%  
 Nitric Acid CONC.

# Prep LogBook

Analyst: FGA Verified by: \_\_\_\_\_

Batch: 942673

Lab SOP: GIL-MA-E-009 REV# 19

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Spike Amount	Spike Units
MB	1202018179		SW846 3050B	21-JAN-2010 13:00	0.523 g	50 mL	95.60229	.52	g
LCS	1202018180		SW846 3050B	21-JAN-2010 13:00	0.52 g	50 mL	96.15385	.25	mL
SAMPLE	244902001		SW846 3050B	21-JAN-2010 13:00	0.52 g	50 mL	96.15385	.25	mL
SAMPLE	244921001		SW846 3050B	21-JAN-2010 13:00	0.523 g	50 mL	95.60229	.25	mL
DUP	1202018181	244921001	SW846 3050B	21-JAN-2010 13:00	0.517 g	50 mL	96.7118	.25	mL
MS	1202018182	244921001	SW846 3050B	21-JAN-2010 13:00	0.51 g	50 mL	98.03922	.25	mL
MSD	1202018185	244921001	SW846 3050B	21-JAN-2010 13:00	0.519 g	50 mL	96.33911	.25	mL
SDILT	1202018183	244921001	SW846 3050B	21-JAN-2010 13:00	0.52 g	50 mL	96.15385	.25	mL
SAMPLE	244921002		SW846 3050B	21-JAN-2010 13:00	0.504 g	50 mL	99.20635		
SAMPLE	244921003		SW846 3050B	21-JAN-2010 13:00	0.525 g	50 mL	95.2381		
SAMPLE	244921004		SW846 3050B	21-JAN-2010 13:00	0.5 g	50 mL	100		
SAMPLE	244921005		SW846 3050B	21-JAN-2010 13:00	0.518 g	50 mL	96.5251		
SAMPLE	244921006		SW846 3050B	21-JAN-2010 13:00	0.502 g	50 mL	99.60159		
SAMPLE	244921007		SW846 3050B	21-JAN-2010 13:00	0.501 g	50 mL	99.8004		
SAMPLE	244921008		SW846 3050B	21-JAN-2010 13:00	0.502 g	50 mL	99.60159		
SAMPLE	244921009		SW846 3050B	21-JAN-2010 13:00	0.51 g	50 mL	98.03922		
SAMPLE	244921010		SW846 3050B	21-JAN-2010 13:00	0.506 g	50 mL	98.81423		

Comments: Brown, powder-like soil.

Reagent/Solvent Lot ID	Amount	Description
1252838	10 mL	HYDROCHLORIC ACID
1234886	1.25 mL	Nitric Acid CONC.

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# Prep LogBook

Analyst: TXB3  
Batch: 943319  
Lab SOP: GL-MA-E-010 REV# 23

Verified by: \_\_\_\_\_

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Spike Amount	Spike Units
MB	1202019779		SW846 7471A Prep	27-JAN-2010 13:25	0.549 g	30 mL	54.64481	SOIL	g
LCS	1202019780		SW846 7471A Prep	27-JAN-2010 13:25	0.204 g	30 mL	147.05882	SOIL	g
SAMPLE	244852001		SW846 7471A Prep	27-JAN-2010 13:25	0.502 g	30 mL	59.76096	SOIL	mL
SAMPLE	244852002		SW846 7471A Prep	27-JAN-2010 13:25	0.516 g	30 mL	58.13953	SOIL	mL
SAMPLE	244852003		SW846 7471A Prep	27-JAN-2010 13:25	0.516 g	30 mL	58.13953	SOIL	mL
SAMPLE	244852004		SW846 7471A Prep	27-JAN-2010 13:25	0.541 g	30 mL	55.45287	SOIL	mL
SAMPLE	244881001		SW846 7471A Prep	27-JAN-2010 13:25	0.566 g	30 mL	53.00353	SOIL	mL
SAMPLE	244881002		SW846 7471A Prep	27-JAN-2010 13:25	0.519 g	30 mL	57.80347	SOIL	mL
SAMPLE	244881003		SW846 7471A Prep	27-JAN-2010 13:25	0.536 g	30 mL	55.97015	SOIL	mL
SAMPLE	244881004		SW846 7471A Prep	27-JAN-2010 13:25	0.526 g	30 mL	57.03422	SOIL	mL
SAMPLE	244902001		SW846 7471A Prep	27-JAN-2010 13:25	0.52 g	30 mL	57.69231	SOIL	mL
SAMPLE	244921001		SW846 7471A Prep	27-JAN-2010 13:25	0.509 g	30 mL	58.9391	SOIL	mL
DUP	1202019781	244921001	SW846 7471A Prep	27-JAN-2010 13:25	0.526 g	30 mL	57.03422	SOIL	mL
MS	1202019782	244921001	SW846 7471A Prep	27-JAN-2010 13:25	0.51 g	30 mL	58.82353	SOIL	mL
MSD	1202019784	244921001	SW846 7471A Prep	27-JAN-2010 13:25	0.548 g	30 mL	54.74453	SOIL	mL
SDILT	1202019783	244921001	SW846 7471A Prep	27-JAN-2010 13:25	0.509 g	30 mL	58.9391	SOIL	mL
SAMPLE	244921002		SW846 7471A Prep	27-JAN-2010 13:25	0.573 g	30 mL	52.35602	SOIL	mL
SAMPLE	244921003		SW846 7471A Prep	27-JAN-2010 13:25	0.55 g	30 mL	54.54545	SOIL	mL
SAMPLE	244921004		SW846 7471A Prep	27-JAN-2010 13:25	0.505 g	30 mL	59.40594	SOIL	mL
SAMPLE	244921005		SW846 7471A Prep	27-JAN-2010 13:25	0.529 g	30 mL	56.71078	SOIL	mL
SAMPLE	244921006		SW846 7471A Prep	27-JAN-2010 13:25	0.508 g	30 mL	59.05512	SOIL	mL
SAMPLE	244921007		SW846 7471A Prep	27-JAN-2010 13:25	0.555 g	30 mL	54.05405	SOIL	mL
SAMPLE	244921008		SW846 7471A Prep	27-JAN-2010 13:25	0.501 g	30 mL	59.88024	SOIL	mL
SAMPLE	244921009		SW846 7471A Prep	27-JAN-2010 13:25	0.513 g	30 mL	58.47953	SOIL	mL
SAMPLE	244921010		SW846 7471A Prep	27-JAN-2010 13:25	0.527 g	30 mL	56.926	SOIL	mL

Reagent/Solvent Lot ID	Amount	Description
1236355-A	1.125 mL	Hydrochloric Acid Conc.
1257474-I	.375 mL	NITRIC ACID
1255535-C	7.5 mL	5% KMnO4 solution
1255532-C	2 mL	Hg reducing agent

Comments: Sample 244921001 is a rocky light brown soil.  
Digestion Start Date: 27-JAN-10 13:25  
Digestion End Date: 27-JAN-10 13:55

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Prep LogBook

WHG100127-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG100127-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5
WHG100127-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG100127-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG100127-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG100127-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

### DATA EXCEPTION REPORT

<b>Mo.Day Yr.</b> 05-FEB-10	<b>Division:</b> Industrial	<b>Quality Criteria:</b> Specifications	<b>Type:</b> Process
<b>Instrument Type:</b> ICP	<b>Test / Method:</b> SW846 3050B/6010B	<b>Matrix Type:</b> Solid	<b>Client Code:</b> LANL
<b>Batch ID:</b> 942675	<b>Sample Numbers:</b> See Below		
<b>Potentially affected work order(s)(SDG): 244902(10-1274),244921(10-1288)</b> <b>Application Issues:</b> Failed Recovery for MS/PS Failed RPD for MS/MSD, or PS/PSD Failed Recovery for MSD/PSD Failed RPD for DUP			
<b>Specification and Requirements Exception Description:</b>		<b>DER Disposition:</b>	
1. Failed Recovery for MS/PS: QC 1202018182MS 2. Failed RPD for DUP: QC 1202018181DUP 3. Failed RPD for MS/MSD, or PS/PSD: QC 1202018185MSD 4. Failed Recovery for MSD/PSD: QC 1202018185MSD		1. The matrix spike recovery failed outside of the control limits for calcium and chromium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 2. The sample and sample duplicate % RPD failed outside the control limits for aluminum,barium,chromium and cobalt due to possible sample non-homogeneity and/or matrix interference. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 3. The matrix spike and matrix spike duplicate % RPD failed outside of the control limits for aluminum due to possible matrix interferences and/or sample non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 4. The matrix spike duplicate recovery failed outside of the control limits for chromium,magnesium and potassium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.	

**Originator's Name:**

Helen Camello

10-FEB-10

**Data Validator/Group Leader:**

Eric Lawson

10-FEB-10



### DATA EXCEPTION REPORT

<b>Mo.Day Yr.</b> 10-FEB-10	<b>Division:</b> Industrial	<b>Quality Criteria:</b> Specifications	<b>Type:</b> Process
<b>Instrument Type:</b> ICP/MS	<b>Test / Method:</b> SW846 3050B/6020	<b>Matrix Type:</b> Solid	<b>Client Code:</b> LANL
<b>Batch ID:</b> 942665	<b>Sample Numbers:</b> See Below		
<b>Potentially affected work order(s)(SDG):</b> 244902(10-1274),244921(10-1288) <b>Application Issues:</b> Failed Recovery for MS/PS Failed RPD for DUP Failed Recovery for MSD/PSD			
<b>Specification and Requirements</b> <b>Exception Description:</b>		<b>DER Disposition:</b>	
1. Failed Recovery for MS/PS: QC 1202018152MS  2. Failed RPD for DUP: QC 1202018151DUP  3. Failed Recovery for MSD/PSD: QC 1202018154MSD		The matrix spike and matrix spike duplicate recovery failed outside of the control limits for Be due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.  The sample and sample duplicate % RPD failed outside the control limits for U due to possible sample non-homogeneity and/or matrix interference. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.	

**Originator's Name:**

Samantha Jacobs 10-FEB-10

**Data Validator/Group Leader:**

Rose Jenkins 11-FEB-10

# Standard Logbook

**Serial ID:** UHG1167639-01      **Opened:** 13-AUG-09      **Amount :** 125 mL  
**Name:** MHGSTOCK1      **Received:** 13-AUG-09      **Catalog Number :** PLHG4-2Y  
**Type:** Source Material      **Expires:** 13-AUG-10      **Lot Number :** 15-37HG  
**Employee:** Bryan Davis      **Solvent :** 10% HNO3  
**Supplier:** Spex  
**Description:** Mercury Source Standard #1 1,000 mg/L  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

**Serial ID:** UHG1167641-02      **Opened:** 13-AUG-09      **Amount :** 100 mL  
**Name:** MHGSTOCK2      **Received:** 13-AUG-09      **Catalog Number :** AHG1KN-100  
**Type:** Source Material      **Expires:** 13-AUG-10      **Lot Number :** 4905530  
**Employee:** Bryan Davis      **Solvent :** 3% HNO3  
**Supplier:** Ricca Chemical Company  
**Description:** Mercury Source Standard #2 1,000 mg/L  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

**Serial ID:** UI031809A      **Opened:** 18-MAR-09      **Catalog Number :** 540  
**Name:** METALSOILSRM      **Received:** 18-MAR-09      **Lot Number :** D061-540  
**Type:** Source Material      **Expires:** 10-OCT-10  
**Employee:** Jamie Johnson  
**Supplier:** ERA  
**Description:** Metals LCS Soil SRM  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

# Standard Logbook

**Serial ID:** UI062540-I      **Opened:** 12-JUN-09      **Amount :** 80 g  
**Name:** ICP SOIL SRM      **Received:** 12-JUN-09      **Lot Number :** D062-540  
**Type:** Source Material      **Expires:** 31-JAN-12  
**Employee:** Bryan Davis  
**Supplier:** ERA  
**Description:** Metals Soil LCS SRM ICP/Hg  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	10500 mg/kg	Antimony	173 mg/kg
Arsenic	104 mg/kg	Barium	198 mg/kg
Beryllium	77.6 mg/kg	Boron	141 mg/kg
Cadmium	60.7 mg/kg	Calcium	9870 mg/kg
Chromium	236 mg/kg	Cobalt	91.2 mg/kg
Copper	174 mg/kg	Iron	18000 mg/kg
Lead	86 mg/kg	Magnesium	4000 mg/kg
Manganese	558 mg/kg	Mercury	8.46 mg/kg
Molybdenum	48.6 mg/kg	Nickel	134 mg/kg
Phosphorous	736 mg/kg	Potassium	4300 mg/kg
Selenium	286 mg/kg	Silica	2591 mg/kg
Silicon	1211 mg/kg	Silver	30.1 mg/kg
Sodium	1020 mg/kg	Strontium	227 mg/kg
Sulfur	385 mg/kg	Thallium	121 mg/kg
Tin	104 mg/kg	Titanium	462 mg/kg
Vanadium	115 mg/kg	Zinc	594 mg/kg

**Serial ID:** UI062540-MS      **Opened:** 12-JUN-09      **Lot Number :** D062-540  
**Name:** ICPMS SOIL SRM      **Received:** 12-JUN-09  
**Type:** Source Material      **Expires:** 31-JAN-12  
**Employee:** Bryan Davis  
**Supplier:** ERA  
**Description:** Metals Soil LCS SRM ICPMS  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	10500 mg/kg	Antimony	67.4 mg/kg
Arsenic	104 mg/kg	Barium	198 mg/kg
Beryllium	77.6 mg/kg	Boron	141 mg/kg
Cadmium	60.6 mg/kg	Calcium	9870 mg/kg
Chromium	236 mg/kg	Cobalt	91.2 mg/kg
Copper	174 mg/kg	Iron	18000 mg/kg
Lead	86 mg/kg	Lithium	10.6 mg/kg
Magnesium	4000 mg/kg	Manganese	558 mg/kg
Mercury	8.46 mg/kg	Molybdenum	48.6 mg/kg
Nickel	134 mg/kg	Phosphorous	755 mg/kg
Potassium	4300 mg/kg	Selenium	286 mg/kg
Silver	30.1 mg/kg	Sodium	1020 mg/kg

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Strontium	227 mg/kg	Thallium	121 mg/kg
Thorium	9.84 mg/kg	Tin	104 mg/kg
Titanium	462 mg/kg	Uranium	2.13 mg/kg
Uranium-235	.0153 mg/kg	Uranium-238	2.11 mg/kg
Vanadium	92.4 mg/kg	Zinc	594 mg/kg
Zirconium	10.6 mg/kg		

Serial ID: UI090610-03      Opened: 10-JUN-09      Catalog Number : 060074-06-01  
 Name: ICPMS Tungsten - 10mg/L      Received: 10-JUN-09      Lot Number : 1016338  
 Type: Source Material      Expires: 10-JUN-10      Solvent : 2% HNO3  
 Employee: Paul Boyd  
 Supplier: O2SI  
 Description: ICPMS Tungsten standard SPIKE - 10mg/L  
 Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090701-09      Opened: 01-JUL-09      Amount : 250 mL  
 Name: ICP-MS CRDL Master #1      Received: 01-JUL-09      Catalog Number : 160044-09-02  
 Type: Source Material      Expires: 01-JUL-10      Lot Number : 1016477  
 Employee: Paul Boyd      Solvent : +/- 0.5% IN 2% HNO3  
 Supplier: O2SI  
 Description: ICPMS CRDL Master Soln #1  
 Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

# Standard Logbook

**Serial ID:** UI090701-10      **Opened:** 01-JUL-09      **Amount :** 250 mL  
**Name:** ICP-MS CRDL Master #2      **Received:** 01-JUL-09      **Catalog Number :** 160044-08-02  
**Type:** Source Material      **Expires:** 01-JUL-10      **Lot Number :** 1016476  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% IN 2% HNO3  
**Supplier:** 02SI  
**Description:** ICPMS CRDL Soln #2  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

**Serial ID:** UI090701-40      **Opened:** 01-JUL-09      **Amount :** 500 mL  
**Name:** TRACE ICP Stock PQL St      **Received:** 30-JUN-09      **Catalog Number :** 160543-01-03  
**Type:** Source Material      **Expires:** 01-JUL-10      **Lot Number :** 1016475  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3+TrHF  
**Supplier:** 02si  
**Description:** TRACE ICP Stock PQL Standard  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

**Serial ID:** UI090828-42      **Opened:** 16-SEP-09      **Amount :** 500 mL  
**Name:** TRACE ICP Na-1000SOUR      **Received:** 27-AUG-09      **Catalog Number :** 060011-02-03  
**Type:** Source Material      **Expires:** 16-SEP-10      **Lot Number :** 1017098  
**Employee:** Helen Camello      **Solvent :** 1%HNO3  
**Supplier:** 02SI  
**Description:** Sodium 1000 +/- 3 ug/mL in 1% HNO3

# Standard Logbook

Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090925-40      Opened: 23-OCT-09      Amount : 500 mL  
 Name: SECOND SOURCE STD -1      Received: 25-SEP-09      Catalog Number : SGELMX38-500N  
 Type: Source Material      Expires: 30-SEP-10      Lot Number : 4909129  
 Employee: Helen Camello      Solvent : 5%HNO3  
 Supplier: SPECTRO PURE  
 Description: SECOND SOURCE STD #1A 5%HNO3  
 Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI090925-41      Opened: 23-OCT-09      Amount : 500 mL  
 Name: SECOND SOURCE STD -1      Received: 25-SEP-09      Catalog Number : SGELMX39-500B  
 Type: Source Material      Expires: 30-SEP-10      Lot Number : 4909130  
 Employee: Helen Camello      Solvent : 5%HNO3,TR.HF  
 Supplier: SPECTRO PURE  
 Description: SECOND SOURCE STD #1B  
 Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI091015-42      Opened: 28-OCT-09      Amount : 500 mL  
 Name: SI 1000mg/L      Received: 15-OCT-09      Catalog Number : 060014-02-03  
 Type: Source Material      Expires: 28-OCT-10      Lot Number : 1017581  
 Employee: Helen Camello      Solvent : 0.3%H2O(NH4)2SiF6  
 Supplier: o2si  
 Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6

# Standard Logbook

Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI091015-A      Opened: 15-OCT-09      Catalog Number : 160067-03

Name: ICP-MS DOE SOIL SPIKE      Received: 15-OCT-09      Lot Number : 1017142

Type: Source Material      Expires: 15-OCT-10

Employee: Francena Armstrong

Supplier: 02si

Description: ICP-MS Spike for soil products.

Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI091015-B      Opened: 15-OCT-09      Catalog Number : 160067-03

Name: ICP-MS DOE SOIL SPIKE      Received: 15-OCT-09      Lot Number : 1017142

Type: Source Material      Expires: 15-OCT-10

Employee: Francena Armstrong

Supplier: 02si

Description: ICP-MS Spike for Soil Products

Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

# Standard Logbook

**Serial ID:** UI091102-40      **Opened:** 16-NOV-09      **Amount :** 500 mL  
**Name:** TRACE CALSTD#1A SOUF      **Received:** 02-NOV-09      **Catalog Number :** HP2270-1-500  
**Type:** Source Material      **Expires:** 31-OCT-10      **Lot Number :** 0930215  
**Employee:** Helen Camello      **Solvent :** HNO3  
**Supplier:** Environmental Express  
**Description:** Trace Calibration Std #1A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

**Serial ID:** UI091102-41      **Opened:** 16-NOV-09      **Amount :** 500 mL  
**Name:** TRACE CALSTD#1B SOUF      **Received:** 02-NOV-09      **Catalog Number :** HP2270-2-500  
**Type:** Source Material      **Expires:** 31-OCT-10      **Lot Number :** 0930216  
**Employee:** Helen Camello      **Solvent :** HNO3  
**Supplier:** Environmental Express  
**Description:** Trace Calibration Standard #1B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

**Serial ID:** UI091102-42      **Opened:** 17-NOV-09      **Amount :** 200 mL  
**Name:** SILICON      **Received:** 02-NOV-09      **Catalog Number :** HP100050-4F  
**Type:** Source Material      **Expires:** 17-NOV-10      **Lot Number :** 0921924  
**Employee:** Helen Camello      **Solvent :** H2O/tr HF  
**Supplier:** ENVIRNMENTAL EXPRESS  
**Description:** SILICON 1000mg/L H2O/tr HF  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L



# Standard Logbook

**Serial ID:** UI091212-60      **Opened:** 12-DEC-09      **Amount :** .5 mL  
**Name:** ICPMS High Range Standard      **Received:** 12-DEC-09      **Catalog Number :** 160212-02-01  
**Type:** Source Material      **Expires:** 12-DEC-10      **Lot Number :** 1018064  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3 + Tr HF  
**Supplier:** O2SI  
**Description:** Linear Range Standard A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

**Serial ID:** UI091212-61      **Opened:** 12-DEC-09      **Amount :** .5 mL  
**Name:** ICPMS High Range Standard      **Received:** 12-DEC-09      **Catalog Number :** 160212-02-01  
**Type:** Source Material      **Expires:** 12-DEC-10      **Lot Number :** 1018064  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3 + Tr HF  
**Supplier:** O2SI  
**Description:** Linear Range Standard B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

**Serial ID:** UI091216-01      **Opened:** 16-DEC-09      **Lot Number :** 1018095  
**Name:** METALSPIKE-1      **Received:** 16-DEC-09  
**Type:** Source Material      **Expires:** 16-DEC-10  
**Employee:** Francena Armstrong  
**Supplier:** OS2I  
**Description:** Metals Spike Mix I  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

**Serial ID:** UI091216-06      **Opened:** 16-DEC-09      **Lot Number :** 1018096  
**Name:** METALSPIKE-2      **Received:** 16-DEC-09  
**Type:** Source Material      **Expires:** 16-DEC-10  
**Employee:** Francena Armstrong  
**Supplier:** OS2I  
**Description:** Metals Spike Mix II  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

**Serial ID:** UI091217-06      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS ICV/CCV Master A      **Received:** 17-DEC-09      **Catalog Number :** 160055-01  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1018209  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 5% HNO3 100 cm2  
**Supplier:** 02SI  
**Description:** ICPMS ICV/CCV SOLN A - 10ppm  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

# Standard Logbook

**Serial ID:** UI091217-07      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS ICV/CCV Master B      **Received:** 17-DEC-09      **Catalog Number :** 160054-02  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1018210  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 5% HNO3 100 cm2  
**Supplier:** Q2SI  
**Description:** ICPMS ICV/CCV Soln B - 10ppm  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

**Serial ID:** UI091217-08      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS ICV/CCV Master C      **Received:** 17-DEC-09      **Catalog Number :** 160054-03  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1018211  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 5% HNO3 100 cm2  
**Supplier:** Q2SI  
**Description:** ICPMS ICV/CCV Soln C - 10ppm  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

**Serial ID:** UI091217-12      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS ICSAB Master B      **Received:** 17-DEC-09      **Catalog Number :** 160033-02  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1018212  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 2% HNO3  
**Supplier:** Q2SI  
**Description:** ICPMS ICSAB Master B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

**Serial ID:** UI091217-13      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS ICSAB Master C      **Received:** 17-DEC-09      **Catalog Number :** 160033-03  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1016926  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 2% HNO3  
**Supplier:** o2Si  
**Description:** ICPMS ICSAB Master C  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

**Serial ID:** UI100114-48      **Opened:** 22-JAN-10      **Amount :** 1000 mL  
**Name:** Trace ICP ICSA      **Received:** 18-JAN-10      **Catalog Number :** 160005-02  
**Type:** Source Material      **Expires:** 22-JAN-11      **Lot Number :** 1018466  
**Employee:** Helen Camello      **Solvent :** 3% HCl + 1% HNO3  
**Supplier:** o2si  
**Description:** Trace ICP Interferent Check Standard A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

**Serial ID:** UI100114-49.7      **Opened:** 29-JAN-10      **Amount :** 100 ml  
**Name:** Trace ICP ICSAB      **Received:** 18-JAN-10      **Catalog Number :** 160066-04  
**Type:** Source Material      **Expires:** 30-JAN-10      **Lot Number :** 1018458  
**Employee:** Helen Camello      **Solvent :** 3% HCl + 1% HNO3  
**Supplier:** o2si  
**Description:** Trace ICP Interferent Check Standard AB  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Antimony	500 ug/L
Arsenic	500 ug/L	Barium	500 ug/L

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Beryllium	250 ug/L	Boron	500 ug/L
Cadmium	500 ug/L	Calcium	500000 ug/L
Chromium	500 ug/L	Cobalt	500 ug/L
Copper	500 ug/L	Iron	200000 ug/L
Lead	500 ug/L	Magnesium	500000 ug/L
Manganese	500 ug/L	Molybdenum	500 ug/L
Nickel	500 ug/L	Phosphorous	2500 ug/L
Potassium	5000 ug/L	Selenium	2500 ug/L
Silica	10696.5 ug/L	Silicon	5000 ug/L
Silver	250 ug/L	Sodium	5000 ug/L
Strontium	500 ug/L	Sulfur	2500 ug/L
Thallium	500 ug/L	Tin	500 ug/L
Titanium	500 ug/L	Uranium	500 ug/L
Vanadium	500 ug/L	Zinc	500 ug/L

**Serial ID:** UI100126-11      **Opened:** 26-JAN-10      **Amount :** 1000 mL  
**Name:** ICP-MS ICSA Master A      **Received:** 26-JAN-10      **Catalog Number :** 160013-01-01L  
**Type:** Source Material      **Expires:** 26-JAN-11      **Lot Number :** 1018321  
**Employee:** Elizabeth Janssen      **Solvent :** 2% HNO3  
**Supplier:** Q2SI  
**Description:** ICP-MS ICSA Master A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

**Serial ID:** UI100128-40      **Opened:** 28-JAN-10      **Amount :** 500 mL  
**Name:** ICP HIGH RANGE STD-A      **Received:** 28-JAN-10      **Catalog Number :** 160211-05-03  
**Type:** Source Material      **Expires:** 28-JAN-11      **Lot Number :** 1018409  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3  
**Supplier:** Q2SI  
**Description:** ICP HIGH RANGE STD SOLUTION A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

**Serial ID:** UI100128-41      **Opened:** 28-JAN-10      **Amount :** 500 mL  
**Name:** ICP HIGH RANGE STD B      **Received:** 28-JAN-10      **Catalog Number :** 160211-05-03  
**Type:** Source Material      **Expires:** 28-JAN-11      **Lot Number :** 1018409  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3  
**Supplier:** 02SI  
**Description:** ICP HIGH RANGE STD SOLUTION B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

**Serial ID:** UMS090303-01      **Opened:** 03-MAR-09      **Amount :** 250 mL  
**Name:** ICPMS Cal SPIKE B      **Received:** 03-MAR-09      **Catalog Number :** ZGEL-100-250  
**Type:** Source Material      **Expires:** 28-FEB-10      **Lot Number :** 14-81JB  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

# Standard Logbook

**Serial ID:** UMS090303-02      **Opened:** 03-MAR-09      **Catalog Number :** ZGEL-102-250  
**Name:** ICPMSCalSPIKEA      **Received:** 03-MAR-09      **Lot Number :** 14-83JB  
**Type:** Source Material      **Expires:** 28-FEB-10  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

**Serial ID:** UMS090303-03      **Opened:** 03-MAR-09      **Amount :** 250 ml  
**Name:** ICPMSCalSPIKEC      **Received:** 03-MAR-09      **Catalog Number :** ZGEL-101-250  
**Type:** Source Material      **Expires:** 28-FEB-10      **Lot Number :** 15-199JB  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution C  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

**Serial ID:** IHG100127-01      **Opened:** 27-JAN-10      **Instrument Id :** Mercury  
**Name:** MHGINTER1      **Received:** 27-JAN-10      **Pipet Id :** Minou1  
**Type:** Intermediate      **Expires:** 28-JAN-10      **Solvent :** 1mL HNO3 + Typel H2O  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Intermediate 1st Source 200 ug/L  
**Comments:** Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

**Serial ID:** IHG100127-02      **Opened:** 27-JAN-10      **Pipet Id :** Minou1  
**Name:** MHGINTER2      **Received:** 27-JAN-10      **Solvent :** 2% HNO3-1257474  
**Type:** Intermediate      **Expires:** 28-JAN-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Intermediate 2nd Source 200 ug/L  
**Comments:** None

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167641-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG100127-07      Opened: 27-JAN-10      Pipet Id : Hg1289245  
 Name: MHGWORKCALS0.2CRA      Received: 27-JAN-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 03-FEB-10  
 Employee: Tara Griffin  
 Supplier: GEL  
 Description: Mercury Working Standard 1st Source CAL S 0.2/CRA  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100127-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG100127-08      Opened: 27-JAN-10      Pipet Id : Hg1289245  
 Name: MHGWORKCALS0.5      Received: 27-JAN-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 03-FEB-10  
 Employee: Tara Griffin      Verified: 20-JUL-07  
 Supplier: GEL  
 Description: Mercury Working Standard 1st Source CAL S 0.5  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100127-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG100127-09      Opened: 27-JAN-10      Pipet Id : Hg1289245  
 Name: MHGWORKCALS2.0      Received: 27-JAN-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 03-FEB-10  
 Employee: Tara Griffin      Verified: 20-JUL-07  
 Supplier: GEL  
 Description: Mercury Working 1st Source CAL S 2.0  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100127-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG100127-10      Opened: 27-JAN-10      Pipet Id : Hg1289245  
 Name: MHGWORKCALS5.0CCV      Received: 27-JAN-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 03-FEB-10  
 Employee: Tara Griffin      Verified: 20-JUL-07  
 Supplier: GEL  
 Description: Mercury Working 1st Source CAL S 5.0/CCV  
 Comments: None



# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100127-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG100127-11      Opened: 27-JAN-10      Pipet Id : Hg1289245  
 Name: MHGWORKCALS10.0      Received: 27-JAN-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 03-FEB-10  
 Employee: Tara Griffin  
 Supplier: GEL  
 Description: Mercury Working 1st Source CAL S 10.0  
 Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100127-01	Mercury	200 ug/L	1.5 mL	30 mL	10 ug/L

Serial ID: WHG100127-12      Opened: 27-JAN-10      Pipet Id : Hg1289245  
 Name: MHGWORKS5.0ICV      Received: 27-JAN-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 03-FEB-10  
 Employee: Tara Griffin      Verified: 20-JUL-07  
 Supplier: GEL  
 Description: Mercury Working 2nd Source S 5.0/ICV  
 Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100127-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG100127-14      Opened: 27-JAN-10      Pipet Id : Hg1289245  
 Name: MHGSOILMSSPIKE      Received: 27-JAN-10      Solvent : 2% HNO3-1257474  
 Type: Working      Expires: 03-FEB-10  
 Employee: Tara Griffin      Verified: 20-JUL-07  
 Supplier: GEL  
 Description: Mercury soil working intermediate standard for MS  
 Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI100129-43      Opened: 29-JAN-10      Balance Id : 216  
 Name: TRACE ICP 0.5/CCV STD.      Received: 02-NOV-09      Pipet Id : 1099667  
 Type: Working      Expires: 30-JAN-10      Solvent : 3%HCL and 1%HNO3 -1259494  
 Employee: Helen Camello  
 Supplier: GEL  
 Description: TRACE ICP 0.5/CCV CALIBRATION STD.  
 Comments: None

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090828-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L
UI091015-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI091102-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L

**Serial ID:** WI100129-46      **Opened:** 29-JAN-10      **Balance Id :** 216  
**Name:** ICP TRACE ICV      **Received:** 25-SEP-09      **Pipet Id :** 1099667  
**Type:** Working      **Expires:** 30-JAN-10      **Solvent :** 3%HCL AND 1%HNO3-1259494  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** Initial Calibration Verification ICP Trace Metals  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI091102-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI091102-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

**Serial ID:** WI100129-47      **Opened:** 29-JAN-10      **Balance Id :** 216  
**Name:** PQL Working Standard      **Received:** 30-JUN-09      **Pipet Id :** 1099667  
**Type:** Working      **Expires:** 30-JAN-10      **Solvent :** 3%HCL & 1%HNO3-1259494  
**Employee:** Helen Camello  
**Supplier:** 02si  
**Description:** PQL Working Standard  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

**Serial ID:** WMS100127-04      **Opened:** 27-JAN-10      **Amount:** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 27-JAN-10      **Balance Id:** 4025216  
**Type:** Working      **Expires:** 28-JAN-10      **Pipet Id:** 3541598  
**Employee:** Elizabeth Janssen      **Solvent:** 2%HNO3/1%HCl-1259290  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (100 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

**Serial ID:** WMS100127-04A      **Opened:** 27-JAN-10      **Balance Id :** 4025216  
**Name:** ICPMS Cal Standard 10      **Received:** 27-JAN-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 28-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (10 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100127-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100127-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100127-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100127-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100127-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100127-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100127-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100127-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100127-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100127-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100127-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

**Serial ID:** WMS100127-05      **Opened:** 27-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 27-JAN-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 28-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS ICV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

**Serial ID:** WMS100127-06      **Opened:** 27-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 27-JAN-10      **Pipet Id :** 3820544  
**Type:** Working      **Expres:** 28-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS CRDL  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

**Serial ID:** WMS100127-07      **Opened:** 27-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 27-JAN-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 28-JAN-10      **Pipet Id :** 3541598  
**Employee:** Elizabeth Janssen      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Supplier:** GEL  
**Description:** ICPMS ICSA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100127-08      **Opened:** 27-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 27-JAN-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 28-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL



# Standard Logbook

Description: ICPMS ICSAB

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS100127-70      Opened: 27-JAN-10      Balance Id : 40245216  
 Name: ICPMS LINEAR RANGE ST      Received: 27-JAN-10      Pipet Id : 1758088  
 Type: Working      Expires: 28-JAN-10      Solvent : 2%HNO3/1%HCl - 1259290  
 Employee: Elizabeth Janssen  
 Supplier: Q2SI  
 Description: ICPMS LINEAR RANGE STANDARD

# Standard Logbook

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI091212-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: WMS100128-04      Opened: 28-JAN-10      Amount : 50 mL  
 Name: ICPMS Cal Standard 100      Received: 28-JAN-10      Balance Id : 4025216  
 Type: Working      Expires: 29-JAN-10      Pipet Id : 3541598  
 Employee: Elizabeth Janssen      Solvent : 2%HNO3/1%HCl-1259290  
 Supplier: GEL  
 Description: ICPMS Calibration Standard (100 ppb)  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090303-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

**Serial ID:** WMS100128-04A      **Opened:** 28-JAN-10      **Balance Id :** 4025216  
**Name:** ICPMS Cal Standard 10      **Received:** 28-JAN-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 29-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (10 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100128-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100128-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100128-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100128-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100128-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100128-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100128-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100128-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100128-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100128-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100128-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100128-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

**Serial ID:** WMS100128-05      **Opened:** 28-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 28-JAN-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 29-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS ICV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

**Serial ID:** WMS100128-06      **Opened:** 28-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 28-JAN-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 29-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS CRDL  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

**Serial ID:** WMS100128-07      **Opened:** 28-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 28-JAN-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 29-JAN-10      **Pipet Id :** 3541598  
**Employee:** Elizabeth Janssen      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Supplier:** GEL  
**Description:** ICPMS ICSA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

# Standard Logbook

**Serial ID:** WMS100128-08      **Opened:** 28-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 28-JAN-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 29-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS ICSAB  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

# Standard Logbook

**Serial ID:** WMS100128-70      **Opened:** 28-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS LINEAR RANGE ST      **Received:** 28-JAN-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 29-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** 02SI  
**Description:** ICPMS LINEAR RANGE STANDARD  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI091212-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

**Serial ID:** WMS100201-04AB      **Opened:** 01-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS Cal Standard 10      **Received:** 01-FEB-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 02-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1262930  
**Employee:** Rose Jenkins  
**Supplier:** GEL



# Standard Logbook

**Description:** ICPMS Calibration Standard (10 ppb)

**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
WMS100201-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100201-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100201-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100201-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100201-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100201-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100201-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100201-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100201-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100201-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100201-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

**Serial ID:** WMS100201-04B      **Opened:** 01-FEB-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 01-FEB-10      **Balance Id :** 40245216  
**Type:** Working      **Expires:** 02-FEB-10      **Pipet Id :** 1758088  
**Employee:** Rose Jenkins      **Solvent :** 2%HNO3/1%HCl- 1262930  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (100 ppb)  
**Comments:** None

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

**Serial ID:** WMS100201-05B      **Opened:** 01-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 01-FEB-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 02-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1262930  
**Employee:** Rose Jenkins  
**Supplier:** GEL  
**Description:** ICPMS ICV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

**Serial ID:** WMS100201-06B      **Opened:** 01-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 01-FEB-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 02-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1262930  
**Employee:** Rose Jenkins  
**Supplier:** GEL  
**Description:** ICPMS CRDL  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

**Serial ID:** WMS100201-07B      **Opened:** 01-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 01-FEB-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 02-FEB-10      **Pipet Id :** 3541598  
**Employee:** Rose Jenkins      **Solvent :** 2%HNO3/1%HCl - 1262930  
**Supplier:** GEL  
**Description:** ICPMS ICSA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100201-08B      **Opened:** 01-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 01-FEB-10      **Pipet Id :** 3541598/1758088  
**Type:** Working      **Expires:** 02-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1262930  
**Employee:** Rose Jenkins  
**Supplier:** GEL  
**Description:** ICPMS ICSAB  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100205-04AB      **Opened:** 05-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS Cal Standard 10      **Received:** 05-FEB-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 06-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1262930  
**Employee:** Rose Jenkins  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (10 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100205-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100205-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100205-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100205-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100205-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100205-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100205-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100205-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100205-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100205-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
WMS100205-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100205-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100206-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100206-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100206-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100206-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100206-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100206-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100206-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100206-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100206-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100206-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

**Serial ID:** WMS100205-04B      **Opened:** 05-FEB-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 05-FEB-10      **Balance Id :** 40245216  
**Type:** Working      **Expires:** 06-FEB-10      **Pipet Id :** 1758088  
**Employee:** Rose Jenkins      **Solvent :** 2%HNO3/1%HCl- 1262930  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (100 ppb)  
**Comments:** None

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

**Serial ID:** WMS100205-05B      **Opened:** 05-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 05-FEB-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 06-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1262930  
**Employee:** Rose Jenkins  
**Supplier:** GEL  
**Description:** ICPMS ICV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L



# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

**Serial ID:** WMS100205-06B      **Opened:** 05-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 05-FEB-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 06-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1262930  
**Employee:** Rose Jenkins  
**Supplier:** GEL  
**Description:** ICPMS CRDL  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

**Serial ID:** WMS100205-07B      **Opened:** 05-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 05-FEB-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 06-FEB-10      **Pipet Id :** 3541598  
**Employee:** Rose Jenkins      **Solvent :** 2%HNO3/1%HCl - 1262930  
**Supplier:** GEL  
**Description:** ICPMS ICSA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100205-08B      **Opened:** 05-FEB-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 05-FEB-10      **Pipet Id :** 3541598/1758088  
**Type:** Working      **Expires:** 06-FEB-10      **Solvent :** 2%HNO3/1%HCl - 1262930  
**Employee:** Rose Jenkins  
**Supplier:** GEL  
**Description:** ICPMS ICSAB  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100206-04      **Opened:** 06-FEB-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 06-FEB-10      **Balance Id :** 4025216  
**Type:** Working      **Expires:** 07-FEB-10      **Pipet Id :** 3541598  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3/1%HCl-1262930  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (100 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: 1156689-A      Opened: 20-JUL-09      Lot Number : 41226920  
 Name: B-KMnO4(VWR)-MER      Received: 20-JUL-09  
 Type: Reagent/Solvent      Expires: 20-JUL-10  
 Employee: Tara Griffin      Verified: 07-AUG-07  
 Supplier: VWR  
 Description: Potassium Permanganate  
 Comments: None

Serial ID: 1203655-02      Opened: 15-OCT-09      Lot Number : ZU74081198 mL  
 Name: B-H2O2      Received: 15-OCT-09  
 Type: Reagent/Solvent      Expires: 15-OCT-10  
 Employee: Francena Armstrong  
 Supplier: EM SCIENCE  
 Description: Hydrogen Peroxide 30%  
 Comments: None

Serial ID: 1228372-A      Opened: 12-NOV-09      Lot Number : 49215936  
 Name: B-NH2OH.HCl-MER      Received: 12-NOV-09  
 Type: Reagent/Solvent      Expires: 12-NOV-10  
 Employee: Tara Griffin  
 Supplier: Fisher Scientific  
 Description: Hydroxylamine Hydrochloride  
 Comments: None

Serial ID: 1234886      Opened: 27-NOV-09      Lot Number : H20053 L  
 Name: I-HNO3      Received: 27-NOV-09  
 Type: Reagent/Solvent      Expires: 27-NOV-10  
 Employee: Bryan Davis  
 Supplier: BAKER  
 Description: Nitric Acid CONC.  
 Comments: None

Serial ID: 1236355-A      Opened: 01-DEC-09      Lot Number : 200930201  
 Name: B-HCl-MER      Received: 01-DEC-09  
 Type: Reagent/Solvent      Expires: 01-DEC-10  
 Employee: Tara Griffin  
 Supplier: Aristar

# Standard Logbook

Description: Hydrochloric Acid Conc.

Comments: None

Serial ID: 1252836      Opened: 08-JAN-10      Lot Number : H20053 L  
 Name: I-HNO3      Received: 08-JAN-10  
 Type: Reagent/Solvent      Expires: 08-JAN-11  
 Employee: Francena Armstrong  
 Supplier: BAKER  
 Description: Nitric Acid CONC.  
 Comments: None

Serial ID: 1252838      Opened: 08-JAN-10      Lot Number : H41032  
 Name: I-HCL      Received: 08-JAN-10      Preservative\_Id : 5 none  
 Type: Reagent/Solvent      Expires: 08-JAN-11  
 Employee: Francena Armstrong  
 Supplier: J.T. BAKER  
 Description: HYDROCHLORIC ACID  
 Comments: None

Serial ID: 1255532-C      Opened: 15-JAN-10      Balance Id : BAL-002  
 Name: B-NaCl.NH2OH.HCl-MER      Received: 15-JAN-10  
 Type: Reagent/Solvent      Expires: 15-JUL-10  
 Employee: Tara Griffin  
 Supplier: GEL  
 Description: Hg reducing agent  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1228372-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1255535-C      Opened: 15-JAN-10      Balance Id : BAL-002  
 Name: B-KMnO4-MER      Received: 15-JAN-10  
 Type: Reagent/Solvent      Expires: 15-JUL-10  
 Employee: Tara Griffin  
 Supplier: GEL  
 Description: 5% KMnO4 solution  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1156689-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

# Standard Logbook

Serial ID: 1257474-1      Opened: 20-JAN-10      Instrument Id : MERCURY  
 Name: B-HNO3-MER      Received: 20-JAN-10      Lot Number : H20053  
 Type: Reagent/Solvent      Expires: 20-JAN-11  
 Employee: Tara Griffin  
 Supplier: Mallinckrodt Chemicals  
 Description: NITRIC ACID  
 Comments: None

Serial ID: 1259290      Opened: 25-JAN-10      Solvent : Type I Water  
 Name: B-2%HNO3/1%HCl-ICPMS      Received: 25-JAN-10  
 Type: Reagent/Solvent      Expires: 01-FEB-10  
 Employee: Elizabeth Janssen  
 Supplier: GEL  
 Description: 2%HNO3/1%HCl Solution (Type I Water)  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1252836	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1252838	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 1259494      Opened: 25-JAN-10      Amount : 20 L  
 Name: B-ICP-RINSE SOLN      Received: 28-DEC-10      Lot Number : H04040+G34050  
 Type: Reagent/Solvent      Expires: 31-JAN-10      Solvent : 3%HCL+1%HNO3  
 Employee: Helen Camello  
 Supplier: GEL  
 Description: 3%HCL+1%HNO3 RINSE SOLN.  
 Comments: None

Serial ID: 1262930      Opened: 01-FEB-10      Solvent : Type I Water  
 Name: B-2%HNO3/1%HCl-ICPMS      Received: 01-FEB-10  
 Type: Reagent/Solvent      Expires: 08-FEB-10  
 Employee: Elizabeth Janssen  
 Supplier: GEL  
 Description: 2%HNO3/1%HCl Solution (Type I Water)  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1252836	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1252838	I-HCL	36.5-38.0	90 mL	9 l	N/A

# **Metals Analysis**



# Case Narrative

**Metals Fractional Narrative  
Los Alamos National Laboratory (LANL)  
SDG 10-1288-1**

**Sample Analysis**

<b>Sample ID</b>	<b>Client ID</b>
244922001	RE15-10-7229
1202017559	Method Blank (MB) ICP
1202017560	Laboratory Control Sample (LCS)
1202017563	244922001(RE15-10-7229L) Serial Dilution (SD)
1202017561	244922001(RE15-10-7229D) Sample Duplicate (DUP)
1202017562	244922001(RE15-10-7229S) Matrix Spike (MS)
1202017705	Method Blank (MB) ICP-MS
1202026084	Method Blank (MB) ICP-MS
1202017706	Laboratory Control Sample (LCS)
1202026085	Laboratory Control Sample (LCS)
1202017709	244925001(WST52-10-11327L) Serial Dilution (SD)
1202026088	244925001(WST52-10-11327L) Serial Dilution (SD)
1202017707	244925001(WST52-10-11327D) Sample Duplicate (DUP)
1202026086	244925001(WST52-10-11327D) Sample Duplicate (DUP)
1202017708	244925001(WST52-10-11327S) Matrix Spike (MS)
1202026087	244925001(WST52-10-11327S) Matrix Spike (MS)
1202019182	Method Blank (MB) CVAA
1202019183	Laboratory Control Sample (LCS)
1202019186	244922001(RE15-10-7229L) Serial Dilution (SD)
1202019184	244922001(RE15-10-7229D) Sample Duplicate (DUP)
1202019185	244922001(RE15-10-7229S) Matrix Spike (MS)

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

#### **Method/Analysis Information**

**Analytical Batch:** 942466, 942514, 945922 and 943087  
**Prep Batch :** 942449, 942490, 945920 and 943086  
**Standard Operating Procedures:** GL-MA-E-013 REV# 20, GL-MA-E-006 REV# 9, GL-MA-E-014 REV# 21 and GL-MA-E-010 REV# 23  
**Analytical Method:** SW846 3005/6010B, SW846 3005/6020 and SW846 7470A  
**Prep Method :** SW846 3005A and SW846 7470A Prep

#### **Preparation/Analytical Method Verification**

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

#### **System Configuration**

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

### **Calibration Information**

#### **Instrument Calibration**

All initial calibration requirements have been met for this sample delivery group (SDG).

#### **CRDL Requirements**

All CRDL standard(s) met the referenced advisory control limits with the exceptions of potassium and mercury, which recovered outside of the advisory limits of 70-130%.

#### **ICSA/ICSAB Statement**

All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

#### **Continuing Calibration Blank (CCB) Requirements**

All continuing calibration blanks (CCB) bracketing this batch met the acceptance criteria.

#### **Continuing Calibration Verification (CCV) Requirements**

All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

### **Quality Control (QC) Information**

#### **Method Blank (MB) Statement**

The MBs analyzed with this SDG met the acceptance criteria.

#### **Laboratory Control Sample (LCS) Recovery**

The LCS spike recoveries met the acceptance limits.

#### **Quality Control (QC) Sample Statement**

The following samples were selected as the quality control (QC) samples for this SDG: 244922001 and 244925001.

#### **Matrix Spike (MS) Recovery Statement**

The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. All applicable elements met the acceptance criteria.

#### **Duplicate Relative Percent Difference (RPD) Statement**

The RPD obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements.

**Serial Dilution % Difference Statement**

The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations 25x the IDL/MDL for CVAA, 50X the IDL/MDL for ICP and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the established criteria of less than 10% difference (%D) with the exception of manganese, as indicated by the "E" qualifier.

**Technical Information****Holding Time Specifications**

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

**Sample Dilutions**

Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG did not require dilutions.

**Preparation Information**

The samples in this SDG were prepared exactly according to the cited SOP.

**Miscellaneous Information****Electronic Packaging Comment**

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

**Data Exception (DER) Documentation**

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

**Additional Comments**

Additional comments were not required for this SDG.

**Certification Statement**

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

**Review Validation:**

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

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

Reviewer: Kristen Fausey Date: 2/8/10

# **Sample Data Summary**

**METALS**  
**-1-**  
**INORGANICS ANALYSIS DATA PACKAGE**

SDG No: 10-1288-1

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 244922001

BASIS: As Received

DATE COLLECTED 12-JAN-10

CLIENT ID: RE15-10-7229

LEVEL: Low

DATE RECEIVED 16-JAN-10

MATRIX: WATER

%SOLIDS: 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	405	ug/L		68	200	200	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	BAJ	01/28/10 08:52	100127-5	945922
7440-38-2	Arsenic	30	ug/L	U	5	30	30	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-39-3	Barium	4.81	ug/L	J	1	5	5	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	BAJ	01/25/10 12:05	100125-4	942514
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	BAJ	01/24/10 18:26	100124-3	942514
7440-70-2	Calcium	113	ug/L	J	50	200	200	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-47-3	Chromium	5	ug/L	U	1	5	5	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	01/26/10 18:47	012610-1	942466
7439-89-6	Iron	234	ug/L		30	100	100	1	P	HSC	01/26/10 18:47	012610-1	942466
7439-92-1	Lead	0.557	ug/L	J	0.5	2	2	1	MS	BAJ	01/24/10 18:26	100124-3	942514
7439-95-4	Magnesium	128	ug/L	J	85	300	300	1	P	HSC	01/26/10 18:47	012610-1	942466
7439-96-5	Manganese	4.36	ug/L	J	1	5	5	1	MS	BAJ	01/24/10 18:26	100124-3	942514
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	JXL1	01/20/10 10:41	012010W1-6	943087
7440-02-0	Nickel	5	ug/L	U	1.5	5	5	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-09-7	Potassium	291	ug/L		50	150	150	1	P	HSC	01/26/10 18:47	012610-1	942466
7782-49-2	Selenium	30	ug/L	U	5	30	30	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-23-5	Sodium	323	ug/L		100	300	300	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-28-0	Thallium	1	ug/L	U	0.3	1	1	1	MS	BAJ	01/24/10 18:26	100124-3	942514
7440-61-1	Uranium	0.20	ug/L	U	0.05	0.2	0.2	1	MS	SKJ	01/25/10 12:48	100125-2	942514
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	01/26/10 18:47	012610-1	942466
7440-66-6	Zinc	10	ug/L	U	3.3	10	10	1	P	HSC	01/26/10 18:47	012610-1	942466

**Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942466	942449	SW846 3005A	50	mL	50	mL	01/19/10	FGA
942514	942490	SW846 3005A	50	mL	50	mL	01/19/10	FGA
943087	943086	SW846 7470A Prep	20	mL	20	mL	01/19/10	TXB3
945922	945920	SW846 3005A	25	mL	25	mL	01/27/10	AXG2



# **Quality Control Summary**

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1288-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS5,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICV01										
	Mercury	4.98	ug/L	5	ug/L	99.7	90.0 – 110.0	AV	20-JAN-10 09:53	012010W1-6
	Cadmium	50.8	ug/L	50	ug/L	101.6	90.0 – 110.0	MS	24-JAN-10 15:03	100124-3
	Lead	53.6	ug/L	50	ug/L	107.1	90.0 – 110.0	MS	24-JAN-10 15:03	100124-3
	Manganese	52.9	ug/L	50	ug/L	105.7	90.0 – 110.0	MS	24-JAN-10 15:03	100124-3
	Thallium	53.7	ug/L	50	ug/L	107.3	90.0 – 110.0	MS	24-JAN-10 15:03	100124-3
	Uranium	52.7	ug/L	50	ug/L	105.3	90.0 – 110.0	MS	25-JAN-10 10:54	100125-2
	Beryllium	49.9	ug/L	50	ug/L	99.9	90.0 – 110.0	MS	25-JAN-10 11:20	100125-4
	Aluminum	4910	ug/L	5000	ug/L	98.1	90.0 – 110.0	P	26-JAN-10 09:38	012610-1
	Arsenic	462	ug/L	500	ug/L	92.4	90.0 – 110.0	P	26-JAN-10 09:38	012610-1
	Barium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	26-JAN-10 09:38	012610-1
	Calcium	4940	ug/L	5000	ug/L	98.9	90.0 – 110.0	P	26-JAN-10 09:38	012610-1
	Chromium	475	ug/L	500	ug/L	95	90.0 – 110.0	P	26-JAN-10 09:38	012610-1
	Cobalt	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	26-JAN-10 09:38	012610-1
	Copper	495	ug/L	500	ug/L	98.9	90.0 – 110.0	P	26-JAN-10 09:38	012610-1
	Iron	5090	ug/L	5000	ug/L	101.8	90.0 – 110.0	P	26-JAN-10 09:38	012610-1
	Magnesium	5360	ug/L	5000	ug/L	107.1	90.0 – 110.0	P	26-JAN-10 09:38	012610-1
	Nickel	484	ug/L	500	ug/L	96.8	90.0 – 110.0	P	26-JAN-10 09:38	012610-1
	Potassium	2430	ug/L	2500	ug/L	97.2	90.0 – 110.0	P	26-JAN-10 09:38	012610-1
	Selenium	2480	ug/L	2500	ug/L	99.3	90.0 – 110.0	P	26-JAN-10 09:38	012610-1
	Silver	255	ug/L	250	ug/L	101.8	90.0 – 110.0	P	26-JAN-10 09:38	012610-1
	Sodium	2360	ug/L	2500	ug/L	94.6	90.0 – 110.0	P	26-JAN-10 09:38	012610-1
	Vanadium	500	ug/L	500	ug/L	100	90.0 – 110.0	P	26-JAN-10 09:38	012610-1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	26-JAN-10 09:38	012610-1
	Antimony	50.9	ug/L	50	ug/L	101.9	90.0 – 110.0	MS	28-JAN-10 07:32	100127-5
CCV01										
	Mercury	4.91	ug/L	5	ug/L	98.2	80.0 – 120.0	AV	20-JAN-10 09:59	012010W1-6
	Cadmium	49.6	ug/L	50	ug/L	99.2	90.0 – 110.0	MS	24-JAN-10 15:33	100124-3
	Lead	52.9	ug/L	50	ug/L	105.9	90.0 – 110.0	MS	24-JAN-10 15:33	100124-3
	Manganese	52.5	ug/L	50	ug/L	105.1	90.0 – 110.0	MS	24-JAN-10 15:33	100124-3
	Thallium	53.3	ug/L	50	ug/L	106.7	90.0 – 110.0	MS	24-JAN-10 15:33	100124-3

## METALS

-2a-

## Initial and Continuing Calibration Verification

SDG No: 10-1288-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS5,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Uranium	50.9	ug/L	50	ug/L	101.7	90.0 - 110.0	MS	25-JAN-10 11:05	100125-2
	Beryllium	49.2	ug/L	50	ug/L	98.3	90.0 - 110.0	MS	25-JAN-10 11:28	100125-4
	Aluminum	4880	ug/L	5000	ug/L	97.6	90.0 - 110.0	P	26-JAN-10 10:38	012610-1
	Arsenic	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	26-JAN-10 10:38	012610-1
	Barium	485	ug/L	500	ug/L	97	90.0 - 110.0	P	26-JAN-10 10:38	012610-1
	Calcium	5030	ug/L	5000	ug/L	100.6	90.0 - 110.0	P	26-JAN-10 10:38	012610-1
	Chromium	485	ug/L	500	ug/L	97	90.0 - 110.0	P	26-JAN-10 10:38	012610-1
	Cobalt	495	ug/L	500	ug/L	99	90.0 - 110.0	P	26-JAN-10 10:38	012610-1
	Copper	477	ug/L	500	ug/L	95.3	90.0 - 110.0	P	26-JAN-10 10:38	012610-1
	Iron	5140	ug/L	5000	ug/L	102.9	90.0 - 110.0	P	26-JAN-10 10:38	012610-1
	Magnesium	5240	ug/L	5000	ug/L	104.9	90.0 - 110.0	P	26-JAN-10 10:38	012610-1
	Nickel	487	ug/L	500	ug/L	97.4	90.0 - 110.0	P	26-JAN-10 10:38	012610-1
	Potassium	5020	ug/L	5000	ug/L	100.5	90.0 - 110.0	P	26-JAN-10 10:38	012610-1
	Selenium	500	ug/L	500	ug/L	100.1	90.0 - 110.0	P	26-JAN-10 10:38	012610-1
	Silver	485	ug/L	500	ug/L	96.9	90.0 - 110.0	P	26-JAN-10 10:38	012610-1
	Sodium	9840	ug/L	10000	ug/L	98.4	90.0 - 110.0	P	26-JAN-10 10:38	012610-1
	Vanadium	489	ug/L	500	ug/L	97.8	90.0 - 110.0	P	26-JAN-10 10:38	012610-1
	Zinc	480	ug/L	500	ug/L	96	90.0 - 110.0	P	26-JAN-10 10:38	012610-1
	Antimony	51.6	ug/L	50	ug/L	103.2	90.0 - 110.0	MS	28-JAN-10 07:44	100127-5
CCV02										
	Mercury	4.83	ug/L	5	ug/L	96.6	80.0 - 120.0	AV	20-JAN-10 10:23	012010W1-6
	Cadmium	49.9	ug/L	50	ug/L	99.8	90.0 - 110.0	MS	24-JAN-10 15:51	100124-3
	Lead	53.3	ug/L	50	ug/L	106.5	90.0 - 110.0	MS	24-JAN-10 15:51	100124-3
	Manganese	53.2	ug/L	50	ug/L	106.4	90.0 - 110.0	MS	24-JAN-10 15:51	100124-3
	Thallium	53.9	ug/L	50	ug/L	107.8	90.0 - 110.0	MS	24-JAN-10 15:51	100124-3
	Uranium	49.8	ug/L	50	ug/L	99.6	90.0 - 110.0	MS	25-JAN-10 11:25	100125-2
	Beryllium	47.2	ug/L	50	ug/L	94.3	90.0 - 110.0	MS	25-JAN-10 11:41	100125-4
	Aluminum	4890	ug/L	5000	ug/L	97.8	90.0 - 110.0	P	26-JAN-10 11:00	012610-1
	Arsenic	485	ug/L	500	ug/L	97.1	90.0 - 110.0	P	26-JAN-10 11:00	012610-1
	Barium	476	ug/L	500	ug/L	95.3	90.0 - 110.0	P	26-JAN-10 11:00	012610-1

## METALS

-2a-

## Initial and Continuing Calibration Verification

SDG No: 10-1288-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS5,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Calcium	5010	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	26-JAN-10 11:00	012610-1
	Chromium	478	ug/L	500	ug/L	95.6	90.0 – 110.0	P	26-JAN-10 11:00	012610-1
	Cobalt	487	ug/L	500	ug/L	97.5	90.0 – 110.0	P	26-JAN-10 11:00	012610-1
	Copper	468	ug/L	500	ug/L	93.7	90.0 – 110.0	P	26-JAN-10 11:00	012610-1
	Iron	5200	ug/L	5000	ug/L	103.9	90.0 – 110.0	P	26-JAN-10 11:00	012610-1
	Magnesium	5220	ug/L	5000	ug/L	104.5	90.0 – 110.0	P	26-JAN-10 11:00	012610-1
	Nickel	479	ug/L	500	ug/L	95.8	90.0 – 110.0	P	26-JAN-10 11:00	012610-1
	Potassium	5020	ug/L	5000	ug/L	100.5	90.0 – 110.0	P	26-JAN-10 11:00	012610-1
	Selenium	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	26-JAN-10 11:00	012610-1
	Silver	478	ug/L	500	ug/L	95.6	90.0 – 110.0	P	26-JAN-10 11:00	012610-1
	Sodium	10000	ug/L	10000	ug/L	100	90.0 – 110.0	P	26-JAN-10 11:00	012610-1
	Vanadium	481	ug/L	500	ug/L	96.2	90.0 – 110.0	P	26-JAN-10 11:00	012610-1
	Zinc	473	ug/L	500	ug/L	94.5	90.0 – 110.0	P	26-JAN-10 11:00	012610-1
	Antimony	49.4	ug/L	50	ug/L	98.7	90.0 – 110.0	MS	28-JAN-10 08:07	100127-5
CCV03	Mercury	4.79	ug/L	5	ug/L	95.7	80.0 – 120.0	AV	20-JAN-10 10:47	012010W1-6
	Cadmium	50	ug/L	50	ug/L	100	90.0 – 110.0	MS	24-JAN-10 16:47	100124-3
	Lead	52.9	ug/L	50	ug/L	105.9	90.0 – 110.0	MS	24-JAN-10 16:47	100124-3
	Manganese	52.9	ug/L	50	ug/L	105.9	90.0 – 110.0	MS	24-JAN-10 16:47	100124-3
	Thallium	54	ug/L	50	ug/L	108	90.0 – 110.0	MS	24-JAN-10 16:47	100124-3
	Uranium	49.4	ug/L	50	ug/L	98.8	90.0 – 110.0	MS	25-JAN-10 11:40	100125-2
	Beryllium	45.3	ug/L	50	ug/L	90.6	90.0 – 110.0	MS	25-JAN-10 11:58	100125-4
	Aluminum	4930	ug/L	5000	ug/L	98.6	90.0 – 110.0	P	26-JAN-10 12:13	012610-1
	Arsenic	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	26-JAN-10 12:13	012610-1
	Barium	491	ug/L	500	ug/L	98.3	90.0 – 110.0	P	26-JAN-10 12:13	012610-1
	Calcium	5050	ug/L	5000	ug/L	101	90.0 – 110.0	P	26-JAN-10 12:13	012610-1
	Chromium	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	26-JAN-10 12:13	012610-1
	Cobalt	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	26-JAN-10 12:13	012610-1
	Copper	484	ug/L	500	ug/L	96.8	90.0 – 110.0	P	26-JAN-10 12:13	012610-1
	Iron	5290	ug/L	5000	ug/L	105.8	90.0 – 110.0	P	26-JAN-10 12:13	012610-1

SW846

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1288-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS5,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Magnesium	5330	ug/L	5000	ug/L	106.5	90.0 - 110.0	P	26-JAN-10 12:13	012610-1
	Nickel	495	ug/L	500	ug/L	99	90.0 - 110.0	P	26-JAN-10 12:13	012610-1
	Potassium	5050	ug/L	5000	ug/L	101	90.0 - 110.0	P	26-JAN-10 12:13	012610-1
	Selenium	509	ug/L	500	ug/L	101.7	90.0 - 110.0	P	26-JAN-10 12:13	012610-1
	Silver	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	26-JAN-10 12:13	012610-1
	Sodium	10300	ug/L	10000	ug/L	102.6	90.0 - 110.0	P	26-JAN-10 12:13	012610-1
	Vanadium	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	26-JAN-10 12:13	012610-1
	Zinc	487	ug/L	500	ug/L	97.5	90.0 - 110.0	P	26-JAN-10 12:13	012610-1
	Antimony	50.4	ug/L	50	ug/L	100.8	90.0 - 110.0	MS	28-JAN-10 08:21	100127-5
CCV04										
	Mercury	4.9	ug/L	5	ug/L	98.1	80.0 - 120.0	AV	20-JAN-10 11:11	012010W1-6
	Cadmium	49.8	ug/L	50	ug/L	99.7	90.0 - 110.0	MS	24-JAN-10 17:42	100124-3
	Lead	53	ug/L	50	ug/L	105.9	90.0 - 110.0	MS	24-JAN-10 17:42	100124-3
	Manganese	52.8	ug/L	50	ug/L	105.7	90.0 - 110.0	MS	24-JAN-10 17:42	100124-3
	Thallium	53.5	ug/L	50	ug/L	107	90.0 - 110.0	MS	24-JAN-10 17:42	100124-3
	Beryllium	47.1	ug/L	50	ug/L	94.1	90.0 - 110.0	MS	25-JAN-10 12:07	100125-4
	Uranium	48.3	ug/L	50	ug/L	96.7	90.0 - 110.0	MS	25-JAN-10 12:13	100125-2
	Aluminum	4920	ug/L	5000	ug/L	98.3	90.0 - 110.0	P	26-JAN-10 13:02	012610-1
	Arsenic	486	ug/L	500	ug/L	97.3	90.0 - 110.0	P	26-JAN-10 13:02	012610-1
	Barium	489	ug/L	500	ug/L	97.9	90.0 - 110.0	P	26-JAN-10 13:02	012610-1
	Calcium	5010	ug/L	5000	ug/L	100.2	90.0 - 110.0	P	26-JAN-10 13:02	012610-1
	Chromium	489	ug/L	500	ug/L	97.8	90.0 - 110.0	P	26-JAN-10 13:02	012610-1
	Cobalt	501	ug/L	500	ug/L	100.1	90.0 - 110.0	P	26-JAN-10 13:02	012610-1
	Copper	484	ug/L	500	ug/L	96.7	90.0 - 110.0	P	26-JAN-10 13:02	012610-1
	Iron	5220	ug/L	5000	ug/L	104.3	90.0 - 110.0	P	26-JAN-10 13:02	012610-1
	Magnesium	5310	ug/L	5000	ug/L	106.2	90.0 - 110.0	P	26-JAN-10 13:02	012610-1
	Nickel	491	ug/L	500	ug/L	98.1	90.0 - 110.0	P	26-JAN-10 13:02	012610-1
	Potassium	5030	ug/L	5000	ug/L	100.6	90.0 - 110.0	P	26-JAN-10 13:02	012610-1
	Selenium	500	ug/L	500	ug/L	100.1	90.0 - 110.0	P	26-JAN-10 13:02	012610-1
	Silver	492	ug/L	500	ug/L	98.3	90.0 - 110.0	P	26-JAN-10 13:02	012610-1

## METALS

-2a-

## Initial and Continuing Calibration Verification

SDG No: 10-1288-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS5,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
CCV05	Sodium	10100	ug/L	10000	ug/L	101.3	90.0 - 110.0	P	26-JAN-10 13:02	012610-1
	Vanadium	493	ug/L	500	ug/L	98.5	90.0 - 110.0	P	26-JAN-10 13:02	012610-1
	Zinc	485	ug/L	500	ug/L	96.9	90.0 - 110.0	P	26-JAN-10 13:02	012610-1
	Antimony	48.2	ug/L	50	ug/L	96.4	90.0 - 110.0	MS	28-JAN-10 08:43	100127-5
CCV06	Cadmium	49.7	ug/L	50	ug/L	99.4	90.0 - 110.0	MS	24-JAN-10 18:32	100124-3
	Lead	52.8	ug/L	50	ug/L	105.5	90.0 - 110.0	MS	24-JAN-10 18:32	100124-3
	Manganese	53.6	ug/L	50	ug/L	107.2	90.0 - 110.0	MS	24-JAN-10 18:32	100124-3
	Thallium	53	ug/L	50	ug/L	106.1	90.0 - 110.0	MS	24-JAN-10 18:32	100124-3
	Beryllium	51.9	ug/L	50	ug/L	103.8	90.0 - 110.0	MS	25-JAN-10 12:17	100125-4
	Uranium	48.5	ug/L	50	ug/L	97	90.0 - 110.0	MS	25-JAN-10 12:37	100125-2
	Aluminum	4930	ug/L	5000	ug/L	98.7	90.0 - 110.0	P	26-JAN-10 13:39	012610-1
	Arsenic	489	ug/L	500	ug/L	97.9	90.0 - 110.0	P	26-JAN-10 13:39	012610-1
	Barium	487	ug/L	500	ug/L	97.5	90.0 - 110.0	P	26-JAN-10 13:39	012610-1
	Calcium	5070	ug/L	5000	ug/L	101.4	90.0 - 110.0	P	26-JAN-10 13:39	012610-1
	Chromium	488	ug/L	500	ug/L	97.5	90.0 - 110.0	P	26-JAN-10 13:39	012610-1
	Cobalt	500	ug/L	500	ug/L	100	90.0 - 110.0	P	26-JAN-10 13:39	012610-1
	Copper	482	ug/L	500	ug/L	96.4	90.0 - 110.0	P	26-JAN-10 13:39	012610-1
	Iron	5370	ug/L	5000	ug/L	107.4	90.0 - 110.0	P	26-JAN-10 13:39	012610-1
	Magnesium	5380	ug/L	5000	ug/L	107.5	90.0 - 110.0	P	26-JAN-10 13:39	012610-1
	Nickel	490	ug/L	500	ug/L	98	90.0 - 110.0	P	26-JAN-10 13:39	012610-1
	Potassium	5050	ug/L	5000	ug/L	101	90.0 - 110.0	P	26-JAN-10 13:39	012610-1
	Selenium	507	ug/L	500	ug/L	101.5	90.0 - 110.0	P	26-JAN-10 13:39	012610-1
	Silver	490	ug/L	500	ug/L	98	90.0 - 110.0	P	26-JAN-10 13:39	012610-1
	Sodium	10800	ug/L	10000	ug/L	107.9	90.0 - 110.0	P	26-JAN-10 13:39	012610-1
	Vanadium	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	26-JAN-10 13:39	012610-1
	Zinc	484	ug/L	500	ug/L	96.8	90.0 - 110.0	P	26-JAN-10 13:39	012610-1
	Antimony	49.4	ug/L	50	ug/L	98.9	90.0 - 110.0	MS	28-JAN-10 09:04	100127-5
CCV06	Cadmium	49.7	ug/L	50	ug/L	99.5	90.0 - 110.0	MS	24-JAN-10 19:09	100124-3

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1288-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS5,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Lead	53.7	ug/L	50	ug/L	107.5	90.0 - 110.0	MS	24-JAN-10 19:09	100124-3
	Manganese	52.2	ug/L	50	ug/L	104.4	90.0 - 110.0	MS	24-JAN-10 19:09	100124-3
	Thallium	54.3	ug/L	50	ug/L	108.5	90.0 - 110.0	MS	24-JAN-10 19:09	100124-3
	Uranium	48.4	ug/L	50	ug/L	96.9	90.0 - 110.0	MS	25-JAN-10 12:59	100125-2
	Aluminum	4830	ug/L	5000	ug/L	96.6	90.0 - 110.0	P	26-JAN-10 14:50	012610-1
	Arsenic	474	ug/L	500	ug/L	94.8	90.0 - 110.0	P	26-JAN-10 14:50	012610-1
	Barium	476	ug/L	500	ug/L	95.2	90.0 - 110.0	P	26-JAN-10 14:50	012610-1
	Calcium	4950	ug/L	5000	ug/L	99	90.0 - 110.0	P	26-JAN-10 14:50	012610-1
	Chromium	476	ug/L	500	ug/L	95.3	90.0 - 110.0	P	26-JAN-10 14:50	012610-1
	Cobalt	487	ug/L	500	ug/L	97.4	90.0 - 110.0	P	26-JAN-10 14:50	012610-1
	Copper	470	ug/L	500	ug/L	94	90.0 - 110.0	P	26-JAN-10 14:50	012610-1
	Iron	5120	ug/L	5000	ug/L	102.5	90.0 - 110.0	P	26-JAN-10 14:50	012610-1
	Magnesium	5180	ug/L	5000	ug/L	103.6	90.0 - 110.0	P	26-JAN-10 14:50	012610-1
	Nickel	478	ug/L	500	ug/L	95.6	90.0 - 110.0	P	26-JAN-10 14:50	012610-1
	Potassium	4950	ug/L	5000	ug/L	98.9	90.0 - 110.0	P	26-JAN-10 14:50	012610-1
	Selenium	485	ug/L	500	ug/L	97	90.0 - 110.0	P	26-JAN-10 14:50	012610-1
	Silver	479	ug/L	500	ug/L	95.8	90.0 - 110.0	P	26-JAN-10 14:50	012610-1
	Sodium	9870	ug/L	10000	ug/L	98.7	90.0 - 110.0	P	26-JAN-10 14:50	012610-1
	Vanadium	481	ug/L	500	ug/L	96.1	90.0 - 110.0	P	26-JAN-10 14:50	012610-1
	Zinc	471	ug/L	500	ug/L	94.1	90.0 - 110.0	P	26-JAN-10 14:50	012610-1
CCV07	Aluminum	4780	ug/L	5000	ug/L	95.6	90.0 - 110.0	P	26-JAN-10 15:38	012610-1
	Arsenic	476	ug/L	500	ug/L	95.2	90.0 - 110.0	P	26-JAN-10 15:38	012610-1
	Barium	475	ug/L	500	ug/L	94.9	90.0 - 110.0	P	26-JAN-10 15:38	012610-1
	Calcium	4900	ug/L	5000	ug/L	98	90.0 - 110.0	P	26-JAN-10 15:38	012610-1
	Chromium	475	ug/L	500	ug/L	94.9	90.0 - 110.0	P	26-JAN-10 15:38	012610-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	26-JAN-10 15:38	012610-1
	Copper	467	ug/L	500	ug/L	93.4	90.0 - 110.0	P	26-JAN-10 15:38	012610-1
	Iron	5110	ug/L	5000	ug/L	102.2	90.0 - 110.0	P	26-JAN-10 15:38	012610-1
	Magnesium	5160	ug/L	5000	ug/L	103.1	90.0 - 110.0	P	26-JAN-10 15:38	012610-1

**METALS**  
**-2a-**  
**Initial and Continuing Calibration Verification**

SDG No: 10-1288-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS5,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Nickel	477	ug/L	500	ug/L	95.3	90.0 - 110.0	P	26-JAN-10 15:38	012610-1
	Potassium	4900	ug/L	5000	ug/L	98	90.0 - 110.0	P	26-JAN-10 15:38	012610-1
	Selenium	489	ug/L	500	ug/L	97.9	90.0 - 110.0	P	26-JAN-10 15:38	012610-1
	Silver	478	ug/L	500	ug/L	95.5	90.0 - 110.0	P	26-JAN-10 15:38	012610-1
	Sodium	9980	ug/L	10000	ug/L	99.8	90.0 - 110.0	P	26-JAN-10 15:38	012610-1
	Vanadium	479	ug/L	500	ug/L	95.8	90.0 - 110.0	P	26-JAN-10 15:38	012610-1
	Zinc	469	ug/L	500	ug/L	93.8	90.0 - 110.0	P	26-JAN-10 15:38	012610-1
CCV08										
	Aluminum	4890	ug/L	5000	ug/L	97.8	90.0 - 110.0	P	26-JAN-10 16:55	012610-1
	Arsenic	485	ug/L	500	ug/L	97	90.0 - 110.0	P	26-JAN-10 16:55	012610-1
	Barium	481	ug/L	500	ug/L	96.1	90.0 - 110.0	P	26-JAN-10 16:55	012610-1
	Calcium	4970	ug/L	5000	ug/L	99.4	90.0 - 110.0	P	26-JAN-10 16:55	012610-1
	Chromium	481	ug/L	500	ug/L	96.2	90.0 - 110.0	P	26-JAN-10 16:55	012610-1
	Cobalt	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	26-JAN-10 16:55	012610-1
	Copper	476	ug/L	500	ug/L	95.3	90.0 - 110.0	P	26-JAN-10 16:55	012610-1
	Iron	5100	ug/L	5000	ug/L	102	90.0 - 110.0	P	26-JAN-10 16:55	012610-1
	Magnesium	5220	ug/L	5000	ug/L	104.3	90.0 - 110.0	P	26-JAN-10 16:55	012610-1
	Nickel	482	ug/L	500	ug/L	96.5	90.0 - 110.0	P	26-JAN-10 16:55	012610-1
	Potassium	4960	ug/L	5000	ug/L	99.1	90.0 - 110.0	P	26-JAN-10 16:55	012610-1
	Selenium	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	26-JAN-10 16:55	012610-1
	Silver	484	ug/L	500	ug/L	96.9	90.0 - 110.0	P	26-JAN-10 16:55	012610-1
	Sodium	9720	ug/L	10000	ug/L	97.2	90.0 - 110.0	P	26-JAN-10 16:55	012610-1
	Vanadium	485	ug/L	500	ug/L	97.1	90.0 - 110.0	P	26-JAN-10 16:55	012610-1
	Zinc	475	ug/L	500	ug/L	95.1	90.0 - 110.0	P	26-JAN-10 16:55	012610-1
CCV09										
	Aluminum	4830	ug/L	5000	ug/L	96.5	90.0 - 110.0	P	26-JAN-10 18:12	012610-1
	Arsenic	486	ug/L	500	ug/L	97.1	90.0 - 110.0	P	26-JAN-10 18:12	012610-1
	Barium	484	ug/L	500	ug/L	96.8	90.0 - 110.0	P	26-JAN-10 18:12	012610-1
	Calcium	4970	ug/L	5000	ug/L	99.4	90.0 - 110.0	P	26-JAN-10 18:12	012610-1
	Chromium	484	ug/L	500	ug/L	96.8	90.0 - 110.0	P	26-JAN-10 18:12	012610-1



## METALS

-2a-

## Initial and Continuing Calibration Verification

SDG No: 10-1288-1

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4,ICPMS5,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Cobalt	495	ug/L	500	ug/L	99	90.0 - 110.0	P	26-JAN-10 18:12	012610-1
	Copper	481	ug/L	500	ug/L	96.2	90.0 - 110.0	P	26-JAN-10 18:12	012610-1
	Iron	5220	ug/L	5000	ug/L	104.4	90.0 - 110.0	P	26-JAN-10 18:12	012610-1
	Magnesium	5220	ug/L	5000	ug/L	104.3	90.0 - 110.0	P	26-JAN-10 18:12	012610-1
	Nickel	487	ug/L	500	ug/L	97.5	90.0 - 110.0	P	26-JAN-10 18:12	012610-1
	Potassium	4910	ug/L	5000	ug/L	98.2	90.0 - 110.0	P	26-JAN-10 18:12	012610-1
	Selenium	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	26-JAN-10 18:12	012610-1
	Silver	486	ug/L	500	ug/L	97.3	90.0 - 110.0	P	26-JAN-10 18:12	012610-1
	Sodium	10200	ug/L	10000	ug/L	101.8	90.0 - 110.0	P	26-JAN-10 18:12	012610-1
	Vanadium	489	ug/L	500	ug/L	97.8	90.0 - 110.0	P	26-JAN-10 18:12	012610-1
	Zinc	479	ug/L	500	ug/L	95.8	90.0 - 110.0	P	26-JAN-10 18:12	012610-1
CCV10	Aluminum	4780	ug/L	5000	ug/L	95.6	90.0 - 110.0	P	26-JAN-10 19:22	012610-1
	Arsenic	490	ug/L	500	ug/L	98	90.0 - 110.0	P	26-JAN-10 19:22	012610-1
	Barium	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	26-JAN-10 19:22	012610-1
	Calcium	4900	ug/L	5000	ug/L	97.9	90.0 - 110.0	P	26-JAN-10 19:22	012610-1
	Chromium	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	26-JAN-10 19:22	012610-1
	Cobalt	501	ug/L	500	ug/L	100.2	90.0 - 110.0	P	26-JAN-10 19:22	012610-1
	Copper	486	ug/L	500	ug/L	97.3	90.0 - 110.0	P	26-JAN-10 19:22	012610-1
	Iron	5040	ug/L	5000	ug/L	100.7	90.0 - 110.0	P	26-JAN-10 19:22	012610-1
	Magnesium	5100	ug/L	5000	ug/L	102	90.0 - 110.0	P	26-JAN-10 19:22	012610-1
	Nickel	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	26-JAN-10 19:22	012610-1
	Potassium	4820	ug/L	5000	ug/L	96.5	90.0 - 110.0	P	26-JAN-10 19:22	012610-1
	Selenium	495	ug/L	500	ug/L	99	90.0 - 110.0	P	26-JAN-10 19:22	012610-1
	Silver	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	26-JAN-10 19:22	012610-1
	Sodium	9290	ug/L	10000	ug/L	92.9	90.0 - 110.0	P	26-JAN-10 19:22	012610-1
	Vanadium	496	ug/L	500	ug/L	99.3	90.0 - 110.0	P	26-JAN-10 19:22	012610-1
	Zinc	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	26-JAN-10 19:22	012610-1

**METALS**  
**-2b-**  
**CRDL Standard for AA & ICP**

SDG No: 10-1288-1

Contract: LANL01004

Lab Code: GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS4,ICPMS5,MER536,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Mercury	.261	ug/L	.2	ug/L	130.6	70.0 - 130.0	AV	20-JAN-10 09:57	012010W1-6
	Lead	2.42	ug/L	2	ug/L	120.9	70.0 - 130.0	MS	24-JAN-10 15:15	100124-3
	Thallium	1.24	ug/L	1	ug/L	124.3	70.0 - 130.0	MS	24-JAN-10 15:15	100124-3
	Manganese	6	ug/L	5	ug/L	120	70.0 - 130.0	MS	24-JAN-10 15:15	100124-3
	Cadmium	1.09	ug/L	1	ug/L	109.1	70.0 - 130.0	MS	24-JAN-10 15:15	100124-3
	Uranium	.228	ug/L	.2	ug/L	114	70.0 - 130.0	MS	25-JAN-10 10:59	100125-2
	Beryllium	.568	ug/L	.5	ug/L	113.6	70.0 - 130.0	MS	25-JAN-10 11:23	100125-4
	Antimony	2.84	ug/L	3	ug/L	94.8	70.0 - 130.0	MS	28-JAN-10 07:37	100127-5
PQL01										
	Aluminum	202	ug/L	200	ug/L	101.1	70.0 - 130.0	P	26-JAN-10 09:53	012610-1
	Selenium	31	ug/L	30	ug/L	103.5	70.0 - 130.0	P	26-JAN-10 09:53	012610-1
	Calcium	205	ug/L	200	ug/L	102.4	70.0 - 130.0	P	26-JAN-10 09:53	012610-1
	Zinc	9.48	ug/L	10	ug/L	94.8	70.0 - 130.0	P	26-JAN-10 09:53	012610-1
	Vanadium	5.51	ug/L	5	ug/L	110.1	70.0 - 130.0	P	26-JAN-10 09:53	012610-1
	Copper	9.35	ug/L	10	ug/L	93.5	70.0 - 130.0	P	26-JAN-10 09:53	012610-1
	Cobalt	5.2	ug/L	5	ug/L	103.9	70.0 - 130.0	P	26-JAN-10 09:53	012610-1
	Chromium	5.04	ug/L	5	ug/L	100.7	70.0 - 130.0	P	26-JAN-10 09:53	012610-1
	Barium	5.18	ug/L	5	ug/L	103.6	70.0 - 130.0	P	26-JAN-10 09:53	012610-1
	Nickel	5.64	ug/L	5	ug/L	112.7	70.0 - 130.0	P	26-JAN-10 09:53	012610-1
	Potassium	99.4	ug/L	150	ug/L	66.3	70.0 - 130.0	P	26-JAN-10 09:53	012610-1
	Silver	5.01	ug/L	5	ug/L	100.2	70.0 - 130.0	P	26-JAN-10 09:53	012610-1
	Arsenic	26.8	ug/L	30	ug/L	89.5	70.0 - 130.0	P	26-JAN-10 09:53	012610-1
	Sodium	233	ug/L	300	ug/L	77.8	70.0 - 130.0	P	26-JAN-10 09:53	012610-1
	Magnesium	382	ug/L	300	ug/L	127.5	70.0 - 130.0	P	26-JAN-10 09:53	012610-1
	Iron	104	ug/L	100	ug/L	103.8	70.0 - 130.0	P	26-JAN-10 09:53	012610-1
PQL02										
	Chromium	5.14	ug/L	5	ug/L	102.8	70.0 - 130.0	P	26-JAN-10 12:20	012610-1
	Barium	5.23	ug/L	5	ug/L	104.5	70.0 - 130.0	P	26-JAN-10 12:20	012610-1
	Arsenic	29.2	ug/L	30	ug/L	97.2	70.0 - 130.0	P	26-JAN-10 12:20	012610-1
	Sodium	254	ug/L	300	ug/L	84.6	70.0 - 130.0	P	26-JAN-10 12:20	012610-1

**METALS**  
**-2b-**  
**CRDL Standard for AA & ICP**

SDG No: 10-1288-1

Contract: LANL01004

Lab Code: GEL

AA CRDL Standard Source:

ICP CRDL Standard Source

Instrument ID: ICPMS4,ICPMS5,MER536,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Advisory Limits (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Silver	5.42	ug/L	5	ug/L	108.3	70.0 - 130.0	P	26-JAN-10 12:20	012610-1
	Potassium	125	ug/L	150	ug/L	83.6	70.0 - 130.0	P	26-JAN-10 12:20	012610-1
	Nickel	5.88	ug/L	5	ug/L	117.6	70.0 - 130.0	P	26-JAN-10 12:20	012610-1
	Magnesium	321	ug/L	300	ug/L	107.2	70.0 - 130.0	P	26-JAN-10 12:20	012610-1
	Iron	114	ug/L	100	ug/L	114.3	70.0 - 130.0	P	26-JAN-10 12:20	012610-1
	Aluminum	199	ug/L	200	ug/L	99.4	70.0 - 130.0	P	26-JAN-10 12:20	012610-1
	Cobalt	5.09	ug/L	5	ug/L	101.8	70.0 - 130.0	P	26-JAN-10 12:20	012610-1
	Copper	9.78	ug/L	10	ug/L	97.8	70.0 - 130.0	P	26-JAN-10 12:20	012610-1
	Vanadium	5.28	ug/L	5	ug/L	105.7	70.0 - 130.0	P	26-JAN-10 12:20	012610-1
	Zinc	9.95	ug/L	10	ug/L	99.5	70.0 - 130.0	P	26-JAN-10 12:20	012610-1
	Calcium	203	ug/L	200	ug/L	101.3	70.0 - 130.0	P	26-JAN-10 12:20	012610-1
	Selenium	27.9	ug/L	30	ug/L	92.9	70.0 - 130.0	P	26-JAN-10 12:20	012610-1
PQL03										
	Aluminum	213	ug/L	200	ug/L	106.4	70.0 - 130.0	P	26-JAN-10 14:57	012610-1
	Iron	116	ug/L	100	ug/L	115.8	70.0 - 130.0	P	26-JAN-10 14:57	012610-1
	Magnesium	359	ug/L	300	ug/L	119.7	70.0 - 130.0	P	26-JAN-10 14:57	012610-1
	Nickel	5.42	ug/L	5	ug/L	108.4	70.0 - 130.0	P	26-JAN-10 14:57	012610-1
	Potassium	109	ug/L	150	ug/L	72.9	70.0 - 130.0	P	26-JAN-10 14:57	012610-1
	Silver	5.13	ug/L	5	ug/L	102.7	70.0 - 130.0	P	26-JAN-10 14:57	012610-1
	Sodium	258	ug/L	300	ug/L	86.1	70.0 - 130.0	P	26-JAN-10 14:57	012610-1
	Arsenic	27.3	ug/L	30	ug/L	91	70.0 - 130.0	P	26-JAN-10 14:57	012610-1
	Barium	4.91	ug/L	5	ug/L	98.1	70.0 - 130.0	P	26-JAN-10 14:57	012610-1
	Chromium	4.88	ug/L	5	ug/L	97.5	70.0 - 130.0	P	26-JAN-10 14:57	012610-1
	Cobalt	5.02	ug/L	5	ug/L	100.4	70.0 - 130.0	P	26-JAN-10 14:57	012610-1
	Copper	8.8	ug/L	10	ug/L	88	70.0 - 130.0	P	26-JAN-10 14:57	012610-1
	Vanadium	5.44	ug/L	5	ug/L	108.9	70.0 - 130.0	P	26-JAN-10 14:57	012610-1
	Zinc	9.4	ug/L	10	ug/L	94	70.0 - 130.0	P	26-JAN-10 14:57	012610-1
	Calcium	200	ug/L	200	ug/L	99.9	70.0 - 130.0	P	26-JAN-10 14:57	012610-1
	Selenium	30.1	ug/L	30	ug/L	100.4	70.0 - 130.0	P	26-JAN-10 14:57	012610-1

**Metals**  
**-3a-**  
**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1288-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ng/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
<b>ICB01</b>	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	20-JAN-10 09:55	012010W1-6
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	24-JAN-10 15:09	100124-3
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	24-JAN-10 15:09	100124-3
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	24-JAN-10 15:09	100124-3
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	24-JAN-10 15:09	100124-3
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	25-JAN-10 10:56	100125-2
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	25-JAN-10 11:21	100125-4
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	26-JAN-10 09:45	012610-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 09:45	012610-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 09:45	012610-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	26-JAN-10 09:45	012610-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 09:45	012610-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 09:45	012610-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	26-JAN-10 09:45	012610-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	26-JAN-10 09:45	012610-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	26-JAN-10 09:45	012610-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	26-JAN-10 09:45	012610-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	26-JAN-10 09:45	012610-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 09:45	012610-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 09:45	012610-1
	Sodium	100	+/-300	U	100	300	LIQ	P	26-JAN-10 09:45	012610-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 09:45	012610-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	26-JAN-10 09:45	012610-1
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	28-JAN-10 07:35	100127-5
<b>CCB01</b>	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	20-JAN-10 10:01	012010W1-6
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	24-JAN-10 15:39	100124-3
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	24-JAN-10 15:39	100124-3
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	24-JAN-10 15:39	100124-3
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	24-JAN-10 15:39	100124-3
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	25-JAN-10 11:07	100125-2

Metals  
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1288-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	25-JAN-10 11:30	100125-4
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	26-JAN-10 10:46	012610-1
	Arsenic	5.93	+/-30	J	5.0	30.0	LIQ	P	26-JAN-10 10:46	012610-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 10:46	012610-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	26-JAN-10 10:46	012610-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 10:46	012610-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 10:46	012610-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	26-JAN-10 10:46	012610-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	26-JAN-10 10:46	012610-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	26-JAN-10 10:46	012610-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	26-JAN-10 10:46	012610-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	26-JAN-10 10:46	012610-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 10:46	012610-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 10:46	012610-1
	Sodium	100	+/-300	U	100	300	LIQ	P	26-JAN-10 10:46	012610-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 10:46	012610-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	26-JAN-10 10:46	012610-1
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	28-JAN-10 07:46	100127-5
CCB02										
	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	20-JAN-10 10:25	012010W1-6
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	24-JAN-10 15:58	100124-3
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	24-JAN-10 15:58	100124-3
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	24-JAN-10 15:58	100124-3
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	24-JAN-10 15:58	100124-3
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	25-JAN-10 11:27	100125-2
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	25-JAN-10 11:43	100125-4
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	26-JAN-10 11:07	012610-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 11:07	012610-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 11:07	012610-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	26-JAN-10 11:07	012610-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 11:07	012610-1

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Metals  
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1288-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 11:07	012610-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	26-JAN-10 11:07	012610-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	26-JAN-10 11:07	012610-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	26-JAN-10 11:07	012610-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	26-JAN-10 11:07	012610-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	26-JAN-10 11:07	012610-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 11:07	012610-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 11:07	012610-1
	Sodium	100	+/-300	U	100	300	LIQ	P	26-JAN-10 11:07	012610-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 11:07	012610-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	26-JAN-10 11:07	012610-1
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	28-JAN-10 08:10	100127-5
CCB03	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	20-JAN-10 10:49	012010W1-6
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	24-JAN-10 16:53	100124-3
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	24-JAN-10 16:53	100124-3
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	24-JAN-10 16:53	100124-3
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	24-JAN-10 16:53	100124-3
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	25-JAN-10 11:43	100125-2
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	25-JAN-10 12:00	100125-4
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	26-JAN-10 12:27	012610-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 12:27	012610-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 12:27	012610-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	26-JAN-10 12:27	012610-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 12:27	012610-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 12:27	012610-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	26-JAN-10 12:27	012610-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	26-JAN-10 12:27	012610-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	26-JAN-10 12:27	012610-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	26-JAN-10 12:27	012610-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	26-JAN-10 12:27	012610-1

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Metals  
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1288-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 12:27	012610-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 12:27	012610-1
	Sodium	100	+/-300	U	100	300	LIQ	P	26-JAN-10 12:27	012610-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 12:27	012610-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	26-JAN-10 12:27	012610-1
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	28-JAN-10 08:24	100127-5
CCB04	Mercury	0.066	+/-2	U	0.066	0.2	LIQ	AV	20-JAN-10 11:13	012010W1-6
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	24-JAN-10 17:48	100124-3
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	24-JAN-10 17:48	100124-3
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	24-JAN-10 17:48	100124-3
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	24-JAN-10 17:48	100124-3
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	25-JAN-10 12:08	100125-4
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	25-JAN-10 12:15	100125-2
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	26-JAN-10 13:09	012610-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 13:09	012610-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 13:09	012610-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	26-JAN-10 13:09	012610-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 13:09	012610-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 13:09	012610-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	26-JAN-10 13:09	012610-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	26-JAN-10 13:09	012610-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	26-JAN-10 13:09	012610-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	26-JAN-10 13:09	012610-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	26-JAN-10 13:09	012610-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 13:09	012610-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 13:09	012610-1
	Sodium	100	+/-300	U	100	300	LIQ	P	26-JAN-10 13:09	012610-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 13:09	012610-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	26-JAN-10 13:09	012610-1
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	28-JAN-10 08:45	100127-5

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**Metals**  
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**Initial and Continuing Calibration Blank Summary**

SDG No.: 10-1288-1

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
<b>CCB05</b>										
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	24-JAN-10 18:38	100124-3
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	24-JAN-10 18:38	100124-3
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	24-JAN-10 18:38	100124-3
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	24-JAN-10 18:38	100124-3
	Beryllium	0.1	+/-5	U	0.1	0.5	LIQ	MS	25-JAN-10 12:19	100125-4
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	25-JAN-10 12:39	100125-2
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	26-JAN-10 13:46	012610-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 13:46	012610-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 13:46	012610-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	26-JAN-10 13:46	012610-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 13:46	012610-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 13:46	012610-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	26-JAN-10 13:46	012610-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	26-JAN-10 13:46	012610-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	26-JAN-10 13:46	012610-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	26-JAN-10 13:46	012610-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	26-JAN-10 13:46	012610-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 13:46	012610-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 13:46	012610-1
	Sodium	100	+/-300	U	100	300	LIQ	P	26-JAN-10 13:46	012610-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 13:46	012610-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	26-JAN-10 13:46	012610-1
	Antimony	1.0	+/-3	U	1.0	3.0	LIQ	MS	28-JAN-10 09:06	100127-5
<b>CCB06</b>										
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	24-JAN-10 19:15	100124-3
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	24-JAN-10 19:15	100124-3
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	24-JAN-10 19:15	100124-3
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	24-JAN-10 19:15	100124-3
	Uranium	0.05	+/-2	U	0.05	0.2	LIQ	MS	25-JAN-10 13:02	100125-2
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	26-JAN-10 15:04	012610-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 15:04	012610-1



Metals  
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1288-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ng/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 15:04	012610-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	26-JAN-10 15:04	012610-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 15:04	012610-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 15:04	012610-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	26-JAN-10 15:04	012610-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	26-JAN-10 15:04	012610-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	26-JAN-10 15:04	012610-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	26-JAN-10 15:04	012610-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	26-JAN-10 15:04	012610-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 15:04	012610-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 15:04	012610-1
	Sodium	100	+/-300	U	100	300	LIQ	P	26-JAN-10 15:04	012610-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 15:04	012610-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	26-JAN-10 15:04	012610-1
CCB07	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	26-JAN-10 15:45	012610-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 15:45	012610-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 15:45	012610-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	26-JAN-10 15:45	012610-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 15:45	012610-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 15:45	012610-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	26-JAN-10 15:45	012610-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	26-JAN-10 15:45	012610-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	26-JAN-10 15:45	012610-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	26-JAN-10 15:45	012610-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	26-JAN-10 15:45	012610-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 15:45	012610-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 15:45	012610-1
	Sodium	100	+/-300	U	100	300	LIQ	P	26-JAN-10 15:45	012610-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 15:45	012610-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	26-JAN-10 15:45	012610-1

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Metals  
-3a-  
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1288-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
CCB08	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	26-JAN-10 17:02	012610-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 17:02	012610-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 17:02	012610-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	26-JAN-10 17:02	012610-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 17:02	012610-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 17:02	012610-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	26-JAN-10 17:02	012610-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	26-JAN-10 17:02	012610-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	26-JAN-10 17:02	012610-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	26-JAN-10 17:02	012610-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	26-JAN-10 17:02	012610-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 17:02	012610-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 17:02	012610-1
	Sodium	100	+/-300	U	100	300	LIQ	P	26-JAN-10 17:02	012610-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 17:02	012610-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	26-JAN-10 17:02	012610-1
CCB09	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	26-JAN-10 18:19	012610-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 18:19	012610-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 18:19	012610-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	26-JAN-10 18:19	012610-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 18:19	012610-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 18:19	012610-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	26-JAN-10 18:19	012610-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	26-JAN-10 18:19	012610-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	26-JAN-10 18:19	012610-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	26-JAN-10 18:19	012610-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	26-JAN-10 18:19	012610-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 18:19	012610-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 18:19	012610-1
	Sodium	100	+/-300	U	100	300	LIQ	P	26-JAN-10 18:19	012610-1

SW846

Metals  
-3a-  
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1288-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
CCB10	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 18:19	012610-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	26-JAN-10 18:19	012610-1
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	26-JAN-10 19:29	012610-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 19:29	012610-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 19:29	012610-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	26-JAN-10 19:29	012610-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 19:29	012610-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 19:29	012610-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	26-JAN-10 19:29	012610-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	26-JAN-10 19:29	012610-1
	Magnesium	85.0	+/-300	U	85.0	300	LIQ	P	26-JAN-10 19:29	012610-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	26-JAN-10 19:29	012610-1
	Potassium	50.0	+/-150	U	50.0	150	LIQ	P	26-JAN-10 19:29	012610-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	26-JAN-10 19:29	012610-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 19:29	012610-1
	Sodium	100	+/-300	U	100	300	LIQ	P	26-JAN-10 19:29	012610-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	26-JAN-10 19:29	012610-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	26-JAN-10 19:29	012610-1

**METALS**  
**-3b-**  
**PREPARATION BLANK SUMMARY**

**SDG NO.** 10-1288-1  
**Contract:** LANL01004  
**Matrix:** WATER

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Acceptance Window</u>	<u>Conc Qual</u>	<u>M</u>	<u>MDL</u>	<u>RDL</u>
1202017559	Aluminum	68	ug/L	+/-200	U	P	68	200
	Arsenic	5	ug/L	+/-30	U	P	5	30
	Barium	1	ug/L	+/-5	U	P	1	5
	Calcium	50	ug/L	+/-200	U	P	50	200
	Cobalt	1	ug/L	+/-5	U	P	1	5
	Iron	30	ug/L	+/-100	U	P	30	100
	Nickel	1.5	ug/L	+/-5	U	P	1.5	5
	Selenium	5	ug/L	+/-30	U	P	5	30
	Sodium	100	ug/L	+/-300	U	P	100	300
	Zinc	3.3	ug/L	+/-10	U	P	3.3	10
	Vanadium	1	ug/L	+/-5	U	P	1	5
	Silver	1	ug/L	+/-5	U	P	1	5
	Potassium	-63.4	ug/L	+/-150	J	P	50	150
	Magnesium	85	ug/L	+/-300	U	P	85	300
	Copper	3	ug/L	+/-10	U	P	3	10
	Chromium	1	ug/L	+/-5	U	P	1	5
1202017705	Beryllium	0.1	ug/L	+/-0.5	U	MS	0.1	0.5
	Cadmium	0.11	ug/L	+/-1	U	MS	0.11	1
	Lead	0.5	ug/L	+/-2	U	MS	0.5	2
	Manganese	1	ug/L	+/-5	U	MS	1	5
	Uranium	0.05	ug/L	+/-0.2	U	MS	0.05	0.2
	Thallium	0.3	ug/L	+/-1	U	MS	0.3	1
1202019182	Mercury	0.066	ug/L	+/-0.2	U	AV	0.066	0.2
1202026084	Antimony	0.5	ug/L	+/-3	U	MS	0.5	3

## METALS

-4-

## Interference Check Sample

SDG No: 10-1288-1

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01									
	Aluminum	523000	ug/L	500000	ug/L	105	80.0 - 120.0	26-JAN-10 09:59	012610-1
	Arsenic	15.3	ug/L					26-JAN-10 09:59	012610-1
	Barium	1.3	ug/L					26-JAN-10 09:59	012610-1
	Calcium	483000	ug/L	500000	ug/L	96.6	80.0 - 120.0	26-JAN-10 09:59	012610-1
	Chromium	1.81	ug/L					26-JAN-10 09:59	012610-1
	Cobalt	-1.55	ug/L					26-JAN-10 09:59	012610-1
	Copper	3.75	ug/L					26-JAN-10 09:59	012610-1
	Iron	189000	ug/L	200000	ug/L	94.7	80.0 - 120.0	26-JAN-10 09:59	012610-1
	Magnesium	499000	ug/L	500000	ug/L	99.9	80.0 - 120.0	26-JAN-10 09:59	012610-1
	Nickel	3.09	ug/L					26-JAN-10 09:59	012610-1
	Potassium	-162.0	ug/L					26-JAN-10 09:59	012610-1
	Selenium	32.6	ug/L					26-JAN-10 09:59	012610-1
	Silver	4.99	ug/L					26-JAN-10 09:59	012610-1
	Sodium	-12.2	ug/L					26-JAN-10 09:59	012610-1
	Vanadium	-1.22	ug/L					26-JAN-10 09:59	012610-1
	Zinc	8.12	ug/L					26-JAN-10 09:59	012610-1
ICSAB01									
	Aluminum	534000	ug/L	500000	ug/L	107	80.0 - 120.0	26-JAN-10 10:05	012610-1
	Arsenic	504	ug/L	500	ug/L	101	80.0 - 120.0	26-JAN-10 10:05	012610-1
	Barium	481	ug/L	500	ug/L	96.2	80.0 - 120.0	26-JAN-10 10:05	012610-1
	Calcium	488000	ug/L	500000	ug/L	97.7	80.0 - 120.0	26-JAN-10 10:05	012610-1
	Chromium	464	ug/L	500	ug/L	92.7	80.0 - 120.0	26-JAN-10 10:05	012610-1
	Cobalt	440	ug/L	500	ug/L	88	80.0 - 120.0	26-JAN-10 10:05	012610-1
	Copper	550	ug/L	500	ug/L	110	80.0 - 120.0	26-JAN-10 10:05	012610-1
	Iron	189000	ug/L	200000	ug/L	94.8	80.0 - 120.0	26-JAN-10 10:05	012610-1
	Magnesium	503000	ug/L	500000	ug/L	101	80.0 - 120.0	26-JAN-10 10:05	012610-1
	Nickel	426	ug/L	500	ug/L	85.3	80.0 - 120.0	26-JAN-10 10:05	012610-1
	Potassium	5420	ug/L	5000	ug/L	108	80.0 - 120.0	26-JAN-10 10:05	012610-1
	Selenium	2520	ug/L	2500	ug/L	101	80.0 - 120.0	26-JAN-10 10:05	012610-1

SW846

**METALS**  
**-4-**  
**Interference Check Sample**

SDG No: 10-1288-1

Contract: LANL01004

Lab Code: GEL

ICS:

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Silver	267	ug/L	250	ug/L	107	80.0 - 120.0	26-JAN-10 10:05	012610-1
	Sodium	5560	ug/L	5000	ug/L	111	80.0 - 120.0	26-JAN-10 10:05	012610-1
	Vanadium	483	ug/L	500	ug/L	96.6	80.0 - 120.0	26-JAN-10 10:05	012610-1
	Zinc	485	ug/L	500	ug/L	97	80.0 - 120.0	26-JAN-10 10:05	012610-1

SW846

METALS  
-4-  
Interference Check Sample

SDG No: 10-1288-1

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS4

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Uranium	0.003	ug/L					25-JAN-10 11:01	100125-2
ICSAB01	Uranium	20.5	ug/L	20	ug/L	103	80.0 - 120.0	25-JAN-10 11:03	100125-2

METALS  
-4-  
Interference Check Sample

SDG No: 10-1288-1

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS5

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01									
	Cadmium	0.453	ug/L					24-JAN-10 15:21	100124-3
	Lead	0.202	ug/L					24-JAN-10 15:21	100124-3
	Manganese	6.05	ug/L					24-JAN-10 15:21	100124-3
	Thallium	0.009	ug/L					24-JAN-10 15:21	100124-3
ICSAB01									
	Cadmium	20.2	ug/L	20.4	ug/L	99.2	80.0 - 120.0	24-JAN-10 15:27	100124-3
	Lead	21.8	ug/L	20.5	ug/L	106	80.0 - 120.0	24-JAN-10 15:27	100124-3
	Manganese	27.1	ug/L	25.8	ug/L	105	80.0 - 120.0	24-JAN-10 15:27	100124-3
	Thallium	22.6	ug/L	20	ug/L	113	80.0 - 120.0	24-JAN-10 15:27	100124-3

SW846



## METALS

-4-

## Interference Check Sample

SDG No: 10-1288-1

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS5

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Beryllium	0.054	ug/L					25-JAN-10 11:25	100125-4
ICSAB01	Beryllium	17.4	ug/L	20	ug/L	87.1	80.0 - 120.0	25-JAN-10 11:26	100125-4

SW846

**METALS**  
**-4-**  
**Interference Check Sample**

SDG No: 10-1288-1

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS5

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Antimony	0.227	ug/L					28-JAN-10 07:39	100127-5
ICSAB01	Antimony	24.0	ug/L	20	ug/L	120	80.0 - 120.0	28-JAN-10 07:42	100127-5

SW846

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1288-1

Client ID: RE15-10-7229S

Contract: LANL01004

Level: Low

Matrix: WATER

% Solids:

Sample ID: 244922001

Spike ID: 1202017562

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Calcium	ug/L	75-125	4600		113	J	5000	89.7		P
Chromium	ug/L	75-125	392		1	U	500	78.3		P
Cobalt	ug/L	75-125	433		1	U	500	86.5		P
Copper	ug/L	75-125	403		3	U	500	80.2		P
Iron	ug/L	75-125	4920		234		5000	93.8		P
Magnesium	ug/L	75-125	4820		128	J	5000	93.9		P
Nickel	ug/L	75-125	394		1.5	U	500	78.5		P
Potassium	ug/L	75-125	4840		291		5000	91		P
Selenium	ug/L	75-125	387		5	U	500	77.4		P
Silver	ug/L	75-125	436		1	U	500	87.2		P
Sodium	ug/L	75-125	5000		323		5000	93.6		P
Vanadium	ug/L	75-125	401		1	U	500	79.9		P
Zinc	ug/L	75-125	388		3.3	U	500	77		P
Aluminum	ug/L	75-125	4880		405		5000	89.5		P
Arsenic	ug/L	75-125	422		5	U	500	84.5		P
Barium	ug/L	75-125	445		4.81	J	500	88		P

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1288-1 Client ID WST52-10-11327S

Contract: LANL01006 Level: Low

Matrix: WATER % Solids:

Sample ID: 244925001 Spike ID: 1202017708

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Beryllium	ug/L	75-125	44.7		0.92		50	87.5		MS
Cadmium	ug/L	75-125	9.69		0.214	J	10	94.8		MS
Lead	ug/L	75-125	38.4		8.18		40	75.5		MS
Manganese	ug/L		260		225		50	70.3	N/A	MS
Thallium	ug/L	75-125	91.9		0.3	U	100	91.8		MS
Uranium	ug/L	75-125	49.3		3.03		50	92.5		MS

## METALS

-5a-

## Matrix Spike Summary

SDG NO. 10-1288-1 Client ID RE15-10-7229S

Contract: LANL01004 Level: Low

Matrix: WATER % Solids:

Sample ID: 244922001 Spike ID: 1202019185

<u>Analyte</u>	<u>Units</u>	<u>Acceptance Limit</u>	<u>Spiked Result</u>	<u>C</u>	<u>Sample Result</u>	<u>C</u>	<u>Spike Added</u>	<u>% Recovery</u>	<u>Qual</u>	<u>M</u>
Mercury	ug/L	75-125	1.96		0.066	U	2	97.8		AV

## METALS

-5a-

## Matrix Spike Summary

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**SDG NO.** 10-1288-1 **Client ID** WST52-10-11327S

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**Contract:** LANL01006 **Level:** Low**Matrix:** WATER **% Solids:****Sample ID:** 244925001 **Spike ID:** 1202026087

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<u>Analyte</u>	<u>Units</u>	<u>Acceptance Limit</u>	<u>Spiked Result</u>	<u>C</u>	<u>Sample Result</u>	<u>C</u>	<u>Spike Added</u>	<u>% Recovery</u>	<u>Qual</u>	<u>M</u>
Antimony	ug/L	75-125	158		0.833	J	200	78.6		MS

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Metals  
-6-  
Duplicate Sample Summary

SDG No.: 10-1288-1

Contract: LANL01004

Lab Code: GEL

Matrix: LIQUID

Level: Low

Client ID: RE15-10-7229D

Sample ID: 244922001

Duplicate ID: 1202017561

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L	+/-200	405		313		25.6		P
Arsenic	ug/L		5 U		5 U				P
Barium	ug/L	+/-5	4.81 J		4.24 J		12.7		P
Calcium	ug/L	+/-200	113 J		101 J		11.5		P
Chromium	ug/L		1 U		1 U				P
Cobalt	ug/L		1 U		1 U				P
Copper	ug/L		3 U		3 U				P
Iron	ug/L	+/-100	234		191		20.1		P
Magnesium	ug/L		128 J		85 U		200		P
Nickel	ug/L		1.5 U		1.5 U				P
Potassium	ug/L	+/-150	291		260		11.3		P
Selenium	ug/L		5 U		5 U				P
Silver	ug/L		1 U		1 U				P
Sodium	ug/L	+/-300	323		310		3.89		P
Vanadium	ug/L		1 U		1.01 J		200		P
Zinc	ug/L		3.3 U		3.3 U				P

Metals  
-6-  
Duplicate Sample Summary

SDG No.: 10-1288-1

Contract: LANL01004

Lab Code: GEL

Matrix: LIQUID

Level: Low

Client ID: WST52-10-11327D

Sample ID: 244925001

Duplicate ID: 1202017707

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Beryllium	ug/L	+/- .5	0.92		0.928		.866		MS
Cadmium	ug/L	+/- 1	0.214 J		0.228 J		6.33		MS
Lead	ug/L	+/- 2	8.18		7.68		6.41		MS
Manganese	ug/L	+/- 20%	225		218		3.31		MS
Thallium	ug/L		0.3 U		0.3 U				MS
Uranium	ug/L	+/- 20%	3.03		2.9		4.22		MS



## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1288-1

Contract: LANL01004

Lab Code: GEL

Matrix: LIQUID

Level: Low

Client ID: RE15-10-7229D

Sample ID: 244922001

Duplicate ID: 1202019184

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L		0.066 U		0.066 U				AV

## Metals

-6-

## Duplicate Sample Summary

SDG No.: 10-1288-1

Contract: LANL01004

Lab Code: GEL

Matrix: LIQUID

Level: Low

Client ID: WST52-10-11327D

Sample ID: 244925001

Duplicate ID: 1202026086

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	ug/L	+/-3	0.833 J		0.804 J		3.54		MS

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1288-1

Contract: LANL01004

Aqueous LCS Source:OS2I

Solid LCS Source:

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202017560								
	Chromium	ug/L	500	473		94.6	80-120	P
	Cobalt	ug/L	500	477		95.3	80-120	P
	Copper	ug/L	500	477		95.5	80-120	P
	Iron	ug/L	5000	5130		103	80-120	P
	Magnesium	ug/L	5000	5200		104	80-120	P
	Nickel	ug/L	500	475		95	80-120	P
	Potassium	ug/L	5000	4970		99.4	80-120	P
	Selenium	ug/L	500	475		95.1	80-120	P
	Silver	ug/L	500	475		95	80-120	P
	Sodium	ug/L	5000	4860		97.1	80-120	P
	Vanadium	ug/L	500	482		96.3	80-120	P
	Zinc	ug/L	500	465		93	80-120	P
	Aluminum	ug/L	5000	4880		97.7	80-120	P
	Arsenic	ug/L	500	478		95.6	80-120	P
	Barium	ug/L	500	484		96.8	80-120	P
	Calcium	ug/L	5000	4960		99.2	80-120	P

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1288-1

Contract: LANL01004

Aqueous LCS Source:O2si

Solid LCS Source:

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202017706								
	Beryllium	ug/L	50	51.4		103	80-120	MS
	Cadmium	ug/L	50	50		100	80-120	MS
	Lead	ug/L	50	53.4		107	80-120	MS
	Manganese	ug/L	50	52.2		104	80-120	MS
	Thallium	ug/L	50	51.7		103	80-120	MS
	Uranium	ug/L	50	48		95.9	80-120	MS

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1288-1

Contract: LANL01004

Aqueous LCS Source: GEL

Solid LCS Source:

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202019183	Mercury	ug/L	2	2.02		101	80-120	AV

## METALS

-7-

## Laboratory Control Sample Summary

SDG NO. 10-1288-1

Contract: LANL01004

Aqueous LCS Source:O2si

Solid LCS Source:

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202026085	Antimony	ug/L	50	55.1		110	80-120	MS

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1288-1 Client ID RE15-10-7229L

Contract: LANL01004

Matrix: LIQUID Level: Low

Sample ID: 244922001 Serial Dilution ID: 1202017563

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	405		464	J	14.4			P
Arsenic	5	U	25	U				P
Barium	4.81	J	5.25	J	9.15			P
Calcium	113	J	250	U	100			P
Chromium	1	U	5	U				P
Cobalt	1	U	5	U				P
Copper	3	U	15	U				P
Iron	234		275	J	17.5			P
Magnesium	128	J	425	U	100			P
Nickel	1.5	U	7.5	U				P
Potassium	291		250	U	100			P
Selenium	5	U	25	U				P
Silver	1	U	5	U				P
Sodium	323		500	U	100			P
Vanadium	1	U	5	U				P
Zinc	3.3	U	16.5	U				P

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1288-1 Client ID WST52-10-11327L

Contract: LANL01004

Matrix: LIQUID Level: Low

Sample ID: 244925001 Serial Dilution ID: 1202017709

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Beryllium	.92		1.01	J	9.24			MS
Cadmium	.214	J	.55	U	100			MS
Lead	8.18		8.55	J	4.52			MS
Manganese	225		269		19.6	E	10	MS
Thallium	.3	U	1.5	U				MS
Uranium	3.03		3.1		2.15			MS



## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1288-1 Client ID RE15-10-7229L

Contract: LANL01004

Matrix: LIQUID Level: Low

Sample ID: 244922001 Serial Dilution ID: 1202019186

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.066	U	.33	U				AV

## METALS

-9-

## Serial Dilution Sample Summary

SDG NO. 10-1288-1 Client ID WST52-10-11327L

Contract: LANL01004

Matrix: LIQUID Level: Low

Sample ID: 244925001 Serial Dilution ID: 1202026088

<u>Analyte</u>	<u>Initial Value ug/L</u>	<u>C</u>	<u>Serial Value ug/L</u>	<u>C</u>	<u>% Difference</u>	<u>Qual</u>	<u>Acceptance Limit</u>	<u>M</u>
Antimony	.833	J	2.5	U	100			MS

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METALS  
-13-  
SAMPLE PREPARATION SUMMARY

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SDG No: 10-1288-1

Method Type: P

Contract: LANL01004

Lab Code: GEL

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<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number 942449							
1202017559	MB for batch 942449	MB	W	19-JAN-10	50mL	50mL	
1202017559	MB for batch 942449	MB	W	19-JAN-10	50mL	50mL	
1202017560	LCS for batch 942449	LCS	W	19-JAN-10	50mL	50mL	
1202017560	LCS for batch 942449	LCS	W	19-JAN-10	50mL	50mL	
1202017562	RE15-10-7229S	MS	W	19-JAN-10	50mL	50mL	
1202017562	RE15-10-7229S	MS	W	19-JAN-10	50mL	50mL	
1202017561	RE15-10-7229D	DUP	W	19-JAN-10	50mL	50mL	
1202017561	RE15-10-7229D	DUP	W	19-JAN-10	50mL	50mL	
244904001	RE46-10-10113	SAMPLE	W	19-JAN-10	50mL	50mL	
244904002	RE46-10-10109	SAMPLE	W	19-JAN-10	50mL	50mL	
244904003	RE46-10-10107	SAMPLE	W	19-JAN-10	50mL	50mL	
244904004	RE46-10-10111	SAMPLE	W	19-JAN-10	50mL	50mL	
244922001	RE15-10-7229	SAMPLE	W	19-JAN-10	50mL	50mL	

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SW846

METALS  
-13-  
SAMPLE PREPARATION SUMMARY

SDG No: 10-1288-1

Method Type: MS

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
<b>Batch Number 942490</b>							
1202017705	MB for batch 942490	MB	W	19-JAN-10	50mL	50mL	
1202017706	LCS for batch 942490	LCS	W	19-JAN-10	50mL	50mL	
1202017708	WST52-10-11327S	MS	W	19-JAN-10	50mL	50mL	
1202017707	WST52-10-11327D	DUP	W	19-JAN-10	50mL	50mL	
244922001	RE15-10-7229	SAMPLE	W	19-JAN-10	50mL	50mL	
<b>Batch Number 945920</b>							
1202026084	MB for batch 945920	MB	W	27-JAN-10	25mL	25mL	
1202026084	MB for batch 945920	MB	W	27-JAN-10	25mL	25mL	
1202026085	LCS for batch 945920	LCS	W	27-JAN-10	25mL	25mL	
1202026085	LCS for batch 945920	LCS	W	27-JAN-10	25mL	25mL	
1202026087	WST52-10-11327S	MS	W	27-JAN-10	25mL	25mL	
1202026087	WST52-10-11327S	MS	W	27-JAN-10	25mL	25mL	
1202026086	WST52-10-11327D	DUP	W	27-JAN-10	25mL	25mL	
1202026086	WST52-10-11327D	DUP	W	27-JAN-10	25mL	25mL	
244922001	RE15-10-7229	SAMPLE	W	27-JAN-10	25mL	25mL	

SW846

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METALS  
-13-  
SAMPLE PREPARATION SUMMARY

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SDG No: 10-1288-1

Method Type: AV

Contract: LANL01004

Lab Code: GEL

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<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number 943086							
1202019182	MB for batch 943086	MB	W	19-JAN-10	20mL	20mL	
1202019183	LCS for batch 943086	LCS	W	19-JAN-10	20mL	20mL	
1202019185	RE15-10-7229S	MS	W	19-JAN-10	20mL	20mL	
1202019184	RE15-10-7229D	DUP	W	19-JAN-10	20mL	20mL	
244922001	RE15-10-7229	SAMPLE	W	19-JAN-10	20mL	20mL	

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SW846

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS5

Start Date: 24-JAN-10

End Date: 24-JAN-10

Client Sdg: 10-1288-1

Method MS

Data File: 100124-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	14:44						X						X	X								X			
S10	1	14:50						X						X	X								X			
S100	1	14:57						X						X	X								X			
ICV01	1	15:03						X						X	X								X			
ICB01	1	15:09						X						X	X								X			
CRDL01	1	15:15						X						X	X								X			
ICSA01	1	15:21						X						X	X								X			
ICSAB01	1	15:27						X						X	X								X			
CCV01	1	15:33						X						X	X								X			
CCB01	1	15:39						X						X	X								X			
LR01	1	15:45						X						X	X								X			
CCV02	1	15:51						X						X	X								X			
CCB02	1	15:58						X						X	X								X			
1202017705	1	16:04						X						X	X								X			
1202017706	1	16:10						X						X	X								X			
ZZZZZZ	1	16:16																								
ZZZZZZ	1	16:22																								
ZZZZZZ	1	16:28																								
ZZZZZZ	1	16:35																								
ZZZZZZ	1	16:41																								
CCV03	1	16:47						X						X	X								X			
CCB03	1	16:53						X						X	X								X			
ZZZZZZ	1	16:59																								
ZZZZZZ	1	17:05																								
ZZZZZZ	1	17:11																								
ZZZZZZ	1	17:18																								
ZZZZZZ	1	17:24																								
ZZZZZZ	1	17:30																								
ZZZZZZ	1	17:36																								
CCV04	1	17:42						X						X	X								X			
CCB04	1	17:48						X						X	X								X			
ZZZZZZ	1	17:55																								
ZZZZZZ	1	18:01																								
ZZZZZZ	1	18:07																								
ZZZZZZ	1	18:13																								
ZZZZZZ	1	18:19																								
244922001	1	18:26						X						X	X								X			
CCV05	1	18:32						X						X	X								X			
CCB05	1	18:38						X						X	X								X			
ZZZZZZ	1	18:44																								

Metals  
-14-  
Analysis Run Log

Samp No.	D/F	Run Time																		
1202017707	1	18:50						X					X		X					X
1202017708	1	18:56						X					X		X					X
1202017709	5	19:03						X					X		X					X
CCV06	1	19:09						X					X		X					X
CCB06	1	19:15						X					X		X					X

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS5

Start Date: 25-JAN-10

End Date: 25-JAN-10

Client Sdg: 10-1288-1

Method MS

Data File: 100125-4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Ti	U	V	Zn
S0.0	1	11:15					X																			
S10	1	11:16					X																			
S100	1	11:18					X																			
ICV01	1	11:20					X																			
ICB01	1	11:21					X																			
CRDL01	1	11:23					X																			
ICSA01	1	11:25					X																			
ICSAB01	1	11:26					X																			
CCV01	1	11:28					X																			
CCB01	1	11:30					X																			
1202017705	1	11:31					X																			
1202017706	1	11:33					X																			
ZZZZZZ	1	11:35																								
ZZZZZZ	1	11:36																								
ZZZZZZ	1	11:38																								
ZZZZZZ	1	11:40																								
CCV02	1	11:41					X																			
CCB02	1	11:43					X																			
ZZZZZZ	1	11:46																								
ZZZZZZ	1	11:48																								
ZZZZZZ	1	11:50																								
ZZZZZZ	1	11:51																								
ZZZZZZ	1	11:53																								
ZZZZZZ	1	11:55																								
ZZZZZZ	1	11:56																								
CCV03	1	11:58					X																			
CCB03	1	12:00					X																			
ZZZZZZ	1	12:02																								
ZZZZZZ	1	12:03																								
244922001	1	12:05					X																			
CCV04	1	12:07					X																			
CCB04	1	12:08					X																			
ZZZZZZ	1	12:10																								
1202017707	1	12:12					X																			
1202017708	1	12:14					X																			
1202017709	5	12:15					X																			
CCV05	1	12:17					X																			
CCB05	1	12:19					X																			



Metals  
-14-  
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS5

Start Date: 28-JAN-10

End Date: 28-JAN-10

Client Sdg: 10-1288-1

Method MS

Data File: 100127-5

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Ti	U	V	Zn
S0.0	1	07:25		X																						
S10	1	07:28		X																						
S100	1	07:30		X																						
ICV01	1	07:32		X																						
ICB01	1	07:35		X																						
CRDL01	1	07:37		X																						
ICSA01	1	07:39		X																						
ICSAB01	1	07:42		X																						
CCV01	1	07:44		X																						
CCB01	1	07:46		X																						
1202026084	1	07:49		X																						
1202026085	1	07:51		X																						
ZZZZZZ	1	07:53																								
ZZZZZZ	1	07:56																								
ZZZZZZ	1	07:58																								
ZZZZZZ	1	08:00																								
ZZZZZZ	1	08:03																								
ZZZZZZ	1	08:05																								
CCV02	1	08:07		X																						
CCB02	1	08:10		X																						
ZZZZZZ	1	08:14																								
ZZZZZZ	1	08:17																								
ZZZZZZ	1	08:19																								
CCV03	1	08:21		X																						
CCB03	1	08:24		X																						
ZZZZZZ	1	08:26																								
ZZZZZZ	1	08:28																								
ZZZZZZ	5	08:31																								
ZZZZZZ	1	08:33																								
ZZZZZZ	1	08:36																								
ZZZZZZ	1	08:38																								
ZZZZZZ	1	08:40																								
CCV04	1	08:43		X																						
CCB04	1	08:45		X																						
ZZZZZZ	1	08:47																								
ZZZZZZ	1	08:50																								
244922001	1	08:52		X																						
ZZZZZZ	1	08:54																								
1202026086	1	08:57		X																						
1202026087	1	08:59		X																						



**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: OPTIMA3

Start Date: 26-JAN-10

End Date: 26-JAN-10

Client Sdg: 10-1288-1

Method P

Data File: 012610-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	09:04	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
S0.1	1	09:12			X	X				X	X	X						X	X	X	X				X	X
S0.5	1	09:18	X		X	X			X	X	X	X			X			X	X	X	X				X	X
SCAL	1	09:25	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
S10	1	09:32	X						X				X		X							X				
ICV01	1	09:38	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ICB01	1	09:45	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
PQL01	1	09:53	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ICSA01	1	09:59	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ICSAB01	1	10:05	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
LR01	1	10:12	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
LR02	1	10:18	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ZZZZZZ	1	10:24																								
ZZZZZZ	1	10:32																								
CCV01	1	10:38	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB01	1	10:46	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
LR03	1	10:53	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCV02	1	11:00	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB02	1	11:07	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ZZZZZZ	1	11:18																								
ZZZZZZ	1	11:25																								
ZZZZZZ	1	11:32																								
ZZZZZZ	1	11:39																								
ZZZZZZ	1	11:46																								
ZZZZZZ	1	11:53																								
ZZZZZZ	1	11:59																								
ZZZZZZ	5	12:06																								
CCV03	1	12:13	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
PQL02	1	12:20	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB03	1	12:27	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ZZZZZZ	1	12:35																								
ZZZZZZ	1	12:42																								
ZZZZZZ	1	12:48																								
ZZZZZZ	1	12:55																								
CCV04	1	13:02	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB04	1	13:09	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ZZZZZZ	1	13:24																								
ZZZZZZ	1	13:32																								
CCV05	1	13:39	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB05	1	13:46	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X

Metals  
-14-  
Analysis Run Log

Samp No.	D/F	Run Time																		
ZZZZZZ	1	13:54																		
ZZZZZZ	1	14:01																		
ZZZZZZ	1	14:08																		
ZZZZZZ	1	14:15																		
ZZZZZZ	1	14:23																		
ZZZZZZ	1	14:29																		
ZZZZZZ	1	14:36																		
ZZZZZZ	5	14:43																		
CCV06	1	14:50	X		X	X			X	X	X	X	X		X		X	X	X	X
PQL03	1	14:57	X		X	X			X	X	X	X	X		X		X	X	X	X
CCB06	1	15:04	X		X	X			X	X	X	X	X		X		X	X	X	X
CCV07	1	15:38	X		X	X			X	X	X	X	X		X		X	X	X	X
CCB07	1	15:45	X		X	X			X	X	X	X	X		X		X	X	X	X
1202017559	1	15:53	X		X	X			X	X	X	X	X		X		X	X	X	X
1202017560	1	16:00	X		X	X			X	X	X	X	X		X		X	X	X	X
ZZZZZZ	1	16:07																		
ZZZZZZ	1	16:13																		
ZZZZZZ	1	16:20																		
ZZZZZZ	1	16:27																		
ZZZZZZ	1	16:34																		
ZZZZZZ	1	16:41																		
ZZZZZZ	1	16:48																		
CCV08	1	16:55	X		X	X			X	X	X	X	X		X		X	X	X	X
CCB08	1	17:02	X		X	X			X	X	X	X	X		X		X	X	X	X
ZZZZZZ	1	17:10																		
ZZZZZZ	1	17:17																		
ZZZZZZ	1	17:24																		
ZZZZZZ	1	17:31																		
ZZZZZZ	10	17:37																		
ZZZZZZ	100	17:45																		
ZZZZZZ	1	17:52																		
ZZZZZZ	1	17:59																		
ZZZZZZ	1	18:05																		
CCV09	1	18:12	X		X	X			X	X	X	X	X		X		X	X	X	X
CCB09	1	18:19	X		X	X			X	X	X	X	X		X		X	X	X	X
ZZZZZZ	1	18:27																		
ZZZZZZ	1	18:34																		
ZZZZZZ	1	18:41																		
244922001	1	18:47	X		X	X			X	X	X	X	X		X		X	X	X	X
1202017561	1	18:55	X		X	X			X	X	X	X	X		X		X	X	X	X

Metals  
-14-  
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
1202017562	1	19:02	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
1202017563	5	19:08	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
<del>ZZZZZ</del>	1	19:15																								
CCV10	1	19:22	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB10	1	19:29	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X

**Metals**  
**-14-**  
**Analysis Run Log**

Contract: LANL01004

Lab Code: GEL

Inst Name: MER536

Start Date: 20-JAN-10

End Date: 20-JAN-10

Client Sdg: 10-1288-1

Method: AV

Data File: 012010W1-6

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	09:41															X									
S0.2	1	09:43															X									
S0.5	1	09:45															X									
S2.0	1	09:47															X									
S5.0	1	09:49															X									
S10	1	09:51															X									
ICV01	1	09:53															X									
ICB01	1	09:55															X									
CRDL01	1	09:57															X									
CCV01	1	09:59															X									
CCB01	1	10:01															X									
ZZZZZZ	1	10:03																								
ZZZZZZ	1	10:05																								
ZZZZZZ	1	10:07																								
ZZZZZZ	1	10:09																								
ZZZZZZ	1	10:11																								
ZZZZZZ	5	10:13																								
ZZZZZZ	1	10:15																								
ZZZZZZ	1	10:17																								
ZZZZZZ	1	10:19																								
1202019182	1	10:21															X									
CCV02	1	10:23															X									
CCB02	1	10:25															X									
1202019183	1	10:27															X									
ZZZZZZ	1	10:29																								
ZZZZZZ	1	10:31																								
ZZZZZZ	1	10:33																								
ZZZZZZ	1	10:35																								
ZZZZZZ	1	10:37																								
ZZZZZZ	1	10:39																								
244922001	1	10:41															X									
1202019184	1	10:43															X									
1202019185	1	10:45															X									
CCV03	1	10:47															X									
CCB03	1	10:49															X									
1202019186	5	10:51															X									
ZZZZZZ	1	10:53																								
ZZZZZZ	1	10:55																								
ZZZZZZ	1	10:57																								
ZZZZZZ	1	10:59																								

Samp No.	D/F	Run Time
ZZZZZZ	1	11:01
ZZZZZZ	1	11:03
ZZZZZZ	5	11:05
ZZZZZZ	1	11:07
ZZZZZZ	1	11:09
CCV04	1	11:11
CCB04	1	11:13

Metals  
-14-  
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS4

Start Date: 25-JAN-10

End Date: 25-JAN-10

Client Sdg: 10-1288-1

Method MS

Data File: 100125-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	10:48																						X		
S10	1	10:50																						X		
S100	1	10:52																						X		
ICV01	1	10:54																						X		
ICB01	1	10:56																						X		
CRDL01	1	10:59																						X		
ICSA01	1	11:01																						X		
ICSAB01	1	11:03																						X		
CCV01	1	11:05																						X		
CCB01	1	11:07																						X		
ZZZZZZ	2	11:10																								
ZZZZZZ	40	11:12																								
ZZZZZZ	2	11:14																								
ZZZZZZ	2	11:16																								
ZZZZZZ	2	11:18																								
ZZZZZZ	2	11:21																								
ZZZZZZ	2	11:23																								
CCV02	1	11:25																						X		
CCB02	1	11:27																						X		
ZZZZZZ	2	11:29																								
ZZZZZZ	2	11:32																								
ZZZZZZ	2	11:34																								
ZZZZZZ	2	11:36																								
ZZZZZZ	10	11:38																								
CCV03	1	11:40																						X		
CCB03	1	11:43																						X		
1202017705	1	11:55																						X		
1202017706	1	11:57																						X		
ZZZZZZ	1	11:59																								
ZZZZZZ	1	12:02																								
ZZZZZZ	1	12:04																								
ZZZZZZ	1	12:06																								
ZZZZZZ	1	12:08																								
ZZZZZZ	1	12:11																								
CCV04	1	12:13																						X		
CCB04	1	12:15																						X		
ZZZZZZ	1	12:17																								
ZZZZZZ	1	12:19																								
ZZZZZZ	1	12:22																								
ZZZZZZ	1	12:24																								



Samp No.	D/F	Run Time
ZZZZZ	1	12:26
ZZZZZ	1	12:28
ZZZZZ	1	12:31
ZZZZZ	1	12:33
ZZZZZ	1	12:35
CCV05	1	12:37
CCB05	1	12:39
ZZZZZ	1	12:42
ZZZZZ	1	12:44
ZZZZZ	1	12:46
244922001	1	12:48
ZZZZZ	1	12:51
I202017707	1	12:53
I202017708	1	12:55
I202017709	5	12:57
CCV06	1	12:59
CCB06	1	13:02

# Standards

METALS  
-10-  
Instrument Detection Limits

SDG NO. 10-1288-1

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP/MS	<u>Analyte</u>	<u>Wavelength (nm)</u>	<u>MDL</u>	<u>RDL</u>
			<u>ug/L</u>	<u>ug/L</u>
LIQUID	Aluminum		15.0	30
	Antimony		1.0	3
	Arsenic		1.6	5
	Barium		0.6	2
	Beryllium		0.1	.5
	Cadmium		0.11	1
	Calcium		65.0	200
	Chromium		2.0	10
	Cobalt		0.1	1
	Copper		0.33	1
	Iron		33.0	100
	Lead		0.5	2
	Magnesium		5.2	15
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		1.0	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Uranium		0.05	.2
	Vanadium		3.0	10
	Zinc		3.0	10

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METALS  
-10-  
Instrument Detection Limits

SDG NO. 10-1288-1

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

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	<u>Analyte</u>	<u>Wavelength</u> <u>(nm)</u>	<u>MDL</u> <u>ug/L</u>	<u>RDL</u> <u>ug/L</u>
MERCURY				
LIQUID	Mercury		0.066	.2

METALS  
-10-  
Instrument Detection Limits

SDG NO. 10-1288-1

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP	<u>Analyte</u>	<u>Wavelength</u>	<u>MDL</u>	<u>RDL</u>
		(nm)	ug/L	ug/L
LIQUID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.0	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	50.0	200
	Chromium	267.716	1.0	5
	Cobalt	228.616	1.0	5
	Copper	324.752	3.0	10
	Iron	238.204	30.0	100
	Lead	220.353	3.3	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	50.0	150
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	100	300
	Thallium	190.801	5.0	20
	Uranium	409.014	10.0	50
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No: 10-1288-1

Contract: LANL01004

Instrument: OPTIMA3

Effective Dates: 01-NOV-09

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Aluminum	Antimony	Arsenic	Barium	Beryllium
Parmname	Wavelength					
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02697	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.48147	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.21356	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.05571	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.18741	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02739	0.00000	0.00000	0.00000	0.00000
Tin	189.927	-0.00058	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No: 10-1288-1

Contract: LANL01004

Instrument: OPTIMA3

Effective Dates: 01-NOV-09

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Boron	Cadmium	Chromium	Cobalt	Copper
Parmname	Wavelength					
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	2.85580	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.44491	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-29.9151	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.57616
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.60374	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	198.62
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.19810

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No: 10-1288-1

Contract: LANL01004

Instrument: OPTIMA3

Effective Dates: 01-NOV-09

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Iron	Lead	Magnesium	Manganese	Molybdenum
Parmname	Wavelength					
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	48.4946
Antimony	206.836	-0.02515	0.00000	0.00000	0.00000	-20.5057
Arsenic	188.979	-0.23424	0.00000	0.00000	0.00000	2.41902
Barium	233.527	-0.03042	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.16240	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.10329	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.01944	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01444	0.00000	0.00000	0.00000	-2.33100
Copper	324.752	-0.05293	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09554	0.00000	0.00000	0.00000	-2.48774
Magnesium	279.077	1.04597	0.00000	0.00000	0.00000	-10.4683
Manganese	257.61	-0.09877	0.00000	0.04089	0.00000	0.00000
Molybdenum	202.031	-0.07763	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80543	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.39429	1.18725
Selenium	196.026	-3.00009	0.00000	0.00000	0.00000	-3.17982
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.32385	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-5.85948	0.00000
Tin	189.927	-0.01337	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12581	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.15211	0.00000	-0.02256	0.00000	-14.2921
Zinc	213.857	0.09548	0.00000	0.03423	0.00000	0.00000



**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No: 10-1288-1

Contract: LANL01004

Instrument: OPTIMA3

Effective Dates: 01-NOV-09

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Nickel	Phosphorous	Potassium	Selenium	Silicon
Parmname	Wavelength					
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	-0.84443	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.63547	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No:

10-1288-1

Contract: LANL01004

Instrument: OPTIMA3

Effective Dates: 01-NOV-09

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-15.4932
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-9.37529
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	3.10491
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

**METALS**  
**-11-**  
**Interelement Correction Factors**

Lab Code: GEL

GEL Job No: 10-1288-1

Contract: LANL01004

Instrument: OPTIMA3

Effective Dates: 01-NOV-09

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Titanium	Uranium	Vanadium	Zinc
Parmname	Wavelength				
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	3.30431	0.00000	-2.81282	0.00000
Arsenic	188.979	-8.66313	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.20293	0.00000
Beryllium	313.107	-2.27027	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	-0.19473	0.00000	0.00000
Chromium	267.716	0.00000	0.39645	-1.41250	0.00000
Cobalt	228.616	2.09497	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.55360	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.81635	-4.04400	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-7.67419	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

**METALS**  
**-12-**  
**Linear Ranges**

SDG NO. 10-1288-1

Contract: LANL01004

Lab Code: GEL

Instrument ID ICPMS5

<u>Analyte</u>	<u>Integration Time (msec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	1	50000	ug/L	01-NOV-09
Antimony	1000	250	ug/L	01-NOV-09
Arsenic	1000	1000	ug/L	01-NOV-09
Barium	1000	1000	ug/L	01-NOV-09
Beryllium	1000	1000	ug/L	01-NOV-09
Cadmium	1000	1000	ug/L	01-NOV-09
Calcium	500	50000	ug/L	01-NOV-09
Chromium	1000	1000	ug/L	01-NOV-09
Cobalt	1000	1000	ug/L	01-NOV-09
Copper	1000	1000	ug/L	01-NOV-09
Iron	500	50000	ug/L	01-NOV-09
Lead	1000	5000	ug/L	01-NOV-09
Magnesium	1	50000	ug/L	01-NOV-09
Manganese	1000	1000	ug/L	01-NOV-09
Nickel	1000	1000	ug/L	01-NOV-09
Potassium	1	50000	ug/L	01-NOV-09
Selenium	1000	500	ug/L	01-NOV-09
Silver	1000	250	ug/L	01-NOV-09
Sodium	1	50000	ug/L	01-NOV-09
Thallium	1000	500	ug/L	01-NOV-09
Uranium	1000	5000	ug/L	01-NOV-09
Vanadium	1000	100	ug/L	01-NOV-09
Zinc	1000	2500	ug/L	01-NOV-09

**METALS**  
**-12-**  
**Linear Ranges**

SDG NO. 10-1288-1

Contract: LANL01004

Lab Code: GEL

Instrument ID OPTIMA3

<u>Analyte</u>	<u>Integration Time (sec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	20	500000	ug/L	01-NOV-09
Antimony	20	10000	ug/L	01-NOV-09
Arsenic	20	10000	ug/L	01-NOV-09
Barium	20	15000	ug/L	01-NOV-09
Beryllium	20	3000	ug/L	01-NOV-09
Cadmium	20	10000	ug/L	01-NOV-09
Calcium	20	500000	ug/L	01-NOV-09
Chromium	20	25000	ug/L	01-NOV-09
Copper	20	20000	ug/L	01-NOV-09
Iron	20	500000	ug/L	01-NOV-09
Lead	20	25000	ug/L	01-NOV-09
Magnesium	20	500000	ug/L	01-NOV-09
Manganese	20	10000	ug/L	01-NOV-09
Nickel	20	10000	ug/L	01-NOV-09
Potassium	20	300000	ug/L	01-NOV-09
Selenium	20	10000	ug/L	01-NOV-09
Silver	20	1000	ug/L	01-NOV-09
Sodium	20	500000	ug/L	01-NOV-09
Thallium	20	10000	ug/L	01-NOV-09
Uranium	20	15000	ug/L	01-NOV-09
Vanadium	20	10000	ug/L	01-NOV-09
Zinc	20	15000	ug/L	01-NOV-09
Cobalt	20	10000	ug/L	01-NOV-09

**METALS**  
**-12-**  
**Linear Ranges**

SDG NO. 10-1288-1

Contract: LANL01004

Lab Code: GEL

Instrument ID ICPMS4

<u>Analyte</u>	<u>Integration Time (msec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	1	50000	ug/L	01-NOV-09
Antimony	1000	250	ug/L	01-NOV-09
Arsenic	1000	1000	ug/L	01-NOV-09
Barium	1000	1000	ug/L	01-NOV-09
Beryllium	1000	1000	ug/L	01-NOV-09
Cadmium	1000	1000	ug/L	01-NOV-09
Calcium	500	50000	ug/L	01-NOV-09
Chromium	1000	1000	ug/L	01-NOV-09
Cobalt	1000	1000	ug/L	01-NOV-09
Copper	1000	1000	ug/L	01-NOV-09
Iron	500	50000	ug/L	01-NOV-09
Lead	1000	5000	ug/L	01-NOV-09
Magnesium	1	50000	ug/L	01-NOV-09
Manganese	1000	1000	ug/L	01-NOV-09
Nickel	1000	1000	ug/L	01-NOV-09
Potassium	1	50000	ug/L	01-NOV-09
Selenium	1000	500	ug/L	01-NOV-09
Silver	1000	250	ug/L	01-NOV-09
Sodium	1	50000	ug/L	01-NOV-09
Thallium	1000	500	ug/L	01-NOV-09
Uranium	1000	5000	ug/L	01-NOV-09
Vanadium	1000	100	ug/L	01-NOV-09
Zinc	1000	2500	ug/L	01-NOV-09

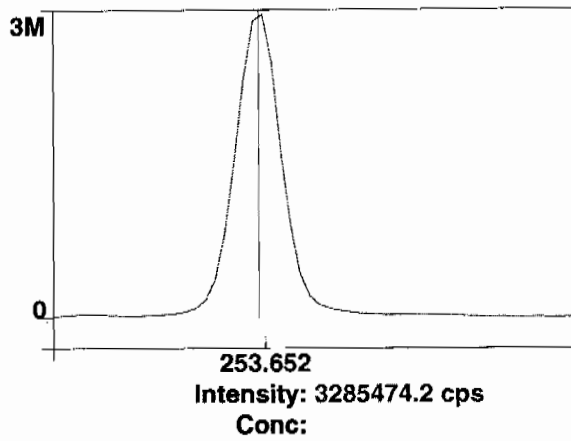
# Raw Data

Method: Hg\_ReAlign  
Result: 012910

Sample ID: Hg\_ReAlign

Hg 253.652

Rep: 1



1



=====  
Analysis Begun

Start Time: 1/26/2010 09:04:50

Plasma On Time: 00:00:00

Logged In Analyst: Optima3

Technique: ICP Continuous

Spectrometer Model: Optima 5300 DV, S/N 077C7090601 Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\012610.sif

Batch ID:

Results Data Set: 012610

Results Library: C:\pe\Optima3\Results\Results.mdb  
=====

## Method Loaded

Method Name: General Eng.2AX

Method Last Saved: 1/25/2010 09:50:48

IEC File: 011110.iec

MSF File:

Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1

Autosampler Location: 8

Sample ID: S0

Date Collected: 1/26/2010 09:04:59

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:  
=====

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Analysis Time
1	Sc Radial	5270.9	5270.9	98.7 %	09:06:51
1	Y RADIAL	5705.9	5705.9	99.11 %	09:06:51
1	Al 396.153Radial†	10.0	10.2	[0.00] ug/L	09:07:11

1	Ca 317.933Radial†	17.0	17.2	[0.00]	ug/L	09:07:11
1	Fe 238.204 Radial†	6.7	6.8	[0.00]	ug/L	09:07:11
1	K 766.490 Radial†	2388.4	2419.8	[0.00]	ug/L	09:06:51
1	Mg 279.077 IEC†	2.8	2.8	[0.00]	ug/L	09:07:11
1	Na 589.592 Radial†	-551.5	-558.7	[0.00]	ug/L	09:06:51
1	Sr 421.552†	1.2	1.3	[0.00]	ug/L	09:06:51
1	Sc 361.383	897998.2	897998.2	100.01	%	09:08:08
1	Y 371.029	821867.5	821867.5	99.848	%	09:08:08
1	Ag 328.068†	250.1	250.0	[0.00]	ug/L	09:08:08
1	As 188.979†	-30.3	-30.3	[0.00]	ug/L	09:08:28
1	B 249.677†	-230.6	-230.6	[0.00]	ug/L	09:08:28
1	Ba 233.527†	0.5	0.5	[0.00]	ug/L	09:08:28
1	Be 313.107†	-5154.8	-5154.0	[0.00]	ug/L	09:08:08
1	Cd 226.502†	-211.8	-211.8	[0.00]	ug/L	09:08:28
1	Co 228.616†	-60.5	-60.5	[0.00]	ug/L	09:08:28
1	Cr 267.716†	96.1	96.1	[0.00]	ug/L	09:08:28
1	Cu 324.752†	9140.4	9139.1	[0.00]	ug/L	09:08:08
1	Mn 257.610†	497.9	497.9	[0.00]	ug/L	09:08:28
1	Mo 202.031†	24.4	24.4	[0.00]	ug/L	09:08:28
1	Ni 231.604†	100.2	100.2	[0.00]	ug/L	09:08:28
1	P 214.914†	249.5	249.5	[0.00]	ug/L	09:08:28
1	Pb 220.353†	-59.3	-59.3	[0.00]	ug/L	09:08:28
1	S 181.975 Axial†	79.8	79.8	[0.00]	ug/L	09:08:28
1	Sb 206.836†	33.5	33.5	[0.00]	ug/L	09:08:28
1	Se 196.026†	-21.1	-21.1	[0.00]	ug/L	09:08:28
1	Si 251.611†	505.0	504.9	[0.00]	ug/L	09:08:28
1	Sn 189.927†	-0.8	-0.8	[0.00]	ug/L	09:08:28
1	Ti 334.940†	-870.8	-870.7	[0.00]	ug/L	09:08:08
1	Tl 190.801†	-42.5	-42.5	[0.00]	ug/L	09:08:28
1	U 409.014†	-1117.0	-1116.9	[0.00]	ug/L	09:08:08
1	V 292.402†	-1380.5	-1380.3	[0.00]	ug/L	09:08:08
1	Zn 213.857†	721.7	721.6	[0.00]	ug/L	09:08:28
1	SiO2†	507.3	507.2	[0.00]	ug/L	09:09:39
2	Sc Radial	5430.3	5430.3	102	%	09:07:17
2	Y RADIAL	5851.7	5851.7	101.6	%	09:07:17
2	Al 396.153Radial†	7.5	7.4	[0.00]	ug/L	09:07:37
2	Ca 317.933Radial†	21.2	20.8	[0.00]	ug/L	09:07:37
2	Fe 238.204 Radial†	7.9	7.8	[0.00]	ug/L	09:07:37
2	K 766.490 Radial†	2627.0	2583.3	[0.00]	ug/L	09:07:17
2	Mg 279.077 IEC†	-1.8	-1.7	[0.00]	ug/L	09:07:37
2	Na 589.592 Radial†	-568.8	-559.3	[0.00]	ug/L	09:07:17
2	Sr 421.552†	-1.4	-1.3	[0.00]	ug/L	09:07:17
2	Sc 361.383	895675.0	895675.0	99.755	%	09:08:34
2	Y 371.029	819609.1	819609.1	99.573	%	09:08:34
2	Ag 328.068†	327.6	328.4	[0.00]	ug/L	09:08:34
2	As 188.979†	-31.5	-31.6	[0.00]	ug/L	09:08:54
2	B 249.677†	-244.4	-245.0	[0.00]	ug/L	09:08:54
2	Ba 233.527†	-1.4	-1.4	[0.00]	ug/L	09:08:54
2	Be 313.107†	-5103.8	-5116.3	[0.00]	ug/L	09:08:34
2	Cd 226.502†	-193.7	-194.2	[0.00]	ug/L	09:08:54
2	Co 228.616†	-82.8	-83.0	[0.00]	ug/L	09:08:54
2	Cr 267.716†	84.9	85.1	[0.00]	ug/L	09:08:54
2	Cu 324.752†	9095.4	9117.7	[0.00]	ug/L	09:08:34
2	Mn 257.610†	494.4	495.6	[0.00]	ug/L	09:08:54
2	Mo 202.031†	24.8	24.8	[0.00]	ug/L	09:08:54
2	Ni 231.604†	86.1	86.3	[0.00]	ug/L	09:08:54
2	P 214.914†	231.3	231.9	[0.00]	ug/L	09:08:54
2	Pb 220.353†	-55.9	-56.1	[0.00]	ug/L	09:08:54
2	S 181.975 Axial†	73.8	74.0	[0.00]	ug/L	09:08:54
2	Sb 206.836†	25.7	25.7	[0.00]	ug/L	09:08:54
2	Se 196.026†	-15.9	-16.0	[0.00]	ug/L	09:08:54
2	Si 251.611†	498.6	499.8	[0.00]	ug/L	09:08:54
2	Sn 189.927†	-0.8	-0.8	[0.00]	ug/L	09:08:54
2	Ti 334.940†	-903.1	-905.3	[0.00]	ug/L	09:08:34
2	Tl 190.801†	-29.5	-29.6	[0.00]	ug/L	09:08:54
2	U 409.014†	-1068.1	-1070.7	[0.00]	ug/L	09:08:34
2	V 292.402†	-1404.0	-1407.5	[0.00]	ug/L	09:08:34
2	Zn 213.857†	724.5	726.2	[0.00]	ug/L	09:08:54
2	SiO2†	511.0	512.3	[0.00]	ug/L	09:09:59
3	Sc Radial	5319.1	5319.1	99.6	%	09:07:42
3	Y RADIAL	5714.0	5714.0	99.25	%	09:07:42

3	Al 396.153Radial†	9.9	9.9	[0.00]	ug/L	09:08:02
3	Ca 317.933Radial†	22.6	22.7	[0.00]	ug/L	09:08:02
3	Fe 238.204 Radial†	6.9	6.9	[0.00]	ug/L	09:08:02
3	K 766.490 Radial†	2497.5	2507.4	[0.00]	ug/L	09:07:42
3	Mg 279.077 IEC†	1.8	1.8	[0.00]	ug/L	09:08:02
3	Na 589.592 Radial†	-522.8	-524.9	[0.00]	ug/L	09:07:42
3	Sr 421.552†	21.3	21.3	[0.00]	ug/L	09:07:42
3	Sc 361.383	899945.9	899945.9	100.23	%	09:08:59
3	Y 371.029	827890.4	827890.4	100.58	%	09:08:59
3	Ag 328.068†	310.3	309.6	[0.00]	ug/L	09:08:59
3	As 188.979†	-28.8	-28.7	[0.00]	ug/L	09:09:19
3	B 249.677†	-246.2	-245.6	[0.00]	ug/L	09:09:19
3	Ba 233.527†	-8.4	-8.4	[0.00]	ug/L	09:09:19
3	Be 313.107†	-5042.6	-5031.0	[0.00]	ug/L	09:08:59
3	Cd 226.502†	-213.0	-212.5	[0.00]	ug/L	09:09:19
3	Co 228.616†	-66.4	-66.3	[0.00]	ug/L	09:09:19
3	Cr 267.716†	100.8	100.5	[0.00]	ug/L	09:09:19
3	Cu 324.752†	9148.3	9127.2	[0.00]	ug/L	09:08:59
3	Mn 257.610†	477.2	476.1	[0.00]	ug/L	09:09:19
3	Mo 202.031†	21.6	21.6	[0.00]	ug/L	09:09:19
3	Ni 231.604†	94.8	94.5	[0.00]	ug/L	09:09:19
3	P 214.914†	235.4	234.9	[0.00]	ug/L	09:09:19
3	Pb 220.353†	-66.0	-65.8	[0.00]	ug/L	09:09:19
3	S 181.975 Axial†	77.3	77.2	[0.00]	ug/L	09:09:19
3	Sb 206.836†	31.6	31.5	[0.00]	ug/L	09:09:19
3	Se 196.026†	-16.8	-16.8	[0.00]	ug/L	09:09:19
3	Si 251.611†	484.3	483.1	[0.00]	ug/L	09:09:19
3	Sn 189.927†	0.5	0.5	[0.00]	ug/L	09:09:19
3	Ti 334.940†	-945.8	-943.6	[0.00]	ug/L	09:08:59
3	Tl 190.801†	-38.7	-38.6	[0.00]	ug/L	09:09:19
3	U 409.014†	-1003.2	-1000.9	[0.00]	ug/L	09:08:59
3	V 292.402†	-1396.2	-1393.0	[0.00]	ug/L	09:08:59
3	Zn 213.857†	754.1	752.4	[0.00]	ug/L	09:09:19
3	SiO2†	522.0	520.8	[0.00]	ug/L	09:10:19

-----  
Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	897873.0	2138.24	0.24%	100.00	%
Sc Radial	5340.1	81.74	1.53%	100	%
Y 371.029	823122.4	4280.88	0.52%	100.00	%
Y RADIAL	5757.2	81.93	1.42%	100.0	%
Ag 328.068†	296.0	40.93	13.83%	[0.00]	ug/L
Al 396.153Radial†	9.1	1.55	16.93%	[0.00]	ug/L
As 188.979†	-30.2	1.45	4.79%	[0.00]	ug/L
B 249.677†	-240.4	8.50	3.54%	[0.00]	ug/L
Ba 233.527†	-3.1	4.71	152.10%	[0.00]	ug/L
Be 313.107†	-5100.4	63.05	1.24%	[0.00]	ug/L
Ca 317.933Radial†	20.2	2.80	13.85%	[0.00]	ug/L
Cd 226.502†	-206.2	10.37	5.03%	[0.00]	ug/L
Co 228.616†	-69.9	11.70	16.72%	[0.00]	ug/L
Cr 267.716†	93.9	7.92	8.44%	[0.00]	ug/L
Cu 324.752†	9128.0	10.74	0.12%	[0.00]	ug/L
Fe 238.204 Radial†	7.2	0.54	7.51%	[0.00]	ug/L
K 766.490 Radial†	2503.5	81.85	3.27%	[0.00]	ug/L
Mg 279.077 IEC†	1.0	2.39	245.73%	[0.00]	ug/L
Mn 257.610†	489.9	11.99	2.45%	[0.00]	ug/L
Mo 202.031†	23.6	1.76	7.45%	[0.00]	ug/L
Na 589.592 Radial†	-547.6	19.71	3.60%	[0.00]	ug/L
Ni 231.604†	93.7	7.00	7.47%	[0.00]	ug/L
P 214.914†	238.7	9.42	3.95%	[0.00]	ug/L
Pb 220.353†	-60.4	4.98	8.24%	[0.00]	ug/L
S 181.975 Axial†	77.0	2.90	3.77%	[0.00]	ug/L
Sb 206.836†	30.3	4.04	13.36%	[0.00]	ug/L
Se 196.026†	-18.0	2.78	15.50%	[0.00]	ug/L
Si 251.611†	496.0	11.39	2.30%	[0.00]	ug/L
Sn 189.927†	-0.3	0.72	209.81%	[0.00]	ug/L
Sr 421.552†	7.1	12.41	175.14%	[0.00]	ug/L
Ti 334.940†	-906.5	36.45	4.02%	[0.00]	ug/L
Tl 190.801†	-36.9	6.60	17.88%	[0.00]	ug/L

U 409.014†	-1062.8	58.40	5.49%	[0.00] ug/L
V 292.402†	-1393.6	13.60	0.98%	[0.00] ug/L
Zn 213.857†	733.4	16.62	2.27%	[0.00] ug/L
SiO2†	513.4	6.86	1.34%	[0.00] ug/L

Sequence No.: 2  
 Sample ID: S0.1  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 2  
 Date Collected: 1/26/2010 09:12:30  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Analysis Time
1	Sc Radial	5478.5	5478.5	103 %	09:14:28
1	Y RADIAL	5929.0	5929.0	103.0 %	09:14:28
1	K 766.490 Radial†	8180.8	5470.6	[1000] ug/L	09:14:22
1	Sr 421.552†	15624.1	15222.2	[100] ug/L	09:14:28
1	Sc 361.383	945841.4	945841.4	105.34 %	09:14:54
1	Y 371.029	834392.6	834392.6	101.37 %	09:14:54
1	Ag 328.068†	24461.7	22925.1	[100] ug/L	09:14:59
1	As 188.979†	218.1	237.2	[100] ug/L	09:15:19
1	B 249.677†	4102.6	4135.0	[100] ug/L	09:14:59
1	Ba 233.527†	12755.3	12111.5	[100] ug/L	09:14:59
1	Be 313.107†	276501.8	267579.4	[100] ug/L	09:14:54
1	Cd 226.502†	8905.8	8660.3	[100] ug/L	09:14:59
1	Co 228.616†	4544.0	4383.5	[100] ug/L	09:15:19
1	Cr 267.716†	9400.6	8829.9	[100] ug/L	09:14:59
1	Cu 324.752†	44282.4	32908.6	[100] ug/L	09:14:59
1	Mn 257.610†	89928.8	84878.2	[100] ug/L	09:14:59
1	Mo 202.031†	1497.9	1398.3	[100] ug/L	09:15:19
1	Ni 231.604†	4055.6	3756.2	[100] ug/L	09:15:19
1	P 214.914†	1122.9	827.2	[500] ug/L	09:15:19
1	Pb 220.353†	744.8	767.4	[100] ug/L	09:15:19
1	S 181.975 Axial†	208.9	121.3	[200] ug/L	09:15:19
1	Sb 206.836†	322.1	275.5	[100] ug/L	09:15:19
1	Se 196.026†	148.1	158.5	[100] ug/L	09:15:19
1	Si 251.611†	17157.6	15791.5	[500] ug/L	09:14:59
1	Sn 189.927†	532.4	505.8	[100] ug/L	09:15:19
1	Ti 334.940†	64818.1	62437.4	[100] ug/L	09:14:59
1	Tl 190.801†	277.3	300.1	[100] ug/L	09:15:19
1	U 409.014†	2516.8	3452.0	[100] ug/L	09:14:59
1	V 292.402†	14563.8	15218.7	[100] ug/L	09:14:59
1	Zn 213.857†	11534.9	10216.5	[100] ug/L	09:14:59
1	SiO2†	17321.5	15929.7	[1069.5] ug/L	09:16:25
2	Sc Radial	5485.7	5485.7	103 %	09:14:38
2	Y RADIAL	5888.9	5888.9	102.3 %	09:14:38
2	K 766.490 Radial†	8131.4	5412.0	[1000] ug/L	09:14:33
2	Sr 421.552†	15502.5	15083.8	[100] ug/L	09:14:38
2	Sc 361.383	933561.7	933561.7	103.97 %	09:15:25
2	Y 371.029	824195.9	824195.9	100.13 %	09:15:25
2	Ag 328.068†	24140.4	22921.5	[100] ug/L	09:15:30
2	As 188.979†	218.9	240.8	[100] ug/L	09:15:50
2	B 249.677†	4075.6	4160.2	[100] ug/L	09:15:30
2	Ba 233.527†	12627.0	12147.4	[100] ug/L	09:15:30
2	Be 313.107†	273568.0	268210.4	[100] ug/L	09:15:25
2	Cd 226.502†	8810.8	8680.1	[100] ug/L	09:15:30
2	Co 228.616†	4533.4	4430.1	[100] ug/L	09:15:50
2	Cr 267.716†	9333.6	8882.9	[100] ug/L	09:15:30
2	Cu 324.752†	43795.1	32992.8	[100] ug/L	09:15:30
2	Mn 257.610†	89016.7	85123.8	[100] ug/L	09:15:30
2	Mo 202.031†	1490.2	1409.6	[100] ug/L	09:15:50
2	Ni 231.604†	4047.7	3799.3	[100] ug/L	09:15:50
2	P 214.914†	1108.9	827.7	[500] ug/L	09:15:50
2	Pb 220.353†	737.7	769.9	[100] ug/L	09:15:50
2	S 181.975 Axial†	212.2	127.1	[200] ug/L	09:15:50
2	Sb 206.836†	318.9	276.5	[100] ug/L	09:15:50
2	Se 196.026†	149.5	161.8	[100] ug/L	09:15:50
2	Si 251.611†	16977.9	15832.9	[500] ug/L	09:15:30
2	Sn 189.927†	530.1	510.1	[100] ug/L	09:15:50
2	Ti 334.940†	64288.7	62737.6	[100] ug/L	09:15:30
2	Tl 190.801†	272.5	299.0	[100] ug/L	09:15:50
2	U 409.014†	2576.4	3540.8	[100] ug/L	09:15:30

2	V 292.402†	14557.2	15394.3	[100]	ug/L	09:15:30
2	Zn 213.857†	11410.7	10241.1	[100]	ug/L	09:15:30
2	SiO2†	17135.5	15967.1	[1069.5]	ug/L	09:16:31
3	Sc Radial	5500.8	5500.8	103	%	09:14:48
3	Y RADIAL	5878.0	5878.0	102.1	%	09:14:48
3	K 766.490 Radial†	8274.4	5529.2	[1000]	ug/L	09:14:43
3	Sr 421.552†	15524.9	15064.1	[100]	ug/L	09:14:48
3	Sc 361.383	940133.8	940133.8	104.71	%	09:15:55
3	Y 371.029	830474.4	830474.4	100.89	%	09:15:55
3	Ag 328.068†	24348.1	22957.6	[100]	ug/L	09:16:00
3	As 188.979†	213.4	234.0	[100]	ug/L	09:16:20
3	B 249.677†	4131.3	4186.0	[100]	ug/L	09:16:00
3	Ba 233.527†	12754.6	12184.3	[100]	ug/L	09:16:00
3	Be 313.107†	276165.1	268851.4	[100]	ug/L	09:15:55
3	Cd 226.502†	8836.7	8645.7	[100]	ug/L	09:16:00
3	Co 228.616†	4541.1	4406.9	[100]	ug/L	09:16:20
3	Cr 267.716†	9334.6	8821.1	[100]	ug/L	09:16:00
3	Cu 324.752†	44165.7	33052.4	[100]	ug/L	09:16:00
3	Mn 257.610†	89482.1	84969.9	[100]	ug/L	09:16:00
3	Mo 202.031†	1498.1	1407.2	[100]	ug/L	09:16:20
3	Ni 231.604†	4050.9	3775.1	[100]	ug/L	09:16:20
3	P 214.914†	1118.0	829.0	[500]	ug/L	09:16:20
3	Pb 220.353†	764.8	790.8	[100]	ug/L	09:16:20
3	S 181.975 Axial†	203.2	117.1	[200]	ug/L	09:16:20
3	Sb 206.836†	326.8	281.9	[100]	ug/L	09:16:20
3	Se 196.026†	149.1	160.3	[100]	ug/L	09:16:20
3	Si 251.611†	17113.9	15848.6	[500]	ug/L	09:16:00
3	Sn 189.927†	530.1	506.6	[100]	ug/L	09:16:20
3	Ti 334.940†	64692.0	62690.5	[100]	ug/L	09:16:00
3	Tl 190.801†	274.6	299.2	[100]	ug/L	09:16:20
3	U 409.014†	2598.0	3544.1	[100]	ug/L	09:16:00
3	V 292.402†	14424.7	15169.9	[100]	ug/L	09:16:00
3	Zn 213.857†	11446.7	10198.8	[100]	ug/L	09:16:00
3	SiO2†	17261.3	15971.9	[1069.5]	ug/L	09:16:36

## Mean Data: S0.1

Analyte	Mean Corrected			Calib	
	Intensity	Std.Dev.	RSD	Conc.	Units
Sc 361.383	939845.6	6144.95	0.65%	104.67	%
Sc Radial	5488.3	11.39	0.21%	103	%
Y 371.029	829687.6	5143.69	0.62%	100.80	%
Y RADIAL	5898.6	26.84	0.45%	102.5	%
Ag 328.068†	22934.7	19.84	0.09%	[100]	ug/L
As 188.979†	237.3	3.37	1.42%	[100]	ug/L
B 249.677†	4160.4	25.53	0.61%	[100]	ug/L
Ba 233.527†	12147.8	36.43	0.30%	[100]	ug/L
Be 313.107†	268213.8	636.02	0.24%	[100]	ug/L
Cd 226.502†	8662.0	17.28	0.20%	[100]	ug/L
Co 228.616†	4406.8	23.31	0.53%	[100]	ug/L
Cr 267.716†	8844.6	33.42	0.38%	[100]	ug/L
Cu 324.752†	32984.6	72.25	0.22%	[100]	ug/L
K 766.490 Radial†	5470.6	58.57	1.07%	[1000]	ug/L
Mn 257.610†	84990.6	124.11	0.15%	[100]	ug/L
Mo 202.031†	1405.0	5.95	0.42%	[100]	ug/L
Ni 231.604†	3776.9	21.60	0.57%	[100]	ug/L
P 214.914†	828.0	0.92	0.11%	[500]	ug/L
Pb 220.353†	776.0	12.84	1.66%	[100]	ug/L
S 181.975 Axial†	121.9	5.02	4.12%	[200]	ug/L
Sb 206.836†	278.0	3.43	1.23%	[100]	ug/L
Se 196.026†	160.2	1.62	1.01%	[100]	ug/L
Si 251.611†	15824.3	29.53	0.19%	[500]	ug/L
Sn 189.927†	507.5	2.31	0.46%	[100]	ug/L
Sr 421.552†	15123.4	86.16	0.57%	[100]	ug/L
Ti 334.940†	62621.8	161.47	0.26%	[100]	ug/L
Tl 190.801†	299.4	0.61	0.20%	[100]	ug/L
U 409.014†	3512.3	52.21	1.49%	[100]	ug/L
V 292.402†	15261.0	118.01	0.77%	[100]	ug/L
Zn 213.857†	10218.8	21.26	0.21%	[100]	ug/L
SiO2†	15956.2	23.14	0.15%	[1069.5]	ug/L

Sequence No.: 3

Sample ID: S0.5

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 3

Date Collected: 1/26/2010 09:18:46

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Analysis Time
1	Sc Radial	5276.5	5276.5	98.8	%	09:20:39
1	Y RADIAL	5642.9	5642.9	98.02	%	09:20:39
1	Al 396.153Radial†	6434.8	6503.2	[5000]	ug/L	09:20:39
1	Ca 317.933Radial†	3188.7	3206.9	[5000]	ug/L	09:20:59
1	K 766.490 Radial†	30120.9	27980.2	[5000]	ug/L	09:20:39
1	Mg 279.077 IEC†	149.5	150.4	[5000]	ug/L	09:20:59
1	Sr 421.552†	78289.2	79225.0	[500]	ug/L	09:20:39
1	Sc 361.383	937398.2	937398.2	104.40	%	09:21:56
1	Y 371.029	818980.5	818980.5	99.497	%	09:21:56
1	Ag 328.068†	121403.4	115988.5	[500]	ug/L	09:22:02
1	As 188.979†	1198.4	1178.0	[500]	ug/L	09:22:22
1	B 249.677†	22582.0	21870.2	[500]	ug/L	09:22:02
1	Ba 233.527†	64045.6	61348.3	[500]	ug/L	09:22:02
1	Be 313.107†	1425315.9	1370318.3	[500]	ug/L	09:21:56
1	Cd 226.502†	45085.4	43390.5	[500]	ug/L	09:22:02
1	Co 228.616†	23485.7	22565.3	[500]	ug/L	09:22:02
1	Cr 267.716†	46577.6	44519.7	[500]	ug/L	09:22:02
1	Cu 324.752†	188814.8	171725.5	[500]	ug/L	09:22:02
1	Mn 257.610†	452812.6	433230.0	[500]	ug/L	09:21:56
1	Mo 202.031†	7371.0	7036.6	[500]	ug/L	09:22:22
1	Ni 231.604†	20252.8	19305.2	[500]	ug/L	09:22:02
1	P 214.914†	4680.6	4244.5	[2500]	ug/L	09:22:22
1	Pb 220.353†	3954.5	3848.1	[500]	ug/L	09:22:22
1	S 181.975 Axial†	803.3	692.5	[1000]	ug/L	09:22:22
1	Sb 206.836†	1520.2	1425.8	[500]	ug/L	09:22:22
1	Se 196.026†	852.0	834.0	[500]	ug/L	09:22:22
1	Si 251.611†	85957.7	81837.3	[2500]	ug/L	09:22:02
1	Sn 189.927†	2702.3	2588.7	[500]	ug/L	09:22:22
1	Ti 334.940†	329288.5	316310.7	[500]	ug/L	09:22:02
1	Tl 190.801†	1543.5	1515.3	[500]	ug/L	09:22:22
1	U 409.014†	19191.0	19444.7	[500]	ug/L	09:22:02
1	V 292.402†	79506.6	77547.8	[500]	ug/L	09:22:02
1	Zn 213.857†	55045.2	51990.8	[500]	ug/L	09:22:02
1	SiO2†	85563.9	81442.7	[5347.5]	ug/L	09:23:29
2	Sc Radial	5492.4	5492.4	103	%	09:21:04
2	Y RADIAL	5888.7	5888.7	102.3	%	09:21:04
2	Al 396.153Radial†	6663.2	6469.2	[5000]	ug/L	09:21:04
2	Ca 317.933Radial†	3207.1	3097.9	[5000]	ug/L	09:21:24
2	K 766.490 Radial†	30912.1	27551.1	[5000]	ug/L	09:21:04
2	Mg 279.077 IEC†	148.2	143.1	[5000]	ug/L	09:21:24
2	Sr 421.552†	80704.1	78458.2	[500]	ug/L	09:21:04
2	Sc 361.383	935356.6	935356.6	104.17	%	09:22:27
2	Y 371.029	818485.6	818485.6	99.437	%	09:22:27
2	Ag 328.068†	120356.2	115237.0	[500]	ug/L	09:22:33
2	As 188.979†	1195.6	1177.9	[500]	ug/L	09:22:53
2	B 249.677†	22466.2	21806.3	[500]	ug/L	09:22:33
2	Ba 233.527†	63727.0	61176.3	[500]	ug/L	09:22:33
2	Be 313.107†	1411823.8	1360346.6	[500]	ug/L	09:22:27
2	Cd 226.502†	45018.1	43420.2	[500]	ug/L	09:22:33
2	Co 228.616†	23420.5	22551.9	[500]	ug/L	09:22:33
2	Cr 267.716†	46416.9	44462.9	[500]	ug/L	09:22:33
2	Cu 324.752†	186490.7	169889.2	[500]	ug/L	09:22:33
2	Mn 257.610†	446497.8	428115.0	[500]	ug/L	09:22:27
2	Mo 202.031†	7366.4	7047.6	[500]	ug/L	09:22:53
2	Ni 231.604†	20222.2	19318.1	[500]	ug/L	09:22:33
2	P 214.914†	4688.8	4262.2	[2500]	ug/L	09:22:53
2	Pb 220.353†	3937.2	3839.8	[500]	ug/L	09:22:53
2	S 181.975 Axial†	797.2	688.3	[1000]	ug/L	09:22:53
2	Sb 206.836†	1521.4	1430.2	[500]	ug/L	09:22:53

2	Se 196.026†	850.8	834.6	[500]	ug/L	09:22:53
2	Si 251.611†	85449.0	81528.7	[2500]	ug/L	09:22:33
2	Sn 189.927†	2715.2	2606.8	[500]	ug/L	09:22:53
2	Ti 334.940†	326947.0	314751.5	[500]	ug/L	09:22:33
2	Tl 190.801†	1530.6	1506.1	[500]	ug/L	09:22:53
2	U 409.014†	18817.8	19126.5	[500]	ug/L	09:22:33
2	V 292.402†	79133.9	77356.3	[500]	ug/L	09:22:33
2	Zn 213.857†	54711.1	51785.1	[500]	ug/L	09:22:33
2	SiO2†	85555.8	81613.8	[5347.5]	ug/L	09:23:34
3	Sc Radial	5619.8	5619.8	105	%	09:21:29
3	Y RADIAL	6029.1	6029.1	104.7	%	09:21:29
3	Al 396.153Radial†	6714.0	6370.7	[5000]	ug/L	09:21:29
3	Ca 317.933Radial†	3206.4	3026.6	[5000]	ug/L	09:21:49
3	K 766.490 Radial†	31280.5	27220.0	[5000]	ug/L	09:21:29
3	Mg 279.077 IEC†	150.8	142.3	[5000]	ug/L	09:21:49
3	Sr 421.552†	81800.0	77721.3	[500]	ug/L	09:21:29
3	Sc 361.383	935046.1	935046.1	104.14	%	09:22:58
3	Y 371.029	818427.1	818427.1	99.430	%	09:22:58
3	Ag 328.068†	119722.0	114666.3	[500]	ug/L	09:23:04
3	As 188.979†	1189.4	1172.3	[500]	ug/L	09:23:24
3	B 249.677†	22298.7	21652.6	[500]	ug/L	09:23:04
3	Ba 233.527†	63397.1	60879.8	[500]	ug/L	09:23:04
3	Be 313.107†	1419339.9	1368014.0	[500]	ug/L	09:22:58
3	Cd 226.502†	44767.0	43193.4	[500]	ug/L	09:23:04
3	Co 228.616†	23283.4	22427.7	[500]	ug/L	09:23:04
3	Cr 267.716†	46273.4	44339.9	[500]	ug/L	09:23:04
3	Cu 324.752†	186029.8	169506.1	[500]	ug/L	09:23:04
3	Mn 257.610†	449335.3	430981.9	[500]	ug/L	09:22:58
3	Mo 202.031†	7341.1	7025.7	[500]	ug/L	09:23:24
3	Ni 231.604†	20081.9	19189.8	[500]	ug/L	09:23:04
3	P 214.914†	4686.1	4261.1	[2500]	ug/L	09:23:24
3	Pb 220.353†	3942.7	3846.3	[500]	ug/L	09:23:24
3	S 181.975 Axial†	805.3	696.3	[1000]	ug/L	09:23:24
3	Sb 206.836†	1528.1	1437.1	[500]	ug/L	09:23:24
3	Se 196.026†	855.2	839.2	[500]	ug/L	09:23:24
3	Si 251.611†	84941.2	81068.4	[2500]	ug/L	09:23:04
3	Sn 189.927†	2725.6	2617.6	[500]	ug/L	09:23:24
3	Ti 334.940†	324928.9	312917.8	[500]	ug/L	09:23:04
3	Tl 190.801†	1534.4	1510.3	[500]	ug/L	09:23:24
3	U 409.014†	18829.3	19143.6	[500]	ug/L	09:23:04
3	V 292.402†	78624.8	76892.7	[500]	ug/L	09:23:04
3	Zn 213.857†	54448.2	51550.2	[500]	ug/L	09:23:04
3	SiO2†	85756.2	81833.5	[5347.5]	ug/L	09:23:39

## Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	935933.6	1277.77	0.14%	104.24 %
Sc Radial	5462.9	173.53	3.18%	102 %
Y 371.029	818631.1	304.00	0.04%	99.454 %
Y RADIAL	5853.6	195.45	3.34%	101.7 %
Ag 328.068†	115297.3	663.12	0.58%	[500] ug/L
Al 396.153Radial†	6447.7	68.80	1.07%	[5000] ug/L
As 188.979†	1176.1	3.27	0.28%	[500] ug/L
B 249.677†	21776.4	111.83	0.51%	[500] ug/L
Ba 233.527†	61134.8	236.97	0.39%	[500] ug/L
Be 313.107†	1366226.3	5220.68	0.38%	[500] ug/L
Ca 317.933Radial†	3110.5	90.81	2.92%	[5000] ug/L
Cd 226.502†	43334.7	123.26	0.28%	[500] ug/L
Co 228.616†	22515.0	75.86	0.34%	[500] ug/L
Cr 267.716†	44440.8	91.92	0.21%	[500] ug/L
Cu 324.752†	170373.6	1186.34	0.70%	[500] ug/L
K 766.490 Radial†	27583.8	381.15	1.38%	[5000] ug/L
Mg 279.077 IEC†	145.2	4.46	3.07%	[5000] ug/L
Mn 257.610†	430775.6	2563.76	0.60%	[500] ug/L
Mo 202.031†	7036.6	10.95	0.16%	[500] ug/L
Ni 231.604†	19271.1	70.63	0.37%	[500] ug/L
P 214.914†	4255.9	9.91	0.23%	[2500] ug/L
Pb 220.353†	3844.8	4.36	0.11%	[500] ug/L
S 181.975 Axial†	692.4	4.03	0.58%	[1000] ug/L



Sb 206.836†	1431.0	5.68	0.40%	[500] ug/L
Se 196.026†	835.9	2.82	0.34%	[500] ug/L
Si 251.611†	81478.1	386.97	0.47%	[2500] ug/L
Sn 189.927†	2604.3	14.60	0.56%	[500] ug/L
Sr 421.552†	78468.2	751.89	0.96%	[500] ug/L
Ti 334.940†	314660.0	1698.32	0.54%	[500] ug/L
Tl 190.801†	1510.6	4.61	0.31%	[500] ug/L
U 409.014†	19238.3	178.95	0.93%	[500] ug/L
V 292.402†	77265.6	336.87	0.44%	[500] ug/L
Zn 213.857†	51775.4	220.48	0.43%	[500] ug/L
SiO2†	81630.0	195.91	0.24%	[5347.5] ug/L

Sequence No.: 4  
 Sample ID: SCAL  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 4  
 Date Collected: 1/26/2010 09:25:50  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Analysis Time
1	Sc Radial	5490.0	5490.0	103 %	09:27:43
1	Y RADIAL	5899.6	5899.6	102.5 %	09:27:43
1	Al 396.153Radial†	13109.2	12742.0	[10000] ug/L	09:27:43
1	Ca 317.933Radial†	6424.5	6228.8	[10000] ug/L	09:27:43
1	Fe 238.204 Radial†	1109.0	1071.6	[10000] ug/L	09:28:03
1	K 766.490 Radial†	58355.3	54257.7	[10000] ug/L	09:27:43
1	Mg 279.077 IEC†	295.5	286.5	[10000] ug/L	09:28:03
1	Na 589.592 Radial†	33069.1	32713.4	[10000] ug/L	09:27:43
1	Sr 421.552†	159135.1	154780.8	[1000] ug/L	09:27:43
1	Sc 361.383	873351.5	873351.5	97.269 %	09:29:06
1	Y 371.029	776986.9	776986.9	94.395 %	09:29:06
1	Ag 328.068†	234042.0	240317.3	[1000] ug/L	09:29:06
1	As 188.979†	2386.7	2483.9	[1000] ug/L	09:29:27
1	B 249.677†	44137.1	45616.8	[1000] ug/L	09:29:06
1	Ba 233.527†	123470.6	126940.4	[1000] ug/L	09:29:06
1	Be 313.107†	2812668.3	2896741.5	[1000] ug/L	09:29:01
1	Cd 226.502†	86786.4	89429.3	[1000] ug/L	09:29:06
1	Co 228.616†	44636.4	45959.6	[1000] ug/L	09:29:27
1	Cr 267.716†	89926.1	92357.1	[1000] ug/L	09:29:06
1	Cu 324.752†	357126.6	358025.8	[1000] ug/L	09:29:06
1	Mn 257.610†	887295.3	911718.5	[1000] ug/L	09:29:01
1	Mo 202.031†	14486.9	14870.0	[1000] ug/L	09:29:27
1	Ni 231.604†	38732.2	39726.0	[1000] ug/L	09:29:06
1	P 214.914†	8973.9	8987.1	[5000] ug/L	09:29:27
1	Pb 220.353†	7795.6	8074.8	[1000] ug/L	09:29:27
1	S 181.975 Axial†	1508.1	1473.4	[2000] ug/L	09:29:27
1	Sb 206.836†	2977.1	3030.4	[1000] ug/L	09:29:27
1	Se 196.026†	1689.3	1754.7	[1000] ug/L	09:29:27
1	Si 251.611†	164645.9	168772.8	[5000] ug/L	09:29:06
1	Sn 189.927†	5369.6	5520.7	[1000] ug/L	09:29:27
1	Ti 334.940†	638137.0	656960.8	[1000] ug/L	09:29:06
1	Tl 190.801†	3057.7	3180.5	[1000] ug/L	09:29:27
1	U 409.014†	37941.9	40070.1	[1000] ug/L	09:29:06
1	V 292.402†	155491.1	161250.5	[1000] ug/L	09:29:06
1	Zn 213.857†	105137.4	107356.0	[1000] ug/L	09:29:06
1	SiO2†	167060.8	171238.1	[10695] ug/L	09:30:35
2	Sc Radial	5509.4	5509.4	103 %	09:28:08
2	Y RADIAL	5946.5	5946.5	103.3 %	09:28:08
2	Al 396.153Radial†	13348.4	12929.1	[10000] ug/L	09:28:08
2	Ca 317.933Radial†	6546.0	6324.6	[10000] ug/L	09:28:08
2	Fe 238.204 Radial†	1104.0	1062.9	[10000] ug/L	09:28:28
2	K 766.490 Radial†	59013.7	54696.9	[10000] ug/L	09:28:08
2	Mg 279.077 IEC†	294.3	284.3	[10000] ug/L	09:28:28
2	Na 589.592 Radial†	33358.1	32880.8	[10000] ug/L	09:28:08
2	Sr 421.552†	160976.9	156023.4	[1000] ug/L	09:28:08
2	Sc 361.383	884457.4	884457.4	98.506 %	09:29:38
2	Y 371.029	789932.9	789932.9	95.968 %	09:29:38
2	Ag 328.068†	240298.0	243646.9	[1000] ug/L	09:29:38
2	As 188.979†	2372.4	2438.6	[1000] ug/L	09:29:58
2	B 249.677†	45576.6	46508.3	[1000] ug/L	09:29:38
2	Ba 233.527†	126823.1	128749.8	[1000] ug/L	09:29:38
2	Be 313.107†	2760137.8	2807104.6	[1000] ug/L	09:29:32
2	Cd 226.502†	88950.2	90505.6	[1000] ug/L	09:29:38
2	Co 228.616†	44630.8	45377.7	[1000] ug/L	09:29:58
2	Cr 267.716†	92114.8	93418.1	[1000] ug/L	09:29:38
2	Cu 324.752†	367506.8	363953.3	[1000] ug/L	09:29:38
2	Mn 257.610†	867933.9	880609.1	[1000] ug/L	09:29:32
2	Mo 202.031†	14468.4	14664.2	[1000] ug/L	09:29:58
2	Ni 231.604†	39782.8	40292.6	[1000] ug/L	09:29:38

2	P 214.914†	8977.8	8875.2	[5000]	ug/L	09:29:58
2	Pb 220.353†	7799.7	7978.4	[1000]	ug/L	09:29:58
2	S 181.975 Axial†	1508.8	1454.7	[2000]	ug/L	09:29:58
2	Sb 206.836†	2977.4	2992.3	[1000]	ug/L	09:29:58
2	Se 196.026†	1701.5	1745.2	[1000]	ug/L	09:29:58
2	Si 251.611†	169491.2	171566.1	[5000]	ug/L	09:29:38
2	Sn 189.927†	5372.8	5454.6	[1000]	ug/L	09:29:58
2	Ti 334.940†	656564.4	667429.8	[1000]	ug/L	09:29:38
2	Tl 190.801†	3035.2	3118.1	[1000]	ug/L	09:29:58
2	U 409.014†	39157.8	40814.6	[1000]	ug/L	09:29:38
2	V 292.402†	159397.9	163209.2	[1000]	ug/L	09:29:38
2	Zn 213.857†	108054.6	108960.2	[1000]	ug/L	09:29:38
2	SiO2†	166820.6	168837.5	[10695]	ug/L	09:30:40
3	Sc Radial	5341.0	5341.0	100	%	09:28:34
3	Y RADIAL	5734.2	5734.2	99.60	%	09:28:34
3	Al 396.153Radial†	12914.3	12902.8	[10000]	ug/L	09:28:34
3	Ca 317.933Radial†	6329.4	6308.0	[10000]	ug/L	09:28:34
3	Fe 238.204 Radial†	1106.9	1099.6	[10000]	ug/L	09:28:54
3	K 766.490 Radial†	57457.1	54943.5	[10000]	ug/L	09:28:34
3	Mg 279.077 IEC†	295.8	294.8	[10000]	ug/L	09:28:54
3	Na 589.592 Radial†	32526.7	33068.6	[10000]	ug/L	09:28:34
3	Sr 421.552†	155987.1	155952.7	[1000]	ug/L	09:28:34
3	Sc 361.383	878114.9	878114.9	97.799	%	09:30:09
3	Y 371.029	782745.7	782745.7	95.095	%	09:30:09
3	Ag 328.068†	236972.7	242008.7	[1000]	ug/L	09:30:09
3	As 188.979†	2397.5	2481.6	[1000]	ug/L	09:30:30
3	B 249.677†	45069.1	46323.6	[1000]	ug/L	09:30:09
3	Ba 233.527†	125693.3	128524.6	[1000]	ug/L	09:30:09
3	Be 313.107†	2813407.2	2881811.0	[1000]	ug/L	09:30:04
3	Cd 226.502†	88658.7	90859.8	[1000]	ug/L	09:30:09
3	Co 228.616†	44912.7	45993.2	[1000]	ug/L	09:30:30
3	Cr 267.716†	91627.1	93594.8	[1000]	ug/L	09:30:09
3	Cu 324.752†	361045.0	360040.7	[1000]	ug/L	09:30:09
3	Mn 257.610†	887989.8	907480.2	[1000]	ug/L	09:30:04
3	Mo 202.031†	14571.4	14875.6	[1000]	ug/L	09:30:30
3	Ni 231.604†	39553.9	40350.2	[1000]	ug/L	09:30:09
3	P 214.914†	9055.4	9020.4	[5000]	ug/L	09:30:30
3	Pb 220.353†	7825.3	8061.8	[1000]	ug/L	09:30:30
3	S 181.975 Axial†	1530.2	1487.7	[2000]	ug/L	09:30:30
3	Sb 206.836†	3004.1	3041.4	[1000]	ug/L	09:30:30
3	Se 196.026†	1695.3	1751.4	[1000]	ug/L	09:30:30
3	Si 251.611†	167298.3	170566.7	[5000]	ug/L	09:30:09
3	Sn 189.927†	5400.2	5522.1	[1000]	ug/L	09:30:30
3	Ti 334.940†	648493.8	663991.8	[1000]	ug/L	09:30:09
3	Tl 190.801†	3057.3	3163.0	[1000]	ug/L	09:30:30
3	U 409.014†	38445.4	40373.3	[1000]	ug/L	09:30:09
3	V 292.402†	157949.2	162896.8	[1000]	ug/L	09:30:09
3	Zn 213.857†	107095.9	108772.3	[1000]	ug/L	09:30:09
3	SiO2†	168631.0	171911.9	[10695]	ug/L	09:30:46

## Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	878641.3	5571.64	0.63%	97.858	%
Sc Radial	5446.8	92.13	1.69%	102	%
Y 371.029	783221.8	6486.13	0.83%	95.153	%
Y RADIAL	5860.1	111.51	1.90%	101.8	%
Ag 328.068†	241991.0	1664.87	0.69%	[1000]	ug/L
Al 396.153Radial†	12858.0	101.30	0.79%	[10000]	ug/L
As 188.979†	2468.0	25.53	1.03%	[1000]	ug/L
B 249.677†	46149.6	470.55	1.02%	[1000]	ug/L
Ba 233.527†	128071.6	986.10	0.77%	[1000]	ug/L
Be 313.107†	2861885.7	48025.56	1.68%	[1000]	ug/L
Ca 317.933Radial†	6287.1	51.21	0.81%	[10000]	ug/L
Cd 226.502†	90264.9	745.01	0.83%	[1000]	ug/L
Co 228.616†	45776.9	346.04	0.76%	[1000]	ug/L
Cr 267.716†	93123.3	669.46	0.72%	[1000]	ug/L
Cu 324.752†	360673.3	3013.92	0.84%	[1000]	ug/L
Fe 238.204 Radial†	1078.0	19.17	1.78%	[10000]	ug/L
K 766.490 Radial†	54632.7	347.39	0.64%	[10000]	ug/L

Mg 279.077 IEC†	288.5	5.53	1.92%	[10000] ug/L
Mn 257.610†	899935.9	16871.16	1.87%	[1000] ug/L
Mo 202.031†	14803.3	120.46	0.81%	[1000] ug/L
Na 589.592 Radial†	32887.6	177.72	0.54%	[10000] ug/L
Ni 231.604†	40122.9	344.93	0.86%	[1000] ug/L
P 214.914†	8960.9	76.06	0.85%	[5000] ug/L
Pb 220.353†	8038.4	52.31	0.65%	[1000] ug/L
S 181.975 Axial†	1471.9	16.53	1.12%	[2000] ug/L
Sb 206.836†	3021.4	25.77	0.85%	[1000] ug/L
Se 196.026†	1750.5	4.83	0.28%	[1000] ug/L
Si 251.611†	170301.9	1415.37	0.83%	[5000] ug/L
Sn 189.927†	5499.1	38.55	0.70%	[1000] ug/L
Sr 421.552†	155585.6	697.91	0.45%	[1000] ug/L
Ti 334.940†	662794.2	5336.26	0.81%	[1000] ug/L
Tl 190.801†	3153.9	32.15	1.02%	[1000] ug/L
U 409.014†	40419.3	374.38	0.93%	[1000] ug/L
V 292.402†	162452.1	1052.35	0.65%	[1000] ug/L
Zn 213.857†	108362.8	877.02	0.81%	[1000] ug/L
Sio2†	170662.5	1615.97	0.95%	[10695] ug/L

Sequence No.: 5  
 Sample ID: S10  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 5  
 Date Collected: 1/26/2010 09:32:56  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Analysis Time
1	Sc Radial	5254.7	5254.7	98.4 %	09:35:10
1	Y RADIAL	5600.1	5600.1	97.27 %	09:35:10
1	Al 396.153Radial†	65162.8	66212.0	[50000] ug/L	09:34:50
1	Ca 317.933Radial†	30729.5	31208.3	[50000] ug/L	09:34:50
1	Fe 238.204 Radial†	2112.0	2139.2	[20000] ug/L	09:35:10
1	Mg 279.077 IEC†	1384.0	1405.5	[50000] ug/L	09:35:10
1	Na 589.592 Radial†	66167.5	67789.8	[20000] ug/L	09:34:50
1	Sc 361.383	909079.1	909079.1	101.25 %	09:36:07
1	Y 371.029	791008.5	791008.5	96.099 %	09:36:07
2	Sc Radial	5290.9	5290.9	99.1 %	09:35:35
2	Y RADIAL	5632.8	5632.8	97.84 %	09:35:35
2	Al 396.153Radial†	65366.4	65964.2	[50000] ug/L	09:35:15
2	Ca 317.933Radial†	30818.9	31084.8	[50000] ug/L	09:35:15
2	Fe 238.204 Radial†	2127.1	2139.7	[20000] ug/L	09:35:35
2	Mg 279.077 IEC†	1391.3	1403.2	[50000] ug/L	09:35:35
2	Na 589.592 Radial†	66538.2	67703.8	[20000] ug/L	09:35:15
2	Sc 361.383	910680.4	910680.4	101.43 %	09:36:13
2	Y 371.029	792508.2	792508.2	96.281 %	09:36:13
3	Sc Radial	5325.4	5325.4	99.7 %	09:36:00
3	Y RADIAL	5675.3	5675.3	98.58 %	09:36:00
3	Al 396.153Radial†	65914.7	66087.3	[50000] ug/L	09:35:40
3	Ca 317.933Radial†	30927.0	30992.0	[50000] ug/L	09:35:40
3	Fe 238.204 Radial†	2130.6	2129.3	[20000] ug/L	09:36:00
3	Mg 279.077 IEC†	1387.2	1390.1	[50000] ug/L	09:36:00
3	Na 589.592 Radial†	66737.8	67469.4	[20000] ug/L	09:35:40
3	Sc 361.383	914147.0	914147.0	101.81 %	09:36:18
3	Y 371.029	795556.8	795556.8	96.651 %	09:36:18

## Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	911302.2	2590.53	0.28%	101.50 %
Sc Radial	5290.4	35.33	0.67%	99.1 %
Y 371.029	793024.5	2317.69	0.29%	96.343 %
Y RADIAL	5636.1	37.74	0.67%	97.90 %
Al 396.153Radial†	66087.8	123.89	0.19%	[50000] ug/L
Ca 317.933Radial†	31095.1	108.49	0.35%	[50000] ug/L
Fe 238.204 Radial†	2136.1	5.88	0.28%	[20000] ug/L
Mg 279.077 IEC†	1399.6	8.34	0.60%	[50000] ug/L
Na 589.592 Radial†	67654.3	165.80	0.25%	[20000] ug/L

## Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	239.6	0.00000	0.999813	
Al 396.153Radial	3	Lin Thru 0	0.0	1.320	0.00000	0.999984	
As 188.979	3	Lin Thru 0	0.0	2.444	0.00000	0.999818	
B 249.677	3	Lin Thru 0	0.0	45.60	0.00000	0.999712	
Ba 233.527	3	Lin Thru 0	0.0	126.9	0.00000	0.999827	
Be 313.107	3	Lin Thru 0	0.0	2835	0.00000	0.999823	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.6222	0.00000	0.999998	
Cd 226.502	3	Lin Thru 0	0.0	89.52	0.00000	0.999868	
Co 228.616	3	Lin Thru 0	0.0	45.62	0.00000	0.999974	
Cr 267.716	3	Lin Thru 0	0.0	92.24	0.00000	0.999825	
Cu 324.752	3	Lin Thru 0	0.0	356.5	0.00000	0.999730	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.1070	0.00000	0.999993	
K 766.490 Radial	3	Lin Thru 0	0.0	5.474	0.00000	0.999992	

Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0280	0.00000	0.999977
Mn 257.610	3	Lin Thru 0	0.0	891.9	0.00000	0.999844
Mo 202.031	3	Lin Thru 0	0.0	14.65	0.00000	0.999796
Na 589.592 Radia	2	Lin Thru 0	0.0	3.364	0.00000	0.999938
Ni 231.604	3	Lin Thru 0	0.0	39.79	0.00000	0.999864
P 214.914	3	Lin Thru 0	0.0	1.773	0.00000	0.999779
Pb 220.353	3	Lin Thru 0	0.0	7.967	0.00000	0.999845
S 181.975 Axial	3	Lin Thru 0	0.0	0.7263	0.00000	0.999610
Sb 206.836	3	Lin Thru 0	0.0	2.988	0.00000	0.999755
Se 196.026	3	Lin Thru 0	0.0	1.734	0.00000	0.999814
Si 251.611	3	Lin Thru 0	0.0	33.75	0.00000	0.999834
Sn 189.927	3	Lin Thru 0	0.0	5.438	0.00000	0.999756
Sr 421.552	3	Lin Thru 0	0.0	155.8	0.00000	0.999991
Ti 334.940	3	Lin Thru 0	0.0	655.9	0.00000	0.999785
Tl 190.801	3	Lin Thru 0	0.0	3.126	0.00000	0.999850
U 409.014	3	Lin Thru 0	0.0	39.99	0.00000	0.999753
V 292.402	3	Lin Thru 0	0.0	160.8	0.00000	0.999797
Zn 213.857	3	Lin Thru 0	0.0	107.4	0.00000	0.999831
SiO2	3	Lin Thru 0	0.0	15.81	0.00000	0.999835

Sequence No.: 6

Sample ID: ICV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 9

Date Collected: 1/26/2010 09:38:30

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5529.0	5529.0	104 %		09:40:22
1	Y RADIAL	5902.0	5902.0	102.5 %		09:40:22
1	Al 396.153Radial†	6743.5	6503.8	4901.7 ug/L	4901.7 ppb	09:40:22
1	Ca 317.933Radial†	3157.4	3029.2	4868.9 ug/L	4868.9 ppb	09:40:43
1	Fe 238.204 Radial†	560.7	534.4	5008.8 ug/L	5008.8 ppb	09:40:43
1	K 766.490 Radial†	16368.8	13305.9	2427.4 ug/L	2427.4 ppb	09:40:22
1	Mg 279.077 IEC†	154.1	147.9	5274.4 ug/L	5274.4 ppb	09:40:43
1	Na 589.592 Radial†	7735.7	8019.0	2383.8 ug/L	2383.8 ppb	09:40:22
1	Sr 421.552†	84235.4	81349.3	522.04 ug/L	522.04 ppb	09:40:22
1	Sc 361.383	934550.6	934550.6	104.08 %		09:41:40
1	Y 371.029	821438.6	821438.6	99.795 %		09:41:40
1	Ag 328.068†	62913.3	60148.2	254.16 ug/L	254.16 ppb	09:41:40
1	As 188.979†	1141.2	1126.6	465.10 ug/L	465.10 ppb	09:42:00
1	B 249.677†	23610.6	22924.3	500.52 ug/L	500.52 ppb	09:41:40
1	Ba 233.527†	65239.1	62681.8	495.31 ug/L	495.31 ppb	09:41:40
1	Be 313.107†	736308.9	712512.1	252.46 ug/L	252.46 ppb	09:41:40
1	Cd 226.502†	43866.6	42351.2	472.96 ug/L	472.96 ppb	09:42:00
1	Co 228.616†	23483.0	22631.3	496.27 ug/L	496.27 ppb	09:42:00
1	Cr 267.716†	45639.9	43754.8	474.94 ug/L	474.94 ppb	09:41:40
1	Cu 324.752†	192751.0	176058.3	493.89 ug/L	493.89 ppb	09:41:40
1	Mn 257.610†	460430.0	441870.0	495.69 ug/L	495.69 ppb	09:41:40
1	Mo 202.031†	7945.2	7609.8	519.80 ug/L	519.80 ppb	09:42:00
1	Ni 231.604†	20126.0	19242.5	483.29 ug/L	483.29 ppb	09:42:00
1	P 214.914†	4720.0	4296.0	2326.6 ug/L	2326.6 ppb	09:42:00
1	Pb 220.353†	3955.6	3860.7	486.27 ug/L	486.27 ppb	09:42:00
1	S 181.975 Axial†	1900.4	1748.9	2407.0 ug/L	2407.0 ppb	09:42:00
1	Sb 206.836†	1532.9	1442.5	501.66 ug/L	501.66 ppb	09:42:00
1	Se 196.026†	4419.4	4263.9	2477.8 ug/L	2477.8 ppb	09:42:00
1	Si 251.611†	164820.1	157855.6	4670.8 ug/L	4670.8 ppb	09:41:40
1	Sn 189.927†	2941.6	2826.5	520.58 ug/L	520.58 ppb	09:42:00
1	Ti 334.940†	334537.4	322314.6	491.28 ug/L	491.28 ppb	09:41:40
1	Tl 190.801†	1606.5	1580.4	508.86 ug/L	508.86 ppb	09:42:00
1	U 409.014†	18431.7	18771.1	467.74 ug/L	467.74 ppb	09:41:40
1	V 292.402†	80960.2	79176.4	499.30 ug/L	499.30 ppb	09:41:40
1	Zn 213.857†	56166.4	53228.7	491.57 ug/L	491.57 ppb	09:41:40
1	SiO2†	162523.5	155631.7	9828.7 ug/L	9828.7 ppb	09:42:58
2	Sc Radial	5518.3	5518.3	103 %		09:40:48
2	Y RADIAL	5888.3	5888.3	102.3 %		09:40:48
2	Al 396.153Radial†	6721.4	6495.2	4894.9 ug/L	4894.9 ppb	09:40:48
2	Ca 317.933Radial†	3187.0	3063.8	4924.5 ug/L	4924.5 ppb	09:41:08
2	Fe 238.204 Radial†	568.3	542.8	5087.8 ug/L	5087.8 ppb	09:41:08
2	K 766.490 Radial†	16372.7	13340.2	2433.7 ug/L	2433.7 ppb	09:40:48
2	Mg 279.077 IEC†	154.6	148.7	5303.2 ug/L	5303.2 ppb	09:41:08
2	Na 589.592 Radial†	7637.2	7938.1	2359.8 ug/L	2359.8 ppb	09:40:48
2	Sr 421.552†	83965.2	81245.5	521.37 ug/L	521.37 ppb	09:40:48
2	Sc 361.383	926496.6	926496.6	103.19 %		09:42:06
2	Y 371.029	813316.0	813316.0	98.809 %		09:42:06
2	Ag 328.068†	62560.8	60332.0	254.96 ug/L	254.96 ppb	09:42:06
2	As 188.979†	1131.2	1126.4	465.02 ug/L	465.02 ppb	09:42:26
2	B 249.677†	23461.0	22976.6	501.65 ug/L	501.65 ppb	09:42:06
2	Ba 233.527†	64625.9	62632.4	494.92 ug/L	494.92 ppb	09:42:06
2	Be 313.107†	730281.0	712819.8	252.57 ug/L	252.57 ppb	09:42:06
2	Cd 226.502†	43703.8	42559.7	475.28 ug/L	475.28 ppb	09:42:26
2	Co 228.616†	23369.3	22717.2	498.16 ug/L	498.16 ppb	09:42:26
2	Cr 267.716†	45276.8	43784.0	475.26 ug/L	475.26 ppb	09:42:06
2	Cu 324.752†	191554.9	176508.9	495.16 ug/L	495.16 ppb	09:42:06
2	Mn 257.610†	457122.5	442510.1	496.41 ug/L	496.41 ppb	09:42:06
2	Mo 202.031†	7939.2	7670.3	523.94 ug/L	523.94 ppb	09:42:26
2	Ni 231.604†	20069.7	19356.0	486.15 ug/L	486.15 ppb	09:42:26

2	P 214.914†	4683.8	4300.3	2328.7 ug/L	2328.7 ppb	09:42:26
2	Pb 220.353†	3964.0	3901.9	491.44 ug/L	491.44 ppb	09:42:26
2	S 181.975 Axial†	1883.2	1748.0	2405.8 ug/L	2405.8 ppb	09:42:26
2	Sb 206.836†	1522.8	1445.5	502.74 ug/L	502.74 ppb	09:42:26
2	Se 196.026†	4397.9	4279.9	2487.4 ug/L	2487.4 ppb	09:42:26
2	Si 251.611†	163797.9	158241.5	4682.2 ug/L	4682.2 ppb	09:42:06
2	Sn 189.927†	2913.0	2823.4	520.01 ug/L	520.01 ppb	09:42:26
2	Ti 334.940†	332133.9	322779.4	491.99 ug/L	491.99 ppb	09:42:06
2	Tl 190.801†	1609.9	1597.1	514.21 ug/L	514.21 ppb	09:42:26
2	U 409.014†	18330.2	18826.7	469.12 ug/L	469.12 ppb	09:42:06
2	V 292.402†	80367.4	79278.1	499.98 ug/L	499.98 ppb	09:42:06
2	Zn 213.857†	55760.3	53304.2	492.24 ug/L	492.24 ppb	09:42:06
2	SiO2†	165322.5	159701.6	10086 ug/L	10086 ppb	09:43:03
3	Sc Radial	5416.5	5416.5	101 %		09:41:13
3	Y RADIAL	5831.9	5831.9	101.3 %		09:41:13
3	Al 396.153Radial†	6631.6	6528.8	4920.6 ug/L	4920.6 ppb	09:41:13
3	Ca 317.933Radial†	3198.2	3132.8	5035.3 ug/L	5035.3 ppb	09:41:33
3	Fe 238.204 Radial†	566.6	551.4	5168.4 ug/L	5168.4 ppb	09:41:33
3	K 766.490 Radial†	16048.1	13318.1	2429.6 ug/L	2429.6 ppb	09:41:13
3	Mg 279.077 IEC†	157.1	153.9	5489.4 ug/L	5489.4 ppb	09:41:33
3	Na 589.592 Radial†	7465.8	7908.1	2350.9 ug/L	2350.9 ppb	09:41:13
3	Sr 421.552†	82380.8	81211.0	521.15 ug/L	521.15 ppb	09:41:13
3	Sc 361.383	930823.2	930823.2	103.67 %		09:42:32
3	Y 371.029	818504.2	818504.2	99.439 %		09:42:32
3	Ag 328.068†	62784.2	60265.7	254.71 ug/L	254.71 ppb	09:42:32
3	As 188.979†	1114.5	1105.2	456.38 ug/L	456.38 ppb	09:42:52
3	B 249.677†	23566.3	22972.5	501.55 ug/L	501.55 ppb	09:42:32
3	Ba 233.527†	64951.2	62655.1	495.10 ug/L	495.10 ppb	09:42:32
3	Be 313.107†	734417.2	713520.1	252.82 ug/L	252.82 ppb	09:42:32
3	Cd 226.502†	43659.8	42320.4	472.60 ug/L	472.60 ppb	09:42:52
3	Co 228.616†	23368.7	22611.4	495.83 ug/L	495.83 ppb	09:42:52
3	Cr 267.716†	45446.6	43743.9	474.83 ug/L	474.83 ppb	09:42:32
3	Cu 324.752†	192364.4	176426.9	494.93 ug/L	494.93 ppb	09:42:32
3	Mn 257.610†	459010.9	442272.5	496.15 ug/L	496.15 ppb	09:42:32
3	Mo 202.031†	7923.6	7619.5	520.47 ug/L	520.47 ppb	09:42:52
3	Ni 231.604†	20042.9	19239.7	483.22 ug/L	483.22 ppb	09:42:52
3	P 214.914†	4675.6	4271.3	2312.4 ug/L	2312.4 ppb	09:42:52
3	Pb 220.353†	3942.5	3863.3	486.58 ug/L	486.58 ppb	09:42:52
3	S 181.975 Axial†	1892.0	1748.0	2405.8 ug/L	2405.8 ppb	09:42:52
3	Sb 206.836†	1532.7	1448.2	503.56 ug/L	503.56 ppb	09:42:52
3	Se 196.026†	4406.4	4268.3	2480.9 ug/L	2480.9 ppb	09:42:52
3	Si 251.611†	164260.4	157949.8	4673.6 ug/L	4673.6 ppb	09:42:32
3	Sn 189.927†	2921.3	2818.2	519.08 ug/L	519.08 ppb	09:42:52
3	Ti 334.940†	333508.8	322609.5	491.73 ug/L	491.73 ppb	09:42:32
3	Tl 190.801†	1604.4	1584.5	510.18 ug/L	510.18 ppb	09:42:52
3	U 409.014†	18413.6	18824.7	469.06 ug/L	469.06 ppb	09:42:32
3	V 292.402†	80872.9	79403.7	500.70 ug/L	500.70 ppb	09:42:32
3	Zn 213.857†	55935.1	53221.7	491.49 ug/L	491.49 ppb	09:42:32
3	SiO2†	162740.7	156466.5	9881.5 ug/L	9881.5 ppb	09:43:08

## Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	930623.5	103.65 %	0.449			0.43%
Sc Radial	5488.0	103 %	1.2			1.13%
Y 371.029	817752.9	99.348 %	0.4997			0.50%
Y RADIAL	5874.1	102.0 %	0.64			0.63%
Ag 328.068†	60248.6	254.61 ug/L	0.406	254.61 ppb	0.406	0.16%
QC value within limits for Ag 328.068 Recovery = 101.84%						
Al 396.153Radial†	6509.3	4905.7 ug/L	13.31	4905.7 ppb	13.31	0.27%
QC value within limits for Al 396.153Radial Recovery = 98.11%						
As 188.979†	1119.4	462.17 ug/L	5.010	462.17 ppb	5.010	1.08%
QC value within limits for As 188.979 Recovery = 92.43%						
B 249.677†	22957.8	501.24 ug/L	0.625	501.24 ppb	0.625	0.12%
QC value within limits for B 249.677 Recovery = 100.25%						
Ba 233.527†	62656.4	495.11 ug/L	0.193	495.11 ppb	0.193	0.04%
QC value within limits for Ba 233.527 Recovery = 99.02%						
Be 313.107†	712950.6	252.62 ug/L	0.183	252.62 ppb	0.183	0.07%
QC value within limits for Be 313.107 Recovery = 101.05%						
Ca 317.933Radial†	3075.3	4942.9 ug/L	84.74	4942.9 ppb	84.74	1.71%



QC value within limits for Ca 317.933 Radial Recovery = 98.86%							
Cd	226.502†	42410.5	473.62 ug/L	1.456	473.62 ppb	1.456	0.31%
QC value within limits for Cd 226.502 Recovery = 94.72%							
Co	228.616†	22653.3	496.76 ug/L	1.237	496.76 ppb	1.237	0.25%
QC value within limits for Co 228.616 Recovery = 99.35%							
Cr	267.716†	43760.9	475.01 ug/L	0.224	475.01 ppb	0.224	0.05%
QC value within limits for Cr 267.716 Recovery = 95.00%							
Cu	324.752†	176331.4	494.66 ug/L	0.676	494.66 ppb	0.676	0.14%
QC value within limits for Cu 324.752 Recovery = 98.93%							
Fe	238.204 Radial†	542.9	5088.3 ug/L	79.81	5088.3 ppb	79.81	1.57%
QC value within limits for Fe 238.204 Radial Recovery = 101.77%							
K	766.490 Radial†	13321.4	2430.2 ug/L	3.17	2430.2 ppb	3.17	0.13%
QC value within limits for K 766.490 Radial Recovery = 97.21%							
Mg	279.077 IEC†	150.1	5355.7 ug/L	116.67	5355.7 ppb	116.67	2.18%
QC value within limits for Mg 279.077 IEC Recovery = 107.11%							
Mn	257.610†	442217.5	496.08 ug/L	0.366	496.08 ppb	0.366	0.07%
QC value within limits for Mn 257.610 Recovery = 99.22%							
Mo	202.031†	7633.2	521.40 ug/L	2.221	521.40 ppb	2.221	0.43%
QC value within limits for Mo 202.031 Recovery = 104.28%							
Na	589.592 Radial†	7955.1	2364.8 ug/L	17.05	2364.8 ppb	17.05	0.72%
QC value within limits for Na 589.592 Radial Recovery = 94.59%							
Ni	231.604†	19279.4	484.22 ug/L	1.667	484.22 ppb	1.667	0.34%
QC value within limits for Ni 231.604 Recovery = 96.84%							
P	214.914†	4289.2	2322.6 ug/L	8.91	2322.6 ppb	8.91	0.38%
QC value within limits for P 214.914 Recovery = 92.90%							
Pb	220.353†	3875.3	488.10 ug/L	2.899	488.10 ppb	2.899	0.59%
QC value within limits for Pb 220.353 Recovery = 97.62%							
S	181.975 Axial†	1748.3	2406.2 ug/L	0.67	2406.2 ppb	0.67	0.03%
QC value within limits for S 181.975 Axial Recovery = 96.25%							
Sb	206.836†	1445.4	502.65 ug/L	0.956	502.65 ppb	0.956	0.19%
QC value within limits for Sb 206.836 Recovery = 100.53%							
Se	196.026†	4270.7	2482.0 ug/L	4.87	2482.0 ppb	4.87	0.20%
QC value within limits for Se 196.026 Recovery = 99.28%							
Si	251.611†	158015.6	4675.6 ug/L	5.93	4675.6 ppb	5.93	0.13%
QC value within limits for Si 251.611 Recovery = 93.51%							
Sn	189.927†	2822.7	519.89 ug/L	0.754	519.89 ppb	0.754	0.15%
QC value within limits for Sn 189.927 Recovery = 103.98%							
Sr	421.552†	81268.6	521.52 ug/L	0.462	521.52 ppb	0.462	0.09%
QC value within limits for Sr 421.552 Recovery = 104.30%							
Ti	334.940†	322567.8	491.67 ug/L	0.361	491.67 ppb	0.361	0.07%
QC value within limits for Ti 334.940 Recovery = 98.33%							
Tl	190.801†	1587.3	511.08 ug/L	2.786	511.08 ppb	2.786	0.55%
QC value within limits for Tl 190.801 Recovery = 102.22%							
U	409.014†	18807.5	468.64 ug/L	0.780	468.64 ppb	0.780	0.17%
QC value within limits for U 409.014 Recovery = 93.73%							
V	292.402†	79286.1	499.99 ug/L	0.703	499.99 ppb	0.703	0.14%
QC value within limits for V 292.402 Recovery = 100.00%							
Zn	213.857†	53251.5	491.77 ug/L	0.416	491.77 ppb	0.416	0.08%
QC value within limits for Zn 213.857 Recovery = 98.35%							
SiO2†		157266.6	9932.1 ug/L	135.90	9932.1 ppb	135.90	1.37%
QC value within limits for SiO2 Recovery = 92.87%							
All analyte(s) passed QC.							

Sequence No.: 7  
 Sample ID: ICB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 10  
 Date Collected: 1/26/2010 09:45:19  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5489.0	5489.0	103 %		09:47:12
1	Y RADIAL	5901.6	5901.6	102.5 %		09:47:12
1	Al 396.153Radial†	6.3	-3.0	-2.3087 ug/L	-2.3087 ppb	09:47:32
1	Ca 317.933Radial†	15.2	-5.4	-8.7450 ug/L	-8.7450 ppb	09:47:32
1	Fe 238.204 Radial†	8.4	1.1	9.8996 ug/L	9.8996 ppb	09:47:32
1	K 766.490 Radial†	2308.3	-257.9	-47.084 ug/L	-47.084 ppb	09:47:12
1	Mg 279.077 IEC†	0.9	-0.1	-3.5151 ug/L	-3.5151 ppb	09:47:32
1	Na 589.592 Radial†	-741.9	-174.2	-51.776 ug/L	-51.776 ppb	09:47:12
1	Sr 421.552†	14.4	6.9	0.0445 ug/L	0.0445 ppb	09:47:12
1	Sc 361.383	946678.1	946678.1	105.44 %		09:48:29
1	Y 371.029	838473.7	838473.7	101.87 %		09:48:29
1	Ag 328.068†	341.1	27.5	0.1305 ug/L	0.1305 ppb	09:48:34
1	As 188.979†	-27.8	3.9	1.5843 ug/L	1.5843 ppb	09:48:54
1	B 249.677†	-44.3	198.4	4.3481 ug/L	4.3481 ppb	09:48:54
1	Ba 233.527†	16.4	18.6	0.1498 ug/L	0.1498 ppb	09:48:54
1	Be 313.107†	-5045.4	315.1	0.1113 ug/L	0.1113 ppb	09:48:34
1	Cd 226.502†	-205.0	11.7	0.1285 ug/L	0.1285 ppb	09:48:54
1	Co 228.616†	-56.6	16.3	0.3569 ug/L	0.3569 ppb	09:48:54
1	Cr 267.716†	71.1	-26.5	-0.2816 ug/L	-0.2816 ppb	09:48:54
1	Cu 324.752†	9103.6	-493.8	-1.3796 ug/L	-1.3796 ppb	09:48:34
1	Mn 257.610†	475.0	-39.3	-0.0430 ug/L	-0.0430 ppb	09:48:54
1	Mo 202.031†	28.1	3.0	0.2087 ug/L	0.2087 ppb	09:48:54
1	Ni 231.604†	104.6	5.6	0.1393 ug/L	0.1393 ppb	09:48:54
1	P 214.914†	245.0	-6.4	-3.3430 ug/L	-3.3430 ppb	09:48:54
1	Pb 220.353†	-45.4	17.4	2.1776 ug/L	2.1776 ppb	09:48:54
1	S 181.975 Axial†	56.0	-23.9	-32.868 ug/L	-32.868 ppb	09:48:54
1	Sb 206.836†	39.4	7.2	2.4048 ug/L	2.4048 ppb	09:48:54
1	Se 196.026†	-16.6	2.2	1.2931 ug/L	1.2931 ppb	09:48:54
1	Si 251.611†	508.0	-14.1	-0.4205 ug/L	-0.4205 ppb	09:48:54
1	Sn 189.927†	1.0	1.3	0.2385 ug/L	0.2385 ppb	09:48:54
1	Ti 334.940†	-915.7	38.1	0.0612 ug/L	0.0612 ppb	09:48:34
1	Tl 190.801†	-43.0	-3.8	-1.2350 ug/L	-1.2350 ppb	09:48:54
1	U 409.014†	-1500.9	-360.7	-9.0203 ug/L	-9.0203 ppb	09:48:34
1	V 292.402†	-1260.9	197.7	1.2136 ug/L	1.2136 ppb	09:48:34
1	Zn 213.857†	687.2	-81.6	-0.7600 ug/L	-0.7600 ppb	09:48:54
1	SiO2†	517.1	-22.9	-1.4569 ug/L	-1.4569 ppb	09:50:15
2	Sc Radial	5519.6	5519.6	103 %		09:47:37
2	Y RADIAL	5909.8	5909.8	102.7 %		09:47:37
2	Al 396.153Radial†	6.2	-3.1	-2.3683 ug/L	-2.3683 ppb	09:47:57
2	Ca 317.933Radial†	18.6	-2.3	-3.6376 ug/L	-3.6376 ppb	09:47:57
2	Fe 238.204 Radial†	7.6	0.2	1.4787 ug/L	1.4787 ppb	09:47:57
2	K 766.490 Radial†	2259.3	-317.7	-58.017 ug/L	-58.017 ppb	09:47:37
2	Mg 279.077 IEC†	2.1	1.1	37.955 ug/L	37.955 ppb	09:47:57
2	Na 589.592 Radial†	-766.4	-193.9	-57.629 ug/L	-57.629 ppb	09:47:37
2	Sr 421.552†	24.0	16.2	0.1037 ug/L	0.1037 ppb	09:47:37
2	Sc 361.383	935009.3	935009.3	104.14 %		09:48:59
2	Y 371.029	827735.8	827735.8	100.56 %		09:48:59
2	Ag 328.068†	404.2	92.1	0.3957 ug/L	0.3957 ppb	09:49:04
2	As 188.979†	-25.9	5.3	2.1562 ug/L	2.1562 ppb	09:49:24
2	B 249.677†	-80.7	162.9	3.5714 ug/L	3.5714 ppb	09:49:24
2	Ba 233.527†	-1.3	1.9	0.0159 ug/L	0.0159 ppb	09:49:24
2	Be 313.107†	-5043.7	257.0	0.0908 ug/L	0.0908 ppb	09:49:04
2	Cd 226.502†	-197.2	16.8	0.1855 ug/L	0.1855 ppb	09:49:24
2	Co 228.616†	-62.3	10.1	0.2230 ug/L	0.2230 ppb	09:49:24
2	Cr 267.716†	64.9	-31.6	-0.3379 ug/L	-0.3379 ppb	09:49:24
2	Cu 324.752†	9122.4	-367.9	-1.0261 ug/L	-1.0261 ppb	09:49:04
2	Mn 257.610†	489.6	-19.7	-0.0234 ug/L	-0.0234 ppb	09:49:24
2	Mo 202.031†	29.1	4.3	0.2934 ug/L	0.2934 ppb	09:49:24
2	Ni 231.604†	96.4	-1.1	-0.0270 ug/L	-0.0270 ppb	09:49:24

2	P 214.914†	228.8	-19.0	-10.523 ug/L	-10.523 ppb	09:49:24
2	Pb 220.353†	-60.1	2.7	0.3407 ug/L	0.3407 ppb	09:49:24
2	S 181.975 Axial†	54.0	-25.2	-34.634 ug/L	-34.634 ppb	09:49:24
2	Sb 206.836†	41.2	9.3	3.1237 ug/L	3.1237 ppb	09:49:24
2	Se 196.026†	-17.3	1.4	0.8071 ug/L	0.8071 ppb	09:49:24
2	Si 251.611†	501.1	-14.8	-0.4415 ug/L	-0.4415 ppb	09:49:24
2	Sn 189.927†	0.3	0.6	0.1080 ug/L	0.1080 ppb	09:49:24
2	Ti 334.940†	-895.9	46.2	0.0718 ug/L	0.0718 ppb	09:49:04
2	Tl 190.801†	-32.6	5.5	1.7733 ug/L	1.7733 ppb	09:49:24
2	U 409.014†	-1560.6	-435.7	-10.895 ug/L	-10.895 ppb	09:49:04
2	V 292.402†	-1376.7	71.5	0.4288 ug/L	0.4288 ppb	09:49:04
2	Zn 213.857†	688.6	-72.1	-0.6706 ug/L	-0.6706 ppb	09:49:24
2	SiO2†	525.5	-8.8	-0.5632 ug/L	-0.5632 ppb	09:50:35
3	Sc Radial	5485.5	5485.5	103 %		09:48:02
3	Y RADIAL	5902.8	5902.8	102.5 %		09:48:02
3	Al 396.153Radial†	-0.4	-9.6	-7.2610 ug/L	-7.2610 ppb	09:48:22
3	Ca 317.933Radial†	17.3	-3.4	-5.4770 ug/L	-5.4770 ppb	09:48:22
3	Fe 238.204 Radial†	8.1	0.7	6.6633 ug/L	6.6633 ppb	09:48:22
3	K 766.490 Radial†	2330.9	-234.4	-42.810 ug/L	-42.810 ppb	09:48:02
3	Mg 279.077 IEC†	4.2	3.1	109.43 ug/L	109.43 ppb	09:48:22
3	Na 589.592 Radial†	-712.5	-145.9	-43.385 ug/L	-43.385 ppb	09:48:02
3	Sr 421.552†	-2.2	-9.2	-0.0590 ug/L	-0.0590 ppb	09:48:02
3	Sc 361.383	930868.9	930868.9	103.67 %		09:49:30
3	Y 371.029	824178.7	824178.7	100.13 %		09:49:30
3	Ag 328.068†	419.5	108.6	0.4648 ug/L	0.4648 ppb	09:49:35
3	As 188.979†	-36.0	-4.5	-1.8576 ug/L	-1.8576 ppb	09:49:55
3	B 249.677†	-48.2	193.9	4.2512 ug/L	4.2512 ppb	09:49:55
3	Ba 233.527†	3.1	6.1	0.0493 ug/L	0.0493 ppb	09:49:55
3	Be 313.107†	-4988.4	288.8	0.1020 ug/L	0.1020 ppb	09:49:35
3	Cd 226.502†	-183.0	29.7	0.3293 ug/L	0.3293 ppb	09:49:55
3	Co 228.616†	-75.0	-2.4	-0.0518 ug/L	-0.0518 ppb	09:49:55
3	Cr 267.716†	96.6	-0.8	-0.0039 ug/L	-0.0039 ppb	09:49:55
3	Cu 324.752†	9043.4	-405.2	-1.1317 ug/L	-1.1317 ppb	09:49:35
3	Mn 257.610†	462.4	-43.8	-0.0529 ug/L	-0.0529 ppb	09:49:55
3	Mo 202.031†	26.2	1.7	0.1133 ug/L	0.1133 ppb	09:49:55
3	Ni 231.604†	108.1	10.6	0.2659 ug/L	0.2659 ppb	09:49:55
3	P 214.914†	229.2	-17.7	-9.7421 ug/L	-9.7421 ppb	09:49:55
3	Pb 220.353†	-60.6	1.9	0.2372 ug/L	0.2372 ppb	09:49:55
3	S 181.975 Axial†	54.6	-24.3	-33.504 ug/L	-33.504 ppb	09:49:55
3	Sb 206.836†	33.4	2.0	0.6687 ug/L	0.6687 ppb	09:49:55
3	Se 196.026†	-11.6	6.7	3.9014 ug/L	3.9014 ppb	09:49:55
3	Si 251.611†	506.9	-7.0	-0.2100 ug/L	-0.2100 ppb	09:49:55
3	Sn 189.927†	-0.6	-0.3	-0.0522 ug/L	-0.0522 ppb	09:49:55
3	Ti 334.940†	-913.3	25.6	0.0329 ug/L	0.0329 ppb	09:49:35
3	Tl 190.801†	-33.1	5.0	1.5860 ug/L	1.5860 ppb	09:49:55
3	U 409.014†	-1444.2	-330.2	-8.2563 ug/L	-8.2563 ppb	09:49:35
3	V 292.402†	-1345.2	96.1	0.5845 ug/L	0.5845 ppb	09:49:35
3	Zn 213.857†	690.3	-67.6	-0.6302 ug/L	-0.6302 ppb	09:49:55
3	SiO2†	517.2	-14.5	-0.9220 ug/L	-0.9220 ppb	09:50:55

## Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	937518.8	104.42 %	0.913			0.87%
Sc Radial	5498.1	103 %	0.4			0.34%
Y 371.029	830129.4	100.85 %	0.904			0.90%
Y RADIAL	5904.7	102.6 %	0.08			0.08%
Ag 328.068†	76.1	0.3303 ug/L	0.17648	0.3303 ppb	0.17648	53.43%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-5.2	-3.9793 ug/L	2.84213	-3.9793 ppb	2.84213	71.42%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	1.5	0.6276 ug/L	2.17119	0.6276 ppb	2.17119	345.95%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	185.1	4.0569 ug/L	0.42321	4.0569 ppb	0.42321	10.43%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	8.9	0.0717 ug/L	0.06971	0.0717 ppb	0.06971	97.25%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	287.0	0.1014 ug/L	0.01025	0.1014 ppb	0.01025	10.11%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-3.7	-5.9532 ug/L	2.58676	-5.9532 ppb	2.58676	43.45%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated							
Cd	226.502†	19.4	0.2144 ug/L	0.10349	0.2144 ppb	0.10349	48.26%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co	228.616†	8.0	0.1760 ug/L	0.20839	0.1760 ppb	0.20839	118.38%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr	267.716†	-19.6	-0.2078 ug/L	0.17878	-0.2078 ppb	0.17878	86.04%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	-422.3	-1.1791 ug/L	0.18151	-1.1791 ppb	0.18151	15.39%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	0.6	6.0139 ug/L	4.24789	6.0139 ppb	4.24789	70.63%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	-270.0	-49.304 ug/L	7.8429	-49.304 ppb	7.8429	15.91%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	1.3	47.957 ug/L	57.1337	47.957 ppb	57.1337	119.14%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	-34.3	-0.0398 ug/L	0.01500	-0.0398 ppb	0.01500	37.70%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	3.0	0.2051 ug/L	0.09008	0.2051 ppb	0.09008	43.92%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	-171.3	-50.930 ug/L	7.1595	-50.930 ppb	7.1595	14.06%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	5.0	0.1261 ug/L	0.14693	0.1261 ppb	0.14693	116.56%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	-14.4	-7.8693 ug/L	3.93933	-7.8693 ppb	3.93933	50.06%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	7.3	0.9185 ug/L	1.09162	0.9185 ppb	1.09162	118.85%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	-24.5	-33.669 ug/L	0.8943	-33.669 ppb	0.8943	2.66%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	6.1	2.0657 ug/L	1.26213	2.0657 ppb	1.26213	61.10%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	3.4	2.0005 ug/L	1.66404	2.0005 ppb	1.66404	83.18%
QC value within limits for Se 196.026 Recovery = Not calculated							
Si	251.611†	-12.0	-0.3573 ug/L	0.12803	-0.3573 ppb	0.12803	35.83%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	0.5	0.0981 ug/L	0.14558	0.0981 ppb	0.14558	148.39%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	4.6	0.0297 ug/L	0.08236	0.0297 ppb	0.08236	276.86%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	36.6	0.0553 ug/L	0.02010	0.0553 ppb	0.02010	36.33%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	2.2	0.7081 ug/L	1.68539	0.7081 ppb	1.68539	238.02%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	-375.5	-9.3907 ug/L	1.35796	-9.3907 ppb	1.35796	14.46%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	121.8	0.7423 ug/L	0.41552	0.7423 ppb	0.41552	55.98%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	-73.8	-0.6869 ug/L	0.06642	-0.6869 ppb	0.06642	9.67%
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†		-15.4	-0.9807 ug/L	0.44976	-0.9807 ppb	0.44976	45.86%
QC value within limits for SiO2 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 8

Sample ID: PQL

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 11

Date Collected: 1/26/2010 09:53:06

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5473.2	5473.2	102 %		09:54:59
1	Y RADIAL	5918.4	5918.4	102.8 %		09:54:59
1	Al 396.153Radial†	289.1	272.9	206.21 ug/L	206.21 ppb	09:55:19
1	Ca 317.933Radial†	150.6	126.7	203.68 ug/L	203.68 ppb	09:55:19
1	Fe 238.204 Radial†	18.5	10.9	101.99 ug/L	101.99 ppb	09:55:19
1	K 766.490 Radial†	3154.0	573.8	104.65 ug/L	104.65 ppb	09:54:59
1	Mg 279.077 IEC†	12.4	11.1	395.23 ug/L	395.23 ppb	09:55:19
1	Na 589.592 Radial†	219.9	762.2	226.57 ug/L	226.57 ppb	09:54:59
1	Sr 421.552†	823.0	795.9	5.1061 ug/L	5.1061 ppb	09:54:59
1	Sc 361.383	920367.1	920367.1	102.51 %		09:56:16
1	Y 371.029	809322.7	809322.7	98.323 %		09:56:16
1	Ag 328.068†	1516.4	1183.4	4.9461 ug/L	4.9461 ppb	09:56:16
1	As 188.979†	37.7	67.0	27.456 ug/L	27.456 ppb	09:56:36
1	B 249.677†	2097.4	2286.6	50.116 ug/L	50.116 ppb	09:56:16
1	Ba 233.527†	662.9	649.8	5.1362 ug/L	5.1362 ppb	09:56:36
1	Be 313.107†	9361.0	14232.7	5.0326 ug/L	5.0326 ppb	09:56:16
1	Cd 226.502†	257.9	457.8	5.1174 ug/L	5.1174 ppb	09:56:36
1	Co 228.616†	167.9	233.8	5.1374 ug/L	5.1374 ppb	09:56:36
1	Cr 267.716†	588.3	479.9	5.1911 ug/L	5.1911 ppb	09:56:36
1	Cu 324.752†	12745.4	3305.9	9.2497 ug/L	9.2497 ppb	09:56:16
1	Mn 257.610†	9947.8	9214.8	10.325 ug/L	10.325 ppb	09:56:16
1	Mo 202.031†	185.8	157.7	10.773 ug/L	10.773 ppb	09:56:36
1	Ni 231.604†	337.5	235.6	5.9182 ug/L	5.9182 ppb	09:56:36
1	P 214.914†	507.8	256.6	142.92 ug/L	142.92 ppb	09:56:36
1	Pb 220.353†	35.8	95.3	12.019 ug/L	12.019 ppb	09:56:36
1	S 181.975 Axial†	138.9	58.5	80.539 ug/L	80.539 ppb	09:56:36
1	Sb 206.836†	51.7	20.2	7.1200 ug/L	7.1200 ppb	09:56:36
1	Se 196.026†	40.8	57.8	33.699 ug/L	33.699 ppb	09:56:36
1	Si 251.611†	3814.5	3225.3	95.433 ug/L	95.433 ppb	09:56:36
1	Sn 189.927†	51.0	50.1	9.2415 ug/L	9.2415 ppb	09:56:36
1	Ti 334.940†	2592.1	3435.3	5.2076 ug/L	5.2076 ppb	09:56:16
1	Tl 190.801†	28.8	65.0	20.859 ug/L	20.859 ppb	09:56:36
1	U 409.014†	1094.3	2130.4	53.249 ug/L	53.249 ppb	09:56:16
1	V 292.402†	-570.9	836.6	5.4422 ug/L	5.4422 ppb	09:56:16
1	Zn 213.857†	1791.7	1014.5	9.3899 ug/L	9.3899 ppb	09:56:36
1	SiO2†	3944.5	3334.7	210.61 ug/L	210.61 ppb	09:57:32
2	Sc Radial	5481.8	5481.8	103 %		09:55:24
2	Y RADIAL	5873.6	5873.6	102.0 %		09:55:24
2	Al 396.153Radial†	283.5	267.0	201.81 ug/L	201.81 ppb	09:55:44
2	Ca 317.933Radial†	152.7	128.5	206.58 ug/L	206.58 ppb	09:55:44
2	Fe 238.204 Radial†	19.1	11.4	106.77 ug/L	106.77 ppb	09:55:44
2	K 766.490 Radial†	3086.1	502.8	91.668 ug/L	91.668 ppb	09:55:24
2	Mg 279.077 IEC†	11.9	10.7	379.90 ug/L	379.90 ppb	09:55:44
2	Na 589.592 Radial†	257.6	798.6	237.40 ug/L	237.40 ppb	09:55:24
2	Sr 421.552†	835.0	806.3	5.1730 ug/L	5.1730 ppb	09:55:24
2	Sc 361.383	911945.6	911945.6	101.57 %		09:56:42
2	Y 371.029	802802.3	802802.3	97.531 %		09:56:42
2	Ag 328.068†	1577.4	1257.0	5.2526 ug/L	5.2526 ppb	09:56:42
2	As 188.979†	29.8	59.6	24.417 ug/L	24.417 ppb	09:57:02
2	B 249.677†	2098.2	2306.3	50.546 ug/L	50.546 ppb	09:56:42
2	Ba 233.527†	653.6	646.6	5.1113 ug/L	5.1113 ppb	09:57:02
2	Be 313.107†	9377.7	14333.4	5.0678 ug/L	5.0678 ppb	09:56:42
2	Cd 226.502†	243.2	445.6	4.9807 ug/L	4.9807 ppb	09:57:02
2	Co 228.616†	170.7	238.0	5.2280 ug/L	5.2280 ppb	09:57:02
2	Cr 267.716†	544.2	441.9	4.7777 ug/L	4.7777 ppb	09:57:02
2	Cu 324.752†	12645.8	3322.7	9.2960 ug/L	9.2960 ppb	09:56:42
2	Mn 257.610†	9880.5	9238.2	10.353 ug/L	10.353 ppb	09:56:42
2	Mo 202.031†	163.9	137.7	9.4112 ug/L	9.4112 ppb	09:57:02
2	Ni 231.604†	316.5	217.9	5.4734 ug/L	5.4734 ppb	09:57:02

2	P 214.914†	508.2	261.6	145.73 ug/L	145.73 ppb	09:57:02
2	Pb 220.353†	30.5	90.5	11.411 ug/L	11.411 ppb	09:57:02
2	S 181.975 Axial†	125.2	46.2	63.628 ug/L	63.628 ppb	09:57:02
2	Sb 206.836†	69.9	38.6	13.246 ug/L	13.246 ppb	09:57:02
2	Se 196.026†	39.3	56.6	33.061 ug/L	33.061 ppb	09:57:02
2	Si 251.611†	3801.0	3246.4	96.075 ug/L	96.075 ppb	09:57:02
2	Sn 189.927†	49.4	49.0	9.0492 ug/L	9.0492 ppb	09:57:02
2	Ti 334.940†	2475.0	3343.4	5.0684 ug/L	5.0684 ppb	09:56:42
2	Tl 190.801†	28.1	64.6	20.708 ug/L	20.708 ppb	09:57:02
2	U 409.014†	1159.9	2204.9	55.110 ug/L	55.110 ppb	09:56:42
2	V 292.402†	-595.1	807.7	5.2458 ug/L	5.2458 ppb	09:56:42
2	Zn 213.857†	1792.0	1030.9	9.5445 ug/L	9.5445 ppb	09:57:02
2	SiO2†	3920.4	3346.5	211.39 ug/L	211.39 ppb	09:57:38
3	Sc Radial	5498.1	5498.1	103 %		09:55:49
3	Y RADIAL	5877.6	5877.6	102.1 %		09:55:49
3	Al 396.153Radial†	280.2	263.0	198.71 ug/L	198.71 ppb	09:56:09
3	Ca 317.933Radial†	151.6	127.0	204.09 ug/L	204.09 ppb	09:56:09
3	Fe 238.204 Radial†	18.7	11.0	102.62 ug/L	102.62 ppb	09:56:09
3	K 766.490 Radial†	3152.5	558.4	101.84 ug/L	101.84 ppb	09:55:49
3	Mg 279.077 IEC†	11.7	10.4	372.00 ug/L	372.00 ppb	09:56:09
3	Na 589.592 Radial†	254.9	795.2	236.40 ug/L	236.40 ppb	09:55:49
3	Sr 421.552†	826.9	796.0	5.1070 ug/L	5.1070 ppb	09:55:49
3	Sc 361.383	909827.5	909827.5	101.33 %		09:57:07
3	Y 371.029	800430.8	800430.8	97.243 %		09:57:07
3	Ag 328.068†	1472.5	1157.1	4.8366 ug/L	4.8366 ppb	09:57:07
3	As 188.979†	40.3	69.9	28.659 ug/L	28.659 ppb	09:57:27
3	B 249.677†	2041.1	2254.7	49.415 ug/L	49.415 ppb	09:57:07
3	Ba 233.527†	675.3	669.5	5.2927 ug/L	5.2927 ppb	09:57:27
3	Be 313.107†	9250.8	14229.7	5.0313 ug/L	5.0313 ppb	09:57:07
3	Cd 226.502†	263.0	465.7	5.2062 ug/L	5.2062 ppb	09:57:27
3	Co 228.616†	170.0	237.7	5.2234 ug/L	5.2234 ppb	09:57:27
3	Cr 267.716†	576.6	475.1	5.1379 ug/L	5.1379 ppb	09:57:27
3	Cu 324.752†	12690.9	3396.1	9.5018 ug/L	9.5018 ppb	09:57:07
3	Mn 257.610†	9818.0	9199.2	10.309 ug/L	10.309 ppb	09:57:07
3	Mo 202.031†	182.1	156.1	10.666 ug/L	10.666 ppb	09:57:27
3	Ni 231.604†	317.5	219.7	5.5180 ug/L	5.5180 ppb	09:57:27
3	P 214.914†	492.3	247.1	137.52 ug/L	137.52 ppb	09:57:27
3	Pb 220.353†	26.9	86.9	10.971 ug/L	10.971 ppb	09:57:27
3	S 181.975 Axial†	122.8	44.2	60.772 ug/L	60.772 ppb	09:57:27
3	Sb 206.836†	63.7	32.6	11.302 ug/L	11.302 ppb	09:57:27
3	Se 196.026†	27.4	45.0	26.345 ug/L	26.345 ppb	09:57:27
3	Si 251.611†	3813.7	3267.6	96.688 ug/L	96.688 ppb	09:57:27
3	Sn 189.927†	56.4	56.0	10.337 ug/L	10.337 ppb	09:57:27
3	Ti 334.940†	2475.5	3349.5	5.0779 ug/L	5.0779 ppb	09:57:07
3	Tl 190.801†	13.2	49.9	16.024 ug/L	16.024 ppb	09:57:27
3	U 409.014†	1160.5	2208.1	55.190 ug/L	55.190 ppb	09:57:07
3	V 292.402†	-501.3	898.9	5.8312 ug/L	5.8312 ppb	09:57:07
3	Zn 213.857†	1782.7	1025.9	9.4975 ug/L	9.4975 ppb	09:57:27
3	SiO2†	3961.0	3395.6	214.46 ug/L	214.46 ppb	09:57:43

## Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	914046.8	101.80 %	0.621			0.61%
Sc Radial	5484.4	103 %	0.2			0.23%
Y 371.029	804185.2	97.699 %	0.5594			0.57%
Y RADIAL	5889.9	102.3 %	0.43			0.42%
Ag 328.068†	1199.1	5.0117 ug/L	0.21563	5.0117 ppb	0.21563	4.30%
QC value within limits for Ag 328.068 Recovery = 100.23%						
Al 396.153Radial†	267.6	202.24 ug/L	3.772	202.24 ppb	3.772	1.87%
QC value within limits for Al 396.153Radial Recovery = 101.12%						
As 188.979†	65.5	26.844 ug/L	2.1860	26.844 ppb	2.1860	8.14%
QC value within limits for As 188.979 Recovery = 89.48%						
B 249.677†	2282.5	50.026 ug/L	0.5708	50.026 ppb	0.5708	1.14%
QC value within limits for B 249.677 Recovery = 100.05%						
Ba 233.527†	655.3	5.1801 ug/L	0.09832	5.1801 ppb	0.09832	1.90%
QC value within limits for Ba 233.527 Recovery = 103.60%						
Be 313.107†	14265.3	5.0439 ug/L	0.02072	5.0439 ppb	0.02072	0.41%
QC value within limits for Be 313.107 Recovery = 100.88%						
Ca 317.933Radial†	127.4	204.78 ug/L	1.568	204.78 ppb	1.568	0.77%

QC value within limits for Ca 317.933 Radial Recovery = 102.39%

Cd 226.502†	456.4	5.1014 ug/L	0.11355	5.1014 ppb	0.11355	2.23%
QC value within limits for Cd 226.502 Recovery = 102.03%						
Co 228.616†	236.5	5.1963 ug/L	0.05108	5.1963 ppb	0.05108	0.98%
QC value within limits for Co 228.616 Recovery = 103.93%						
Cr 267.716†	465.6	5.0356 ug/L	0.22489	5.0356 ppb	0.22489	4.47%
QC value within limits for Cr 267.716 Recovery = 100.71%						
Cu 324.752†	3341.5	9.3491 ug/L	0.13419	9.3491 ppb	0.13419	1.44%
QC value within limits for Cu 324.752 Recovery = 93.49%						
Fe 238.204 Radial†	11.1	103.79 ug/L	2.602	103.79 ppb	2.602	2.51%
QC value within limits for Fe 238.204 Radial Recovery = 103.79%						
K 766.490 Radial†	545.0	99.385 ug/L	6.8289	99.385 ppb	6.8289	6.87%
QC value less than the lower limit for K 766.490 Radial Recovery = 66.26%						
Mg 279.077 IEC†	10.7	382.38 ug/L	11.814	382.38 ppb	11.814	3.09%
QC value within limits for Mg 279.077 IEC Recovery = 127.46%						
Mn 257.610†	9217.4	10.329 ug/L	0.0221	10.329 ppb	0.0221	0.21%
QC value within limits for Mn 257.610 Recovery = 103.29%						
Mo 202.031†	150.5	10.283 ug/L	0.7570	10.283 ppb	0.7570	7.36%
QC value within limits for Mo 202.031 Recovery = 102.83%						
Na 589.592 Radial†	785.3	233.46 ug/L	5.988	233.46 ppb	5.988	2.56%
QC value within limits for Na 589.592 Radial Recovery = 77.82%						
Ni 231.604†	224.4	5.6365 ug/L	0.24496	5.6365 ppb	0.24496	4.35%
QC value within limits for Ni 231.604 Recovery = 112.73%						
P 214.914†	255.1	142.06 ug/L	4.172	142.06 ppb	4.172	2.94%
QC value within limits for P 214.914 Recovery = 94.71%						
Pb 220.353†	90.9	11.467 ug/L	0.5264	11.467 ppb	0.5264	4.59%
QC value within limits for Pb 220.353 Recovery = 114.67%						
S 181.975 Axial†	49.6	68.313 ug/L	10.6838	68.313 ppb	10.6838	15.64%
QC value less than the lower limit for S 181.975 Axial Recovery = 68.31%						
Sb 206.836†	30.5	10.556 ug/L	3.1304	10.556 ppb	3.1304	29.66%
QC value within limits for Sb 206.836 Recovery = 105.56%						
Se 196.026†	53.1	31.035 ug/L	4.0738	31.035 ppb	4.0738	13.13%
QC value within limits for Se 196.026 Recovery = 103.45%						
Si 251.611†	3246.5	96.065 ug/L	0.6276	96.065 ppb	0.6276	0.65%
QC value within limits for Si 251.611 Recovery = 96.07%						
Sn 189.927†	51.7	9.5424 ug/L	0.69442	9.5424 ppb	0.69442	7.28%
QC value within limits for Sn 189.927 Recovery = 95.42%						
Sr 421.552†	799.4	5.1287 ug/L	0.03840	5.1287 ppb	0.03840	0.75%
QC value within limits for Sr 421.552 Recovery = 102.57%						
Ti 334.940†	3376.1	5.1180 ug/L	0.07775	5.1180 ppb	0.07775	1.52%
QC value within limits for Ti 334.940 Recovery = 102.36%						
Tl 190.801†	59.8	19.197 ug/L	2.7491	19.197 ppb	2.7491	14.32%
QC value within limits for Tl 190.801 Recovery = 95.99%						
U 409.014†	2181.1	54.516 ug/L	1.0986	54.516 ppb	1.0986	2.02%
QC value within limits for U 409.014 Recovery = 109.03%						
V 292.402†	847.7	5.5064 ug/L	0.29793	5.5064 ppb	0.29793	5.41%
QC value within limits for V 292.402 Recovery = 110.13%						
Zn 213.857†	1023.8	9.4773 ug/L	0.07926	9.4773 ppb	0.07926	0.84%
QC value within limits for Zn 213.857 Recovery = 94.77%						
SiO2†	3358.9	212.15 ug/L	2.036	212.15 ppb	2.036	0.96%
QC value within limits for SiO2 Recovery = 99.60%						

QC Failed. Continue with analysis.

Sequence No.: 9

Sample ID: ICSEA

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 13

Date Collected: 1/26/2010 09:59:54

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: ICSEA

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4967.3	4967.3	93.0 %		10:01:53
1	Y RADIAL	5327.2	5327.2	92.53 %		10:01:53
1	Al 396.153Radial†	627223.9	674282.7	510790 ug/L	510790 ppb	10:01:48
1	Ca 317.933Radial†	274135.2	294686.6	473650 ug/L	473650 ppb	10:01:48
1	Fe 238.204 Radial†	18771.2	20172.7	188520 ug/L	188520 ppb	10:01:53
1	K 766.490 Radial†	2344.2	16.6	-155.38 ug/L	-155.38 ppb	10:01:53
1	Mg 279.077 IEC†	12983.9	13957.2	497650 ug/L	497650 ppb	10:01:53
1	Na 589.592 Radial†	-558.7	-53.0	-15.743 ug/L	-15.743 ppb	10:01:53
1	Sr 421.552†	557.3	592.1	0.2629 ug/L	0.2629 ppb	10:01:53
1	Sc 361.383	803575.0	803575.0	89.498 %		10:02:20
1	Y 371.029	694490.8	694490.8	84.373 %		10:02:20
1	Ag 328.068†	-10512.1	-12041.7	4.4102 ug/L	4.4102 ppb	10:02:20
1	As 188.979†	-96.3	-77.4	12.285 ug/L	12.285 ppb	10:02:41
1	B 249.677†	714.2	1038.5	-7.8439 ug/L	-7.8439 ppb	10:02:20
1	Ba 233.527†	-521.1	-579.2	1.2082 ug/L	1.2082 ppb	10:02:41
1	Be 313.107†	-5374.5	-904.8	-0.3813 ug/L	-0.3813 ppb	10:02:20
1	Cd 226.502†	1427.5	1801.1	0.6534 ug/L	0.6534 ppb	10:02:41
1	Co 228.616†	-17.5	50.4	-1.6008 ug/L	-1.6008 ppb	10:02:41
1	Cr 267.716†	-71.2	-173.5	1.7967 ug/L	1.7967 ppb	10:02:41
1	Cu 324.752†	6271.0	-2121.2	4.0136 ug/L	4.0136 ppb	10:02:20
1	Mn 257.610†	-907.5	-1503.9	-3.4218 ug/L	-3.4218 ppb	10:02:20
1	Mo 202.031†	-192.0	-238.1	4.0180 ug/L	4.0180 ppb	10:02:41
1	Ni 231.604†	191.1	119.9	3.0119 ug/L	3.0119 ppb	10:02:41
1	P 214.914†	161.5	-58.3	-56.873 ug/L	-56.873 ppb	10:02:41
1	Pb 220.353†	-732.4	-758.0	4.8704 ug/L	4.8704 ppb	10:02:41
1	S 181.975 Axial†	94.0	28.1	-57.078 ug/L	-57.078 ppb	10:02:41
1	Sb 206.836†	45.4	20.5	-3.5060 ug/L	-3.5060 ppb	10:02:41
1	Se 196.026†	-990.2	-1088.4	28.011 ug/L	28.011 ppb	10:02:41
1	Si 251.611†	453.7	11.0	0.5251 ug/L	0.5251 ppb	10:02:41
1	Sn 189.927†	-354.3	-395.5	2.4151 ug/L	2.4151 ppb	10:02:41
1	Ti 334.940†	-16876.4	-17950.3	-4.5144 ug/L	-4.5144 ppb	10:02:20
1	Tl 190.801†	-80.6	-53.2	-17.274 ug/L	-17.274 ppb	10:02:41
1	U 409.014†	-6.0	1056.1	4.9202 ug/L	4.9202 ppb	10:02:20
1	V 292.402†	1204.3	2739.2	-0.9575 ug/L	-0.9575 ppb	10:02:41
1	Zn 213.857†	3199.5	2841.6	8.1691 ug/L	8.1691 ppb	10:02:41
1	SiO2†	470.8	12.7	1.2450 ug/L	1.2450 ppb	10:03:37
2	Sc Radial	4805.3	4805.3	90.0 %		10:02:04
2	Y RADIAL	5154.3	5154.3	89.53 %		10:02:04
2	Al 396.153Radial†	638034.9	709025.6	537110 ug/L	537110 ppb	10:01:59
2	Ca 317.933Radial†	277837.7	308735.0	496230 ug/L	496230 ppb	10:01:59
2	Fe 238.204 Radial†	18349.0	20383.7	190500 ug/L	190500 ppb	10:02:04
2	K 766.490 Radial†	2296.2	48.2	-157.16 ug/L	-157.16 ppb	10:02:04
2	Mg 279.077 IEC†	12666.3	14074.9	501840 ug/L	501840 ppb	10:02:04
2	Na 589.592 Radial†	-529.9	-41.2	-12.242 ug/L	-12.242 ppb	10:02:04
2	Sr 421.552†	538.8	591.7	0.0918 ug/L	0.0918 ppb	10:02:04
2	Sc 361.383	796203.6	796203.6	88.677 %		10:02:46
2	Y 371.029	688426.5	688426.5	83.636 %		10:02:46
2	Ag 328.068†	-10223.7	-11825.2	5.6422 ug/L	5.6422 ppb	10:02:46
2	As 188.979†	-101.8	-84.6	9.8181 ug/L	9.8181 ppb	10:03:06
2	B 249.677†	660.6	985.4	-9.3310 ug/L	-9.3310 ppb	10:02:46
2	Ba 233.527†	-511.6	-573.8	1.3095 ug/L	1.3095 ppb	10:03:06
2	Be 313.107†	-5211.7	-776.8	-0.3356 ug/L	-0.3356 ppb	10:02:46
2	Cd 226.502†	1442.8	1833.2	0.8085 ug/L	0.8085 ppb	10:03:06
2	Co 228.616†	7.5	78.4	-1.0172 ug/L	-1.0172 ppb	10:03:06
2	Cr 267.716†	-56.2	-157.3	2.0091 ug/L	2.0091 ppb	10:03:06
2	Cu 324.752†	6058.2	-2296.2	3.6260 ug/L	3.6260 ppb	10:02:46
2	Mn 257.610†	-1005.6	-1623.8	-3.5331 ug/L	-3.5331 ppb	10:02:46
2	Mo 202.031†	-205.9	-255.8	3.2318 ug/L	3.2318 ppb	10:03:06
2	Ni 231.604†	191.9	122.7	3.0836 ug/L	3.0836 ppb	10:03:06



2	P 214.914†	203.4	-9.4	-24.205 ug/L	-24.205 ppb	10:03:06
2	Pb 220.353†	-727.2	-759.7	10.511 ug/L	10.511 ppb	10:03:06
2	S 181.975 Axial†	80.5	13.8	-81.631 ug/L	-81.631 ppb	10:03:06
2	Sb 206.836†	56.4	33.3	0.0791 ug/L	0.0791 ppb	10:03:06
2	Se 196.026†	-989.5	-1097.9	30.741 ug/L	30.741 ppb	10:03:06
2	Si 251.611†	435.0	-5.4	0.0536 ug/L	0.0536 ppb	10:03:06
2	Sn 189.927†	-357.9	-403.2	4.4640 ug/L	4.4640 ppb	10:03:06
2	Ti 334.940†	-16585.3	-17796.6	-1.5952 ug/L	-1.5952 ppb	10:02:46
2	Tl 190.801†	-83.9	-57.7	-18.729 ug/L	-18.729 ppb	10:03:06
2	U 409.014†	60.2	1130.7	6.5597 ug/L	6.5597 ppb	10:02:46
2	V 292.402†	1142.5	2681.9	-1.5332 ug/L	-1.5332 ppb	10:03:06
2	Zn 213.857†	3183.8	2857.0	8.1215 ug/L	8.1215 ppb	10:03:06
2	SiO2†	464.0	9.8	1.0970 ug/L	1.0970 ppb	10:03:42
3	Sc Radial	4958.7	4958.7	92.9 %		10:02:14
3	Y RADIAL	5327.7	5327.7	92.54 %		10:02:14
3	Al 396.153Radial†	637938.3	686986.6	520410 ug/L	520410 ppb	10:02:09
3	Ca 317.933Radial†	277017.0	298299.4	479460 ug/L	479460 ppb	10:02:09
3	Fe 238.204 Radial†	18772.9	20209.4	188870 ug/L	188870 ppb	10:02:14
3	K 766.490 Radial†	2258.1	-71.7	-173.46 ug/L	-173.46 ppb	10:02:14
3	Mg 279.077 IEC†	12977.2	13974.1	498250 ug/L	498250 ppb	10:02:14
3	Na 589.592 Radial†	-535.3	-28.8	-8.5601 ug/L	-8.5601 ppb	10:02:14
3	Sr 421.552†	586.5	624.5	0.4280 ug/L	0.4280 ppb	10:02:14
3	Sc 361.383	803234.6	803234.6	89.460 %		10:03:11
3	Y 371.029	695709.6	695709.6	84.521 %		10:03:11
3	Ag 328.068†	-10403.9	-11925.7	4.9265 ug/L	4.9265 ppb	10:03:11
3	As 188.979†	-71.4	-49.7	23.727 ug/L	23.727 ppb	10:03:31
3	B 249.677†	677.8	998.1	-8.7842 ug/L	-8.7842 ppb	10:03:11
3	Ba 233.527†	-502.1	-558.2	1.3839 ug/L	1.3839 ppb	10:03:31
3	Be 313.107†	-5187.9	-698.7	-0.3089 ug/L	-0.3089 ppb	10:03:11
3	Cd 226.502†	1447.4	1824.1	0.8739 ug/L	0.8739 ppb	10:03:31
3	Co 228.616†	-35.3	30.5	-2.0439 ug/L	-2.0439 ppb	10:03:31
3	Cr 267.716†	-86.7	-190.8	1.6159 ug/L	1.6159 ppb	10:03:31
3	Cu 324.752†	6133.7	-2271.6	3.6103 ug/L	3.6103 ppb	10:03:11
3	Mn 257.610†	-1168.2	-1795.7	-3.7398 ug/L	-3.7398 ppb	10:03:11
3	Mo 202.031†	-212.4	-261.0	2.5516 ug/L	2.5516 ppb	10:03:31
3	Ni 231.604†	196.5	125.9	3.1641 ug/L	3.1641 ppb	10:03:31
3	P 214.914†	193.9	-22.0	-34.176 ug/L	-34.176 ppb	10:03:31
3	Pb 220.353†	-677.2	-696.6	14.705 ug/L	14.705 ppb	10:03:31
3	S 181.975 Axial†	71.8	3.2	-93.093 ug/L	-93.093 ppb	10:03:31
3	Sb 206.836†	70.0	48.0	5.4189 ug/L	5.4189 ppb	10:03:31
3	Se 196.026†	-975.4	-1072.4	39.009 ug/L	39.009 ppb	10:03:31
3	Si 251.611†	460.1	18.3	0.7628 ug/L	0.7628 ppb	10:03:31
3	Sn 189.927†	-361.2	-403.4	1.8639 ug/L	1.8639 ppb	10:03:31
3	Ti 334.940†	-16938.8	-18028.0	-3.9028 ug/L	-3.9028 ppb	10:03:11
3	Tl 190.801†	-91.5	-65.4	-21.184 ug/L	-21.184 ppb	10:03:31
3	U 409.014†	-43.6	1014.1	3.8316 ug/L	3.8316 ppb	10:03:11
3	V 292.402†	1180.8	2713.5	-1.1790 ug/L	-1.1790 ppb	10:03:31
3	Zn 213.857†	3190.5	2833.0	8.0557 ug/L	8.0557 ppb	10:03:31
3	SiO2†	454.6	-5.2	0.1536 ug/L	0.1536 ppb	10:03:47

## Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	801004.4	89.211 %		0.4634			0.52%
Sc Radial	4910.5	92.0 %		1.71			1.86%
Y 371.029	692875.6	84.177 %		0.4739			0.56%
Y RADIAL	5269.7	91.53 %		1.736			1.90%
Ag 328.068†	-11930.9	4.9930 ug/L		0.61869	4.9930 ppb	0.61869	12.39%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	690098.3	522770 ug/L		13316.8	522770 ppb	13316.8	2.55%
QC value within limits for Al 396.153Radial Recovery = 104.55%							
As 188.979†	-70.6	15.277 ug/L		7.4211	15.277 ppb	7.4211	48.58%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	1007.3	-8.6530 ug/L		0.75218	-8.6530 ppb	0.75218	8.69%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	-570.4	1.3005 ug/L		0.08822	1.3005 ppb	0.08822	6.78%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	-793.4	-0.3419 ug/L		0.03662	-0.3419 ppb	0.03662	10.71%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	300573.7	483110 ug/L		11725.4	483110 ppb	11725.4	2.43%

QC value within limits for Ca 317.933 Radial Recovery = 96.62%

Cd 226.502†	1819.5	0.7786 ug/L	0.11328	0.7786 ppb	0.11328	14.55%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	53.1	-1.5540 ug/L	0.51493	-1.5540 ppb	0.51493	33.14%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-173.9	1.8072 ug/L	0.19685	1.8072 ppb	0.19685	10.89%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-2229.6	3.7500 ug/L	0.22845	3.7500 ppb	0.22845	6.09%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	20255.3	189300 ug/L	1053.7	189300 ppb	1053.7	0.56%
QC value within limits for Fe 238.204 Radial Recovery = 94.65%						
K 766.490 Radial†	-2.3	-162.00 ug/L	9.967	-162.00 ppb	9.967	6.15%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	14002.1	499250 ug/L	2267.9	499250 ppb	2267.9	0.45%
QC value within limits for Mg 279.077 IEC Recovery = 99.85%						
Mn 257.610†	-1641.2	-3.5649 ug/L	0.16136	-3.5649 ppb	0.16136	4.53%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-251.7	3.2671 ug/L	0.73385	3.2671 ppb	0.73385	22.46%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-41.0	-12.182 ug/L	3.5916	-12.182 ppb	3.5916	29.48%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	122.8	3.0865 ug/L	0.07614	3.0865 ppb	0.07614	2.47%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-29.9	-38.418 ug/L	16.7419	-38.418 ppb	16.7419	43.58%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-738.1	10.029 ug/L	4.9350	10.029 ppb	4.9350	49.21%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	15.0	-77.267 ug/L	18.3996	-77.267 ppb	18.3996	23.81%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	33.9	0.6640 ug/L	4.49112	0.6640 ppb	4.49112	676.41%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-1086.2	32.587 ug/L	5.7268	32.587 ppb	5.7268	17.57%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	8.0	0.4472 ug/L	0.36099	0.4472 ppb	0.36099	80.73%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-400.7	2.9143 ug/L	1.37005	2.9143 ppb	1.37005	47.01%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	602.8	0.2609 ug/L	0.16808	0.2609 ppb	0.16808	64.43%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	-17924.9	-3.3375 ug/L	1.53955	-3.3375 ppb	1.53955	46.13%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-58.7	-19.062 ug/L	1.9761	-19.062 ppb	1.9761	10.37%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	1067.0	5.1038 ug/L	1.37328	5.1038 ppb	1.37328	26.91%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	2711.5	-1.2232 ug/L	0.29041	-1.2232 ppb	0.29041	23.74%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	2843.9	8.1154 ug/L	0.05696	8.1154 ppb	0.05696	0.70%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	5.8	0.8319 ug/L	0.59204	0.8319 ppb	0.59204	71.17%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 10  
 Sample ID: ICSAB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 14  
 Date Collected: 1/26/2010 10:05:59  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4682.8	4682.8	87.7 %		10:07:56
1	Y RADIAL	5066.7	5066.7	88.01 %		10:07:56
1	Al 396.153Radial†	643486.0	733803.2	555860 ug/L	555860 ppb	10:07:51
1	Ca 317.933Radial†	276930.6	315783.1	507560 ug/L	507560 ppb	10:07:51
1	Fe 238.204 Radial†	18141.6	20681.0	193290 ug/L	193290 ppb	10:07:56
1	K 766.490 Radial†	30165.9	31896.8	5654.3 ug/L	5654.3 ppb	10:07:51
1	Mg 279.077 IEC†	12619.0	14389.4	513060 ug/L	513060 ppb	10:07:56
1	Na 589.592 Radial†	16222.4	19047.2	5662.2 ug/L	5662.2 ppb	10:07:56
1	Sr 421.552†	75006.7	85528.3	545.11 ug/L	545.11 ppb	10:07:51
1	Sc 361.383	810517.8	810517.8	90.271 %		10:08:24
1	Y 371.029	699266.8	699266.8	84.953 %		10:08:24
1	Ag 328.068†	45937.7	50592.7	268.41 ug/L	268.41 ppb	10:08:24
1	As 188.979†	978.8	1114.5	504.25 ug/L	504.25 ppb	10:08:44
1	B 249.677†	21280.1	23814.0	489.62 ug/L	489.62 ppb	10:08:24
1	Ba 233.527†	54181.3	60024.0	480.09 ug/L	480.09 ppb	10:08:24
1	Be 313.107†	592235.6	661165.4	234.31 ug/L	234.31 ppb	10:08:24
1	Cd 226.502†	36417.2	40548.3	433.34 ug/L	433.34 ppb	10:08:44
1	Co 228.616†	18038.6	20052.7	436.89 ug/L	436.89 ppb	10:08:44
1	Cr 267.716†	38282.5	42314.5	462.98 ug/L	462.98 ppb	10:08:24
1	Cu 324.752†	182336.3	192859.9	550.98 ug/L	550.98 ppb	10:08:24
1	Mn 257.610†	375636.6	415631.7	464.10 ug/L	464.10 ppb	10:08:24
1	Mo 202.031†	5964.1	6583.3	470.34 ug/L	470.34 ppb	10:08:44
1	Ni 231.604†	15304.6	16860.4	423.46 ug/L	423.46 ppb	10:08:44
1	P 214.914†	4113.6	4318.2	2314.3 ug/L	2314.3 ppb	10:08:44
1	Pb 220.353†	2482.9	2810.9	463.49 ug/L	463.49 ppb	10:08:44
1	S 181.975 Axial†	1773.8	1887.9	2495.2 ug/L	2495.2 ppb	10:08:44
1	Sb 206.836†	1459.1	1586.1	536.22 ug/L	536.22 ppb	10:08:44
1	Se 196.026†	2870.6	3198.0	2520.4 ug/L	2520.4 ppb	10:08:44
1	Si 251.611†	156650.3	173037.6	5121.5 ug/L	5121.5 ppb	10:08:24
1	Sn 189.927†	1936.3	2145.4	474.88 ug/L	474.88 ppb	10:08:44
1	Ti 334.940†	279825.4	310890.7	499.79 ug/L	499.79 ppb	10:08:24
1	Tl 190.801†	1229.1	1398.5	450.64 ug/L	450.64 ppb	10:08:44
1	U 409.014†	16791.8	19664.4	468.65 ug/L	468.65 ppb	10:08:24
1	V 292.402†	70344.0	79319.1	481.65 ug/L	481.65 ppb	10:08:24
1	Zn 213.857†	49752.3	54381.1	484.35 ug/L	484.35 ppb	10:08:24
1	SiO2†	153831.7	169897.8	10733 ug/L	10733 ppb	10:09:42
2	Sc Radial	4877.2	4877.2	91.3 %		10:08:07
2	Y RADIAL	5274.4	5274.4	91.61 %		10:08:07
2	Al 396.153Radial†	642479.4	703438.4	532850 ug/L	532850 ppb	10:08:01
2	Ca 317.933Radial†	276272.3	302469.0	486160 ug/L	486160 ppb	10:08:01
2	Fe 238.204 Radial†	18461.9	20206.6	188850 ug/L	188850 ppb	10:08:07
2	K 766.490 Radial†	30146.8	30504.1	5407.1 ug/L	5407.1 ppb	10:08:01
2	Mg 279.077 IEC†	12827.9	14044.2	500760 ug/L	500760 ppb	10:08:07
2	Na 589.592 Radial†	16453.0	18561.9	5517.9 ug/L	5517.9 ppb	10:08:07
2	Sr 421.552†	74798.4	81889.3	521.91 ug/L	521.91 ppb	10:08:01
2	Sc 361.383	803590.5	803590.5	89.499 %		10:08:50
2	Y 371.029	693102.3	693102.3	84.204 %		10:08:50
2	Ag 328.068†	45476.7	50516.3	266.96 ug/L	266.96 ppb	10:08:50
2	As 188.979†	979.5	1124.6	507.32 ug/L	507.32 ppb	10:09:10
2	B 249.677†	21099.5	23815.5	490.35 ug/L	490.35 ppb	10:08:50
2	Ba 233.527†	53880.1	60204.8	481.38 ug/L	481.38 ppb	10:08:50
2	Be 313.107†	588080.2	662178.1	234.67 ug/L	234.67 ppb	10:08:50
2	Cd 226.502†	36645.0	41150.6	440.53 ug/L	440.53 ppb	10:09:10
2	Co 228.616†	18184.9	20388.4	444.33 ug/L	444.33 ppb	10:09:10
2	Cr 267.716†	38093.5	42469.0	464.57 ug/L	464.57 ppb	10:08:50
2	Cu 324.752†	180019.1	192012.2	548.37 ug/L	548.37 ppb	10:08:50
2	Mn 257.610†	373055.8	416335.3	464.95 ug/L	464.95 ppb	10:08:50
2	Mo 202.031†	5960.9	6636.7	473.39 ug/L	473.39 ppb	10:09:10
2	Ni 231.604†	15394.4	17106.8	429.65 ug/L	429.65 ppb	10:09:10

2	P 214.914†	4120.7	4365.5	2339.4 ug/L	2339.4 ppb	10:09:10
2	Pb 220.353†	2492.7	2845.6	462.97 ug/L	462.97 ppb	10:09:10
2	S 181.975 Axial†	1783.3	1915.5	2537.4 ug/L	2537.4 ppb	10:09:10
2	Sb 206.836†	1483.3	1627.1	550.68 ug/L	550.68 ppb	10:09:10
2	Se 196.026†	2881.7	3237.8	2527.2 ug/L	2527.2 ppb	10:09:10
2	Si 251.611†	155320.8	173048.1	5121.8 ug/L	5121.8 ppb	10:08:50
2	Sn 189.927†	1965.3	2196.2	480.91 ug/L	480.91 ppb	10:09:10
2	Ti 334.940†	277575.0	311048.5	498.17 ug/L	498.17 ppb	10:08:50
2	Tl 190.801†	1228.2	1409.2	454.05 ug/L	454.05 ppb	10:09:10
2	U 409.014†	16374.9	19359.0	461.52 ug/L	461.52 ppb	10:08:50
2	V 292.402†	70038.4	79649.4	484.15 ug/L	484.15 ppb	10:08:50
2	Zn 213.857†	49406.5	54469.8	485.58 ug/L	485.58 ppb	10:08:50
2	SiO2†	155870.0	173644.3	10970 ug/L	10970 ppb	10:09:47
3	Sc Radial	4934.5	4934.5	92.4 %		10:08:17
3	Y RADIAL	5304.8	5304.8	92.14 %		10:08:17
3	Al 396.153Radial†	626718.7	678215.7	513750 ug/L	513750 ppb	10:08:12
3	Ca 317.933Radial†	271233.6	293504.4	471750 ug/L	471750 ppb	10:08:12
3	Fe 238.204 Radial†	18429.0	19936.5	186330 ug/L	186330 ppb	10:08:17
3	K 766.490 Radial†	29462.0	29379.9	5206.6 ug/L	5206.6 ppb	10:08:12
3	Mg 279.077 IEC†	12818.6	13871.1	494590 ug/L	494590 ppb	10:08:17
3	Na 589.592 Radial†	16552.0	18460.0	5487.6 ug/L	5487.6 ppb	10:08:17
3	Sr 421.552†	72805.7	78782.0	502.08 ug/L	502.08 ppb	10:08:12
3	Sc 361.383	812825.4	812825.4	90.528 %		10:09:16
3	Y 371.029	701381.0	701381.0	85.210 %		10:09:16
3	Ag 328.068†	45984.7	50500.2	266.27 ug/L	266.27 ppb	10:09:16
3	As 188.979†	977.1	1109.5	500.60 ug/L	500.60 ppb	10:09:36
3	B 249.677†	21323.8	23795.3	490.33 ug/L	490.33 ppb	10:09:16
3	Ba 233.527†	54466.0	60167.9	481.01 ug/L	481.01 ppb	10:09:16
3	Be 313.107†	594499.7	661803.9	234.54 ug/L	234.54 ppb	10:09:16
3	Cd 226.502†	36616.5	40654.0	435.24 ug/L	435.24 ppb	10:09:36
3	Co 228.616†	18168.8	20139.8	438.90 ug/L	438.90 ppb	10:09:36
3	Cr 267.716†	38418.7	42344.6	463.17 ug/L	463.17 ppb	10:09:16
3	Cu 324.752†	182676.4	192662.2	550.06 ug/L	550.06 ppb	10:09:16
3	Mn 257.610†	377256.0	416239.2	464.85 ug/L	464.85 ppb	10:09:16
3	Mo 202.031†	5991.3	6594.6	470.14 ug/L	470.14 ppb	10:09:36
3	Ni 231.604†	15451.9	16975.0	426.34 ug/L	426.34 ppb	10:09:36
3	P 214.914†	4132.9	4326.6	2314.3 ug/L	2314.3 ppb	10:09:36
3	Pb 220.353†	2486.2	2806.7	453.96 ug/L	453.96 ppb	10:09:36
3	S 181.975 Axial†	1793.0	1903.6	2524.6 ug/L	2524.6 ppb	10:09:36
3	Sb 206.836†	1466.3	1589.5	538.41 ug/L	538.41 ppb	10:09:36
3	Se 196.026†	2888.7	3208.9	2501.0 ug/L	2501.0 ppb	10:09:36
3	Si 251.611†	157227.3	173182.3	5125.8 ug/L	5125.8 ppb	10:09:16
3	Sn 189.927†	1962.6	2168.2	473.54 ug/L	473.54 ppb	10:09:36
3	Ti 334.940†	281058.1	311372.3	497.23 ug/L	497.23 ppb	10:09:16
3	Tl 190.801†	1227.1	1392.4	448.68 ug/L	448.68 ppb	10:09:36
3	U 409.014†	16728.4	19541.6	466.37 ug/L	466.37 ppb	10:09:16
3	V 292.402†	70744.1	79539.7	483.68 ug/L	483.68 ppb	10:09:16
3	Zn 213.857†	49881.9	54367.8	484.89 ug/L	484.89 ppb	10:09:16
3	SiO2†	155898.0	171696.5	10847 ug/L	10847 ppb	10:09:52

## Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	808977.9	90.099 %	0.5353			0.59%
Sc Radial	4831.5	90.5 %	2.47			2.73%
Y 371.029	697916.7	84.789 %	0.5226			0.62%
Y RADIAL	5215.3	90.59 %	2.252			2.49%
Ag 328.068†	50536.4	267.22 ug/L	1.094	267.22 ppb	1.094	0.41%
QC value within limits for Ag 328.068 Recovery = 106.89%						
Al 396.153Radial†	705152.4	534150 ug/L	21084.6	534150 ppb	21084.6	3.95%
QC value within limits for Al 396.153Radial Recovery = 106.83%						
As 188.979†	1116.2	504.06 ug/L	3.367	504.06 ppb	3.367	0.67%
QC value within limits for As 188.979 Recovery = 100.81%						
B 249.677†	23808.3	490.10 ug/L	0.417	490.10 ppb	0.417	0.09%
QC value within limits for B 249.677 Recovery = 98.02%						
Ba 233.527†	60132.2	480.83 ug/L	0.667	480.83 ppb	0.667	0.14%
QC value within limits for Ba 233.527 Recovery = 96.17%						
Be 313.107†	661715.8	234.50 ug/L	0.181	234.50 ppb	0.181	0.08%
QC value within limits for Be 313.107 Recovery = 93.80%						
Ca 317.933Radial†	303918.8	488490 ug/L	18017.7	488490 ppb	18017.7	3.69%

QC value within limits for Ca 317.933 Radial Recovery = 97.70%

Cd 226.502†	40784.3	436.37 ug/L	3.725	436.37 ppb	3.725	0.85%
QC value within limits for Cd 226.502 Recovery = 87.27%						
Co 228.616†	20193.6	440.04 ug/L	3.845	440.04 ppb	3.845	0.87%
QC value within limits for Co 228.616 Recovery = 88.01%						
Cr 267.716†	42376.0	463.57 ug/L	0.870	463.57 ppb	0.870	0.19%
QC value within limits for Cr 267.716 Recovery = 92.71%						
Cu 324.752†	192511.4	549.80 ug/L	1.323	549.80 ppb	1.323	0.24%
QC value within limits for Cu 324.752 Recovery = 109.96%						
Fe 238.204 Radial†	20274.7	189490 ug/L	3522.1	189490 ppb	3522.1	1.86%
QC value within limits for Fe 238.204 Radial Recovery = 94.75%						
K 766.490 Radial†	30593.6	5422.7 ug/L	224.28	5422.7 ppb	224.28	4.14%
QC value within limits for K 766.490 Radial Recovery = 108.45%						
Mg 279.077 IEC†	14101.6	502800 ug/L	9407.2	502800 ppb	9407.2	1.87%
QC value within limits for Mg 279.077 IEC Recovery = 100.56%						
Mn 257.610†	416068.8	464.63 ug/L	0.466	464.63 ppb	0.466	0.10%
QC value within limits for Mn 257.610 Recovery = 92.93%						
Mo 202.031†	6604.9	471.29 ug/L	1.818	471.29 ppb	1.818	0.39%
QC value within limits for Mo 202.031 Recovery = 94.26%						
Na 589.592 Radial†	18689.7	5555.9 ug/L	93.27	5555.9 ppb	93.27	1.68%
QC value within limits for Na 589.592 Radial Recovery = 111.12%						
Ni 231.604†	16980.7	426.49 ug/L	3.097	426.49 ppb	3.097	0.73%
QC value within limits for Ni 231.604 Recovery = 85.30%						
P 214.914†	4336.8	2322.7 ug/L	14.46	2322.7 ppb	14.46	0.62%
QC value within limits for P 214.914 Recovery = 92.91%						
Pb 220.353†	2821.1	460.14 ug/L	5.357	460.14 ppb	5.357	1.16%
QC value within limits for Pb 220.353 Recovery = 92.03%						
S 181.975 Axial†	1902.3	2519.1 ug/L	21.66	2519.1 ppb	21.66	0.86%
QC value within limits for S 181.975 Axial Recovery = 100.76%						
Sb 206.836†	1600.9	541.77 ug/L	7.795	541.77 ppb	7.795	1.44%
QC value within limits for Sb 206.836 Recovery = 108.35%						
Se 196.026†	3214.9	2516.2 ug/L	13.60	2516.2 ppb	13.60	0.54%
QC value within limits for Se 196.026 Recovery = 100.65%						
Si 251.611†	173089.3	5123.1 ug/L	2.40	5123.1 ppb	2.40	0.05%
QC value within limits for Si 251.611 Recovery = 102.46%						
Sn 189.927†	2169.9	476.44 ug/L	3.927	476.44 ppb	3.927	0.82%
QC value within limits for Sn 189.927 Recovery = 95.29%						
Sr 421.552†	82066.5	523.03 ug/L	21.536	523.03 ppb	21.536	4.12%
QC value within limits for Sr 421.552 Recovery = 104.61%						
Ti 334.940†	311103.8	498.40 ug/L	1.294	498.40 ppb	1.294	0.26%
QC value within limits for Ti 334.940 Recovery = 99.68%						
Tl 190.801†	1400.0	451.12 ug/L	2.719	451.12 ppb	2.719	0.60%
QC value within limits for Tl 190.801 Recovery = 90.22%						
U 409.014†	19521.7	465.51 ug/L	3.645	465.51 ppb	3.645	0.78%
QC value within limits for U 409.014 Recovery = 93.10%						
V 292.402†	79502.7	483.16 ug/L	1.328	483.16 ppb	1.328	0.27%
QC value within limits for V 292.402 Recovery = 96.63%						
Zn 213.857†	54406.2	484.94 ug/L	0.612	484.94 ppb	0.612	0.13%
QC value within limits for Zn 213.857 Recovery = 96.99%						
SiO2†	171746.2	10850 ug/L	118.5	10850 ppb	118.5	1.09%
QC value within limits for SiO2 Recovery = 101.45%						

All analyte(s) passed QC.

Sequence No.: 11  
 Sample ID: LR1  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 15  
 Date Collected: 1/26/2010 10:12:02  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4645.9	4645.9	87.0 %		10:14:00
1	Y RADIAL	5024.7	5024.7	87.28 %		10:14:00
1	Al 396.153Radial†	612943.2	704519.2	533700 ug/L	533700 ppb	10:13:55
1	Ca 317.933Radial†	263608.8	302976.6	486970 ug/L	486970 ppb	10:13:55
1	Fe 238.204 Radial†	40997.7	47116.4	440330 ug/L	440330 ppb	10:14:00
1	K 766.490 Radial†	3429.1	1438.0	-101.18 ug/L	-101.18 ppb	10:14:00
1	Mg 279.077 IEC†	12176.3	13994.7	498720 ug/L	498720 ppb	10:14:00
1	Na 589.592 Radial†	1507847.4	1733695.5	515380 ug/L	515380 ppb	10:13:55
1	Sr 421.552†	747.8	852.4	1.8345 ug/L	1.8345 ppb	10:14:00
1	Sc 361.383	772915.2	772915.2	86.083 %		10:14:28
1	Y 371.029	667874.5	667874.5	81.139 %		10:14:28
1	Ag 328.068†	-24214.7	-28425.5	5.9459 ug/L	5.9459 ppb	10:14:28
1	As 188.979†	-174.8	-172.9	32.271 ug/L	32.271 ppb	10:14:48
1	B 249.677†	1895.6	2442.5	-17.957 ug/L	-17.957 ppb	10:14:28
1	Ba 233.527†	-1435.9	-1665.0	0.3312 ug/L	0.3312 ppb	10:14:48
1	Be 313.107†	-12543.2	-9470.6	-3.4025 ug/L	-3.4025 ppb	10:14:28
1	Cd 226.502†	3612.6	4402.8	6.4501 ug/L	6.4501 ppb	10:14:48
1	Co 228.616†	165.5	262.3	-0.6478 ug/L	-0.6478 ppb	10:14:48
1	Cr 267.716†	92.7	13.7	3.1507 ug/L	3.1507 ppb	10:14:48
1	Cu 324.752†	3140.0	-5480.4	0.1227 ug/L	0.1227 ppb	10:14:28
1	Mn 257.610†	-25492.5	-30103.8	-10.672 ug/L	-10.672 ppb	10:14:28
1	Mo 202.031†	-455.7	-552.9	2.2395 ug/L	2.2395 ppb	10:14:48
1	Ni 231.604†	304.5	260.1	6.5328 ug/L	6.5328 ppb	10:14:48
1	P 214.914†	575.8	430.2	23.277 ug/L	23.277 ppb	10:14:48
1	Pb 220.353†	-490.6	-509.5	17.099 ug/L	17.099 ppb	10:14:48
1	S 181.975 Axial†	113.6	54.9	-24.396 ug/L	-24.396 ppb	10:14:48
1	Sb 206.836†	52.8	31.0	5.1806 ug/L	5.1806 ppb	10:14:48
1	Se 196.026†	-2319.5	-2676.6	-53.978 ug/L	-53.978 ppb	10:14:48
1	Si 251.611†	-336.8	-887.2	-25.823 ug/L	-25.823 ppb	10:14:48
1	Sn 189.927†	-386.1	-448.2	-1.0007 ug/L	-1.0007 ppb	10:14:48
1	Ti 334.940†	-16109.5	-17807.4	-8.8031 ug/L	-8.8031 ppb	10:14:28
1	Tl 190.801†	-115.1	-96.8	-31.432 ug/L	-31.432 ppb	10:14:48
1	U 409.014†	484755.7	564189.4	14057 ug/L	14057 ppb	10:14:28
1	V 292.402†	2453.6	4243.8	-1.6032 ug/L	-1.6032 ppb	10:14:28
1	Zn 213.857†	6099.6	6352.3	16.434 ug/L	16.434 ppb	10:14:48
1	SiO2†	-208.5	-755.6	-46.762 ug/L	-46.762 ppb	10:15:45
2	Sc Radial	4757.3	4757.3	89.1 %		10:14:10
2	Y RADIAL	5166.2	5166.2	89.74 %		10:14:10
2	Al 396.153Radial†	608754.8	683325.3	517640 ug/L	517640 ppb	10:14:05
2	Ca 317.933Radial†	262404.0	294531.4	473400 ug/L	473400 ppb	10:14:05
2	Fe 238.204 Radial†	41753.4	46861.5	437940 ug/L	437940 ppb	10:14:10
2	K 766.490 Radial†	3251.6	1146.4	-143.92 ug/L	-143.92 ppb	10:14:10
2	Mg 279.077 IEC†	12381.3	13897.2	495250 ug/L	495250 ppb	10:14:10
2	Na 589.592 Radial†	1498032.8	1682107.0	500040 ug/L	500040 ppb	10:14:05
2	Sr 421.552†	765.0	851.6	1.9307 ug/L	1.9307 ppb	10:14:10
2	Sc 361.383	772649.8	772649.8	86.053 %		10:14:54
2	Y 371.029	668937.3	668937.3	81.268 %		10:14:54
2	Ag 328.068†	-23940.6	-28116.7	6.6625 ug/L	6.6625 ppb	10:14:54
2	As 188.979†	-181.4	-180.6	28.539 ug/L	28.539 ppb	10:15:14
2	B 249.677†	1756.8	2281.9	-21.093 ug/L	-21.093 ppb	10:14:54
2	Ba 233.527†	-1423.6	-1651.3	0.3679 ug/L	0.3679 ppb	10:15:14
2	Be 313.107†	-12402.2	-9311.8	-3.3458 ug/L	-3.3458 ppb	10:14:54
2	Cd 226.502†	3621.5	4414.6	6.8246 ug/L	6.8246 ppb	10:15:14
2	Co 228.616†	171.7	269.4	-0.4550 ug/L	-0.4550 ppb	10:15:14
2	Cr 267.716†	104.2	27.1	3.2564 ug/L	3.2564 ppb	10:15:14
2	Cu 324.752†	2954.9	-5694.3	-0.5947 ug/L	-0.5947 ppb	10:14:54
2	Mn 257.610†	-25727.5	-30387.0	-11.083 ug/L	-11.083 ppb	10:14:54
2	Mo 202.031†	-446.0	-541.9	2.6479 ug/L	2.6479 ppb	10:15:14
2	Ni 231.604†	321.0	279.4	7.0176 ug/L	7.0176 ppb	10:15:14

2	P 214.914†	595.7	453.5	34.464 ug/L	34.464 ppb	10:15:14
2	Pb 220.353†	-497.5	-517.8	12.602 ug/L	12.602 ppb	10:15:14
2	S 181.975 Axial†	94.2	32.5	-52.286 ug/L	-52.286 ppb	10:15:14
2	Sb 206.836†	46.6	23.9	3.1939 ug/L	3.1939 ppb	10:15:14
2	Se 196.026†	-2317.2	-2674.8	-61.842 ug/L	-61.842 ppb	10:15:14
2	Si 251.611†	-346.3	-898.4	-26.165 ug/L	-26.165 ppb	10:15:14
2	Sn 189.927†	-382.4	-444.0	-2.3452 ug/L	-2.3452 ppb	10:15:14
2	Ti 334.940†	-15941.1	-17618.1	-10.044 ug/L	-10.044 ppb	10:14:54
2	Tl 190.801†	-105.9	-86.2	-28.039 ug/L	-28.039 ppb	10:15:14
2	U 409.014†	484051.8	563564.9	14042 ug/L	14042 ppb	10:14:54
2	V 292.402†	2511.9	4312.6	-0.9154 ug/L	-0.9154 ppb	10:14:54
2	Zn 213.857†	6095.9	6350.4	16.645 ug/L	16.645 ppb	10:15:14
2	SiO2†	-313.0	-877.2	-54.468 ug/L	-54.468 ppb	10:15:50
3	Sc Radial	4765.7	4765.7	89.2 %		10:14:21
3	Y RADIAL	5129.6	5129.6	89.10 %		10:14:21
3	Al 396.153Radial†	612444.6	686252.5	519860 ug/L	519860 ppb	10:14:16
3	Ca 317.933Radial†	263051.2	294736.1	473730 ug/L	473730 ppb	10:14:16
3	Fe 238.204 Radial†	41494.8	46489.0	434460 ug/L	434460 ppb	10:14:21
3	K 766.490 Radial†	3310.7	1206.2	-133.73 ug/L	-133.73 ppb	10:14:21
3	Mg 279.077 IEC†	12335.2	13820.9	492530 ug/L	492530 ppb	10:14:21
3	Na 589.592 Radial†	1505450.7	1687448.1	501630 ug/L	501630 ppb	10:14:16
3	Sr 421.552†	730.3	811.3	1.6691 ug/L	1.6691 ppb	10:14:21
3	Sc 361.383	773612.1	773612.1	86.161 %		10:15:19
3	Y 371.029	669300.1	669300.1	81.312 %		10:15:19
3	Ag 328.068†	-24009.9	-28162.5	5.3114 ug/L	5.3114 ppb	10:15:19
3	As 188.979†	-190.3	-190.7	23.617 ug/L	23.617 ppb	10:15:40
3	B 249.677†	1765.8	2289.9	-20.354 ug/L	-20.354 ppb	10:15:19
3	Ba 233.527†	-1493.6	-1730.4	-0.3626 ug/L	-0.3626 ppb	10:15:40
3	Be 313.107†	-12392.9	-9283.0	-3.3371 ug/L	-3.3371 ppb	10:15:19
3	Cd 226.502†	3643.5	4434.9	7.4175 ug/L	7.4175 ppb	10:15:40
3	Co 228.616†	184.0	283.5	-0.0993 ug/L	-0.0993 ppb	10:15:40
3	Cr 267.716†	92.9	13.9	3.0318 ug/L	3.0318 ppb	10:15:40
3	Cu 324.752†	3245.7	-5361.0	0.1381 ug/L	0.1381 ppb	10:15:19
3	Mn 257.610†	-25660.9	-30272.6	-11.187 ug/L	-11.187 ppb	10:15:19
3	Mo 202.031†	-464.9	-563.2	0.9239 ug/L	0.9239 ppb	10:15:40
3	Ni 231.604†	300.7	255.3	6.4121 ug/L	6.4121 ppb	10:15:40
3	P 214.914†	581.4	436.0	27.787 ug/L	27.787 ppb	10:15:40
3	Pb 220.353†	-459.5	-472.9	19.046 ug/L	19.046 ppb	10:15:40
3	S 181.975 Axial†	93.4	31.4	-54.211 ug/L	-54.211 ppb	10:15:40
3	Sb 206.836†	64.5	44.5	9.9375 ug/L	9.9375 ppb	10:15:40
3	Se 196.026†	-2314.0	-2667.7	-69.116 ug/L	-69.116 ppb	10:15:40
3	Si 251.611†	-397.8	-957.7	-27.902 ug/L	-27.902 ppb	10:15:40
3	Sn 189.927†	-381.1	-442.0	-1.9728 ug/L	-1.9728 ppb	10:15:40
3	Ti 334.940†	-16327.4	-18043.5	-10.440 ug/L	-10.440 ppb	10:15:19
3	Tl 190.801†	-112.0	-93.0	-30.230 ug/L	-30.230 ppb	10:15:40
3	U 409.014†	485762.5	564850.6	14075 ug/L	14075 ppb	10:15:19
3	V 292.402†	2455.5	4243.5	-0.8485 ug/L	-0.8485 ppb	10:15:19
3	Zn 213.857†	6174.3	6432.6	17.751 ug/L	17.751 ppb	10:15:40
3	SiO2†	-468.6	-1057.2	-65.818 ug/L	-65.818 ppb	10:15:55

## Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	773059.0	86.099 %		0.0554			0.06%
Sc Radial	4722.9	88.4 %		1.25			1.42%
Y 371.029	668703.9	81.240 %		0.0900			0.11%
Y RADIAL	5106.8	88.70 %		1.275			1.44%
Ag 328.068†	-28234.9	5.9733 ug/L		0.67597	5.9733 ppb	0.67597	11.32%
Al 396.153Radial†	691365.7	523730 ug/L		8700.2	523730 ppb	8700.2	1.66%
QC value within limits for Al 396.153Radial Recovery = 104.75%							
As 188.979†	-181.4	28.143 ug/L		4.3405	28.143 ppb	4.3405	15.42%
B 249.677†	2338.1	-19.801 ug/L		1.6392	-19.801 ppb	1.6392	8.28%
Ba 233.527†	-1682.2	0.1122 ug/L		0.41156	0.1122 ppb	0.41156	366.91%
Be 313.107†	-9355.1	-3.3618 ug/L		0.03549	-3.3618 ppb	0.03549	1.06%
Ca 317.933Radial†	297414.7	478030 ug/L		7743.7	478030 ppb	7743.7	1.62%
QC value within limits for Ca 317.933Radial Recovery = 95.61%							
Cd 226.502†	4417.5	6.8974 ug/L		0.48776	6.8974 ppb	0.48776	7.07%
Co 228.616†	271.7	-0.4007 ug/L		0.27821	-0.4007 ppb	0.27821	69.43%
Cr 267.716†	18.2	3.1463 ug/L		0.11239	3.1463 ppb	0.11239	3.57%
Cu 324.752†	-5511.9	-0.1113 ug/L		0.41869	-0.1113 ppb	0.41869	376.20%

Fe 238.204 Radial†	46822.3	437580 ug/L	2948.9	437580 ppb	2948.9	0.67%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 87.52%						
K 766.490 Radial†	1263.5	-126.28 ug/L	22.324	-126.28 ppb	22.324	17.68%
Mg 279.077 IEC†	13904.3	495500 ug/L	3103.9	495500 ppb	3103.9	0.63%
QC value within limits for Mg 279.077 IEC Recovery = 99.10%						
Mn 257.610†	-30254.5	-10.981 ug/L	0.2722	-10.981 ppb	0.2722	2.48%
Mo 202.031†	-552.7	1.9371 ug/L	0.90088	1.9371 ppb	0.90088	46.51%
Na 589.592 Radial†	1701083.5	505680 ug/L	8433.2	505680 ppb	8433.2	1.67%
QC value within limits for Na 589.592 Radial Recovery = 101.14%						
Ni 231.604†	264.9	6.6542 ug/L	0.32049	6.6542 ppb	0.32049	4.82%
P 214.914†	439.9	28.509 ug/L	5.6284	28.509 ppb	5.6284	19.74%
Pb 220.353†	-500.1	16.249 ug/L	3.3049	16.249 ppb	3.3049	20.34%
S 181.975 Axial†	39.6	-43.631 ug/L	16.6859	-43.631 ppb	16.6859	38.24%
Sb 206.836†	33.2	6.1040 ug/L	3.46534	6.1040 ppb	3.46534	56.77%
Se 196.026†	-2673.0	-61.645 ug/L	7.5706	-61.645 ppb	7.5706	12.28%
Si 251.611†	-914.4	-26.630 ug/L	1.1151	-26.630 ppb	1.1151	4.19%
Sn 189.927†	-444.7	-1.7729 ug/L	0.69417	-1.7729 ppb	0.69417	39.15%
Sr 421.552†	838.4	1.8114 ug/L	0.13233	1.8114 ppb	0.13233	7.31%
Ti 334.940†	-17823.0	-9.7626 ug/L	0.85426	-9.7626 ppb	0.85426	8.75%
Tl 190.801†	-92.0	-29.900 ug/L	1.7201	-29.900 ppb	1.7201	5.75%
U 409.014†	564201.6	14058 ug/L	16.3	14058 ppb	16.3	0.12%
QC value within limits for U 409.014 Recovery = 93.72%						
V 292.402†	4266.6	-1.1224 ug/L	0.41775	-1.1224 ppb	0.41775	37.22%
Zn 213.857†	6378.5	16.944 ug/L	0.7074	16.944 ppb	0.7074	4.17%
SiO2†	-896.7	-55.683 ug/L	9.5855	-55.683 ppb	9.5855	17.21%

QC Failed. Continue with analysis.



Sequence No.: 12

Sample ID: LR2

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 16

Date Collected: 1/26/2010 10:18:05

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5207.0	5207.0	97.5 %		10:20:03
1	Y RADIAL	5586.5	5586.5	97.03 %		10:20:03
1	Al 396.153Radial†	592.5	598.5	29.601 ug/L	29.601 ppb	10:20:03
1	Ca 317.933Radial†	32.1	12.7	20.420 ug/L	20.420 ppb	10:20:23
1	Fe 238.204 Radial†	-19.6	-27.3	7.5818 ug/L	7.5818 ppb	10:20:23
1	K 766.490 Radial†	1648379.4	1687992.8	308350 ug/L	308350 ppb	10:19:58
1	Mg 279.077 IEC†	-7.3	-8.5	-211.18 ug/L	-211.18 ppb	10:20:23
1	Na 589.592 Radial†	-277.7	262.9	78.147 ug/L	78.147 ppb	10:20:03
1	Sr 421.552†	1549691.8	1589280.1	10200 ug/L	10200 ppb	10:19:58
1	Sc 361.383	874848.0	874848.0	97.436 %		10:21:40
1	Y 371.029	758195.9	758195.9	92.112 %		10:21:40
1	Ag 328.068†	-7176.3	-7661.2	6.4330 ug/L	6.4330 ppb	10:21:46
1	As 188.979†	20253.0	20816.2	8579.6 ug/L	8579.6 ppb	10:21:46
1	B 249.677†	211582.3	217391.3	4742.5 ug/L	4742.5 ppb	10:21:40
1	Ba 233.527†	1688325.3	1732763.2	13679 ug/L	13679 ppb	10:21:40
1	Be 313.107†	7745227.2	7954173.5	2828.1 ug/L	2828.1 ppb	10:21:34
1	Cd 226.502†	807433.6	828890.6	9264.6 ug/L	9264.6 ppb	10:21:40
1	Co 228.616†	389631.2	399955.8	8764.4 ug/L	8764.4 ppb	10:21:46
1	Cr 267.716†	2063525.6	2117741.4	22971 ug/L	22971 ppb	10:21:40
1	Cu 324.752†	6900835.9	7073330.3	19842 ug/L	19842 ppb	10:21:34
1	Mn 257.610†	8084783.9	8297076.6	9302.4 ug/L	9302.4 ppb	10:21:34
1	Mo 202.031†	124785.3	128045.9	8738.9 ug/L	8738.9 ppb	10:21:46
1	Ni 231.604†	337445.5	346233.0	8696.1 ug/L	8696.1 ppb	10:21:46
1	P 214.914†	27588.6	28075.9	11982 ug/L	11982 ppb	10:21:46
1	Pb 220.353†	170940.1	175499.4	22039 ug/L	22039 ppb	10:21:46
1	S 181.975 Axial†	32738.4	33523.0	46155 ug/L	46155 ppb	10:21:46
1	Sb 206.836†	27325.3	28014.2	9705.7 ug/L	9705.7 ppb	10:21:46
1	Se 196.026†	14817.7	15225.7	8808.2 ug/L	8808.2 ppb	10:21:46
1	Si 251.611†	1473739.1	1512030.3	44694 ug/L	44694 ppb	10:21:40
1	Sn 189.927†	50819.6	52157.4	9591.0 ug/L	9591.0 ppb	10:21:46
1	Ti 334.940†	6230699.3	6395590.9	9743.1 ug/L	9743.1 ppb	10:21:34
1	Tl 190.801†	26856.3	27600.0	8897.4 ug/L	8897.4 ppb	10:21:46
1	U 409.014†	77.9	1142.8	-22.771 ug/L	-22.771 ppb	10:21:46
1	V 292.402†	1490666.3	1531292.6	9627.6 ug/L	9627.6 ppb	10:21:40
1	Zn 213.857†	1401987.5	1438152.9	13313 ug/L	13313 ppb	10:21:40
1	SiO2†	1531352.3	1571142.4	99128 ug/L	99128 ppb	10:22:33
2	Sc Radial	5189.5	5189.5	97.2 %		10:20:33
2	Y RADIAL	5560.9	5560.9	96.59 %		10:20:33
2	Al 396.153Radial†	604.8	613.2	1.4686 ug/L	1.4686 ppb	10:20:33
2	Ca 317.933Radial†	27.9	8.5	13.669 ug/L	13.669 ppb	10:20:53
2	Fe 238.204 Radial†	-20.9	-28.7	19.431 ug/L	19.431 ppb	10:20:53
2	K 766.490 Radial†	1622973.2	1667544.4	304620 ug/L	304620 ppb	10:20:28
2	Mg 279.077 IEC†	-5.4	-6.5	-132.53 ug/L	-132.53 ppb	10:20:53
2	Na 589.592 Radial†	-304.9	233.9	69.534 ug/L	69.534 ppb	10:20:33
2	Sr 421.552†	1520045.7	1564127.9	10038 ug/L	10038 ppb	10:20:28
2	Sc 361.383	854709.8	854709.8	95.193 %		10:22:00
2	Y 371.029	740540.6	740540.6	89.967 %		10:22:00
2	Ag 328.068†	-7740.3	-8427.2	4.6708 ug/L	4.6708 ppb	10:22:05
2	As 188.979†	21891.8	23027.5	9483.2 ug/L	9483.2 ppb	10:22:05
2	B 249.677†	214363.9	225429.8	4916.5 ug/L	4916.5 ppb	10:22:00
2	Ba 233.527†	1710841.0	1797242.5	14188 ug/L	14188 ppb	10:22:00
2	Be 313.107†	7647408.3	8038706.8	2858.1 ug/L	2858.1 ppb	10:21:54
2	Cd 226.502†	818865.2	860424.4	9617.3 ug/L	9617.3 ppb	10:22:00
2	Co 228.616†	416796.7	437915.1	9598.0 ug/L	9598.0 ppb	10:22:05
2	Cr 267.716†	2091850.6	2197396.2	23835 ug/L	23835 ppb	10:22:00
2	Cu 324.752†	6819344.2	7154596.6	20070 ug/L	20070 ppb	10:21:54
2	Mn 257.610†	7988964.5	8391921.5	9408.8 ug/L	9408.8 ppb	10:21:54
2	Mo 202.031†	133205.7	139909.0	9548.5 ug/L	9548.5 ppb	10:22:05
2	Ni 231.604†	360437.4	378546.0	9507.7 ug/L	9507.7 ppb	10:22:05

2	P 214.914†	29899.2	31170.4	13690 ug/L	13690 ppb	10:22:05
2	Pb 220.353†	182634.9	191918.4	24102 ug/L	24102 ppb	10:22:05
2	S 181.975 Axial†	35539.6	37257.4	51297 ug/L	51297 ppb	10:22:05
2	Sb 206.836†	29527.6	30988.5	10733 ug/L	10733 ppb	10:22:05
2	Se 196.026†	16270.3	17109.9	9897.5 ug/L	9897.5 ppb	10:22:05
2	Si 251.611†	1493583.0	1568513.8	46357 ug/L	46357 ppb	10:22:00
2	Sn 189.927†	54371.0	57117.1	10503 ug/L	10503 ppb	10:22:05
2	Ti 334.940†	6156000.6	6467788.3	9852.9 ug/L	9852.9 ppb	10:21:54
2	Tl 190.801†	28735.4	30223.5	9733.7 ug/L	9733.7 ppb	10:22:05
2	U 409.014†	155.9	1226.7	-22.606 ug/L	-22.606 ppb	10:22:05
2	V 292.402†	1510862.6	1588555.5	9994.7 ug/L	9994.7 ppb	10:22:00
2	Zn 213.857†	1419289.7	1490231.1	13793 ug/L	13793 ppb	10:22:00
2	SiO2†	1541505.3	1618838.7	102120 ug/L	102120 ppb	10:22:40
3	Sc Radial	5368.9	5368.9	101 %		10:21:04
3	Y RADIAL	5740.0	5740.0	99.70 %		10:21:04
3	Al 396.153Radial†	601.9	589.5	-33.075 ug/L	-33.075 ppb	10:21:04
3	Ca 317.933Radial†	27.9	7.5	12.128 ug/L	12.128 ppb	10:21:24
3	Fe 238.204 Radial†	-23.8	-30.8	9.1186 ug/L	9.1186 ppb	10:21:24
3	K 766.490 Radial†	1640207.1	1628890.9	297560 ug/L	297560 ppb	10:20:59
3	Mg 279.077 IEC†	-5.2	-6.2	-116.63 ug/L	-116.63 ppb	10:21:24
3	Na 589.592 Radial†	-270.1	279.0	82.934 ug/L	82.934 ppb	10:21:04
3	Sr 421.552†	1540648.5	1532363.6	9834.2 ug/L	9834.2 ppb	10:20:59
3	Sc 361.383	846991.1	846991.1	94.333 %		10:22:20
3	Y 371.029	732830.7	732830.7	89.031 %		10:22:20
3	Ag 328.068†	-7897.1	-8667.6	4.1798 ug/L	4.1798 ppb	10:22:25
3	As 188.979†	22637.3	24027.3	9892.5 ug/L	9892.5 ppb	10:22:25
3	B 249.677†	215594.9	228786.9	4989.1 ug/L	4989.1 ppb	10:22:20
3	Ba 233.527†	1718251.9	1821476.9	14379 ug/L	14379 ppb	10:22:20
3	Be 313.107†	7668912.1	8134713.2	2892.3 ug/L	2892.3 ppb	10:22:13
3	Cd 226.502†	823505.8	873183.1	9760.1 ug/L	9760.1 ppb	10:22:20
3	Co 228.616†	427725.6	453490.7	9940.0 ug/L	9940.0 ppb	10:22:25
3	Cr 267.716†	2101234.2	2227369.4	24160 ug/L	24160 ppb	10:22:20
3	Cu 324.752†	6852725.1	7255266.3	20353 ug/L	20353 ppb	10:22:13
3	Mn 257.610†	8015481.1	8496511.6	9526.0 ug/L	9526.0 ppb	10:22:13
3	Mo 202.031†	136735.2	144925.8	9890.9 ug/L	9890.9 ppb	10:22:25
3	Ni 231.604†	369684.2	391798.9	9840.5 ug/L	9840.5 ppb	10:22:25
3	P 214.914†	30656.1	32259.0	14251 ug/L	14251 ppb	10:22:25
3	Pb 220.353†	187366.9	198683.1	24951 ug/L	24951 ppb	10:22:25
3	S 181.975 Axial†	36509.4	38625.7	53181 ug/L	53181 ppb	10:22:25
3	Sb 206.836†	30318.6	32109.7	11121 ug/L	11121 ppb	10:22:25
3	Se 196.026†	16784.5	17810.8	10303 ug/L	10303 ppb	10:22:25
3	Si 251.611†	1501806.8	1591530.1	47035 ug/L	47035 ppb	10:22:20
3	Sn 189.927†	55742.7	59091.7	10866 ug/L	10866 ppb	10:22:25
3	Ti 334.940†	6175380.2	6547265.3	9974.0 ug/L	9974.0 ppb	10:22:13
3	Tl 190.801†	29521.0	31331.3	10088 ug/L	10088 ppb	10:22:25
3	U 409.014†	146.7	1218.4	-23.537 ug/L	-23.537 ppb	10:22:25
3	V 292.402†	1516669.0	1609174.6	10128 ug/L	10128 ppb	10:22:20
3	Zn 213.857†	1427141.7	1512142.1	13995 ug/L	13995 ppb	10:22:20
3	SiO2†	1527675.5	1618935.4	102120 ug/L	102120 ppb	10:22:47

## Mean Data: LR2

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	858849.6	95.654 %		1.6018			1.67%
Sc Radial	5255.2	98.4 %		1.85			1.88%
Y 371.029	743855.7	90.370 %		1.5798			1.75%
Y RADIAL	5629.2	97.78 %		1.683			1.72%
Ag 328.068†	-8252.0	5.0945 ug/L		1.18484	5.0945 ppb	1.18484	23.26%
Al 396.153Radial†	600.4	-0.6687 ug/L		31.39251	-0.6687 ppb	31.39251	>999.9%
As 188.979†	22623.7	9318.4 ug/L		671.81	9318.4 ppb	671.81	7.21%
QC value within limits for As 188.979 Recovery = 93.18%							
B 249.677†	223869.3	4882.7 ug/L		126.70	4882.7 ppb	126.70	2.59%
QC value within limits for B 249.677 Recovery = 97.65%							
Ba 233.527†	1783827.5	14082 ug/L		362.0	14082 ppb	362.0	2.57%
QC value within limits for Ba 233.527 Recovery = 93.88%							
Be 313.107†	8042531.1	2859.5 ug/L		32.13	2859.5 ppb	32.13	1.12%
QC value within limits for Be 313.107 Recovery = 95.32%							
Ca 317.933Radial†	9.6	15.406 ug/L		4.4101	15.406 ppb	4.4101	28.63%
Cd 226.502†	854166.0	9547.3 ug/L		255.06	9547.3 ppb	255.06	2.67%
QC value within limits for Cd 226.502 Recovery = 95.47%							

Co 228.616†	430453.9	9434.1 ug/L	604.71	9434.1 ppb	604.71	6.41%
QC value within limits for Co 228.616 Recovery = 94.34%						
Cr 267.716†	2180835.7	23656 ug/L	614.6	23656 ppb	614.6	2.60%
QC value within limits for Cr 267.716 Recovery = 94.62%						
Cu 324.752†	7161064.4	20089 ug/L	255.7	20089 ppb	255.7	1.27%
QC value within limits for Cu 324.752 Recovery = 100.44%						
Fe 238.204 Radial†	-28.9	12.044 ug/L	6.4436	12.044 ppb	6.4436	53.50%
K 766.490 Radial†	1661476.0	303510 ug/L	5483.9	303510 ppb	5483.9	1.81%
QC value within limits for K 766.490 Radial Recovery = 101.17%						
Mg 279.077 IEC†	-7.1	-153.44 ug/L	50.626	-153.44 ppb	50.626	32.99%
Mn 257.610†	8395169.9	9412.4 ug/L	111.84	9412.4 ppb	111.84	1.19%
QC value within limits for Mn 257.610 Recovery = 94.12%						
Mo 202.031†	137626.9	9392.7 ug/L	591.59	9392.7 ppb	591.59	6.30%
QC value within limits for Mo 202.031 Recovery = 93.93%						
Na 589.592 Radial†	258.6	76.872 ug/L	6.7903	76.872 ppb	6.7903	8.83%
Ni 231.604†	372192.6	9348.1 ug/L	588.67	9348.1 ppb	588.67	6.30%
QC value within limits for Ni 231.604 Recovery = 93.48%						
P 214.914†	30501.8	13308 ug/L	1182.1	13308 ppb	1182.1	8.88%
QC value less than the lower limit for P 214.914 Recovery = 88.72%						
Pb 220.353†	188700.3	23697 ug/L	1497.8	23697 ppb	1497.8	6.32%
QC value within limits for Pb 220.353 Recovery = 94.79%						
S 181.975 Axial†	36468.7	50211 ug/L	3636.5	50211 ppb	3636.5	7.24%
QC value within limits for S 181.975 Axial Recovery = 100.42%						
Sb 206.836†	30370.8	10520 ug/L	731.5	10520 ppb	731.5	6.95%
QC value within limits for Sb 206.836 Recovery = 105.20%						
Se 196.026†	16715.4	9669.5 ug/L	772.90	9669.5 ppb	772.90	7.99%
QC value within limits for Se 196.026 Recovery = 96.69%						
Si 251.611†	1557358.1	46029 ug/L	1204.8	46029 ppb	1204.8	2.62%
QC value within limits for Si 251.611 Recovery = 92.06%						
Sn 189.927†	56122.1	10320 ug/L	657.0	10320 ppb	657.0	6.37%
QC value within limits for Sn 189.927 Recovery = 103.20%						
Sr 421.552†	1561923.9	10024 ug/L	183.0	10024 ppb	183.0	1.83%
QC value within limits for Sr 421.552 Recovery = 100.24%						
Ti 334.940†	6470214.8	9856.7 ug/L	115.46	9856.7 ppb	115.46	1.17%
QC value within limits for Ti 334.940 Recovery = 98.57%						
Tl 190.801†	29718.3	9573.0 ug/L	611.29	9573.0 ppb	611.29	6.39%
QC value within limits for Tl 190.801 Recovery = 95.73%						
U 409.014†	1196.0	-22.971 ug/L	0.4970	-22.971 ppb	0.4970	2.16%
V 292.402†	1576340.9	9916.6 ug/L	258.96	9916.6 ppb	258.96	2.61%
QC value within limits for V 292.402 Recovery = 99.17%						
Zn 213.857†	1480175.4	13700 ug/L	349.9	13700 ppb	349.9	2.55%
QC value within limits for Zn 213.857 Recovery = 91.34%						
SiO2†	1602972.2	101120 ug/L	1727.9	101120 ppb	1727.9	1.71%
QC value within limits for SiO2 Recovery = 94.51%						
QC Failed. Continue with analysis.						

=====  
Analysis Begun

Start Time: 1/26/2010 10:38:56

Plasma On Time: 00:00:00

Logged In Analyst: Optima3

Technique: ICP Continuous

Spectrometer Model: Optima 5300 DV, S/N 077C7090601 Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\012610.sif

Batch ID:

Results Data Set: 012610

Results Library: C:\pe\Optima3\Results\Results.mdb  
=====

## Method Loaded

Method Name: General Eng.2AX

Method Last Saved: 1/26/2010 09:10:21

IEC File: 011110.iec

MSF File:

Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1

Autosampler Location: 7

Sample ID: CCV

Date Collected: 1/26/2010 10:38:58

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

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Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5709.5	5709.5	107 %		10:40:50
1	Y RADIAL	6139.2	6139.2	106.6 %		10:40:50
1	Al 396.153Radial†	6542.6	6110.2	4605.4 ug/L	4605.4 ppb	10:40:50

1	Ca 317.933Radial†	3195.2	2968.2	4770.8 ug/L	4770.8 ppb	10:41:10
1	Fe 238.204 Radial†	564.2	520.5	4879.5 ug/L	4879.5 ppb	10:41:10
1	K 766.490 Radial†	30504.7	26027.6	4748.8 ug/L	4748.8 ppb	10:40:50
1	Mg 279.077 IEC†	148.1	137.5	4905.2 ug/L	4905.2 ppb	10:41:10
1	Na 589.592 Radial†	33087.5	31494.4	9362.4 ug/L	9362.4 ppb	10:40:50
1	Sr 421.552†	79318.2	74179.5	476.03 ug/L	476.03 ppb	10:40:50
1	Sc 361.383	938569.5	938569.5	104.53 %		10:42:08
1	Y 371.029	823149.9	823149.9	100.00 %		10:42:08
1	Ag 328.068†	121397.9	115838.0	486.48 ug/L	486.48 ppb	10:42:13
1	As 188.979†	1221.4	1198.6	494.52 ug/L	494.52 ppb	10:42:33
1	B 249.677†	23250.5	22482.7	490.85 ug/L	490.85 ppb	10:42:13
1	Ba 233.527†	64251.2	61468.3	485.72 ug/L	485.72 ppb	10:42:13
1	Be 313.107†	1428011.9	1371193.7	484.80 ug/L	484.80 ppb	10:42:08
1	Cd 226.502†	45340.0	43580.3	486.71 ug/L	486.71 ppb	10:42:13
1	Co 228.616†	23578.3	22625.9	496.07 ug/L	496.07 ppb	10:42:13
1	Cr 267.716†	46813.4	44689.6	485.05 ug/L	485.05 ppb	10:42:13
1	Cu 324.752†	188322.0	171028.4	479.76 ug/L	479.76 ppb	10:42:13
1	Mn 257.610†	449448.4	429470.4	481.79 ug/L	481.79 ppb	10:42:08
1	Mo 202.031†	7360.0	7017.3	479.35 ug/L	479.35 ppb	10:42:33
1	Ni 231.604†	20329.8	19354.6	486.11 ug/L	486.11 ppb	10:42:13
1	P 214.914†	4663.6	4222.6	2287.7 ug/L	2287.7 ppb	10:42:33
1	Pb 220.353†	3960.9	3849.5	484.72 ug/L	484.72 ppb	10:42:33
1	S 181.975 Axial†	789.3	678.1	932.77 ug/L	932.77 ppb	10:42:33
1	Sb 206.836†	1539.2	1442.2	500.17 ug/L	500.17 ppb	10:42:33
1	Se 196.026†	847.4	828.6	495.79 ug/L	495.79 ppb	10:42:33
1	Si 251.611†	86090.8	81861.9	2419.7 ug/L	2419.7 ppb	10:42:13
1	Sn 189.927†	2747.7	2628.9	484.23 ug/L	484.23 ppb	10:42:33
1	Ti 334.940†	329323.4	315950.5	481.58 ug/L	481.58 ppb	10:42:13
1	Tl 190.801†	1504.0	1475.7	475.23 ug/L	475.23 ppb	10:42:33
1	U 409.014†	19231.5	19460.5	484.97 ug/L	484.97 ppb	10:42:13
1	V 292.402†	79895.1	77824.4	490.37 ug/L	490.37 ppb	10:42:13
1	Zn 213.857†	55169.2	52043.7	480.54 ug/L	480.54 ppb	10:42:13
1	SiO2†	85634.8	81408.2	5135.6 ug/L	5135.6 ppb	10:43:40
2	Sc Radial	5189.1	5189.1	97.2 %		10:41:15
2	Y RADIAL	5588.6	5588.6	97.07 %		10:41:15
2	Al 396.153Radial†	6568.7	6750.6	5090.4 ug/L	5090.4 ppb	10:41:15
2	Ca 317.933Radial†	3218.9	3292.3	5291.7 ug/L	5291.7 ppb	10:41:35
2	Fe 238.204 Radial†	568.5	577.9	5415.3 ug/L	5415.3 ppb	10:41:35
2	K 766.490 Radial†	30413.4	28794.7	5253.8 ug/L	5253.8 ppb	10:41:15
2	Mg 279.077 IEC†	152.9	156.4	5578.1 ug/L	5578.1 ppb	10:41:35
2	Na 589.592 Radial†	33068.7	34578.4	10279 ug/L	10279 ppb	10:41:15
2	Sr 421.552†	79365.7	81667.5	524.08 ug/L	524.08 ppb	10:41:15
2	Sc 361.383	933250.2	933250.2	103.94 %		10:42:39
2	Y 371.029	817518.6	817518.6	99.319 %		10:42:39
2	Ag 328.068†	119632.8	114801.8	482.31 ug/L	482.31 ppb	10:42:44
2	As 188.979†	1223.4	1207.2	498.11 ug/L	498.11 ppb	10:43:04
2	B 249.677†	22983.6	22352.7	487.93 ug/L	487.93 ppb	10:42:44
2	Ba 233.527†	63558.5	61152.2	483.24 ug/L	483.24 ppb	10:42:44
2	Be 313.107†	1419124.6	1370429.5	484.52 ug/L	484.52 ppb	10:42:39
2	Cd 226.502†	44945.0	43447.4	485.17 ug/L	485.17 ppb	10:42:44
2	Co 228.616†	23288.3	22475.5	492.78 ug/L	492.78 ppb	10:42:44
2	Cr 267.716†	46456.2	44601.2	484.10 ug/L	484.10 ppb	10:42:44
2	Cu 324.752†	184874.1	168738.0	473.37 ug/L	473.37 ppb	10:42:44
2	Mn 257.610†	447911.4	430442.3	482.91 ug/L	482.91 ppb	10:42:39
2	Mo 202.031†	7368.1	7065.2	482.67 ug/L	482.67 ppb	10:43:04
2	Ni 231.604†	20172.1	19313.8	485.09 ug/L	485.09 ppb	10:42:44
2	P 214.914†	4660.3	4244.9	2301.3 ug/L	2301.3 ppb	10:43:04
2	Pb 220.353†	3938.7	3849.8	484.82 ug/L	484.82 ppb	10:43:04
2	S 181.975 Axial†	792.2	685.2	942.39 ug/L	942.39 ppb	10:43:04
2	Sb 206.836†	1553.4	1464.2	507.62 ug/L	507.62 ppb	10:43:04
2	Se 196.026†	860.3	845.6	507.41 ug/L	507.41 ppb	10:43:04
2	Si 251.611†	85133.5	81410.4	2406.2 ug/L	2406.2 ppb	10:42:44
2	Sn 189.927†	2734.9	2631.6	484.81 ug/L	484.81 ppb	10:43:04
2	Ti 334.940†	324380.2	312990.3	477.09 ug/L	477.09 ppb	10:42:44
2	Tl 190.801†	1521.9	1501.1	483.36 ug/L	483.36 ppb	10:43:04
2	U 409.014†	18714.7	19068.1	475.10 ug/L	475.10 ppb	10:42:44
2	V 292.402†	78768.2	77175.9	486.31 ug/L	486.31 ppb	10:42:44
2	Zn 213.857†	54657.0	51851.7	478.72 ug/L	478.72 ppb	10:42:44
2	SiO2†	84965.4	81231.2	5124.3 ug/L	5124.3 ppb	10:43:45
3	Sc Radial	5417.9	5417.9	101 %		10:41:40
3	Y RADIAL	5821.4	5821.4	101.1 %		10:41:40

3	Al 396.153Radial†	6665.3	6560.4	4946.3 ug/L	4946.3 ppb	10:41:40
3	Ca 317.933Radial†	3192.6	3126.5	5025.2 ug/L	5025.2 ppb	10:42:01
3	Fe 238.204 Radial†	563.2	547.9	5135.6 ug/L	5135.6 ppb	10:42:01
3	K 766.490 Radial†	30739.0	27793.7	5071.2 ug/L	5071.2 ppb	10:41:40
3	Mg 279.077 IEC†	150.2	147.1	5245.0 ug/L	5245.0 ppb	10:42:01
3	Na 589.592 Radial†	33156.2	33227.3	9877.5 ug/L	9877.5 ppb	10:41:40
3	Sr 421.552†	79990.3	78833.7	505.89 ug/L	505.89 ppb	10:41:40
3	Sc 361.383	942206.6	942206.6	104.94 %		10:43:10
3	Y 371.029	824780.8	824780.8	100.20 %		10:43:10
3	Ag 328.068†	121460.3	115449.2	484.94 ug/L	484.94 ppb	10:43:15
3	As 188.979†	1234.2	1206.3	497.70 ug/L	497.70 ppb	10:43:35
3	B 249.677†	23336.6	22478.9	490.73 ug/L	490.73 ppb	10:43:15
3	Ba 233.527†	64474.0	61443.4	485.53 ug/L	485.53 ppb	10:43:15
3	Be 313.107†	1427946.0	1365857.4	482.91 ug/L	482.91 ppb	10:43:10
3	Cd 226.502†	45654.6	43712.6	488.16 ug/L	488.16 ppb	10:43:15
3	Co 228.616†	23646.2	22603.5	495.59 ug/L	495.59 ppb	10:43:15
3	Cr 267.716†	47071.4	44762.6	485.85 ug/L	485.85 ppb	10:43:15
3	Cu 324.752†	187900.9	169931.6	476.71 ug/L	476.71 ppb	10:43:15
3	Mn 257.610†	451278.4	429554.6	481.90 ug/L	481.90 ppb	10:43:10
3	Mo 202.031†	7425.7	7052.7	481.79 ug/L	481.79 ppb	10:43:35
3	Ni 231.604†	20541.6	19481.4	489.30 ug/L	489.30 ppb	10:43:15
3	P 214.914†	4698.8	4239.0	2297.5 ug/L	2297.5 ppb	10:43:35
3	Pb 220.353†	3975.4	3848.7	484.68 ug/L	484.68 ppb	10:43:35
3	S 181.975 Axial†	788.5	674.5	927.67 ug/L	927.67 ppb	10:43:35
3	Sb 206.836†	1559.8	1456.2	504.93 ug/L	504.93 ppb	10:43:35
3	Se 196.026†	852.2	830.1	497.51 ug/L	497.51 ppb	10:43:35
3	Si 251.611†	86396.5	81835.3	2418.8 ug/L	2418.8 ppb	10:43:15
3	Sn 189.927†	2768.0	2638.1	485.96 ug/L	485.96 ppb	10:43:35
3	Ti 334.940†	329592.1	314990.3	480.13 ug/L	480.13 ppb	10:43:15
3	Tl 190.801†	1537.5	1502.0	483.65 ug/L	483.65 ppb	10:43:35
3	U 409.014†	18985.1	19154.6	477.29 ug/L	477.29 ppb	10:43:15
3	V 292.402†	80086.5	77711.8	489.66 ug/L	489.66 ppb	10:43:15
3	Zn 213.857†	55335.0	51997.9	480.08 ug/L	480.08 ppb	10:43:15
3	SiO2†	85189.0	80667.2	5088.6 ug/L	5088.6 ppb	10:43:51

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	938008.8	104.47 %	0.502			0.48%
Sc Radial	5438.8	102 %	4.9			4.80%
Y 371.029	821816.4	99.841 %	0.4629			0.46%
Y RADIAL	5849.7	101.6 %	4.80			4.72%
Ag 328.068†	115363.0	484.57 ug/L	2.107	484.57 ppb	2.107	0.43%
QC value within limits for Ag 328.068 Recovery = 96.91%						
Al 396.153Radial†	6473.7	4880.7 ug/L	249.05	4880.7 ppb	249.05	5.10%
QC value within limits for Al 396.153Radial Recovery = 97.61%						
As 188.979†	1204.0	496.78 ug/L	1.963	496.78 ppb	1.963	0.40%
QC value within limits for As 188.979 Recovery = 99.36%						
B 249.677†	22438.1	489.84 ug/L	1.656	489.84 ppb	1.656	0.34%
QC value within limits for B 249.677 Recovery = 97.97%						
Ba 233.527†	61354.7	484.83 ug/L	1.383	484.83 ppb	1.383	0.29%
QC value within limits for Ba 233.527 Recovery = 96.97%						
Be 313.107†	1369160.2	484.08 ug/L	1.018	484.08 ppb	1.018	0.21%
QC value within limits for Be 313.107 Recovery = 96.82%						
Ca 317.933Radial†	3129.0	5029.2 ug/L	260.49	5029.2 ppb	260.49	5.18%
QC value within limits for Ca 317.933Radial Recovery = 100.58%						
Cd 226.502†	43580.1	486.68 ug/L	1.497	486.68 ppb	1.497	0.31%
QC value within limits for Cd 226.502 Recovery = 97.34%						
Co 228.616†	22568.3	494.81 ug/L	1.775	494.81 ppb	1.775	0.36%
QC value within limits for Co 228.616 Recovery = 98.96%						
Cr 267.716†	44684.5	485.00 ug/L	0.875	485.00 ppb	0.875	0.18%
QC value within limits for Cr 267.716 Recovery = 97.00%						
Cu 324.752†	169899.3	476.61 ug/L	3.197	476.61 ppb	3.197	0.67%
QC value within limits for Cu 324.752 Recovery = 95.32%						
Fe 238.204 Radial†	548.8	5143.4 ug/L	268.00	5143.4 ppb	268.00	5.21%
QC value within limits for Fe 238.204 Radial Recovery = 102.87%						
K 766.490 Radial†	27538.7	5024.6 ug/L	255.69	5024.6 ppb	255.69	5.09%
QC value within limits for K 766.490 Radial Recovery = 100.49%						
Mg 279.077 IEC†	147.0	5242.7 ug/L	336.44	5242.7 ppb	336.44	6.42%
QC value within limits for Mg 279.077 IEC Recovery = 104.85%						

Mn 257.610†	429822.4	482.20 ug/L	0.616	482.20 ppb	0.616	0.13%
QC value within limits for Mn 257.610 Recovery = 96.44%						
Mo 202.031†	7045.1	481.27 ug/L	1.720	481.27 ppb	1.720	0.36%
QC value within limits for Mo 202.031 Recovery = 96.25%						
Na 589.592 Radial†	33100.0	9839.7 ug/L	459.55	9839.7 ppb	459.55	4.67%
QC value within limits for Na 589.592 Radial Recovery = 98.40%						
Ni 231.604†	19383.3	486.83 ug/L	2.197	486.83 ppb	2.197	0.45%
QC value within limits for Ni 231.604 Recovery = 97.37%						
P 214.914†	4235.5	2295.5 ug/L	6.99	2295.5 ppb	6.99	0.30%
QC value within limits for P 214.914 Recovery = 91.82%						
Pb 220.353†	3849.3	484.74 ug/L	0.073	484.74 ppb	0.073	0.02%
QC value within limits for Pb 220.353 Recovery = 96.95%						
S 181.975 Axial†	679.2	934.28 ug/L	7.470	934.28 ppb	7.470	0.80%
QC value within limits for S 181.975 Axial Recovery = 93.43%						
Sb 206.836†	1454.2	504.24 ug/L	3.772	504.24 ppb	3.772	0.75%
QC value within limits for Sb 206.836 Recovery = 100.85%						
Se 196.026†	834.8	500.24 ug/L	6.269	500.24 ppb	6.269	1.25%
QC value within limits for Se 196.026 Recovery = 100.05%						
Si 251.611†	81702.6	2414.9 ug/L	7.52	2414.9 ppb	7.52	0.31%
QC value within limits for Si 251.611 Recovery = 96.60%						
Sn 189.927†	2632.9	485.00 ug/L	0.877	485.00 ppb	0.877	0.18%
QC value within limits for Sn 189.927 Recovery = 97.00%						
Sr 421.552†	78226.9	502.00 ug/L	24.262	502.00 ppb	24.262	4.83%
QC value within limits for Sr 421.552 Recovery = 100.40%						
Ti 334.940†	314643.7	479.60 ug/L	2.293	479.60 ppb	2.293	0.48%
QC value within limits for Ti 334.940 Recovery = 95.92%						
Tl 190.801†	1492.9	480.75 ug/L	4.781	480.75 ppb	4.781	0.99%
QC value within limits for Tl 190.801 Recovery = 96.15%						
U 409.014†	19227.7	479.12 ug/L	5.183	479.12 ppb	5.183	1.08%
QC value within limits for U 409.014 Recovery = 95.82%						
V 292.402†	77570.7	488.78 ug/L	2.171	488.78 ppb	2.171	0.44%
QC value within limits for V 292.402 Recovery = 97.76%						
Zn 213.857†	51964.4	479.78 ug/L	0.948	479.78 ppb	0.948	0.20%
QC value within limits for Zn 213.857 Recovery = 95.96%						
SiO2†	81102.2	5116.2 ug/L	24.50	5116.2 ppb	24.50	0.48%
QC value within limits for SiO2 Recovery = 95.67%						

All analyte(s) passed QC.

Sequence No.: 2

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 1/26/2010 10:46:01

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5500.4	5500.4	103 %		10:47:53
1	Y RADIAL	5938.0	5938.0	103.1 %		10:47:53
1	Al 396.153Radial†	3.1	-6.1	-4.6271 ug/L	-4.6271 ppb	10:48:13
1	Ca 317.933Radial†	21.4	0.5	0.8113 ug/L	0.8113 ppb	10:48:13
1	Fe 238.204 Radial†	6.9	-0.5	-4.6519 ug/L	-4.6519 ppb	10:48:13
1	K 766.490 Radial†	2596.4	17.3	3.1658 ug/L	3.1658 ppb	10:47:53
1	Mg 279.077 IEC†	0.7	-0.3	-11.957 ug/L	-11.957 ppb	10:48:13
1	Na 589.592 Radial†	-679.9	-112.4	-33.420 ug/L	-33.420 ppb	10:47:53
1	Sr 421.552†	59.1	50.3	0.3225 ug/L	0.3225 ppb	10:47:53
1	Sc 361.383	895964.4	895964.4	99.787 %		10:49:10
1	Y 371.029	821794.6	821794.6	99.839 %		10:49:10
1	Ag 328.068†	381.0	85.8	0.3573 ug/L	0.3573 ppb	10:49:10
1	As 188.979†	-13.5	16.7	6.8113 ug/L	6.8113 ppb	10:49:30
1	B 249.677†	284.9	525.9	11.535 ug/L	11.535 ppb	10:49:30
1	Ba 233.527†	16.3	19.5	0.1538 ug/L	0.1538 ppb	10:49:30
1	Be 313.107†	-4987.3	102.5	0.0359 ug/L	0.0359 ppb	10:49:10
1	Cd 226.502†	-195.3	10.5	0.1180 ug/L	0.1180 ppb	10:49:30
1	Co 228.616†	-72.6	-2.8	-0.0617 ug/L	-0.0617 ppb	10:49:30
1	Cr 267.716†	91.8	-2.0	-0.0212 ug/L	-0.0212 ppb	10:49:30
1	Cu 324.752†	9066.2	-42.5	-0.1193 ug/L	-0.1193 ppb	10:49:10
1	Mn 257.610†	508.7	20.0	0.0224 ug/L	0.0224 ppb	10:49:30
1	Mo 202.031†	21.6	-2.0	-0.1376 ug/L	-0.1376 ppb	10:49:30
1	Ni 231.604†	113.8	20.3	0.5114 ug/L	0.5114 ppb	10:49:30
1	P 214.914†	236.5	-1.7	-0.9137 ug/L	-0.9137 ppb	10:49:30
1	Pb 220.353†	-52.5	7.8	0.9777 ug/L	0.9777 ppb	10:49:30
1	S 181.975 Axial†	46.3	-30.6	-42.105 ug/L	-42.105 ppb	10:49:30
1	Sb 206.836†	41.6	11.5	3.8882 ug/L	3.8882 ppb	10:49:30
1	Se 196.026†	-22.6	-4.7	-2.7190 ug/L	-2.7190 ppb	10:49:30
1	Si 251.611†	502.2	7.3	0.2182 ug/L	0.2182 ppb	10:49:30
1	Sn 189.927†	16.2	16.6	3.0446 ug/L	3.0446 ppb	10:49:30
1	Ti 334.940†	-965.7	-61.2	-0.0922 ug/L	-0.0922 ppb	10:49:10
1	Tl 190.801†	-37.4	-0.5	-0.1739 ug/L	-0.1739 ppb	10:49:30
1	U 409.014†	-1065.4	-4.8	-0.1193 ug/L	-0.1193 ppb	10:49:10
1	V 292.402†	-1357.2	33.5	0.2066 ug/L	0.2066 ppb	10:49:10
1	Zn 213.857†	703.2	-28.7	-0.2699 ug/L	-0.2699 ppb	10:49:30
1	SiO2†	530.2	17.9	1.1374 ug/L	1.1374 ppb	10:50:41
2	Sc Radial	5462.9	5462.9	102 %		10:48:18
2	Y RADIAL	5846.7	5846.7	101.6 %		10:48:18
2	Al 396.153Radial†	8.7	-0.7	-0.5100 ug/L	-0.5100 ppb	10:48:38
2	Ca 317.933Radial†	24.7	3.9	6.2066 ug/L	6.2066 ppb	10:48:38
2	Fe 238.204 Radial†	8.5	1.2	11.151 ug/L	11.151 ppb	10:48:38
2	K 766.490 Radial†	2505.6	-54.2	-9.8962 ug/L	-9.8962 ppb	10:48:18
2	Mg 279.077 IEC†	3.2	2.2	78.437 ug/L	78.437 ppb	10:48:38
2	Na 589.592 Radial†	-690.4	-127.2	-37.826 ug/L	-37.826 ppb	10:48:18
2	Sr 421.552†	51.1	42.9	0.2753 ug/L	0.2753 ppb	10:48:18
2	Sc 361.383	893219.2	893219.2	99.482 %		10:49:35
2	Y 371.029	815151.4	815151.4	99.032 %		10:49:35
2	Ag 328.068†	358.6	64.5	0.2711 ug/L	0.2711 ppb	10:49:35
2	As 188.979†	-18.4	11.7	4.8007 ug/L	4.8007 ppb	10:49:55
2	B 249.677†	281.3	523.1	11.471 ug/L	11.471 ppb	10:49:55
2	Ba 233.527†	-0.5	2.6	0.0210 ug/L	0.0210 ppb	10:49:55
2	Be 313.107†	-5012.5	61.8	0.0213 ug/L	0.0213 ppb	10:49:35
2	Cd 226.502†	-197.3	7.8	0.0866 ug/L	0.0866 ppb	10:49:55
2	Co 228.616†	-70.7	-1.2	-0.0243 ug/L	-0.0243 ppb	10:49:55
2	Cr 267.716†	106.9	13.5	0.1457 ug/L	0.1457 ppb	10:49:55
2	Cu 324.752†	9006.6	-74.5	-0.2093 ug/L	-0.2093 ppb	10:49:35
2	Mn 257.610†	520.5	33.4	0.0353 ug/L	0.0353 ppb	10:49:55
2	Mo 202.031†	28.3	4.9	0.3340 ug/L	0.3340 ppb	10:49:55
2	Ni 231.604†	93.0	-0.2	-0.0047 ug/L	-0.0047 ppb	10:49:55



2	P 214.914†	234.0	-3.5	-1.9175 ug/L	-1.9175 ppb	10:49:55
2	Pb 220.353†	-29.7	30.5	3.8308 ug/L	3.8308 ppb	10:49:55
2	S 181.975 Axial†	51.1	-25.6	-35.242 ug/L	-35.242 ppb	10:49:55
2	Sb 206.836†	50.8	20.8	7.0038 ug/L	7.0038 ppb	10:49:55
2	Se 196.026†	-16.3	1.6	0.9508 ug/L	0.9508 ppb	10:49:55
2	Si 251.611†	544.5	51.4	1.5188 ug/L	1.5188 ppb	10:49:55
2	Sn 189.927†	11.9	12.3	2.2605 ug/L	2.2605 ppb	10:49:55
2	Ti 334.940†	-1051.8	-150.7	-0.2361 ug/L	-0.2361 ppb	10:49:35
2	Tl 190.801†	-33.3	3.4	1.0888 ug/L	1.0888 ppb	10:49:55
2	U 409.014†	-997.0	60.6	1.5146 ug/L	1.5146 ppb	10:49:35
2	V 292.402†	-1396.8	-10.5	-0.0577 ug/L	-0.0577 ppb	10:49:35
2	Zn 213.857†	677.8	-52.1	-0.4861 ug/L	-0.4861 ppb	10:49:55
2	SiO2†	521.7	11.0	0.6885 ug/L	0.6885 ppb	10:51:01
3	Sc Radial	5553.5	5553.5	104 %		10:48:43
3	Y RADIAL	6016.2	6016.2	104.5 %		10:48:43
3	Al 396.153Radial†	9.0	-0.5	-0.3490 ug/L	-0.3490 ppb	10:49:03
3	Ca 317.933Radial†	25.5	4.3	6.9058 ug/L	6.9058 ppb	10:49:03
3	Fe 238.204 Radial†	8.8	1.3	12.233 ug/L	12.233 ppb	10:49:03
3	K 766.490 Radial†	2493.3	-106.0	-19.357 ug/L	-19.357 ppb	10:48:43
3	Mg 279.077 IEC†	3.3	2.2	77.715 ug/L	77.715 ppb	10:49:03
3	Na 589.592 Radial†	-707.0	-132.2	-39.292 ug/L	-39.292 ppb	10:48:43
3	Sr 421.552†	15.2	7.5	0.0482 ug/L	0.0482 ppb	10:48:43
3	Sc 361.383	891232.6	891232.6	99.260 %		10:50:00
3	Y 371.029	812156.4	812156.4	98.668 %		10:50:00
3	Ag 328.068†	321.1	27.4	0.1190 ug/L	0.1190 ppb	10:50:00
3	As 188.979†	-15.0	15.1	6.1770 ug/L	6.1770 ppb	10:50:20
3	B 249.677†	245.5	487.8	10.695 ug/L	10.695 ppb	10:50:20
3	Ba 233.527†	-2.7	0.3	0.0029 ug/L	0.0029 ppb	10:50:20
3	Be 313.107†	-4989.4	73.9	0.0259 ug/L	0.0259 ppb	10:50:00
3	Cd 226.502†	-205.5	-0.9	-0.0113 ug/L	-0.0113 ppb	10:50:20
3	Co 228.616†	-67.9	1.5	0.0322 ug/L	0.0322 ppb	10:50:20
3	Cr 267.716†	83.3	-10.0	-0.1083 ug/L	-0.1083 ppb	10:50:20
3	Cu 324.752†	8878.2	-183.7	-0.5139 ug/L	-0.5139 ppb	10:50:00
3	Mn 257.610†	491.9	5.7	0.0044 ug/L	0.0044 ppb	10:50:20
3	Mo 202.031†	17.0	-6.5	-0.4400 ug/L	-0.4400 ppb	10:50:20
3	Ni 231.604†	112.0	19.1	0.4810 ug/L	0.4810 ppb	10:50:20
3	P 214.914†	241.0	4.0	2.3932 ug/L	2.3932 ppb	10:50:20
3	Pb 220.353†	-39.8	20.3	2.5479 ug/L	2.5479 ppb	10:50:20
3	S 181.975 Axial†	43.6	-33.0	-45.497 ug/L	-45.497 ppb	10:50:20
3	Sb 206.836†	40.5	10.6	3.5552 ug/L	3.5552 ppb	10:50:20
3	Se 196.026†	-22.4	-4.6	-2.6295 ug/L	-2.6295 ppb	10:50:20
3	Si 251.611†	509.2	17.0	0.5098 ug/L	0.5098 ppb	10:50:20
3	Sn 189.927†	9.7	10.1	1.8540 ug/L	1.8540 ppb	10:50:20
3	Ti 334.940†	-935.1	-35.6	-0.0591 ug/L	-0.0591 ppb	10:50:00
3	Tl 190.801†	-40.0	-3.4	-1.0927 ug/L	-1.0927 ppb	10:50:20
3	U 409.014†	-1104.3	-49.7	-1.2427 ug/L	-1.2427 ppb	10:50:00
3	V 292.402†	-1399.1	-15.9	-0.1079 ug/L	-0.1079 ppb	10:50:00
3	Zn 213.857†	676.8	-51.5	-0.4835 ug/L	-0.4835 ppb	10:50:20
3	SiO2†	549.0	39.6	2.5188 ug/L	2.5188 ppb	10:51:21

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
Sc 361.383	893472.1	99.510 %		0.2646			0.27%
Sc Radial	5505.6	103 %		0.9			0.83%
Y 371.029	816367.5	99.179 %		0.5993			0.60%
Y RADIAL	5933.6	103.1 %		1.47			1.43%
Ag 328.068†	59.2	0.2491 ug/L		0.12069	0.2491 ppb	0.12069	48.44%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	-2.4	-1.8287 ug/L		2.42479	-1.8287 ppb	2.42479	132.60%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	14.5	5.9297 ug/L		1.02783	5.9297 ppb	1.02783	17.33%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	512.3	11.234 ug/L		0.4675	11.234 ppb	0.4675	4.16%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	7.5	0.0592 ug/L		0.08240	0.0592 ppb	0.08240	139.11%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	79.4	0.0277 ug/L		0.00749	0.0277 ppb	0.00749	27.01%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	2.9	4.6412 ug/L		3.33521	4.6412 ppb	3.33521	71.86%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated						
Cd 226.502†	5.8	0.0644 ug/L	0.06743	0.0644 ppb	0.06743	104.69%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-0.8	-0.0179 ug/L	0.04728	-0.0179 ppb	0.04728	264.22%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	0.5	0.0054 ug/L	0.12908	0.0054 ppb	0.12908	>999.9%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-100.2	-0.2808 ug/L	0.20683	-0.2808 ppb	0.20683	73.65%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	0.7	6.2442 ug/L	9.45182	6.2442 ppb	9.45182	151.37%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-47.7	-8.6957 ug/L	11.30917	-8.6957 ppb	11.30917	130.06%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	1.3	48.065 ug/L	51.9821	48.065 ppb	51.9821	108.15%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	19.7	0.0207 ug/L	0.01552	0.0207 ppb	0.01552	74.90%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-1.2	-0.0812 ug/L	0.39010	-0.0812 ppb	0.39010	480.41%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-123.9	-36.846 ug/L	3.0563	-36.846 ppb	3.0563	8.29%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	13.1	0.3292 ug/L	0.28960	0.3292 ppb	0.28960	87.96%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-0.4	-0.1460 ug/L	2.25556	-0.1460 ppb	2.25556	>999.9%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	19.5	2.4521 ug/L	1.42899	2.4521 ppb	1.42899	58.28%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-29.7	-40.948 ug/L	5.2243	-40.948 ppb	5.2243	12.76%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	14.3	4.8158 ug/L	1.90220	4.8158 ppb	1.90220	39.50%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-2.6	-1.4659 ug/L	2.09340	-1.4659 ppb	2.09340	142.81%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	25.2	0.7490 ug/L	0.68248	0.7490 ppb	0.68248	91.12%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	13.0	2.3864 ug/L	0.60523	2.3864 ppb	0.60523	25.36%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	33.6	0.2154 ug/L	0.14664	0.2154 ppb	0.14664	68.09%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	-82.5	-0.1291 ug/L	0.09412	-0.1291 ppb	0.09412	72.90%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-0.2	-0.0593 ug/L	1.09525	-0.0593 ppb	1.09525	>999.9%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	2.1	0.0509 ug/L	1.38652	0.0509 ppb	1.38652	>999.9%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	2.3	0.0136 ug/L	0.16895	0.0136 ppb	0.16895	>999.9%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-44.1	-0.4132 ug/L	0.12412	-0.4132 ppb	0.12412	30.04%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	22.9	1.4482 ug/L	0.95397	1.4482 ppb	0.95397	65.87%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 3

Sample ID: LR1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 37

Date Collected: 1/26/2010 10:53:32

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5331.5	5331.5	99.8 %		10:55:25
1	Y RADIAL	5743.5	5743.5	99.76 %		10:55:25
1	Al 396.153Radial†	-9.1	-18.3	-12.713 ug/L	-12.713 ppb	10:55:45
1	Ca 317.933Radial†	32.2	12.0	19.322 ug/L	19.322 ppb	10:55:45
1	Fe 238.204 Radial†	40804.6	40863.0	381890 ug/L	381890 ppb	10:55:25
1	K 766.490 Radial†	1969.1	-531.2	-96.996 ug/L	-96.996 ppb	10:55:25
1	Mg 279.077 IEC†	9.8	8.8	-85.328 ug/L	-85.328 ppb	10:55:45
1	Na 589.592 Radial†	-673.5	-126.9	-37.733 ug/L	-37.733 ppb	10:55:25
1	Sr 421.552†	82.7	75.8	0.4860 ug/L	0.4860 ppb	10:55:25
1	Sc 361.383	906081.7	906081.7	100.91 %		10:56:43
1	Y 371.029	797742.4	797742.4	96.917 %		10:56:43
1	Ag 328.068†	-27617.7	-27663.5	8.4117 ug/L	8.4117 ppb	10:56:43
1	As 188.979†	-199.2	-167.2	21.092 ug/L	21.092 ppb	10:57:03
1	B 249.677†	2638.5	2855.1	0.5806 ug/L	0.5806 ppb	10:56:43
1	Ba 233.527†	-1739.3	-1720.5	-1.8216 ug/L	-1.8216 ppb	10:56:43
1	Be 313.107†	-4917.4	227.6	0.0803 ug/L	0.0803 ppb	10:56:43
1	Cd 226.502†	3491.0	3665.6	1.5105 ug/L	1.5105 ppb	10:56:43
1	Co 228.616†	191.4	259.6	0.1169 ug/L	0.1169 ppb	10:57:03
1	Cr 267.716†	-532.5	-621.6	0.7406 ug/L	0.7406 ppb	10:56:43
1	Cu 324.752†	1887.4	-7257.7	-0.1738 ug/L	-0.1738 ppb	10:56:43
1	Mn 257.610†	-36804.5	-36961.0	-3.7350 ug/L	-3.7350 ppb	10:56:43
1	Mo 202.031†	-327.2	-347.8	5.9079 ug/L	5.9079 ppb	10:56:43
1	Ni 231.604†	168.2	72.9	1.8299 ug/L	1.8299 ppb	10:57:03
1	P 214.914†	744.3	498.9	-22.245 ug/L	-22.245 ppb	10:57:03
1	Pb 220.353†	214.8	273.3	-2.2331 ug/L	-2.2331 ppb	10:57:03
1	S 181.975 Axial†	60.1	-17.5	-24.065 ug/L	-24.065 ppb	10:57:03
1	Sb 206.836†	26.9	-3.6	8.0432 ug/L	8.0432 ppb	10:57:03
1	Se 196.026†	-1933.3	-1897.8	168.11 ug/L	168.11 ppb	10:57:03
1	Si 251.611†	-597.2	-1087.7	-31.937 ug/L	-31.937 ppb	10:56:43
1	Sn 189.927†	-11.6	-11.1	4.3774 ug/L	4.3774 ppb	10:57:03
1	Ti 334.940†	-922.9	-8.0	-0.0546 ug/L	-0.0546 ppb	10:56:43
1	Tl 190.801†	-66.2	-28.8	-9.5234 ug/L	-9.5234 ppb	10:57:03
1	U 409.014†	922.4	1976.9	5.9120 ug/L	5.9120 ppb	10:56:43
1	V 292.402†	7477.9	8803.7	-1.1023 ug/L	-1.1023 ppb	10:56:43
1	Zn 213.857†	4800.3	4023.4	0.4469 ug/L	0.4469 ppb	10:57:03
1	SiO2†	-519.1	-1027.9	-64.360 ug/L	-64.360 ppb	10:58:00
2	Sc Radial	5369.1	5369.1	101 %		10:55:50
2	Y RADIAL	5831.7	5831.7	101.3 %		10:55:50
2	Al 396.153Radial†	-21.7	-30.8	-22.209 ug/L	-22.209 ppb	10:56:10
2	Ca 317.933Radial†	34.8	14.4	23.128 ug/L	23.128 ppb	10:56:10
2	Fe 238.204 Radial†	41219.6	40989.9	383070 ug/L	383070 ppb	10:55:50
2	K 766.490 Radial†	2093.1	-421.7	-76.985 ug/L	-76.985 ppb	10:55:50
2	Mg 279.077 IEC†	12.6	11.6	12.481 ug/L	12.481 ppb	10:56:10
2	Na 589.592 Radial†	-690.3	-138.9	-41.301 ug/L	-41.301 ppb	10:55:50
2	Sr 421.552†	96.4	88.8	0.5700 ug/L	0.5700 ppb	10:55:50
2	Sc 361.383	909885.9	909885.9	101.34 %		10:57:09
2	Y 371.029	802891.2	802891.2	97.542 %		10:57:09
2	Ag 328.068†	-27755.5	-27685.0	8.7029 ug/L	8.7029 ppb	10:57:09
2	As 188.979†	-205.1	-172.2	19.325 ug/L	19.325 ppb	10:57:29
2	B 249.677†	2539.3	2746.2	-2.0008 ug/L	-2.0008 ppb	10:57:09
2	Ba 233.527†	-1751.4	-1725.2	-1.8253 ug/L	-1.8253 ppb	10:57:09
2	Be 313.107†	-4938.7	227.0	0.0799 ug/L	0.0799 ppb	10:57:09
2	Cd 226.502†	3490.1	3650.2	1.2158 ug/L	1.2158 ppb	10:57:09
2	Co 228.616†	205.7	272.9	0.3935 ug/L	0.3935 ppb	10:57:29
2	Cr 267.716†	-537.4	-624.2	0.7348 ug/L	0.7348 ppb	10:57:09
2	Cu 324.752†	2027.4	-7127.4	0.2558 ug/L	0.2558 ppb	10:57:09
2	Mn 257.610†	-37179.1	-37178.1	-3.8654 ug/L	-3.8654 ppb	10:57:09
2	Mo 202.031†	-312.3	-331.8	7.0920 ug/L	7.0920 ppb	10:57:09
2	Ni 231.604†	160.3	64.5	1.6166 ug/L	1.6166 ppb	10:57:29

2	P 214.914†	734.1	485.7	-30.705 ug/L	-30.705 ppb	10:57:29
2	Pb 220.353†	216.9	274.5	-2.1980 ug/L	-2.1980 ppb	10:57:29
2	S 181.975 Axial†	61.8	-16.0	-21.981 ug/L	-21.981 ppb	10:57:29
2	Sb 206.836†	14.1	-16.4	3.7916 ug/L	3.7916 ppb	10:57:29
2	Se 196.026†	-1940.0	-1896.5	172.83 ug/L	172.83 ppb	10:57:29
2	Si 251.611†	-549.5	-1038.2	-30.483 ug/L	-30.483 ppb	10:57:09
2	Sn 189.927†	-20.1	-19.5	2.8635 ug/L	2.8635 ppb	10:57:29
2	Ti 334.940†	-977.1	-57.7	-0.1370 ug/L	-0.1370 ppb	10:57:09
2	Tl 190.801†	-59.7	-22.0	-7.3556 ug/L	-7.3556 ppb	10:57:29
2	U 409.014†	843.8	1895.5	3.7415 ug/L	3.7415 ppb	10:57:09
2	V 292.402†	7328.8	8625.6	-2.3692 ug/L	-2.3692 ppb	10:57:09
2	Zn 213.857†	4845.0	4047.7	0.5590 ug/L	0.5590 ppb	10:57:29
2	SiO2†	-491.2	-998.1	-62.509 ug/L	-62.509 ppb	10:58:05
3	Sc Radial	5378.0	5378.0	101 %		10:56:15
3	Y RADIAL	5823.7	5823.7	101.2 %		10:56:15
3	Al 396.153Radial†	-12.3	-21.3	-15.054 ug/L	-15.054 ppb	10:56:35
3	Ca 317.933Radial†	31.2	10.8	17.335 ug/L	17.335 ppb	10:56:35
3	Fe 238.204 Radial†	41130.3	40832.7	381600 ug/L	381600 ppb	10:56:15
3	K 766.490 Radial†	2070.9	-447.2	-81.642 ug/L	-81.642 ppb	10:56:15
3	Mg 279.077 IEC†	12.5	11.4	8.1771 ug/L	8.1771 ppb	10:56:35
3	Na 589.592 Radial†	-663.8	-111.5	-33.143 ug/L	-33.143 ppb	10:56:15
3	Sr 421.552†	96.5	88.7	0.5691 ug/L	0.5691 ppb	10:56:15
3	Sc 361.383	911945.8	911945.8	101.57 %		10:57:35
3	Y 371.029	804967.5	804967.5	97.794 %		10:57:35
3	Ag 328.068†	-27816.4	-27683.2	8.2368 ug/L	8.2368 ppb	10:57:35
3	As 188.979†	-199.6	-166.3	21.412 ug/L	21.412 ppb	10:57:55
3	B 249.677†	2530.0	2731.4	-2.0859 ug/L	-2.0859 ppb	10:57:35
3	Ba 233.527†	-1708.2	-1678.7	-1.5032 ug/L	-1.5032 ppb	10:57:35
3	Be 313.107†	-4842.0	333.2	0.1176 ug/L	0.1176 ppb	10:57:35
3	Cd 226.502†	3498.2	3650.4	1.3691 ug/L	1.3691 ppb	10:57:35
3	Co 228.616†	191.9	258.8	0.1064 ug/L	0.1064 ppb	10:57:55
3	Cr 267.716†	-545.2	-630.7	0.6372 ug/L	0.6372 ppb	10:57:35
3	Cu 324.752†	1747.4	-7407.6	-0.6071 ug/L	-0.6071 ppb	10:57:35
3	Mn 257.610†	-37430.5	-37342.7	-4.1949 ug/L	-4.1949 ppb	10:57:35
3	Mo 202.031†	-316.3	-335.0	6.7581 ug/L	6.7581 ppb	10:57:35
3	Ni 231.604†	164.5	68.3	1.7119 ug/L	1.7119 ppb	10:57:55
3	P 214.914†	755.8	505.4	-18.283 ug/L	-18.283 ppb	10:57:55
3	Pb 220.353†	225.2	282.1	-1.0968 ug/L	-1.0968 ppb	10:57:55
3	S 181.975 Axial†	74.2	-3.9	-5.4029 ug/L	-5.4029 ppb	10:57:55
3	Sb 206.836†	9.5	-20.9	2.2066 ug/L	2.2066 ppb	10:57:55
3	Se 196.026†	-1949.0	-1901.0	165.36 ug/L	165.36 ppb	10:57:55
3	Si 251.611†	-440.0	-929.2	-27.250 ug/L	-27.250 ppb	10:57:35
3	Sn 189.927†	-28.9	-28.1	1.2547 ug/L	1.2547 ppb	10:57:55
3	Ti 334.940†	-888.0	32.3	0.0007 ug/L	0.0007 ppb	10:57:35
3	Tl 190.801†	-53.9	-16.2	-5.5052 ug/L	-5.5052 ppb	10:57:55
3	U 409.014†	772.1	1823.0	2.0958 ug/L	2.0958 ppb	10:57:35
3	V 292.402†	7364.3	8644.2	-2.0464 ug/L	-2.0464 ppb	10:57:35
3	Zn 213.857†	4842.4	4034.3	0.5771 ug/L	0.5771 ppb	10:57:55
3	SiO2†	-508.0	-1013.6	-63.480 ug/L	-63.480 ppb	10:58:10

## Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Conc. Units	Std.Dev.	RSD
Sc 361.383	909304.5	101.27 %		0.331			0.33%
Sc Radial	5359.5	100 %		0.5			0.46%
Y 371.029	801867.0	97.418 %		0.4519			0.46%
Y RADIAL	5799.6	100.7 %		0.85			0.84%
Ag 328.068†	-27677.2	8.4504 ug/L		0.23546	8.4504 ppb	0.23546	2.79%
Al 396.153Radial†	-23.5	-16.658 ug/L		4.9471	-16.658 ppb	4.9471	29.70%
As 188.979†	-168.6	20.610 ug/L		1.1240	20.610 ppb	1.1240	5.45%
B 249.677†	2777.5	-1.1687 ug/L		1.51555	-1.1687 ppb	1.51555	129.68%
Ba 233.527†	-1708.1	-1.7167 ug/L		0.18492	-1.7167 ppb	0.18492	10.77%
Be 313.107†	262.6	0.0926 ug/L		0.02169	0.0926 ppb	0.02169	23.43%
Ca 317.933Radial†	12.4	19.928 ug/L		2.9441	19.928 ppb	2.9441	14.77%
Cd 226.502†	3655.4	1.3652 ug/L		0.14738	1.3652 ppb	0.14738	10.80%
Co 228.616†	263.8	0.2056 ug/L		0.16283	0.2056 ppb	0.16283	79.20%
Cr 267.716†	-625.5	0.7042 ug/L		0.05809	0.7042 ppb	0.05809	8.25%
Cu 324.752†	-7264.2	-0.1750 ug/L		0.43142	-0.1750 ppb	0.43142	246.49%
Fe 238.204 Radial†	40895.2	382190 ug/L		779.5	382190 ppb	779.5	0.20%
K 766.490 Radial†	-466.7	-85.208 ug/L		10.4716	-85.208 ppb	10.4716	12.29%

Mg 279.077 IEC†	10.6	-21.557 ug/L	55.2696	-21.557 ppb	55.2696	256.39%
Mn 257.610†	-37160.6	-3.9318 ug/L	0.23701	-3.9318 ppb	0.23701	6.03%
Mo 202.031†	-338.2	6.5860 ug/L	0.61052	6.5860 ppb	0.61052	9.27%
Na 589.592 Radial†	-125.8	-37.392 ug/L	4.0899	-37.392 ppb	4.0899	10.94%
Ni 231.604†	68.6	1.7195 ug/L	0.10686	1.7195 ppb	0.10686	6.21%
P 214.914†	496.6	-23.744 ug/L	6.3449	-23.744 ppb	6.3449	26.72%
Pb 220.353†	276.6	-1.8426 ug/L	0.64619	-1.8426 ppb	0.64619	35.07%
S 181.975 Axial†	-12.5	-17.150 ug/L	10.2263	-17.150 ppb	10.2263	59.63%
Sb 206.836†	-13.6	4.6805 ug/L	3.01816	4.6805 ppb	3.01816	64.48%
Se 196.026†	-1898.4	168.77 ug/L	3.775	168.77 ppb	3.775	2.24%
Si 251.611†	-1018.4	-29.890 ug/L	2.3990	-29.890 ppb	2.3990	8.03%
Sn 189.927†	-19.6	2.8319 ug/L	1.56160	2.8319 ppb	1.56160	55.14%
Sr 421.552†	84.4	0.5417 ug/L	0.04822	0.5417 ppb	0.04822	8.90%
Ti 334.940†	-11.1	-0.0636 ug/L	0.06928	-0.0636 ppb	0.06928	108.89%
Tl 190.801†	-22.3	-7.4614 ug/L	2.01118	-7.4614 ppb	2.01118	26.95%
U 409.014†	1898.5	3.9165 ug/L	1.91408	3.9165 ppb	1.91408	48.87%
V 292.402†	8691.2	-1.8393 ug/L	0.65834	-1.8393 ppb	0.65834	35.79%
Zn 213.857†	4035.1	0.5276 ug/L	0.07052	0.5276 ppb	0.07052	13.36%
SiO2†	-1013.2	-63.449 ug/L	0.9259	-63.449 ppb	0.9259	1.46%

Sequence No.: 4  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 1/26/2010 11:00:22  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5476.7	5476.7	103 %		11:02:14
1	Y RADIAL	5888.4	5888.4	102.3 %		11:02:14
1	Al 396.153Radial†	6760.7	6582.9	4964.1 ug/L	4964.1 ppb	11:02:14
1	Ca 317.933Radial†	3177.4	3078.0	4947.2 ug/L	4947.2 ppb	11:02:34
1	Fe 238.204 Radial†	573.6	552.1	5174.1 ug/L	5174.1 ppb	11:02:34
1	K 766.490 Radial†	31043.4	27765.6	5066.0 ug/L	5066.0 ppb	11:02:14
1	Mg 279.077 IEC†	147.9	143.2	5108.7 ug/L	5108.7 ppb	11:02:34
1	Na 589.592 Radial†	34505.2	34192.1	10164 ug/L	10164 ppb	11:02:14
1	Sr 421.552†	82340.4	80279.5	515.17 ug/L	515.17 ppb	11:02:14
1	Sc 361.383	957819.9	957819.9	106.68 %		11:03:32
1	Y 371.029	839308.1	839308.1	101.97 %		11:03:32
1	Ag 328.068†	120581.9	112739.0	473.59 ug/L	473.59 ppb	11:03:37
1	As 188.979†	1199.6	1154.7	476.54 ug/L	476.54 ppb	11:03:57
1	B 249.677†	22675.2	21496.5	469.22 ug/L	469.22 ppb	11:03:37
1	Ba 233.527†	63808.5	59818.1	472.69 ug/L	472.69 ppb	11:03:37
1	Be 313.107†	1403806.0	1321046.8	467.07 ug/L	467.07 ppb	11:03:32
1	Cd 226.502†	45177.7	42556.4	475.23 ug/L	475.23 ppb	11:03:37
1	Co 228.616†	23376.3	21983.2	481.98 ug/L	481.98 ppb	11:03:37
1	Cr 267.716†	46560.1	43552.1	472.72 ug/L	472.72 ppb	11:03:37
1	Cu 324.752†	186092.8	165317.8	463.77 ug/L	463.77 ppb	11:03:37
1	Mn 257.610†	443165.2	414939.1	465.52 ug/L	465.52 ppb	11:03:32
1	Mo 202.031†	7342.2	6859.1	468.58 ug/L	468.58 ppb	11:03:57
1	Ni 231.604†	20232.7	18872.7	474.01 ug/L	474.01 ppb	11:03:37
1	P 214.914†	4678.5	4147.0	2248.0 ug/L	2248.0 ppb	11:03:57
1	Pb 220.353†	3961.4	3773.9	475.26 ug/L	475.26 ppb	11:03:57
1	S 181.975 Axial†	790.3	663.8	913.03 ug/L	913.03 ppb	11:03:57
1	Sb 206.836†	1508.9	1384.2	480.36 ug/L	480.36 ppb	11:03:57
1	Se 196.026†	855.2	819.6	491.56 ug/L	491.56 ppb	11:03:57
1	Si 251.611†	85511.1	79663.2	2354.6 ug/L	2354.6 ppb	11:03:37
1	Sn 189.927†	2731.2	2560.6	471.70 ug/L	471.70 ppb	11:03:57
1	Ti 334.940†	325820.3	306334.8	466.94 ug/L	466.94 ppb	11:03:37
1	Tl 190.801†	1519.7	1461.5	470.59 ug/L	470.59 ppb	11:03:57
1	U 409.014†	18835.8	18719.7	466.45 ug/L	466.45 ppb	11:03:37
1	V 292.402†	79078.1	75522.4	475.85 ug/L	475.85 ppb	11:03:37
1	Zn 213.857†	54836.9	50671.4	467.83 ug/L	467.83 ppb	11:03:37
1	SiO2†	85565.8	79697.1	5027.7 ug/L	5027.7 ppb	11:05:04
2	Sc Radial	5415.3	5415.3	101 %		11:02:39
2	Y RADIAL	5842.0	5842.0	101.5 %		11:02:39
2	Al 396.153Radial†	6591.8	6491.1	4893.9 ug/L	4893.9 ppb	11:02:39
2	Ca 317.933Radial†	3197.3	3132.6	5035.1 ug/L	5035.1 ppb	11:03:00
2	Fe 238.204 Radial†	571.6	556.5	5215.2 ug/L	5215.2 ppb	11:03:00
2	K 766.490 Radial†	30525.9	27598.2	5035.4 ug/L	5035.4 ppb	11:02:39
2	Mg 279.077 IEC†	152.3	149.2	5320.5 ug/L	5320.5 ppb	11:03:00
2	Na 589.592 Radial†	33626.9	33707.3	10020 ug/L	10020 ppb	11:02:39
2	Sr 421.552†	80236.8	79114.7	507.70 ug/L	507.70 ppb	11:02:39
2	Sc 361.383	933724.6	933724.6	103.99 %		11:04:03
2	Y 371.029	818894.9	818894.9	99.486 %		11:04:03
2	Ag 328.068†	119276.4	114400.6	480.57 ug/L	480.57 ppb	11:04:08
2	As 188.979†	1202.3	1186.3	489.50 ug/L	489.50 ppb	11:04:28
2	B 249.677†	22468.7	21846.4	476.86 ug/L	476.86 ppb	11:04:08
2	Ba 233.527†	62960.8	60546.5	478.45 ug/L	478.45 ppb	11:04:08
2	Be 313.107†	1410307.8	1361257.6	481.28 ug/L	481.28 ppb	11:04:03
2	Cd 226.502†	44750.1	43238.0	482.85 ug/L	482.85 ppb	11:04:08
2	Co 228.616†	23168.0	22348.4	490.00 ug/L	490.00 ppb	11:04:08
2	Cr 267.716†	46204.1	44336.1	481.22 ug/L	481.22 ppb	11:04:08
2	Cu 324.752†	183948.1	167757.2	470.61 ug/L	470.61 ppb	11:04:08
2	Mn 257.610†	444815.3	427246.2	479.31 ug/L	479.31 ppb	11:04:03
2	Mo 202.031†	7346.0	7040.4	480.95 ug/L	480.95 ppb	11:04:28
2	Ni 231.604†	20066.7	19202.5	482.29 ug/L	482.29 ppb	11:04:08

2	P 214.914†	4665.4	4247.5	2303.4 ug/L	2303.4 ppb	11:04:28
2	Pb 220.353†	3945.1	3854.0	485.32 ug/L	485.32 ppb	11:04:28
2	S 181.975 Axial†	792.8	685.4	942.70 ug/L	942.70 ppb	11:04:28
2	Sb 206.836†	1524.2	1435.4	497.92 ug/L	497.92 ppb	11:04:28
2	Se 196.026†	844.0	829.5	497.45 ug/L	497.45 ppb	11:04:28
2	Si 251.611†	84548.5	80806.2	2388.4 ug/L	2388.4 ppb	11:04:08
2	Sn 189.927†	2723.0	2618.8	482.41 ug/L	482.41 ppb	11:04:28
2	Ti 334.940†	322456.7	310982.1	474.02 ug/L	474.02 ppb	11:04:08
2	Tl 190.801†	1528.5	1506.7	485.13 ug/L	485.13 ppb	11:04:28
2	U 409.014†	18737.9	19081.2	475.46 ug/L	475.46 ppb	11:04:08
2	V 292.402†	78496.2	76875.8	484.44 ug/L	484.44 ppb	11:04:08
2	Zn 213.857†	54362.4	51541.7	475.87 ug/L	475.87 ppb	11:04:08
2	SiO2†	86284.4	82457.9	5201.9 ug/L	5201.9 ppb	11:05:10
3	Sc Radial	5455.9	5455.9	102 %		11:03:05
3	Y RADIAL	5835.4	5835.4	101.4 %		11:03:05
3	Al 396.153Radial†	6538.8	6390.8	4817.9 ug/L	4817.9 ppb	11:03:05
3	Ca 317.933Radial†	3219.8	3131.2	5032.7 ug/L	5032.7 ppb	11:03:25
3	Fe 238.204 Radial†	574.0	554.7	5198.4 ug/L	5198.4 ppb	11:03:25
3	K 766.490 Radial†	30365.0	27216.7	4965.8 ug/L	4965.8 ppb	11:03:05
3	Mg 279.077 IEC†	151.1	146.9	5240.6 ug/L	5240.6 ppb	11:03:25
3	Na 589.592 Radial†	33220.2	33062.4	9828.5 ug/L	9828.5 ppb	11:03:05
3	Sr 421.552†	79310.9	77619.5	498.10 ug/L	498.10 ppb	11:03:05
3	Sc 361.383	940128.6	940128.6	104.71 %		11:04:34
3	Y 371.029	823950.0	823950.0	100.10 %		11:04:34
3	Ag 328.068†	119785.7	114105.7	479.33 ug/L	479.33 ppb	11:04:39
3	As 188.979†	1212.0	1187.7	490.08 ug/L	490.08 ppb	11:04:59
3	B 249.677†	22492.2	21721.6	474.13 ug/L	474.13 ppb	11:04:39
3	Ba 233.527†	63370.1	60525.0	478.28 ug/L	478.28 ppb	11:04:39
3	Be 313.107†	1421296.0	1362514.0	481.72 ug/L	481.72 ppb	11:04:34
3	Cd 226.502†	44943.5	43129.6	481.64 ug/L	481.64 ppb	11:04:39
3	Co 228.616†	23346.6	22367.2	490.42 ug/L	490.42 ppb	11:04:39
3	Cr 267.716†	46372.1	44193.9	479.68 ug/L	479.68 ppb	11:04:39
3	Cu 324.752†	185130.1	167681.1	470.40 ug/L	470.40 ppb	11:04:39
3	Mn 257.610†	448155.4	427522.5	479.62 ug/L	479.62 ppb	11:04:34
3	Mo 202.031†	7408.6	7052.0	481.75 ug/L	481.75 ppb	11:04:59
3	Ni 231.604†	20160.1	19160.3	481.23 ug/L	481.23 ppb	11:04:39
3	P 214.914†	4711.0	4260.5	2310.8 ug/L	2310.8 ppb	11:04:59
3	Pb 220.353†	3981.9	3863.4	486.48 ug/L	486.48 ppb	11:04:59
3	S 181.975 Axial†	791.9	679.3	934.35 ug/L	934.35 ppb	11:04:59
3	Sb 206.836†	1533.4	1434.3	497.59 ug/L	497.59 ppb	11:04:59
3	Se 196.026†	843.6	823.6	493.98 ug/L	493.98 ppb	11:04:59
3	Si 251.611†	84926.6	80613.5	2382.6 ug/L	2382.6 ppb	11:04:39
3	Sn 189.927†	2760.5	2636.8	485.73 ug/L	485.73 ppb	11:04:59
3	Ti 334.940†	324307.9	310637.9	473.50 ug/L	473.50 ppb	11:04:39
3	Tl 190.801†	1523.3	1491.8	480.34 ug/L	480.34 ppb	11:04:59
3	U 409.014†	18833.7	19050.0	474.69 ug/L	474.69 ppb	11:04:39
3	V 292.402†	78819.7	76670.6	483.18 ug/L	483.18 ppb	11:04:39
3	Zn 213.857†	54571.3	51385.1	474.42 ug/L	474.42 ppb	11:04:39
3	SiO2†	84966.6	80634.2	5086.6 ug/L	5086.6 ppb	11:05:15

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	943891.1	105.13 %	1.390			1.32%
Sc Radial	5449.3	102 %	0.6			0.57%
Y 371.029	827384.3	100.52 %	1.292			1.28%
Y RADIAL	5855.3	101.7 %	0.50			0.49%
Ag 328.068†	113748.4	477.83 ug/L	3.720	477.83 ppb	3.720	0.78%
QC value within limits for Ag 328.068 Recovery = 95.57%						
Al 396.153Radial†	6488.3	4891.9 ug/L	73.10	4891.9 ppb	73.10	1.49%
QC value within limits for Al 396.153Radial Recovery = 97.84%						
As 188.979†	1176.3	485.37 ug/L	7.656	485.37 ppb	7.656	1.58%
QC value within limits for As 188.979 Recovery = 97.07%						
B 249.677†	21688.2	473.40 ug/L	3.874	473.40 ppb	3.874	0.82%
QC value within limits for B 249.677 Recovery = 94.68%						
Ba 233.527†	60296.5	476.47 ug/L	3.278	476.47 ppb	3.278	0.69%
QC value within limits for Ba 233.527 Recovery = 95.29%						
Be 313.107†	1348272.8	476.69 ug/L	8.329	476.69 ppb	8.329	1.75%
QC value within limits for Be 313.107 Recovery = 95.34%						
Ca 317.933Radial†	3113.9	5005.0 ug/L	50.08	5005.0 ppb	50.08	1.00%

QC value within limits for Ca 317.933 Radial Recovery = 100.10%

Cd 226.502†	42974.7	479.90 ug/L	4.093	479.90 ppb	4.093	0.85%
QC value within limits for Cd 226.502 Recovery = 95.98%						
Co 228.616†	22232.9	487.47 ug/L	4.754	487.47 ppb	4.754	0.98%
QC value within limits for Co 228.616 Recovery = 97.49%						
Cr 267.716†	44027.4	477.87 ug/L	4.532	477.87 ppb	4.532	0.95%
QC value within limits for Cr 267.716 Recovery = 95.57%						
Cu 324.752†	166918.7	468.26 ug/L	3.889	468.26 ppb	3.889	0.83%
QC value within limits for Cu 324.752 Recovery = 93.65%						
Fe 238.204 Radial†	554.4	5195.9 ug/L	20.62	5195.9 ppb	20.62	0.40%
QC value within limits for Fe 238.204 Radial Recovery = 103.92%						
K 766.490 Radial†	27526.8	5022.4 ug/L	51.35	5022.4 ppb	51.35	1.02%
QC value within limits for K 766.490 Radial Recovery = 100.45%						
Mg 279.077 IEC†	146.4	5223.3 ug/L	106.95	5223.3 ppb	106.95	2.05%
QC value within limits for Mg 279.077 IEC Recovery = 104.47%						
Mn 257.610†	423235.9	474.82 ug/L	8.055	474.82 ppb	8.055	1.70%
QC value within limits for Mn 257.610 Recovery = 94.96%						
Mo 202.031†	6983.8	477.09 ug/L	7.386	477.09 ppb	7.386	1.55%
QC value within limits for Mo 202.031 Recovery = 95.42%						
Na 589.592 Radial†	33653.9	10004 ug/L	168.5	10004 ppb	168.5	1.68%
QC value within limits for Na 589.592 Radial Recovery = 100.04%						
Ni 231.604†	19078.5	479.18 ug/L	4.508	479.18 ppb	4.508	0.94%
QC value within limits for Ni 231.604 Recovery = 95.84%						
P 214.914†	4218.4	2287.4 ug/L	34.31	2287.4 ppb	34.31	1.50%
QC value within limits for P 214.914 Recovery = 91.50%						
Pb 220.353†	3830.4	482.36 ug/L	6.174	482.36 ppb	6.174	1.28%
QC value within limits for Pb 220.353 Recovery = 96.47%						
S 181.975 Axial†	676.2	930.03 ug/L	15.300	930.03 ppb	15.300	1.65%
QC value within limits for S 181.975 Axial Recovery = 93.00%						
Sb 206.836†	1418.0	491.96 ug/L	10.047	491.96 ppb	10.047	2.04%
QC value within limits for Sb 206.836 Recovery = 98.39%						
Se 196.026†	824.2	494.33 ug/L	2.958	494.33 ppb	2.958	0.60%
QC value within limits for Se 196.026 Recovery = 98.87%						
Si 251.611†	80361.0	2375.2 ug/L	18.04	2375.2 ppb	18.04	0.76%
QC value within limits for Si 251.611 Recovery = 95.01%						
Sn 189.927†	2605.4	479.94 ug/L	7.332	479.94 ppb	7.332	1.53%
QC value within limits for Sn 189.927 Recovery = 95.99%						
Sr 421.552†	79004.6	506.99 ug/L	8.558	506.99 ppb	8.558	1.69%
QC value within limits for Sr 421.552 Recovery = 101.40%						
Ti 334.940†	309318.3	471.48 ug/L	3.943	471.48 ppb	3.943	0.84%
QC value within limits for Ti 334.940 Recovery = 94.30%						
Tl 190.801†	1486.7	478.69 ug/L	7.408	478.69 ppb	7.408	1.55%
QC value within limits for Tl 190.801 Recovery = 95.74%						
U 409.014†	18950.3	472.20 ug/L	4.996	472.20 ppb	4.996	1.06%
QC value within limits for U 409.014 Recovery = 94.44%						
V 292.402†	76356.3	481.16 ug/L	4.641	481.16 ppb	4.641	0.96%
QC value within limits for V 292.402 Recovery = 96.23%						
Zn 213.857†	51199.4	472.71 ug/L	4.285	472.71 ppb	4.285	0.91%
QC value within limits for Zn 213.857 Recovery = 94.54%						
SiO2†	80929.7	5105.4 ug/L	88.65	5105.4 ppb	88.65	1.74%
QC value within limits for SiO2 Recovery = 95.47%						

All analyte(s) passed QC.



Sequence No.: 5  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 1/26/2010 11:07:24  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5038.9	5038.9	94.4 %		11:09:17
1	Y RADIAL	5462.8	5462.8	94.89 %		11:09:17
1	Al 396.153Radial†	2.4	-6.6	-4.9616 ug/L	-4.9616 ppb	11:09:37
1	Ca 317.933Radial†	14.6	-4.8	-7.6397 ug/L	-7.6397 ppb	11:09:37
1	Fe 238.204 Radial†	7.7	1.0	8.8916 ug/L	8.8916 ppb	11:09:37
1	K 766.490 Radial†	2570.3	220.4	40.293 ug/L	40.293 ppb	11:09:17
1	Mg 279.077 IEC†	0.8	-0.2	-5.8119 ug/L	-5.8119 ppb	11:09:37
1	Na 589.592 Radial†	-739.0	-235.5	-70.014 ug/L	-70.014 ppb	11:09:17
1	Sr 421.552†	10.9	4.4	0.0286 ug/L	0.0286 ppb	11:09:17
1	Sc 361.383	887409.0	887409.0	98.835 %		11:10:34
1	Y 371.029	806255.2	806255.2	97.951 %		11:10:34
1	Ag 328.068†	309.2	16.8	0.0741 ug/L	0.0741 ppb	11:10:34
1	As 188.979†	-16.5	13.5	5.5051 ug/L	5.5051 ppb	11:10:54
1	B 249.677†	36.9	277.7	6.0889 ug/L	6.0889 ppb	11:10:54
1	Ba 233.527†	-6.4	-3.3	-0.0260 ug/L	-0.0260 ppb	11:10:54
1	Be 313.107†	-4929.7	112.6	0.0398 ug/L	0.0398 ppb	11:10:34
1	Cd 226.502†	-194.5	9.4	0.1036 ug/L	0.1036 ppb	11:10:54
1	Co 228.616†	-63.7	5.5	0.1196 ug/L	0.1196 ppb	11:10:54
1	Cr 267.716†	77.0	-16.0	-0.1729 ug/L	-0.1729 ppb	11:10:54
1	Cu 324.752†	8797.6	-226.6	-0.6346 ug/L	-0.6346 ppb	11:10:34
1	Mn 257.610†	491.2	7.1	0.0091 ug/L	0.0091 ppb	11:10:54
1	Mo 202.031†	22.5	-0.9	-0.0583 ug/L	-0.0583 ppb	11:10:54
1	Ni 231.604†	88.5	-4.2	-0.1052 ug/L	-0.1052 ppb	11:10:54
1	P 214.914†	240.7	4.8	2.8188 ug/L	2.8188 ppb	11:10:54
1	Pb 220.353†	-52.1	7.7	0.9623 ug/L	0.9623 ppb	11:10:54
1	S 181.975 Axial†	48.0	-28.4	-39.140 ug/L	-39.140 ppb	11:10:54
1	Sb 206.836†	39.8	10.0	3.3555 ug/L	3.3555 ppb	11:10:54
1	Se 196.026†	-20.2	-2.5	-1.3991 ug/L	-1.3991 ppb	11:10:54
1	Si 251.611†	484.5	-5.7	-0.1695 ug/L	-0.1695 ppb	11:10:54
1	Sn 189.927†	6.7	7.2	1.3144 ug/L	1.3144 ppb	11:10:54
1	Ti 334.940†	-889.4	6.6	0.0101 ug/L	0.0101 ppb	11:10:34
1	Tl 190.801†	-35.3	1.1	0.3618 ug/L	0.3618 ppb	11:10:54
1	U 409.014†	-1095.6	-45.6	-1.1418 ug/L	-1.1418 ppb	11:10:34
1	V 292.402†	-1371.2	6.2	0.0339 ug/L	0.0339 ppb	11:10:34
1	Zn 213.857†	682.8	-42.6	-0.3958 ug/L	-0.3958 ppb	11:10:54
1	SiO2†	513.9	6.5	0.4127 ug/L	0.4127 ppb	11:12:05
2	Sc Radial	5389.5	5389.5	101 %		11:09:42
2	Y RADIAL	5844.1	5844.1	101.5 %		11:09:42
2	Al 396.153Radial†	13.2	3.9	2.9300 ug/L	2.9300 ppb	11:10:02
2	Ca 317.933Radial†	16.8	-3.6	-5.7303 ug/L	-5.7303 ppb	11:10:02
2	Fe 238.204 Radial†	8.7	1.5	13.786 ug/L	13.786 ppb	11:10:02
2	K 766.490 Radial†	2309.9	-214.8	-39.213 ug/L	-39.213 ppb	11:09:42
2	Mg 279.077 IEC†	0.7	-0.3	-10.525 ug/L	-10.525 ppb	11:10:02
2	Na 589.592 Radial†	-736.7	-182.2	-54.177 ug/L	-54.177 ppb	11:09:42
2	Sr 421.552†	50.5	42.9	0.2756 ug/L	0.2756 ppb	11:09:42
2	Sc 361.383	887653.4	887653.4	98.862 %		11:10:59
2	Y 371.029	808770.7	808770.7	98.256 %		11:10:59
2	Ag 328.068†	321.6	29.3	0.1268 ug/L	0.1268 ppb	11:10:59
2	As 188.979†	-33.3	-3.5	-1.4396 ug/L	-1.4396 ppb	11:11:19
2	B 249.677†	31.0	271.8	5.9570 ug/L	5.9570 ppb	11:11:19
2	Ba 233.527†	9.1	12.4	0.0975 ug/L	0.0975 ppb	11:11:19
2	Be 313.107†	-4884.9	159.3	0.0561 ug/L	0.0561 ppb	11:10:59
2	Cd 226.502†	-202.6	1.3	0.0127 ug/L	0.0127 ppb	11:11:19
2	Co 228.616†	-59.4	9.8	0.2163 ug/L	0.2163 ppb	11:11:19
2	Cr 267.716†	88.8	-4.1	-0.0439 ug/L	-0.0439 ppb	11:11:19
2	Cu 324.752†	8903.6	-121.9	-0.3409 ug/L	-0.3409 ppb	11:10:59
2	Mn 257.610†	486.2	1.9	0.0040 ug/L	0.0040 ppb	11:11:19
2	Mo 202.031†	27.9	4.6	0.3171 ug/L	0.3171 ppb	11:11:19
2	Ni 231.604†	103.9	11.4	0.2872 ug/L	0.2872 ppb	11:11:19

2	P 214.914†	217.8	-18.4	-10.316 ug/L	-10.316 ppb	11:11:19
2	Pb 220.353†	-41.3	18.6	2.3398 ug/L	2.3398 ppb	11:11:19
2	S 181.975 Axial†	50.8	-25.6	-35.196 ug/L	-35.196 ppb	11:11:19
2	Sb 206.836†	38.2	8.3	2.8281 ug/L	2.8281 ppb	11:11:19
2	Se 196.026†	-27.0	-9.3	-5.3261 ug/L	-5.3261 ppb	11:11:19
2	Si 251.611†	485.1	-5.3	-0.1595 ug/L	-0.1595 ppb	11:11:19
2	Sn 189.927†	9.4	9.9	1.8146 ug/L	1.8146 ppb	11:11:19
2	Ti 334.940†	-923.0	-27.1	-0.0410 ug/L	-0.0410 ppb	11:10:59
2	Tl 190.801†	-40.8	-4.3	-1.3921 ug/L	-1.3921 ppb	11:11:19
2	U 409.014†	-1067.3	-16.7	-0.4192 ug/L	-0.4192 ppb	11:10:59
2	V 292.402†	-1397.0	-19.6	-0.1201 ug/L	-0.1201 ppb	11:10:59
2	Zn 213.857†	681.0	-44.5	-0.4175 ug/L	-0.4175 ppb	11:11:19
2	SiO2†	541.7	34.5	2.1718 ug/L	2.1718 ppb	11:12:25
3	Sc Radial	5456.3	5456.3	102 %		11:10:07
3	Y RADIAL	5908.8	5908.8	102.6 %		11:10:07
3	Al 396.153Radial†	2.8	-6.4	-4.8295 ug/L	-4.8295 ppb	11:10:27
3	Ca 317.933Radial†	19.1	-1.5	-2.4499 ug/L	-2.4499 ppb	11:10:27
3	Fe 238.204 Radial†	7.4	0.1	0.4792 ug/L	0.4792 ppb	11:10:27
3	K 766.490 Radial†	2457.2	-98.6	-17.999 ug/L	-17.999 ppb	11:10:07
3	Mg 279.077 IEC†	2.9	1.9	66.619 ug/L	66.619 ppb	11:10:27
3	Na 589.592 Radial†	-708.1	-145.4	-43.226 ug/L	-43.226 ppb	11:10:07
3	Sr 421.552†	35.3	27.5	0.1763 ug/L	0.1763 ppb	11:10:07
3	Sc 361.383	889459.6	889459.6	99.063 %		11:11:25
3	Y 371.029	810407.8	810407.8	98.455 %		11:11:25
3	Ag 328.068†	349.7	57.0	0.2372 ug/L	0.2372 ppb	11:11:25
3	As 188.979†	-25.6	4.3	1.7717 ug/L	1.7717 ppb	11:11:45
3	B 249.677†	23.5	264.2	5.7933 ug/L	5.7933 ppb	11:11:45
3	Ba 233.527†	16.9	20.1	0.1585 ug/L	0.1585 ppb	11:11:45
3	Be 313.107†	-4959.8	93.7	0.0331 ug/L	0.0331 ppb	11:11:25
3	Cd 226.502†	-209.5	-5.3	-0.0593 ug/L	-0.0593 ppb	11:11:45
3	Co 228.616†	-62.5	6.8	0.1493 ug/L	0.1493 ppb	11:11:45
3	Cr 267.716†	75.7	-17.5	-0.1896 ug/L	-0.1896 ppb	11:11:45
3	Cu 324.752†	8902.8	-141.0	-0.3956 ug/L	-0.3956 ppb	11:11:25
3	Mn 257.610†	481.0	-4.3	-0.0075 ug/L	-0.0075 ppb	11:11:45
3	Mo 202.031†	20.3	-3.2	-0.2153 ug/L	-0.2153 ppb	11:11:45
3	Ni 231.604†	91.3	-1.5	-0.0375 ug/L	-0.0375 ppb	11:11:45
3	P 214.914†	235.3	-1.2	-0.5519 ug/L	-0.5519 ppb	11:11:45
3	Pb 220.353†	-59.4	0.4	0.0514 ug/L	0.0514 ppb	11:11:45
3	S 181.975 Axial†	44.4	-32.1	-44.241 ug/L	-44.241 ppb	11:11:45
3	Sb 206.836†	41.8	12.0	4.0492 ug/L	4.0492 ppb	11:11:45
3	Se 196.026†	-14.3	3.6	2.0506 ug/L	2.0506 ppb	11:11:45
3	Si 251.611†	492.2	0.9	0.0307 ug/L	0.0307 ppb	11:11:45
3	Sn 189.927†	17.8	18.3	3.3739 ug/L	3.3739 ppb	11:11:45
3	Ti 334.940†	-884.0	14.2	0.0160 ug/L	0.0160 ppb	11:11:25
3	Tl 190.801†	-38.0	-1.5	-0.4719 ug/L	-0.4719 ppb	11:11:45
3	U 409.014†	-1051.2	1.7	0.0419 ug/L	0.0419 ppb	11:11:25
3	V 292.402†	-1406.5	-26.2	-0.1649 ug/L	-0.1649 ppb	11:11:25
3	Zn 213.857†	694.5	-32.3	-0.3004 ug/L	-0.3004 ppb	11:11:45
3	SiO2†	492.3	-16.5	-1.0349 ug/L	-1.0349 ppb	11:12:45

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample	Std.Dev.	RSD
Sc 361.383	888174.0	98.920 %		0.1247				0.13%
Sc Radial	5294.9	99.2 %		4.20				4.23%
Y 371.029	808477.9	98.221 %		0.2541				0.26%
Y RADIAL	5738.6	99.68 %		4.186				4.20%
Ag 328.068†	34.4	0.1460 ug/L		0.08325	0.1460 ppb		0.08325	57.00%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-3.0	-2.2870 ug/L		4.51858	-2.2870 ppb		4.51858	197.57%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	4.8	1.9457 ug/L		3.47563	1.9457 ppb		3.47563	178.63%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	271.2	5.9464 ug/L		0.14807	5.9464 ppb		0.14807	2.49%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	9.7	0.0767 ug/L		0.09401	0.0767 ppb		0.09401	122.63%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	121.9	0.0430 ug/L		0.01183	0.0430 ppb		0.01183	27.53%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-3.3	-5.2733 ug/L		2.62490	-5.2733 ppb		2.62490	49.78%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated

Cd 226.502† 1.8 0.0190 ug/L 0.08166 0.0190 ppb 0.08166 429.73%

QC value within limits for Cd 226.502 Recovery = Not calculated

Co 228.616† 7.4 0.1618 ug/L 0.04955 0.1618 ppb 0.04955 30.63%

QC value within limits for Co 228.616 Recovery = Not calculated

Cr 267.716† -12.5 -0.1355 ug/L 0.07975 -0.1355 ppb 0.07975 58.87%

QC value within limits for Cr 267.716 Recovery = Not calculated

Cu 324.752† -163.2 -0.4570 ug/L 0.15621 -0.4570 ppb 0.15621 34.18%

QC value within limits for Cu 324.752 Recovery = Not calculated

Fe 238.204 Radial† 0.8 7.7189 ug/L 6.73040 7.7189 ppb 6.73040 87.19%

QC value within limits for Fe 238.204 Radial Recovery = Not calculated

K 766.490 Radial† -31.0 -5.6398 ug/L 41.16864 -5.6398 ppb 41.16864 729.96%

QC value within limits for K 766.490 Radial Recovery = Not calculated

Mg 279.077 IEC† 0.5 16.761 ug/L 43.2432 16.761 ppb 43.2432 258.00%

QC value within limits for Mg 279.077 IEC Recovery = Not calculated

Mn 257.610† 1.6 0.0019 ug/L 0.00849 0.0019 ppb 0.00849 456.11%

QC value within limits for Mn 257.610 Recovery = Not calculated

Mo 202.031† 0.2 0.0145 ug/L 0.27358 0.0145 ppb 0.27358 >999.9%

QC value within limits for Mo 202.031 Recovery = Not calculated

Na 589.592 Radial† -187.7 -55.806 ug/L 13.4680 -55.806 ppb 13.4680 24.13%

QC value within limits for Na 589.592 Radial Recovery = Not calculated

Ni 231.604† 1.9 0.0482 ug/L 0.20978 0.0482 ppb 0.20978 435.37%

QC value within limits for Ni 231.604 Recovery = Not calculated

P 214.914† -4.9 -2.6831 ug/L 6.82189 -2.6831 ppb 6.82189 254.26%

QC value within limits for P 214.914 Recovery = Not calculated

Pb 220.353† 8.9 1.1179 ug/L 1.15213 1.1179 ppb 1.15213 103.07%

QC value within limits for Pb 220.353 Recovery = Not calculated

S 181.975 Axial† -28.7 -39.526 ug/L 4.5352 -39.526 ppb 4.5352 11.47%

QC value within limits for S 181.975 Axial Recovery = Not calculated

Sb 206.836† 10.1 3.4109 ug/L 0.61240 3.4109 ppb 0.61240 17.95%

QC value within limits for Sb 206.836 Recovery = Not calculated

Se 196.026† -2.7 -1.5582 ug/L 3.69089 -1.5582 ppb 3.69089 236.87%

QC value within limits for Se 196.026 Recovery = Not calculated

Si 251.611† -3.4 -0.0994 ug/L 0.11281 -0.0994 ppb 0.11281 113.44%

QC value within limits for Si 251.611 Recovery = Not calculated

Sn 189.927† 11.8 2.1676 ug/L 1.07419 2.1676 ppb 1.07419 49.56%

QC value within limits for Sn 189.927 Recovery = Not calculated

Sr 421.552† 25.0 0.1602 ug/L 0.12431 0.1602 ppb 0.12431 77.60%

QC value within limits for Sr 421.552 Recovery = Not calculated

Ti 334.940† -2.1 -0.0050 ug/L 0.03133 -0.0050 ppb 0.03133 628.81%

QC value within limits for Ti 334.940 Recovery = Not calculated

Tl 190.801† -1.6 -0.5008 ug/L 0.87732 -0.5008 ppb 0.87732 175.20%

QC value within limits for Tl 190.801 Recovery = Not calculated

U 409.014† -20.2 -0.5064 ug/L 0.59667 -0.5064 ppb 0.59667 117.83%

QC value within limits for U 409.014 Recovery = Not calculated

V 292.402† -13.2 -0.0837 ug/L 0.10431 -0.0837 ppb 0.10431 124.62%

QC value within limits for V 292.402 Recovery = Not calculated

Zn 213.857† -39.8 -0.3712 ug/L 0.06231 -0.3712 ppb 0.06231 16.78%

QC value within limits for Zn 213.857 Recovery = Not calculated

SiO2† 8.2 0.5165 ug/L 1.60587 0.5165 ppb 1.60587 310.90%

QC value within limits for SiO2 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 9  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 1/26/2010 12:13:34  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5433.0	5433.0	102 %		12:15:26
1	Y RADIAL	5836.7	5836.7	101.4 %		12:15:26
1	Al 396.153Radial†	6608.6	6486.4	4890.1 ug/L	4890.1 ppb	12:15:26
1	Ca 317.933Radial†	3217.2	3141.9	5049.9 ug/L	5049.9 ppb	12:15:46
1	Fe 238.204 Radial†	578.3	561.3	5260.3 ug/L	5260.3 ppb	12:15:46
1	K 766.490 Radial†	30416.9	27392.9	4997.8 ug/L	4997.8 ppb	12:15:26
1	Mg 279.077 IEC†	151.4	147.9	5274.6 ug/L	5274.6 ppb	12:15:46
1	Na 589.592 Radial†	34421.6	34380.3	10220 ug/L	10220 ppb	12:15:26
1	Sr 421.552†	80987.0	79594.2	510.77 ug/L	510.77 ppb	12:15:26
1	Sc 361.383	923891.8	923891.8	102.90 %		12:16:44
1	Y 371.029	809345.7	809345.7	98.326 %		12:16:44
1	Ag 328.068†	121335.5	117622.4	494.07 ug/L	494.07 ppb	12:16:49
1	As 188.979†	1199.0	1195.4	493.36 ug/L	493.36 ppb	12:17:09
1	B 249.677†	22641.0	22243.8	485.53 ug/L	485.53 ppb	12:16:49
1	Ba 233.527†	64172.8	62368.7	492.84 ug/L	492.84 ppb	12:16:49
1	Be 313.107†	1415559.2	1380794.6	488.20 ug/L	488.20 ppb	12:16:44
1	Cd 226.502†	45558.5	44481.6	496.74 ug/L	496.74 ppb	12:16:49
1	Co 228.616†	23532.9	22940.1	502.96 ug/L	502.96 ppb	12:16:49
1	Cr 267.716†	47042.5	45623.8	495.20 ug/L	495.20 ppb	12:16:49
1	Cu 324.752†	187213.1	172812.8	484.79 ug/L	484.79 ppb	12:16:49
1	Mn 257.610†	447871.5	434768.6	487.75 ug/L	487.75 ppb	12:16:44
1	Mo 202.031†	7347.9	7117.4	486.22 ug/L	486.22 ppb	12:17:09
1	Ni 231.604†	20427.0	19758.1	496.25 ug/L	496.25 ppb	12:16:49
1	P 214.914†	4667.6	4297.5	2328.8 ug/L	2328.8 ppb	12:17:09
1	Pb 220.353†	3954.1	3903.2	491.49 ug/L	491.49 ppb	12:17:09
1	S 181.975 Axial†	794.7	695.4	956.46 ug/L	956.46 ppb	12:17:09
1	Sb 206.836†	1534.4	1460.9	506.67 ug/L	506.67 ppb	12:17:09
1	Se 196.026†	851.5	845.5	506.81 ug/L	506.81 ppb	12:17:09
1	Si 251.611†	86055.6	83136.1	2457.3 ug/L	2457.3 ppb	12:16:49
1	Sn 189.927†	2738.0	2661.2	490.21 ug/L	490.21 ppb	12:17:09
1	Ti 334.940†	328569.8	320223.1	488.10 ug/L	488.10 ppb	12:16:49
1	Tl 190.801†	1517.7	1511.9	486.85 ug/L	486.85 ppb	12:17:09
1	U 409.014†	18951.7	19480.8	485.41 ug/L	485.41 ppb	12:16:49
1	V 292.402†	79772.8	78919.8	497.22 ug/L	497.22 ppb	12:16:49
1	Zn 213.857†	55252.2	52962.7	489.00 ug/L	489.00 ppb	12:16:49
1	SiO2†	86703.2	83748.0	5283.4 ug/L	5283.4 ppb	12:18:17
2	Sc Radial	5434.3	5434.3	102 %		12:15:52
2	Y RADIAL	5854.6	5854.6	101.7 %		12:15:52
2	Al 396.153Radial†	6656.5	6532.0	4924.3 ug/L	4924.3 ppb	12:15:52
2	Ca 317.933Radial†	3208.0	3132.2	5034.3 ug/L	5034.3 ppb	12:16:12
2	Fe 238.204 Radial†	582.4	565.2	5296.7 ug/L	5296.7 ppb	12:16:12
2	K 766.490 Radial†	30709.3	27673.4	5049.0 ug/L	5049.0 ppb	12:15:52
2	Mg 279.077 IEC†	151.8	148.2	5285.6 ug/L	5285.6 ppb	12:16:12
2	Na 589.592 Radial†	34490.0	34439.7	10238 ug/L	10238 ppb	12:15:52
2	Sr 421.552†	81509.8	80089.5	513.95 ug/L	513.95 ppb	12:15:52
2	Sc 361.383	920562.4	920562.4	102.53 %		12:17:15
2	Y 371.029	807595.5	807595.5	98.114 %		12:17:15
2	Ag 328.068†	121078.0	117797.7	494.81 ug/L	494.81 ppb	12:17:20
2	As 188.979†	1211.1	1211.4	499.89 ug/L	499.89 ppb	12:17:40
2	B 249.677†	22650.3	22332.4	487.47 ug/L	487.47 ppb	12:17:20
2	Ba 233.527†	64060.2	62484.4	493.76 ug/L	493.76 ppb	12:17:20
2	Be 313.107†	1412967.1	1383241.8	489.06 ug/L	489.06 ppb	12:17:15
2	Cd 226.502†	45343.5	44432.1	496.19 ug/L	496.19 ppb	12:17:20
2	Co 228.616†	23476.9	22968.2	503.59 ug/L	503.59 ppb	12:17:20
2	Cr 267.716†	46867.3	45618.3	495.14 ug/L	495.14 ppb	12:17:20
2	Cu 324.752†	187165.8	173424.7	486.51 ug/L	486.51 ppb	12:17:20
2	Mn 257.610†	445993.0	434510.7	487.47 ug/L	487.47 ppb	12:17:15
2	Mo 202.031†	7434.2	7227.3	493.72 ug/L	493.72 ppb	12:17:40
2	Ni 231.604†	20378.3	19782.3	496.86 ug/L	496.86 ppb	12:17:20

2	P 214.914†	4714.9	4359.9	2363.7 ug/L	2363.7 ppb	12:17:40
2	Pb 220.353†	3979.0	3941.3	496.30 ug/L	496.30 ppb	12:17:40
2	S 181.975 Axial†	806.2	709.4	975.75 ug/L	975.75 ppb	12:17:40
2	Sb 206.836†	1546.4	1478.0	512.65 ug/L	512.65 ppb	12:17:40
2	Se 196.026†	863.0	859.7	515.15 ug/L	515.15 ppb	12:17:40
2	Si 251.611†	85994.5	83379.0	2464.4 ug/L	2464.4 ppb	12:17:20
2	Sn 189.927†	2764.7	2696.9	496.78 ug/L	496.78 ppb	12:17:40
2	Ti 334.940†	327821.2	320647.9	488.74 ug/L	488.74 ppb	12:17:20
2	Tl 190.801†	1537.6	1536.6	494.76 ug/L	494.76 ppb	12:17:40
2	U 409.014†	19037.6	19631.2	489.17 ug/L	489.17 ppb	12:17:20
2	V 292.402†	79683.0	79112.6	498.53 ug/L	498.53 ppb	12:17:20
2	Zn 213.857†	55143.1	53050.6	489.80 ug/L	489.80 ppb	12:17:20
2	SiO2†	85235.4	82621.2	5211.9 ug/L	5211.9 ppb	12:18:22
3	Sc Radial	5356.7	5356.7	100 %		12:16:17
3	Y RADIAL	5759.6	5759.6	100.0 %		12:16:17
3	Al 396.153Radial†	6629.4	6599.7	4975.9 ug/L	4975.9 ppb	12:16:17
3	Ca 317.933Radial†	3184.6	3154.5	5070.2 ug/L	5070.2 ppb	12:16:37
3	Fe 238.204 Radial†	575.3	566.4	5308.0 ug/L	5308.0 ppb	12:16:37
3	K 766.490 Radial†	30539.8	27941.5	5098.0 ug/L	5098.0 ppb	12:16:17
3	Mg 279.077 IEC†	153.4	151.9	5418.3 ug/L	5418.3 ppb	12:16:37
3	Na 589.592 Radial†	34248.3	34689.6	10312 ug/L	10312 ppb	12:16:17
3	Sr 421.552†	80762.1	80504.2	516.61 ug/L	516.61 ppb	12:16:17
3	Sc 361.383	930593.8	930593.8	103.64 %		12:17:46
3	Y 371.029	815416.9	815416.9	99.064 %		12:17:46
3	Ag 328.068†	121072.6	116519.5	489.46 ug/L	489.46 ppb	12:17:51
3	As 188.979†	1213.6	1201.1	495.64 ug/L	495.64 ppb	12:18:11
3	B 249.677†	22709.1	22151.1	483.50 ug/L	483.50 ppb	12:17:51
3	Ba 233.527†	63920.0	61675.6	487.37 ug/L	487.37 ppb	12:17:51
3	Be 313.107†	1426007.0	1380967.3	488.25 ug/L	488.25 ppb	12:17:46
3	Cd 226.502†	45398.5	44008.4	491.45 ug/L	491.45 ppb	12:17:51
3	Co 228.616†	23511.5	22754.8	498.90 ug/L	498.90 ppb	12:17:51
3	Cr 267.716†	46750.9	45013.2	488.57 ug/L	488.57 ppb	12:17:51
3	Cu 324.752†	187206.1	171495.7	481.10 ug/L	481.10 ppb	12:17:51
3	Mn 257.610†	450718.9	434381.2	487.32 ug/L	487.32 ppb	12:17:46
3	Mo 202.031†	7400.8	7116.9	486.19 ug/L	486.19 ppb	12:18:11
3	Ni 231.604†	20364.4	19554.6	491.14 ug/L	491.14 ppb	12:17:51
3	P 214.914†	4729.9	4324.8	2344.9 ug/L	2344.9 ppb	12:18:11
3	Pb 220.353†	3959.3	3880.4	488.66 ug/L	488.66 ppb	12:18:11
3	S 181.975 Axial†	799.0	693.9	954.42 ug/L	954.42 ppb	12:18:11
3	Sb 206.836†	1528.0	1444.0	501.03 ug/L	501.03 ppb	12:18:11
3	Se 196.026†	851.6	839.6	503.59 ug/L	503.59 ppb	12:18:11
3	Si 251.611†	85986.6	82467.3	2437.5 ug/L	2437.5 ppb	12:17:51
3	Sn 189.927†	2762.1	2665.3	490.98 ug/L	490.98 ppb	12:18:11
3	Ti 334.940†	327580.5	316968.9	483.13 ug/L	483.13 ppb	12:17:51
3	Tl 190.801†	1528.2	1511.4	486.68 ug/L	486.68 ppb	12:18:11
3	U 409.014†	19160.8	19549.9	487.15 ug/L	487.15 ppb	12:17:51
3	V 292.402†	79412.7	78014.1	491.60 ug/L	491.60 ppb	12:17:51
3	Zn 213.857†	55024.7	52356.5	483.38 ug/L	483.38 ppb	12:17:51
3	SiO2†	85738.5	82210.5	5186.1 ug/L	5186.1 ppb	12:18:27

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	925016.0	103.02 %	0.569			0.55%
Sc Radial	5408.0	101 %	0.8			0.82%
Y 371.029	810786.0	98.501 %	0.4987			0.51%
Y RADIAL	5817.0	101.0 %	0.88			0.87%
Ag 328.068†	117313.2	492.78 ug/L	2.902	492.78 ppb	2.902	0.59%
QC value within limits for Ag 328.068 Recovery = 98.56%						
Al 396.153Radial†	6539.4	4930.1 ug/L	43.20	4930.1 ppb	43.20	0.88%
QC value within limits for Al 396.153Radial Recovery = 98.60%						
As 188.979†	1202.6	496.30 ug/L	3.315	496.30 ppb	3.315	0.67%
QC value within limits for As 188.979 Recovery = 99.26%						
B 249.677†	22242.4	485.50 ug/L	1.983	485.50 ppb	1.983	0.41%
QC value within limits for B 249.677 Recovery = 97.10%						
Ba 233.527†	62176.2	491.32 ug/L	3.455	491.32 ppb	3.455	0.70%
QC value within limits for Ba 233.527 Recovery = 98.26%						
Be 313.107†	1381667.9	488.50 ug/L	0.486	488.50 ppb	0.486	0.10%
QC value within limits for Be 313.107 Recovery = 97.70%						
Ca 317.933Radial†	3142.8	5051.5 ug/L	17.96	5051.5 ppb	17.96	0.36%

QC value within limits for Ca 317.933 Radial Recovery = 101.03%

Cd 226.502†	44307.4	494.79 ug/L	2.909	494.79 ppb	2.909	0.59%
QC value within limits for Cd 226.502 Recovery = 98.96%						
Co 228.616†	22887.7	501.82 ug/L	2.542	501.82 ppb	2.542	0.51%
QC value within limits for Co 228.616 Recovery = 100.36%						
Cr 267.716†	45418.4	492.97 ug/L	3.809	492.97 ppb	3.809	0.77%
QC value within limits for Cr 267.716 Recovery = 98.59%						
Cu 324.752†	172577.7	484.13 ug/L	2.764	484.13 ppb	2.764	0.57%
QC value within limits for Cu 324.752 Recovery = 96.83%						
Fe 238.204 Radial†	564.3	5288.3 ug/L	24.91	5288.3 ppb	24.91	0.47%
QC value within limits for Fe 238.204 Radial Recovery = 105.77%						
K 766.490 Radial†	27669.3	5048.3 ug/L	50.09	5048.3 ppb	50.09	0.99%
QC value within limits for K 766.490 Radial Recovery = 100.97%						
Mg 279.077 IEC†	149.3	5326.1 ug/L	80.00	5326.1 ppb	80.00	1.50%
QC value within limits for Mg 279.077 IEC Recovery = 106.52%						
Mn 257.610†	434553.5	487.51 ug/L	0.221	487.51 ppb	0.221	0.05%
QC value within limits for Mn 257.610 Recovery = 97.50%						
Mo 202.031†	7153.9	488.71 ug/L	4.341	488.71 ppb	4.341	0.89%
QC value within limits for Mo 202.031 Recovery = 97.74%						
Na 589.592 Radial†	34503.2	10257 ug/L	48.8	10257 ppb	48.8	0.48%
QC value within limits for Na 589.592 Radial Recovery = 102.57%						
Ni 231.604†	19698.4	494.75 ug/L	3.141	494.75 ppb	3.141	0.63%
QC value within limits for Ni 231.604 Recovery = 98.95%						
P 214.914†	4327.4	2345.8 ug/L	17.49	2345.8 ppb	17.49	0.75%
QC value within limits for P 214.914 Recovery = 93.83%						
Pb 220.353†	3908.3	492.15 ug/L	3.864	492.15 ppb	3.864	0.79%
QC value within limits for Pb 220.353 Recovery = 98.43%						
S 181.975 Axial†	699.5	962.21 ug/L	11.770	962.21 ppb	11.770	1.22%
QC value within limits for S 181.975 Axial Recovery = 96.22%						
Sb 206.836†	1461.0	506.78 ug/L	5.808	506.78 ppb	5.808	1.15%
QC value within limits for Sb 206.836 Recovery = 101.36%						
Se 196.026†	848.2	508.52 ug/L	5.968	508.52 ppb	5.968	1.17%
QC value within limits for Se 196.026 Recovery = 101.70%						
Si 251.611†	82994.1	2453.1 ug/L	13.95	2453.1 ppb	13.95	0.57%
QC value within limits for Si 251.611 Recovery = 98.12%						
Sn 189.927†	2674.5	492.66 ug/L	3.593	492.66 ppb	3.593	0.73%
QC value within limits for Sn 189.927 Recovery = 98.53%						
Sr 421.552†	80062.7	513.78 ug/L	2.924	513.78 ppb	2.924	0.57%
QC value within limits for Sr 421.552 Recovery = 102.76%						
Ti 334.940†	319280.0	486.66 ug/L	3.071	486.66 ppb	3.071	0.63%
QC value within limits for Ti 334.940 Recovery = 97.33%						
Tl 190.801†	1519.9	489.43 ug/L	4.614	489.43 ppb	4.614	0.94%
QC value within limits for Tl 190.801 Recovery = 97.89%						
U 409.014†	19553.9	487.25 ug/L	1.880	487.25 ppb	1.880	0.39%
QC value within limits for U 409.014 Recovery = 97.45%						
V 292.402†	78682.2	495.78 ug/L	3.684	495.78 ppb	3.684	0.74%
QC value within limits for V 292.402 Recovery = 99.16%						
Zn 213.857†	52790.0	487.39 ug/L	3.498	487.39 ppb	3.498	0.72%
QC value within limits for Zn 213.857 Recovery = 97.48%						
SiO2†	82859.9	5227.1 ug/L	50.38	5227.1 ppb	50.38	0.96%
QC value within limits for SiO2 Recovery = 97.75%						

All analyte(s) passed QC.

Sequence No.: 10  
 Sample ID: PQL  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 11  
 Date Collected: 1/26/2010 12:20:38  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5415.3	5415.3	101 %		12:22:31
1	Y RADIAL	5847.2	5847.2	101.6 %		12:22:31
1	Al 396.153Radial†	275.7	262.8	198.56 ug/L	198.56 ppb	12:22:51
1	Ca 317.933Radial†	152.1	129.8	208.60 ug/L	208.60 ppb	12:22:51
1	Fe 238.204 Radial†	21.1	13.6	127.55 ug/L	127.55 ppb	12:22:51
1	K 766.490 Radial†	3280.7	731.6	133.47 ug/L	133.47 ppb	12:22:31
1	Mg 279.077 IEC†	10.5	9.3	332.93 ug/L	332.93 ppb	12:22:51
1	Na 589.592 Radial†	265.9	809.9	240.75 ug/L	240.75 ppb	12:22:31
1	Sr 421.552†	809.0	790.6	5.0724 ug/L	5.0724 ppb	12:22:31
1	Sc 361.383	890266.9	890266.9	99.153 %		12:23:48
1	Y 371.029	809464.4	809464.4	98.341 %		12:23:48
1	Ag 328.068†	1559.9	1277.2	5.3485 ug/L	5.3485 ppb	12:23:48
1	As 188.979†	41.2	71.8	29.413 ug/L	29.413 ppb	12:24:08
1	B 249.677†	2148.3	2407.1	52.753 ug/L	52.753 ppb	12:23:48
1	Ba 233.527†	649.8	658.4	5.2058 ug/L	5.2058 ppb	12:24:08
1	Be 313.107†	9305.3	14485.2	5.1216 ug/L	5.1216 ppb	12:23:48
1	Cd 226.502†	256.1	464.5	5.1889 ug/L	5.1889 ppb	12:24:08
1	Co 228.616†	158.6	229.9	5.0505 ug/L	5.0505 ppb	12:24:08
1	Cr 267.716†	550.8	461.6	4.9940 ug/L	4.9940 ppb	12:24:08
1	Cu 324.752†	12535.9	3514.9	9.8385 ug/L	9.8385 ppb	12:23:48
1	Mn 257.610†	9867.7	9462.2	10.608 ug/L	10.608 ppb	12:23:48
1	Mo 202.031†	171.6	149.5	10.213 ug/L	10.213 ppb	12:24:08
1	Ni 231.604†	323.2	232.3	5.8342 ug/L	5.8342 ppb	12:24:08
1	P 214.914†	507.0	272.6	151.83 ug/L	151.83 ppb	12:24:08
1	Pb 220.353†	22.8	83.4	10.522 ug/L	10.522 ppb	12:24:08
1	S 181.975 Axial†	132.5	56.7	78.011 ug/L	78.011 ppb	12:24:08
1	Sb 206.836†	71.7	42.0	14.451 ug/L	14.451 ppb	12:24:08
1	Se 196.026†	31.5	49.7	29.135 ug/L	29.135 ppb	12:24:08
1	Si 251.611†	3773.0	3309.3	97.928 ug/L	97.928 ppb	12:24:08
1	Sn 189.927†	60.6	61.4	11.327 ug/L	11.327 ppb	12:24:08
1	Ti 334.940†	2484.5	3412.3	5.1791 ug/L	5.1791 ppb	12:23:48
1	Tl 190.801†	12.6	49.6	15.931 ug/L	15.931 ppb	12:24:08
1	U 409.014†	989.5	2060.7	51.504 ug/L	51.504 ppb	12:23:48
1	V 292.402†	-508.3	881.0	5.7019 ug/L	5.7019 ppb	12:23:48
1	Zn 213.857†	1790.4	1072.3	9.9246 ug/L	9.9246 ppb	12:24:08
1	SiO2†	3998.3	3519.0	222.28 ug/L	222.28 ppb	12:25:04
2	Sc Radial	5401.3	5401.3	101 %		12:22:56
2	Y RADIAL	5831.5	5831.5	101.3 %		12:22:56
2	Al 396.153Radial†	278.3	266.0	201.00 ug/L	201.00 ppb	12:23:16
2	Ca 317.933Radial†	148.3	126.4	203.13 ug/L	203.13 ppb	12:23:16
2	Fe 238.204 Radial†	19.1	11.7	109.83 ug/L	109.83 ppb	12:23:16
2	K 766.490 Radial†	3282.7	742.0	135.37 ug/L	135.37 ppb	12:22:56
2	Mg 279.077 IEC†	9.1	8.0	284.70 ug/L	284.70 ppb	12:23:16
2	Na 589.592 Radial†	292.9	837.2	248.87 ug/L	248.87 ppb	12:22:56
2	Sr 421.552†	826.6	810.2	5.1978 ug/L	5.1978 ppb	12:22:56
2	Sc 361.383	885666.5	885666.5	98.641 %		12:24:13
2	Y 371.029	803756.0	803756.0	97.647 %		12:24:13
2	Ag 328.068†	1580.8	1306.6	5.4645 ug/L	5.4645 ppb	12:24:13
2	As 188.979†	40.0	70.7	28.970 ug/L	28.970 ppb	12:24:33
2	B 249.677†	2033.1	2301.6	50.442 ug/L	50.442 ppb	12:24:13
2	Ba 233.527†	658.7	670.9	5.3023 ug/L	5.3023 ppb	12:24:33
2	Be 313.107†	9253.9	14481.8	5.1206 ug/L	5.1206 ppb	12:24:13
2	Cd 226.502†	283.8	493.9	5.5192 ug/L	5.5192 ppb	12:24:33
2	Co 228.616†	157.8	229.9	5.0515 ug/L	5.0515 ppb	12:24:33
2	Cr 267.716†	564.2	478.0	5.1716 ug/L	5.1716 ppb	12:24:33
2	Cu 324.752†	12388.3	3431.0	9.6030 ug/L	9.6030 ppb	12:24:13
2	Mn 257.610†	9788.9	9434.0	10.576 ug/L	10.576 ppb	12:24:13
2	Mo 202.031†	169.2	148.0	10.108 ug/L	10.108 ppb	12:24:33
2	Ni 231.604†	318.9	229.6	5.7665 ug/L	5.7665 ppb	12:24:33



2	P 214.914†	501.6	269.7	150.28 ug/L	150.28 ppb	12:24:33
2	Pb 220.353†	31.8	92.7	11.687 ug/L	11.687 ppb	12:24:33
2	S 181.975 Axial†	122.6	47.2	65.016 ug/L	65.016 ppb	12:24:33
2	Sb 206.836†	63.3	33.9	11.739 ug/L	11.739 ppb	12:24:33
2	Se 196.026†	29.4	47.7	27.941 ug/L	27.941 ppb	12:24:33
2	Si 251.611†	3808.9	3365.4	99.592 ug/L	99.592 ppb	12:24:33
2	Sn 189.927†	62.9	64.1	11.821 ug/L	11.821 ppb	12:24:33
2	Ti 334.940†	2521.2	3462.5	5.2594 ug/L	5.2594 ppb	12:24:13
2	Tl 190.801†	19.2	56.4	18.088 ug/L	18.088 ppb	12:24:33
2	U 409.014†	924.5	2000.1	49.988 ug/L	49.988 ppb	12:24:13
2	V 292.402†	-584.1	801.4	5.2042 ug/L	5.2042 ppb	12:24:13
2	Zn 213.857†	1797.5	1088.9	10.082 ug/L	10.082 ppb	12:24:33
2	SiO2†	3926.2	3466.9	218.99 ug/L	218.99 ppb	12:25:09
3	Sc Radial	5516.4	5516.4	103 %		12:23:21
3	Y RADIAL	5969.8	5969.8	103.7 %		12:23:21
3	Al 396.153Radial†	278.3	260.2	196.61 ug/L	196.61 ppb	12:23:41
3	Ca 317.933Radial†	146.8	121.8	195.83 ug/L	195.83 ppb	12:23:41
3	Fe 238.204 Radial†	19.0	11.3	105.44 ug/L	105.44 ppb	12:23:41
3	K 766.490 Radial†	3193.2	587.7	107.17 ug/L	107.17 ppb	12:23:21
3	Mg 279.077 IEC†	11.0	9.7	346.79 ug/L	346.79 ppb	12:23:41
3	Na 589.592 Radial†	379.7	915.2	272.07 ug/L	272.07 ppb	12:23:21
3	Sr 421.552†	846.0	811.9	5.2091 ug/L	5.2091 ppb	12:23:21
3	Sc 361.383	894423.6	894423.6	99.616 %		12:24:38
3	Y 371.029	817232.0	817232.0	99.284 %		12:24:38
3	Ag 328.068†	1591.3	1301.4	5.4350 ug/L	5.4350 ppb	12:24:38
3	As 188.979†	40.7	71.0	29.095 ug/L	29.095 ppb	12:24:58
3	B 249.677†	2091.8	2340.3	51.293 ug/L	51.293 ppb	12:24:38
3	Ba 233.527†	648.2	653.8	5.1670 ug/L	5.1670 ppb	12:24:58
3	Be 313.107†	9369.1	14505.6	5.1288 ug/L	5.1288 ppb	12:24:38
3	Cd 226.502†	264.1	471.3	5.2680 ug/L	5.2680 ppb	12:24:58
3	Co 228.616†	164.8	235.3	5.1718 ug/L	5.1718 ppb	12:24:58
3	Cr 267.716†	577.3	485.5	5.2499 ug/L	5.2499 ppb	12:24:58
3	Cu 324.752†	12615.0	3535.7	9.8927 ug/L	9.8927 ppb	12:24:38
3	Mn 257.610†	9931.8	9480.2	10.625 ug/L	10.625 ppb	12:24:38
3	Mo 202.031†	179.1	156.2	10.668 ug/L	10.668 ppb	12:24:58
3	Ni 231.604†	332.8	240.4	6.0376 ug/L	6.0376 ppb	12:24:58
3	P 214.914†	510.8	274.1	152.67 ug/L	152.67 ppb	12:24:58
3	Pb 220.353†	9.4	69.8	8.8204 ug/L	8.8204 ppb	12:24:58
3	S 181.975 Axial†	122.6	46.1	63.375 ug/L	63.375 ppb	12:24:58
3	Sb 206.836†	66.4	36.4	12.598 ug/L	12.598 ppb	12:24:58
3	Se 196.026†	27.2	45.3	26.526 ug/L	26.526 ppb	12:24:58
3	Si 251.611†	3808.4	3327.1	98.451 ug/L	98.451 ppb	12:24:58
3	Sn 189.927†	66.3	66.9	12.324 ug/L	12.324 ppb	12:24:58
3	Ti 334.940†	2490.0	3406.1	5.1645 ug/L	5.1645 ppb	12:24:38
3	Tl 190.801†	30.3	67.3	21.597 ug/L	21.597 ppb	12:24:58
3	U 409.014†	1199.0	2266.5	56.650 ug/L	56.650 ppb	12:24:38
3	V 292.402†	-635.5	755.6	4.9418 ug/L	4.9418 ppb	12:24:38
3	Zn 213.857†	1788.4	1061.9	9.8287 ug/L	9.8287 ppb	12:24:58
3	SiO2†	3913.1	3414.8	215.68 ug/L	215.68 ppb	12:25:14

## Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	890119.0	99.136 %	0.4879			0.49%
Sc Radial	5444.3	102 %	1.2			1.15%
Y 371.029	810150.8	98.424 %	0.8218			0.83%
Y RADIAL	5882.8	102.2 %	1.32			1.29%
Ag 328.068†	1295.1	5.4160 ug/L	0.06030	5.4160 ppb	0.06030	1.11%
QC value within limits for Ag 328.068 Recovery = 108.32%						
Al 396.153Radial†	263.0	198.72 ug/L	2.195	198.72 ppb	2.195	1.10%
QC value within limits for Al 396.153Radial Recovery = 99.36%						
As 188.979†	71.2	29.159 ug/L	0.2285	29.159 ppb	0.2285	0.78%
QC value within limits for As 188.979 Recovery = 97.20%						
B 249.677†	2349.6	51.496 ug/L	1.1689	51.496 ppb	1.1689	2.27%
QC value within limits for B 249.677 Recovery = 102.99%						
Ba 233.527†	661.0	5.2250 ug/L	0.06968	5.2250 ppb	0.06968	1.33%
QC value within limits for Ba 233.527 Recovery = 104.50%						
Be 313.107†	14490.9	5.1237 ug/L	0.00447	5.1237 ppb	0.00447	0.09%
QC value within limits for Be 313.107 Recovery = 102.47%						
Ca 317.933Radial†	126.0	202.52 ug/L	6.404	202.52 ppb	6.404	3.16%



QC value within limits for Ca 317.933 Radial Recovery = 101.26%

Cd 226.502†	476.5	5.3254 ug/L	0.17250	5.3254 ppb	0.17250	3.24%
QC value within limits for Cd 226.502 Recovery = 106.51%						
Co 228.616†	231.7	5.0913 ug/L	0.06971	5.0913 ppb	0.06971	1.37%
QC value within limits for Co 228.616 Recovery = 101.83%						
Cr 267.716†	475.1	5.1385 ug/L	0.13115	5.1385 ppb	0.13115	2.55%
QC value within limits for Cr 267.716 Recovery = 102.77%						
Cu 324.752†	3493.9	9.7781 ug/L	0.15398	9.7781 ppb	0.15398	1.57%
QC value within limits for Cu 324.752 Recovery = 97.78%						
Fe 238.204 Radial†	12.2	114.27 ug/L	11.708	114.27 ppb	11.708	10.25%
QC value within limits for Fe 238.204 Radial Recovery = 114.27%						
K 766.490 Radial†	687.1	125.34 ug/L	15.761	125.34 ppb	15.761	12.57%
QC value within limits for K 766.490 Radial Recovery = 83.56%						
Mg 279.077 IEC†	9.0	321.48 ug/L	32.589	321.48 ppb	32.589	10.14%
QC value within limits for Mg 279.077 IEC Recovery = 107.16%						
Mn 257.610†	9458.8	10.603 ug/L	0.0248	10.603 ppb	0.0248	0.23%
QC value within limits for Mn 257.610 Recovery = 106.03%						
Mo 202.031†	151.2	10.330 ug/L	0.2973	10.330 ppb	0.2973	2.88%
QC value within limits for Mo 202.031 Recovery = 103.30%						
Na 589.592 Radial†	854.1	253.90 ug/L	16.254	253.90 ppb	16.254	6.40%
QC value within limits for Na 589.592 Radial Recovery = 84.63%						
Ni 231.604†	234.1	5.8794 ug/L	0.14108	5.8794 ppb	0.14108	2.40%
QC value within limits for Ni 231.604 Recovery = 117.59%						
P 214.914†	272.1	151.59 ug/L	1.213	151.59 ppb	1.213	0.80%
QC value within limits for P 214.914 Recovery = 101.06%						
Pb 220.353†	82.0	10.343 ug/L	1.4418	10.343 ppb	1.4418	13.94%
QC value within limits for Pb 220.353 Recovery = 103.43%						
S 181.975 Axial†	50.0	68.801 ug/L	8.0186	68.801 ppb	8.0186	11.65%
QC value less than the lower limit for S 181.975 Axial Recovery = 68.80%						
Sb 206.836†	37.5	12.929 ug/L	1.3861	12.929 ppb	1.3861	10.72%
QC value within limits for Sb 206.836 Recovery = 129.29%						
Se 196.026†	47.6	27.867 ug/L	1.3060	27.867 ppb	1.3060	4.69%
QC value within limits for Se 196.026 Recovery = 92.89%						
Si 251.611†	3333.9	98.657 ug/L	0.8512	98.657 ppb	0.8512	0.86%
QC value within limits for Si 251.611 Recovery = 98.66%						
Sn 189.927†	64.1	11.824 ug/L	0.4988	11.824 ppb	0.4988	4.22%
QC value within limits for Sn 189.927 Recovery = 118.24%						
Sr 421.552†	804.2	5.1598 ug/L	0.07583	5.1598 ppb	0.07583	1.47%
QC value within limits for Sr 421.552 Recovery = 103.20%						
Ti 334.940†	3427.0	5.2010 ug/L	0.05110	5.2010 ppb	0.05110	0.98%
QC value within limits for Ti 334.940 Recovery = 104.02%						
Tl 190.801†	57.8	18.539 ug/L	2.8599	18.539 ppb	2.8599	15.43%
QC value within limits for Tl 190.801 Recovery = 92.69%						
U 409.014†	2109.1	52.714 ug/L	3.4919	52.714 ppb	3.4919	6.62%
QC value within limits for U 409.014 Recovery = 105.43%						
V 292.402†	812.7	5.2826 ug/L	0.38605	5.2826 ppb	0.38605	7.31%
QC value within limits for V 292.402 Recovery = 105.65%						
Zn 213.857†	1074.3	9.9452 ug/L	0.12804	9.9452 ppb	0.12804	1.29%
QC value within limits for Zn 213.857 Recovery = 99.45%						
SiO2†	3466.9	218.98 ug/L	3.303	218.98 ppb	3.303	1.51%
QC value within limits for SiO2 Recovery = 102.81%						

QC Failed. Continue with analysis.

Sequence No.: 11  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 1/26/2010 12:27:26  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5457.3	5457.3	102 %		12:29:18
1	Y RADIAL	5882.3	5882.3	102.2 %		12:29:18
1	Al 396.153Radial†	15.3	5.8	4.4091 ug/L	4.4091 ppb	12:29:38
1	Ca 317.933Radial†	18.3	-2.3	-3.6904 ug/L	-3.6904 ppb	12:29:38
1	Fe 238.204 Radial†	9.1	1.7	16.303 ug/L	16.303 ppb	12:29:38
1	K 766.490 Radial†	2332.0	-221.6	-40.456 ug/L	-40.456 ppb	12:29:18
1	Mg 279.077 IEC†	2.4	1.4	48.448 ug/L	48.448 ppb	12:29:38
1	Na 589.592 Radial†	-726.5	-163.3	-48.538 ug/L	-48.538 ppb	12:29:18
1	Sr 421.552†	35.9	28.1	0.1803 ug/L	0.1803 ppb	12:29:18
1	Sc 361.383	931138.2	931138.2	103.70 %		12:30:35
1	Y 371.029	823490.4	823490.4	100.04 %		12:30:35
1	Ag 328.068†	271.8	-33.9	-0.1249 ug/L	-0.1249 ppb	12:30:40
1	As 188.979†	-38.0	-6.4	-2.6215 ug/L	-2.6215 ppb	12:31:00
1	B 249.677†	-245.1	4.1	0.0872 ug/L	0.0872 ppb	12:31:00
1	Ba 233.527†	-2.2	1.0	0.0098 ug/L	0.0098 ppb	12:31:00
1	Be 313.107†	-5022.0	257.9	0.0909 ug/L	0.0909 ppb	12:30:40
1	Cd 226.502†	-206.2	7.3	0.0781 ug/L	0.0781 ppb	12:31:00
1	Co 228.616†	-74.8	-2.2	-0.0476 ug/L	-0.0476 ppb	12:31:00
1	Cr 267.716†	73.4	-23.1	-0.2455 ug/L	-0.2455 ppb	12:31:00
1	Cu 324.752†	8993.0	-456.3	-1.2733 ug/L	-1.2733 ppb	12:30:40
1	Mn 257.610†	492.9	-14.6	-0.0167 ug/L	-0.0167 ppb	12:31:00
1	Mo 202.031†	23.2	-1.2	-0.0805 ug/L	-0.0805 ppb	12:31:00
1	Ni 231.604†	110.0	12.4	0.3118 ug/L	0.3118 ppb	12:31:00
1	P 214.914†	248.2	0.5	0.5603 ug/L	0.5603 ppb	12:31:00
1	Pb 220.353†	-52.9	9.4	1.1792 ug/L	1.1792 ppb	12:31:00
1	S 181.975 Axial†	46.2	-32.5	-44.726 ug/L	-44.726 ppb	12:31:00
1	Sb 206.836†	29.4	-1.9	-0.6305 ug/L	-0.6305 ppb	12:31:00
1	Se 196.026†	-20.3	-1.6	-0.8854 ug/L	-0.8854 ppb	12:31:00
1	Si 251.611†	515.4	1.1	0.0322 ug/L	0.0322 ppb	12:31:00
1	Sn 189.927†	5.8	6.0	1.0998 ug/L	1.0998 ppb	12:31:00
1	Ti 334.940†	-976.2	-34.7	-0.0527 ug/L	-0.0527 ppb	12:30:40
1	Tl 190.801†	-33.7	4.4	1.3911 ug/L	1.3911 ppb	12:31:00
1	U 409.014†	-1543.5	-425.5	-10.642 ug/L	-10.642 ppb	12:30:40
1	V 292.402†	-1334.8	106.5	0.6395 ug/L	0.6395 ppb	12:30:40
1	Zn 213.857†	688.4	-69.6	-0.6499 ug/L	-0.6499 ppb	12:31:00
1	SiO2†	513.6	-18.1	-1.1455 ug/L	-1.1455 ppb	12:32:21
2	Sc Radial	5451.6	5451.6	102 %		12:29:43
2	Y RADIAL	5824.3	5824.3	101.2 %		12:29:43
2	Al 396.153Radial†	17.8	8.3	6.2802 ug/L	6.2802 ppb	12:30:03
2	Ca 317.933Radial†	22.3	1.6	2.6482 ug/L	2.6482 ppb	12:30:03
2	Fe 238.204 Radial†	11.0	3.6	33.550 ug/L	33.550 ppb	12:30:03
2	K 766.490 Radial†	2338.7	-212.7	-38.834 ug/L	-38.834 ppb	12:29:43
2	Mg 279.077 IEC†	3.3	2.3	81.282 ug/L	81.282 ppb	12:30:03
2	Na 589.592 Radial†	-698.5	-136.6	-40.614 ug/L	-40.614 ppb	12:29:43
2	Sr 421.552†	45.6	37.6	0.2412 ug/L	0.2412 ppb	12:29:43
2	Sc 361.383	943443.6	943443.6	105.08 %		12:31:05
2	Y 371.029	835412.7	835412.7	101.49 %		12:31:05
2	Ag 328.068†	279.4	-30.1	-0.1076 ug/L	-0.1076 ppb	12:31:10
2	As 188.979†	-25.7	5.8	2.3664 ug/L	2.3664 ppb	12:31:30
2	B 249.677†	-255.8	-3.0	-0.0720 ug/L	-0.0720 ppb	12:31:30
2	Ba 233.527†	-6.2	-2.8	-0.0202 ug/L	-0.0202 ppb	12:31:30
2	Be 313.107†	-5031.2	312.3	0.1101 ug/L	0.1101 ppb	12:31:10
2	Cd 226.502†	-195.4	20.2	0.2203 ug/L	0.2203 ppb	12:31:30
2	Co 228.616†	-62.3	10.6	0.2321 ug/L	0.2321 ppb	12:31:30
2	Cr 267.716†	80.7	-17.1	-0.1817 ug/L	-0.1817 ppb	12:31:30
2	Cu 324.752†	9012.5	-550.8	-1.5392 ug/L	-1.5392 ppb	12:31:10
2	Mn 257.610†	480.1	-32.9	-0.0369 ug/L	-0.0369 ppb	12:31:30
2	Mo 202.031†	18.7	-5.8	-0.3952 ug/L	-0.3952 ppb	12:31:30
2	Ni 231.604†	86.4	-11.4	-0.2872 ug/L	-0.2872 ppb	12:31:30

2	P 214.914†	239.8	-10.5	-5.6378 ug/L	-5.6378 ppb	12:31:30
2	Pb 220.353†	-49.6	13.2	1.6534 ug/L	1.6534 ppb	12:31:30
2	S 181.975 Axial†	47.2	-32.0	-44.114 ug/L	-44.114 ppb	12:31:30
2	Sb 206.836†	46.5	14.0	4.7134 ug/L	4.7134 ppb	12:31:30
2	Se 196.026†	-22.7	-3.6	-1.9927 ug/L	-1.9927 ppb	12:31:30
2	Si 251.611†	484.4	-35.0	-1.0308 ug/L	-1.0308 ppb	12:31:30
2	Sn 189.927†	10.4	10.3	1.8880 ug/L	1.8880 ppb	12:31:30
2	Ti 334.940†	-980.0	-26.2	-0.0428 ug/L	-0.0428 ppb	12:31:10
2	Tl 190.801†	-28.1	10.1	3.2419 ug/L	3.2419 ppb	12:31:30
2	U 409.014†	-1436.6	-304.4	-7.6138 ug/L	-7.6138 ppb	12:31:10
2	V 292.402†	-1425.7	36.8	0.2052 ug/L	0.2052 ppb	12:31:10
2	Zn 213.857†	704.8	-62.6	-0.5826 ug/L	-0.5826 ppb	12:31:30
2	SiO2†	494.6	-42.7	-2.6888 ug/L	-2.6888 ppb	12:32:41
3	Sc Radial	5389.5	5389.5	101 %		12:30:08
3	Y RADIAL	5799.9	5799.9	100.7 %		12:30:08
3	Al 396.153Radial†	5.8	-3.4	-2.6016 ug/L	-2.6016 ppb	12:30:28
3	Ca 317.933Radial†	23.9	3.4	5.4992 ug/L	5.4992 ppb	12:30:28
3	Fe 238.204 Radial†	8.2	1.0	9.3222 ug/L	9.3222 ppb	12:30:28
3	K 766.490 Radial†	2388.5	-136.9	-24.994 ug/L	-24.994 ppb	12:30:08
3	Mg 279.077 IEC†	2.7	1.7	59.817 ug/L	59.817 ppb	12:30:28
3	Na 589.592 Radial†	-671.1	-117.3	-34.861 ug/L	-34.861 ppb	12:30:08
3	Sr 421.552†	13.8	6.6	0.0423 ug/L	0.0423 ppb	12:30:08
3	Sc 361.383	924987.0	924987.0	103.02 %		12:31:35
3	Y 371.029	817391.7	817391.7	99.304 %		12:31:35
3	Ag 328.068†	271.8	-32.2	-0.1211 ug/L	-0.1211 ppb	12:31:40
3	As 188.979†	-35.5	-4.3	-1.7376 ug/L	-1.7376 ppb	12:32:00
3	B 249.677†	-248.5	-0.7	-0.0182 ug/L	-0.0182 ppb	12:32:00
3	Ba 233.527†	2.9	5.9	0.0476 ug/L	0.0476 ppb	12:32:00
3	Be 313.107†	-5118.1	132.4	0.0467 ug/L	0.0467 ppb	12:31:40
3	Cd 226.502†	-207.5	4.8	0.0501 ug/L	0.0501 ppb	12:32:00
3	Co 228.616†	-67.2	4.7	0.1021 ug/L	0.1021 ppb	12:32:00
3	Cr 267.716†	98.5	1.7	0.0238 ug/L	0.0238 ppb	12:32:00
3	Cu 324.752†	9022.3	-370.2	-1.0317 ug/L	-1.0317 ppb	12:31:40
3	Mn 257.610†	494.8	-9.6	-0.0122 ug/L	-0.0122 ppb	12:32:00
3	Mo 202.031†	24.1	-0.2	-0.0131 ug/L	-0.0131 ppb	12:32:00
3	Ni 231.604†	106.9	10.1	0.2540 ug/L	0.2540 ppb	12:32:00
3	P 214.914†	248.8	2.8	1.7694 ug/L	1.7694 ppb	12:32:00
3	Pb 220.353†	-46.8	15.0	1.8788 ug/L	1.8788 ppb	12:32:00
3	S 181.975 Axial†	50.3	-28.2	-38.792 ug/L	-38.792 ppb	12:32:00
3	Sb 206.836†	42.9	11.4	3.7902 ug/L	3.7902 ppb	12:32:00
3	Se 196.026†	-16.5	2.0	1.1690 ug/L	1.1690 ppb	12:32:00
3	Si 251.611†	466.6	-43.0	-1.2740 ug/L	-1.2740 ppb	12:32:00
3	Sn 189.927†	-4.5	-4.0	-0.7425 ug/L	-0.7425 ppb	12:32:00
3	Ti 334.940†	-923.7	9.9	0.0160 ug/L	0.0160 ppb	12:31:40
3	Tl 190.801†	-32.1	5.7	1.8355 ug/L	1.8355 ppb	12:32:00
3	U 409.014†	-1567.1	-458.3	-11.462 ug/L	-11.462 ppb	12:31:40
3	V 292.402†	-1390.6	43.8	0.2498 ug/L	0.2498 ppb	12:31:40
3	Zn 213.857†	694.7	-59.0	-0.5511 ug/L	-0.5511 ppb	12:32:00
3	SiO2†	507.6	-20.7	-1.3074 ug/L	-1.3074 ppb	12:33:01

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Conc. Units	Std.Dev.	RSD
Sc 361.383	933189.6	103.93 %		1.047			1.01%
Sc Radial	5432.8	102 %		0.7			0.69%
Y 371.029	825431.6	100.28 %		1.114			1.11%
Y RADIAL	5835.5	101.4 %		0.74			0.73%
Ag 328.068†	-32.1	-0.1178 ug/L		0.00909	-0.1178 ppb	0.00909	7.72%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	3.5	2.6959 ug/L		4.68221	2.6959 ppb	4.68221	173.68%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	-1.6	-0.6642 ug/L		2.66156	-0.6642 ppb	2.66156	400.69%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	0.1	-0.0010 ug/L		0.08101	-0.0010 ppb	0.08101	>999.9%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	1.4	0.0124 ug/L		0.03399	0.0124 ppb	0.03399	273.99%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	234.2	0.0826 ug/L		0.03247	0.0826 ppb	0.03247	39.33%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	0.9	1.4857 ug/L		4.70382	1.4857 ppb	4.70382	316.61%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated

Cd 226.502†	10.7	0.1162 ug/L	0.09126	0.1162 ppb	0.09126	78.56%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	4.4	0.0956 ug/L	0.13997	0.0956 ppb	0.13997	146.48%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-12.9	-0.1345 ug/L	0.14069	-0.1345 ppb	0.14069	104.62%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-459.1	-1.2814 ug/L	0.25387	-1.2814 ppb	0.25387	19.81%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	2.1	19.725 ug/L	12.4713	19.725 ppb	12.4713	63.22%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-190.4	-34.761 ug/L	8.4973	-34.761 ppb	8.4973	24.44%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	1.8	63.182 ug/L	16.6737	63.182 ppb	16.6737	26.39%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	-19.0	-0.0220 ug/L	0.01316	-0.0220 ppb	0.01316	59.90%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-2.4	-0.1629 ug/L	0.20395	-0.1629 ppb	0.20395	125.19%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-139.1	-41.338 ug/L	6.8668	-41.338 ppb	6.8668	16.61%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	3.7	0.0929 ug/L	0.33040	0.0929 ppb	0.33040	355.75%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-2.4	-1.1027 ug/L	3.97373	-1.1027 ppb	3.97373	360.36%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	12.5	1.5705 ug/L	0.35710	1.5705 ppb	0.35710	22.74%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-30.9	-42.544 ug/L	3.2636	-42.544 ppb	3.2636	7.67%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	7.8	2.6244 ug/L	2.85633	2.6244 ppb	2.85633	108.84%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-1.1	-0.5697 ug/L	1.60435	-0.5697 ppb	1.60435	281.61%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	-25.6	-0.7575 ug/L	0.69467	-0.7575 ppb	0.69467	91.70%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	4.1	0.7484 ug/L	1.35003	0.7484 ppb	1.35003	180.38%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	24.1	0.1546 ug/L	0.10190	0.1546 ppb	0.10190	65.92%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	-17.0	-0.0265 ug/L	0.03711	-0.0265 ppb	0.03711	140.09%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	6.7	2.1562 ug/L	0.96613	2.1562 ppb	0.96613	44.81%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	-396.1	-9.9059 ug/L	2.02696	-9.9059 ppb	2.02696	20.46%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	62.3	0.3648 ug/L	0.23890	0.3648 ppb	0.23890	65.48%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-63.7	-0.5945 ug/L	0.05049	-0.5945 ppb	0.05049	8.49%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	-27.2	-1.7139 ug/L	0.84815	-1.7139 ppb	0.84815	49.49%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 16  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 1/26/2010 13:02:25  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5409.7	5409.7	101 %		13:04:17
1	Y RADIAL	5794.4	5794.4	100.6 %		13:04:17
1	Al 396.153Radial†	6559.7	6466.2	4875.0 ug/L	4875.0 ppb	13:04:17
1	Ca 317.933Radial†	3166.2	3105.2	4991.0 ug/L	4991.0 ppb	13:04:37
1	Fe 238.204 Radial†	566.6	552.2	5175.3 ug/L	5175.3 ppb	13:04:37
1	K 766.490 Radial†	30135.1	27243.7	4970.6 ug/L	4970.6 ppb	13:04:17
1	Mg 279.077 IEC†	149.5	146.6	5229.4 ug/L	5229.4 ppb	13:04:37
1	Na 589.592 Radial†	33774.4	33887.3	10074 ug/L	10074 ppb	13:04:17
1	Sr 421.552†	79900.3	78864.9	506.09 ug/L	506.09 ppb	13:04:17
1	Sc 361.383	929796.1	929796.1	103.56 %		13:05:35
1	Y 371.029	812299.4	812299.4	98.685 %		13:05:35
1	Ag 328.068†	121543.2	117074.2	491.73 ug/L	491.73 ppb	13:05:40
1	As 188.979†	1192.0	1181.3	487.58 ug/L	487.58 ppb	13:06:00
1	B 249.677†	22409.4	21880.4	477.58 ug/L	477.58 ppb	13:05:40
1	Ba 233.527†	64140.6	61941.6	489.47 ug/L	489.47 ppb	13:05:40
1	Be 313.107†	1399484.3	1356535.7	479.65 ug/L	479.65 ppb	13:05:35
1	Cd 226.502†	45506.7	44150.5	493.05 ug/L	493.05 ppb	13:05:40
1	Co 228.616†	23606.6	22866.1	501.32 ug/L	501.32 ppb	13:05:40
1	Cr 267.716†	46713.6	45015.8	488.60 ug/L	488.60 ppb	13:05:40
1	Cu 324.752†	188075.8	172490.5	483.88 ug/L	483.88 ppb	13:05:40
1	Mn 257.610†	446277.4	430465.3	482.92 ug/L	482.92 ppb	13:05:35
1	Mo 202.031†	7319.5	7044.6	481.24 ug/L	481.24 ppb	13:06:00
1	Ni 231.604†	20306.7	19515.8	490.16 ug/L	490.16 ppb	13:05:40
1	P 214.914†	4659.9	4261.2	2308.5 ug/L	2308.5 ppb	13:06:00
1	Pb 220.353†	4070.8	3991.4	502.56 ug/L	502.56 ppb	13:06:00
1	S 181.975 Axial†	786.9	682.9	939.35 ug/L	939.35 ppb	13:06:00
1	Sb 206.836†	1532.7	1449.8	502.73 ug/L	502.73 ppb	13:06:00
1	Se 196.026†	850.7	839.5	503.07 ug/L	503.07 ppb	13:06:00
1	Si 251.611†	86320.3	82860.7	2449.2 ug/L	2449.2 ppb	13:05:40
1	Sn 189.927†	2723.7	2630.5	484.56 ug/L	484.56 ppb	13:06:00
1	Ti 334.940†	332571.1	322059.4	490.90 ug/L	490.90 ppb	13:05:35
1	Tl 190.801†	1515.9	1500.7	483.31 ug/L	483.31 ppb	13:06:00
1	U 409.014†	19318.1	19717.6	491.36 ug/L	491.36 ppb	13:05:40
1	V 292.402†	79628.3	78287.9	493.24 ug/L	493.24 ppb	13:05:40
1	Zn 213.857†	55169.5	52541.9	485.12 ug/L	485.12 ppb	13:05:40
1	SiO2†	85215.1	81775.9	5158.8 ug/L	5158.8 ppb	13:07:08
2	Sc Radial	5338.6	5338.6	100.0 %		13:04:42
2	Y RADIAL	5707.1	5707.1	99.13 %		13:04:42
2	Al 396.153Radial†	6649.9	6642.6	5008.7 ug/L	5008.7 ppb	13:04:42
2	Ca 317.933Radial†	3176.3	3156.9	5074.1 ug/L	5074.1 ppb	13:05:02
2	Fe 238.204 Radial†	572.0	564.9	5294.7 ug/L	5294.7 ppb	13:05:02
2	K 766.490 Radial†	30673.2	28178.0	5141.2 ug/L	5141.2 ppb	13:04:42
2	Mg 279.077 IEC†	153.2	152.2	5429.4 ug/L	5429.4 ppb	13:05:02
2	Na 589.592 Radial†	34094.6	34651.5	10301 ug/L	10301 ppb	13:04:42
2	Sr 421.552†	81018.9	81033.7	520.01 ug/L	520.01 ppb	13:04:42
2	Sc 361.383	928173.3	928173.3	103.37 %		13:06:06
2	Y 371.029	810603.7	810603.7	98.479 %		13:06:06
2	Ag 328.068†	121045.4	116797.9	490.61 ug/L	490.61 ppb	13:06:11
2	As 188.979†	1175.9	1167.7	482.12 ug/L	482.12 ppb	13:06:31
2	B 249.677†	22436.5	21944.5	478.97 ug/L	478.97 ppb	13:06:11
2	Ba 233.527†	64049.7	61961.9	489.63 ug/L	489.63 ppb	13:06:11
2	Be 313.107†	1409254.8	1368350.1	483.83 ug/L	483.83 ppb	13:06:06
2	Cd 226.502†	45176.9	43908.3	490.33 ug/L	490.33 ppb	13:06:11
2	Co 228.616†	23490.7	22793.8	499.72 ug/L	499.72 ppb	13:06:11
2	Cr 267.716†	46649.5	45032.7	488.78 ug/L	488.78 ppb	13:06:11
2	Cu 324.752†	187321.5	172078.4	482.73 ug/L	482.73 ppb	13:06:11
2	Mn 257.610†	449781.3	434608.3	487.57 ug/L	487.57 ppb	13:06:06
2	Mo 202.031†	7302.6	7040.6	480.98 ug/L	480.98 ppb	13:06:31
2	Ni 231.604†	20274.7	19519.2	490.25 ug/L	490.25 ppb	13:06:11

2	P 214.914†	4659.2	4268.3	2312.6 ug/L	2312.6 ppb	13:06:31
2	Pb 220.353†	4023.2	3952.2	497.66 ug/L	497.66 ppb	13:06:31
2	S 181.975 Axial†	785.1	682.5	938.69 ug/L	938.69 ppb	13:06:31
2	Sb 206.836†	1516.4	1436.6	498.24 ug/L	498.24 ppb	13:06:31
2	Se 196.026†	839.4	830.0	497.99 ug/L	497.99 ppb	13:06:31
2	Si 251.611†	85943.2	82641.6	2442.7 ug/L	2442.7 ppb	13:06:11
2	Sn 189.927†	2700.6	2612.8	481.31 ug/L	481.31 ppb	13:06:31
2	Ti 334.940†	335526.9	325480.1	496.11 ug/L	496.11 ppb	13:06:06
2	Tl 190.801†	1512.3	1499.9	483.10 ug/L	483.10 ppb	13:06:31
2	U 409.014†	19412.0	19841.1	494.43 ug/L	494.43 ppb	13:06:11
2	V 292.402†	79182.2	77990.9	491.38 ug/L	491.38 ppb	13:06:11
2	Zn 213.857†	54851.4	52327.4	483.12 ug/L	483.12 ppb	13:06:11
2	SiO2†	86471.8	83135.5	5244.8 ug/L	5244.8 ppb	13:07:13
3	Sc Radial	5457.3	5457.3	102 %		13:05:07
3	Y RADIAL	5842.5	5842.5	101.5 %		13:05:07
3	Al 396.153Radial†	6605.0	6453.9	4865.6 ug/L	4865.6 ppb	13:05:07
3	Ca 317.933Radial†	3177.9	3089.4	4965.6 ug/L	4965.6 ppb	13:05:27
3	Fe 238.204 Radial†	571.9	552.4	5177.9 ug/L	5177.9 ppb	13:05:27
3	K 766.490 Radial†	30413.8	27257.0	4973.1 ug/L	4973.1 ppb	13:05:07
3	Mg 279.077 IEC†	152.0	147.8	5271.6 ug/L	5271.6 ppb	13:05:27
3	Na 589.592 Radial†	33913.5	33732.6	10028 ug/L	10028 ppb	13:05:07
3	Sr 421.552†	80702.5	78961.8	506.72 ug/L	506.72 ppb	13:05:07
3	Sc 361.383	927620.9	927620.9	103.31 %		13:06:37
3	Y 371.029	812561.6	812561.6	98.717 %		13:06:37
3	Ag 328.068†	121460.2	117269.1	492.55 ug/L	492.55 ppb	13:06:42
3	As 188.979†	1193.6	1185.5	489.31 ug/L	489.31 ppb	13:07:02
3	B 249.677†	22512.9	22031.4	480.90 ug/L	480.90 ppb	13:06:42
3	Ba 233.527†	63968.3	61920.0	489.30 ug/L	489.30 ppb	13:06:42
3	Be 313.107†	1400314.6	1360508.4	481.05 ug/L	481.05 ppb	13:06:37
3	Cd 226.502†	45183.7	43940.8	490.71 ug/L	490.71 ppb	13:06:42
3	Co 228.616†	23510.9	22826.9	500.47 ug/L	500.47 ppb	13:06:42
3	Cr 267.716†	46717.5	45125.4	489.79 ug/L	489.79 ppb	13:06:42
3	Cu 324.752†	187714.3	172566.5	484.09 ug/L	484.09 ppb	13:06:42
3	Mn 257.610†	443797.9	429075.9	481.36 ug/L	481.36 ppb	13:06:37
3	Mo 202.031†	7354.9	7095.4	484.71 ug/L	484.71 ppb	13:07:02
3	Ni 231.604†	20310.5	19565.4	491.41 ug/L	491.41 ppb	13:06:42
3	P 214.914†	4693.5	4304.3	2332.8 ug/L	2332.8 ppb	13:07:02
3	Pb 220.353†	4071.3	4001.1	503.78 ug/L	503.78 ppb	13:07:02
3	S 181.975 Axial†	794.1	691.6	951.34 ug/L	951.34 ppb	13:07:02
3	Sb 206.836†	1505.6	1427.1	495.24 ug/L	495.24 ppb	13:07:02
3	Se 196.026†	843.2	834.1	499.97 ug/L	499.97 ppb	13:07:02
3	Si 251.611†	85970.5	82717.6	2444.9 ug/L	2444.9 ppb	13:06:42
3	Sn 189.927†	2727.6	2640.5	486.39 ug/L	486.39 ppb	13:07:02
3	Ti 334.940†	331298.6	321580.8	490.16 ug/L	490.16 ppb	13:06:37
3	Tl 190.801†	1514.7	1503.0	484.02 ug/L	484.02 ppb	13:07:02
3	U 409.014†	19260.9	19706.1	491.07 ug/L	491.07 ppb	13:06:42
3	V 292.402†	79463.5	78308.7	493.42 ug/L	493.42 ppb	13:06:42
3	Zn 213.857†	55061.3	52562.2	485.30 ug/L	485.30 ppb	13:06:42
3	SiO2†	85667.4	82406.8	5198.6 ug/L	5198.6 ppb	13:07:18

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	928530.1	103.41 %	0.126			0.12%
Sc Radial	5401.9	101 %	1.1			1.11%
Y 371.029	811821.6	98.627 %	0.1291			0.13%
Y RADIAL	5781.3	100.4 %	1.19			1.19%
Ag 328.068†	117047.1	491.63 ug/L	0.975	491.63 ppb	0.975	0.20%
QC value within limits for Ag 328.068 Recovery = 98.33%						
Al 396.153Radial†	6520.9	4916.4 ug/L	80.03	4916.4 ppb	80.03	1.63%
QC value within limits for Al 396.153Radial Recovery = 98.33%						
As 188.979†	1178.2	486.34 ug/L	3.754	486.34 ppb	3.754	0.77%
QC value within limits for As 188.979 Recovery = 97.27%						
B 249.677†	21952.1	479.15 ug/L	1.664	479.15 ppb	1.664	0.35%
QC value within limits for B 249.677 Recovery = 95.83%						
Ba 233.527†	61941.2	489.46 ug/L	0.165	489.46 ppb	0.165	0.03%
QC value within limits for Ba 233.527 Recovery = 97.89%						
Be 313.107†	1361798.1	481.51 ug/L	2.127	481.51 ppb	2.127	0.44%
QC value within limits for Be 313.107 Recovery = 96.30%						
Ca 317.933Radial†	3117.2	5010.2 ug/L	56.78	5010.2 ppb	56.78	1.13%

QC value within limits for Ca 317.933 Radial Recovery = 100.20%

Cd 226.502†	43999.9	491.37 ug/L	1.473	491.37 ppb	1.473	0.30%
QC value within limits for Cd 226.502 Recovery = 98.27%						
Co 228.616†	22828.9	500.50 ug/L	0.800	500.50 ppb	0.800	0.16%
QC value within limits for Co 228.616 Recovery = 100.10%						
Cr 267.716†	45058.0	489.05 ug/L	0.640	489.05 ppb	0.640	0.13%
QC value within limits for Cr 267.716 Recovery = 97.81%						
Cu 324.752†	172378.5	483.57 ug/L	0.734	483.57 ppb	0.734	0.15%
QC value within limits for Cu 324.752 Recovery = 96.71%						
Fe 238.204 Radial†	556.5	5215.9 ug/L	68.19	5215.9 ppb	68.19	1.31%
QC value within limits for Fe 238.204 Radial Recovery = 104.32%						
K 766.490 Radial†	27559.6	5028.3 ug/L	97.77	5028.3 ppb	97.77	1.94%
QC value within limits for K 766.490 Radial Recovery = 100.57%						
Mg 279.077 IEC†	148.9	5310.1 ug/L	105.44	5310.1 ppb	105.44	1.99%
QC value within limits for Mg 279.077 IEC Recovery = 106.20%						
Mn 257.610†	431383.2	483.95 ug/L	3.230	483.95 ppb	3.230	0.67%
QC value within limits for Mn 257.610 Recovery = 96.79%						
Mo 202.031†	7060.2	482.31 ug/L	2.082	482.31 ppb	2.082	0.43%
QC value within limits for Mo 202.031 Recovery = 96.46%						
Na 589.592 Radial†	34090.5	10134 ug/L	146.2	10134 ppb	146.2	1.44%
QC value within limits for Na 589.592 Radial Recovery = 101.34%						
Ni 231.604†	19533.5	490.60 ug/L	0.697	490.60 ppb	0.697	0.14%
QC value within limits for Ni 231.604 Recovery = 98.12%						
P 214.914†	4277.9	2318.0 ug/L	12.98	2318.0 ppb	12.98	0.56%
QC value within limits for P 214.914 Recovery = 92.72%						
Pb 220.353†	3981.6	501.34 ug/L	3.240	501.34 ppb	3.240	0.65%
QC value within limits for Pb 220.353 Recovery = 100.27%						
S 181.975 Axial†	685.7	943.13 ug/L	7.121	943.13 ppb	7.121	0.76%
QC value within limits for S 181.975 Axial Recovery = 94.31%						
Sb 206.836†	1437.8	498.74 ug/L	3.772	498.74 ppb	3.772	0.76%
QC value within limits for Sb 206.836 Recovery = 99.75%						
Se 196.026†	834.5	500.34 ug/L	2.562	500.34 ppb	2.562	0.51%
QC value within limits for Se 196.026 Recovery = 100.07%						
Si 251.611†	82739.9	2445.6 ug/L	3.30	2445.6 ppb	3.30	0.13%
QC value within limits for Si 251.611 Recovery = 97.83%						
Sn 189.927†	2627.9	484.09 ug/L	2.572	484.09 ppb	2.572	0.53%
QC value within limits for Sn 189.927 Recovery = 96.82%						
Sr 421.552†	79620.1	510.94 ug/L	7.862	510.94 ppb	7.862	1.54%
QC value within limits for Sr 421.552 Recovery = 102.19%						
Ti 334.940†	323040.1	492.39 ug/L	3.241	492.39 ppb	3.241	0.66%
QC value within limits for Ti 334.940 Recovery = 98.48%						
Tl 190.801†	1501.2	483.48 ug/L	0.481	483.48 ppb	0.481	0.10%
QC value within limits for Tl 190.801 Recovery = 96.70%						
U 409.014†	19754.9	492.29 ug/L	1.864	492.29 ppb	1.864	0.38%
QC value within limits for U 409.014 Recovery = 98.46%						
V 292.402†	78195.9	492.68 ug/L	1.131	492.68 ppb	1.131	0.23%
QC value within limits for V 292.402 Recovery = 98.54%						
Zn 213.857†	52477.2	484.51 ug/L	1.215	484.51 ppb	1.215	0.25%
QC value within limits for Zn 213.857 Recovery = 96.90%						
SiO2†	82439.4	5200.7 ug/L	43.04	5200.7 ppb	43.04	0.83%
QC value within limits for SiO2 Recovery = 97.26%						

All analyte(s) passed QC.

Sequence No.: 17  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 1/26/2010 13:09:29  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5358.7	5358.7	100 %		13:11:22
1	Y RADIAL	5787.1	5787.1	100.5 %		13:11:22
1	Al 396.153Radial†	10.1	0.9	0.6540 ug/L	0.6540 ppb	13:11:42
1	Ca 317.933Radial†	20.7	0.4	0.6949 ug/L	0.6949 ppb	13:11:42
1	Fe 238.204 Radial†	8.6	1.4	13.425 ug/L	13.425 ppb	13:11:42
1	K 766.490 Radial†	2284.5	-226.9	-41.440 ug/L	-41.440 ppb	13:11:22
1	Mg 279.077 IEC†	3.5	2.6	91.174 ug/L	91.174 ppb	13:11:42
1	Na 589.592 Radial†	-697.0	-146.9	-43.679 ug/L	-43.679 ppb	13:11:22
1	Sr 421.552†	14.4	7.3	0.0469 ug/L	0.0469 ppb	13:11:22
1	Sc 361.383	906281.3	906281.3	100.94 %		13:12:38
1	Y 371.029	798201.9	798201.9	96.972 %		13:12:38
1	Ag 328.068†	273.1	-25.4	-0.1009 ug/L	-0.1009 ppb	13:12:38
1	As 188.979†	-30.4	0.0	0.0134 ug/L	0.0134 ppb	13:12:58
1	B 249.677†	-210.1	32.3	0.7064 ug/L	0.7064 ppb	13:12:58
1	Ba 233.527†	-13.2	-10.0	-0.0779 ug/L	-0.0779 ppb	13:12:58
1	Be 313.107†	-4998.3	148.5	0.0522 ug/L	0.0522 ppb	13:12:38
1	Cd 226.502†	-190.5	17.4	0.1928 ug/L	0.1928 ppb	13:12:58
1	Co 228.616†	-69.3	1.3	0.0293 ug/L	0.0293 ppb	13:12:58
1	Cr 267.716†	93.7	-1.1	-0.0109 ug/L	-0.0109 ppb	13:12:58
1	Cu 324.752†	8874.3	-336.1	-0.9420 ug/L	-0.9420 ppb	13:12:38
1	Mn 257.610†	486.9	-7.5	-0.0108 ug/L	-0.0108 ppb	13:12:58
1	Mo 202.031†	26.3	2.5	0.1688 ug/L	0.1688 ppb	13:12:58
1	Ni 231.604†	71.2	-23.1	-0.5806 ug/L	-0.5806 ppb	13:12:58
1	P 214.914†	245.9	4.9	2.9309 ug/L	2.9309 ppb	13:12:58
1	Pb 220.353†	40.3	100.3	12.593 ug/L	12.593 ppb	13:12:58
1	S 181.975 Axial†	40.7	-36.7	-50.525 ug/L	-50.525 ppb	13:12:58
1	Sb 206.836†	41.2	10.5	3.5460 ug/L	3.5460 ppb	13:12:58
1	Se 196.026†	-9.4	8.6	5.0282 ug/L	5.0282 ppb	13:12:58
1	Si 251.611†	469.9	-30.4	-0.9021 ug/L	-0.9021 ppb	13:12:58
1	Sn 189.927†	7.8	8.1	1.4834 ug/L	1.4834 ppb	13:12:58
1	Ti 334.940†	-960.1	-44.6	-0.0753 ug/L	-0.0753 ppb	13:12:38
1	Tl 190.801†	-35.8	1.5	0.4636 ug/L	0.4636 ppb	13:12:58
1	U 409.014†	-1080.6	-7.7	-0.1946 ug/L	-0.1946 ppb	13:12:38
1	V 292.402†	-1380.9	25.5	0.1604 ug/L	0.1604 ppb	13:12:38
1	Zn 213.857†	682.8	-56.9	-0.5264 ug/L	-0.5264 ppb	13:12:58
1	SiO2†	481.3	-36.6	-2.3197 ug/L	-2.3197 ppb	13:14:09
2	Sc Radial	5391.4	5391.4	101 %		13:11:47
2	Y RADIAL	5829.7	5829.7	101.3 %		13:11:47
2	Al 396.153Radial†	0.5	-8.7	-6.5539 ug/L	-6.5539 ppb	13:12:07
2	Ca 317.933Radial†	16.8	-3.6	-5.8156 ug/L	-5.8156 ppb	13:12:07
2	Fe 238.204 Radial†	7.0	-0.2	-2.2305 ug/L	-2.2305 ppb	13:12:07
2	K 766.490 Radial†	2343.4	-182.4	-33.308 ug/L	-33.308 ppb	13:11:47
2	Mg 279.077 IEC†	4.2	3.2	112.56 ug/L	112.56 ppb	13:12:07
2	Na 589.592 Radial†	-682.4	-128.3	-38.131 ug/L	-38.131 ppb	13:11:47
2	Sr 421.552†	19.8	12.6	0.0807 ug/L	0.0807 ppb	13:11:47
2	Sc 361.383	908925.0	908925.0	101.23 %		13:13:04
2	Y 371.029	801255.6	801255.6	97.343 %		13:13:04
2	Ag 328.068†	156.8	-141.1	-0.5896 ug/L	-0.5896 ppb	13:13:04
2	As 188.979†	-30.5	0.1	0.0293 ug/L	0.0293 ppb	13:13:24
2	B 249.677†	-207.2	35.8	0.7852 ug/L	0.7852 ppb	13:13:24
2	Ba 233.527†	-0.5	2.6	0.0209 ug/L	0.0209 ppb	13:13:24
2	Be 313.107†	-4946.8	213.8	0.0752 ug/L	0.0752 ppb	13:13:04
2	Cd 226.502†	-198.9	9.7	0.1090 ug/L	0.1090 ppb	13:13:24
2	Co 228.616†	-74.4	-3.5	-0.0772 ug/L	-0.0772 ppb	13:13:24
2	Cr 267.716†	84.5	-10.5	-0.1141 ug/L	-0.1141 ppb	13:13:24
2	Cu 324.752†	8876.5	-359.5	-1.0095 ug/L	-1.0095 ppb	13:13:04
2	Mn 257.610†	481.7	-14.0	-0.0205 ug/L	-0.0205 ppb	13:13:24
2	Mo 202.031†	22.9	-1.0	-0.0657 ug/L	-0.0657 ppb	13:13:24
2	Ni 231.604†	77.7	-16.9	-0.4246 ug/L	-0.4246 ppb	13:13:24



2	P 214.914†	244.6	2.9	1.8714 ug/L	1.8714 ppb	13:13:24
2	Pb 220.353†	42.2	102.1	12.817 ug/L	12.817 ppb	13:13:24
2	S 181.975 Axial†	43.5	-34.0	-46.836 ug/L	-46.836 ppb	13:13:24
2	Sb 206.836†	50.6	19.7	6.6260 ug/L	6.6260 ppb	13:13:24
2	Se 196.026†	-9.9	8.2	4.7131 ug/L	4.7131 ppb	13:13:24
2	Si 251.611†	486.9	-14.9	-0.4419 ug/L	-0.4419 ppb	13:13:24
2	Sn 189.927†	12.0	12.2	2.2497 ug/L	2.2497 ppb	13:13:24
2	Ti 334.940†	-974.5	-56.1	-0.0962 ug/L	-0.0962 ppb	13:13:04
2	Tl 190.801†	-34.9	2.4	0.7708 ug/L	0.7708 ppb	13:13:24
2	U 409.014†	-1007.1	68.0	1.7014 ug/L	1.7014 ppb	13:13:04
2	V 292.402†	-1362.6	47.6	0.3007 ug/L	0.3007 ppb	13:13:04
2	Zn 213.857†	691.3	-50.5	-0.4658 ug/L	-0.4658 ppb	13:13:24
2	SiO2†	480.0	-39.2	-2.4782 ug/L	-2.4782 ppb	13:14:29
3	Sc Radial	5363.8	5363.8	100 %		13:12:12
3	Y RADIAL	5794.6	5794.6	100.7 %		13:12:12
3	Al 396.153Radial†	17.3	8.1	6.1125 ug/L	6.1125 ppb	13:12:32
3	Ca 317.933Radial†	21.8	1.5	2.4110 ug/L	2.4110 ppb	13:12:32
3	Fe 238.204 Radial†	8.2	1.0	9.4466 ug/L	9.4466 ppb	13:12:32
3	K 766.490 Radial†	2265.0	-248.5	-45.374 ug/L	-45.374 ppb	13:12:12
3	Mg 279.077 IEC†	1.3	0.3	10.353 ug/L	10.353 ppb	13:12:32
3	Na 589.592 Radial†	-708.7	-157.9	-46.949 ug/L	-46.949 ppb	13:12:12
3	Sr 421.552†	21.9	14.8	0.0947 ug/L	0.0947 ppb	13:12:12
3	Sc 361.383	905694.6	905694.6	100.87 %		13:13:29
3	Y 371.029	798812.2	798812.2	97.047 %		13:13:29
3	Ag 328.068†	271.1	-27.2	-0.1113 ug/L	-0.1113 ppb	13:13:29
3	As 188.979†	-23.0	7.3	3.0049 ug/L	3.0049 ppb	13:13:49
3	B 249.677†	-212.8	29.4	0.6437 ug/L	0.6437 ppb	13:13:49
3	Ba 233.527†	-12.7	-9.5	-0.0743 ug/L	-0.0743 ppb	13:13:49
3	Be 313.107†	-4964.0	179.3	0.0633 ug/L	0.0633 ppb	13:13:29
3	Cd 226.502†	-192.2	15.7	0.1744 ug/L	0.1744 ppb	13:13:49
3	Co 228.616†	-68.2	2.3	0.0509 ug/L	0.0509 ppb	13:13:49
3	Cr 267.716†	102.2	7.3	0.0795 ug/L	0.0795 ppb	13:13:49
3	Cu 324.752†	8831.8	-372.5	-1.0448 ug/L	-1.0448 ppb	13:13:29
3	Mn 257.610†	497.9	3.8	0.0047 ug/L	0.0047 ppb	13:13:49
3	Mo 202.031†	25.3	1.5	0.1033 ug/L	0.1033 ppb	13:13:49
3	Ni 231.604†	97.9	3.3	0.0839 ug/L	0.0839 ppb	13:13:49
3	P 214.914†	246.6	5.8	3.4554 ug/L	3.4554 ppb	13:13:49
3	Pb 220.353†	53.0	112.9	14.175 ug/L	14.175 ppb	13:13:49
3	S 181.975 Axial†	46.2	-31.2	-42.970 ug/L	-42.970 ppb	13:13:49
3	Sb 206.836†	38.6	8.1	2.7015 ug/L	2.7015 ppb	13:13:49
3	Se 196.026†	-19.3	-1.2	-0.6689 ug/L	-0.6689 ppb	13:13:49
3	Si 251.611†	468.6	-31.4	-0.9303 ug/L	-0.9303 ppb	13:13:49
3	Sn 189.927†	0.7	1.0	0.1906 ug/L	0.1906 ppb	13:13:49
3	Ti 334.940†	-900.7	13.6	0.0198 ug/L	0.0198 ppb	13:13:29
3	Tl 190.801†	-36.9	0.3	0.1040 ug/L	0.1040 ppb	13:13:49
3	U 409.014†	-1036.3	35.5	0.8865 ug/L	0.8865 ppb	13:13:29
3	V 292.402†	-1403.9	1.8	0.0129 ug/L	0.0129 ppb	13:13:29
3	Zn 213.857†	664.8	-74.3	-0.6922 ug/L	-0.6922 ppb	13:13:49
3	SiO2†	467.8	-49.6	-3.1427 ug/L	-3.1427 ppb	13:14:49

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	906967.0	101.01 %		0.192			0.19%
Sc Radial	5371.3	101 %		0.3			0.33%
Y 371.029	799423.2	97.121 %		0.1963			0.20%
Y RADIAL	5803.8	100.8 %		0.39			0.39%
Ag 328.068†	-64.6	-0.2673 ug/L		0.27915	-0.2673 ppb	0.27915	104.44%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	0.1	0.0709 ug/L		6.35328	0.0709 ppb	6.35328	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	2.5	1.0159 ug/L		1.72258	1.0159 ppb	1.72258	169.56%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	32.5	0.7118 ug/L		0.07088	0.7118 ppb	0.07088	9.96%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	-5.6	-0.0438 ug/L		0.05602	-0.0438 ppb	0.05602	127.96%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	180.6	0.0636 ug/L		0.01150	0.0636 ppb	0.01150	18.09%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	-0.6	-0.9032 ug/L		4.33987	-0.9032 ppb	4.33987	480.48%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated						
Cd 226.502†	14.3	0.1587 ug/L	0.04402	0.1587 ppb	0.04402	27.73%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	0.0	0.0010 ug/L	0.06855	0.0010 ppb	0.06855	>999.9%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-1.4	-0.0152 ug/L	0.09687	-0.0152 ppb	0.09687	638.17%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-356.0	-0.9988 ug/L	0.05225	-0.9988 ppb	0.05225	5.23%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	0.7	6.8803 ug/L	8.13701	6.8803 ppb	8.13701	118.27%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-219.3	-40.040 ug/L	6.1533	-40.040 ppb	6.1533	15.37%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	2.0	71.361 ug/L	53.9060	71.361 ppb	53.9060	75.54%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	-5.9	-0.0089 ug/L	0.01274	-0.0089 ppb	0.01274	143.55%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	1.0	0.0688 ug/L	0.12099	0.0688 ppb	0.12099	175.79%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-144.4	-42.920 ug/L	4.4578	-42.920 ppb	4.4578	10.39%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	-12.2	-0.3071 ug/L	0.34747	-0.3071 ppb	0.34747	113.14%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	4.5	2.7525 ug/L	0.80692	2.7525 ppb	0.80692	29.32%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	105.1	13.195 ug/L	0.8563	13.195 ppb	0.8563	6.49%
QC value greater than the upper limit for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-34.0	-46.777 ug/L	3.7775	-46.777 ppb	3.7775	8.08%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	12.8	4.2912 ug/L	2.06567	4.2912 ppb	2.06567	48.14%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	5.2	3.0241 ug/L	3.20212	3.0241 ppb	3.20212	105.89%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	-25.6	-0.7581 ug/L	0.27423	-0.7581 ppb	0.27423	36.17%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	7.1	1.3079 ug/L	1.04073	1.3079 ppb	1.04073	79.57%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	11.5	0.0741 ug/L	0.02457	0.0741 ppb	0.02457	33.17%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	-29.0	-0.0506 ug/L	0.06185	-0.0506 ppb	0.06185	122.27%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	1.4	0.4461 ug/L	0.33376	0.4461 ppb	0.33376	74.81%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	31.9	0.7978 ug/L	0.95111	0.7978 ppb	0.95111	119.22%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	24.9	0.1580 ug/L	0.14389	0.1580 ppb	0.14389	91.06%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-60.6	-0.5615 ug/L	0.11718	-0.5615 ppb	0.11718	20.87%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	-41.8	-2.6469 ug/L	0.43669	-2.6469 ppb	0.43669	16.50%
QC value within limits for SiO2 Recovery = Not calculated						
QC Failed. Continue with analysis.						

Sequence No.: 3  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 1/26/2010 13:39:53  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5327.2	5327.2	99.8 %		13:41:46
1	Y RADIAL	5721.6	5721.6	99.38 %		13:41:46
1	Al 396.153Radial†	6703.3	6710.3	5059.8 ug/L	5059.8 ppb	13:41:46
1	Ca 317.933Radial†	3218.7	3206.2	5153.3 ug/L	5153.3 ppb	13:42:06
1	Fe 238.204 Radial†	584.4	578.6	5422.8 ug/L	5422.8 ppb	13:42:06
1	K 766.490 Radial†	30737.0	28307.7	5164.5 ug/L	5164.5 ppb	13:41:46
1	Mg 279.077 IEC†	158.0	157.4	5613.4 ug/L	5613.4 ppb	13:42:06
1	Na 589.592 Radial†	36530.0	37165.7	11048 ug/L	11048 ppb	13:41:46
1	Sr 421.552†	83885.7	84080.9	539.57 ug/L	539.57 ppb	13:41:46
1	Sc 361.383	929779.9	929779.9	103.55 %		13:43:03
1	Y 371.029	812452.1	812452.1	98.704 %		13:43:03
1	Ag 328.068†	121501.0	117035.4	491.65 ug/L	491.65 ppb	13:43:08
1	As 188.979†	1195.9	1185.0	489.12 ug/L	489.12 ppb	13:43:28
1	B 249.677†	22494.0	21962.5	479.34 ug/L	479.34 ppb	13:43:08
1	Ba 233.527†	64225.9	62025.0	490.13 ug/L	490.13 ppb	13:43:08
1	Be 313.107†	1419405.0	1375796.3	486.43 ug/L	486.43 ppb	13:43:03
1	Cd 226.502†	45567.0	44209.4	493.69 ug/L	493.69 ppb	13:43:08
1	Co 228.616†	23673.7	22931.2	502.76 ug/L	502.76 ppb	13:43:08
1	Cr 267.716†	46862.1	45160.0	490.17 ug/L	490.17 ppb	13:43:08
1	Cu 324.752†	188101.7	172518.7	483.97 ug/L	483.97 ppb	13:43:08
1	Mn 257.610†	451524.7	435540.0	488.62 ug/L	488.62 ppb	13:43:03
1	Mo 202.031†	7373.2	7096.6	484.81 ug/L	484.81 ppb	13:43:28
1	Ni 231.604†	20400.5	19606.8	492.45 ug/L	492.45 ppb	13:43:08
1	P 214.914†	4709.4	4309.1	2335.4 ug/L	2335.4 ppb	13:43:28
1	Pb 220.353†	3986.6	3910.2	492.39 ug/L	492.39 ppb	13:43:28
1	S 181.975 Axial†	801.1	696.6	958.11 ug/L	958.11 ppb	13:43:28
1	Sb 206.836†	1536.2	1453.2	504.03 ug/L	504.03 ppb	13:43:28
1	Se 196.026†	862.0	850.4	510.19 ug/L	510.19 ppb	13:43:28
1	Si 251.611†	86295.8	82838.4	2448.5 ug/L	2448.5 ppb	13:43:08
1	Sn 189.927†	2743.2	2649.4	488.06 ug/L	488.06 ppb	13:43:28
1	Ti 334.940†	329670.6	319264.0	486.62 ug/L	486.62 ppb	13:43:08
1	Tl 190.801†	1528.8	1513.3	487.30 ug/L	487.30 ppb	13:43:28
1	U 409.014†	19377.3	19775.2	492.77 ug/L	492.77 ppb	13:43:08
1	V 292.402†	79796.0	78451.3	494.29 ug/L	494.29 ppb	13:43:08
1	Zn 213.857†	55352.7	52719.8	486.74 ug/L	486.74 ppb	13:43:08
1	SiO2†	85873.2	82412.9	5199.0 ug/L	5199.0 ppb	13:44:36
2	Sc Radial	5393.0	5393.0	101 %		13:42:11
2	Y RADIAL	5768.1	5768.1	100.2 %		13:42:11
2	Al 396.153Radial†	6540.8	6467.5	4876.0 ug/L	4876.0 ppb	13:42:11
2	Ca 317.933Radial†	3144.7	3093.6	4972.4 ug/L	4972.4 ppb	13:42:31
2	Fe 238.204 Radial†	574.7	561.9	5266.0 ug/L	5266.0 ppb	13:42:31
2	K 766.490 Radial†	30206.3	27406.6	5000.1 ug/L	5000.1 ppb	13:42:11
2	Mg 279.077 IEC†	148.5	146.1	5209.3 ug/L	5209.3 ppb	13:42:31
2	Na 589.592 Radial†	35798.8	35995.4	10700 ug/L	10700 ppb	13:42:11
2	Sr 421.552†	82097.4	81285.2	521.63 ug/L	521.63 ppb	13:42:11
2	Sc 361.383	934913.7	934913.7	104.13 %		13:43:34
2	Y 371.029	817652.1	817652.1	99.335 %		13:43:34
2	Ag 328.068†	120064.5	115011.7	483.13 ug/L	483.13 ppb	13:43:39
2	As 188.979†	1187.0	1170.1	482.93 ug/L	482.93 ppb	13:43:59
2	B 249.677†	22201.9	21562.7	470.62 ug/L	470.62 ppb	13:43:39
2	Ba 233.527†	63420.1	60910.5	481.32 ug/L	481.32 ppb	13:43:39
2	Be 313.107†	1426424.3	1375010.8	486.14 ug/L	486.14 ppb	13:43:34
2	Cd 226.502†	44943.8	43369.4	484.31 ug/L	484.31 ppb	13:43:39
2	Co 228.616†	23328.6	22474.2	492.76 ug/L	492.76 ppb	13:43:39
2	Cr 267.716†	46254.3	44327.8	481.13 ug/L	481.13 ppb	13:43:39
2	Cu 324.752†	185518.3	169040.2	474.21 ug/L	474.21 ppb	13:43:39
2	Mn 257.610†	453481.7	435025.2	488.04 ug/L	488.04 ppb	13:43:34
2	Mo 202.031†	7364.4	7049.1	481.55 ug/L	481.55 ppb	13:43:59
2	Ni 231.604†	20115.3	19224.6	482.85 ug/L	482.85 ppb	13:43:39

2	P 214.914†	4695.2	4270.4	2315.5 ug/L	2315.5 ppb	13:43:59
2	Pb 220.353†	3977.5	3880.3	488.61 ug/L	488.61 ppb	13:43:59
2	S 181.975 Axial†	788.4	680.1	935.51 ug/L	935.51 ppb	13:43:59
2	Sb 206.836†	1534.8	1443.7	500.69 ug/L	500.69 ppb	13:43:59
2	Se 196.026†	847.6	832.0	499.07 ug/L	499.07 ppb	13:43:59
2	Si 251.611†	85114.9	81246.7	2401.4 ug/L	2401.4 ppb	13:43:39
2	Sn 189.927†	2726.5	2618.9	482.42 ug/L	482.42 ppb	13:43:59
2	Ti 334.940†	325305.6	313323.8	477.58 ug/L	477.58 ppb	13:43:39
2	Tl 190.801†	1514.5	1491.4	480.28 ug/L	480.28 ppb	13:43:59
2	U 409.014†	19113.3	19418.8	483.90 ug/L	483.90 ppb	13:43:39
2	V 292.402†	78652.5	76929.9	484.79 ug/L	484.79 ppb	13:43:39
2	Zn 213.857†	54607.0	51710.1	477.43 ug/L	477.43 ppb	13:43:39
2	SiO2†	85386.5	81490.2	5140.7 ug/L	5140.7 ppb	13:44:41
3	Sc Radial	5448.6	5448.6	102 %		13:42:36
3	Y RADIAL	5817.8	5817.8	101.1 %		13:42:36
3	Al 396.153Radial†	6598.4	6457.9	4868.3 ug/L	4868.3 ppb	13:42:36
3	Ca 317.933Radial†	3244.9	3160.0	5079.1 ug/L	5079.1 ppb	13:42:56
3	Fe 238.204 Radial†	597.7	578.7	5423.0 ug/L	5423.0 ppb	13:42:56
3	K 766.490 Radial†	30404.8	27295.9	4979.9 ug/L	4979.9 ppb	13:42:36
3	Mg 279.077 IEC†	152.9	148.8	5308.8 ug/L	5308.8 ppb	13:42:56
3	Na 589.592 Radial†	35940.2	35772.2	10634 ug/L	10634 ppb	13:42:36
3	Sr 421.552†	82466.8	80817.8	518.63 ug/L	518.63 ppb	13:42:36
3	Sc 361.383	921952.0	921952.0	102.68 %		13:44:05
3	Y 371.029	807764.9	807764.9	98.134 %		13:44:05
3	Ag 328.068†	121154.1	117693.9	494.41 ug/L	494.41 ppb	13:44:10
3	As 188.979†	1202.7	1201.5	495.88 ug/L	495.88 ppb	13:44:30
3	B 249.677†	22587.9	22238.4	485.38 ug/L	485.38 ppb	13:44:10
3	Ba 233.527†	63793.3	62130.3	490.97 ug/L	490.97 ppb	13:44:10
3	Be 313.107†	1409215.0	1377510.5	487.04 ug/L	487.04 ppb	13:44:05
3	Cd 226.502†	45205.3	44230.9	493.93 ug/L	493.93 ppb	13:44:10
3	Co 228.616†	23547.8	23002.7	504.33 ug/L	504.33 ppb	13:44:10
3	Cr 267.716†	46620.2	45308.7	491.78 ug/L	491.78 ppb	13:44:10
3	Cu 324.752†	187862.7	173828.2	487.64 ug/L	487.64 ppb	13:44:10
3	Mn 257.610†	446717.2	434560.3	487.53 ug/L	487.53 ppb	13:44:05
3	Mo 202.031†	7385.1	7168.6	489.73 ug/L	489.73 ppb	13:44:30
3	Ni 231.604†	20291.4	19667.7	493.98 ug/L	493.98 ppb	13:44:10
3	P 214.914†	4711.6	4349.8	2357.6 ug/L	2357.6 ppb	13:44:30
3	Pb 220.353†	3985.1	3941.5	496.29 ug/L	496.29 ppb	13:44:30
3	S 181.975 Axial†	790.6	692.9	953.12 ug/L	953.12 ppb	13:44:30
3	Sb 206.836†	1536.4	1466.1	508.54 ug/L	508.54 ppb	13:44:30
3	Se 196.026†	859.3	854.8	512.76 ug/L	512.76 ppb	13:44:30
3	Si 251.611†	85918.4	83178.5	2458.5 ug/L	2458.5 ppb	13:44:10
3	Sn 189.927†	2756.9	2685.3	494.65 ug/L	494.65 ppb	13:44:30
3	Ti 334.940†	328431.2	320760.0	488.92 ug/L	488.92 ppb	13:44:10
3	Tl 190.801†	1536.5	1533.3	493.71 ug/L	493.71 ppb	13:44:30
3	U 409.014†	19295.0	19853.9	494.73 ug/L	494.73 ppb	13:44:10
3	V 292.402†	79483.5	78801.2	496.53 ug/L	496.53 ppb	13:44:10
3	Zn 213.857†	54995.2	52825.5	487.71 ug/L	487.71 ppb	13:44:10
3	SiO2†	86703.8	83925.9	5294.5 ug/L	5294.5 ppb	13:44:46

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	928881.8	103.45 %		0.727			0.70%
Sc Radial	5389.6	101 %		1.1			1.13%
Y 371.029	812623.0	98.724 %		0.6009			0.61%
Y RADIAL	5769.2	100.2 %		0.84			0.83%
Ag 328.068†	116580.3	489.73 ug/L		5.881	489.73 ppb	5.881	1.20%
QC value within limits for Ag 328.068 Recovery = 97.95%							
Al 396.153Radial†	6545.2	4934.7 ug/L		108.38	4934.7 ppb	108.38	2.20%
QC value within limits for Al 396.153Radial Recovery = 98.69%							
As 188.979†	1185.5	489.31 ug/L		6.475	489.31 ppb	6.475	1.32%
QC value within limits for As 188.979 Recovery = 97.86%							
B 249.677†	21921.2	478.45 ug/L		7.420	478.45 ppb	7.420	1.55%
QC value within limits for B 249.677 Recovery = 95.69%							
Ba 233.527†	61688.6	487.47 ug/L		5.344	487.47 ppb	5.344	1.10%
QC value within limits for Ba 233.527 Recovery = 97.49%							
Be 313.107†	1376105.9	486.54 ug/L		0.463	486.54 ppb	0.463	0.10%
QC value within limits for Be 313.107 Recovery = 97.31%							
Ca 317.933Radial†	3153.3	5068.3 ug/L		90.95	5068.3 ppb	90.95	1.79%

QC value within limits for Ca 317.933 Radial Recovery = 101.37%

Cd 226.502†	43936.6	490.64 ug/L	5.484	490.64 ppb	5.484	1.12%
QC value within limits for Cd 226.502 Recovery = 98.13%						
Co 228.616†	22802.7	499.95 ug/L	6.280	499.95 ppb	6.280	1.26%
QC value within limits for Co 228.616 Recovery = 99.99%						
Cr 267.716†	44932.2	487.69 ug/L	5.739	487.69 ppb	5.739	1.18%
QC value within limits for Cr 267.716 Recovery = 97.54%						
Cu 324.752†	171795.7	481.94 ug/L	6.943	481.94 ppb	6.943	1.44%
QC value within limits for Cu 324.752 Recovery = 96.39%						
Fe 238.204 Radial†	573.1	5370.6 ug/L	90.59	5370.6 ppb	90.59	1.69%
QC value within limits for Fe 238.204 Radial Recovery = 107.41%						
K 766.490 Radial†	27670.1	5048.2 ug/L	101.27	5048.2 ppb	101.27	2.01%
QC value within limits for K 766.490 Radial Recovery = 100.96%						
Mg 279.077 IEC†	150.8	5377.1 ug/L	210.55	5377.1 ppb	210.55	3.92%
QC value within limits for Mg 279.077 IEC Recovery = 107.54%						
Mn 257.610†	435041.8	488.07 ug/L	0.543	488.07 ppb	0.543	0.11%
QC value within limits for Mn 257.610 Recovery = 97.61%						
Mo 202.031†	7104.8	485.36 ug/L	4.116	485.36 ppb	4.116	0.85%
QC value within limits for Mo 202.031 Recovery = 97.07%						
Na 589.592 Radial†	36311.1	10794 ug/L	222.5	10794 ppb	222.5	2.06%
QC value within limits for Na 589.592 Radial Recovery = 107.94%						
Ni 231.604†	19499.7	489.76 ug/L	6.032	489.76 ppb	6.032	1.23%
QC value within limits for Ni 231.604 Recovery = 97.95%						
P 214.914†	4309.8	2336.2 ug/L	21.06	2336.2 ppb	21.06	0.90%
QC value within limits for P 214.914 Recovery = 93.45%						
Pb 220.353†	3910.6	492.43 ug/L	3.837	492.43 ppb	3.837	0.78%
QC value within limits for Pb 220.353 Recovery = 98.49%						
S 181.975 Axial†	689.9	948.91 ug/L	11.874	948.91 ppb	11.874	1.25%
QC value within limits for S 181.975 Axial Recovery = 94.89%						
Sb 206.836†	1454.3	504.42 ug/L	3.940	504.42 ppb	3.940	0.78%
QC value within limits for Sb 206.836 Recovery = 100.88%						
Se 196.026†	845.7	507.34 ug/L	7.278	507.34 ppb	7.278	1.43%
QC value within limits for Se 196.026 Recovery = 101.47%						
Si 251.611†	82421.2	2436.2 ug/L	30.51	2436.2 ppb	30.51	1.25%
QC value within limits for Si 251.611 Recovery = 97.45%						
Sn 189.927†	2651.2	488.38 ug/L	6.121	488.38 ppb	6.121	1.25%
QC value within limits for Sn 189.927 Recovery = 97.68%						
Sr 421.552†	82061.3	526.61 ug/L	11.324	526.61 ppb	11.324	2.15%
QC value within limits for Sr 421.552 Recovery = 105.32%						
Ti 334.940†	317782.6	484.37 ug/L	5.993	484.37 ppb	5.993	1.24%
QC value within limits for Ti 334.940 Recovery = 96.87%						
Tl 190.801†	1512.7	487.10 ug/L	6.718	487.10 ppb	6.718	1.38%
QC value within limits for Tl 190.801 Recovery = 97.42%						
U 409.014†	19682.6	490.47 ug/L	5.774	490.47 ppb	5.774	1.18%
QC value within limits for U 409.014 Recovery = 98.09%						
V 292.402†	78060.8	491.87 ug/L	6.231	491.87 ppb	6.231	1.27%
QC value within limits for V 292.402 Recovery = 98.37%						
Zn 213.857†	52418.5	483.96 ug/L	5.679	483.96 ppb	5.679	1.17%
QC value within limits for Zn 213.857 Recovery = 96.79%						
SiO2†	82609.7	5211.4 ug/L	77.66	5211.4 ppb	77.66	1.49%
QC value within limits for SiO2 Recovery = 97.45%						

All analyte(s) passed QC.

Sequence No.: 4  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 1/26/2010 13:46:57  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5502.8	5502.8	103 %		13:48:50
1	Y RADIAL	5974.5	5974.5	103.8 %		13:48:50
1	Al 396.153Radial†	13.3	3.7	2.8216 ug/L	2.8216 ppb	13:49:10
1	Ca 317.933Radial†	21.9	1.1	1.7031 ug/L	1.7031 ppb	13:49:10
1	Fe 238.204 Radial†	8.1	0.7	6.7191 ug/L	6.7191 ppb	13:49:10
1	K 766.490 Radial†	2275.4	-295.4	-53.955 ug/L	-53.955 ppb	13:48:50
1	Mg 279.077 IEC†	1.4	0.4	14.680 ug/L	14.680 ppb	13:49:10
1	Na 589.592 Radial†	-696.9	-128.6	-38.239 ug/L	-38.239 ppb	13:48:50
1	Sr 421.552†	40.5	32.2	0.2067 ug/L	0.2067 ppb	13:48:50
1	Sc 361.383	914086.5	914086.5	101.81 %		13:50:06
1	Y 371.029	804471.0	804471.0	97.734 %		13:50:06
1	Ag 328.068†	300.7	-0.7	-0.0001 ug/L	-0.0001 ppb	13:50:06
1	As 188.979†	-28.2	2.4	1.0017 ug/L	1.0017 ppb	13:50:26
1	B 249.677†	-230.5	14.0	0.3050 ug/L	0.3050 ppb	13:50:26
1	Ba 233.527†	-17.4	-14.0	-0.1090 ug/L	-0.1090 ppb	13:50:26
1	Be 313.107†	-5100.1	90.8	0.0320 ug/L	0.0320 ppb	13:50:06
1	Cd 226.502†	-204.9	4.9	0.0543 ug/L	0.0543 ppb	13:50:26
1	Co 228.616†	-65.1	6.0	0.1305 ug/L	0.1305 ppb	13:50:26
1	Cr 267.716†	88.2	-7.3	-0.0787 ug/L	-0.0787 ppb	13:50:26
1	Cu 324.752†	8875.1	-410.3	-1.1516 ug/L	-1.1516 ppb	13:50:06
1	Mn 257.610†	506.5	7.7	0.0086 ug/L	0.0086 ppb	13:50:26
1	Mo 202.031†	25.0	1.0	0.0668 ug/L	0.0668 ppb	13:50:26
1	Ni 231.604†	98.7	3.2	0.0812 ug/L	0.0812 ppb	13:50:26
1	P 214.914†	238.6	-4.3	-2.2005 ug/L	-2.2005 ppb	13:50:26
1	Pb 220.353†	-35.5	25.5	3.2068 ug/L	3.2068 ppb	13:50:26
1	S 181.975 Axial†	53.5	-24.4	-33.595 ug/L	-33.595 ppb	13:50:26
1	Sb 206.836†	35.8	4.9	1.6619 ug/L	1.6619 ppb	13:50:26
1	Se 196.026†	-20.0	-1.7	-0.9428 ug/L	-0.9428 ppb	13:50:26
1	Si 251.611†	481.8	-22.7	-0.6737 ug/L	-0.6737 ppb	13:50:26
1	Sn 189.927†	11.2	11.4	2.0944 ug/L	2.0944 ppb	13:50:26
1	Ti 334.940†	-930.9	-7.8	-0.0136 ug/L	-0.0136 ppb	13:50:06
1	Tl 190.801†	-40.6	-2.9	-0.9418 ug/L	-0.9418 ppb	13:50:26
1	U 409.014†	-1016.1	64.8	1.6197 ug/L	1.6197 ppb	13:50:06
1	V 292.402†	-1340.6	76.8	0.4807 ug/L	0.4807 ppb	13:50:06
1	Zn 213.857†	713.3	-32.8	-0.3052 ug/L	-0.3052 ppb	13:50:26
1	SiO2†	487.5	-34.6	-2.1894 ug/L	-2.1894 ppb	13:51:37
2	Sc Radial	5401.7	5401.7	101 %		13:49:15
2	Y RADIAL	5835.8	5835.8	101.4 %		13:49:15
2	Al 396.153Radial†	2.3	-6.9	-5.2210 ug/L	-5.2210 ppb	13:49:35
2	Ca 317.933Radial†	21.8	1.3	2.1032 ug/L	2.1032 ppb	13:49:35
2	Fe 238.204 Radial†	10.1	2.8	26.145 ug/L	26.145 ppb	13:49:35
2	K 766.490 Radial†	2271.0	-258.4	-47.189 ug/L	-47.189 ppb	13:49:15
2	Mg 279.077 IEC†	1.0	-0.0	-0.6395 ug/L	-0.6395 ppb	13:49:35
2	Na 589.592 Radial†	-723.5	-167.7	-49.840 ug/L	-49.840 ppb	13:49:15
2	Sr 421.552†	24.3	16.9	0.1086 ug/L	0.1086 ppb	13:49:15
2	Sc 361.383	909949.5	909949.5	101.35 %		13:50:32
2	Y 371.029	801794.3	801794.3	97.409 %		13:50:32
2	Ag 328.068†	341.5	40.9	0.1803 ug/L	0.1803 ppb	13:50:32
2	As 188.979†	-32.3	-1.6	-0.6638 ug/L	-0.6638 ppb	13:50:52
2	B 249.677†	-244.2	-0.5	-0.0156 ug/L	-0.0156 ppb	13:50:52
2	Ba 233.527†	4.0	7.1	0.0572 ug/L	0.0572 ppb	13:50:52
2	Be 313.107†	-5034.9	132.4	0.0468 ug/L	0.0468 ppb	13:50:32
2	Cd 226.502†	-212.3	-3.3	-0.0398 ug/L	-0.0398 ppb	13:50:52
2	Co 228.616†	-65.3	5.5	0.1200 ug/L	0.1200 ppb	13:50:52
2	Cr 267.716†	100.5	5.2	0.0571 ug/L	0.0571 ppb	13:50:52
2	Cu 324.752†	8920.7	-325.7	-0.9127 ug/L	-0.9127 ppb	13:50:32
2	Mn 257.610†	495.5	-1.0	0.0015 ug/L	0.0015 ppb	13:50:52
2	Mo 202.031†	24.6	0.7	0.0475 ug/L	0.0475 ppb	13:50:52
2	Ni 231.604†	103.7	8.6	0.2159 ug/L	0.2159 ppb	13:50:52

2	P 214.914†	245.5	3.5	2.1684 ug/L	2.1684 ppb	13:50:52
2	Pb 220.353†	-34.9	26.0	3.2600 ug/L	3.2600 ppb	13:50:52
2	S 181.975 Axial†	49.3	-28.3	-38.999 ug/L	-38.999 ppb	13:50:52
2	Sb 206.836†	37.0	6.2	2.1206 ug/L	2.1206 ppb	13:50:52
2	Se 196.026†	-8.3	9.8	5.7168 ug/L	5.7168 ppb	13:50:52
2	Si 251.611†	471.9	-30.3	-0.8997 ug/L	-0.8997 ppb	13:50:52
2	Sn 189.927†	9.1	9.3	1.7078 ug/L	1.7078 ppb	13:50:52
2	Ti 334.940†	-882.4	35.8	0.0547 ug/L	0.0547 ppb	13:50:32
2	Tl 190.801†	-42.5	-5.0	-1.6097 ug/L	-1.6097 ppb	13:50:52
2	U 409.014†	-1053.6	23.2	0.5782 ug/L	0.5782 ppb	13:50:32
2	V 292.402†	-1350.8	60.7	0.3753 ug/L	0.3753 ppb	13:50:32
2	Zn 213.857†	714.8	-28.1	-0.2647 ug/L	-0.2647 ppb	13:50:52
2	SiO2†	494.8	-25.2	-1.5953 ug/L	-1.5953 ppb	13:51:57
3	Sc Radial	5421.1	5421.1	102 %		13:49:40
3	Y RADIAL	5839.3	5839.3	101.4 %		13:49:40
3	Al 396.153Radial†	9.4	0.1	0.0666 ug/L	0.0666 ppb	13:50:00
3	Ca 317.933Radial†	19.9	-0.6	-1.0380 ug/L	-1.0380 ppb	13:50:00
3	Fe 238.204 Radial†	7.3	0.1	0.6454 ug/L	0.6454 ppb	13:50:00
3	K 766.490 Radial†	2330.8	-207.5	-37.899 ug/L	-37.899 ppb	13:49:40
3	Mg 279.077 IEC†	1.2	0.2	6.8873 ug/L	6.8873 ppb	13:50:00
3	Na 589.592 Radial†	-673.4	-115.7	-34.381 ug/L	-34.381 ppb	13:49:40
3	Sr 421.552†	31.5	24.0	0.1539 ug/L	0.1539 ppb	13:49:40
3	Sc 361.383	917057.8	917057.8	102.14 %		13:50:57
3	Y 371.029	807599.7	807599.7	98.114 %		13:50:57
3	Ag 328.068†	340.4	37.3	0.1574 ug/L	0.1574 ppb	13:50:57
3	As 188.979†	-26.5	4.2	1.7148 ug/L	1.7148 ppb	13:51:17
3	B 249.677†	-235.3	10.0	0.2189 ug/L	0.2189 ppb	13:51:17
3	Ba 233.527†	2.9	6.0	0.0484 ug/L	0.0484 ppb	13:51:17
3	Be 313.107†	-4960.4	243.8	0.0860 ug/L	0.0860 ppb	13:50:57
3	Cd 226.502†	-201.8	8.6	0.0959 ug/L	0.0959 ppb	13:51:17
3	Co 228.616†	-64.4	6.9	0.1532 ug/L	0.1532 ppb	13:51:17
3	Cr 267.716†	84.4	-11.3	-0.1226 ug/L	-0.1226 ppb	13:51:17
3	Cu 324.752†	8880.0	-433.7	-1.2172 ug/L	-1.2172 ppb	13:50:57
3	Mn 257.610†	485.8	-14.2	-0.0161 ug/L	-0.0161 ppb	13:51:17
3	Mo 202.031†	32.5	8.2	0.5593 ug/L	0.5593 ppb	13:51:17
3	Ni 231.604†	85.5	-10.0	-0.2514 ug/L	-0.2514 ppb	13:51:17
3	P 214.914†	242.9	-1.0	-0.2837 ug/L	-0.2837 ppb	13:51:17
3	Pb 220.353†	-4.5	56.0	7.0347 ug/L	7.0347 ppb	13:51:17
3	S 181.975 Axial†	48.9	-29.1	-40.108 ug/L	-40.108 ppb	13:51:17
3	Sb 206.836†	27.9	-2.9	-0.9294 ug/L	-0.9294 ppb	13:51:17
3	Se 196.026†	-22.8	-4.4	-2.5404 ug/L	-2.5404 ppb	13:51:17
3	Si 251.611†	458.6	-46.9	-1.3968 ug/L	-1.3968 ppb	13:51:17
3	Sn 189.927†	9.4	9.5	1.7489 ug/L	1.7489 ppb	13:51:17
3	Ti 334.940†	-921.7	4.2	0.0053 ug/L	0.0053 ppb	13:50:57
3	Tl 190.801†	-36.2	1.5	0.4733 ug/L	0.4733 ppb	13:51:17
3	U 409.014†	-1046.5	38.2	0.9557 ug/L	0.9557 ppb	13:50:57
3	V 292.402†	-1328.9	92.5	0.5848 ug/L	0.5848 ppb	13:50:57
3	Zn 213.857†	712.3	-36.0	-0.3324 ug/L	-0.3324 ppb	13:51:17
3	SiO2†	472.1	-51.1	-3.2499 ug/L	-3.2499 ppb	13:52:17

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	913697.9	101.76 %	0.398			0.39%
Sc Radial	5441.9	102 %	1.0			0.99%
Y 371.029	804621.7	97.752 %	0.3530			0.36%
Y RADIAL	5883.2	102.2 %	1.37			1.34%
Ag 328.068†	25.8	0.1125 ug/L	0.09820	0.1125 ppb	0.09820	87.29%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-1.0	-0.7776 ug/L	4.08724	-0.7776 ppb	4.08724	525.63%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	1.7	0.6842 ug/L	1.22064	0.6842 ppb	1.22064	178.39%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	7.8	0.1694 ug/L	0.16592	0.1694 ppb	0.16592	97.93%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-0.3	-0.0011 ug/L	0.09353	-0.0011 ppb	0.09353	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	155.7	0.0550 ug/L	0.02790	0.0550 ppb	0.02790	50.78%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	0.6	0.9228 ug/L	1.70981	0.9228 ppb	1.70981	185.29%



QC value within limits for Ca 317.933 Radial Recovery = Not calculated

Cd 226.502†	3.4	0.0368 ug/L	0.06951	0.0368 ppb	0.06951	188.94%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	6.1	0.1346 ug/L	0.01697	0.1346 ppb	0.01697	12.61%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-4.5	-0.0481 ug/L	0.09367	-0.0481 ppb	0.09367	194.89%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-389.9	-1.0938 ug/L	0.16027	-1.0938 ppb	0.16027	14.65%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	1.2	11.170 ug/L	13.3194	11.170 ppb	13.3194	119.25%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-253.8	-46.348 ug/L	8.0607	-46.348 ppb	8.0607	17.39%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	0.2	6.9760 ug/L	7.66032	6.9760 ppb	7.66032	109.81%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	-2.5	-0.0020 ug/L	0.01276	-0.0020 ppb	0.01276	639.66%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	3.3	0.2245 ug/L	0.29006	0.2245 ppb	0.29006	129.19%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-137.3	-40.820 ug/L	8.0463	-40.820 ppb	8.0463	19.71%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	0.6	0.0152 ug/L	0.24054	0.0152 ppb	0.24054	>999.9%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-0.6	-0.1053 ug/L	2.18991	-0.1053 ppb	2.18991	>999.9%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	35.9	4.5005 ug/L	2.19481	4.5005 ppb	2.19481	48.77%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-27.3	-37.567 ug/L	3.4845	-37.567 ppb	3.4845	9.28%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	2.7	0.9510 ug/L	1.64458	0.9510 ppb	1.64458	172.93%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	1.2	0.7445 ug/L	4.37955	0.7445 ppb	4.37955	588.24%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	-33.3	-0.9900 ug/L	0.36996	-0.9900 ppb	0.36996	37.37%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	10.1	1.8504 ug/L	0.21237	1.8504 ppb	0.21237	11.48%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	24.4	0.1564 ug/L	0.04909	0.1564 ppb	0.04909	31.39%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	10.7	0.0155 ug/L	0.03526	0.0155 ppb	0.03526	227.88%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-2.2	-0.6927 ug/L	1.06361	-0.6927 ppb	1.06361	153.54%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	42.1	1.0512 ug/L	0.52729	1.0512 ppb	0.52729	50.16%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	76.6	0.4803 ug/L	0.10473	0.4803 ppb	0.10473	21.81%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-32.3	-0.3007 ug/L	0.03406	-0.3007 ppb	0.03406	11.33%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	-37.0	-2.3449 ug/L	0.83818	-2.3449 ppb	0.83818	35.75%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.



Sequence No.: 13  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 7  
 Date Collected: 1/26/2010 14:50:29  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5288.7	5288.7	99.0 %		14:52:21
1	Y RADIAL	5671.7	5671.7	98.52 %		14:52:21
1	Al 396.153Radial†	6479.9	6533.7	4926.7 ug/L	4926.7 ppb	14:52:21
1	Ca 317.933Radial†	3112.5	3122.5	5018.7 ug/L	5018.7 ppb	14:52:41
1	Fe 238.204 Radial†	560.0	558.3	5231.9 ug/L	5231.9 ppb	14:52:41
1	K 766.490 Radial†	29735.5	27521.0	5021.3 ug/L	5021.3 ppb	14:52:21
1	Mg 279.077 IEC†	148.6	149.1	5316.9 ug/L	5316.9 ppb	14:52:41
1	Na 589.592 Radial†	32957.6	33825.6	10055 ug/L	10055 ppb	14:52:21
1	Sr 421.552†	78604.6	79361.4	509.28 ug/L	509.28 ppb	14:52:21
1	Sc 361.383	938731.1	938731.1	104.55 %		14:53:39
1	Y 371.029	822827.6	822827.6	99.964 %		14:53:39
1	Ag 328.068†	118903.4	113432.1	476.51 ug/L	476.51 ppb	14:53:44
1	As 188.979†	1159.0	1138.8	470.07 ug/L	470.07 ppb	14:54:04
1	B 249.677†	22100.0	21378.5	466.62 ug/L	466.62 ppb	14:53:44
1	Ba 233.527†	62665.6	59941.2	473.67 ug/L	473.67 ppb	14:53:44
1	Be 313.107†	1394002.7	1338429.5	473.22 ug/L	473.22 ppb	14:53:39
1	Cd 226.502†	44461.1	42732.1	477.19 ug/L	477.19 ppb	14:53:44
1	Co 228.616†	23009.4	22077.9	484.05 ug/L	484.05 ppb	14:53:44
1	Cr 267.716†	45795.3	43708.1	474.41 ug/L	474.41 ppb	14:53:44
1	Cu 324.752†	183775.2	166648.4	467.50 ug/L	467.50 ppb	14:53:44
1	Mn 257.610†	442114.3	422381.5	473.86 ug/L	473.86 ppb	14:53:39
1	Mo 202.031†	7231.3	6892.9	470.89 ug/L	470.89 ppb	14:54:04
1	Ni 231.604†	19875.1	18916.3	475.10 ug/L	475.10 ppb	14:53:44
1	P 214.914†	4567.9	4130.4	2237.8 ug/L	2237.8 ppb	14:54:04
1	Pb 220.353†	3883.1	3774.4	475.32 ug/L	475.32 ppb	14:54:04
1	S 181.975 Axial†	778.4	667.5	918.15 ug/L	918.15 ppb	14:54:04
1	Sb 206.836†	1505.6	1409.8	488.96 ug/L	488.96 ppb	14:54:04
1	Se 196.026†	826.6	808.6	485.40 ug/L	485.40 ppb	14:54:04
1	Si 251.611†	84433.6	80262.7	2372.4 ug/L	2372.4 ppb	14:53:44
1	Sn 189.927†	2674.0	2557.9	471.22 ug/L	471.22 ppb	14:54:04
1	Ti 334.940†	322609.8	309474.8	471.72 ug/L	471.72 ppb	14:53:44
1	Tl 190.801†	1490.2	1462.2	470.88 ug/L	470.88 ppb	14:54:04
1	U 409.014†	18632.1	18883.9	470.54 ug/L	470.54 ppb	14:53:44
1	V 292.402†	77910.2	75912.7	478.31 ug/L	478.31 ppb	14:53:44
1	Zn 213.857†	53777.1	50703.0	468.11 ug/L	468.11 ppb	14:53:44
1	SiO2†	84053.3	79881.5	5039.3 ug/L	5039.3 ppb	14:55:11
2	Sc Radial	5373.3	5373.3	101 %		14:52:46
2	Y RADIAL	5778.0	5778.0	100.4 %		14:52:46
2	Al 396.153Radial†	6395.3	6346.6	4784.5 ug/L	4784.5 ppb	14:52:46
2	Ca 317.933Radial†	3094.2	3054.8	4910.0 ug/L	4910.0 ppb	14:53:06
2	Fe 238.204 Radial†	547.2	536.7	5030.1 ug/L	5030.1 ppb	14:53:06
2	K 766.490 Radial†	29588.3	26901.8	4908.3 ug/L	4908.3 ppb	14:52:46
2	Mg 279.077 IEC†	144.7	142.8	5094.6 ug/L	5094.6 ppb	14:53:06
2	Na 589.592 Radial†	32768.3	33113.3	9843.6 ug/L	9843.6 ppb	14:52:46
2	Sr 421.552†	77962.5	77473.3	497.16 ug/L	497.16 ppb	14:52:46
2	Sc 361.383	919503.5	919503.5	102.41 %		14:54:10
2	Y 371.029	804779.4	804779.4	97.772 %		14:54:10
2	Ag 328.068†	117506.6	114446.4	480.69 ug/L	480.69 ppb	14:54:15
2	As 188.979†	1159.0	1162.0	479.52 ug/L	479.52 ppb	14:54:35
2	B 249.677†	21749.3	21478.1	468.82 ug/L	468.82 ppb	14:54:15
2	Ba 233.527†	61978.0	60523.2	478.26 ug/L	478.26 ppb	14:54:15
2	Be 313.107†	1365150.6	1338137.2	473.12 ug/L	473.12 ppb	14:54:10
2	Cd 226.502†	43888.6	43062.4	480.90 ug/L	480.90 ppb	14:54:15
2	Co 228.616†	22787.8	22321.7	489.41 ug/L	489.41 ppb	14:54:15
2	Cr 267.716†	45221.4	44063.7	478.26 ug/L	478.26 ppb	14:54:15
2	Cu 324.752†	181173.8	167783.9	470.68 ug/L	470.68 ppb	14:54:15
2	Mn 257.610†	433737.5	423044.4	474.59 ug/L	474.59 ppb	14:54:10
2	Mo 202.031†	7210.0	7016.8	479.33 ug/L	479.33 ppb	14:54:35
2	Ni 231.604†	19664.6	19108.3	479.93 ug/L	479.93 ppb	14:54:15

2	P 214.914†	4554.7	4208.8	2281.6 ug/L	2281.6 ppb	14:54:35
2	Pb 220.353†	3839.6	3809.7	479.75 ug/L	479.75 ppb	14:54:35
2	S 181.975 Axial†	771.9	676.8	930.88 ug/L	930.88 ppb	14:54:35
2	Sb 206.836†	1481.7	1416.6	491.54 ug/L	491.54 ppb	14:54:35
2	Se 196.026†	818.9	817.6	489.96 ug/L	489.96 ppb	14:54:35
2	Si 251.611†	83568.6	81106.8	2397.3 ug/L	2397.3 ppb	14:54:15
2	Sn 189.927†	2670.1	2607.7	480.34 ug/L	480.34 ppb	14:54:35
2	Ti 334.940†	318960.9	312364.2	476.12 ug/L	476.12 ppb	14:54:15
2	Tl 190.801†	1489.8	1491.6	480.31 ug/L	480.31 ppb	14:54:35
2	U 409.014†	18517.6	19144.8	477.08 ug/L	477.08 ppb	14:54:15
2	V 292.402†	76876.0	76461.1	481.87 ug/L	481.87 ppb	14:54:15
2	Zn 213.857†	53183.7	51199.2	472.71 ug/L	472.71 ppb	14:54:15
2	SiO2†	84095.9	81604.2	5148.0 ug/L	5148.0 ppb	14:55:16
3	Sc Radial	5352.8	5352.8	100 %		14:53:11
3	Y RADIAL	5721.4	5721.4	99.38 %		14:53:11
3	Al 396.153Radial†	6361.7	6337.4	4778.0 ug/L	4778.0 ppb	14:53:11
3	Ca 317.933Radial†	3089.2	3061.6	4920.9 ug/L	4920.9 ppb	14:53:31
3	Fe 238.204 Radial†	553.9	545.5	5112.1 ug/L	5112.1 ppb	14:53:31
3	K 766.490 Radial†	29479.9	26906.4	4909.2 ug/L	4909.2 ppb	14:53:11
3	Mg 279.077 IEC†	145.2	143.9	5132.6 ug/L	5132.6 ppb	14:53:31
3	Na 589.592 Radial†	32225.5	32696.5	9719.8 ug/L	9719.8 ppb	14:53:11
3	Sr 421.552†	77129.1	76938.8	493.73 ug/L	493.73 ppb	14:53:11
3	Sc 361.383	931169.9	931169.9	103.71 %		14:54:41
3	Y 371.029	815789.7	815789.7	99.109 %		14:54:41
3	Ag 328.068†	118925.2	114376.6	480.42 ug/L	480.42 ppb	14:54:46
3	As 188.979†	1154.5	1143.4	471.96 ug/L	471.96 ppb	14:55:06
3	B 249.677†	22063.4	21514.8	469.62 ug/L	469.62 ppb	14:54:46
3	Ba 233.527†	62378.3	60150.9	475.32 ug/L	475.32 ppb	14:54:46
3	Be 313.107†	1384417.8	1340014.1	473.78 ug/L	473.78 ppb	14:54:41
3	Cd 226.502†	44263.5	42886.9	478.93 ug/L	478.93 ppb	14:54:46
3	Co 228.616†	22957.0	22206.0	486.86 ug/L	486.86 ppb	14:54:46
3	Cr 267.716†	45642.1	43916.1	476.66 ug/L	476.66 ppb	14:54:46
3	Cu 324.752†	183677.5	167981.5	471.23 ug/L	471.23 ppb	14:54:46
3	Mn 257.610†	439156.5	422963.3	474.51 ug/L	474.51 ppb	14:54:41
3	Mo 202.031†	7181.4	6901.0	471.43 ug/L	471.43 ppb	14:55:06
3	Ni 231.604†	19847.0	19043.6	478.30 ug/L	478.30 ppb	14:54:46
3	P 214.914†	4544.2	4143.0	2244.3 ug/L	2244.3 ppb	14:55:06
3	Pb 220.353†	3832.5	3755.9	472.96 ug/L	472.96 ppb	14:55:06
3	S 181.975 Axial†	770.2	665.6	915.57 ug/L	915.57 ppb	14:55:06
3	Sb 206.836†	1460.1	1377.7	478.24 ug/L	478.24 ppb	14:55:06
3	Se 196.026†	810.9	799.8	479.96 ug/L	479.96 ppb	14:55:06
3	Si 251.611†	84294.5	80784.3	2387.8 ug/L	2387.8 ppb	14:54:46
3	Sn 189.927†	2663.3	2568.4	473.13 ug/L	473.13 ppb	14:55:06
3	Ti 334.940†	322161.8	311548.4	474.88 ug/L	474.88 ppb	14:54:46
3	Tl 190.801†	1487.8	1471.4	473.85 ug/L	473.85 ppb	14:55:06
3	U 409.014†	18887.6	19275.1	480.33 ug/L	480.33 ppb	14:54:46
3	V 292.402†	77843.4	76453.4	481.70 ug/L	481.70 ppb	14:54:46
3	Zn 213.857†	53666.2	51013.8	470.99 ug/L	470.99 ppb	14:54:46
3	SiO2†	83783.5	80274.1	5064.1 ug/L	5064.1 ppb	14:55:21

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	929801.5	103.56 %	1.079			1.04%
Sc Radial	5338.3	100.0 %	0.83			0.83%
Y 371.029	814465.6	98.948 %	1.1051			1.12%
Y RADIAL	5723.7	99.42 %	0.924			0.93%
Ag 328.068†	114085.0	479.21 ug/L	2.338	479.21 ppb	2.338	0.49%
QC value within limits for Ag 328.068 Recovery = 95.84%						
Al 396.153Radial†	6405.9	4829.7 ug/L	84.04	4829.7 ppb	84.04	1.74%
QC value within limits for Al 396.153Radial Recovery = 96.59%						
As 188.979†	1148.1	473.85 ug/L	5.004	473.85 ppb	5.004	1.06%
QC value within limits for As 188.979 Recovery = 94.77%						
B 249.677†	21457.2	468.35 ug/L	1.554	468.35 ppb	1.554	0.33%
QC value within limits for B 249.677 Recovery = 93.67%						
Ba 233.527†	60205.1	475.75 ug/L	2.324	475.75 ppb	2.324	0.49%
QC value within limits for Ba 233.527 Recovery = 95.15%						
Be 313.107†	1338860.3	473.38 ug/L	0.357	473.38 ppb	0.357	0.08%
QC value within limits for Be 313.107 Recovery = 94.68%						
Ca 317.933Radial†	3079.6	4949.9 ug/L	59.88	4949.9 ppb	59.88	1.21%

QC value within limits for Ca 317.933 Radial Recovery = 99.00%

Cd 226.502†	42893.8	479.01 ug/L	1.858	479.01 ppb	1.858	0.39%
QC value within limits for Cd 226.502 Recovery = 95.80%						
Co 228.616†	22201.9	486.77 ug/L	2.680	486.77 ppb	2.680	0.55%
QC value within limits for Co 228.616 Recovery = 97.35%						
Cr 267.716†	43896.0	476.44 ug/L	1.936	476.44 ppb	1.936	0.41%
QC value within limits for Cr 267.716 Recovery = 95.29%						
Cu 324.752†	167471.3	469.80 ug/L	2.011	469.80 ppb	2.011	0.43%
QC value within limits for Cu 324.752 Recovery = 93.96%						
Fe 238.204 Radial†	546.8	5124.7 ug/L	101.52	5124.7 ppb	101.52	1.98%
QC value within limits for Fe 238.204 Radial Recovery = 102.49%						
K 766.490 Radial†	27109.7	4946.3 ug/L	64.99	4946.3 ppb	64.99	1.31%
QC value within limits for K 766.490 Radial Recovery = 98.93%						
Mg 279.077 IEC†	145.3	5181.4 ug/L	118.93	5181.4 ppb	118.93	2.30%
QC value within limits for Mg 279.077 IEC Recovery = 103.63%						
Mn 257.610†	422796.4	474.32 ug/L	0.401	474.32 ppb	0.401	0.08%
QC value within limits for Mn 257.610 Recovery = 94.86%						
Mo 202.031†	6936.9	473.89 ug/L	4.723	473.89 ppb	4.723	1.00%
QC value within limits for Mo 202.031 Recovery = 94.78%						
Na 589.592 Radial†	33211.8	9872.9 ug/L	169.72	9872.9 ppb	169.72	1.72%
QC value within limits for Na 589.592 Radial Recovery = 98.73%						
Ni 231.604†	19022.8	477.78 ug/L	2.453	477.78 ppb	2.453	0.51%
QC value within limits for Ni 231.604 Recovery = 95.56%						
P 214.914†	4160.7	2254.6 ug/L	23.65	2254.6 ppb	23.65	1.05%
QC value within limits for P 214.914 Recovery = 90.18%						
Pb 220.353†	3780.0	476.01 ug/L	3.443	476.01 ppb	3.443	0.72%
QC value within limits for Pb 220.353 Recovery = 95.20%						
S 181.975 Axial†	670.0	921.53 ug/L	8.195	921.53 ppb	8.195	0.89%
QC value within limits for S 181.975 Axial Recovery = 92.15%						
Sb 206.836†	1401.4	486.24 ug/L	7.053	486.24 ppb	7.053	1.45%
QC value within limits for Sb 206.836 Recovery = 97.25%						
Se 196.026†	808.7	485.11 ug/L	5.007	485.11 ppb	5.007	1.03%
QC value within limits for Se 196.026 Recovery = 97.02%						
Si 251.611†	80717.9	2385.8 ug/L	12.57	2385.8 ppb	12.57	0.53%
QC value within limits for Si 251.611 Recovery = 95.43%						
Sn 189.927†	2578.0	474.90 ug/L	4.813	474.90 ppb	4.813	1.01%
QC value within limits for Sn 189.927 Recovery = 94.98%						
Sr 421.552†	77924.5	500.06 ug/L	8.168	500.06 ppb	8.168	1.63%
QC value within limits for Sr 421.552 Recovery = 100.01%						
Ti 334.940†	311129.2	474.24 ug/L	2.271	474.24 ppb	2.271	0.48%
QC value within limits for Ti 334.940 Recovery = 94.85%						
Tl 190.801†	1475.1	475.01 ug/L	4.822	475.01 ppb	4.822	1.02%
QC value within limits for Tl 190.801 Recovery = 95.00%						
U 409.014†	19101.3	475.98 ug/L	4.985	475.98 ppb	4.985	1.05%
QC value within limits for U 409.014 Recovery = 95.20%						
V 292.402†	76275.8	480.63 ug/L	2.011	480.63 ppb	2.011	0.42%
QC value within limits for V 292.402 Recovery = 96.13%						
Zn 213.857†	50972.0	470.60 ug/L	2.327	470.60 ppb	2.327	0.49%
QC value within limits for Zn 213.857 Recovery = 94.12%						
SiO2†	80586.6	5083.8 ug/L	56.97	5083.8 ppb	56.97	1.12%
QC value within limits for SiO2 Recovery = 95.07%						

All analyte(s) passed QC.

Sequence No.: 14  
 Sample ID: PQL  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 11  
 Date Collected: 1/26/2010 14:57:31  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5466.8	5466.8	102 %		14:59:24
1	Y RADIAL	5869.4	5869.4	101.9 %		14:59:24
1	Al 396.153Radial†	279.6	264.0	199.52 ug/L	199.52 ppb	14:59:45
1	Ca 317.933Radial†	145.9	122.3	196.50 ug/L	196.50 ppb	14:59:45
1	Fe 238.204 Radial†	19.4	11.8	110.07 ug/L	110.07 ppb	14:59:45
1	K 766.490 Radial†	3024.8	451.2	82.242 ug/L	82.242 ppb	14:59:24
1	Mg 279.077 IEC†	9.8	8.6	305.27 ug/L	305.27 ppb	14:59:45
1	Na 589.592 Radial†	358.2	897.6	266.82 ug/L	266.82 ppb	14:59:24
1	Sr 421.552†	851.2	824.4	5.2892 ug/L	5.2892 ppb	14:59:24
1	Sc 361.383	915476.5	915476.5	101.96 %		15:00:41
1	Y 371.029	805899.9	805899.9	97.908 %		15:00:41
1	Ag 328.068†	1485.0	1160.4	4.8535 ug/L	4.8535 ppb	15:00:41
1	As 188.979†	41.2	70.6	28.912 ug/L	28.912 ppb	15:01:01
1	B 249.677†	2044.5	2245.6	49.216 ug/L	49.216 ppb	15:00:41
1	Ba 233.527†	622.7	613.8	4.8529 ug/L	4.8529 ppb	15:01:01
1	Be 313.107†	9187.6	14111.3	4.9896 ug/L	4.9896 ppb	15:00:41
1	Cd 226.502†	260.7	461.9	5.1615 ug/L	5.1615 ppb	15:01:01
1	Co 228.616†	160.3	227.1	4.9904 ug/L	4.9904 ppb	15:01:01
1	Cr 267.716†	553.0	448.5	4.8504 ug/L	4.8504 ppb	15:01:01
1	Cu 324.752†	12452.8	3085.4	8.6322 ug/L	8.6322 ppb	15:00:41
1	Mn 257.610†	9908.5	9228.1	10.345 ug/L	10.345 ppb	15:00:41
1	Mo 202.031†	171.7	144.8	9.8940 ug/L	9.8940 ppb	15:01:01
1	Ni 231.604†	310.0	210.4	5.2842 ug/L	5.2842 ppb	15:01:01
1	P 214.914†	511.1	262.5	146.38 ug/L	146.38 ppb	15:01:01
1	Pb 220.353†	27.3	87.1	10.993 ug/L	10.993 ppb	15:01:01
1	S 181.975 Axial†	123.6	44.2	60.815 ug/L	60.815 ppb	15:01:01
1	Sb 206.836†	65.7	34.2	11.819 ug/L	11.819 ppb	15:01:01
1	Se 196.026†	41.5	58.7	34.250 ug/L	34.250 ppb	15:01:01
1	Si 251.611†	3748.5	3180.5	94.116 ug/L	94.116 ppb	15:01:01
1	Sn 189.927†	64.3	63.4	11.684 ug/L	11.684 ppb	15:01:01
1	Ti 334.940†	2521.9	3379.9	5.1302 ug/L	5.1302 ppb	15:00:41
1	Tl 190.801†	26.4	62.8	20.140 ug/L	20.140 ppb	15:01:01
1	U 409.014†	1041.5	2084.3	52.094 ug/L	52.094 ppb	15:00:41
1	V 292.402†	-585.9	819.0	5.3151 ug/L	5.3151 ppb	15:00:41
1	Zn 213.857†	1787.6	1019.8	9.4427 ug/L	9.4427 ppb	15:01:01
1	SiO2†	3926.3	3337.3	210.80 ug/L	210.80 ppb	15:01:58
2	Sc Radial	5383.3	5383.3	101 %		14:59:50
2	Y RADIAL	5822.6	5822.6	101.1 %		14:59:50
2	Al 396.153Radial†	288.7	277.3	209.58 ug/L	209.58 ppb	15:00:10
2	Ca 317.933Radial†	148.7	127.2	204.53 ug/L	204.53 ppb	15:00:10
2	Fe 238.204 Radial†	19.8	12.5	117.05 ug/L	117.05 ppb	15:00:10
2	K 766.490 Radial†	3208.6	679.3	123.92 ug/L	123.92 ppb	14:59:50
2	Mg 279.077 IEC†	13.0	11.9	425.10 ug/L	425.10 ppb	15:00:10
2	Na 589.592 Radial†	306.6	851.8	253.22 ug/L	253.22 ppb	14:59:50
2	Sr 421.552†	825.0	811.3	5.2051 ug/L	5.2051 ppb	14:59:50
2	Sc 361.383	911011.3	911011.3	101.46 %		15:01:07
2	Y 371.029	802353.5	802353.5	97.477 %		15:01:07
2	Ag 328.068†	1591.5	1272.6	5.3246 ug/L	5.3246 ppb	15:01:07
2	As 188.979†	39.6	69.3	28.387 ug/L	28.387 ppb	15:01:27
2	B 249.677†	2050.3	2261.1	49.554 ug/L	49.554 ppb	15:01:07
2	Ba 233.527†	633.9	627.9	4.9641 ug/L	4.9641 ppb	15:01:27
2	Be 313.107†	9054.3	14024.2	4.9589 ug/L	4.9589 ppb	15:01:07
2	Cd 226.502†	247.1	449.7	5.0251 ug/L	5.0251 ppb	15:01:27
2	Co 228.616†	165.8	233.3	5.1244 ug/L	5.1244 ppb	15:01:27
2	Cr 267.716†	547.5	445.7	4.8207 ug/L	4.8207 ppb	15:01:27
2	Cu 324.752†	12456.7	3149.0	8.8115 ug/L	8.8115 ppb	15:01:07
2	Mn 257.610†	9825.3	9193.7	10.302 ug/L	10.302 ppb	15:01:07
2	Mo 202.031†	161.7	135.7	9.2749 ug/L	9.2749 ppb	15:01:27
2	Ni 231.604†	310.7	212.5	5.3371 ug/L	5.3371 ppb	15:01:27

2	P 214.914†	513.8	267.7	149.27 ug/L	149.27 ppb	15:01:27
2	Pb 220.353†	46.2	105.9	13.347 ug/L	13.347 ppb	15:01:27
2	S 181.975 Axial†	124.7	45.9	63.125 ug/L	63.125 ppb	15:01:27
2	Sb 206.836†	79.8	48.4	16.590 ug/L	16.590 ppb	15:01:27
2	Se 196.026†	33.4	50.8	29.751 ug/L	29.751 ppb	15:01:27
2	Si 251.611†	3729.1	3179.4	94.090 ug/L	94.090 ppb	15:01:27
2	Sn 189.927†	69.8	69.1	12.741 ug/L	12.741 ppb	15:01:27
2	Ti 334.940†	2514.0	3384.3	5.1285 ug/L	5.1285 ppb	15:01:07
2	Tl 190.801†	18.4	55.1	17.671 ug/L	17.671 ppb	15:01:27
2	U 409.014†	1005.9	2054.2	51.341 ug/L	51.341 ppb	15:01:07
2	V 292.402†	-571.8	830.1	5.3751 ug/L	5.3751 ppb	15:01:07
2	Zn 213.857†	1774.3	1015.3	9.3996 ug/L	9.3996 ppb	15:01:27
2	SiO2†	3943.3	3373.0	213.07 ug/L	213.07 ppb	15:02:03
3	Sc Radial	5232.6	5232.6	98.0 %		15:00:15
3	Y RADIAL	5665.9	5665.9	98.41 %		15:00:15
3	Al 396.153Radial†	306.3	303.4	229.34 ug/L	229.34 ppb	15:00:35
3	Ca 317.933Radial†	140.6	123.3	198.15 ug/L	198.15 ppb	15:00:35
3	Fe 238.204 Radial†	19.6	12.8	120.17 ug/L	120.17 ppb	15:00:35
3	K 766.490 Radial†	3108.0	668.4	121.92 ug/L	121.92 ppb	15:00:15
3	Mg 279.077 IEC†	10.5	9.7	346.78 ug/L	346.78 ppb	15:00:35
3	Na 589.592 Radial†	302.5	856.3	254.57 ug/L	254.57 ppb	15:00:15
3	Sr 421.552†	782.3	791.2	5.0765 ug/L	5.0765 ppb	15:00:15
3	Sc 361.383	914033.0	914033.0	101.80 %		15:01:32
3	Y 371.029	804583.4	804583.4	97.748 %		15:01:32
3	Ag 328.068†	1571.8	1248.0	5.2224 ug/L	5.2224 ppb	15:01:32
3	As 188.979†	30.3	59.9	24.571 ug/L	24.571 ppb	15:01:52
3	B 249.677†	2057.7	2261.8	49.568 ug/L	49.568 ppb	15:01:32
3	Ba 233.527†	627.9	619.9	4.9020 ug/L	4.9020 ppb	15:01:52
3	Be 313.107†	9158.6	14097.2	4.9847 ug/L	4.9847 ppb	15:01:32
3	Cd 226.502†	248.9	450.7	5.0356 ug/L	5.0356 ppb	15:01:52
3	Co 228.616†	157.5	224.7	4.9373 ug/L	4.9373 ppb	15:01:52
3	Cr 267.716†	561.9	458.1	4.9547 ug/L	4.9547 ppb	15:01:52
3	Cu 324.752†	12555.7	3205.7	8.9695 ug/L	8.9695 ppb	15:01:32
3	Mn 257.610†	9820.8	9157.3	10.265 ug/L	10.265 ppb	15:01:32
3	Mo 202.031†	177.8	151.0	10.320 ug/L	10.320 ppb	15:01:52
3	Ni 231.604†	324.2	224.7	5.6451 ug/L	5.6451 ppb	15:01:52
3	P 214.914†	499.3	251.7	140.22 ug/L	140.22 ppb	15:01:52
3	Pb 220.353†	43.5	103.1	13.005 ug/L	13.005 ppb	15:01:52
3	S 181.975 Axial†	121.1	42.0	57.727 ug/L	57.727 ppb	15:01:52
3	Sb 206.836†	73.5	42.0	14.422 ug/L	14.422 ppb	15:01:52
3	Se 196.026†	27.5	44.9	26.366 ug/L	26.366 ppb	15:01:52
3	Si 251.611†	3740.3	3178.2	94.042 ug/L	94.042 ppb	15:01:52
3	Sn 189.927†	58.2	57.5	10.604 ug/L	10.604 ppb	15:01:52
3	Ti 334.940†	2524.8	3386.7	5.1367 ug/L	5.1367 ppb	15:01:32
3	Tl 190.801†	24.3	60.7	19.490 ug/L	19.490 ppb	15:01:52
3	U 409.014†	1089.9	2133.4	53.322 ug/L	53.322 ppb	15:01:32
3	V 292.402†	-532.8	870.2	5.6411 ug/L	5.6411 ppb	15:01:32
3	Zn 213.857†	1774.4	1009.6	9.3445 ug/L	9.3445 ppb	15:01:52
3	SiO2†	3891.2	3309.0	209.00 ug/L	209.00 ppb	15:02:08

## Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	913506.9	101.74 %	0.254			0.25%
Sc Radial	5360.9	100 %	2.2			2.21%
Y 371.029	804278.9	97.711 %	0.2178			0.22%
Y RADIAL	5786.0	100.5 %	1.85			1.84%
Ag 328.068†	1227.0	5.1335 ug/L	0.24779	5.1335 ppb	0.24779	4.83%
QC value within limits for Ag 328.068 Recovery = 102.67%						
Al 396.153Radial†	281.6	212.81 ug/L	15.172	212.81 ppb	15.172	7.13%
QC value within limits for Al 396.153Radial Recovery = 106.41%						
As 188.979†	66.6	27.290 ug/L	2.3691	27.290 ppb	2.3691	8.68%
QC value within limits for As 188.979 Recovery = 90.97%						
B 249.677†	2256.2	49.446 ug/L	0.1993	49.446 ppb	0.1993	0.40%
QC value within limits for B 249.677 Recovery = 98.89%						
Ba 233.527†	620.6	4.9063 ug/L	0.05575	4.9063 ppb	0.05575	1.14%
QC value within limits for Ba 233.527 Recovery = 98.13%						
Be 313.107†	14077.6	4.9777 ug/L	0.01650	4.9777 ppb	0.01650	0.33%
QC value within limits for Be 313.107 Recovery = 99.55%						
Ca 317.933Radial†	124.3	199.73 ug/L	4.239	199.73 ppb	4.239	2.12%

QC value within limits for Ca 317.933 Radial Recovery = 99.86%

Cd 226.502†	454.1	5.0741 ug/L	0.07589	5.0741 ppb	0.07589	1.50%
QC value within limits for Cd 226.502 Recovery = 101.48%						
Co 228.616†	228.4	5.0174 ug/L	0.09646	5.0174 ppb	0.09646	1.92%
QC value within limits for Co 228.616 Recovery = 100.35%						
Cr 267.716†	450.7	4.8753 ug/L	0.07035	4.8753 ppb	0.07035	1.44%
QC value within limits for Cr 267.716 Recovery = 97.51%						
Cu 324.752†	3146.7	8.8044 ug/L	0.16874	8.8044 ppb	0.16874	1.92%
QC value within limits for Cu 324.752 Recovery = 88.04%						
Fe 238.204 Radial†	12.4	115.76 ug/L	5.171	115.76 ppb	5.171	4.47%
QC value within limits for Fe 238.204 Radial Recovery = 115.76%						
K 766.490 Radial†	599.6	109.36 ug/L	23.507	109.36 ppb	23.507	21.50%
QC value within limits for K 766.490 Radial Recovery = 72.91%						
Mg 279.077 IEC†	10.1	359.05 ug/L	60.849	359.05 ppb	60.849	16.95%
QC value within limits for Mg 279.077 IEC Recovery = 119.68%						
Mn 257.610†	9193.0	10.304 ug/L	0.0401	10.304 ppb	0.0401	0.39%
QC value within limits for Mn 257.610 Recovery = 103.04%						
Mo 202.031†	143.9	9.8295 ug/L	0.52531	9.8295 ppb	0.52531	5.34%
QC value within limits for Mo 202.031 Recovery = 98.30%						
Na 589.592 Radial†	868.6	258.20 ug/L	7.492	258.20 ppb	7.492	2.90%
QC value within limits for Na 589.592 Radial Recovery = 86.07%						
Ni 231.604†	215.9	5.4222 ug/L	0.19487	5.4222 ppb	0.19487	3.59%
QC value within limits for Ni 231.604 Recovery = 108.44%						
P 214.914†	260.6	145.29 ug/L	4.624	145.29 ppb	4.624	3.18%
QC value within limits for P 214.914 Recovery = 96.86%						
Pb 220.353†	98.7	12.448 ug/L	1.2720	12.448 ppb	1.2720	10.22%
QC value within limits for Pb 220.353 Recovery = 124.48%						
S 181.975 Axial†	44.0	60.555 ug/L	2.7085	60.555 ppb	2.7085	4.47%
QC value less than the lower limit for S 181.975 Axial Recovery = 60.56%						
Sb 206.836†	41.5	14.277 ug/L	2.3890	14.277 ppb	2.3890	16.73%
QC value greater than the upper limit for Sb 206.836 Recovery = 142.77%						
Se 196.026†	51.5	30.122 ug/L	3.9551	30.122 ppb	3.9551	13.13%
QC value within limits for Se 196.026 Recovery = 100.41%						
Si 251.611†	3179.3	94.083 ug/L	0.0374	94.083 ppb	0.0374	0.04%
QC value within limits for Si 251.611 Recovery = 94.08%						
Sn 189.927†	63.3	11.676 ug/L	1.0682	11.676 ppb	1.0682	9.15%
QC value within limits for Sn 189.927 Recovery = 116.76%						
Sr 421.552†	809.0	5.1903 ug/L	0.10715	5.1903 ppb	0.10715	2.06%
QC value within limits for Sr 421.552 Recovery = 103.81%						
Ti 334.940†	3383.6	5.1318 ug/L	0.00434	5.1318 ppb	0.00434	0.08%
QC value within limits for Ti 334.940 Recovery = 102.64%						
Tl 190.801†	59.5	19.100 ug/L	1.2796	19.100 ppb	1.2796	6.70%
QC value within limits for Tl 190.801 Recovery = 95.50%						
U 409.014†	2090.6	52.253 ug/L	0.9997	52.253 ppb	0.9997	1.91%
QC value within limits for U 409.014 Recovery = 104.51%						
V 292.402†	839.7	5.4438 ug/L	0.17354	5.4438 ppb	0.17354	3.19%
QC value within limits for V 292.402 Recovery = 108.88%						
Zn 213.857†	1014.9	9.3956 ug/L	0.04926	9.3956 ppb	0.04926	0.52%
QC value within limits for Zn 213.857 Recovery = 93.96%						
SiO2†	3339.8	210.96 ug/L	2.043	210.96 ppb	2.043	0.97%
QC value within limits for SiO2 Recovery = 99.04%						

QC Failed. Continue with analysis.

Sequence No.: 15  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 1/26/2010 15:04:19  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5472.0	5472.0	102 %		15:06:11
1	Y RADIAL	5876.1	5876.1	102.1 %		15:06:11
1	Al 396.153Radial†	10.5	1.1	0.7686 ug/L	0.7686 ppb	15:06:31
1	Ca 317.933Radial†	23.2	2.4	3.8210 ug/L	3.8210 ppb	15:06:31
1	Fe 238.204 Radial†	6.6	-0.8	-7.0459 ug/L	-7.0459 ppb	15:06:31
1	K 766.490 Radial†	2348.4	-211.7	-38.664 ug/L	-38.664 ppb	15:06:11
1	Mg 279.077 IEC†	1.1	0.1	3.9059 ug/L	3.9059 ppb	15:06:31
1	Na 589.592 Radial†	-671.6	-107.8	-32.050 ug/L	-32.050 ppb	15:06:11
1	Sr 421.552†	4.7	-2.5	-0.0159 ug/L	-0.0159 ppb	15:06:11
1	Sc 361.383	924855.8	924855.8	103.01 %		15:07:28
1	Y 371.029	818551.5	818551.5	99.445 %		15:07:28
1	Ag 328.068†	199.0	-102.8	-0.4219 ug/L	-0.4219 ppb	15:07:33
1	As 188.979†	-37.2	-5.9	-2.4310 ug/L	-2.4310 ppb	15:07:53
1	B 249.677†	-255.5	-7.6	-0.1666 ug/L	-0.1666 ppb	15:07:53
1	Ba 233.527†	-1.7	1.4	0.0119 ug/L	0.0119 ppb	15:07:53
1	Be 313.107†	-5071.6	176.9	0.0623 ug/L	0.0623 ppb	15:07:33
1	Cd 226.502†	-196.0	15.9	0.1766 ug/L	0.1766 ppb	15:07:53
1	Co 228.616†	-62.6	9.1	0.2027 ug/L	0.2027 ppb	15:07:53
1	Cr 267.716†	86.9	-9.6	-0.1000 ug/L	-0.1000 ppb	15:07:53
1	Cu 324.752†	8959.2	-430.2	-1.2021 ug/L	-1.2021 ppb	15:07:33
1	Mn 257.610†	497.0	-7.4	-0.0091 ug/L	-0.0091 ppb	15:07:53
1	Mo 202.031†	37.3	12.6	0.8590 ug/L	0.8590 ppb	15:07:53
1	Ni 231.604†	89.7	-6.6	-0.1664 ug/L	-0.1664 ppb	15:07:53
1	P 214.914†	241.5	-4.3	-2.1660 ug/L	-2.1660 ppb	15:07:53
1	Pb 220.353†	-49.9	12.0	1.5064 ug/L	1.5064 ppb	15:07:53
1	S 181.975 Axial†	42.2	-36.0	-49.588 ug/L	-49.588 ppb	15:07:53
1	Sb 206.836†	47.8	16.2	5.4534 ug/L	5.4534 ppb	15:07:53
1	Se 196.026†	-23.4	-4.7	-2.7572 ug/L	-2.7572 ppb	15:07:53
1	Si 251.611†	486.3	-23.9	-0.7173 ug/L	-0.7173 ppb	15:07:53
1	Sn 189.927†	6.8	6.9	1.2694 ug/L	1.2694 ppb	15:07:53
1	Ti 334.940†	-962.5	-27.9	-0.0381 ug/L	-0.0381 ppb	15:07:33
1	Tl 190.801†	-36.6	1.3	0.4201 ug/L	0.4201 ppb	15:07:53
1	U 409.014†	-1483.1	-377.0	-9.4257 ug/L	-9.4257 ppb	15:07:33
1	V 292.402†	-1360.9	72.4	0.4454 ug/L	0.4454 ppb	15:07:33
1	Zn 213.857†	702.1	-51.8	-0.4787 ug/L	-0.4787 ppb	15:07:53
1	SiO2†	510.2	-18.1	-1.1669 ug/L	-1.1669 ppb	15:09:14
2	Sc Radial	5243.7	5243.7	98.2 %		15:06:36
2	Y RADIAL	5652.8	5652.8	98.19 %		15:06:36
2	Al 396.153Radial†	4.7	-4.3	-3.2647 ug/L	-3.2647 ppb	15:06:56
2	Ca 317.933Radial†	23.8	4.0	6.3563 ug/L	6.3563 ppb	15:06:56
2	Fe 238.204 Radial†	7.0	-0.1	-0.5032 ug/L	-0.5032 ppb	15:06:56
2	K 766.490 Radial†	2220.4	-242.3	-44.247 ug/L	-44.247 ppb	15:06:36
2	Mg 279.077 IEC†	0.6	-0.3	-12.125 ug/L	-12.125 ppb	15:06:56
2	Na 589.592 Radial†	-641.4	-105.6	-31.389 ug/L	-31.389 ppb	15:06:36
2	Sr 421.552†	-0.2	-7.3	-0.0472 ug/L	-0.0472 ppb	15:06:36
2	Sc 361.383	930124.5	930124.5	103.59 %		15:07:58
2	Y 371.029	821671.2	821671.2	99.824 %		15:07:58
2	Ag 328.068†	351.3	43.1	0.1892 ug/L	0.1892 ppb	15:08:03
2	As 188.979†	-25.2	5.9	2.3945 ug/L	2.3945 ppb	15:08:23
2	B 249.677†	-251.0	-1.9	-0.0411 ug/L	-0.0411 ppb	15:08:23
2	Ba 233.527†	-13.5	-9.9	-0.0768 ug/L	-0.0768 ppb	15:08:23
2	Be 313.107†	-5059.3	216.6	0.0764 ug/L	0.0764 ppb	15:08:03
2	Cd 226.502†	-197.6	15.4	0.1705 ug/L	0.1705 ppb	15:08:23
2	Co 228.616†	-73.0	-0.5	-0.0121 ug/L	-0.0121 ppb	15:08:23
2	Cr 267.716†	98.8	1.5	0.0202 ug/L	0.0202 ppb	15:08:23
2	Cu 324.752†	8852.9	-582.1	-1.6285 ug/L	-1.6285 ppb	15:08:03
2	Mn 257.610†	488.9	-17.9	-0.0196 ug/L	-0.0196 ppb	15:08:23
2	Mo 202.031†	20.2	-4.1	-0.2800 ug/L	-0.2800 ppb	15:08:23
2	Ni 231.604†	98.7	1.6	0.0399 ug/L	0.0399 ppb	15:08:23



2	P 214.914†	237.3	-9.6	-5.1042 ug/L	-5.1042 ppb	15:08:23
2	Pb 220.353†	-53.0	9.2	1.1559 ug/L	1.1559 ppb	15:08:23
2	S 181.975 Axial†	47.5	-31.1	-42.866 ug/L	-42.866 ppb	15:08:23
2	Sb 206.836†	35.6	4.1	1.3743 ug/L	1.3743 ppb	15:08:23
2	Se 196.026†	-18.4	0.2	0.1159 ug/L	0.1159 ppb	15:08:23
2	Si 251.611†	479.7	-32.9	-0.9699 ug/L	-0.9699 ppb	15:08:23
2	Sn 189.927†	2.7	2.9	0.5420 ug/L	0.5420 ppb	15:08:23
2	Ti 334.940†	-948.9	-9.5	-0.0091 ug/L	-0.0091 ppb	15:08:03
2	Tl 190.801†	-32.0	6.0	1.9202 ug/L	1.9202 ppb	15:08:23
2	U 409.014†	-1435.0	-322.4	-8.0617 ug/L	-8.0617 ppb	15:08:03
2	V 292.402†	-1325.5	114.0	0.6897 ug/L	0.6897 ppb	15:08:03
2	Zn 213.857†	699.5	-58.2	-0.5401 ug/L	-0.5401 ppb	15:08:23
2	SiO2†	522.0	-9.5	-0.5957 ug/L	-0.5957 ppb	15:09:34
3	Sc Radial	5356.1	5356.1	100 %		15:07:01
3	Y RADIAL	5779.0	5779.0	100.4 %		15:07:01
3	Al 396.153Radial†	-3.2	-12.3	-9.3374 ug/L	-9.3374 ppb	15:07:21
3	Ca 317.933Radial†	19.0	-1.3	-2.0191 ug/L	-2.0191 ppb	15:07:21
3	Fe 238.204 Radial†	6.9	-0.3	-2.5493 ug/L	-2.5493 ppb	15:07:21
3	K 766.490 Radial†	2304.6	-205.8	-37.572 ug/L	-37.572 ppb	15:07:01
3	Mg 279.077 IEC†	-0.2	-1.2	-41.291 ug/L	-41.291 ppb	15:07:21
3	Na 589.592 Radial†	-688.2	-138.5	-41.183 ug/L	-41.183 ppb	15:07:01
3	Sr 421.552†	18.1	11.0	0.0706 ug/L	0.0706 ppb	15:07:01
3	Sc 361.383	923472.4	923472.4	102.85 %		15:08:28
3	Y 371.029	818650.7	818650.7	99.457 %		15:08:28
3	Ag 328.068†	374.2	67.8	0.2917 ug/L	0.2917 ppb	15:08:33
3	As 188.979†	-32.4	-1.3	-0.5276 ug/L	-0.5276 ppb	15:08:53
3	B 249.677†	-257.9	-10.3	-0.2267 ug/L	-0.2267 ppb	15:08:53
3	Ba 233.527†	2.8	5.8	0.0465 ug/L	0.0465 ppb	15:08:53
3	Be 313.107†	-5044.2	196.1	0.0690 ug/L	0.0690 ppb	15:08:33
3	Cd 226.502†	-194.4	17.2	0.1902 ug/L	0.1902 ppb	15:08:53
3	Co 228.616†	-59.4	12.2	0.2680 ug/L	0.2680 ppb	15:08:53
3	Cr 267.716†	102.6	5.8	0.0673 ug/L	0.0673 ppb	15:08:53
3	Cu 324.752†	8998.4	-379.1	-1.0578 ug/L	-1.0578 ppb	15:08:33
3	Mn 257.610†	482.2	-21.0	-0.0221 ug/L	-0.0221 ppb	15:08:53
3	Mo 202.031†	25.1	0.8	0.0514 ug/L	0.0514 ppb	15:08:53
3	Ni 231.604†	103.1	6.5	0.1642 ug/L	0.1642 ppb	15:08:53
3	P 214.914†	247.3	1.7	1.1533 ug/L	1.1533 ppb	15:08:53
3	Pb 220.353†	-40.3	21.2	2.6653 ug/L	2.6653 ppb	15:08:53
3	S 181.975 Axial†	47.1	-31.1	-42.885 ug/L	-42.885 ppb	15:08:53
3	Sb 206.836†	33.8	2.6	0.8967 ug/L	0.8967 ppb	15:08:53
3	Se 196.026†	-17.4	1.0	0.5763 ug/L	0.5763 ppb	15:08:53
3	Si 251.611†	479.8	-29.5	-0.8732 ug/L	-0.8732 ppb	15:08:53
3	Sn 189.927†	2.3	2.6	0.4705 ug/L	0.4705 ppb	15:08:53
3	Ti 334.940†	-991.7	-57.7	-0.0804 ug/L	-0.0804 ppb	15:08:33
3	Tl 190.801†	-38.3	-0.4	-0.1232 ug/L	-0.1232 ppb	15:08:53
3	U 409.014†	-1515.4	-410.6	-10.267 ug/L	-10.267 ppb	15:08:33
3	V 292.402†	-1385.4	46.6	0.2706 ug/L	0.2706 ppb	15:08:33
3	Zn 213.857†	703.5	-49.4	-0.4599 ug/L	-0.4599 ppb	15:08:53
3	SiO2†	489.7	-37.3	-2.3610 ug/L	-2.3610 ppb	15:09:54

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample	Std.Dev.	RSD
Sc 361.383	926150.9	103.15 %		0.391				0.38%
Sc Radial	5357.2	100 %		2.1				2.13%
Y 371.029	819624.5	99.575 %		0.2154				0.22%
Y RADIAL	5769.3	100.2 %		1.95				1.94%
Ag 328.068†	2.7	0.0197 ug/L		0.38582	0.0197 ppb		0.38582	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-5.2	-3.9445 ug/L		5.08721	-3.9445 ppb		5.08721	128.97%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-0.5	-0.1881 ug/L		2.43060	-0.1881 ppb		2.43060	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	-6.6	-0.1448 ug/L		0.09473	-0.1448 ppb		0.09473	65.42%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-0.9	-0.0061 ug/L		0.06358	-0.0061 ppb		0.06358	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	196.5	0.0692 ug/L		0.00704	0.0692 ppb		0.00704	10.17%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.7	2.7194 ug/L		4.29499	2.7194 ppb		4.29499	157.94%



QC value within limits for Ca 317.933 Radial Recovery = Not calculated							
Cd 226.502†	16.2	0.1791 ug/L	0.01011	0.1791 ppb	0.01011	5.64%	
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	6.9	0.1529 ug/L	0.14651	0.1529 ppb	0.14651	95.85%	
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-0.8	-0.0041 ug/L	0.08628	-0.0041 ppb	0.08628	>999.9%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-463.8	-1.2961 ug/L	0.29674	-1.2961 ppb	0.29674	22.89%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	-0.4	-3.3661 ug/L	3.34697	-3.3661 ppb	3.34697	99.43%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	-219.9	-40.161 ug/L	3.5803	-40.161 ppb	3.5803	8.91%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	-0.5	-16.503 ug/L	22.9145	-16.503 ppb	22.9145	138.85%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	-15.4	-0.0169 ug/L	0.00690	-0.0169 ppb	0.00690	40.68%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	3.1	0.2101 ug/L	0.58583	0.2101 ppb	0.58583	278.78%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-117.3	-34.874 ug/L	5.4738	-34.874 ppb	5.4738	15.70%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	0.5	0.0126 ug/L	0.16701	0.0126 ppb	0.16701	>999.9%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-4.1	-2.0390 ug/L	3.13071	-2.0390 ppb	3.13071	153.54%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	14.1	1.7759 ug/L	0.78995	1.7759 ppb	0.78995	44.48%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-32.8	-45.113 ug/L	3.8758	-45.113 ppb	3.8758	8.59%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	7.6	2.5748 ug/L	2.50433	2.5748 ppb	2.50433	97.26%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-1.2	-0.6883 ug/L	1.80640	-0.6883 ppb	1.80640	262.44%	
QC value within limits for Se 196.026 Recovery = Not calculated							
Si 251.611†	-28.7	-0.8535 ug/L	0.12748	-0.8535 ppb	0.12748	14.94%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	4.1	0.7606 ug/L	0.44205	0.7606 ppb	0.44205	58.12%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	0.4	0.0025 ug/L	0.06100	0.0025 ppb	0.06100	>999.9%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	-31.7	-0.0425 ug/L	0.03586	-0.0425 ppb	0.03586	84.38%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	2.3	0.7391 ug/L	1.05839	0.7391 ppb	1.05839	143.21%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-370.0	-9.2515 ug/L	1.11296	-9.2515 ppb	1.11296	12.03%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	77.7	0.4686 ug/L	0.21050	0.4686 ppb	0.21050	44.93%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-53.1	-0.4929 ug/L	0.04197	-0.4929 ppb	0.04197	8.51%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†	-21.6	-1.3745 ug/L	0.90078	-1.3745 ppb	0.90078	65.53%	
QC value within limits for SiO2 Recovery = Not calculated							
All analyte(s) passed QC.							

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Analysis Begun

Start Time: 1/26/2010 15:38:39

Plasma On Time: 00:00:00

Logged In Analyst: Optima3

Technique: ICP Continuous

Spectrometer Model: Optima 5300 DV, S/N 077C7090601 Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\012610A.sif

Batch ID:

Results Data Set: 012610

Results Library: C:\pe\Optima3\Results\Results.mdb  
=====

Sequence No.: 1

Autosampler Location: 7

Sample ID: CCV

Date Collected: 1/26/2010 15:38:40

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:  
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## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5349.6	5349.6	100 %		15:40:32
1	Y RADIAL	5716.3	5716.3	99.29 %		15:40:32
1	Al 396.153Radial†	6385.3	6364.8	4798.5 ug/L	4798.5 ppb	15:40:32
1	Ca 317.933Radial†	3093.2	3067.5	4930.3 ug/L	4930.3 ppb	15:40:52
1	Fe 238.204 Radial†	560.5	552.4	5176.7 ug/L	5176.7 ppb	15:40:52
1	K 766.490 Radial†	29390.2	26834.5	4895.9 ug/L	4895.9 ppb	15:40:32
1	Mg 279.077 IEC†	148.1	146.9	5239.6 ug/L	5239.6 ppb	15:40:52
1	Na 589.592 Radial†	33214.0	33702.7	10019 ug/L	10019 ppb	15:40:32
1	Sr 421.552†	78263.1	78117.0	501.29 ug/L	501.29 ppb	15:40:32
1	Sc 361.383	927647.7	927647.7	103.32 %		15:41:50
1	Y 371.029	811568.1	811568.1	98.596 %		15:41:50
1	Ag 328.068†	118279.7	114187.3	479.65 ug/L	479.65 ppb	15:41:55
1	As 188.979†	1157.1	1150.2	474.83 ug/L	474.83 ppb	15:42:15
1	B 249.677†	21715.1	21258.6	463.98 ug/L	463.98 ppb	15:41:55
1	Ba 233.527†	62364.5	60365.9	477.02 ug/L	477.02 ppb	15:41:55
1	Be 313.107†	1382970.1	1343681.4	475.10 ug/L	475.10 ppb	15:41:50
1	Cd 226.502†	44113.7	42904.0	479.12 ug/L	479.12 ppb	15:41:55
1	Co 228.616†	22948.4	22281.7	488.50 ug/L	488.50 ppb	15:41:55
1	Cr 267.716†	45484.6	43930.8	476.82 ug/L	476.82 ppb	15:41:55
1	Cu 324.752†	182306.2	167326.7	469.40 ug/L	469.40 ppb	15:41:55
1	Mn 257.610†	439125.2	424540.8	476.28 ug/L	476.28 ppb	15:41:50
1	Mo 202.031†	7214.7	6959.5	475.43 ug/L	475.43 ppb	15:42:15
1	Ni 231.604†	19779.1	19050.6	478.48 ug/L	478.48 ppb	15:41:55
1	P 214.914†	4604.6	4218.0	2286.9 ug/L	2286.9 ppb	15:42:15
1	Pb 220.353†	3865.5	3801.8	478.74 ug/L	478.74 ppb	15:42:15
1	S 181.975 Axial†	770.0	668.3	919.26 ug/L	919.26 ppb	15:42:15
1	Sb 206.836†	1490.1	1412.0	489.83 ug/L	489.83 ppb	15:42:15
1	Se 196.026†	822.5	814.1	488.41 ug/L	488.41 ppb	15:42:15
1	Si 251.611†	83951.9	80761.3	2387.1 ug/L	2387.1 ppb	15:41:55
1	Sn 189.927†	2676.9	2591.4	477.35 ug/L	477.35 ppb	15:42:15
1	Ti 334.940†	328377.9	318744.5	485.84 ug/L	485.84 ppb	15:41:50
1	Tl 190.801†	1492.7	1481.7	477.22 ug/L	477.22 ppb	15:42:15
1	U 409.014†	18724.2	19186.1	478.10 ug/L	478.10 ppb	15:41:55
1	V 292.402†	77396.8	76306.2	480.82 ug/L	480.82 ppb	15:41:55
1	Zn 213.857†	53494.7	51044.3	471.27 ug/L	471.27 ppb	15:41:55
1	SiO2†	84835.3	81599.0	5147.7 ug/L	5147.7 ppb	15:43:23
2	Sc Radial	5402.9	5402.9	101 %		15:40:57
2	Y RADIAL	5778.6	5778.6	100.4 %		15:40:57
2	Al 396.153Radial†	6422.6	6338.8	4778.9 ug/L	4778.9 ppb	15:40:57
2	Ca 317.933Radial†	3094.0	3037.8	4882.7 ug/L	4882.7 ppb	15:41:17
2	Fe 238.204 Radial†	554.8	541.2	5071.8 ug/L	5071.8 ppb	15:41:17
2	K 766.490 Radial†	29782.0	26932.3	4913.8 ug/L	4913.8 ppb	15:40:57
2	Mg 279.077 IEC†	147.0	144.3	5145.7 ug/L	5145.7 ppb	15:41:17
2	Na 589.592 Radial†	33364.3	33524.0	9965.8 ug/L	9965.8 ppb	15:40:57
2	Sr 421.552†	78809.9	77886.5	499.82 ug/L	499.82 ppb	15:40:57
2	Sc 361.383	930884.6	930884.6	103.68 %		15:42:21
2	Y 371.029	814937.8	814937.8	99.006 %		15:42:21

2	Ag 328.068†	117990.2	113509.9	476.78 ug/L	476.78 ppb	15:42:26
2	As 188.979†	1154.2	1143.4	472.05 ug/L	472.05 ppb	15:42:46
2	B 249.677†	21641.4	21114.4	460.85 ug/L	460.85 ppb	15:42:26
2	Ba 233.527†	62083.9	59885.4	473.22 ug/L	473.22 ppb	15:42:26
2	Be 313.107†	1385302.6	1341276.7	474.25 ug/L	474.25 ppb	15:42:21
2	Cd 226.502†	44031.1	42675.8	476.58 ug/L	476.58 ppb	15:42:26
2	Co 228.616†	22803.0	22064.2	483.73 ug/L	483.73 ppb	15:42:26
2	Cr 267.716†	45324.3	43623.0	473.48 ug/L	473.48 ppb	15:42:26
2	Cu 324.752†	181385.9	165825.5	465.19 ug/L	465.19 ppb	15:42:26
2	Mn 257.610†	439898.2	423808.4	475.45 ug/L	475.45 ppb	15:42:21
2	Mo 202.031†	7198.7	6919.8	472.71 ug/L	472.71 ppb	15:42:46
2	Ni 231.604†	19767.9	18973.2	476.53 ug/L	476.53 ppb	15:42:26
2	P 214.914†	4572.6	4171.7	2261.7 ug/L	2261.7 ppb	15:42:46
2	Pb 220.353†	3839.6	3763.8	473.97 ug/L	473.97 ppb	15:42:46
2	S 181.975 Axial†	777.7	673.1	925.83 ug/L	925.83 ppb	15:42:46
2	Sb 206.836†	1475.5	1392.9	483.33 ug/L	483.33 ppb	15:42:46
2	Se 196.026†	822.8	811.6	486.63 ug/L	486.63 ppb	15:42:46
2	Si 251.611†	83476.2	80019.9	2365.2 ug/L	2365.2 ppb	15:42:26
2	Sn 189.927†	2675.1	2580.5	475.35 ug/L	475.35 ppb	15:42:46
2	Ti 334.940†	329456.8	318679.9	485.75 ug/L	485.75 ppb	15:42:21
2	Tl 190.801†	1476.6	1461.1	470.67 ug/L	470.67 ppb	15:42:46
2	U 409.014†	18584.8	18988.6	473.18 ug/L	473.18 ppb	15:42:26
2	V 292.402†	77165.2	75822.3	477.78 ug/L	477.78 ppb	15:42:26
2	Zn 213.857†	53399.1	50772.0	468.76 ug/L	468.76 ppb	15:42:26
2	SiO2†	84786.0	81265.8	5126.8 ug/L	5126.8 ppb	15:43:28
3	Sc Radial	5417.9	5417.9	101 %		15:41:22
3	Y RADIAL	5815.8	5815.8	101.0 %		15:41:22
3	Al 396.153Radial†	6423.6	6322.2	4766.3 ug/L	4766.3 ppb	15:41:22
3	Ca 317.933Radial†	3102.0	3037.2	4881.7 ug/L	4881.7 ppb	15:41:42
3	Fe 238.204 Radial†	557.2	542.0	5080.0 ug/L	5080.0 ppb	15:41:42
3	K 766.490 Radial†	29721.5	26791.2	4888.1 ug/L	4888.1 ppb	15:41:22
3	Mg 279.077 IEC†	145.6	142.5	5083.1 ug/L	5083.1 ppb	15:41:42
3	Na 589.592 Radial†	33391.4	33459.6	9946.6 ug/L	9946.6 ppb	15:41:22
3	Sr 421.552†	78985.5	77844.4	499.55 ug/L	499.55 ppb	15:41:22
3	Sc 361.383	931013.9	931013.9	103.69 %		15:42:52
3	Y 371.029	814850.4	814850.4	98.995 %		15:42:52
3	Ag 328.068†	117952.5	113457.8	476.56 ug/L	476.56 ppb	15:42:57
3	As 188.979†	1178.2	1166.4	481.45 ug/L	481.45 ppb	15:43:18
3	B 249.677†	21627.3	21097.9	460.48 ug/L	460.48 ppb	15:42:57
3	Ba 233.527†	62112.9	59905.0	473.38 ug/L	473.38 ppb	15:42:57
3	Be 313.107†	1383031.9	1338901.2	473.41 ug/L	473.41 ppb	15:42:52
3	Cd 226.502†	43959.1	42600.5	475.74 ug/L	475.74 ppb	15:42:57
3	Co 228.616†	22903.6	22158.2	485.80 ug/L	485.80 ppb	15:42:57
3	Cr 267.716†	45349.5	43641.3	473.68 ug/L	473.68 ppb	15:42:57
3	Cu 324.752†	181782.0	166183.1	466.19 ug/L	466.19 ppb	15:42:57
3	Mn 257.610†	439073.0	422953.7	474.50 ug/L	474.50 ppb	15:42:52
3	Mo 202.031†	7226.1	6945.2	474.45 ug/L	474.45 ppb	15:43:18
3	Ni 231.604†	19710.3	18915.0	475.07 ug/L	475.07 ppb	15:42:57
3	P 214.914†	4573.8	4172.3	2261.8 ug/L	2261.8 ppb	15:43:18
3	Pb 220.353†	3870.6	3793.2	477.67 ug/L	477.67 ppb	15:43:18
3	S 181.975 Axial†	780.8	676.1	929.91 ug/L	929.91 ppb	15:43:18
3	Sb 206.836†	1476.8	1394.0	483.75 ug/L	483.75 ppb	15:43:18
3	Se 196.026†	833.8	822.1	492.68 ug/L	492.68 ppb	15:43:18
3	Si 251.611†	83722.9	80246.7	2371.9 ug/L	2371.9 ppb	15:42:57
3	Sn 189.927†	2676.2	2581.2	475.48 ug/L	475.48 ppb	15:43:18
3	Ti 334.940†	328877.3	318076.9	484.83 ug/L	484.83 ppb	15:42:52
3	Tl 190.801†	1491.3	1475.1	475.12 ug/L	475.12 ppb	15:43:18
3	U 409.014†	18724.4	19120.8	476.48 ug/L	476.48 ppb	15:42:57
3	V 292.402†	77216.9	75861.8	478.06 ug/L	478.06 ppb	15:42:57
3	Zn 213.857†	53234.5	50606.1	467.22 ug/L	467.22 ppb	15:42:57
3	SiO2†	83293.1	79814.7	5034.9 ug/L	5034.9 ppb	15:43:33

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	929848.7	103.56 %	0.212			0.21%
Sc Radial	5390.1	101 %	0.7			0.67%
Y 371.029	813785.4	98.866 %	0.2334			0.24%
Y RADIAL	5770.2	100.2 %	0.87			0.87%
Ag 328.068†	113718.3	477.66 ug/L	1.722	477.66 ppb	1.722	0.36%

QC value within limits for Ag 328.068 Recovery = 95.53%								
Al	396.153Radial†	6341.9	4781.2 ug/L	16.25	4781.2 ppb	16.25	0.34%	
QC value within limits for Al 396.153Radial Recovery = 95.62%								
As	188.979†	1153.3	476.11 ug/L	4.828	476.11 ppb	4.828	1.01%	
QC value within limits for As 188.979 Recovery = 95.22%								
B	249.677†	21156.9	461.77 ug/L	1.923	461.77 ppb	1.923	0.42%	
QC value within limits for B 249.677 Recovery = 92.35%								
Ba	233.527†	60052.1	474.54 ug/L	2.149	474.54 ppb	2.149	0.45%	
QC value within limits for Ba 233.527 Recovery = 94.91%								
Be	313.107†	1341286.4	474.26 ug/L	0.844	474.26 ppb	0.844	0.18%	
QC value within limits for Be 313.107 Recovery = 94.85%								
Ca	317.933Radial†	3047.5	4898.2 ug/L	27.82	4898.2 ppb	27.82	0.57%	
QC value within limits for Ca 317.933Radial Recovery = 97.96%								
Cd	226.502†	42726.8	477.14 ug/L	1.761	477.14 ppb	1.761	0.37%	
QC value within limits for Cd 226.502 Recovery = 95.43%								
Co	228.616†	22168.1	486.01 ug/L	2.394	486.01 ppb	2.394	0.49%	
QC value within limits for Co 228.616 Recovery = 97.20%								
Cr	267.716†	43731.7	474.66 ug/L	1.874	474.66 ppb	1.874	0.39%	
QC value within limits for Cr 267.716 Recovery = 94.93%								
Cu	324.752†	166445.1	466.92 ug/L	2.201	466.92 ppb	2.201	0.47%	
QC value within limits for Cu 324.752 Recovery = 93.38%								
Fe	238.204 Radial†	545.2	5109.5 ug/L	58.32	5109.5 ppb	58.32	1.14%	
QC value within limits for Fe 238.204 Radial Recovery = 102.19%								
K	766.490 Radial†	26852.7	4899.3 ug/L	13.20	4899.3 ppb	13.20	0.27%	
QC value within limits for K 766.490 Radial Recovery = 97.99%								
Mg	279.077 IEC†	144.6	5156.1 ug/L	78.78	5156.1 ppb	78.78	1.53%	
QC value within limits for Mg 279.077 IEC Recovery = 103.12%								
Mn	257.610†	423767.6	475.41 ug/L	0.892	475.41 ppb	0.892	0.19%	
QC value within limits for Mn 257.610 Recovery = 95.08%								
Mo	202.031†	6941.5	474.20 ug/L	1.379	474.20 ppb	1.379	0.29%	
QC value within limits for Mo 202.031 Recovery = 94.84%								
Na	589.592 Radial†	33562.1	9977.1 ug/L	37.44	9977.1 ppb	37.44	0.38%	
QC value within limits for Na 589.592 Radial Recovery = 99.77%								
Ni	231.604†	18979.6	476.69 ug/L	1.709	476.69 ppb	1.709	0.36%	
QC value within limits for Ni 231.604 Recovery = 95.34%								
P	214.914†	4187.3	2270.2 ug/L	14.54	2270.2 ppb	14.54	0.64%	
QC value within limits for P 214.914 Recovery = 90.81%								
Pb	220.353†	3786.3	476.79 ug/L	2.501	476.79 ppb	2.501	0.52%	
QC value within limits for Pb 220.353 Recovery = 95.36%								
S	181.975 Axial†	672.5	925.00 ug/L	5.372	925.00 ppb	5.372	0.58%	
QC value within limits for S 181.975 Axial Recovery = 92.50%								
Sb	206.836†	1399.6	485.64 ug/L	3.636	485.64 ppb	3.636	0.75%	
QC value within limits for Sb 206.836 Recovery = 97.13%								
Se	196.026†	815.9	489.24 ug/L	3.112	489.24 ppb	3.112	0.64%	
QC value within limits for Se 196.026 Recovery = 97.85%								
Si	251.611†	80342.7	2374.7 ug/L	11.24	2374.7 ppb	11.24	0.47%	
QC value within limits for Si 251.611 Recovery = 94.99%								
Sn	189.927†	2584.4	476.06 ug/L	1.120	476.06 ppb	1.120	0.24%	
QC value within limits for Sn 189.927 Recovery = 95.21%								
Sr	421.552†	77949.3	500.22 ug/L	0.942	500.22 ppb	0.942	0.19%	
QC value within limits for Sr 421.552 Recovery = 100.04%								
Ti	334.940†	318500.5	485.48 ug/L	0.558	485.48 ppb	0.558	0.11%	
QC value within limits for Ti 334.940 Recovery = 97.10%								
Tl	190.801†	1472.6	474.34 ug/L	3.345	474.34 ppb	3.345	0.71%	
QC value within limits for Tl 190.801 Recovery = 94.87%								
U	409.014†	19098.5	475.92 ug/L	2.507	475.92 ppb	2.507	0.53%	
QC value within limits for U 409.014 Recovery = 95.18%								
V	292.402†	75996.8	478.89 ug/L	1.683	478.89 ppb	1.683	0.35%	
QC value within limits for V 292.402 Recovery = 95.78%								
Zn	213.857†	50807.5	469.08 ug/L	2.042	469.08 ppb	2.042	0.44%	
QC value within limits for Zn 213.857 Recovery = 93.82%								
SiO2†		80893.2	5103.1 ug/L	60.00	5103.1 ppb	60.00	1.18%	
QC value within limits for SiO2 Recovery = 95.43%								
All analyte(s) passed QC.								

All analyte(s) passed QC.

Sequence No.: 2  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 1/26/2010 15:45:44  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5055.4	5055.4	94.7 %		15:47:37
1	Y RADIAL	5423.2	5423.2	94.20 %		15:47:37
1	Al 396.153Radial†	4.6	-4.3	-3.2555 ug/L	-3.2555 ppb	15:47:57
1	Ca 317.933Radial†	24.4	5.6	8.9546 ug/L	8.9546 ppb	15:47:57
1	Fe 238.204 Radial†	6.1	-0.7	-6.2166 ug/L	-6.2166 ppb	15:47:57
1	K 766.490 Radial†	2358.3	-12.4	-2.2489 ug/L	-2.2489 ppb	15:47:37
1	Mg 279.077 IEC†	3.6	2.9	102.27 ug/L	102.27 ppb	15:47:57
1	Na 589.592 Radial†	-681.0	-171.7	-51.051 ug/L	-51.051 ppb	15:47:37
1	Sr 421.552†	18.3	12.2	0.0783 ug/L	0.0783 ppb	15:47:37
1	Sc 361.383	935233.3	935233.3	104.16 %		15:48:53
1	Y 371.029	827186.0	827186.0	100.49 %		15:48:53
1	Ag 328.068†	257.7	-48.6	-0.1929 ug/L	-0.1929 ppb	15:48:58
1	As 188.979†	-27.4	3.9	1.5941 ug/L	1.5941 ppb	15:49:18
1	B 249.677†	-247.9	2.4	0.0542 ug/L	0.0542 ppb	15:49:18
1	Ba 233.527†	-13.1	-9.5	-0.0736 ug/L	-0.0736 ppb	15:49:18
1	Be 313.107†	-4977.5	321.8	0.1135 ug/L	0.1135 ppb	15:48:58
1	Cd 226.502†	-188.7	25.0	0.2783 ug/L	0.2783 ppb	15:49:18
1	Co 228.616†	-76.1	-3.1	-0.0677 ug/L	-0.0677 ppb	15:49:18
1	Cr 267.716†	69.8	-26.9	-0.2863 ug/L	-0.2863 ppb	15:49:18
1	Cu 324.752†	8962.5	-523.5	-1.4627 ug/L	-1.4627 ppb	15:48:58
1	Mn 257.610†	491.6	-17.9	-0.0249 ug/L	-0.0249 ppb	15:49:18
1	Mo 202.031†	25.2	0.6	0.0394 ug/L	0.0394 ppb	15:49:18
1	Ni 231.604†	99.9	2.3	0.0566 ug/L	0.0566 ppb	15:49:18
1	P 214.914†	239.6	-8.7	-4.6112 ug/L	-4.6112 ppb	15:49:18
1	Pb 220.353†	-50.9	11.5	1.4437 ug/L	1.4437 ppb	15:49:18
1	S 181.975 Axial†	44.3	-34.4	-47.405 ug/L	-47.405 ppb	15:49:18
1	Sb 206.836†	36.3	4.6	1.5463 ug/L	1.5463 ppb	15:49:18
1	Se 196.026†	-19.3	-0.6	-0.3685 ug/L	-0.3685 ppb	15:49:18
1	Si 251.611†	487.6	-27.8	-0.8251 ug/L	-0.8251 ppb	15:49:18
1	Sn 189.927†	0.5	0.9	0.1613 ug/L	0.1613 ppb	15:49:18
1	Ti 334.940†	-949.6	-5.1	-0.0099 ug/L	-0.0099 ppb	15:48:58
1	Tl 190.801†	-39.2	-0.8	-0.2431 ug/L	-0.2431 ppb	15:49:18
1	U 409.014†	-1570.1	-444.5	-11.114 ug/L	-11.114 ppb	15:48:58
1	V 292.402†	-1323.0	123.4	0.7499 ug/L	0.7499 ppb	15:48:58
1	Zn 213.857†	702.8	-58.7	-0.5441 ug/L	-0.5441 ppb	15:49:18
1	SiO2†	468.5	-63.7	-4.0273 ug/L	-4.0273 ppb	15:50:39
2	Sc Radial	5389.8	5389.8	101 %		15:48:02
2	Y RADIAL	5787.5	5787.5	100.5 %		15:48:02
2	Al 396.153Radial†	6.0	-3.2	-2.4025 ug/L	-2.4025 ppb	15:48:22
2	Ca 317.933Radial†	19.6	-0.8	-1.3266 ug/L	-1.3266 ppb	15:48:22
2	Fe 238.204 Radial†	6.9	-0.3	-2.6454 ug/L	-2.6454 ppb	15:48:22
2	K 766.490 Radial†	2319.8	-205.1	-37.440 ug/L	-37.440 ppb	15:48:02
2	Mg 279.077 IEC†	2.8	1.8	63.531 ug/L	63.531 ppb	15:48:22
2	Na 589.592 Radial†	-713.5	-159.3	-47.353 ug/L	-47.353 ppb	15:48:02
2	Sr 421.552†	39.8	32.3	0.2076 ug/L	0.2076 ppb	15:48:02
2	Sc 361.383	936244.1	936244.1	104.27 %		15:49:23
2	Y 371.029	827401.7	827401.7	100.52 %		15:49:23
2	Ag 328.068†	344.2	34.1	0.1505 ug/L	0.1505 ppb	15:49:29
2	As 188.979†	-25.4	5.8	2.3856 ug/L	2.3856 ppb	15:49:49
2	B 249.677†	-194.1	54.2	1.1896 ug/L	1.1896 ppb	15:49:49
2	Ba 233.527†	20.5	22.7	0.1800 ug/L	0.1800 ppb	15:49:49
2	Be 313.107†	-4919.0	383.0	0.1354 ug/L	0.1354 ppb	15:49:29
2	Cd 226.502†	-192.1	21.9	0.2431 ug/L	0.2431 ppb	15:49:49
2	Co 228.616†	-66.4	6.2	0.1354 ug/L	0.1354 ppb	15:49:49
2	Cr 267.716†	94.4	-3.4	-0.0331 ug/L	-0.0331 ppb	15:49:49
2	Cu 324.752†	8866.5	-624.9	-1.7480 ug/L	-1.7480 ppb	15:49:29
2	Mn 257.610†	578.6	65.0	0.0700 ug/L	0.0700 ppb	15:49:49
2	Mo 202.031†	16.3	-7.9	-0.5424 ug/L	-0.5424 ppb	15:49:49
2	Ni 231.604†	102.2	4.4	0.1095 ug/L	0.1095 ppb	15:49:49

2	P 214.914†	232.6	-15.7	-8.4993 ug/L	-8.4993 ppb	15:49:49
2	Pb 220.353†	-29.7	31.9	4.0019 ug/L	4.0019 ppb	15:49:49
2	S 181.975 Axial†	52.0	-27.1	-37.305 ug/L	-37.305 ppb	15:49:49
2	Sb 206.836†	47.1	14.9	4.9902 ug/L	4.9902 ppb	15:49:49
2	Se 196.026†	-19.8	-1.0	-0.6087 ug/L	-0.6087 ppb	15:49:49
2	Si 251.611†	540.1	22.1	0.6601 ug/L	0.6601 ppb	15:49:49
2	Sn 189.927†	-0.5	-0.1	-0.0266 ug/L	-0.0266 ppb	15:49:49
2	Ti 334.940†	-863.8	78.1	0.1179 ug/L	0.1179 ppb	15:49:29
2	Tl 190.801†	-48.3	-9.4	-3.0051 ug/L	-3.0051 ppb	15:49:49
2	U 409.014†	-1499.1	-374.9	-9.3729 ug/L	-9.3729 ppb	15:49:29
2	V 292.402†	-1395.8	54.9	0.3176 ug/L	0.3176 ppb	15:49:29
2	Zn 213.857†	744.1	-19.8	-0.1829 ug/L	-0.1829 ppb	15:49:49
2	SiO2†	479.4	-53.7	-3.3808 ug/L	-3.3808 ppb	15:50:59
3	Sc Radial	5423.9	5423.9	102 %		15:48:27
3	Y RADIAL	5862.1	5862.1	101.8 %		15:48:27
3	Al 396.153Radial†	11.7	2.4	1.8213 ug/L	1.8213 ppb	15:48:47
3	Ca 317.933Radial†	19.6	-0.9	-1.4384 ug/L	-1.4384 ppb	15:48:47
3	Fe 238.204 Radial†	5.0	-2.2	-21.020 ug/L	-21.020 ppb	15:48:47
3	K 766.490 Radial†	2257.0	-281.3	-51.379 ug/L	-51.379 ppb	15:48:27
3	Mg 279.077 IEC†	0.2	-0.8	-26.766 ug/L	-26.766 ppb	15:48:47
3	Na 589.592 Radial†	-681.1	-122.9	-36.544 ug/L	-36.544 ppb	15:48:27
3	Sr 421.552†	51.6	43.7	0.2803 ug/L	0.2803 ppb	15:48:27
3	Sc 361.383	942414.5	942414.5	104.96 %		15:49:54
3	Y 371.029	834912.8	834912.8	101.43 %		15:49:54
3	Ag 328.068†	375.4	61.6	0.2599 ug/L	0.2599 ppb	15:49:59
3	As 188.979†	-25.2	6.1	2.5071 ug/L	2.5071 ppb	15:50:19
3	B 249.677†	-269.4	-16.3	-0.3524 ug/L	-0.3524 ppb	15:50:19
3	Ba 233.527†	-1.6	1.6	0.0129 ug/L	0.0129 ppb	15:50:19
3	Be 313.107†	-4953.6	381.0	0.1344 ug/L	0.1344 ppb	15:49:59
3	Cd 226.502†	-196.1	19.4	0.2168 ug/L	0.2168 ppb	15:50:19
3	Co 228.616†	-86.0	-12.0	-0.2636 ug/L	-0.2636 ppb	15:50:19
3	Cr 267.716†	70.8	-26.5	-0.2829 ug/L	-0.2829 ppb	15:50:19
3	Cu 324.752†	8995.8	-557.4	-1.5593 ug/L	-1.5593 ppb	15:49:59
3	Mn 257.610†	504.2	-9.5	-0.0116 ug/L	-0.0116 ppb	15:50:19
3	Mo 202.031†	23.3	-1.4	-0.0987 ug/L	-0.0987 ppb	15:50:19
3	Ni 231.604†	106.0	7.3	0.1835 ug/L	0.1835 ppb	15:50:19
3	P 214.914†	238.2	-11.8	-6.3348 ug/L	-6.3348 ppb	15:50:19
3	Pb 220.353†	-42.8	19.6	2.4614 ug/L	2.4614 ppb	15:50:19
3	S 181.975 Axial†	44.9	-34.2	-47.150 ug/L	-47.150 ppb	15:50:19
3	Sb 206.836†	28.7	-2.9	-0.9716 ug/L	-0.9716 ppb	15:50:19
3	Se 196.026†	-19.7	-0.8	-0.5186 ug/L	-0.5186 ppb	15:50:19
3	Si 251.611†	462.7	-55.1	-1.6309 ug/L	-1.6309 ppb	15:50:19
3	Sn 189.927†	2.1	2.3	0.4302 ug/L	0.4302 ppb	15:50:19
3	Ti 334.940†	-933.8	16.8	0.0321 ug/L	0.0321 ppb	15:49:59
3	Tl 190.801†	-34.8	3.7	1.1815 ug/L	1.1815 ppb	15:50:19
3	U 409.014†	-1528.3	-393.2	-9.8291 ug/L	-9.8291 ppb	15:49:59
3	V 292.402†	-1393.9	65.5	0.3898 ug/L	0.3898 ppb	15:49:59
3	Zn 213.857†	708.3	-58.6	-0.5429 ug/L	-0.5429 ppb	15:50:19
3	SiO2†	486.4	-50.0	-3.1623 ug/L	-3.1623 ppb	15:51:19

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	937964.0	104.47 %	0.433			0.41%
Sc Radial	5289.7	99.1 %	3.81			3.85%
Y 371.029	829833.5	100.82 %	0.535			0.53%
Y RADIAL	5690.9	98.85 %	4.080			4.13%
Ag 328.068†	15.7	0.0725 ug/L	0.23628	0.0725 ppb	0.23628	325.84%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-1.7	-1.2789 ug/L	2.71851	-1.2789 ppb	2.71851	212.56%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	5.3	2.1623 ug/L	0.49578	2.1623 ppb	0.49578	22.93%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	13.5	0.2971 ug/L	0.79917	0.2971 ppb	0.79917	268.95%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	4.9	0.0398 ug/L	0.12889	0.0398 ppb	0.12889	324.14%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	361.9	0.1278 ug/L	0.01238	0.1278 ppb	0.01238	9.69%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	1.3	2.0632 ug/L	5.96837	2.0632 ppb	5.96837	289.28%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated

Cd 226.502†	22.1	0.2460 ug/L	0.03086	0.2460 ppb	0.03086	12.54%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-3.0	-0.0653 ug/L	0.19950	-0.0653 ppb	0.19950	305.49%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-18.9	-0.2008 ug/L	0.14521	-0.2008 ppb	0.14521	72.32%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-568.6	-1.5900 ug/L	0.14506	-1.5900 ppb	0.14506	9.12%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	-1.1	-9.9606 ug/L	9.74262	-9.9606 ppb	9.74262	97.81%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-166.3	-30.356 ug/L	25.3196	-30.356 ppb	25.3196	83.41%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	1.3	46.346 ug/L	66.2135	46.346 ppb	66.2135	142.87%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	12.5	0.0112 ug/L	0.05141	0.0112 ppb	0.05141	459.55%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-2.9	-0.2006 ug/L	0.30399	-0.2006 ppb	0.30399	151.57%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-151.3	-44.982 ug/L	7.5386	-44.982 ppb	7.5386	16.76%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	4.6	0.1165 ug/L	0.06374	0.1165 ppb	0.06374	54.69%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-12.1	-6.4817 ug/L	1.94824	-6.4817 ppb	1.94824	30.06%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	21.0	2.6356 ug/L	1.28797	2.6356 ppb	1.28797	48.87%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-31.9	-43.953 ug/L	5.7590	-43.953 ppb	5.7590	13.10%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	5.5	1.8550 ug/L	2.99289	1.8550 ppb	2.99289	161.34%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-0.8	-0.4986 ug/L	0.12133	-0.4986 ppb	0.12133	24.33%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	-20.3	-0.5986 ug/L	1.16219	-0.5986 ppb	1.16219	194.14%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	1.0	0.1883 ug/L	0.22960	0.1883 ppb	0.22960	121.93%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	29.4	0.1887 ug/L	0.10233	0.1887 ppb	0.10233	54.22%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	30.0	0.0467 ug/L	0.06516	0.0467 ppb	0.06516	139.58%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-2.2	-0.6889 ug/L	2.12861	-0.6889 ppb	2.12861	309.00%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	-404.2	-10.105 ug/L	0.9026	-10.105 ppb	0.9026	8.93%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	81.3	0.4858 ug/L	0.23158	0.4858 ppb	0.23158	47.67%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-45.7	-0.4233 ug/L	0.20819	-0.4233 ppb	0.20819	49.19%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	-55.8	-3.5235 ug/L	0.44978	-3.5235 ppb	0.44978	12.77%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.



Sequence No.: 3  
 Sample ID: 1202017559|942466|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 38  
 Date Collected: 1/26/2010 15:53:30  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 1202017559|942466|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5419.9	5419.9	101 %		15:55:23
1	Y RADIAL	5819.8	5819.8	101.1 %		15:55:23
1	Al 396.153Radial†	13.8	4.5	3.3762 ug/L	3.3762 ppb	15:55:43
1	Ca 317.933Radial†	18.1	-2.4	-3.8131 ug/L	-3.8131 ppb	15:55:43
1	Fe 238.204 Radial†	8.2	0.9	8.5370 ug/L	8.5370 ppb	15:55:43
1	K 766.490 Radial†	2258.7	-278.0	-50.773 ug/L	-50.773 ppb	15:55:23
1	Mg 279.077 IEC†	0.1	-0.9	-30.418 ug/L	-30.418 ppb	15:55:43
1	Na 589.592 Radial†	-711.9	-153.8	-45.719 ug/L	-45.719 ppb	15:55:23
1	Sr 421.552†	41.0	33.3	0.2139 ug/L	0.2139 ppb	15:55:23
1	Sc 361.383	914819.3	914819.3	101.89 %		15:56:39
1	Y 371.029	804951.1	804951.1	97.792 %		15:56:39
1	Ag 328.068†	280.0	-21.2	-0.0868 ug/L	-0.0868 ppb	15:56:39
1	As 188.979†	-32.5	-1.7	-0.6817 ug/L	-0.6817 ppb	15:56:59
1	B 249.677†	-315.1	-68.9	-1.5116 ug/L	-1.5116 ppb	15:56:59
1	Ba 233.527†	-18.6	-15.2	-0.1191 ug/L	-0.1191 ppb	15:56:59
1	Be 313.107†	-5023.5	170.0	0.0604 ug/L	0.0604 ppb	15:56:39
1	Cd 226.502†	-208.6	1.4	0.0157 ug/L	0.0157 ppb	15:56:59
1	Co 228.616†	-75.4	-4.0	-0.0888 ug/L	-0.0888 ppb	15:56:59
1	Cr 267.716†	81.7	-13.8	-0.1495 ug/L	-0.1495 ppb	15:56:59
1	Cu 324.752†	8865.7	-426.5	-1.1972 ug/L	-1.1972 ppb	15:56:39
1	Mn 257.610†	518.9	19.4	0.0238 ug/L	0.0238 ppb	15:56:59
1	Mo 202.031†	25.1	1.0	0.0701 ug/L	0.0701 ppb	15:56:59
1	Ni 231.604†	102.0	6.5	0.1623 ug/L	0.1623 ppb	15:56:59
1	P 214.914†	250.2	6.8	4.1073 ug/L	4.1073 ppb	15:56:59
1	Pb 220.353†	-48.3	13.0	1.6278 ug/L	1.6278 ppb	15:56:59
1	S 181.975 Axial†	42.8	-35.0	-48.162 ug/L	-48.162 ppb	15:56:59
1	Sb 206.836†	45.8	14.7	4.9638 ug/L	4.9638 ppb	15:56:59
1	Se 196.026†	-16.0	2.3	1.3322 ug/L	1.3322 ppb	15:56:59
1	Si 251.611†	549.3	43.2	1.2795 ug/L	1.2795 ppb	15:56:59
1	Sn 189.927†	9.6	9.8	1.8024 ug/L	1.8024 ppb	15:56:59
1	Ti 334.940†	-793.4	127.9	0.1960 ug/L	0.1960 ppb	15:56:39
1	Tl 190.801†	-32.6	4.9	1.5770 ug/L	1.5770 ppb	15:56:59
1	U 409.014†	-992.7	88.5	2.2134 ug/L	2.2134 ppb	15:56:39
1	V 292.402†	-1390.1	29.2	0.1850 ug/L	0.1850 ppb	15:56:39
1	Zn 213.857†	821.5	72.9	0.6786 ug/L	0.6786 ppb	15:56:59
1	SiO2†	560.7	36.9	2.3331 ug/L	2.3331 ppb	15:57:55
2	Sc Radial	5503.3	5503.3	103 %		15:55:48
2	Y RADIAL	5902.9	5902.9	102.5 %		15:55:48
2	Al 396.153Radial†	11.1	1.6	1.2540 ug/L	1.2540 ppb	15:56:08
2	Ca 317.933Radial†	19.7	-1.1	-1.8380 ug/L	-1.8380 ppb	15:56:08
2	Fe 238.204 Radial†	8.5	1.1	9.9744 ug/L	9.9744 ppb	15:56:08
2	K 766.490 Radial†	2168.2	-399.6	-72.987 ug/L	-72.987 ppb	15:55:48
2	Mg 279.077 IEC†	1.2	0.2	6.6405 ug/L	6.6405 ppb	15:56:08
2	Na 589.592 Radial†	-666.8	-99.4	-29.544 ug/L	-29.544 ppb	15:55:48
2	Sr 421.552†	31.4	23.4	0.1503 ug/L	0.1503 ppb	15:55:48
2	Sc 361.383	921862.2	921862.2	102.67 %		15:57:05
2	Y 371.029	810216.9	810216.9	98.432 %		15:57:05
2	Ag 328.068†	316.6	12.4	0.0548 ug/L	0.0548 ppb	15:57:05
2	As 188.979†	-37.1	-6.0	-2.4425 ug/L	-2.4425 ppb	15:57:25
2	B 249.677†	-313.9	-65.3	-1.4355 ug/L	-1.4355 ppb	15:57:25
2	Ba 233.527†	-15.8	-12.2	-0.0962 ug/L	-0.0962 ppb	15:57:25
2	Be 313.107†	-5011.3	219.5	0.0778 ug/L	0.0778 ppb	15:57:05
2	Cd 226.502†	-200.4	11.0	0.1213 ug/L	0.1213 ppb	15:57:25
2	Co 228.616†	-60.2	11.3	0.2476 ug/L	0.2476 ppb	15:57:25
2	Cr 267.716†	97.3	0.8	0.0088 ug/L	0.0088 ppb	15:57:25
2	Cu 324.752†	8867.2	-491.6	-1.3786 ug/L	-1.3786 ppb	15:57:05
2	Mn 257.610†	536.2	32.4	0.0371 ug/L	0.0371 ppb	15:57:25
2	Mo 202.031†	20.0	-4.1	-0.2799 ug/L	-0.2799 ppb	15:57:25
2	Ni 231.604†	84.3	-11.6	-0.2917 ug/L	-0.2917 ppb	15:57:25



2	P 214.914†	251.3	6.0	3.6659 ug/L	3.6659 ppb	15:57:25
2	Pb 220.353†	-50.7	11.1	1.3874 ug/L	1.3874 ppb	15:57:25
2	S 181.975 Axial†	46.8	-31.4	-43.236 ug/L	-43.236 ppb	15:57:25
2	Sb 206.836†	46.9	15.5	5.1689 ug/L	5.1689 ppb	15:57:25
2	Se 196.026†	-20.3	-1.8	-1.0105 ug/L	-1.0105 ppb	15:57:25
2	Si 251.611†	563.2	52.6	1.5620 ug/L	1.5620 ppb	15:57:25
2	Sn 189.927†	0.5	0.8	0.1531 ug/L	0.1531 ppb	15:57:25
2	Ti 334.940†	-829.1	99.1	0.1501 ug/L	0.1501 ppb	15:57:05
2	Tl 190.801†	-38.1	-0.2	-0.0633 ug/L	-0.0633 ppb	15:57:25
2	U 409.014†	-1078.5	12.4	0.3081 ug/L	0.3081 ppb	15:57:05
2	V 292.402†	-1425.2	5.5	0.0293 ug/L	0.0293 ppb	15:57:05
2	Zn 213.857†	822.5	67.7	0.6331 ug/L	0.6331 ppb	15:57:25
2	SiO2†	596.7	67.7	4.2910 ug/L	4.2910 ppb	15:58:00
3	Sc Radial	5503.0	5503.0	103 %		15:56:13
3	Y RADIAL	5914.8	5914.8	102.7 %		15:56:13
3	Al 396.153Radial†	-2.0	-11.1	-8.4032 ug/L	-8.4032 ppb	15:56:33
3	Ca 317.933Radial†	19.1	-1.7	-2.7542 ug/L	-2.7542 ppb	15:56:33
3	Fe 238.204 Radial†	8.6	1.2	11.526 ug/L	11.526 ppb	15:56:33
3	K 766.490 Radial†	2204.5	-364.3	-66.540 ug/L	-66.540 ppb	15:56:13
3	Mg 279.077 IEC†	4.4	3.3	118.71 ug/L	118.71 ppb	15:56:33
3	Na 589.592 Radial†	-682.8	-115.0	-34.175 ug/L	-34.175 ppb	15:56:13
3	Sr 421.552†	21.1	13.4	0.0857 ug/L	0.0857 ppb	15:56:13
3	Sc 361.383	878464.9	878464.9	97.838 %		15:57:30
3	Y 371.029	776152.0	776152.0	94.294 %		15:57:30
3	Ag 328.068†	299.2	9.8	0.0439 ug/L	0.0439 ppb	15:57:30
3	As 188.979†	-32.7	-3.3	-1.3375 ug/L	-1.3375 ppb	15:57:50
3	B 249.677†	-312.2	-78.7	-1.7282 ug/L	-1.7282 ppb	15:57:50
3	Ba 233.527†	-15.2	-12.5	-0.0985 ug/L	-0.0985 ppb	15:57:50
3	Be 313.107†	-5133.5	-146.5	-0.0515 ug/L	-0.0515 ppb	15:57:30
3	Cd 226.502†	-200.1	1.7	0.0177 ug/L	0.0177 ppb	15:57:50
3	Co 228.616†	-61.4	7.2	0.1581 ug/L	0.1581 ppb	15:57:50
3	Cr 267.716†	80.2	-12.0	-0.1300 ug/L	-0.1300 ppb	15:57:50
3	Cu 324.752†	8851.2	-81.2	-0.2271 ug/L	-0.2271 ppb	15:57:30
3	Mn 257.610†	501.8	23.0	0.0221 ug/L	0.0221 ppb	15:57:50
3	Mo 202.031†	22.4	-0.7	-0.0476 ug/L	-0.0476 ppb	15:57:50
3	Ni 231.604†	102.8	11.4	0.2853 ug/L	0.2853 ppb	15:57:50
3	P 214.914†	258.7	25.6	14.502 ug/L	14.502 ppb	15:57:50
3	Pb 220.353†	-46.0	13.3	1.6709 ug/L	1.6709 ppb	15:57:50
3	S 181.975 Axial†	41.7	-34.3	-47.255 ug/L	-47.255 ppb	15:57:50
3	Sb 206.836†	34.6	5.1	1.7231 ug/L	1.7231 ppb	15:57:50
3	Se 196.026†	-12.3	5.4	3.1454 ug/L	3.1454 ppb	15:57:50
3	Si 251.611†	557.1	73.5	2.1782 ug/L	2.1782 ppb	15:57:50
3	Sn 189.927†	4.8	5.3	0.9689 ug/L	0.9689 ppb	15:57:50
3	Ti 334.940†	-844.8	43.1	0.0559 ug/L	0.0559 ppb	15:57:30
3	Tl 190.801†	-42.4	-6.5	-2.0709 ug/L	-2.0709 ppb	15:57:50
3	U 409.014†	-1056.1	-16.6	-0.4155 ug/L	-0.4155 ppb	15:57:30
3	V 292.402†	-1397.6	-34.9	-0.2177 ug/L	-0.2177 ppb	15:57:30
3	Zn 213.857†	827.6	112.5	1.0453 ug/L	1.0453 ppb	15:57:50
3	SiO2†	607.2	107.2	6.7837 ug/L	6.7837 ppb	15:58:05

Mean Data: 1202017559|942466|1

Analyte	Mean Corrected	Conc. Units	Calib.	Std.Dev.	Conc. Units	Std.Dev.	RSD
Sc 361.383	905048.8	100.80 %		2.594			2.57%
Sc Radial	5475.4	103 %		0.9			0.88%
Y 371.029	797106.7	96.839 %		2.278			2.30%
Y RADIAL	5879.2	102.1 %		0.90			0.88%
Ag 328.068†	0.3	0.0040 ug/L		0.07879	0.0040 ppb	0.07879	>999.9%
Al 396.153Radial†	-1.7	-1.2577 ug/L		6.27852	-1.2577 ppb	6.27852	499.22%
As 188.979†	-3.6	-1.4873 ug/L		0.88989	-1.4873 ppb	0.88989	59.83%
B 249.677†	-71.0	-1.5584 ug/L		0.15186	-1.5584 ppb	0.15186	9.74%
Ba 233.527†	-13.3	-0.1046 ug/L		0.01264	-0.1046 ppb	0.01264	12.08%
Be 313.107†	81.0	0.0289 ug/L		0.07017	0.0289 ppb	0.07017	242.91%
Ca 317.933Radial†	-1.7	-2.8017 ug/L		0.98841	-2.8017 ppb	0.98841	35.28%
Cd 226.502†	4.7	0.0516 ug/L		0.06041	0.0516 ppb	0.06041	117.09%
Co 228.616†	4.8	0.1057 ug/L		0.17426	0.1057 ppb	0.17426	164.93%
Cr 267.716†	-8.3	-0.0902 ug/L		0.08636	-0.0902 ppb	0.08636	95.71%
Cu 324.752†	-333.1	-0.9343 ug/L		0.61917	-0.9343 ppb	0.61917	66.27%
Fe 238.204 Radial†	1.1	10.013 ug/L		1.4950	10.013 ppb	1.4950	14.93%
K 766.490 Radial†	-347.3	-63.433 ug/L		11.4283	-63.433 ppb	11.4283	18.02%

Mg 279.077 IEC†	0.9	31.646 ug/L	77.6465	31.646 ppb	77.6465	245.36%
Mn 257.610†	25.0	0.0277 ug/L	0.00818	0.0277 ppb	0.00818	29.57%
Mo 202.031†	-1.3	-0.0858 ug/L	0.17810	-0.0858 ppb	0.17810	207.60%
Na 589.592 Radial†	-122.7	-36.480 ug/L	8.3302	-36.480 ppb	8.3302	22.84%
Ni 231.604†	2.1	0.0520 ug/L	0.30391	0.0520 ppb	0.30391	584.56%
P 214.914†	12.8	7.4251 ug/L	6.13283	7.4251 ppb	6.13283	82.60%
Pb 220.353†	12.5	1.5620 ug/L	0.15274	1.5620 ppb	0.15274	9.78%
S 181.975 Axial†	-33.6	-46.217 ug/L	2.6219	-46.217 ppb	2.6219	5.67%
Sb 206.836†	11.8	3.9519 ug/L	1.93293	3.9519 ppb	1.93293	48.91%
Se 196.026†	1.9	1.1557 ug/L	2.08357	1.1557 ppb	2.08357	180.29%
Si 251.611†	56.4	1.6732 ug/L	0.45953	1.6732 ppb	0.45953	27.46%
Sn 189.927†	5.3	0.9748 ug/L	0.82467	0.9748 ppb	0.82467	84.60%
Sr 421.552†	23.4	0.1500 ug/L	0.06409	0.1500 ppb	0.06409	42.73%
Ti 334.940†	90.0	0.1340 ug/L	0.07142	0.1340 ppb	0.07142	53.29%
Tl 190.801†	-0.6	-0.1857 ug/L	1.82699	-0.1857 ppb	1.82699	983.63%
U 409.014†	28.1	0.7020 ug/L	1.35799	0.7020 ppb	1.35799	193.46%
V 292.402†	-0.0	-0.0011 ug/L	0.20306	-0.0011 ppb	0.20306	>999.9%
Zn 213.857†	84.4	0.7857 ug/L	0.22595	0.7857 ppb	0.22595	28.76%
SiO2†	70.6	4.4692 ug/L	2.23063	4.4692 ppb	2.23063	49.91%

Sequence No.: 4  
 Sample ID: 1202017560|942466|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 39  
 Date Collected: 1/26/2010 16:00:16  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 1202017560|942466|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5389.1	5389.1	101 %		16:02:09
1	Y RADIAL	5807.6	5807.6	100.9 %		16:02:09
1	Al 396.153Radial†	6590.9	6521.8	4918.0 ug/L	4918.0 ppb	16:02:09
1	Ca 317.933Radial†	3159.4	3110.5	4999.4 ug/L	4999.4 ppb	16:02:29
1	Fe 238.204 Radial†	565.3	553.0	5182.0 ug/L	5182.0 ppb	16:02:29
1	K 766.490 Radial†	30205.8	27427.4	5006.2 ug/L	5006.2 ppb	16:02:09
1	Mg 279.077 IEC†	150.2	147.8	5272.0 ug/L	5272.0 ppb	16:02:29
1	Na 589.592 Radial†	16012.9	16414.9	4879.7 ug/L	4879.7 ppb	16:02:09
1	Sr 421.552†	78926.2	78201.0	501.83 ug/L	501.83 ppb	16:02:09
1	Sc 361.383	942617.3	942617.3	104.98 %		16:03:28
1	Y 371.029	825920.7	825920.7	100.34 %		16:03:28
1	Ag 328.068†	118964.3	113021.2	474.78 ug/L	474.78 ppb	16:03:28
1	As 188.979†	1178.2	1152.4	475.77 ug/L	475.77 ppb	16:03:48
1	B 249.677†	22147.5	21336.6	465.74 ug/L	465.74 ppb	16:03:28
1	Ba 233.527†	64134.4	61093.1	482.75 ug/L	482.75 ppb	16:03:28
1	Be 313.107†	1409573.4	1347764.1	476.54 ug/L	476.54 ppb	16:03:28
1	Cd 226.502†	43105.5	41265.5	460.81 ug/L	460.81 ppb	16:03:48
1	Co 228.616†	22557.9	21557.1	472.60 ug/L	472.60 ppb	16:03:48
1	Cr 267.716†	45759.2	43493.2	472.08 ug/L	472.08 ppb	16:03:28
1	Cu 324.752†	188374.5	170304.7	477.75 ug/L	477.75 ppb	16:03:28
1	Mn 257.610†	443850.2	422291.6	473.76 ug/L	473.76 ppb	16:03:28
1	Mo 202.031†	7157.5	6794.2	464.15 ug/L	464.15 ppb	16:03:48
1	Ni 231.604†	19805.6	18771.8	471.48 ug/L	471.48 ppb	16:03:48
1	P 214.914†	1249.8	951.7	443.53 ug/L	443.53 ppb	16:03:48
1	Pb 220.353†	3917.3	3791.8	477.47 ug/L	477.47 ppb	16:03:48
1	S 181.975 Axial†	3716.8	3463.4	4767.5 ug/L	4767.5 ppb	16:03:48
1	Sb 206.836†	1572.8	1467.8	508.56 ug/L	508.56 ppb	16:03:48
1	Se 196.026†	802.8	782.7	470.26 ug/L	470.26 ppb	16:03:48
1	Si 251.611†	164403.0	156103.2	4619.6 ug/L	4619.6 ppb	16:03:28
1	Sn 189.927†	2821.2	2687.6	495.06 ug/L	495.06 ppb	16:03:48
1	Ti 334.940†	332860.0	317966.3	484.67 ug/L	484.67 ppb	16:03:28
1	Tl 190.801†	1482.7	1449.2	466.87 ug/L	466.87 ppb	16:03:48
1	U 409.014†	19031.5	19190.9	478.23 ug/L	478.23 ppb	16:03:28
1	V 292.402†	78711.8	76369.0	481.06 ug/L	481.06 ppb	16:03:28
1	Zn 213.857†	53558.7	50283.0	464.21 ug/L	464.21 ppb	16:03:28
1	SiO2†	163320.1	155054.2	9793.7 ug/L	9793.7 ppb	16:04:48
2	Sc Radial	5416.4	5416.4	101 %		16:02:34
2	Y RADIAL	5805.9	5805.9	100.8 %		16:02:34
2	Al 396.153Radial†	6579.7	6477.9	4884.4 ug/L	4884.4 ppb	16:02:34
2	Ca 317.933Radial†	3158.3	3093.6	4972.3 ug/L	4972.3 ppb	16:02:54
2	Fe 238.204 Radial†	564.6	549.5	5149.4 ug/L	5149.4 ppb	16:02:54
2	K 766.490 Radial†	30068.8	27141.9	4954.1 ug/L	4954.1 ppb	16:02:34
2	Mg 279.077 IEC†	149.2	146.2	5213.5 ug/L	5213.5 ppb	16:02:54
2	Na 589.592 Radial†	15951.7	16274.7	4838.0 ug/L	4838.0 ppb	16:02:34
2	Sr 421.552†	78601.1	77487.0	497.25 ug/L	497.25 ppb	16:02:34
2	Sc 361.383	941670.4	941670.4	104.88 %		16:03:55
2	Y 371.029	825746.2	825746.2	100.32 %		16:03:55
2	Ag 328.068†	118872.8	113048.0	474.89 ug/L	474.89 ppb	16:03:55
2	As 188.979†	1187.2	1162.2	479.72 ug/L	479.72 ppb	16:04:15
2	B 249.677†	22081.8	21295.2	464.82 ug/L	464.82 ppb	16:03:55
2	Ba 233.527†	64240.4	61255.7	484.03 ug/L	484.03 ppb	16:03:55
2	Be 313.107†	1411603.9	1351050.2	477.70 ug/L	477.70 ppb	16:03:55
2	Cd 226.502†	43583.8	41762.8	466.37 ug/L	466.37 ppb	16:04:15
2	Co 228.616†	22828.3	21836.5	478.74 ug/L	478.74 ppb	16:04:15
2	Cr 267.716†	45795.5	43571.6	472.93 ug/L	472.93 ppb	16:03:55
2	Cu 324.752†	187857.1	169991.8	476.88 ug/L	476.88 ppb	16:03:55
2	Mn 257.610†	443553.6	422434.0	473.92 ug/L	473.92 ppb	16:03:55
2	Mo 202.031†	7242.0	6881.6	470.11 ug/L	470.11 ppb	16:04:15
2	Ni 231.604†	20025.4	19000.4	477.22 ug/L	477.22 ppb	16:04:15

2	P 214.914†	1260.6	963.2	450.22 ug/L	450.22 ppb	16:04:15
2	Pb 220.353†	3971.7	3847.4	484.47 ug/L	484.47 ppb	16:04:15
2	S 181.975 Axial†	3757.1	3505.4	4825.4 ug/L	4825.4 ppb	16:04:15
2	Sb 206.836†	1608.0	1503.0	520.52 ug/L	520.52 ppb	16:04:15
2	Se 196.026†	815.8	795.8	477.74 ug/L	477.74 ppb	16:04:15
2	Si 251.611†	164028.4	155903.4	4613.6 ug/L	4613.6 ppb	16:03:55
2	Sn 189.927†	2843.0	2711.1	499.37 ug/L	499.37 ppb	16:04:15
2	Ti 334.940†	332181.5	317638.2	484.17 ug/L	484.17 ppb	16:03:55
2	Tl 190.801†	1499.1	1466.2	472.29 ug/L	472.29 ppb	16:04:15
2	U 409.014†	18991.0	19170.6	477.72 ug/L	477.72 ppb	16:03:55
2	V 292.402†	78746.0	76477.0	481.82 ug/L	481.82 ppb	16:03:55
2	Zn 213.857†	53570.5	50345.5	464.76 ug/L	464.76 ppb	16:03:55
2	SiO2†	163789.7	155658.3	9831.7 ug/L	9831.7 ppb	16:04:53
3	Sc Radial	5490.2	5490.2	103 %		16:02:59
3	Y RADIAL	5904.0	5904.0	102.5 %		16:02:59
3	Al 396.153Radial†	6625.5	6435.1	4852.1 ug/L	4852.1 ppb	16:02:59
3	Ca 317.933Radial†	3163.5	3056.8	4913.2 ug/L	4913.2 ppb	16:03:19
3	Fe 238.204 Radial†	562.9	540.3	5064.0 ug/L	5064.0 ppb	16:03:19
3	K 766.490 Radial†	30432.2	27096.4	4945.8 ug/L	4945.8 ppb	16:02:59
3	Mg 279.077 IEC†	148.3	143.3	5110.3 ug/L	5110.3 ppb	16:03:19
3	Na 589.592 Radial†	16226.2	16330.1	4854.5 ug/L	4854.5 ppb	16:02:59
3	Sr 421.552†	79903.6	77711.3	498.69 ug/L	498.69 ppb	16:02:59
3	Sc 361.383	939002.4	939002.4	104.58 %		16:04:22
3	Y 371.029	822056.2	822056.2	99.870 %		16:04:22
3	Ag 328.068†	118529.4	113041.7	474.84 ug/L	474.84 ppb	16:04:22
3	As 188.979†	1182.6	1161.0	479.24 ug/L	479.24 ppb	16:04:43
3	B 249.677†	22204.7	21472.5	468.72 ug/L	468.72 ppb	16:04:22
3	Ba 233.527†	64160.9	61353.6	484.80 ug/L	484.80 ppb	16:04:22
3	Be 313.107†	1407177.8	1350642.3	477.56 ug/L	477.56 ppb	16:04:22
3	Cd 226.502†	43379.4	41685.5	465.52 ug/L	465.52 ppb	16:04:43
3	Co 228.616†	22758.5	21831.6	478.63 ug/L	478.63 ppb	16:04:43
3	Cr 267.716†	45699.7	43604.0	473.28 ug/L	473.28 ppb	16:04:22
3	Cu 324.752†	187447.8	170109.4	477.20 ug/L	477.20 ppb	16:04:22
3	Mn 257.610†	443078.4	423181.2	474.75 ug/L	474.75 ppb	16:04:22
3	Mo 202.031†	7208.6	6869.3	469.26 ug/L	469.26 ppb	16:04:43
3	Ni 231.604†	19928.9	18962.3	476.26 ug/L	476.26 ppb	16:04:43
3	P 214.914†	1265.2	971.0	454.63 ug/L	454.63 ppb	16:04:43
3	Pb 220.353†	3967.0	3853.6	485.25 ug/L	485.25 ppb	16:04:43
3	S 181.975 Axial†	3751.3	3510.0	4831.8 ug/L	4831.8 ppb	16:04:43
3	Sb 206.836†	1600.6	1500.3	519.58 ug/L	519.58 ppb	16:04:43
3	Se 196.026†	814.0	796.3	477.75 ug/L	477.75 ppb	16:04:43
3	Si 251.611†	163938.6	156261.9	4624.2 ug/L	4624.2 ppb	16:04:22
3	Sn 189.927†	2832.9	2709.2	499.01 ug/L	499.01 ppb	16:04:43
3	Ti 334.940†	331733.0	318109.3	484.88 ug/L	484.88 ppb	16:04:22
3	Tl 190.801†	1494.4	1465.8	472.18 ug/L	472.18 ppb	16:04:43
3	U 409.014†	19014.5	19244.5	479.58 ug/L	479.58 ppb	16:04:22
3	V 292.402†	78566.9	76519.1	482.08 ug/L	482.08 ppb	16:04:22
3	Zn 213.857†	53502.0	50425.1	465.52 ug/L	465.52 ppb	16:04:22
3	SiO2†	161637.3	154044.0	9729.7 ug/L	9729.7 ppb	16:04:59

Mean Data: 1202017560|942466|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	941096.7	104.81 %	0.209			0.20%
Sc Radial	5431.9	102 %	1.0			0.96%
Y 371.029	824574.4	100.18 %	0.265			0.26%
Y RADIAL	5839.2	101.4 %	0.97			0.96%
Ag 328.068†	113037.0	474.84 ug/L	0.052	474.84 ppb	0.052	0.01%
Al 396.153Radial†	6478.3	4884.8 ug/L	32.97	4884.8 ppb	32.97	0.67%
As 188.979†	1158.5	478.24 ug/L	2.153	478.24 ppb	2.153	0.45%
B 249.677†	21368.1	466.42 ug/L	2.040	466.42 ppb	2.040	0.44%
Ba 233.527†	61234.1	483.86 ug/L	1.036	483.86 ppb	1.036	0.21%
Be 313.107†	1349818.8	477.26 ug/L	0.632	477.26 ppb	0.632	0.13%
Ca 317.933Radial†	3086.9	4961.6 ug/L	44.11	4961.6 ppb	44.11	0.89%
Cd 226.502†	41571.3	464.23 ug/L	2.995	464.23 ppb	2.995	0.65%
Co 228.616†	21741.7	476.66 ug/L	3.514	476.66 ppb	3.514	0.74%
Cr 267.716†	43556.3	472.76 ug/L	0.617	472.76 ppb	0.617	0.13%
Cu 324.752†	170135.3	477.28 ug/L	0.445	477.28 ppb	0.445	0.09%
Fe 238.204 Radial†	547.6	5131.8 ug/L	60.95	5131.8 ppb	60.95	1.19%
K 766.490 Radial†	27221.9	4968.7 ug/L	32.76	4968.7 ppb	32.76	0.66%

Mg 279.077 IEC†	145.8	5198.6 ug/L	81.88	5198.6 ppb	81.88	1.58%
Mn 257.610†	422635.6	474.14 ug/L	0.533	474.14 ppb	0.533	0.11%
Mo 202.031†	6848.3	467.84 ug/L	3.225	467.84 ppb	3.225	0.69%
Na 589.592 Radial†	16339.9	4857.4 ug/L	20.99	4857.4 ppb	20.99	0.43%
Ni 231.604†	18911.5	474.99 ug/L	3.075	474.99 ppb	3.075	0.65%
P 214.914†	962.0	449.46 ug/L	5.592	449.46 ppb	5.592	1.24%
Pb 220.353†	3830.9	482.40 ug/L	4.281	482.40 ppb	4.281	0.89%
S 181.975 Axial†	3492.9	4808.2 ug/L	35.39	4808.2 ppb	35.39	0.74%
Sb 206.836†	1490.4	516.22 ug/L	6.649	516.22 ppb	6.649	1.29%
Se 196.026†	791.6	475.25 ug/L	4.320	475.25 ppb	4.320	0.91%
Si 251.611†	156089.5	4619.2 ug/L	5.33	4619.2 ppb	5.33	0.12%
Sn 189.927†	2702.6	497.82 ug/L	2.389	497.82 ppb	2.389	0.48%
Sr 421.552†	77799.8	499.26 ug/L	2.343	499.26 ppb	2.343	0.47%
Ti 334.940†	317904.6	484.57 ug/L	0.368	484.57 ppb	0.368	0.08%
Tl 190.801†	1460.4	470.45 ug/L	3.102	470.45 ppb	3.102	0.66%
U 409.014†	19202.0	478.51 ug/L	0.959	478.51 ppb	0.959	0.20%
V 292.402†	76455.1	481.65 ug/L	0.531	481.65 ppb	0.531	0.11%
Zn 213.857†	50351.2	464.83 ug/L	0.656	464.83 ppb	0.656	0.14%
SiO2†	154918.8	9785.0 ug/L	51.59	9785.0 ppb	51.59	0.53%

Sequence No.: 12

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 1/26/2010 16:55:39

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5404.1	5404.1	101 %		16:57:31
1	Y RADIAL	5813.1	5813.1	101.0 %		16:57:31
1	Al 396.153Radial†	6596.0	6508.7	4907.1 ug/L	4907.1 ppb	16:57:31
1	Ca 317.933Radial†	3156.1	3098.5	4980.2 ug/L	4980.2 ppb	16:57:51
1	Fe 238.204 Radial†	558.8	545.1	5108.5 ug/L	5108.5 ppb	16:57:51
1	K 766.490 Radial†	30060.1	27200.3	4962.8 ug/L	4962.8 ppb	16:57:31
1	Mg 279.077 IEC†	146.5	143.8	5127.5 ug/L	5127.5 ppb	16:57:51
1	Na 589.592 Radial†	32863.9	33022.0	9816.5 ug/L	9816.5 ppb	16:57:31
1	Sr 421.552†	79011.1	78067.5	500.98 ug/L	500.98 ppb	16:57:31
1	Sc 361.383	933459.5	933459.5	103.96 %		16:58:49
1	Y 371.029	816613.7	816613.7	99.209 %		16:58:49
1	Ag 328.068†	119809.4	114945.9	482.80 ug/L	482.80 ppb	16:58:54
1	As 188.979†	1192.2	1176.9	485.77 ug/L	485.77 ppb	16:59:14
1	B 249.677†	22006.1	21407.6	467.26 ug/L	467.26 ppb	16:58:54
1	Ba 233.527†	63064.8	60663.7	479.37 ug/L	479.37 ppb	16:58:54
1	Be 313.107†	1405050.3	1356585.8	479.67 ug/L	479.67 ppb	16:58:49
1	Cd 226.502†	44607.2	43112.8	481.46 ug/L	481.46 ppb	16:58:54
1	Co 228.616†	23169.0	22355.7	490.13 ug/L	490.13 ppb	16:58:54
1	Cr 267.716†	46082.0	44231.2	480.08 ug/L	480.08 ppb	16:58:54
1	Cu 324.752†	185253.1	169062.7	474.26 ug/L	474.26 ppb	16:58:54
1	Mn 257.610†	446312.1	428807.4	481.06 ug/L	481.06 ppb	16:58:49
1	Mo 202.031†	7383.8	7078.7	483.56 ug/L	483.56 ppb	16:59:14
1	Ni 231.604†	20043.5	19185.7	481.87 ug/L	481.87 ppb	16:58:54
1	P 214.914†	4669.2	4252.5	2305.6 ug/L	2305.6 ppb	16:59:14
1	Pb 220.353†	3941.6	3851.7	485.05 ug/L	485.05 ppb	16:59:14
1	S 181.975 Axial†	789.3	682.2	938.41 ug/L	938.41 ppb	16:59:14
1	Sb 206.836†	1536.7	1447.8	502.14 ug/L	502.14 ppb	16:59:14
1	Se 196.026†	834.8	821.0	492.18 ug/L	492.18 ppb	16:59:14
1	Si 251.611†	85090.0	81350.2	2404.4 ug/L	2404.4 ppb	16:58:54
1	Sn 189.927†	2752.0	2647.4	487.67 ug/L	487.67 ppb	16:59:14
1	Ti 334.940†	333773.7	321955.7	490.75 ug/L	490.75 ppb	16:58:49
1	Tl 190.801†	1513.2	1492.4	480.69 ug/L	480.69 ppb	16:59:14
1	U 409.014†	19016.4	19354.3	482.30 ug/L	482.30 ppb	16:58:54
1	V 292.402†	78414.0	76818.2	484.13 ug/L	484.13 ppb	16:58:54
1	Zn 213.857†	54192.3	51392.9	474.49 ug/L	474.49 ppb	16:58:54
1	SiO2†	85733.7	81951.9	5169.8 ug/L	5169.8 ppb	17:00:22
2	Sc Radial	5464.4	5464.4	102 %		16:57:57
2	Y RADIAL	5854.8	5854.8	101.7 %		16:57:57
2	Al 396.153Radial†	6607.0	6447.5	4861.0 ug/L	4861.0 ppb	16:57:57
2	Ca 317.933Radial†	3114.7	3023.6	4859.7 ug/L	4859.7 ppb	16:58:17
2	Fe 238.204 Radial†	551.7	532.0	4986.7 ug/L	4986.7 ppb	16:58:17
2	K 766.490 Radial†	30113.7	26924.8	4912.6 ug/L	4912.6 ppb	16:57:57
2	Mg 279.077 IEC†	149.8	145.4	5186.7 ug/L	5186.7 ppb	16:58:17
2	Na 589.592 Radial†	32632.4	32437.4	9642.7 ug/L	9642.7 ppb	16:57:57
2	Sr 421.552†	78996.9	77191.8	495.36 ug/L	495.36 ppb	16:57:57
2	Sc 361.383	937520.1	937520.1	104.42 %		16:59:20
2	Y 371.029	819542.3	819542.3	99.565 %		16:59:20
2	Ag 328.068†	119741.6	114381.8	480.40 ug/L	480.40 ppb	16:59:26
2	As 188.979†	1188.9	1168.8	482.47 ug/L	482.47 ppb	16:59:46
2	B 249.677†	22032.5	21341.2	465.83 ug/L	465.83 ppb	16:59:26
2	Ba 233.527†	62932.0	60273.7	476.29 ug/L	476.29 ppb	16:59:26
2	Be 313.107†	1415446.5	1360688.7	481.12 ug/L	481.12 ppb	16:59:20
2	Cd 226.502†	44490.8	42815.5	478.15 ug/L	478.15 ppb	16:59:26
2	Co 228.616†	23118.9	22211.2	486.95 ug/L	486.95 ppb	16:59:26
2	Cr 267.716†	45947.6	43910.6	476.60 ug/L	476.60 ppb	16:59:26
2	Cu 324.752†	185148.5	168190.6	471.81 ug/L	471.81 ppb	16:59:26
2	Mn 257.610†	449866.5	430352.1	482.78 ug/L	482.78 ppb	16:59:20
2	Mo 202.031†	7330.8	6997.2	477.99 ug/L	477.99 ppb	16:59:46
2	Ni 231.604†	19941.2	19004.2	477.31 ug/L	477.31 ppb	16:59:26

2	P 214.914†	4638.9	4203.9	2278.7 ug/L	2278.7 ppb	16:59:46
2	Pb 220.353†	3914.4	3809.2	479.71 ug/L	479.71 ppb	16:59:46
2	S 181.975 Axial†	777.8	667.9	918.64 ug/L	918.64 ppb	16:59:46
2	Sb 206.836†	1527.0	1432.1	496.67 ug/L	496.67 ppb	16:59:46
2	Se 196.026†	841.1	823.4	493.18 ug/L	493.18 ppb	16:59:46
2	Si 251.611†	84970.0	80880.7	2390.6 ug/L	2390.6 ppb	16:59:26
2	Sn 189.927†	2735.5	2620.2	482.64 ug/L	482.64 ppb	16:59:46
2	Ti 334.940†	336981.7	323637.5	493.30 ug/L	493.30 ppb	16:59:20
2	Tl 190.801†	1515.1	1487.9	479.32 ug/L	479.32 ppb	16:59:46
2	U 409.014†	18862.1	19127.3	476.65 ug/L	476.65 ppb	16:59:26
2	V 292.402†	78246.7	76331.3	481.03 ug/L	481.03 ppb	16:59:26
2	Zn 213.857†	54088.3	51067.5	471.51 ug/L	471.51 ppb	16:59:26
2	SiO2†	85093.4	80981.4	5108.6 ug/L	5108.6 ppb	17:00:27
3	Sc Radial	5318.4	5318.4	99.6 %		16:58:22
3	Y RADIAL	5730.9	5730.9	99.54 %		16:58:22
3	Al 396.153Radial†	6474.1	6491.4	4894.0 ug/L	4894.0 ppb	16:58:22
3	Ca 317.933Radial†	3156.9	3149.5	5062.2 ug/L	5062.2 ppb	16:58:42
3	Fe 238.204 Radial†	560.5	555.6	5207.1 ug/L	5207.1 ppb	16:58:42
3	K 766.490 Radial†	29759.8	27377.7	4995.2 ug/L	4995.2 ppb	16:58:22
3	Mg 279.077 IEC†	149.8	149.5	5331.4 ug/L	5331.4 ppb	16:58:42
3	Na 589.592 Radial†	31935.3	32613.1	9695.0 ug/L	9695.0 ppb	16:58:22
3	Sr 421.552†	77533.5	77842.6	499.53 ug/L	499.53 ppb	16:58:22
3	Sc 361.383	927787.5	927787.5	103.33 %		16:59:52
3	Y 371.029	812798.3	812798.3	98.746 %		16:59:52
3	Ag 328.068†	120774.2	116584.1	489.69 ug/L	489.69 ppb	16:59:57
3	As 188.979†	1188.1	1180.0	487.07 ug/L	487.07 ppb	17:00:17
3	B 249.677†	22301.4	21822.8	476.33 ug/L	476.33 ppb	16:59:57
3	Ba 233.527†	63594.5	61547.1	486.35 ug/L	486.35 ppb	16:59:57
3	Be 313.107†	1402066.6	1361960.4	481.57 ug/L	481.57 ppb	16:59:52
3	Cd 226.502†	44852.4	43612.4	487.04 ug/L	487.04 ppb	16:59:57
3	Co 228.616†	23282.3	22601.6	495.52 ug/L	495.52 ppb	16:59:57
3	Cr 267.716†	46420.8	44830.1	486.58 ug/L	486.58 ppb	16:59:57
3	Cu 324.752†	187305.0	172137.7	482.89 ug/L	482.89 ppb	16:59:57
3	Mn 257.610†	444250.0	429436.2	481.77 ug/L	481.77 ppb	16:59:52
3	Mo 202.031†	7320.5	7060.8	482.35 ug/L	482.35 ppb	17:00:17
3	Ni 231.604†	20169.0	19425.0	487.88 ug/L	487.88 ppb	16:59:57
3	P 214.914†	4632.8	4244.7	2299.4 ug/L	2299.4 ppb	17:00:17
3	Pb 220.353†	3913.1	3847.4	484.49 ug/L	484.49 ppb	17:00:17
3	S 181.975 Axial†	779.6	677.5	931.83 ug/L	931.83 ppb	17:00:17
3	Sb 206.836†	1534.3	1454.6	504.36 ug/L	504.36 ppb	17:00:17
3	Se 196.026†	837.8	828.7	496.98 ug/L	496.98 ppb	17:00:17
3	Si 251.611†	85819.4	82556.3	2440.2 ug/L	2440.2 ppb	16:59:57
3	Sn 189.927†	2722.3	2634.8	485.37 ug/L	485.37 ppb	17:00:17
3	Ti 334.940†	333068.8	323236.3	492.69 ug/L	492.69 ppb	16:59:52
3	Tl 190.801†	1503.4	1491.8	480.50 ug/L	480.50 ppb	17:00:17
3	U 409.014†	19251.8	19693.9	490.77 ug/L	490.77 ppb	16:59:57
3	V 292.402†	79080.8	77924.6	491.00 ug/L	491.00 ppb	16:59:57
3	Zn 213.857†	54509.8	52018.9	480.26 ug/L	480.26 ppb	16:59:57
3	SiO2†	85048.9	81793.2	5159.8 ug/L	5159.8 ppb	17:00:32

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	932922.4	103.90 %	0.544			0.52%
Sc Radial	5395.7	101 %	1.4			1.36%
Y 371.029	816318.1	99.173 %	0.4108			0.41%
Y RADIAL	5799.6	100.7 %	1.10			1.09%
Ag 328.068†	115303.9	484.30 ug/L	4.821	484.30 ppb	4.821	1.00%
QC value within limits for Ag 328.068 Recovery = 96.86%						
Al 396.153Radial†	6482.5	4887.4 ug/L	23.75	4887.4 ppb	23.75	0.49%
QC value within limits for Al 396.153Radial Recovery = 97.75%						
As 188.979†	1175.2	485.11 ug/L	2.372	485.11 ppb	2.372	0.49%
QC value within limits for As 188.979 Recovery = 97.02%						
B 249.677†	21523.8	469.80 ug/L	5.696	469.80 ppb	5.696	1.21%
QC value within limits for B 249.677 Recovery = 93.96%						
Ba 233.527†	60828.2	480.67 ug/L	5.157	480.67 ppb	5.157	1.07%
QC value within limits for Ba 233.527 Recovery = 96.13%						
Be 313.107†	1359745.0	480.78 ug/L	0.994	480.78 ppb	0.994	0.21%
QC value within limits for Be 313.107 Recovery = 96.16%						
Ca 317.933Radial†	3090.5	4967.4 ug/L	101.86	4967.4 ppb	101.86	2.05%

QC value within limits for Ca 317.933 Radial Recovery = 99.35%

Cd 226.502†	43180.2	482.21 ug/L	4.492	482.21 ppb	4.492	0.93%
QC value within limits for Cd 226.502 Recovery = 96.44%						
Co 228.616†	22389.5	490.87 ug/L	4.330	490.87 ppb	4.330	0.88%
QC value within limits for Co 228.616 Recovery = 98.17%						
Cr 267.716†	44324.0	481.09 ug/L	5.066	481.09 ppb	5.066	1.05%
QC value within limits for Cr 267.716 Recovery = 96.22%						
Cu 324.752†	169797.0	476.32 ug/L	5.818	476.32 ppb	5.818	1.22%
QC value within limits for Cu 324.752 Recovery = 95.26%						
Fe 238.204 Radial†	544.2	5100.8 ug/L	110.41	5100.8 ppb	110.41	2.16%
QC value within limits for Fe 238.204 Radial Recovery = 102.02%						
K 766.490 Radial†	27167.6	4956.9 ug/L	41.64	4956.9 ppb	41.64	0.84%
QC value within limits for K 766.490 Radial Recovery = 99.14%						
Mg 279.077 IEC†	146.2	5215.2 ug/L	104.90	5215.2 ppb	104.90	2.01%
QC value within limits for Mg 279.077 IEC Recovery = 104.30%						
Mn 257.610†	429531.9	481.87 ug/L	0.863	481.87 ppb	0.863	0.18%
QC value within limits for Mn 257.610 Recovery = 96.37%						
Mo 202.031†	7045.6	481.30 ug/L	2.933	481.30 ppb	2.933	0.61%
QC value within limits for Mo 202.031 Recovery = 96.26%						
Na 589.592 Radial†	32690.8	9718.1 ug/L	89.17	9718.1 ppb	89.17	0.92%
QC value within limits for Na 589.592 Radial Recovery = 97.18%						
Ni 231.604†	19205.0	482.36 ug/L	5.302	482.36 ppb	5.302	1.10%
QC value within limits for Ni 231.604 Recovery = 96.47%						
P 214.914†	4233.7	2294.6 ug/L	14.05	2294.6 ppb	14.05	0.61%
QC value within limits for P 214.914 Recovery = 91.78%						
Pb 220.353†	3836.1	483.08 ug/L	2.937	483.08 ppb	2.937	0.61%
QC value within limits for Pb 220.353 Recovery = 96.62%						
S 181.975 Axial†	675.9	929.62 ug/L	10.068	929.62 ppb	10.068	1.08%
QC value within limits for S 181.975 Axial Recovery = 92.96%						
Sb 206.836†	1444.8	501.06 ug/L	3.955	501.06 ppb	3.955	0.79%
QC value within limits for Sb 206.836 Recovery = 100.21%						
Se 196.026†	824.4	494.11 ug/L	2.530	494.11 ppb	2.530	0.51%
QC value within limits for Se 196.026 Recovery = 98.82%						
Si 251.611†	81595.7	2411.8 ug/L	25.59	2411.8 ppb	25.59	1.06%
QC value within limits for Si 251.611 Recovery = 96.47%						
Sn 189.927†	2634.1	485.22 ug/L	2.517	485.22 ppb	2.517	0.52%
QC value within limits for Sn 189.927 Recovery = 97.04%						
Sr 421.552†	77700.7	498.62 ug/L	2.918	498.62 ppb	2.918	0.59%
QC value within limits for Sr 421.552 Recovery = 99.72%						
Ti 334.940†	322943.2	492.25 ug/L	1.330	492.25 ppb	1.330	0.27%
QC value within limits for Ti 334.940 Recovery = 98.45%						
Tl 190.801†	1490.7	480.17 ug/L	0.741	480.17 ppb	0.741	0.15%
QC value within limits for Tl 190.801 Recovery = 96.03%						
U 409.014†	19391.8	483.24 ug/L	7.108	483.24 ppb	7.108	1.47%
QC value within limits for U 409.014 Recovery = 96.65%						
V 292.402†	77024.7	485.39 ug/L	5.100	485.39 ppb	5.100	1.05%
QC value within limits for V 292.402 Recovery = 97.08%						
Zn 213.857†	51493.1	475.42 ug/L	4.452	475.42 ppb	4.452	0.94%
QC value within limits for Zn 213.857 Recovery = 95.08%						
SiO2†	81575.5	5146.1 ug/L	32.84	5146.1 ppb	32.84	0.64%
QC value within limits for SiO2 Recovery = 96.23%						

All analyte(s) passed QC.



Sequence No.: 13  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 8  
 Date Collected: 1/26/2010 17:02:43  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5295.7	5295.7	99.2 %		17:04:36
1	Y RADIAL	5703.6	5703.6	99.07 %		17:04:36
1	Al 396.153Radial†	8.7	-0.4	-0.3165 ug/L	-0.3165 ppb	17:04:56
1	Ca 317.933Radial†	26.1	6.1	9.7644 ug/L	9.7644 ppb	17:04:56
1	Fe 238.204 Radial†	8.0	1.0	8.9563 ug/L	8.9563 ppb	17:04:56
1	K 766.490 Radial†	2160.1	-325.3	-59.418 ug/L	-59.418 ppb	17:04:36
1	Mg 279.077 IEC†	1.9	1.0	34.293 ug/L	34.293 ppb	17:04:56
1	Na 589.592 Radial†	-707.3	-165.6	-49.235 ug/L	-49.235 ppb	17:04:36
1	Sr 421.552†	35.8	29.0	0.1861 ug/L	0.1861 ppb	17:04:36
1	Sc 361.383	903875.2	903875.2	100.67 %		17:05:52
1	Y 371.029	795336.9	795336.9	96.624 %		17:05:52
1	Ag 328.068†	342.0	43.7	0.1899 ug/L	0.1899 ppb	17:05:52
1	As 188.979†	-26.0	4.3	1.7762 ug/L	1.7762 ppb	17:06:12
1	B 249.677†	-263.2	-21.1	-0.4638 ug/L	-0.4638 ppb	17:06:12
1	Ba 233.527†	-7.5	-4.3	-0.0326 ug/L	-0.0326 ppb	17:06:12
1	Be 313.107†	-5006.7	127.0	0.0449 ug/L	0.0449 ppb	17:05:52
1	Cd 226.502†	-205.3	2.2	0.0232 ug/L	0.0232 ppb	17:06:12
1	Co 228.616†	-67.8	2.6	0.0562 ug/L	0.0562 ppb	17:06:12
1	Cr 267.716†	96.6	2.0	0.0242 ug/L	0.0242 ppb	17:06:12
1	Cu 324.752†	8877.4	-309.6	-0.8661 ug/L	-0.8661 ppb	17:05:52
1	Mn 257.610†	516.4	23.1	0.0254 ug/L	0.0254 ppb	17:06:12
1	Mo 202.031†	24.6	0.8	0.0577 ug/L	0.0577 ppb	17:06:12
1	Ni 231.604†	98.4	4.1	0.1023 ug/L	0.1023 ppb	17:06:12
1	P 214.914†	247.7	7.3	4.3184 ug/L	4.3184 ppb	17:06:12
1	Pb 220.353†	-56.1	4.7	0.5870 ug/L	0.5870 ppb	17:06:12
1	S 181.975 Axial†	49.0	-28.3	-38.996 ug/L	-38.996 ppb	17:06:12
1	Sb 206.836†	53.0	22.4	7.5215 ug/L	7.5215 ppb	17:06:12
1	Se 196.026†	-21.6	-3.5	-2.0027 ug/L	-2.0027 ppb	17:06:12
1	Si 251.611†	527.7	28.3	0.8364 ug/L	0.8364 ppb	17:06:12
1	Sn 189.927†	6.3	6.6	1.2065 ug/L	1.2065 ppb	17:06:12
1	Ti 334.940†	-891.8	20.7	0.0315 ug/L	0.0315 ppb	17:05:52
1	Tl 190.801†	-44.2	-7.0	-2.2451 ug/L	-2.2451 ppb	17:06:12
1	U 409.014†	-1201.2	-130.4	-3.2608 ug/L	-3.2608 ppb	17:05:52
1	V 292.402†	-1323.0	79.4	0.4875 ug/L	0.4875 ppb	17:05:52
1	Zn 213.857†	727.9	-10.3	-0.0966 ug/L	-0.0966 ppb	17:06:12
1	SiO2†	541.1	24.0	1.5192 ug/L	1.5192 ppb	17:07:23
2	Sc Radial	5415.0	5415.0	101 %		17:05:01
2	Y RADIAL	5882.2	5882.2	102.2 %		17:05:01
2	Al 396.153Radial†	4.3	-4.9	-3.6707 ug/L	-3.6707 ppb	17:05:21
2	Ca 317.933Radial†	24.9	4.3	6.8654 ug/L	6.8654 ppb	17:05:21
2	Fe 238.204 Radial†	7.9	0.6	5.4460 ug/L	5.4460 ppb	17:05:21
2	K 766.490 Radial†	2320.8	-214.8	-39.226 ug/L	-39.226 ppb	17:05:01
2	Mg 279.077 IEC†	0.6	-0.3	-12.259 ug/L	-12.259 ppb	17:05:21
2	Na 589.592 Radial†	-762.3	-204.1	-60.676 ug/L	-60.676 ppb	17:05:01
2	Sr 421.552†	10.1	2.9	0.0183 ug/L	0.0183 ppb	17:05:01
2	Sc 361.383	921318.5	921318.5	102.61 %		17:06:18
2	Y 371.029	809656.2	809656.2	98.364 %		17:06:18
2	Ag 328.068†	291.2	-12.2	-0.0431 ug/L	-0.0431 ppb	17:06:18
2	As 188.979†	-21.7	9.1	3.7078 ug/L	3.7078 ppb	17:06:38
2	B 249.677†	-236.3	10.2	0.2215 ug/L	0.2215 ppb	17:06:38
2	Ba 233.527†	-0.6	2.5	0.0216 ug/L	0.0216 ppb	17:06:38
2	Be 313.107†	-5015.9	212.1	0.0750 ug/L	0.0750 ppb	17:06:18
2	Cd 226.502†	-199.4	11.8	0.1309 ug/L	0.1309 ppb	17:06:38
2	Co 228.616†	-65.3	6.3	0.1372 ug/L	0.1372 ppb	17:06:38
2	Cr 267.716†	91.4	-4.8	-0.0495 ug/L	-0.0495 ppb	17:06:38
2	Cu 324.752†	9048.2	-310.1	-0.8671 ug/L	-0.8671 ppb	17:06:18
2	Mn 257.610†	517.6	14.6	0.0174 ug/L	0.0174 ppb	17:06:38
2	Mo 202.031†	18.6	-5.5	-0.3757 ug/L	-0.3757 ppb	17:06:38
2	Ni 231.604†	103.6	7.3	0.1831 ug/L	0.1831 ppb	17:06:38

2	P 214.914†	240.8	-4.1	-2.1204 ug/L	-2.1204 ppb	17:06:38
2	Pb 220.353†	-62.1	-0.1	-0.0146 ug/L	-0.0146 ppb	17:06:38
2	S 181.975 Axial†	45.0	-33.1	-45.630 ug/L	-45.630 ppb	17:06:38
2	Sb 206.836†	38.0	6.8	2.2872 ug/L	2.2872 ppb	17:06:38
2	Se 196.026†	-24.1	-5.6	-3.1979 ug/L	-3.1979 ppb	17:06:38
2	Si 251.611†	529.2	19.8	0.5906 ug/L	0.5906 ppb	17:06:38
2	Sn 189.927†	4.2	4.4	0.8191 ug/L	0.8191 ppb	17:06:38
2	Ti 334.940†	-882.6	46.4	0.0746 ug/L	0.0746 ppb	17:06:18
2	Tl 190.801†	-37.8	0.1	0.0208 ug/L	0.0208 ppb	17:06:38
2	U 409.014†	-1272.6	-177.3	-4.4350 ug/L	-4.4350 ppb	17:06:18
2	V 292.402†	-1324.4	102.9	0.6249 ug/L	0.6249 ppb	17:06:18
2	Zn 213.857†	723.6	-28.2	-0.2634 ug/L	-0.2634 ppb	17:06:38
2	SiO2†	549.0	21.6	1.3762 ug/L	1.3762 ppb	17:07:44
3	Sc Radial	5411.0	5411.0	101 %		17:05:26
3	Y RADIAL	5850.4	5850.4	101.6 %		17:05:26
3	Al 396.153Radial†	15.2	5.9	4.4738 ug/L	4.4738 ppb	17:05:46
3	Ca 317.933Radial†	20.3	-0.2	-0.2757 ug/L	-0.2757 ppb	17:05:46
3	Fe 238.204 Radial†	7.3	0.1	0.4720 ug/L	0.4720 ppb	17:05:46
3	K 766.490 Radial†	2343.5	-190.7	-34.833 ug/L	-34.833 ppb	17:05:26
3	Mg 279.077 IEC†	1.3	0.3	10.439 ug/L	10.439 ppb	17:05:46
3	Na 589.592 Radial†	-667.7	-111.3	-33.083 ug/L	-33.083 ppb	17:05:26
3	Sr 421.552†	1.4	-5.7	-0.0365 ug/L	-0.0365 ppb	17:05:26
3	Sc 361.383	915253.9	915253.9	101.94 %		17:06:43
3	Y 371.029	804714.4	804714.4	97.764 %		17:06:43
3	Ag 328.068†	313.2	11.3	0.0479 ug/L	0.0479 ppb	17:06:43
3	As 188.979†	-24.4	6.2	2.5504 ug/L	2.5504 ppb	17:07:03
3	B 249.677†	-265.6	-20.2	-0.4425 ug/L	-0.4425 ppb	17:07:03
3	Ba 233.527†	-16.0	-12.6	-0.0990 ug/L	-0.0990 ppb	17:07:03
3	Be 313.107†	-5010.8	184.8	0.0652 ug/L	0.0652 ppb	17:06:43
3	Cd 226.502†	-208.5	1.7	0.0186 ug/L	0.0186 ppb	17:07:03
3	Co 228.616†	-70.0	1.3	0.0287 ug/L	0.0287 ppb	17:07:03
3	Cr 267.716†	85.6	-9.9	-0.1075 ug/L	-0.1075 ppb	17:07:03
3	Cu 324.752†	8977.2	-321.3	-0.9012 ug/L	-0.9012 ppb	17:06:43
3	Mn 257.610†	513.8	14.1	0.0155 ug/L	0.0155 ppb	17:07:03
3	Mo 202.031†	22.7	-1.3	-0.0882 ug/L	-0.0882 ppb	17:07:03
3	Ni 231.604†	96.2	0.7	0.0179 ug/L	0.0179 ppb	17:07:03
3	P 214.914†	240.0	-3.3	-1.6913 ug/L	-1.6913 ppb	17:07:03
3	Pb 220.353†	-45.4	15.8	1.9863 ug/L	1.9863 ppb	17:07:03
3	S 181.975 Axial†	45.3	-32.5	-44.797 ug/L	-44.797 ppb	17:07:03
3	Sb 206.836†	42.2	11.1	3.7340 ug/L	3.7340 ppb	17:07:03
3	Se 196.026†	-24.5	-6.1	-3.5188 ug/L	-3.5188 ppb	17:07:03
3	Si 251.611†	518.0	12.2	0.3629 ug/L	0.3629 ppb	17:07:03
3	Sn 189.927†	7.1	7.3	1.3401 ug/L	1.3401 ppb	17:07:03
3	Ti 334.940†	-910.1	13.7	0.0201 ug/L	0.0201 ppb	17:06:43
3	Tl 190.801†	-43.6	-5.9	-1.8844 ug/L	-1.8844 ppb	17:07:03
3	U 409.014†	-1090.9	-7.4	-0.1841 ug/L	-0.1841 ppb	17:06:43
3	V 292.402†	-1395.0	25.0	0.1542 ug/L	0.1542 ppb	17:06:43
3	Zn 213.857†	725.8	-21.4	-0.1980 ug/L	-0.1980 ppb	17:07:03
3	SiO2†	552.2	28.3	1.7920 ug/L	1.7920 ppb	17:08:04

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	913482.5	101.74 %	0.986			0.97%
Sc Radial	5373.9	101 %	1.3			1.26%
Y 371.029	803235.8	97.584 %	0.8836			0.91%
Y RADIAL	5812.1	101.0 %	1.66			1.64%
Ag 328.068†	14.3	0.0649 ug/L	0.11742	0.0649 ppb	0.11742	180.97%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	0.2	0.1622 ug/L	4.09327	0.1622 ppb	4.09327	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	6.5	2.6782 ug/L	0.97210	2.6782 ppb	0.97210	36.30%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	-10.4	-0.2283 ug/L	0.38965	-0.2283 ppb	0.38965	170.70%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-4.8	-0.0367 ug/L	0.06043	-0.0367 ppb	0.06043	164.85%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	174.6	0.0617 ug/L	0.01538	0.0617 ppb	0.01538	24.92%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	3.4	5.4514 ug/L	5.16727	5.4514 ppb	5.16727	94.79%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated						
Cd 226.502†	5.2	0.0576 ug/L	0.06354	0.0576 ppb	0.06354	110.35%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	3.4	0.0740 ug/L	0.05642	0.0740 ppb	0.05642	76.22%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-4.2	-0.0442 ug/L	0.06599	-0.0442 ppb	0.06599	149.20%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-313.6	-0.8781 ug/L	0.02000	-0.8781 ppb	0.02000	2.28%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	0.5	4.9581 ug/L	4.26317	4.9581 ppb	4.26317	85.98%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-243.6	-44.492 ug/L	13.1117	-44.492 ppb	13.1117	29.47%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	0.3	10.825 ug/L	23.2784	10.825 ppb	23.2784	215.05%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	17.3	0.0194 ug/L	0.00525	0.0194 ppb	0.00525	27.06%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-2.0	-0.1354 ug/L	0.22054	-0.1354 ppb	0.22054	162.86%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-160.3	-47.664 ug/L	13.8633	-47.664 ppb	13.8633	29.09%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	4.0	0.1011 ug/L	0.08260	0.1011 ppb	0.08260	81.71%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-0.0	0.1689 ug/L	3.59995	0.1689 ppb	3.59995	>999.9%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	6.8	0.8529 ug/L	1.02660	0.8529 ppb	1.02660	120.37%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-31.3	-43.141 ug/L	3.6142	-43.141 ppb	3.6142	8.38%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	13.4	4.5142 ug/L	2.70297	4.5142 ppb	2.70297	59.88%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-5.1	-2.9064 ug/L	0.79897	-2.9064 ppb	0.79897	27.49%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	20.1	0.5966 ug/L	0.23684	0.5966 ppb	0.23684	39.70%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	6.1	1.1219 ug/L	0.27063	1.1219 ppb	0.27063	24.12%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	8.7	0.0560 ug/L	0.11601	0.0560 ppb	0.11601	207.25%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	26.9	0.0421 ug/L	0.02876	0.0421 ppb	0.02876	68.38%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-4.3	-1.3695 ug/L	1.21751	-1.3695 ppb	1.21751	88.90%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	-105.0	-2.6266 ug/L	2.19531	-2.6266 ppb	2.19531	83.58%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	69.1	0.4222 ug/L	0.24203	0.4222 ppb	0.24203	57.33%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-20.0	-0.1860 ug/L	0.08405	-0.1860 ppb	0.08405	45.19%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	24.6	1.5625 ug/L	0.21124	1.5625 ppb	0.21124	13.52%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 23  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 1  
 Date Collected: 1/26/2010 18:12:35  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5569.9	5569.9	104 %		18:14:27
1	Y RADIAL	5977.3	5977.3	103.8 %		18:14:27
1	Al 396.153Radial†	6615.6	6333.5	4774.3 ug/L	4774.3 ppb	18:14:27
1	Ca 317.933Radial†	3229.3	3075.8	4943.7 ug/L	4943.7 ppb	18:14:47
1	Fe 238.204 Radial†	581.1	549.9	5154.2 ug/L	5154.2 ppb	18:14:47
1	K 766.490 Radial†	30244.3	26492.8	4833.4 ug/L	4833.4 ppb	18:14:27
1	Mg 279.077 IEC†	153.1	145.8	5201.0 ug/L	5201.0 ppb	18:14:47
1	Na 589.592 Radial†	34927.7	34034.1	10117 ug/L	10117 ppb	18:14:27
1	Sr 421.552†	81821.1	78437.9	503.35 ug/L	503.35 ppb	18:14:27
1	Sc 361.383	936626.4	936626.4	104.32 %		18:15:44
1	Y 371.029	818866.9	818866.9	99.483 %		18:15:44
1	Ag 328.068†	120728.0	115436.8	484.87 ug/L	484.87 ppb	18:15:50
1	As 188.979†	1205.1	1185.4	489.17 ug/L	489.17 ppb	18:16:10
1	B 249.677†	22866.7	22161.0	483.76 ug/L	483.76 ppb	18:15:50
1	Ba 233.527†	63707.9	61075.1	482.62 ug/L	482.62 ppb	18:15:50
1	Be 313.107†	1419153.9	1365536.1	482.80 ug/L	482.80 ppb	18:15:44
1	Cd 226.502†	44928.9	43276.1	483.28 ug/L	483.28 ppb	18:15:50
1	Co 228.616†	23402.0	22503.6	493.40 ug/L	493.40 ppb	18:15:50
1	Cr 267.716†	46426.3	44411.4	482.04 ug/L	482.04 ppb	18:15:50
1	Cu 324.752†	188180.1	171266.1	480.45 ug/L	480.45 ppb	18:15:50
1	Mn 257.610†	449551.0	430460.8	482.92 ug/L	482.92 ppb	18:15:44
1	Mo 202.031†	7422.6	7091.9	484.47 ug/L	484.47 ppb	18:16:10
1	Ni 231.604†	20312.5	19378.4	486.71 ug/L	486.71 ppb	18:15:50
1	P 214.914†	4676.2	4244.0	2299.5 ug/L	2299.5 ppb	18:16:10
1	Pb 220.353†	3949.8	3846.8	484.40 ug/L	484.40 ppb	18:16:10
1	S 181.975 Axial†	798.4	688.4	946.84 ug/L	946.84 ppb	18:16:10
1	Sb 206.836†	1541.6	1447.6	502.14 ug/L	502.14 ppb	18:16:10
1	Se 196.026†	841.9	825.0	494.64 ug/L	494.64 ppb	18:16:10
1	Si 251.611†	85599.3	81561.7	2410.7 ug/L	2410.7 ppb	18:15:50
1	Sn 189.927†	2767.6	2653.4	488.76 ug/L	488.76 ppb	18:16:10
1	Ti 334.940†	327922.6	315261.2	480.53 ug/L	480.53 ppb	18:15:50
1	Tl 190.801†	1520.2	1494.2	481.16 ug/L	481.16 ppb	18:16:10
1	U 409.014†	19088.3	19361.4	482.47 ug/L	482.47 ppb	18:15:50
1	V 292.402†	79087.9	77209.2	486.58 ug/L	486.58 ppb	18:15:50
1	Zn 213.857†	54759.1	51760.1	477.87 ug/L	477.87 ppb	18:15:50
1	SiO2†	85110.1	81075.2	5114.4 ug/L	5114.4 ppb	18:17:17
2	Sc Radial	5552.4	5552.4	104 %		18:14:52
2	Y RADIAL	5966.5	5966.5	103.6 %		18:14:52
2	Al 396.153Radial†	6678.3	6413.7	4835.2 ug/L	4835.2 ppb	18:14:52
2	Ca 317.933Radial†	3214.5	3071.3	4936.5 ug/L	4936.5 ppb	18:15:12
2	Fe 238.204 Radial†	584.7	555.2	5203.2 ug/L	5203.2 ppb	18:15:12
2	K 766.490 Radial†	30676.1	26999.3	4926.0 ug/L	4926.0 ppb	18:14:52
2	Mg 279.077 IEC†	152.0	145.2	5179.3 ug/L	5179.3 ppb	18:15:12
2	Na 589.592 Radial†	35017.5	34225.8	10174 ug/L	10174 ppb	18:14:52
2	Sr 421.552†	82187.9	79037.4	507.20 ug/L	507.20 ppb	18:14:52
2	Sc 361.383	940530.3	940530.3	104.75 %		18:16:15
2	Y 371.029	824263.5	824263.5	100.14 %		18:16:15
2	Ag 328.068†	121450.6	115646.3	485.77 ug/L	485.77 ppb	18:16:21
2	As 188.979†	1192.7	1168.8	482.38 ug/L	482.38 ppb	18:16:41
2	B 249.677†	23132.6	22323.9	487.33 ug/L	487.33 ppb	18:16:21
2	Ba 233.527†	63953.3	61055.8	482.47 ug/L	482.47 ppb	18:16:21
2	Be 313.107†	1433413.1	1373501.9	485.61 ug/L	485.61 ppb	18:16:15
2	Cd 226.502†	45112.0	43272.1	483.23 ug/L	483.23 ppb	18:16:21
2	Co 228.616†	23504.1	22508.0	493.49 ug/L	493.49 ppb	18:16:21
2	Cr 267.716†	46703.3	44491.2	482.91 ug/L	482.91 ppb	18:16:21
2	Cu 324.752†	188868.6	171174.6	480.19 ug/L	480.19 ppb	18:16:21
2	Mn 257.610†	452511.0	431497.8	484.08 ug/L	484.08 ppb	18:16:15
2	Mo 202.031†	7411.1	7051.4	481.71 ug/L	481.71 ppb	18:16:41
2	Ni 231.604†	20348.8	19332.2	485.55 ug/L	485.55 ppb	18:16:21

2	P 214.914†	4681.7	4230.6	2291.9 ug/L	2291.9 ppb	18:16:41
2	Pb 220.353†	3958.2	3839.0	483.43 ug/L	483.43 ppb	18:16:41
2	S 181.975 Axial†	795.1	682.0	938.14 ug/L	938.14 ppb	18:16:41
2	Sb 206.836†	1531.7	1431.9	496.76 ug/L	496.76 ppb	18:16:41
2	Se 196.026†	838.5	818.4	491.01 ug/L	491.01 ppb	18:16:41
2	Si 251.611†	86009.9	81613.0	2412.3 ug/L	2412.3 ppb	18:16:21
2	Sn 189.927†	2744.2	2620.1	482.64 ug/L	482.64 ppb	18:16:41
2	Ti 334.940†	329683.4	315637.3	481.11 ug/L	481.11 ppb	18:16:21
2	Tl 190.801†	1532.9	1500.3	483.13 ug/L	483.13 ppb	18:16:41
2	U 409.014†	19217.0	19408.2	483.63 ug/L	483.63 ppb	18:16:21
2	V 292.402†	79766.1	77541.9	488.60 ug/L	488.60 ppb	18:16:21
2	Zn 213.857†	55055.7	51825.3	478.48 ug/L	478.48 ppb	18:16:21
2	SiO2†	86087.3	81669.4	5152.0 ug/L	5152.0 ppb	18:17:22
3	Sc Radial	5484.8	5484.8	103 %		18:15:17
3	Y RADIAL	5916.9	5916.9	102.8 %		18:15:17
3	Al 396.153Radial†	6642.3	6457.9	4868.5 ug/L	4868.5 ppb	18:15:17
3	Ca 317.933Radial†	3230.5	3125.1	5022.9 ug/L	5022.9 ppb	18:15:37
3	Fe 238.204 Radial†	587.6	565.0	5294.8 ug/L	5294.8 ppb	18:15:37
3	K 766.490 Radial†	30532.3	27223.3	4966.8 ug/L	4966.8 ppb	18:15:17
3	Mg 279.077 IBC†	152.7	147.7	5269.4 ug/L	5269.4 ppb	18:15:37
3	Na 589.592 Radial†	34866.3	34494.0	10254 ug/L	10254 ppb	18:15:17
3	Sr 421.552†	81761.9	79597.6	510.80 ug/L	510.80 ppb	18:15:17
3	Sc 361.383	930460.1	930460.1	103.63 %		18:16:46
3	Y 371.029	814593.4	814593.4	98.964 %		18:16:46
3	Ag 328.068†	120875.5	116346.1	488.73 ug/L	488.73 ppb	18:16:52
3	As 188.979†	1187.4	1176.0	485.36 ug/L	485.36 ppb	18:17:12
3	B 249.677†	23060.7	22493.4	491.02 ug/L	491.02 ppb	18:16:52
3	Ba 233.527†	63827.8	61595.5	486.74 ug/L	486.74 ppb	18:16:52
3	Be 313.107†	1417049.1	1372521.0	485.27 ug/L	485.27 ppb	18:16:46
3	Cd 226.502†	45037.3	43666.2	487.63 ug/L	487.63 ppb	18:16:52
3	Co 228.616†	23492.6	22739.8	498.57 ug/L	498.57 ppb	18:16:52
3	Cr 267.716†	46609.4	44883.0	487.16 ug/L	487.16 ppb	18:16:52
3	Cu 324.752†	187500.7	171805.9	481.97 ug/L	481.97 ppb	18:16:52
3	Mn 257.610†	447975.3	431796.3	484.42 ug/L	484.42 ppb	18:16:46
3	Mo 202.031†	7397.2	7114.6	486.02 ug/L	486.02 ppb	18:17:12
3	Ni 231.604†	20291.4	19487.1	489.44 ug/L	489.44 ppb	18:16:52
3	P 214.914†	4679.3	4276.7	2317.5 ug/L	2317.5 ppb	18:17:12
3	Pb 220.353†	3950.8	3872.9	487.68 ug/L	487.68 ppb	18:17:12
3	S 181.975 Axial†	790.6	685.9	943.46 ug/L	943.46 ppb	18:17:12
3	Sb 206.836†	1552.6	1468.0	509.03 ug/L	509.03 ppb	18:17:12
3	Se 196.026†	837.3	826.0	495.69 ug/L	495.69 ppb	18:17:12
3	Si 251.611†	85764.2	82264.6	2431.5 ug/L	2431.5 ppb	18:16:52
3	Sn 189.927†	2757.6	2661.4	490.25 ug/L	490.25 ppb	18:17:12
3	Ti 334.940†	328021.8	317440.2	483.86 ug/L	483.86 ppb	18:16:52
3	Tl 190.801†	1542.6	1525.4	491.17 ug/L	491.17 ppb	18:17:12
3	U 409.014†	19033.2	19429.5	484.15 ug/L	484.15 ppb	18:16:52
3	V 292.402†	79407.3	78019.8	491.62 ug/L	491.62 ppb	18:16:52
3	Zn 213.857†	54717.4	52067.7	480.70 ug/L	480.70 ppb	18:16:52
3	SiO2†	85324.6	81822.9	5161.6 ug/L	5161.6 ppb	18:17:27

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	935872.3	104.23 %	0.565			0.54%
Sc Radial	5535.7	104 %	0.8			0.81%
Y 371.029	819241.3	99.528 %	0.5887			0.59%
Y RADIAL	5953.6	103.4 %	0.56			0.54%
Ag 328.068†	115809.7	486.46 ug/L	2.019	486.46 ppb	2.019	0.42%
QC value within limits for Ag 328.068 Recovery = 97.29%						
Al 396.153Radial†	6401.7	4826.0 ug/L	47.75	4826.0 ppb	47.75	0.99%
QC value within limits for Al 396.153Radial Recovery = 96.52%						
As 188.979†	1176.7	485.64 ug/L	3.403	485.64 ppb	3.403	0.70%
QC value within limits for As 188.979 Recovery = 97.13%						
B 249.677†	22326.1	487.37 ug/L	3.627	487.37 ppb	3.627	0.74%
QC value within limits for B 249.677 Recovery = 97.47%						
Ba 233.527†	61242.1	483.94 ug/L	2.420	483.94 ppb	2.420	0.50%
QC value within limits for Ba 233.527 Recovery = 96.79%						
Be 313.107†	1370519.7	484.56 ug/L	1.534	484.56 ppb	1.534	0.32%
QC value within limits for Be 313.107 Recovery = 96.91%						
Ca 317.933Radial†	3090.7	4967.7 ug/L	47.95	4967.7 ppb	47.95	0.97%

QC value within limits for Ca 317.933 Radial Recovery = 99.35%							
Cd 226.502†	43404.8	484.71 ug/L	2.523	484.71 ppb	2.523	0.52%	
QC value within limits for Cd 226.502 Recovery = 96.94%							
Co 228.616†	22583.8	495.16 ug/L	2.961	495.16 ppb	2.961	0.60%	
QC value within limits for Co 228.616 Recovery = 99.03%							
Cr 267.716†	44595.2	484.04 ug/L	2.741	484.04 ppb	2.741	0.57%	
QC value within limits for Cr 267.716 Recovery = 96.81%							
Cu 324.752†	171415.5	480.87 ug/L	0.960	480.87 ppb	0.960	0.20%	
QC value within limits for Cu 324.752 Recovery = 96.17%							
Fe 238.204 Radial†	556.7	5217.4 ug/L	71.38	5217.4 ppb	71.38	1.37%	
QC value within limits for Fe 238.204 Radial Recovery = 104.35%							
K 766.490 Radial†	26905.1	4908.7 ug/L	68.33	4908.7 ppb	68.33	1.39%	
QC value within limits for K 766.490 Radial Recovery = 98.17%							
Mg 279.077 IEC†	146.3	5216.6 ug/L	47.03	5216.6 ppb	47.03	0.90%	
QC value within limits for Mg 279.077 IEC Recovery = 104.33%							
Mn 257.610†	431251.6	483.81 ug/L	0.791	483.81 ppb	0.791	0.16%	
QC value within limits for Mn 257.610 Recovery = 96.76%							
Mo 202.031†	7086.0	484.07 ug/L	2.187	484.07 ppb	2.187	0.45%	
QC value within limits for Mo 202.031 Recovery = 96.81%							
Na 589.592 Radial†	34251.3	10182 ug/L	68.7	10182 ppb	68.7	0.67%	
QC value within limits for Na 589.592 Radial Recovery = 101.82%							
Ni 231.604†	19399.2	487.23 ug/L	1.997	487.23 ppb	1.997	0.41%	
QC value within limits for Ni 231.604 Recovery = 97.45%							
P 214.914†	4250.4	2303.0 ug/L	13.16	2303.0 ppb	13.16	0.57%	
QC value within limits for P 214.914 Recovery = 92.12%							
Pb 220.353†	3852.9	485.17 ug/L	2.230	485.17 ppb	2.230	0.46%	
QC value within limits for Pb 220.353 Recovery = 97.03%							
S 181.975 Axial†	685.4	942.81 ug/L	4.387	942.81 ppb	4.387	0.47%	
QC value within limits for S 181.975 Axial Recovery = 94.28%							
Sb 206.836†	1449.2	502.64 ug/L	6.154	502.64 ppb	6.154	1.22%	
QC value within limits for Sb 206.836 Recovery = 100.53%							
Se 196.026†	823.1	493.78 ug/L	2.457	493.78 ppb	2.457	0.50%	
QC value within limits for Se 196.026 Recovery = 98.76%							
Si 251.611†	81813.1	2418.2 ug/L	11.59	2418.2 ppb	11.59	0.48%	
QC value within limits for Si 251.611 Recovery = 96.73%							
Sn 189.927†	2645.0	487.22 ug/L	4.033	487.22 ppb	4.033	0.83%	
QC value within limits for Sn 189.927 Recovery = 97.44%							
Sr 421.552†	79024.3	507.12 ug/L	3.722	507.12 ppb	3.722	0.73%	
QC value within limits for Sr 421.552 Recovery = 101.42%							
Ti 334.940†	316112.9	481.83 ug/L	1.777	481.83 ppb	1.777	0.37%	
QC value within limits for Ti 334.940 Recovery = 96.37%							
Tl 190.801†	1506.6	485.16 ug/L	5.303	485.16 ppb	5.303	1.09%	
QC value within limits for Tl 190.801 Recovery = 97.03%							
U 409.014†	19399.7	483.42 ug/L	0.859	483.42 ppb	0.859	0.18%	
QC value within limits for U 409.014 Recovery = 96.68%							
V 292.402†	77590.3	488.94 ug/L	2.537	488.94 ppb	2.537	0.52%	
QC value within limits for V 292.402 Recovery = 97.79%							
Zn 213.857†	51884.3	479.02 ug/L	1.491	479.02 ppb	1.491	0.31%	
QC value within limits for Zn 213.857 Recovery = 95.80%							
SiO2†	81522.5	5142.7 ug/L	24.97	5142.7 ppb	24.97	0.49%	
QC value within limits for SiO2 Recovery = 96.17%							
All analyte(s) passed QC.							

Sequence No.: 24  
 Sample ID: CCB  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 6  
 Date Collected: 1/26/2010 18:19:37  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5441.5	5441.5	102 %		18:21:29
1	Y RADIAL	5854.4	5854.4	101.7 %		18:21:29
1	Al 396.153Radial†	-2.8	-11.9	-8.9932 ug/L	-8.9932 ppb	18:21:49
1	Ca 317.933Radial†	19.1	-1.5	-2.4436 ug/L	-2.4436 ppb	18:21:49
1	Fe 238.204 Radial†	5.6	-1.7	-15.847 ug/L	-15.847 ppb	18:21:49
1	K 766.490 Radial†	2272.4	-273.4	-49.926 ug/L	-49.926 ppb	18:21:29
1	Mg 279.077 IEC†	3.2	2.2	77.442 ug/L	77.442 ppb	18:21:49
1	Na 589.592 Radial†	-747.7	-186.1	-55.317 ug/L	-55.317 ppb	18:21:29
1	Sr 421.552†	22.7	15.2	0.0973 ug/L	0.0973 ppb	18:21:29
1	Sc 361.383	951804.2	951804.2	106.01 %		18:22:46
1	Y 371.029	841748.5	841748.5	102.26 %		18:22:46
1	Ag 328.068†	230.7	-78.4	-0.3222 ug/L	-0.3222 ppb	18:22:51
1	As 188.979†	-27.7	4.1	1.6523 ug/L	1.6523 ppb	18:23:11
1	B 249.677†	346.0	566.8	12.434 ug/L	12.434 ppb	18:23:11
1	Ba 233.527†	-4.0	-0.6	-0.0045 ug/L	-0.0045 ppb	18:23:11
1	Be 313.107†	-4974.6	407.7	0.1437 ug/L	0.1437 ppb	18:22:51
1	Cd 226.502†	-199.0	18.5	0.2063 ug/L	0.2063 ppb	18:23:11
1	Co 228.616†	-70.4	3.5	0.0779 ug/L	0.0779 ppb	18:23:11
1	Cr 267.716†	64.2	-33.4	-0.3578 ug/L	-0.3578 ppb	18:23:11
1	Cu 324.752†	8814.5	-813.0	-2.2759 ug/L	-2.2759 ppb	18:22:51
1	Mn 257.610†	497.5	-20.5	-0.0277 ug/L	-0.0277 ppb	18:23:11
1	Mo 202.031†	28.6	3.4	0.2303 ug/L	0.2303 ppb	18:23:11
1	Ni 231.604†	105.0	5.4	0.1347 ug/L	0.1347 ppb	18:23:11
1	P 214.914†	227.2	-24.4	-13.285 ug/L	-13.285 ppb	18:23:11
1	Pb 220.353†	-45.8	17.2	2.1599 ug/L	2.1599 ppb	18:23:11
1	S 181.975 Axial†	38.1	-41.1	-56.541 ug/L	-56.541 ppb	18:23:11
1	Sb 206.836†	39.2	6.8	2.2867 ug/L	2.2867 ppb	18:23:11
1	Se 196.026†	-16.1	2.7	1.5329 ug/L	1.5329 ppb	18:23:11
1	Si 251.611†	473.1	-49.7	-1.4750 ug/L	-1.4750 ppb	18:23:11
1	Sn 189.927†	6.3	6.2	1.1486 ug/L	1.1486 ppb	18:23:11
1	Ti 334.940†	-1010.6	-46.8	-0.0735 ug/L	-0.0735 ppb	18:22:51
1	Tl 190.801†	-39.3	-0.2	-0.0557 ug/L	-0.0557 ppb	18:23:11
1	U 409.014†	-1552.6	-401.8	-10.043 ug/L	-10.043 ppb	18:22:51
1	V 292.402†	-1398.8	74.0	0.4485 ug/L	0.4485 ppb	18:22:51
1	Zn 213.857†	678.3	-93.5	-0.8675 ug/L	-0.8675 ppb	18:23:11
1	SiO2†	481.0	-59.6	-3.7784 ug/L	-3.7784 ppb	18:24:32
2	Sc Radial	5535.8	5535.8	104 %		18:21:54
2	Y RADIAL	5952.0	5952.0	103.4 %		18:21:54
2	Al 396.153Radial†	5.0	-4.3	-3.2815 ug/L	-3.2815 ppb	18:22:14
2	Ca 317.933Radial†	21.2	0.2	0.3784 ug/L	0.3784 ppb	18:22:14
2	Fe 238.204 Radial†	6.4	-1.0	-9.1324 ug/L	-9.1324 ppb	18:22:14
2	K 766.490 Radial†	2249.9	-333.2	-60.846 ug/L	-60.846 ppb	18:21:54
2	Mg 279.077 IEC†	1.9	0.9	31.198 ug/L	31.198 ppb	18:22:14
2	Na 589.592 Radial†	-800.8	-224.8	-66.840 ug/L	-66.840 ppb	18:21:54
2	Sr 421.552†	36.3	27.9	0.1790 ug/L	0.1790 ppb	18:21:54
2	Sc 361.383	943560.9	943560.9	105.09 %		18:23:16
2	Y 371.029	834278.1	834278.1	101.36 %		18:23:16
2	Ag 328.068†	265.6	-43.3	-0.1742 ug/L	-0.1742 ppb	18:23:21
2	As 188.979†	-24.7	6.7	2.7286 ug/L	2.7286 ppb	18:23:41
2	B 249.677†	359.1	582.1	12.768 ug/L	12.768 ppb	18:23:41
2	Ba 233.527†	-10.0	-6.4	-0.0499 ug/L	-0.0499 ppb	18:23:41
2	Be 313.107†	-5059.7	285.7	0.1011 ug/L	0.1011 ppb	18:23:21
2	Cd 226.502†	-178.3	36.5	0.4066 ug/L	0.4066 ppb	18:23:41
2	Co 228.616†	-70.4	3.0	0.0662 ug/L	0.0662 ppb	18:23:41
2	Cr 267.716†	81.4	-16.5	-0.1745 ug/L	-0.1745 ppb	18:23:41
2	Cu 324.752†	8860.9	-696.2	-1.9486 ug/L	-1.9486 ppb	18:23:21
2	Mn 257.610†	493.4	-20.4	-0.0250 ug/L	-0.0250 ppb	18:23:41
2	Mo 202.031†	29.6	4.6	0.3101 ug/L	0.3101 ppb	18:23:41
2	Ni 231.604†	99.5	1.0	0.0261 ug/L	0.0261 ppb	18:23:41



2	P 214.914†	226.3	-23.4	-12.814 ug/L	-12.814 ppb	18:23:41
2	Pb 220.353†	-53.2	9.7	1.2229 ug/L	1.2229 ppb	18:23:41
2	S 181.975 Axial†	47.8	-31.5	-43.424 ug/L	-43.424 ppb	18:23:41
2	Sb 206.836†	36.6	4.6	1.5412 ug/L	1.5412 ppb	18:23:41
2	Se 196.026†	-20.9	-1.9	-1.1471 ug/L	-1.1471 ppb	18:23:41
2	Si 251.611†	491.7	-28.1	-0.8359 ug/L	-0.8359 ppb	18:23:41
2	Sn 189.927†	1.8	2.0	0.3698 ug/L	0.3698 ppb	18:23:41
2	Ti 334.940†	-846.7	100.8	0.1552 ug/L	0.1552 ppb	18:23:21
2	Tl 190.801†	-34.8	3.7	1.1972 ug/L	1.1972 ppb	18:23:41
2	U 409.014†	-1491.2	-356.1	-8.9034 ug/L	-8.9034 ppb	18:23:21
2	V 292.402†	-1372.0	88.0	0.5364 ug/L	0.5364 ppb	18:23:21
2	Zn 213.857†	678.3	-87.9	-0.8158 ug/L	-0.8158 ppb	18:23:41
2	SiO2†	460.8	-74.9	-4.7464 ug/L	-4.7464 ppb	18:24:52
3	Sc Radial	5334.3	5334.3	99.9 %		18:22:19
3	Y RADIAL	5763.8	5763.8	100.1 %		18:22:19
3	Al 396.153Radial†	11.8	2.7	1.9930 ug/L	1.9930 ppb	18:22:39
3	Ca 317.933Radial†	19.7	-0.6	-0.9033 ug/L	-0.9033 ppb	18:22:39
3	Fe 238.204 Radial†	5.2	-2.0	-18.237 ug/L	-18.237 ppb	18:22:39
3	K 766.490 Radial†	2341.9	-159.1	-29.029 ug/L	-29.029 ppb	18:22:19
3	Mg 279.077 IEC†	1.9	0.9	32.584 ug/L	32.584 ppb	18:22:39
3	Na 589.592 Radial†	-798.5	-251.7	-74.826 ug/L	-74.826 ppb	18:22:19
3	Sr 421.552†	17.3	10.3	0.0658 ug/L	0.0658 ppb	18:22:19
3	Sc 361.383	942574.3	942574.3	104.98 %		18:23:46
3	Y 371.029	833350.1	833350.1	101.24 %		18:23:46
3	Ag 328.068†	320.1	8.9	0.0424 ug/L	0.0424 ppb	18:23:51
3	As 188.979†	-35.7	-3.8	-1.5690 ug/L	-1.5690 ppb	18:24:11
3	B 249.677†	300.2	526.4	11.547 ug/L	11.547 ppb	18:24:11
3	Ba 233.527†	4.9	7.8	0.0628 ug/L	0.0628 ppb	18:24:11
3	Be 313.107†	-4884.3	447.8	0.1581 ug/L	0.1581 ppb	18:23:51
3	Cd 226.502†	-193.5	21.9	0.2441 ug/L	0.2441 ppb	18:24:11
3	Co 228.616†	-69.8	3.4	0.0759 ug/L	0.0759 ppb	18:24:11
3	Cr 267.716†	72.8	-24.6	-0.2622 ug/L	-0.2622 ppb	18:24:11
3	Cu 324.752†	8813.0	-732.9	-2.0521 ug/L	-2.0521 ppb	18:23:51
3	Mn 257.610†	490.7	-22.4	-0.0283 ug/L	-0.0283 ppb	18:24:11
3	Mo 202.031†	29.8	4.7	0.3217 ug/L	0.3217 ppb	18:24:11
3	Ni 231.604†	85.3	-12.4	-0.3118 ug/L	-0.3118 ppb	18:24:11
3	P 214.914†	242.8	-7.4	-3.7755 ug/L	-3.7755 ppb	18:24:11
3	Pb 220.353†	-57.3	5.8	0.7364 ug/L	0.7364 ppb	18:24:11
3	S 181.975 Axial†	45.7	-33.4	-46.022 ug/L	-46.022 ppb	18:24:11
3	Sb 206.836†	36.6	4.6	1.5476 ug/L	1.5476 ppb	18:24:11
3	Se 196.026†	-8.7	9.7	5.5321 ug/L	5.5321 ppb	18:24:11
3	Si 251.611†	493.8	-25.6	-0.7613 ug/L	-0.7613 ppb	18:24:11
3	Sn 189.927†	-3.1	-2.6	-0.4821 ug/L	-0.4821 ppb	18:24:11
3	Ti 334.940†	-901.3	48.0	0.0744 ug/L	0.0744 ppb	18:23:51
3	Tl 190.801†	-38.8	-0.0	-0.0146 ug/L	-0.0146 ppb	18:24:11
3	U 409.014†	-1483.6	-350.4	-8.7596 ug/L	-8.7596 ppb	18:23:51
3	V 292.402†	-1288.7	166.0	1.0234 ug/L	1.0234 ppb	18:23:51
3	Zn 213.857†	676.5	-89.0	-0.8223 ug/L	-0.8223 ppb	18:24:11
3	SiO2†	491.0	-45.7	-2.8960 ug/L	-2.8960 ppb	18:25:12

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	945979.8	105.36 %		0.564			0.54%
Sc Radial	5437.2	102 %		1.9			1.85%
Y 371.029	836458.9	101.62 %		0.559			0.55%
Y RADIAL	5856.8	101.7 %		1.64			1.61%
Ag 328.068†	-37.6	-0.1513 ug/L		0.18335	-0.1513 ppb	0.18335	121.18%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	-4.5	-3.4273 ug/L		5.49454	-3.4273 ppb	5.49454	160.32%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	2.3	0.9373 ug/L		2.23623	0.9373 ppb	2.23623	238.58%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	558.5	12.250 ug/L		0.6306	12.250 ppb	0.6306	5.15%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	0.2	0.0028 ug/L		0.05670	0.0028 ppb	0.05670	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	380.4	0.1343 ug/L		0.02963	0.1343 ppb	0.02963	22.06%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	-0.6	-0.9895 ug/L		1.41301	-0.9895 ppb	1.41301	142.80%



QC value within limits for Ca 317.933Radial Recovery = Not calculated							
Cd 226.502†	25.6	0.2857 ug/L	0.10642	0.2857 ppb	0.10642	37.26%	
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	3.3	0.0733 ug/L	0.00625	0.0733 ppb	0.00625	8.52%	
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-24.8	-0.2649 ug/L	0.09165	-0.2649 ppb	0.09165	34.60%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-747.4	-2.0922 ug/L	0.16728	-2.0922 ppb	0.16728	8.00%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	-1.5	-14.406 ug/L	4.7204	-14.406 ppb	4.7204	32.77%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	-255.2	-46.600 ug/L	16.1672	-46.600 ppb	16.1672	34.69%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	1.3	47.075 ug/L	26.3079	47.075 ppb	26.3079	55.89%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	-21.1	-0.0270 ug/L	0.00173	-0.0270 ppb	0.00173	6.41%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	4.2	0.2874 ug/L	0.04977	0.2874 ppb	0.04977	17.32%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-220.9	-65.661 ug/L	9.8077	-65.661 ppb	9.8077	14.94%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	-2.0	-0.0503 ug/L	0.23286	-0.0503 ppb	0.23286	462.57%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-18.4	-9.9581 ug/L	5.35947	-9.9581 ppb	5.35947	53.82%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	10.9	1.3731 ug/L	0.72353	1.3731 ppb	0.72353	52.69%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-35.3	-48.662 ug/L	6.9456	-48.662 ppb	6.9456	14.27%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	5.3	1.7918 ug/L	0.42857	1.7918 ppb	0.42857	23.92%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	3.5	1.9726 ug/L	3.36125	1.9726 ppb	3.36125	170.39%	
QC value within limits for Se 196.026 Recovery = Not calculated							
Si 251.611†	-34.4	-1.0241 ug/L	0.39226	-1.0241 ppb	0.39226	38.30%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	1.9	0.3455 ug/L	0.81560	0.3455 ppb	0.81560	236.10%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	17.8	0.1140 ug/L	0.05843	0.1140 ppb	0.05843	51.24%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	34.0	0.0520 ug/L	0.11596	0.0520 ppb	0.11596	222.80%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	1.2	0.3756 ug/L	0.71179	0.3756 ppb	0.71179	189.50%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-369.4	-9.2355 ug/L	0.70333	-9.2355 ppb	0.70333	7.62%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	109.3	0.6694 ug/L	0.30967	0.6694 ppb	0.30967	46.26%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-90.2	-0.8352 ug/L	0.02814	-0.8352 ppb	0.02814	3.37%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†	-60.1	-3.8070 ug/L	0.92554	-3.8070 ppb	0.92554	24.31%	
QC value within limits for SiO2 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 28  
 Sample ID: 244922001|942466|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 59  
 Date Collected: 1/26/2010 18:47:58  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 244922001|942466|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5657.8	5657.8	106 %		18:49:51
1	Y RADIAL	6097.5	6097.5	105.9 %		18:49:51
1	Al 396.153Radial†	574.2	532.8	403.59 ug/L	403.59 ppb	18:49:51
1	Ca 317.933Radial†	99.4	73.6	118.26 ug/L	118.26 ppb	18:50:11
1	Fe 238.204 Radial†	35.3	26.2	244.52 ug/L	244.52 ppb	18:50:11
1	K 766.490 Radial†	4307.4	1562.0	285.18 ug/L	285.18 ppb	18:49:51
1	Mg 279.077 IEC†	6.8	5.5	195.59 ug/L	195.59 ppb	18:50:11
1	Na 589.592 Radial†	583.2	1098.1	326.43 ug/L	326.43 ppb	18:49:51
1	Sr 421.552†	169.5	152.9	0.9804 ug/L	0.9804 ppb	18:49:51
1	Sc 361.383	951976.3	951976.3	106.03 %		18:51:07
1	Y 371.029	841245.4	841245.4	102.20 %		18:51:07
1	Ag 328.068†	258.6	-52.1	-0.1306 ug/L	-0.1306 ppb	18:51:12
1	As 188.979†	-38.2	-5.8	-2.2471 ug/L	-2.2471 ppb	18:51:33
1	B 249.677†	1647.0	1793.8	39.299 ug/L	39.299 ppb	18:51:12
1	Ba 233.527†	665.1	630.4	4.9780 ug/L	4.9780 ppb	18:51:33
1	Be 313.107†	-5129.5	262.5	0.1150 ug/L	0.1150 ppb	18:51:12
1	Cd 226.502†	-198.0	19.4	0.1910 ug/L	0.1910 ppb	18:51:33
1	Co 228.616†	-53.9	19.1	0.3961 ug/L	0.3961 ppb	18:51:33
1	Cr 267.716†	196.8	91.7	1.0031 ug/L	1.0031 ppb	18:51:33
1	Cu 324.752†	10471.8	748.7	2.1172 ug/L	2.1172 ppb	18:51:12
1	Mn 257.610†	4937.1	4166.6	4.6877 ug/L	4.6877 ppb	18:51:12
1	Mo 202.031†	23.9	-1.0	-0.0506 ug/L	-0.0506 ppb	18:51:33
1	Ni 231.604†	136.1	34.7	0.8713 ug/L	0.8713 ppb	18:51:33
1	P 214.914†	250.2	-2.7	-2.0532 ug/L	-2.0532 ppb	18:51:33
1	Pb 220.353†	-55.8	7.8	1.0426 ug/L	1.0426 ppb	18:51:33
1	S 181.975 Axial†	111.9	28.6	39.235 ug/L	39.235 ppb	18:51:33
1	Sb 206.836†	22.7	-8.8	-2.9933 ug/L	-2.9933 ppb	18:51:33
1	Se 196.026†	-24.6	-5.2	-2.1883 ug/L	-2.1883 ppb	18:51:33
1	Si 251.611†	111222.4	104405.4	3093.5 ug/L	3093.5 ppb	18:51:12
1	Sn 189.927†	-1.2	-0.7	-0.1148 ug/L	-0.1148 ppb	18:51:33
1	Ti 334.940†	5901.5	6472.7	9.8718 ug/L	9.8718 ppb	18:51:12
1	Tl 190.801†	-49.0	-9.4	-2.8921 ug/L	-2.8921 ppb	18:51:33
1	U 409.014†	-1443.4	-298.6	-7.4959 ug/L	-7.4959 ppb	18:51:12
1	V 292.402†	-1347.9	122.2	0.7023 ug/L	0.7023 ppb	18:51:12
1	Zn 213.857†	1174.3	374.2	3.4532 ug/L	3.4532 ppb	18:51:33
1	SiO2†	113477.5	106514.9	6736.5 ug/L	6736.5 ppb	18:52:39
2	Sc Radial	5665.7	5665.7	106 %		18:50:16
2	Y RADIAL	6109.3	6109.3	106.1 %		18:50:16
2	Al 396.153Radial†	569.3	527.4	399.55 ug/L	399.55 ppb	18:50:16
2	Ca 317.933Radial†	93.6	68.0	109.30 ug/L	109.30 ppb	18:50:36
2	Fe 238.204 Radial†	34.2	25.1	234.49 ug/L	234.49 ppb	18:50:36
2	K 766.490 Radial†	4297.8	1547.3	282.50 ug/L	282.50 ppb	18:50:16
2	Mg 279.077 IEC†	3.8	2.6	93.792 ug/L	93.792 ppb	18:50:36
2	Na 589.592 Radial†	562.1	1077.4	320.29 ug/L	320.29 ppb	18:50:16
2	Sr 421.552†	173.6	156.5	1.0038 ug/L	1.0038 ppb	18:50:16
2	Sc 361.383	980782.8	980782.8	109.23 %		18:51:38
2	Y 371.029	865249.4	865249.4	105.12 %		18:51:38
2	Ag 328.068†	329.9	6.0	0.1086 ug/L	0.1086 ppb	18:51:43
2	As 188.979†	-37.7	-4.3	-1.6227 ug/L	-1.6227 ppb	18:52:03
2	B 249.677†	1718.6	1813.7	39.737 ug/L	39.737 ppb	18:51:43
2	Ba 233.527†	659.9	607.2	4.7954 ug/L	4.7954 ppb	18:52:03
2	Be 313.107†	-5159.2	377.4	0.1551 ug/L	0.1551 ppb	18:51:43
2	Cd 226.502†	-200.2	22.9	0.2307 ug/L	0.2307 ppb	18:52:03
2	Co 228.616†	-62.2	13.0	0.2634 ug/L	0.2634 ppb	18:52:03
2	Cr 267.716†	204.4	93.2	1.0189 ug/L	1.0189 ppb	18:52:03
2	Cu 324.752†	10471.7	458.5	1.3021 ug/L	1.3021 ppb	18:51:43
2	Mn 257.610†	4947.5	4039.4	4.5482 ug/L	4.5482 ppb	18:51:43
2	Mo 202.031†	27.6	1.6	0.1307 ug/L	0.1307 ppb	18:52:03
2	Ni 231.604†	146.5	40.5	1.0167 ug/L	1.0167 ppb	18:52:03

2	P 214.914†	259.7	-1.0	-0.8931 ug/L	-0.8931 ppb	18:52:03
2	Pb 220.353†	-45.5	18.8	2.4192 ug/L	2.4192 ppb	18:52:03
2	S 181.975 Axial†	107.0	20.9	28.734 ug/L	28.734 ppb	18:52:03
2	Sb 206.836†	27.1	-5.5	-1.8851 ug/L	-1.8851 ppb	18:52:03
2	Se 196.026†	-18.3	1.2	1.4982 ug/L	1.4982 ppb	18:52:03
2	Si 251.611†	111180.8	101286.3	3001.1 ug/L	3001.1 ppb	18:51:43
2	Sn 189.927†	-7.0	-6.1	-1.0938 ug/L	-1.0938 ppb	18:52:03
2	Ti 334.940†	5936.1	6340.8	9.6773 ug/L	9.6773 ppb	18:51:43
2	Tl 190.801†	-39.2	1.0	0.4263 ug/L	0.4263 ppb	18:52:03
2	U 409.014†	-1435.3	-251.1	-6.3077 ug/L	-6.3077 ppb	18:51:43
2	V 292.402†	-1352.8	155.1	0.9112 ug/L	0.9112 ppb	18:51:43
2	Zn 213.857†	1167.2	335.1	3.0902 ug/L	3.0902 ppb	18:52:03
2	SiO2†	112547.4	102519.9	6483.8 ug/L	6483.8 ppb	18:52:44
3	Sc Radial	5635.1	5635.1	106 %		18:50:41
3	Y RADIAL	6068.2	6068.2	105.4 %		18:50:41
3	Al 396.153Radial†	582.6	542.9	411.27 ug/L	411.27 ppb	18:50:41
3	Ca 317.933Radial†	94.2	69.0	110.88 ug/L	110.88 ppb	18:51:01
3	Fe 238.204 Radial†	32.6	23.7	221.54 ug/L	221.54 ppb	18:51:01
3	K 766.490 Radial†	4400.9	1667.0	304.37 ug/L	304.37 ppb	18:50:41
3	Mg 279.077 IEC†	3.8	2.6	93.346 ug/L	93.346 ppb	18:51:01
3	Na 589.592 Radial†	561.4	1079.6	320.95 ug/L	320.95 ppb	18:50:41
3	Sr 421.552†	168.2	152.3	0.9765 ug/L	0.9765 ppb	18:50:41
3	Sc 361.383	995865.3	995865.3	110.91 %		18:52:08
3	Y 371.029	880410.7	880410.7	106.96 %		18:52:08
3	Ag 328.068†	325.1	-2.9	0.0667 ug/L	0.0667 ppb	18:52:13
3	As 188.979†	-33.1	0.3	0.2589 ug/L	0.2589 ppb	18:52:33
3	B 249.677†	1639.5	1718.6	37.652 ug/L	37.652 ppb	18:52:13
3	Ba 233.527†	651.9	590.9	4.6669 ug/L	4.6669 ppb	18:52:33
3	Be 313.107†	-5161.2	447.1	0.1792 ug/L	0.1792 ppb	18:52:13
3	Cd 226.502†	-198.6	27.1	0.2796 ug/L	0.2796 ppb	18:52:33
3	Co 228.616†	-47.6	27.0	0.5725 ug/L	0.5725 ppb	18:52:33
3	Cr 267.716†	188.2	75.7	0.8285 ug/L	0.8285 ppb	18:52:33
3	Cu 324.752†	10495.8	335.0	0.9539 ug/L	0.9539 ppb	18:52:13
3	Mn 257.610†	4929.4	3954.5	4.4517 ug/L	4.4517 ppb	18:52:13
3	Mo 202.031†	33.3	6.4	0.4542 ug/L	0.4542 ppb	18:52:33
3	Ni 231.604†	155.5	46.5	1.1677 ug/L	1.1677 ppb	18:52:33
3	P 214.914†	262.1	-2.4	-1.6177 ug/L	-1.6177 ppb	18:52:33
3	Pb 220.353†	-58.5	7.7	1.0297 ug/L	1.0297 ppb	18:52:33
3	S 181.975 Axial†	107.8	20.2	27.723 ug/L	27.723 ppb	18:52:33
3	Sb 206.836†	35.1	1.4	0.4271 ug/L	0.4271 ppb	18:52:33
3	Se 196.026†	-20.1	-0.2	0.6389 ug/L	0.6389 ppb	18:52:33
3	Si 251.611†	111717.4	100228.5	2969.8 ug/L	2969.8 ppb	18:52:13
3	Sn 189.927†	-2.7	-2.1	-0.3712 ug/L	-0.3712 ppb	18:52:33
3	Ti 334.940†	5867.0	6196.2	9.4562 ug/L	9.4562 ppb	18:52:13
3	Tl 190.801†	-40.0	0.9	0.3715 ug/L	0.3715 ppb	18:52:33
3	U 409.014†	-1367.5	-170.1	-4.2808 ug/L	-4.2808 ppb	18:52:13
3	V 292.402†	-1327.9	196.4	1.1785 ug/L	1.1785 ppb	18:52:13
3	Zn 213.857†	1155.4	308.3	2.8411 ug/L	2.8411 ppb	18:52:33
3	SiO2†	113907.2	102185.4	6462.7 ug/L	6462.7 ppb	18:52:49

Mean Data: 244922001|942466|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	976208.1	108.72 %		2.484			2.28%
Sc Radial	5652.9	106 %		0.3			0.28%
Y 371.029	862301.8	104.76 %		2.399			2.29%
Y RADIAL	6091.7	105.8 %		0.37			0.35%
Ag 328.068†	-16.3	0.0149 ug/L		0.12776	0.0149 ppb	0.12776	857.65%
Al 396.153Radial†	534.4	404.80 ug/L		5.955	404.80 ppb	5.955	1.47%
As 188.979†	-3.3	-1.2037 ug/L		1.30450	-1.2037 ppb	1.30450	108.38%
B 249.677†	1775.4	38.896 ug/L		1.0995	38.896 ppb	1.0995	2.83%
Ba 233.527†	609.5	4.8134 ug/L		0.15630	4.8134 ppb	0.15630	3.25%
Be 313.107†	362.3	0.1497 ug/L		0.03242	0.1497 ppb	0.03242	21.65%
Ca 317.933Radial†	70.2	112.81 ug/L		4.785	112.81 ppb	4.785	4.24%
Cd 226.502†	23.1	0.2337 ug/L		0.04439	0.2337 ppb	0.04439	18.99%
Co 228.616†	19.7	0.4107 ug/L		0.15508	0.4107 ppb	0.15508	37.76%
Cr 267.716†	86.9	0.9502 ug/L		0.10566	0.9502 ppb	0.10566	11.12%
Cu 324.752†	514.1	1.4578 ug/L		0.59707	1.4578 ppb	0.59707	40.96%
Fe 238.204 Radial†	25.0	233.52 ug/L		11.521	233.52 ppb	11.521	4.93%
K 766.490 Radial†	1592.1	290.68 ug/L		11.928	290.68 ppb	11.928	4.10%

Mg 279.077 IEC†	3.6	127.57 ug/L	58.900	127.57 ppb	58.900	46.17%
Mn 257.610†	4053.5	4.5625 ug/L	0.11861	4.5625 ppb	0.11861	2.60%
Mo 202.031†	2.3	0.1781 ug/L	0.25570	0.1781 ppb	0.25570	143.58%
Na 589.592 Radial†	1085.0	322.55 ug/L	3.372	322.55 ppb	3.372	1.05%
Ni 231.604†	40.5	1.0186 ug/L	0.14821	1.0186 ppb	0.14821	14.55%
P 214.914†	-2.0	-1.5214 ug/L	0.58600	-1.5214 ppb	0.58600	38.52%
Pb 220.353†	11.4	1.4972 ug/L	0.79854	1.4972 ppb	0.79854	53.34%
S 181.975 Axial†	23.2	31.898 ug/L	6.3745	31.898 ppb	6.3745	19.98%
Sb 206.836†	-4.3	-1.4838 ug/L	1.74513	-1.4838 ppb	1.74513	117.61%
Se 196.026†	-1.4	-0.0171 ug/L	1.92878	-0.0171 ppb	1.92878	>999.9%
Si 251.611†	101973.4	3021.5 ug/L	64.35	3021.5 ppb	64.35	2.13%
Sn 189.927†	-3.0	-0.5266 ug/L	0.50765	-0.5266 ppb	0.50765	96.40%
Sr 421.552†	153.9	0.9869 ug/L	0.01478	0.9869 ppb	0.01478	1.50%
Ti 334.940†	6336.6	9.6684 ug/L	0.20790	9.6684 ppb	0.20790	2.15%
Tl 190.801†	-2.5	-0.6981 ug/L	1.90024	-0.6981 ppb	1.90024	272.20%
U 409.014†	-239.9	-6.0281 ug/L	1.62566	-6.0281 ppb	1.62566	26.97%
V 292.402†	157.9	0.9307 ug/L	0.23869	0.9307 ppb	0.23869	25.65%
Zn 213.857†	339.2	3.1282 ug/L	0.30780	3.1282 ppb	0.30780	9.84%
SiO2†	103740.0	6561.0 ug/L	152.35	6561.0 ppb	152.35	2.32%

Sequence No.: 29

Sample ID: 1202017561|942466|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 60

Date Collected: 1/26/2010 18:55:00

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202017561|942466|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5718.6	5718.6	107 %		18:56:53
1	Y RADIAL	6164.7	6164.7	107.1 %		18:56:53
1	Al 396.153Radial†	454.3	415.1	314.42 ug/L	314.42 ppb	18:56:53
1	Ca 317.933Radial†	91.9	65.6	105.47 ug/L	105.47 ppb	18:57:13
1	Fe 238.204 Radial†	30.2	21.0	196.65 ug/L	196.65 ppb	18:57:13
1	K 766.490 Radial†	4214.2	1431.7	261.40 ug/L	261.40 ppb	18:56:53
1	Mg 279.077 IEC†	2.9	1.7	61.544 ug/L	61.544 ppb	18:57:13
1	Na 589.592 Radial†	517.9	1031.3	306.58 ug/L	306.58 ppb	18:56:53
1	Sr 421.552†	159.3	141.6	0.9082 ug/L	0.9082 ppb	18:56:53
1	Sc 361.383	961823.3	961823.3	107.12 %		18:58:09
1	Y 371.029	849400.9	849400.9	103.19 %		18:58:09
1	Ag 328.068†	209.3	-100.7	-0.3449 ug/L	-0.3449 ppb	18:58:15
1	As 188.979†	-28.2	3.8	1.6801 ug/L	1.6801 ppb	18:58:35
1	B 249.677†	1580.8	1716.1	37.601 ug/L	37.601 ppb	18:58:15
1	Ba 233.527†	568.3	533.6	4.2148 ug/L	4.2148 ppb	18:58:35
1	Be 313.107†	-5223.1	224.6	0.0962 ug/L	0.0962 ppb	18:58:15
1	Cd 226.502†	-196.6	22.7	0.2317 ug/L	0.2317 ppb	18:58:35
1	Co 228.616†	-49.5	23.7	0.5027 ug/L	0.5027 ppb	18:58:35
1	Cr 267.716†	192.0	85.3	0.9342 ug/L	0.9342 ppb	18:58:35
1	Cu 324.752†	10427.4	606.1	1.7160 ug/L	1.7160 ppb	18:58:15
1	Mn 257.610†	4533.6	3742.3	4.2126 ug/L	4.2126 ppb	18:58:15
1	Mo 202.031†	25.0	-0.3	-0.0044 ug/L	-0.0044 ppb	18:58:35
1	Ni 231.604†	154.8	50.8	1.2763 ug/L	1.2763 ppb	18:58:35
1	P 214.914†	274.8	17.8	9.5984 ug/L	9.5984 ppb	18:58:35
1	Pb 220.353†	-44.4	19.0	2.4324 ug/L	2.4324 ppb	18:58:35
1	S 181.975 Axial†	101.6	17.9	24.518 ug/L	24.518 ppb	18:58:35
1	Sb 206.836†	22.1	-9.6	-3.2606 ug/L	-3.2606 ppb	18:58:35
1	Se 196.026†	-22.2	-2.7	-0.9155 ug/L	-0.9155 ppb	18:58:35
1	Si 251.611†	101120.0	93900.7	2782.3 ug/L	2782.3 ppb	18:58:15
1	Sn 189.927†	-6.2	-5.4	-0.9813 ug/L	-0.9813 ppb	18:58:35
1	Ti 334.940†	4291.8	4913.0	7.5039 ug/L	7.5039 ppb	18:58:15
1	Tl 190.801†	-37.5	1.9	0.6720 ug/L	0.6720 ppb	18:58:35
1	U 409.014†	-1548.6	-382.8	-9.5969 ug/L	-9.5969 ppb	18:58:15
1	V 292.402†	-1274.0	204.3	1.2161 ug/L	1.2161 ppb	18:58:15
1	Zn 213.857†	1081.6	276.3	2.5442 ug/L	2.5442 ppb	18:58:35
1	SiO2†	102124.9	94821.4	5996.9 ug/L	5996.9 ppb	18:59:41
2	Sc Radial	5731.2	5731.2	107 %		18:57:18
2	Y RADIAL	6181.0	6181.0	107.4 %		18:57:18
2	Al 396.153Radial†	435.6	396.7	300.54 ug/L	300.54 ppb	18:57:18
2	Ca 317.933Radial†	85.9	59.8	96.158 ug/L	96.158 ppb	18:57:38
2	Fe 238.204 Radial†	29.2	20.0	186.97 ug/L	186.97 ppb	18:57:38
2	K 766.490 Radial†	4198.2	1408.2	257.10 ug/L	257.10 ppb	18:57:18
2	Mg 279.077 IEC†	3.0	1.8	64.230 ug/L	64.230 ppb	18:57:38
2	Na 589.592 Radial†	552.8	1062.8	315.93 ug/L	315.93 ppb	18:57:18
2	Sr 421.552†	151.1	133.7	0.8574 ug/L	0.8574 ppb	18:57:18
2	Sc 361.383	974003.0	974003.0	108.48 %		18:58:40
2	Y 371.029	860875.4	860875.4	104.59 %		18:58:40
2	Ag 328.068†	388.1	61.7	0.3256 ug/L	0.3256 ppb	18:58:45
2	As 188.979†	-32.8	-0.0	0.1053 ug/L	0.1053 ppb	18:59:05
2	B 249.677†	1548.4	1667.8	36.543 ug/L	36.543 ppb	18:58:45
2	Ba 233.527†	585.4	542.8	4.2858 ug/L	4.2858 ppb	18:59:05
2	Be 313.107†	-5210.8	296.9	0.1216 ug/L	0.1216 ppb	18:58:45
2	Cd 226.502†	-194.7	26.7	0.2786 ug/L	0.2786 ppb	18:59:05
2	Co 228.616†	-50.4	23.5	0.4983 ug/L	0.4983 ppb	18:59:05
2	Cr 267.716†	173.2	65.7	0.7195 ug/L	0.7195 ppb	18:59:05
2	Cu 324.752†	10496.1	547.7	1.5500 ug/L	1.5500 ppb	18:58:45
2	Mn 257.610†	4537.0	3692.5	4.1558 ug/L	4.1558 ppb	18:58:45
2	Mo 202.031†	23.4	-2.1	-0.1260 ug/L	-0.1260 ppb	18:59:05
2	Ni 231.604†	148.5	43.2	1.0852 ug/L	1.0852 ppb	18:59:05

2	P 214.914†	266.4	6.9	3.4854 ug/L	3.4854 ppb	18:59:05
2	Pb 220.353†	-41.3	22.3	2.8479 ug/L	2.8479 ppb	18:59:05
2	S 181.975 Axial†	100.2	15.4	21.080 ug/L	21.080 ppb	18:59:05
2	Sb 206.836†	20.9	-11.0	-3.7144 ug/L	-3.7144 ppb	18:59:05
2	Se 196.026†	-16.9	2.4	2.0034 ug/L	2.0034 ppb	18:59:05
2	Si 251.611†	101003.8	92613.2	2744.1 ug/L	2744.1 ppb	18:58:45
2	Sn 189.927†	-1.2	-0.7	-0.1199 ug/L	-0.1199 ppb	18:59:05
2	Ti 334.940†	4299.5	4870.0	7.4357 ug/L	7.4357 ppb	18:58:45
2	Tl 190.801†	-36.2	3.5	1.2083 ug/L	1.2083 ppb	18:59:05
2	U 409.014†	-1447.9	-271.9	-6.8207 ug/L	-6.8207 ppb	18:58:45
2	V 292.402†	-1369.9	130.7	0.7639 ug/L	0.7639 ppb	18:58:45
2	Zn 213.857†	1065.5	248.8	2.2905 ug/L	2.2905 ppb	18:59:05
2	SiO2†	103777.3	95152.4	6017.9 ug/L	6017.9 ppb	18:59:46
3	Sc Radial	5717.9	5717.9	107 %		18:57:43
3	Y RADIAL	6165.6	6165.6	107.1 %		18:57:43
3	Al 396.153Radial†	467.5	427.5	323.82 ug/L	323.82 ppb	18:57:43
3	Ca 317.933Radial†	88.3	62.3	100.09 ug/L	100.09 ppb	18:58:03
3	Fe 238.204 Radial†	29.3	20.3	189.26 ug/L	189.26 ppb	18:58:03
3	K 766.490 Radial†	4209.2	1427.6	260.64 ug/L	260.64 ppb	18:57:43
3	Mg 279.077 IBC†	2.4	1.3	46.281 ug/L	46.281 ppb	18:58:03
3	Na 589.592 Radial†	523.8	1036.8	308.22 ug/L	308.22 ppb	18:57:43
3	Sr 421.552†	131.6	115.8	0.7427 ug/L	0.7427 ppb	18:57:43
3	Sc 361.383	979621.6	979621.6	109.10 %		18:59:10
3	Y 371.029	865645.2	865645.2	105.17 %		18:59:10
3	Ag 328.068†	371.8	44.8	0.2555 ug/L	0.2555 ppb	18:59:15
3	As 188.979†	-35.6	-2.5	-0.8992 ug/L	-0.8992 ppb	18:59:35
3	B 249.677†	1617.6	1723.1	37.757 ug/L	37.757 ppb	18:59:15
3	Ba 233.527†	579.8	534.5	4.2216 ug/L	4.2216 ppb	18:59:35
3	Be 313.107†	-5164.2	367.2	0.1462 ug/L	0.1462 ppb	18:59:15
3	Cd 226.502†	-207.5	16.0	0.1592 ug/L	0.1592 ppb	18:59:35
3	Co 228.616†	-68.8	6.9	0.1339 ug/L	0.1339 ppb	18:59:35
3	Cr 267.716†	182.3	73.1	0.7998 ug/L	0.7998 ppb	18:59:35
3	Cu 324.752†	10482.9	480.1	1.3597 ug/L	1.3597 ppb	18:59:15
3	Mn 257.610†	4494.0	3629.1	4.0857 ug/L	4.0857 ppb	18:59:15
3	Mo 202.031†	21.9	-3.5	-0.2239 ug/L	-0.2239 ppb	18:59:35
3	Ni 231.604†	160.1	53.1	1.3333 ug/L	1.3333 ppb	18:59:35
3	P 214.914†	259.0	-1.4	-1.1198 ug/L	-1.1198 ppb	18:59:35
3	Pb 220.353†	-50.4	14.2	1.8311 ug/L	1.8311 ppb	18:59:35
3	S 181.975 Axial†	100.9	15.5	21.324 ug/L	21.324 ppb	18:59:35
3	Sb 206.836†	32.4	-0.5	-0.2157 ug/L	-0.2157 ppb	18:59:35
3	Se 196.026†	-18.9	0.7	1.0290 ug/L	1.0290 ppb	18:59:35
3	Si 251.611†	101353.6	92399.8	2737.8 ug/L	2737.8 ppb	18:59:15
3	Sn 189.927†	-4.6	-3.9	-0.6939 ug/L	-0.6939 ppb	18:59:35
3	Ti 334.940†	4270.8	4821.0	7.3622 ug/L	7.3622 ppb	18:59:15
3	Tl 190.801†	-41.7	-1.3	-0.3350 ug/L	-0.3350 ppb	18:59:35
3	U 409.014†	-1384.2	-205.9	-5.1710 ug/L	-5.1710 ppb	18:59:15
3	V 292.402†	-1329.9	174.7	1.0383 ug/L	1.0383 ppb	18:59:15
3	Zn 213.857†	1095.3	270.5	2.4908 ug/L	2.4908 ppb	18:59:35
3	SiO2†	101613.8	92620.8	5857.8 ug/L	5857.8 ppb	18:59:51

Mean Data: 1202017561|942466|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
Sc 361.383	971816.0	108.24 %		1.013			0.94%
Sc Radial	5722.6	107 %		0.1			0.13%
Y 371.029	858640.5	104.32 %		1.014			0.97%
Y RADIAL	6170.4	107.2 %		0.16			0.15%
Ag 328.068†	1.9	0.0787 ug/L		0.36856	0.0787 ppb	0.36856	468.29%
Al 396.153Radial†	413.1	312.92 ug/L		11.712	312.92 ppb	11.712	3.74%
As 188.979†	0.5	0.2954 ug/L		1.30009	0.2954 ppb	1.30009	440.12%
B 249.677†	1702.3	37.300 ug/L		0.6604	37.300 ppb	0.6604	1.77%
Ba 233.527†	537.0	4.2407 ug/L		0.03919	4.2407 ppb	0.03919	0.92%
Be 313.107†	296.3	0.1214 ug/L		0.02500	0.1214 ppb	0.02500	20.60%
Ca 317.933Radial†	62.6	100.57 ug/L		4.675	100.57 ppb	4.675	4.65%
Cd 226.502†	21.8	0.2232 ug/L		0.06014	0.2232 ppb	0.06014	26.95%
Co 228.616†	18.0	0.3783 ug/L		0.21166	0.3783 ppb	0.21166	55.95%
Cr 267.716†	74.7	0.8178 ug/L		0.10844	0.8178 ppb	0.10844	13.26%
Cu 324.752†	544.6	1.5419 ug/L		0.17828	1.5419 ppb	0.17828	11.56%
Fe 238.204 Radial†	20.4	190.96 ug/L		5.056	190.96 ppb	5.056	2.65%
K 766.490 Radial†	1422.5	259.71 ug/L		2.296	259.71 ppb	2.296	0.88%

Mg 279.077 IEC†	1.6	57.352 ug/L	9.6811	57.352 ppb	9.6811	16.88%
Mn 257.610†	3688.0	4.1514 ug/L	0.06360	4.1514 ppb	0.06360	1.53%
Mo 202.031†	-2.0	-0.1181 ug/L	0.10994	-0.1181 ppb	0.10994	93.11%
Na 589.592 Radial†	1043.6	310.24 ug/L	4.993	310.24 ppb	4.993	1.61%
Ni 231.604†	49.0	1.2316 ug/L	0.12994	1.2316 ppb	0.12994	10.55%
P 214.914†	7.8	3.9880 ug/L	5.37676	3.9880 ppb	5.37676	134.82%
Pb 220.353†	18.5	2.3705 ug/L	0.51121	2.3705 ppb	0.51121	21.57%
S 181.975 Axial†	16.2	22.307 ug/L	1.9183	22.307 ppb	1.9183	8.60%
Sb 206.836†	-7.1	-2.3969 ug/L	1.90252	-2.3969 ppb	1.90252	79.37%
Se 196.026†	0.1	0.7056 ug/L	1.48610	0.7056 ppb	1.48610	210.61%
Si 251.611†	92971.2	2754.7 ug/L	24.06	2754.7 ppb	24.06	0.87%
Sn 189.927†	-3.4	-0.5984 ug/L	0.43859	-0.5984 ppb	0.43859	73.30%
Sr 421.552†	130.4	0.8361 ug/L	0.08476	0.8361 ppb	0.08476	10.14%
Ti 334.940†	4868.0	7.4339 ug/L	0.07086	7.4339 ppb	0.07086	0.95%
Tl 190.801†	1.4	0.5151 ug/L	0.78351	0.5151 ppb	0.78351	152.11%
U 409.014†	-286.8	-7.1962 ug/L	2.23671	-7.1962 ppb	2.23671	31.08%
V 292.402†	169.9	1.0061 ug/L	0.22780	1.0061 ppb	0.22780	22.64%
Zn 213.857†	265.2	2.4418 ug/L	0.13370	2.4418 ppb	0.13370	5.48%
SiO2†	94198.2	5957.5 ug/L	87.03	5957.5 ppb	87.03	1.46%

Sequence No.: 30  
 Sample ID: 1202017562|942466|1  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 61  
 Date Collected: 1/26/2010 19:02:02  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

Replicate Data: 1202017562|942466|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5694.1	5694.1	107 %		19:03:55
1	Y RADIAL	6107.1	6107.1	106.1 %		19:03:55
1	Al 396.153Radial†	6901.6	6463.4	4877.7 ug/L	4877.7 ppb	19:03:55
1	Ca 317.933Radial†	3059.2	2848.8	4578.9 ug/L	4578.9 ppb	19:04:15
1	Fe 238.204 Radial†	564.4	522.2	4893.0 ug/L	4893.0 ppb	19:04:15
1	K 766.490 Radial†	31013.5	26581.9	4852.0 ug/L	4852.0 ppb	19:03:55
1	Mg 279.077 IEC†	143.7	133.8	4770.4 ug/L	4770.4 ppb	19:04:15
1	Na 589.592 Radial†	17323.6	16794.3	4992.5 ug/L	4992.5 ppb	19:03:55
1	Sr 421.552†	77800.5	72956.6	468.18 ug/L	468.18 ppb	19:03:55
1	Sc 361.383	977453.7	977453.7	108.86 %		19:05:14
1	Y 371.029	856007.4	856007.4	104.00 %		19:05:14
1	Ag 328.068†	113238.6	103723.1	435.64 ug/L	435.64 ppb	19:05:14
1	As 188.979†	1065.2	1008.7	416.44 ug/L	416.44 ppb	19:05:34
1	B 249.677†	22496.5	20905.4	456.45 ug/L	456.45 ppb	19:05:14
1	Ba 233.527†	61441.7	56442.4	445.91 ug/L	445.91 ppb	19:05:14
1	Be 313.107†	1295454.8	1195084.2	422.51 ug/L	422.51 ppb	19:05:14
1	Cd 226.502†	40218.6	37150.3	414.80 ug/L	414.80 ppb	19:05:34
1	Co 228.616†	21223.0	19565.1	428.92 ug/L	428.92 ppb	19:05:34
1	Cr 267.716†	39443.9	36138.6	392.27 ug/L	392.27 ppb	19:05:14
1	Cu 324.752†	166255.3	143591.4	402.85 ug/L	402.85 ppb	19:05:14
1	Mn 257.610†	387457.3	355422.1	398.78 ug/L	398.78 ppb	19:05:14
1	Mo 202.031†	6119.7	5597.9	382.48 ug/L	382.48 ppb	19:05:34
1	Ni 231.604†	17017.0	15537.8	390.23 ug/L	390.23 ppb	19:05:34
1	P 214.914†	1152.8	820.2	383.65 ug/L	383.65 ppb	19:05:34
1	Pb 220.353†	3691.5	3451.4	434.60 ug/L	434.60 ppb	19:05:34
1	S 181.975 Axial†	3256.1	2914.0	4011.2 ug/L	4011.2 ppb	19:05:34
1	Sb 206.836†	1311.0	1174.0	407.17 ug/L	407.17 ppb	19:05:34
1	Se 196.026†	669.8	633.2	382.87 ug/L	382.87 ppb	19:05:34
1	Si 251.611†	253597.4	232454.5	6882.9 ug/L	6882.9 ppb	19:05:14
1	Sn 189.927†	2420.8	2224.1	409.76 ug/L	409.76 ppb	19:05:34
1	Ti 334.940†	291698.5	268856.1	409.84 ug/L	409.84 ppb	19:05:14
1	Tl 190.801†	1279.3	1212.1	390.39 ug/L	390.39 ppb	19:05:34
1	U 409.014†	16086.2	15839.4	394.63 ug/L	394.63 ppb	19:05:14
1	V 292.402†	67748.5	63626.3	400.64 ug/L	400.64 ppb	19:05:14
1	Zn 213.857†	46626.1	42096.6	388.60 ug/L	388.60 ppb	19:05:14
1	SiO2†	250139.4	229260.6	14489 ug/L	14489 ppb	19:06:34
2	Sc Radial	5723.0	5723.0	107 %		19:04:20
2	Y RADIAL	6156.5	6156.5	106.9 %		19:04:20
2	Al 396.153Radial†	6903.4	6432.3	4854.0 ug/L	4854.0 ppb	19:04:20
2	Ca 317.933Radial†	3108.1	2879.9	4628.9 ug/L	4628.9 ppb	19:04:40
2	Fe 238.204 Radial†	573.4	527.9	4946.6 ug/L	4946.6 ppb	19:04:40
2	K 766.490 Radial†	30961.9	26386.8	4816.3 ug/L	4816.3 ppb	19:04:20
2	Mg 279.077 IEC†	146.7	135.9	4847.8 ug/L	4847.8 ppb	19:04:40
2	Na 589.592 Radial†	17396.1	16779.8	4988.2 ug/L	4988.2 ppb	19:04:20
2	Sr 421.552†	78114.7	72881.0	467.69 ug/L	467.69 ppb	19:04:20
2	Sc 361.383	974685.0	974685.0	108.55 %		19:05:41
2	Y 371.029	855306.6	855306.6	103.91 %		19:05:41
2	Ag 328.068†	113047.5	103842.6	436.16 ug/L	436.16 ppb	19:05:41
2	As 188.979†	1078.0	1023.3	422.40 ug/L	422.40 ppb	19:06:01
2	B 249.677†	22512.6	20978.8	458.04 ug/L	458.04 ppb	19:05:41
2	Ba 233.527†	60971.9	56169.9	443.76 ug/L	443.76 ppb	19:05:41
2	Be 313.107†	1293167.7	1196357.5	422.96 ug/L	422.96 ppb	19:05:41
2	Cd 226.502†	40399.4	37421.8	417.83 ug/L	417.83 ppb	19:06:01
2	Co 228.616†	21382.2	19767.1	433.36 ug/L	433.36 ppb	19:06:01
2	Cr 267.716†	39306.9	36115.3	392.01 ug/L	392.01 ppb	19:05:41
2	Cu 324.752†	165753.8	143563.2	402.77 ug/L	402.77 ppb	19:05:41
2	Mn 257.610†	385053.4	354218.6	397.43 ug/L	397.43 ppb	19:05:41
2	Mo 202.031†	6166.1	5656.6	386.49 ug/L	386.49 ppb	19:06:01
2	Ni 231.604†	17115.1	15672.7	393.62 ug/L	393.62 ppb	19:06:01



2	P 214.914†	1162.4	832.1	390.33 ug/L	390.33 ppb	19:06:01
2	Pb 220.353†	3705.1	3473.5	437.37 ug/L	437.37 ppb	19:06:01
2	S 181.975 Axial†	3263.8	2929.6	4032.7 ug/L	4032.7 ppb	19:06:01
2	Sb 206.836†	1319.5	1185.3	411.07 ug/L	411.07 ppb	19:06:01
2	Se 196.026†	681.7	646.0	390.41 ug/L	390.41 ppb	19:06:01
2	Si 251.611†	252051.6	231692.2	6860.3 ug/L	6860.3 ppb	19:05:41
2	Sn 189.927†	2429.0	2237.9	412.31 ug/L	412.31 ppb	19:06:01
2	Ti 334.940†	290173.7	268212.5	408.86 ug/L	408.86 ppb	19:05:41
2	Tl 190.801†	1287.8	1223.2	393.90 ug/L	393.90 ppb	19:06:01
2	U 409.014†	16069.7	15866.2	395.30 ug/L	395.30 ppb	19:05:41
2	V 292.402†	67506.4	63580.0	400.40 ug/L	400.40 ppb	19:05:41
2	Zn 213.857†	46398.3	42008.3	387.76 ug/L	387.76 ppb	19:05:41
2	SiO2†	251930.3	231563.0	14635 ug/L	14635 ppb	19:06:40
3	Sc Radial	5701.3	5701.3	107 %		19:04:45
3	Y RADIAL	6128.2	6128.2	106.4 %		19:04:45
3	Al 396.153Radial†	6950.3	6500.7	4905.6 ug/L	4905.6 ppb	19:04:45
3	Ca 317.933Radial†	3068.3	2853.6	4586.6 ug/L	4586.6 ppb	19:05:05
3	Fe 238.204 Radial†	569.7	526.5	4933.2 ug/L	4933.2 ppb	19:05:05
3	K 766.490 Radial†	31041.0	26570.6	4849.9 ug/L	4849.9 ppb	19:04:45
3	Mg 279.077 IEC†	146.4	136.2	4856.2 ug/L	4856.2 ppb	19:05:05
3	Na 589.592 Radial†	17451.5	16893.3	5021.9 ug/L	5021.9 ppb	19:04:45
3	Sr 421.552†	78143.2	73184.5	469.64 ug/L	469.64 ppb	19:04:45
3	Sc 361.383	967493.7	967493.7	107.75 %		19:06:09
3	Y 371.029	848994.6	848994.6	103.14 %		19:06:09
3	Ag 328.068†	112269.9	103894.9	436.37 ug/L	436.37 ppb	19:06:09
3	As 188.979†	1084.6	1036.7	427.91 ug/L	427.91 ppb	19:06:29
3	B 249.677†	22371.6	21002.1	458.55 ug/L	458.55 ppb	19:06:09
3	Ba 233.527†	60625.1	56265.6	444.52 ug/L	444.52 ppb	19:06:09
3	Be 313.107†	1284694.5	1197348.5	423.31 ug/L	423.31 ppb	19:06:09
3	Cd 226.502†	40454.2	37749.3	421.50 ug/L	421.50 ppb	19:06:29
3	Co 228.616†	21373.3	19905.3	436.39 ug/L	436.39 ppb	19:06:29
3	Cr 267.716†	39067.5	36162.3	392.52 ug/L	392.52 ppb	19:06:09
3	Cu 324.752†	164192.6	143249.3	401.89 ug/L	401.89 ppb	19:06:09
3	Mn 257.610†	383052.7	354998.5	398.30 ug/L	398.30 ppb	19:06:09
3	Mo 202.031†	6161.4	5694.4	389.07 ug/L	389.07 ppb	19:06:29
3	Ni 231.604†	17136.1	15809.3	397.05 ug/L	397.05 ppb	19:06:29
3	P 214.914†	1173.6	850.4	400.90 ug/L	400.90 ppb	19:06:29
3	Pb 220.353†	3718.5	3511.3	442.14 ug/L	442.14 ppb	19:06:29
3	S 181.975 Axial†	3264.6	2952.7	4064.4 ug/L	4064.4 ppb	19:06:29
3	Sb 206.836†	1323.8	1198.3	415.52 ug/L	415.52 ppb	19:06:29
3	Se 196.026†	671.4	641.1	387.55 ug/L	387.55 ppb	19:06:29
3	Si 251.611†	250519.1	231995.8	6869.2 ug/L	6869.2 ppb	19:06:09
3	Sn 189.927†	2429.5	2255.0	415.45 ug/L	415.45 ppb	19:06:29
3	Ti 334.940†	288206.0	268373.3	409.09 ug/L	409.09 ppb	19:06:09
3	Tl 190.801†	1287.2	1231.4	396.54 ug/L	396.54 ppb	19:06:29
3	U 409.014†	16048.3	15956.3	397.55 ug/L	397.55 ppb	19:06:09
3	V 292.402†	67081.7	63648.1	400.87 ug/L	400.87 ppb	19:06:09
3	Zn 213.857†	46156.7	42101.9	388.61 ug/L	388.61 ppb	19:06:09
3	SiO2†	250923.9	232354.1	14685 ug/L	14685 ppb	19:06:45

## Mean Data: 1202017562|942466|1

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	973210.8	108.39 %		0.573			0.53%
Sc Radial	5706.1	107 %		0.3			0.26%
Y 371.029	853436.2	103.68 %		0.469			0.45%
Y RADIAL	6130.6	106.5 %		0.43			0.40%
Ag 328.068†	103820.2	436.06 ug/L		0.374	436.06 ppb	0.374	0.09%
Al 396.153Radial†	6465.5	4879.1 ug/L		25.87	4879.1 ppb	25.87	0.53%
As 188.979†	1022.9	422.25 ug/L		5.736	422.25 ppb	5.736	1.36%
B 249.677†	20962.1	457.68 ug/L		1.093	457.68 ppb	1.093	0.24%
Ba 233.527†	56292.7	444.73 ug/L		1.089	444.73 ppb	1.089	0.24%
Be 313.107†	1196263.4	422.92 ug/L		0.400	422.92 ppb	0.400	0.09%
Ca 317.933Radial†	2860.8	4598.1 ug/L		26.91	4598.1 ppb	26.91	0.59%
Cd 226.502†	37440.5	418.04 ug/L		3.351	418.04 ppb	3.351	0.80%
Co 228.616†	19745.8	432.89 ug/L		3.759	432.89 ppb	3.759	0.87%
Cr 267.716†	36138.7	392.27 ug/L		0.255	392.27 ppb	0.255	0.06%
Cu 324.752†	143468.0	402.50 ug/L		0.533	402.50 ppb	0.533	0.13%
Fe 238.204 Radial†	525.5	4924.3 ug/L		27.88	4924.3 ppb	27.88	0.57%
K 766.490 Radial†	26513.1	4839.4 ug/L		20.01	4839.4 ppb	20.01	0.41%

Mg 279.077 IEC†	135.3	4824.8 ug/L	47.30	4824.8 ppb	47.30	0.98%
Mn 257.610†	354879.7	398.17 ug/L	0.683	398.17 ppb	0.683	0.17%
Mo 202.031†	5649.6	386.01 ug/L	3.322	386.01 ppb	3.322	0.86%
Na 589.592 Radial†	16822.5	5000.8 ug/L	18.37	5000.8 ppb	18.37	0.37%
Ni 231.604†	15673.3	393.63 ug/L	3.409	393.63 ppb	3.409	0.87%
P 214.914†	834.2	391.62 ug/L	8.698	391.62 ppb	8.698	2.22%
Pb 220.353†	3478.7	438.04 ug/L	3.816	438.04 ppb	3.816	0.87%
S 181.975 Axial†	2932.1	4036.1 ug/L	26.79	4036.1 ppb	26.79	0.66%
Sb 206.836†	1185.8	411.26 ug/L	4.178	411.26 ppb	4.178	1.02%
Se 196.026†	640.1	386.94 ug/L	3.807	386.94 ppb	3.807	0.98%
Si 251.611†	232047.5	6870.8 ug/L	11.40	6870.8 ppb	11.40	0.17%
Sn 189.927†	2239.0	412.51 ug/L	2.852	412.51 ppb	2.852	0.69%
Sr 421.552†	73007.4	468.50 ug/L	1.014	468.50 ppb	1.014	0.22%
Ti 334.940†	268480.6	409.26 ug/L	0.512	409.26 ppb	0.512	0.13%
Tl 190.801†	1222.2	393.61 ug/L	3.087	393.61 ppb	3.087	0.78%
U 409.014†	15887.3	395.83 ug/L	1.530	395.83 ppb	1.530	0.39%
V 292.402†	63618.1	400.64 ug/L	0.233	400.64 ppb	0.233	0.06%
Zn 213.857†	42068.9	388.32 ug/L	0.491	388.32 ppb	0.491	0.13%
SiO2†	231059.2	14603 ug/L	101.6	14603 ppb	101.6	0.70%

Sequence No.: 31  
 Sample ID: 1202017563|942466|5  
 Analyst: HSC  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 62  
 Date Collected: 1/26/2010 19:08:56  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: 1202017563|942466|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5447.8	5447.8	102 %		19:10:49
1	Y RADIAL	5859.0	5859.0	101.8 %		19:10:49
1	Al 396.153Radial†	131.5	119.8	90.717 ug/L	90.717 ppb	19:11:09
1	Ca 317.933Radial†	35.1	14.2	22.776 ug/L	22.776 ppb	19:11:09
1	Fe 238.204 Radial†	12.8	5.4	50.659 ug/L	50.659 ppb	19:11:09
1	K 766.490 Radial†	2701.7	144.7	26.424 ug/L	26.424 ppb	19:10:49
1	Mg 279.077 IEC†	0.6	-0.4	-13.959 ug/L	-13.959 ppb	19:11:09
1	Na 589.592 Radial†	-466.9	90.0	26.759 ug/L	26.759 ppb	19:10:49
1	Sr 421.552†	61.2	52.9	0.3395 ug/L	0.3395 ppb	19:10:49
1	Sc 361.383	915026.4	915026.4	101.91 %		19:12:06
1	Y 371.029	803873.1	803873.1	97.661 %		19:12:06
1	Ag 328.068†	315.4	13.4	0.0733 ug/L	0.0733 ppb	19:12:06
1	As 188.979†	-28.6	2.1	0.9005 ug/L	0.9005 ppb	19:12:26
1	B 249.677†	249.6	485.3	10.635 ug/L	10.635 ppb	19:12:26
1	Ba 233.527†	132.8	133.4	1.0541 ug/L	1.0541 ppb	19:12:26
1	Be 313.107†	-4982.8	211.1	0.0792 ug/L	0.0792 ppb	19:12:06
1	Cd 226.502†	-187.6	22.1	0.2419 ug/L	0.2419 ppb	19:12:26
1	Co 228.616†	-68.2	3.0	0.0623 ug/L	0.0623 ppb	19:12:26
1	Cr 267.716†	98.4	2.6	0.0295 ug/L	0.0295 ppb	19:12:26
1	Cu 324.752†	9193.9	-106.4	-0.2964 ug/L	-0.2964 ppb	19:12:06
1	Mn 257.610†	1347.7	832.5	0.9390 ug/L	0.9390 ppb	19:12:26
1	Mo 202.031†	29.5	5.3	0.3691 ug/L	0.3691 ppb	19:12:26
1	Ni 231.604†	99.1	3.5	0.0891 ug/L	0.0891 ppb	19:12:26
1	P 214.914†	238.8	-4.4	-2.4278 ug/L	-2.4278 ppb	19:12:26
1	Pb 220.353†	-54.8	6.7	0.8515 ug/L	0.8515 ppb	19:12:26
1	S 181.975 Axial†	57.1	-20.9	-28.837 ug/L	-28.837 ppb	19:12:26
1	Sb 206.836†	38.5	7.5	2.5296 ug/L	2.5296 ppb	19:12:26
1	Se 196.026†	-21.1	-2.8	-1.4188 ug/L	-1.4188 ppb	19:12:26
1	Si 251.611†	22354.5	21439.5	635.24 ug/L	635.24 ppb	19:12:06
1	Sn 189.927†	2.7	3.0	0.5502 ug/L	0.5502 ppb	19:12:26
1	Ti 334.940†	460.0	1357.9	2.0742 ug/L	2.0742 ppb	19:12:06
1	Tl 190.801†	-39.8	-2.2	-0.6789 ug/L	-0.6789 ppb	19:12:26
1	U 409.014†	-1044.9	37.5	0.9317 ug/L	0.9317 ppb	19:12:06
1	V 292.402†	-1341.2	77.6	0.4794 ug/L	0.4794 ppb	19:12:06
1	Zn 213.857†	833.6	84.6	0.7825 ug/L	0.7825 ppb	19:12:26
1	SiO2†	22404.3	21470.9	1357.9 ug/L	1357.9 ppb	19:13:22
2	Sc Radial	5470.9	5470.9	102 %		19:11:14
2	Y RADIAL	5882.2	5882.2	102.2 %		19:11:14
2	Al 396.153Radial†	127.0	114.9	86.975 ug/L	86.975 ppb	19:11:34
2	Ca 317.933Radial†	38.1	17.0	27.287 ug/L	27.287 ppb	19:11:34
2	Fe 238.204 Radial†	14.0	6.5	60.981 ug/L	60.981 ppb	19:11:34
2	K 766.490 Radial†	2704.2	136.0	24.841 ug/L	24.841 ppb	19:11:14
2	Mg 279.077 IEC†	2.0	0.9	33.382 ug/L	33.382 ppb	19:11:34
2	Na 589.592 Radial†	-579.6	-18.1	-5.3740 ug/L	-5.3740 ppb	19:11:14
2	Sr 421.552†	46.9	38.7	0.2482 ug/L	0.2482 ppb	19:11:14
2	Sc 361.383	918903.9	918903.9	102.34 %		19:12:31
2	Y 371.029	806986.5	806986.5	98.040 %		19:12:31
2	Ag 328.068†	256.4	-45.5	-0.1708 ug/L	-0.1708 ppb	19:12:31
2	As 188.979†	-27.4	3.4	1.4340 ug/L	1.4340 ppb	19:12:51
2	B 249.677†	216.1	451.6	9.8934 ug/L	9.8934 ppb	19:12:51
2	Ba 233.527†	134.9	134.9	1.0661 ug/L	1.0661 ppb	19:12:51
2	Be 313.107†	-4962.6	251.4	0.0935 ug/L	0.0935 ppb	19:12:31
2	Cd 226.502†	-195.2	15.4	0.1670 ug/L	0.1670 ppb	19:12:51
2	Co 228.616†	-71.4	0.2	0.0007 ug/L	0.0007 ppb	19:12:51
2	Cr 267.716†	103.8	7.5	0.0823 ug/L	0.0823 ppb	19:12:51
2	Cu 324.752†	9317.4	-23.9	-0.0654 ug/L	-0.0654 ppb	19:12:31
2	Mn 257.610†	1333.4	813.1	0.9162 ug/L	0.9162 ppb	19:12:51
2	Mo 202.031†	36.3	11.9	0.8148 ug/L	0.8148 ppb	19:12:51
2	Ni 231.604†	112.5	16.2	0.4078 ug/L	0.4078 ppb	19:12:51

2	P 214.914†	244.7	0.3	0.1731 ug/L	0.1731 ppb	19:12:51
2	Pb 220.353†	-45.7	15.8	1.9928 ug/L	1.9928 ppb	19:12:51
2	S 181.975 Axial†	60.6	-17.8	-24.550 ug/L	-24.550 ppb	19:12:51
2	Sb 206.836†	31.7	0.8	0.2765 ug/L	0.2765 ppb	19:12:51
2	Se 196.026†	-23.1	-4.7	-2.4799 ug/L	-2.4799 ppb	19:12:51
2	Si 251.611†	22374.7	21366.7	633.08 ug/L	633.08 ppb	19:12:31
2	Sn 189.927†	4.4	4.6	0.8533 ug/L	0.8533 ppb	19:12:51
2	Ti 334.940†	501.5	1396.6	2.1290 ug/L	2.1290 ppb	19:12:31
2	Tl 190.801†	-34.9	2.8	0.9008 ug/L	0.9008 ppb	19:12:51
2	U 409.014†	-969.0	116.0	2.8928 ug/L	2.8928 ppb	19:12:31
2	V 292.402†	-1348.2	76.2	0.4805 ug/L	0.4805 ppb	19:12:31
2	Zn 213.857†	821.8	69.6	0.6399 ug/L	0.6399 ppb	19:12:51
2	SiO2†	22443.1	21416.1	1354.4 ug/L	1354.4 ppb	19:13:27
3	Sc Radial	5381.4	5381.4	101 %		19:11:39
3	Y RADIAL	5785.2	5785.2	100.5 %		19:11:39
3	Al 396.153Radial†	143.0	132.8	100.54 ug/L	100.54 ppb	19:11:59
3	Ca 317.933Radial†	36.3	15.7	25.302 ug/L	25.302 ppb	19:11:59
3	Fe 238.204 Radial†	13.0	5.7	53.429 ug/L	53.429 ppb	19:11:59
3	K 766.490 Radial†	2734.3	209.8	38.313 ug/L	38.313 ppb	19:11:39
3	Mg 279.077 IEC†	5.2	4.2	148.23 ug/L	148.23 ppb	19:11:59
3	Na 589.592 Radial†	-554.2	-2.3	-0.6768 ug/L	-0.6768 ppb	19:11:39
3	Sr 421.552†	61.5	53.9	0.3458 ug/L	0.3458 ppb	19:11:39
3	Sc 361.383	918432.6	918432.6	102.29 %		19:12:57
3	Y 371.029	806074.3	806074.3	97.929 %		19:12:57
3	Ag 328.068†	348.1	44.3	0.1988 ug/L	0.1988 ppb	19:12:57
3	As 188.979†	-38.0	-7.0	-2.8228 ug/L	-2.8228 ppb	19:13:17
3	B 249.677†	218.0	453.5	9.9365 ug/L	9.9365 ppb	19:13:17
3	Ba 233.527†	129.5	129.7	1.0245 ug/L	1.0245 ppb	19:13:17
3	Be 313.107†	-4930.9	279.9	0.1034 ug/L	0.1034 ppb	19:12:57
3	Cd 226.502†	-188.3	22.1	0.2423 ug/L	0.2423 ppb	19:13:17
3	Co 228.616†	-64.7	6.7	0.1425 ug/L	0.1425 ppb	19:13:17
3	Cr 267.716†	84.3	-11.6	-0.1257 ug/L	-0.1257 ppb	19:13:17
3	Cu 324.752†	9205.2	-128.8	-0.3608 ug/L	-0.3608 ppb	19:12:57
3	Mn 257.610†	1323.1	803.6	0.9002 ug/L	0.9002 ppb	19:13:17
3	Mo 202.031†	31.9	7.5	0.5196 ug/L	0.5196 ppb	19:13:17
3	Ni 231.604†	111.6	15.4	0.3865 ug/L	0.3865 ppb	19:13:17
3	P 214.914†	245.1	0.8	0.5216 ug/L	0.5216 ppb	19:13:17
3	Pb 220.353†	-44.8	16.6	2.0968 ug/L	2.0968 ppb	19:13:17
3	S 181.975 Axial†	56.6	-21.7	-29.898 ug/L	-29.898 ppb	19:13:17
3	Sb 206.836†	38.0	6.9	2.3209 ug/L	2.3209 ppb	19:13:17
3	Se 196.026†	-22.2	-3.8	-1.9959 ug/L	-1.9959 ppb	19:13:17
3	Si 251.611†	22403.9	21406.4	634.26 ug/L	634.26 ppb	19:12:57
3	Sn 189.927†	-2.1	-1.7	-0.3084 ug/L	-0.3084 ppb	19:13:17
3	Ti 334.940†	466.6	1362.7	2.0673 ug/L	2.0673 ppb	19:12:57
3	Tl 190.801†	-40.3	-2.5	-0.7911 ug/L	-0.7911 ppb	19:13:17
3	U 409.014†	-925.8	157.7	3.9384 ug/L	3.9384 ppb	19:12:57
3	V 292.402†	-1409.4	15.7	0.1053 ug/L	0.1053 ppb	19:12:57
3	Zn 213.857†	819.3	67.6	0.6224 ug/L	0.6224 ppb	19:13:17
3	SiO2†	22266.0	21254.2	1344.2 ug/L	1344.2 ppb	19:13:32

Mean Data: 1202017563|942466|5

Analyte	Mean Corrected	Conc.	Calib.	Std.Dev.	Conc.	Sample	Std.Dev.	RSD
	Intensity	Units			Units			
Sc 361.383	917454.3	102.18 %		0.236				0.23%
Sc Radial	5433.4	102 %		0.9				0.86%
Y 371.029	805644.6	97.877 %		0.1945				0.20%
Y RADIAL	5842.1	101.5 %		0.88				0.87%
Ag 328.068†	4.1	0.0338 ug/L		0.18795	0.0338 ppb		0.18795	556.32%
Al 396.153Radial†	122.5	92.745 ug/L		7.0072	92.745 ppb		7.0072	7.56%
As 188.979†	-0.5	-0.1628 ug/L		2.31902	-0.1628 ppb		2.31902	>999.9%
B 249.677†	463.5	10.155 ug/L		0.4160	10.155 ppb		0.4160	4.10%
Ba 233.527†	132.7	1.0482 ug/L		0.02146	1.0482 ppb		0.02146	2.05%
Be 313.107†	247.5	0.0920 ug/L		0.01221	0.0920 ppb		0.01221	13.26%
Ca 317.933Radial†	15.6	25.122 ug/L		2.2609	25.122 ppb		2.2609	9.00%
Cd 226.502†	19.9	0.2171 ug/L		0.04338	0.2171 ppb		0.04338	19.99%
Co 228.616†	3.3	0.0685 ug/L		0.07112	0.0685 ppb		0.07112	103.85%
Cr 267.716†	-0.5	-0.0046 ug/L		0.10815	-0.0046 ppb		0.10815	>999.9%
Cu 324.752†	-86.4	-0.2409 ug/L		0.15534	-0.2409 ppb		0.15534	64.50%
Fe 238.204 Radial†	5.9	55.023 ug/L		5.3426	55.023 ppb		5.3426	9.71%
K 766.490 Radial†	163.5	29.859 ug/L		7.3639	29.859 ppb		7.3639	24.66%

Mg 279.077 IEC†	1.6	55.886 ug/L	83.4054	55.886 ppb	83.4054	149.24%
Mn 257.610†	816.4	0.9185 ug/L	0.01947	0.9185 ppb	0.01947	2.12%
Mo 202.031†	8.3	0.5678 ug/L	0.22673	0.5678 ppb	0.22673	39.93%
Na 589.592 Radial†	23.2	6.9028 ug/L	17.35570	6.9028 ppb	17.35570	251.43%
Ni 231.604†	11.7	0.2945 ug/L	0.17813	0.2945 ppb	0.17813	60.49%
P 214.914†	-1.1	-0.5777 ug/L	1.61171	-0.5777 ppb	1.61171	278.99%
Pb 220.353†	13.0	1.6470 ug/L	0.69092	1.6470 ppb	0.69092	41.95%
S 181.975 Axial†	-20.2	-27.762 ug/L	2.8316	-27.762 ppb	2.8316	10.20%
Sb 206.836†	5.1	1.7090 ug/L	1.24494	1.7090 ppb	1.24494	72.85%
Se 196.026†	-3.7	-1.9648 ug/L	0.53123	-1.9648 ppb	0.53123	27.04%
Si 251.611†	21404.2	634.20 ug/L	1.083	634.20 ppb	1.083	0.17%
Sn 189.927†	2.0	0.3650 ug/L	0.60259	0.3650 ppb	0.60259	165.07%
Sr 421.552†	48.5	0.3112 ug/L	0.05461	0.3112 ppb	0.05461	17.55%
Ti 334.940†	1372.4	2.0902 ug/L	0.03384	2.0902 ppb	0.03384	1.62%
Tl 190.801†	-0.7	-0.1897 ug/L	0.94609	-0.1897 ppb	0.94609	498.62%
U 409.014†	103.7	2.5876 ug/L	1.52638	2.5876 ppb	1.52638	58.99%
V 292.402†	56.5	0.3551 ug/L	0.21629	0.3551 ppb	0.21629	60.91%
Zn 213.857†	73.9	0.6816 ug/L	0.08782	0.6816 ppb	0.08782	12.88%
SiO2†	21380.4	1352.2 ug/L	7.13	1352.2 ppb	7.13	0.53%

Sequence No.: 33  
 Sample ID: CCV  
 Analyst:  
 Initial Sample Wt:  
 Dilution:

Autosampler Location: 1  
 Date Collected: 1/26/2010 19:22:53  
 Data Type: Original  
 Initial Sample Vol:  
 Sample Prep Vol:

## Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5428.8	5428.8	102 %		19:24:45
1	Y RADIAL	5838.3	5838.3	101.4 %		19:24:45
1	Al 396.153Radial†	6771.3	6651.5	5015.1 ug/L	5015.1 ppb	19:24:45
1	Ca 317.933Radial†	3213.1	3140.3	5047.5 ug/L	5047.5 ppb	19:25:05
1	Fe 238.204 Radial†	571.2	554.7	5198.8 ug/L	5198.8 ppb	19:25:05
1	K 766.490 Radial†	30694.7	27689.5	5052.2 ug/L	5052.2 ppb	19:24:45
1	Mg 279.077 IEC†	151.0	147.6	5263.8 ug/L	5263.8 ppb	19:25:05
1	Na 589.592 Radial†	32853.5	32864.2	9769.6 ug/L	9769.6 ppb	19:24:45
1	Sr 421.552†	80682.6	79356.8	509.25 ug/L	509.25 ppb	19:24:45
1	Sc 361.383	932362.2	932362.2	103.84 %		19:26:02
1	Y 371.029	817818.1	817818.1	99.356 %		19:26:02
1	Ag 328.068†	122271.0	117452.0	493.33 ug/L	493.33 ppb	19:26:08
1	As 188.979†	1200.0	1185.8	489.42 ug/L	489.42 ppb	19:26:28
1	B 249.677†	22865.8	22260.4	485.91 ug/L	485.91 ppb	19:26:08
1	Ba 233.527†	64346.9	61969.8	489.70 ug/L	489.70 ppb	19:26:08
1	Be 313.107†	1423895.6	1376324.5	486.62 ug/L	486.62 ppb	19:26:02
1	Cd 226.502†	45499.2	44022.3	491.62 ug/L	491.62 ppb	19:26:08
1	Co 228.616†	23628.7	22824.6	500.43 ug/L	500.43 ppb	19:26:08
1	Cr 267.716†	47235.9	45394.6	492.71 ug/L	492.71 ppb	19:26:08
1	Cu 324.752†	189180.4	173054.4	485.46 ug/L	485.46 ppb	19:26:08
1	Mn 257.610†	448525.6	431444.3	484.02 ug/L	484.02 ppb	19:26:02
1	Mo 202.031†	7418.6	7120.6	486.43 ug/L	486.43 ppb	19:26:28
1	Ni 231.604†	20425.0	19575.8	491.67 ug/L	491.67 ppb	19:26:08
1	P 214.914†	4651.8	4241.0	2296.9 ug/L	2296.9 ppb	19:26:28
1	Pb 220.353†	3966.2	3879.9	488.60 ug/L	488.60 ppb	19:26:28
1	S 181.975 Axial†	792.1	685.8	943.27 ug/L	943.27 ppb	19:26:28
1	Sb 206.836†	1545.0	1457.6	505.55 ug/L	505.55 ppb	19:26:28
1	Se 196.026†	845.3	832.0	498.83 ug/L	498.83 ppb	19:26:28
1	Si 251.611†	86832.3	83124.3	2457.0 ug/L	2457.0 ppb	19:26:08
1	Sn 189.927†	2762.5	2660.7	490.11 ug/L	490.11 ppb	19:26:28
1	Ti 334.940†	331572.5	320213.8	488.09 ug/L	488.09 ppb	19:26:08
1	Tl 190.801†	1498.2	1479.7	476.56 ug/L	476.56 ppb	19:26:28
1	U 409.014†	19186.9	19540.0	486.91 ug/L	486.91 ppb	19:26:08
1	V 292.402†	80369.2	78789.8	496.43 ug/L	496.43 ppb	19:26:08
1	Zn 213.857†	55370.8	52589.1	485.55 ug/L	485.55 ppb	19:26:08
1	SiO2†	86637.3	82919.1	5230.9 ug/L	5230.9 ppb	19:27:35
2	Sc Radial	5266.7	5266.7	98.6 %		19:25:10
2	Y RADIAL	5668.8	5668.8	98.46 %		19:25:10
2	Al 396.153Radial†	6543.0	6625.0	4995.0 ug/L	4995.0 ppb	19:25:10
2	Ca 317.933Radial†	3193.2	3217.4	5171.3 ug/L	5171.3 ppb	19:25:30
2	Fe 238.204 Radial†	565.6	566.3	5307.8 ug/L	5307.8 ppb	19:25:30
2	K 766.490 Radial†	29779.6	27691.0	5052.4 ug/L	5052.4 ppb	19:25:10
2	Mg 279.077 IEC†	148.8	149.9	5346.5 ug/L	5346.5 ppb	19:25:30
2	Na 589.592 Radial†	31534.9	32521.8	9667.8 ug/L	9667.8 ppb	19:25:10
2	Sr 421.552†	77425.8	78497.3	503.73 ug/L	503.73 ppb	19:25:10
2	Sc 361.383	930628.1	930628.1	103.65 %		19:26:33
2	Y 371.029	815853.6	815853.6	99.117 %		19:26:33
2	Ag 328.068†	122700.9	118086.3	496.02 ug/L	496.02 ppb	19:26:39
2	As 188.979†	1187.5	1175.9	485.41 ug/L	485.41 ppb	19:26:59
2	B 249.677†	22981.9	22413.5	489.24 ug/L	489.24 ppb	19:26:39
2	Ba 233.527†	64753.6	62477.5	493.71 ug/L	493.71 ppb	19:26:39
2	Be 313.107†	1423009.1	1378024.4	487.23 ug/L	487.23 ppb	19:26:33
2	Cd 226.502†	45720.0	44317.0	494.90 ug/L	494.90 ppb	19:26:39
2	Co 228.616†	23730.3	22965.0	503.50 ug/L	503.50 ppb	19:26:39
2	Cr 267.716†	47294.6	45536.1	494.25 ug/L	494.25 ppb	19:26:39
2	Cu 324.752†	190054.8	174237.5	488.78 ug/L	488.78 ppb	19:26:39
2	Mn 257.610†	448212.9	431947.4	484.59 ug/L	484.59 ppb	19:26:33
2	Mo 202.031†	7426.9	7141.9	487.89 ug/L	487.89 ppb	19:26:59
2	Ni 231.604†	20560.4	19743.1	495.87 ug/L	495.87 ppb	19:26:39

2	P 214.914†	4686.1	4282.5	2319.5 ug/L	2319.5 ppb	19:26:59
2	Pb 220.353†	3968.9	3889.6	489.81 ug/L	489.81 ppb	19:26:59
2	S 181.975 Axial†	790.7	685.9	943.39 ug/L	943.39 ppb	19:26:59
2	Sb 206.836†	1563.3	1478.0	512.44 ug/L	512.44 ppb	19:26:59
2	Se 196.026†	833.3	821.9	493.39 ug/L	493.39 ppb	19:26:59
2	Si 251.611†	87174.0	83609.8	2471.3 ug/L	2471.3 ppb	19:26:39
2	Sn 189.927†	2768.2	2671.1	492.06 ug/L	492.06 ppb	19:26:59
2	Ti 334.940†	333473.9	322643.2	491.80 ug/L	491.80 ppb	19:26:39
2	Tl 190.801†	1512.2	1495.9	481.76 ug/L	481.76 ppb	19:26:59
2	U 409.014†	19443.9	19822.4	493.95 ug/L	493.95 ppb	19:26:39
2	V 292.402†	80616.6	79172.8	498.83 ug/L	498.83 ppb	19:26:39
2	Zn 213.857†	55655.0	52962.7	488.99 ug/L	488.99 ppb	19:26:39
2	SiO2†	85843.9	82309.0	5192.3 ug/L	5192.3 ppb	19:27:40
3	Sc Radial	6022.1	6022.1	113 %		19:25:35
3	Y RADIAL	6490.1	6490.1	112.7 %		19:25:35
3	Al 396.153Radial†	6495.3	5750.5	4332.6 ug/L	4332.6 ppb	19:25:35
3	Ca 317.933Radial†	3160.4	2782.3	4471.9 ug/L	4471.9 ppb	19:25:55
3	Fe 238.204 Radial†	561.7	491.0	4603.2 ug/L	4603.2 ppb	19:25:55
3	K 766.490 Radial†	29809.0	23929.5	4366.0 ug/L	4366.0 ppb	19:25:35
3	Mg 279.077 IEC†	149.2	131.3	4683.9 ug/L	4683.9 ppb	19:25:55
3	Na 589.592 Radial†	31334.7	28333.6	8422.8 ug/L	8422.8 ppb	19:25:35
3	Sr 421.552†	76882.8	68168.5	437.45 ug/L	437.45 ppb	19:25:35
3	Sc 361.383	931108.5	931108.5	103.70 %		19:27:04
3	Y 371.029	815501.5	815501.5	99.074 %		19:27:04
3	Ag 328.068†	122018.0	117366.6	492.78 ug/L	492.78 ppb	19:27:10
3	As 188.979†	1212.5	1199.4	494.82 ug/L	494.82 ppb	19:27:30
3	B 249.677†	22891.2	22314.5	487.20 ug/L	487.20 ppb	19:27:10
3	Ba 233.527†	64161.2	61874.1	488.92 ug/L	488.92 ppb	19:27:10
3	Be 313.107†	1420909.4	1375291.2	486.25 ug/L	486.25 ppb	19:27:04
3	Cd 226.502†	45352.7	43940.0	490.76 ug/L	490.76 ppb	19:27:10
3	Co 228.616†	23528.1	22758.2	498.99 ug/L	498.99 ppb	19:27:10
3	Cr 267.716†	46854.6	45088.2	489.37 ug/L	489.37 ppb	19:27:10
3	Cu 324.752†	188570.8	172711.9	484.47 ug/L	484.47 ppb	19:27:10
3	Mn 257.610†	448969.0	432453.4	485.12 ug/L	485.12 ppb	19:27:04
3	Mo 202.031†	7423.0	7134.4	487.32 ug/L	487.32 ppb	19:27:30
3	Ni 231.604†	20397.2	19575.4	491.66 ug/L	491.66 ppb	19:27:10
3	P 214.914†	4694.3	4288.0	2323.9 ug/L	2323.9 ppb	19:27:30
3	Pb 220.353†	3970.3	3889.0	489.65 ug/L	489.65 ppb	19:27:30
3	S 181.975 Axial†	793.2	687.9	946.30 ug/L	946.30 ppb	19:27:30
3	Sb 206.836†	1543.8	1458.5	505.91 ug/L	505.91 ppb	19:27:30
3	Se 196.026†	835.5	823.7	492.04 ug/L	492.04 ppb	19:27:30
3	Si 251.611†	86462.4	82880.2	2449.7 ug/L	2449.7 ppb	19:27:10
3	Sn 189.927†	2773.1	2674.5	492.56 ug/L	492.56 ppb	19:27:30
3	Ti 334.940†	330185.4	319306.1	486.68 ug/L	486.68 ppb	19:27:10
3	Tl 190.801†	1505.8	1489.0	479.53 ug/L	479.53 ppb	19:27:30
3	U 409.014†	19161.8	19540.7	487.00 ug/L	487.00 ppb	19:27:10
3	V 292.402†	79846.5	78390.0	494.03 ug/L	494.03 ppb	19:27:10
3	Zn 213.857†	55042.7	52344.6	483.33 ug/L	483.33 ppb	19:27:10
3	SiO2†	86429.8	82831.3	5225.4 ug/L	5225.4 ppb	19:27:45

## Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	931366.3	103.73 %	0.100			0.10%
Sc Radial	5572.5	104 %	7.4			7.14%
Y 371.029	816391.1	99.182 %	0.1517			0.15%
Y RADIAL	5999.0	104.2 %	7.53			7.23%
Ag 328.068†	117634.9	494.04 ug/L	1.731	494.04 ppb	1.731	0.35%
QC value within limits for Ag 328.068 Recovery = 98.81%						
Al 396.153Radial†	6342.4	4780.9 ug/L	388.39	4780.9 ppb	388.39	8.12%
QC value within limits for Al 396.153Radial Recovery = 95.62%						
As 188.979†	1187.1	489.88 ug/L	4.722	489.88 ppb	4.722	0.96%
QC value within limits for As 188.979 Recovery = 97.98%						
B 249.677†	22329.5	487.45 ug/L	1.679	487.45 ppb	1.679	0.34%
QC value within limits for B 249.677 Recovery = 97.49%						
Ba 233.527†	62107.1	490.77 ug/L	2.570	490.77 ppb	2.570	0.52%
QC value within limits for Ba 233.527 Recovery = 98.15%						
Be 313.107†	1376546.7	486.70 ug/L	0.493	486.70 ppb	0.493	0.10%
QC value within limits for Be 313.107 Recovery = 97.34%						
Ca 317.933Radial†	3046.7	4896.9 ug/L	373.23	4896.9 ppb	373.23	7.62%

QC value within limits for Ca 317.933 Radial Recovery = 97.94%							
Cd 226.502†	44093.1	492.43 ug/L	2.186	492.43 ppb	2.186	0.44%	
QC value within limits for Cd 226.502 Recovery = 98.49%							
Co 228.616†	22849.3	500.97 ug/L	2.305	500.97 ppb	2.305	0.46%	
QC value within limits for Co 228.616 Recovery = 100.19%							
Cr 267.716†	45339.6	492.11 ug/L	2.491	492.11 ppb	2.491	0.51%	
QC value within limits for Cr 267.716 Recovery = 98.42%							
Cu 324.752†	173334.6	486.24 ug/L	2.259	486.24 ppb	2.259	0.46%	
QC value within limits for Cu 324.752 Recovery = 97.25%							
Fe 238.204 Radial†	537.3	5036.6 ug/L	379.25	5036.6 ppb	379.25	7.53%	
QC value within limits for Fe 238.204 Radial Recovery = 100.73%							
K 766.490 Radial†	26436.7	4823.5 ug/L	396.24	4823.5 ppb	396.24	8.21%	
QC value within limits for K 766.490 Radial Recovery = 96.47%							
Mg 279.077 IEC†	142.9	5098.1 ug/L	361.03	5098.1 ppb	361.03	7.08%	
QC value within limits for Mg 279.077 IEC Recovery = 101.96%							
Mn 257.610†	431948.4	484.58 ug/L	0.548	484.58 ppb	0.548	0.11%	
QC value within limits for Mn 257.610 Recovery = 96.92%							
Mo 202.031†	7132.3	487.21 ug/L	0.739	487.21 ppb	0.739	0.15%	
QC value within limits for Mo 202.031 Recovery = 97.44%							
Na 589.592 Radial†	31239.9	9286.7 ug/L	749.93	9286.7 ppb	749.93	8.08%	
QC value within limits for Na 589.592 Radial Recovery = 92.87%							
Ni 231.604†	19631.4	493.07 ug/L	2.428	493.07 ppb	2.428	0.49%	
QC value within limits for Ni 231.604 Recovery = 98.61%							
P 214.914†	4270.5	2313.4 ug/L	14.50	2313.4 ppb	14.50	0.63%	
QC value within limits for P 214.914 Recovery = 92.54%							
Pb 220.353†	3886.1	489.35 ug/L	0.657	489.35 ppb	0.657	0.13%	
QC value within limits for Pb 220.353 Recovery = 97.87%							
S 181.975 Axial†	686.5	944.32 ug/L	1.714	944.32 ppb	1.714	0.18%	
QC value within limits for S 181.975 Axial Recovery = 94.43%							
Sb 206.836†	1464.7	507.97 ug/L	3.877	507.97 ppb	3.877	0.76%	
QC value within limits for Sb 206.836 Recovery = 101.59%							
Se 196.026†	825.8	494.75 ug/L	3.594	494.75 ppb	3.594	0.73%	
QC value within limits for Se 196.026 Recovery = 98.95%							
Si 251.611†	83204.8	2459.4 ug/L	11.00	2459.4 ppb	11.00	0.45%	
QC value within limits for Si 251.611 Recovery = 98.37%							
Sn 189.927†	2668.8	491.58 ug/L	1.291	491.58 ppb	1.291	0.26%	
QC value within limits for Sn 189.927 Recovery = 98.32%							
Sr 421.552†	75340.9	483.48 ug/L	39.956	483.48 ppb	39.956	8.26%	
QC value within limits for Sr 421.552 Recovery = 96.70%							
Ti 334.940†	320721.0	488.85 ug/L	2.646	488.85 ppb	2.646	0.54%	
QC value within limits for Ti 334.940 Recovery = 97.77%							
Tl 190.801†	1488.2	479.28 ug/L	2.607	479.28 ppb	2.607	0.54%	
QC value within limits for Tl 190.801 Recovery = 95.86%							
U 409.014†	19634.3	489.29 ug/L	4.041	489.29 ppb	4.041	0.83%	
QC value within limits for U 409.014 Recovery = 97.86%							
V 292.402†	78784.2	496.43 ug/L	2.396	496.43 ppb	2.396	0.48%	
QC value within limits for V 292.402 Recovery = 99.29%							
Zn 213.857†	52632.2	485.96 ug/L	2.850	485.96 ppb	2.850	0.59%	
QC value within limits for Zn 213.857 Recovery = 97.19%							
SiO2†	82686.5	5216.2 ug/L	20.88	5216.2 ppb	20.88	0.40%	
QC value within limits for SiO2 Recovery = 97.54%							
All analyte(s) passed QC.							



Sequence No.: 34

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 6

Date Collected: 1/26/2010 19:29:56

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

## Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5428.5	5428.5	102 %		19:31:47
1	Y RADIAL	5877.7	5877.7	102.1 %		19:31:47
1	Al 396.153Radial†	10.8	1.5	1.1418 ug/L	1.1418 ppb	19:32:07
1	Ca 317.933Radial†	15.1	-5.4	-8.7282 ug/L	-8.7282 ppb	19:32:07
1	Fe 238.204 Radial†	5.9	-1.3	-12.322 ug/L	-12.322 ppb	19:32:07
1	K 766.490 Radial†	2384.3	-158.1	-28.843 ug/L	-28.843 ppb	19:31:47
1	Mg 279.077 IEC†	-1.5	-2.4	-86.408 ug/L	-86.408 ppb	19:32:07
1	Na 589.592 Radial†	-829.4	-268.2	-79.742 ug/L	-79.742 ppb	19:31:47
1	Sr 421.552†	38.6	30.8	0.1980 ug/L	0.1980 ppb	19:31:47
1	Sc 361.383	917685.8	917685.8	102.21 %		19:33:04
1	Y 371.029	806622.3	806622.3	97.995 %		19:33:04
1	Ag 328.068†	411.7	106.7	0.4441 ug/L	0.4441 ppb	19:33:04
1	As 188.979†	-21.3	9.4	3.8243 ug/L	3.8243 ppb	19:33:24
1	B 249.677†	-49.2	192.3	4.2201 ug/L	4.2201 ppb	19:33:24
1	Ba 233.527†	-3.3	-0.1	-0.0007 ug/L	-0.0007 ppb	19:33:24
1	Be 313.107†	-4993.5	214.7	0.0757 ug/L	0.0757 ppb	19:33:04
1	Cd 226.502†	-193.7	16.7	0.1875 ug/L	0.1875 ppb	19:33:24
1	Co 228.616†	-77.4	-5.7	-0.1249 ug/L	-0.1249 ppb	19:33:24
1	Cr 267.716†	95.0	-1.0	-0.0101 ug/L	-0.0101 ppb	19:33:24
1	Cu 324.752†	9042.5	-280.8	-0.7875 ug/L	-0.7875 ppb	19:33:04
1	Mn 257.610†	488.9	-11.5	-0.0106 ug/L	-0.0106 ppb	19:33:24
1	Mo 202.031†	29.4	5.2	0.3518 ug/L	0.3518 ppb	19:33:24
1	Ni 231.604†	101.8	5.9	0.1476 ug/L	0.1476 ppb	19:33:24
1	P 214.914†	241.2	-2.7	-1.3616 ug/L	-1.3616 ppb	19:33:24
1	Pb 220.353†	-36.5	24.7	3.1020 ug/L	3.1020 ppb	19:33:24
1	S 181.975 Axial†	44.3	-33.7	-46.385 ug/L	-46.385 ppb	19:33:24
1	Sb 206.836†	40.3	9.2	3.0770 ug/L	3.0770 ppb	19:33:24
1	Se 196.026†	-24.7	-6.2	-3.6440 ug/L	-3.6440 ppb	19:33:24
1	Si 251.611†	533.9	26.4	0.7774 ug/L	0.7774 ppb	19:33:24
1	Sn 189.927†	1.8	2.1	0.3788 ug/L	0.3788 ppb	19:33:24
1	Ti 334.940†	-928.8	-2.2	0.0032 ug/L	0.0032 ppb	19:33:04
1	Tl 190.801†	-46.1	-8.2	-2.6150 ug/L	-2.6150 ppb	19:33:24
1	U 409.014†	-1141.2	-53.7	-1.3426 ug/L	-1.3426 ppb	19:33:04
1	V 292.402†	-1367.7	55.4	0.3473 ug/L	0.3473 ppb	19:33:04
1	Zn 213.857†	687.7	-60.6	-0.5629 ug/L	-0.5629 ppb	19:33:24
1	SiO2†	541.0	16.0	0.9995 ug/L	0.9995 ppb	19:34:35
2	Sc Radial	5727.5	5727.5	107 %		19:32:12
2	Y RADIAL	6158.4	6158.4	107.0 %		19:32:12
2	Al 396.153Radial†	1.4	-7.8	-5.8944 ug/L	-5.8944 ppb	19:32:32
2	Ca 317.933Radial†	17.8	-3.6	-5.8334 ug/L	-5.8334 ppb	19:32:32
2	Fe 238.204 Radial†	8.5	0.8	7.3524 ug/L	7.3524 ppb	19:32:32
2	K 766.490 Radial†	2335.5	-326.0	-59.526 ug/L	-59.526 ppb	19:32:12
2	Mg 279.077 IEC†	1.5	0.4	13.732 ug/L	13.732 ppb	19:32:32
2	Na 589.592 Radial†	-753.0	-154.4	-45.905 ug/L	-45.905 ppb	19:32:12
2	Sr 421.552†	2.8	-4.5	-0.0289 ug/L	-0.0289 ppb	19:32:12
2	Sc 361.383	909084.1	909084.1	101.25 %		19:33:29
2	Y 371.029	798999.4	798999.4	97.069 %		19:33:29
2	Ag 328.068†	350.9	50.5	0.2162 ug/L	0.2162 ppb	19:33:29
2	As 188.979†	-25.7	4.8	1.9789 ug/L	1.9789 ppb	19:33:50
2	B 249.677†	-57.6	183.6	4.0244 ug/L	4.0244 ppb	19:33:50
2	Ba 233.527†	8.7	11.7	0.0928 ug/L	0.0928 ppb	19:33:50
2	Be 313.107†	-4921.2	239.9	0.0847 ug/L	0.0847 ppb	19:33:29
2	Cd 226.502†	-205.7	3.0	0.0324 ug/L	0.0324 ppb	19:33:50
2	Co 228.616†	-67.3	3.4	0.0743 ug/L	0.0743 ppb	19:33:50
2	Cr 267.716†	95.0	-0.1	0.0002 ug/L	0.0002 ppb	19:33:50
2	Cu 324.752†	8934.2	-303.9	-0.8506 ug/L	-0.8506 ppb	19:33:29
2	Mn 257.610†	463.6	-31.9	-0.0356 ug/L	-0.0356 ppb	19:33:50
2	Mo 202.031†	19.4	-4.4	-0.3025 ug/L	-0.3025 ppb	19:33:50
2	Ni 231.604†	102.1	7.2	0.1798 ug/L	0.1798 ppb	19:33:50

2	P 214.914†	231.7	-9.9	-5.4325 ug/L	-5.4325 ppb	19:33:50
2	Pb 220.353†	-40.2	20.7	2.5986 ug/L	2.5986 ppb	19:33:50
2	S 181.975 Axial†	41.0	-36.5	-50.288 ug/L	-50.288 ppb	19:33:50
2	Sb 206.836†	35.5	4.8	1.5909 ug/L	1.5909 ppb	19:33:50
2	Se 196.026†	-12.2	5.9	3.4478 ug/L	3.4478 ppb	19:33:50
2	Si 251.611†	536.1	33.6	0.9984 ug/L	0.9984 ppb	19:33:50
2	Sn 189.927†	-0.1	0.3	0.0456 ug/L	0.0456 ppb	19:33:50
2	Ti 334.940†	-887.2	30.2	0.0455 ug/L	0.0455 ppb	19:33:29
2	Tl 190.801†	-29.5	7.7	2.4773 ug/L	2.4773 ppb	19:33:50
2	U 409.014†	-1199.4	-121.7	-3.0447 ug/L	-3.0447 ppb	19:33:29
2	V 292.402†	-1393.3	17.4	0.0975 ug/L	0.0975 ppb	19:33:29
2	Zn 213.857†	702.1	-39.9	-0.3727 ug/L	-0.3727 ppb	19:33:50
2	SiO2†	550.2	30.0	1.9084 ug/L	1.9084 ppb	19:34:55
3	Sc Radial	5518.7	5518.7	103 %		19:32:37
3	Y RADIAL	5956.4	5956.4	103.5 %		19:32:37
3	Al 396.153Radial†	-16.0	-24.7	-18.663 ug/L	-18.663 ppb	19:32:58
3	Ca 317.933Radial†	16.1	-4.6	-7.4572 ug/L	-7.4572 ppb	19:32:58
3	Fe 238.204 Radial†	9.6	2.2	20.284 ug/L	20.284 ppb	19:32:58
3	K 766.490 Radial†	2476.0	-107.6	-19.630 ug/L	-19.630 ppb	19:32:37
3	Mg 279.077 IEC†	2.2	1.2	42.605 ug/L	42.605 ppb	19:32:58
3	Na 589.592 Radial†	-830.5	-256.0	-76.094 ug/L	-76.094 ppb	19:32:37
3	Sr 421.552†	13.2	5.7	0.0367 ug/L	0.0367 ppb	19:32:37
3	Sc 361.383	911535.1	911535.1	101.52 %		19:33:55
3	Y 371.029	801306.1	801306.1	97.350 %		19:33:55
3	Ag 328.068†	366.2	64.7	0.2759 ug/L	0.2759 ppb	19:33:55
3	As 188.979†	-29.4	1.2	0.5114 ug/L	0.5114 ppb	19:34:15
3	B 249.677†	-70.7	170.8	3.7429 ug/L	3.7429 ppb	19:34:15
3	Ba 233.527†	-10.2	-7.0	-0.0542 ug/L	-0.0542 ppb	19:34:15
3	Be 313.107†	-4939.8	234.7	0.0828 ug/L	0.0828 ppb	19:33:55
3	Cd 226.502†	-203.8	5.4	0.0588 ug/L	0.0588 ppb	19:34:15
3	Co 228.616†	-70.6	0.4	0.0083 ug/L	0.0083 ppb	19:34:15
3	Cr 267.716†	80.7	-14.4	-0.1563 ug/L	-0.1563 ppb	19:34:15
3	Cu 324.752†	8845.9	-414.7	-1.1629 ug/L	-1.1629 ppb	19:33:55
3	Mn 257.610†	497.0	-0.3	-0.0001 ug/L	-0.0001 ppb	19:34:15
3	Mo 202.031†	18.9	-5.0	-0.3416 ug/L	-0.3416 ppb	19:34:15
3	Ni 231.604†	106.6	11.4	0.2855 ug/L	0.2855 ppb	19:34:15
3	P 214.914†	255.9	13.3	7.7282 ug/L	7.7282 ppb	19:34:15
3	Pb 220.353†	-36.3	24.6	3.0867 ug/L	3.0867 ppb	19:34:15
3	S 181.975 Axial†	40.3	-37.3	-51.350 ug/L	-51.350 ppb	19:34:15
3	Sb 206.836†	46.3	15.4	5.1528 ug/L	5.1528 ppb	19:34:15
3	Se 196.026†	-14.3	3.9	2.3078 ug/L	2.3078 ppb	19:34:15
3	Si 251.611†	517.3	13.6	0.4070 ug/L	0.4070 ppb	19:34:15
3	Sn 189.927†	1.5	1.8	0.3306 ug/L	0.3306 ppb	19:34:15
3	Ti 334.940†	-920.0	0.3	-0.0044 ug/L	-0.0044 ppb	19:33:55
3	Tl 190.801†	-32.4	5.0	1.5910 ug/L	1.5910 ppb	19:34:15
3	U 409.014†	-1034.4	43.9	1.0959 ug/L	1.0959 ppb	19:33:55
3	V 292.402†	-1417.5	-2.7	-0.0216 ug/L	-0.0216 ppb	19:33:55
3	Zn 213.857†	675.4	-68.1	-0.6364 ug/L	-0.6364 ppb	19:34:15
3	SiO2†	523.1	1.9	0.1271 ug/L	0.1271 ppb	19:35:15

## Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
Sc 361.383	912768.3	101.66 %		0.494			0.49%
Sc Radial	5558.2	104 %		2.9			2.76%
Y 371.029	802309.2	97.471 %		0.4749			0.49%
Y RADIAL	5997.5	104.2 %		2.52			2.41%
Ag 328.068†	74.0	0.3121 ug/L		0.11816	0.3121 ppb	0.11816	37.86%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	-10.3	-7.8052 ug/L		10.03973	-7.8052 ppb	10.03973	128.63%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	5.1	2.1049 ug/L		1.66004	2.1049 ppb	1.66004	78.87%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	182.2	3.9958 ug/L		0.23991	3.9958 ppb	0.23991	6.00%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	1.5	0.0126 ug/L		0.07442	0.0126 ppb	0.07442	588.46%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	229.8	0.0811 ug/L		0.00473	0.0811 ppb	0.00473	5.83%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	-4.6	-7.3396 ug/L		1.45103	-7.3396 ppb	1.45103	19.77%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated							
Cd 226.502†	8.4	0.0929 ug/L	0.08299	0.0929 ppb	0.08299	89.34%	
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	-0.6	-0.0141 ug/L	0.10149	-0.0141 ppb	0.10149	719.21%	
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-5.2	-0.0554 ug/L	0.08752	-0.0554 ppb	0.08752	158.02%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-333.1	-0.9337 ug/L	0.20104	-0.9337 ppb	0.20104	21.53%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	0.5	5.1047 ug/L	16.41880	5.1047 ppb	16.41880	321.64%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	-197.2	-36.000 ug/L	20.8884	-36.000 ppb	20.8884	58.02%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	-0.3	-10.024 ug/L	67.7075	-10.024 ppb	67.7075	675.49%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	-14.6	-0.0154 ug/L	0.01826	-0.0154 ppb	0.01826	118.24%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	-1.4	-0.0974 ug/L	0.38952	-0.0974 ppb	0.38952	399.81%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-226.2	-67.247 ug/L	18.5721	-67.247 ppb	18.5721	27.62%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	8.1	0.2043 ug/L	0.07213	0.2043 ppb	0.07213	35.30%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	0.2	0.3114 ug/L	6.73795	0.3114 ppb	6.73795	>999.9%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	23.4	2.9291 ug/L	0.28632	2.9291 ppb	0.28632	9.77%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-35.8	-49.341 ug/L	2.6148	-49.341 ppb	2.6148	5.30%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	9.8	3.2736 ug/L	1.78907	3.2736 ppb	1.78907	54.65%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	1.2	0.7039 ug/L	3.80824	0.7039 ppb	3.80824	541.05%	
QC value within limits for Se 196.026 Recovery = Not calculated							
Si 251.611†	24.5	0.7276 ug/L	0.29884	0.7276 ppb	0.29884	41.07%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	1.4	0.2517 ug/L	0.18006	0.2517 ppb	0.18006	71.55%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	10.7	0.0686 ug/L	0.11676	0.0686 ppb	0.11676	170.26%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	9.5	0.0148 ug/L	0.02692	0.0148 ppb	0.02692	182.30%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	1.5	0.4845 ug/L	2.72054	0.4845 ppb	2.72054	561.56%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-43.9	-1.0971 ug/L	2.08114	-1.0971 ppb	2.08114	189.69%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	23.4	0.1411 ug/L	0.18830	0.1411 ppb	0.18830	133.49%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-56.2	-0.5240 ug/L	0.13608	-0.5240 ppb	0.13608	25.97%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†	16.0	1.0117 ug/L	0.89071	1.0117 ppb	0.89071	88.04%	
QC value within limits for SiO2 Recovery = Not calculated							

All analyte(s) passed QC.

## Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Monday, January 25, 2010 10:15:21

Sample Description:

Method File: c:\elandata\Method\daily2.mth

Dataset File: c:\elandata\Dataset\090811\Sample.365

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

### Summary

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
Be	9.0	279.6	279.603	7.232	2.6
Mg	24.0	6551.7	6551.703	224.316	3.4
Co	58.9	19524.1	19524.133	162.594	0.8
Rh	102.9	43393.0	43393.008	419.775	1.0
In	114.9	59564.7	59564.726	455.300	0.8
Pb	208.0	24383.4	24383.392	43.598	0.2
[> Ba	137.9	49039.4	49039.405	331.258	0.7
[ Ba++	69.0	663.8	0.014	0.000	2.5
[> Ce	139.9	58114.6	58114.574	541.645	0.9
[ CeO	155.9	1381.1	0.024	0.000	1.8
Bkgd	220.0	2.7	2.700	0.908	33.6

### Current Optimization File Data

Current Value	Description
0.86	Nebulizer Gas Flow
9.00	Lens Voltage
1000.00	ICP RF Power
-1875.00	Analog Stage Voltage
1100.00	Pulse Stage Voltage
50.00	Discriminator Threshold
-2.00	AC Rod Offset

### Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	17	8.3	526.7
Co	59	17	9.8	17606.2
In	115	17	11.3	44925.9

## ICPMS #4 TUNING REPORT

File Name: default2.tun  
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	605	2060	0.712
Be	9.0	9.1	2032	2045	0.713
Mg	24.0	24.0	5651	2075	0.629
Mg	25.0	25.0	5961	2080	0.752
Mg	26.0	26.1	6122	2085	0.671
Co	58.9	58.9	14167	2140	0.679
Rh	102.9	102.8	24853	2230	0.691
In	114.9	114.9	27767	2255	0.695
Ce	139.9	139.8	33839	2310	0.669
Pb	206.0	206.0	49932	2500	0.664
Pb	207.0	207.0	50113	2380	0.688
Pb	208.0	208.0	50436	2570	0.658
U	238.1	238.1	57690	2510	0.703

## ICPMS#4 - Summary Report

Sample ID: Blank

Sample Date/Time: Monday, January 25, 2010 10:48:06

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\Blank.001

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		70562	
[	U	238	ug/L		7	

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Simple Linear	
U	238Simple Linear	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175				
[	U	238				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: Blank

Report Date/Time: Monday, January 25, 2010 10:48:19

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## ICPMS#4 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Monday, January 25, 2010 10:50:17

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\Standard 1.002

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		71229	71228.552
[ U 238	10.000	ug/L	0.948	60117	0.844

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175					
[ U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: Standard 1

Report Date/Time: Monday, January 25, 2010 10:50:28

Page 1

## ICPMS#4 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Monday, January 25, 2010 10:52:26

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\Standard 2.003

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		71370	71369.580
[	U 238	99.975	ug/L	2.548	587354	8.231

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175					
[	U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: Standard 2

Report Date/Time: Monday, January 25, 2010 10:52:37

Page 1



## ICPMS#4 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Monday, January 25, 2010 10:54:36

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 1.004

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		70364	70363.907
[	U 238	52.666	ug/L	1.699	305082	4.336

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175			99.7		
[	U 238	105.331				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 1

Report Date/Time: Monday, January 25, 2010 10:54:47

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Monday, January 25, 2010 10:56:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 2.005

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		67652	67651.830
[	U 238	0.019	ug/L	7.663	115	0.002

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		95.9			
[	U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 2

Report Date/Time: Monday, January 25, 2010 10:57:01

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Monday, January 25, 2010 10:59:01

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 3.006

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		70012	70012.214
[	U 238	0.228	ug/L	1.188	1323	0.019

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175			99.2		
[	U 238	114.119				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#4 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Monday, January 25, 2010 11:01:11

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 4.007

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		66109	66108.971
[	U 238	0.003	ug/L	24.116	25	0.000

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		93.7			
[	U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 4

Report Date/Time: Monday, January 25, 2010 11:01:23

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Monday, January 25, 2010 11:03:23

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 5.008

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		64803	64802.658
[	U	238	20.513 ug/L	1.294	109445	1.689

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		91.8		
[	U	238	102.565			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 5

Report Date/Time: Monday, January 25, 2010 11:03:35

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, January 25, 2010 11:05:35

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 6.009

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		66608	66607.627
[ U	238	50.864	ug/L	0.662	278958	4.188

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu	175		94.4			
[ U	238	101.727				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Monday, January 25, 2010 11:05:47

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, January 25, 2010 11:07:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 7.010

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		66809	66808.564
[	U 238	0.017	ug/L	18.292	99	0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		94.7			
[	U 238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Monday, January 25, 2010 11:08:01

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, January 25, 2010 11:25:29

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 6.018

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		65297	65296.542
[	U	238	49.814 ug/L	2.164	267815	4.101

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		92.5		
[	U	238	99.628			

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Monday, January 25, 2010 11:25:41

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, January 25, 2010 11:27:43

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 7.019

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		63567	63567.105
[ U 238	0.014	ug/L	10.045	79	0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175		90.1			
[ U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, January 25, 2010 11:40:59

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 6.025

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		63507	63507.227
[	U 238	49.378	ug/L	0.462	258205	4.065

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175			90.0		
[	U 238	98.757				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Monday, January 25, 2010 11:41:10

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, January 25, 2010 11:43:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 7.026

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		63466	63466.300
[	U 238	0.018	ug/L	6.189	98	0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175			89.9		
[	U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Monday, January 25, 2010 11:43:25

Page 1

## ICPMS#4 - Summary Report

Sample ID: 1202017705

Sample Date/Time: Monday, January 25, 2010 11:55:33

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 942514|1|skj

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\1202017705.027

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		58764	58763.904
[	U 238	0.007	ug/L	9.995	41	0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		83.3			
[	U 238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202017705

Report Date/Time: Monday, January 25, 2010 11:55:44

Page 1

## ICPMS#4 - Summary Report

Sample ID: 1202017706

Sample Date/Time: Monday, January 25, 2010 11:57:44

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 942514|1|skj

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\1202017706.028

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		59049	59048.727
[ U 238	47.958	ug/L	0.687	233169	3.948

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175		83.7			
[ U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202017706

Report Date/Time: Monday, January 25, 2010 11:57:56

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, January 25, 2010 12:13:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 6.035

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		62728	62728.079
[	U	238	48.343 ug/L	0.986	249655	3.980

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		88.9		
[	U	238	96.687			

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Monday, January 25, 2010 12:13:25

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, January 25, 2010 12:15:26

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 7.036

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		62171	62171.281
[	U 238	0.016	ug/L	8.139	87	0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		88.1			
[	U 238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Monday, January 25, 2010 12:15:39

Page 1

## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, January 25, 2010 12:37:37

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 6.046

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		63250	63250.012
[ U 238	48.488	ug/L	0.840	252503	3.992

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175		89.6			
[ U 238	96.976				

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Monday, January 25, 2010 12:37:49

Page 1



## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, January 25, 2010 12:39:51

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 7.047

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		62741	62741.102
[ U 238	0.016	ug/L	14.527	91	0.001

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175			88.9		
[ U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Monday, January 25, 2010 12:40:04

Page 1

## ICPMS#4 - Summary Report

Sample ID: 244922001

Sample Date/Time: Monday, January 25, 2010 12:48:48

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942514|1|skj

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\244922001.051

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		63502	63501.795
[	U 238	0.040	ug/L	4.594	215	0.003

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		90.0			
[	U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 244922001

Report Date/Time: Monday, January 25, 2010 12:49:02

Page 1

## ICPMS#4 - Summary Report

Sample ID: 1202017707

Sample Date/Time: Monday, January 25, 2010 12:53:15

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 942514|1|skj

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\1202017707.053

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		61403	61403.305
[ U 238	2.903	ug/L	1.645	14680	0.239

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175		87.0			
[ U 238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202017707

Report Date/Time: Monday, January 25, 2010 12:53:27

Page 1

## ICPMS#4 - Summary Report

Sample ID: 1202017708

Sample Date/Time: Monday, January 25, 2010 12:55:28

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 942514|1|skj

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\1202017708.054

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		59852	59852.387
[	U 238	49.292	ug/L	1.323	242919	4.058

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		84.8			
[	U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#4 - Summary Report

Sample ID: 1202017709

Sample Date/Time: Monday, January 25, 2010 12:57:43

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 942514|5|skj

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\1202017709.055

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		57742	57742.392
[	U 238	0.619	ug/L	2.234	2947	0.051

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		81.8			
[	U 238					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202017709

Report Date/Time: Monday, January 25, 2010 12:57:55

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## ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, January 25, 2010 12:59:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 6.056

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
> Lu 175		ug/L		57970	57969.997
[ U 238	48.429	ug/L	0.708	231150	3.987

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
> Lu 175		82.2			
[ U 238	96.858				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Monday, January 25, 2010 13:00:08

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## ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, January 25, 2010 13:02:09

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 7.057

### Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		56905	56904.726
[ U 238	0.017	ug/L	4.984	85	0.001

### Calibration

Analyte	Mass Curve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

### QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175		80.6			
[ U 238					

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Monday, January 25, 2010 13:02:22

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## ICPMS #5 Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Sunday, January 24, 2010 12:32:20

### Sample Description:

Method File: c:\elandata\Method\Daily2.mth

Dataset File: c:\elandata\Dataset\default2\Sample.1744

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Number of Replicates: 5

### Summary

Analyte	Mass	Meas. Intens.	Mean	Net Intens.	Mean	Net Intens.	SD	Net Intens.	RSD
Be	9.0	2517.0		2517.022		73.747		2.9	
Mg	24.0	37608.2		37608.248		590.113		1.6	
Co	58.9	75402.3		75402.282		688.003		0.9	
Rh	102.9	139404.7		139404.691		734.179		0.5	
In	114.9	194564.7		194564.664		1769.852		0.9	
Pb	208.0	211131.0		211131.027		1912.120		0.9	
[> Ba	137.9	183368.7		183368.743		2127.934		1.2	
[ Ba++	69.0	2810.4		0.015		0.000		0.7	
[> Ce	139.9	223045.8		223045.814		1616.742		0.7	
[ CeO	155.9	4848.4		0.022		0.000		2.2	
Bkgd	220.0	15.8		15.800		2.168		13.7	

### Current Optimization File Data

Current Value	Description
0.85	Nebulizer Gas Flow
8.75	Lens Voltage
1450.00	ICP RF Power
-1718.75	Analog Stage Voltage
1200.00	Pulse Stage Voltage
275.00	Discriminator Threshold
-6.00	AC Rod Offset

### Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	19	8.8	4557.4
Co	59	19	10.0	76159.8
In	115	19	11.3	194713.0



## ICPMS #5 Instrument Tuning Report

File Name: default2.tun  
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	590	2050	0.622
Be	9.0	9.0	2062	2070	0.601
Mg	24.0	24.0	5691	2070	0.592
Mg	25.0	24.9	5931	2070	0.623
Mg	26.0	26.0	6160	2070	0.612
Co	58.9	58.9	14185	2105	0.595
Rh	102.9	102.9	24882	2165	0.603
In	114.9	114.9	27796	2185	0.590
Ce	139.9	139.9	33868	2200	0.613
Pb	206.0	206.0	49948	2270	0.636
Pb	207.0	207.0	50171	2235	0.668
Pb	208.0	208.0	50439	2260	0.696
U	238.1	238.0	57726	2260	0.743

## ICPMS#5 - Summary Report

Sample ID: Blank  
 Sample Date/Time: Sunday, January 24, 2010 14:44:50  
 Sample Type:  
 Sample Description:  
 Number of Replicates: 3  
 Batch ID:  
 Method File: c:\elandata\Method\6020 2.mth  
 Dataset File: C:\elandata\Dataset\100124\Blank.071

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		75	
	Be	9		ug/L		14	
	B	11		ug/L		332	
	Na	23		ug/L		30032	
	Mg	24		ug/L		7669	
	Al	27		ug/L		8336	
	P	31		ug/L		4692	
	K	39		ug/L		464780	
	Ca	43		ug/L		193	
>	Sc	45		ug/L		923650	
	Ti	47		ug/L		272	
	V	51		ug/L		-1043	
	Cr	52		ug/L		-810	
	Cr	53		ug/L		68039	
	Mn	55		ug/L		1178	
	Fe	57		ug/L		4741	
	Co	59		ug/L		158	
	Ni	60		ug/L		147	
	Cu	63		ug/L		2178	
	Cu	65		ug/L		1058	
	Zn	66		ug/L		1645	
	Zn	67		ug/L		7432	
	Zn	68		ug/L		1740	
>	Ge	74		ug/L		348609	
	As	75		ug/L		-293	
	Se	77		ug/L		3933	
	Se	82		ug/L		-2	
	Kr	83		ug/L		85	
	Sr	88		ug/L		229	
	Y	89		ug/L		63	
	Mo	98		ug/L		84	
	Ag	107		ug/L		52	
	Cd	111		ug/L		16	
	Cd	114		ug/L		49	
>	In	115		ug/L		234860	
	Sn	120		ug/L		1271	
	Sb	121		ug/L		492	
	Sb	123		ug/L		391	
	Ba	135		ug/L		46	
	Ba	137		ug/L		71	
	Ho	165		ug/L		20	
>	Lu	175		ug/L		505775	
	Tl	205		ug/L		574	
	Pb	208		ug/L		1063	
	Bi	209		ug/L		110	
	Th	232		ug/L		816	
	U	238		ug/L		621	

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Simple Linear	
Be	9Simple Linear	
B	11Simple Linear	
Na	23Simple Linear	
Mg	24Simple Linear	
Al	27Simple Linear	
P	31Simple Linear	
K	39Simple Linear	
Ca	43Simple Linear	
Sc	45Simple Linear	
Ti	47Simple Linear	
V	51Simple Linear	
Cr	52Simple Linear	
Cr	53Simple Linear	
Mn	55Simple Linear	
Fe	57Simple Linear	
Co	59Simple Linear	
Ni	60Simple Linear	
Cu	63Simple Linear	
Cu	65Simple Linear	
Zn	66Simple Linear	
Zn	67Simple Linear	
Zn	68Simple Linear	
Ge	74Simple Linear	
As	75Simple Linear	
Se	77Simple Linear	
Se	82Simple Linear	
Kr	83Simple Linear	
Sr	88Simple Linear	
Y	89Simple Linear	
Mo	98Simple Linear	
Ag	107Simple Linear	
Cd	111Simple Linear	
Cd	114Simple Linear	
In	115Simple Linear	
Sn	120Simple Linear	
Sb	121Simple Linear	
Sb	123Simple Linear	
Ba	135Simple Linear	
Ba	137Simple Linear	
Ho	165Simple Linear	
Lu	175Linear Thru Zero	
Tl	205Simple Linear	
Pb	208Simple Linear	
Bi	209Simple Linear	
Th	232Simple Linear	
U	238Linear Thru Zero	0.9998

Sample ID: Blank

Report Date/Time: Sunday, January 24, 2010 14:47:34

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Sunday, January 24, 2010 14:50:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\Standard 1.072

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	10.000	ug/L	3.008	11835	0.013
Be	9	10.000	ug/L	2.317	3784	0.004
B	11	20.000	ug/L	2.732	7498	0.008
Na	23	1000.000	ug/L	5.567	4353033	4.623
Mg	24	1000.000	ug/L	5.815	2933997	3.126
Al	27	1000.000	ug/L	3.212	4071620	4.342
P	31	1000.000	ug/L	2.312	225479	0.236
K	39	1000.000	ug/L	8.407	5285458	5.149
Ca	43	1000.000	ug/L	2.142	11890	0.013
> Sc	45		ug/L		935507	935507.422
Ti	47	10.000	ug/L	0.397	5481	0.006
V	51	10.000	ug/L	2.239	58660	0.064
Cr	52	10.000	ug/L	1.707	46673	0.051
Cr	53		ug/L		75415	0.007
Mn	55	10.000	ug/L	1.900	83546	0.088
Fe	57	1000.000	ug/L	2.105	172446	0.179
Co	59	10.000	ug/L	0.346	63836	0.068
Ni	60	10.000	ug/L	2.614	13904	0.015
Cu	63		ug/L		34888	0.035
Cu	65	10.000	ug/L	0.566	16918	0.017
Zn	66	10.000	ug/L	1.250	12342	0.030
Zn	67		ug/L		9108	0.004
Zn	68		ug/L		9047	0.021
> Ge	74		ug/L		353919	353918.972
As	75	10.000	ug/L	1.568	10421	0.030
Se	77		ug/L		4935	0.003
Se	82	10.000	ug/L	3.316	1024	0.003
Kr	83		ug/L		91	0.000
Sr	88	10.000	ug/L	1.454	122599	0.515
Y	89		ug/L		81	0.000
Mo	98	10.000	ug/L	0.343	29400	0.123
Ag	107	10.000	ug/L	0.984	53144	0.224
Cd	111	10.000	ug/L	1.897	13366	0.056
Cd	114		ug/L		32955	0.139
> In	115		ug/L		237432	237432.146
Sn	120	10.000	ug/L	1.393	60153	0.248
Sb	121	10.000	ug/L	9.608	46862	0.195
Sb	123		ug/L		36610	0.152
Ba	135		ug/L		14370	0.028
Ba	137	10.000	ug/L	1.823	25229	0.050
Ho	165		ug/L		20	-0.000
> Lu	175		ug/L		504295	504294.966
Tl	205	10.000	ug/L	1.794	237998	0.471
Pb	208	10.000	ug/L	0.979	364226	0.720
Bi	209		ug/L		135	0.000
Th	232	10.000	ug/L	1.667	493577	0.977
U	238	10.000	ug/L	0.659	537405	1.064

Sample ID: Standard 1

Report Date/Time: Sunday, January 24, 2010 14:53:38

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

Sample ID: Standard 1

Report Date/Time: Sunday, January 24, 2010 14:53:38

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## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

## QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Sunday, January 24, 2010 14:57:00

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\Standard 2.073

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	99.946	ug/L	4.854	113803	0.119
Be	9	99.926	ug/L	1.781	35756	0.037
B	11	199.970	ug/L	1.360	72242	0.075
Na	23	9999.612	ug/L	1.505	43939341	46.051
Mg	24	10007.913	ug/L	9.965	32410614	33.973
Al	27	10007.725	ug/L	6.250	44922045	47.097
P	31	9994.841	ug/L	3.094	2143402	2.243
K	39	10004.508	ug/L	4.621	51916199	53.950
Ca	43	9999.716	ug/L	3.105	119067	0.125
Sc	45		ug/L		953518	953518.474
Ti	47	99.999	ug/L	1.282	53287	0.056
V	51	100.016	ug/L	1.954	618023	0.649
Cr	52	99.990	ug/L	1.665	478400	0.503
Cr	53		ug/L		132356	0.065
Mn	55	99.941	ug/L	0.986	793804	0.831
Fe	57	9988.789	ug/L	2.711	1540018	1.610
Co	59	99.957	ug/L	2.894	622186	0.652
Ni	60	99.968	ug/L	1.732	135984	0.142
Cu	63		ug/L		327250	0.341
Cu	65	99.980	ug/L	1.940	159368	0.166
Zn	66	99.986	ug/L	0.891	108650	0.297
Zn	67		ug/L		24434	0.047
Zn	68		ug/L		75827	0.206
Ge	74		ug/L		359604	359603.674
As	75	99.963	ug/L	0.255	104687	0.292
Se	77		ug/L		12614	0.024
Se	82	100.003	ug/L	1.327	10452	0.029
Kr	83		ug/L		112	0.000
Sr	88	99.965	ug/L	0.701	1160379	4.977
Y	89		ug/L		165	0.000
Mo	98	100.022	ug/L	1.600	294353	1.262
Ag	107	99.986	ug/L	1.782	513882	2.204
Cd	111	100.016	ug/L	0.730	133203	0.571
Cd	114		ug/L		319829	1.372
In	115		ug/L		233093	233093.051
Sn	120	99.988	ug/L	1.726	572186	2.449
Sb	121	100.031	ug/L	5.024	470480	2.016
Sb	123		ug/L		371842	1.593
Ba	135		ug/L		142216	0.288
Ba	137	100.006	ug/L	2.797	247803	0.502
Ho	165		ug/L		26	0.000
Lu	175		ug/L		493449	493449.218
Tl	205	99.826	ug/L	1.671	1975095	4.002
Pb	208	99.898	ug/L	1.615	3223401	6.531
Bi	209		ug/L		394	0.001
Th	232	99.836	ug/L	2.850	4135575	8.380
U	238	99.825	ug/L	2.135	4461465	9.042

Sample ID: Standard 2

Report Date/Time: Sunday, January 24, 2010 14:59:42

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

Sample ID: Standard 2

Report Date/Time: Sunday, January 24, 2010 14:59:42

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## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45					
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
L Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74					
As	75					
Se	77					
Se	82					
L Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115					
Sn	120					
Sb	121					
L Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175					
Tl	205					
Pb	208					
Bi	209					
Th	232					
L U	238					

## QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

## QC Action

QC Action Line: No QC out of limits detected

# ICPMS#5 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Sunday, January 24, 2010 15:03:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 1.074

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	49.683	ug/L	3.164	58042	0.059
Be	9	51.126	ug/L	1.302	18758	0.019
B	11	105.782	ug/L	2.344	39334	0.040
Na	23	5122.100	ug/L	12.004	23060363	23.589
Mg	24	4938.586	ug/L	1.713	16392869	16.765
Al	27	4419.208	ug/L	4.309	20341319	20.797
P	31	5119.191	ug/L	2.293	1127567	1.149
K	39	5427.686	ug/L	7.851	29123722	29.269
Ca	43	5032.081	ug/L	2.536	61512	0.063
> Sc	45		ug/L		977438	977437.715
Ti	47	50.525	ug/L	2.195	27735	0.028
V	51	49.725	ug/L	3.862	314298	0.323
Cr	52	51.799	ug/L	2.330	253574	0.260
Cr	53		ug/L		110395	0.039
Mn	55	52.864	ug/L	1.452	430931	0.440
Fe	57	5273.052	ug/L	2.525	835495	0.850
Co	59	50.530	ug/L	2.554	322422	0.330
Ni	60	52.491	ug/L	1.268	73261	0.075
Cu	63		ug/L		173740	0.175
Cu	65	51.594	ug/L	1.438	84830	0.086
Zn	66	52.079	ug/L	2.491	59270	0.155
Zn	67		ug/L		16988	0.024
Zn	68		ug/L		41468	0.107
> Ge	74		ug/L		371389	371389.341
As	75	47.686	ug/L	2.677	51403	0.139
Se	77		ug/L		9277	0.014
Se	82	48.922	ug/L	0.467	5280	0.014
Kr	83		ug/L		95	0.000
Sr	88	52.718	ug/L	1.592	626882	2.625
Y	89		ug/L		98	0.000
Mo	98	50.055	ug/L	1.576	150922	0.632
Ag	107	51.225	ug/L	1.861	269686	1.129
Cd	111	50.804	ug/L	1.423	69311	0.290
Cd	114		ug/L		166076	0.695
> In	115		ug/L		238765	238764.697
Sn	120	50.649	ug/L	0.964	297498	1.241
Sb	121	50.346	ug/L	6.700	242717	1.015
Sb	123		ug/L		192487	0.805
Ba	135		ug/L		73788	0.148
Ba	137	51.071	ug/L	0.526	128205	0.256
Ho	165		ug/L		51	0.000
> Lu	175		ug/L		499671	499671.051
Tl	205	53.657	ug/L	1.100	1075424	2.151
Pb	208	53.556	ug/L	0.304	1750556	3.501
Bi	209		ug/L		424	0.001
Th	232	50.376	ug/L	0.062	2113737	4.229
U	238	52.279	ug/L	0.524	2366696	4.735

Sample ID: QC Std 1

Report Date/Time: Sunday, January 24, 2010 15:05:47

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7	99.366				
Be	9	102.252				
B	11	105.782				
Na	23	102.442				
Mg	24	98.772				
Al	27	87.509				
P	31	102.384				
K	39	108.554				
Ca	43	100.642				
> Sc	45		105.8			
Ti	47	101.049				
V	51	99.451				
Cr	52	103.597				
Cr	53					
Mn	55	105.729				
Fe	57	105.461				
Co	59	101.060				
Ni	60	104.981				
Cu	63					
Cu	65	103.188				
Zn	66	104.157				
Zn	67					
Zn	68					
> Ge	74		106.5			
As	75	95.372				
Se	77					
Se	82	97.843				
Kr	83					
Sr	88	105.436				
Y	89					
Mo	98	100.110				
Ag	107	102.451				
Cd	111	101.608				
Cd	114					
> In	115		101.7			
Sn	120	101.299				
Sb	121	100.693				
Sb	123					
Ba	135					
Ba	137	102.143				
Ho	165					
> Lu	175		98.8			
Tl	205	107.314				
Pb	208	107.112				
Bi	209					
Th	232	100.752				
U	238	104.558				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message  
 QC Std 1 Al 27ICV is out of limits (+/- 10%)

### QC Action

QC Action Line: Continue

# ICPMS#5 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Sunday, January 24, 2010 15:09:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 2.075

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.001	ug/L	573.967	82	0.000
Be	9	-0.003	ug/L	439.932	14	-0.000
B	11	3.805	ug/L	23.149	1774	0.001
Na	23	-1.495	ug/L	76.476	25356	-0.007
Mg	24	-0.064	ug/L	942.433	8002	-0.000
Al	27	-0.417	ug/L	154.290	7002	-0.002
P	31	-0.108	ug/L	739.865	5006	-0.000
K	39	17.026	ug/L	35.893	589263	0.092
Ca	43	3.038	ug/L	77.152	245	0.000
Sc	45		ug/L		990428	990428.008
Ti	47	-0.055	ug/L	90.177	261	-0.000
V	51	0.262	ug/L	171.559	582	0.002
Cr	52	0.407	ug/L	12.582	1160	0.002
Cr	53		ug/L		80375	0.008
Mn	55	-0.023	ug/L	14.746	1077	-0.000
Fe	57	4.478	ug/L	13.200	5799	0.001
Co	59	0.002	ug/L	83.803	181	0.000
Ni	60	0.014	ug/L	160.945	176	0.000
Cu	63		ug/L		2330	-0.000
Cu	65	0.021	ug/L	98.247	1168	0.000
Zn	66	-0.247	ug/L	7.999	1485	-0.001
Zn	67		ug/L		7958	0.000
Zn	68		ug/L		1627	-0.001
Ge	74		ug/L		372843	372843.406
As	75	0.034	ug/L	410.674	-277	0.000
Se	77		ug/L		5326	0.003
Se	82	-0.079	ug/L	371.865	-11	-0.000
Kr	83		ug/L		110	0.000
Sr	88	0.000	ug/L	549.338	241	0.000
Y	89		ug/L		58	-0.000
Mo	98	0.041	ug/L	23.389	211	0.001
Ag	107	0.002	ug/L	3.817	64	0.000
Cd	111	0.007	ug/L	35.165	26	0.000
Cd	114		ug/L		44	-0.000
In	115		ug/L		242879	242879.139
Sn	120	0.152	ug/L	16.906	2221	0.004
Sb	121	0.939	ug/L	23.263	5105	0.019
Sb	123		ug/L		4046	0.015
Ba	135		ug/L		40	-0.000
Ba	137	-0.000	ug/L	188.979	69	-0.000
Ho	165		ug/L		22	0.000
Lu	175		ug/L		497307	497306.895
Tl	205	0.006	ug/L	66.310	686	0.000
Pb	208	0.003	ug/L	35.393	1152	0.000
Bi	209		ug/L		107	-0.000
Th	232	0.046	ug/L	15.703	2718	0.004
U	238	0.006	ug/L	27.366	862	0.001

Sample ID: QC Std 2

Report Date/Time: Sunday, January 24, 2010 15:11:56

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		107.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		107.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		103.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.3			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 2

Report Date/Time: Sunday, January 24, 2010 15:11:56

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## ICPMS#5 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Sunday, January 24, 2010 15:15:20

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 3.076

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	10.909	ug/L	5.250	12807	0.013
Be	9	0.592	ug/L	2.846	232	0.000
B	11	16.845	ug/L	3.036	6561	0.006
Na	23	294.646	ug/L	12.988	1358230	1.357
Mg	24	15.767	ug/L	36.468	60470	0.054
Al	27	31.082	ug/L	8.867	151806	0.146
P	31	59.276	ug/L	2.565	17970	0.013
K	39	316.866	ug/L	6.433	2162233	1.709
Ca	43	225.134	ug/L	6.622	2948	0.003
> Sc	45		ug/L		977603	977603.080
Ti	47	9.440	ug/L	1.158	5418	0.005
V	51	11.659	ug/L	2.810	72888	0.076
Cr	52	11.406	ug/L	2.643	55188	0.057
Cr	53		ug/L		88320	0.017
Mn	55	5.999	ug/L	1.371	50025	0.050
Fe	57	126.300	ug/L	2.079	24918	0.020
Co	59	1.121	ug/L	1.386	7322	0.007
Ni	60	2.227	ug/L	1.764	3257	0.003
Cu	63		ug/L		6176	0.004
Cu	65	1.147	ug/L	2.090	2981	0.002
Zn	66	10.965	ug/L	1.126	13779	0.033
Zn	67		ug/L		9998	0.006
Zn	68		ug/L		9967	0.022
> Ge	74		ug/L		369146	369146.311
As	75	5.684	ug/L	6.882	5821	0.017
Se	77		ug/L		5771	0.004
Se	82	5.508	ug/L	5.202	588	0.002
Kr	83		ug/L		104	0.000
Sr	88	11.522	ug/L	2.918	140443	0.574
Y	89		ug/L		50	-0.000
Mo	98	0.546	ug/L	4.162	1772	0.007
Ag	107	1.057	ug/L	1.828	5752	0.023
Cd	111	1.091	ug/L	3.327	1541	0.006
Cd	114		ug/L		3619	0.015
> In	115		ug/L		244449	244448.718
Sn	120	5.403	ug/L	1.649	33680	0.132
Sb	121	3.279	ug/L	8.040	16676	0.066
Sb	123		ug/L		13141	0.052
Ba	135		ug/L		3268	0.006
Ba	137	2.235	ug/L	2.561	5705	0.011
Ho	165		ug/L		19	-0.000
> Lu	175		ug/L		502235	502234.533
Tl	205	1.243	ug/L	1.110	25602	0.050
Pb	208	2.418	ug/L	0.712	80441	0.158
Bi	209		ug/L		115	0.000
Th	232	1.334	ug/L	1.184	57036	0.112
U	238	0.276	ug/L	0.711	13174	0.025

Sample ID: QC Std 3

Report Date/Time: Sunday, January 24, 2010 15:18:02

Page 1

## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	109.088				
Be	9	118.460				
B	11	112.297				
Na	23	117.858				
Mg	24	105.112				
Al	27	103.607				
P	31	118.552				
K	39	105.622				
Ca	43	112.567				
> Sc	45		105.8			
Ti	47	94.400				
V	51	116.589				
Cr	52	114.058				
Cr	53					
Mn	55	119.983				
Fe	57	126.300				
Co	59	112.140				
Ni	60	111.330				
Cu	63					
Cu	65	114.696				
Zn	66	109.646				
Zn	67					
Zn	68					
> Ge	74		105.9			
As	75	113.682				
Se	77					
Se	82	110.163				
Kr	83					
Sr	88	115.222				
Y	89					
Mo	98	109.152				
Ag	107	105.739				
Cd	111	109.135				
Cd	114					
> In	115		104.1			
Sn	120	108.068				
Sb	121	109.306				
Sb	123					
Ba	135					
Ba	137	111.726				
Ho	165					
> Lu	175		99.3			
Tl	205	124.317				
Pb	208	120.889				
Bi	209					
Th	232	133.376				
U	238	138.029				

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Th	232	CRDL is out of limits
QC Std 3	U	238	CRDL is out of limits

## QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Sunday, January 24, 2010 15:21:26

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 4.077

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.136	ug/L	16.297	225	0.000
Be	9	0.051	ug/L	34.744	32	0.000
B	11	1.298	ug/L	21.984	784	0.000
Na	23	103517.766	ug/L	5.039	439860848	476.729
Mg	24	97004.475	ug/L	1.723	303870945	329.293
Al	27	94091.943	ug/L	5.515	408593736	442.803
P	31	98463.237	ug/L	2.502	20390353	22.096
K	39	100908.416	ug/L	6.063	502338973	544.154
Ca	43	93272.449	ug/L	1.543	1073166	1.163
> Sc	45		ug/L		922747	922746.814
Ti	47	1477.120	ug/L	1.399	757893	0.821
V	51	0.859	ug/L	55.785	4078	0.006
Cr	52	2.643	ug/L	2.160	11446	0.013
Cr	53		ug/L		71042	0.003
Mn	55	6.054	ug/L	2.041	47628	0.050
Fe	57	95137.944	ug/L	2.395	14151679	15.334
Co	59	0.301	ug/L	3.891	1969	0.002
Ni	60	2.904	ug/L	2.807	3964	0.004
Cu	63		ug/L		8015	0.006
Cu	65	2.387	ug/L	4.441	4713	0.004
Zn	66	2.977	ug/L	4.467	4627	0.009
Zn	67		ug/L		7794	0.002
Zn	68		ug/L		2194	0.001
> Ge	74		ug/L		340993	340993.007
As	75	0.457	ug/L	15.240	168	0.001
Se	77		ug/L		7508	0.011
Se	82	-0.698	ug/L	35.112	-72	-0.000
Kr	83		ug/L		227	0.000
Sr	88	1.262	ug/L	2.074	13880	0.063
Y	89		ug/L		431	0.002
Mo	98	1985.806	ug/L	1.499	5452670	25.064
Ag	107	0.064	ug/L	8.926	354	0.001
Cd	111	0.453	ug/L	16.226	579	0.003
Cd	114		ug/L		7485	0.034
> In	115		ug/L		217545	217545.288
Sn	120	0.101	ug/L	7.995	1715	0.002
Sb	121	0.200	ug/L	21.823	1331	0.004
Sb	123		ug/L		1057	0.003
Ba	135		ug/L		1131	0.002
Ba	137	0.884	ug/L	1.828	2005	0.004
Ho	165		ug/L		1050	0.002
> Lu	175		ug/L		437717	437716.845
Tl	205	0.009	ug/L	5.396	659	0.000
Pb	208	0.202	ug/L	1.909	6690	0.013
Bi	209		ug/L		1226	0.003
Th	232	0.046	ug/L	33.982	2410	0.004
U	238	0.000	ug/L	265.365	542	0.000

Sample ID: QC Std 4

Report Date/Time: Sunday, January 24, 2010 15:24:08

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23	103.518				
Mg	24	97.004				
Al	27	94.092				
P	31	98.463				
K	39	100.908				
Ca	43	93.272				
Sc	45		99.9			
Ti	47	73.856				
V	51					
Cr	52	71.423				
Cr	53					
Mn	55	104.373				
Fe	57	95.138				
Co	59	120.322				
Ni	60	107.545				
Cu	63					
Cu	65	82.327				
Zn	66	82.686				
Zn	67					
Zn	68					
Ge	74		97.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88	105.153				
Y	89					
Mo	98	99.290				
Ag	107					
Cd	111	113.360				
Cd	114					
In	115		92.6			
Sn	120					
Sb	121	199.605				
Sb	123					
Ba	135					
Ba	137	131.946				
Ho	165					
Lu	175		86.5			
Tl	205					
Pb	208	100.832				
Bi	209					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Ti	47	ICSA is out of limits

### QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Sunday, January 24, 2010 15:27:32

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 5.078

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	20.247	ug/L	4.582	21838	0.024
Be	9	18.971	ug/L	2.404	6424	0.007
B	11	19.681	ug/L	1.205	7009	0.007
Na	23	106395.057	ug/L	3.845	441418981	489.980
Mg	24	104279.605	ug/L	6.773	318961601	353.989
Al	27	89950.695	ug/L	4.613	381389948	423.314
P	31	99417.120	ug/L	1.314	20103701	22.310
K	39	100661.716	ug/L	2.444	489495592	542.824
Ca	43	95621.967	ug/L	0.532	1074221	1.192
Sc	45		ug/L		900883	900883.124
Ti	47	1481.323	ug/L	0.975	742114	0.823
V	51	21.357	ug/L	1.104	123887	0.139
Cr	52	23.280	ug/L	0.804	104626	0.117
Cr	53		ug/L		78525	0.014
Mn	55	27.087	ug/L	0.358	204103	0.225
Fe	57	97575.842	ug/L	1.739	14172039	15.727
Co	59	20.241	ug/L	1.232	119158	0.132
Ni	60	22.146	ug/L	2.581	28572	0.032
Cu	63		ug/L		66110	0.071
Cu	65	21.427	ug/L	0.908	33078	0.036
Zn	66	21.701	ug/L	2.876	23277	0.065
Zn	67		ug/L		10663	0.010
Zn	68		ug/L		15204	0.040
Ge	74		ug/L		336079	336079.356
As	75	20.368	ug/L	2.644	19709	0.059
Se	77		ug/L		8194	0.013
Se	82	19.209	ug/L	2.542	1874	0.006
Kr	83		ug/L		244	0.000
Sr	88	24.183	ug/L	0.902	257260	1.204
Y	89		ug/L		408	0.002
Mo	98	2034.706	ug/L	1.576	5482415	25.681
Ag	107	20.277	ug/L	0.563	95490	0.447
Cd	111	20.227	ug/L	1.024	24685	0.116
Cd	114		ug/L		65368	0.306
In	115		ug/L		213494	213494.286
Sn	120	20.827	ug/L	0.306	110067	0.510
Sb	121	22.372	ug/L	2.021	96704	0.451
Sb	123		ug/L		75497	0.352
Ba	135		ug/L		26909	0.062
Ba	137	21.494	ug/L	0.470	47041	0.108
Ho	165		ug/L		1079	0.002
Lu	175		ug/L		435293	435293.481
Tl	205	22.631	ug/L	2.369	395408	0.907
Pb	208	21.800	ug/L	0.362	621314	1.425
Bi	209		ug/L		1613	0.003
Th	232	24.396	ug/L	1.508	892080	2.048
U	238	24.732	ug/L	0.885	975622	2.240

Sample ID: QC Std 5

Report Date/Time: Sunday, January 24, 2010 15:30:15

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

Sample ID: QC Std 5

Report Date/Time: Sunday, January 24, 2010 15:30:15

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## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7	101.236				
Be	9	94.854				
B	11	98.407				
Na	23	106.395				
Mg	24	104.280				
Al	27	89.951				
P	31	99.417				
K	39	100.662				
Ca	43	95.622				
Sc	45		97.5			
Ti	47	74.066				
V	51	106.787				
Cr	52	98.228				
Cr	53					
Mn	55	104.989				
Fe	57	97.576				
Co	59	99.955				
Ni	60	97.561				
Cu	63					
Cu	65	93.566				
Zn	66	91.954				
Zn	67					
Zn	68					
Ge	74		96.4			
As	75	101.838				
Se	77					
Se	82	96.044				
Kr	83					
Sr	88	114.072				
Y	89					
Mo	98	101.735				
Ag	107	101.387				
Cd	111	99.153				
Cd	114					
In	115		90.9			
Sn	120	104.133				
Sb	121	111.306				
Sb	123					
Ba	135					
Ba	137	103.988				
Ho	165					
Lu	175		86.1			
Tl	205	113.157				
Pb	208	107.923				
Bi	209					
Th	232	121.979				
U	238	123.662				

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	Ti	47	ICSAB is out of limits
QC Std 5	Th	232	ICSAB is out of limits
QC Std 5	U	238	ICSAB is out of limits

## QC Action

Sample ID: QC Std 5  
 Report Date/Time: Sunday, January 24, 2010 15:30:15  
 Page 3

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Sunday, January 24, 2010 15:33:39

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 6.079

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	48.588	ug/L	7.478	56100	0.058
Be	9	49.650	ug/L	4.874	18013	0.019
B	11	97.157	ug/L	2.807	35759	0.037
Na	23	5277.724	ug/L	6.434	23527803	24.305
Mg	24	4800.171	ug/L	2.636	15763198	16.295
Al	27	4664.435	ug/L	1.612	21233384	21.951
P	31	5117.575	ug/L	1.272	1115232	1.148
K	39	5181.371	ug/L	1.874	27495687	27.941
Ca	43	4998.650	ug/L	1.762	60465	0.062
> Sc	45		ug/L		966799	966798.907
Ti	47	51.922	ug/L	2.508	28187	0.029
V	51	50.529	ug/L	1.414	316021	0.328
Cr	52	51.194	ug/L	0.195	247932	0.257
Cr	53		ug/L		111262	0.041
Mn	55	52.523	ug/L	2.476	423475	0.437
Fe	57	5286.483	ug/L	1.968	828547	0.852
Co	59	50.810	ug/L	1.937	320703	0.332
Ni	60	52.345	ug/L	2.205	72255	0.075
Cu	63		ug/L		171796	0.175
Cu	65	50.572	ug/L	2.492	82259	0.084
Zn	66	51.257	ug/L	0.674	57658	0.152
Zn	67		ug/L		16518	0.024
Zn	68		ug/L		40007	0.104
> Ge	74		ug/L		366843	366843.136
As	75	47.725	ug/L	1.231	50824	0.139
Se	77		ug/L		10114	0.016
Se	82	49.253	ug/L	2.644	5251	0.014
Kr	83		ug/L		90	-0.000
Sr	88	51.306	ug/L	1.316	610804	2.554
Y	89		ug/L		117	0.000
Mo	98	48.844	ug/L	2.027	147414	0.616
Ag	107	51.019	ug/L	1.035	268920	1.125
Cd	111	49.589	ug/L	2.004	67719	0.283
Cd	114		ug/L		163729	0.685
> In	115		ug/L		239018	239018.012
Sn	120	49.713	ug/L	2.736	292285	1.218
Sb	121	48.078	ug/L	7.133	232025	0.969
Sb	123		ug/L		182786	0.763
Ba	135		ug/L		71799	0.145
Ba	137	50.581	ug/L	0.833	125605	0.254
Ho	165		ug/L		46	0.000
> Lu	175		ug/L		494266	494266.017
Tl	205	53.341	ug/L	1.189	1057505	2.138
Pb	208	52.927	ug/L	0.572	1711293	3.460
Bi	209		ug/L		419	0.001
Th	232	51.345	ug/L	1.742	2131049	4.310
U	238	52.638	ug/L	0.993	2357079	4.768

Sample ID: QC Std 6

Report Date/Time: Sunday, January 24, 2010 15:36:22

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	97.175				
Be	9	99.300				
B	11	97.157				
Na	23	105.554				
Mg	24	96.003				
Al	27	92.365				
P	31	102.352				
K	39	103.627				
Ca	43	99.973				
> Sc	45		104.7			
Ti	47	103.843				
V	51	101.059				
Cr	52	102.388				
Cr	53					
Mn	55	105.047				
Fe	57	105.730				
Co	59	101.619				
Ni	60	104.691				
Cu	63					
Cu	65	101.143				
Zn	66	102.514				
Zn	67					
Zn	68					
> Ge	74		105.2			
As	75	95.450				
Se	77					
Se	82	98.507				
Kr	83					
Sr	88	102.612				
Y	89					
Mo	98	97.688				
Ag	107	102.038				
Cd	111	99.178				
Cd	114					
> In	115		101.8			
Sn	120	99.427				
Sb	121	96.156				
Sb	123					
Ba	135					
Ba	137	101.162				
Ho	165					
> Lu	175		97.7			
Tl	205	106.683				
Pb	208	105.854				
Bi	209					
Th	232	102.689				
U	238	105.275				

## QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

## QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, January 24, 2010 15:39:47

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 7.080

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.015	ug/L	46.487	96	0.000
Be	9	0.014	ug/L	74.401	20	0.000
B	11	2.379	ug/L	22.238	1210	0.001
Na	23	0.838	ug/L	67.367	35043	0.004
Mg	24	0.408	ug/L	186.551	9337	0.001
Al	27	1.319	ug/L	41.725	14674	0.006
P	31	0.092	ug/L	1569.212	4912	0.000
K	39	13.383	ug/L	25.486	554220	0.072
Ca	43	3.083	ug/L	61.960	239	0.000
Sc	45		ug/L		963219	963218.666
Ti	47	0.183	ug/L	14.920	381	0.000
V	51	0.407	ug/L	52.131	1460	0.003
Cr	52	0.301	ug/L	11.390	614	0.002
Cr	53		ug/L		83521	0.013
Mn	55	-0.026	ug/L	6.507	1024	-0.000
Fe	57	8.144	ug/L	14.349	6209	0.001
Co	59	0.000	ug/L	376.990	168	0.000
Ni	60	0.020	ug/L	39.261	181	0.000
Cu	63		ug/L		2265	-0.000
Cu	65	0.007	ug/L	114.438	1115	0.000
Zn	66	-0.403	ug/L	8.301	1295	-0.001
Zn	67		ug/L		7813	-0.000
Zn	68		ug/L		1499	-0.001
Ge	74		ug/L		368119	368118.892
As	75	-0.022	ug/L	1058.670	-332	-0.000
Se	77		ug/L		6184	0.006
Se	82	0.016	ug/L	1093.427	-1	0.000
Kr	83		ug/L		90	-0.000
Sr	88	0.001	ug/L	318.896	243	0.000
Y	89		ug/L		44	-0.000
Mo	98	0.102	ug/L	16.626	398	0.001
Ag	107	0.003	ug/L	46.741	71	0.000
Cd	111	0.011	ug/L	50.857	32	0.000
Cd	114		ug/L		55	0.000
In	115		ug/L		241294	241294.299
Sn	120	0.078	ug/L	41.749	1767	0.002
Sb	121	0.749	ug/L	24.779	4148	0.015
Sb	123		ug/L		3310	0.012
Ba	135		ug/L		52	0.000
Ba	137	0.004	ug/L	50.959	78	0.000
Ho	165		ug/L		23	0.000
Lu	175		ug/L		492339	492339.206
Tl	205	0.015	ug/L	42.483	849	0.001
Pb	208	0.002	ug/L	54.008	1103	0.000
Bi	209		ug/L		105	-0.000
Th	232	0.044	ug/L	14.106	2609	0.004
U	238	0.005	ug/L	7.361	820	0.000

Sample ID: QC Std 7

Report Date/Time: Sunday, January 24, 2010 15:42:31

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

Sample ID: QC Std 7

Report Date/Time: Sunday, January 24, 2010 15:42:31

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## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		104.3			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		105.6			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		102.7			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		97.3			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

## QC Action

QC Action Line: No QC out of limits detected



## ICPMS#5 - Summary Report

Sample ID: QC Std 10

Sample Date/Time: Sunday, January 24, 2010 15:45:54

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 10.081

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	916.934	ug/L	5.917	960504	1.094
Be	9	954.984	ug/L	3.180	314355	0.358
B	11	0.838	ug/L	21.997	593	0.000
Na	23	50774.149	ug/L	1.728	205206070	233.829
Mg	24	48486.391	ug/L	3.218	144390144	164.593
Al	27	49412.765	ug/L	7.763	204028409	232.540
P	31	25413.554	ug/L	2.277	5007356	5.703
K	39	52787.059	ug/L	1.505	250174577	284.657
Ca	43	48533.021	ug/L	1.279	531044	0.605
> Sc	45		ug/L		877397	877396.698
Ti	47	39.831	ug/L	3.838	19684	0.022
V	51	929.542	ug/L	2.191	5292796	6.035
Cr	52	935.113	ug/L	1.612	4122830	4.700
Cr	53		ug/L		590499	0.599
Mn	55	924.083	ug/L	0.658	6744107	7.686
Fe	57	49855.031	ug/L	1.511	7053897	8.035
Co	59	890.927	ug/L	1.739	5101361	5.815
Ni	60	885.134	ug/L	1.900	1106703	1.261
Cu	63		ug/L		2675407	3.047
Cu	65	857.180	ug/L	1.132	1249581	1.423
Zn	66	2127.247	ug/L	9.039	2107460	6.327
Zn	67		ug/L		351145	1.034
Zn	68		ug/L		1444793	4.338
> Ge	74		ug/L		332685	332685.177
As	75	878.854	ug/L	0.291	853662	2.567
Se	77		ug/L		38405	0.104
Se	82	464.254	ug/L	0.193	44902	0.135
Kr	83		ug/L		153	0.000
Sr	88	976.205	ug/L	1.419	10132490	48.605
Y	89		ug/L		411	0.002
Mo	98	1049.270	ug/L	2.883	2760196	13.244
Ag	107	236.948	ug/L	1.934	1088937	5.224
Cd	111	912.882	ug/L	1.660	1087101	5.215
Cd	114		ug/L		2717907	13.041
> In	115		ug/L		208492	208491.585
Sn	120	967.476	ug/L	2.458	4940251	23.698
Sb	121	237.401	ug/L	7.143	996991	4.784
Sb	123		ug/L		795788	3.819
Ba	135		ug/L		1202103	2.692
Ba	137	864.453	ug/L	0.694	1938621	4.341
Ho	165		ug/L		347	0.001
> Lu	175		ug/L		446627	446627.417
Tl	205	468.454	ug/L	1.070	8387864	18.781
Pb	208	4847.450	ug/L	1.070	141533712	316.915
Bi	209		ug/L		4072	0.009
Th	232	2626.592	ug/L	0.637	98477423	220.480
U	238	5374.484	ug/L	2.063	217387867	486.799

Sample ID: QC Std 10

Report Date/Time: Sunday, January 24, 2010 15:48:36

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	91.693				
Be	9	95.498				
B	11					
Na	23	101.548				
Mg	24	96.973				
Al	27	98.826				
P	31	101.654				
K	39	105.574				
Ca	43	97.066				
> Sc	45		95.0			
Ti	47					
V	51	92.954				
Cr	52	93.511				
Cr	53					
Mn	55	92.408				
Fe	57	99.710				
Co	59	89.093				
Ni	60	88.513				
Cu	63					
Cu	65	85.718				
Zn	66	85.090				
Zn	67					
Zn	68					
> Ge	74		95.4			
As	75	87.885				
Se	77					
Se	82	92.851				
Kr	83					
Sr	88	97.620				
Y	89					
Mo	98	104.927				
Ag	107	94.779				
Cd	111	91.288				
Cd	114					
> In	115		88.8			
Sn	120	96.748				
Sb	121	94.960				
Sb	123					
Ba	135					
Ba	137	86.445				
Ho	165					
> Lu	175		88.3			
Tl	205	93.691				
Pb	208	96.949				
Bi	209					
Th	232	105.064				
U	238	107.490				

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 10	Co	59LRS	is out of limits (+/- 10%)
QC Std 10	Ni	60LRS	is out of limits (+/- 10%)
QC Std 10	Cu	65LRS	is out of limits (+/- 10%)
QC Std 10	Zn	66LRS	is out of limits (+/- 10%)
QC Std 10	As	75LRS	is out of limits (+/- 10%)
QC Std 10	Ba	137LRS	is out of limits (+/- 10%)

## QC Action

QC Action Line: Continue

---

Sample ID: QC Std 10

Report Date/Time: Sunday, January 24, 2010 15:48:36

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## ICPMS#5 - Summary Report

Sample ID: QC Std 11

Sample Date/Time: Sunday, January 24, 2010 15:51:59

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 11.082

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	47.887	ug/L	7.761	52894	0.057
Be	9	48.176	ug/L	3.255	16717	0.018
B	11	97.837	ug/L	1.985	34433	0.037
Na	23	5562.174	ug/L	9.674	23703093	25.615
Mg	24	5642.483	ug/L	11.860	17708478	19.154
Al	27	4828.053	ug/L	4.480	21009669	22.721
P	31	5189.396	ug/L	1.657	1081201	1.165
K	39	5167.390	ug/L	6.246	26229439	27.865
Ca	43	5031.800	ug/L	0.328	58186	0.063
Sc	45		ug/L		924404	924404.426
Ti	47	51.004	ug/L	2.182	26481	0.028
V	51	50.921	ug/L	1.568	304547	0.331
Cr	52	51.869	ug/L	0.875	240196	0.261
Cr	53		ug/L		103862	0.039
Mn	55	53.194	ug/L	1.524	410138	0.442
Fe	57	5311.644	ug/L	0.668	796124	0.856
Co	59	50.988	ug/L	1.419	307785	0.333
Ni	60	52.378	ug/L	1.071	69147	0.075
Cu	63		ug/L		166437	0.178
Cu	65	51.233	ug/L	1.822	79679	0.085
Zn	66	50.952	ug/L	1.307	55299	0.152
Zn	67		ug/L		16171	0.024
Zn	68		ug/L		39174	0.106
Ge	74		ug/L		353884	353883.538
As	75	48.416	ug/L	1.456	49746	0.141
Se	77		ug/L		8717	0.013
Se	82	48.877	ug/L	0.864	5027	0.014
Kr	83		ug/L		91	0.000
Sr	88	51.607	ug/L	1.562	597519	2.569
Y	89		ug/L		73	0.000
Mo	98	49.479	ug/L	2.479	145246	0.625
Ag	107	50.472	ug/L	1.061	258724	1.113
Cd	111	49.913	ug/L	0.247	66300	0.285
Cd	114		ug/L		159925	0.688
In	115		ug/L		232451	232451.201
Sn	120	52.490	ug/L	1.770	300118	1.286
Sb	121	51.543	ug/L	5.602	241942	1.039
Sb	123		ug/L		189536	0.814
Ba	135		ug/L		70902	0.145
Ba	137	50.180	ug/L	1.709	122950	0.252
Ho	165		ug/L		41	0.000
Lu	175		ug/L		487745	487745.346
Tl	205	53.879	ug/L	2.507	1053862	2.160
Pb	208	53.249	ug/L	1.417	1698809	3.481
Bi	209		ug/L		433	0.001
Th	232	52.674	ug/L	1.837	2157078	4.422
U	238	54.083	ug/L	2.575	2389334	4.899

Sample ID: QC Std 11

Report Date/Time: Sunday, January 24, 2010 15:54:41

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	95.773				
Be	9	96.352				
B	11	97.837				
Na	23	111.243				
Mg	24	112.850				
Al	27	95.605				
P	31	103.788				
K	39	103.348				
Ca	43	100.636				
> Sc	45		100.1			
Ti	47	102.007				
V	51	101.842				
Cr	52	103.738				
Cr	53					
Mn	55	106.389				
Fe	57	106.233				
Co	59	101.976				
Ni	60	104.756				
Cu	63					
Cu	65	102.465				
Zn	66	101.904				
Zn	67					
Zn	68					
> Ge	74		101.5			
As	75	96.833				
Se	77					
Se	82	97.754				
Kr	83					
Sr	88	103.214				
Y	89					
Mo	98	98.959				
Ag	107	100.943				
Cd	111	99.826				
Cd	114					
> In	115		99.0			
Sn	120	104.980				
Sb	121	103.087				
Sb	123					
Ba	135					
Ba	137	100.361				
Ho	165					
> Lu	175		96.4			
Tl	205	107.758				
Pb	208	106.498				
Bi	209					
Th	232	105.349				
U	238	108.166				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 11	Na	23	CCV is out of limits (+/- 10%)
QC Std 11	Mg	24	CCV is out of limits (+/- 10%)

### QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 12

Sample Date/Time: Sunday, January 24, 2010 15:58:06

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 12.083

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.075	ug/L	31.488	162	0.000
Be	9	0.002	ug/L	413.389	15	0.000
B	11	2.337	ug/L	24.929	1175	0.001
Na	23	-0.333	ug/L	556.246	29365	-0.002
Mg	24	-0.166	ug/L	287.072	7335	-0.001
Al	27	-0.123	ug/L	186.184	8002	-0.001
P	31	0.118	ug/L	1104.990	4839	0.000
K	39	20.770	ug/L	10.308	582995	0.112
Ca	43	1.666	ug/L	84.023	218	0.000
> Sc	45		ug/L		947614	947613.851
Ti	47	-0.036	ug/L	75.768	260	-0.000
V	51	0.192	ug/L	229.555	108	0.001
Cr	52	0.275	ug/L	9.837	479	0.001
Cr	53		ug/L		77647	0.008
Mn	55	-0.018	ug/L	15.353	1068	-0.000
Fe	57	3.479	ug/L	4.734	5396	0.001
Co	59	0.016	ug/L	25.651	259	0.000
Ni	60	0.010	ug/L	114.280	164	0.000
Cu	63		ug/L		2282	0.000
Cu	65	0.027	ug/L	155.510	1128	0.000
Zn	66	-0.473	ug/L	9.416	1176	-0.001
Zn	67		ug/L		7696	0.000
Zn	68		ug/L		1440	-0.001
> Ge	74		ug/L		355071	355071.079
As	75	0.159	ug/L	171.147	-134	0.000
Se	77		ug/L		5422	0.004
Se	82	-0.042	ug/L	49.325	-7	-0.000
Kr	83		ug/L		87	0.000
Sr	88	0.003	ug/L	55.150	261	0.000
Y	89		ug/L		52	-0.000
Mo	98	0.131	ug/L	16.374	477	0.002
Ag	107	0.004	ug/L	61.190	75	0.000
Cd	111	0.014	ug/L	26.967	35	0.000
Cd	114		ug/L		66	0.000
> In	115		ug/L		237091	237090.804
Sn	120	0.850	ug/L	13.079	6212	0.021
Sb	121	1.497	ug/L	19.896	7633	0.030
Sb	123		ug/L		5882	0.023
Ba	135		ug/L		59	0.000
Ba	137	0.001	ug/L	175.186	74	0.000
Ho	165		ug/L		19	-0.000
> Lu	175		ug/L		500724	500724.334
Tl	205	0.030	ug/L	20.883	1173	0.001
Pb	208	0.013	ug/L	27.074	1475	0.001
Bi	209		ug/L		99	-0.000
Th	232	0.103	ug/L	10.858	5142	0.009
U	238	0.049	ug/L	15.790	2833	0.004

Sample ID: QC Std 12

Report Date/Time: Sunday, January 24, 2010 16:00:50

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
Sc	45		102.6			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
Ge	74		101.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
In	115		100.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
Lu	175		99.0			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

## QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 12

Report Date/Time: Sunday, January 24, 2010 16:00:50

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## ICPMS#5 - Summary Report

Sample ID: 1202017705

Sample Date/Time: Sunday, January 24, 2010 16:04:15

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 942514|1|ba|

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\1202017705.084

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.123	ug/L	11.793	207	0.000
Be	9	-0.000	ug/L	307.900	14	-0.000
B	11	0.959	ug/L	14.599	656	0.000
Na	23	1.517	ug/L	147.034	36048	0.007
Mg	24	-1.264	ug/L	52.473	3667	-0.004
Al	27	0.885	ug/L	55.809	12005	0.004
P	31	0.446	ug/L	104.318	4720	0.000
K	39	33.023	ug/L	24.225	620918	0.178
Ca	43	11.571	ug/L	28.089	322	0.000
> Sc	45		ug/L		911040	911040.017
Ti	47	0.203	ug/L	26.878	371	0.000
V	51	-1.894	ug/L	36.200	-12245	-0.012
Cr	52	0.218	ug/L	10.288	199	0.001
Cr	53		ug/L		183647	0.128
Mn	55	0.081	ug/L	7.178	1773	0.001
Fe	57	9.529	ug/L	1.843	6076	0.002
Co	59	0.006	ug/L	22.743	194	0.000
Ni	60	0.015	ug/L	61.543	164	0.000
Cu	63		ug/L		2437	0.000
Cu	65	0.096	ug/L	50.938	1187	0.000
Zn	66	0.499	ug/L	6.750	2157	0.001
Zn	67		ug/L		27905	0.059
Zn	68		ug/L		3037	0.004
> Ge	74		ug/L		347696	347696.338
As	75	-0.228	ug/L	76.104	-524	-0.001
Se	77		ug/L		15047	0.032
Se	82	0.073	ug/L	189.641	5	0.000
Kr	83		ug/L		81	-0.000
Sr	88	0.020	ug/L	11.082	441	0.001
Y	89		ug/L		49	-0.000
Mo	98	0.058	ug/L	4.274	241	0.001
Ag	107	0.000	ug/L	811.234	50	0.000
Cd	111	0.015	ug/L	60.394	34	0.000
Cd	114		ug/L		9	-0.000
> In	115		ug/L		221463	221462.777
Sn	120	1.813	ug/L	39.884	11028	0.044
Sb	121	0.796	ug/L	23.659	4015	0.016
Sb	123		ug/L		3159	0.013
Ba	135		ug/L		75	0.000
Ba	137	0.020	ug/L	9.753	112	0.000
Ho	165		ug/L		22	0.000
> Lu	175		ug/L		468060	468060.172
Tl	205	-0.003	ug/L	24.252	474	-0.000
Pb	208	0.005	ug/L	23.478	1129	0.000
Bi	209		ug/L		98	-0.000
Th	232	0.125	ug/L	14.429	5650	0.010
U	238	0.012	ug/L	11.928	1067	0.001

Sample ID: 1202017705

Report Date/Time: Sunday, January 24, 2010 16:06:59

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		98.6			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		99.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		94.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		92.5			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

## QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202017705

Report Date/Time: Sunday, January 24, 2010 16:06:59

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## ICPMS#5 - Summary Report

Sample ID: 1202017706

Sample Date/Time: Sunday, January 24, 2010 16:10:24

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 942514|1|baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\1202017706.085

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	47.068	ug/L	7.272	51535	0.056
Be	9	52.755	ug/L	1.805	18148	0.020
B	11	110.561	ug/L	0.122	38536	0.042
Na	23	2102.917	ug/L	6.957	8903267	9.685
Mg	24	2102.112	ug/L	6.360	6548573	7.136
Al	27	1874.623	ug/L	7.459	8095700	8.822
P	31	2140.055	ug/L	0.563	444776	0.480
K	39	2003.364	ug/L	10.370	10361759	10.803
Ca	43	1991.886	ug/L	0.457	22951	0.025
> Sc	45		ug/L		916434	916434.217
Ti	47	46.339	ug/L	2.141	23874	0.026
V	51	46.496	ug/L	1.364	275568	0.302
Cr	52	50.765	ug/L	1.304	233051	0.255
Cr	53		ug/L		219903	0.166
Mn	55	52.231	ug/L	1.828	399231	0.434
Fe	57	2176.940	ug/L	0.971	326259	0.351
Co	59	50.508	ug/L	0.325	302253	0.330
Ni	60	51.084	ug/L	0.429	66858	0.073
Cu	63		ug/L		162416	0.175
Cu	65	51.011	ug/L	1.852	78652	0.085
Zn	66	50.843	ug/L	0.937	54140	0.151
Zn	67		ug/L		39380	0.092
Zn	68		ug/L		38692	0.106
> Ge	74		ug/L		347169	347168.537
As	75	49.266	ug/L	0.767	49662	0.144
Se	77		ug/L		19221	0.044
Se	82	50.662	ug/L	1.743	5111	0.015
Kr	83		ug/L		96	0.000
Sr	88	52.558	ug/L	0.241	577159	2.617
Y	89		ug/L		73	0.000
Mo	98	50.555	ug/L	1.219	140757	0.638
Ag	107	52.497	ug/L	0.746	255233	1.157
Cd	111	49.979	ug/L	1.667	62963	0.286
Cd	114		ug/L		153142	0.694
> In	115		ug/L		220474	220473.831
Sn	120	52.036	ug/L	0.586	282212	1.275
Sb	121	56.081	ug/L	1.220	249635	1.130
Sb	123		ug/L		195422	0.885
Ba	135		ug/L		66367	0.141
Ba	137	49.266	ug/L	3.029	116227	0.247
Ho	165		ug/L		35	0.000
> Lu	175		ug/L		469724	469724.476
Tl	205	51.689	ug/L	2.227	973722	2.072
Pb	208	53.443	ug/L	1.899	1641867	3.494
Bi	209		ug/L		1305756	2.780
Th	232	51.118	ug/L	2.392	2015837	4.291
U	238	52.656	ug/L	3.651	2239982	4.769

Sample ID: 1202017706

Report Date/Time: Sunday, January 24, 2010 16:13:08

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		99.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		99.6			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		93.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		92.9			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Sunday, January 24, 2010 16:47:20

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 8.091

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	55.532	ug/L	5.107	59217	0.066
Be	9	55.569	ug/L	2.834	18619	0.021
B	11	106.623	ug/L	1.303	36213	0.040
Na	23	4768.437	ug/L	0.932	19632471	21.960
Mg	24	4909.861	ug/L	3.159	14889698	16.667
Al	27	4556.610	ug/L	1.703	19150035	21.444
P	31	5012.287	ug/L	0.895	1008620	1.125
K	39	5095.009	ug/L	10.527	24963190	27.475
Ca	43	4976.074	ug/L	0.832	55575	0.062
> Sc	45		ug/L		892740	892739.722
Ti	47	50.039	ug/L	2.957	25092	0.028
V	51	50.117	ug/L	1.110	289433	0.325
Cr	52	50.932	ug/L	0.790	227759	0.256
Cr	53		ug/L		110605	0.050
Mn	55	52.930	ug/L	1.153	394114	0.440
Fe	57	5370.968	ug/L	1.231	777333	0.866
Co	59	50.948	ug/L	1.440	296995	0.333
Ni	60	51.894	ug/L	1.129	66159	0.074
Cu	63		ug/L		158504	0.175
Cu	65	50.443	ug/L	0.749	75781	0.084
Zn	66	51.506	ug/L	2.262	53462	0.153
Zn	67		ug/L		16653	0.028
Zn	68		ug/L		37489	0.106
> Ge	74		ug/L		338600	338600.128
As	75	47.632	ug/L	1.837	46820	0.139
Se	77		ug/L		9624	0.017
Se	82	49.316	ug/L	1.422	4852	0.014
Kr	83		ug/L		99	0.000
Sr	88	51.925	ug/L	1.441	583529	2.585
Y	89		ug/L		114	0.000
Mo	98	49.341	ug/L	0.421	140597	0.623
Ag	107	49.986	ug/L	0.666	248708	1.102
Cd	111	49.987	ug/L	0.764	64451	0.286
Cd	114		ug/L		156232	0.692
> In	115		ug/L		225631	225630.804
Sn	120	50.895	ug/L	1.604	282519	1.247
Sb	121	47.815	ug/L	8.578	217946	0.964
Sb	123		ug/L		170819	0.755
Ba	135		ug/L		70201	0.143
Ba	137	49.118	ug/L	1.338	121321	0.247
Ho	165		ug/L		50	0.000
> Lu	175		ug/L		491708	491708.149
Tl	205	53.990	ug/L	1.485	1064651	2.164
Pb	208	52.930	ug/L	2.085	1702106	3.460
Bi	209		ug/L		416	0.001
Th	232	50.198	ug/L	1.673	2072219	4.214
U	238	51.827	ug/L	2.639	2308015	4.694

Sample ID: QC Std 8

Report Date/Time: Sunday, January 24, 2010 16:50:04

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	111.064				
Be	9	111.138				
B	11	106.623				
Na	23	95.369				
Mg	24	98.197				
Al	27	90.230				
P	31	100.246				
K	39	101.900				
Ca	43	99.521				
> Sc	45		96.7			
Ti	47	100.078				
V	51	100.235				
Cr	52	101.865				
Cr	53					
Mn	55	105.861				
Fe	57	107.419				
Co	59	101.896				
Ni	60	103.787				
Cu	63					
Cu	65	100.885				
Zn	66	103.012				
Zn	67					
Zn	68					
> Ge	74		97.1			
As	75	95.263				
Se	77					
Se	82	98.632				
Kr	83					
Sr	88	103.850				
Y	89					
Mo	98	98.682				
Ag	107	99.971				
Cd	111	99.973				
Cd	114					
> In	115		96.1			
Sn	120	101.789				
Sb	121	95.631				
Sb	123					
Ba	135					
Ba	137	98.235				
Ho	165					
> Lu	175		97.2			
Tl	205	107.980				
Pb	208	105.859				
Bi	209					
Th	232	100.396				
U	238	103.654				

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Li	7	7CCV is out of limits (+/- 10%)
QC Std 8	Be	9	9CCV is out of limits (+/- 10%)

## QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Sunday, January 24, 2010 16:53:29

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 9.092

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.002	ug/L	540.321	75	0.000
Be	9	0.005	ug/L	256.726	15	0.000
B	11	2.428	ug/L	26.094	1157	0.001
Na	23	0.843	ug/L	76.113	33038	0.004
Mg	24	-0.713	ug/L	95.559	5334	-0.002
Al	27	-0.279	ug/L	167.968	7002	-0.001
P	31	0.091	ug/L	1440.603	4631	0.000
K	39	8.104	ug/L	18.995	496482	0.044
Ca	43	0.699	ug/L	361.534	198	0.000
> Sc	45		ug/L		907773	907772.729
Ti	47	-0.063	ug/L	21.433	235	-0.000
V	51	-0.111	ug/L	113.503	-1675	-0.001
Cr	52	0.488	ug/L	12.774	1430	0.002
Cr	53		ug/L		80317	0.015
Mn	55	-0.011	ug/L	64.462	1077	-0.000
Fe	57	3.366	ug/L	15.885	5152	0.001
Co	59	0.004	ug/L	58.337	180	0.000
Ni	60	0.006	ug/L	239.510	151	0.000
Cu	63		ug/L		2107	-0.000
Cu	65	-0.006	ug/L	108.449	1030	-0.000
Zn	66	-0.532	ug/L	5.862	1082	-0.002
Zn	67		ug/L		7698	0.001
Zn	68		ug/L		1383	-0.001
> Ge	74		ug/L		345092	345092.355
As	75	-0.055	ug/L	591.706	-347	-0.000
Se	77		ug/L		5803	0.006
Se	82	-0.120	ug/L	63.387	-14	-0.000
Kr	83		ug/L		86	0.000
Sr	88	0.001	ug/L	109.003	237	0.000
Y	89		ug/L		49	-0.000
Mo	98	0.030	ug/L	23.856	169	0.000
Ag	107	0.003	ug/L	90.897	67	0.000
Cd	111	0.001	ug/L	295.268	18	0.000
Cd	114		ug/L		68	0.000
> In	115		ug/L		230148	230147.883
Sn	120	0.051	ug/L	52.884	1534	0.001
Sb	121	0.784	ug/L	26.723	4124	0.016
Sb	123		ug/L		3271	0.013
Ba	135		ug/L		48	0.000
Ba	137	-0.001	ug/L	81.614	67	-0.000
Ho	165		ug/L		20	-0.000
> Lu	175		ug/L		497399	497398.840
Tl	205	0.048	ug/L	13.392	1526	0.002
Pb	208	0.005	ug/L	33.149	1216	0.000
Bi	209		ug/L		91	-0.000
Th	232	0.048	ug/L	18.822	2793	0.004
U	238	0.009	ug/L	24.448	1014	0.001

Sample ID: QC Std 9

Report Date/Time: Sunday, January 24, 2010 16:56:13

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

Sample ID: QC Std 9

Report Date/Time: Sunday, January 24, 2010 16:56:13

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		98.3			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		99.0			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		98.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.3			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 9

Report Date/Time: Sunday, January 24, 2010 16:56:13

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## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Sunday, January 24, 2010 17:42:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 8.100

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	50.730	ug/L	3.965	57307	0.061
Be	9	51.510	ug/L	1.385	18274	0.019
B	11	101.410	ug/L	3.102	36467	0.038
Na	23	5543.014	ug/L	6.075	24151056	25.527
Mg	24	5004.982	ug/L	6.526	16057937	16.990
Al	27	4784.768	ug/L	13.732	21255756	22.517
P	31	5078.160	ug/L	2.758	1081421	1.140
K	39	4912.889	ug/L	4.915	25505868	26.493
Ca	43	5015.841	ug/L	2.294	59290	0.063
> Sc	45		ug/L		945067	945066.701
Ti	47	50.579	ug/L	2.251	26843	0.028
V	51	49.899	ug/L	4.663	304919	0.324
Cr	52	50.846	ug/L	2.774	240630	0.256
Cr	53		ug/L		124077	0.058
Mn	55	52.826	ug/L	1.428	416396	0.439
Fe	57	5243.904	ug/L	1.853	803469	0.845
Co	59	50.274	ug/L	3.000	310141	0.328
Ni	60	51.155	ug/L	2.303	69027	0.073
Cu	63		ug/L		165564	0.173
Cu	65	50.491	ug/L	2.203	80285	0.084
Zn	66	51.626	ug/L	2.913	56367	0.154
Zn	67		ug/L		17796	0.029
Zn	68		ug/L		39358	0.106
> Ge	74		ug/L		356245	356244.841
As	75	47.675	ug/L	1.236	49296	0.139
Se	77		ug/L		11162	0.020
Se	82	50.108	ug/L	2.913	5186	0.015
Kr	83		ug/L		99	0.000
Sr	88	52.298	ug/L	1.262	605456	2.604
Y	89		ug/L		105	0.000
Mo	98	48.871	ug/L	2.586	143437	0.617
Ag	107	50.641	ug/L	2.272	259538	1.117
Cd	111	49.827	ug/L	2.132	66175	0.285
Cd	114		ug/L		160455	0.690
> In	115		ug/L		232450	232449.902
Sn	120	50.663	ug/L	3.156	289676	1.241
Sb	121	46.798	ug/L	8.514	219670	0.943
Sb	123		ug/L		172800	0.742
Ba	135		ug/L		70952	0.143
Ba	137	49.744	ug/L	0.865	123617	0.250
Ho	165		ug/L		45	0.000
> Lu	175		ug/L		494618	494617.558
Tl	205	53.496	ug/L	1.027	1061329	2.145
Pb	208	52.971	ug/L	1.772	1713891	3.463
Bi	209		ug/L		431	0.001
Th	232	50.935	ug/L	1.340	2115486	4.276
U	238	52.112	ug/L	0.410	2335239	4.720

Sample ID: QC Std 8

Report Date/Time: Sunday, January 24, 2010 17:45:31

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998



### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	101.461				
Be	9	103.020				
B	11	101.410				
Na	23	110.860				
Mg	24	100.100				
Al	27	94.748				
P	31	101.563				
K	39	98.258				
Ca	43	100.317				
> Sc	45		102.3			
Ti	47	101.157				
V	51	99.798				
Cr	52	101.691				
Cr	53					
Mn	55	105.653				
Fe	57	104.878				
Co	59	100.549				
Ni	60	102.309				
Cu	63					
Cu	65	100.983				
Zn	66	103.252				
Zn	67					
Zn	68					
> Ge	74		102.2			
As	75	95.350				
Se	77					
Se	82	100.215				
Kr	83					
Sr	88	104.597				
Y	89					
Mo	98	97.742				
Ag	107	101.282				
Cd	111	99.655				
Cd	114					
> In	115		99.0			
Sn	120	101.326				
Sb	121	93.595				
Sb	123					
Ba	135					
Ba	137	99.488				
Ho	165					
> Lu	175		97.8			
Tl	205	106.992				
Pb	208	105.942				
Bi	209					
Th	232	101.870				
U	238	104.224				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message  
 QC Std 8 Na 23CCV is out of limits (+/- 10%)

### QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Sunday, January 24, 2010 17:48:57

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 9.101

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	-0.006	ug/L	110.468	69	-0.000
Be	9	-0.001	ug/L	310.885	14	-0.000
B	11	2.441	ug/L	20.296	1209	0.001
Na	23	-0.473	ug/L	381.772	28697	-0.002
Mg	24	-0.053	ug/L	354.923	7669	-0.000
Al	27	1.163	ug/L	70.010	13673	0.005
P	31	0.299	ug/L	734.557	4858	0.000
K	39	6.921	ug/L	69.098	510298	0.037
Ca	43	-0.363	ug/L	525.266	193	-0.000
Sc	45		ug/L		944263	944263.379
Ti	47	-0.079	ug/L	65.892	236	-0.000
V	51	0.293	ug/L	75.125	720	0.002
Cr	52	0.453	ug/L	6.131	1323	0.002
Cr	53		ug/L		89366	0.021
Mn	55	-0.008	ug/L	53.325	1145	-0.000
Fe	57	3.957	ug/L	13.440	5449	0.001
Co	59	0.001	ug/L	101.200	170	0.000
Ni	60	0.001	ug/L	290.617	152	0.000
Cu	63		ug/L		2134	-0.000
Cu	65	0.013	ug/L	259.143	1102	0.000
Zn	66	-0.540	ug/L	8.044	1113	-0.002
Zn	67		ug/L		8172	0.002
Zn	68		ug/L		1448	-0.001
Ge	74		ug/L		358000	358000.404
As	75	0.136	ug/L	280.777	-161	0.000
Se	77		ug/L		6781	0.008
Se	82	-0.070	ug/L	239.232	-10	-0.000
Kr	83		ug/L		94	0.000
Sr	88	0.002	ug/L	68.394	256	0.000
Y	89		ug/L		48	-0.000
Mo	98	0.026	ug/L	16.696	163	0.000
Ag	107	0.004	ug/L	47.964	75	0.000
Cd	111	0.011	ug/L	69.179	31	0.000
Cd	114		ug/L		47	-0.000
In	115		ug/L		236338	236337.766
Sn	120	0.021	ug/L	154.581	1403	0.001
Sb	121	0.776	ug/L	28.499	4198	0.016
Sb	123		ug/L		3252	0.012
Ba	135		ug/L		41	-0.000
Ba	137	-0.004	ug/L	66.812	61	-0.000
Ho	165		ug/L		18	-0.000
Lu	175		ug/L		498701	498700.930
Tl	205	0.045	ug/L	21.704	1467	0.002
Pb	208	0.005	ug/L	37.735	1197	0.000
Bi	209		ug/L		98	-0.000
Th	232	0.049	ug/L	18.023	2857	0.004
U	238	0.008	ug/L	11.543	969	0.001

Sample ID: QC Std 9

Report Date/Time: Sunday, January 24, 2010 17:51:41

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

Sample ID: QC Std 9

Report Date/Time: Sunday, January 24, 2010 17:51:41

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		102.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		102.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		100.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.6			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 244922001

Sample Date/Time: Sunday, January 24, 2010 18:26:01

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942514|1|ba|

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\244922001.107

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.366	ug/L	8.294	481	0.000
Be	9	0.010	ug/L	84.727	18	0.000
B	11	40.369	ug/L	0.075	14465	0.015
Na	23	374.236	ug/L	11.611	1628713	1.723
Mg	24	47.968	ug/L	11.177	158886	0.163
Al	27	262.262	ug/L	7.841	1154347	1.234
P	31	6.665	ug/L	16.201	6105	0.001
K	39	349.141	ug/L	18.562	2214843	1.883
Ca	43	105.978	ug/L	3.622	1421	0.001
> Sc	45		ug/L		928343	928343.360
Ti	47	5.748	ug/L	0.683	3239	0.003
V	51	0.614	ug/L	30.933	2659	0.004
Cr	52	1.583	ug/L	5.169	6570	0.008
Cr	53		ug/L		45181	-0.025
Mn	55	4.358	ug/L	2.680	34826	0.036
Fe	57	175.051	ug/L	1.806	30953	0.028
Co	59	0.235	ug/L	1.849	1584	0.002
Ni	60	1.096	ug/L	3.604	1597	0.002
Cu	63		ug/L		13607	0.012
Cu	65	3.584	ug/L	4.614	6585	0.006
Zn	66	2.829	ug/L	4.264	4720	0.008
Zn	67		ug/L		4458	-0.009
Zn	68		ug/L		3657	0.005
> Ge	74		ug/L		359552	359551.860
As	75	0.524	ug/L	58.513	250	0.002
Se	77		ug/L		2845	-0.003
Se	82	-0.044	ug/L	196.028	-7	-0.000
Kr	83		ug/L		89	0.000
Sr	88	0.762	ug/L	0.214	9502	0.038
Y	89		ug/L		3417	0.014
Mo	98	0.045	ug/L	5.132	227	0.001
Ag	107	0.027	ug/L	7.923	198	0.001
Cd	111	0.009	ug/L	7.333	30	0.000
Cd	114		ug/L		44	-0.000
> In	115		ug/L		244314	244314.032
Sn	120	-0.057	ug/L	16.440	978	-0.001
Sb	121	-0.063	ug/L	3.843	204	-0.001
Sb	123		ug/L		168	-0.001
Ba	135		ug/L		6094	0.012
Ba	137	4.095	ug/L	1.354	10587	0.021
Ho	165		ug/L		312	0.001
> Lu	175		ug/L		511424	511423.540
Tl	205	0.000	ug/L	844.706	581	0.000
Pb	208	0.557	ug/L	3.756	19698	0.036
Bi	209		ug/L		360	0.000
Th	232	0.073	ug/L	9.167	3969	0.006
U	238	0.037	ug/L	13.178	2340	0.003

Sample ID: 244922001

Report Date/Time: Sunday, January 24, 2010 18:28:46

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

Sample ID: 244922001

Report Date/Time: Sunday, January 24, 2010 18:28:46

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## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		100.5			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		103.1			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		104.0			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		101.1			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

## QC Action

QC Action Line: No QC out of limits detected

Sample ID: 244922001

Report Date/Time: Sunday, January 24, 2010 18:28:46

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## ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Sunday, January 24, 2010 18:32:10

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 8.108

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	53.421	ug/L	4.511	59114	0.064
Be	9	53.051	ug/L	3.377	18443	0.020
B	11	104.954	ug/L	0.809	36995	0.040
Na	23	5248.080	ug/L	5.703	22437110	24.169
Mg	24	5012.975	ug/L	2.687	15768557	17.017
Al	27	4720.982	ug/L	2.776	20590203	22.217
P	31	5038.821	ug/L	2.241	1052161	1.131
K	39	5014.210	ug/L	9.969	25505868	27.039
Ca	43	5050.612	ug/L	2.191	58520	0.063
> Sc	45		ug/L		926473	926472.637
Ti	47	50.291	ug/L	1.632	26169	0.028
V	51	49.609	ug/L	3.262	297217	0.322
Cr	52	51.233	ug/L	2.475	237716	0.258
Cr	53		ug/L		107037	0.042
Mn	55	53.605	ug/L	1.841	414150	0.446
Fe	57	5296.932	ug/L	2.065	795529	0.854
Co	59	50.462	ug/L	1.890	305213	0.329
Ni	60	51.429	ug/L	1.738	68035	0.073
Cu	63		ug/L		163281	0.174
Cu	65	50.369	ug/L	1.319	78530	0.084
Zn	66	50.698	ug/L	1.280	54665	0.151
Zn	67		ug/L		15167	0.022
Zn	68		ug/L		38725	0.105
> Ge	74		ug/L		351530	351529.571
As	75	47.748	ug/L	1.228	48729	0.139
Se	77		ug/L		10064	0.017
Se	82	48.970	ug/L	1.028	5002	0.014
Kr	83		ug/L		107	0.000
Sr	88	52.743	ug/L	1.037	606533	2.626
Y	89		ug/L		121	0.000
Mo	98	48.968	ug/L	1.853	142771	0.618
Ag	107	50.198	ug/L	1.153	255580	1.107
Cd	111	49.701	ug/L	0.648	65578	0.284
Cd	114		ug/L		158385	0.686
> In	115		ug/L		230905	230905.107
Sn	120	50.724	ug/L	3.046	288062	1.242
Sb	121	47.054	ug/L	7.222	219550	0.948
Sb	123		ug/L		173907	0.751
Ba	135		ug/L		70774	0.143
Ba	137	49.320	ug/L	1.916	122371	0.248
Ho	165		ug/L		46	0.000
> Lu	175		ug/L		493911	493911.194
Tl	205	53.042	ug/L	1.356	1050763	2.126
Pb	208	52.765	ug/L	0.836	1704763	3.450
Bi	209		ug/L		480	0.001
Th	232	49.617	ug/L	1.022	2057793	4.165
U	238	51.025	ug/L	1.457	2283079	4.622

Sample ID: QC Std 8

Report Date/Time: Sunday, January 24, 2010 18:34:53

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	106.841				
Be	9	106.102				
B	11	104.954				
Na	23	104.962				
Mg	24	100.260				
Al	27	93.485				
P	31	100.776				
K	39	100.284				
Ca	43	101.012				
> Sc	45		100.3			
Ti	47	100.582				
V	51	99.219				
Cr	52	102.466				
Cr	53					
Mn	55	107.210				
Fe	57	105.939				
Co	59	100.924				
Ni	60	102.858				
Cu	63					
Cu	65	100.739				
Zn	66	101.396				
Zn	67					
Zn	68					
> Ge	74		100.8			
As	75	95.496				
Se	77					
Se	82	97.941				
Kr	83					
Sr	88	105.486				
Y	89					
Mo	98	97.936				
Ag	107	100.396				
Cd	111	99.403				
Cd	114					
> In	115		98.3			
Sn	120	101.448				
Sb	121	94.108				
Sb	123					
Ba	135					
Ba	137	98.641				
Ho	165					
> Lu	175		97.7			
Tl	205	106.085				
Pb	208	105.530				
Bi	209					
Th	232	99.235				
U	238	102.051				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Sunday, January 24, 2010 18:38:18

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 9.109

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	-0.016	ug/L	71.831	57	-0.000
Be	9	0.017	ug/L	56.126	20	0.000
B	11	2.697	ug/L	21.097	1254	0.001
Na	23	-0.467	ug/L	141.637	27694	-0.002
Mg	24	0.354	ug/L	138.545	8669	0.001
Al	27	0.337	ug/L	263.902	9670	0.002
P	31	2.812	ug/L	40.289	5207	0.001
K	39	13.816	ug/L	107.912	526646	0.075
Ca	43	-0.249	ug/L	398.675	188	-0.000
> Sc	45		ug/L		911858	911858.024
Ti	47	-0.073	ug/L	10.895	231	-0.000
V	51	-0.048	ug/L	505.108	-1318	-0.000
Cr	52	0.509	ug/L	8.484	1531	0.003
Cr	53		ug/L		79688	0.014
Mn	55	-0.023	ug/L	24.603	992	-0.000
Fe	57	4.126	ug/L	21.831	5287	0.001
Co	59	0.002	ug/L	155.390	167	0.000
Ni	60	0.006	ug/L	219.716	153	0.000
Cu	63		ug/L		2234	0.000
Cu	65	0.020	ug/L	182.406	1075	0.000
Zn	66	-0.598	ug/L	12.014	1018	-0.002
Zn	67		ug/L		7070	-0.001
Zn	68		ug/L		1293	-0.001
> Ge	74		ug/L		346185	346184.841
As	75	-0.082	ug/L	329.573	-375	-0.000
Se	77		ug/L		6147	0.006
Se	82	0.073	ug/L	170.750	5	0.000
Kr	83		ug/L		84	-0.000
Sr	88	0.001	ug/L	24.351	242	0.000
Y	89		ug/L		48	-0.000
Mo	98	0.037	ug/L	27.953	192	0.000
Ag	107	0.004	ug/L	67.091	71	0.000
Cd	111	0.004	ug/L	108.474	22	0.000
Cd	114		ug/L		54	0.000
> In	115		ug/L		233090	233090.088
Sn	120	0.015	ug/L	180.058	1346	0.000
Sb	121	0.793	ug/L	26.907	4209	0.016
Sb	123		ug/L		3294	0.012
Ba	135		ug/L		45	0.000
Ba	137	-0.002	ug/L	266.049	67	-0.000
Ho	165		ug/L		15	-0.000
> Lu	175		ug/L		501511	501510.937
Tl	205	0.060	ug/L	13.562	1769	0.002
Pb	208	0.004	ug/L	64.349	1174	0.000
Bi	209		ug/L		113	0.000
Th	232	0.046	ug/L	20.765	2735	0.004
U	238	0.008	ug/L	8.368	993	0.001

Sample ID: QC Std 9

Report Date/Time: Sunday, January 24, 2010 18:41:02

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

## QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		98.7			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		99.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		99.2			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		99.2			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

## QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

## QC Action

QC Action Line: No QC out of limits detected

# ICPMS#5 - Summary Report

Sample ID: 1202017707

Sample Date/Time: Sunday, January 24, 2010 18:50:39

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 942514|1|ba|

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\1202017707.111

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	56.750	ug/L	5.807	69311	0.068
Be	9	0.901	ug/L	3.831	361	0.000
B	11	507.503	ug/L	3.498	195915	0.191
Na	23	35409.156	ug/L	1.733	166720194	163.069
Mg	24	7357.779	ug/L	14.167	25551225	24.977
Al	27	9601.135	ug/L	5.257	46174851	45.184
P	31	574.637	ug/L	2.885	136982	0.129
K	39	4633.990	ug/L	4.575	26048546	24.989
Ca	43	23782.599	ug/L	0.772	303269	0.297
Sc	45		ug/L		1022114	1022114.008
Ti	47	72.407	ug/L	2.144	41436	0.040
V	51	13.295	ug/L	3.506	87050	0.086
Cr	52	9.972	ug/L	1.906	50333	0.050
Cr	53		ug/L		38806	-0.036
Mn	55	217.888	ug/L	1.856	1853274	1.812
Fe	57	7905.570	ug/L	2.372	1307355	1.274
Co	59	8.043	ug/L	0.879	53827	0.052
Ni	60	18.081	ug/L	3.134	26496	0.026
Cu	63		ug/L		705015	0.687
Cu	65	207.049	ug/L	2.132	352456	0.344
Zn	66	1339.930	ug/L	0.989	1414195	3.986
Zn	67		ug/L		231011	0.631
Zn	68		ug/L		1017296	2.865
Ge	74		ug/L		354421	354420.617
As	75	3.682	ug/L	2.022	3513	0.011
Se	77		ug/L		2056	-0.005
Se	82	0.301	ug/L	6.485	29	0.000
Kr	83		ug/L		125	0.000
Sr	88	148.773	ug/L	0.719	1731975	7.407
Y	89		ug/L		93412	0.399
Mo	98	14.309	ug/L	0.335	42302	0.181
Ag	107	0.082	ug/L	4.347	475	0.002
Cd	111	0.228	ug/L	3.397	320	0.001
Cd	114		ug/L		544	0.002
In	115		ug/L		233775	233775.085
Sn	120	0.313	ug/L	1.511	3054	0.008
Sb	121	0.486	ug/L	3.194	2781	0.010
Sb	123		ug/L		2212	0.008
Ba	135		ug/L		96186	0.189
Ba	137	65.646	ug/L	1.413	168121	0.330
Ho	165		ug/L		8297	0.016
Lu	175		ug/L		509818	509817.539
Tl	205	0.094	ug/L	7.646	2510	0.004
Pb	208	7.676	ug/L	0.758	256915	0.502
Bi	209		ug/L		7007	0.014
Th	232	9.369	ug/L	0.980	401766	0.786
U	238	3.712	ug/L	2.016	172027	0.336

Sample ID: 1202017707

Report Date/Time: Sunday, January 24, 2010 18:53:24

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

Sample ID: 1202017707

Report Date/Time: Sunday, January 24, 2010 18:53:24

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		110.7			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		101.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		99.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.8			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	B	11	Sample is out of limits (over linear range)

### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#5 - Summary Report

Sample ID: 1202017708

Sample Date/Time: Sunday, January 24, 2010 18:56:51

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 942514|1|baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\1202017708.112

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	108.564	ug/L	6.549	135348	0.130
Be	9	45.895	ug/L	1.912	17995	0.017
B	11	603.325	ug/L	1.636	238028	0.228
Na	23	37605.337	ug/L	3.348	180899201	173.183
Mg	24	9425.259	ug/L	4.444	33439523	31.995
Al	27	15178.887	ug/L	4.604	74631444	71.433
P	31	2341.275	ug/L	1.762	554166	0.525
K	39	6457.532	ug/L	1.709	36902107	34.823
Ca	43	25696.923	ug/L	3.018	334901	0.320
> Sc	45		ug/L		1044538	1044537.542
Ti	47	128.272	ug/L	0.494	74786	0.071
V	51	57.494	ug/L	0.215	388688	0.373
Cr	52	53.341	ug/L	0.815	279137	0.268
Cr	53		ug/L		65557	-0.011
Mn	55	260.385	ug/L	0.293	2263351	2.166
Fe	57	10475.259	ug/L	1.438	1769054	1.688
Co	59	49.671	ug/L	0.673	338774	0.324
Ni	60	60.072	ug/L	1.330	89580	0.086
Cu	63		ug/L		862152	0.823
Cu	65	250.179	ug/L	1.459	434995	0.415
Zn	66	1410.817	ug/L	0.572	1490183	4.196
Zn	67		ug/L		245447	0.671
Zn	68		ug/L		1070003	3.012
> Ge	74		ug/L		354721	354720.546
As	75	77.390	ug/L	1.262	79875	0.226
Se	77		ug/L		3373	-0.002
Se	82	19.106	ug/L	2.456	1968	0.006
Kr	83		ug/L		139	0.000
Sr	88	197.372	ug/L	0.679	2281628	9.827
Y	89		ug/L		99280	0.427
Mo	98	65.207	ug/L	1.249	191153	0.823
Ag	107	46.881	ug/L	0.388	240016	1.034
Cd	111	9.692	ug/L	1.472	12871	0.055
Cd	114		ug/L		31024	0.133
> In	115		ug/L		232159	232158.608
Sn	120	3.927	ug/L	1.699	23586	0.096
Sb	121	47.799	ug/L	4.352	224120	0.963
Sb	123		ug/L		177531	0.763
Ba	135		ug/L		167078	0.330
Ba	137	114.019	ug/L	2.145	289788	0.573
Ho	165		ug/L		8991	0.018
> Lu	175		ug/L		506043	506043.474
Tl	205	91.923	ug/L	0.934	1865472	3.685
Pb	208	38.403	ug/L	1.196	1271557	2.511
Bi	209		ug/L		8249	0.016
Th	232	55.729	ug/L	0.728	2368061	4.678
U	238	52.367	ug/L	2.014	2400874	4.743

Sample ID: 1202017708

Report Date/Time: Sunday, January 24, 2010 18:59:36

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

## QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
[	Li	7				
	Be	9				
	B	11				
	Na	23				
	Mg	24				
	Al	27				
	P	31				
	K	39				
	Ca	43				
>	Sc	45	113.1			
	Ti	47				
	V	51				
	Cr	52				
	Cr	53				
	Mn	55				
	Fe	57				
	Co	59				
	Ni	60				
	Cu	63				
	Cu	65				
	Zn	66				
	Zn	67				
	Zn	68				
>	Ge	74	101.8			
	As	75				
	Se	77				
	Se	82				
	Kr	83				
	Sr	88				
	Y	89				
	Mo	98				
	Ag	107				
	Cd	111				
	Cd	114				
>	In	115	98.8			
	Sn	120				
	Sb	121				
	Sb	123				
	Ba	135				
	Ba	137				
	Ho	165				
>	Lu	175	100.1			
	Tl	205				
	Pb	208				
	Bi	209				
	Th	232				
	U	238				

## QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	B	11	Sample is out of limits (over linear range)
	Ti	47	Sample is out of limits (over linear range)

## QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 1202017709

Sample Date/Time: Sunday, January 24, 2010 19:03:03

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 942514|5|baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\1202017709.113

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	12.118	ug/L	4.382	14055	0.014
Be	9	0.232	ug/L	19.692	99	0.000
B	11	126.495	ug/L	3.414	46444	0.048
Na	23	7590.397	ug/L	3.358	33811479	34.956
Mg	24	1613.726	ug/L	7.399	5302629	5.478
Al	27	2115.996	ug/L	5.326	9633743	9.958
P	31	130.645	ug/L	2.842	33244	0.029
K	39	991.347	ug/L	1.237	5652896	5.346
Ca	43	5300.154	ug/L	1.010	64068	0.066
> Sc	45		ug/L		966467	966466.614
Ti	47	16.270	ug/L	1.586	9025	0.009
V	51	3.589	ug/L	10.491	21427	0.023
Cr	52	2.589	ug/L	2.247	11731	0.013
Cr	53		ug/L		60045	-0.012
Mn	55	53.757	ug/L	2.243	433306	0.447
Fe	57	1851.586	ug/L	1.816	293370	0.298
Co	59	1.751	ug/L	1.608	11210	0.011
Ni	60	4.109	ug/L	4.488	5812	0.006
Cu	63		ug/L		159459	0.163
Cu	65	48.093	ug/L	1.891	78268	0.080
Zn	66	311.205	ug/L	1.644	330103	0.926
Zn	67		ug/L		54298	0.132
Zn	68		ug/L		228969	0.640
> Ge	74		ug/L		354794	354794.257
As	75	0.989	ug/L	35.182	727	0.003
Se	77		ug/L		4177	0.000
Se	82	0.175	ug/L	76.030	16	0.000
Kr	83		ug/L		84	-0.000
Sr	88	34.222	ug/L	1.176	400630	1.704
Y	89		ug/L		19698	0.084
Mo	98	2.922	ug/L	1.218	8751	0.037
Ag	107	0.016	ug/L	14.702	134	0.000
Cd	111	0.046	ug/L	44.264	77	0.000
Cd	114		ug/L		126	0.000
> In	115		ug/L		235005	235004.583
Sn	120	-0.014	ug/L	161.382	1191	-0.000
Sb	121	0.487	ug/L	23.653	2797	0.010
Sb	123		ug/L		2216	0.008
Ba	135		ug/L		20418	0.040
Ba	137	13.980	ug/L	2.179	35551	0.070
Ho	165		ug/L		1713	0.003
> Lu	175		ug/L		505537	505536.549
Tl	205	0.007	ug/L	31.448	718	0.000
Pb	208	1.714	ug/L	2.580	57707	0.112
Bi	209		ug/L		1609	0.003
Th	232	2.066	ug/L	2.565	88475	0.173
U	238	0.766	ug/L	1.591	35668	0.069

Sample ID: 1202017709

Report Date/Time: Sunday, January 24, 2010 19:05:49

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

Sample ID: 1202017709

Report Date/Time: Sunday, January 24, 2010 19:05:49

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		104.6			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		101.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		100.1			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.0			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

# ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Sunday, January 24, 2010 19:09:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 8.114

## Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	53.758	ug/L	5.649	60845	0.064
Be	9	52.724	ug/L	4.609	18750	0.020
B	11	112.417	ug/L	3.786	40507	0.042
Na	23	5022.886	ug/L	4.609	21969670	23.132
Mg	24	5218.088	ug/L	4.794	16800145	17.713
Al	27	4581.754	ug/L	3.299	20450380	21.562
P	31	5080.099	ug/L	1.886	1085350	1.140
K	39	5176.286	ug/L	16.837	26953009	27.913
Ca	43	4956.876	ug/L	2.413	58765	0.062
Sc	45		ug/L		947917	947917.296
Ti	47	49.789	ug/L	0.808	26515	0.028
V	51	50.853	ug/L	2.043	311800	0.330
Cr	52	51.340	ug/L	0.694	243766	0.258
Cr	53		ug/L		98942	0.031
Mn	55	52.207	ug/L	1.170	412780	0.434
Fe	57	5196.695	ug/L	2.110	798672	0.838
Co	59	49.338	ug/L	1.345	305343	0.322
Ni	60	50.254	ug/L	1.423	68023	0.072
Cu	63		ug/L		161214	0.168
Cu	65	49.116	ug/L	0.405	78384	0.082
Zn	66	50.989	ug/L	1.245	55451	0.152
Zn	67		ug/L		15533	0.022
Zn	68		ug/L		39470	0.106
Ge	74		ug/L		354631	354630.514
As	75	46.827	ug/L	2.368	48191	0.137
Se	77		ug/L		8631	0.013
Se	82	48.319	ug/L	1.587	4979	0.014
Kr	83		ug/L		113	0.000
Sr	88	53.647	ug/L	1.495	614868	2.671
Y	89		ug/L		125	0.000
Mo	98	50.081	ug/L	1.684	145518	0.632
Ag	107	49.816	ug/L	1.035	252784	1.098
Cd	111	49.744	ug/L	1.874	65401	0.284
Cd	114		ug/L		158177	0.687
In	115		ug/L		230092	230092.383
Sn	120	50.550	ug/L	0.527	286142	1.238
Sb	121	47.535	ug/L	8.061	221032	0.958
Sb	123		ug/L		175988	0.763
Ba	135		ug/L		72641	0.145
Ba	137	50.312	ug/L	3.114	126961	0.253
Ho	165		ug/L		39	0.000
Lu	175		ug/L		502408	502407.597
Tl	205	54.249	ug/L	0.885	1093164	2.175
Pb	208	53.741	ug/L	1.473	1766125	3.513
Bi	209		ug/L		477	0.001
Th	232	50.155	ug/L	1.379	2115801	4.210
U	238	51.404	ug/L	1.618	2339540	4.656

Sample ID: QC Std 8

Report Date/Time: Sunday, January 24, 2010 19:11:56

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998



### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	107.516				
Be	9	105.449				
B	11	112.417				
Na	23	100.458				
Mg	24	104.362				
Al	27	90.728				
P	31	101.602				
K	39	103.526				
Ca	43	99.138				
> Sc	45		102.6			
Ti	47	99.578				
V	51	101.705				
Cr	52	102.679				
Cr	53					
Mn	55	104.413				
Fe	57	103.934				
Co	59	98.676				
Ni	60	100.508				
Cu	63					
Cu	65	98.233				
Zn	66	101.978				
Zn	67					
Zn	68					
> Ge	74		101.7			
As	75	93.654				
Se	77					
Se	82	96.637				
Kr	83					
Sr	88	107.294				
Y	89					
Mo	98	100.161				
Ag	107	99.632				
Cd	111	99.488				
Cd	114					
> In	115		98.0			
Sn	120	101.101				
Sb	121	95.070				
Sb	123					
Ba	135					
Ba	137	100.624				
Ho	165					
> Lu	175		99.3			
Tl	205	108.498				
Pb	208	107.482				
Bi	209					
Th	232	100.311				
U	238	102.807				

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message  
 QC Std 8 B 11CCV is out of limits (+/- 10%)

### QC Action

QC Action Line: Continue

## ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Sunday, January 24, 2010 19:15:21

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: C:\elandata\Dataset\100124\QC Std 9.115

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.008	ug/L	195.505	86	0.000
Be	9	0.005	ug/L	162.042	16	0.000
B	11	6.695	ug/L	15.508	2719	0.003
Na	23	1.241	ug/L	55.777	36046	0.006
Mg	24	-0.886	ug/L	69.620	5001	-0.003
Al	27	0.332	ug/L	174.450	10004	0.002
P	31	-0.145	ug/L	1335.733	4759	-0.000
K	39	8.445	ug/L	124.036	517605	0.046
Ca	43	3.456	ug/L	74.274	238	0.000
> Sc	45		ug/L		943374	943373.656
Ti	47	0.035	ug/L	101.251	296	0.000
V	51	0.478	ug/L	74.461	1849	0.003
Cr	52	0.440	ug/L	10.739	1257	0.002
Cr	53		ug/L		72841	0.004
Mn	55	-0.019	ug/L	6.096	1056	-0.000
Fe	57	-0.305	ug/L	235.607	4796	-0.000
Co	59	0.001	ug/L	296.955	167	0.000
Ni	60	-0.015	ug/L	80.829	130	-0.000
Cu	63		ug/L		2269	0.000
Cu	65	0.002	ug/L	2421.007	1082	0.000
Zn	66	-0.609	ug/L	5.172	1030	-0.002
Zn	67		ug/L		7250	-0.001
Zn	68		ug/L		1253	-0.001
> Ge	74		ug/L		354354	354354.170
As	75	0.312	ug/L	57.570	24	0.001
Se	77		ug/L		4870	0.002
Se	82	-0.250	ug/L	43.530	-28	-0.000
Kr	83		ug/L		97	0.000
Sr	88	0.002	ug/L	48.275	253	0.000
Y	89		ug/L		57	-0.000
Mo	98	0.040	ug/L	14.769	202	0.001
Ag	107	0.004	ug/L	17.970	73	0.000
Cd	111	0.002	ug/L	484.194	19	0.000
Cd	114		ug/L		42	-0.000
> In	115		ug/L		233453	233453.236
Sn	120	0.024	ug/L	122.323	1399	0.001
Sb	121	0.818	ug/L	25.985	4336	0.016
Sb	123		ug/L		3491	0.013
Ba	135		ug/L		41	-0.000
Ba	137	-0.000	ug/L	3680.186	71	-0.000
Ho	165		ug/L		14	-0.000
> Lu	175		ug/L		504817	504816.539
Tl	205	0.050	ug/L	24.267	1577	0.002
Pb	208	0.005	ug/L	43.279	1220	0.000
Bi	209		ug/L		121	0.000
Th	232	0.051	ug/L	18.607	2961	0.004
U	238	0.009	ug/L	14.441	1043	0.001

Sample ID: QC Std 9

Report Date/Time: Sunday, January 24, 2010 19:18:05

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## Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9999
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9998

Sample ID: QC Std 9

Report Date/Time: Sunday, January 24, 2010 19:18:05

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### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		102.1			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		101.6			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		99.4			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		99.8			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS #5 Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Monday, January 25, 2010 10:06:01

Sample Description:

Method File: c:\elandata\Method\Daily2.mth

Dataset File: c:\elandata\Dataset\default2\Sample.1750

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Number of Replicates: 5

### Summary

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
Be	9.0	3797.9	3797.905	55.830	1.5
Mg	24.0	41866.7	41866.664	413.504	1.0
Co	58.9	89574.0	89573.957	663.666	0.7
Rh	102.9	166042.0	166041.981	567.518	0.3
In	114.9	222043.5	222043.538	1016.649	0.5
Pb	208.0	242059.8	242059.850	2131.441	0.9
[> Ba	137.9	227089.5	227089.518	838.861	0.4
[ Ba++	69.0	4144.4	0.018	0.000	1.2
[> Ce	139.9	278563.8	278563.808	2005.002	0.7
[ CeO	155.9	6175.5	0.022	0.000	1.6
Bkgd	220.0	15.5	15.500	1.225	7.9

### Current Optimization File Data

Current Value	Description
0.85	Nebulizer Gas Flow
8.75	Lens Voltage
1450.00	ICP RF Power
-1718.75	Analog Stage Voltage
1200.00	Pulse Stage Voltage
275.00	Discriminator Threshold
-6.00	AC Rod Offset

### Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	23	10.3	4722.4
Co	59	23	11.0	89272.7
In	115	23	12.3	230319.1

## ICPMS #5 Instrument Tuning Report

File Name: 100125.tun  
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	590	2050	0.661
Be	9.0	9.1	2059	2070	0.641
Mg	24.0	24.0	5689	2070	0.614
Mg	25.0	25.0	5941	2070	0.625
Mg	26.0	26.0	6164	2070	0.651
Co	58.9	58.9	14182	2105	0.614
Rh	102.9	102.9	24875	2165	0.614
In	114.9	114.9	27789	2185	0.615
Ce	139.9	139.9	33873	2200	0.633
Pb	206.0	206.0	49948	2270	0.673
Pb	207.0	207.0	50159	2235	0.664
Pb	208.0	208.0	50451	2260	0.722
U	238.1	238.1	57726	2275	0.736

## ICPMS#5 - Summary Report

Sample ID: Blank  
Sample Date/Time: Monday, January 25, 2010 11:15:10  
Sample Type:  
Sample Description:  
Number of Replicates: 3  
Batch ID:  
Method File: c:\elandata\Method\be only.mth  
Dataset File: C:\elandata\Dataset\100125\Blank.035

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9		ug/L			14
Sc	45		ug/L			748784

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	
Sc	45	Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Monday, January 25, 2010 11:16:49

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\Standard 1.036

### Concentration Results

	Analyte	Mass	Conc.	Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Be	9	10.000	ug/L	2.980	4807	0.006	
>	Sc	45		ug/L		738365	738364.708	

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Be	9					
>	Sc	45					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: Standard 1

Report Date/Time: Monday, January 25, 2010 11:16:58

Page 1



## ICPMS#5 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Monday, January 25, 2010 11:18:26

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\Standard 2.037

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	99.936	ug/L	1.737	46143	0.061
Sc	45		ug/L		756172	756172.490

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: Standard 2

Report Date/Time: Monday, January 25, 2010 11:18:35

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Monday, January 25, 2010 11:20:03

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 1.038

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	49.931	ug/L	0.957	23658	0.030
Sc	45		ug/L		775711	775711.095

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std	% Recovery	Int Std	% Recovery	Spike	% Recov	Dilution	% Dil	Duplicate	Rel. % Difference	
[	Be	9		99.863									
> <td></td> <td>Sc</td> <td>45</td> <td></td> <td></td> <td></td> <td>103.6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		Sc	45				103.6						

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 1

Report Date/Time: Monday, January 25, 2010 11:20:13

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Monday, January 25, 2010 11:21:43

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 2.039

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.002	ug/L	517.822	15	0.000
Sc	45		ug/L		768990	768990.371

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Be	9					
Sc	45		102.7			

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 2

Report Date/Time: Monday, January 25, 2010 11:21:55

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Monday, January 25, 2010 11:23:23

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 3.040

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.568	ug/L	2.703	278	0.000
Sc	45		ug/L		761305	761304.629

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Be	9	113.527				
Sc	45		101.7			

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Monday, January 25, 2010 11:25:02

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 4.041

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.054	ug/L	10.603	39	0.000
Sc	45		ug/L		749608	749608.008

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45		100.1			

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 4

Report Date/Time: Monday, January 25, 2010 11:25:12

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Monday, January 25, 2010 11:26:41

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 5.042

### Concentration Results

Analyte	Mass	Conc.	Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	17.411	ug/L	1.458	8006	0.011	
Sc	45		ug/L		751828	751827.544	

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9	87.055				
Sc	45		100.4			

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 5

Report Date/Time: Monday, January 25, 2010 11:26:52

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, January 25, 2010 11:28:21

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 6.043

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Be	9	49.149	ug/L	2.485	23303	0.030
Sc	45		ug/L		776319	776318.799	

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std	% Recovery	Int Std	% Recovery	Spike	% Recov	Dilution	% Di	Duplicate	Rel. % Difference
[	Be	9		98.298								
Sc	45				103.7							

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, January 25, 2010 11:30:02

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 7.044

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.013	ug/L	22.989	21	0.000
Sc	45		ug/L		806730	806730.442

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45		107.7			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Monday, January 25, 2010 11:30:14

Page 1



## ICPMS#5 - Summary Report

Sample ID: 1202017705

Sample Date/Time: Monday, January 25, 2010 11:31:43

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 942514|1|ba|

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\1202017705.045

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	-0.002	ug/L	319.291	14	-0.000
Sc	45		ug/L		803023	803023.060

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
Be	9					
Sc	45		107.2			

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202017705

Report Date/Time: Monday, January 25, 2010 11:31:55

Page 1

## ICPMS#5 - Summary Report

Sample ID: 1202017706

Sample Date/Time: Monday, January 25, 2010 11:33:25

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 942514|1|ba|

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\1202017706.046

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	51.406	ug/L	0.498	24930	0.031
Sc	45		ug/L		793950	793950.214

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45		106.0			

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202017706

Report Date/Time: Monday, January 25, 2010 11:33:37

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, January 25, 2010 11:41:57

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 6.051

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	47.168	ug/L	0.571	23413	0.029
Sc	45		ug/L		812626	812625.765

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9	94.335				
Sc	45		108.5			

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Monday, January 25, 2010 11:42:08

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, January 25, 2010 11:43:38

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 7.052

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.012	ug/L	69.529	22	0.000
Sc	45		ug/L		825486	825485.590

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45		110.2			

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Monday, January 25, 2010 11:43:50

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, January 25, 2010 11:58:39

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 6.060

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	45.275	ug/L	0.342	22403	0.028
Sc	45		ug/L		810051	810050.738

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9	90.549				
Sc	45		108.2			

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Monday, January 25, 2010 11:58:50

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, January 25, 2010 12:00:20

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 7.061

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.007	ug/L	114.524	19	0.000
Sc	45		ug/L		816834	816834.148

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45		109.1			

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Monday, January 25, 2010 12:00:32

Page 1

## ICPMS#5 - Summary Report

Sample ID: 244922001

Sample Date/Time: Monday, January 25, 2010 12:05:32

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 942514|1|ba|

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\244922001.064

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[ Be	9	0.017	ug/L	71.021	23	0.000
45		ug/L		797172	797172.241	

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[ Be	9					
45		106.5				

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 244922001

Report Date/Time: Monday, January 25, 2010 12:05:44

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, January 25, 2010 12:07:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 6.065

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	47.068	ug/L	1.721	22837	0.029
Sc	45		ug/L		794356	794356.063

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9	94.136				
Sc	45		106.1			

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected



## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, January 25, 2010 12:08:54

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 7.066

### Concentration Results

Analyte	Mass	Conc.	Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.014	ug/L	41.321	22	0.000	
Sc	45		ug/L		795691	795690.900	

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Be	9					
Sc	45		106.3			

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Monday, January 25, 2010 12:09:06

Page 1

## ICPMS#5 - Summary Report

Sample ID: 1202017707

Sample Date/Time: Monday, January 25, 2010 12:12:20

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 942514|1|baj

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\1202017707.068

### Concentration Results

Analyte	Mass	Conc.	Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.928	ug/L	4.640	472	0.001	
Sc	45		ug/L		806418	806418.048	

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Be	9					
Sc	45		107.7			

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202017707

Report Date/Time: Monday, January 25, 2010 12:12:33

Page 1

## ICPMS#5 - Summary Report

Sample ID: 1202017708

Sample Date/Time: Monday, January 25, 2010 12:14:05

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 942514|1|baj

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\1202017708.069

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	44.653	ug/L	2.604	21931	0.027
Sc	45		ug/L		804098	804098.247

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Be	9					
Sc	45		107.4			

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: 1202017709

Sample Date/Time: Monday, January 25, 2010 12:15:49

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 942514|5|baj

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\1202017709.070

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	0.201	ug/L	5.948	101	0.000
Sc	45		ug/L		717220	717219.618

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Duplicate Rel. % Difference
Be	9					
Sc	45		95.8			

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202017709

Report Date/Time: Monday, January 25, 2010 12:16:03

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, January 25, 2010 12:17:32

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 6.071

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Be	9	51.920	ug/L	1.731	22606	0.032
Sc	45		ug/L		712913	712913.330

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
Be	9	103.840				
Sc	45		95.2			

### QC Out Of Limits

Measurement Type	Analyte	Mass Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, January 25, 2010 12:19:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\be only.mth

Dataset File: C:\elandata\Dataset\100125\QC Std 7.072

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[ Be	9	0.016	ug/L	52.966	20	0.000
45		ug/L		705695	705695.474	

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[ Be	9					
45		94.2				

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS #5 Daily Performance Report

### Sample ID: Sample

Sample Date/Time: Wednesday, January 27, 2010 10:01:35

### Sample Description:

Method File: c:\elandata\Method\Daily2.mth

Dataset File: c:\elandata\Dataset\default2\Sample.1759

Tuning File: c:\elandata\Tuning\default2.tun

Optimization File: c:\elandata\Optimize\default.dac

Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35

Current Dead Time (ns): 35

Number of Replicates: 5

### Summary

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
Be	9.0	3087.9	3087.934	102.308	3.3
Mg	24.0	43506.8	43506.755	472.576	1.1
Co	58.9	90532.6	90532.583	922.047	1.0
Rh	102.9	164177.8	164177.826	711.277	0.4
In	114.9	219828.5	219828.487	1233.124	0.6
Pb	208.0	228297.1	228297.121	2676.890	1.2
[> Ba	137.9	216842.8	216842.850	2692.980	1.2
[ Ba++	69.0	5124.6	0.024	0.000	1.1
[> Ce	139.9	265739.6	265739.576	3528.800	1.3
[ CeO	155.9	6319.2	0.024	0.001	2.2
Bkgd	220.0	23.6	23.600	3.324	14.1

### Current Optimization File Data

Current Value	Description
0.85	Nebulizer Gas Flow
11.00	Lens Voltage
1450.00	ICP RF Power
-1718.75	Analog Stage Voltage
1200.00	Pulse Stage Voltage
275.00	Discriminator Threshold
-6.00	AC Rod Offset

### Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	17	10.0	5387.0
Co	59	17	11.0	83338.7
In	115	17	12.5	220648.3

## ICPMS #5 Instrument Tuning Report

File Name: default2.tun  
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	586	2050	0.653
Be	9.0	9.0	2034	2070	0.659
Mg	24.0	23.9	5683	2070	0.662
Mg	25.0	25.0	5947	2070	0.718
Mg	26.0	26.0	6147	2070	0.671
Co	58.9	59.0	14188	2105	0.637
Rh	102.9	102.9	24878	2165	0.625
In	114.9	114.9	27792	2185	0.632
Ce	139.9	139.9	33864	2200	0.638
Pb	206.0	206.0	49948	2270	0.691
Pb	207.0	207.0	50159	2235	0.674
Pb	208.0	208.0	50451	2260	0.722
U	238.1	238.1	57732	2275	0.725



## ICPMS#5 - Summary Report

Sample ID: Blank  
Sample Date/Time: Thursday, January 28, 2010 07:25:54  
Sample Type:  
Sample Description:  
Number of Replicates: 3  
Batch ID:  
Method File: c:\elandata\Method\sb only.mth  
Dataset File: c:\elandata\Dataset\100127\Blank.301

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	In	115		ug/L		184558	
	Sb	121		ug/L		831	
	Sb	123		ug/L		708	

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	In	115					
	Sb	121					
	Sb	123					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Thursday, January 28, 2010 07:28:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\Standard 1.302

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		207201	207201.453
	Sb	121	10.000	ug/L	11.258	38837	0.184
L	Sb	123		ug/L		30647	0.145

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel.	% Difference
[>	In	115						
	Sb	121						
L	Sb	123						

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Thursday, January 28, 2010 07:30:29

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\Standard 2.303

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
In	115		ug/L		192081	192081.340
Sb	121	100.148	ug/L	11.308	414043	2.159
Sb	123		ug/L		325312	1.697

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
In	115					
Sb	121					
Sb	123					

### QC Out Of Limits

Measurement Type    Analyte    Mass    Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

## ICPMS#5 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Thursday, January 28, 2010 07:32:45

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 1.304

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		199138	199137.722
	Sb	121	50.936	ug/L	9.740	219014	1.098
L	Sb	123		ug/L		172181	0.863

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	In	115		107.9			
	Sb	121	101.873				
L	Sb	123					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 1

Report Date/Time: Thursday, January 28, 2010 07:33:05

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Thursday, January 28, 2010 07:35:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 2.305

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		189644	189643.763
	Sb	121	0.370	ug/L	13.829	2360	0.008
L	Sb	123		ug/L		1903	0.006

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	In	115		102.8			
	Sb	121					
L	Sb	123					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 2

Report Date/Time: Thursday, January 28, 2010 07:35:26

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## ICPMS#5 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Thursday, January 28, 2010 07:37:24

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 3.306

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> In	115		ug/L		197837	197836.599
Sb	121	2.844	ug/L	11.862	12967	0.061
Sb	123		ug/L		10231	0.048

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	0.9999
Sb	123Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[> In	115		107.2			
Sb	121	94.813				
Sb	123					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 3

Report Date/Time: Thursday, January 28, 2010 07:37:43

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Thursday, January 28, 2010 07:39:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 4.307

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	In	115		ug/L		174837	174837.022
	Sb	121	0.227	ug/L	14.543	1638	0.005
	Sb	123		ug/L		1332	0.004

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel.	% Difference
>	In	115			94.7			
	Sb	121						
	Sb	123						

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 4

Report Date/Time: Thursday, January 28, 2010 07:40:02

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Thursday, January 28, 2010 07:42:00

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 5.308

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		166014	166013.822
	Sb	121	24.003	ug/L	11.003	86293	0.518
L	Sb	123		ug/L		67733	0.406

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	In	115			90.0			
	Sb	121	120.017					
L	Sb	123						

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	Sb	121	ICSAB is out of limits

### QC Action

QC Action Line: Continue

Sample ID: QC Std 5

Report Date/Time: Thursday, January 28, 2010 07:42:20

Page 1



## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 07:44:19

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 6.309

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> In	115		ug/L		193209	193208.961
Sb	121	51.584	ug/L	8.712	215239	1.112
Sb	123		ug/L		169431	0.876

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[> In	115		104.7			
Sb	121	103.169				
Sb	123					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 07:44:40

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## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 07:46:40

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 7.310

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		183682	183682.133
	Sb	121	0.191	ug/L	19.195	1579	0.004
L	Sb	123		ug/L		1290	0.003

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	In	115		99.5			
	Sb	121					
L	Sb	123					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 07:47:01

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## ICPMS#5 - Summary Report

Sample ID: 1202026084

Sample Date/Time: Thursday, January 28, 2010 07:49:02

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 945922|1|baj

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\1202026084.311

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		174055	174054.853
	Sb	121	0.258	ug/L	13.495	1747	0.006
L	Sb	123		ug/L		1365	0.004

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	In	115		94.3			
	Sb	121					
L	Sb	123					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202026084

Report Date/Time: Thursday, January 28, 2010 07:49:23

Page 1

## ICPMS#5 - Summary Report

Sample ID: 1202026085

Sample Date/Time: Thursday, January 28, 2010 07:51:23

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 945922|1|baj

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\1202026085.312

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	In	115		ug/L		172887	172886.936
	Sb	121	55.133	ug/L	15.191	204628	1.189
	Sb	123		ug/L		164458	0.954

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. %	Difference
>	In	115		93.7				
	Sb	121						
	Sb	123						

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202026085

Report Date/Time: Thursday, January 28, 2010 07:51:43

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 08:07:52

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 6.319

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		184498	184498.204
	Sb	121	49.352	ug/L	13.812	195951	1.064
L	Sb	123		ug/L		156470	0.849

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	In	115			100.0		
	Sb	121	98.703				
L	Sb	123					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 08:08:12

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## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 08:10:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 7.320

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		179429	179429.049
	Sb	121	0.148	ug/L	34.218	1370	0.003
	Sb	123		ug/L		1043	0.002

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	0.9999
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel.	% Difference
[>	In	115			97.2			
	Sb	121						
	Sb	123						

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 08:10:34

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 08:21:47

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 6.324

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		195714	195714.229
	Sb	121	50.411	ug/L	12.486	212341	1.087
L	Sb	123		ug/L		171093	0.876

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel.	% Difference
[>	In	115		106.0				
	Sb	121	100.822					
L	Sb	123						

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 08:22:08

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 08:24:08

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 7.325

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		210842	210842.027
	Sb	121	0.120	ug/L	28.992	1490	0.003
[	Sb	123		ug/L		1139	0.002

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	In	115		114.2			
	Sb	121					
[	Sb	123					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 08:24:29

Page 1



## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 08:43:03

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 6.333

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		195328	195328.229
	Sb	121	48.202	ug/L	12.842	202871	1.039
	Sb	123		ug/L		163587	0.837

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	In	115		105.8			
	Sb	121	96.404				
	Sb	123					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 08:43:24

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 08:45:24

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 7.334

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	In	115		ug/L		196974	196973.776
	Sb	121	0.126	ug/L	29.281	1417	0.003
	Sb	123		ug/L		1162	0.002

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	In	115		106.7			
	Sb	121					
	Sb	123					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 08:45:45

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## ICPMS#5 - Summary Report

Sample ID: 244922001

Sample Date/Time: Thursday, January 28, 2010 08:52:31

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945922|1|baj

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\244922001.337

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		187725	187724.727
	Sb	121	-0.082	ug/L	13.494	513	-0.002
L	Sb	123		ug/L		483	-0.001

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	In	115		101.7			
	Sb	121					
L	Sb	123					

### QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 244922001

Report Date/Time: Thursday, January 28, 2010 08:52:54

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## ICPMS#5 - Summary Report

Sample ID: 1202026086

Sample Date/Time: Thursday, January 28, 2010 08:57:20

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 945922[1|ba]

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\1202026086.339

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In 115		ug/L		177770	177769.544
	Sb 121	0.804	ug/L	18.160	3857	0.017
L	Sb 123		ug/L		3197	0.014

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	0.9999
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	In 115		96.3			
	Sb 121					
L	Sb 123					

### QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202026086

Report Date/Time: Thursday, January 28, 2010 08:57:43

Page 1

## ICPMS#5 - Summary Report

Sample ID: 1202026087

Sample Date/Time: Thursday, January 28, 2010 08:59:45

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 945922|1|ba|

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\1202026087.340

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> In	115		ug/L		177148	177147.521
Sb	121	158.013	ug/L	13.060	600719	3.407
Sb	123		ug/L		484497	2.746

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[> In	115		96.0			
Sb	121					
Sb	123					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202026087

Report Date/Time: Thursday, January 28, 2010 09:00:09

Page 1

## ICPMS#5 - Summary Report

Sample ID: 1202026088

Sample Date/Time: Thursday, January 28, 2010 09:02:09

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 945922[5]ba]

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\1202026088.341

### Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115		ug/L		186524	186523.850
	Sb	121	0.041	ug/L	61.449	1001	0.001
L	Sb	123		ug/L		826	0.001

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	In	115		101.1			
	Sb	121					
L	Sb	123					

### QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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### QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202026088

Report Date/Time: Thursday, January 28, 2010 09:02:31

Page 1

## ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 28, 2010 09:04:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 6.342

### Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
In	115		ug/L		188955	188954.709
Sb	121	49.425	ug/L	11.020	201433	1.066
Sb	123		ug/L		159671	0.845

### Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
In	115	Linear Thru Zero	
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	

### QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
In	115		102.4			
Sb	121	98.850				
Sb	123					

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 6

Report Date/Time: Thursday, January 28, 2010 09:04:51

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## ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Thursday, January 28, 2010 09:06:51

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\sb only.mth

Dataset File: c:\elandata\Dataset\100127\QC Std 7.343

### Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	In	115	ug/L		192987	192986.528
	Sb	121	ug/L	30.707	1343	0.002
L	Sb	123	ug/L		1087	0.002

### Calibration

Analyte	MassCurve Type	Correlation Coefficient
In	115Linear Thru Zero	
Sb	121Linear Thru Zero	0.9999
Sb	123Linear Thru Zero	

### QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	In	115		104.6		
	Sb	121				
L	Sb	123				

### QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

### QC Action

QC Action Line: No QC out of limits detected

Sample ID: QC Std 7

Report Date/Time: Thursday, January 28, 2010 09:07:12

Page 1



Method Name: WATER  
 Method Description: 7470A, 245.2, ILM04 ANALYST ETL  
 Element: Hg

Date: 01/20/2010  
 Technique: FI-MHS  
 Calibration Type:  
 Hg, Calc. Intercept : Linear  
 Wavelength: 253.7 nm  
 Sample Info Name: 012010W1.SIF

Results Data Set Name: 012010W1

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 01/20/2010  
 Sample ID: Calib Blank

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0018	0.0018	09:41:11	No
2			0.0019	0.0019	09:41:46	No
Mean:			0.0019			
SD :			0.0001			
%RSD:			5.5435			

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 01/20/2010  
 Sample ID: S0.2

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0020	0.0038	09:43:08	No
2			0.0019	0.0037	09:43:43	No
Mean:			0.0019			
SD :			0.0001			
%RSD:			4.6731			

[Hg] Standard number 1 applied. [0.200]  
 Correlation Coefficient: 1.00000 Slope: 0.00963  
 Intercept : 0.00000

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 01/20/2010  
 Sample ID: S0.5

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0050	0.0069	09:45:06	No
2			0.0049	0.0068	09:45:40	No
Mean:			0.0050			
SD :			0.0000			
%RSD:			0.8734			

[Hg] Standard number 2 applied. [0.500]  
 Correlation Coefficient: 0.99989 Slope: 0.00998  
 Intercept : -0.00003

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 01/20/2010  
 Sample ID: S2.0

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0195	0.0214	09:47:05	No
2			0.0193	0.0212	09:47:40	No
Mean:			0.0194			
SD :			0.0001			
%RSD:			0.5747			

[Hg] Standard number 3 applied. [2.000]

Correlation Coefficient: 0.99997  
Intercept : 0.00003

Slope: 0.00971

=====

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 01/20/2010  
Sample ID: S5.0

-----

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0463	0.0481	09:49:05	No
2			0.0472	0.0490	09:49:40	No
Mean:			0.0467			
SD :			0.0006			
%RSD:			1.3718			

[Hg] Standard number 4 applied. [5.000]  
Correlation Coefficient: 0.99987 Slope: 0.00934  
Intercept : 0.00023

=====

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 01/20/2010  
Sample ID: S10

-----

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0952	0.0971	09:51:06	No
2			0.0946	0.0965	09:51:40	No
Mean:			0.0949			
SD :			0.0004			
%RSD:			0.4649			

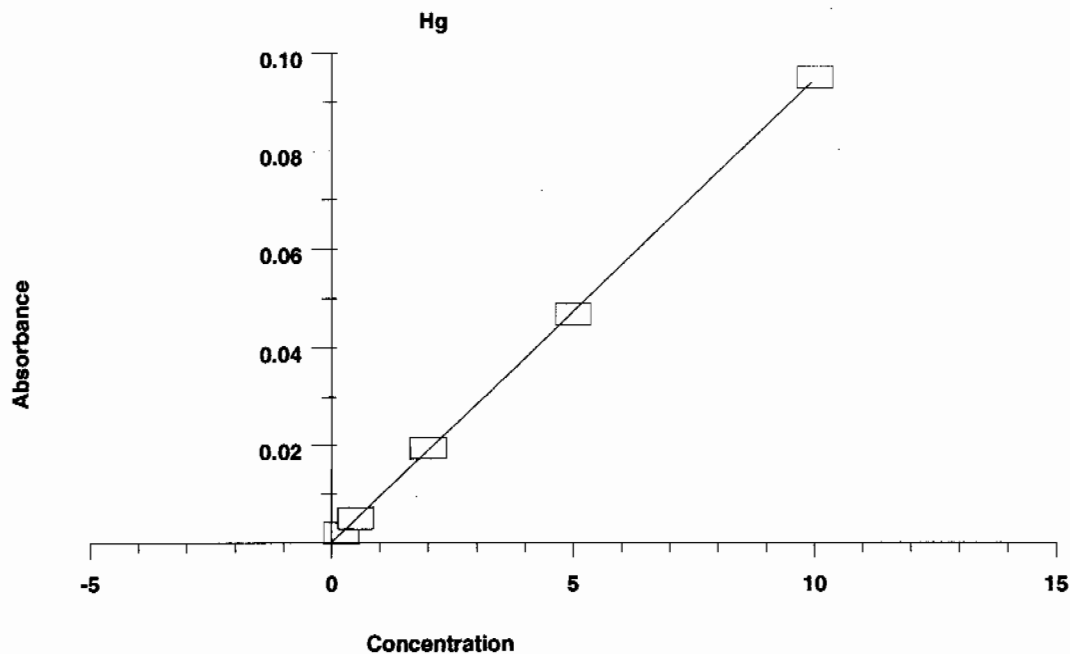
[Hg] Standard number 5 applied. [10.00]  
Correlation Coefficient: 0.99995 Slope: 0.00946  
Intercept : 0.00009

-----

#### Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0019	---	---	---	---
S0.2	0.0019	0.200	0.194	0.0001	4.7
S0.5	0.0050	0.500	0.517	0.0000	0.9
S2.0	0.0194	2.000	2.044	0.0001	0.6
S5.0	0.0467	5.000	4.929	0.0006	1.4
S10	0.0949	10.000	10.03	0.0004	0.5
Correlation Coefficient: 0.99995		Slope:	0.00946	Intercept: 0.0001	

-----



=====

Element: Hg    Seq. No.: 7    AS Loc.: 9    Date: 01/20/2010  
 Sample ID: ICV

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	5.086	5.086	0.0482	0.0500	09:53:10	No
2	4.880	4.880	0.0462	0.0481	09:53:45	No
Mean:	4.983	4.983	0.0472			
SD :	0.1457	0.1457	0.0014			
%RSD:	2.9	2.9	2.9174			

QC value within specified limits.

=====

Element: Hg    Seq. No.: 8    AS Loc.: 10    Date: 01/20/2010  
 Sample ID: ICB

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.024	0.024	0.0003	0.0022	09:55:07	No
2	0.016	0.016	0.0002	0.0021	09:55:42	No
Mean:	0.020	0.020	0.0003			
SD :	0.0055	0.0055	0.0001			
%RSD:	27.6	27.6	18.5133			

QC value within specified limits.

=====

Element: Hg    Seq. No.: 9    AS Loc.: 11    Date: 01/20/2010  
 Sample ID: CRDL

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.262	0.262	0.0026	0.0044	09:57:05	No
2	0.261	0.261	0.0026	0.0044	09:57:40	No
Mean:	0.261	0.261	0.0026			
SD :	0.0005	0.0005	0.0000			
%RSD:	0.2	0.2	0.1780			

QC value within specified limits.

=====

Element: Hg Seq. No.: 10 AS Loc.: 7 Date: 01/20/2010

Sample ID: CCV

-----

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	4.845	4.845	0.0459	0.0478	09:59:05	No
2	4.970	4.970	0.0471	0.0489	09:59:40	No
Mean:	4.907	4.907	0.0465			
SD :	0.0881	0.0881	0.0008			
%RSD:	1.8	1.8	1.7908			

QC value within specified limits.

=====

Element: Hg Seq. No.: 11 AS Loc.: 8 Date: 01/20/2010

Sample ID: CCB

-----

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.027	0.027	0.0004	0.0022	10:01:08	No
2	0.040	0.040	0.0005	0.0023	10:01:43	No
Mean:	0.034	0.034	0.0004			
SD :	0.0086	0.0086	0.0001			
%RSD:	25.7	25.7	19.9234			

QC value within specified limits.

=====

Element: Hg Seq. No.: 12 AS Loc.: 12 Date: 01/20/2010

Sample ID: 1202019104|i||943059|MB

-----

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.026	-0.026	-0.0002	0.0017	10:03:09	No
2	-0.027	-0.027	-0.0002	0.0017	10:03:45	No
Mean:	-0.026	-0.026	-0.0002			
SD :	0.0005	0.0005	0.0000			
%RSD:	2.0	2.0	3.1383			

=====

Element: Hg Seq. No.: 13 AS Loc.: 13 Date: 01/20/2010

Sample ID: 1202019105|i||LCS

-----

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.001	2.001	0.0190	0.0209	10:05:09	No
2	1.990	1.990	0.0189	0.0208	10:05:43	No
Mean:	1.995	1.995	0.0190			
SD :	0.0077	0.0077	0.0001			
%RSD:	0.4	0.4	0.3863			

=====

Element: Hg Seq. No.: 14 AS Loc.: 14 Date: 01/20/2010

Sample ID: 244960001|i|||

-----

Repl #	SampleConc µg/L	StdndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.003	0.003	0.0001	0.0020	10:07:09	No
2	-0.008	-0.008	0.0000	0.0019	10:07:44	No
Mean:	-0.002	-0.002	0.0001			
SD :	0.0078	0.0078	0.0001			
%RSD:	332.1	332.1	104.5106			

=====

Element: Hg Seq. No.: 15 AS Loc.: 15 Date: 01/20/2010

Sample ID: 1202019106|i|||DUP

%RSD: 7.7 7.7 10.8541

=====  
 Element: Hg Seq. No.: 21 AS Loc.: 21 Date: 01/20/2010  
 Sample ID: 1202019182|i||943087|MB  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.015	-0.015	-0.0001	0.0018	10:20:59	No
2	-0.034	-0.034	-0.0002	0.0016	10:21:34	No
Mean:	-0.024	-0.024	-0.0001			
SD :	0.0131	0.0131	0.0001			
%RSD:	53.8	53.8	89.6560			

=====  
 Element: Hg Seq. No.: 22 AS Loc.: 7 Date: 01/20/2010  
 Sample ID: CCV  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	4.832	4.832	0.0458	0.0476	10:22:59	No
2	4.829	4.829	0.0458	0.0476	10:23:34	No
Mean:	4.830	4.830	0.0458			
SD :	0.0015	0.0015	0.0000			
%RSD:						

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 23 AS Loc.: 8 Date: 01/20/2010  
 Sample ID: CCB  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.023	0.023	0.0003	0.0022	10:25:02	No
2	0.015	0.015	0.0002	0.0021	10:25:38	No
Mean:	0.019	0.019	0.0003			
SD :	0.0057	0.0057	0.0001			
%RSD:	29.7	29.7	19.7396			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 24 AS Loc.: 22 Date: 01/20/2010  
 Sample ID: 1202019183|i||LCS  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.057	2.057	0.0195	0.0214	10:27:03	No
2	1.992	1.992	0.0189	0.0208	10:27:38	No
Mean:	2.024	2.024	0.0192			
SD :	0.0460	0.0460	0.0004			
%RSD:	2.3	2.3	2.2598			

=====  
 Element: Hg Seq. No.: 25 AS Loc.: 23 Date: 01/20/2010  
 Sample ID: 244849001|i|||  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.032	-0.032	-0.0002	0.0016	10:29:02	No
2	-0.043	-0.043	-0.0003	0.0015	10:29:37	No
Mean:	-0.038	-0.038	-0.0003			
SD :	0.0077	0.0077	0.0001			
%RSD:	20.4	20.4	27.5068			

=====  
 Element: Hg Seq. No.: 26 AS Loc.: 24 Date: 01/20/2010  
 Sample ID: 244880001|i|||  
 =====

```

-----
Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L       µg/L       Signal    Height    No        Stored
1      -0.025     -0.025     -0.0001   0.0017    10:31:01  No
2      -0.042     -0.042     -0.0003   0.0016    10:31:36  No
Mean:   -0.034     -0.034     -0.0002
SD :    0.0120     0.0120     0.0001
%RSD:   35.6       35.6       50.1287
-----

```

```

=====
Element: Hg      Seq. No.: 27      AS Loc.: 25      Date: 01/20/2010
Sample ID: 244904001|i|||
-----

```

```

Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L       µg/L       Signal    Height    No        Stored
1      -0.034     -0.034     -0.0002   0.0016    10:33:00  No
2      -0.041     -0.041     -0.0003   0.0016    10:33:35  No
Mean:   -0.037     -0.037     -0.0003
SD :    0.0047     0.0047     0.0000
%RSD:   12.5       12.5       16.9462
-----

```

```

=====
Element: Hg      Seq. No.: 28      AS Loc.: 26      Date: 01/20/2010
Sample ID: 244904002|i|||
-----

```

```

Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L       µg/L       Signal    Height    No        Stored
1      -0.031     -0.031     -0.0002   0.0017    10:35:00  No
2      -0.053     -0.053     -0.0004   0.0014    10:35:35  No
Mean:   -0.042     -0.042     -0.0003
SD :    0.0159     0.0159     0.0002
%RSD:   37.8       37.8       49.3153
-----

```

```

=====
Element: Hg      Seq. No.: 29      AS Loc.: 27      Date: 01/20/2010
Sample ID: 244904003|i|||
-----

```

```

Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L       µg/L       Signal    Height    No        Stored
1      -0.061     -0.061     -0.0005   0.0014    10:37:01  No
2      -0.052     -0.052     -0.0004   0.0015    10:37:36  No
Mean:   -0.057     -0.057     -0.0004
SD :    0.0059     0.0059     0.0001
%RSD:   10.5       10.5       12.6630
-----

```

```

=====
Element: Hg      Seq. No.: 30      AS Loc.: 28      Date: 01/20/2010
Sample ID: 244904004|i|||
-----

```

```

Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L       µg/L       Signal    Height    No        Stored
1      -0.064     -0.064     -0.0005   0.0013    10:39:01  No
2      -0.065     -0.065     -0.0005   0.0013    10:39:36  No
Mean:   -0.064     -0.064     -0.0005
SD :    0.0002     0.0002     0.0000
%RSD:   0.3        0.3        0.3727
-----

```

```

=====
Element: Hg      Seq. No.: 31      AS Loc.: 29      Date: 01/20/2010
Sample ID: 244922001|i|||
-----

```

```

Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L       µg/L       Signal    Height    No        Stored
1      -0.038     -0.038     -0.0003   0.0016    10:41:02  No
2      -0.031     -0.031     -0.0002   0.0017    10:41:37  No
Mean:   -0.035     -0.035     -0.0002
SD :    0.0050     0.0050     0.0000
-----

```

%RSD: 14.6 14.6 20.3504

=====

Element: Hg Seq. No.: 32 AS Loc.: 30 Date: 01/20/2010  
 Sample ID: 1202019184|i|||DUP

-----

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	-0.014	-0.014	0.0000	0.0018	10:43:04	No
2	-0.030	-0.030	-0.0002	0.0017	10:43:39	No
Mean:	-0.022	-0.022	-0.0001			
SD :	0.0110	0.0110	0.0001			
%RSD:	49.4	49.4	88.0200			

=====

Element: Hg Seq. No.: 33 AS Loc.: 31 Date: 01/20/2010  
 Sample ID: 1202019185|i|||MS

-----

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	1.975	1.975	0.0188	0.0206	10:45:06	No
2	1.935	1.935	0.0184	0.0203	10:45:41	No
Mean:	1.955	1.955	0.0186			
SD :	0.0284	0.0284	0.0003			
%RSD:	1.5	1.5	1.4428			

=====

Element: Hg Seq. No.: 34 AS Loc.: 7 Date: 01/20/2010  
 Sample ID: CCV

-----

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	4.807	4.807	0.0456	0.0474	10:47:08	No
2	4.763	4.763	0.0451	0.0470	10:47:44	No
Mean:	4.785	4.785	0.0453			
SD :	0.0314	0.0314	0.0003			
%RSD:	0.7	0.7	0.6546			

QC value within specified limits.

=====

Element: Hg Seq. No.: 35 AS Loc.: 8 Date: 01/20/2010  
 Sample ID: CCB

-----

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	-0.003	-0.003	0.0001	0.0019	10:49:11	No
2	0.017	0.017	0.0003	0.0021	10:49:46	No
Mean:	0.007	0.007	0.0002			
SD :	0.0136	0.0136	0.0001			
%RSD:	192.5	192.5	80.7319			

QC value within specified limits.

=====

Element: Hg Seq. No.: 36 AS Loc.: 32 Date: 01/20/2010  
 Sample ID: 1202019186|i|5||SDILT

-----

Repl #	SampleConc µg/L	StdndConc µg/L	BlndCorr Signal	Peak Height	Time	Peak Stored
1	-0.044	-0.044	-0.0003	0.0015	10:51:10	No
2	-0.045	-0.045	-0.0003	0.0015	10:51:45	No
Mean:	-0.044	-0.044	-0.0003			
SD :	0.0009	0.0009	0.0000			
%RSD:	2.1	2.1	2.6704			

=====

Element: Hg Seq. No.: 37 AS Loc.: 33 Date: 01/20/2010  
 Sample ID: 1202017112|i||942702|TB

=====

%RSD: 0.5 0.5 0.5060

=====  
 Element: Hg Seq. No.: 43 AS Loc.: 39 Date: 01/20/2010  
 Sample ID: 1202018240|i|5|SDILT  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.047	-0.047	-0.0004	0.0015	11:04:44	No
2	-0.061	-0.061	-0.0005	0.0014	11:05:19	No
Mean:	-0.054	-0.054	-0.0004			
SD :	0.0099	0.0099	0.0001			
%RSD:	18.4	18.4	22.4861			

=====  
 Element: Hg Seq. No.: 44 AS Loc.: 40 Date: 01/20/2010  
 Sample ID: 1202019163|i||943078|MB  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.014	-0.014	0.0000	0.0018	11:06:43	No
2	-0.008	-0.008	0.0000	0.0019	11:07:18	No
Mean:	-0.011	-0.011	0.0000			
SD :	0.0044	0.0044	0.0000			
%RSD:	39.8	39.8	340.3022			

=====  
 Element: Hg Seq. No.: 45 AS Loc.: 41 Date: 01/20/2010  
 Sample ID: 1202019164|i||LCS  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	2.005	2.005	0.0191	0.0209	11:08:42	No
2	2.047	2.047	0.0195	0.0213	11:09:16	No
Mean:	2.026	2.026	0.0193			
SD :	0.0300	0.0300	0.0003			
%RSD:	1.5	1.5	1.4719			

=====  
 Element: Hg Seq. No.: 46 AS Loc.: 7 Date: 01/20/2010  
 Sample ID: CCV  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	4.940	4.940	0.0468	0.0487	11:10:41	No
2	4.865	4.865	0.0461	0.0480	11:11:17	No
Mean:	4.902	4.902	0.0465			
SD :	0.0535	0.0535	0.0005			
%RSD:	1.1	1.1	1.0888			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 47 AS Loc.: 8 Date: 01/20/2010  
 Sample ID: CCB  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	-0.009	-0.009	0.0000	0.0019	11:12:45	No
2	-0.017	-0.017	-0.0001	0.0018	11:13:19	No
Mean:	-0.013	-0.013	0.0000			
SD :	0.0056	0.0056	0.0001			
%RSD:	43.0	43.0	176.2390			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 48 AS Loc.: 42 Date: 01/20/2010  
 Sample ID: 244937001|i|||  
 =====



# Miscellaneous

# Prep LogBook

Analyst: FGA  
Batch: 942449  
Lab SOP: GL-MA-E-006 REV# 9

Verified by: \_\_\_\_\_

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202017560	UI091216-01	.25	mL
LCS	1202017560	UI091216-06	.25	mL
MS	1202017562	UI091216-01	.25	mL
MS	1202017562	UI091216-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202017559		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
LCS	1202017560		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SAMPLE	244829001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SAMPLE	244829002		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SAMPLE	244829003		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SAMPLE	244829004		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SAMPLE	244844001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	GROUND WATER
SAMPLE	244844002		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	GROUND WATER
SAMPLE	244844003		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	GROUND WATER
SAMPLE	244844004		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	GROUND WATER
SAMPLE	244849001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SAMPLE	244880001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SAMPLE	244893001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SAMPLE	244895002		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SAMPLE	244904001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SAMPLE	244904002		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SAMPLE	244904003		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SAMPLE	244904004		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SAMPLE	244912001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SAMPLE	244919001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SAMPLE	244922001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
DUP	1202017561	244922001	SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
MS	1202017562	244922001	SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SDILT	1202017563	244922001	SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER
SAMPLE	244925001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1	WATER

Comments:

Reagent/Solvent Lot ID	Amount	Description
1252838	2.5 mL	HYDROCHLORIC ACID
1252836	1 mL	Nitric Acid CONC.

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# Prep LogBook

Analyst: FGA  
 Batch: 942490  
 Lab SOP: GL-MA-E-006 REV# 9

Verified by: \_\_\_\_\_

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Spike Amount	Spike Units
MB	1202017705		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
LCS	1202017706		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244829001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244829002		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244829003		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244829004		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244844001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244844002		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244844003		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244844004		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244849001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244880001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244893001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244895002		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244904001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244904002		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244904003		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244904004		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244912001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244919001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244922001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SAMPLE	244925001		SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
DUP	1202017707	244925001	SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
MS	1202017708	244925001	SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		
SDILT	1202017709	244925001	SW846 3005A	19-JAN-2010 14:00	<2	50 mL	50 mL	1		

Comments

Reagent/Solvent Lot ID	Amount	Description
1252838	2.5 mL	HYDROCHLORIC ACID
1252836	1 mL	Nitric Acid CONC.

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# Prep LogBook

Analyst: TXB3  
Batch: 943086  
Lab SOP: GL-MA-E-010 REV# 23

Verified by:

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Spike Amount	Spike Units
MB	1202019182		SW846 7470A Prep	19-JAN-2010 12:45	<2	20 mL	20 mL	1		
LCS	1202019183		SW846 7470A Prep	19-JAN-2010 12:45	<2	20 mL	20 mL	1	.2	mL
SAMPLE	244849001		SW846 7470A Prep	19-JAN-2010 12:45	<2	20 mL	20 mL	1		
SAMPLE	244880001		SW846 7470A Prep	19-JAN-2010 12:45	<2	20 mL	20 mL	1		
SAMPLE	244904001		SW846 7470A Prep	19-JAN-2010 12:45	<2	20 mL	20 mL	1		
SAMPLE	244904002		SW846 7470A Prep	19-JAN-2010 12:45	<2	20 mL	20 mL	1		
SAMPLE	244904003		SW846 7470A Prep	19-JAN-2010 12:45	<2	20 mL	20 mL	1		
SAMPLE	244904004		SW846 7470A Prep	19-JAN-2010 12:45	<2	20 mL	20 mL	1		
SAMPLE	244922001		SW846 7470A Prep	19-JAN-2010 12:45	<2	20 mL	20 mL	1		
DUP	1202019184	244922001	SW846 7470A Prep	19-JAN-2010 12:45	<2	20 mL	20 mL	1		
MS	1202019185	244922001	SW846 7470A Prep	19-JAN-2010 12:45	<2	20 mL	20 mL	1		
SDILT	1202019186	244922001	SW846 7470A Prep	19-JAN-2010 12:45	<2	20 mL	20 mL	1		

Comments Digestion Start Date: 19-JAN-10 12:45  
Digestion End Date: 19-JAN-10 14:45

Reagent/Solvent Lot ID	Amount	Description
1176183	1 mL	Sulfuric Acid, Concentrated
1240182-1	.5 mL	NITRIC ACID
1234385-C	1.5 mL	5% Potassium Persulfate
1255535-C	3 mL	5% KMnO4 solution
1255532-C	1 mL	Hg reducing agent
WHG100119-06	500 uL	Mercury Working 2nd Source 5.0/ICV
WHG100119-01a	20 uL	Mercury Working 1st Source CAL 0.2/CRA
WHG100119-02	50 uL	Mercury Working 1st Source CAL 0.5
WHG100119-05	1 mL	Mercury Working 1st Source CAL 10.0
WHG100119-03	200 uL	Mercury Working 1st Source CAL 2.0
WHG100119-04	500 uL	Mercury Working 1st Source CAL 5.0/CCV

# Prep LogBook

Analyst: AXG2  
 Batch: 945920  
 Lab SOP: GL-MA-E-006 REV# 9

Verified by: \_\_\_\_\_

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix	Spike Amount	Spike Units
MB	1202026084		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
LCS	1202026085		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SAMPLE	244829001		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SAMPLE	244829002		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SAMPLE	244829003		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SAMPLE	244829004		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SAMPLE	244844001		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	GROUND WATER	.25	mL
SAMPLE	244844002		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	GROUND WATER	.25	mL
SAMPLE	244844003		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	GROUND WATER	.25	mL
SAMPLE	244844004		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	GROUND WATER	.25	mL
SAMPLE	244849001		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SAMPLE	244880001		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SAMPLE	244893001		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SAMPLE	244895002		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SAMPLE	244904001		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SAMPLE	244904002		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SAMPLE	244904003		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SAMPLE	244904004		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SAMPLE	244912001		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SAMPLE	244919001		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SAMPLE	244922001		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SAMPLE	244925001		SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
DUP	1202026086	244925001	SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
MS	1202026087	244925001	SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL
SDILT	1202026088	244925001	SW846 3005A	27-JAN-2010 13:20	<2	25 mL	25 mL	1	WATER	.25	mL

## Comments

Reagent/Solvent Lot ID Amount Description  
 1252838 1.25 mL HYDROCHLORIC ACID  
 1234886 .5 mL Nitric Acid CONC.

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# Standard Logbook

Serial ID: UHG1167639-01      Opened: 13-AUG-09      Amount : 125 mL  
 Name: MHGSTOCK1      Received: 13-AUG-09      Catalog Number : PLHG4-2Y  
 Type: Source Material      Expires: 13-AUG-10      Lot Number : 15-37HG  
 Employee: Bryan Davis      Solvent : 10% HNO3  
 Supplier: Spex  
 Description: Mercury Source Standard #1 1,000 mg/L  
 Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG1167641-02      Opened: 13-AUG-09      Amount : 100 mL  
 Name: MHGSTOCK2      Received: 13-AUG-09      Catalog Number : AHG1KN-100  
 Type: Source Material      Expires: 13-AUG-10      Lot Number : 4905530  
 Employee: Bryan Davis      Solvent : 3% HNO3  
 Supplier: Ricca Chemical Company  
 Description: Mercury Source Standard #2 1,000 mg/L  
 Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI090422-40      Opened: 04-MAY-09      Amount : 500 mL  
 Name: TRACE ICP ICSA SOLN A      Received: 22-APR-09      Catalog Number : 160005-01-03  
 Type: Source Material      Expires: 04-MAY-10      Lot Number : 1013357  
 Employee: Helen Camello      Solvent : 5%HNO3  
 Supplier: o2si  
 Description: TRACE ICP ICSA SOLN A mg/L +/- 0.5% IN 5% HNO3  
 Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090610-03      Opened: 10-JUN-09      Catalog Number : 060074-06-01  
 Name: ICPMS Tungsten - 10mg/L      Received: 10-JUN-09      Lot Number : 1016338  
 Type: Source Material      Expires: 10-JUN-10      Solvent : 2% HNO3  
 Employee: Paul Boyd  
 Supplier: O2SI  
 Description: ICPMS Tungsten standard SPIKE - 10mg/L  
 Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

# Standard Logbook

**Serial ID:** UI090701-09      **Opened:** 01-JUL-09      **Amount :** 250 mL  
**Name:** ICP-MS CRDL Master #1      **Received:** 01-JUL-09      **Catalog Number :** 160044-09-02  
**Type:** Source Material      **Expires:** 01-JUL-10      **Lot Number :** 1016477  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% IN 2% HNO3  
**Supplier:** 02SI  
**Description:** ICPMS CRDL Master Soln #1  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

**Serial ID:** UI090701-10      **Opened:** 01-JUL-09      **Amount :** 250 mL  
**Name:** ICP-MS CRDL Master #2      **Received:** 01-JUL-09      **Catalog Number :** 160044-08-02  
**Type:** Source Material      **Expires:** 01-JUL-10      **Lot Number :** 1016476  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% IN 2% HNO3  
**Supplier:** 02SI  
**Description:** ICPMS CRDL Soln #2  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

**Serial ID:** UI090701-40      **Opened:** 01-JUL-09      **Amount :** 500 mL  
**Name:** TRACE ICP Stock PQL St      **Received:** 30-JUN-09      **Catalog Number :** 160543-01-03  
**Type:** Source Material      **Expires:** 01-JUL-10      **Lot Number :** 1016475  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3+TrHF  
**Supplier:** 02si  
**Description:** TRACE ICP Stock PQL Standard  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
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# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

**Serial ID:** UI090828-42      **Opened:** 16-SEP-09      **Amount :** 500 mL  
**Name:** TRACE ICP Na-1000SOUR      **Received:** 27-AUG-09      **Catalog Number :** 060011-02-03  
**Type:** Source Material      **Expires:** 16-SEP-10      **Lot Number :** 1017098  
**Employee:** Helen Camello      **Solvent :** 1%HNO3  
**Supplier:** O2Si  
**Description:** Sodium 1000 +/- 3 ug/mL in 1% HNO3  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

**Serial ID:** UI090828-A      **Opened:** 28-AUG-09      **Catalog Number :** 160067-02  
**Name:** ICP-MS DOE Liquid SPIKE      **Received:** 27-AUG-09      **Lot Number :** 1017141  
**Type:** Source Material      **Expires:** 28-AUG-10  
**Employee:** Francena Armstrong      **Verified:** 21-NOV-08  
**Supplier:** O2Si  
**Description:** ICP-MS DOE liquid Spike Solution A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	4 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L



# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Silicon	200 mg/L
Sodium	200 mg/L	Strontium	5 mg/L
Thallium	10 mg/L	Thorium	5 mg/L
Total Uranium	5 mg/L	Uranium	5 mg/L
Uranium-235	.0364 mg/L	Uranium-238	4.96 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

**Serial ID:** UI090828-B      **Opened:** 28-AUG-09      **Catalog Number :** 160067-02  
**Name:** ICP-MS DOE Liquid SPIKE      **Received:** 27-AUG-09      **Lot Number :** 1017141  
**Type:** Source Material      **Expires:** 28-AUG-10  
**Employee:** Francena Armstrong      **Verified:** 21-NOV-08  
**Supplier:** O2Si  
**Description:** ICP-MS DOE Liquid Spike Solution B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

**Serial ID:** UI090925-40      **Opened:** 23-OCT-09      **Amount :** 500 mL  
**Name:** SECOND SOURCE STD -1      **Received:** 25-SEP-09      **Catalog Number :** SGELMX38-500N  
**Type:** Source Material      **Expires:** 30-SEP-10      **Lot Number :** 4909129  
**Employee:** Helen Camello      **Solvent :** 5%HNO3  
**Supplier:** SPECTRO PURE  
**Description:** SECOND SOURCE STD #1A 5%HNO3  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

**Serial ID:** UI090925-41      **Opened:** 23-OCT-09      **Amount :** 500 mL  
**Name:** SECOND SOURCE STD -1      **Received:** 25-SEP-09      **Catalog Number :** SGELMX39-500B  
**Type:** Source Material      **Expires:** 30-SEP-10      **Lot Number :** 4909130  
**Employee:** Helen Camello      **Solvent :** 5%HNO3,TR.HF  
**Supplier:** SPECTRO PURE

# Standard Logbook

**Description:** SECOND SOURCE STD #1B

**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

**Serial ID:** UI090930-A **Opened:** 30-SEP-09 **Catalog Number :** 160067-02

**Name:** ICP-MS DOE Liquid SPIKE **Received:** 28-SEP-09 **Lot Number :** 1017141

**Type:** Source Material **Expires:** 30-SEP-10

**Employee:** Francena Armstrong **Verified:** 21-NOV-08

**Supplier:** O2Si

**Description:** ICP-MS DOE liquid Spike Solution A

**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	4 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Silicon	200 mg/L
Sodium	200 mg/L	Strontium	5 mg/L
Thallium	10 mg/L	Thorium	5 mg/L
Total Uranium	5 mg/L	Uranium	5 mg/L
Uranium-235	.0364 mg/L	Uranium-238	4.96 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

**Serial ID:** UI090930-B **Opened:** 30-SEP-09 **Catalog Number :** 160067-02

**Name:** ICP-MS DOE Liquid SPIKE **Received:** 28-SEP-09 **Lot Number :** 1017141

**Type:** Source Material **Expires:** 30-SEP-10

**Employee:** Francena Armstrong **Verified:** 21-NOV-08

**Supplier:** O2Si

**Description:** ICP-MS DOE Liquid Spike Solution B

**Comments:** None

Analyte	Concentration	Analyte	Concentration
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# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

**Serial ID:** UI091015-42      **Opened:** 28-OCT-09      **Amount :** 500 mL  
**Name:** SI 1000mg/L      **Received:** 15-OCT-09      **Catalog Number :** 060014-02-03  
**Type:** Source Material      **Expires:** 28-OCT-10      **Lot Number :** 1017581  
**Employee:** Helen Camello      **Solvent :** 0.3%H2O(NH4)2SiF6  
**Supplier:** o2si  
**Description:** Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

**Serial ID:** UI091102-40      **Opened:** 16-NOV-09      **Amount :** 500 mL  
**Name:** TRACE CALSTD#1A SOUF      **Received:** 02-NOV-09      **Catalog Number :** HP2270-1-500  
**Type:** Source Material      **Expires:** 31-OCT-10      **Lot Number :** 0930215  
**Employee:** Helen Camello      **Solvent :** HNO3  
**Supplier:** Environmental Express  
**Description:** Trace Calibration Std #1A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

**Serial ID:** UI091102-41      **Opened:** 16-NOV-09      **Amount :** 500 mL  
**Name:** TRACE CALSTD#1B SOUF      **Received:** 02-NOV-09      **Catalog Number :** HP2270-2-500  
**Type:** Source Material      **Expires:** 31-OCT-10      **Lot Number :** 0930216  
**Employee:** Helen Camello      **Solvent :** HNO3  
**Supplier:** Environmental Express  
**Description:** Trace Calibration Standard #1B  
**Comments:** None

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

**Serial ID:** UI091102-42      **Opened:** 17-NOV-09      **Amount :** 200 mL  
**Name:** SILICON      **Received:** 02-NOV-09      **Catalog Number :** HP100050-4F  
**Type:** Source Material      **Expires:** 17-NOV-10      **Lot Number :** 0921924  
**Employee:** Helen Camello      **Solvent :** H2O/tr HF  
**Supplier:** ENVIRONMENTAL EXPRESS  
**Description:** SILICON 1000mg/L H2O/tr HF  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

**Serial ID:** UI091212-11      **Opened:** 12-DEC-09      **Amount :** 1000 mL  
**Name:** ICP-MS ICSA Master A      **Received:** 12-DEC-09      **Catalog Number :** 160013-01-01L  
**Type:** Source Material      **Expires:** 12-DEC-10      **Lot Number :** 1015303  
**Employee:** Paul Boyd      **Solvent :** 2% HNO3  
**Supplier:** O2SI  
**Description:** ICP-MS ICSA Master A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

**Serial ID:** UI091212-60      **Opened:** 12-DEC-09      **Amount :** .5 mL  
**Name:** ICPMS High Range Standard      **Received:** 12-DEC-09      **Catalog Number :** 160212-02-01  
**Type:** Source Material      **Expires:** 12-DEC-10      **Lot Number :** 1018064  
**Employee:** Paul Boyd      **Solvent :** 2%HNO3 + Tr HF  
**Supplier:** O2SI  
**Description:** Linear Range Standard A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

**Serial ID:** UI091212-61      **Opened:** 12-DEC-09      **Amount:** .5 mL  
**Name:** ICPMS High Range Standard      **Received:** 12-DEC-09      **Catalog Number:** 160212-02-01  
**Type:** Source Material      **Expires:** 12-DEC-10      **Lot Number:** 1018064  
**Employee:** Paul Boyd      **Solvent:** 2%HNO3 + Tr HF  
**Supplier:** O2SI  
**Description:** Linear Range Standard B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

**Serial ID:** UI091216-01      **Opened:** 16-DEC-09      **Lot Number:** 1018095  
**Name:** METALSPIKE-1      **Received:** 16-DEC-09  
**Type:** Source Material      **Expires:** 16-DEC-10  
**Employee:** Francena Armstrong  
**Supplier:** OS2I  
**Description:** Metals Spike Mix I  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

# Standard Logbook

**Serial ID:** UI091216-06      **Opened:** 16-DEC-09      **Lot Number :** 1018096  
**Name:** METALSPIKE-2      **Received:** 16-DEC-09  
**Type:** Source Material      **Expires:** 16-DEC-10  
**Employee:** Francena Armstrong  
**Supplier:** OS2I  
**Description:** Metals Spike Mix II  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

**Serial ID:** UI091217-06      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS ICV/CCV Master A      **Received:** 17-DEC-09      **Catalog Number :** 160055-01  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1018209  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 5% HNO3 100 cm2  
**Supplier:** 02SI  
**Description:** ICPMS ICV/CCV SOLN A - 10ppm  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

**Serial ID:** UI091217-07      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS ICV/CCV Master B      **Received:** 17-DEC-09      **Catalog Number :** 160054-02  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1018210  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 5% HNO3 100 cm2  
**Supplier:** 02SI  
**Description:** ICPMS ICV/CCV Soln B - 10ppm  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

**Serial ID:** UI091217-08      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS ICV/CCV Master C      **Received:** 17-DEC-09      **Catalog Number :** 160054-03  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1018211  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 5% HNO3 100 cm2  
**Supplier:** 02SI  
**Description:** ICPMS ICV/CCV Soln C - 10ppm  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

**Serial ID:** UI091217-12      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS ICSAB Master B      **Received:** 17-DEC-09      **Catalog Number :** 160033-02  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1018212  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 2% HNO3  
**Supplier:** 02SI  
**Description:** ICPMS ICSAB Master B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

# Standard Logbook

**Serial ID:** UI091217-13      **Opened:** 17-DEC-09      **Amount :** 250 mL  
**Name:** ICP-MS ICSAB Master C      **Received:** 17-DEC-09      **Catalog Number :** 160033-03  
**Type:** Source Material      **Expires:** 17-DEC-10      **Lot Number :** 1016926  
**Employee:** Paul Boyd      **Solvent :** +/- 0.5% in 2% HNO3  
**Supplier:** 02SI  
**Description:** ICPMS ICSAB Master C  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

**Serial ID:** UI100114-40      **Opened:** 14-JAN-10      **Amount :** 500 mL  
**Name:** ICP HIGH RANGE STD-A      **Received:** 14-JAN-10      **Catalog Number :** 160211-05-03  
**Type:** Source Material      **Expires:** 14-JAN-11      **Lot Number :** 1018160  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3  
**Supplier:** 02SI  
**Description:** ICP HIGH RANGE STD SOLUTION A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

**Serial ID:** UI100114-41      **Opened:** 14-JAN-10      **Amount :** 500 mL  
**Name:** ICP HIGH RANGE STD B      **Received:** 14-JAN-10      **Catalog Number :** 160211-05-03  
**Type:** Source Material      **Expires:** 14-JAN-11      **Lot Number :** 1018160  
**Employee:** Helen Camello      **Solvent :** +/-0.5%in2%HNO3  
**Supplier:** 02SI  
**Description:** ICP HIGH RANGE STD SOLUTION B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L



# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

**Serial ID:** UI100114-48      **Opened:** 22-JAN-10      **Amount:** 1000 mL  
**Name:** Trace ICP ICSA      **Received:** 18-JAN-10      **Catalog Number:** 160005-02  
**Type:** Source Material      **Expires:** 22-JAN-11      **Lot Number:** 1018466  
**Employee:** Helen Camello      **Solvent:** 3% HCl + 1% HNO3  
**Supplier:** o2si  
**Description:** Trace ICP Interferent Check Standard A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

**Serial ID:** UI100126-11      **Opened:** 26-JAN-10      **Amount:** 1000 mL  
**Name:** ICP-MS ICSA Master A      **Received:** 26-JAN-10      **Catalog Number:** 160013-01-01L  
**Type:** Source Material      **Expires:** 26-JAN-11      **Lot Number:** 1018321  
**Employee:** Elizabeth Janssen      **Solvent:** 2% HNO3  
**Supplier:** O2SI  
**Description:** ICP-MS ICSA Master A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

**Serial ID:** UI1246651-A      **Opened:** 23-DEC-09      **Catalog Number:** 160067-05  
**Name:** ICP-MS ALL OTHER SPIKE      **Received:** 23-DEC-09      **Lot Number:** 1018097  
**Type:** Source Material      **Expires:** 23-DEC-10  
**Employee:** Bryan Davis  
**Supplier:** O2si  
**Description:** ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	5 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Bismuth	5 mg/L	Boron	10 mg/L
Cadmium	5 mg/L	Calcium	200 mg/L

# Standard Logbook

Analyte	Concentration	Analyte	Concentration
Cesium	5 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	5 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorous	200 mg/L	Potassium	200 mg/L
Selenium	5 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	5 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

**Serial ID:** UI1246654-B      **Opened:** 23-DEC-09      **Catalog Number :** 160067-05  
**Name:** ICP-MS ALL OTHER SPIKE      **Received:** 23-DEC-09      **Lot Number :** 1017644  
**Type:** Source Material      **Expires:** 23-DEC-10  
**Employee:** Bryan Davis  
**Supplier:** O2si  
**Description:** MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	5 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

**Serial ID:** UMS090303-01      **Opened:** 03-MAR-09      **Amount :** 250 mL  
**Name:** ICPMSCalSPIKEB      **Received:** 03-MAR-09      **Catalog Number :** ZGEL-100-250  
**Type:** Source Material      **Expires:** 28-FEB-10      **Lot Number :** 14-81JB  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution B  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

# Standard Logbook

**Serial ID:** UMS090303-02      **Opened:** 03-MAR-09      **Catalog Number :** ZGEL-102-250  
**Name:** ICPMSCalSPIKEA      **Received:** 03-MAR-09      **Lot Number :** 14-83JB  
**Type:** Source Material      **Expires:** 28-FEB-10  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution A  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

**Serial ID:** UMS090303-03      **Opened:** 03-MAR-09      **Amount :** 250 ml  
**Name:** ICPMSCalSPIKEC      **Received:** 03-MAR-09      **Catalog Number :** ZGEL-101-250  
**Type:** Source Material      **Expires:** 28-FEB-10      **Lot Number :** 15-199JB  
**Employee:** Paul Boyd  
**Supplier:** SPEX  
**Description:** ICPMS Calibration Standard Solution C  
**Comments:** None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

**Serial ID:** IHG100119-01      **Opened:** 19-JAN-10      **Instrument Id :** Mercury  
**Name:** MHGINTER1      **Received:** 19-JAN-10      **Pipet Id :** Minou1  
**Type:** Intermediate      **Expires:** 20-JAN-10      **Solvent :** 1mL HNO3 + Typel H2O  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Intermediate 1st Source 200 ug/L  
**Comments:** Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

**Serial ID:** IHG100119-02      **Opened:** 19-JAN-10      **Pipet Id :** Minou1  
**Name:** MHGINTER2      **Received:** 19-JAN-10      **Solvent :** 2% HNO3-1240182  
**Type:** Intermediate      **Expires:** 20-JAN-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Mercury Intermediate 2nd Source 200 ug/L  
**Comments:** None

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167641-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG100119-01a      Opened: 19-JAN-10      Pipet Id : Hg1289245  
 Name: MHGWORKCAL0.2CRA      Received: 19-JAN-10      Solvent : 2% HNO3-1240182  
 Type: Working      Expires: 26-JAN-10  
 Employee: Tara Griffin  
 Supplier: GEL  
 Description: Mercury Working 1st Source CAL 0.2/CRA  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100119-01	Mercury	200 ug/L	20 uL	20 mL	.2 ug/L

Serial ID: WHG100119-02      Opened: 19-JAN-10      Pipet Id : Hg1289245  
 Name: MHGWORKCAL0.5      Received: 19-JAN-10      Solvent : 2% HNO3-1240182  
 Type: Working      Expires: 26-JAN-10  
 Employee: Tara Griffin  
 Supplier: GEL  
 Description: Mercury Working 1st Source CAL 0.5  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100119-01	Mercury	200 ug/L	50 uL	20 mL	.5 ug/L

Serial ID: WHG100119-03      Opened: 19-JAN-10      Pipet Id : Hg1289245  
 Name: MHGWORKCAL2.0      Received: 19-JAN-10      Solvent : 2% HNO3-1240182  
 Type: Working      Expires: 26-JAN-10  
 Employee: Tara Griffin      Verified: 20-JUL-07  
 Supplier: GEL  
 Description: Mercury Working 1st Source CAL 2.0  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100119-01	Mercury	200 ug/L	200 uL	20 mL	2 ug/L

Serial ID: WHG100119-04      Opened: 19-JAN-10      Pipet Id : Hg1289245  
 Name: MHGWORKCAL5.0CCV      Received: 19-JAN-10      Solvent : 2% HNO3-1240182  
 Type: Working      Expires: 26-JAN-10  
 Employee: Tara Griffin      Verified: 20-JUL-07  
 Supplier: GEL  
 Description: Mercury Working 1st Source CAL 5.0/CCV  
 Comments: None

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100119-01	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG100119-05      Opened: 19-JAN-10      Pipet Id : Hg1289245  
 Name: MHGWORKCAL10.0      Received: 19-JAN-10      Solvent : 2% HNO3-1240182  
 Type: Working      Expires: 26-JAN-10  
 Employee: Tara Griffin      Verified: 20-JUL-07  
 Supplier: GEL  
 Description: Mercury Working 1st Source CAL 10.0  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100119-01	Mercury	200 ug/L	1 mL	20 mL	10 ug/L

Serial ID: WHG100119-06      Opened: 19-JAN-10      Pipet Id : Hg1289245  
 Name: MHGWORK5.0ICV      Received: 19-JAN-10      Solvent : 2% HNO3-1240182  
 Type: Working      Expires: 26-JAN-10  
 Employee: Tara Griffin  
 Supplier: GEL  
 Description: Mercury Working 2nd Source 5.0/ICV  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100119-02	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG100119-13      Opened: 19-JAN-10      Pipet Id : Hg1289245  
 Name: MHGLIQLCSMSSPIKE      Received: 19-JAN-10      Solvent : 2% HNO3-1240182  
 Type: Working      Expires: 26-JAN-10  
 Employee: Tara Griffin      Verified: 20-JUL-07  
 Supplier: GEL  
 Description: Mercury working intermediate standard for LCS/MS  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI100126-42      Opened: 26-JAN-10      Balance Id : 216  
 Name: TRACE ICP 0.1 PPM STD.      Received: 02-NOV-09      Pipet Id : 1099667  
 Type: Working      Expires: 27-JAN-10      Solvent : 3%HCL and 1%HNO3 -1259494  
 Employee: Helen Camello  
 Supplier: GEL  
 Description: TRACE ICP 0.1 PPM CALIBRATION STD.  
 Comments: None

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100126-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100126-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100126-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100126-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100126-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI100126-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100126-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI100126-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI100126-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100126-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI100126-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100126-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

**Serial ID:** WI100126-43      **Opened:** 26-JAN-10      **Balance Id :** 216  
**Name:** TRACE ICP 0.5/CCV STD.      **Received:** 02-NOV-09      **Pipet Id :** 1099667  
**Type:** Working      **Expires:** 27-JAN-10      **Solvent :** 3%HCL and 1%HNO3 -1259494  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** TRACE ICP 0.5/CCV CALIBRATION STD.  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090828-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L
UI091015-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091102-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI091102-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L

**Serial ID:** WI100126-44      **Opened:** 26-JAN-10      **Balance Id :** 216  
**Name:** TRACE ICP SCAL 1.0      **Received:** 02-NOV-09      **Pipet Id :** 1099667  
**Type:** Working      **Expires:** 27-JAN-10      **Solvent :** 3%HCL and 1 %HNO3-1259494  
**Employee:** Helen Camello  
**Supplier:** o2si  
**Description:** Trace ICP Calibration Standard 1.0ppm  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091015-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UI091102-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI091102-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

**Serial ID:** WI100126-45      **Opened:** 26-JAN-10      **Balance Id :** 216  
**Name:** TRACE ICP S-10 STD      **Received:** 22-APR-09      **Pipet Id :** 1099667  
**Type:** Working      **Expires:** 27-JAN-10      **Solvent :** 3%HCL and 1%HNO3 -1259494  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** TRACE ICP S-10 CALIBRATION STD.  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090828-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L



# Standard Logbook

**Serial ID:** WI100126-46      **Opened:** 26-JAN-10      **Balance Id :** 216  
**Name:** ICP TRACE ICV      **Received:** 25-SEP-09      **Pipet Id :** 1099667  
**Type:** Working      **Expires:** 27-JAN-10      **Solvent :** 3%HCL AND 1%HNO3-1259494  
**Employee:** Helen Camello  
**Supplier:** GEL  
**Description:** Initial Calibration Verification ICP Trace Metals  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI091102-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI091102-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

# Standard Logbook

**Serial ID:** WI100126-47      **Opened:** 26-JAN-10      **Balance Id :** 216  
**Name:** PQL Working Standard      **Received:** 30-JUN-09      **Pipet Id :** 1099667  
**Type:** Working      **Expires:** 27-JAN-10      **Solvent :** 3%HCL &1%HNO3-1259494  
**Employee:** Helen Camello  
**Supplier:** 02si  
**Description:** PQL Working Standard  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

**Serial ID:** WMS100124-04      **Opened:** 24-JAN-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 24-JAN-10      **Balance Id :** 4025216  
**Type:** Working      **Expires:** 25-JAN-10      **Pipet Id :** 3541598  
**Employee:** Elizabeth Janssen      **Solvent :** 2%HNO3/1%HCl-1256053  
**Supplier:** GEL

# Standard Logbook

**Description:** ICPMS Calibration Standard (100 ppb)

**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

**Serial ID:** WMS100124-04A      **Opened:** 24-JAN-10      **Balance Id :** 4025216  
**Name:** ICPMS Cal Standard 10      **Received:** 24-JAN-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 25-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1256053  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (10 ppb)  
**Comments:** None

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100124-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100124-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100124-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100124-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100124-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100124-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100124-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100124-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100124-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100124-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100124-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

**Serial ID:** WMS100124-05      **Opened:** 24-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 24-JAN-10      **Pipet Id :** 3541598  
**Type:** Working      **Expres:** 25-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1256053  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS ICV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

**Serial ID:** WMS100124-06      **Opened:** 24-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 24-JAN-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 25-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1256053  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS CRDL  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

**Serial ID:** WMS100124-07      **Opened:** 24-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 24-JAN-10      **Lot Number :** 1010773  
**Type:** Working      **Expres:** 25-JAN-10      **Pipet Id :** 3541598  
**Employee:** Elizabeth Janssen      **Solvent :** 2%HNO3/1%HCl - 1256053  
**Supplier:** GEL  
**Description:** ICPMS ICSA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100124-08      **Opened:** 24-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 24-JAN-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 25-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1256053  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS ICSAB  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L

**Serial ID:** WMS100124-70      **Opened:** 24-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS LINEAR RANGE ST      **Received:** 24-JAN-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 25-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1253206  
**Employee:** Elizabeth Janssen  
**Supplier:** 02SI  
**Description:** ICPMS LINEAR RANGE STANDARD  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI091212-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L



# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

**Serial ID:** WMS100125-04      **Opened:** 25-JAN-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 25-JAN-10      **Balance Id :** 4025216  
**Type:** Working      **Expires:** 26-JAN-10      **Pipet Id :** 3541598  
**Employee:** Elizabeth Janssen      **Solvent :** 2%HNO3/1%HCl-1259290  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (100 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

# Standard Logbook

**Serial ID:** WMS100125-04A      **Opened:** 25-JAN-10      **Balance Id :** 4025216  
**Name:** ICPMS Cal Standard 10      **Received:** 25-JAN-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 26-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (10 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
WMS100125-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100125-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100125-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100125-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100125-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100125-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100125-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100125-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100125-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100125-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100125-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

# Standard Logbook

**Serial ID:** WMS100125-05      **Opened:** 25-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 25-JAN-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 26-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS ICV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

# Standard Logbook

**Serial ID:** WMS100125-06      **Opened:** 25-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 25-JAN-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 26-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS CRDL  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

# Standard Logbook

**Serial ID:** WMS100125-07      **Opened:** 25-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 25-JAN-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 26-JAN-10      **Pipet Id :** 3541598  
**Employee:** Elizabeth Janssen      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Supplier:** GEL  
**Description:** ICPMS ICSA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100125-08      **Opened:** 25-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 25-JAN-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 26-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS ICSAB  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L

**Serial ID:** WMS100127-04      **Opened:** 27-JAN-10      **Amount :** 50 mL  
**Name:** ICPMS Cal Standard 100      **Received:** 27-JAN-10      **Balance Id :** 4025216  
**Type:** Working      **Expires:** 28-JAN-10      **Pipet Id :** 3541598  
**Employee:** Elizabeth Janssen      **Solvent :** 2%HNO3/1%HCl-1259290  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (100 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

**Serial ID:** WMS100127-04A      **Opened:** 27-JAN-10      **Balance Id :** 4025216  
**Name:** ICPMS Cal Standard 10      **Received:** 27-JAN-10      **Pipet Id :** 3541598  
**Type:** Working      **Expires:** 28-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS Calibration Standard (10 ppb)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100127-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100127-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100127-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100127-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100127-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100127-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100127-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100127-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100127-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100127-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100127-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

**Serial ID:** WMS100127-05      **Opened:** 27-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS ICV      **Received:** 27-JAN-10      **Pipet Id :** 3541598  
**Type:** Working      **Expres:** 28-JAN-10      **Solvent :** 2% $\text{HNO}_3$ /1% $\text{HCl}$  - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS ICV  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L



# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

**Serial ID:** WMS100127-06      **Opened:** 27-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS CRDL      **Received:** 27-JAN-10      **Pipet Id :** 3820544  
**Type:** Working      **Expires:** 28-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS CRDL  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

**Serial ID:** WMS100127-07      **Opened:** 27-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSA      **Received:** 27-JAN-10      **Lot Number :** 1010773  
**Type:** Working      **Expires:** 28-JAN-10      **Pipet Id :** 3541598  
**Employee:** Elizabeth Janssen      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Supplier:** GEL  
**Description:** ICPMS ICSA  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

**Serial ID:** WMS100127-08      **Opened:** 27-JAN-10      **Balance Id :** 40245216  
**Name:** ICPMS ICSAB      **Received:** 27-JAN-10      **Pipet Id :** 1758088  
**Type:** Working      **Expires:** 28-JAN-10      **Solvent :** 2%HNO3/1%HCl - 1259290  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** ICPMS ICSAB  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L

# Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: 1156689-A      Opened: 20-JUL-09      Lot Number : 41226920  
 Name: B-KMnO4(VWR)-MER      Received: 20-JUL-09  
 Type: Reagent/Solvent      Expires: 20-JUL-10  
 Employee: Tara Griffin      Verified: 07-AUG-07  
 Supplier: VWR  
 Description: Potassium Permanganate  
 Comments: None

# Standard Logbook

Serial ID: 1176183      Opened: 24-AUG-09      Lot Number : H20001  
 Name: B-H2SO4-MER      Received: 24-AUG-09  
 Type: Reagent/Solvent      Expires: 24-AUG-10  
 Employee: Tara Griffin  
 Supplier: Mallinckrodt  
 Description: Sulfuric Acid, Concentrated  
 Comments: None

Serial ID: 1215906      Opened: 06-NOV-09      Lot Number : H44465  
 Name: B-K2S2O8S-MER      Received: 06-NOV-09  
 Type: Reagent/Solvent      Expires: 06-NOV-10  
 Employee: Tara Griffin  
 Supplier: J.T BAKER  
 Description: Potassium Persulfate Concentrate.  
 Comments: None

Serial ID: 1228372-A      Opened: 12-NOV-09      Lot Number : 49215936  
 Name: B-NH2OH.HCl-MER      Received: 12-NOV-09  
 Type: Reagent/Solvent      Expires: 12-NOV-10  
 Employee: Tara Griffin  
 Supplier: Fisher Scientific  
 Description: Hydroxylamine Hydrochloride  
 Comments: None

Serial ID: 1234385-C      Opened: 25-NOV-09      Balance Id : BAL-002  
 Name: B-K2S2O8-MER      Received: 25-NOV-09  
 Type: Reagent/Solvent      Expires: 25-MAY-10  
 Employee: Tara Griffin  
 Supplier: GEL  
 Description: 5% Potassium Persulfate  
 Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1215906	B-K2S2O8S-MER	N/A	50 g	1000 mL	N/A

Serial ID: 1234886      Opened: 27-NOV-09      Lot Number : H20053 L  
 Name: H-HNO3      Received: 27-NOV-09  
 Type: Reagent/Solvent      Expires: 27-NOV-10  
 Employee: Bryan Davis  
 Supplier: BAKER  
 Description: Nitric Acid CONC.  
 Comments: None

# Standard Logbook

Serial ID: 1238345      Opened: 04-DEC-09      Lot Number : H20053 L  
Name: I-HNO3      Received: 04-DEC-09  
Type: Reagent/Solvent      Expires: 04-DEC-10  
Employee: Francena Armstrong  
Supplier: BAKER  
Description: Nitric Acid CONC.  
Comments: None

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Serial ID: 1240182-1      Opened: 09-DEC-09      Instrument Id : MERCURY  
Name: B-HNO3-MER      Received: 09-DEC-09      Lot Number : H34040  
Type: Reagent/Solvent      Expires: 09-DEC-10  
Employee: Tara Griffin  
Supplier: Mallinckrodt Chemicals  
Description: NITRIC ACID  
Comments: None

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Serial ID: 1244970      Opened: 18-DEC-09      Lot Number : H41032  
Name: I-HCL      Received: 18-DEC-09      Preservative\_Id : 5 none  
Type: Reagent/Solvent      Expires: 18-DEC-10  
Employee: Francena Armstrong  
Supplier: J.T. BAKER  
Description: HYDROCHLORIC ACID  
Comments: None

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Serial ID: 1252836      Opened: 08-JAN-10      Lot Number : H20053 L  
Name: I-HNO3      Received: 08-JAN-10  
Type: Reagent/Solvent      Expires: 08-JAN-11  
Employee: Francena Armstrong  
Supplier: BAKER  
Description: Nitric Acid CONC.  
Comments: None

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Serial ID: 1252838      Opened: 08-JAN-10      Lot Number : H41032  
Name: I-HCL      Received: 08-JAN-10      Preservative\_Id : 5 none  
Type: Reagent/Solvent      Expires: 08-JAN-11  
Employee: Francena Armstrong  
Supplier: J.T. BAKER  
Description: HYDROCHLORIC ACID  
Comments: None

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# Standard Logbook

**Serial ID:** 1255532-C      **Opened:** 15-JAN-10      **Balance Id :** BAL-002  
**Name:** B-NaCl.NH2OH.HCl-MER      **Received:** 15-JAN-10  
**Type:** Reagent/Solvent      **Expires:** 15-JUL-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** Hg reducing agent  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1228372-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

**Serial ID:** 1255535-C      **Opened:** 15-JAN-10      **Balance Id :** BAL-002  
**Name:** B-KMnO4-MER      **Received:** 15-JAN-10  
**Type:** Reagent/Solvent      **Expires:** 15-JUL-10  
**Employee:** Tara Griffin  
**Supplier:** GEL  
**Description:** 5% KMnO4 solution  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1156689-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

**Serial ID:** 1256053      **Opened:** 18-JAN-10      **Solvent :** Type I Water  
**Name:** B-2%HNO3/1%HCl-ICPMS      **Received:** 18-JAN-10  
**Type:** Reagent/Solvent      **Expires:** 25-JAN-10  
**Employee:** Paul Boyd  
**Supplier:** GEL  
**Description:** 2%HNO3/1%HCl Solution (Type I Water)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1238345	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1244970	I-HCL	36.5-38.0	90 mL	9 l	N/A

**Serial ID:** 1259290      **Opened:** 25-JAN-10      **Solvent :** Type I Water  
**Name:** B-2%HNO3/1%HCl-ICPMS      **Received:** 25-JAN-10  
**Type:** Reagent/Solvent      **Expires:** 01-FEB-10  
**Employee:** Elizabeth Janssen  
**Supplier:** GEL  
**Description:** 2%HNO3/1%HCl Solution (Type I Water)  
**Comments:** None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1252836	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1252838	I-HCL	36.5-38.0	90 mL	9 l	N/A

## Standard Logbook

Serial ID: 1259494      Opened: 25-JAN-10      Amount : 20 L  
Name: B-ICP-RINSE SOLN      Received: 28-DEC-10      Lot Number : H04040+G34050  
Type: Reagent/Solvent      Expires: 31-JAN-10      Solvent : 3%HCL+1%HNO3  
Employee: Helen Camello  
Supplier: GEL  
Description: 3%HCL+1%HNO3 RINSE SOLN.  
Comments: None

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# **General Chemistry Analysis**



# Case Narrative

**General Chemistry Narrative  
Los Alamos National Laboratory (LANL)  
SDG 10-1288**

**Method/Analysis Information**

**Product:** Cyanide, Total

**Analytical Batch:** 942457 and 942461    **Method:** SW9012A Cyanide and Total

**Prep Batch :** 942455 and 942460    **Method:** SSW846 9010B Prep

**Sample Analysis**

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

<b>Sample ID</b>	<b>Client ID</b>
244921001	RE15-10-7163
244921002	RE15-10-7162
244921003	RE15-10-7161
244921004	RE15-10-7160
244921005	RE15-10-7174
244921006	RE15-10-7173
244921007	RE15-10-7175
244921008	RE15-10-7172
244921009	RE15-10-7218
244921010	RE15-10-7223
1202017527	Method Blank (MB)
1202017528	244847001(RE12-10-7272) Sample Duplicate (DUP)
1202017529	244847002(RE12-10-7273) Sample Duplicate (DUP)
1202017530	244847001(RE12-10-7272) Matrix Spike (MS)
1202017531	244847002(RE12-10-7273) Matrix Spike (MS)
1202017532	244847001(RE12-10-7272) Matrix Spike Duplicate (MSD)
1202017533	244847002(RE12-10-7273) Matrix Spike Duplicate (MSD)
1202017534	Laboratory Control Sample (LCS)
1202017543	Method Blank (MB)
1202017544	244921003(RE15-10-7161) Sample Duplicate (DUP)
1202017545	244921004(RE15-10-7160) Sample Duplicate (DUP)
1202017546	244921003(RE15-10-7161) Matrix Spike (MS)
1202017547	244921004(RE15-10-7160) Matrix Spike (MS)
1202017548	244921003(RE15-10-7161) Matrix Spike Duplicate (MSD)
1202017549	244921004(RE15-10-7160) Matrix Spike Duplicate (MSD)
1202017550	Laboratory Control Sample (LCS)

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

**SOP Reference**

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as

Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 12.

#### **Preparation/Analytical Method Verification**

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

#### **Calibration Information**

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

#### **Initial Calibration**

All initial calibration requirements have been met for this SDG.

#### **Continuing Calibration Blanks**

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

#### **Calibration Verification Information (CCV)**

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

#### **Y Intercept Rule**

The absolute value of the intercept is less than 3 times the MDL.

#### **Quality Control (QC) Information**

##### **Method Blank (MB) Statement**

The MBs analyzed with this SDG met the acceptance criteria.

##### **Laboratory Control Sample (LCS) Recovery**

The LCS spike recoveries met the acceptance limits.

##### **Quality Control (QC) Designation**

The following samples were selected for QC analysis: 244847001 (RE12-10-7272), 244847002 (RE12-10-7273)- Batch 942457, 244921003 (RE15-10-7161) and 244921004 (RE15-10-7160)- Batch 942461.

##### **Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The spike recovery falls outside of the client specified acceptance limits but within the GEL acceptance limits: 1202017547 (RE15-10-7160)- Batch 942461.

##### **Matrix Spike Duplicate (MSD) Recovery Statement**

The spike recovery duplicate falls outside of the client specified acceptance limits but within the GEL acceptance limits: 1202017549 (RE15-10-7160)- Batch 942461.

##### **MS/MSD Relative Percent Difference (RPD) Statement**

The RPDs between the spike and spike duplicate met the acceptance limits.

##### **Duplicate Relative Percent Difference (RPD) Statement**

The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1202017528 (RE12-10-7272)- Batch 942457, 1202017544 (RE15-10-7161), 1202017545 (RE15-10-7160), 244921003 (RE15-10-7161) and 244921004 (RE15-10-7160)- Batch 942461.

### **Technical Information**

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

#### **Holding Times**

All samples in this SDG met the specified holding time.

#### **Sample Preservation/Integrity**

All the samples from this sample group met the preservation and integrity requirements of the method.

#### **Sample Dilutions**

The following samples in this sample group were diluted due to high concentration: 1202017534 (LCS)- Batch 942457 and 1202017550 (LCS)- Batch 942461.

#### **Sample Re-analysis**

The samples in this SDG did not require re-analysis.

### **Miscellaneous Information**

#### **Data Exception (DER) Documentation**

The following DER was generated for this SDG: 783040 1202017547 (RE15-10-7160) and 1202017549 (RE15-10-7160)- Batch 942461.

#### **Additional Comments**

Additional comments were not required for this SDG.

#### **Electronic Packaging Comment**

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

**Certification Statement**

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

**Review Validation:**

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

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

Reviewer:  Date: 08Feb10

# **Sample Data Summary**

## GEL LABORATORIES LLC

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

### Certificate of Analysis Report for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 10-1288 GEL Work Order: 244921

**The Qualifiers in this report are defined as follows:**

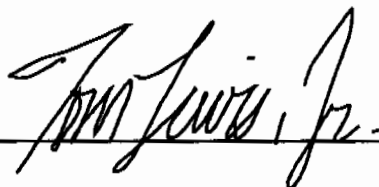
- \* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- \*\* Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

A handwritten signature in black ink, appearing to read "Tom Lewis, Jr.", is written over a horizontal line.

# GEL LABORATORIES LLC

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## Certificate of Analysis

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

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7163  
Sample ID: 244921001  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 6.57%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	71.4	262	ug/kg	1	AXC2	01/18/10	1611	942457	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/18/10	1418	942455

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	



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

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7162  
Sample ID: 244921002  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 9.75%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	J	205	72.4	266	ug/kg	1	AXC2	01/18/10	1611	942457	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/18/10	1418	942455

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7161  
Sample ID: 244921003  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 10.9%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	76.3	281	ug/kg	1	AXC2	01/25/10	1217	942461	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/22/10	1509	942460

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7160  
Sample ID: 244921004  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 20%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	73.3	269	ug/kg	1	AXC2	01/25/10	1221	942461	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/22/10	1509	942460

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7174  
Sample ID: 244921005  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 19.7%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	J	291	81.4	299	ug/kg	1	AXC2	01/25/10	1228	942461	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/22/10	1509	942460

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez  
Project: LANL ER Project

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7173  
Sample ID: 244921006  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 9.8%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	U	ND	75.4	277	ug/kg	1	AXC2	01/25/10	1229	942461	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/22/10	1509	942460

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7175  
Sample ID: 244921007  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 9.33%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	72.1	265	ug/kg	1	AXC2	01/25/10	1230	942461	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/22/10	1509	942460

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7172  
Sample ID: 244921008  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 21.2%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Flow Injection Analysis</b>											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total		316	78.5	289	ug/kg	1	AXC2	01/25/10	1231	942461	1

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/22/10	1509	942460

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7218  
Sample ID: 244921009  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 9.93%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	74.0	272	ug/kg	1	AXC2	01/25/10	1231	942461	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/22/10	1509	942460

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	



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## Certificate of Analysis

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

Report Date: February 3, 2010

Client SDG: 10-1288

Client Sample ID: RE15-10-7223  
Sample ID: 244921010  
Matrix: R  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client  
Moisture: 10.8%

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	U	ND	70.6	259	ug/kg	1	AXC2	01/25/10	1232	942461	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/22/10	1509	942460

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

# **Quality Control Summary**

# GEL LABORATORIES LLC

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

## QC Summary

Report Date: February 3, 2010

Page 1 of 2

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

Workorder: 244921

Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Flow Injection Analysis</b>											
Batch	942457										
QC1202017528 244847001 DUP											
Cyanide, Total		U	ND	J	82.6	ug/kg	200	(+/-265)	AXC2	01/18/10	15:32
QC1202017529 244847002 DUP											
Cyanide, Total		U	ND	U	ND	ug/kg	N/A			01/18/10	15:55
QC1202017534 LCS											
Cyanide, Total	67900				71500	ug/kg	105	(46%-145%)		01/18/10	15:25
QC1202017527 MB											
Cyanide, Total				U	250	ug/kg				01/18/10	15:24
QC1202017530 244847001 MS											
Cyanide, Total	5610	U	ND		5150	ug/kg	91.8	(50%-130%)		01/18/10	15:53
QC1202017531 244847002 MS											
Cyanide, Total	5650	U	ND		4930	ug/kg	87.1	(50%-130%)		01/18/10	15:56
QC1202017532 244847001 MSD											
Cyanide, Total	5300	U	ND		4690	ug/kg	9.26	88.6	(0%-30%)	01/18/10	15:54
QC1202017533 244847002 MSD											
Cyanide, Total	5770	U	ND		4780	ug/kg	2.96	82.9	(0%-30%)	01/18/10	15:57
Batch	942461										
QC1202017544 244921003 DUP											
Cyanide, Total		U	ND	U	ND	ug/kg	N/A		AXC2	01/25/10	12:18
QC1202017545 244921004 DUP											
Cyanide, Total		U	ND	U	ND	ug/kg	N/A			01/25/10	12:22
QC1202017550 LCS											
Cyanide, Total	67900				79800	ug/kg	117	(46%-145%)		01/25/10	12:02
QC1202017543 MB											
Cyanide, Total				U	250	ug/kg				01/25/10	12:01
QC1202017546 244921003 MS											
Cyanide, Total	5010	U	ND		4210	ug/kg	84	(50%-130%)		01/25/10	12:19
QC1202017547 244921004 MS											
Cyanide, Total	6130	U	ND		4290	ug/kg	70	(50%-130%)		01/25/10	12:26
QC1202017548 244921003 MSD											
Cyanide, Total	5100	U	ND		4390	ug/kg	4.27	86.1	(0%-30%)	01/25/10	12:20
QC1202017549 244921004 MSD											
Cyanide, Total	6250	U	ND		4340	ug/kg	1.12	69.4	(0%-30%)	01/25/10	12:27

### Notes:

RER is calculated at the 95% confidence level (2-sigma).

The Qualifiers in this report are defined as follows:

\*\* Analyte is a surrogate compound

< Result is less than value reported

> Result is greater than value reported

A The TIC is a suspected aldol-condensation product

## GEL LABORATORIES LLC

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### QC Summary

Workorder: 244921

Page 2 of 2

Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.										
BD	Results are either below the MDC or tracer recovery is low										
C	Analyte has been confirmed by GC/MS analysis										
D	Results are reported from a diluted aliquot of the sample										
E	General Chemistry--Concentration of the target analyte exceeds the instrument calibration range										
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria										
E	Organics--Concentration of the target analyte exceeds the instrument calibration range										
F	Estimated Value										
H	Analytical holding time was exceeded										
J	Value is estimated										
M	M if above MDC and less than LLD										
M	Matrix Related Failure										
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor										
N/A	RPD or %Recovery limits do not apply.										
ND	Analyte concentration is not detected above the detection limit										
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%										
R	Sample results are rejected										
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.										
UI	Gamma Spectroscopy--Uncertain identification										
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Y	QC Samples were not spiked with this compound										
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.										
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.										
d	5-day BOD--The 2:1 depletion requirement was not met for this sample										
h	Preparation or preservation holding time was exceeded										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

# **Instrument QC Data Summary**

# INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 03-FEB-2010 21:17

GEL Laboratories LLC

Contract: LANL01004

SDG #: 10-1288

Flow Injection Analysis

Method: SW846 9012A

Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	18-JAN-2010 12:46:12	OM_1-18-2010_12-35-44	156	150	104	(90%-110%)	Yes
CCV	18-JAN-2010 15:20:51	OM_1-18-2010_15-20-05	105	100	105	(90%-110%)	Yes
CCV	18-JAN-2010 15:33:18	OM_1-18-2010_15-20-05	107	100	107	(90%-110%)	Yes
CCV	18-JAN-2010 15:48:49	OM_1-18-2010_15-47-18	102	100	102	(90%-110%)	Yes
CCV	18-JAN-2010 16:01:14	OM_1-18-2010_15-47-18	102	100	102	(90%-110%)	Yes
CCV	18-JAN-2010 16:13:39	OM_1-18-2010_15-47-18	103	100	103	(90%-110%)	Yes
ICV	25-JAN-2010 11:56:21	OM_1-25-2010_11-47-41	140	150	93	(90%-110%)	Yes
CCV	25-JAN-2010 12:10:38	OM_1-25-2010_11-47-41	93.6	100	94	(90%-110%)	Yes
CCV	25-JAN-2010 12:23:03	OM_1-25-2010_11-47-41	94.4	100	94	(90%-110%)	Yes
CCV	25-JAN-2010 12:35:26	OM_1-25-2010_11-47-41	94.1	100	94	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	18-JAN-2010 12:48:02	OM_1-18-2010_12-35-44	-3.54	5	Yes
CCB	18-JAN-2010 15:22:41	OM_1-18-2010_15-20-05	-3.73	5	Yes
CCB	18-JAN-2010 15:35:09	OM_1-18-2010_15-20-05	-3.64	5	Yes
CCB	18-JAN-2010 15:50:40	OM_1-18-2010_15-47-18	-3.5	5	Yes
CCB	18-JAN-2010 16:03:05	OM_1-18-2010_15-47-18	-3.61	5	Yes
CCB	18-JAN-2010 16:15:30	OM_1-18-2010_15-47-18	2.41	5	Yes
ICB	25-JAN-2010 11:58:11	OM_1-25-2010_11-47-41	-1.19	5	Yes
CCB	25-JAN-2010 12:12:28	OM_1-25-2010_11-47-41	-1.17	5	Yes
CCB	25-JAN-2010 12:24:54	OM_1-25-2010_11-47-41	-2.07	5	Yes
CCB	25-JAN-2010 12:37:16	OM_1-25-2010_11-47-41	-1.41	5	Yes

# Cyanide, Total

# Prep LogBook

Analyst: AXS5 Verified by: \_\_\_\_\_

Batch: 942455

Lab SOP: GL-GC-E-067 REV# 13

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202017534	URF1200957-01	.25	g
MS	1202017530	URF1184831-02	.025	mL
MS	1202017531	URF1184831-02	.025	mL
MSD	1202017532	URF1184831-02	.025	mL
MSD	1202017533	URF1184831-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202017527		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.5 g	25 mL	50	SOIL
LCS	1202017534		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.25 g	25 mL	100	SOIL
SAMPLE	244721009		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	244721010		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	244721011		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	244721012		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	244721013		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	244810001		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.567 g	25 mL	44.09171	MISC SOLID
SAMPLE	244847001		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.57 g	25 mL	43.85965	SOIL
DUP	1202017528	244847001	SW846 9010B Prep	18-JAN-2010 14:18	>12	0.54 g	25 mL	46.2963	SOIL
MS	1202017530	244847001	SW846 9010B Prep	18-JAN-2010 14:18	>12	0.51 g	25 mL	49.01961	SOIL
MSD	1202017532	244847001	SW846 9010B Prep	18-JAN-2010 14:18	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	244847002		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.54 g	25 mL	46.2963	SOIL
DUP	1202017529	244847002	SW846 9010B Prep	18-JAN-2010 14:18	>12	0.55 g	25 mL	45.45455	SOIL
MS	1202017531	244847002	SW846 9010B Prep	18-JAN-2010 14:18	>12	0.51 g	25 mL	49.01961	SOIL
MSD	1202017533	244847002	SW846 9010B Prep	18-JAN-2010 14:18	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244847003		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	244847004		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	244852001		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	244852002		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	244852003		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	244852004		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.56 g	25 mL	44.64286	SOIL
SAMPLE	244881001		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.5 g	25 mL	50	SOIL
SAMPLE	244881002		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	244881003		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	244881004		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	244921001		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	244921002		SW846 9010B Prep	18-JAN-2010 14:18	>12	0.52 g	25 mL	48.07692	SOIL

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## Prep LogBook

Reagent/Solvent Lot ID	Amount	Description	Comments
091211-C	25 mL	0.25N Sodium Hydroxide Solution	
WCN1001118-07	.0375 mL	150 ppb CN Distilled ICV Standard	
1176724-C	1.25 mL	0.8N H3NO3S	
1238146-C	2.5 mL	50% H2SO4 CN Prep	
1176778-C	1 mL	51% MgCl2 Soln	
1238142-C	1.25 mL	Bismuth Nitrate Solution	

# Prep LogBook

Analyst: AXS5 Verified by: \_\_\_\_\_

Batch: 942460

Lab SOP: GL-GC-E-067 REV# 13

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix	Spike Amount	Spike Units
MB	1202017543		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.5 g	25 mL	50	SOIL	.25	g
LCS	1202017550		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.25 g	25 mL	100	SOIL	.025	mL
SAMPLE	244828001		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.56 g	25 mL	44.64286	SOIL	.025	mL
SAMPLE	244828002		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.5 g	25 mL	50	SOIL	.025	mL
SAMPLE	244828003		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.5 g	25 mL	50	SOIL	.025	mL
SAMPLE	244828004		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.57 g	25 mL	43.85965	SOIL	.025	mL
SAMPLE	244828005		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.5 g	25 mL	50	SOIL	.025	mL
SAMPLE	244828006		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.53 g	25 mL	47.16981	SOIL	.025	mL
SAMPLE	244828007		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.5 g	25 mL	50	SOIL	.025	mL
SAMPLE	244828008		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.5 g	25 mL	50	SOIL	.025	mL
SAMPLE	244828009		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.54 g	25 mL	46.2963	SOIL	.025	mL
SAMPLE	244828010		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.53 g	25 mL	47.16981	SOIL	.025	mL
SAMPLE	244842001		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.5 g	25 mL	50	SOIL	.025	mL
SAMPLE	244842002		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.53 g	25 mL	47.16981	SOIL	.025	mL
SAMPLE	244921003		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.5 g	25 mL	50	SOIL	.025	mL
DUP	1202017544	244921003	SW846 9010B Prep	22-JAN-2010 15:09	>12	0.52 g	25 mL	48.07692	SOIL	.025	mL
MS	1202017546	244921003	SW846 9010B Prep	22-JAN-2010 15:09	>12	0.56 g	25 mL	44.64286	SOIL	.025	mL
MSD	1202017548	244921003	SW846 9010B Prep	22-JAN-2010 15:09	>12	0.55 g	25 mL	45.45455	SOIL	.025	mL
SAMPLE	244921004		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.58 g	25 mL	43.10345	SOIL	.025	mL
DUP	1202017545	244921004	SW846 9010B Prep	22-JAN-2010 15:09	>12	0.5 g	25 mL	50	SOIL	.025	mL
MS	1202017547	244921004	SW846 9010B Prep	22-JAN-2010 15:09	>12	0.51 g	25 mL	49.01961	SOIL	.025	mL
MSD	1202017549	244921004	SW846 9010B Prep	22-JAN-2010 15:09	>12	0.5 g	25 mL	50	SOIL	.025	mL
SAMPLE	244921005		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.52 g	25 mL	48.07692	SOIL	.025	mL
SAMPLE	244921006		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.5 g	25 mL	50	SOIL	.025	mL
SAMPLE	244921007		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.52 g	25 mL	48.07692	SOIL	.025	mL
SAMPLE	244921008		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.55 g	25 mL	45.45455	SOIL	.025	mL
SAMPLE	244921009		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.51 g	25 mL	49.01961	SOIL	.025	mL
SAMPLE	244921010		SW846 9010B Prep	22-JAN-2010 15:09	>12	0.54 g	25 mL	46.2963	SOIL	.025	mL

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**Prep LogBook**

Reagent/Solvent Lot ID	Amount	Description	Comments
0912111-C	25 mL	0.25N Sodium Hydroxide Solution	
WCN100122-07	.0375 mL	150 ppb CN Distilled ICV Standard	
1176724-C	1.25 mL	0.8N H3NO3S	
1238146-C	2.5 mL	50% H2SO4 CN Prep	
1176778-C	1 mL	51 % MgCl2 Soln	
1238142-C	1.25 mL	Bismuth Nitrate Solution	

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	1/18/2010 12:39:03	OM_1-18-2010_12-35-44
150 ppb		1	axc2	1/18/2010 12:39:55	OM_1-18-2010_12-35-44
100 ppb		1	axc2	1/18/2010 12:40:48	OM_1-18-2010_12-35-44
50 ppb		1	axc2	1/18/2010 12:41:40	OM_1-18-2010_12-35-44
10 ppb		1	axc2	1/18/2010 12:42:34	OM_1-18-2010_12-35-44
CRDL 5.0 ppb		1	axc2	1/18/2010 12:43:27	OM_1-18-2010_12-35-44
ICAL-00		1	axc2	1/18/2010 12:44:21	OM_1-18-2010_12-35-44
ICV		1	axc2	1/18/2010 12:46:12	OM_1-18-2010_12-35-44
ICB		1	axc2	1/18/2010 12:48:02	OM_1-18-2010_12-35-44
CRDL		1	axc2	1/18/2010 12:49:52	OM_1-18-2010_12-35-44
1202013064	940627	1	axc2	1/18/2010 12:51:41	OM_1-18-2010_12-35-44
1202013071	940627	1	axc2	1/18/2010 12:52:35	OM_1-18-2010_12-35-44
244226001	940627	1	axc2	1/18/2010 12:53:28	OM_1-18-2010_12-35-44
1202013065	940627	1	axc2	1/18/2010 12:54:21	OM_1-18-2010_12-35-44
1202013067	940627	1	axc2	1/18/2010 12:55:14	OM_1-18-2010_12-35-44
1202013069	940627	1	axc2	1/18/2010 12:56:07	OM_1-18-2010_12-35-44
244226002	940627	1	axc2	1/18/2010 12:57:00	OM_1-18-2010_12-35-44
244236001	940627	1	axc2	1/18/2010 12:57:52	OM_1-18-2010_12-35-44
1202013066	940627	1	axc2	1/18/2010 12:58:45	OM_1-18-2010_12-35-44
1202013068	940627	1	axc2	1/18/2010 12:59:37	OM_1-18-2010_12-35-44
CCV		1	axc2	1/18/2010 13:00:29	OM_1-18-2010_12-35-44
CCB		1	axc2	1/18/2010 13:02:19	OM_1-18-2010_12-35-44
1202013070	940627	1	axc2	1/18/2010 13:04:08	OM_1-18-2010_12-35-44
244236004	940627	1	axc2	1/18/2010 13:05:00	OM_1-18-2010_12-35-44
244240002	940627	1	axc2	1/18/2010 13:05:51	OM_1-18-2010_12-35-44
244243001	940627	1	axc2	1/18/2010 13:06:43	OM_1-18-2010_12-35-44
244243002	940627	1	axc2	1/18/2010 13:07:35	OM_1-18-2010_12-35-44
244243003	940627	1	axc2	1/18/2010 13:08:28	OM_1-18-2010_12-35-44
244243004	940627	1	axc2	1/18/2010 13:09:22	OM_1-18-2010_12-35-44
244516001	940627	1	axc2	1/18/2010 13:10:16	OM_1-18-2010_12-35-44
244516002	940627	1	axc2	1/18/2010 13:11:09	OM_1-18-2010_12-35-44
244523001	940627	1	axc2	1/18/2010 13:12:02	OM_1-18-2010_12-35-44
CCV		1	axc2	1/18/2010 13:12:54	OM_1-18-2010_12-35-44
CCB		1	axc2	1/18/2010 13:14:44	OM_1-18-2010_12-35-44
244525001	940627	1	axc2	1/18/2010 13:16:33	OM_1-18-2010_12-35-44
244525003	940627	1	axc2	1/18/2010 13:17:26	OM_1-18-2010_12-35-44
244532001	940627	1	axc2	1/18/2010 13:18:19	OM_1-18-2010_12-35-44
244537001	940627	1	axc2	1/18/2010 13:19:11	OM_1-18-2010_12-35-44
244574001	940627	1	axc2	1/18/2010 13:20:04	OM_1-18-2010_12-35-44
244580001	940627	1	axc2	1/18/2010 13:20:56	OM_1-18-2010_12-35-44
244583001	940627	1	axc2	1/18/2010 13:21:49	OM_1-18-2010_12-35-44
244609005	940627	1	axc2	1/18/2010 13:22:40	OM_1-18-2010_12-35-44
1202016420	941969	1	axc2	1/18/2010 13:23:32	OM_1-18-2010_12-35-44
1202016427	941969	25	axc2	1/18/2010 13:24:24	OM_1-18-2010_12-35-44
CCV		1	axc2	1/18/2010 13:25:17	OM_1-18-2010_12-35-44
CCB		1	axc2	1/18/2010 13:27:07	OM_1-18-2010_12-35-44
244622003	941969	1	axc2	1/18/2010 13:28:58	OM_1-18-2010_12-35-44
1202016421	941969	1	axc2	1/18/2010 13:29:52	OM_1-18-2010_12-35-44
1202016423	941969	1	axc2	1/18/2010 13:30:45	OM_1-18-2010_12-35-44
1202016425	941969	1	axc2	1/18/2010 13:31:38	OM_1-18-2010_12-35-44
244622004	941969	1	axc2	1/18/2010 13:32:31	OM_1-18-2010_12-35-44
244622005	941969	1	axc2	1/18/2010 13:33:24	OM_1-18-2010_12-35-44
244622006	941969	1	axc2	1/18/2010 13:34:17	OM_1-18-2010_12-35-44
244622007	941969	1	axc2	1/18/2010 13:35:10	OM_1-18-2010_12-35-44
244622008	941969	1	axc2	1/18/2010 13:36:04	OM_1-18-2010_12-35-44
244768001	941969	1	axc2	1/18/2010 13:36:56	OM_1-18-2010_12-35-44
CCV		1	axc2	1/18/2010 13:37:49	OM_1-18-2010_12-35-44
CCB		1	axc2	1/18/2010 13:39:38	OM_1-18-2010_12-35-44

244768002	941969	1	axc2	1/18/2010	13:41:27	OM_1-18-2010_12-35-44
244768003	941969	1	axc2	1/18/2010	13:42:19	OM_1-18-2010_12-35-44
244768004	941969	1	axc2	1/18/2010	13:43:12	OM_1-18-2010_12-35-44
244768005	941969	1	axc2	1/18/2010	13:44:03	OM_1-18-2010_12-35-44
244768006	941969	1	axc2	1/18/2010	13:44:55	OM_1-18-2010_12-35-44
244768007	941969	1	axc2	1/18/2010	13:45:50	OM_1-18-2010_12-35-44
244768008	941969	1	axc2	1/18/2010	13:46:44	OM_1-18-2010_12-35-44
244768009	941969	1	axc2	1/18/2010	13:47:37	OM_1-18-2010_12-35-44
244768010	941969	1	axc2	1/18/2010	13:48:31	OM_1-18-2010_12-35-44
244773001	941969	1	axc2	1/18/2010	13:49:24	OM_1-18-2010_12-35-44
CCV		1	axc2	1/18/2010	13:50:17	OM_1-18-2010_12-35-44
CCB		1	axc2	1/18/2010	13:52:07	OM_1-18-2010_12-35-44
1202016422	941969	1	axc2	1/18/2010	13:53:57	OM_1-18-2010_12-35-44
1202016424	941969	1	axc2	1/18/2010	13:54:50	OM_1-18-2010_12-35-44
1202016426	941969	1	axc2	1/18/2010	13:55:43	OM_1-18-2010_12-35-44
244773002	941969	1	axc2	1/18/2010	13:56:36	OM_1-18-2010_12-35-44
244773003	941969	1	axc2	1/18/2010	13:57:28	OM_1-18-2010_12-35-44
244773004	941969	1	axc2	1/18/2010	13:58:21	OM_1-18-2010_12-35-44
244609005	940627	5	axc2	1/18/2010	13:59:14	OM_1-18-2010_12-35-44
1202017519	942453	1	axc2	1/18/2010	14:00:07	OM_1-18-2010_12-35-44
1202017520	942453	1	axc2	1/18/2010	14:01:01	OM_1-18-2010_12-35-44
1202017521	942453	1	axc2	1/18/2010	14:01:56	OM_1-18-2010_12-35-44
CCV		1	axc2	1/18/2010	14:02:47	OM_1-18-2010_12-35-44
CCB		1	axc2	1/18/2010	14:04:37	OM_1-18-2010_12-35-44
244810001	942453	1	axc2	1/18/2010	14:06:27	OM_1-18-2010_12-35-44
1202012091*	940249	1	axc2	1/18/2010	14:07:21	OM_1-18-2010_12-35-44
1202012098*	940249	25	axc2	1/18/2010	14:08:12	OM_1-18-2010_12-35-44
244228002	940249	1	axc2	1/18/2010	14:09:04	OM_1-18-2010_12-35-44
1202012096	940249	1	axc2	1/18/2010	14:09:56	OM_1-18-2010_12-35-44
1202012094	940249	1	axc2	1/18/2010	14:10:51	OM_1-18-2010_12-35-44
1202012092	940249	1	axc2	1/18/2010	14:11:45	OM_1-18-2010_12-35-44
244228003	940249	1	axc2	1/18/2010	14:12:39	OM_1-18-2010_12-35-44
1202012093	940249	1	axc2	1/18/2010	14:13:33	OM_1-18-2010_12-35-44
1202012095	940249	1	axc2	1/18/2010	14:14:26	OM_1-18-2010_12-35-44
CCV		1	axc2	1/18/2010	14:15:18	OM_1-18-2010_12-35-44
CCB		1	axc2	1/18/2010	14:17:09	OM_1-18-2010_12-35-44
1202012091	940249	1	axc2	1/18/2010	14:18:58	OM_1-18-2010_12-35-44
1202012098	940249	25	axc2	1/18/2010	14:19:51	OM_1-18-2010_12-35-44
1202012097	940249	1	axc2	1/18/2010	14:20:44	OM_1-18-2010_12-35-44
244228004	940249	1	axc2	1/18/2010	14:21:37	OM_1-18-2010_12-35-44
244228005	940249	1	axc2	1/18/2010	14:22:30	OM_1-18-2010_12-35-44
244228006	940249	1	axc2	1/18/2010	14:23:23	OM_1-18-2010_12-35-44
244242001	940249	1	axc2	1/18/2010	14:24:17	OM_1-18-2010_12-35-44
244242002	940249	1	axc2	1/18/2010	14:25:09	OM_1-18-2010_12-35-44
244242003	940249	1	axc2	1/18/2010	14:26:02	OM_1-18-2010_12-35-44
244242004	940249	1	axc2	1/18/2010	14:26:54	OM_1-18-2010_12-35-44
CCV		1	axc2	1/18/2010	14:27:47	OM_1-18-2010_12-35-44
CCB		1	axc2	1/18/2010	14:29:37	OM_1-18-2010_12-35-44
244242005	940249	1	axc2	1/18/2010	14:31:26	OM_1-18-2010_12-35-44
244242006	940249	1	axc2	1/18/2010	14:32:18	OM_1-18-2010_12-35-44
244242007	940249	1	axc2	1/18/2010	14:33:12	OM_1-18-2010_12-35-44
244242008	940249	1	axc2	1/18/2010	14:34:06	OM_1-18-2010_12-35-44
244242009	940249	1	axc2	1/18/2010	14:35:01	OM_1-18-2010_12-35-44
244242010	940249	1	axc2	1/18/2010	14:35:55	OM_1-18-2010_12-35-44
244242011	940249	1	axc2	1/18/2010	14:36:48	OM_1-18-2010_12-35-44
244242012	940249	1	axc2	1/18/2010	14:37:42	OM_1-18-2010_12-35-44
244242013	940249	1	axc2	1/18/2010	14:38:36	OM_1-18-2010_12-35-44
244242014	940249	1	axc2	1/18/2010	14:39:29	OM_1-18-2010_12-35-44
CCV		1	axc2	1/18/2010	14:40:21	OM_1-18-2010_12-35-44
CCB		1	axc2	1/18/2010	14:42:12	OM_1-18-2010_12-35-44

1202012065	940244	1	axc2	1/18/2010	14:44:01	OM_1-18-2010_12-35-44
1202012072	940244	25	axc2	1/18/2010	14:44:54	OM_1-18-2010_12-35-44
244139009	940244	1	axc2	1/18/2010	14:45:47	OM_1-18-2010_12-35-44
1202012066	940244	1	axc2	1/18/2010	14:46:40	OM_1-18-2010_12-35-44
1202012068	940244	1	axc2	1/18/2010	14:47:32	OM_1-18-2010_12-35-44
1202012070	940244	1	axc2	1/18/2010	14:48:25	OM_1-18-2010_12-35-44
244139010	940244	1	axc2	1/18/2010	14:49:18	OM_1-18-2010_12-35-44
1202012067	940244	1	axc2	1/18/2010	14:50:12	OM_1-18-2010_12-35-44
1202012069	940244	1	axc2	1/18/2010	14:51:07	OM_1-18-2010_12-35-44
1202012071	940244	1	axc2	1/18/2010	14:52:01	OM_1-18-2010_12-35-44
CCV		1	axc2	1/18/2010	14:52:53	OM_1-18-2010_12-35-44
CCB		1	axc2	1/18/2010	14:54:43	OM_1-18-2010_12-35-44
244139011	940244	1	axc2	1/18/2010	14:56:34	OM_1-18-2010_12-35-44
244139012	940244	1	axc2	1/18/2010	14:57:28	OM_1-18-2010_12-35-44
244227001	940244	1	axc2	1/18/2010	14:58:22	OM_1-18-2010_12-35-44
244227002	940244	1	axc2	1/18/2010	14:59:16	OM_1-18-2010_12-35-44
244227003	940244	1	axc2	1/18/2010	15:00:09	OM_1-18-2010_12-35-44
244227004	940244	1	axc2	1/18/2010	15:01:03	OM_1-18-2010_12-35-44
244227005	940244	1	axc2	1/18/2010	15:01:56	OM_1-18-2010_12-35-44
244227006	940244	1	axc2	1/18/2010	15:02:50	OM_1-18-2010_12-35-44
244227007	940244	1	axc2	1/18/2010	15:03:43	OM_1-18-2010_12-35-44
244227008	940244	1	axc2	1/18/2010	15:04:35	OM_1-18-2010_12-35-44
CCV		1	axc2	1/18/2010	15:05:28	OM_1-18-2010_12-35-44
CCB		1	axc2	1/18/2010	15:07:18	OM_1-18-2010_12-35-44
244227009	940244	1	axc2	1/18/2010	15:09:08	OM_1-18-2010_12-35-44
244227010	940244	1	axc2	1/18/2010	15:10:00	OM_1-18-2010_12-35-44
244227011	940244	1	axc2	1/18/2010	15:10:55	OM_1-18-2010_12-35-44
244227012	940244	1	axc2	1/18/2010	15:11:50	OM_1-18-2010_12-35-44
244227013	940244	1	axc2	1/18/2010	15:12:44	OM_1-18-2010_12-35-44
244227014	940244	1	axc2	1/18/2010	15:13:38	OM_1-18-2010_12-35-44
244227015	940244	1	axc2	1/18/2010	15:14:33	OM_1-18-2010_12-35-44
244228001	940244	1	axc2	1/18/2010	15:15:27	OM_1-18-2010_12-35-44
CCV		1	axc2	1/18/2010	15:16:19	OM_1-18-2010_12-35-44
CCB		1	axc2	1/18/2010	15:18:10	OM_1-18-2010_12-35-44

Author: axc2

Date : 1/19/2010

Original Run Filename: OM\_1-18-2010\_12-35-44.OMN created 1/18/2010 12:35:44  
 Original Run Author's Signature: [axc2]  
 Current Run Filename: OM\_1-18-2010\_12-35-44.OMN last modified 1/18/2010 15:19:15  
 Current Run Author's Signature: [axc2]  
 Description: GL-GC-E-102 EPA 420.4, 9066  
 LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE		Detection Time	ADF	MDF	Description
			Conc. (ug/L)	Area (Vs)				
WCN100118-01	1	S1	200	6.39	1/18/2010@12:39:03			200 ppb
WCN100118-02	1	S2	150	4.99	1/18/2010@12:39:55			150 ppb
WCN100118-03	1	S3	100	3.39	1/18/2010@12:40:48			100 ppb
WCN100118-04	1	S4	50.0	1.78	1/18/2010@12:41:40			50 ppb
WCN100118-05	1	S5	10.0	0.425	1/18/2010@12:42:34			10 ppb
WCN100118-06	1	S6	5.00	0.276	1/18/2010@12:43:27			CRDL 5.0 ppb
WCN100118-08	1	S7	0.00	0.0116	1/18/2010@12:44:21			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
Result:			0.99944 > 0.99500					
Message			Pass					
Action			Continue					
WCN100118-07	1	S8	156	5.09	1/18/2010@12:46:12			ICV
Known Conc:			150					
DQM Test: > + Percent Relative Difference								
Result:			3.7 < 10.0					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			3.7 < 10.0					
Message			ICV Passed					
Action			Continue					
WCN100118-08	1	S7	-3.54	-0.00105	1/18/2010@12:48:02			ICB/CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-3.54 < 5.01					
Message			ICB/CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-3.54 > -5.01					
Message			ICB/CCB Passed					
Action			Continue					
WCN100118-06	1	S6	4.85	0.267	1/18/2010@12:49:52			CRDL
Known Conc:			5.00					
DQM Test: > + Concentration Limit								
Result:			4.85 < 7.50					
Message			CRDL Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			4.85 > 2.50					
Message			Pass					
Action			None					
1202013064 940627 MB	1	1	-2.14	0.0438	1/18/2010@12:51:41			
1202013071 LCS	1	2	53.9	1.84	1/18/2010@12:52:35			
244226001	1	3	-2.70	0.0257	1/18/2010@12:53:28			
1202013065 DUP	1	4	-2.50	0.0320	1/18/2010@12:54:21			
1202013067 MS	1	5	99.5	3.30	1/18/2010@12:55:14			
1202013069 MSD	1	6	108	3.56	1/18/2010@12:56:07			
244226002	1	7	-2.72	0.0251	1/18/2010@12:57:00			
244236001	1	8	-2.86	0.0207	1/18/2010@12:57:52			
1202013066 DUP	1	9	-2.28	0.0393	1/18/2010@12:58:45			
1202013068 MS	1	10	105	3.46	1/18/2010@12:59:37			
WCN100118-03	1	S3	109	3.59	1/18/2010@13:00:29			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			8.8 < 10.0					
Message			CCV Passed					
Action			Continue					

DQM Test: < - Percent Relative Difference						
Result:		8.8 < 10.0				
Message		CCV Passed				
Action		Continue				
WCN100118-08	1	S7	-2.87	0.0203	1/18/2010@13:02:19	CCB
Known Conc:		0.00				
DQM Test: > + Concentration Limit						
Result:		-2.87 < 5.00				
Message		CCB Passed				
Action		Continue				
DQM Test: < - Concentration Limit						
Result:		-2.87 > -5.00				
Message		CCB Passed				
Action		Continue				
1202013070  MSD	1	11	105	3.49	1/18/2010@13:04:08	
244236004	1	12	-2.08	0.0457	1/18/2010@13:05:00	
244240002	1	13	-3.50	-8.65e-6	1/18/2010@13:05:51	
244243001	1	14	-3.66	-0.00508	1/18/2010@13:06:43	
244243002	1	15	-2.84	0.0212	1/18/2010@13:07:35	
244243003	1	16	-2.79	0.0230	1/18/2010@13:08:28	
244243004	1	17	-2.27	0.0396	1/18/2010@13:09:22	
244516001	1	18	-2.40	0.0353	1/18/2010@13:10:16	
244516002	1	19	-2.08	0.0457	1/18/2010@13:11:09	
244523001	1	20	-3.86	-0.0114	1/18/2010@13:12:02	
WCN100118-03	1	S3	109	3.60	1/18/2010@13:12:54	CCV
Known Conc:		100				
DQM Test: > + Percent Relative Difference						
Result:		9.0 < 10.0				
Message		CCV Passed				
Action		Continue				
DQM Test: < - Percent Relative Difference						
Result:		9.0 < 10.0				
Message		CCV Passed				
Action		Continue				
WCN100118-08	1	S7	-4.31	-0.0257	1/18/2010@13:14:44	CCB
Known Conc:		0.00				
DQM Test: > + Concentration Limit						
Result:		-4.31 < 5.00				
Message		CCB Passed				
Action		Continue				
DQM Test: < - Concentration Limit						
Result:		-4.31 > -5.00				
Message		CCB Passed				
Action		Continue				
244525001	1	21	-2.34	0.0371	1/18/2010@13:16:33	
244525003	1	22	-2.43	0.0342	1/18/2010@13:17:26	
244532001	1	23	7.91	0.365	1/18/2010@13:18:19	
244537001	1	24	-1.03	0.0790	1/18/2010@13:19:11	
244574001	1	25	-0.528	0.0952	1/18/2010@13:20:04	
244580001	1	26	-1.41	0.0669	1/18/2010@13:20:56	
244583001	1	27	10.8	0.459	1/18/2010@13:21:49	
244609005	1	28	328	10.6	1/18/2010@13:22:40	
1202016420 941969 MB	1	29	-1.71	0.0574	1/18/2010@13:23:32	
1202016427 LCS	1	30	27.2	0.982	1/18/2010@13:24:24	25.00
WCN100118-03	1	S3	109	3.59	1/18/2010@13:25:17	CCV
Known Conc:		100				
DQM Test: > + Percent Relative Difference						
Result:		8.6 < 10.0				
Message		CCV Passed				
Action		Continue				
DQM Test: < - Percent Relative Difference						
Result:		8.6 < 10.0				
Message		CCV Passed				
Action		Continue				
WCN100118-08	1	S7	-1.95	0.0499	1/18/2010@13:27:07	CCB
Known Conc:		0.00				
DQM Test: > + Concentration Limit						
Result:		-1.95 < 5.00				



		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.95 > -5.00					
		Message	CCB Passed					
		Action	Continue					
244622003	1	31	-1.57	0.0620	1/18/2010@13:28:58			
1202016421  DUP	1	32	-2.30	0.0384	1/18/2010@13:29:52			
1202016423  MS	1	33	102	3.36	1/18/2010@13:30:45			
1202016425  MSD	1	34	105	3.46	1/18/2010@13:31:38			
244622004	1	35	-2.58	0.0297	1/18/2010@13:32:31			
244622005	1	36	-2.62	0.0283	1/18/2010@13:33:24			
244622006	1	37	-2.32	0.0379	1/18/2010@13:34:17			
244622007	1	38	-2.27	0.0394	1/18/2010@13:35:10			
244622008	1	39	-1.49	0.0644	1/18/2010@13:36:04			
244768001	1	40	5.61	0.292	1/18/2010@13:36:56			
WCN100118-03	1	S3	108	3.58	1/18/2010@13:37:49			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	8.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	8.5 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100118-08	1	S7	-3.50	-1.72e-6	1/18/2010@13:39:38			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-3.50 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-3.50 > -5.00					
		Message	CCB Passed					
		Action	Continue					
244768002	1	41	-2.73	0.0249	1/18/2010@13:41:27			
244768003	1	42	-2.84	0.0214	1/18/2010@13:42:19			
244768004	1	43	-2.54	0.0309	1/18/2010@13:43:12			
244768005	1	44	-1.22	0.0731	1/18/2010@13:44:03			
244768006	1	45	-2.45	0.0337	1/18/2010@13:44:55			
244768007	1	46	-2.55	0.0307	1/18/2010@13:45:50			
244768008	1	47	-2.10	0.0449	1/18/2010@13:46:44			
244768009	1	48	-1.29	0.0708	1/18/2010@13:47:37			
244768010	1	49	-1.30	0.0706	1/18/2010@13:48:31			
244773001	1	50	-2.37	0.0364	1/18/2010@13:49:24			
WCN100118-03	1	S3	108	3.56	1/18/2010@13:50:17			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	7.8 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	7.8 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100118-08	1	S7	-3.12	0.0122	1/18/2010@13:52:07			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-3.12 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-3.12 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1202016422  DUP	1	51	-2.60	0.0290	1/18/2010@13:53:57			
1202016424  MS	1	52	93.1	3.09	1/18/2010@13:54:50			

1202016426  MSD	1	53	95.7	3.18	1/18/2010@13:55:43		
244773002	1	54	-2.43	0.0343	1/18/2010@13:56:36		
244773003	1	55	-1.87	0.0522	1/18/2010@13:57:28		
244773004	1	56	-2.08	0.0457	1/18/2010@13:58:21		
244609005 940627	1	28	60.8	2.06	1/18/2010@13:59:14	5.00	
1202017519 942453 MB	1	112	-2.32	0.0378	1/18/2010@14:00:07		
1202017520  LCS	1	113	-2.48	0.0329	1/18/2010@14:01:01		
1202017521  LCSD	1	114	-3.68	-0.00553	1/18/2010@14:01:56		
WCN100118-03	1	S3	107	3.55	1/18/2010@14:02:47		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			7.5 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			7.5 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100118-08	1	S7	-3.63	-0.00401	1/18/2010@14:04:37		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-3.63 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-3.63 > -5.00				
Message			CCB Passed				
Action			Continue				
244810001	1	115	162	5.31	1/18/2010@14:06:27		
1202012091 940249 MB	1	57	615	19.8	1/18/2010@14:07:21		
1202012098  LCS	1	58	-1.60	0.0610	1/18/2010@14:08:12	25.00	
244228002	1	59	0.0437	0.114	1/18/2010@14:09:04		
1202012096  MSD	1	60	90.3	3.00	1/18/2010@14:09:56		
1202012094  MS	1	61	83.7	2.79	1/18/2010@14:10:51		
1202012092  DUP	1	62	-0.800	0.0865	1/18/2010@14:11:45		
244228003	1	63	-2.62	0.0284	1/18/2010@14:12:39		
1202012093  DUP	1	64	-2.57	0.0299	1/18/2010@14:13:33		
1202012095  MS	1	65	96.3	3.19	1/18/2010@14:14:26		
WCN100118-03	1	S3	108	3.57	1/18/2010@14:15:18		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			8.2 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			8.2 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100118-08	1	S7	-3.71	-0.00665	1/18/2010@14:17:09		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-3.71 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-3.71 > -5.00				
Message			CCB Passed				
Action			Continue				
1202012091  MB	1	57	-3.73	-0.00710	1/18/2010@14:18:58		
1202012098  LCS	1	58	27.7	0.999	1/18/2010@14:19:51	25.00	
1202012097  MSD	1	66	99.3	3.29	1/18/2010@14:20:44		
244228004	1	67	-1.50	0.0642	1/18/2010@14:21:37		
244228005	1	68	-1.84	0.0532	1/18/2010@14:22:30		
244228006	1	69	-0.258	0.104	1/18/2010@14:23:23		
244242001	1	70	-2.38	0.0359	1/18/2010@14:24:17		
244242002	1	71	0.545	0.130	1/18/2010@14:25:09		
244242003	1	72	-2.36	0.0365	1/18/2010@14:26:02		
244242004	1	73	-2.40	0.0354	1/18/2010@14:26:54		

WCN100118-03	1	S3	107	3.54	1/18/2010@14:27:47		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			7.0 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			7.0 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100118-08	1	S7	-3.74	-0.00766	1/18/2010@14:29:37		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-3.74 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-3.74 > -5.00				
Message			CCB Passed				
Action			Continue				
244242005	1	74	-2.53	0.0310	1/18/2010@14:31:26		
244242006	1	75	-2.02	0.0476	1/18/2010@14:32:18		
244242007	1	76	-1.48	0.0646	1/18/2010@14:33:12		
244242008	1	77	-0.969	0.0811	1/18/2010@14:34:06		
244242009	1	78	1.92	0.173	1/18/2010@14:35:01		
244242010	1	79	-0.972	0.0810	1/18/2010@14:35:55		
244242011	1	80	2.46	0.191	1/18/2010@14:36:48		
244242012	1	81	-2.33	0.0374	1/18/2010@14:37:42		
244242013	1	82	-1.94	0.0501	1/18/2010@14:38:36		
244242014	1	83	-4.40	-0.0288	1/18/2010@14:39:29		
WCN100118-03	1	S3	105	3.48	1/18/2010@14:40:21		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			5.1 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			5.1 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100118-08	1	S7	-3.70	-0.00617	1/18/2010@14:42:12		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-3.70 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-3.70 > -5.00				
Message			CCB Passed				
Action			Continue				
1202012065 940244 MB	1	84	-1.88	0.0518	1/18/2010@14:44:01		
1202012072 LCS	1	85	28.4	1.02	1/18/2010@14:44:54	25.00	
244139009	1	86	-2.18	0.0422	1/18/2010@14:45:47		
1202012066 DUP	1	87	-1.68	0.0582	1/18/2010@14:46:40		
1202012068 MS	1	88	109	3.61	1/18/2010@14:47:32		
1202012070 MSD	1	89	92.7	3.08	1/18/2010@14:48:25		
244139010	1	90	-1.82	0.0540	1/18/2010@14:49:18		
1202012067 DUP	1	91	-2.24	0.0405	1/18/2010@14:50:12		
1202012069 MS	1	92	103	3.41	1/18/2010@14:51:07		
1202012071 MSD	1	93	111	3.67	1/18/2010@14:52:01		
WCN100118-03	1	S3	107	3.55	1/18/2010@14:52:53		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			7.4 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			7.4 < 10.0				

		Message	CCV Passed					
		Action	Continue					
WCN100118-08	1	S7	-3.08	0.0137	1/18/2010@14:54:43			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-3.08 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-3.08 > -5.00					
		Message	CCB Passed					
		Action	Continue					
		Calibration:	Table/Fig. 1					
244139011	1	94	-1.12	0.0764	1/18/2010@14:56:34			
244139012	1	95	-4.10	-0.0191	1/18/2010@14:57:28			
244227001	1	96	-2.47	0.0332	1/18/2010@14:58:22			
244227002	1	97	-2.52	0.0315	1/18/2010@14:59:16			
244227003	1	98	-3.51	-3.03e-4	1/18/2010@15:00:09			
244227004	1	99	-1.79	0.0547	1/18/2010@15:01:03			
244227005	1	100	-1.73	0.0568	1/18/2010@15:01:56			
244227006	1	101	-2.49	0.0323	1/18/2010@15:02:50			
244227007	1	102	9.40	0.413	1/18/2010@15:03:43			
244227008	1	103	-0.858	0.0847	1/18/2010@15:04:35			
WCN100118-03	1	S3	106	3.50	1/18/2010@15:05:28			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	5.8 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	5.8 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100118-08	1	S7	-2.72	0.0249	1/18/2010@15:07:18			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-2.72 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-2.72 > -5.00					
		Message	CCB Passed					
		Action	Continue					
244227009	1	104	-0.336	0.101	1/18/2010@15:09:08			
244227010	1	105	-2.18	0.0424	1/18/2010@15:10:00			
244227011	1	106	-1.74	0.0564	1/18/2010@15:10:55			
244227012	1	107	-2.46	0.0332	1/18/2010@15:11:50			
244227013	1	108	-1.71	0.0574	1/18/2010@15:12:44			
244227014	1	109	-2.04	0.0468	1/18/2010@15:13:38			
244227015	1	110	-0.817	0.0860	1/18/2010@15:14:33			
244228001	1	111	-3.51	-3.21e-4	1/18/2010@15:15:27			
WCN100118-03	1	S3	105	3.48	1/18/2010@15:16:19			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	5.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	5.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100118-08	1	S7	-3.64	-0.00439	1/18/2010@15:18:10			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-3.64 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								

Result:	-3.64 > -5.00			
Message	CCB Passed			
Action	Continue			

Analyte Properties Table for OM\_1-18-2010\_12-35-44.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/l
Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

### Channel 1: Current View

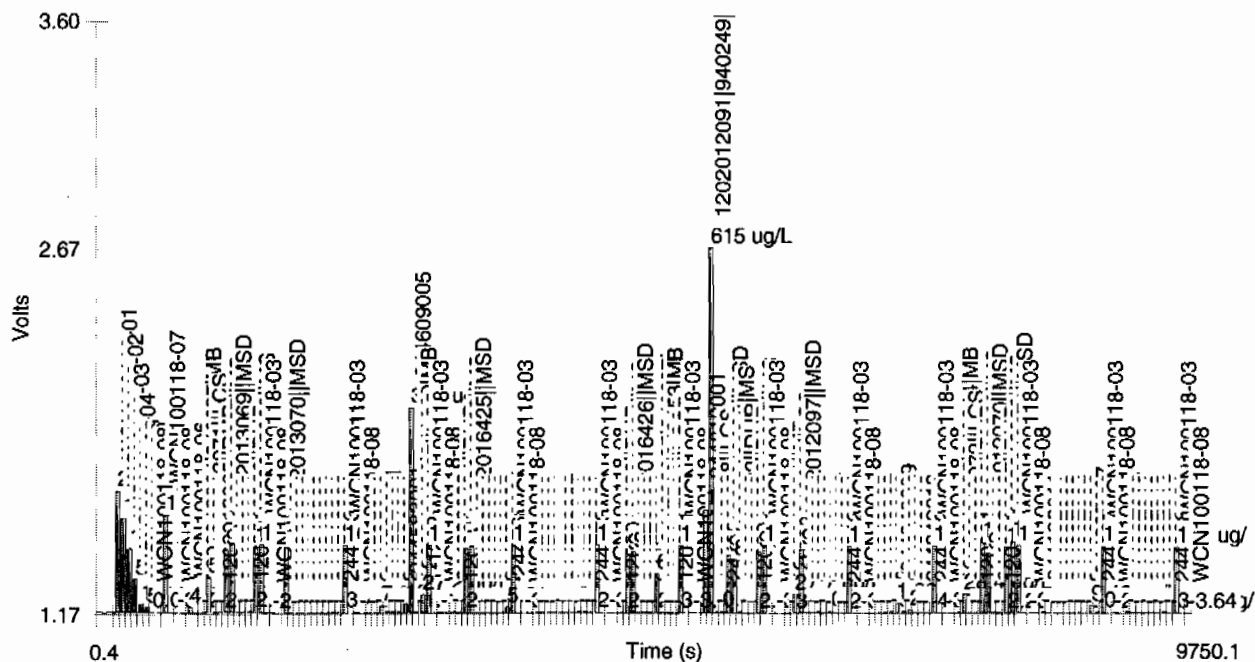
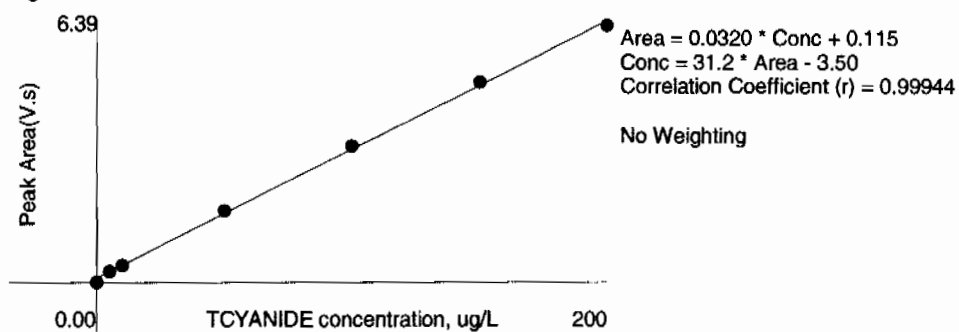


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	6.39	0.494	1.8	1/18/2010	12:40:06
2	150	1	4.99	0.384	-1.7	1/18/2010	12:40:58
3	100	1	3.39	0.261	-2.5	1/18/2010	12:41:50
4	50.0	1	1.78	0.137	-3.8	1/18/2010	12:42:43
5	10.0	1	0.425	0.0315	2.3	1/18/2010	12:43:37
6	5.00	1	0.276	0.0199	-0.6	1/18/2010	12:44:30
7	0.00	1	0.0116	3.98e-4		1/18/2010	12:45:24

Figure 1: TCYANIDE



This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axc2	1/18/2010 15:20:51	OM_1-18-2010_15-20-05
CCB		1	axc2	1/18/2010 15:22:41	OM_1-18-2010_15-20-05
1202017527	942457	1	axc2	1/18/2010 15:24:30	OM_1-18-2010_15-20-05
1202017534	942457	25	axc2	1/18/2010 15:25:24	OM_1-18-2010_15-20-05
244721009	942457	1	axc2	1/18/2010 15:26:17	OM_1-18-2010_15-20-05
244721010	942457	1	axc2	1/18/2010 15:27:10	OM_1-18-2010_15-20-05
244721011	942457	1	axc2	1/18/2010 15:28:03	OM_1-18-2010_15-20-05
244721012	942457	1	axc2	1/18/2010 15:28:56	OM_1-18-2010_15-20-05
244721013*	942457	1	axc2	1/18/2010 15:29:48	OM_1-18-2010_15-20-05
244810001	942457	1	axc2	1/18/2010 15:30:41	OM_1-18-2010_15-20-05
244847001	942457	1	axc2	1/18/2010 15:31:33	OM_1-18-2010_15-20-05
1202017528	942457	1	axc2	1/18/2010 15:32:26	OM_1-18-2010_15-20-05
CCV		1	axc2	1/18/2010 15:33:18	OM_1-18-2010_15-20-05
CCB		1	axc2	1/18/2010 15:35:09	OM_1-18-2010_15-20-05

Author: axc2

Date : 1/18/2010

Original Run Filename: OM\_1-18-2010\_15-20-05.OMN created 1/18/2010 15:20:05  
 Original Run Author's Signature: [axc2]  
 Current Run Filename: OM\_1-18-2010\_15-20-05.OMN last modified 1/18/2010 15:37:53  
 Current Run Author's Signature: [axc2]  
 Description: GL-GC-E-102 EPA 420.4, 9066  
 LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE		Detection Time	ADF	MDF	Description
			Conc. (ug/L)	Area (Vs)				
WCN100118-03	1	S3	105	3.46	1/18/2010@15:20:51			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			4.5 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			4.5 < 10.0					
Message			CCV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN100118-08	1	S7	-3.73	-0.00723	1/18/2010@15:22:41			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-3.73 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-3.73 > -5.00					
Message			CCB Passed					
Action			Continue					
1202017527 942457 MB	1	1	-3.72	-0.00685	1/18/2010@15:24:30			
1202017534  LCS	1	2	28.6	1.03	1/18/2010@15:25:24		25.00	
244721009	1	3	0.955	0.143	1/18/2010@15:26:17			
244721010	1	4	-1.79	0.0548	1/18/2010@15:27:10			
244721011	1	5	-1.45	0.0658	1/18/2010@15:28:03			
244721012	1	6	-2.08	0.0456	1/18/2010@15:28:56			
244721013	1	7	11.8	0.490	1/18/2010@15:29:48			
244810001	1	8	148	4.86	1/18/2010@15:30:41			
244847001	1	9	-1.68	0.0584	1/18/2010@15:31:33			
1202017528  DUP	1	10	1.56	0.162	1/18/2010@15:32:26			
WCN100118-03	1	S3	107	3.53	1/18/2010@15:33:18			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			6.7 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			6.7 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100118-08	1	S7	-3.64	-0.00431	1/18/2010@15:35:09			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-3.64 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-3.64 > -5.00					
Message			CCB Passed					
Action			Continue					

Analyte Properties Table for OM\_1-18-2010\_15-20-05.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L



Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View

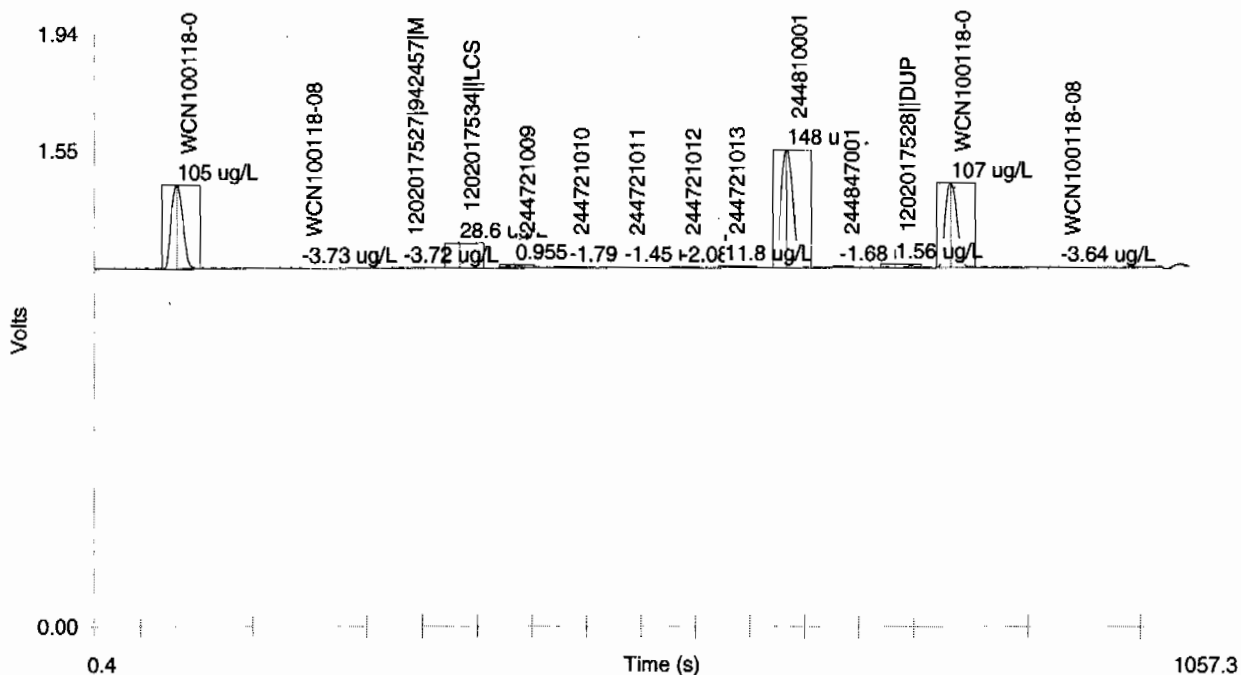
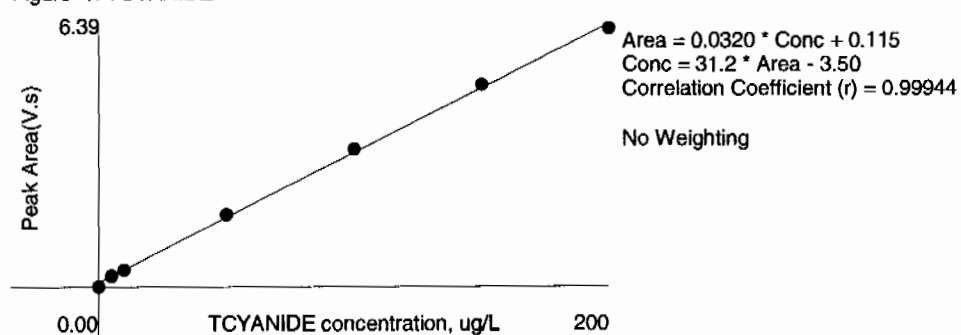


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	6.39	0.494	1.8	1/18/2010	12:40:06
2	150	1	4.99	0.384	-1.7	1/18/2010	12:40:58
3	100	1	3.39	0.261	-2.5	1/18/2010	12:41:50
4	50.0	1	1.78	0.137	-3.8	1/18/2010	12:42:43
5	10.0	1	0.425	0.0315	2.3	1/18/2010	12:43:37
6	5.00	1	0.276	0.0199	-0.6	1/18/2010	12:44:30
7	0.00	1	0.0116	3.98e-4		1/18/2010	12:45:24

Figure 1: TCYANIDE



This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
CCV		1	axc2	1/18/2010 15:48:49	OM_1-18-2010_15-47-18
CCB		1	axc2	1/18/2010 15:50:40	OM_1-18-2010_15-47-18
244721013	942457	1	axc2	1/18/2010 15:52:28	OM_1-18-2010_15-47-18
1202017530	942457	1	axc2	1/18/2010 15:53:21	OM_1-18-2010_15-47-18
1202017532	942457	1	axc2	1/18/2010 15:54:13	OM_1-18-2010_15-47-18
244847002	942457	1	axc2	1/18/2010 15:55:04	OM_1-18-2010_15-47-18
1202017529	942457	1	axc2	1/18/2010 15:55:56	OM_1-18-2010_15-47-18
1202017531	942457	1	axc2	1/18/2010 15:56:48	OM_1-18-2010_15-47-18
1202017533	942457	1	axc2	1/18/2010 15:57:41	OM_1-18-2010_15-47-18
244847003	942457	1	axc2	1/18/2010 15:58:35	OM_1-18-2010_15-47-18
244847004	942457	1	axc2	1/18/2010 15:59:29	OM_1-18-2010_15-47-18
244852001	942457	1	axc2	1/18/2010 16:00:22	OM_1-18-2010_15-47-18
CCV		1	axc2	1/18/2010 16:01:14	OM_1-18-2010_15-47-18
CCB		1	axc2	1/18/2010 16:03:05	OM_1-18-2010_15-47-18
244852002	942457	1	axc2	1/18/2010 16:04:54	OM_1-18-2010_15-47-18
244852003	942457	1	axc2	1/18/2010 16:05:47	OM_1-18-2010_15-47-18
244852004	942457	1	axc2	1/18/2010 16:06:40	OM_1-18-2010_15-47-18
244881001	942457	1	axc2	1/18/2010 16:07:33	OM_1-18-2010_15-47-18
244881002	942457	1	axc2	1/18/2010 16:08:25	OM_1-18-2010_15-47-18
244881003	942457	1	axc2	1/18/2010 16:09:18	OM_1-18-2010_15-47-18
244881004	942457	1	axc2	1/18/2010 16:10:11	OM_1-18-2010_15-47-18
244921001	942457	1	axc2	1/18/2010 16:11:03	OM_1-18-2010_15-47-18
244921002	942457	1	axc2	1/18/2010 16:11:55	OM_1-18-2010_15-47-18
1202015123	941495	1	axc2	1/18/2010 16:12:47	OM_1-18-2010_15-47-18
CCV		1	axc2	1/18/2010 16:13:39	OM_1-18-2010_15-47-18
CCB		1	axc2	1/18/2010 16:15:30	OM_1-18-2010_15-47-18
1202015125	941495	1	axc2	1/18/2010 16:17:17	OM_1-18-2010_15-47-18
244447003	941495	1	axc2	1/18/2010 16:18:11	OM_1-18-2010_15-47-18
1202015124	941495	1	axc2	1/18/2010 16:19:06	OM_1-18-2010_15-47-18
244580001	941495	1	axc2	1/18/2010 16:19:59	OM_1-18-2010_15-47-18
CCV		1	axc2	1/18/2010 16:20:52	OM_1-18-2010_15-47-18
CCB		1	axc2	1/18/2010 16:22:42	OM_1-18-2010_15-47-18

Author: axc2

Date : 1/18/2010

Original Run Filename: OM\_1-18-2010\_15-47-18.OMN created 1/18/2010 15:47:18  
 Original Run Author's Signature: [axc2]  
 Current Run Filename: OM\_1-18-2010\_15-47-18.OMN last modified 1/18/2010 16:23:46  
 Current Run Author's Signature: [axc2]  
 Description: GL-GC-E-102 EPA 420.4, 9066  
 LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1		Detection Time	ADF	MDF	Description
			TCYANIDE	Area (Vs)				
WCN100118-03	1	S3	102	3.38	1/18/2010@15:48:49			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			2.0 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			2.0 < 10.0					
Message			CCV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN100118-08	1	S7	-3.50	-4.33e-5	1/18/2010@15:50:40			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-3.50 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-3.50 > -5.00					
Message			CCB Passed					
Action			Continue					
244721013	1	7	-0.687	0.0901	1/18/2010@15:52:28			
1202017530  MS	1	11	91.8	3.05	1/18/2010@15:53:21			
1202017532  MSD	1	12	88.6	2.95	1/18/2010@15:54:13			
244847002	1	13	-0.466	0.0972	1/18/2010@15:55:04			
1202017529  DUP	1	14	-0.415	0.0988	1/18/2010@15:55:56			
1202017531  MS	1	15	87.1	2.90	1/18/2010@15:56:48			
1202017533  MSD	1	16	82.9	2.77	1/18/2010@15:57:41			
244847003	1	17	-0.641	0.0916	1/18/2010@15:58:35			
244847004	1	18	-1.31	0.0702	1/18/2010@15:59:29			
244852001	1	19	-1.17	0.0745	1/18/2010@16:00:22			
WCN100118-03	1	S3	102	3.39	1/18/2010@16:01:14			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			2.5 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			2.5 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100118-08	1	S7	-3.61	-0.00342	1/18/2010@16:03:05			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-3.61 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-3.61 > -5.00					
Message			CCB Passed					
Action			Continue					
244852002	1	20	1.27	0.153	1/18/2010@16:04:54			
244852003	1	21	-0.425	0.0985	1/18/2010@16:05:47			
244852004	1	22	1.35	0.155	1/18/2010@16:06:40			
244881001	1	23	-0.769	0.0875	1/18/2010@16:07:33			
244881002	1	24	-1.07	0.0778	1/18/2010@16:08:25			
244881003	1	25	-0.237	0.105	1/18/2010@16:09:18			

244881004	1	26	-0.741	0.0884	1/18/2010@16:10:11		
244921001	1	27	-0.433	0.0982	1/18/2010@16:11:03		
244921002	1	28	3.85	0.235	1/18/2010@16:11:55		
1202015123 941495 MB	1	29	-2.04	0.0469	1/18/2010@16:12:47		
WCN100118-03	1	S3	103	3.41	1/18/2010@16:13:39		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			3.1 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			3.1 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100118-08	1	S7	2.41	0.189	1/18/2010@16:15:30		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			2.41 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			2.41 > -5.00				
Message			CCB Passed				
Action			Continue				
1202015125 LCS	1	30	-0.207	0.105	1/18/2010@16:17:17		
244447003	1	31	-2.15	0.0434	1/18/2010@16:18:11		
1202015124 DUP	1	32	-0.178	0.106	1/18/2010@16:19:06		
244580001	1	33	-2.04	0.0470	1/18/2010@16:19:59		
WCN100118-03	1	S3	95.9	3.18	1/18/2010@16:20:52		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			-4.1 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			-4.1 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100118-08	1	S7	0.552	0.130	1/18/2010@16:22:42		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			0.552 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			0.552 > -5.00				
Message			CCB Passed				
Action			Continue				

Analyte Properties Table for OM\_1-18-2010\_15-47-18.OMN

Property	Channel 1
Concentration Units	TCYANIDE
Calibration Fit Type	ug/L
Clear Calibration	First Order
Force Through Zero	True
Calibration Weighting	False
Auto Dilution Trigger	None
% of High Standard	True
Quik Chem Method	100
Chemistry	10-204-00-1-A
Calibration by Height	Direct/Bipolar
Inject to Peak Start	False
Peak Base Width	22
	39

## Channel 1: Current View

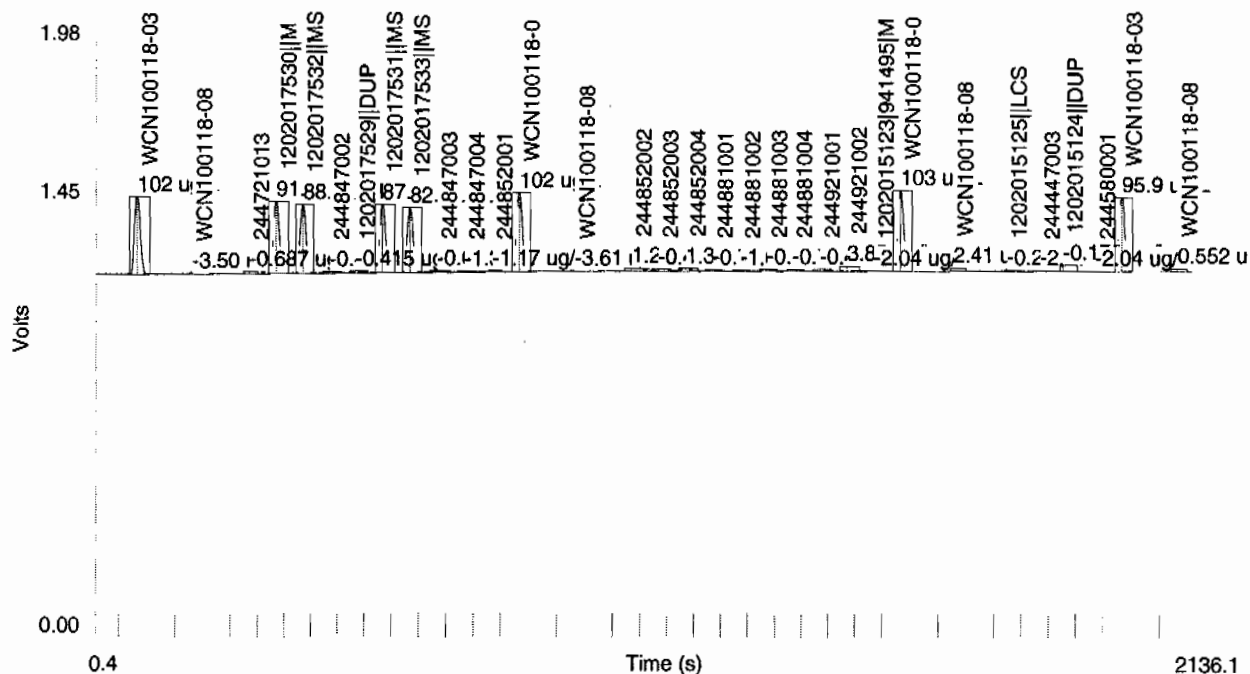
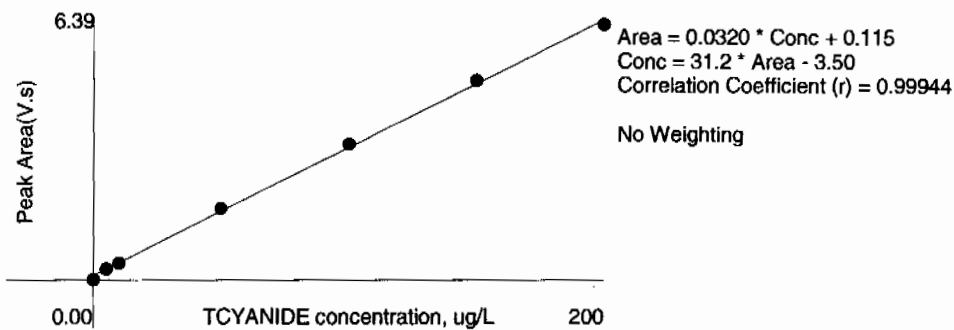


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	6.39	0.494	1.8	1/18/2010	12:40:06
2	150	1	4.99	0.384	-1.7	1/18/2010	12:40:58
3	100	1	3.39	0.261	-2.5	1/18/2010	12:41:50
4	50.0	1	1.78	0.137	-3.8	1/18/2010	12:42:43
5	10.0	1	0.425	0.0315	2.3	1/18/2010	12:43:37
6	5.00	1	0.276	0.0199	-0.6	1/18/2010	12:44:30
7	0.00	1	0.0116	3.98e-4		1/18/2010	12:45:24

Figure 1: TCYANIDE



This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	1/25/2010 11:49:12	OM_1-25-2010_11-47-41
150 ppb		1	axc2	1/25/2010 11:50:04	OM_1-25-2010_11-47-41
100 ppb		1	axc2	1/25/2010 11:50:56	OM_1-25-2010_11-47-41
50 ppb		1	axc2	1/25/2010 11:51:49	OM_1-25-2010_11-47-41
10 ppb		1	axc2	1/25/2010 11:52:42	OM_1-25-2010_11-47-41
CRDL 5.0 ppb		1	axc2	1/25/2010 11:53:36	OM_1-25-2010_11-47-41
ICAL-00		1	axc2	1/25/2010 11:54:30	OM_1-25-2010_11-47-41
ICV		1	axc2	1/25/2010 11:56:21	OM_1-25-2010_11-47-41
ICB		1	axc2	1/25/2010 11:58:11	OM_1-25-2010_11-47-41
CRDL		1	axc2	1/25/2010 12:00:00	OM_1-25-2010_11-47-41
1202017543	942461	1	axc2	1/25/2010 12:01:50	OM_1-25-2010_11-47-41
1202017550	942461	25	axc2	1/25/2010 12:02:44	OM_1-25-2010_11-47-41
244828001	942461	1	axc2	1/25/2010 12:03:37	OM_1-25-2010_11-47-41
244828002	942461	1	axc2	1/25/2010 12:04:30	OM_1-25-2010_11-47-41
244828003	942461	1	axc2	1/25/2010 12:05:23	OM_1-25-2010_11-47-41
244828004	942461	1	axc2	1/25/2010 12:06:16	OM_1-25-2010_11-47-41
244828005	942461	1	axc2	1/25/2010 12:07:08	OM_1-25-2010_11-47-41
244828006	942461	1	axc2	1/25/2010 12:08:01	OM_1-25-2010_11-47-41
244828007	942461	1	axc2	1/25/2010 12:08:53	OM_1-25-2010_11-47-41
244828008	942461	1	axc2	1/25/2010 12:09:45	OM_1-25-2010_11-47-41
CCV		1	axc2	1/25/2010 12:10:38	OM_1-25-2010_11-47-41
CCB		1	axc2	1/25/2010 12:12:28	OM_1-25-2010_11-47-41
244828009	942461	1	axc2	1/25/2010 12:14:17	OM_1-25-2010_11-47-41
244828010	942461	1	axc2	1/25/2010 12:15:08	OM_1-25-2010_11-47-41
244842001	942461	1	axc2	1/25/2010 12:16:00	OM_1-25-2010_11-47-41
244842002	942461	1	axc2	1/25/2010 12:16:52	OM_1-25-2010_11-47-41
244921003	942461	1	axc2	1/25/2010 12:17:43	OM_1-25-2010_11-47-41
1202017544	942461	1	axc2	1/25/2010 12:18:37	OM_1-25-2010_11-47-41
1202017546	942461	1	axc2	1/25/2010 12:19:30	OM_1-25-2010_11-47-41
1202017548	942461	1	axc2	1/25/2010 12:20:24	OM_1-25-2010_11-47-41
244921004	942461	1	axc2	1/25/2010 12:21:17	OM_1-25-2010_11-47-41
1202017545	942461	1	axc2	1/25/2010 12:22:11	OM_1-25-2010_11-47-41
CCV		1	axc2	1/25/2010 12:23:03	OM_1-25-2010_11-47-41
CCB		1	axc2	1/25/2010 12:24:54	OM_1-25-2010_11-47-41
1202017547	942461	1	axc2	1/25/2010 12:26:43	OM_1-25-2010_11-47-41
1202017549	942461	1	axc2	1/25/2010 12:27:36	OM_1-25-2010_11-47-41
244921005	942461	1	axc2	1/25/2010 12:28:29	OM_1-25-2010_11-47-41
244921006	942461	1	axc2	1/25/2010 12:29:21	OM_1-25-2010_11-47-41
244921007	942461	1	axc2	1/25/2010 12:30:14	OM_1-25-2010_11-47-41
244921008	942461	1	axc2	1/25/2010 12:31:06	OM_1-25-2010_11-47-41
244921009	942461	1	axc2	1/25/2010 12:31:58	OM_1-25-2010_11-47-41
244921010	942461	1	axc2	1/25/2010 12:32:50	OM_1-25-2010_11-47-41
1202017551	942464	1	axc2	1/25/2010 12:33:42	OM_1-25-2010_11-47-41
1202017558	942464	25	axc2	1/25/2010 12:34:34	OM_1-25-2010_11-47-41
CCV		1	axc2	1/25/2010 12:35:26	OM_1-25-2010_11-47-41
CCB		1	axc2	1/25/2010 12:37:16	OM_1-25-2010_11-47-41
244842003	942464	1	axc2	1/25/2010 12:39:07	OM_1-25-2010_11-47-41
1202017552	942464	1	axc2	1/25/2010 12:40:00	OM_1-25-2010_11-47-41
1202017554	942464	1	axc2	1/25/2010 12:40:54	OM_1-25-2010_11-47-41
1202017556	942464	1	axc2	1/25/2010 12:41:47	OM_1-25-2010_11-47-41
244842004	942464	1	axc2	1/25/2010 12:42:40	OM_1-25-2010_11-47-41
1202017553	942464	1	axc2	1/25/2010 12:43:33	OM_1-25-2010_11-47-41
1202017555	942464	1	axc2	1/25/2010 12:44:27	OM_1-25-2010_11-47-41
1202017557	942464	1	axc2	1/25/2010 12:45:20	OM_1-25-2010_11-47-41
244842005	942464	1	axc2	1/25/2010 12:46:12	OM_1-25-2010_11-47-41
244842006	942464	1	axc2	1/25/2010 12:47:06	OM_1-25-2010_11-47-41
CCV		1	axc2	1/25/2010 12:47:57	OM_1-25-2010_11-47-41
CCB		1	axc2	1/25/2010 12:49:48	OM_1-25-2010_11-47-41

244899001	942464	1	axc2	1/25/2010	12:51:37	OM_1-25-2010_11-47-41
244899002	942464	1	axc2	1/25/2010	12:52:29	OM_1-25-2010_11-47-41
244899003	942464	1	axc2	1/25/2010	12:53:21	OM_1-25-2010_11-47-41
244899004	942464	1	axc2	1/25/2010	12:54:13	OM_1-25-2010_11-47-41
244899005	942464	1	axc2	1/25/2010	12:55:05	OM_1-25-2010_11-47-41
244899006*	942464	1	axc2	1/25/2010	12:56:00	OM_1-25-2010_11-47-41
244899007	942464	1	axc2	1/25/2010	12:56:54	OM_1-25-2010_11-47-41
244899008	942464	1	axc2	1/25/2010	12:57:47	OM_1-25-2010_11-47-41
244899009	942464	1	axc2	1/25/2010	12:58:41	OM_1-25-2010_11-47-41
244899010	942464	1	axc2	1/25/2010	12:59:34	OM_1-25-2010_11-47-41
CCV		1	axc2	1/25/2010	13:00:27	OM_1-25-2010_11-47-41
CCB		1	axc2	1/25/2010	13:02:18	OM_1-25-2010_11-47-41
244899006	942464	1	axc2	1/25/2010	13:04:09	OM_1-25-2010_11-47-41
244899011	942464	1	axc2	1/25/2010	13:05:02	OM_1-25-2010_11-47-41
244899012	942464	1	axc2	1/25/2010	13:05:56	OM_1-25-2010_11-47-41
244899013	942464	1	axc2	1/25/2010	13:06:48	OM_1-25-2010_11-47-41
244899014	942464	1	axc2	1/25/2010	13:07:41	OM_1-25-2010_11-47-41
244899015	942464	1	axc2	1/25/2010	13:08:34	OM_1-25-2010_11-47-41
244899016	942464	1	axc2	1/25/2010	13:09:27	OM_1-25-2010_11-47-41
CCV		1	axc2	1/25/2010	13:10:19	OM_1-25-2010_11-47-41
CCB		1	axc2	1/25/2010	13:12:10	OM_1-25-2010_11-47-41



Original Run Filename: OM\_1-25-2010\_11-47-41.OMN created 1/25/2010 11:47:41  
 Original Run Author's Signature: [axc2]  
 Current Run Filename: OM\_1-25-2010\_11-47-41.OMN last modified 1/25/2010 13:13:15  
 Current Run Author's Signature: [axc2]  
 Description: GL-GC-E-102 EPA 420.4, 9066  
 LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE		Detection Time	ADF	MDF	Description
			Conc. (ug/L)	Area (Vs)				
WCN100125-01	1	S1	200	9.10	1/25/2010@11:49:12			200 ppb
WCN100125-02	1	S2	150	6.90	1/25/2010@11:50:04			150 ppb
WCN100125-03	1	S3	100	4.67	1/25/2010@11:50:56			100 ppb
WCN100125-04	1	S4	50.0	2.43	1/25/2010@11:51:49			50 ppb
WCN100125-05	1	S5	10.0	0.539	1/25/2010@11:52:42			10 ppb
WCN100125-06	1	S6	5.00	0.326	1/25/2010@11:53:36			CRDL 5.0 ppb
WCN100125-08	1	S7	0.00	0.0186	1/25/2010@11:54:30			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
Result:			0.99990 > 0.99500					
Message			Pass					
Action			Continue					
WCN100125-07	1	S8	140	6.46	1/25/2010@11:56:21			ICV
Known Conc:			150					
DQM Test: > + Percent Relative Difference								
Result:			-6.4 < 10.0					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-6.4 < 10.0					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN100125-08	1	S7	-1.19	0.0395	1/25/2010@11:58:11			ICB/CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.19 < 5.01					
Message			ICB/CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.19 > -5.01					
Message			ICB/CCB Passed					
Action			Continue					
WCN100125-06	1	S6	5.46	0.341	1/25/2010@12:00:00			CRDL
Known Conc:			5.00					
DQM Test: > + Concentration Limit								
Result:			5.46 < 7.50					
Message			CRDL Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			5.46 > 2.50					
Message			Pass					
Action			None					
1202017543 942461 MB	1	1	-2.37	-0.0139	1/25/2010@12:01:50			
1202017550 LCS	1	2	31.9	1.54	1/25/2010@12:02:44		25.00	
244828001	1	3	0.659	0.124	1/25/2010@12:03:37			
244828002	1	4	0.591	0.120	1/25/2010@12:04:30			
244828003	1	5	-0.213	0.0840	1/25/2010@12:05:23			
244828004	1	6	-2.09	-9.69e-4	1/25/2010@12:06:16			
244828005	1	7	3.48	0.251	1/25/2010@12:07:08			
244828006	1	8	-0.165	0.0861	1/25/2010@12:08:01			
244828007	1	9	-0.220	0.0837	1/25/2010@12:08:53			
244828008	1	10	0.218	0.103	1/25/2010@12:09:45			
WCN100125-03	1	S3	93.6	4.33	1/25/2010@12:10:38			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			-6.4 < 10.0					
Message			CCV Passed					

		Action	Continue				
		DQM Test: < - Percent Relative Difference					
		Result:	-6.4 < 10.0				
		Message	CCV Passed				
		Action	Continue				
WCN100125-08	1	S7	-1.17	0.0408	1/25/2010@12:12:28		CCB
		Known Conc:	0.00				
		DQM Test: > + Concentration Limit					
		Result:	-1.17 > 5.00				
		Message	CCB Passed				
		Action	Continue				
		DQM Test: < - Concentration Limit					
		Result:	-1.17 > -5.00				
		Message	CCB Passed				
		Action	Continue				
244828009	1	11	-0.560	0.0683	1/25/2010@12:14:17		
244828010	1	12	-0.576	0.0675	1/25/2010@12:15:08		
244842001	1	13	-0.884	0.0536	1/25/2010@12:16:00		
244842002	1	14	2.23	0.195	1/25/2010@12:16:52		
244921003	1	15	-0.872	0.0541	1/25/2010@12:17:43		
1202017544  DUP	1	16	-0.656	0.0639	1/25/2010@12:18:37		
1202017546  MS	1	17	84.0	3.90	1/25/2010@12:19:30		
1202017548  MSD	1	18	86.1	3.99	1/25/2010@12:20:24		
244921004	1	19	-0.440	0.0737	1/25/2010@12:21:17		
1202017545  DUP	1	20	0.154	0.101	1/25/2010@12:22:11		
WCN100125-03	1	S3	94.4	4.37	1/25/2010@12:23:03		CCV
		Known Conc:	100				
		DQM Test: > + Percent Relative Difference					
		Result:	-5.6 < 10.0				
		Message	CCV Passed				
		Action	Continue				
		DQM Test: < - Percent Relative Difference					
		Result:	-5.6 < 10.0				
		Message	CCV Passed				
		Action	Continue				
WCN100125-08	1	S7	-2.07	-1.50e-4	1/25/2010@12:24:54		CCB
		Known Conc:	0.00				
		DQM Test: > + Concentration Limit					
		Result:	-2.07 > 5.00				
		Message	CCB Passed				
		Action	Continue				
		DQM Test: < - Concentration Limit					
		Result:	-2.07 > -5.00				
		Message	CCB Passed				
		Action	Continue				
1202017547  MS	1	21	70.0	3.26	1/25/2010@12:26:43		
1202017549  MSD	1	22	69.4	3.24	1/25/2010@12:27:36		
244921005	1	23	4.86	0.314	1/25/2010@12:28:29		
244921006	1	24	-0.709	0.0615	1/25/2010@12:29:21		
244921007	1	25	-0.888	0.0534	1/25/2010@12:30:14		
244921008	1	26	5.48	0.342	1/25/2010@12:31:06		
244921009	1	27	-0.927	0.0516	1/25/2010@12:31:58		
244921010	1	28	-1.10	0.0439	1/25/2010@12:32:50		
1202017551 942464 MB	1	29	-0.900	0.0529	1/25/2010@12:33:42		
1202017558  LCS	1	30	35.5	1.70	1/25/2010@12:34:34	25.00	
WCN100125-03	1	S3	94.1	4.36	1/25/2010@12:35:26		CCV
		Known Conc:	100				
		DQM Test: > + Percent Relative Difference					
		Result:	-5.9 < 10.0				
		Message	CCV Passed				
		Action	Continue				
		DQM Test: < - Percent Relative Difference					
		Result:	-5.9 < 10.0				
		Message	CCV Passed				
		Action	Continue				
WCN100125-08	1	S7	-1.41	0.0296	1/25/2010@12:37:16		CCB
		Known Conc:	0.00				
		DQM Test: > + Concentration Limit					

				Result:	-1.41 < 5.00				
				Message	CCB Passed				
				Action	Continue				
				DQM Test: < - Concentration Limit					
				Result:	-1.41 > -5.00				
				Message	CCB Passed				
				Action	Continue				
244842003	1	31			7.32	0.425	1/25/2010@12:39:07		
1202017552	DUP	1	32		5.68	0.351	1/25/2010@12:40:00		
1202017554	MS	1	33		95.8	4.44	1/25/2010@12:40:54		
1202017556	MSD	1	34		82.5	3.83	1/25/2010@12:41:47		
244842004		1	35		0.534	0.118	1/25/2010@12:42:40		
1202017553	DUP	1	36		-0.949	0.0506	1/25/2010@12:43:33		
1202017555	MS	1	37		84.4	3.92	1/25/2010@12:44:27		
1202017557	MSD	1	38		87.4	4.05	1/25/2010@12:45:20		
244842005		1	39		-0.296	0.0802	1/25/2010@12:46:12		
244842006		1	40		4.76	0.309	1/25/2010@12:47:06		
WCN100125-03		1	S3		95.0	4.40	1/25/2010@12:47:57		CCV
				Known Conc:	100				
				DQM Test: > + Percent Relative Difference					
				Result:	-5.0 < 10.0				
				Message	CCV Passed				
				Action	Continue				
				DQM Test: < - Percent Relative Difference					
				Result:	-5.0 < 10.0				
				Message	CCV Passed				
				Action	Continue				
WCN100125-08		1	S7		-1.69	0.0170	1/25/2010@12:49:48		CCB
				Known Conc:	0.00				
				DQM Test: > + Concentration Limit					
				Result:	-1.69 < 5.00				
				Message	CCB Passed				
				Action	Continue				
				DQM Test: < - Concentration Limit					
				Result:	-1.69 > -5.00				
				Message	CCB Passed				
				Action	Continue				
244899001		1	41		-0.401	0.0755	1/25/2010@12:51:37		
244899002		1	42		3.22	0.240	1/25/2010@12:52:29		
244899003		1	43		-0.975	0.0495	1/25/2010@12:53:21		
244899004		1	44		-0.978	0.0493	1/25/2010@12:54:13		
244899005		1	45		2.41	0.203	1/25/2010@12:55:05		
244899006		1	46		7.25	0.422	1/25/2010@12:56:00		
244899007		1	47		-1.62	0.0202	1/25/2010@12:56:54		
244899008		1	48		-0.652	0.0641	1/25/2010@12:57:47		
244899009		1	49		-0.679	0.0629	1/25/2010@12:58:41		
244899010		1	50		-1.35	0.0323	1/25/2010@12:59:34		
WCN100125-03		1	S3		94.0	4.35	1/25/2010@13:00:27		CCV
				Known Conc:	100				
				DQM Test: > + Percent Relative Difference					
				Result:	-6.0 < 10.0				
				Message	CCV Passed				
				Action	Continue				
				DQM Test: < - Percent Relative Difference					
				Result:	-6.0 < 10.0				
				Message	CCV Passed				
				Action	Continue				
WCN100125-08		1	S7		-1.86	0.00953	1/25/2010@13:02:18		CCB
				Known Conc:	0.00				
				DQM Test: > + Concentration Limit					
				Result:	-1.86 < 5.00				
				Message	CCB Passed				
				Action	Continue				
				DQM Test: < - Concentration Limit					
				Result:	-1.86 > -5.00				
				Message	CCB Passed				
				Action	Continue				
244899006		1	46		-1.29	0.0350	1/25/2010@13:04:09		

244899011	1	51	-1.13	0.0423	1/25/2010@13:05:02		
244899012	1	52	-1.19	0.0395	1/25/2010@13:05:56		
244899013	1	53	4.52	0.298	1/25/2010@13:06:48		
244899014	1	54	-1.29	0.0352	1/25/2010@13:07:41		
244899015	1	55	-0.959	0.0502	1/25/2010@13:08:34		
244899016	1	56	-0.0709	0.0904	1/25/2010@13:09:27		
WCN100125-03	1	S3	95.2	4.41	1/25/2010@13:10:19		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			-4.8 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			-4.8 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100125-08	1	S7	-1.84	0.0103	1/25/2010@13:12:10		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-1.84 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-1.84 > -5.00				
Message			CCB Passed				
Action			Continue				

Analyte Properties Table for OM\_1-25-2010\_11-47-41.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View

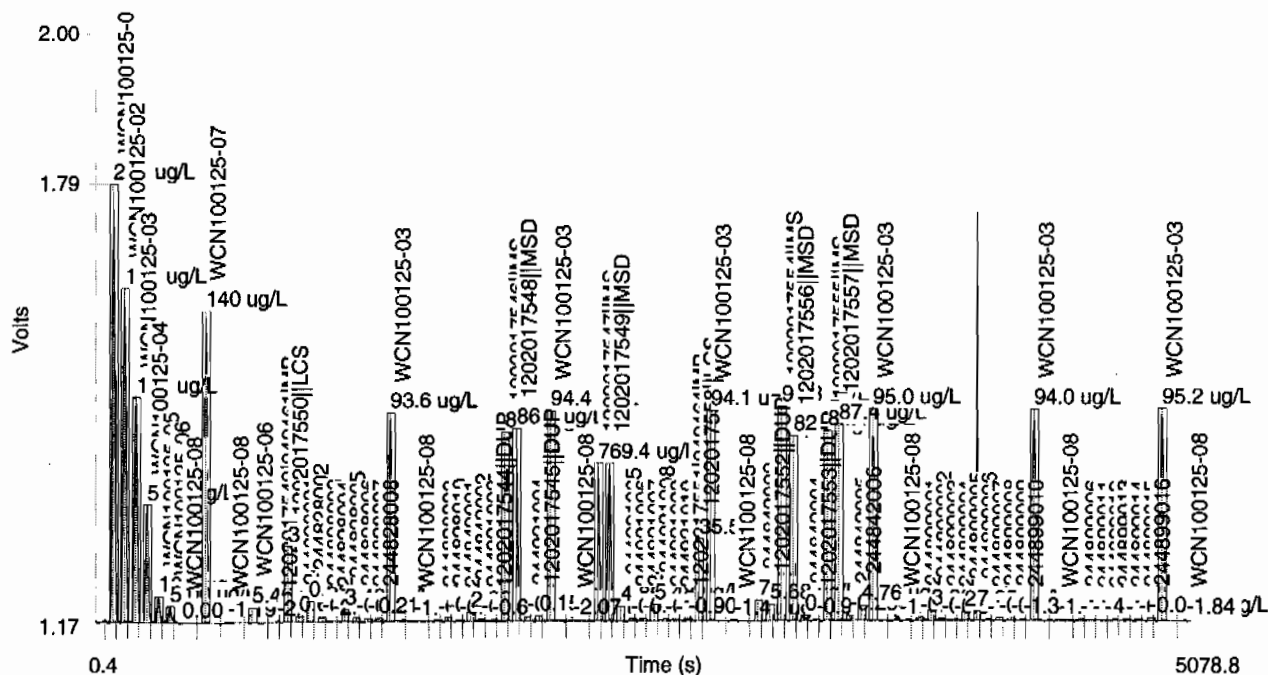
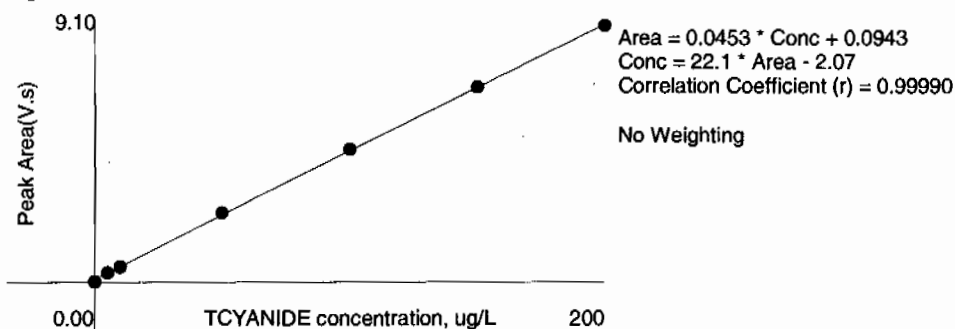


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	9.10	0.614	0.6	1/25/2010	11:50:15
2	150	1	6.90	0.468	-0.2	1/25/2010	11:51:07
3	100	1	4.67	0.315	-1.0	1/25/2010	11:51:59
4	50.0	1	2.43	0.163	-2.9	1/25/2010	11:52:53
5	10.0	1	0.539	0.0353	1.6	1/25/2010	11:53:46
6	5.00	1	0.326	0.0224	-1.5	1/25/2010	11:54:39
7	0.00	1	0.0186	0.00114		1/25/2010	11:55:33

Figure 1: TCYANIDE



# Miscellaneous

### DATA EXCEPTION REPORT

<b>Mo.Day Yr.</b> 25-JAN-10	<b>Division:</b> Federal	<b>Quality Criteria:</b>	<b>Type:</b>
<b>Instrument Type:</b>	<b>Test / Method:</b> EPA 335.4	<b>Matrix Type:</b> Solid	<b>Client Code:</b> LANL
<b>Batch ID:</b> 942461	<b>Sample Numbers:</b> See Below		
<b>Potentially affected work order(s)(SDG):</b> 244828(10-1254),244842(10-1257),244921(10-1288)			
<b>Application Issues:</b> Failed Recovery for MS/PS Failed Recovery for MSD/PSD			
<b>Specification and Requirements Exception Description:</b>		<b>DER Disposition:</b>	
1. Failed Recovery for MS/MSD:  QC 1202017547MS, QC 1202017549MSD		1. The MS recovery falls outside of the client specified limits. The MSD verifies the recovery failure with a passing RPD; therefore, the failure is attributed to matrix interference. The MS and MSD recoveries fall within the GEL acceptance limits.	

**Originator's Name:**

Ashley Earl

25-JAN-10

**Data Validator/Group Leader:**

Julia Hamilton

02-FEB-10

# **General Chemistry**

## **Analysis**



# Case Narrative

**General Chemistry Narrative  
Los Alamos National Laboratory (LANL)  
SDG 10-1288-1**

**Method/Analysis Information**

**Product:** Cyanide, Total  
**Analytical Batch:** 942459      **Method:** SW9012A Cyanide and Total  
**Prep Batch :** 942458      **Method:** SSW846 9010B Prep

**Sample Analysis**

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

<b>Sample ID</b>	<b>Client ID</b>
244922001	RE15-10-7229
1202017535	Method Blank (MB)
1202017536	244849001(RE12-10-7286) Sample Duplicate (DUP)
1202017537	244844001(CALA-10-9157) Sample Duplicate (DUP)
1202017538	244849001(RE12-10-7286) Matrix Spike (MS)
1202017539	244844001(CALA-10-9157) Matrix Spike (MS)
1202017540	244849001(RE12-10-7286) Matrix Spike Duplicate (MSD)
1202017541	244844001(CALA-10-9157) Matrix Spike Duplicate (MSD)
1202017542	Laboratory Control Sample (LCS)

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

**SOP Reference**

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 12.

**Preparation/Analytical Method Verification**

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

**Calibration Information**

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

**Initial Calibration**

All initial calibration requirements have been met for this SDG.

**Continuing Calibration Blanks**

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

**Calibration Verification Information (CCV)**

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

**Y Intercept Rule**

The absolute value of the intercept is less than 3 times the MDL.

**Quality Control (QC) Information****Method Blank (MB) Statement**

The MB analyzed with this SDG met the acceptance criteria.

**Laboratory Control Sample (LCS) Recovery**

The LCS spike recovery met the acceptance limits.

**Quality Control (QC) Designation**

The following samples were selected for QC analysis: 244844001 (CALA-10-9157) and 244849001 (RE12-10-7286).

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The MS/PS recoveries for this sample set were within the required acceptance limits.

**Matrix Spike Duplicate (MSD) Recovery Statement**

The MSD recoveries for this sample set were within the required acceptance limits.

**MS/MSD Relative Percent Difference (RPD) Statement**

The RPDs between the spike and spike duplicate met the acceptance limits.

**Duplicate Relative Percent Difference (RPD) Statement**

The RPD between the sample and its duplicate met the acceptance limits.

**Technical Information**

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

**Holding Times**

All samples in this SDG met the specified holding time.

**Sample Preservation/Integrity**

All the samples from this sample group met the preservation and integrity requirements of the method.

**Sample Dilutions**

The samples in this SDG did not require dilutions.

**Sample Re-analysis**

The samples in this SDG did not require re-analysis.

**Miscellaneous Information****Data Exception (DER) Documentation**

A DER was not required for this SDG.

**Additional Comments**

Additional comments were not required for this SDG.

**Electronic Packaging Comment**

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

**Certification Statement**

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

**Review Validation:**

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

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

Reviewer:  Date: 08Feb10

# **Sample Data Summary**

## GEL LABORATORIES LLC

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

### Certificate of Analysis Report for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 10-1288-1 GEL Work Order: 244922

**The Qualifiers in this report are defined as follows:**

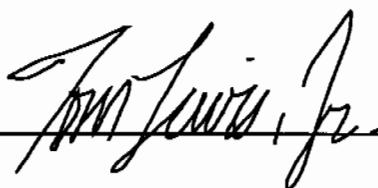
- \* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- \*\* Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

A handwritten signature in black ink, appearing to read "Tom Lewis, Jr.", is written over a horizontal line.

# GEL LABORATORIES LLC

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

## Certificate of Analysis

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

Report Date: February 4, 2010

Client SDG: 10-1288-1

Client Sample ID: RE15-10-7229  
Sample ID: 244922001  
Matrix: W  
Collect Date: 12-JAN-10 12:00  
Receive Date: 16-JAN-10  
Collector: Client

Project: LANL01004  
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
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### Flow Injection Analysis

SW9012A Cyanide, Total "As Received"

Cyanide, Total	U	ND	1.66	5.00	ug/L	1	AXC2	01/22/10	1034	942459	1
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### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	01/21/10	1600	942458

### The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	



# **Quality Control Summary**

# GEL LABORATORIES LLC

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

## QC Summary

Report Date: February 4, 2010

Page 1 of 2

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

Contact: Ms. Joylene Valdez

Workorder: 244922

Parmname	NOM	Sample	Qual	QC	Units	RPD %	REC %	Range	Anlst	Date	Time
Flow Injection Analysis											
Batch	942459										
QC1202017536	244849001	DUP									
Cyanide, Total		U	ND	U	ND	ug/L	N/A		AXC2	01/22/10	10:23
QC1202017537	244844001	DUP									
Cyanide, Total		U	ND	U	ND	ug/L	N/A			01/22/10	10:19
QC1202017542	LCS										
Cyanide, Total	50.0				47.5	ug/L	95	(90%-110%)		01/22/10	10:05
QC1202017535	MB										
Cyanide, Total			U		5.00	ug/L				01/22/10	10:04
QC1202017538	244849001	MS									
Cyanide, Total	100	U	ND		107	ug/L	107	(60%-127%)		01/22/10	10:24
QC1202017539	244844001	MS									
Cyanide, Total	100	U	ND		103	ug/L	103	(60%-127%)		01/22/10	10:20
QC1202017540	244849001	MSD									
Cyanide, Total	100	U	ND		99.8	ug/L	6.96	99.8	(0%-20%)	01/22/10	10:29
QC1202017541	244844001	MSD									
Cyanide, Total	100	U	ND		99.1	ug/L	3.86	99.1	(0%-20%)	01/22/10	10:21

### Notes:

RER is calculated at the 95% confidence level (2-sigma).

The Qualifiers in this report are defined as follows:

\*\* Analyte is a surrogate compound

< Result is less than value reported

> Result is greater than value reported

A The TIC is a suspected aldol-condensation product

B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.

C Analyte has been confirmed by GC/MS analysis

D Results are reported from a diluted aliquot of the sample

E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range

E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria

E Organics--Concentration of the target analyte exceeds the instrument calibration range

F Estimated Value

H Analytical holding time was exceeded

J Value is estimated

M Matrix Related Failure

N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor

N/A RPD or %Recovery limits do not apply.

## GEL LABORATORIES LLC

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### QC Summary

Workorder: 244922

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
ND	Analyte concentration is not detected above the detection limit										
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%										
R	Sample results are rejected										
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.										
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Y	QC Samples were not spiked with this compound										
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.										
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.										
d	5-day BOD--The 2:1 depletion requirement was not met for this sample										
h	Preparation or preservation holding time was exceeded										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

# **Instrument QC Data Summary**

# INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 04-FEB-2010 16:39

**GEL Laboratories LLC**

**Contract: LANL01004**

**SDG #: 10-1288-1**

Flow Injection Analysis

Method: SW846 9012A

Concentration Units:ug/L

Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	22-JAN-2010 09:58:58	OM_1-22-2010_09-50-18	147	150	98	(90%-110%)	Yes
CCV	22-JAN-2010 10:13:15	OM_1-22-2010_09-50-18	95.4	100	95	(90%-110%)	Yes
CCV	22-JAN-2010 10:25:40	OM_1-22-2010_09-50-18	96.3	100	96	(90%-110%)	Yes
CCV	22-JAN-2010 10:38:05	OM_1-22-2010_09-50-18	96.3	100	96	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	22-JAN-2010 10:00:48	OM_1-22-2010_09-50-18	-0.809	5	Yes
CCB	22-JAN-2010 10:15:05	OM_1-22-2010_09-50-18	-0.874	5	Yes
CCB	22-JAN-2010 10:27:31	OM_1-22-2010_09-50-18	-1.14	5	Yes
CCB	22-JAN-2010 10:39:55	OM_1-22-2010_09-50-18	-0.776	5	Yes

# Cyanide, Total

# Prep LogBook

Analyst: AXS5  
Batch: 942458  
Lab SOP: GL-GC-E-067 REV# 13

Verified by: \_\_\_\_\_

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix	Type	Sample Id	Lot. Id	Spike Amount	Spike Units
MB	1202017535		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER	LCS	1202017542	URF1184831-02	.0125	mL
LCS	1202017542		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER	MS	1202017538	URF1184831-02	.025	mL
SAMPLE	244722001		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER	MS	1202017539	URF1184831-02	.025	mL
SAMPLE	244722002		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER	MSD	1202017540	URF1184831-02	.025	mL
SAMPLE	244722003		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER	MSD	1202017541	URF1184831-02	.025	mL
SAMPLE	244722004		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER					
SAMPLE	244807011		EPA 335.4	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WASTE WATER					
SAMPLE	244807014		EPA 335.4	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WASTE WATER					
SAMPLE	244829001		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER					
SAMPLE	244829002		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER					
SAMPLE	244829003		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER					
SAMPLE	244829004		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER					
SAMPLE	244844001		EPA 335.4	21-JAN-2010 16:00	>12	25 mL	25 mL	1	GROUND WATER					
DUP	1202017537	244844001	EPA 335.4	21-JAN-2010 16:00	>12	25 mL	25 mL	1	GROUND WATER					
MS	1202017539	244844001	EPA 335.4	21-JAN-2010 16:00	>12	25 mL	25 mL	1	GROUND WATER					
MSD	1202017541	244844001	EPA 335.4	21-JAN-2010 16:00	>12	25 mL	25 mL	1	GROUND WATER					
SAMPLE	244844003		EPA 335.4	21-JAN-2010 16:00	>12	25 mL	25 mL	1	GROUND WATER					
SAMPLE	244849001		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER					
DUP	1202017536	244849001	SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER					
MS	1202017538	244849001	SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER					
MSD	1202017540	244849001	SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER					
SAMPLE	244880001		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER					
SAMPLE	244904001		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER					
SAMPLE	244904002		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER					
SAMPLE	244904003		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER					
SAMPLE	244904004		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER					
SAMPLE	244922001		SW846 9010B Prep	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER					
SAMPLE	244925001		EPA 335.4	21-JAN-2010 16:00	>12	25 mL	25 mL	1	WATER					

Prep Data Logbook Version 1:1

GEL Laboratories LLC

Page#

Prep LogBook

Reagent/Solvent Lot ID	Amount	Description	Comments
091211-C	25 mL	0.25N Sodium Hydroxide Solution	
WCN100121-07	.0375 mL	150 ppb CN Distilled ICV Standard	
1176724-C	1.25 mL	0.8N H3NO3S	
1238146-C	2.5 mL	50% H2SO4 CN Prep	
1176778-C	1 mL	51% MgCl2 Soln	
1238142-C	1.25 mL	Bismuth Nitrate Solution	



This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	1/22/2010 9:51:49	OM_1-22-2010_09-50-18
150 ppb		1	axc2	1/22/2010 9:52:41	OM_1-22-2010_09-50-18
100 ppb		1	axc2	1/22/2010 9:53:33	OM_1-22-2010_09-50-18
50 ppb		1	axc2	1/22/2010 9:54:27	OM_1-22-2010_09-50-18
10 ppb		1	axc2	1/22/2010 9:55:19	OM_1-22-2010_09-50-18
CRDL 5.0 ppb		1	axc2	1/22/2010 9:56:14	OM_1-22-2010_09-50-18
ICAL-00		1	axc2	1/22/2010 9:57:07	OM_1-22-2010_09-50-18
ICV		1	axc2	1/22/2010 9:58:58	OM_1-22-2010_09-50-18
ICB		1	axc2	1/22/2010 10:00:48	OM_1-22-2010_09-50-18
CRDL		1	axc2	1/22/2010 10:02:38	OM_1-22-2010_09-50-18
1202017535	942459	1	axc2	1/22/2010 10:04:27	OM_1-22-2010_09-50-18
1202017542	942459	1	axc2	1/22/2010 10:05:21	OM_1-22-2010_09-50-18
244722001	942459	1	axc2	1/22/2010 10:06:14	OM_1-22-2010_09-50-18
244722002	942459	1	axc2	1/22/2010 10:07:07	OM_1-22-2010_09-50-18
244722003	942459	1	axc2	1/22/2010 10:08:00	OM_1-22-2010_09-50-18
244722004	942459	1	axc2	1/22/2010 10:08:53	OM_1-22-2010_09-50-18
244807011	942459	1	axc2	1/22/2010 10:09:46	OM_1-22-2010_09-50-18
244807014	942459	1	axc2	1/22/2010 10:10:38	OM_1-22-2010_09-50-18
244829001	942459	1	axc2	1/22/2010 10:11:31	OM_1-22-2010_09-50-18
244829002	942459	1	axc2	1/22/2010 10:12:23	OM_1-22-2010_09-50-18
CCV		1	axc2	1/22/2010 10:13:15	OM_1-22-2010_09-50-18
CCB		1	axc2	1/22/2010 10:15:05	OM_1-22-2010_09-50-18
244829003	942459	1	axc2	1/22/2010 10:16:54	OM_1-22-2010_09-50-18
244829004	942459	1	axc2	1/22/2010 10:17:46	OM_1-22-2010_09-50-18
244844001	942459	1	axc2	1/22/2010 10:18:38	OM_1-22-2010_09-50-18
1202017537	942459	1	axc2	1/22/2010 10:19:29	OM_1-22-2010_09-50-18
1202017539	942459	1	axc2	1/22/2010 10:20:21	OM_1-22-2010_09-50-18
1202017541	942459	1	axc2	1/22/2010 10:21:15	OM_1-22-2010_09-50-18
244844003	942459	1	axc2	1/22/2010 10:22:09	OM_1-22-2010_09-50-18
244849001	942459	1	axc2	1/22/2010 10:23:02	OM_1-22-2010_09-50-18
1202017536	942459	1	axc2	1/22/2010 10:23:55	OM_1-22-2010_09-50-18
1202017538	942459	1	axc2	1/22/2010 10:24:48	OM_1-22-2010_09-50-18
CCV		1	axc2	1/22/2010 10:25:40	OM_1-22-2010_09-50-18
CCB		1	axc2	1/22/2010 10:27:31	OM_1-22-2010_09-50-18
1202017540	942459	1	axc2	1/22/2010 10:29:21	OM_1-22-2010_09-50-18
244880001	942459	1	axc2	1/22/2010 10:30:13	OM_1-22-2010_09-50-18
244904001	942459	1	axc2	1/22/2010 10:31:06	OM_1-22-2010_09-50-18
244904002	942459	1	axc2	1/22/2010 10:31:58	OM_1-22-2010_09-50-18
244904003	942459	1	axc2	1/22/2010 10:32:51	OM_1-22-2010_09-50-18
244904004	942459	1	axc2	1/22/2010 10:33:43	OM_1-22-2010_09-50-18
244922001	942459	1	axc2	1/22/2010 10:34:36	OM_1-22-2010_09-50-18
244925001	942459	1	axc2	1/22/2010 10:35:27	OM_1-22-2010_09-50-18
1202020316	943575	1	axc2	1/22/2010 10:36:20	OM_1-22-2010_09-50-18
1202020318	943575	250	axc2	1/22/2010 10:37:12	OM_1-22-2010_09-50-18
CCV		1	axc2	1/22/2010 10:38:05	OM_1-22-2010_09-50-18
CCB		1	axc2	1/22/2010 10:39:55	OM_1-22-2010_09-50-18
244953006	943575	1	axc2	1/22/2010 10:41:45	OM_1-22-2010_09-50-18
1202020317	943575	1	axc2	1/22/2010 10:42:39	OM_1-22-2010_09-50-18
244855001	942468	1	axc2	1/22/2010 10:43:33	OM_1-22-2010_09-50-18
1202017567	942468	1	axc2	1/22/2010 10:44:28	OM_1-22-2010_09-50-18
1202017570	942468	1	axc2	1/22/2010 10:45:22	OM_1-22-2010_09-50-18
1202017573	942468	1	axc2	1/22/2010 10:46:16	OM_1-22-2010_09-50-18
244855003	942468	1	axc2	1/22/2010 10:47:11	OM_1-22-2010_09-50-18
244874001	942468	1	axc2	1/22/2010 10:48:05	OM_1-22-2010_09-50-18
244879003	942468	1	axc2	1/22/2010 10:48:58	OM_1-22-2010_09-50-18
1202017568	942468	1	axc2	1/22/2010 10:49:52	OM_1-22-2010_09-50-18
CCV		1	axc2	1/22/2010 10:50:44	OM_1-22-2010_09-50-18
CCB		1	axc2	1/22/2010 10:52:35	OM_1-22-2010_09-50-18

1202017571	942468	1	axc2	1/22/2010	10:54:24	OM_1-22-2010_09-50-18
1202017574	942468	1	axc2	1/22/2010	10:55:19	OM_1-22-2010_09-50-18
244896001	942468	1	axc2	1/22/2010	10:56:12	OM_1-22-2010_09-50-18
1202017569	942468	1	axc2	1/22/2010	10:57:04	OM_1-22-2010_09-50-18
1202017572	942468	1	axc2	1/22/2010	10:57:57	OM_1-22-2010_09-50-18
1202017575	942468	1	axc2	1/22/2010	10:58:50	OM_1-22-2010_09-50-18
244901001	942468	1	axc2	1/22/2010	10:59:43	OM_1-22-2010_09-50-18
244901002*	942468	1	axc2	1/22/2010	11:00:37	OM_1-22-2010_09-50-18
244903001	942468	1	axc2	1/22/2010	11:01:32	OM_1-22-2010_09-50-18
244937001	942468	1	axc2	1/22/2010	11:02:26	OM_1-22-2010_09-50-18
CCV		1	axc2	1/22/2010	11:03:19	OM_1-22-2010_09-50-18
CCB		1	axc2	1/22/2010	11:05:10	OM_1-22-2010_09-50-18
1202018979	942468	1	axc2	1/22/2010	11:06:59	OM_1-22-2010_09-50-18
1202018980	942468	1	axc2	1/22/2010	11:07:54	OM_1-22-2010_09-50-18
1202018981	942468	1	axc2	1/22/2010	11:08:48	OM_1-22-2010_09-50-18
244937002	942468	1	axc2	1/22/2010	11:09:42	OM_1-22-2010_09-50-18
244960001	942468	1	axc2	1/22/2010	11:10:36	OM_1-22-2010_09-50-18
244960003	942468	1	axc2	1/22/2010	11:11:30	OM_1-22-2010_09-50-18
244901002	942468	1	axc2	1/22/2010	11:12:24	OM_1-22-2010_09-50-18
CCV		1	axc2	1/22/2010	11:13:17	OM_1-22-2010_09-50-18
CCB		1	axc2	1/22/2010	11:15:07	OM_1-22-2010_09-50-18

Author: axc2

Date : 1/22/2010

Original Run Filename: OM\_1-22-2010\_09-50-18.OMN created 1/22/2010 09:50:18  
 Original Run Author's Signature: [axc2]  
 Current Run Filename: OM\_1-22-2010\_09-50-18.OMN last modified 1/22/2010 11:16:11  
 Current Run Author's Signature: [axc2]  
 Description: GL-GC-E-102 EPA 420.4, 9066  
 LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE		Detection Time	ADF	MDF	Description
			Conc. (ug/L)	Area (Vs)				
WCN100122-01	1	S1	200	7.56	1/22/2010@09:51:49			200 ppb
WCN100122-02	1	S2	150	5.80	1/22/2010@09:52:41			150 ppb
WCN100122-03	1	S3	100	3.66	1/22/2010@09:53:33			100 ppb
WCN100122-04	1	S4	50.0	2.02	1/22/2010@09:54:27			50 ppb
WCN100122-05	1	S5	10.0	0.470	1/22/2010@09:55:19			10 ppb
WCN100122-06	1	S6	5.00	0.297	1/22/2010@09:56:14			CRDL 5.0 ppb
WCN100122-08	1	S7	0.00	0.0439	1/22/2010@09:57:07			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
Result:			0.99958 > 0.99500					
Message			Pass					
Action			Continue					
WCN100122-07	1	S8	147	5.59	1/22/2010@09:58:58			ICV
Known Conc:			150					
DQM Test: > + Percent Relative Difference								
Result:			-1.9 < 10.0					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-1.9 < 10.0					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN100122-08	1	S7	-0.809	0.0467	1/22/2010@10:00:48			ICB/CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-0.809 < 5.01					
Message			ICB/CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-0.809 > -5.01					
Message			ICB/CCB Passed					
Action			Continue					
WCN100122-06	1	S6	5.72	0.292	1/22/2010@10:02:38			CRDL
Known Conc:			5.00					
DQM Test: > + Concentration Limit								
Result:			5.72 < 7.50					
Message			CRDL Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			5.72 > 2.50					
Message			Pass					
Action			None					
1202017535 942459 MB	1	1	-1.57	0.0180	1/22/2010@10:04:27			
1202017542 LCS	1	2	47.5	1.86	1/22/2010@10:05:21			
244722001	1	3	-1.14	0.0343	1/22/2010@10:06:14			
244722002	1	4	-1.81	0.00896	1/22/2010@10:07:07			
244722003	1	5	-1.36	0.0260	1/22/2010@10:08:00			
244722004	1	6	3.41	0.205	1/22/2010@10:08:53			
244807011	1	7	-0.652	0.0526	1/22/2010@10:09:46			
244807014	1	8	1.04	0.116	1/22/2010@10:10:38			
244829001	1	9	-2.05	0.00	1/22/2010@10:11:31			
244829002	1	10	-1.42	0.0236	1/22/2010@10:12:23			
WCN100122-03	1	S3	95.4	3.65	1/22/2010@10:13:15			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			-4.6 < 10.0					
Message			CCV Passed					

		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	-4.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100122-08	1	S7	-0.874	0.0442	1/22/2010@10:15:05			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-0.874 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-0.874 > -5.00					
		Message	CCB Passed					
		Action	Continue					
244829003	1	11	-1.38	0.0253	1/22/2010@10:16:54			
244829004	1	12	-1.37	0.0255	1/22/2010@10:17:46			
244844001	1	13	-2.56	-0.0189	1/22/2010@10:18:38			
1202017537  DUP	1	14	-2.35	-0.0111	1/22/2010@10:19:29			
1202017539  MS	1	15	103	3.94	1/22/2010@10:20:21			
1202017541  MSD	1	16	99.1	3.79	1/22/2010@10:21:15			
244844003	1	17	-0.977	0.0404	1/22/2010@10:22:09			
244849001	1	18	-1.40	0.0246	1/22/2010@10:23:02			
1202017536  DUP	1	19	-1.50	0.0208	1/22/2010@10:23:55			
1202017538  MS	1	20	107	4.08	1/22/2010@10:24:48			
WCN100122-03	1	S3	96.3	3.69	1/22/2010@10:25:40			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	-3.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	-3.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100122-08	1	S7	-1.14	0.0343	1/22/2010@10:27:31			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						
		Result:	-1.14 < 5.00					
		Message	CCB Passed					
		Action	Continue					
		DQM Test: < - Concentration Limit						
		Result:	-1.14 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1202017540  MSD	1	21	99.8	3.82	1/22/2010@10:29:21			
244880001	1	22	-1.41	0.0241	1/22/2010@10:30:13			
244904001	1	23	-1.73	0.0122	1/22/2010@10:31:06			
244904002	1	24	-2.06	-3.75e-4	1/22/2010@10:31:58			
244904003	1	25	-1.93	0.00454	1/22/2010@10:32:51			
244904004	1	26	-1.44	0.0231	1/22/2010@10:33:43			
244922001	1	27	-1.74	0.0117	1/22/2010@10:34:36			
244925001	1	28	2.78	0.181	1/22/2010@10:35:27			
1202020316 943575 MB	1	29	-1.73	0.0122	1/22/2010@10:36:20			
1202020318  LCS	1	30	145	5.53	1/22/2010@10:37:12		250.00	
WCN100122-03	1	S3	96.3	3.69	1/22/2010@10:38:05			CCV
		Known Conc:	100					
		DQM Test: > + Percent Relative Difference						
		Result:	-3.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
		DQM Test: < - Percent Relative Difference						
		Result:	-3.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100122-08	1	S7	-0.776	0.0479	1/22/2010@10:39:55			CCB
		Known Conc:	0.00					
		DQM Test: > + Concentration Limit						

Result:			-0.776 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-0.776 > -5.00				
Message			CCB Passed				
Action			Continue				
244953006	1	31	-2.08	-9.47e-4	1/22/2010@10:41:45		
1202020317  DUP	1	32	-1.83	0.00854	1/22/2010@10:42:39		
244855001 942468	1	91	-0.500	0.0582	1/22/2010@10:43:33		
1202017567  DUP	1	92	-0.685	0.0513	1/22/2010@10:44:28		
1202017570  MS	1	93	96.6	3.70	1/22/2010@10:45:22		
1202017573  MSD	1	94	98.9	3.78	1/22/2010@10:46:16		
244855003	1	95	-0.122	0.0724	1/22/2010@10:47:11		
244874001	1	96	5.49	0.283	1/22/2010@10:48:05		
244879003	1	97	0.538	0.0971	1/22/2010@10:48:58		
1202017568  DUP	1	98	0.476	0.0948	1/22/2010@10:49:52		
WCN100122-03	1	S3	96.6	3.70	1/22/2010@10:50:44		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			-3.4 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			-3.4 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100122-08	1	S7	-0.824	0.0461	1/22/2010@10:52:35		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-0.824 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-0.824 > -5.00				
Message			CCB Passed				
Action			Continue				
1202017571  MS	1	99	100	3.84	1/22/2010@10:54:24		
1202017574  MSD	1	100	106	4.04	1/22/2010@10:55:19		
244896001	1	101	-1.17	0.0331	1/22/2010@10:56:12		
1202017569  DUP	1	102	-1.10	0.0357	1/22/2010@10:57:04		
1202017572  MS	1	103	93.4	3.58	1/22/2010@10:57:57		
1202017575  MSD	1	104	96.3	3.69	1/22/2010@10:58:50		
244901001	1	105	2.39	0.167	1/22/2010@10:59:43		
244901002	1	106	-11.8	-0.364	1/22/2010@11:00:37		
244903001	1	107	-2.54	-0.0181	1/22/2010@11:01:32		
244937001	1	108	-1.23	0.0307	1/22/2010@11:02:26		
WCN100122-03	1	S3	95.9	3.67	1/22/2010@11:03:19		CCV
Known Conc:			100				
DQM Test: > + Percent Relative Difference							
Result:			-4.1 < 10.0				
Message			CCV Passed				
Action			Continue				
DQM Test: < - Percent Relative Difference							
Result:			-4.1 < 10.0				
Message			CCV Passed				
Action			Continue				
WCN100122-08	1	S7	-0.987	0.0400	1/22/2010@11:05:10		CCB
Known Conc:			0.00				
DQM Test: > + Concentration Limit							
Result:			-0.987 < 5.00				
Message			CCB Passed				
Action			Continue				
DQM Test: < - Concentration Limit							
Result:			-0.987 > -5.00				
Message			CCB Passed				
Action			Continue				
1202018979  DUP	1	109	-1.03	0.0385	1/22/2010@11:06:59		

1202018980	MS	1	110	96.3	3.69	1/22/2010@11:07:54			
1202018981	MSD	1	111	99.4	3.80	1/22/2010@11:08:48			
244937002		1	112	-0.764	0.0483	1/22/2010@11:09:42			
244960001		1	113	17.1	0.719	1/22/2010@11:10:36			
244960003		1	114	-0.769	0.0482	1/22/2010@11:11:30			
244901002		1	106	0.799	0.107	1/22/2010@11:12:24			
WCN100122-03		1	S3	95.2	3.65	1/22/2010@11:13:17			CCV
Known Conc:				100					
DQM Test: > + Percent Relative Difference									
Result:				-4.8 < 10.0					
Message				CCV Passed					
Action				Continue					
DQM Test: < - Percent Relative Difference									
Result:				-4.8 < 10.0					
Message				CCV Passed					
Action				Continue					
WCN100122-08		1	S7	-0.784	0.0476	1/22/2010@11:15:07			CCB
Known Conc:				0.00					
DQM Test: > + Concentration Limit									
Result:				-0.784 < 5.00					
Message				CCB Passed					
Action				Continue					
DQM Test: < - Concentration Limit									
Result:				-0.784 > -5.00					
Message				CCB Passed					
Action				Continue					

Analyte Properties Table for OM\_1-22-2010\_09-50-18.OMN

Property	Channel 1 TCYANIDE
Concentration Units	ug/L
Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View

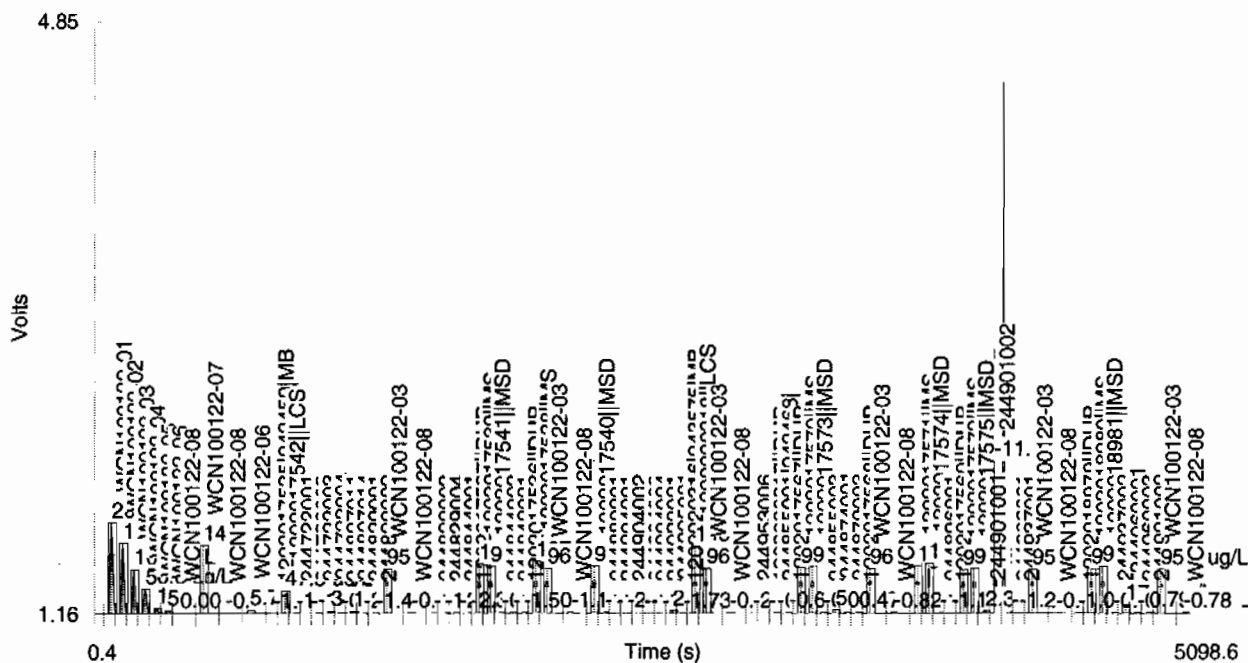


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	7.56	0.563	0.1	1/22/2010	09:52:52
2	150	1	5.80	0.432	-1.8	1/22/2010	09:53:44
3	100	1	3.66	0.272	4.3	1/22/2010	09:54:36
4	50.0	1	2.02	0.150	-3.2	1/22/2010	09:55:29
5	10.0	1	0.470	0.0337	-3.6	1/22/2010	09:56:22
6	5.00	1	0.297	0.0217	-11.4	1/22/2010	09:57:16
7	0.00	1	0.0439	0.00389		1/22/2010	09:58:10

Figure 1: TCYANIDE

