Thursday, January 14, 2010

REQUEST NUMBER: 10-1263

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:10-1263
Per Agreement Number:126310011
Project Cost Code: MR3A05529E00

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 1/14/2010
TURNAROUND/REPORT DUE: 2/13/2010
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
	EPA:901.1	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	HASL-300:AM-241	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	HASL-300:ISOPU	1	RE12-10-7854	R	1/11/2010	

Thursday, January 14, 2010

REQUEST NUMBER: 10-1263

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOPU	1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	HASL-300:ISOU	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:6020	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:6850	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:7471A	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:8082	1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:8321A_MOD	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:9012A	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	

Thursday, January 14, 2010

REQUEST NUMBER: 10-1263

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	RE12-10-7857	R	1/11/2010	

Final Page of REQUEST NUMBER 10-1263

Thursday, January 14, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1263

REQUEST NUMBER: 10-1263

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/13/2010

TURNAROUND REQ'D: 30

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE12-10-7856	1	AMBER GLASS	8082+NMED-HEXP	Ice	R
RE12-10-7856	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7856	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7857	1	AMBER GLASS	8082+NMED-HEXP	Ice	R
RE12-10-7857	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7857	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7855	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7855	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7855	1	AMBER GLASS	NMED Explosives list	Ice	R
RE12-10-7854	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7854	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7854	1	AMBER GLASS	NMED Explosives list	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
		1/14/10	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: 2498 **EVENT NAME:** 4th Qtr. FY09 - SWMU 12-001(a) of CU 12-001(a)-99 - Threemile Cyn

SAMPLE ID: RE12-10-7854 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/11/2010	MEDIA:	QBT3	ALLIT
TIME COLLECTED (HH:MM)		0930	SUB-MEDIA:	TUFF 1	NA
PRS ID:	12-001(a)	OK	SAMPLE TECH CODE:	HA	
LOCATION ID:	12-610701		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		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	AM241+GS+ISOPU+ISOU	1 LITER POLY 12/22/09	None	Yes	
1		Met+U+CLO4+CN	~~1 GAL~~ 1 L POLY	Ice	Yes	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Yes	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Yes	

SAMPLE DESC: Light brownish grey, sandy, silty, decomposed ~~tuff~~ soil RS 01.11.10

SAMPLE COMMENTS: NA

LOCATION DESC: 1a-1 RS 01.11.10 ~~10~~
5 ft north of location

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 16 dpm PID ambient Reading 0.0 / 0.0 ppm

BY ≤ 2010 dpm HE Neg

COLLECTED BY (PRINT) R Saunders REVIEWED BY (PRINT) J. Marin

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) R. Saunders	1/11/10	(Printed Name)	1/11/10
(Signature) R Saunders	1430	(Signature)	1430
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2498 **EVENT NAME:** 4th Qtr. FY09 - SWMU 12-001(a) of CU 12-001(a)-99 - Threemile Cyn

SAMPLE ID: RE12-10-7855 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/11/2010	MEDIA:	OBT3	OK
TIME COLLECTED (HH:MM)		09:40	SUB-MEDIA:	TUFF 1	↓
PRS ID:	12-001(a)	OK	SAMPLE TECH CODE:	HA	OK
LOCATION ID:	12-610701	↓	FIELD QC TYPE:	NA	↓
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	2.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	3.0	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	AM241+GS+ISOPU+ISOU	1 LITER POLY gm 12/22/09	None	Yes	
1	↓	Met+U+CLO4+CN	1 ~~GAL~~ POLY 1 L	Ice	Yes	
1	↓	NMED Explosives list	250 ML AMBER GLASS	Ice	Yes	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Yes	

SAMPLE DESC: Light brownish grey dry decomposed

SAMPLE COMMENTS:
NA

LOCATION DESC: 1a-1 RS 01·11·10 ~~TO~~
5ft. north of Location

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 71 dpm PID ambient 0 / reading 0 ppm

BY ≤ 2000 dpm

COLLECTED BY (PRINT) R Saunders **REVIEWED BY (PRINT)** J Marin

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Riley Evans	1/11/10 1430	(Printed Name)	1/11/10 1430
(Signature)		(Signature)	
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2498 **EVENT NAME:** 4th Qtr. FY09 - SWMU 12-001(a) of CU 12-001(a)-99 - Threemile Cyn

SAMPLE ID: RE12-10-7856 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/11/2010	MEDIA:	QBT3	ALCH
TIME COLLECTED (HH:MM)		11:20	SUB-MEDIA:	TUFF 1	NA
PRS ID:	12-001(a)	12-001(a)-99	SAMPLE TECH CODE:	HA	
LOCATION ID:	UNK	12-610679 DK 1/11/10	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	0.5 ft	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+NMED-HEXP	250 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY 12m 12/22/09	None		
1		Met+U+CLO4+CN	1 ~~GAL~~ 1 L POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Light brown sandy soil

SAMPLE COMMENTS:
NA

LOCATION DESC:
1a 25

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 33 dpm
Beta/Gamma = 2350 dpm

PID Ambient Reading 0.0 / 0.0 ppm

COLLECTED BY (PRINT) R Saunders

REVIEWED BY (PRINT) P A Byers

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Riley Evans (Signature)	1/11/10 14:30	(Printed Name) (Signature)	1/11/10 1430
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2498 **EVENT NAME:** 4th Qtr. FY09 - SWMU 12-001(a) of CU 12-001(a)-99 - Threemile Cyn

SAMPLE ID: RE12-10-7857 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		01/11/2010	MEDIA:	OBT3	RS 01-11-10 OK ALH
TIME COLLECTED (HH:MM)		11:27	SUB-MEDIA:	TUFF 1	NA
PRS ID:	12-001(a)	12-001(a)-99 OK gem 1/13/10	SAMPLE TECH CODE:	HA	OK
LOCATION ID:	UNK	12-610679 gem 1/13/10	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	1.0 ft	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.8 ft	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	OK S RS 01-11-10	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+NMED-HEXP	250 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISOPU+ISOU	1 LITER POLY	None		
1		Met+U+CLO4+CN	1 GAL POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Light brown sandy soil, few roots and rock

SAMPLE COMMENTS:

NA

LOCATION DESC:

1a 2b 25

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha = 33 dpm
Beta/Gamma = 2550 dpm

PID Ambient/Reading 0.0/0.0 ppm

COLLECTED BY (PRINT) R Saunders REVIEWED BY (PRINT) Dan Byers

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Riley Evans (Signature)	1/11/10 1430	(Printed Name) (Signature)	1/11/10 1430
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):

RE12-10-7272
7273
7274
7854
7855
7281
8094
8095

RE12-10-7856
7857
8096
8097

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):

RE12-10-7271 Field Rinsate
RE12-10-8098 " "

Reason:

Print Last Name MARIN Signature Jan R. Marin Date 1/11/10

ARS INTERNATIONAL
2609 North River Road, Port Allen, Louisiana 70767
1 (800) 401-4277 FAX (225) 381-2996

ARS Sample Delivery Group: ARS1-10-00044
Analysis Description: Gross Alpha/Beta in (Soil, Sludge, Waste, Sediment [SO])
Analysis Test Method:

Request or PO Number:
Date Received: 1/12/2010
Report Date: 01/13/10 17:57

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
ARS1-10-00044-001	RE12-10-7272	GROSS ALPHA	7.324	8.994	12.781	3.695		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-001	RE12-10-7272	GROSS BETA	24.960	9.476	7.840	3.382		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-002	RE12-10-7273	GROSS ALPHA	-0.747	4.281	13.555	3.962		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-002	RE12-10-7273	GROSS BETA	20.852	9.400	10.601	4.746		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-003	RE12-10-7274	GROSS ALPHA	5.946	9.276	15.184	4.812		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-003	RE12-10-7274	GROSS BETA	35.211	11.781	7.708	3.310		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-004	RE12-10-7854	GROSS ALPHA	14.420	12.028	13.362	4.038		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-004	RE12-10-7854	GROSS BETA	23.381	9.179	7.641	3.274		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-005	RE12-10-7855	GROSS ALPHA	11.135	12.881	19.661	7.099		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-005	RE12-10-7855	GROSS BETA	32.484	11.324	8.220	3.566		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-006	RE12-10-7281	GROSS ALPHA	7.379	9.635	15.016	4.855		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-006	RE12-10-7281	GROSS BETA	26.206	9.694	7.691	3.315		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-007	RE12-10-8094	GROSS ALPHA	5.877	9.060	15.214	4.865		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-007	RE12-10-8094	GROSS BETA	27.356	10.025	7.905	3.413		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-008	RE12-10-8095	GROSS ALPHA	12.001	11.500	14.798	4.689		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-008	RE12-10-8095	GROSS BETA	23.743	9.328	8.104	3.515		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-009	RE12-10-7856	GROSS ALPHA	1.764	6.652	13.665	4.289		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-009	RE12-10-7856	GROSS BETA	31.222	10.713	7.415	3.178		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-010	RE12-10-7857	GROSS ALPHA	7.819	9.885	14.648	4.627		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-010	RE12-10-7857	GROSS BETA	33.430	11.500	8.194	3.551		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-011	RE12-10-8096	GROSS ALPHA	0.440	7.280	16.634	5.535		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-011	RE12-10-8096	GROSS BETA	38.135	12.367	7.699	3.315		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-012	RE12-10-8097	GROSS ALPHA	11.228	11.049	14.038	4.435		pCi/g	1/13/2010	CR		SO
ARS1-10-00044-012	RE12-10-8097	GROSS BETA	35.741	11.883	7.611	3.271		pCi/g	1/13/2010	CR		SO

NOTES:

Project Manager Review

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 10-1263 VALIDATION DATE: 2/22/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Larry Fukui ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	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. The MS/MSD %R calculations were performed incorrectly. The parent sample result was < the MDL and, thus, a result of 0 µg/kg should have been used to calculate the %Rs. The laboratory subtracted the parent sample concentration. The %Rs were within the acceptance limits when calculated correctly. No sample results were qualified as a result.

Reviewed by: Charissa Lewis Level: 1 Date: 2/24/10

VALIDATOR'S SIGNATURE: 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

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	1. The Internal Standard (IS) relativer retention time has shifted by more than 0.98 to 1.02 seconds.	R, PERC0	J, PERC0
☐	☒	☐	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
☐	☐	☒	3. The IS are count is <25% of the expected value.	UJ, PERC1a	J, PERC1a
☐	☐	☒	4. The IS area count is <70% but >25% of the average of that obtained from the calibration standards.	UJ, PERC1b	J, PERC1b
☐	☐	☒	5. The IS area count is >130% of the average of that obtained from the calibration standards.	UJ, PERC1c	J, PERC1c
☐	☐	☒	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PREC1d	R, PERC1d
☐	☒	☐	7. The sample result is ≤ 5X the concentration of the related analyte in the method blank.	U, PERC4	N/A
☐	☒	☐	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
☐	☐	☒	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
☐	☒	☐	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
☐	☒	☐	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
☐	☒	☐	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 **LC/MS/MS Perchlorate Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

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

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

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	27. The MS/MSD relative percent difference was >20%.	UJ, PERC12g	J, PERC12g
☐	☐	☒	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
☐	☐	☒	29. The sample was diluted because target analytes were > the initial verification calibration.	UJ, PERC15a	J, PERC15a
☐	☐	☒	30. The Contract Required Detection Limit check standard (CRI) sample did not pass method-acceptance limits.	UJ, R, PERC16	J, PERC16
☐	☐	☒	31. The Interference Check Sample was not within ±20% of the known value.	UJ, PERC16a	J, PERC16a
☐	☐	☒	32. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, PERC16c	R, PERC16c
☐	☒	☐	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
☐	☒	☐	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: 944719

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7856

Date Received: 15-JAN-10

GEL Job No (SDG): 10-1263

GEL Sample ID: 244852001

Date Filtered: 27-JAN-10

Injection Volume (uL): 20

%Solids: 90.6

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.552	2.21	0.552	ug/kg	U	1	27-JAN-10 20:59	per0127015a
	Perchlorate Isotope Ratio						1	27-JAN-10 20:59	per0127015a
14797-73-0	Perchlorate-101	.552	2.21	0.552	ug/kg	U	1	27-JAN-10 20:59	per0127015a
	Perchlorate-O(18)			5.52	ug/kg		1	27-JAN-10 20:59	per0127015a

^ 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 =

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

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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: 944719

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7857

Date Received: 15-JAN-10

GEL Job No (SDG): 10-1263

GEL Sample ID: 244852002

Date Filtered: 27-JAN-10

Injection Volume (uL): 20

%Solids: 93.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.533	2.13	0.533	ug/kg	U	1	27-JAN-10 21:23	per0127018a
	Perchlorate Isotope Ratio						1	27-JAN-10 21:23	per0127018a
14797-73-0	Perchlorate-101	.533	2.13	0.533	ug/kg	U	1	27-JAN-10 21:23	per0127018a
	Perchlorate-O(18)			5.36	ug/kg		1	27-JAN-10 21:23	per0127018a

^ 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 =

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

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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: 944719

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7855

Date Received: 15-JAN-10

GEL Job No (SDG): 10-1263

GEL Sample ID: 244852003

Date Filtered: 27-JAN-10

Injection Volume (uL): 20

%Solids: 92.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.54	2.16	0.540	ug/kg	U	1	27-JAN-10 21:31	per0127019a
	Perchlorate Isotope Ratio						1	27-JAN-10 21:31	per0127019a
14797-73-0	Perchlorate-101	.54	2.16	0.540	ug/kg	U	1	27-JAN-10 21:31	per0127019a
	Perchlorate-O(18)			5.83	ug/kg		1	27-JAN-10 21:31	per0127019a

^ 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 =

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

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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: 944719

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7854

Date Received: 15-JAN-10

GEL Job No (SDG): 10-1263

GEL Sample ID: 244852004

Date Filtered: 27-JAN-10

Injection Volume (uL): 20

%Solids: 86

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.58	2.32	0.580	ug/kg	U	1	27-JAN-10 21:39	per0127020a
	Perchlorate Isotope Ratio						1	27-JAN-10 21:39	per0127020a
14797-73-0	Perchlorate-101	.58	2.32	0.580	ug/kg	U	1	27-JAN-10 21:39	per0127020a
	Perchlorate-O(18)			6.28	ug/kg		1	27-JAN-10 21:39	per0127020a

^ 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 =

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

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DATA VALIDATION COVER SHEET

5122-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 10-1263 VALIDATION DATE: 2/22/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Larry Fukui ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	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. The CCV %Ds were >20% with a positive bias for 2,4,6-trinitrotoluene; 2,4-dinitrotoluene; and RDX. The associated sample results were NDs and, thus, were not qualified.
2. The MSD %R was > the laboratory's UAL for TATB. The associated sample results were NDs and, thus, were not qualified. The MS/MSD RPD was > the laboratory acceptance limit for TATB. The associated sample results were NDs and, thus, were qualified UJ,HE12g. It should be noted that the MS and MSD parent sample was from another LANL RN. No sample data were qualified as a result.
3. It should be noted that the raw ICAL data from the instrument used for the secondary HE analysis were not reported in the data package. Thus, the surrogate retention time criteria could not be evaluated. No sample data were qualified as a result.

Reviewed by: Charissa Lewis Level: 1 Date: 2/24/10

VALIDATOR'S SIGNATURE: DATE: 2/22/10

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST

5122-2

LC/MS/MS High Explosive Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The IS retention time has shifted by more than 30 seconds.	R, UJ, HE0	J, HE0
☐	☒	☐	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE0b	R, HE0b
☐	☐	☒	3. The quantitating IS area count is <25% of the expected value, which indicates increased potential for false negative results and other possible problems with sample quantitation. Follow the method-specific windows.	R, HE1a	J, HE1a
☐	☐	☒	4. The IS area count for the quantitating IS is <70% but >25% of the average of that obtained from the calibration standards.	UJ, HE1b	J+, HE1b
☐	☐	☒	5. The IS area count for the quantitating IS is >130% of the average of that obtained from the calibration standards.	UJ, HE1c	J-, HE1c
☐	☐	☒	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE1d	R, HE1d
☐	☒	☐	7. The surrogate is <10%R. Follow the external laboratory limits.	R, HE3	J-, HE3
☐	☒	☐	8. The surrogate is < the Lower Acceptance Limit but ≥10% recovery. Follow the external laboratory limits.	UJ, HE3a	J-, HE3a
☐	☒	☐	9. The surrogate %R value is > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, HE3b
☐	☐	☒	10. At least one surrogate is > the Upper Acceptance Limit and one surrogate is < the Lower Acceptance Limit. Follow the external laboratory limits.	UJ, HE3c	J, HE3c

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST	
5122-2 LC/MS/MS High Explosive Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	11. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE3d	R, HE3d
☐	☒	☐	12. The sample result is ≤5 times the concentration of the related analyte in the method blank.	U, HE4	N/A
☐	☒	☐	13. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5x.	N/A	J, HE4a
☐	☐	☒	14. The sample result is ≤5 times the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, HE4d	N/A
☐	☒	☐	15. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE4e	R, HE4e
☐	☒	☐	16. The absence of sample carry-over must be determined and verified.	N/A	R, N, HE4f
☐	☒	☐	17. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, HE7	J, HE7
☐	☒	☐	18. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is less < 0.99.	UJ, R, HE7a	J, HE7a
☐	☒	☐	19. The affected analytes were analyzed with a RRF of <0.05 in the initial calibration and/or CCV.	UJ, R, HE7b	J, HE7b
☒	☐	☐	20. The ICV and/or CCV were recovered outside the method limits.	UJ, R, HE7c	J, HE7c
☐	☒	☐	21. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, HE7d	J, HE7d
☐	☒	☐	22. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, HE7f	R, HE7f

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST

5122-2

LC/MS/MS High Explosive Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	23. The mass spectral documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE8a	R, HE8a
☐	☒	☐	24. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, HE9	J-, HE9
☐	☒	☐	25. The holding time was >2 times the applicable holding time requirement.	R, HE9a	J-, HE9a
☐	☒	☐	26. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, HE12	J-, HE12
☐	☒	☐	27. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, HE12a	J-, HE12a
☐	☒	☐	28. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, HE12b
☐	☒	☐	29. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE12c	R, HE12c
☐	☒	☐	30. The MS/MSD percent recovery was <10%.	R, HE12d	R, HE12d
☐	☒	☐	31. The MS/MSD percent recovery was >10% but <70%.	UJ, HE12e	J, HE12e
☒	☐	☐	32. The MS/MSD percent recover was >70%.	N/A	J+, HE12f
☒	☐	☐	33. The MS/MSD relative percent difference was >30%.	UJ, HE12g	J, HE12g
☐	☐	☒	34. 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, HE15	R, HE15
☐	☐	☒	35. The sample was diluted because target analytes were > the initial verification calibration.	UJ, HE15a	J, HE15a

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST	
5122-2 LC/MS/MS High Explosive Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	36. The Contract Required Detection Limit Check Standard (CRI) sample did not pass method acceptance criteria.	UJ, R, HE16	J, HE16
☐	☐	☒	37. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, HE16c	R, HE16c
☐	☒	☐	38. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.	UJ, R, HE19	J, R, HE19
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, HE88	J, HE88

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7856

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852001

Sample Amount 2

Moisture: 9.4

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0131021a

Date Analyzed: 31-JAN-10 22:25

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7856

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852001

Sample Amount 2

Moisture: 9.4

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01250028.wiff

Date Analyzed: 25-JAN-10 17:36

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB UJ,HE12g	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7857

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852002

Sample Amount 2

Moisture: 6.3

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0131022a

Date Analyzed: 31-JAN-10 22:55

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7857

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852002

Sample Amount 2

Moisture: 6.3

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01250029.wiff

Date Analyzed: 25-JAN-10 17:52

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB UJ,HE12g	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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2/22/10

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7855

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852003

Sample Amount 2

Moisture: 7.5

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0131026a

Date Analyzed: 01-FEB-10 00:53

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7855

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852003

Sample Amount 2

Moisture: 7.5

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01250030.wiff

Date Analyzed: 25-JAN-10 18:08

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB UJ,HE12g	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7854

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852004

Sample Amount 2

Moisture: 13.8

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0131027a

Date Analyzed: 01-FEB-10 01:22

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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2/22/10

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7854

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852004

Sample Amount 2

Moisture: 13.8

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01250031.wiff

Date Analyzed: 25-JAN-10 18:24

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB UJ,HE12g	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

LMF
2/22/10

DATA VALIDATION COVER SHEET

5116-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 10-1263 VALIDATION DATE: 2/22/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Larry Fukui ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	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 MS and MSD parent sample was from another LANL RN and the raw data for the parent sample was not included in the package. Since an MS/MSD was not required, no sample results were qualified.

Reviewed by: Charissa Lewis Level: 1 Date: 2/24/10

VALIDATOR'S SIGNATURE: DATE: 2/22/10

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, P9	J-, P9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, P9	J-, P9a
☐	☒	☐	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, P9b	R, P9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, P7	J, P7
☐	☒	☐	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, P7a	J, P7a
☐	☒	☐	6. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, P7c	J, P7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, P7d	J, P7d
☐	☐	☒	8. The multicomponent standard was not analyzed within 72 hours of the initial analysis.	R, P7e	J, P7e
☐	☒	☐	9. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, P7f	R, P7f
☐	☐	☒	10. The breakdown criteria have been exceeded. This can cause low bias in reported results. If compound is detected, qualify J-. If compound is not present, but breakdown products are present, qualify R. If no compounds or breakdown products are present, qualify UJ (4,4' DDT and Endrin).	UJ, R, P13	J-, P13

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	11. The breakdown criteria have been exceeded. This can cause high bias in the reported results and potential false positive results for the breakdown products Endrin ketone, Endrin aldehyde, DDD, and DDE.	UJ, P13a	J+, P13a
☐	☐	☒	12. The breakdown documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P13b	R, P13b
☐	☒	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, P4	N/A
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was greater than 5X.	N/A	J, P4a
☐	☐	☒	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	UJ, P4b	N/A
☐	☐	☒	16. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	UJ, P4d	N/A
☐	☒	☐	17. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P4e	R, P4e
☐	☒	☐	18. The analyte RT shifted by more than 0.05 minutes from the mid-level standard of the initial calibration.	R, P0	J, P0
☐	☒	☐	19. Required retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P0b	R, P0b
☐	☒	☐	20. The surrogate is <10%R. Follow the external laboratory limits located within the associated data package.	R, P3	J-, P3

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2

Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	21. The surrogate is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package.	UJ, P3a	J-, P3a
☐	☒	☐	22. The surrogate %R value is > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P3b
☐	☒	☐	23. At least one surrogate is > the Upper Acceptance Limit (UAL) and one surrogate is < the LAL. Follow the external laboratory limits located within the associated data package.	UJ, P3c	J, P3c
☐	☒	☐	24. Required surrogate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P3d	R, P3d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, P12	J-, P12
☐	☒	☐	26. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, P12a	J-, P12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, P12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P12c	R, P12c
☐	☐	☒	29. The analyte was not confirmed on a second dissimilar column.	N/A	R, P8
☐	☐	☒	30. The second dissimilar column documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, P8a	R, P8a
☐	☒	☐	31. Duplicate, Dilution, or reanalysis.	UJ, P88	J, P88

ORGANOCHLORINE PESTICIDE (PEST) AND POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL DATA VALIDATION CHECKLIST

5116-2 Organochlorine Pesticide (PEST) and Polychlorinated Biphenyl (PCB) Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	**32. The affected analytes have elevated detection limits and may not meet project DQOs because the sample was diluted without any target analytees identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.**	**UJ, R, P15**	**R, P15**
☒	☐	☐	**33. 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**
☐	☒	☐	**34. The LANL project chemist identified quality deficiencies in the reported data that requires further qualification. This code can only be used and/or under advisement by the LANL project chemist.**	**UJ, R, P19**	**J, R, P19**

PCB
Certificate of Analysis
Sample Summary

SDG Number:	10-1263	**Date Collected:**	01/11/2010 12:00	**Matrix:**	R
Lab Sample ID:	244852001	**Date Received:**	01/15/2010 08:50	**%Moisture:**	9.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	RE12-10-7856	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	943205	**Inst:**	ECD2A.I	**Dilution:**	1
Run Date:	01/20/2010 13:06	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	01/19/2010 20:46	**Aliquot:**	30.09 g	**Final Volume:**	1 mL
Data File:	027f2701.d	**Column:**	1 CLP1	**Level:**	LOW
	027b2701.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.67	ug/kg	1.22	3.67	1
11104-28-2	Aroclor-1221	U	3.67	ug/kg	1.22	3.67	1
11141-16-5	Aroclor-1232	U	3.67	ug/kg	1.22	3.67	1
53469-21-9	Aroclor-1242	U	3.67	ug/kg	1.22	3.67	1
12672-29-6	Aroclor-1248	U	3.67	ug/kg	1.22	3.67	1
11097-69-1	Aroclor-1254	U	3.67	ug/kg	1.22	3.67	1
11096-82-5	Aroclor-1260	U	3.67	ug/kg	1.22	3.67	1

LMF
2/22/10

PCB
Certificate of Analysis
Sample Summary

SDG Number:	10-1263	Date Collected:	01/11/2010 12:00	Matrix:	R
Lab Sample ID:	244852002	Date Received:	01/15/2010 08:50	%Moisture:	6.3
		Client:	LANL010	Project:	LANL01004
Client ID:	RE12-10-7857	Method:	SW846 8082	SOP Ref:	GL-OA-E-040
Batch ID:	943205	Inst:	ECD2A.I	Dilution:	1
Run Date:	01/20/2010 13:40	Analyst:	JAOC	Inj. Vol:	1 uL
Prep Date:	01/19/2010 20:46	Aliquot:	30.09 g	Final Volume:	1 mL
Data File:	030f3001.d	Column:	1 CLP1	Level:	LOW
	030b3001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.55	ug/kg	1.18	3.55	1
11104-28-2	Aroclor-1221	U	3.55	ug/kg	1.18	3.55	1
11141-16-5	Aroclor-1232	U	3.55	ug/kg	1.18	3.55	1
53469-21-9	Aroclor-1242	U	3.55	ug/kg	1.18	3.55	1
12672-29-6	Aroclor-1248	U	3.55	ug/kg	1.18	3.55	1
11097-69-1	Aroclor-1254	U	3.55	ug/kg	1.18	3.55	1
11096-82-5	Aroclor-1260	U	3.55	ug/kg	1.18	3.55	1

LMF
2/22/10

DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 10-1263 VALIDATION DATE: 2/22/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Larry Fukui ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	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. In the MB, Fe, Mg, Mn, Na, and Sb were detected. The associated sample results for Na were detects >5X but ≤50X the MB concentrations and, thus, were qualified J,I4a. The associated sample results for Sb were NDs and, thus, were not qualified. All other associated sample results were detects >50X the MB concentrations and, thus, were not qualified based on professional judgment.
2. In the ICB and/or CCB, Mg, Na, and Sb were detected. The associated sample results for Sb were NDs and, thus, were not qualified. All other associated sample results were detects >5X the greatest blank concentrations and, thus, were not qualified.
3. The MS %Rs were > the laboratory's UAL for K, Mg, and Mn. The associated sample results were detects and, thus, were qualified J+,I6b. The MS %Rs were also > the laboratory's UAL for Al, Fe, and Hg. However, the associated parent sample results were >4X the spike concentrations and, thus, no sample results were qualified, based on professional judgment.
4. It should be noted that the matrix QC parent sample was from another LANL RN. No sample results were qualified as a result.

Reviewed by: Charissa Lewis Level: 1 Date: 2/24/10

DATA VALIDATION COVER SHEET

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

VALIDATOR'S SIGNATURE: _____ DATE: 2/22/10

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

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☐	☒	3. The instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
☐	☐	☒	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
☐	☐	☒	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
☐	☐	☒	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
☐	☒	☐	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
☐	☒	☐	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
☐	☒	☐	9. The Initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	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
☐	☒	☐	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1952

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

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

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Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	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
☐	☒	☐	26. The sample and the duplicate sample results were ≥5X the RL and the duplicate RPD was >20% for water samples and >35% for soil samples.	UJ, I10a	J, I10a
☐	☒	☐	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
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	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
☐	☒	☐	30. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	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
☐	☐	☒	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

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	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
☐	☐	☒	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
☐	☐	☒	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
☐	☐	☒	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
☐	☐	☒	37. Serial dilution sample was not analyzed with the samples.	UJ, I18a	J, I18
☐	☐	☒	38. The sample result was reported as detected between the IDL and the EDL.	N/A	J, I1
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, I88	J, I88
☒	☐	☐	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
☐	☒	☐	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: 10-1263 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 244852001 **BASIS:** Dry Weight **DATE COLLECTED** 11-JAN-10

CLIENT ID: RE12-10-7856 **LEVEL:** Low **DATE RECEIVED** 15-JAN-10

MATRIX: SOIL **%SOLIDS:** 90.6

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2820000	ug/Kg		7350	21600	21600	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-36-0	Antimony	1080	ug/Kg	U	357	1080	1080	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-38-2	Arsenic	1.14	mg/kg		0.22	1.1	1.1	2	MS	BAJ	02/08/10 04:11	100207-3	942638
7440-39-3	Barium	40500	ug/Kg		108	540	540	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-41-7	Beryllium	0.447	mg/kg		0.022	0.11	0.11	2	MS	BAJ	02/08/10 07:48	100207-4	942638
7440-43-9	Cadmium	540	ug/Kg	U	108	540	540	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-70-2	Calcium	991000	ug/Kg		8640	27000	27000	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-47-3	Chromium	4630	ug/Kg		162	540	540	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-48-4	Cobalt	1820	ug/Kg		162	540	540	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-50-8	Copper	3250	ug/Kg		324	1080	1080	1	P	HSC	02/02/10 01:56	020110-1	942648
7439-89-6	Iron	8330000	ug/Kg		8640	27000	27000	1	P	HSC	02/02/10 01:56	020110-1	942648
7439-92-1	Lead	6430	ug/Kg		270	1080	1080	1	P	HSC	02/02/10 01:56	020110-1	942648
7439-95-4	Magnesium J+,I6b	662000	ug/Kg		9180	32400	32400	1	P	HSC	02/02/10 01:56	020110-1	942648
7439-96-5	Manganese J+,I6b	238000	ug/Kg		216	1080	1080	1	P	HSC	02/02/10 01:56	020110-1	942648
7439-97-6	Mercury	5.84	ug/kg	J	4.49	13.2	13.2	1	AV	JXL1	01/28/10 09:51	012810S1-6	943320
7440-02-0	Nickel	2.63	mg/kg		0.11	0.44	0.44	2	MS	BAJ	02/08/10 04:11	100207-3	942638
7440-09-7	Potassium J+,I6b	515000	ug/Kg		6910	27000	27000	1	P	HSC	02/02/10 01:56	020110-1	942648
7782-49-2	Selenium	1.1	mg/kg	U	0.55	1.1	1.1	2	MS	BAJ	02/08/10 04:11	100207-3	942638
7440-22-4	Silver	540	ug/Kg	U	108	540	540	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-23-5	Sodium J,I4a	60500	ug/Kg		7560	27000	27000	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-28-0	Thallium	0.220	mg/kg	U	0.066	0.22	0.22	2	MS	BAJ	02/08/10 04:11	100207-3	942638
7440-61-1	Uranium	1.25	mg/kg		0.0145	0.0438	0.0438	2	MS	SKJ	02/09/10 21:41	100209-2	950661
7440-62-2	Vanadium	9360	ug/Kg		108	540	540	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-66-6	Zinc	34000	ug/Kg		357	1080	1080	1	P	HSC	02/02/10 01:56	020110-1	942648

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942638	942632	SW846 3050B	0.502	g	50	mL	01/21/10	AXG2
942648	942644	SW846 3050B	0.511	g	50	mL	01/21/10	AXG2
943320	943319	SW846 7471A Prep	0.502	g	30	mL	01/27/10	TXB3
950661	950660	SW846 3050B	0.504	g	50	mL	02/09/10	AXG2

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2/22/10

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1263 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 244852002 **BASIS:** Dry Weight **DATE COLLECTED** 11-JAN-10

CLIENT ID: RE12-10-7857 **LEVEL:** Low **DATE RECEIVED** 15-JAN-10

MATRIX: SOIL **%SOLIDS:** 93.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3100000	ug/Kg		6990	20600	20600	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-36-0	Antimony	1030	ug/Kg	U	339	1030	1030	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-38-2	Arsenic	1.17	mg/kg		0.21	1.05	1.05	2	MS	BAJ	02/08/10 04:17	100207-3	942638
7440-39-3	Barium	37600	ug/Kg		103	514	514	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-41-7	Beryllium	0.484	mg/kg		0.021	0.105	0.105	2	MS	BAJ	02/08/10 07:52	100207-4	942638
7440-43-9	Cadmium	514	ug/Kg	U	103	514	514	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-70-2	Calcium	968000	ug/Kg		8220	25700	25700	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-47-3	Chromium	5050	ug/Kg		154	514	514	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-48-4	Cobalt	1430	ug/Kg		154	514	514	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-50-8	Copper	2980	ug/Kg		308	1030	1030	1	P	HSC	02/02/10 02:03	020110-1	942648
7439-89-6	Iron	9960000	ug/Kg		8220	25700	25700	1	P	HSC	02/02/10 02:03	020110-1	942648
7439-92-1	Lead	5280	ug/Kg		257	1030	1030	1	P	HSC	02/02/10 02:03	020110-1	942648
7439-95-4	Magnesium J+,I6b	692000	ug/Kg		8740	30800	30800	1	P	HSC	02/02/10 02:03	020110-1	942648
7439-96-5	Manganese J+,I6b	215000	ug/Kg		206	1030	1030	1	P	HSC	02/02/10 02:03	020110-1	942648
7439-97-6	Mercury	12.4	ug/kg	U	4.22	12.4	12.4	1	AV	JXL1	01/28/10 09:53	012810S1-6	943320
7440-02-0	Nickel	2.57	mg/kg		0.105	0.42	0.42	2	MS	BAJ	02/08/10 04:17	100207-3	942638
7440-09-7	Potassium J+,I6b	561000	ug/Kg		6580	25700	25700	1	P	HSC	02/02/10 02:03	020110-1	942648
7782-49-2	Selenium	1.05	mg/kg	U	0.525	1.05	1.05	2	MS	BAJ	02/08/10 04:17	100207-3	942638
7440-22-4	Silver	255	ug/Kg	J	103	514	514	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-23-5	Sodium J,I4a	75700	ug/Kg		7200	25700	25700	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-28-0	Thallium	0.210	mg/kg	U	0.063	0.21	0.21	2	MS	BAJ	02/08/10 04:17	100207-3	942638
7440-61-1	Uranium	0.857	mg/kg		0.014	0.0423	0.0423	2	MS	SKJ	02/09/10 21:43	100209-2	950661
7440-62-2	Vanadium	9300	ug/Kg		103	514	514	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-66-6	Zinc	37800	ug/Kg		339	1030	1030	1	P	HSC	02/02/10 02:03	020110-1	942648

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942638	942632	SW846 3050B	0.508	g	50	mL	01/21/10	AXG2
942648	942644	SW846 3050B	0.519	g	50	mL	01/21/10	AXG2
943320	943319	SW846 7471A Prep	0.516	g	30	mL	01/27/10	TXB3
950661	950660	SW846 3050B	0.504	g	50	mL	02/09/10	AXG2

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2/22/10

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1263 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 244852003 **BASIS:** Dry Weight **DATE COLLECTED** 11-JAN-10

CLIENT ID: RE12-10-7855 **LEVEL:** Low **DATE RECEIVED** 15-JAN-10

MATRIX: SOIL **%SOLIDS:** 92.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	11400000	ug/Kg		7110	20900	20900	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-36-0	Antimony	1050	ug/Kg	U	345	1050	1050	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-38-2	Arsenic	1.87	mg/kg		0.209	1.04	1.04	2	MS	BAJ	02/08/10 04:36	100207-3	942638
7440-39-3	Barium	243000	ug/Kg		105	523	523	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-41-7	Beryllium	1.05	mg/kg		0.0209	0.104	0.104	2	MS	BAJ	02/08/10 08:03	100207-4	942638
7440-43-9	Cadmium	523	ug/Kg	U	105	523	523	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-70-2	Calcium	2400000	ug/Kg		8360	26100	26100	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-47-3	Chromium	11500	ug/Kg		157	523	523	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-48-4	Cobalt	7080	ug/Kg		157	523	523	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-50-8	Copper	7070	ug/Kg		314	1050	1050	1	P	HSC	02/02/10 02:11	020110-1	942648
7439-89-6	Iron	13600000	ug/Kg		8360	26100	26100	1	P	HSC	02/02/10 02:11	020110-1	942648
7439-92-1	Lead	14700	ug/Kg		261	1050	1050	1	P	HSC	02/02/10 02:11	020110-1	942648
7439-95-4	Magnesium J+,I6b	2040000	ug/Kg		8880	31400	31400	1	P	HSC	02/02/10 02:11	020110-1	942648
7439-96-5	Manganese J+,I6b	474000	ug/Kg		209	1050	1050	1	P	HSC	02/02/10 02:11	020110-1	942648
7439-97-6	Mercury	9	ug/kg	J	4.27	12.6	12.6	1	AV	JXL1	01/28/10 09:55	012810S1-6	943320
7440-02-0	Nickel	8.43	mg/kg		0.104	0.417	0.417	2	MS	BAJ	02/08/10 04:36	100207-3	942638
7440-09-7	Potassium J+,I6b	1850000	ug/Kg		6690	26100	26100	1	P	HSC	02/02/10 02:11	020110-1	942648
7782-49-2	Selenium	1.04	mg/kg	U	0.522	1.04	1.04	2	MS	BAJ	02/08/10 04:36	100207-3	942638
7440-22-4	Silver	138	ug/Kg	J	105	523	523	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-23-5	Sodium J,I4a	89200	ug/Kg		7320	26100	26100	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-28-0	Thallium	0.257	mg/kg		0.0626	0.209	0.209	2	MS	BAJ	02/08/10 04:36	100207-3	942638
7440-61-1	Uranium	1.11	mg/kg		0.0137	0.0414	0.0414	2	MS	SKJ	02/09/10 21:46	100209-2	950661
7440-62-2	Vanadium	28800	ug/Kg		105	523	523	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-66-6	Zinc	25800	ug/Kg		345	1050	1050	1	P	HSC	02/02/10 02:11	020110-1	942648

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942638	942632	SW846 3050B	0.518	g	50	mL	01/21/10	AXG2
942648	942644	SW846 3050B	0.517	g	50	mL	01/21/10	AXG2
943320	943319	SW846 7471A Prep	0.516	g	30	mL	01/27/10	TXB3
950661	950660	SW846 3050B	0.522	g	50	mL	02/09/10	AXG2

LMF
2/22/10

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1263 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 244852004 **BASIS:** Dry Weight **DATE COLLECTED** 11-JAN-10

CLIENT ID: RE12-10-7854 **LEVEL:** Low **DATE RECEIVED** 15-JAN-10

MATRIX: SOIL **%SOLIDS:** 86

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9660000	ug/Kg		7810	23000	23000	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-36-0	Antimony	1150	ug/Kg	U	379	1150	1150	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-38-2	Arsenic	2.03	mg/kg		0.222	1.11	1.11	2	MS	BAJ	02/08/10 04:42	100207-3	942638
7440-39-3	Barium	209000	ug/Kg		115	574	574	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-41-7	Beryllium	1.02	mg/kg		0.0222	0.111	0.111	2	MS	BAJ	02/08/10 08:07	100207-4	942638
7440-43-9	Cadmium	574	ug/Kg	U	115	574	574	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-70-2	Calcium	2280000	ug/Kg		9190	28700	28700	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-47-3	Chromium	13300	ug/Kg		172	574	574	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-48-4	Cobalt	6560	ug/Kg		172	574	574	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-50-8	Copper	10400	ug/Kg		345	1150	1150	1	P	HSC	02/02/10 02:18	020110-1	942648
7439-89-6	Iron	13900000	ug/Kg		9190	28700	28700	1	P	HSC	02/02/10 02:18	020110-1	942648
7439-92-1	Lead	15200	ug/Kg		287	1150	1150	1	P	HSC	02/02/10 02:18	020110-1	942648
7439-95-4	Magnesium J+,I6b	1980000	ug/Kg		9770	34500	34500	1	P	HSC	02/02/10 02:18	020110-1	942648
7439-96-5	Manganese J+,I6b	468000	ug/Kg		230	1150	1150	1	P	HSC	02/02/10 02:18	020110-1	942648
7439-97-6	Mercury	11.3	ug/kg	J	4.38	12.9	12.9	1	AV	JXL1	01/28/10 09:57	012810S1-6	943320
7440-02-0	Nickel	8.54	mg/kg		0.111	0.444	0.444	2	MS	BAJ	02/08/10 04:42	100207-3	942638
7440-09-7	Potassium J+,I6b	2110000	ug/Kg		7350	28700	28700	1	P	HSC	02/02/10 02:18	020110-1	942648
7782-49-2	Selenium	1.11	mg/kg	U	0.555	1.11	1.11	2	MS	BAJ	02/08/10 04:42	100207-3	942638
7440-22-4	Silver	193	ug/Kg	J	115	574	574	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-23-5	Sodium J,I4a	137000	ug/Kg		8040	28700	28700	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-28-0	Thallium	0.253	mg/kg		0.0666	0.222	0.222	2	MS	BAJ	02/08/10 04:42	100207-3	942638
7440-61-1	Uranium	3.2	mg/kg		0.0151	0.0459	0.0459	2	MS	SKJ	02/09/10 21:52	100209-2	950661
7440-62-2	Vanadium	30700	ug/Kg		115	574	574	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-66-6	Zinc	31000	ug/Kg		379	1150	1150	1	P	HSC	02/02/10 02:18	020110-1	942648

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942638	942632	SW846 3050B	0.523	g	50	mL	01/21/10	AXG2
942648	942644	SW846 3050B	0.505	g	50	mL	01/21/10	AXG2
943320	943319	SW846 7471A Prep	0.541	g	30	mL	01/27/10	TXB3
950661	950660	SW846 3050B	0.506	g	50	mL	02/09/10	AXG2

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2/22/10

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 10-1263 VALIDATION DATE: 2/22/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Larry Fukui ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	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. In the ICB and/or CCBs, total CN was detected. The associated sample results were NDs and, thus, were not qualified.
2. It should be noted that the matrix QC analysis for total CN were performed on a parent sample from another LANL RN. No sample data were qualified as a result.

Reviewed by: Charissa Lewis Level: 1 Date: 2/24/10

VALIDATOR'S SIGNATURE: DATE: 2/22/10

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☐	☒	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, I9b	R, I9b
☐	☒	☐	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
☐	☒	☐	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
☐	☒	☐	6. The ICV and/or CCV were recovered outside the method specific limits.	UJ, I7c	J, I7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	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
☐	☐	☒	9. The interference check sample percent recovery value is <50%.	R, I2	J-, I2
☐	☐	☒	10. The interference check sample percent recovery value is ≥50% and <80%.	UJ, I2a	J-, I2a
☐	☐	☒	11. The interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☐	☒	12. The interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☐	☒	☐	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

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	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
☒	☐	☐	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☐	☒	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
☐	☒	☐	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
☐	☒	☐	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☐	☒	☐	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
☐	☒	☐	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
☐	☒	☐	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
☐	☒	☐	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	
5120-2 General Chemistry Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below if Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	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
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	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
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	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
☐	☒	☐	29. Duplicate, dilution, or reanalysis	UJ, I88	J, I88
☐	☒	☐	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
☒	☐	☐	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 1, 2010

Client SDG: 10-1263

Client Sample ID:	RE12-10-7856	Project:	LANL01004
Sample ID:	244852001	Client ID:	LANL010
Matrix:	R		
Collect Date:	11-JAN-10 12:00		
Receive Date:	15-JAN-10		
Collector:	Client		
Moisture:	9.44%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total "Dry Weight Corrected"										
Cyanide, Total	U	ND	70.8	260	ug/kg	1	AXC2 01/18/10	1600	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	

LMF
2/22/10

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: February 1, 2010

Client SDG: 10-1263

Client Sample ID:	RE12-10-7857	Project:	LANL01004
Sample ID:	244852002	Client ID:	LANL010
Matrix:	R		
Collect Date:	11-JAN-10 12:00		
Receive Date:	15-JAN-10		
Collector:	Client		
Moisture:	6.28%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total "Dry Weight Corrected"										
Cyanide, Total	U	ND	71.1	262	ug/kg	1	AXC2 01/18/10	1604	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	

LMF
2/22/10

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: February 1, 2010

Client SDG: 10-1263

Client Sample ID:	RE12-10-7855	Project:	LANL01004
Sample ID:	244852003	Client ID:	LANL010
Matrix:	R		
Collect Date:	11-JAN-10 12:00		
Receive Date:	15-JAN-10		
Collector:	Client		
Moisture:	7.46%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total "Dry Weight Corrected"										
Cyanide, Total	U	ND	72.0	265	ug/kg	1	AXC2 01/18/10	1605	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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2/22/10

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

Report Date: February 1, 2010

Client SDG: 10-1263

Client Sample ID:	RE12-10-7854	Project:	LANL01004
Sample ID:	244852004	Client ID:	LANL010
Matrix:	R		
Collect Date:	11-JAN-10 12:00		
Receive Date:	15-JAN-10		
Collector:	Client		
Moisture:	13.8%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total "Dry Weight Corrected"										
Cyanide, Total	U	ND	70.5	259	ug/kg	1	AXC2 01/18/10	1606	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	

LMF
2/22/10

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY

Section I.

REQUEST NUMBER: 10-1263 VALIDATION DATE: 2/22/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Larry Fukui ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	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. All gamma spec sample results that were rejected by the laboratory due to interference or low abundance were qualified R,R5a. In the duplicate sample, the laboratory also rejected several results. No sample data were qualified as a result.
2. It should be noted that the matrix QC parent sample for all analyses <u>except</u> gamma spec was from another LANL RN. No sample results were qualified as a result.

Reviewed by: Charissa Lewis Level: 1 Date: 2/24/10

VALIDATOR'S SIGNATURE: DATE: 2/22/10

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY EST 1943

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

RAD ANALYTICAL DATA VALIDATION CHECKLIST	
5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST 1943

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

RAD ANALYTICAL DATA VALIDATION CHECKLIST	
5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
☐	☐	☒	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
☐	☐	☒	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
☐	☐	☒	24. 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. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
☐	☒	☐	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
☐	☒	☐	26. 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, R19	J, R, R19
☒	☐	☐	27. Quantification 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

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Certificate of Analysis

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

Report Date: January 29, 2010

Client Sample ID:	RE12-10-7856	Project:	LANL01004
Sample ID:	244852001	Client ID:	LANL010
Matrix:	R		
Collect Date:	11-JAN-10		
Receive Date:	15-JAN-10		
Collector:	Client		
Moisture:	9.44%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
AM241 "Dry Weight Corrected"													
Americium-241	U	0.00181		0.0205	+/-0.00533	0.050	pCi/g		KXM4	01/26/10	1417	942753	2
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00123		0.0203	+/-0.00442	0.050	pCi/g		KXM4	01/23/10	1208	942754	3
Plutonium-239/240	U	0.00613		0.0232	+/-0.00408	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.03		0.120	+/-0.0969	0.100	pCi/g		KXM4	01/26/10	2026	942756	4
Uranium-235/236		0.0764		0.0743	+/-0.0198	0.100	pCi/g						
Uranium-238		1.25		0.0694	+/-0.112	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0683		0.246	+/-0.0744	0.200	pCi/g		MXR1	01/26/10	1206	942718	5
Bismuth-211	UI	3.36	R,R5a	0.300	+/-0.222		pCi/g						
Bismuth-214		1.00		0.110	+/-0.0828	0.200	pCi/g						
Cadmium-109	UI	3.69	R,R5a	1.13	+/-0.528		pCi/g						
Cerium-139	U	-0.0178		0.0446	+/-0.0137	0.050	pCi/g						
Cesium-134	UI	0.102	R,R5a	0.0932	+/-0.0246	0.100	pCi/g						
Cesium-137		0.150		0.0603	+/-0.0362	0.100	pCi/g						
Cobalt-60	U	0.00582		0.0644	+/-0.0193	0.100	pCi/g						
Europium-152	U	-0.0792		0.144	+/-0.0449	0.200	pCi/g						
Lanthanum-140	U	-0.102		0.117	+/-0.0427		pCi/g						
Lead-212		1.49		0.0814	+/-0.0737	0.100	pCi/g						
Lead-214		1.17		0.105	+/-0.083	0.100	pCi/g						
Mercury-203	U	0.0151		0.0616	+/-0.0197	0.100	pCi/g						
Potassium-40		30.9		0.505	+/-1.41	1.00	pCi/g						
Radium-223	U	-0.582		0.943	+/-0.343		pCi/g						
Radium-224	UI	4.38	R,R5a	0.926	+/-0.674		pCi/g						
Radium-226		1.00		0.110	+/-0.0828		pCi/g						
Radium-228		1.57		0.191	+/-0.155	0.500	pCi/g						
Ruthenium-106	U	-0.292		0.430	+/-0.140	0.800	pCi/g						

LMF
2/22/10

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

Report Date: January 29, 2010

Client Sample ID: RE12-10-7856
Sample ID: 244852001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Sodium-22	U	-0.0356	0.0713	+/-0.0234	0.080	pCi/g						
Strontium-85	U	0.0272	0.0589	+/-0.0192		pCi/g						
Thallium-208		0.496	0.0544	+/-0.0427	0.080	pCi/g						
Thorium-227	U	-0.415	0.532	+/-0.168		pCi/g						
Thorium-231	U	-0.582	0.943	+/-0.343		pCi/g						
Thorium-234	U	1.09	2.02	+/-0.899	2.00	pCi/g						
Tin-113	U	0.00657	0.0665	+/-0.0196	0.100	pCi/g						
Uranium-235	U	-0.0954	0.321	+/-0.0981	0.500	pCi/g						
Yttrium-88	U	-0.0119	0.0441	+/-0.0146	0.100	pCi/g						

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	91.6	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	83.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	89.8	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-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.
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

LMF
2/22/10

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

Report Date: January 29, 2010

Client Sample ID:	RE12-10-7857	Project:	LANL01004
Sample ID:	244852002	Client ID:	LANL010
Matrix:	R		
Collect Date:	11-JAN-10		
Receive Date:	15-JAN-10		
Collector:	Client		
Moisture:	6.28%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
AM241 "Dry Weight Corrected"													
Americium-241	U	-0.00745		0.0239	+/-0.00575	0.050	pCi/g		KXM4	01/26/10	1417	942753	2
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	-0.0052		0.0215	+/-0.00636	0.050	pCi/g		KXM4	01/23/10	1208	942754	3
Plutonium-239/240	U	0.0104		0.0245	+/-0.00453	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.608		0.110	+/-0.0638	0.100	pCi/g		KXM4	01/26/10	2026	942756	4
Uranium-235/236	U	0.0352		0.0685	+/-0.0127	0.100	pCi/g						
Uranium-238		0.747		0.064	+/-0.0738	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0231		0.315	+/-0.0955	0.200	pCi/g		MXR1	01/26/10	1300	942718	5
Bismuth-211	UI	3.82	R,R5a	0.333	+/-0.336		pCi/g						
Bismuth-214		1.12		0.120	+/-0.0959	0.200	pCi/g						
Cadmium-109	UI	3.82	R,R5a	1.17	+/-0.498		pCi/g						
Cerium-139	U	-0.0155		0.0478	+/-0.0145	0.050	pCi/g						
Cesium-134	UI	0.127	R,R5a	0.100	+/-0.0262	0.100	pCi/g						
Cesium-137		0.0779		0.0669	+/-0.0235	0.100	pCi/g						
Cobalt-60	U	0.0188		0.0802	+/-0.0234	0.100	pCi/g						
Europium-152	U	0.00631		0.167	+/-0.0503	0.200	pCi/g						
Lanthanum-140	U	-0.0146		0.140	+/-0.0437		pCi/g						
Lead-212		1.54		0.0981	+/-0.113	0.100	pCi/g						
Lead-214		1.33		0.116	+/-0.122	0.100	pCi/g						
Mercury-203	U	0.0405		0.0749	+/-0.0232	0.100	pCi/g						
Potassium-40		31.7		0.476	+/-1.77	1.00	pCi/g						
Radium-223	U	-0.912		1.14	+/-0.367		pCi/g						
Radium-224	UI	4.37	R,R5a	1.12	+/-0.707		pCi/g						
Radium-226		1.12		0.120	+/-0.0959		pCi/g						
Radium-228		1.76		0.214	+/-0.176	0.500	pCi/g						
Ruthenium-106	U	0.00439		0.587	+/-0.172	0.800	pCi/g						
Sodium-22	U	-0.0397		0.0761	+/-0.0251	0.080	pCi/g						

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GEL LABORATORIES LLC

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Certificate of Analysis

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

Report Date: January 29, 2010

Client Sample ID: RE12-10-7857
Sample ID: 244852002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.00234	0.0671	+/-0.0233		pCi/g						
Thallium-208		0.571	0.0519	+/-0.0477	0.080	pCi/g						
Thorium-227	U	0.00988	0.667	+/-0.190		pCi/g						
Thorium-231	U	-0.912	1.14	+/-0.367		pCi/g						
Thorium-234	U	0.212	2.39	+/-1.09	2.00	pCi/g						
Tin-113	U	-0.0286	0.0758	+/-0.0235	0.100	pCi/g						
Uranium-235		0.393	0.358	+/-0.177	0.500	pCi/g						
Yttrium-88	U	0.0146	0.0619	+/-0.0174	0.100	pCi/g						

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	79.4	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	85.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.4	(50%-105%)

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

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B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
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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

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

Report Date: January 29, 2010

Client Sample ID: RE12-10-7855
Sample ID: 244852003
Matrix: R
Collect Date: 11-JAN-10
Receive Date: 15-JAN-10
Collector: Client
Moisture: 7.46%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
AM241 "Dry Weight Corrected"													
Americium-241	U	0.000627		0.0208	+/-0.00122	0.050	pCi/g		KXM4	01/26/10	1417	942753	2
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.0193		0.0199	+/-0.00689	0.050	pCi/g		KXM4	01/23/10	1208	942754	3
Plutonium-239/240	U	0.00121		0.0228	+/-0.00209	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.10		0.111	+/-0.0998	0.100	pCi/g		KXM4	01/26/10	2026	942756	4
Uranium-235/236	U	0.0662		0.0687	+/-0.0177	0.100	pCi/g						
Uranium-238		1.20		0.0642	+/-0.107	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	-0.00952		0.104	+/-0.0325	0.200	pCi/g		MXR1	01/26/10	1310	942718	5
Bismuth-211	UI	4.28	R,R5a	0.352	+/-0.328		pCi/g						
Bismuth-214		1.32		0.135	+/-0.111	0.200	pCi/g						
Cadmium-109	UI	4.12	R,R5a	0.979	+/-0.460		pCi/g						
Cerium-139	U	-0.0129		0.0478	+/-0.0145	0.050	pCi/g						
Cesium-134	U	0.0778		0.111	+/-0.0297	0.100	pCi/g						
Cesium-137	U	-0.0221		0.0755	+/-0.0245	0.100	pCi/g						
Cobalt-60	U	-0.0545		0.0687	+/-0.0244	0.100	pCi/g						
Europium-152	U	-0.0536		0.169	+/-0.0511	0.200	pCi/g						
Lanthanum-140	U	-0.113		0.136	+/-0.0526		pCi/g						
Lead-212		1.55		0.0919	+/-0.0975	0.100	pCi/g						
Lead-214		1.49		0.123	+/-0.121	0.100	pCi/g						
Mercury-203	U	-0.0251		0.0673	+/-0.0201	0.100	pCi/g						
Potassium-40		20.1		0.652	+/-1.30	1.00	pCi/g						
Radium-223	U	-0.104		1.22	+/-0.357		pCi/g						
Radium-224	UI	4.73	R,R5a	1.05	+/-0.676		pCi/g						
Radium-226		1.32		0.135	+/-0.111		pCi/g						
Radium-228		1.76		0.273	+/-0.199	0.500	pCi/g						
Ruthenium-106	U	-0.232		0.605	+/-0.197	0.800	pCi/g						
Sodium-22	U	-0.023		0.0808	+/-0.0267	0.080	pCi/g						

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2/22/10

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

Report Date: January 29, 2010

Client Sample ID: RE12-10-7855
Sample ID: 244852003
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.0258	0.0693	+/-0.0198		pCi/g						
Thallium-208		0.518	0.0624	+/-0.0573	0.080	pCi/g						
Thorium-227	U	-0.095	0.624	+/-0.195		pCi/g						
Thorium-231	U	-0.104	1.22	+/-0.357		pCi/g						
Thorium-234		2.17	1.01	+/-0.587	2.00	pCi/g						
Tin-113	U	0.0201	0.0831	+/-0.0237	0.100	pCi/g						
Uranium-235	U	0.0706	0.365	+/-0.107	0.500	pCi/g						
Yttrium-88	U	-0.0199	0.0465	+/-0.0175	0.100	pCi/g						

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	87.4	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	92.3	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	98.6	(50%-105%)

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

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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

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

Report Date: January 29, 2010

Client Sample ID: RE12-10-7854
Sample ID: 244852004
Matrix: R
Collect Date: 11-JAN-10
Receive Date: 15-JAN-10
Collector: Client
Moisture: 13.8%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
AM241 "Dry Weight Corrected"													
Americium-241	U	0.00916		0.0233	+/-0.00492	0.050	pCi/g		KXM4	01/26/10	1417	942753	2
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	-0.00116		0.0192	+/-0.00164	0.050	pCi/g		KXM4	01/23/10	1208	942754	3
Plutonium-239/240	U	0.0186		0.0219	+/-0.00474	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.66		0.127	+/-0.145	0.100	pCi/g		KXM4	01/26/10	2026	942756	4
Uranium-235/236		0.0911		0.0787	+/-0.0224	0.100	pCi/g						
Uranium-238		1.89		0.0736	+/-0.161	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.144		0.381	+/-0.105	0.200	pCi/g		MXR1	01/26/10	1320	942718	5
Bismuth-211	UI	3.48	R,R5a	0.322	+/-0.231		pCi/g						
Bismuth-214		1.05		0.0985	+/-0.0825	0.200	pCi/g						
Cadmium-109	UI	3.70	R,R5a	1.24	+/-0.576		pCi/g						
Cerium-139	U	0.000768		0.0455	+/-0.0136	0.050	pCi/g						
Cesium-134	UI	0.196	R,R5a	0.0915	+/-0.0382	0.100	pCi/g						
Cesium-137		0.304		0.057	+/-0.0315	0.100	pCi/g						
Cobalt-60	U	-0.00316		0.0551	+/-0.0168	0.100	pCi/g						
Europium-152	U	-0.0108		0.145	+/-0.0488	0.200	pCi/g						
Lanthanum-140	U	-0.0157		0.132	+/-0.0468		pCi/g						
Lead-212		1.54		0.0845	+/-0.078	0.100	pCi/g						
Lead-214		1.21		0.108	+/-0.0865	0.100	pCi/g						
Mercury-203	U	0.0235		0.0663	+/-0.0186	0.100	pCi/g						
Potassium-40		20.2		0.526	+/-1.17	1.00	pCi/g						
Radium-223	U	0.0741		1.01	+/-0.333		pCi/g						
Radium-224	UI	3.96	R,R5a	0.961	+/-0.442		pCi/g						
Radium-226		1.05		0.0985	+/-0.0825		pCi/g						
Radium-228		1.24		0.187	+/-0.163	0.500	pCi/g						
Ruthenium-106	U	0.119		0.472	+/-0.133	0.800	pCi/g						
Sodium-22	U	0.00962		0.0673	+/-0.0196	0.080	pCi/g						

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2/22/10

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

Report Date: January 29, 2010

Client Sample ID: RE12-10-7854
Sample ID: 244852004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.0274	0.0575	+/-0.0187		pCi/g						
Thallium-208		0.470	0.0545	+/-0.0411	0.080	pCi/g						
Thorium-227	U	0.0399	0.592	+/-0.169		pCi/g						
Thorium-231	U	0.0741	1.01	+/-0.333		pCi/g						
Thorium-234	U	1.42	3.06	+/-0.860	2.00	pCi/g						
Tin-113	U	-0.0104	0.0675	+/-0.0204	0.100	pCi/g						
Uranium-235	U	0.139	0.341	+/-0.100	0.500	pCi/g						
Yttrium-88	U	-0.0293	0.0411	+/-0.0162	0.100	pCi/g						

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	82.8	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	92.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	87.8	(50%-105%)

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

** Analyte is a surrogate compound
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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

LMF
2/22/10

Thursday, January 14, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1263

REQUEST NUMBER: 10-1263

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/13/2010

TURNAROUND REQ'D: 30

General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

LAB REQUEST COMMENTS: 244852%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE12-10-7856	1	AMBER GLASS	8082+NMED-HEXP	Ice	R
RE12-10-7856	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7856	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7857	1	AMBER GLASS	8082+NMED-HEXP	Ice	R
RE12-10-7857	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7857	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7855	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7855	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7855	1	AMBER GLASS	NMED Explosives list	Ice	R
RE12-10-7854	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7854	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7854	1	AMBER GLASS	NMED Explosives list	Ice	R

Relinquished By:	Date	Time	Received By:	Date	Time
Printed Name / Signature	1/14/10	1400	P.O.D 1-15-10 Patricia Dover-Dent / P. Dover-Dent	1-15-10	08:5
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

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

Thursday, January 14, 2010

REQUEST NUMBER: 10-1263

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:10-1263
Per Agreement Number:126310011
Project Cost Code: MR3A05529E00

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 1/14/2010
TURNAROUND/REPORT DUE: 2/13/2010
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
	EPA:901.1	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	HASL-300:AM-241	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	HASL-300:ISOPU	1	RE12-10-7854	R	1/11/2010	

Thursday, January 14, 2010

REQUEST NUMBER: 10-1263

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOPU	1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	HASL-300:ISOU	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:6020	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:6850	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:7471A	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:8082	1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:8321A_MOD	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:9012A	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	

Thursday, January 14, 2010

REQUEST NUMBER: 10-1263

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	RE12-10-7857	R	1/11/2010	

Final Page of REQUEST NUMBER 10-1263

GEL Laboratories LLC

a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407

P 843.556.8171 F 843.766.1178

www.gel.com

January 19, 2010

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 Order: 244852
SDG: 10-1263

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on January 15, 2010, and analyzed for Explosives by LCMSMS, GC Semivolatile PCB, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry. 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,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 10-1263
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 244852
SDG: 10-1263

TABLE OF CONTENTS

Case Narrative.....1

Chain of Custody and Supporting Documentation..... 4

Data Review Qualifier Flag Definition Sheet..... 13

LC/MS/MS Perchlorate Analysis..... 15
- Sample Data Summary.....20
- Quality Control Summary.....25
- Sample Data..... 47
- Standards Data.....56
- Quality Control 68
- Miscellaneous Data.....77

LC/MS/MS Explosives Analysis.....84
- Sample Data Summary.....90
- Quality Control Summary.....99
- Sample Data..... 160
- Standards Data..... 189
- Quality Control Data.....264
- Miscellaneous Data.....280

GC Semivolatile PCB Analysis.....302
- Sample Data Summary.....308
- Quality Control Summary.....311
- Sample Data..... 317
- Standards Data.....330
- Quality Control Data.....386
- Miscellaneous Data.....399

Metals Analysis..... 416
- Case Narrative..... 417

Sample Data Summary.....423
Quality Control Summary.....428
Standards.....498
Raw Data.....511
Miscellaneous.....907

General Chemistry Analysis.....950
Case Narrative.....951
Sample Data Summary.....956
Quality Control Summary.....962
Instrument QC Data Summary.....965
Cyanide, Total.....967

Radiological Analysis.....989
Sample Data Summary.....1001
Quality Control Data.....1015
Raw Data.....1022
Background and Efficiency Data.....1387
Standards Data.....1463
Runlogs.....1495

Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 244852
SDG # : 10-1263

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 15, 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. The containers for radiochemistry were received at 12-14C temperatures. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
244852001	RE12-10-7856
244852002	RE12-10-7857
244852003	RE12-10-7855
244852004	RE12-10-7854

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: Explosives by LCMSMS, GC Semivolatile PCB, General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry.

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.

for

Valerie Davis

Project Manager

List of current GEL Certifications as of 19 January 2010

State	Certification
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

Thursday, January 14, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1263

REQUEST NUMBER: 10-1263

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 2/13/2010

TURNAROUND REQ'D: 30

LAB REQUEST COMMENTS: 244852%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE12-10-7856	1	AMBER GLASS	8082+NMED-HEXP	Ice	R
RE12-10-7856	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7856	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7857	1	AMBER GLASS	8082+NMED-HEXP	Ice	R
RE12-10-7857	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7857	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7855	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7855	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7855	1	AMBER GLASS	NMED Explosives list	Ice	R
RE12-10-7854	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7854	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7854	1	AMBER GLASS	NMED Explosives list	Ice	R

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[illegible]	1/14/10	1400	P.Q.D 1-15-10 Patricia Dover-Dent	P.Q.D Dent	1-15-10	08:5
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

Thursday, January 14, 2010

REQUEST NUMBER: 10-1263

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:10-1263

Per Agreement Number:126310011

Project Cost Code: MR3A05529E00

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 1/14/2010

TURNAROUND/REPORT DUE: 2/13/2010

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
	EPA:901.1	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	HASL-300:AM-241	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	HASL-300:ISOPU	1	RE12-10-7854	R	1/11/2010	

Thursday, January 14, 2010

REQUEST NUMBER: 10-1263

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:ISOPU	1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	HASL-300:ISOU	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:6020	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:6850	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:7471A	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:8082	1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:8321A_MOD	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	
		1	RE12-10-7857	R	1/11/2010	
	SW-846:9012A	1	RE12-10-7854	R	1/11/2010	
		1	RE12-10-7855	R	1/11/2010	
		1	RE12-10-7856	R	1/11/2010	

Thursday, January 14, 2010

REQUEST NUMBER: 10-1263

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	RE12-10-7857	R	1/11/2010	

Final Page of REQUEST NUMBER 10-1263

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client:LANL	SDG/ARCOC/Work Order:10-1263
Received By:Patricia Dover-Dent	Date Received: JANUARY 15, 2009

Suspected Hazard Information	Yes	No	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further
COC/Samples marked as radioactive?		X	Maximum Counts Observed*:40CPM
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 (describe) 2-4,12-14
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 Preservative 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: No Time on Chain of Custody
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 #'S

7209 7849 5129 2C
7209 7849 5130 14C
7209 7849 5184 2C
7209 7849 5254 2C
7209 7849 5118 3C
7209 7849 5162 3C
7209 7849 5151 4C
7209 7849 5173 4C
7209 7849 5243 12C
7209 7849 5195 13C

PM (or PMA) review: Initials _____ Date 1/18/10

TA00 BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

ACTWGT: 49.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AMR1A015AGWF0

2C

FedEx Express

3 of 3
MPS# 0263 7209 7849 5129
Matr# 7209 7849 5107 0201

FRI - 15JAN A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

Part # 156143-434 WAIT V3 04-0

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: 14JAN10
ACTWGT: 64.0 LB MAN
CAD: 0014176/CAFE2449

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GENERAL ENGINEERING LAB
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CHARLESTON SC 29407
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REF: 6B010AMR2A0515BYD0

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2 of 2
MPS# 0263 7209 7849 5184
Matr# 7209 7849 5173 0201

FRI - 15JAN A1
PRIORITY OVERNIGHT

XX CHSA

29407
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CHS

Part # 156143-434 WAIT V3 04-0

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: 14JAN10
ACTWGT: 32.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AWE6L11550000

2C

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K# 01 7209 7849 5254

FRI - 15JAN A1
PRIORITY OVERNIGHT

XX 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: 14JAN10
ACTWGT: 52.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AMR1A015AGWF0

3c

FedEx Express

2 of 3
MPS# 0263 7209 7849 5118
Matr# 7209 7849 5107 0201

FRI - 15JAN A1
PRIORITY OVERNIGHT

XX 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: 14JAN10
ACTWGT: 54.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AMR3A05529E00

3c

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2 of 2
MPS# 0263 7209 7849 5162
Mstr# 7209 7849 5151 0201

FRI - 15JAN A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

XX CHSA

Part # 156143-434 NRIT V3 04-0

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: 14JAN10
ACTWGT: 52.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AMR3A05529E00

4C

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1 of 2
TRK# 0201 7209 7849 5151
MM MASTER MM

FRI - 15JAN A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

XX CHSA

Part # 156148-434 NRIT V3 04-0

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: 14JAN10
ACTWGT: 57.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AMR2A0515BYD0

4C

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1 of 2
TRK# 0201 7209 7849 5173
MM MASTER MM

FRI - 15JAN A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

XX CHSA

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: 14JAN10
ACTWGT: 41.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 6B010AMR3A05529E00

12C

FedEx Express

TRK# 0201 7209 7849 5243

FRI - 15JAN A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

XX CHSA

ORIGIN ID: SAFA (505) 665-9960
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 14JAN10
ACTWGT: 52.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 68010AMR2A0515BYD0

13C

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FRI - 15JAN A1
PRIORITY OVERNIGHT

TRK# 0201 7209 7849 5195

XX CHSA

29407
SC-US
CHS

Part # 1561-39-434 WAIT V5.0

ORIGIN ID: SAFA (505) 665-9960
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 14JAN10
ACTWGT: 49.0 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843) 556-8171
REF: 68010AMR1A015AGWF0

14C

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FRI - 15JAN A1
PRIORITY OVERNIGHT

TRK# 0201 7209 7849 5130

XX CHSA

29407
SC-US

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.

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LC/MS/MS PERCHLORATE ANALYSIS

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

Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 10-1263

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:	944720
Prep Batch Number:	944719

Sample Analysis

Sample ID	Client ID
244852001	RE12-10-7856
244852002	RE12-10-7857
244852003	RE12-10-7855
244852004	RE12-10-7854
1202023104	Interference Check Sample (ICS)
1202023100	Method Blank (MB)
1202023101	Laboratory Control Sample (LCS)
1202023102	244852001(RE12-10-7856) Matrix Spike (MS)
1202023103	244852001(RE12-10-7856) Matrix Spike Duplicate (MSD)

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

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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
Sample 244852001 (RE12-10-7856) 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.

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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.

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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 Mauer **Date:** 02/02/10

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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: 944719

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7856

Date Received: 15-JAN-10

GEL Job No (SDG): 10-1263

GEL Sample ID: 244852001

Date Filtered: 27-JAN-10

Injection Volume (uL): 20

%Solids: 90.6

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.552	2.21	0.552	ug/kg	U	1	27-JAN-10 20:59	per0127015a
	Perchlorate Isotope Ratio						1	27-JAN-10 20:59	per0127015a
14797-73-0	Perchlorate-101	.552	2.21	0.552	ug/kg	U	1	27-JAN-10 20:59	per0127015a
	Perchlorate-O(18)			5.52	ug/kg		1	27-JAN-10 20:59	per0127015a

^ 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 =

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

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944719

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7857

Date Received: 15-JAN-10

GEL Job No (SDG): 10-1263

GEL Sample ID: 244852002

Date Filtered: 27-JAN-10

Injection Volume (uL): 20

%Solids: 93.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.533	2.13	0.533	ug/kg	U	1	27-JAN-10 21:23	per0127018a
	Perchlorate Isotope Ratio						1	27-JAN-10 21:23	per0127018a
14797-73-0	Perchlorate-101	.533	2.13	0.533	ug/kg	U	1	27-JAN-10 21:23	per0127018a
	Perchlorate-O(18)			5.36	ug/kg		1	27-JAN-10 21:23	per0127018a

^ 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 =

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

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944719

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7855

Date Received: 15-JAN-10

GEL Job No (SDG): 10-1263

GEL Sample ID: 244852003

Date Filtered: 27-JAN-10

Injection Volume (uL): 20

%Solids: 92.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.54	2.16	0.540	ug/kg	U	1	27-JAN-10 21:31	per0127019a
	Perchlorate Isotope Ratio						1	27-JAN-10 21:31	per0127019a
14797-73-0	Perchlorate-101	.54	2.16	0.540	ug/kg	U	1	27-JAN-10 21:31	per0127019a
	Perchlorate-O(18)			5.83	ug/kg		1	27-JAN-10 21:31	per0127019a

^ 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 =

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

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944719

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7854

Date Received: 15-JAN-10

GEL Job No (SDG): 10-1263

GEL Sample ID: 244852004

Date Filtered: 27-JAN-10

Injection Volume (uL): 20

%Solids: 86

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.58	2.32	0.580	ug/kg	U	1	27-JAN-10 21:39	per0127020a
	Perchlorate Isotope Ratio						1	27-JAN-10 21:39	per0127020a
14797-73-0	Perchlorate-101	.58	2.32	0.580	ug/kg	U	1	27-JAN-10 21:39	per0127020a
	Perchlorate-O(18)			6.28	ug/kg		1	27-JAN-10 21:39	per0127020a

^ 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 =

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

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10-1263

Extract Batch Code: 944719

Date Filtered: 27-JAN-10

Matrix: SOIL

Sample ID: 1202023101

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.06	ug/kg	103		70 – 130
Perchlorate Isotope Ratio		3.17				–
Perchlorate-101	2.00	1.95	ug/kg	97.4		70 – 130
Perchlorate-O(18)		4.89	ug/kg			–

^ 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.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10–1263

Extract Batch Code: 944719

Date Filtered: 27–JAN–10

Matrix: SOIL

Sample ID: 1202023104

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.05	ug/kg	103		70 – 130
Perchlorate Isotope Ratio		3.17				
Perchlorate–101	2.00	1.95	ug/kg	97.3		70 – 130
Perchlorate–O(18)		4.93	ug/kg			

^ 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.

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Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

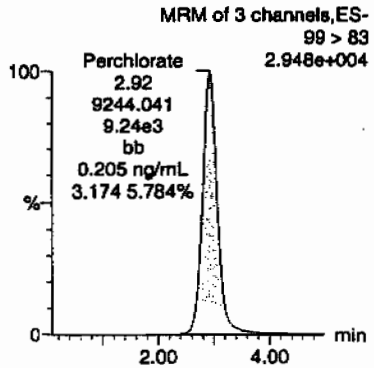
Name: per0127014a
Date: 27-Jan-2010
Time: 20:51:34
ID: 1202023102 4
Vial: 1:3,C

cmw 01-28-10

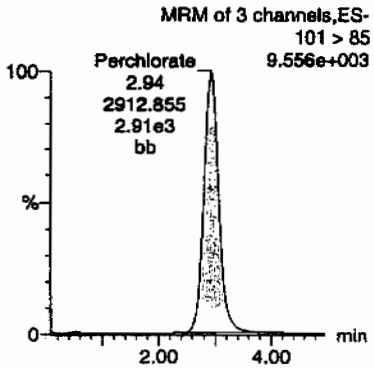
|LANL|944720|5020|ICS|1|

cmw 01-28-10

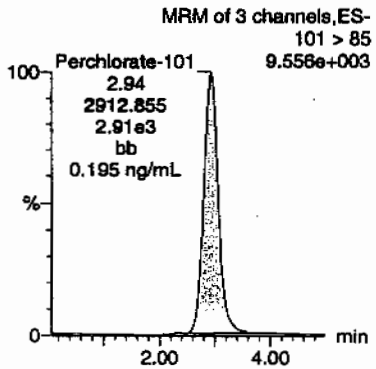
Perchlorate



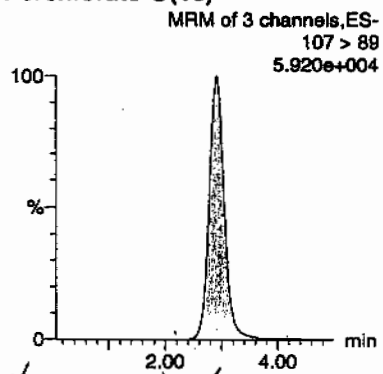
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hnm 01/29/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202023102	Perchlorate	99 > 83	2.92	9244.041	9244.041	bb			0.2054	102.72	2.72	1893.9...	3.17
1202023102	Perchlorate-101	101 > 85	2.94	2912.855	2912.855	bb			0.1946	97.29	-2.71	1890.1...	
1202023102	Perchlorate-O(18)	107 > 89	2.91	18491.609	18491.609	bb			0.4932	98.64	-1.36	3720.9...	

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Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 10-1263

Extract Batch Code: 944719

Date Extracted: 27-JAN-10

GEL MS/PS ID: 1202023102

Client ID: RE12-10-7856

GEL MSD/PSD ID: 1202023103

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	2.21	0.058	ug/kg	2.23	98.3	2.25	99.3	1.02	30	75 – 125
Perchlorate Isotope Ratio	0	0.00		3		3		0		–
Perchlorate-101	2.21	0.0638	ug/kg	2.24	98.3	2.26	99.4	1.06	30	75 – 125
Perchlorate-O(18)	0	5.52	ug/kg	5.36		5.4		.748		–

^ 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:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10–1263

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	27–JAN–10	per0127001a	IPB001
Perchlorate–101	0.00	0	NA	27–JAN–10	per0127001a	IPB001
Perchlorate	0.00	0	NA	27–JAN–10	per0127002a	IPB001
Perchlorate–101	0.00	0	NA	27–JAN–10	per0127002a	IPB001

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

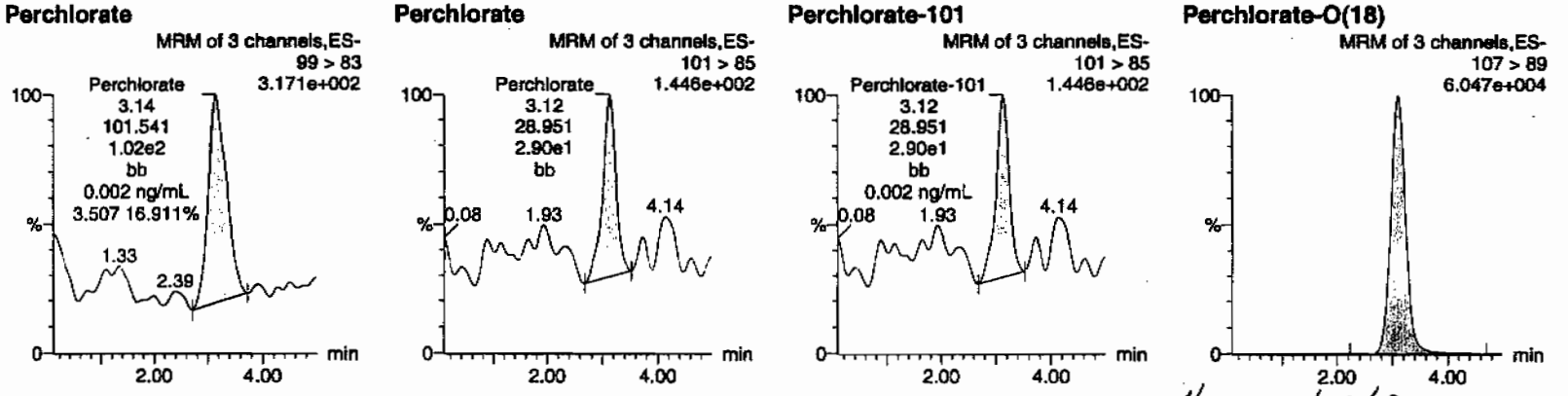
Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per012710a.mdb 28 Jan 2010 10:22:42
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per012710a.cdb 28 Jan 2010 12:32:46

Name: per0127001a
Date: 27-Jan-2010
Time: 19:06:51
ID: IPB001
Vial: 1:1,A

Cmw
01-28-10



Hmc 01/29/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	3.14	101.541	101.541	bb			0.0023			43.847	3.51
IPB001	Perchlorate-101	101 > 85	3.12	28.951	28.951	bb			0.0019			16.582	
IPB001	Perchlorate-O(18)	107 > 89	3.10	18671.002	18671.002	bb			0.4980	99.60	-0.40	1853.0...	

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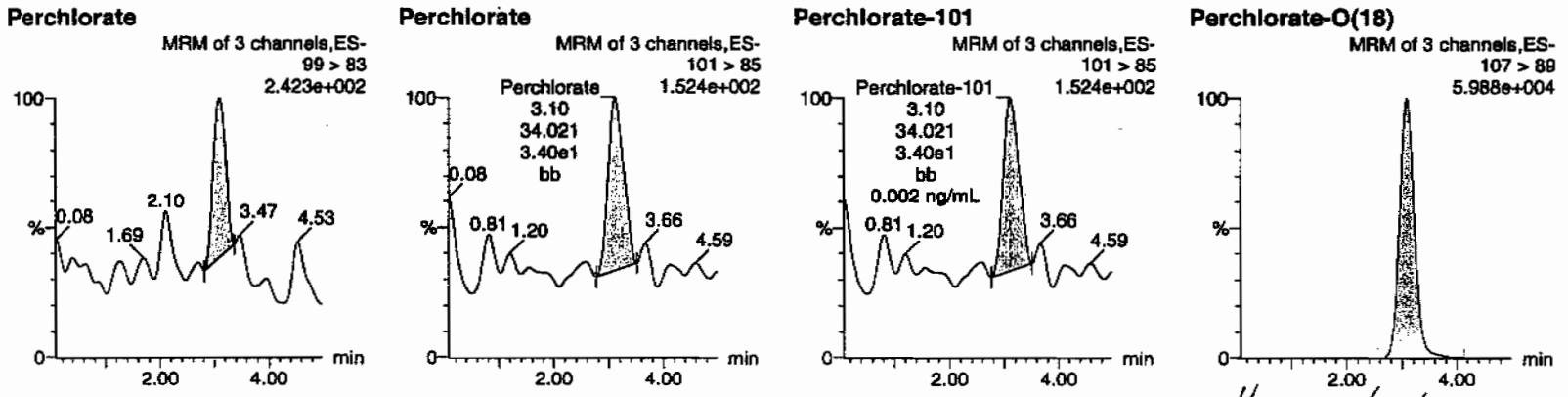
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

Name: per0127002a
Date: 27-Jan-2010
Time: 19:15:04
ID: IPB001
Vial: 1:1,A

WWO
01-28-10



HMW 01/29/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	3.10	41.383	41.383	bb			0.0009			8.994	1.22
IPB001	Perchlorate-101	101 > 85	3.10	34.021	34.021	bb			0.0023			16.085	
IPB001	Perchlorate-O(18)	107 > 89	3.09	18576.500	18576.500	bb			0.4955	99.10	-0.90	3756.9...	

OKAY
WWO

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10–1263

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	27–JAN–10	per0127008a	IPB002
Perchlorate–101	0.00	0	NA	27–JAN–10	per0127008a	IPB002
Perchlorate	0.00	0	NA	27–JAN–10	per0127010a	IPB003
Perchlorate–101	0.00	0	NA	27–JAN–10	per0127010a	IPB003
Perchlorate	0.00	0	NA	27–JAN–10	per0127023a	IPB004
Perchlorate–101	0.00	0	NA	27–JAN–10	per0127023a	IPB004

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

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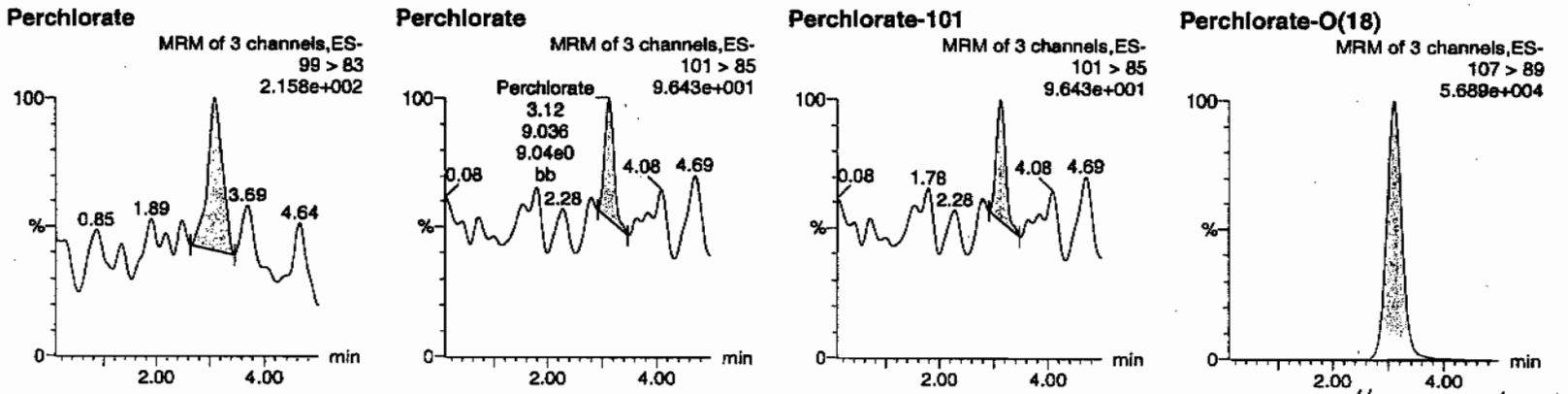
Date: 27-Jan-2010
Time: 20:03:21
ID: IPB002
Vial: 1:1,A

CWO 01-28-10



Hmm 01/29/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83	3.09	42.079	42.079	bb			0.0009			12.512	4.66
IPB002	Perchlorate-101	101 > 85	3.12	9.036	9.036	bb			0.0006			12.364	
IPB002	Perchlorate-O(18)	107 > 89	3.10	17949.510	17949.510	bb			0.4788	95.75	-4.25	5202.8...	

Okay 020210

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

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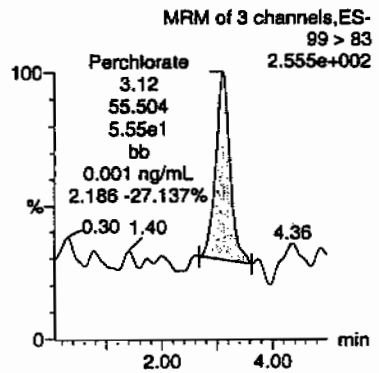
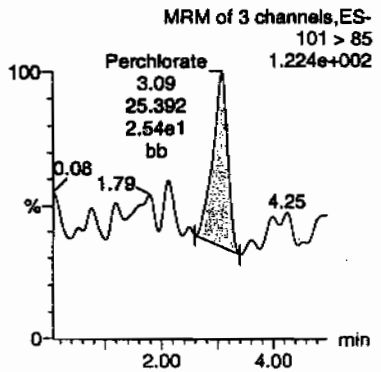
Time: 20:19:25
ID: IPB003
Vial: 1:1,A

CWW
01-28-10

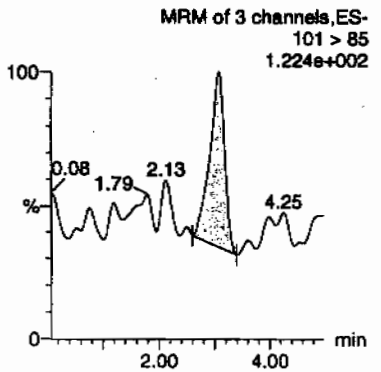
Perchlorate



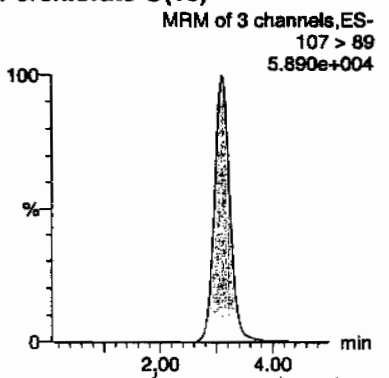
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hume 01/29/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83	3.12	55.504	55.504	bb			0.0012			10.142	2.19
IPB003	Perchlorate-101	101 > 85	3.09	25.392	25.392	bb			0.0017			17.762	
IPB003	Perchlorate-O(18)	107 > 89	3.10	18617.938	18617.938	bb			0.4966	99.32	-0.68	4293.7...	

OKAY
LOW500

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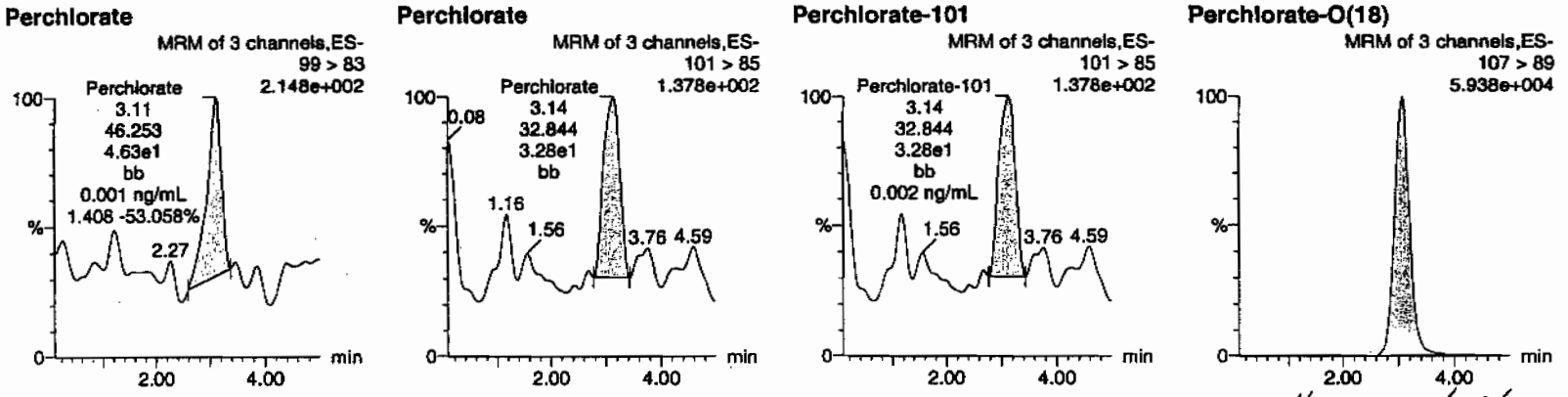
Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

Name: per0127023a
Date: 27-Jan-2010
Time: 22:03:52
ID: IPB004
Vial: 1:1,A

CWW 01-28-10



HMM 01/28/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83	3.11	46.253	46.253	bb			0.0010			37.540	1.41
IPB004	Perchlorate-101	101 > 85	3.14	32.844	32.844	bb			0.0022			16.463	
IPB004	Perchlorate-O(18)	107 > 89	3.06	18551.006	18551.006	bb			0.4948	98.96	-1.04	7426.3...	

CWW 01-28-10

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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

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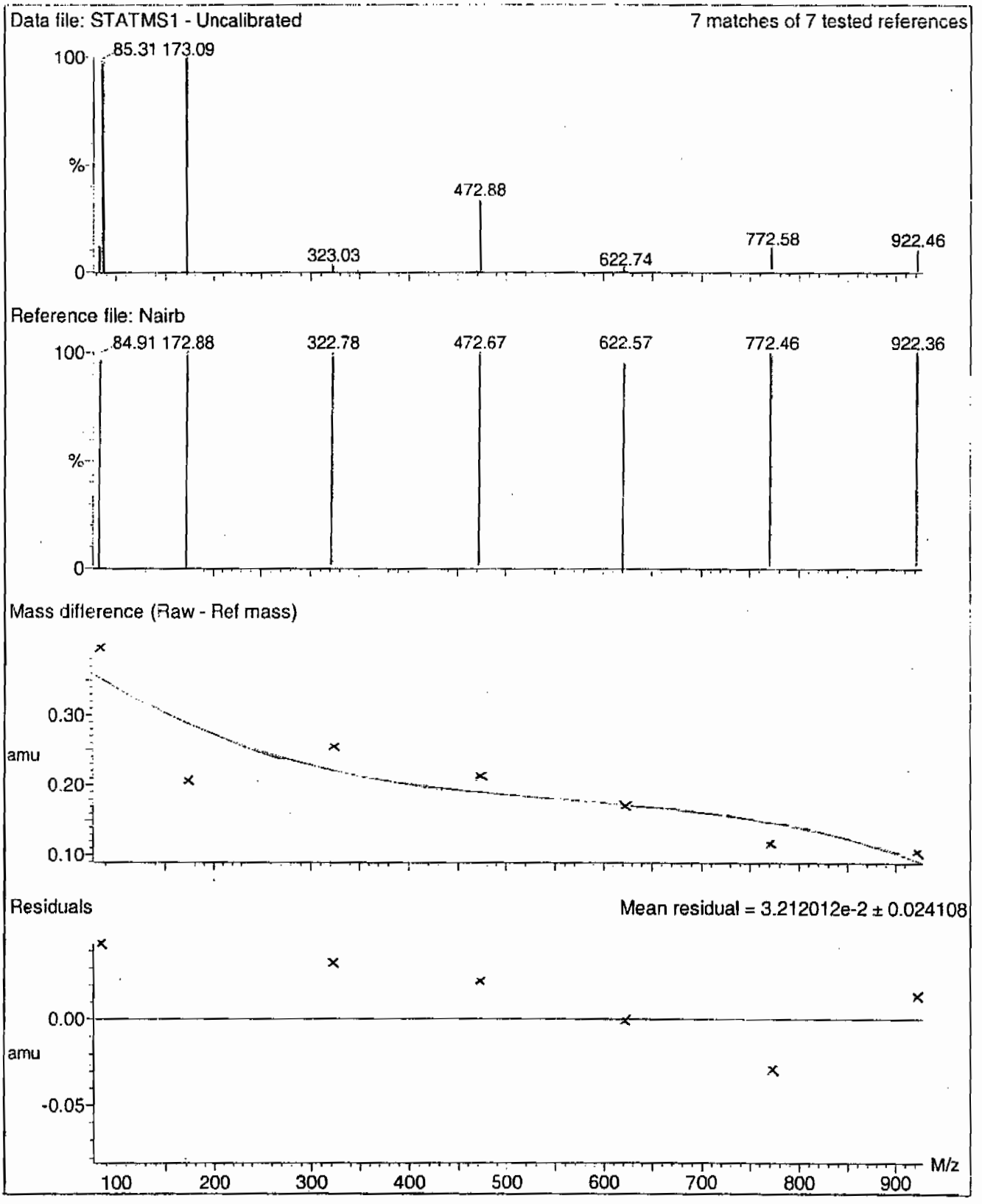
QUATRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

Printed: Tue Jan 08 12:19:12 2008

PARTS HIGHLIGHTED BY [illegible] 01-09-08



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

Calibration Report - MS1 Scanning

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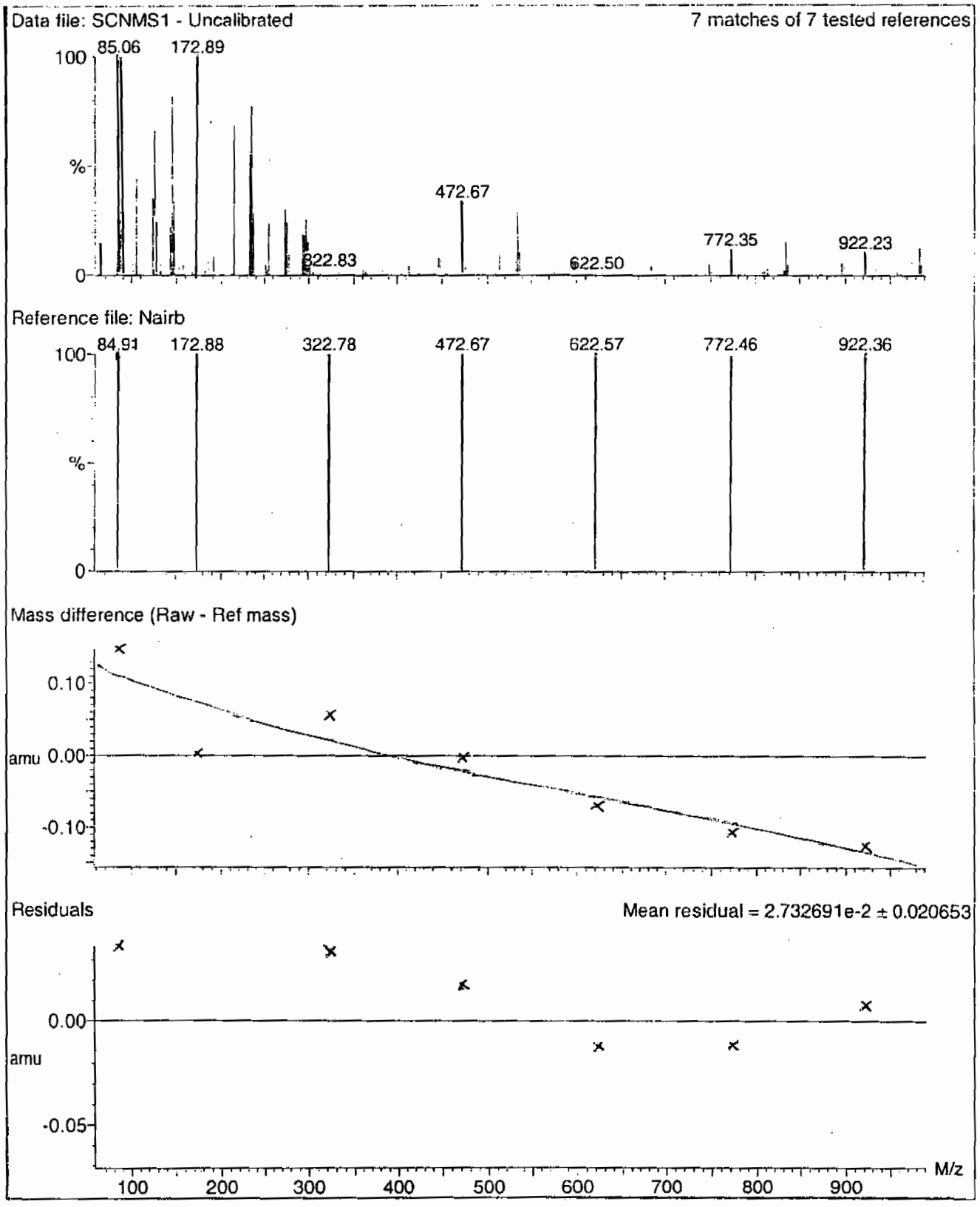
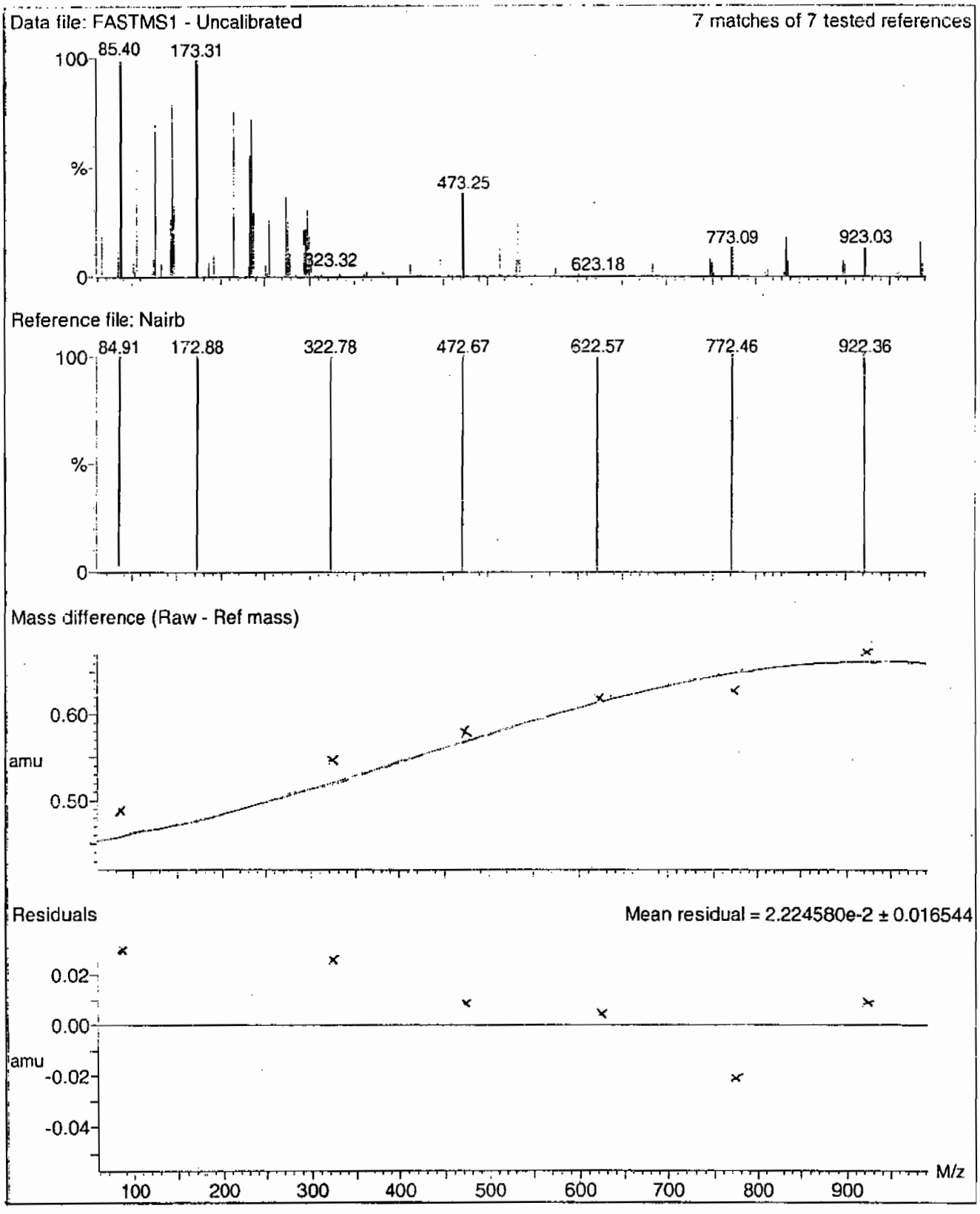


PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS1 Scan Speed Compensation

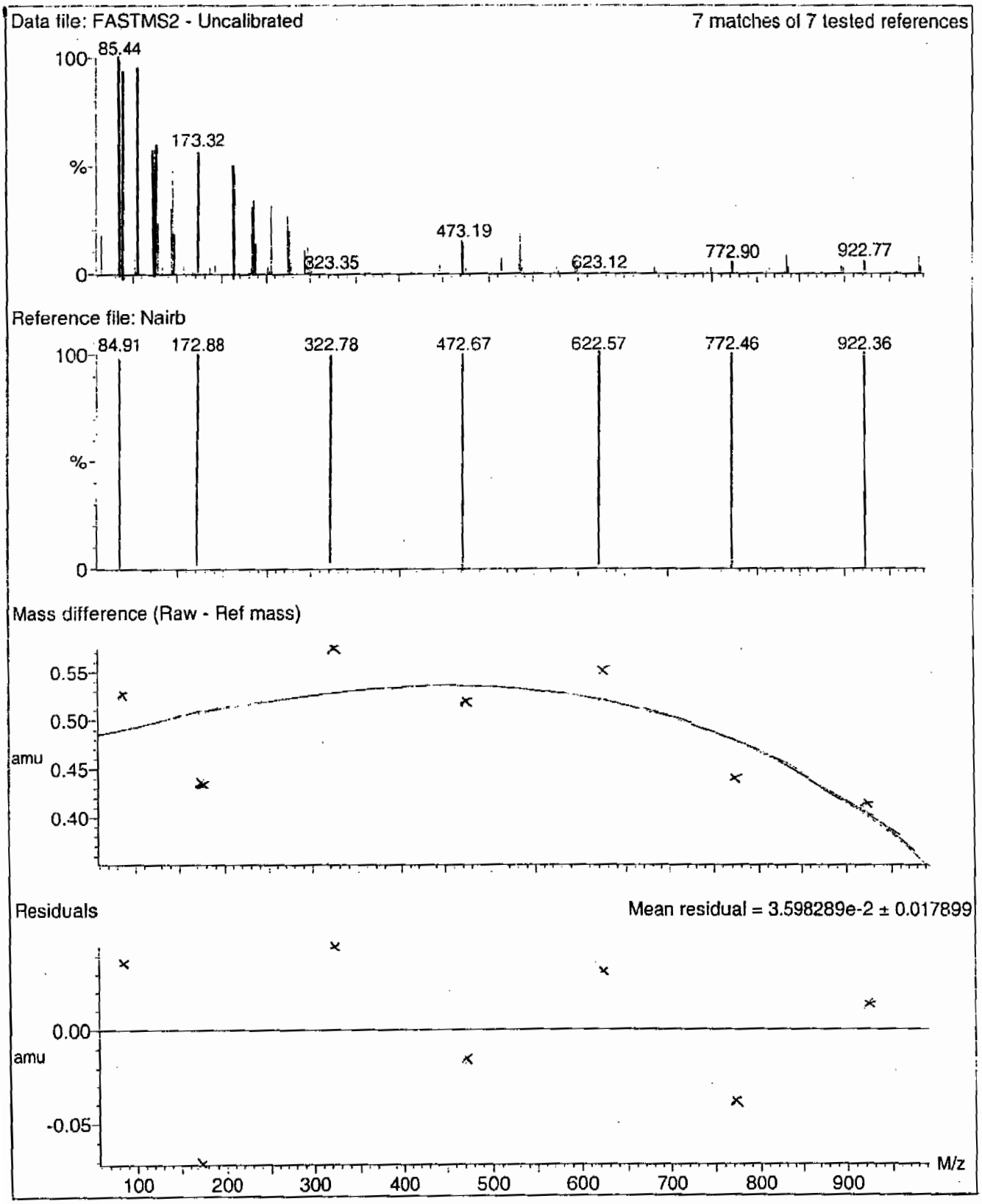
Printed: Tue Jan 08 12:21:04 2008



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

Calibration Report - MS2 Scan Speed Compensation

Printed: Tue Jan 08 12:23:51 2008



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

Calibration Report - MS2 Scanning

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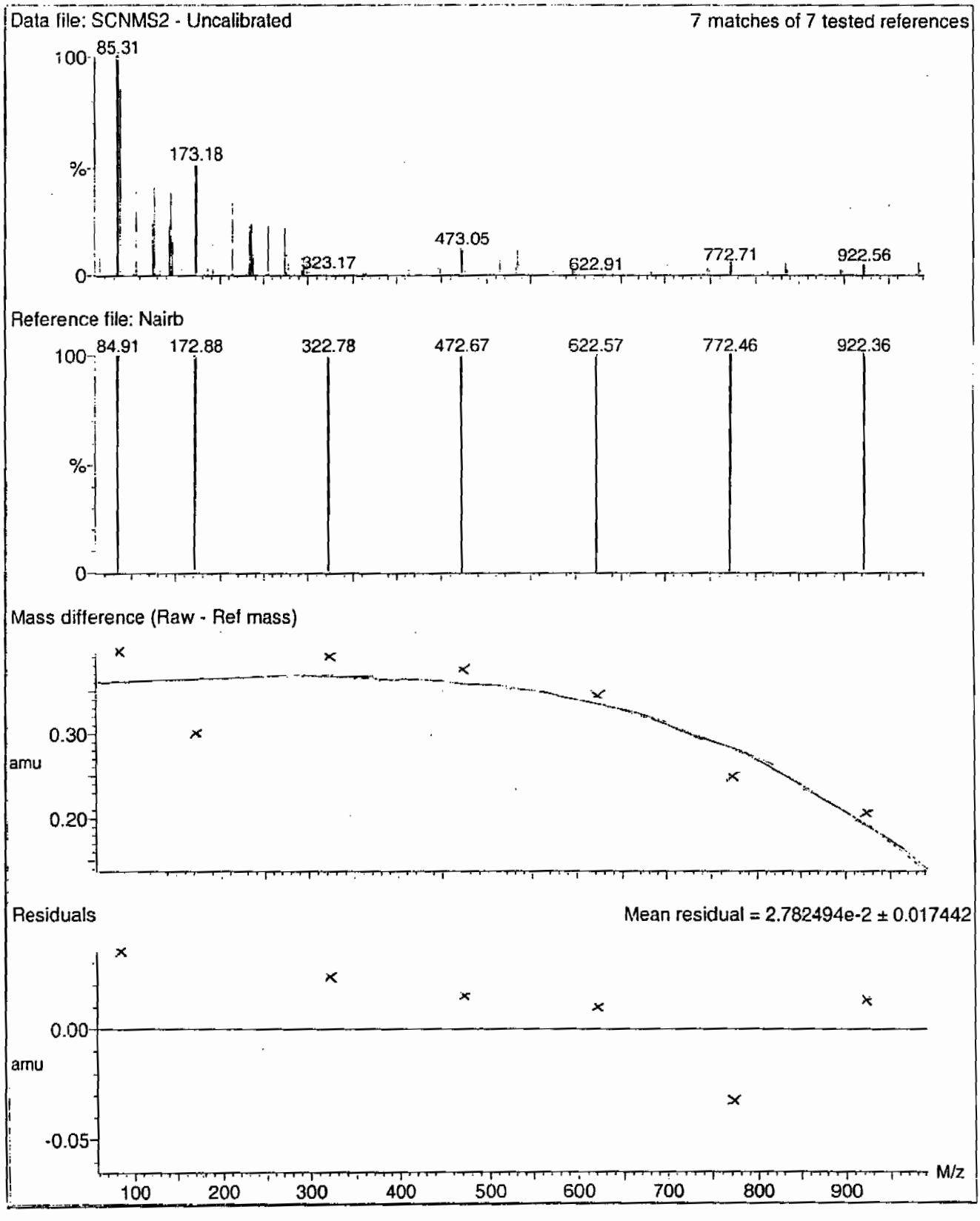
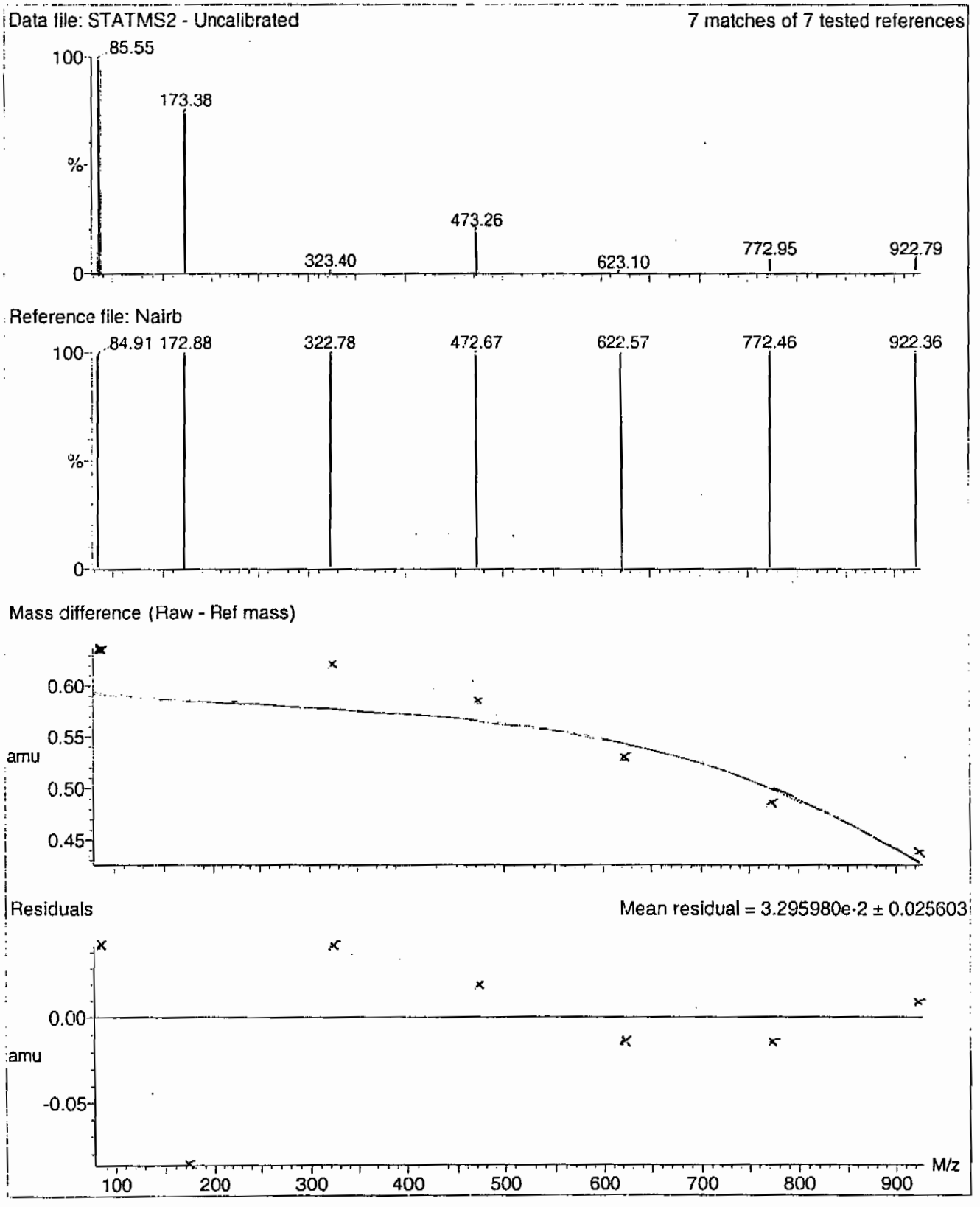


PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Static

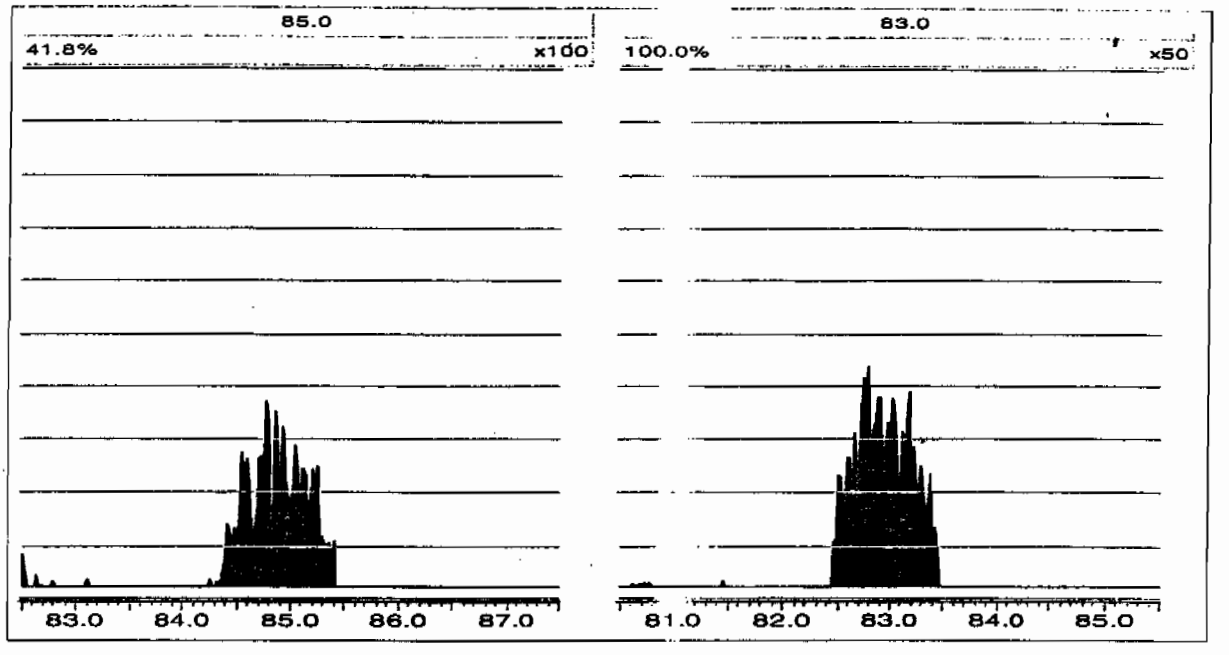
Printed: Tue Jan 08 12:21:59 2008



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

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

Printed: Wednesday, January 27, 2010 16:13:13 Eastern Standard Time



Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1263

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	**per0127006a**	**27–JAN–10**	**18703.3**				
Lower Area Limit			**9351.65**				
Upper Area Limit			**37406.6**				
1202023100	per0127012a	27–JAN–10 20:35	17755.4	3.09	3.09778	1.003	
1202023101	per0127013a	27–JAN–10 20:43	18324.5	3.09	3.0978	1.003	
1202023104	per0127014a	27–JAN–10 20:51	18491.6	2.91	2.92378	1.005	
244852001	per0127015a	27–JAN–10 20:59	18744.8	3.07	3.08543	1.005	
1202023102	per0127016a	27–JAN–10 21:07	18194.5	3.07	3.09778	1.009	
1202023103	per0127017a	27–JAN–10 21:15	18331.1	3.07	3.08533	1.005	
244852002	per0127018a	27–JAN–10 21:23	18849.9	3.07	3.0853	1.005	
244852003	per0127019a	27–JAN–10 21:31	20244.3	3.07	3.08535	1.005	

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Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1263

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	**per0127006a**	**27–JAN–10**	**18703.3**				
Lower Area Limit			**9351.65**				
Upper Area Limit			**37406.6**				
244852004	per0127020a	27–JAN–10 21:39	20300.3	3.07	3.09778	1.009	

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SAMPLE
DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944719

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7856

Date Received: 15-JAN-10

GEL Job No (SDG): 10-1263

GEL Sample ID: 244852001

Date Filtered: 27-JAN-10

Injection Volume (uL): 20

%Solids: 90.6

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.552	2.21	0.552	ug/kg	U	1	27-JAN-10 20:59	per0127015a
	Perchlorate Isotope Ratio						1	27-JAN-10 20:59	per0127015a
14797-73-0	Perchlorate-101	.552	2.21	0.552	ug/kg	U	1	27-JAN-10 20:59	per0127015a
	Perchlorate-O(18)			5.52	ug/kg		1	27-JAN-10 20:59	per0127015a

^ 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 =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

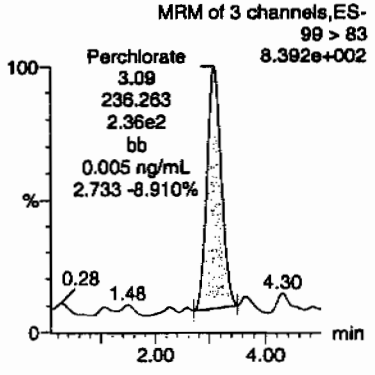
Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

Name: per0127015a
Date: 27-Jan-2010
Time: 20:59:36
ID: 244852001
Vial: 1:3,D

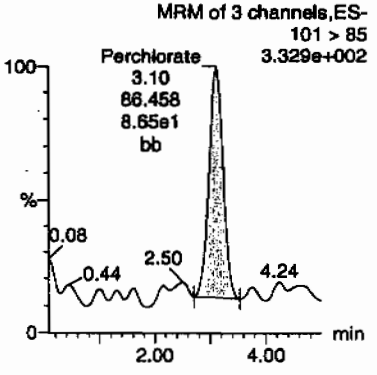
ILANL|944720|5020|1|

GWJ 01-28-10

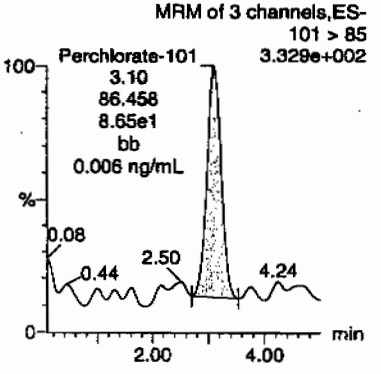
Perchlorate



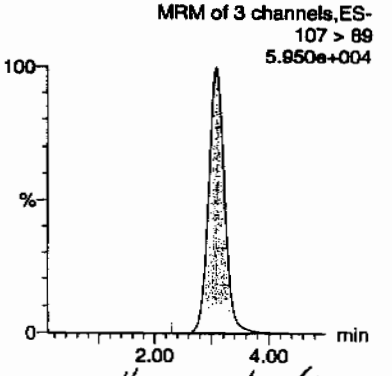
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMM 01/29/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
244852001	Perchlorate	99 > 83	3.09	236.263	236.263	bb			0.0053			64.373	2.73
244852001	Perchlorate-101	101 > 85	3.10	86.458	86.458	bb			0.0058			8.160	
244852001	Perchlorate-O(18)	107 > 89	3.07	18744.850	18744.850	bb			0.5000	99.99	-0.01	1345.7...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944719

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7857

Date Received: 15-JAN-10

GEL Job No (SDG): 10-1263

GEL Sample ID: 244852002

Date Filtered: 27-JAN-10

Injection Volume (uL): 20

%Solids: 93.7

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.533	2.13	0.533	ug/kg	U	1	27-JAN-10 21:23	per0127018a
	Perchlorate Isotope Ratio						1	27-JAN-10 21:23	per0127018a
14797-73-0	Perchlorate-101	.533	2.13	0.533	ug/kg	U	1	27-JAN-10 21:23	per0127018a
	Perchlorate-O(18)			5.36	ug/kg		1	27-JAN-10 21:23	per0127018a

^ 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 =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

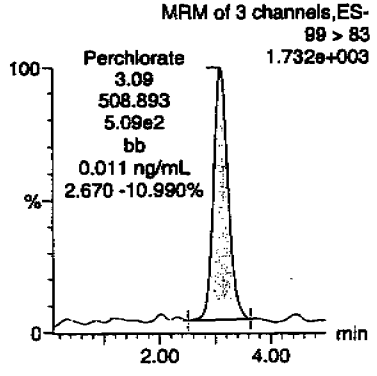
Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

Name: per0127018a
Date: 27-Jan-2010
Time: 21:23:40
ID: 244852002
Vial: 1:4,A

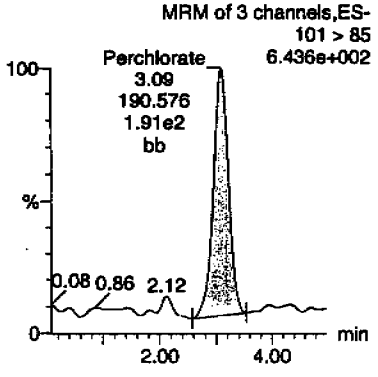
|LANL| 944720| 50120 |1|

AW 01-28-10

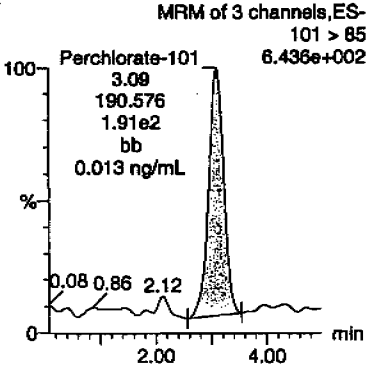
Perchlorate



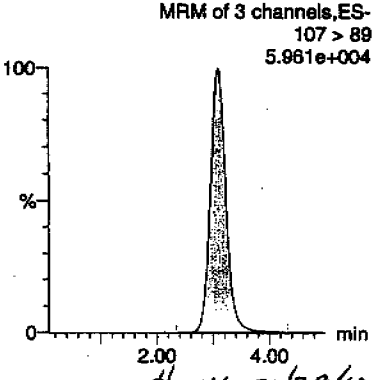
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/29/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
244852002	Perchlorate	99 > 83	3.09	508.893	508.893	bb			0.0113			101.060	2.67
244852002	Perchlorate-101	101 > 85	3.09	190.576	190.576	bb			0.0127			22.500	
244852002	Perchlorate-O(18)	107 > 89	3.07	18849.906	18849.906	bb			0.5028	100.55	0.55	1153.5...	

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

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944719

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7855

Date Received: 15-JAN-10

GEL Job No (SDG): 10-1263

GEL Sample ID: 244852003

Date Filtered: 27-JAN-10

Injection Volume (uL): 20

%Solids: 92.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.54	2.16	0.540	ug/kg	U	1	27-JAN-10 21:31	per0127019a
	Perchlorate Isotope Ratio						1	27-JAN-10 21:31	per0127019a
14797-73-0	Perchlorate-101	.54	2.16	0.540	ug/kg	U	1	27-JAN-10 21:31	per0127019a
	Perchlorate-O(18)			5.83	ug/kg		1	27-JAN-10 21:31	per0127019a

^ 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 =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

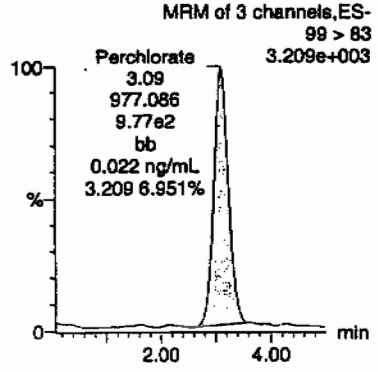
Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

Name: per0127019a
Date: 27-Jan-2010
Time: 21:31:43
ID: 244852003
Vial: 1:4,B

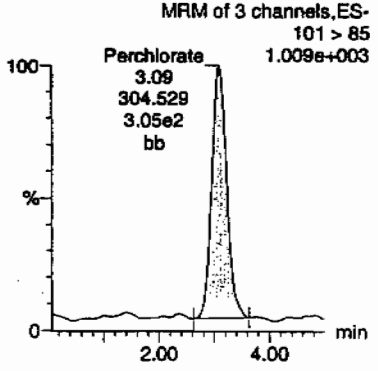
|LANL|944720|SOL20|1|

CWW 01-28-10

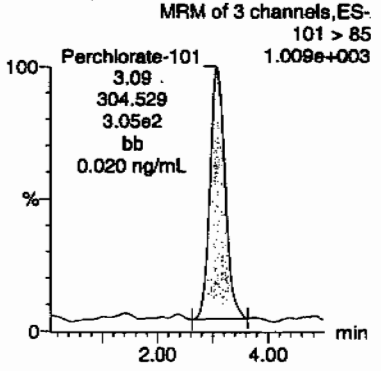
Perchlorate



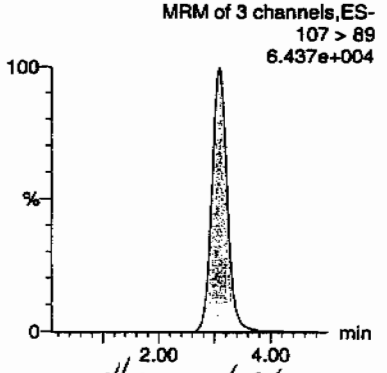
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMC 01/29/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
244852003	Perchlorate	99 > 83	3.09	977.086	977.086	bb			0.0217			602.412	3.21
244852003	Perchlorate-101	101 > 85	3.09	304.529	304.529	bb			0.0203			206.348	
244852003	Perchlorate-O(18)	107 > 89	3.07	20244.320	20244.320	bb			0.5400	107.99	7.99	3429.8...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944719

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7854

Date Received: 15-JAN-10

GEL Job No (SDG): 10-1263

GEL Sample ID: 244852004

Date Filtered: 27-JAN-10

Injection Volume (uL): 20

%Solids: 86

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.58	2.32	0.580	ug/kg	U	1	27-JAN-10 21:39	per0127020a
	Perchlorate Isotope Ratio						1	27-JAN-10 21:39	per0127020a
14797-73-0	Perchlorate-101	.58	2.32	0.580	ug/kg	U	1	27-JAN-10 21:39	per0127020a
	Perchlorate-O(18)			6.28	ug/kg		1	27-JAN-10 21:39	per0127020a

^ 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 =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

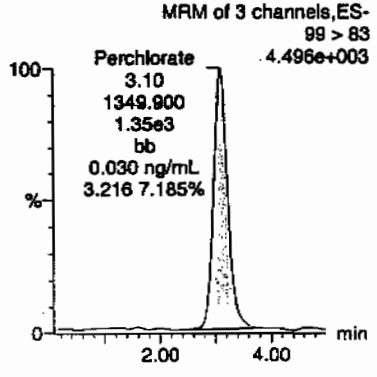
Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

Name: per0127020a
Date: 27-Jan-2010
Time: 21:39:46
ID: 244852004
Vial: 1:4,C

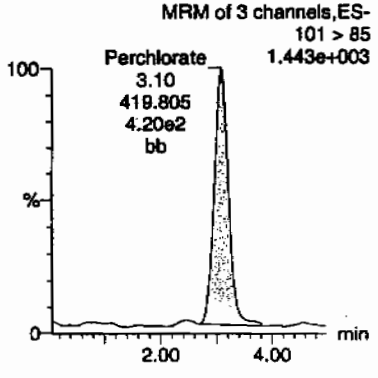
|LANL|944720|50120|1|

aw
01-28-10

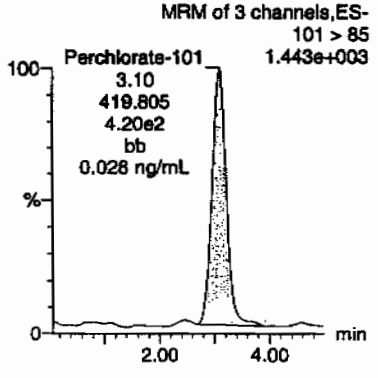
Perchlorate



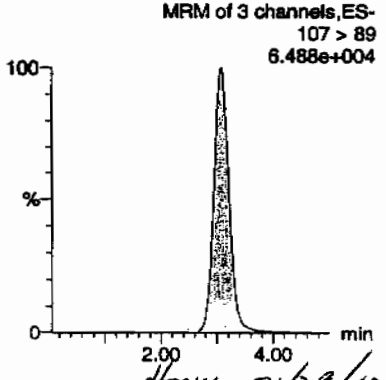
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/29/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
244852004	Perchlorate	99 > 83	3.10	1349.900	1349.900	bb			0.0300			273.844	3.22
244852004	Perchlorate-101	101 > 85	3.10	419.805	419.805	bb			0.0280			245.535	
244852004	Perchlorate-O(18)	107 > 89	3.07	20300.344	20300.344	bb			0.5415	108.29	8.29	2355.2...	

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STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1263

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 27–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

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 44996.9

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1263

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 27–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

Parmname Perchlorate–101

Coefficient of Determination:

Calibration Curve: 14970.68

Response Type: External Standard

Curve Type: RF

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

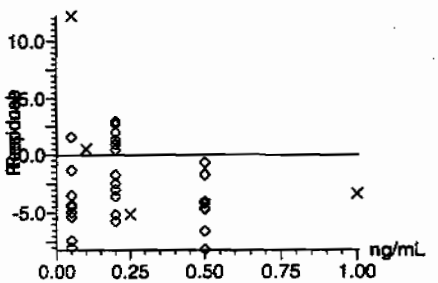
Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

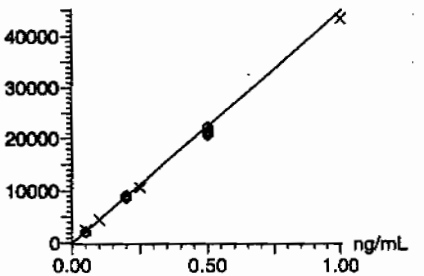
Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per012710a.mdb 28 Jan 2010 10:22:42
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per012710a.cdb 28 Jan 2010 12:32:46

Compound name: Perchlorate
Response Factor: 44996.9
RRF SD: 3216.47, % Relative SD: 7.1482
Response type: External Std, Area
Curve type: RF





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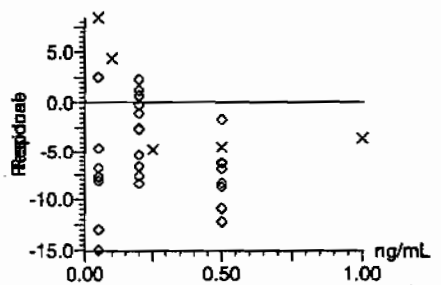
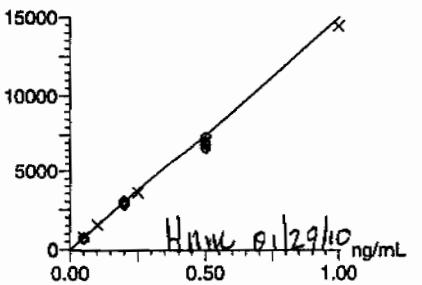
01-28-10

Compound name: Perchlorate-101
Response Factor: 14970.7
RRF SD: 904.041, % Relative SD: 6.03875
Response type: External Std, Area
Curve type: RF





HMW 01/29/10

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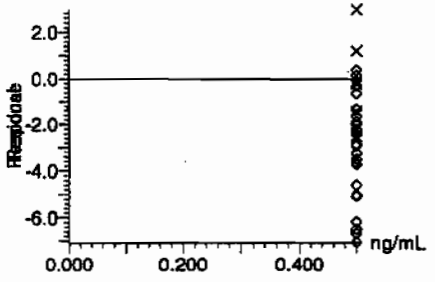
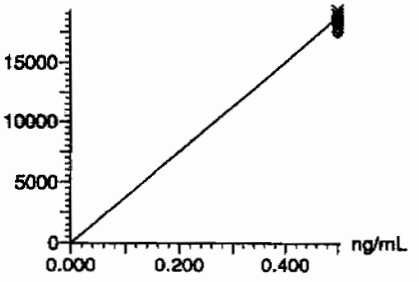
Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

Compound name: Perchlorate-O(18)
Response Factor: 37492.1
RRF SD: 809.25, % Relative SD: 2.15846
Response type: External Std, Area
Curve type: RF





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

Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10–1263

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.5	99.32	27–JAN–10 20:11	per0127009a
Perchlorate Isotope Ratio		3.04		27–JAN–10 20:11	per0127009a
Perchlorate–101	.5	.49	98.31	27–JAN–10 20:11	per0127009a

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

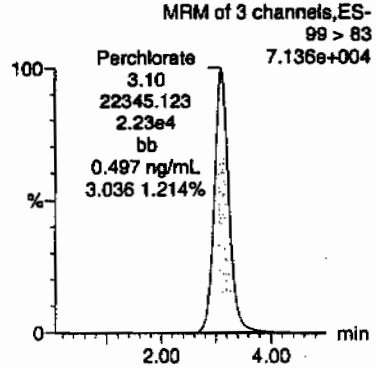
Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

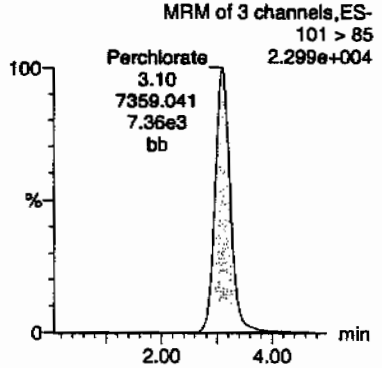
Name: per0127009a
Date: 27-Jan-2010
Time: 20:11:23
ID: WCL100118-06ICV
Vial: 1:2,A

Pass
CWW
01-28-10

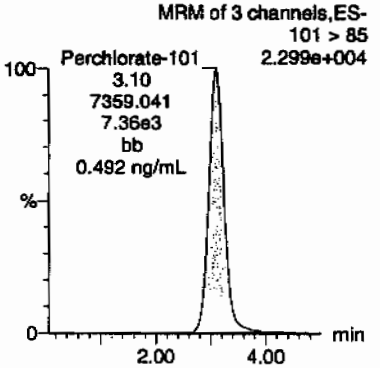
Perchlorate



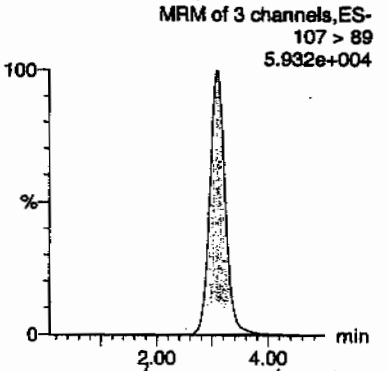
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMW 01/29/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100118-06ICV	Perchlorate	99 > 83	3.10	22345.123	22345.123	bb			0.4966	99.32	-0.68	3082.7...	3.04
WCL100118-06ICV	Perchlorate-101	101 > 85	3.10	7359.041	7359.041	bb			0.4916	98.31	-1.69	5894.4...	
WCL100118-06ICV	Perchlorate-O(18)	107 > 89	3.09	18816.395	18816.395	bb			0.5019	100.38	0.38	2751.6...	

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

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Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10–1263

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.49	98.29	27–JAN–10 21:55	per0127022a
Perchlorate Isotope Ratio		3.15		27–JAN–10 21:55	per0127022a
Perchlorate–101	.5	.47	93.85	27–JAN–10 21:55	per0127022a

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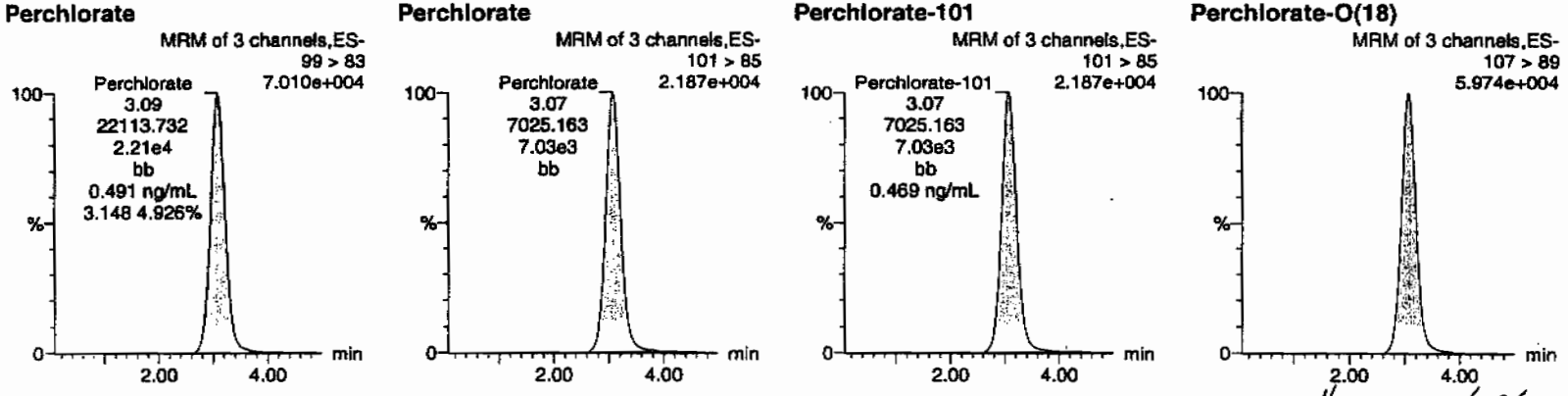
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

Name: per0127022a
Date: 27-Jan-2010
Time: 21:55:50
ID: WCL100118-06CCV
Vial: 1:2,A

Pass
ans
01-28-10



Hmw 01/29/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100118-06CCV	Perchlorate	99 > 83	3.09	22113.732	22113.732	bb			0.4915	98.29	-1.71	1382.8...	3.15
WCL100118-06CCV	Perchlorate-101	101 > 85	3.07	7025.163	7025.163	bb			0.4693	93.85	-6.15	1288.0...	
WCL100118-06CCV	Perchlorate-O(18)	107 > 89	3.06	18686.016	18686.016	bb			0.4984	99.68	-0.32	7209.1...	

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

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

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10–1263

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	95.72	27–JAN–10 20:27	per0127011a
Perchlorate Isotope Ratio		2.81		27–JAN–10 20:27	per0127011a
Perchlorate–101	.05	.05	102.55	27–JAN–10 20:27	per0127011a
Perchlorate	.05	.05	101.57	27–JAN–10 22:11	per0127024a
Perchlorate Isotope Ratio		3.2		27–JAN–10 22:11	per0127024a
Perchlorate–101	.05	.05	95.39	27–JAN–10 22:11	per0127024a

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

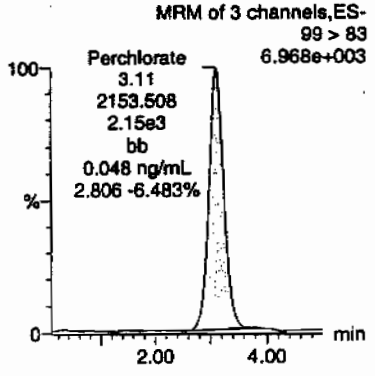
Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

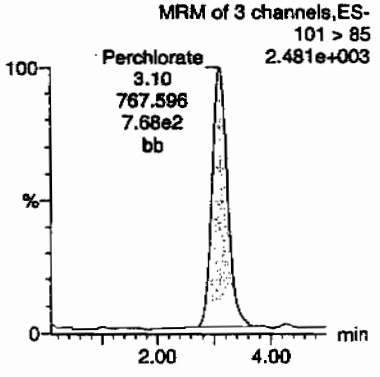
Name: per0127011a
Date: 27-Jan-2010
Time: 20:27:27
ID: WCL100118-07CRI
Vial: 1:2,B

Pass
CWW
01-28-10

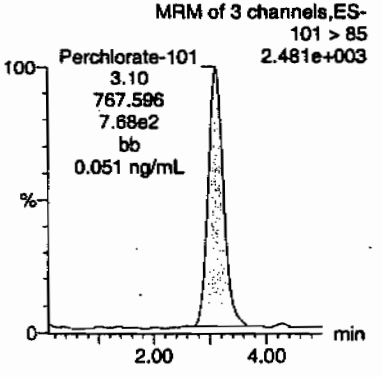
Perchlorate



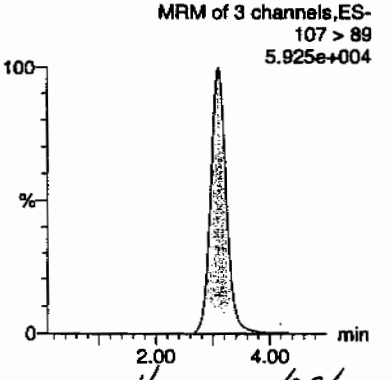
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMW 01/29/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100118-07CRI	Perchlorate	99 > 83	3.11	2153.508	2153.508	bb			0.0479	95.72	-4.28	654.175	2.81
WCL100118-07CRI	Perchlorate-101	101 > 85	3.10	767.596	767.596	bb			0.0513	102.55	2.55	790.867	
WCL100118-07CRI	Perchlorate-O(18)	107 > 89	3.10	18733.061	18733.061	bb			0.4997	99.93	-0.07	1495.5...	

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

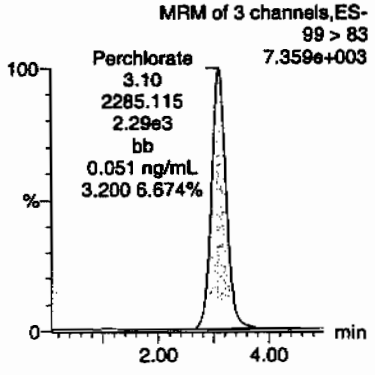
Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

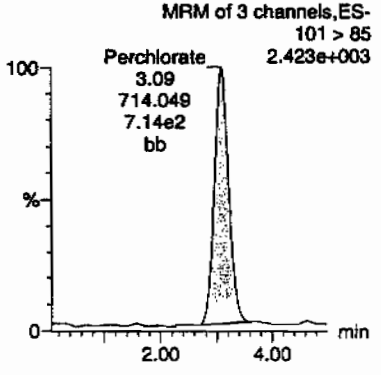
Name: per0127024a
Date: 27-Jan-2010
Time: 22:11:54
ID: WCL100118-07CRI
Vial: 1:2,B

Pass
aw
01-28-10

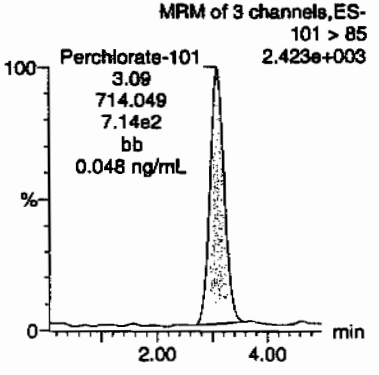
Perchlorate



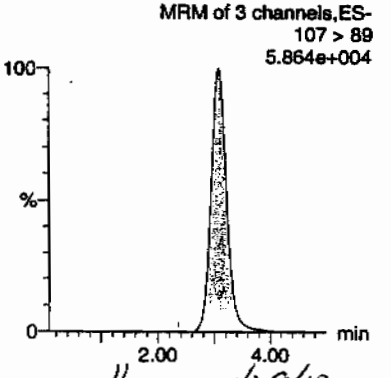
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HWW 01/29/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100118-07CRI	Perchlorate	99 > 83	3.10	2285.115	2285.115	bb			0.0508	101.57	1.57	722.371	3.20
WCL100118-07CRI	Perchlorate-101	101 > 85	3.09	714.049	714.049	bb			0.0477	95.39	-4.61	823.829	
WCL100118-07CRI	Perchlorate-O(18)	107 > 89	3.07	18776.434	18776.434	bb			0.5008	100.16	0.16	2962.4...	

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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: 944719

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
MB

Date Received: 27-JAN-10

GEL Job No (SDG): 10-1263

GEL Sample ID: 1202023100

Date Filtered: 27-JAN-10

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	0.500	ug/kg	U	1	27-JAN-10 20:35	per0127012a
	Perchlorate Isotope Ratio						1	27-JAN-10 20:35	per0127012a
14797-73-0	Perchlorate-101	.5	2	0.500	ug/kg	U	1	27-JAN-10 20:35	per0127012a
	Perchlorate-O(18)			4.74	ug/kg		1	27-JAN-10 20:35	per0127012a

^ 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 =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

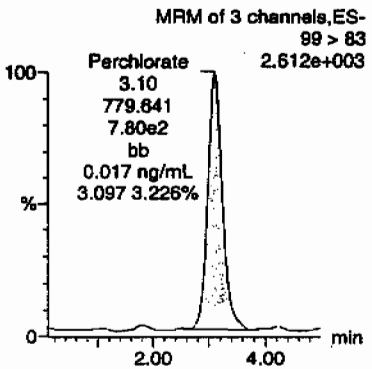
Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

Name: per0127012a
Date: 27-Jan-2010
Time: 20:35:29
ID: 1202023100
Vial: 1:3,A

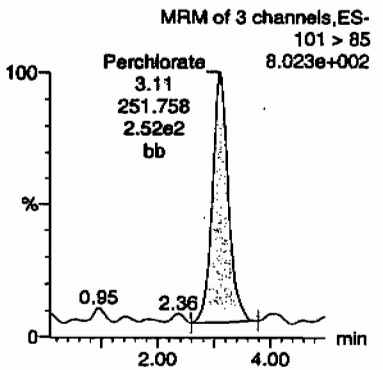
|LANL| 944720 | 50120 |MB|1|

cwo
01-28-10

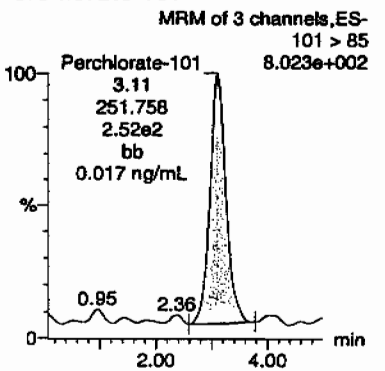
Perchlorate



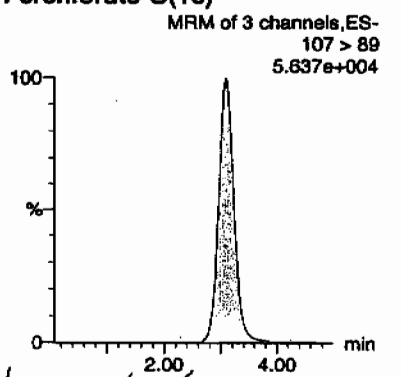
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hume 01/29/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202023100	Perchlorate	99 > 83	3.10	779.641	779.641	bb			0.0173			197.636	3.10
1202023100	Perchlorate-101	101 > 85	3.11	251.758	251.758	bb			0.0168			69.233	
1202023100	Perchlorate-O(18)	107 > 89	3.09	17755.354	17755.354	bb			0.4736	94.72	-5.28	2331.0...	

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944719

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
LCS

Date Received: 27-JAN-10

GEL Job No (SDG): 10-1263

GEL Sample ID: 1202023101

Date Filtered: 27-JAN-10

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	2.06	ug/kg		1	27-JAN-10 20:43	per0127013a
	Perchlorate Isotope Ratio			3.17			1	27-JAN-10 20:43	per0127013a
14797-73-0	Perchlorate-101	.5	2	1.95	ug/kg	J	1	27-JAN-10 20:43	per0127013a
	Perchlorate-O(18)			4.89	ug/kg		1	27-JAN-10 20:43	per0127013a

^ 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 =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

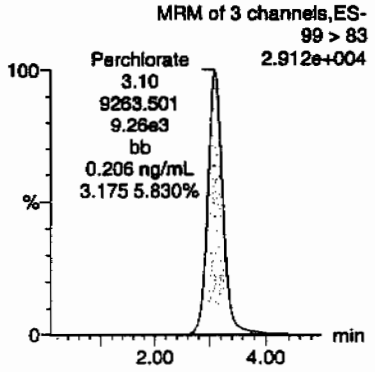
Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

Name: per0127013a
Date: 27-Jan-2010
Time: 20:43:32
ID: 1202023104 |LANL|944720|SO20|LCS|1|
Vial: 1:3,B

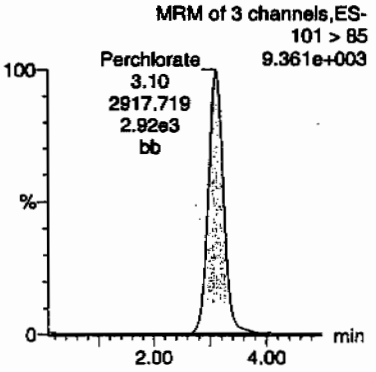
GWO 01-28-10

GWO 01-28-10

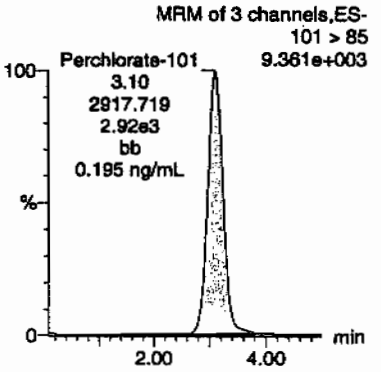
Perchlorate



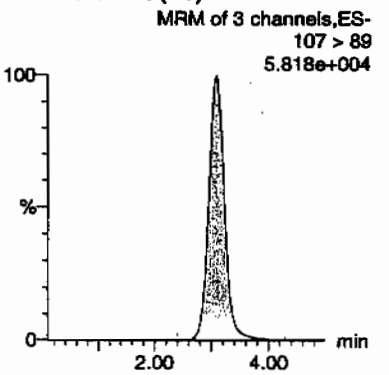
Perchlorate



Perchlorate-101



Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202023104	Perchlorate	99 > 83	3.10	9263.501	9263.501	bb			0.2059	102.93	2.93	2499.1...	3.17
1202023104	Perchlorate-101	101 > 85	3.10	2917.719	2917.719	bb			0.1949	97.45	-2.55	283.686	
1202023104	Perchlorate-O(18)	107 > 89	3.09	18324.533	18324.533	bb			0.4888	97.75	-2.25	11559....	

$$\frac{9263.501}{44996.9} = 0.2059$$

HMC
01/29/10

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944719

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7856MS

Date Received: 15-JAN-10

GEL Job No (SDG): 10-1263

GEL Sample ID: 1202023102

Date Filtered: 27-JAN-10

Injection Volume (uL): 20

%Solids: 90.6

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.552	2.21	2.23	ug/kg		1	27-JAN-10 21:07	per0127016a
	Perchlorate Isotope Ratio			3			1	27-JAN-10 21:07	per0127016a
14797-73-0	Perchlorate-101	.552	2.21	2.24	ug/kg		1	27-JAN-10 21:07	per0127016a
	Perchlorate-O(18)			5.36	ug/kg		1	27-JAN-10 21:07	per0127016a

^ 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 =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

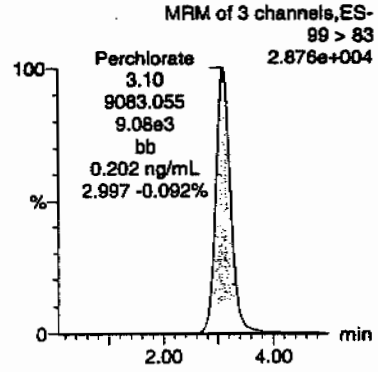
Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

Name: per0127016a
Date: 27-Jan-2010
Time: 21:07:38
ID: 1202023102
Vial: 1:3,E

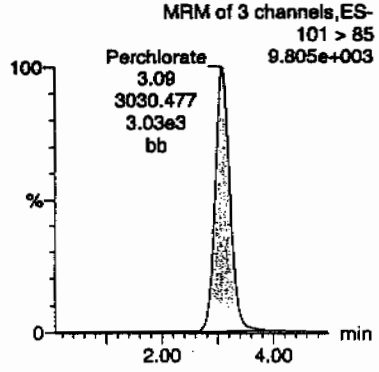
|LAUL|944720|SOL20|MS|1|

01-28-10

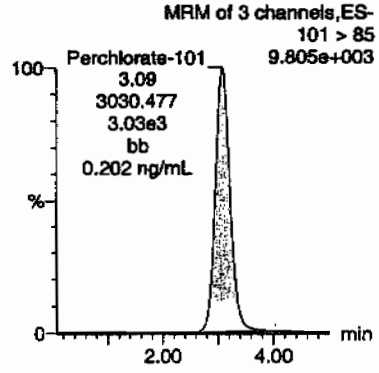
Perchlorate



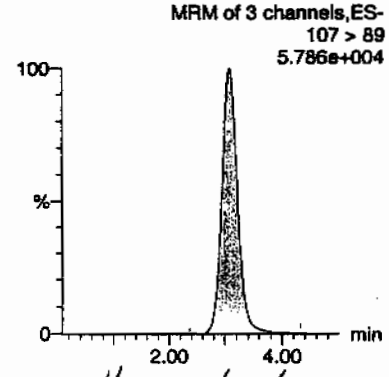
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hnm 01/29/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202023102	Perchlorate	99 > 83	3.10	9083.055	9083.055	bb			0.2019	100.93	0.93	2070.5...	3.00
1202023102	Perchlorate-101	101 > 85	3.09	3030.477	3030.477	bb			0.2024	101.21	1.21	1948.5...	
1202023102	Perchlorate-O(18)	107 > 89	3.07	18194.547	18194.547	bb			0.4853	97.06	-2.94	5808.2...	

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

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 944719

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7856MSD

Date Received: 15-JAN-10

GEL Job No (SDG): 10-1263

GEL Sample ID: 1202023103

Date Filtered: 27-JAN-10

Injection Volume (uL): 20

%Solids: 90.6

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.552	2.21	2.25	ug/kg		1	27-JAN-10 21:15	per0127017a
	Perchlorate Isotope Ratio			3			1	27-JAN-10 21:15	per0127017a
14797-73-0	Perchlorate-101	.552	2.21	2.26	ug/kg		1	27-JAN-10 21:15	per0127017a
	Perchlorate-O(18)			5.40	ug/kg		1	27-JAN-10 21:15	per0127017a

^ 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 =

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

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Dataset: C:\MassLynx\Perchlorate.PRO\per012710a.qld

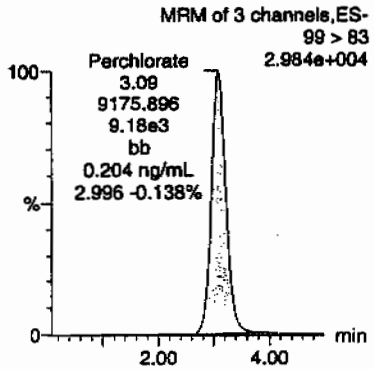
Last Altered: Thursday, January 28, 2010 12:32:47 PM Eastern Standard Time
Printed: Thursday, January 28, 2010 12:45:42 PM Eastern Standard Time

Name: per0127017a
Date: 27-Jan-2010
Time: 21:15:39
ID: 1202023103
Vial: 1:3,F

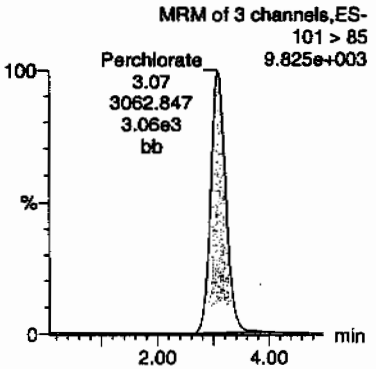
|LANL|944720|SOL20|MSO|1|

01-28-10

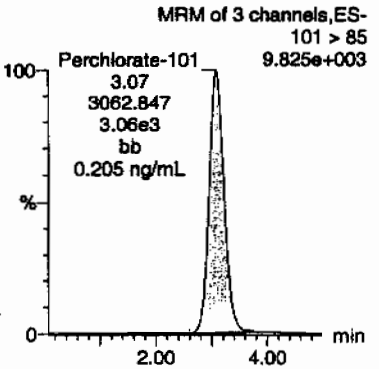
Perchlorate



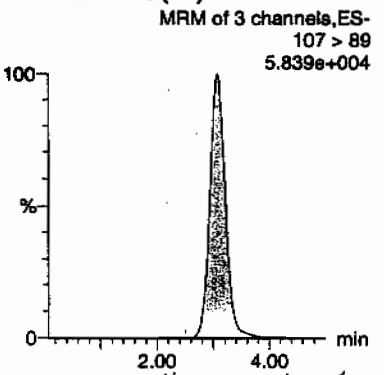
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/29/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202023103	Perchlorate	99 > 83	3.09	9175.896	9175.896	bb			0.2039	101.96	1.96	1080.1...	3.00
1202023103	Perchlorate-101	101 > 85	3.07	3062.847	3062.847	bb			0.2046	102.30	2.30	578.785	
1202023103	Perchlorate-O(18)	107 > 89	3.07	18331.102	18331.102	bb			0.4889	97.79	-2.21	4227.4...	

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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: 944719 Verified by: _____

Analyst: Jareth Shirley

Method: SW846 6850 Modified

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

Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202023100 MB	27-JAN-2010 16:47:18	2	20	10
1202023101 LCS	27-JAN-2010 16:47:18	2	20	10
244852001	27-JAN-2010 16:47:18	2	20	10
1202023102 MS (244852001)	27-JAN-2010 16:47:18	2	20	10
1202023103 MSD (244852001)	27-JAN-2010 16:47:18	2	20	10
244852002	27-JAN-2010 16:47:18	2	20	10
244852003	27-JAN-2010 16:47:18	2	20	10
244852004	27-JAN-2010 16:47:18	2	20	10
244881001	27-JAN-2010 16:47:18	2	20	10
244881002	27-JAN-2010 16:47:18	2	20	10
244881003	27-JAN-2010 16:47:18	2	20	10
244881004	27-JAN-2010 16:47:18	2	20	10
244888001	27-JAN-2010 16:47:18	2	20	10
244888002	27-JAN-2010 16:47:18	2	20	10
244888003	27-JAN-2010 16:47:18	2	20	10
244888004	27-JAN-2010 16:47:18	2	20	10
244888005	27-JAN-2010 16:47:18	2	20	10
244888006	27-JAN-2010 16:47:18	2	20	10
244902001	27-JAN-2010 16:47:18	2	20	10
1202023104 ICS	27-JAN-2010 16:47:18	2	20	10

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1202023104	10 ug/L ICV/CCV Second Source	UCL091230-01.2	.4	mL
LCS	1202023101	10 ug/L ICV/CCV Second Source	UCL091230-01.2	.4	mL
MS	1202023102	10 ug/L ICV/CCV Second Source	UCL091230-01.2	.4	mL
MSD	1202023103	10 ug/L ICV/CCV Second Source	UCL091230-01.2	.4	mL

Comments:

Desalting cartridges used: 090414-1-Ba & 091130-1-H

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GEL ORGANIC RUN LOG INSTRUMENT ID: LCMSMS#2

Date: 01/27/10
Extr. Injection Volume: 20uL
Sequence Number: per012710a
Initial Calibration Date: 01/27/10

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

Reviewed BY: Hnm
Date: 01/29/10
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
per0127001a	IPB001	CWW	1/27/2010 19:06			1		USE	B
per0127002a	IPB001	CWW	1/27/2010 19:15			1		USE	B
per0127003a	WCLICAL-01	CWW	1/27/2010 19:23			1		USE	I
per0127004a	WCLICAL-02	CWW	1/27/2010 19:31			1		USE	I
per0127005a	WCLICAL-03	CWW	1/27/2010 19:39			1		USE	I
per0127006a	WCLICAL-04	CWW	1/27/2010 19:47			1		USE	I
per0127007a	WCLICAL-05	CWW	1/27/2010 19:55			1		USE	I
per0127008a	IPB002	CWW	1/27/2010 20:03			1		USE	B
per0127009a	WCLICV	CWW	1/27/2010 20:11			1		USE	C
per0127010a	IPB003	CWW	1/27/2010 20:19			1		USE	B
per0127011a	WCLCRI	CWW	1/27/2010 20:27			1		USE	C
per0127012a	1202023100	CWW	1/27/2010 20:35	944720	VARIOUS	1	LANL	USE	S
per0127013a	1202023101	CWW	1/27/2010 20:43	944720	VARIOUS	1	LANL	USE	S
per0127014a	1202023104	CWW	1/27/2010 20:51	944720	VARIOUS	1	LANL	USE	S
per0127015a	244852001	CWW	1/27/2010 20:59	944720	10-1263	1	LANL	USE	S
per0127016a	1202023102	CWW	1/27/2010 21:07	944720	10-1263	1	LANL	USE	S
per0127017a	1202023103	CWW	1/27/2010 21:15	944720	10-1263	1	LANL	USE	S
per0127018a	244852002	CWW	1/27/2010 21:23	944720	10-1263	1	LANL	USE	S
per0127019a	244852003	CWW	1/27/2010 21:31	944720	10-1263	1	LANL	USE	S
per0127020a	244852004	CWW	1/27/2010 21:39	944720	10-1263	1	LANL	USE	S
per0127021a	244881001	CWW	1/27/2010 21:47	944720	10-1264-1	1	LANL	USE	S
per0127022a	WCLCCV	CWW	1/27/2010 21:55			1		USE	C
per0127023a	IPB004	CWW	1/27/2010 22:03			1		USE	B
per0127024a	WCLCRI	CWW	1/27/2010 22:11			1		USE	C
per0127025a	244881002	CWW	1/27/2010 22:19	944720	10-1264-1	1	LANL	USE	S
per0127026a	244881003	CWW	1/27/2010 22:27	944720	10-1264-1	1	LANL	USE	S
per0127027a	244881004	CWW	1/27/2010 22:35	944720	10-1264-1	1	LANL	USE	S
per0127028a	244888001	CWW	1/27/2010 22:44	944720	10-1278	1	LANL	USE	S
per0127029a	244888002	CWW	1/27/2010 22:52	944720	10-1278	1	LANL	USE	S

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per0127030a	244888003	CWW	1/27/2010 23:00	944720	10-1278	1	LANL	USE	S
per0127031a	244888004	CWW	1/27/2010 23:08	944720	10-1278	1	LANL	USE	S
per0127032a	244888005	CWW	1/27/2010 23:16	944720	10-1278	1	LANL	USE	S
per0127033a	244888006	CWW	1/27/2010 23:24	944720	10-1278	1	LANL	USE	S
per0127034a	244902001	CWW	1/27/2010 23:32	944720	10-1274	1	LANL	USE	S
per0127035a	WCLCCV	CWW	1/27/2010 23:40			1		USE	C
per0127036a	IPB005	CWW	1/27/2010 23:48			1		USE	B
per0127037a	WCLCRI	CWW	1/27/2010 23:56			1		USE	C
per0127038a	1202024385	CWW	1/28/2010 0:04	945223	VARIOUS	1	LANL	USE	S
per0127039a	1202024386	CWW	1/28/2010 0:12	945223	VARIOUS	1	LANL	USE	S
per0127040a	1202024389	CWW	1/28/2010 0:20	945223	VARIOUS	1	LANL	USE	S
per0127041a	245089001	CWW	1/28/2010 0:28	945223	10-1293	1	LANL	USE	S
per0127042a	245089002	CWW	1/28/2010 0:36	945223	10-1293	1	LANL	USE	S
per0127043a	1202024387	CWW	1/28/2010 0:44	945223	10-1293	1	LANL	USE	S
per0127044a	1202024388	CWW	1/28/2010 0:52	945223	10-1293	1	LANL	USE	S
per0127045a	245089003	CWW	1/28/2010 1:00	945223	10-1293	1	LANL	USE	S
per0127046a	245089004	CWW	1/28/2010 1:08	945223	10-1293	1	LANL	USE	S
per0127047a	245110001	CWW	1/28/2010 1:16	945223	10-1295	1	LANL	USE	S
per0127048a	WCLCCV	CWW	1/28/2010 1:24			1		USE	C
per0127049a	IPB006	CWW	1/28/2010 1:33			1		USE	B
per0127050a	WCLCRI	CWW	1/28/2010 1:41			1		USE	C
per0127051a	245110002	CWW	1/28/2010 1:49	945223	10-1295	1	LANL	USE	S
per0127052a	245112001	CWW	1/28/2010 1:57	945223	10-1325	1	LANL	USE	S
per0127053a	245120001	CWW	1/28/2010 2:05	945223	10-1328-1	1	LANL	USE	S
per0127054a	245135001	CWW	1/28/2010 2:13	945223	10-1300-1	1	LANL	USE	S
per0127055a	245135002	CWW	1/28/2010 2:21	945223	10-1300-1	1	LANL	USE	S
per0127056a	245137001	CWW	1/28/2010 2:29	945223	10-1303-1	1	LANL	USE	S
per0127057a	245137002	CWW	1/28/2010 2:37	945223	10-1303-1	1	LANL	USE	S
per0127058a	245137003	CWW	1/28/2010 2:45	945223	10-1303-1	1	LANL	USE	S
per0127059a	245140001	CWW	1/28/2010 2:53	945223	10-1335	1	LANL	USE	S
per0127060a	245231002	CWW	1/28/2010 3:01	945223	10-1344	1	LANL	USE	S
per0127061a	WCLCCV	CWW	1/28/2010 3:09			1		USE	C
per0127062a	IPB007	CWW	1/28/2010 3:18			1		USE	B
per0127063a	WCLCRI	CWW	1/28/2010 3:26			1		USE	C
per0127064a	245237001	CWW	1/28/2010 3:34	945223	10-1346	1	LANL	DUSE-DL	S
per0127065a	IPB008	CWW	1/28/2010 3:42			1		USE	B
per0127066a	245237002	CWW	1/28/2010 3:50	945223	10-1346	1	LANL	DUSE-DL	S

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per0127067a	IPB009	CWW	1/28/2010 3:58			1		USE	B
per0127068a	245242001	CWW	1/28/2010 4:07	945223	10-1348	1	LANL	USE	S
per0127069a	245242002	CWW	1/28/2010 4:15	945223	10-1348	1	LANL	USE	S
per0127070a	WCLCCV	CWW	1/28/2010 4:23			1		USE	C
per0127071a	IPB010	CWW	1/28/2010 4:31			1		USE	B
per0127072a	WCLCRI	CWW	1/28/2010 4:39			1		USE	C
per0127073a	1202023081	CWW	1/28/2010 4:47	944711	10-1272	1	LANL	USE	S
per0127074a	1202023082	CWW	1/28/2010 4:55	944711	10-1272	1	LANL	USE	S
per0127075a	1202023085	CWW	1/28/2010 5:04	944711	10-1272	1	LANL	USE	S
per0127076a	244899001	CWW	1/28/2010 5:12	944711	10-1272	1	LANL	USE	S
per0127077a	1202023083	CWW	1/28/2010 5:20	944711	10-1272	1	LANL	USE	S
per0127078a	1202023084	CWW	1/28/2010 5:28	944711	10-1272	1	LANL	USE	S
per0127079a	244899002	CWW	1/28/2010 5:36	944711	10-1272	1	LANL	USE	S
per0127080a	244899003	CWW	1/28/2010 5:44	944711	10-1272	1	LANL	USE	S
per0127081a	244899004	CWW	1/28/2010 5:52	944711	10-1272	1	LANL	USE	S
per0127082a	244899005	CWW	1/28/2010 6:00	944711	10-1272	1	LANL	USE	S
per0127083a	WCLCCV	CWW	1/28/2010 6:08			1		USE	C
per0127084a	IPB011	CWW	1/28/2010 6:16			1		USE	B
per0127085a	WCLCRI	CWW	1/28/2010 6:24			1		USE	C
per0127086a	244899006	CWW	1/28/2010 6:32	944711	10-1272	1	LANL	USE	S
per0127087a	244899007	CWW	1/28/2010 6:40	944711	10-1272	1	LANL	USE	S
per0127088a	244899008	CWW	1/28/2010 6:48	944711	10-1272	1	LANL	USE	S
per0127089a	244899009	CWW	1/28/2010 6:56	944711	10-1272	1	LANL	USE	S
per0127090a	244899010	CWW	1/28/2010 7:04	944711	10-1272	1	LANL	USE	S
per0127091a	244899011	CWW	1/28/2010 7:12	944711	10-1272	1	LANL	USE	S
per0127092a	244899012	CWW	1/28/2010 7:20	944711	10-1272	1	LANL	USE	S
per0127093a	244899013	CWW	1/28/2010 7:28	944711	10-1272	1	LANL	USE	S
per0127094a	244899014	CWW	1/28/2010 7:36	944711	10-1272	1	LANL	USE	S
per0127095a	244899015	CWW	1/28/2010 7:45	944711	10-1272	1	LANL	USE	S
per0127096a	WCLCCV	CWW	1/28/2010 7:53			1		USE	C
per0127097a	IPB012	CWW	1/28/2010 8:01			1		USE	B
per0127098a	WCLCRI	CWW	1/28/2010 8:09			1		USE	C
per0127099a	244899016	CWW	1/28/2010 8:17	944711	10-1272	1	LANL	USE	S
per0127100a	244899017	CWW	1/28/2010 8:25	944711	10-1272	1	LANL	USE	S
per0127101a	244899018	CWW	1/28/2010 8:33	944711	10-1272	1	LANL	USE	S
per0127102a	244899019	CWW	1/28/2010 8:41	944711	10-1272	1	LANL	USE	S
per0127103a	244899020	CWW	1/28/2010 8:49	944711	10-1272	1	LANL	USE	S

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per0127104a	IPB013	CWW	1/28/2010 8:58			1		USE	B
per0127105a	1260110 Supp	CWW	1/28/2010 9:06	Screen	Inhouse	1	GEL	DUSE	B
per0127106a	WCLCCV	CWW	1/28/2010 9:14			1		USE	C
per0127107a	IPB014	CWW	1/28/2010 9:22			1		USE	B
per0127108a	WCLCRI	CWW	1/28/2010 9:30			1		USE	C

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Isotope Ratio Criteria

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

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.

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LC/MS/MS EXPLOSIVES ANALYSIS

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LC/MS/MS Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1263

Method/Analysis Information

Procedure:	**Definitive Low Level Analysis of Nitroaromatic Explosives Utilizing Liquid Chromatography / Mass Spectrometry / Mass Spectrometry (LC/MS/MS) by SW-846 Method 8321 Modified (8321M)**
Analytical Method:	SW846 8321A Modified
Prep Method:	SW846 8330 PREP
Analytical Batch Number:	942335
Prep Batch Number:	942334

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8321A Modified:

Sample ID	Client ID
244852001	RE12-10-7856
244852002	RE12-10-7857
244852003	RE12-10-7855
244852004	RE12-10-7854
1202017300	Method Blank (MB)
1202017301	Laboratory Control Sample (LCS)
1202017302	244847001(RE12-10-7272) Matrix Spike (MS)
1202017303	244847001(RE12-10-7272) Matrix Spike Duplicate (MSD)

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-056 REV# 12.

Primary Analyte Analysis

Calibration Information

Initial Calibration
All initial calibration requirements for this analysis have been met for this SDG.

Calibration Verification Standard Requirements
All associated calibration verification standard(s) (ICV or CCV) for this analysis met the acceptance criteria.

Calibration Blank Requirements
All initial or continuing calibration blanks (ICB or CCB) bracketing the analyses associated with this batch for this analysis were within acceptance criteria. Due to software limitations, the CCBs and/or the ICBs may have a concentration for target analytes in the Found column. These values should be zero.

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CRI Requirements
All low level calibration verification (CRI) requirements for this analysis were met by all bracketing CRI standards and may be based off the grand mean average percent recovery of all target analytes.

Quality Control (QC) Information

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

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria in this SDG in this analytical batch for this analysis. New surrogate limits went into effect midnight on 01/31/10. Samples for Primary analyte analysis were analyzed both before and after midnight on 01/31/10. This fact is documented on the Form 2.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries were within the established acceptance limits.

QC Sample Designation
Client sample 244847001 (RE12-10-7272) from SDG 10-1262 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 spike recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD spike 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.

Internal Standard (ISTD) Acceptance
The internal standard responses were within the required acceptance criteria for all samples and QC.

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
According to the GEL SOP for Method 8321A, all sample and QC extracts are diluted 1:1 v/v with HPLC grade water. The samples in this SDG in this analytical batch for this analysis did not require any additional dilutions.

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

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Secondary Analyte Analysis

Calibration Information

Initial Calibration
All initial calibration requirements for this analysis have been met for this SDG.

Calibration Verification Standard Requirements
All associated calibration verification standard(s) (ICV or CCV) for this analysis met the acceptance criteria.

Calibration Blank Requirements
All initial or continuing calibration blanks (ICB or CCB) bracketing the analyses associated with this batch for this analysis were within acceptance criteria. Due to software limitations, the CCBs and/or the ICBs may have a concentration for target analytes in the Found column. These values should be zero.

CRI Requirements
All low level calibration verification (CRI) requirements for this analysis were met by all bracketing CRI standards and may be based off the grand mean average percent recovery of all target analytes.

Quality Control (QC) Information

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

Surrogate Recoveries
All the surrogate recoveries were within the established acceptance criteria in this SDG in this analytical batch for this analysis.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries were within the established acceptance limits.

QC Sample Designation
Client sample 244847001 (RE12-10-7272) from SDG 10-1262 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 Matrix Spike (1202017302) did not meet spike recovery limits for TATB at 440%. The recovery limits The MS recovered TATB at 440%. The recovery limits are 44-166%. Since the LCS met acceptance limits for TATB, the noted exception is attributed to vagaries in the extraction process. The data are reported. Please see data exception report 785558.

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

MS/MSD Relative Percent Difference (RPD) Statement
The MS/MSD RPD for TATB was 92.2%. The acceptance limits are 0-30%. Since all other RPD recoveries met acceptance criteria, the noted exception is attributed to vagaries in the extraction process. The data are reported. Please see data exception report 785558.

Internal Standard (ISTD) Acceptance
The internal standards were not added to the secondary analyte extracts.

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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
According to the GEL SOP for Method 8321A, all sample and QC extracts are diluted 1:1 v/v with HPLC grade water. The samples in this SDG in this analytical batch for this analysis did not require any additional dilutions.

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

Miscellaneous Information

Data Exception (DER) Documentation
Data exception report 785558 was generated for this SDG.

The MS recovered TATB at 440%. The recovery limits are 44-166%. Since the LCS met acceptance limits for TATB, the noted exception is attributed to vagaries in the extraction process. The data are reported.

The MS/MSD RPD for TATB was 92.2%. The acceptance limits are 0-30%. Since all other RPD recoveries met acceptance criteria, the noted exception is attributed to vagaries in the extraction process. The data are reported.

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

Flagging Convention
The samples were not originally analyzed using SW-846 Method 8330.

Additional Comments
Due to software limitations, all initial calibration blanks must be designated as XIB001 in order for the forms to be correct.

Due to software limitations in the secondary analyte analysis, false positives and analytes detected below the MDL cannot be deleted from the raw data.

Due to software limitations, file extensions such as DL, RE, etc. may not appear on the generated forms and/or raw data.

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System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for primary analyte 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 APCI (Atmospheric Pressure chemical Ionization) probe that is operated in the negative ionization mode for the primary analyte analysis. The laboratory also utilizes an Agilent 1100 liquid chromatography instrument for either primary or secondary analyte analysis. It is coupled with a Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as either LCMSMS #3 or LCMSMS #4. It is fitted with a APCI (Atmospheric Pressure chemical Ionization) probe that is operated in the negative ionization mode for both the primary and secondary analyte analysis.

Chromatographic Columns

The detection of the primary analyte nitroaromatic and nitramines is accomplished through analysis on the following reversed phase column:

Phenomenex: Ultracarb 5u ODS (20), 250 x 4.60 mm ID.

The detection of the secondary analytes is accomplished through analysis on the following reversed phase column:

YMC: J'sphere ODS-H80, 150 x 4.6mm I.D.

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 K Maier **Date:** 02/04/10

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SAMPLE DATA SUMMARY

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7856

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852001

Sample Amount 2

Moisture: 9.4

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0131021a

Date Analyzed: 31-JAN-10 22:25

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7856

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852001

Sample Amount 2

Moisture: 9.4

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01250028.wiff

Date Analyzed: 25-JAN-10 17:36

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7857

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852002

Sample Amount 2

Moisture: 6.3

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0131022a

Date Analyzed: 31-JAN-10 22:55

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7857

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852002

Sample Amount 2

Moisture: 6.3

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01250029.wiff

Date Analyzed: 25-JAN-10 17:52

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7855

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852003

Sample Amount 2

Moisture: 7.5

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0131026a

Date Analyzed: 01-FEB-10 00:53

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7855

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852003

Sample Amount 2

Moisture: 7.5

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01250030.wiff

Date Analyzed: 25-JAN-10 18:08

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7854

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852004

Sample Amount 2

Moisture: 13.8

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0131027a

Date Analyzed: 01-FEB-10 01:22

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7854

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852004

Sample Amount 2

Moisture: 13.8

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01250031.wiff

Date Analyzed: 25-JAN-10 18:24

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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QUALITY CONTROL SUMMARY

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

2

High Explosives Surrogate Recovery Summary

Lab Name: GEL Laboratories LLC **GEL Job No (SDG):** 10-1263

Lab Code: GEL **HPLC Column:** Phenomenex Ultracarb 5u ODS(20)

Lab Sample ID	Client Sample ID	DNT	QC Limits	Flg
244852001	RE12-10-7856	97.4	73.7 - 133.3	
244852001	RE12-10-7856	104	73.7 - 133.3	
244852002	RE12-10-7857	101	73.7 - 133.3	
244852002	RE12-10-7857	99.6	73.7 - 133.3	
244852003	RE12-10-7855	97.1	70 - 144	
244852003	RE12-10-7855	98	73.7 - 133.3	
244852004	RE12-10-7854	97.9	70 - 144	
244852004	RE12-10-7854	96	73.7 - 133.3	
1202017300	MB for batch 942334	93.6	73.7 - 133.3	
1202017300	MB for batch 942334	102	73.7 - 133.3	
1202017301	LCS for batch 942334	97.5	73.7 - 133.3	
1202017301	LCS for batch 942334	110	73.7 - 133.3	

DNT = 3,4-Dinitrotoluene

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3B
High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 10-1263

Extract Batch Code: 942334

Date Extracted: 22-JAN-10

GEL LCS ID: 1202017301

GEL LCSDUP ID:

Analysis Date/Time: 25-JAN-10 14:59

DUP Analysis Date/Time:

Reporting Units: ug/kg

QC Type: LCS/LCSD

Compound	Spike Added	LCS Conc	LCS Rec #	LCSD Conc	LCSD Rec #	RPD #	RPD	Recovery Limits
2,4-Diamino-6-nitrotoluene	5000	5410	108					64.8 – 128
2,6-Diamino-4-nitrotoluene	5000	4930	98.6					69.6 – 133
TATB	5000	5370	107					46.8 – 166
3,5-Dinitroaniline	5000	5260	105					77.3 – 123
tris(o-cresyl) phosphate	5000	5040	101					84.3 – 120

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

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3B
High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 10-1263

Extract Batch Code: 942334

Date Extracted: 22-JAN-10

GEL LCS ID: 1202017301

GEL LCSDUP ID:

Analysis Date/Time: 31-JAN-10 18:59

DUP Analysis Date/Time:

Reporting Units: ug/kg

QC Type: LCS/LCSD

Compound	Spike Added	LCS Conc	LCS Rec #	LCSD Conc	LCSD Rec #	RPD #	RPD	Recovery Limits
HMX	5000	4340	86.8					66.5 – 142
Nitrobenzene	5000	5170	103					71.8 – 126
PETN	5000	4210	84.2					64.6 – 147
2,4,6–Trinitrotoluene	5000	5030	101					78.3 – 132
4–Amino–2,6–dinitrotoluene	5000	5080	102					85.6 – 133
2–Amino–4,6–dinitrotoluene	5000	4750	95					84.2 – 149
2,6–Dinitrotoluene	5000	4740	94.9					86.9 – 122
2,4–Dinitrotoluene	5000	5150	103					82.7 – 132
1,3,5–Trinitrobenzene	5000	4060	81.3					62.1 – 124
RDX	5000	4970	99.5					78.7 – 144
Tetryl	5000	3150	62.9					31.2 – 119
m–Dinitrobenzene	5000	4570	91.4					80.9 – 127
m–Nitrotoluene	5000	4460	89.1					71.9 – 126
o–Nitrotoluene	5000	4840	96.8					75 – 123
p–Nitrotoluene	5000	4830	96.6					73.7 – 124

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

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3

High Explosives MS/MSD Summary

Lab Name: GEL Laboratories LLC

Client ID: RE12-10-7272

Lab Code: GEL

GEL Job No (SDG) 10-1263

Extract Batch Code: 942334

Date Extracted: 22-JAN-10

GEL Spike ID: 1202017302

GEL SpikeDup ID: 1202017303

Analysis Date/Time: 31-JAN-10 19:58

MSD Analysis Date/Time:

Reporting Units: ug/kg

QC Type: MS/MSD

Compound	Spike Added	Sample Conc	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Rec Limits
1,3,5-Trinitrobenzene	5000	0	4910	98.2	4700	94.1	4.32	30	70.7 – 130
2,4,6-Trinitrotoluene	5000	0	5060	101	6180	124	20	30	83.4 – 138
2,4-Dinitrotoluene	5000	0	5010	100	5340	107	6.38	30	79.1 – 137
2,6-Dinitrotoluene	5000	0	4880	97.6	5060	101	3.63	30	85.4 – 125
2-Amino-4,6-dinitrotoluene	5000	0	5140	103	4790	95.7	7.24	30	77.4 – 154
4-Amino-2,6-dinitrotoluene	5000	0	5110	102	6090	122	17.6	30	77.3 – 140
HMX	5000	0	4650	93	4440	88.9	4.56	30	66.7 – 144
Nitrobenzene	5000	0	5240	105	4660	93.1	11.9	30	70.4 – 129
PETN	5000	0	4040	80.8	4060	81.1	.399	30	61.9 – 153
RDX	5000	0	5340	107	4630	92.6	14.2	30	73 – 140
Tetryl	5000	0	4520	90.3	4810	96.3	6.4	30	46.8 – 138
m-Dinitrobenzene	5000	0	4930	98.5	4650	93	5.78	30	83.5 – 126
m-Nitrotoluene	5000	0	4430	88.5	4520	90.4	2.08	30	68.6 – 135
o-Nitrotoluene	5000	0	4210	84.2	4900	98	15.1	30	71.2 – 131
p-Nitrotoluene	5000	0	4350	87	4810	96.2	10	30	69.3 – 133

#Column to be used to flag recovery and RPD values with an asterisk

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3

High Explosives MS/MSD Summary

Lab Name: GEL Laboratories LLC

Client ID: RE12-10-7272

Lab Code: GEL

GEL Job No (SDG) 10-1263

Extract Batch Code: 942334

Date Extracted: 22-JAN-10

GEL Spike ID: 1202017302

GEL SpikeDup ID: 1202017303

Analysis Date/Time: 25-JAN-10 15:31

MSD Analysis Date/Time:

Reporting Units: ug/kg

QC Type: MS/MSD

Compound	Spike Added	Sample Conc	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Rec Limits
2,4-Diamino-6-nitrotoluene	5000	0	3720	74.4	4490	89.8	18.8	30	51.6 - 127
2,6-Diamino-4-nitrotoluene	5000	0	4030	80.6	4750	95	16.4	30	58.9 - 135
3,5-Dinitroaniline	5000	0	5200	104	4970	99.4	4.52	30	72.8 - 125
tris(o-cresyl) phosphate	5000	0	4540	90.8	3990	79.8	12.9	30	79.1 - 124
TATB	5000	0	22000	440 *	8120	162	92.2 *	30	43.9 - 166

#Column to be used to flag recovery and RPD values with an asterisk

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4

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1263

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 31-JAN-10 12:35

GEL Data File: EXP0131001a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	536.185
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	570.359
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

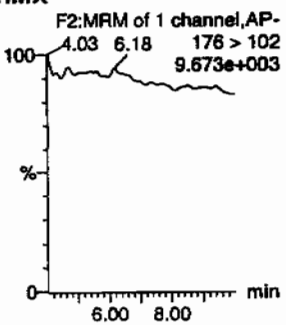
Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Method: C:\MASSLYNX\NEW_EXP.PRO\MethDB\013110expa.mdb, Time: Mon Feb 01 10:41:50 2010
Calibration: Untitled, Time: Mon Feb 01 14:26:07 2010

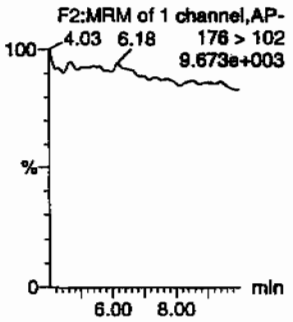
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131001a
Date: 31-Jan-2010
Time: 12:35:42
ID: XIBLK01
Vial: 1:1,A

MMT 2/1/10

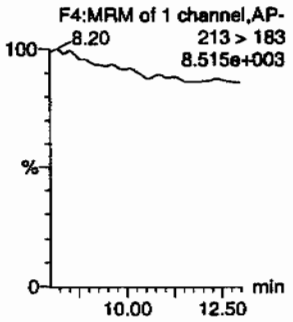
HMX



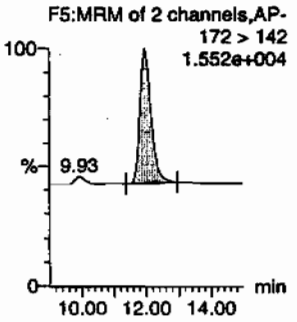
RDX



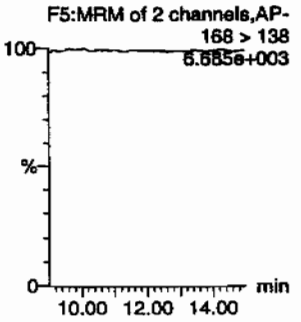
135-Trinitrobenzene



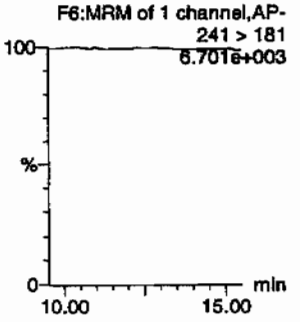
13-Dinitrobenzene-d4



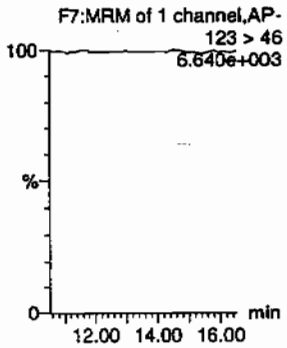
13-Dinitrobenzene



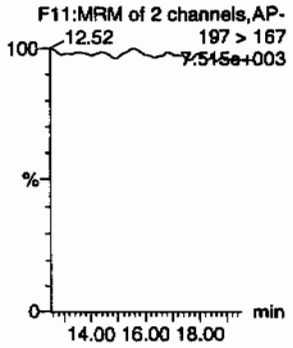
Tetryl



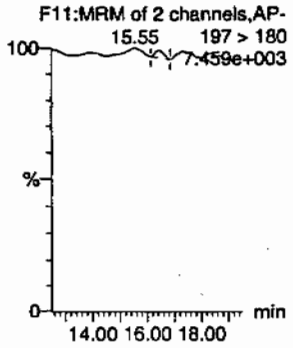
Nitrobenzene



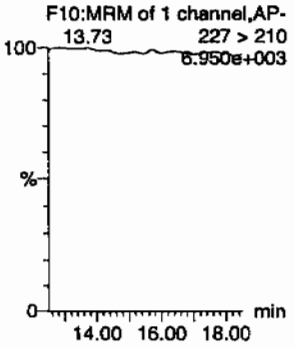
4-Amino-26-dinitrotoluene



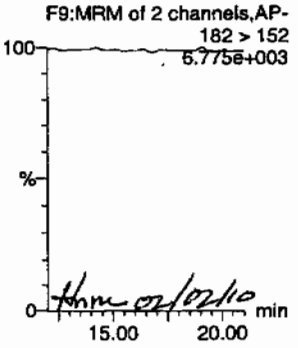
2-Amino-46-dinitrotoluene



246-Trinitrotoluene

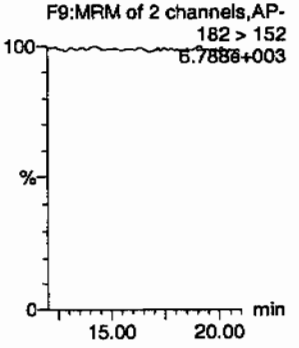


34-dinitrotoluene



Hmm 02/02/10

26-dinitrotoluene



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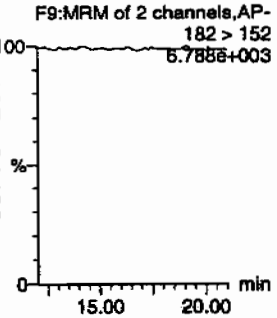
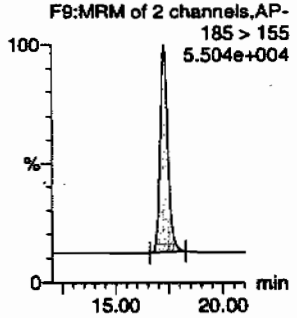
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

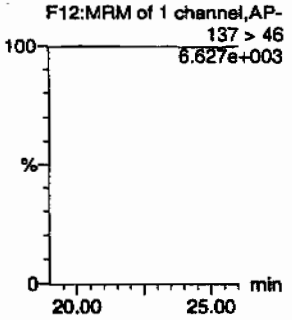
24-dinitrotoluene



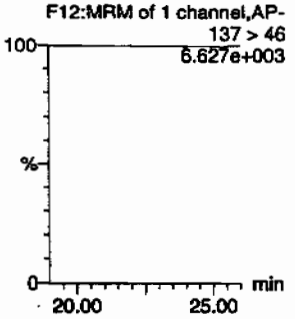
26-dinitrotoluene-d3



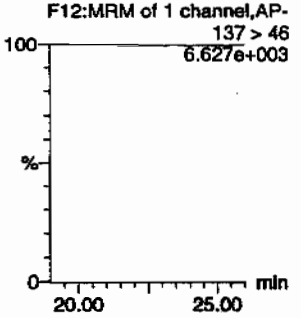
2-Nitrotoluene



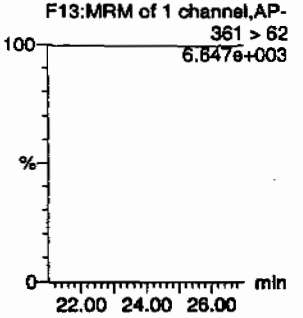
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
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XIBLK01	RDX	176 > 102			3547.960									
XIBLK01	135-Trinitrobenzene	213 > 183			3547.960									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	11.97	3547.960		3547.960	3547.960	bb			536.1853	107.2	7.2	275.2
XIBLK01	13-Dinitrobenzene	168 > 138			3547.960									
XIBLK01	Tetryl	241 > 181			3547.960									
XIBLK01	Nitrobenzene	123 > 46			3547.960									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			20734.992									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			20734.992			MM-	01-Feb-10	14:12:40				
XIBLK01	246-Trinitrotoluene	227 > 210			20734.992									
XIBLK01	34-dinitrotoluene	182 > 152			20734.992									
XIBLK01	26-dinitrotoluene	182 > 152			20734.992									
XIBLK01	24-dinitrotoluene	182 > 152			20734.992									
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.27	20734.992		20734.992	20734.992	bb			570.3587	114.1	14.1	1186.5
XIBLK01	2-Nitrotoluene	137 > 46			20734.992									
XIBLK01	4-Nitrotoluene	137 > 46			20734.992									
XIBLK01	3-Nitrotoluene	137 > 46			20734.992									
XIBLK01	PETN	361 > 62			20734.992									

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4

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1263

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 31–JAN–10 13:05

GEL Data File: EXP0131002a

Instrument ID: LCMSMS

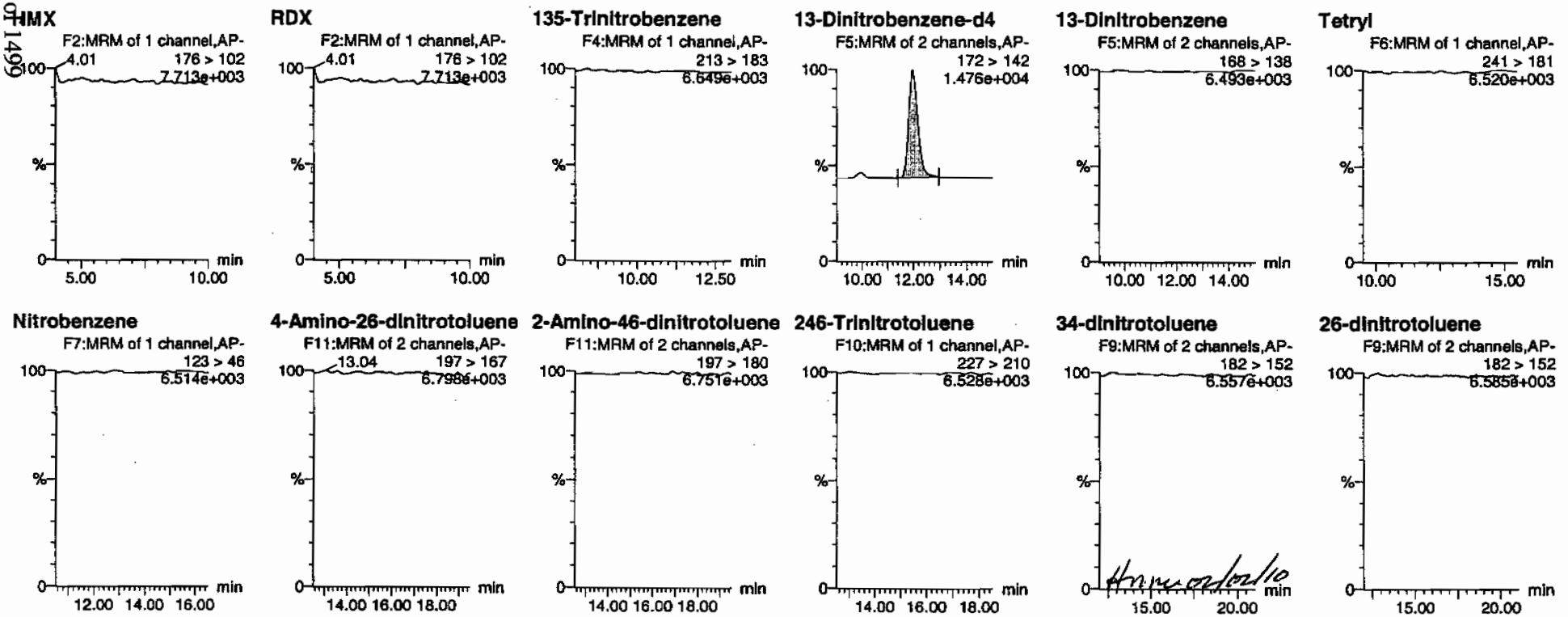
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	504.609
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	521.251
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131002a
Date: 31-Jan-2010
Time: 13:05:29
ID: XIBLK01
Vial: 1:1,A

MAP 2/1/10



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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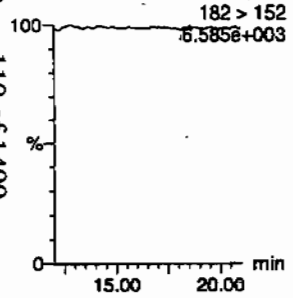
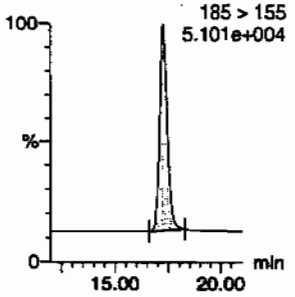
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

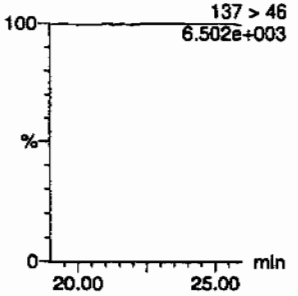
24-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.585e+003



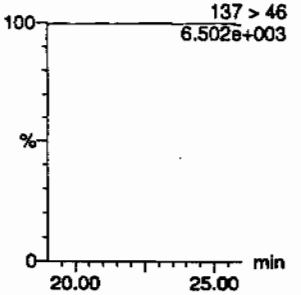
26-dinitrotoluene-d3
F9:MRM of 2 channels,AP-
185 > 155
5.101e+004



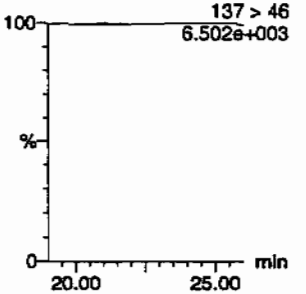
2-Nitrotoluene
F12:MRM of 1 channel,AP-
137 > 46
6.502e+003



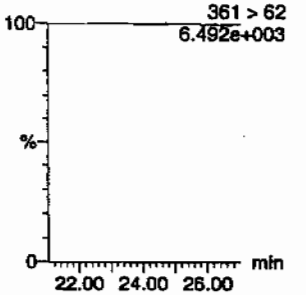
4-Nitrotoluene
F12:MRM of 1 channel,AP-
137 > 46
6.502e+003



3-Nitrotoluene
F12:MRM of 1 channel,AP-
137 > 46
6.502e+003



PETN
F13:MRM of 1 channel,AP-
361 > 62
6.492e+003



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
XIBLK01	HMX	176 > 102			3339.021									
XIBLK01	RDX	176 > 102			3339.021									
XIBLK01	135-Trinitrobenzene	213 > 183			3339.021									
XIBLK01	13-Dinitrobenzene-d4	172 > 142	11.97	3339.021		3339.021	3339.021	bb			504.6094	100.9	0.9	404.8
XIBLK01	13-Dinitrobenzene	168 > 138			3339.021									
XIBLK01	Tetryl	241 > 181			3339.021									
XIBLK01	Nitrobenzene	123 > 46			3339.021									
XIBLK01	4-Amino-26-dinitrotoluene	197 > 167			18949.709									
XIBLK01	2-Amino-46-dinitrotoluene	197 > 180			18949.709									
XIBLK01	246-Trinitrotoluene	227 > 210			18949.709									
XIBLK01	34-dinitrotoluene	182 > 152			18949.709									
XIBLK01	26-dinitrotoluene	182 > 152			18949.709									
XIBLK01	24-dinitrotoluene	182 > 152			18949.709			MM-	01-Feb-10	14:17:22				
XIBLK01	26-dinitrotoluene-d3	185 > 155	17.27	18949.709		18949.709	18949.709	bb			521.2508	104.3	4.3	1709.4
XIBLK01	2-Nitrotoluene	137 > 46			18949.709									
XIBLK01	4-Nitrotoluene	137 > 46			18949.709									
XIBLK01	3-Nitrotoluene	137 > 46			18949.709									
XIBLK01	PETN	361 > 62			18949.709									

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4

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1263

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 25-JAN-10 10:28

GEL Data File: EXS01250001.wiff

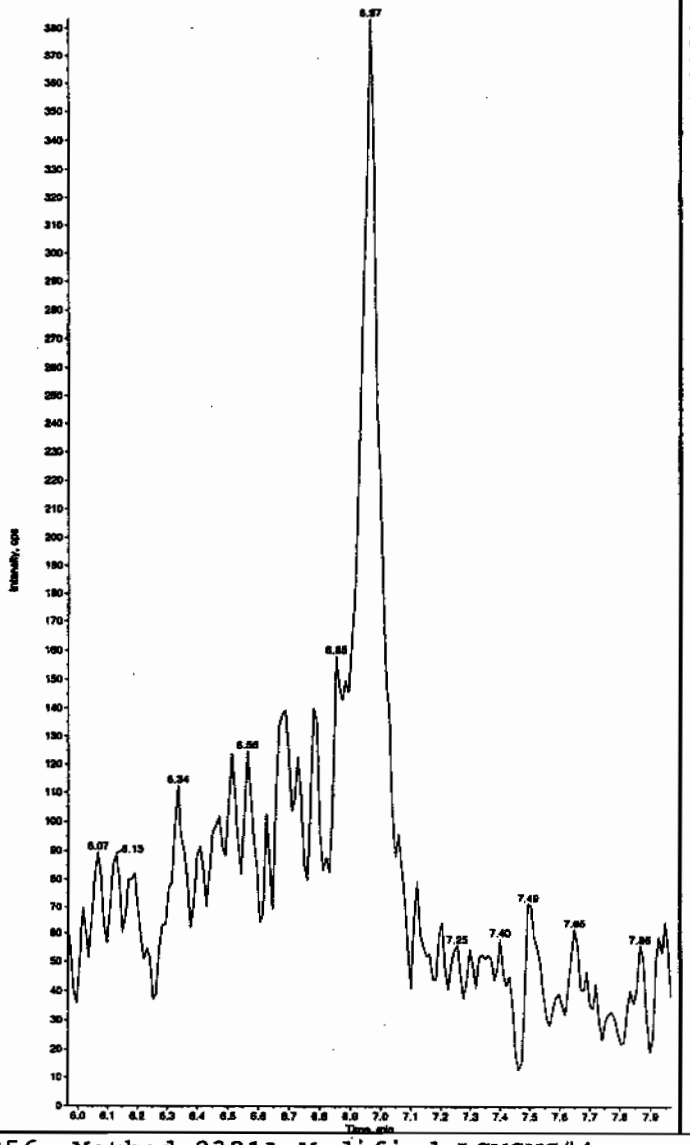
Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

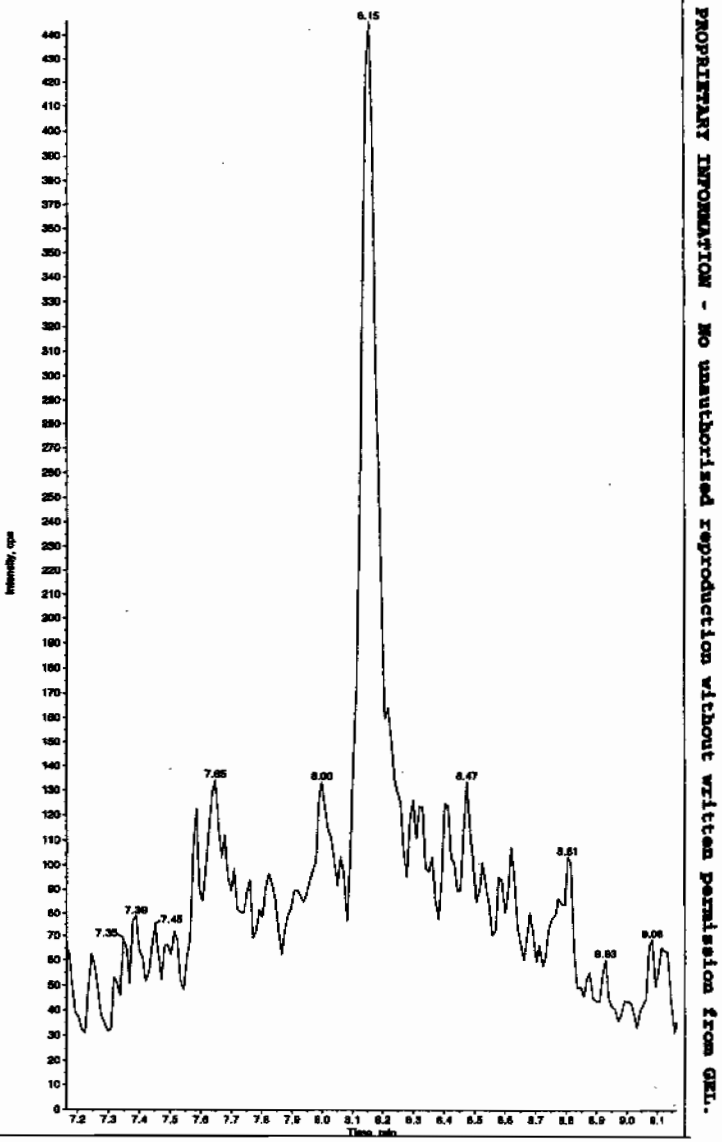
Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	0
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

LER 1/27/10

Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01250001.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 10:28:30 AM
Modified: No



Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01250001.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 10:28:30 AM
Modified: No



Hm 01/27/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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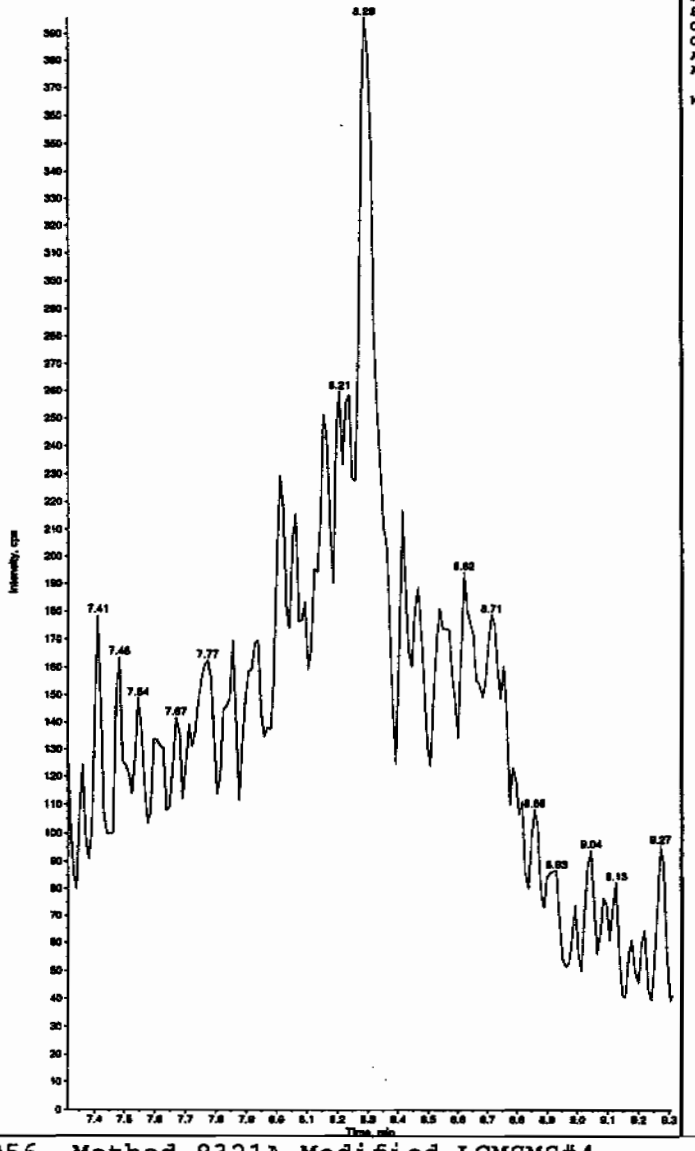
Sample Name: "XIBLK01" Sample ID: "1|1|LER" File: "EXS01250001.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 10:28:30 AM

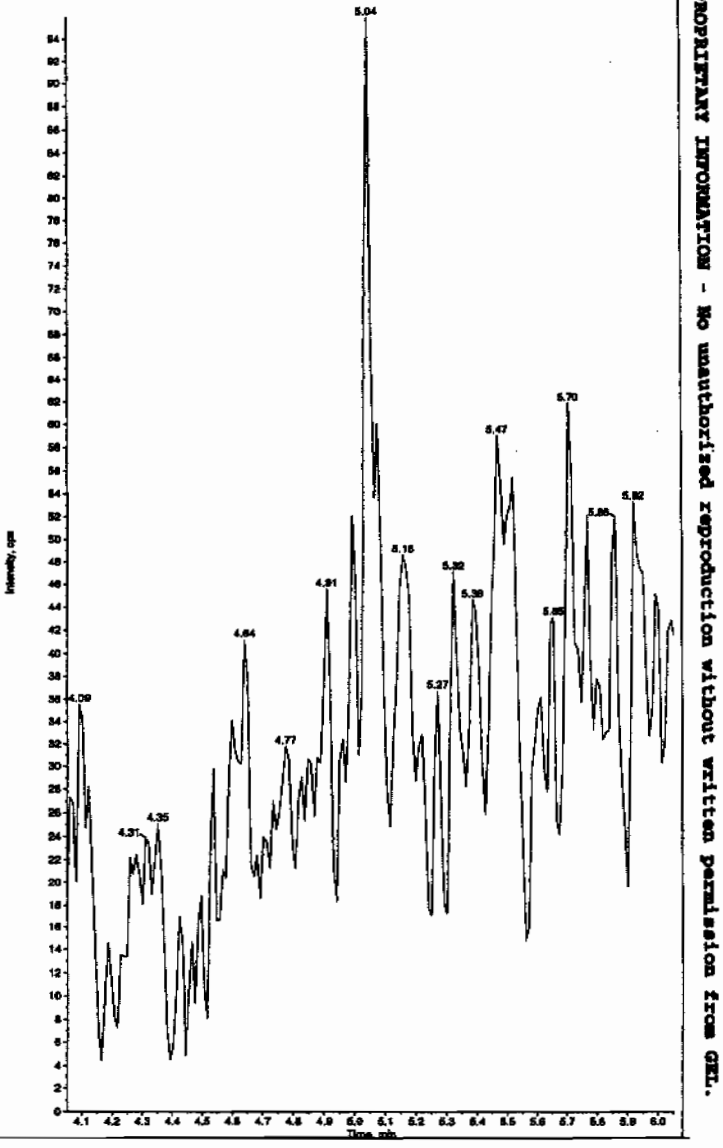
Modified: No



Sample Name: "XIBLK01" Sample ID: "1|1|LER" File: "EXS01250001.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 10:28:30 AM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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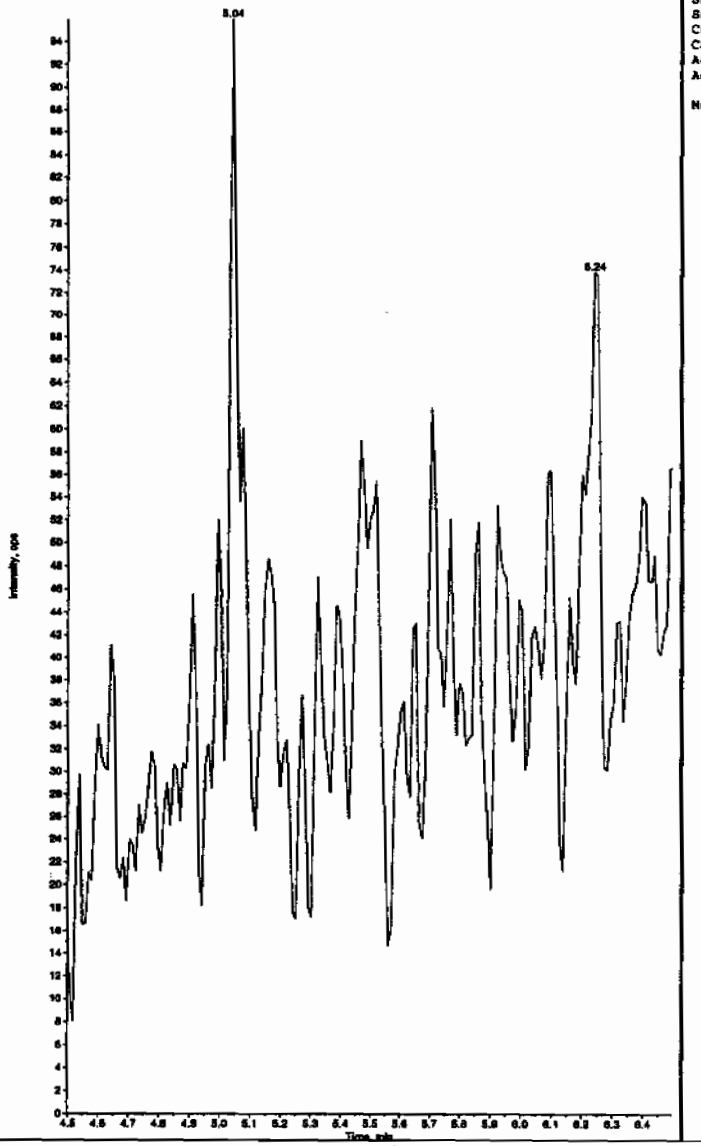
Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01250001.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 10:28:30 AM

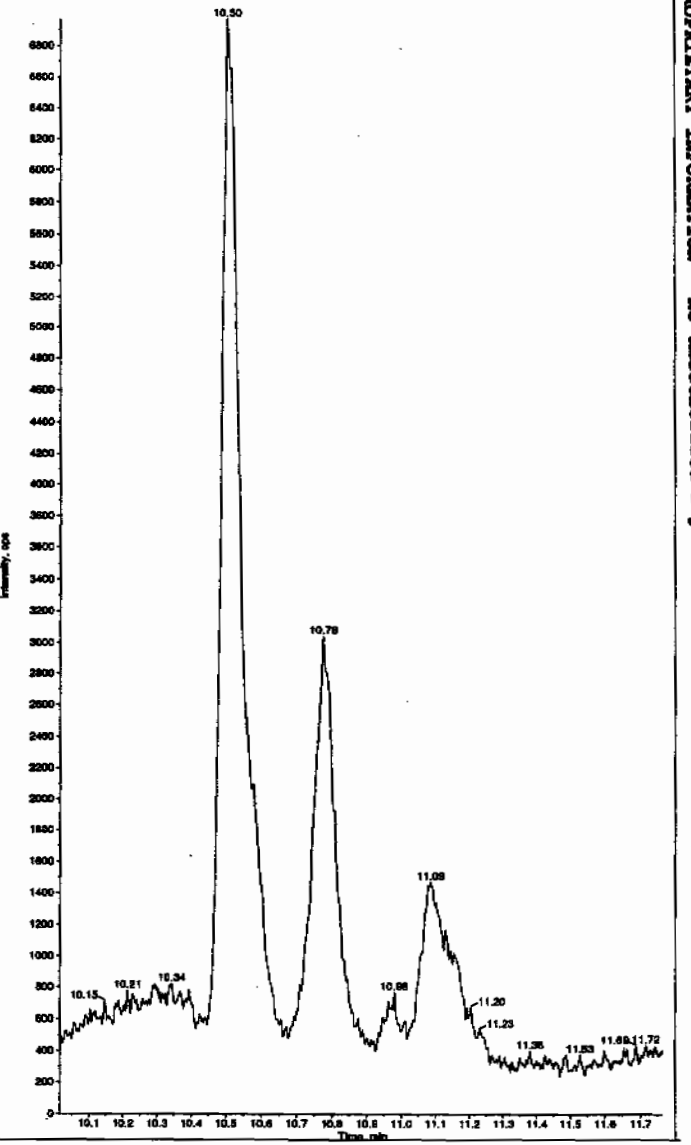
Modified: No



Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01250001.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 10:28:30 AM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1263

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 25-JAN-10 10:46

GEL Data File: EXS01250002.wiff

Instrument ID: LCMSMS

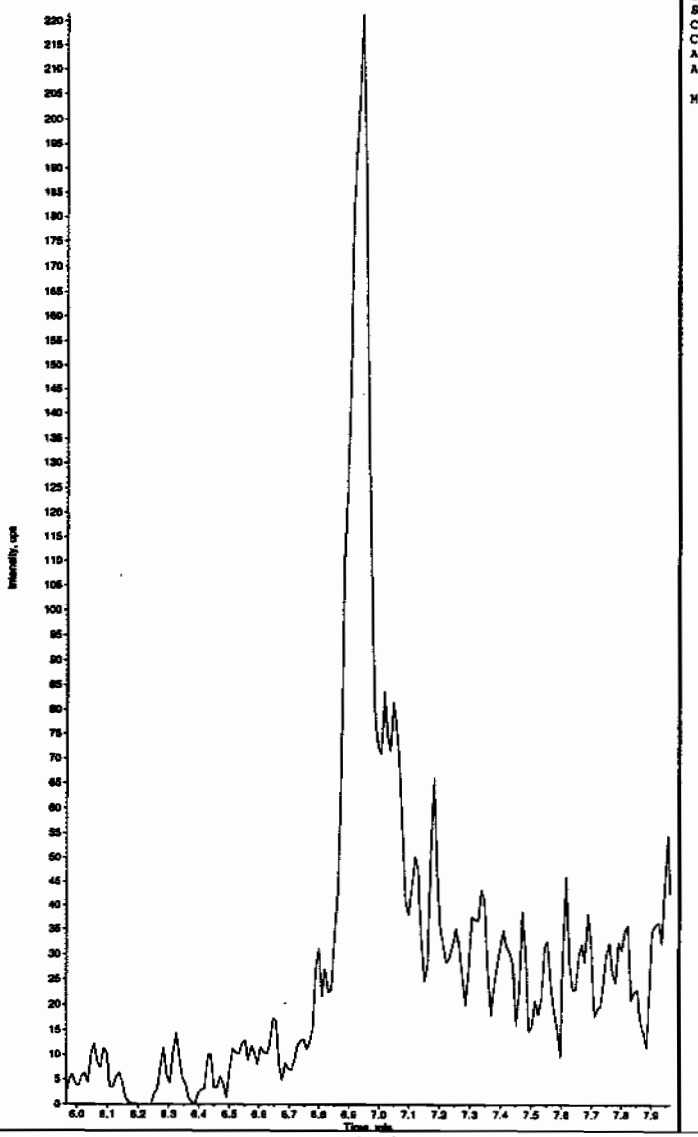
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	0
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Lar 1/27/10

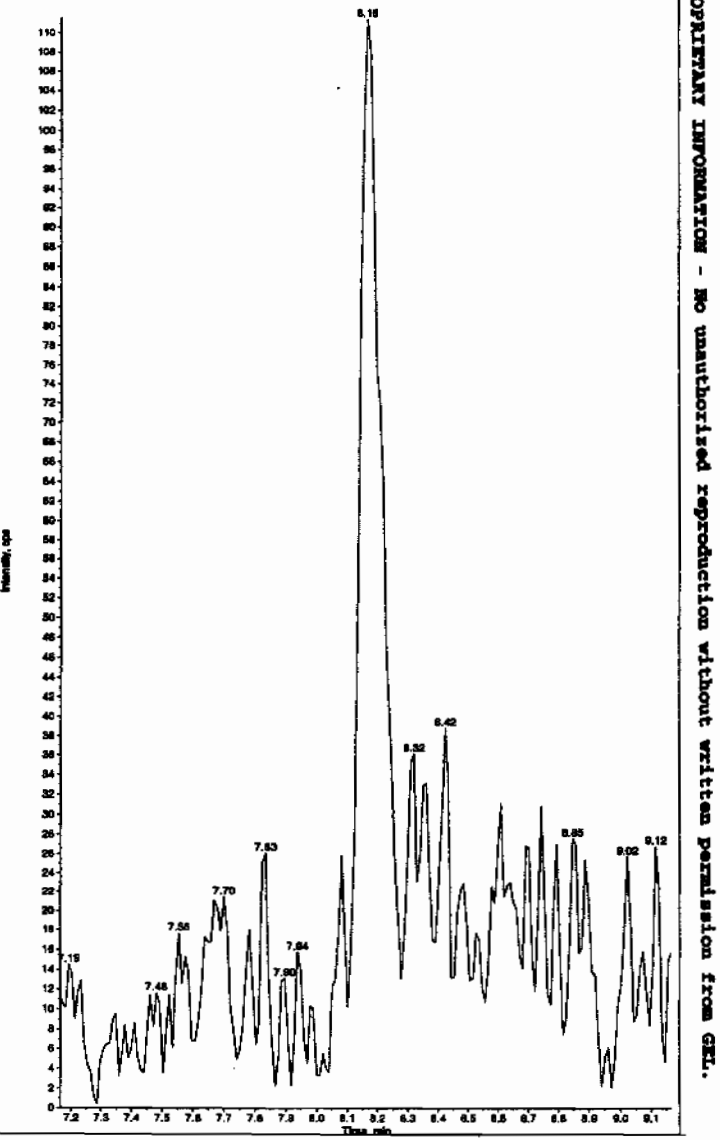
Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01250002.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 10:46:38 AM

Modified: No



Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01250002.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 10:46:38 AM

Modified: No



tm mc 01/27/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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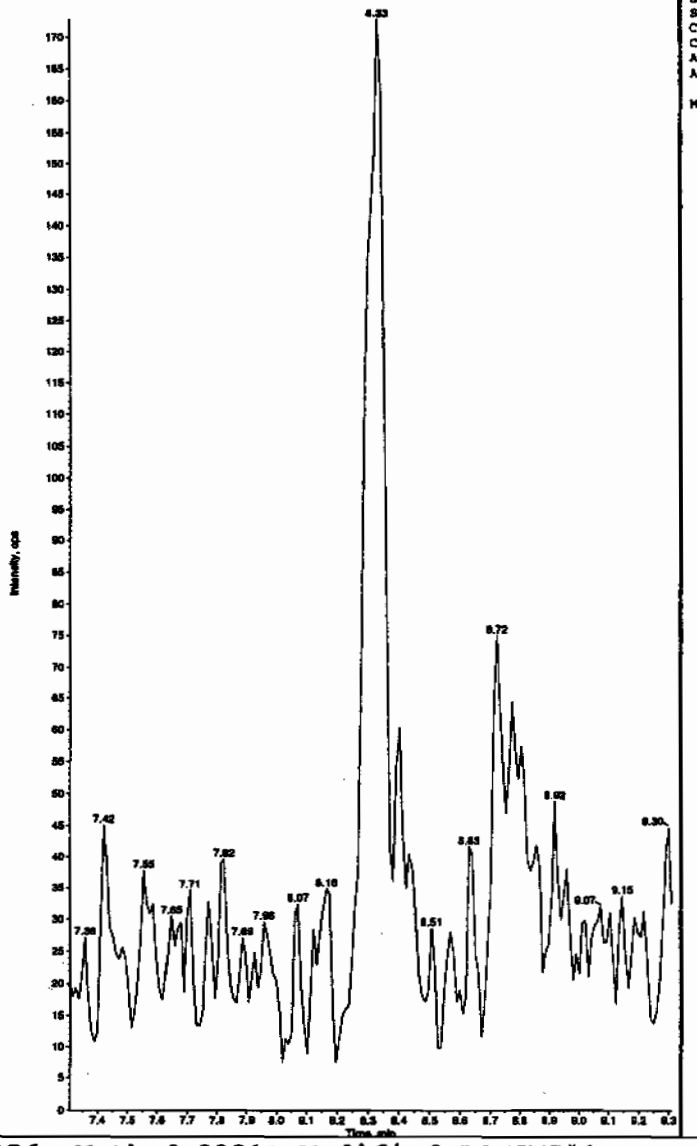
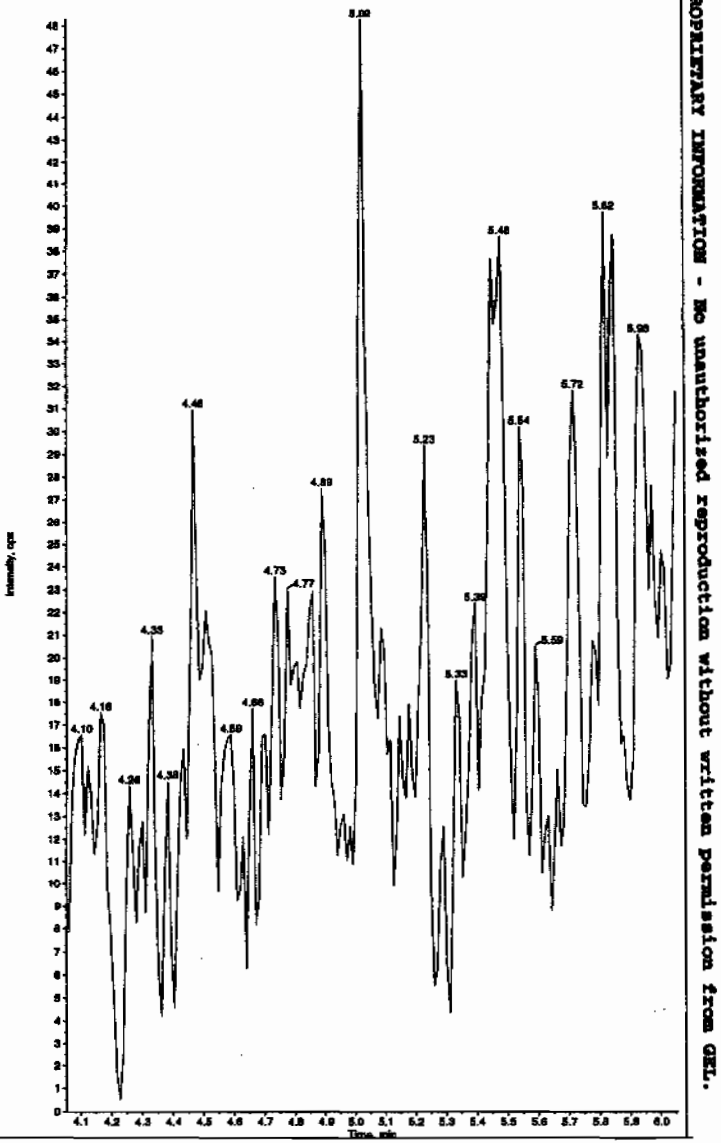
Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01250002.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 10:46:38 AM

Modified: No



Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01250002.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 10:46:38 AM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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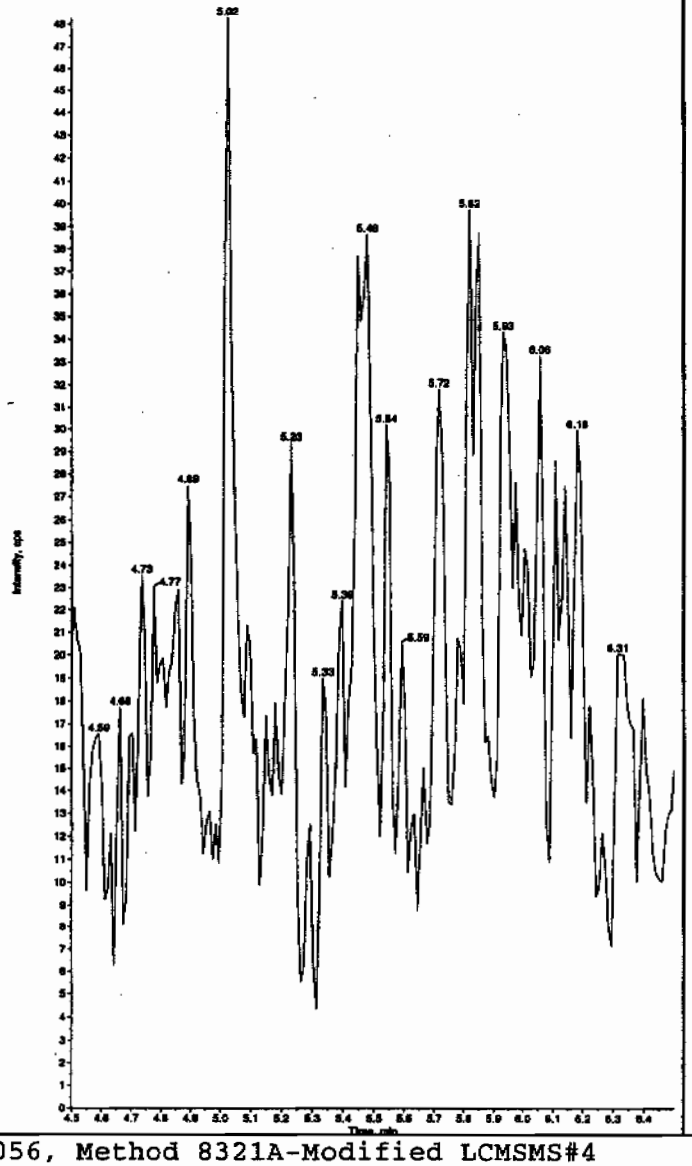
Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01250002.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 10:46:38 AM

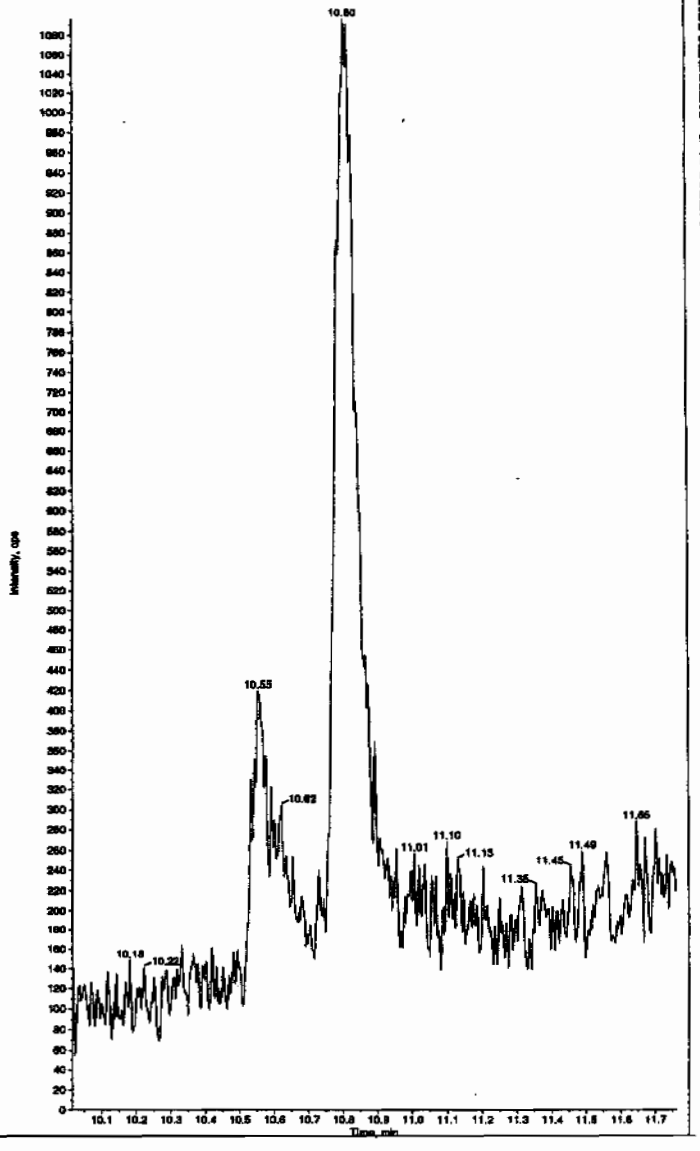
Modified: No



Sample Name: "XIBLK01" Sample ID: "[1]LER" File: "EXS01250002.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 10:46:38 AM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1263

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 31-JAN-10 16:32

GEL Data File: EXP0131009a

Instrument ID: LCMSMS

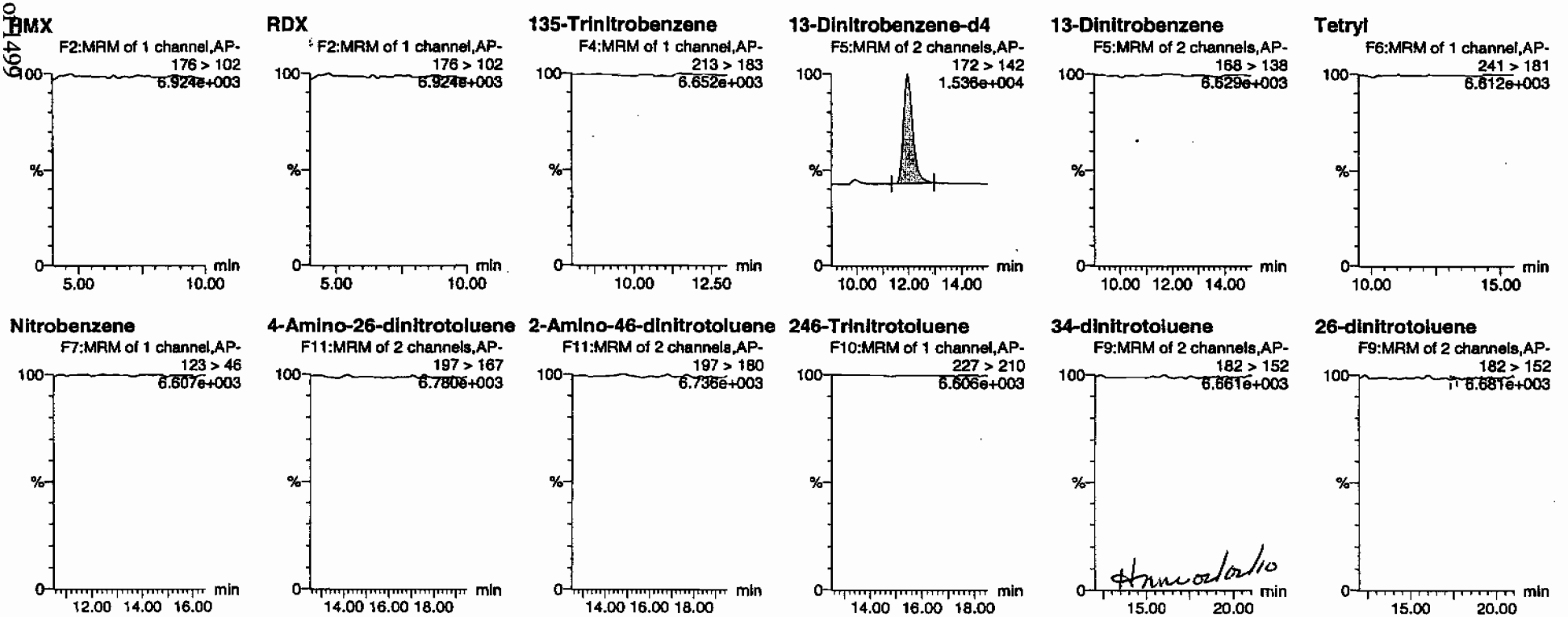
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	533.449
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	543.732
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131009a
Date: 31-Jan-2010
Time: 16:32:03
ID: XIBLK02
Vial: 1:1,A

MAP 2/1/10



Hmm 02/02/10

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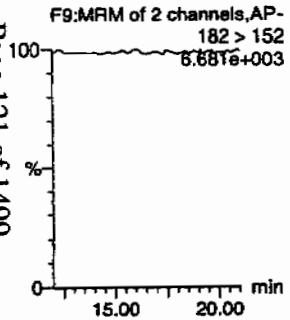
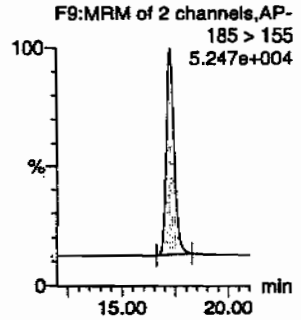
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

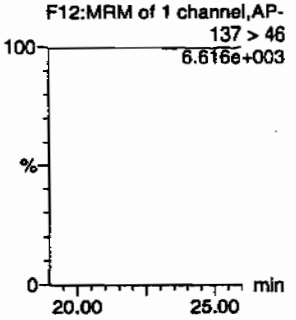
24-dinitrotoluene



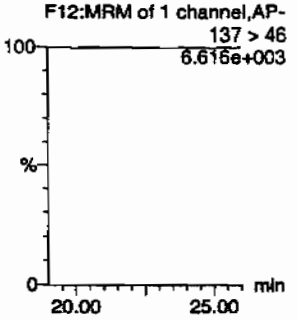
26-dinitrotoluene-d3



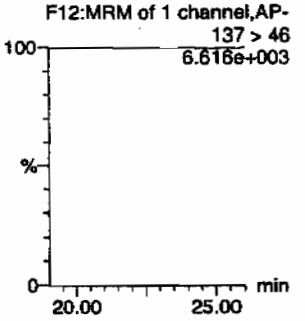
2-Nitrotoluene



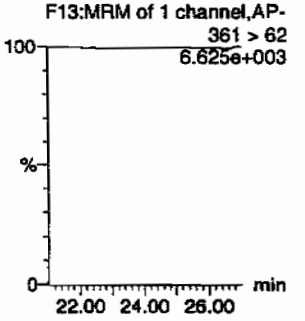
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%RSD	S/N
XIBLK02	HMX	176 > 102			3529.854									
XIBLK02	RDX	176 > 102			3529.854									
XIBLK02	135-Trinitrobenzene	213 > 183			3529.854									
XIBLK02	13-Dinitrobenzene-d4	172 > 142	11.97	3529.854		3529.854	3529.854	bb			533.4490	106.7	6.7	242.5
XIBLK02	13-Dinitrobenzene	168 > 138			3529.854									
XIBLK02	Tetryl	241 > 181			3529.854									
XIBLK02	Nitrobenzene	123 > 46			3529.854									
XIBLK02	4-Amino-26-dinitrotoluene	197 > 167			19766.984									
XIBLK02	2-Amino-46-dinitrotoluene	197 > 180			19766.984									
XIBLK02	246-Trinitrotoluene	227 > 210			19766.984									
XIBLK02	34-dinitrotoluene	182 > 152			19766.984									
XIBLK02	26-dinitrotoluene	182 > 152			19766.984			MM-	01-Feb-10	14:14:24				
XIBLK02	24-dinitrotoluene	182 > 152			19766.984									
XIBLK02	26-dinitrotoluene-d3	185 > 155	17.27	19766.984		19766.984	19766.984	bb			543.7317	108.7	8.7	1235.4
XIBLK02	2-Nitrotoluene	137 > 46			19766.984									
XIBLK02	4-Nitrotoluene	137 > 46			19766.984									
XIBLK02	3-Nitrotoluene	137 > 46			19766.984									
XIBLK02	PETN	361 > 62			19766.984									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1263

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 31-JAN-10 17:31

GEL Data File: EXP0131011a

Instrument ID: LCMSMS

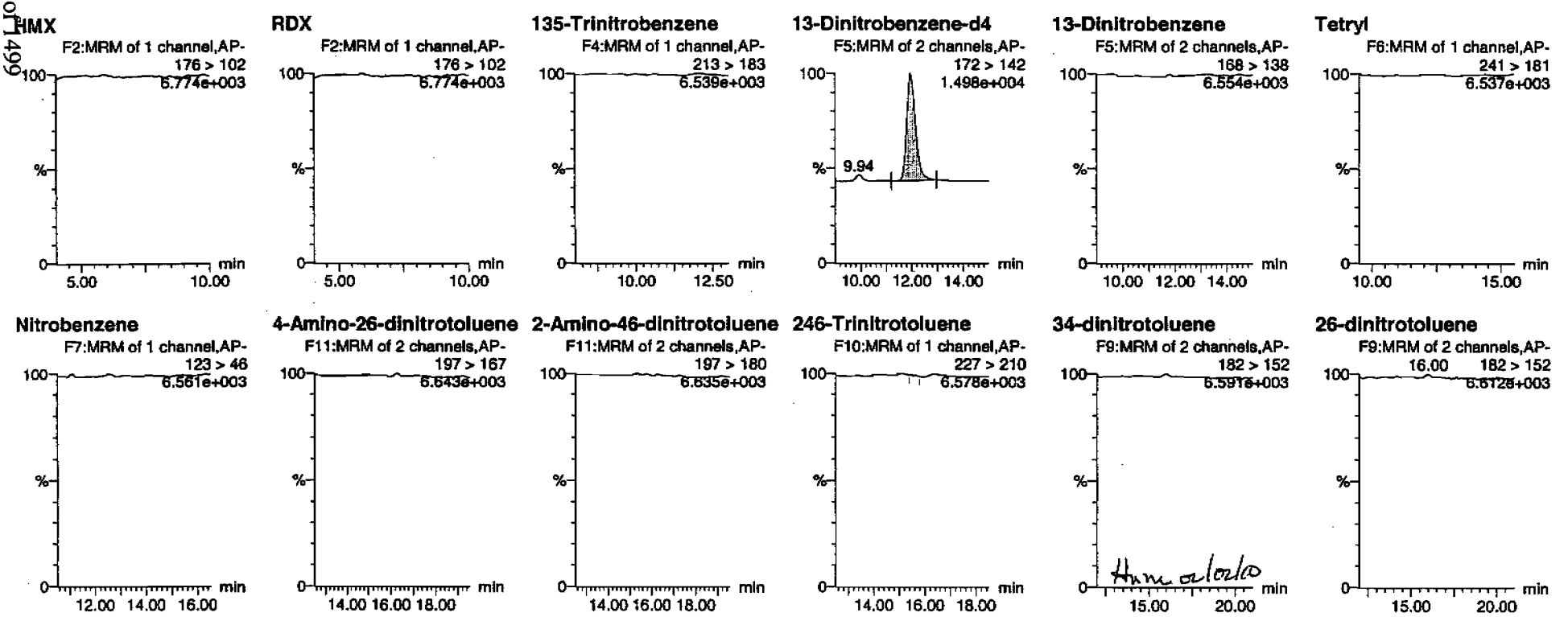
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	504.9
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	516.084
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131011a
Date: 31-Jan-2010
Time: 17:31:00
ID: XIBLK03
Vial: 1:1,A

MAP 2/1/10



GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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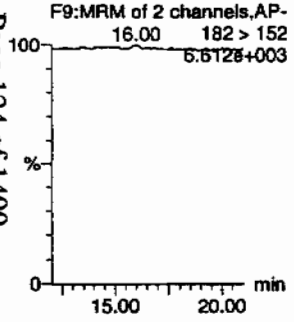
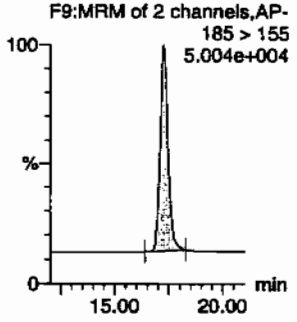
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

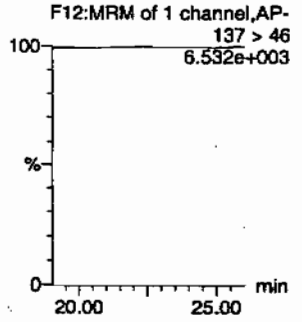
24-dinitrotoluene



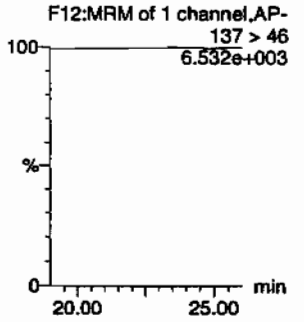
26-dinitrotoluene-d3



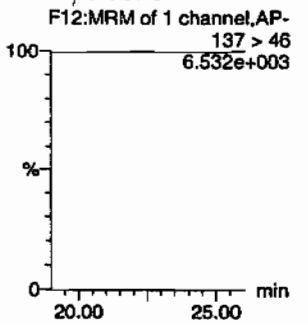
2-Nitrotoluene



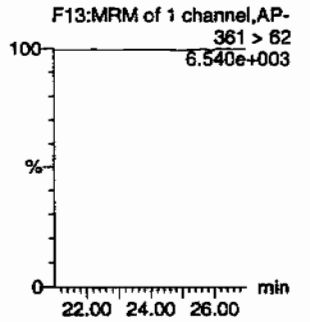
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	IS Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
XIBLK03	HMX	176 > 102			3340.941									
XIBLK03	RDX	176 > 102			3340.941									
XIBLK03	135-Trinitrobenzene	213 > 183			3340.941									
XIBLK03	13-Dinitrobenzene-d4	172 > 142	11.97	3340.941		3340.941	3340.941	bb			504.8996	101.0	1.0	381.1
XIBLK03	13-Dinitrobenzene	168 > 138			3340.941									
XIBLK03	Tetryl	241 > 181			3340.941									
XIBLK03	Nitrobenzene	123 > 46			3340.941									
XIBLK03	4-Amino-26-dinitrotoluene	197 > 167			18761.885									
XIBLK03	2-Amino-46-dinitrotoluene	197 > 180			18761.885									
XIBLK03	246-Trinitrotoluene	227 > 210			18761.885			MM-	01-Feb-10	14:12:50				
XIBLK03	34-dinitrotoluene	182 > 152			18761.885									
XIBLK03	26-dinitrotoluene	182 > 152			18761.885									
XIBLK03	24-dinitrotoluene	182 > 152			18761.885									
XIBLK03	26-dinitrotoluene-d3	185 > 155	17.27	18761.885		18761.885	18761.885	bb			516.0843	103.2	3.2	1825.0
XIBLK03	2-Nitrotoluene	137 > 46			18761.885									
XIBLK03	4-Nitrotoluene	137 > 46			18761.885									
XIBLK03	3-Nitrotoluene	137 > 46			18761.885									
XIBLK03	PETN	361 > 62			18761.885									

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1263

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 31–JAN–10 23:54

GEL Data File: EXP0131024a

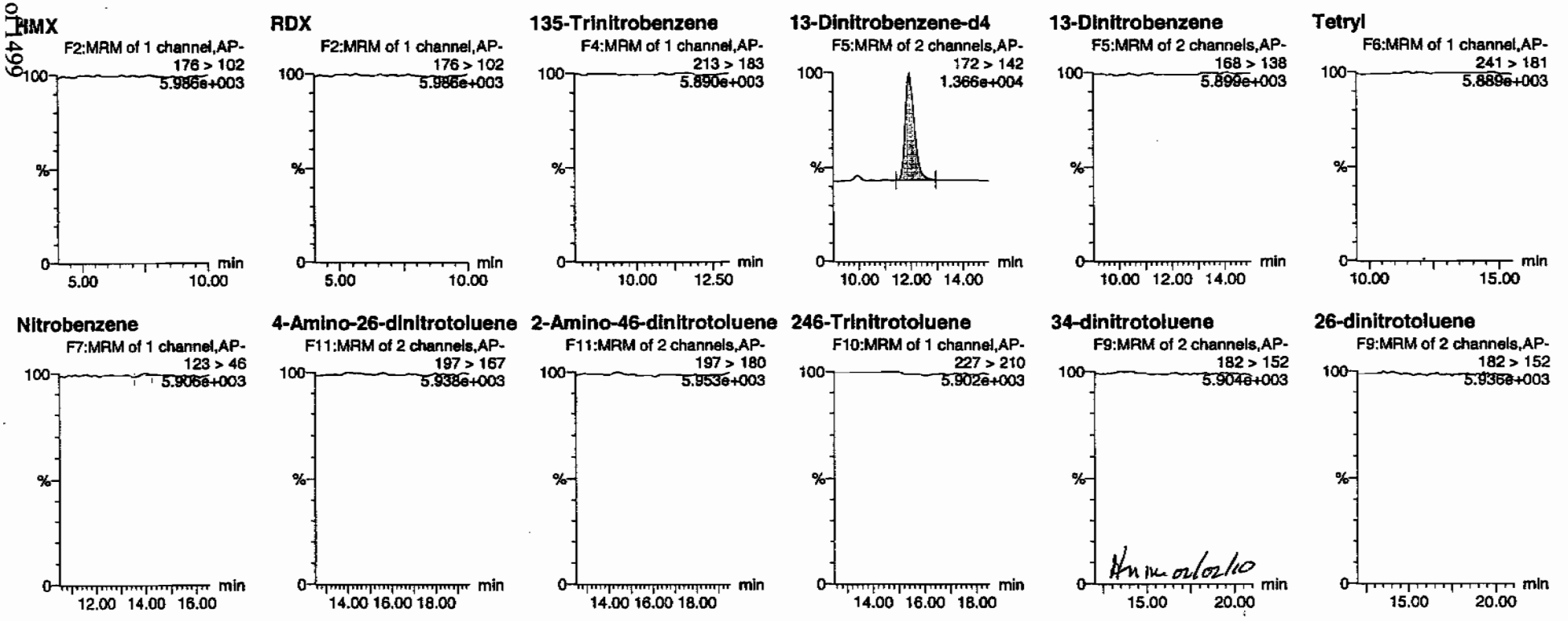
Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	469.819
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	476.945
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131024a
Date: 31-Jan-2010
Time: 23:54:18
ID: XIBLK04
Vial: 1:1,A



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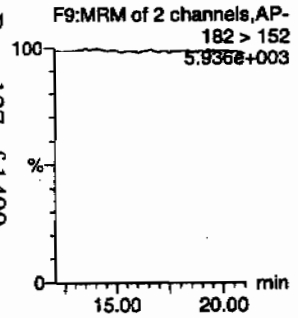
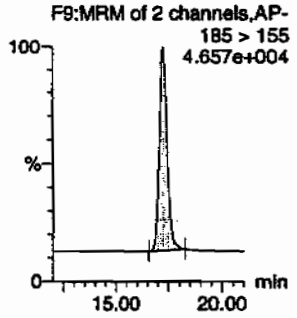
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

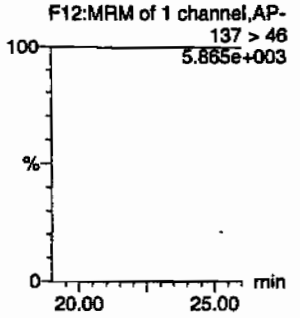
24-dinitrotoluene



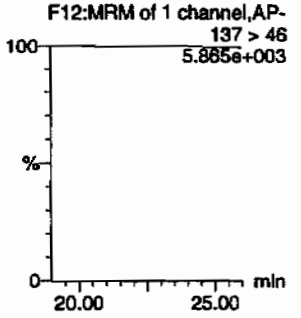
26-dinitrotoluene-d3



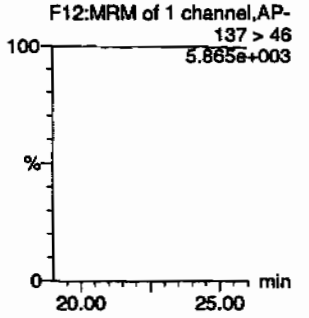
2-Nitrotoluene



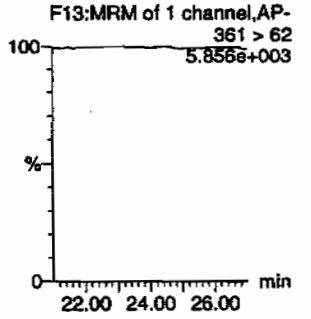
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
XIBLK04	HMX	176 > 102			3108.811									
XIBLK04	RDX	176 > 102			3108.811									
XIBLK04	135-Trinitrobenzene	213 > 183			3108.811									
XIBLK04	13-Dinitrobenzene-d4	172 > 142	11.95	3108.811		3108.811	3108.811	bb			469.8189	94.0	-6.0	562.0
XIBLK04	13-Dinitrobenzene	168 > 138			3108.811									
XIBLK04	Tetryl	241 > 181			3108.811									
XIBLK04	Nitrobenzene	123 > 46			3108.811			MM-	01-Feb-10	14:08:04				
XIBLK04	4-Amino-26-dinitrotoluene	197 > 167			17339.012									
XIBLK04	2-Amino-46-dinitrotoluene	197 > 180			17339.012									
XIBLK04	246-Trinitrotoluene	227 > 210			17339.012									
XIBLK04	34-dinitrotoluene	182 > 152			17339.012									
XIBLK04	26-dinitrotoluene	182 > 152			17339.012									
XIBLK04	24-dinitrotoluene	182 > 152			17339.012									
XIBLK04	26-dinitrotoluene-d3	185 > 155	17.25	17339.012		17339.012	17339.012	bb			476.9453	95.4	-4.6	2039.4
XIBLK04	2-Nitrotoluene	137 > 46			17339.012									
XIBLK04	4-Nitrotoluene	137 > 46			17339.012									
XIBLK04	3-Nitrotoluene	137 > 46			17339.012									
XIBLK04	PETN	361 > 62			17339.012									

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4A
Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1263

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 01–FEB–10 06:17

GEL Data File: EXP0131037a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

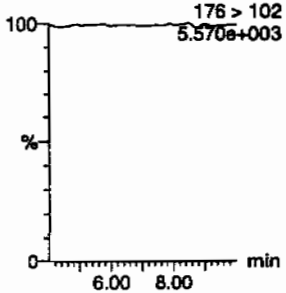
Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
1,3,5–Trinitrobenzene	0	0
1,3–Dinitrobenzene–d4	500	447.977
2,4,6–Trinitrotoluene	0	0
2,4–Dinitrotoluene	0	0
2,6–Dinitrotoluene	0	0
2,6–Dinitrotoluene–d3	500	480.86
2–Amino–4,6–dinitrotoluene	0	0
4–Amino–2,6–dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0
RDX	0	0
Tetryl	0	0
m–Dinitrobenzene	0	0
m–Nitrotoluene	0	0
o–Nitrotoluene	0	0
p–Nitrotoluene	0	0

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

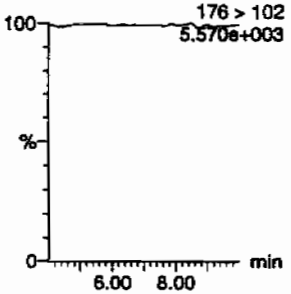
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131037a
Date: 01-Feb-2010
Time: 06:17:40
ID: XIBLK05
Vial: 1:1,A

MAT 2/1/10

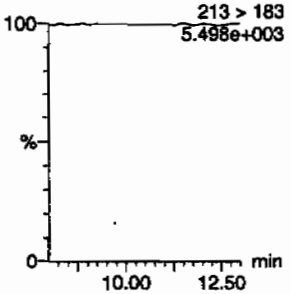
HMX
F2:MRM of 1 channel,AP-
176 > 102
5.570e+003



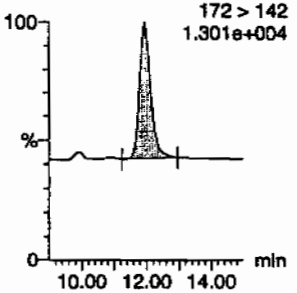
RDX
F2:MRM of 1 channel,AP-
176 > 102
5.570e+003



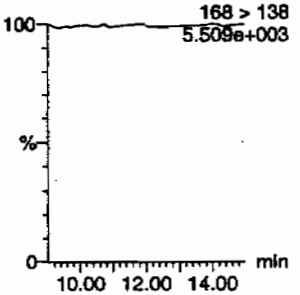
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
5.498e+003



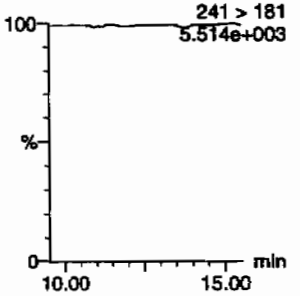
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.301e+004



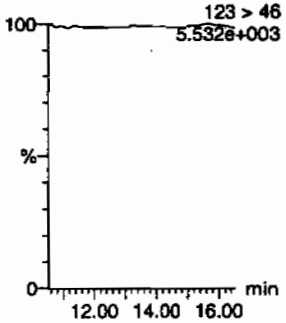
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
5.509e+003



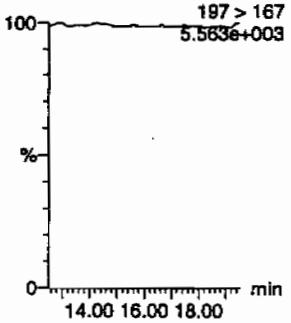
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
5.514e+003



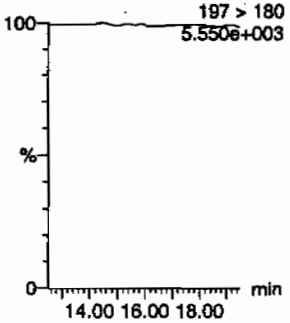
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
5.532e+003



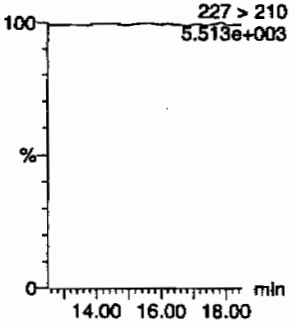
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
5.563e+003



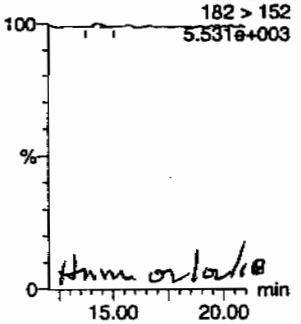
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
5.550e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
5.513e+003

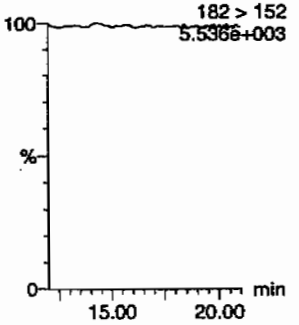


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.531e+003



Hmm or la/le

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.536e+003



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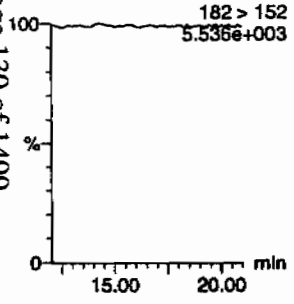
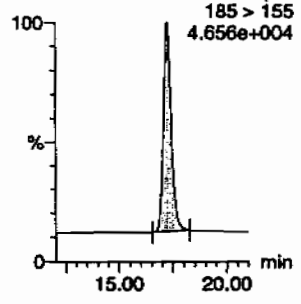
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

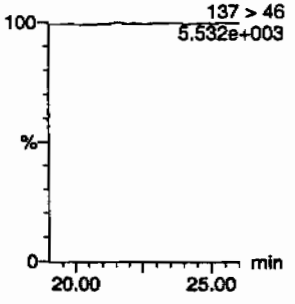
24-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.536e+003



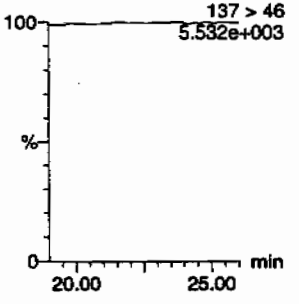
26-dinitrotoluene-d3
F9:MRM of 2 channels,AP-
185 > 155
4.656e+004



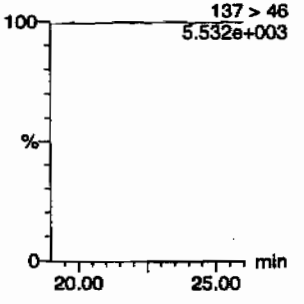
2-Nitrotoluene
F12:MRM of 1 channel,AP-
137 > 46
5.532e+003



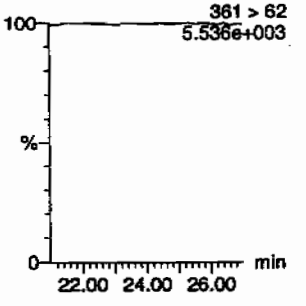
4-Nitrotoluene
F12:MRM of 1 channel,AP-
137 > 46
5.532e+003



3-Nitrotoluene
F12:MRM of 1 channel,AP-
137 > 46
5.532e+003



PETN
F13:MRM of 1 channel,AP-
361 > 62
5.536e+003



ID	Name	Trace	RT	IS Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ug/ml	%Rec	%Dev	S/N
XIBLK05	HMX	176 > 102			2964.285									
XIBLK05	RDX	176 > 102			2964.285									
XIBLK05	135-Trinitrobenzene	213 > 183			2964.285									
XIBLK05	13-Dinitrobenzene-d4	172 > 142	11.95	2964.285		2964.285	2964.285	bb			447.9774	89.6	-10.4	214.0
XIBLK05	13-Dinitrobenzene	168 > 138			2964.285									
XIBLK05	Tetryl	241 > 181			2964.285									
XIBLK05	Nitrobenzene	123 > 46			2964.285									
XIBLK05	4-Amino-26-dinitrotoluene	197 > 167			17481.314									
XIBLK05	2-Amino-46-dinitrotoluene	197 > 180			17481.314									
XIBLK05	246-Trinitrotoluene	227 > 210			17481.314									
XIBLK05	34-dinitrotoluene	182 > 152			17481.314			MM-	01-Feb-10	14:13:13				
XIBLK05	26-dinitrotoluene	182 > 152			17481.314									
XIBLK05	24-dinitrotoluene	182 > 152			17481.314									
XIBLK05	26-dinitrotoluene-d3	185 > 155	17.25	17481.314		17481.314	17481.314	bb			480.8596	96.2	-3.8	1773.7
XIBLK05	2-Nitrotoluene	137 > 46			17481.314									
XIBLK05	4-Nitrotoluene	137 > 46			17481.314									
XIBLK05	3-Nitrotoluene	137 > 46			17481.314									
XIBLK05	PETN	361 > 62			17481.314									

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1263

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 25–JAN–10 12:54

GEL Data File: EXS01250010.wiff

Instrument ID: LCMSMS

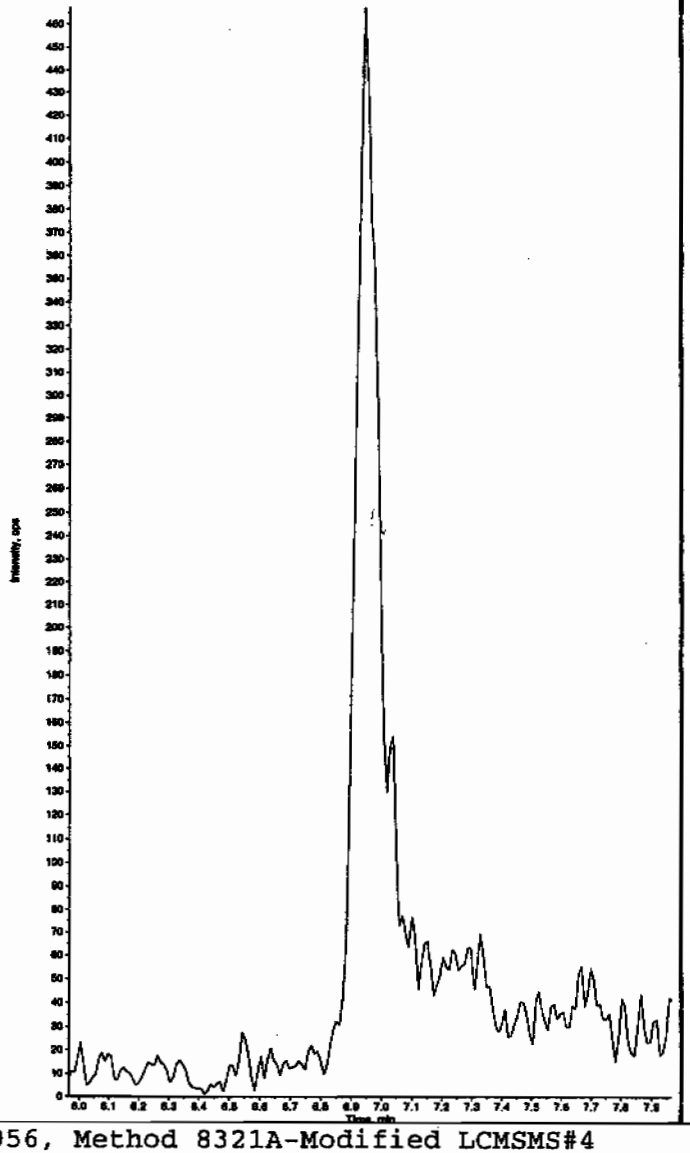
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
tris(o–cresyl) phosphate	0	16.7
TATB	0	0
3,5–Dinitroaniline	0	0
2,4–Diamino–6–nitrotoluene	0	0
2,6–Diamino–4–nitrotoluene	0	0

Ker 1/27/10

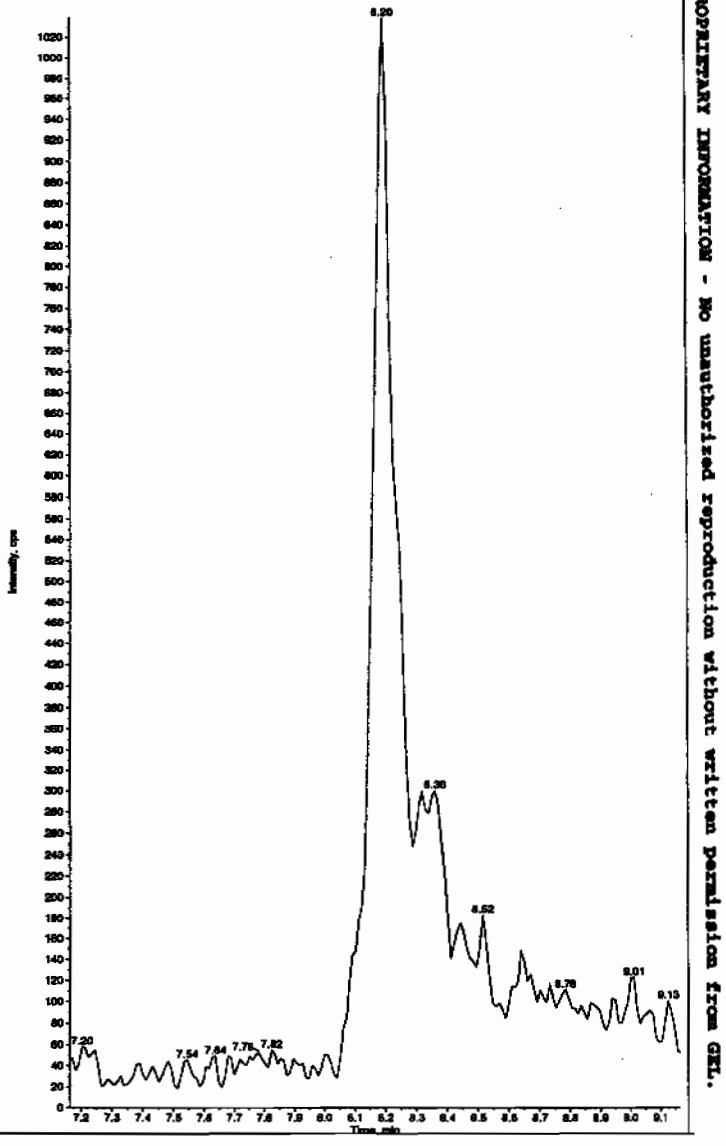
Sample Name: "XIBLK02" Sample ID: "1|1|LER" File: "EXS01250010.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 12:54:10 PM

Modified: No



Sample Name: "XIBLK02" Sample ID: "1|1|LER" File: "EXS01250010.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 12:54:10 PM

Modified: No



Hrm 01/27/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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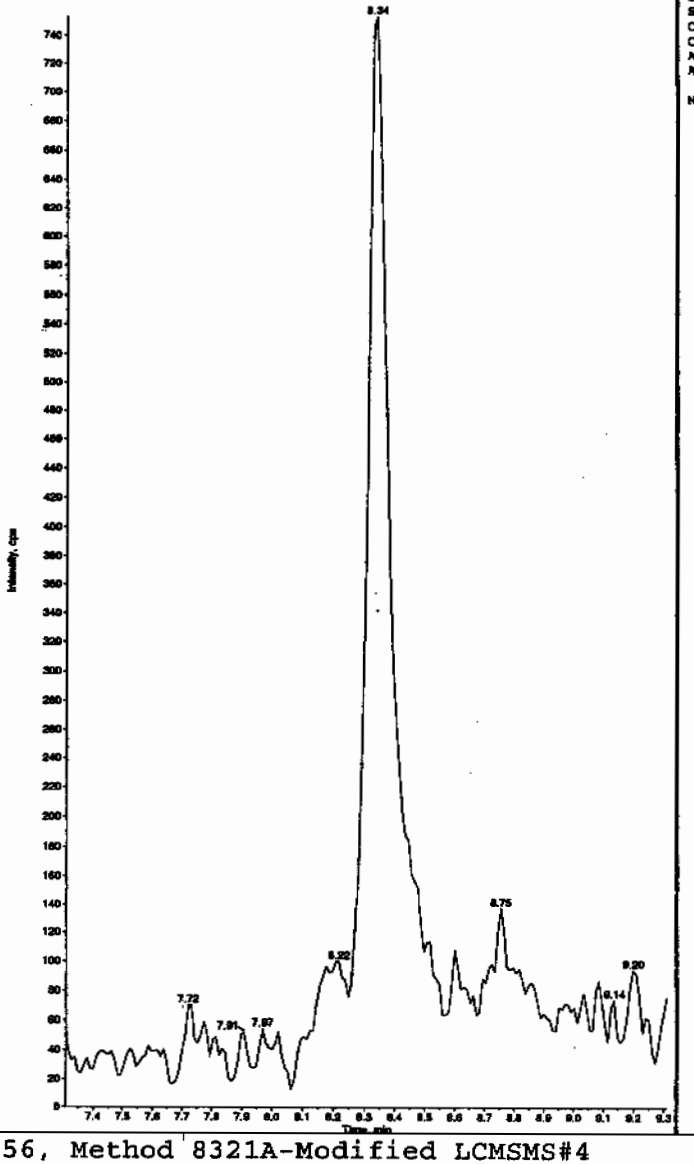
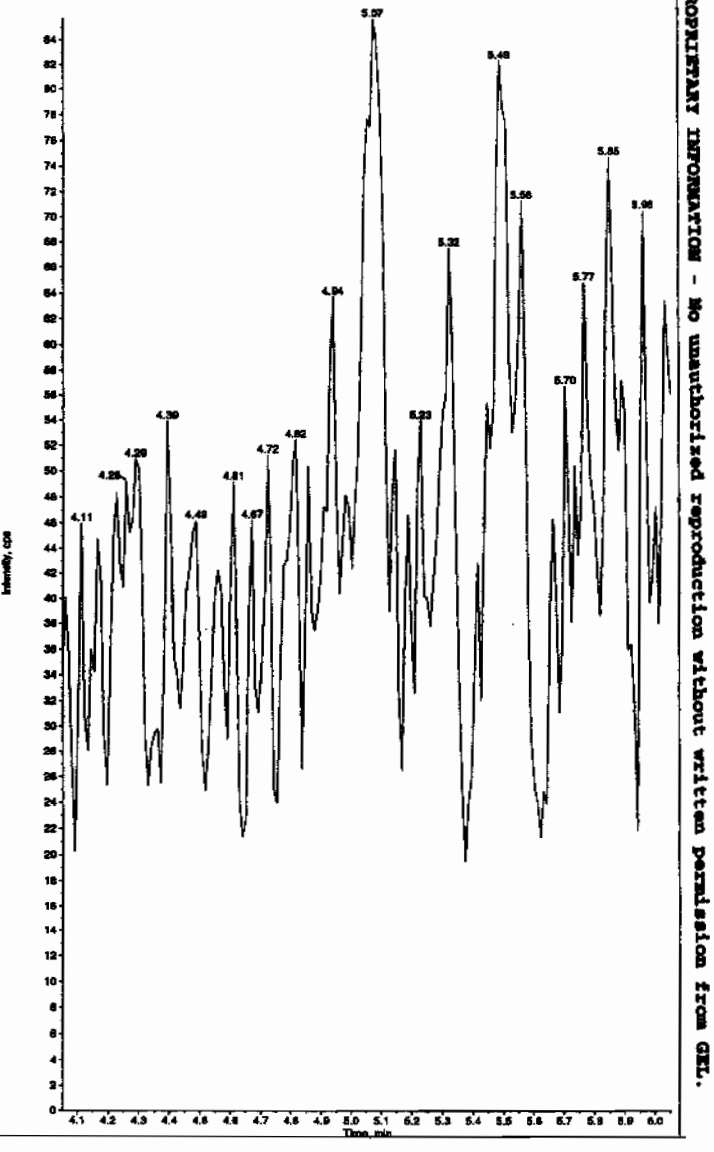
Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS01250010.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 12:54:10 PM

Modified: No



Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS01250010.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 12:54:10 PM

Modified: No

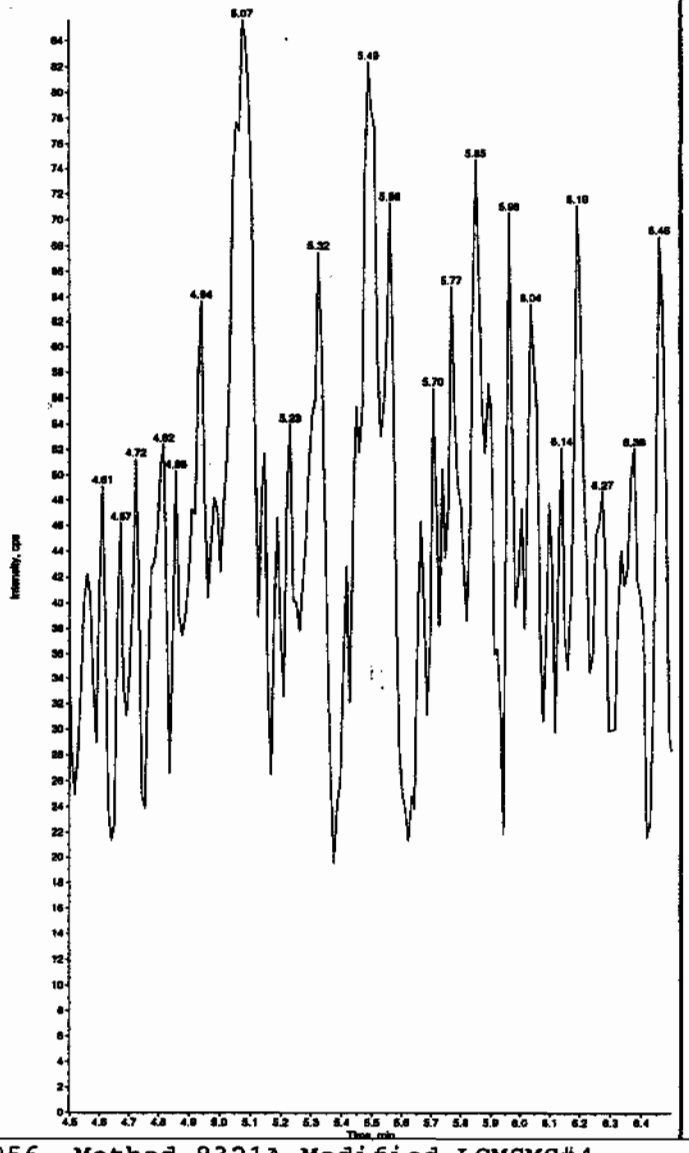


*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS01250010.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 12:54:10 PM

Modified: No

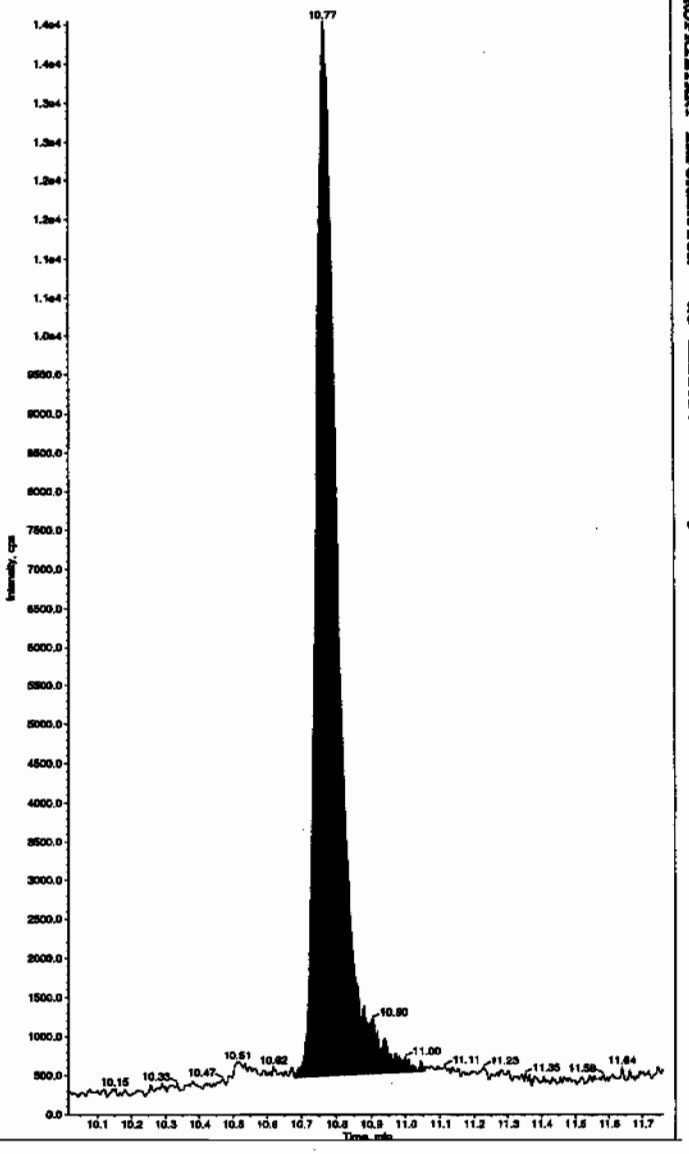


Sample Name: "XIBLK02" Sample ID: "[1]LER" File: "EXS01250010.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 16.7 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 12:54:10 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 6.01e+004 counts
Height: 13557.476 cps
Start Time: 10.7 min
End Time: 11.1 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1263

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 25-JAN-10 13:25

GEL Data File: EXS01250012.wiff

Instrument ID: LCMSMS

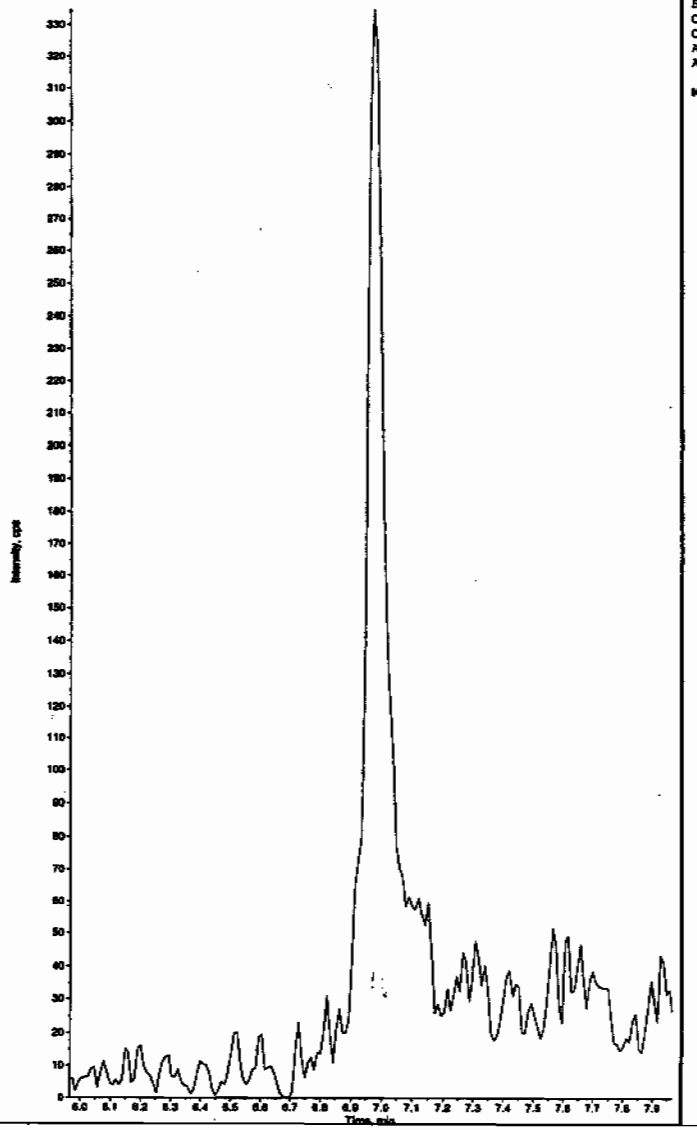
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	0
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Ler 1/27/10

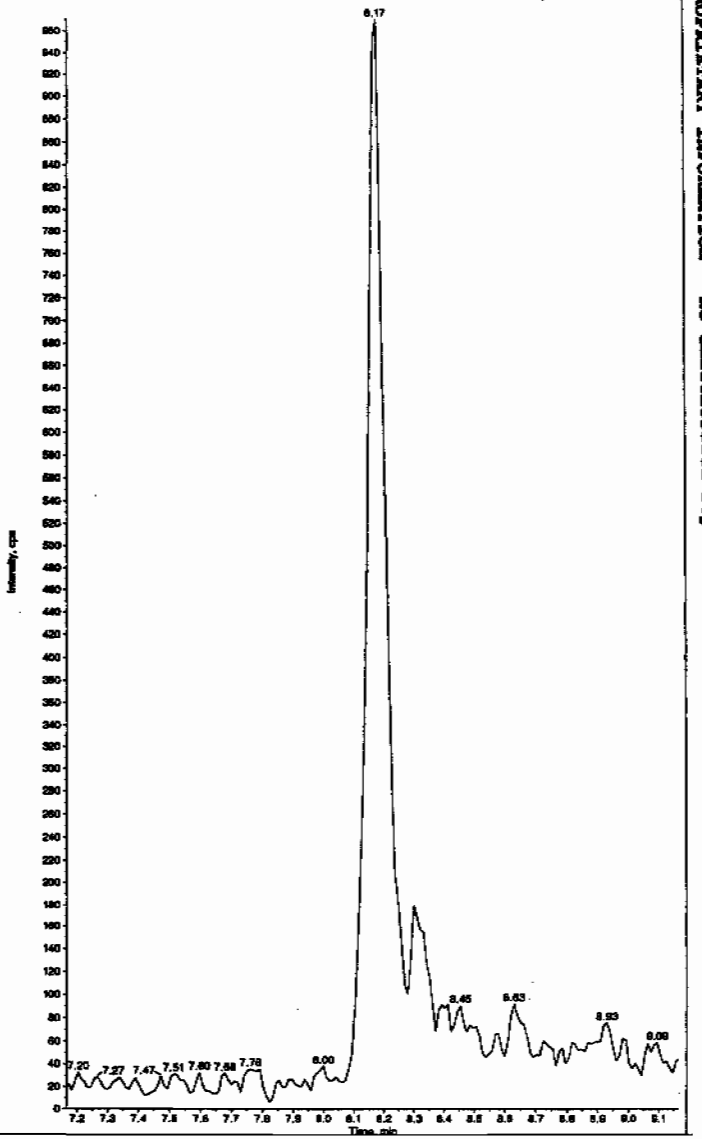
Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS01250012.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_8" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:25:34 PM

Modified: No



Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS01250012.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_8" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:25:34 PM

Modified: No



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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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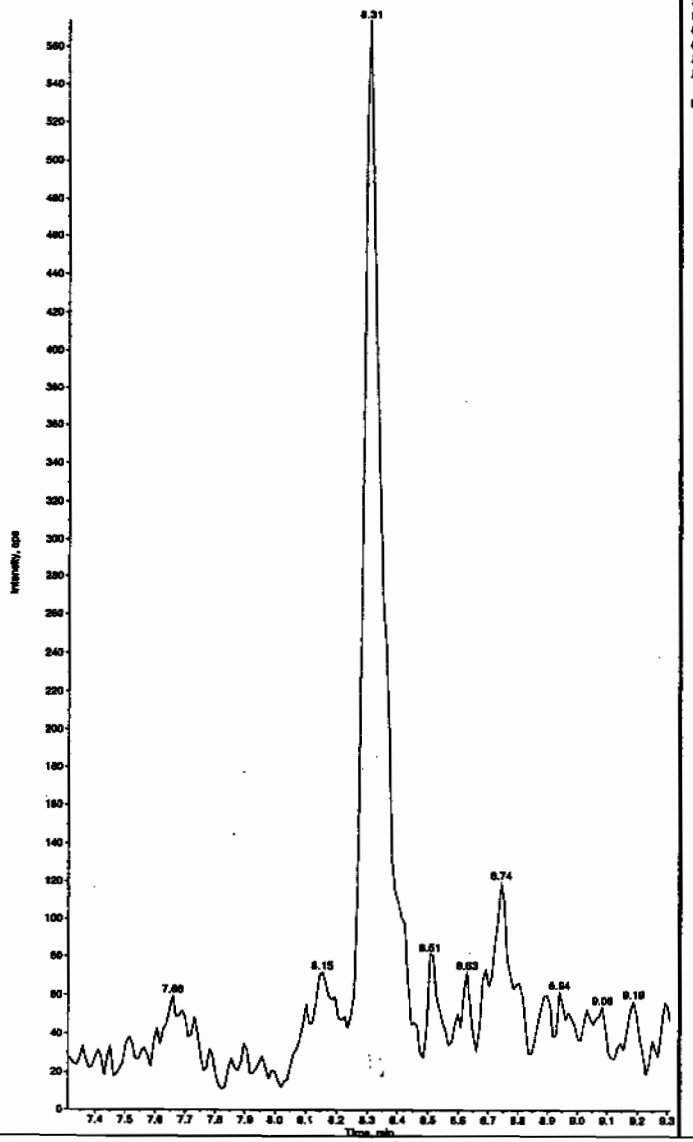
Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS01250012.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:25:34 PM

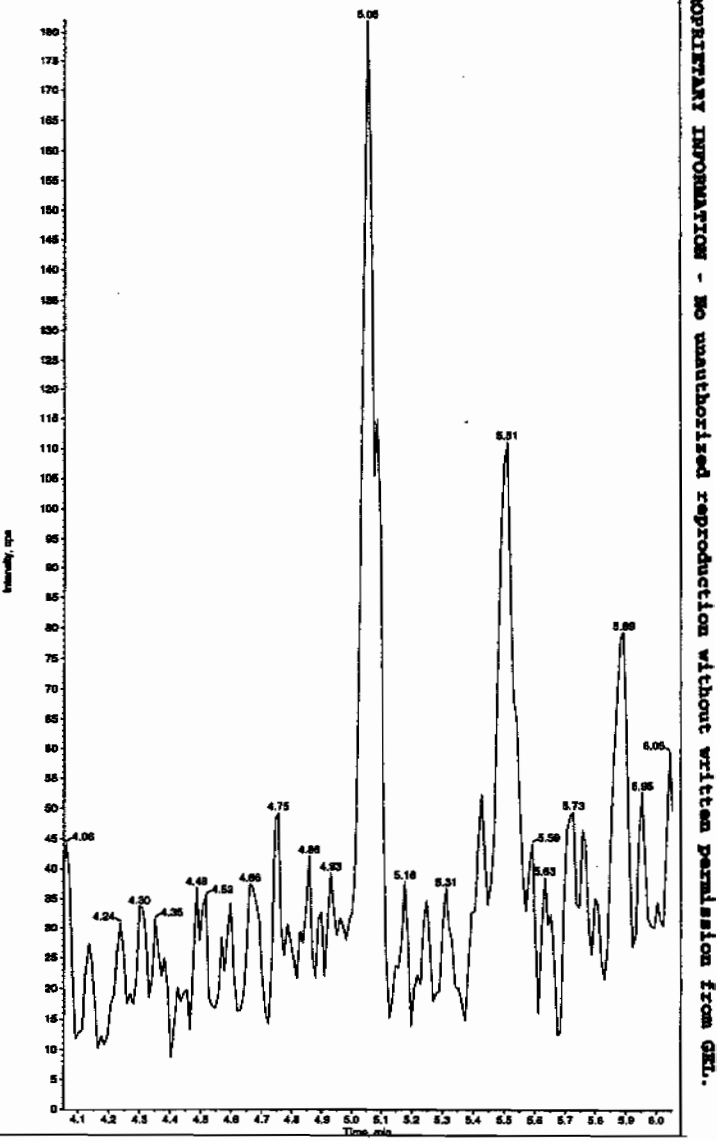
Modified: No



Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS01250012.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:25:34 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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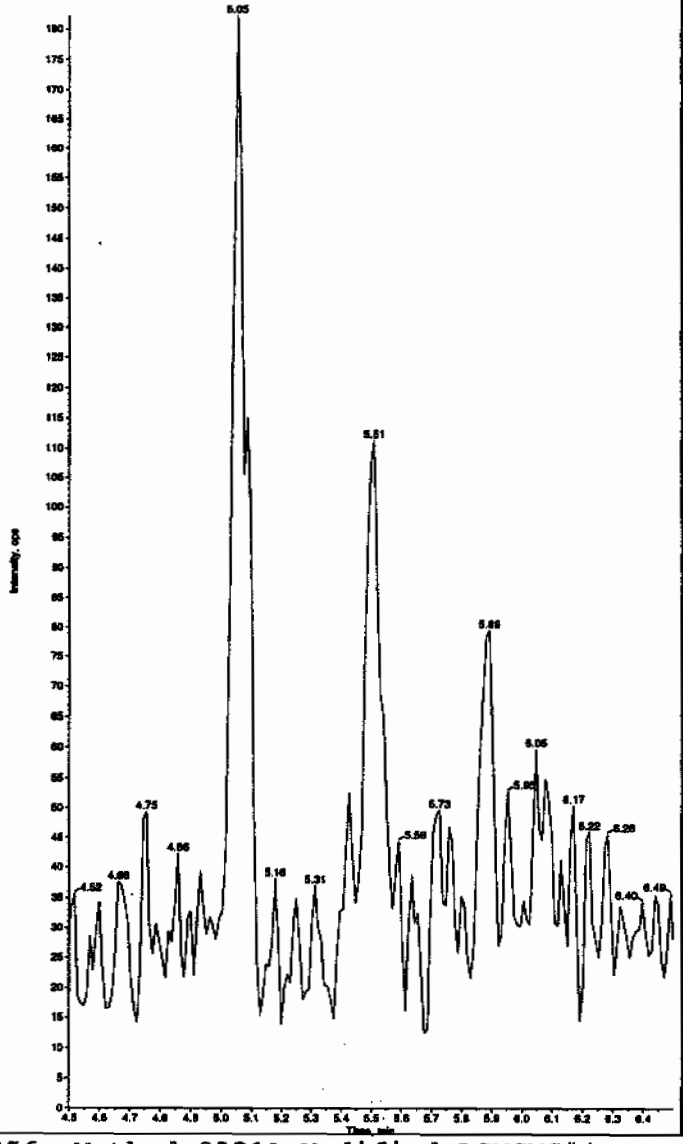
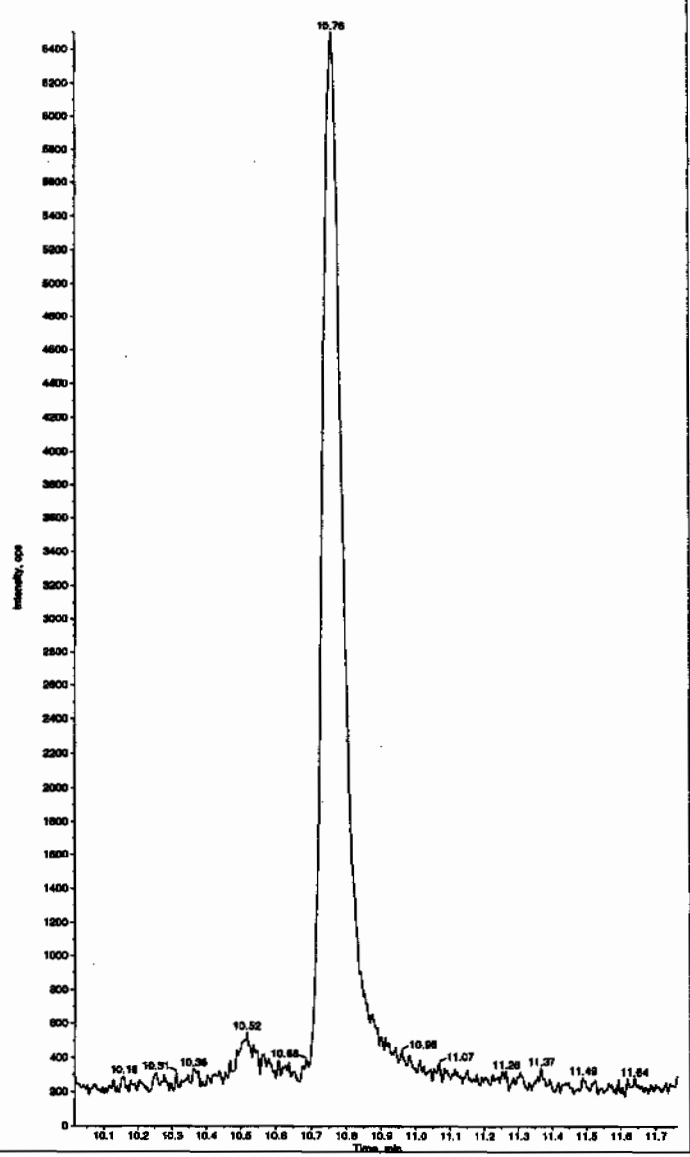
Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS01250012.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:25:34 PM

Modified: No



Sample Name: "XIBLK03" Sample ID: "[1]LER" File: "EXS01250012.wiff"
Peak Name: "Iris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:25:34 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1263

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 25–JAN–10 14:28

GEL Data File: EXS01250016.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

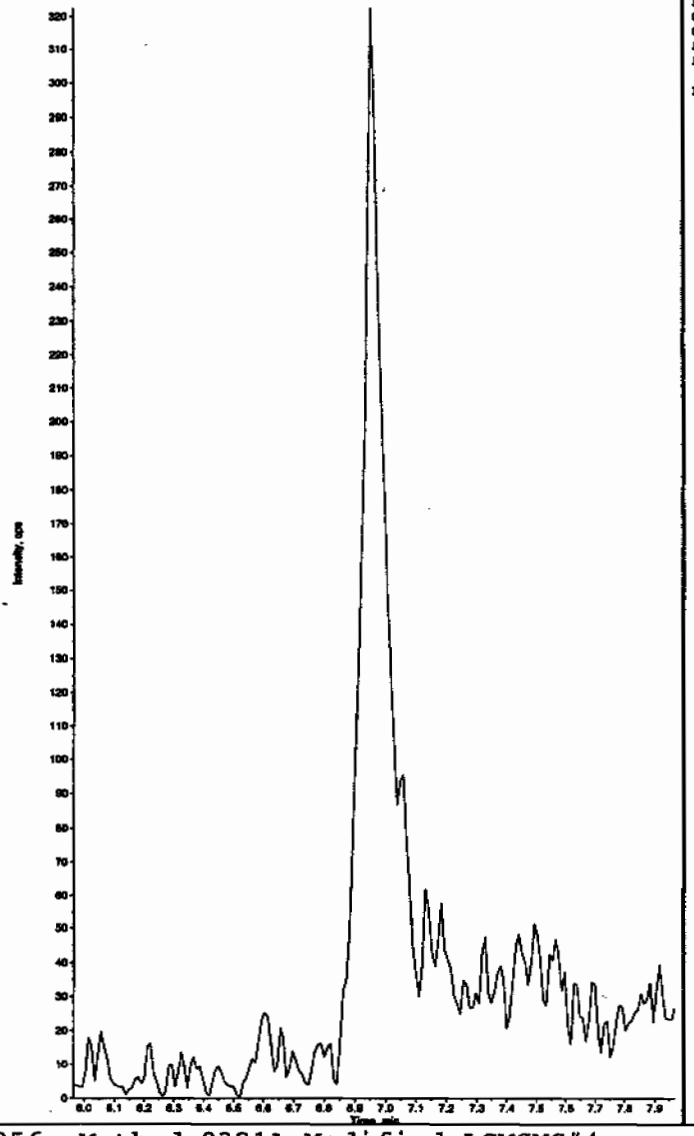
Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
tris(o–cresyl) phosphate	0	0
TATB	0	0
3,5–Dinitroaniline	0	0
2,4–Diamino–6–nitrotoluene	0	0
2,6–Diamino–4–nitrotoluene	0	0

Lan 1/27/10

Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS01250016.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_8" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:28:22 PM

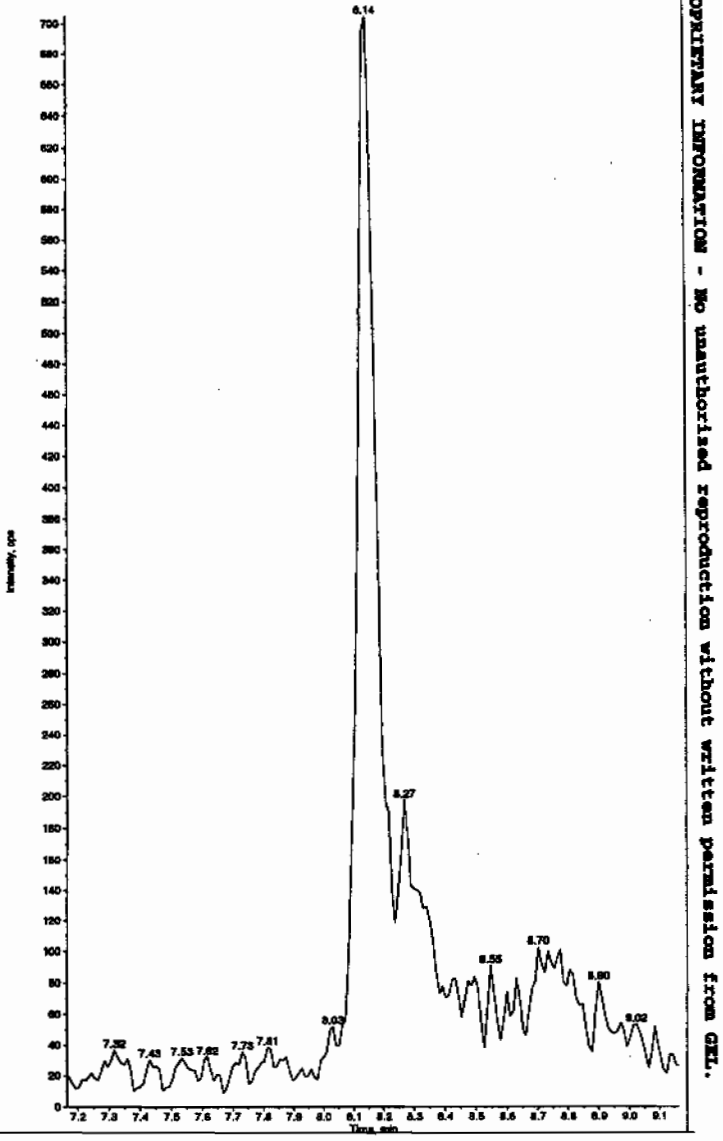
Modified: No



Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS01250016.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_8" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:28:22 PM

Modified: No



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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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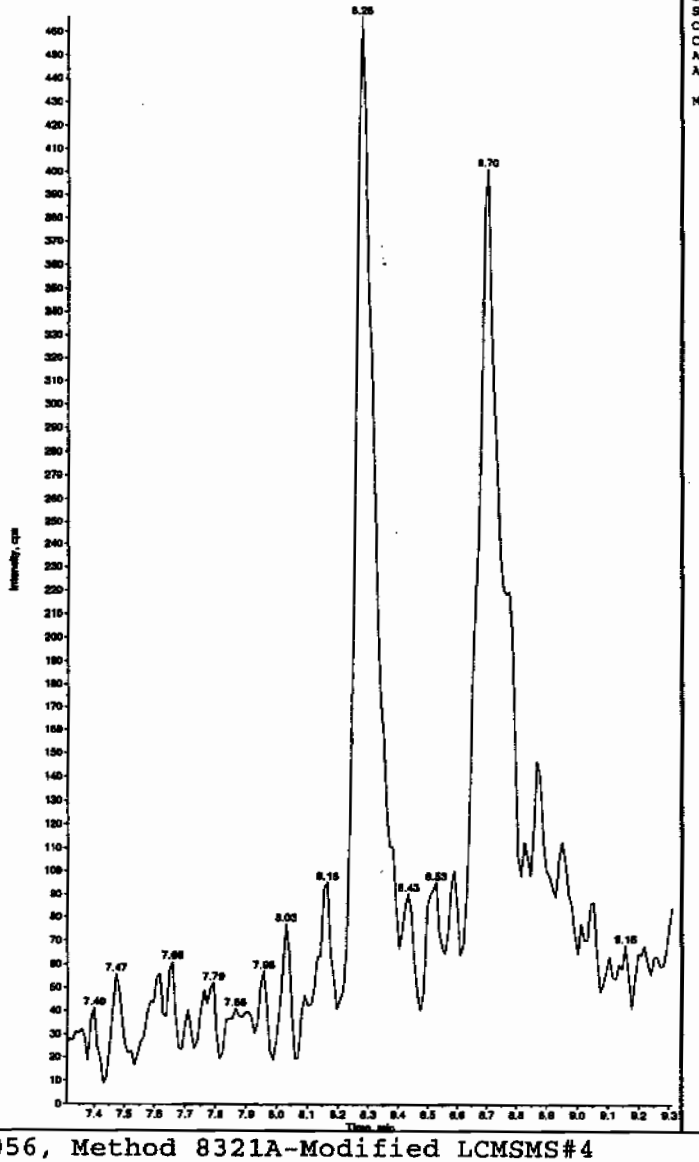
Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS01250016.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:28:22 PM

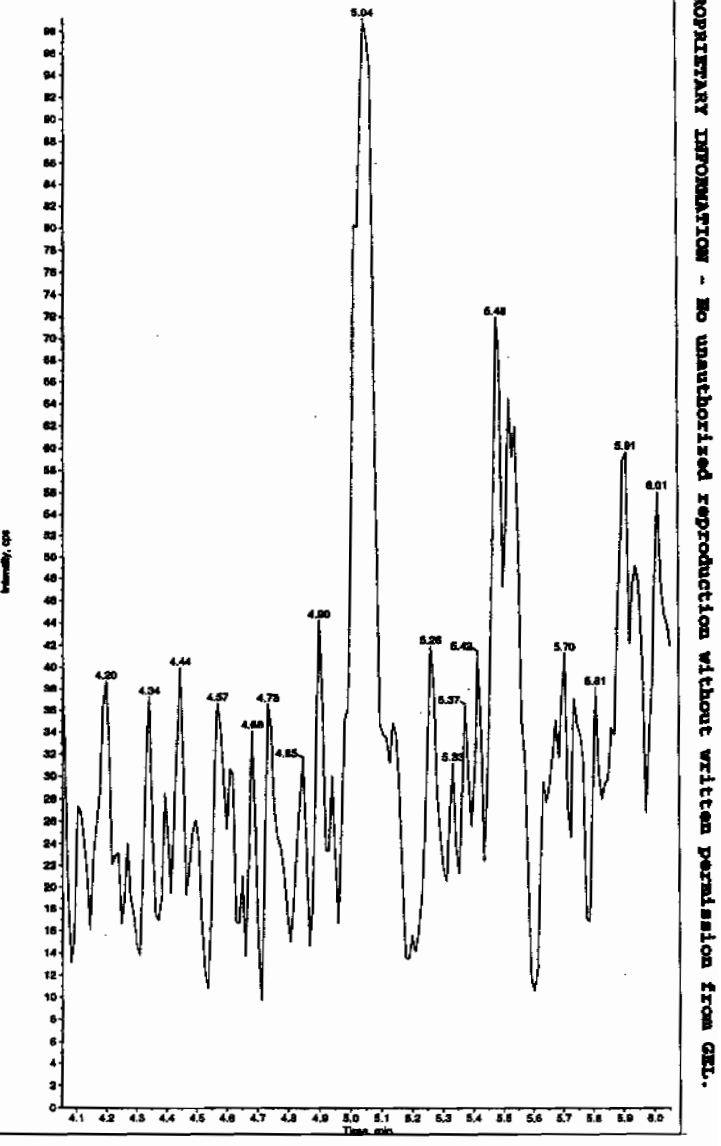
Modified: No



Sample Name: "XIBLK04" Sample ID: "[1]LER" File: "EXS01250016.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:28:22 PM

Modified: No

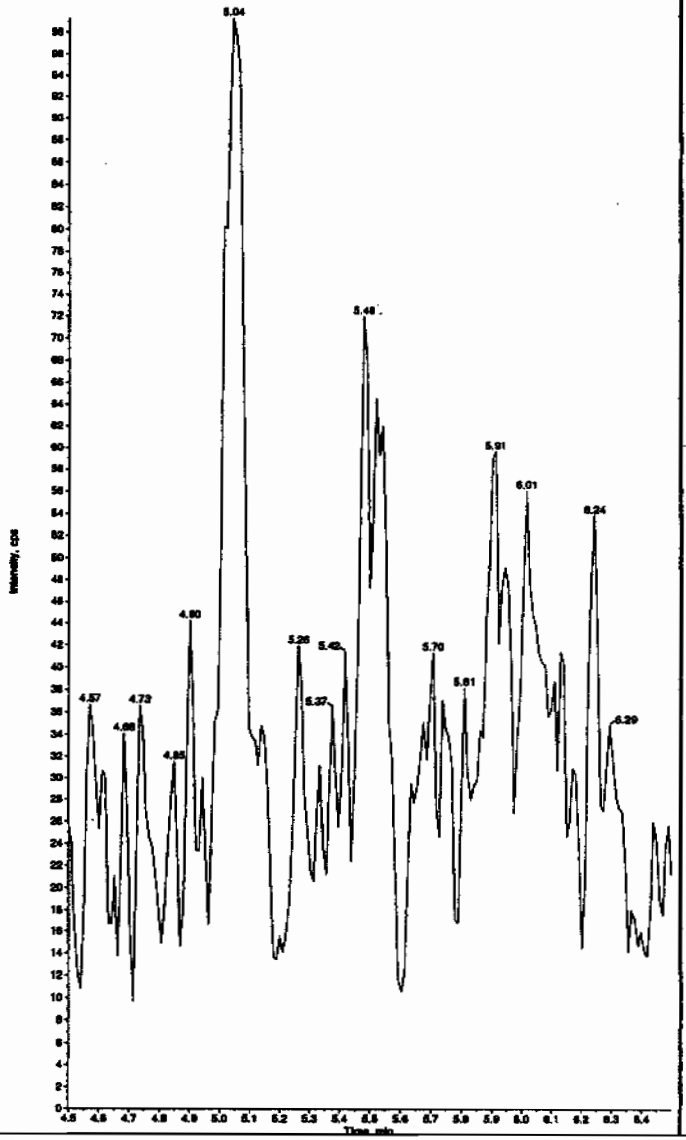


*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS01250016.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:28:22 PM

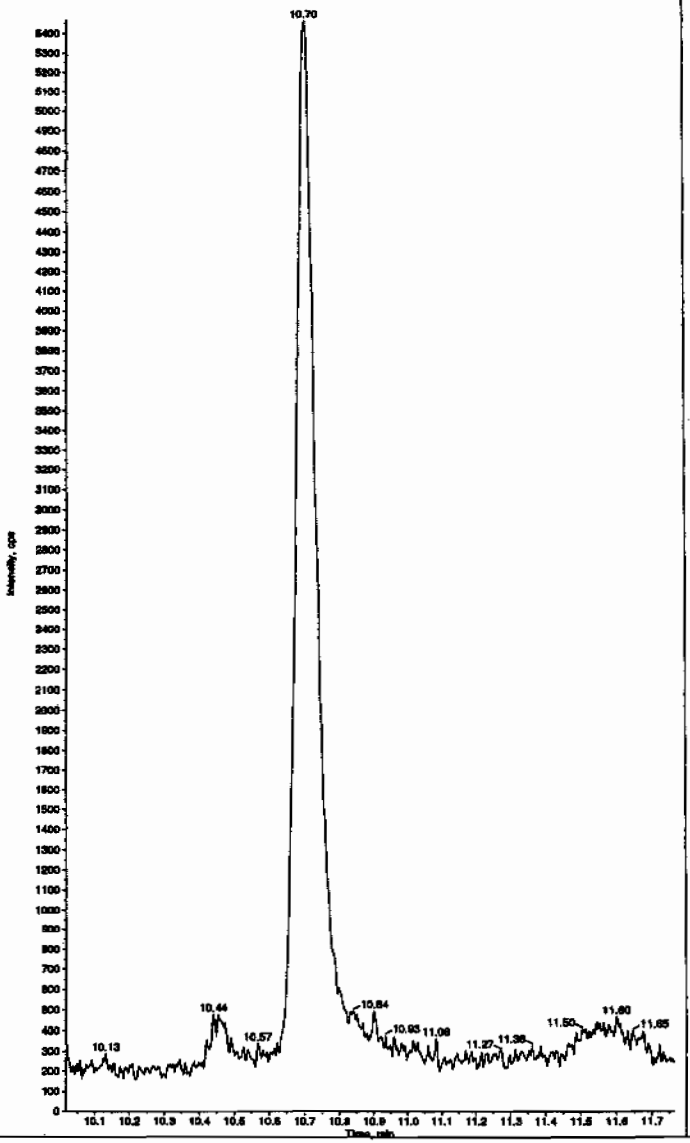
Modified: No



Sample Name: "XIBLK04" Sample ID: "|1|LER" File: "EXS01250016.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:28:22 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10–1263

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 25–JAN–10 16:49

GEL Data File: EXS01250025.wiff

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

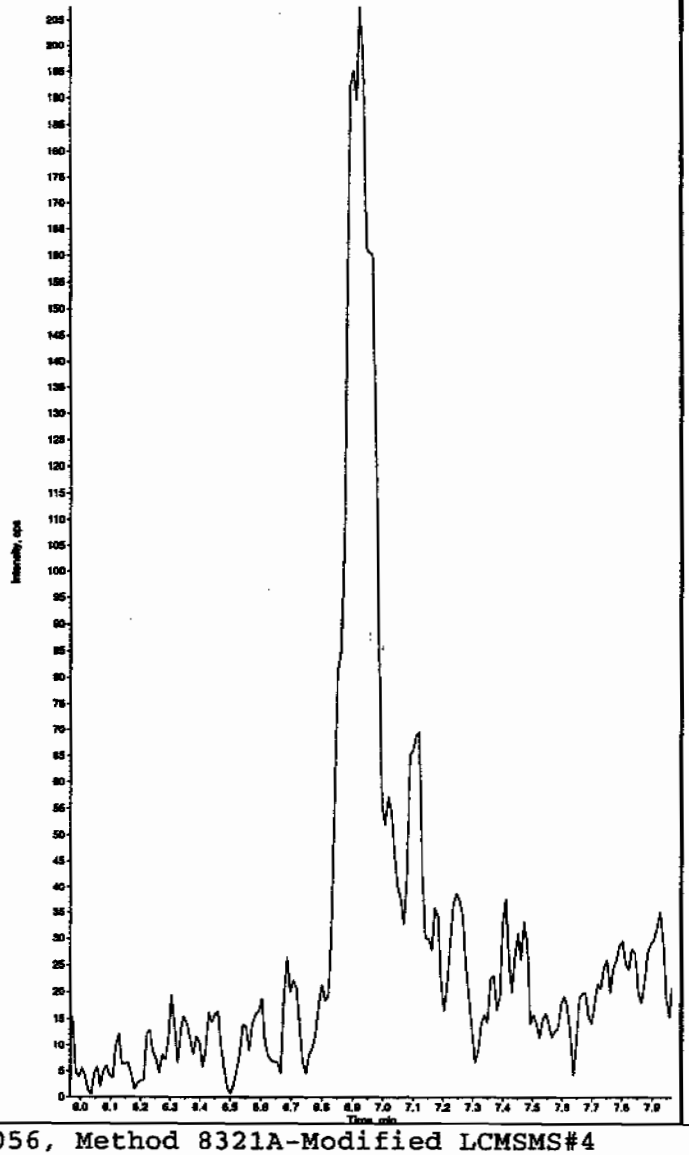
Compound	True	Found (ug/L)
3,4–Dinitrotoluene	0	0
tris(o–cresyl) phosphate	0	0
TATB	0	0
3,5–Dinitroaniline	0	0
2,4–Diamino–6–nitrotoluene	0	0
2,6–Diamino–4–nitrotoluene	0	0

Ler 11/27/10

Sample Name: "XIBLK05" Sample ID: "[1]LER" File: "EXS01250025.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 4:49:39 PM

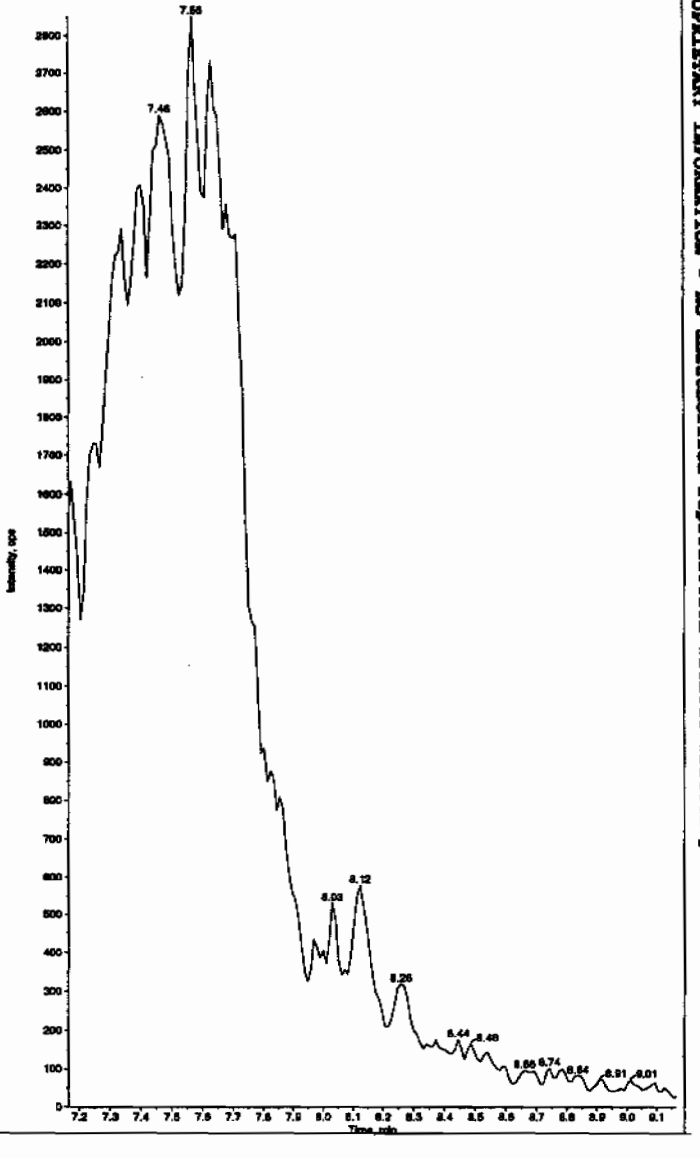
Modified: No



Sample Name: "XIBLK05" Sample ID: "[1]LER" File: "EXS01250025.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 4:49:39 PM

Modified: No



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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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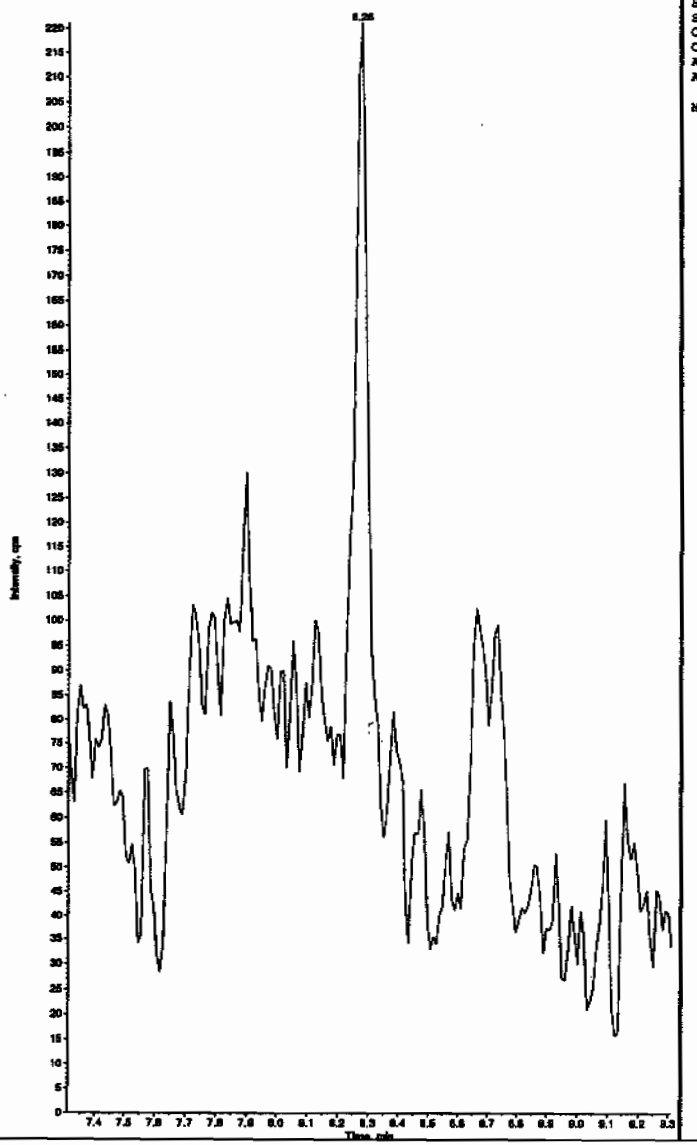
Sample Name: "XIBLK05" Sample ID: "[1]LER" File: "EXS01250025.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 4:49:39 PM

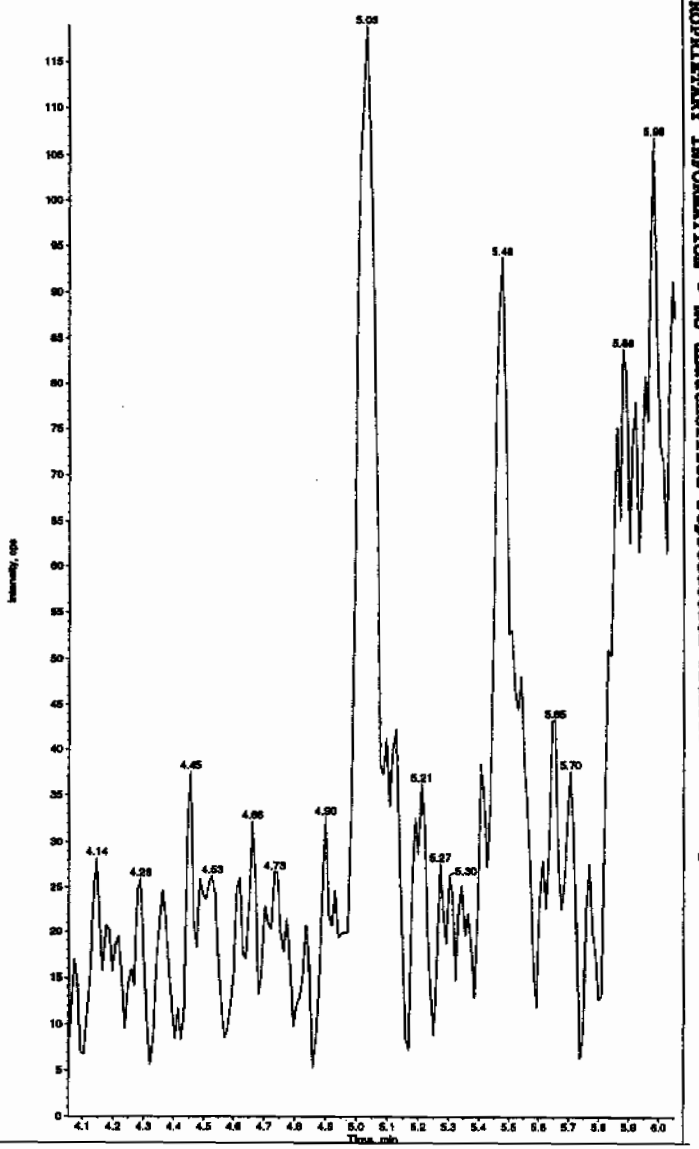
Modified: No



Sample Name: "XIBLK05" Sample ID: "[1]LER" File: "EXS01250025.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 4:49:39 PM

Modified: No



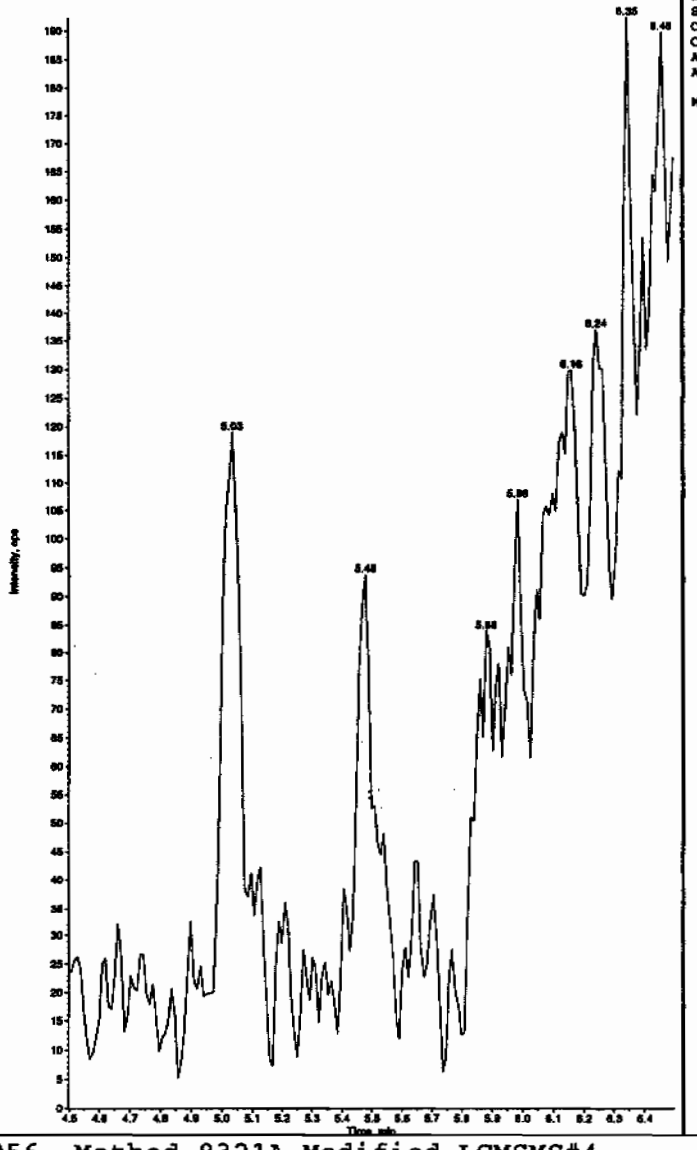
*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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

Sample Name: "XIBLK05" Sample ID: "[1]LER" File: "EXS01250025.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 4:49:39 PM

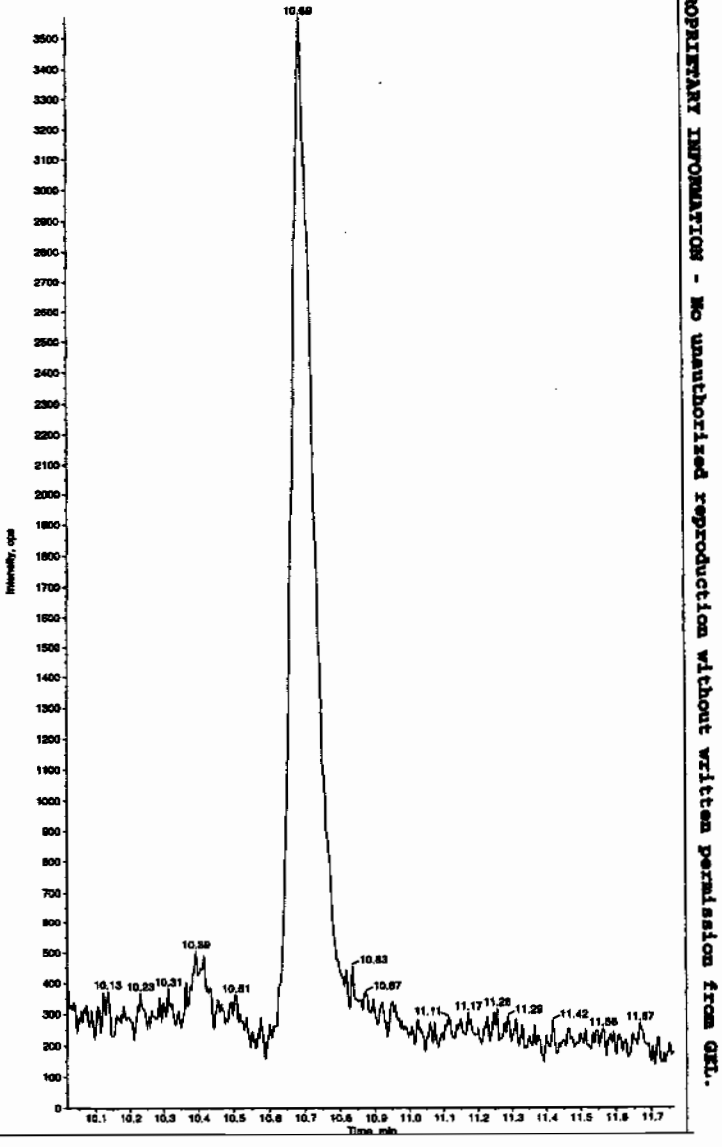
Modified: No



Sample Name: "XIBLK05" Sample ID: "[1]LER" File: "EXS01250025.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 4:49:39 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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

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4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1263

Lab Code: GEL

Lab Sample ID: XIBLK06

Analysis Date: 25-JAN-10 20:14

GEL Data File: EXS01250038.wiff

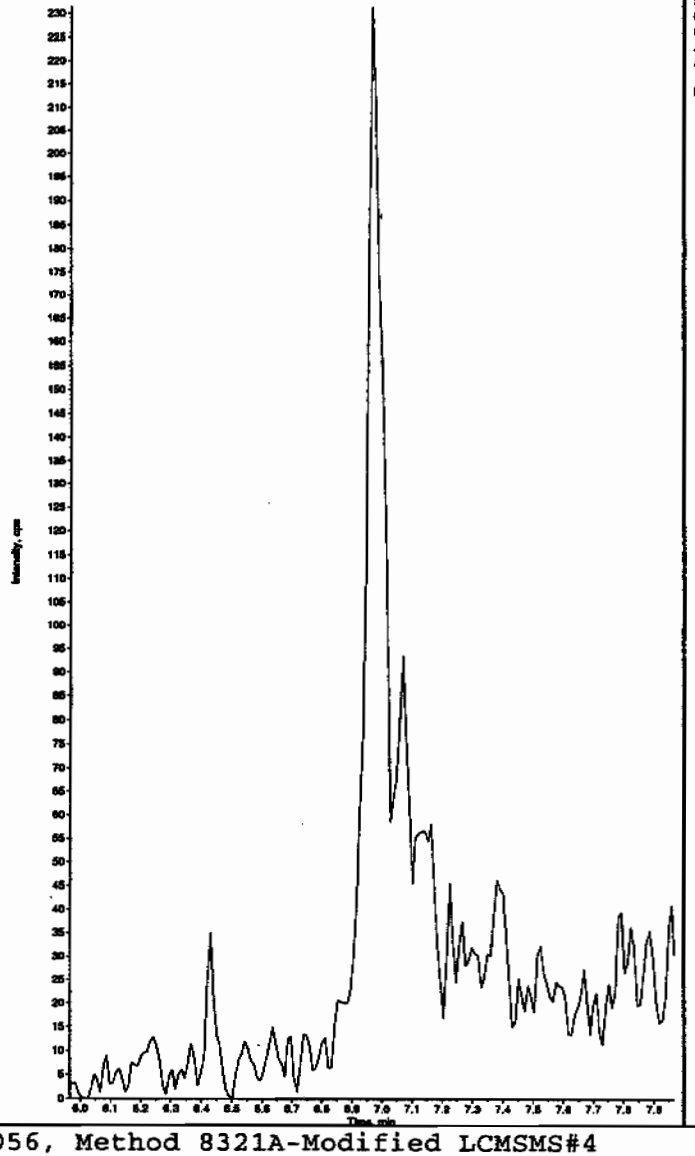
Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	0
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

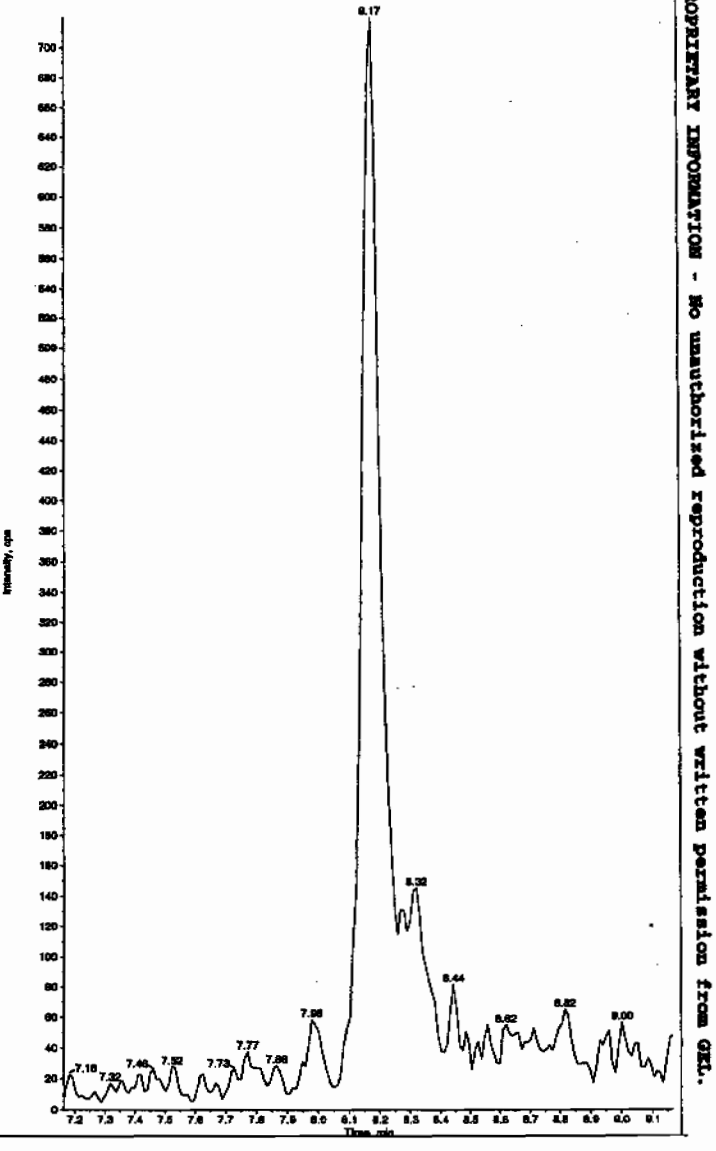
Sample Name: "XIBLK06" Sample ID: "[1]LER" File: "EXS01250038.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 8:14:02 PM

Modified: No



Sample Name: "XIBLK06" Sample ID: "[1]LER" File: "EXS01250038.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 8:14:02 PM

Modified: No

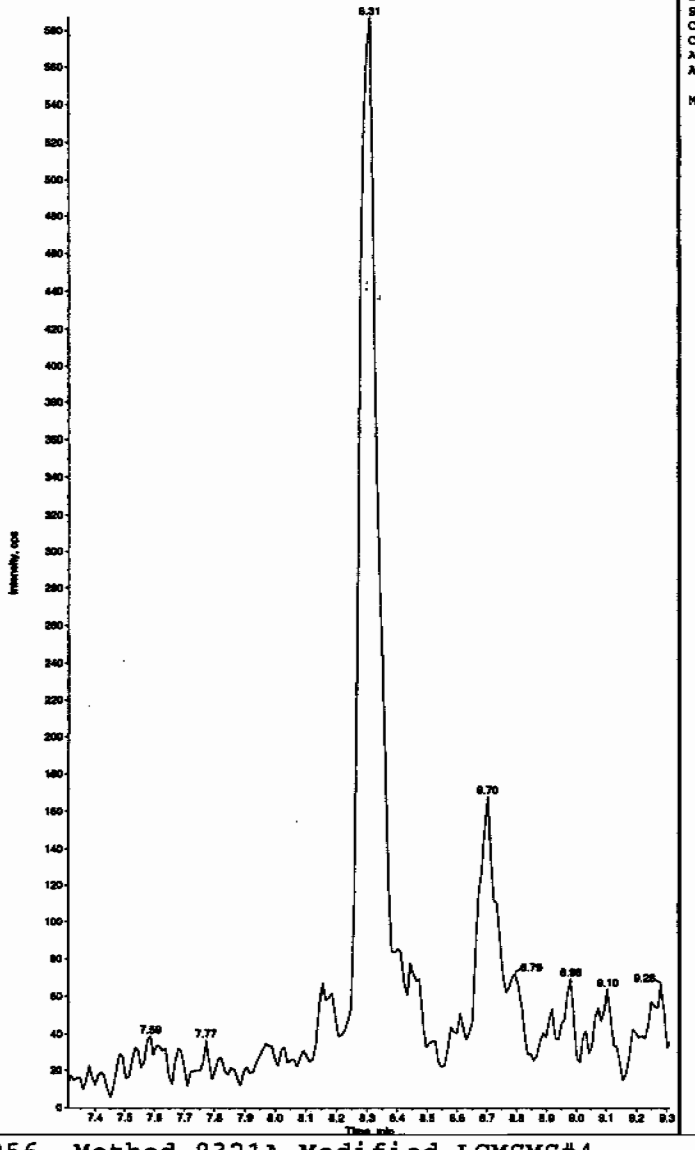


*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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

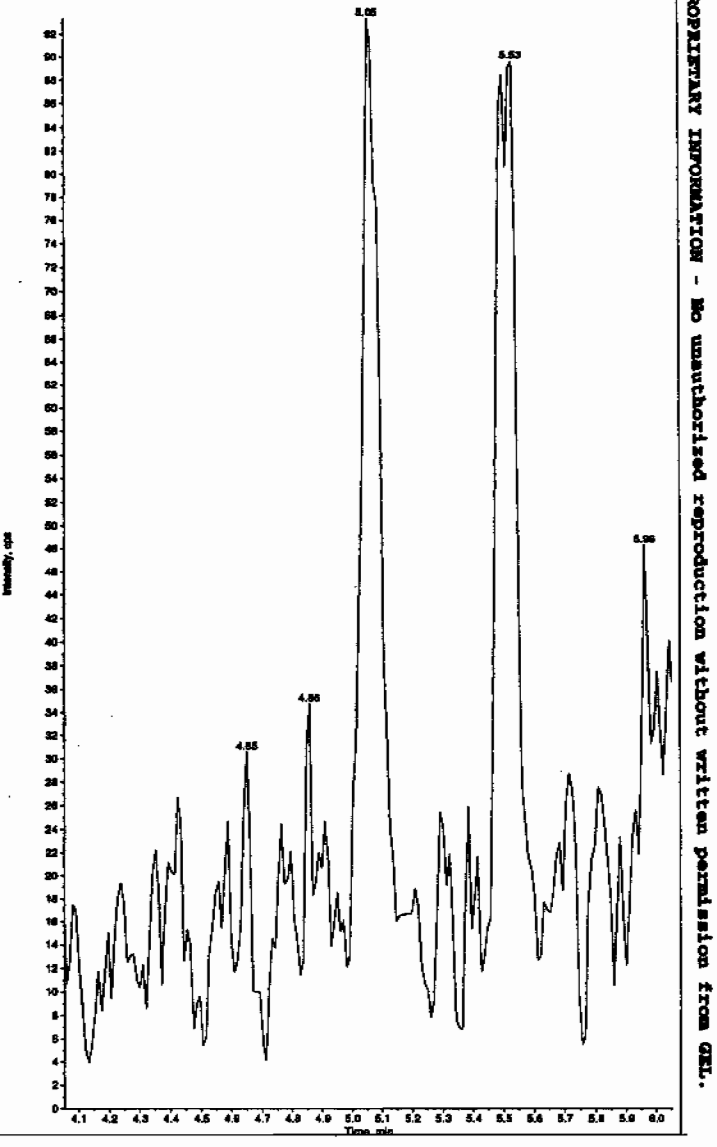
Sample Name: "XI8LK06" Sample ID: "[1]LER" File: "EXS01250038.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 8:14:02 PM

Modified: No



Sample Name: "XI8LK06" Sample ID: "[1]LER" File: "EXS01250038.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 8:14:02 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

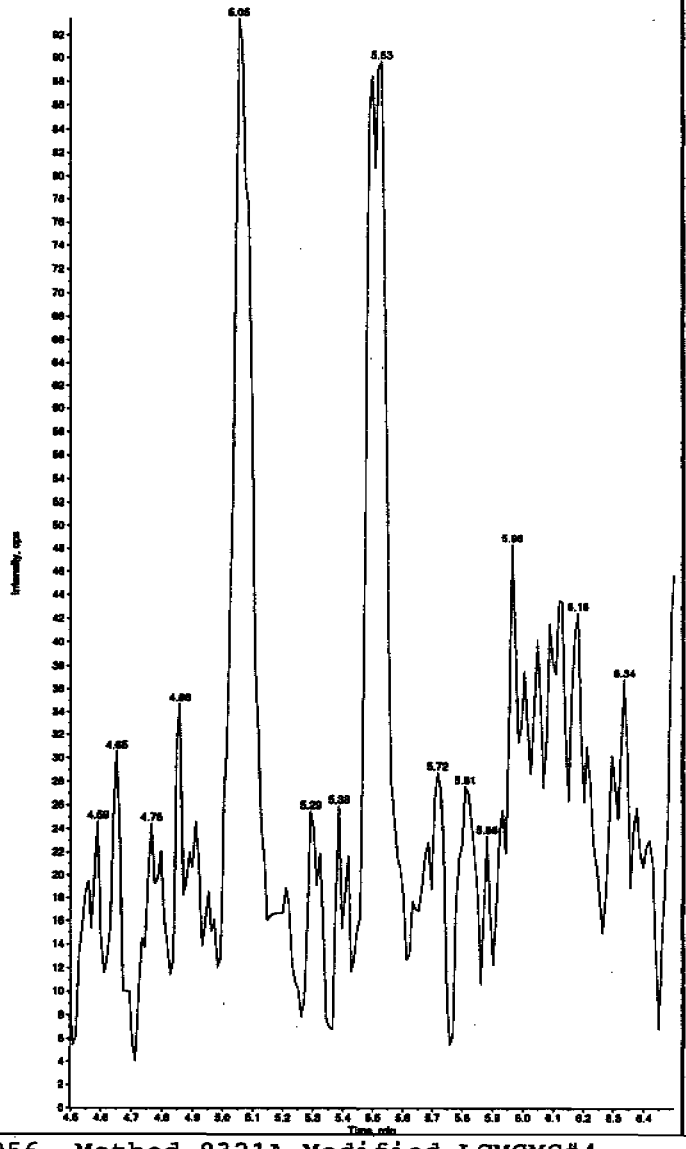
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

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

Sample Name: "XIBLK06" Sample ID: "[1]LER" File: "EXS01250038.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "168.0/46.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 8:14:02 PM

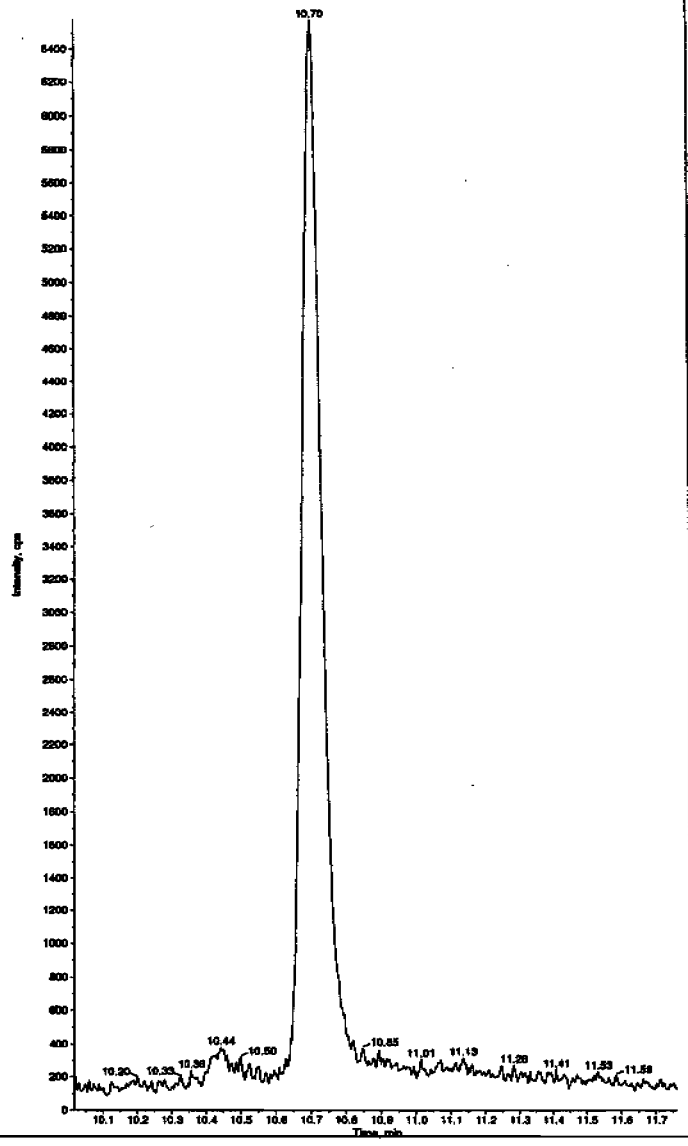
Modified: No



Sample Name: "XIBLK06" Sample ID: "[1]LER" File: "EXS01250038.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 8:14:02 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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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

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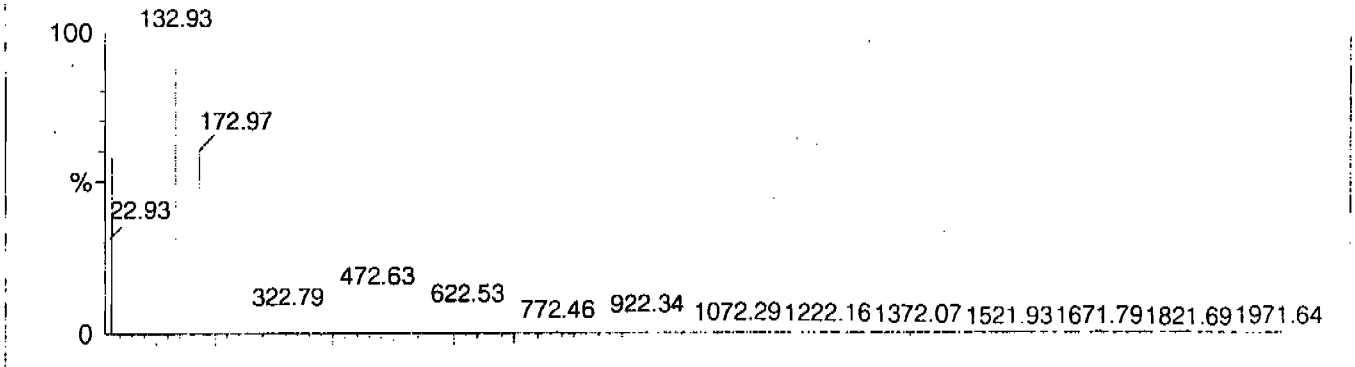
Calibration Report - MS1 Static

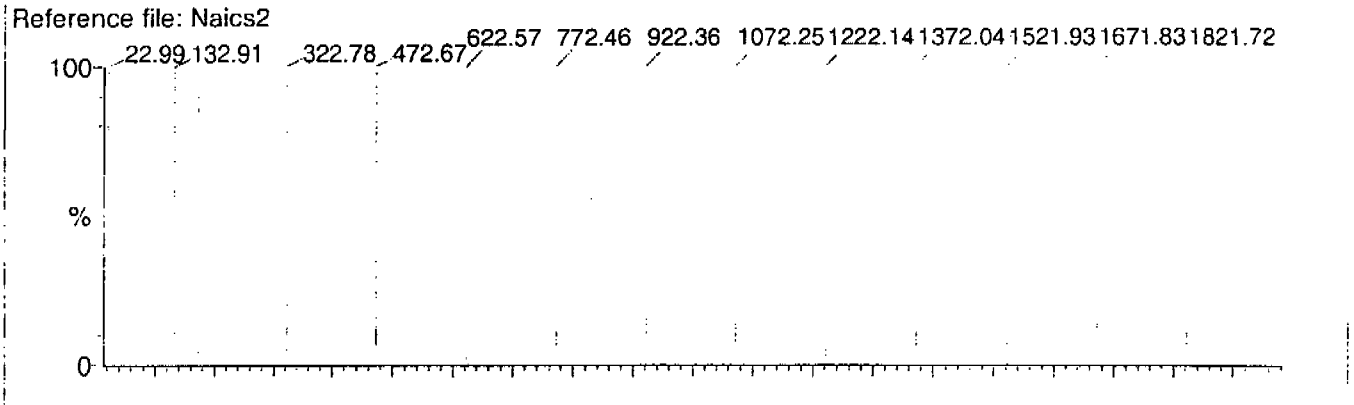
Printed: Fri Aug 25 10:50:01 2006

Data file: STATMS1 - Calibrated

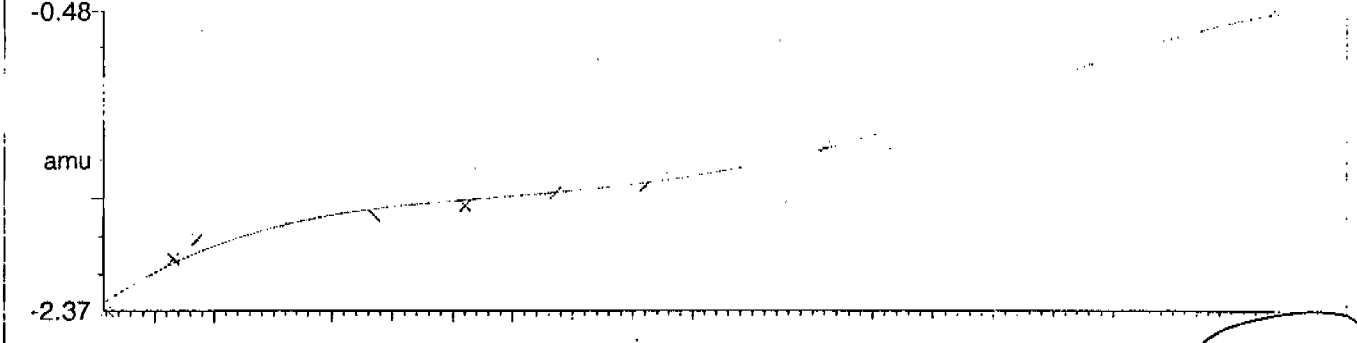
15 matches of 15 tested references



Reference file: Naics2



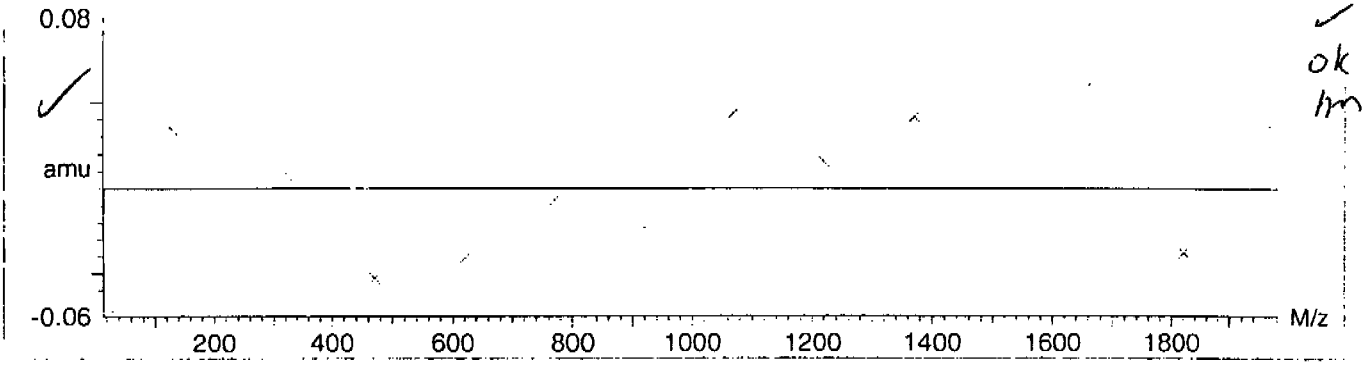
Mass difference (Raw - Ref mass)



Residuals

Mean residual = -1.673470e-9 ± 0.036953

ok
hm



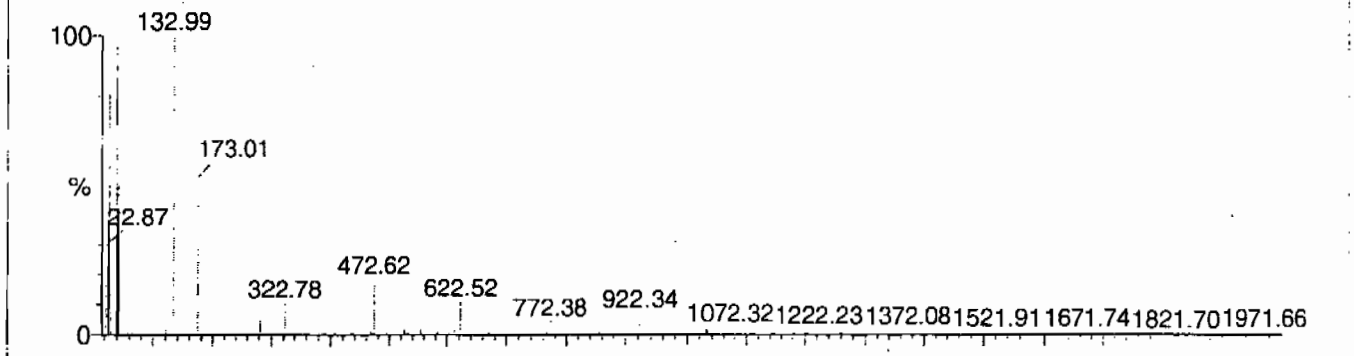
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS1 Scanning

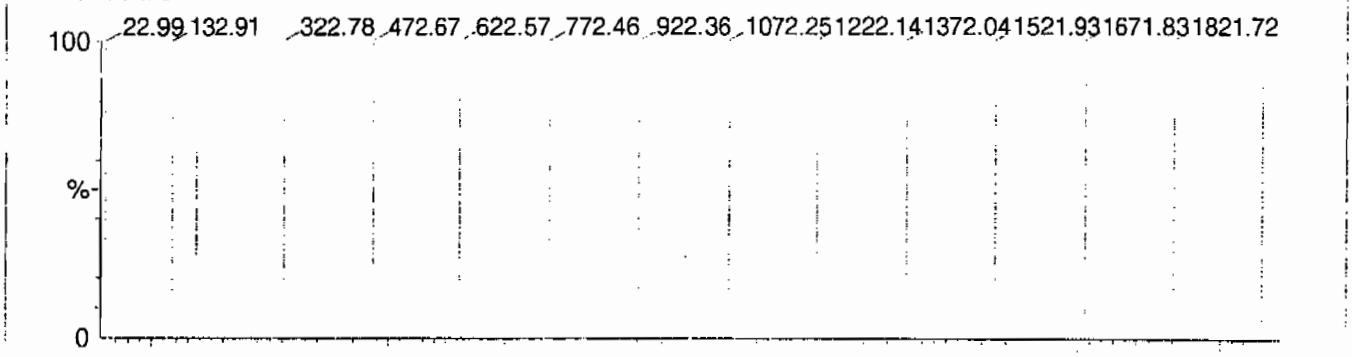
Printed: Fri Aug 25 10:51:06 2006

Data file: SCNMS1 - Calibrated

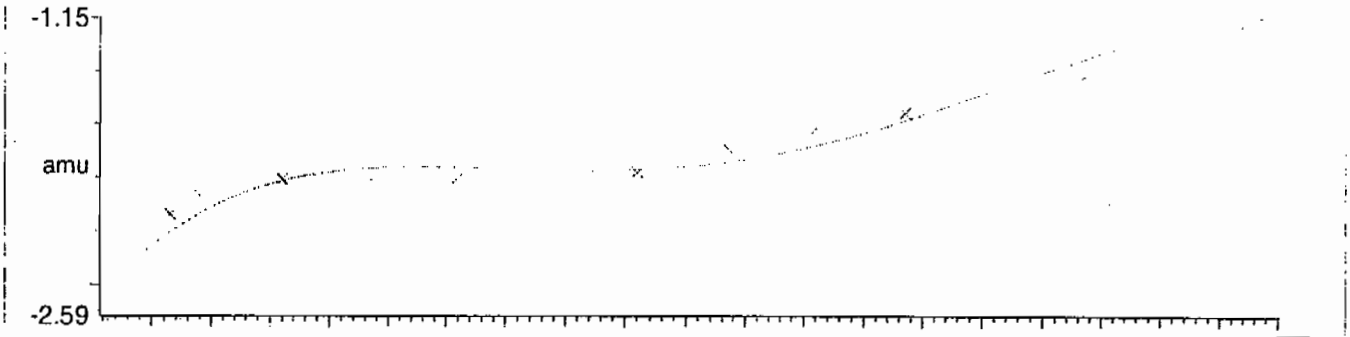
15 matches of 15 tested references



Reference file: Naics2



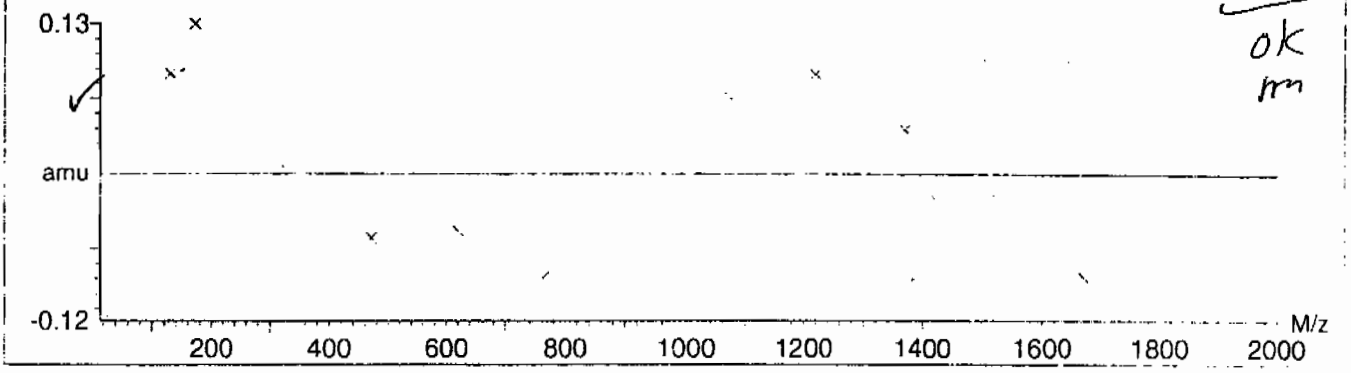
Mass difference (Raw - Ref mass)



Residuals

Mean residual = -5.432715e-9 ± 0.069858

ok
m



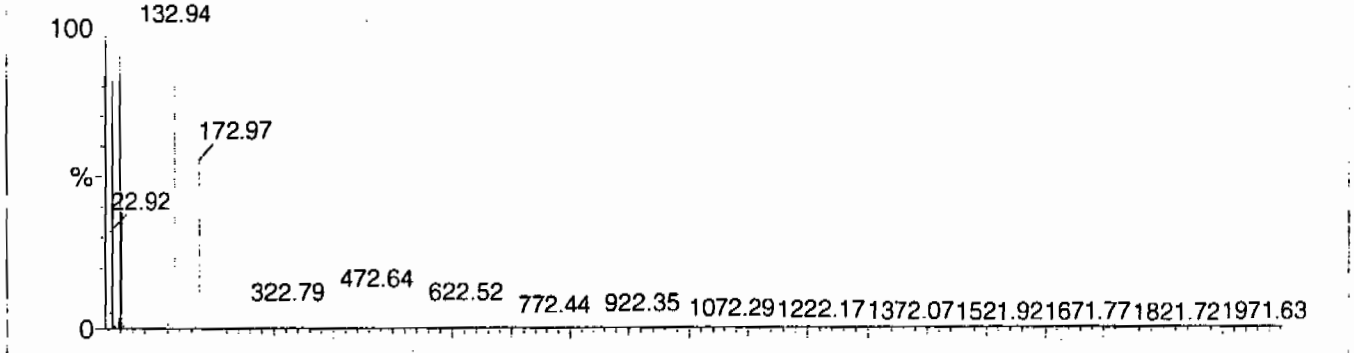
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS1 Scan Speed Compensation

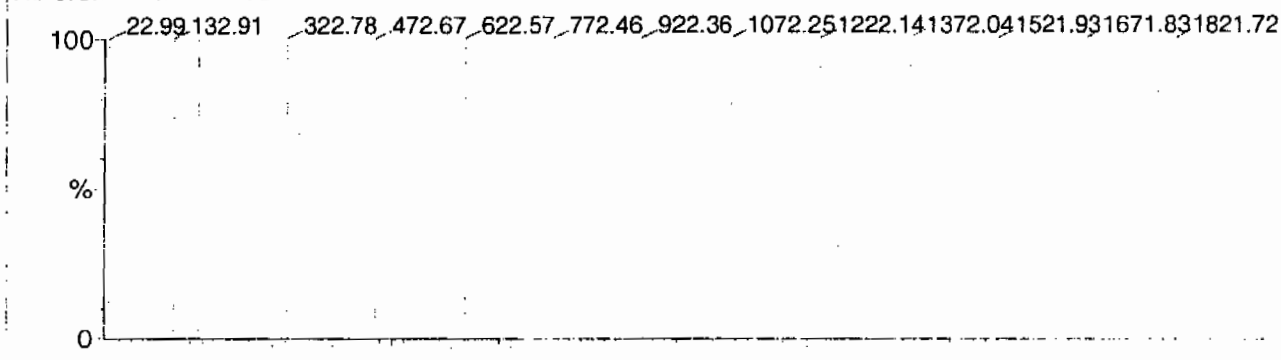
Printed: Fri Aug 25 10:52:01 2006

Data file: FASTMS1 - Calibrated

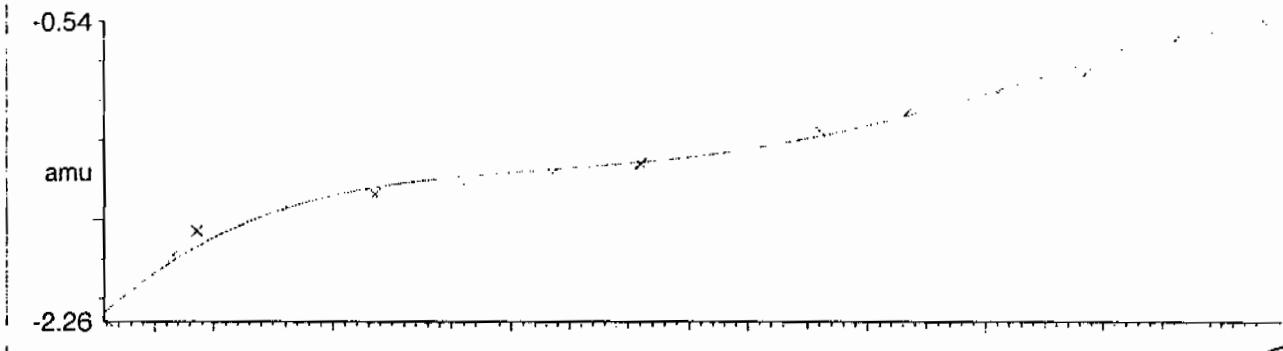
15 matches of 15 tested references



Reference file: Naics2

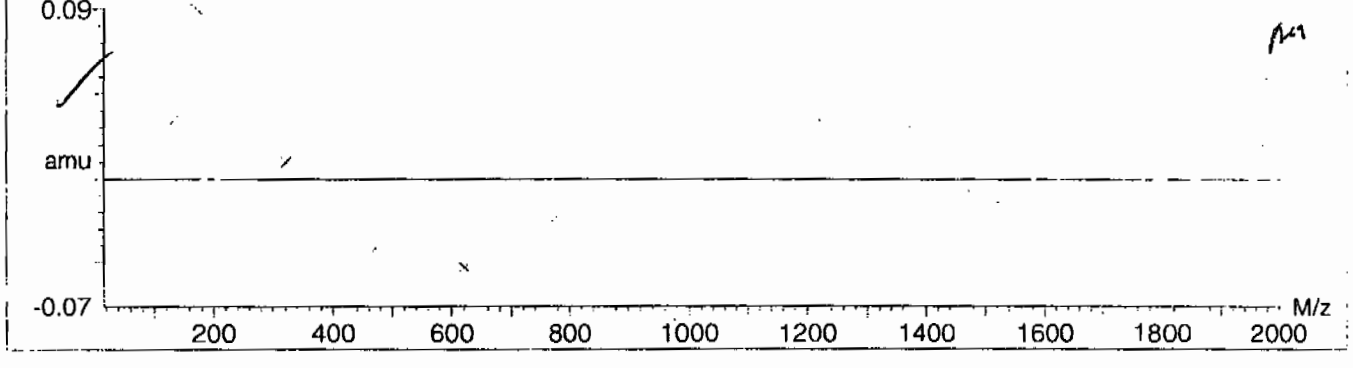


Mass difference (Raw - Ref mass)



Residuals

Mean residual = 3.486639e-9 ± 0.040487



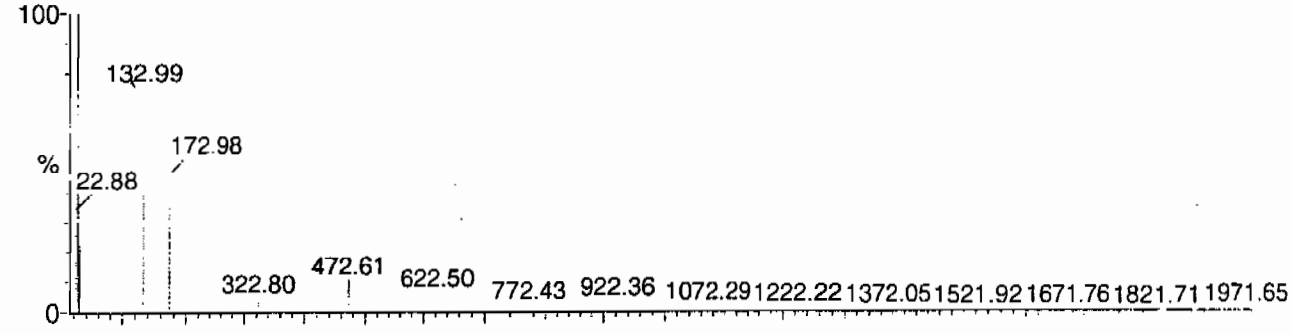
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Calibration Report - MS2 Static

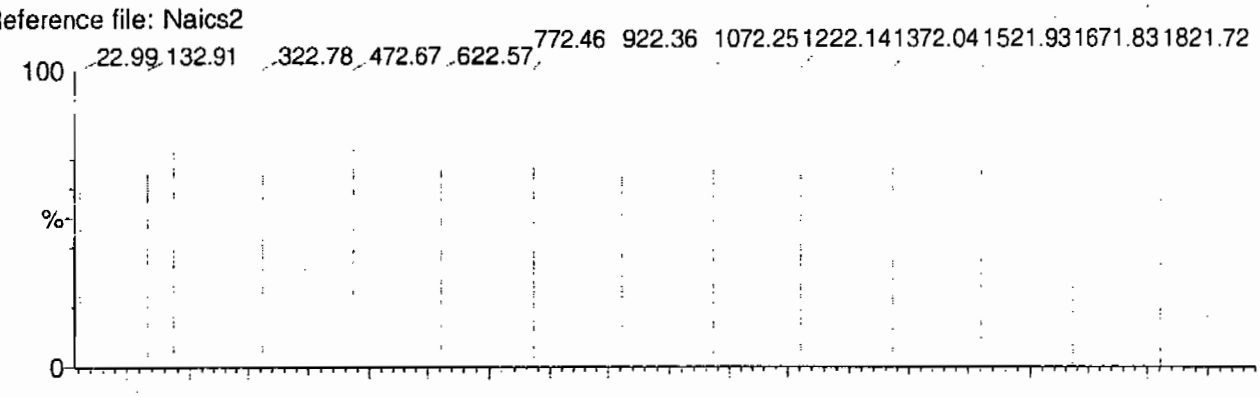
Printed: Fri Aug 25 10:52:54 2006

Data file: STATMS2 - Calibrated

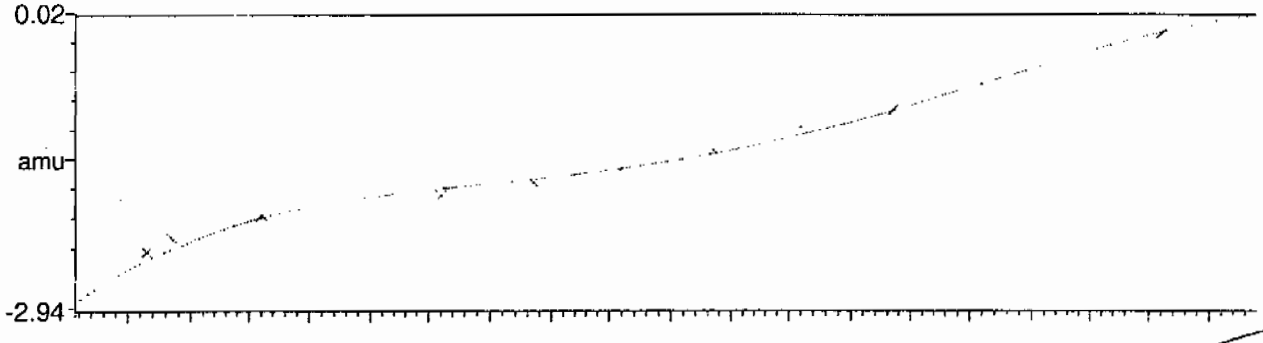
15 matches of 15 tested references



Reference file: Naics2

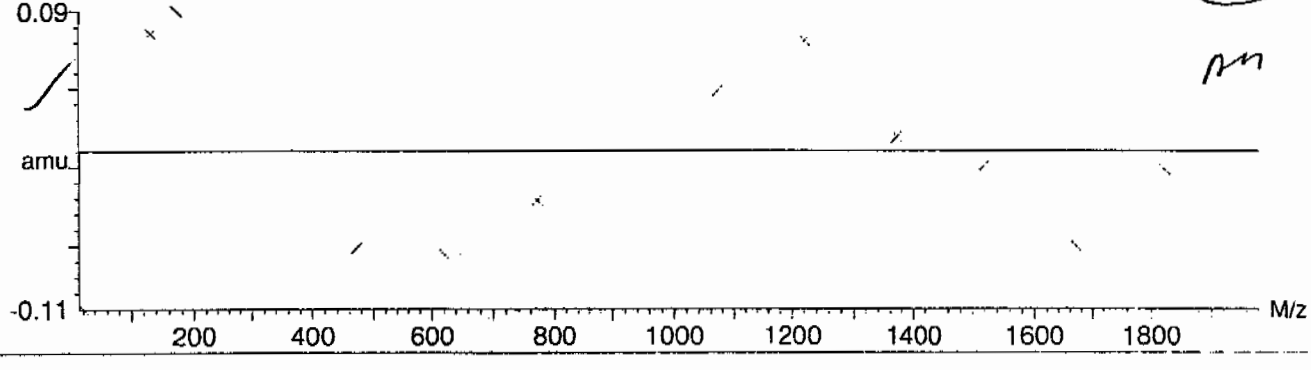


Mass difference (Raw - Ref mass)



Residuals

Mean residual = 2.048910e-9 ± 0.057803



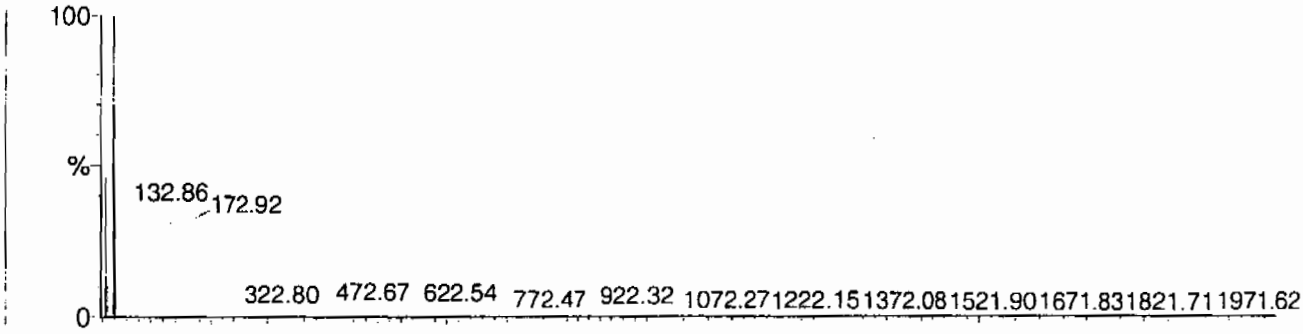
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GKL.

Calibration Report - MS2 Scanning

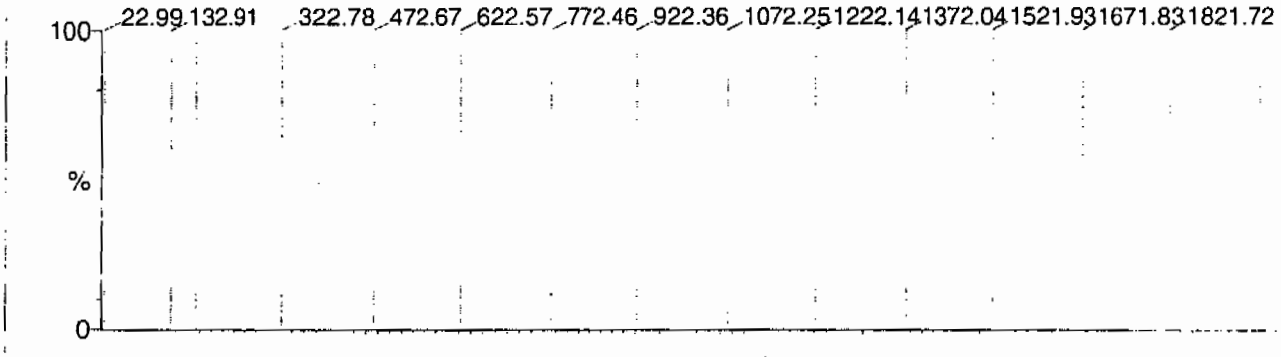
Printed: Fri Aug 25 10:54:00 2006

Data file: SCNMS2 - Calibrated

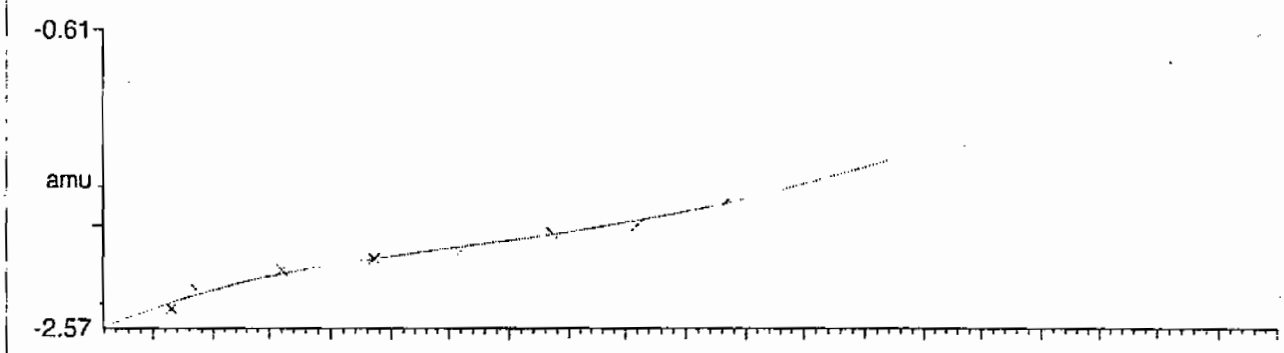
14 matches of 15 tested references



Reference file: Naics2

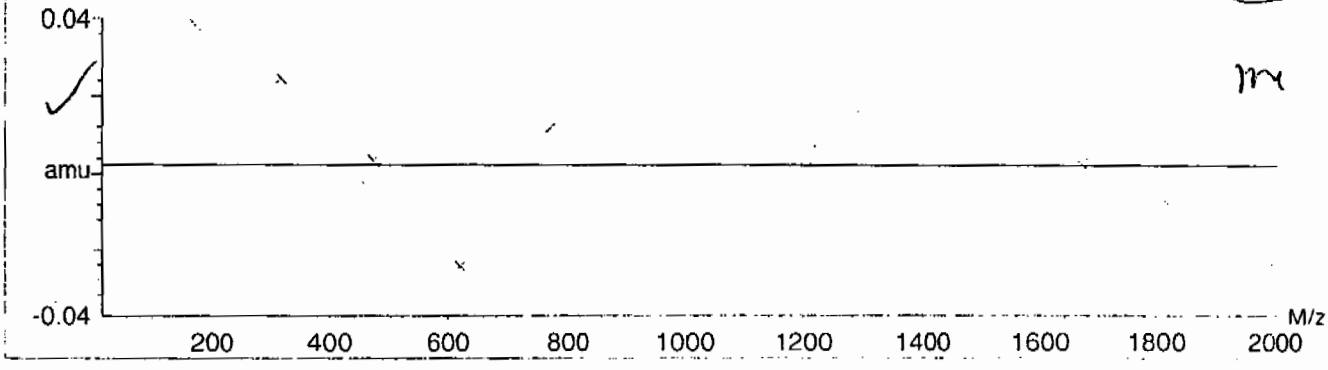


Mass difference (Raw - Ref mass)



Residuals

Mean residual = -2.623502e-9 ± 0.025622



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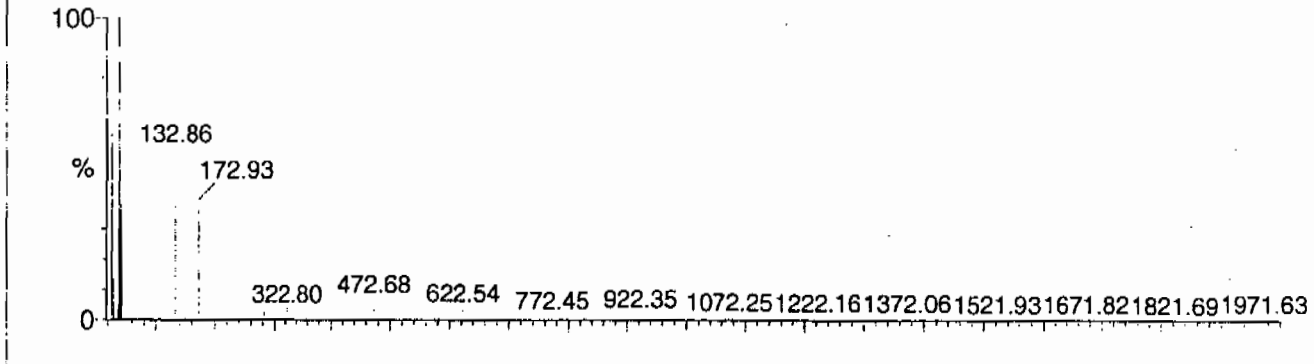
Calibration Report - MS2 Scan Speed Compensation

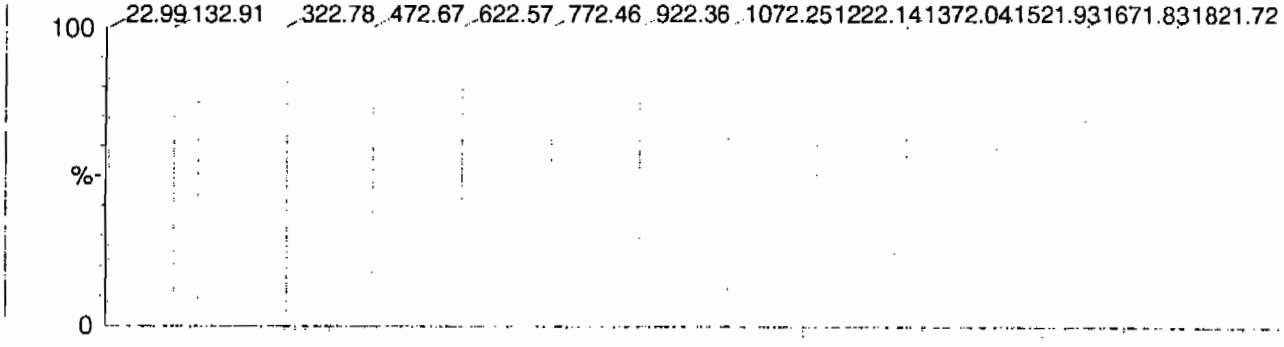
Printed: Fri Aug 25 10:54:54 2006

Data file: FASTMS2 - Calibrated

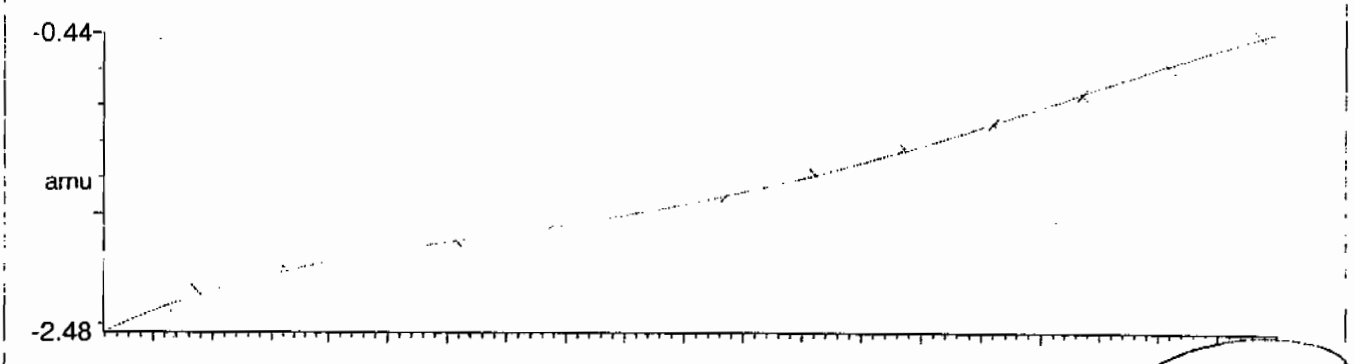
14 matches of 15 tested references



Reference file: Naics2



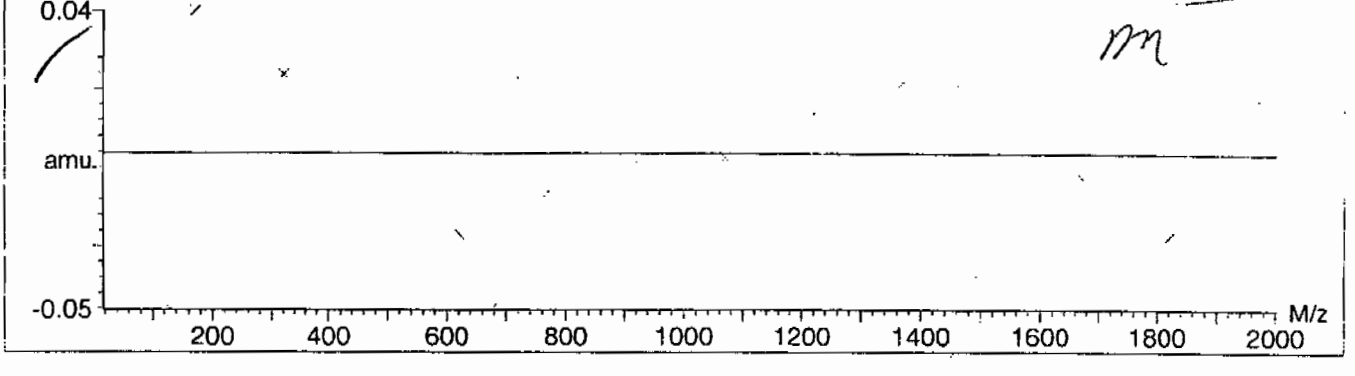
Mass difference (Raw - Ref mass)



Residuals

Mean residual = -6.785350e-9 ± 0.023134

m



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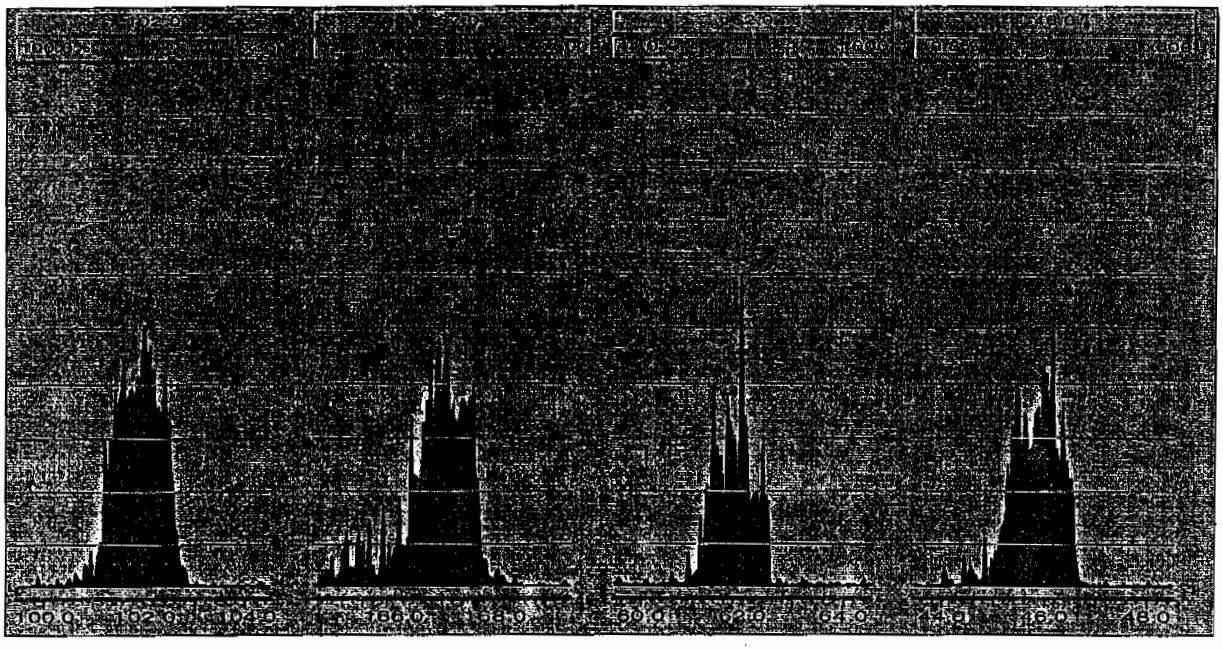
Quattro Micro Tune Parameters

Parameter File: C:\MASSLYNX\NEW_EXP.PRO\ACQUDB\explosives04.IPR

Printed : Sun Jan 31 12:32:54 2010



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8

High Explosives Internal Standard Summary

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1263

Lab Code: GEL

HPLC Column: Phenomenex Ultracarb 5u ODS(20)

Instrument ID: LCMSMS

	Analysis Date/Time	GEL Data File	IS1 (DNB) (Area) #	RT (min) #	IS2 (DNT) (Area) #	RT2 (min) #
			3308.52	11.961	18177.133	17.265
Upper Limit			4301.076	12.461	23630.2729	17.765
Lower Limit			2315.964	11.461	12723.9931	16.765
RE12–10–7855	01–feb–10 00:53	EXP0131026a	3084.14	11.946	18377.6	17.247
RE12–10–7854	01–feb–10 01:22	EXP0131027a	3234.98	11.946	18645.2	17.247
MB for batch 942334	31–jan–10 18:29	EXP0131013a	3132.8	11.946	18680.1	17.269
LCS for batch 942334	31–jan–10 18:59	EXP0131014a	3252.73	11.946	17898.4	17.247
RE12–10–7856	31–jan–10 22:25	EXP0131021a	3230.8	11.946	20013.5	17.248
RE12–10–7857	31–jan–10 22:55	EXP0131022a	2936.2	11.946	16684.1	17.247

IS1 (DNB) = 1,3–Dinitrobenzene–d4
IS2 (DNT) = 2,6–Dinitrotoluene–d3

Area Upper Limit = + 30% of average IS area from multipoint calibration
Area Lower Limit = – 30% of average IS area from multipoint calibration

RT Upper Limit = +0.5 of average multipoint RT
RT Lower Limit = –0.5 of average multipoint RT

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits

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SAMPLE
DATA

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7856

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852001

Sample Amount 2

Moisture: 9.4

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0131021a

Date Analyzed: 31-JAN-10 22:25

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

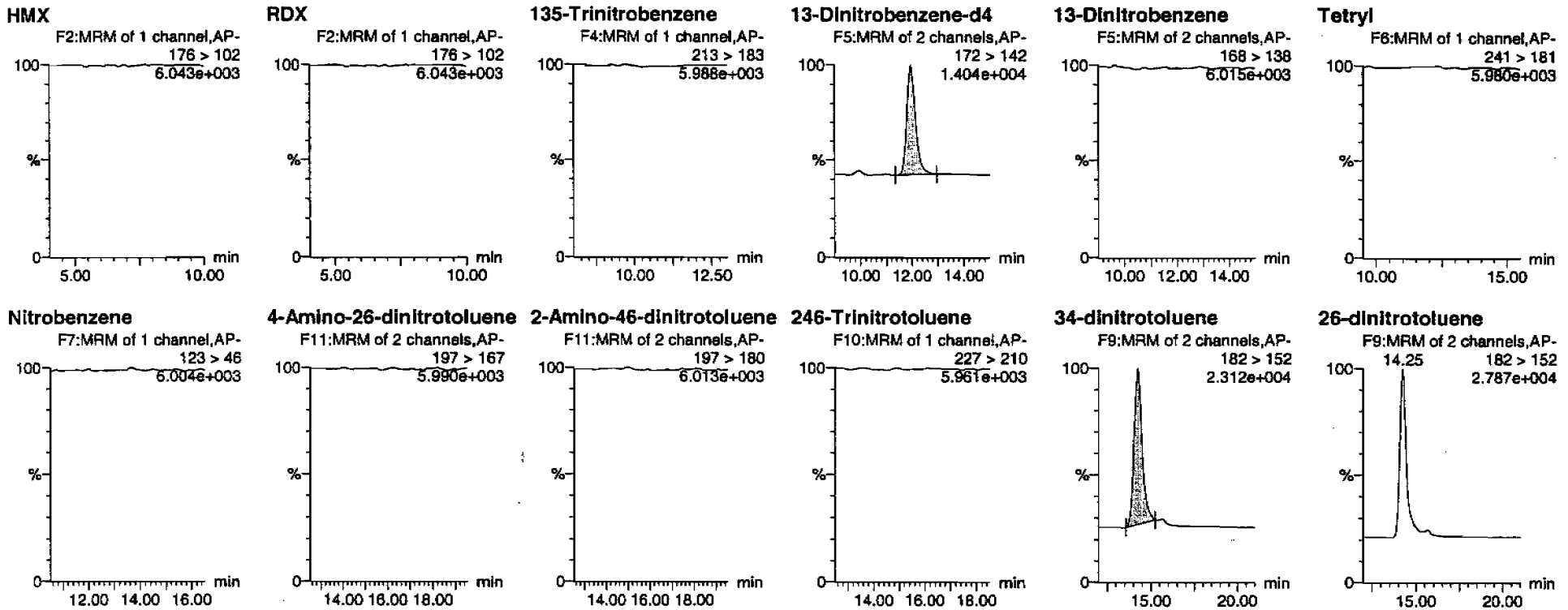
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131021a
Date: 31-Jan-2010
Time: 22:25:52
ID: 244852001 | LANL | 942335 | Solids | 21
Vial: 1:5,C

MAP 2/1/10



Hmm 2/1/10

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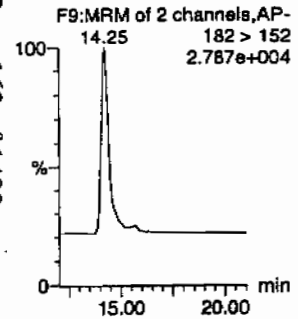
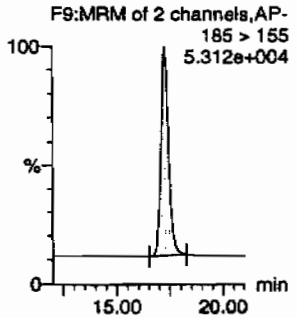
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

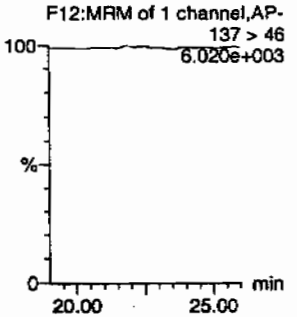
24-dinitrotoluene



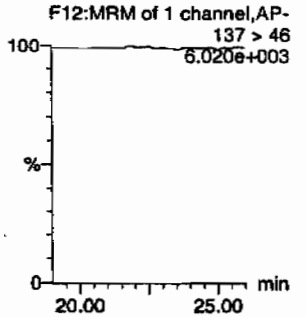
26-dinitrotoluene-d3



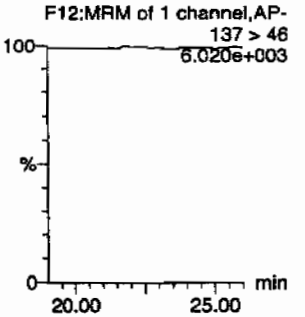
2-Nitrotoluene



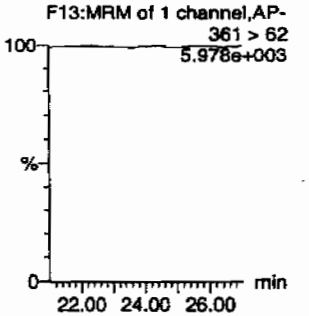
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
244852001	HMX	176 > 102			3230.798									
244852001	RDX	176 > 102			3230.798									
244852001	135-Trinitrobenzene	213 > 183			3230.798									
244852001	13-Dinitrobenzene-d4	172 > 142	11.95	3230.798		3230.798	3230.798	bb			488.2542	97.7	-2.3	445.7
244852001	13-Dinitrobenzene	168 > 138			3230.798									
244852001	Tetryl	241 > 181			3230.798									
244852001	Nitrobenzene	123 > 46			3230.798									
244852001	4-Amino-26-dinitrotoluene	197 > 167			20013.502									
244852001	2-Amino-46-dinitrotoluene	197 > 180			20013.502									
244852001	246-Trinitrotoluene	227 > 210			20013.502									
244852001	34-dinitrotoluene	182 > 152	14.25	9113.011	20013.502	9113.011	227.672	bb			243.6061	97.4	-2.6	568.0
244852001	26-dinitrotoluene	182 > 152			20013.502									
244852001	24-dinitrotoluene	182 > 152			20013.502									
244852001	26-dinitrotoluene-d3	185 > 155	17.25	20013.502		20013.502	20013.502	bb			550.5126	110.1	10.1	2879.3
244852001	2-Nitrotoluene	137 > 46			20013.502									
244852001	4-Nitrotoluene	137 > 46			20013.502									
244852001	3-Nitrotoluene	137 > 46			20013.502									
244852001	PETN	361 > 62			20013.502									

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7856

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852001

Sample Amount 2

Moisture: 9.4

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01250028.wiff

Date Analyzed: 25-JAN-10 17:36

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

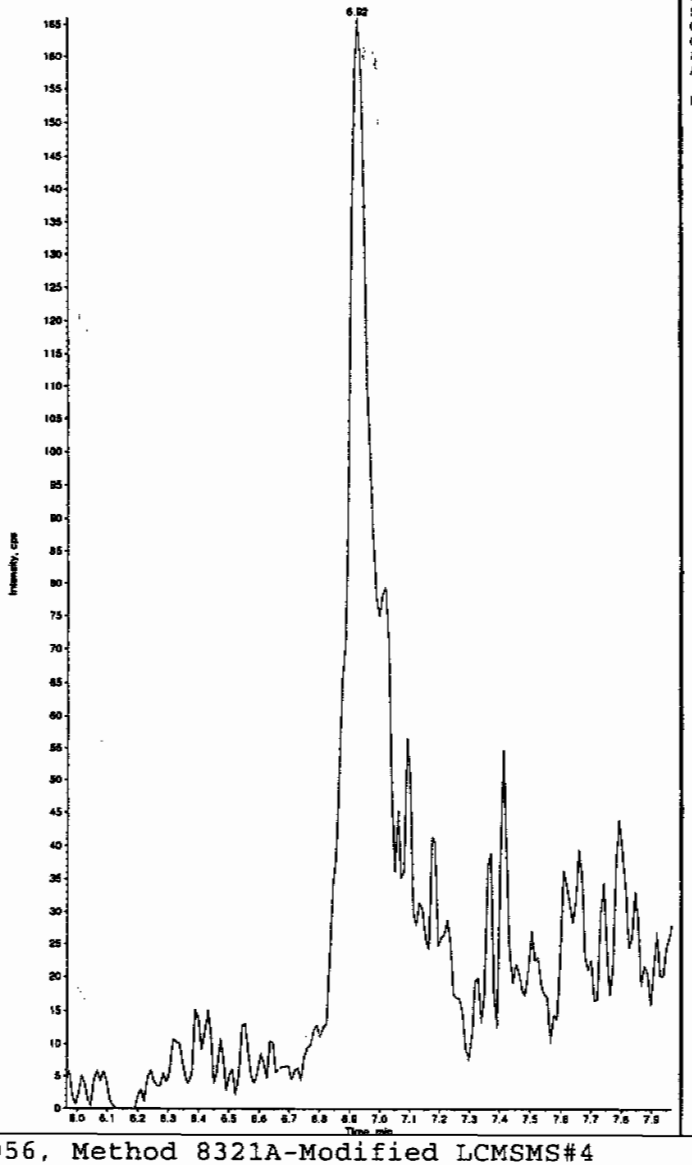
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Lcn 1/27/10

Sample Name: "244852001" Sample ID: "942335|2|LER" File: "EXS01250028.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:36:45 PM

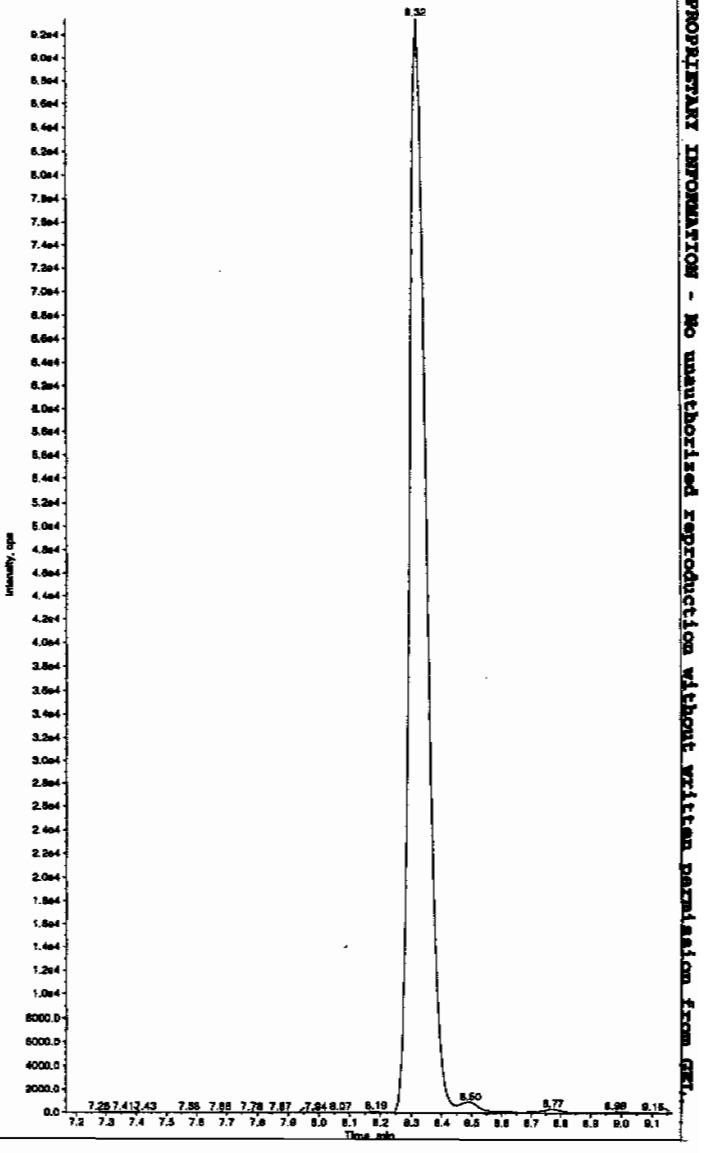
Modified: No



Sample Name: "244852001" Sample ID: "942335|2|LER" File: "EXS01250028.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:36:45 PM

Modified: No



Hmm 01/27/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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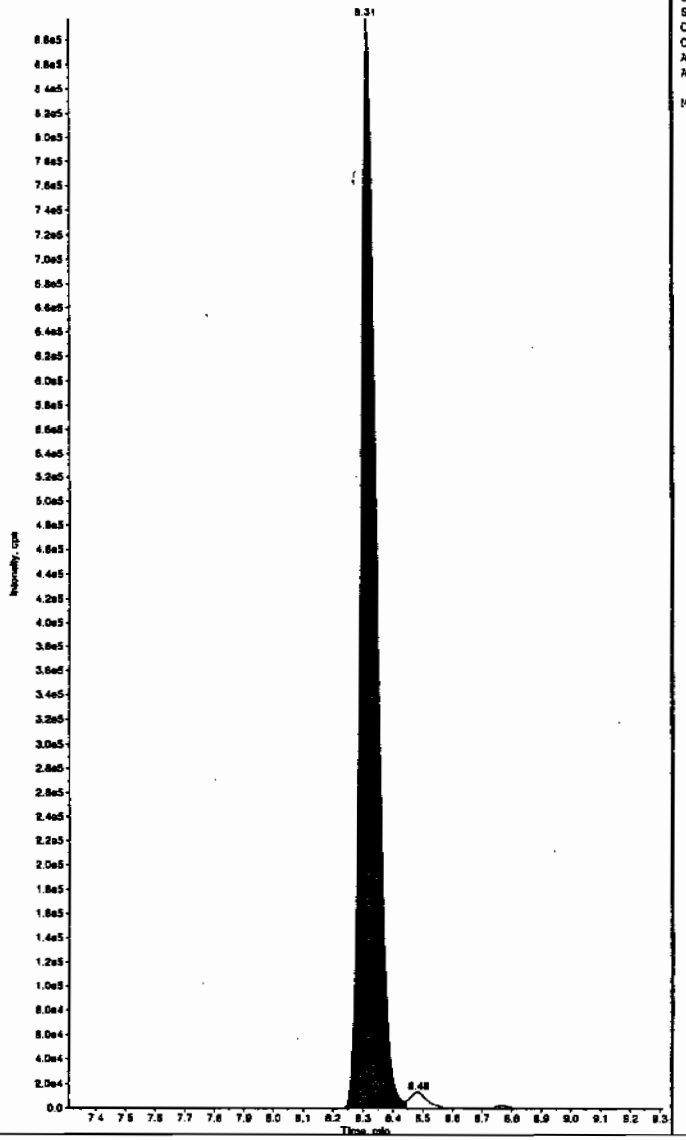
Sample Name: "244852001" Sample ID: "942335[2]LER" File: "EXS01250028.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 260. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:36:45 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.31 min
Use Relative RT: No

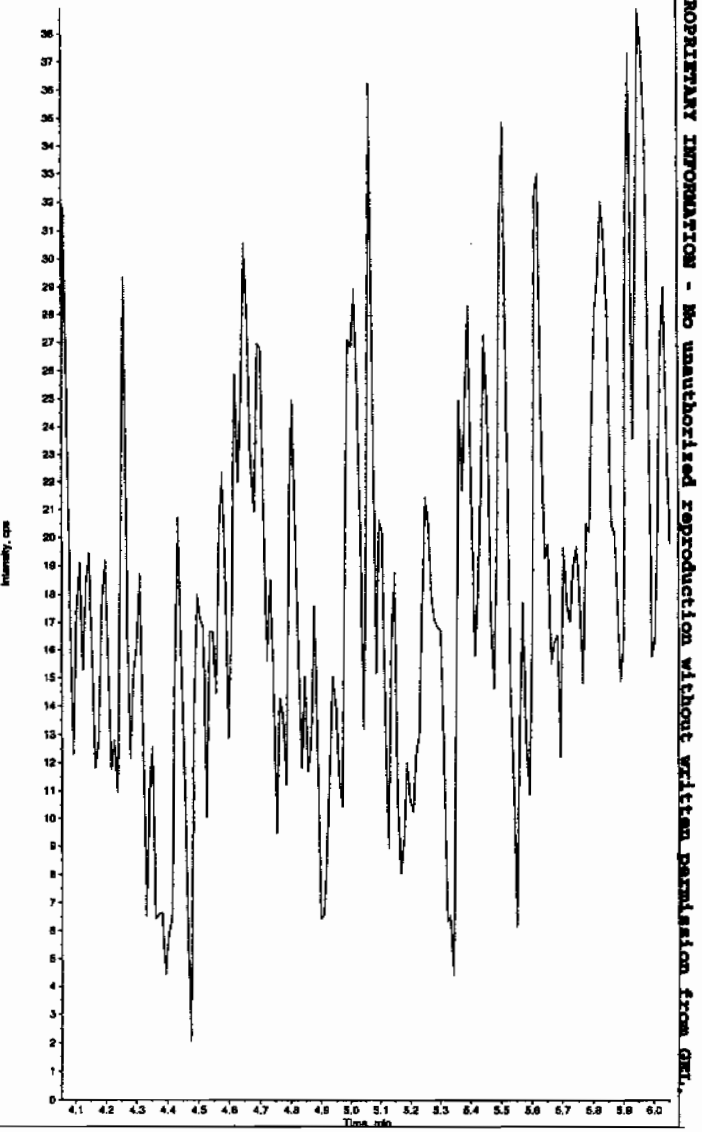
Int. Type: Valley
Retention Time: 8.31 min
Area: 3.43e+006 counts
Height: 897195.435 cps
Start Time: 8.22 min
End Time: 8.44 min



Sample Name: "244852001" Sample ID: "942335[2]LER" File: "EXS01250028.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:36:45 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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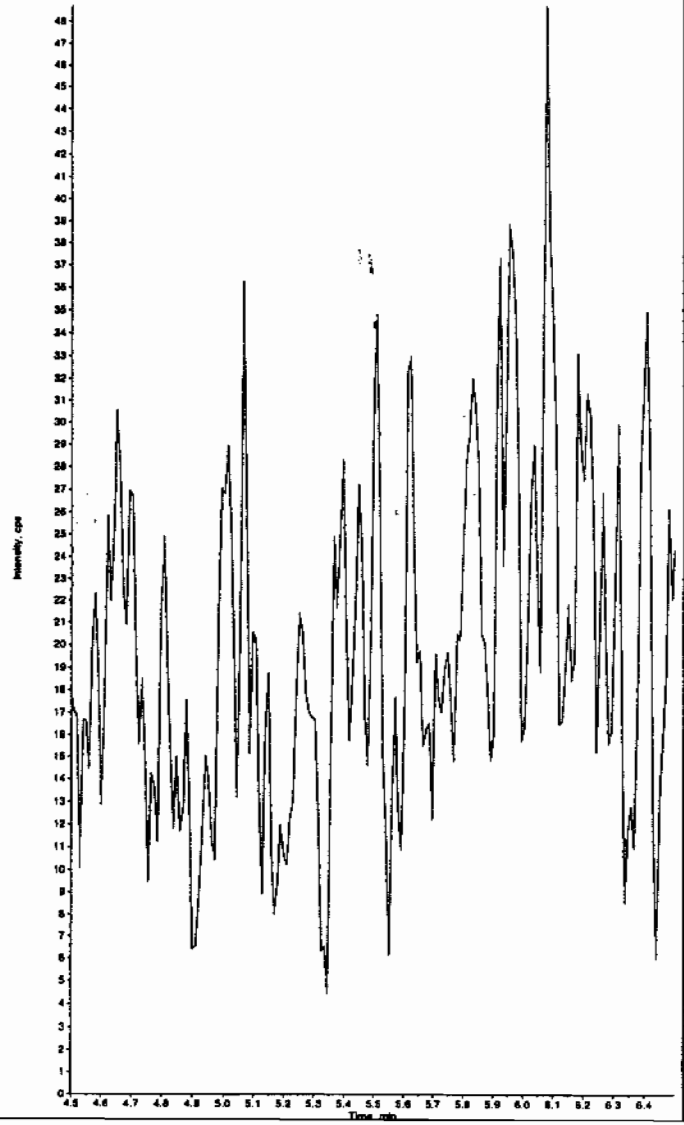
Sample Name: "244652001" Sample ID: "942335|2|LER" File: "EXS01250028.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:36:45 PM

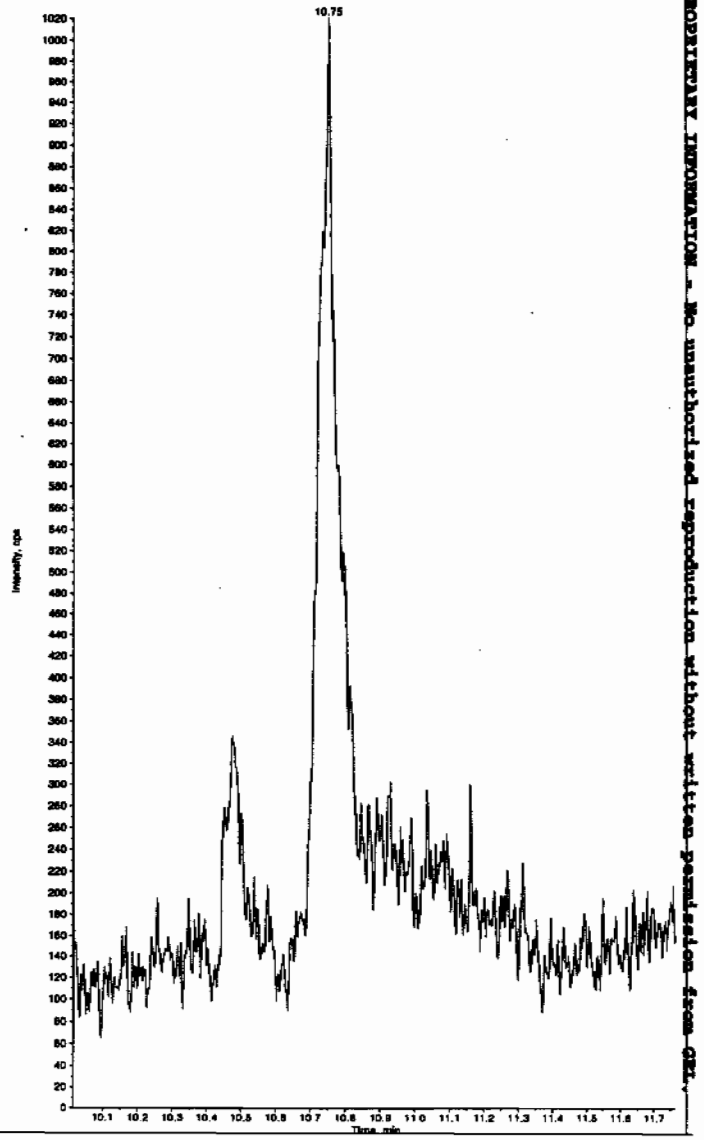
Modified: No



Sample Name: "244652001" Sample ID: "942335|2|LER" File: "EXS01250028.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:36:45 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7857

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852002

Sample Amount 2

Moisture: 6.3

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0131022a

Date Analyzed: 31-JAN-10 22:55

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

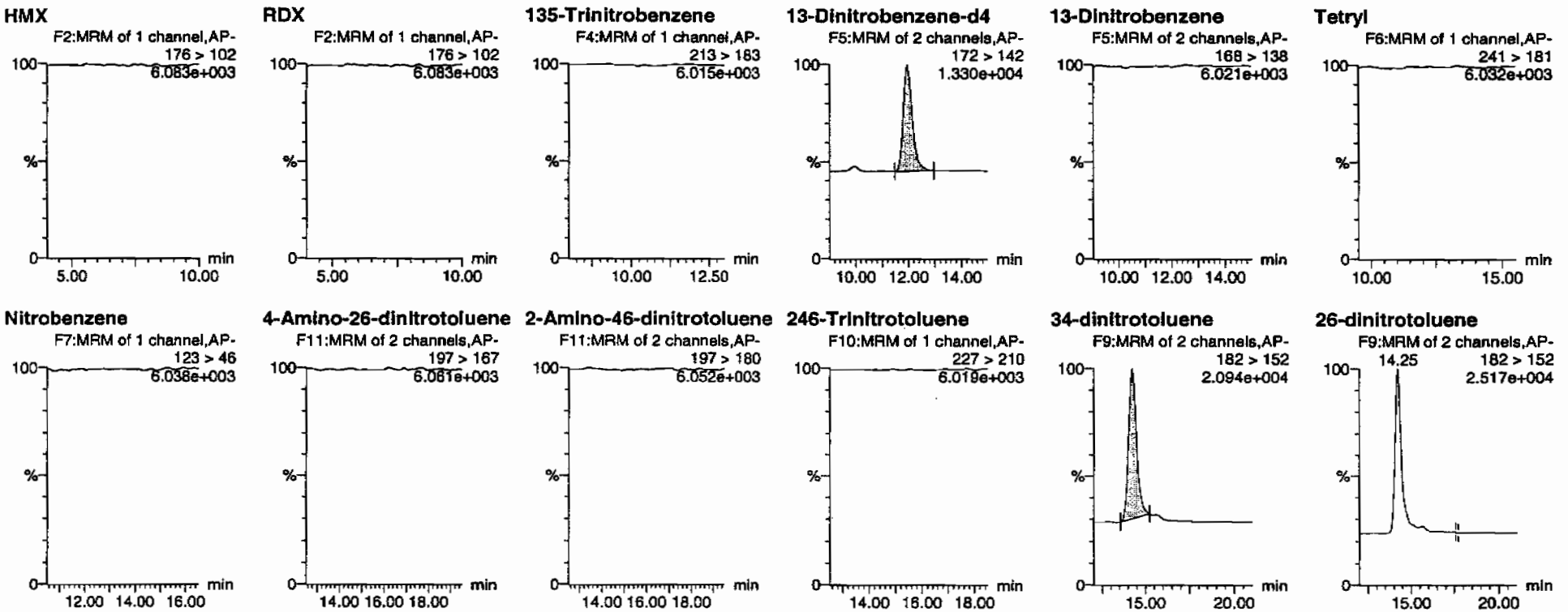
*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131022a
Date: 31-Jan-2010
Time: 22:55:21
ID: 244852002 | LANL | 942335 | Soled | 2 |
Vial: 1:5,D

MAP 2/1/10



HMM 02/02/10

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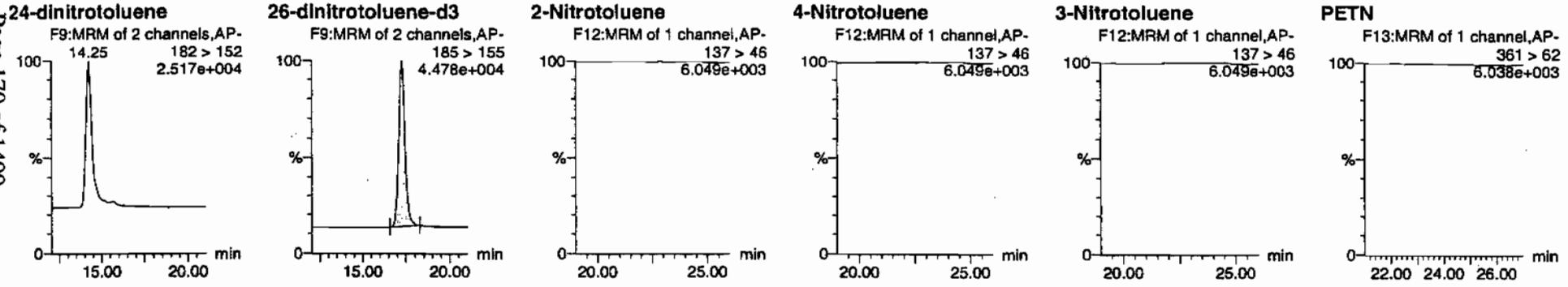
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod Time	ng/ml	%Rec	%Dev	S/N
244852002	HMX	176 > 102			2936.203									
244852002	RDX	176 > 102			2936.203									
244852002	135-Trinitrobenzene	213 > 183			2936.203									
244852002	13-Dinitrobenzene-d4	172 > 142	11.95	2936.203		2936.203	2936.203	bb			443.7336	88.7	-11.3	378.6
244852002	13-Dinitrobenzene	168 > 138			2936.203									
244852002	Tetryl	241 > 181			2936.203									
244852002	Nitrobenzene	123 > 46			2936.203									
244852002	4-Amino-26-dinitrotoluene	197 > 167			16684.090									
244852002	2-Amino-46-dinitrotoluene	197 > 180			16684.090									
244852002	246-Trinitrotoluene	227 > 210			16684.090									
244852002	34-dinitrotoluene	182 > 152	14.25	7853.871	16684.090	7853.871	235.370	bb			251.8434	100.7	0.7	359.8
244852002	26-dinitrotoluene	182 > 152			16684.090			MM-	01-Feb-10	14:15:31				
244852002	24-dinitrotoluene	182 > 152			16684.090									
244852002	26-dinitrotoluene-d3	185 > 155	17.25	16684.090		16684.090	16684.090	bb			458.9303	91.8	-8.2	1739.7
244852002	2-Nitrotoluene	137 > 46			16684.090									
244852002	4-Nitrotoluene	137 > 46			16684.090									
244852002	3-Nitrotoluene	137 > 46			16684.090									
244852002	PETN	361 > 62			16684.090									

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7857

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852002

Sample Amount 2

Moisture: 6.3

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01250029.wiff

Date Analyzed: 25-JAN-10 17:52

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

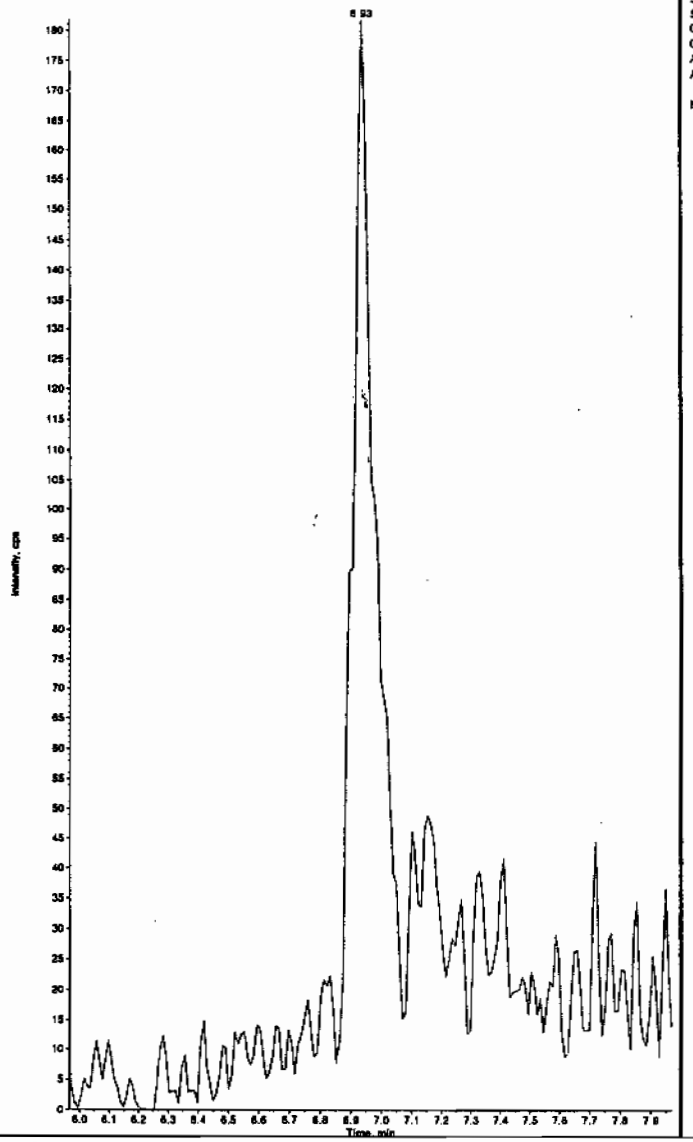
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

LCer 1/27/10

Sample Name: "244852002" Sample ID: "942335|2|LER" File: "EXS01250029.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:52:36 PM

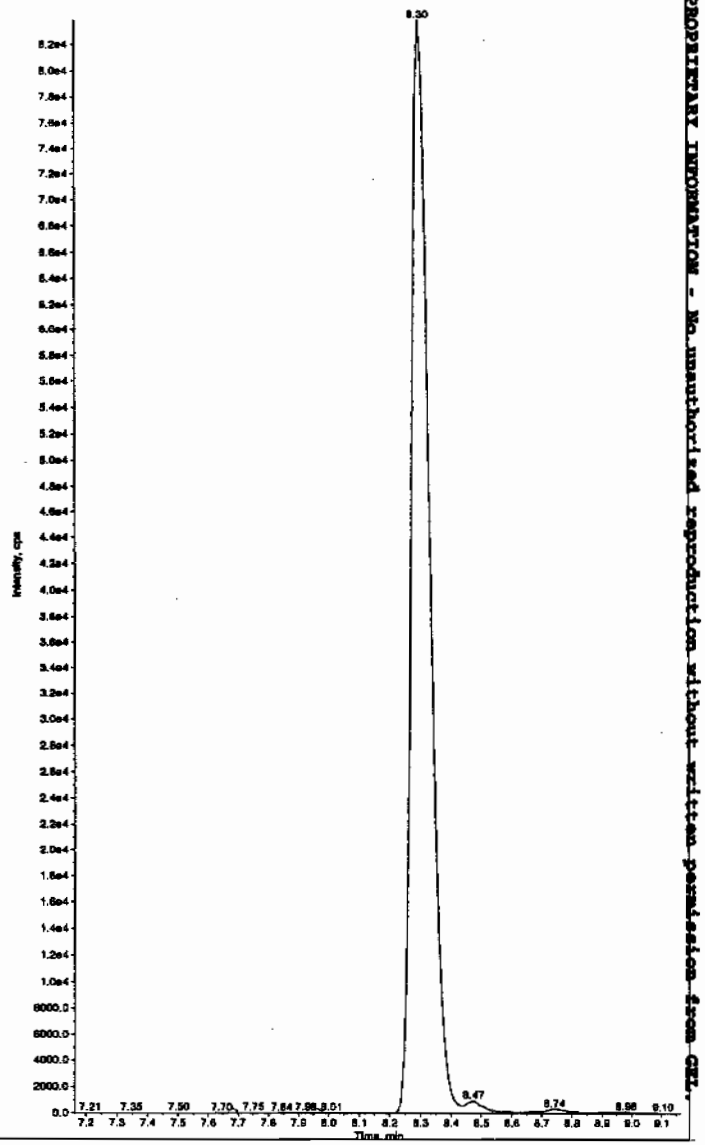
Modified: No



Sample Name: "244852002" Sample ID: "942335|2|LER" File: "EXS01250029.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:52:36 PM

Modified: No



dtm 01/27/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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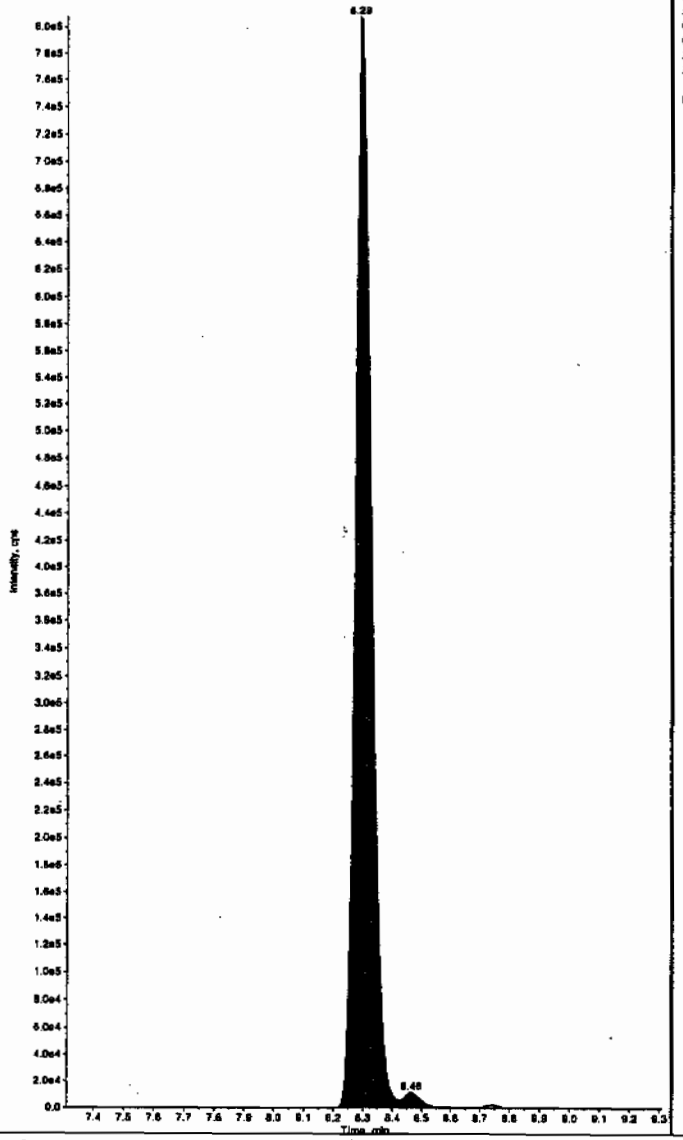
Sample Name: "244852002" Sample ID: "942335[2]LER" File: "EXS01250029.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 249. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:52:36 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.31 min
Use Relative RT: No

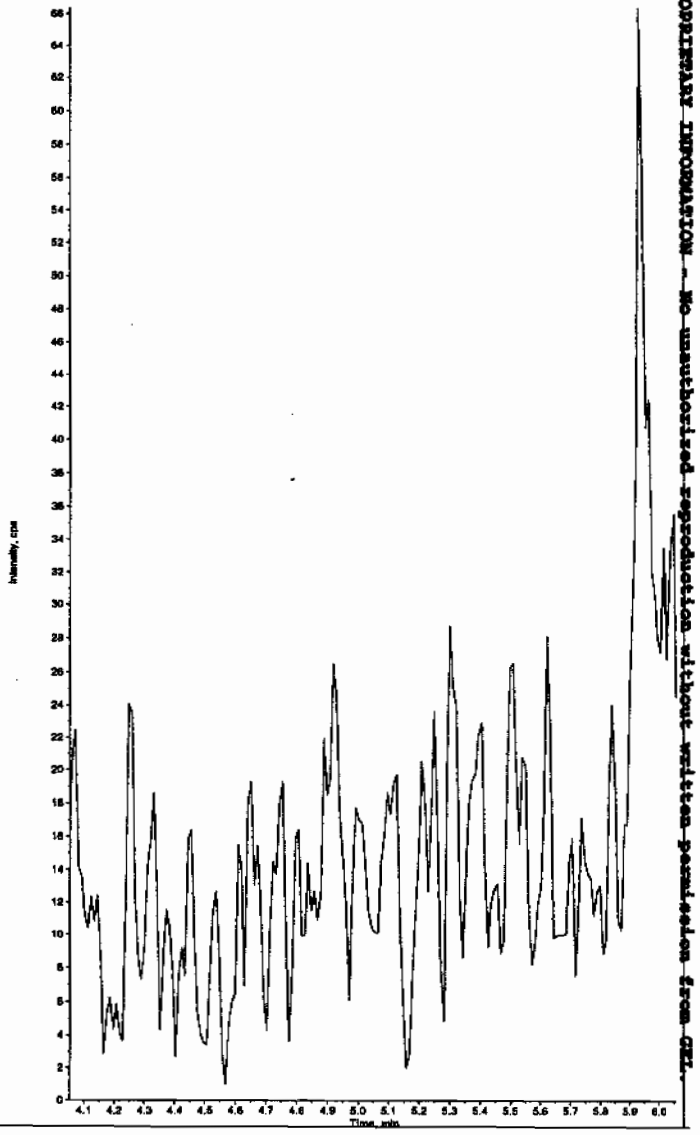
Int. Type: Valley
Retention Time: 8.29 min
Area: 3.29e+006 counts
Height: 808316.162 cps
Start Time: 8.17 min
End Time: 8.63 min



Sample Name: "244852002" Sample ID: "942335[2]LER" File: "EXS01250029.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:52:36 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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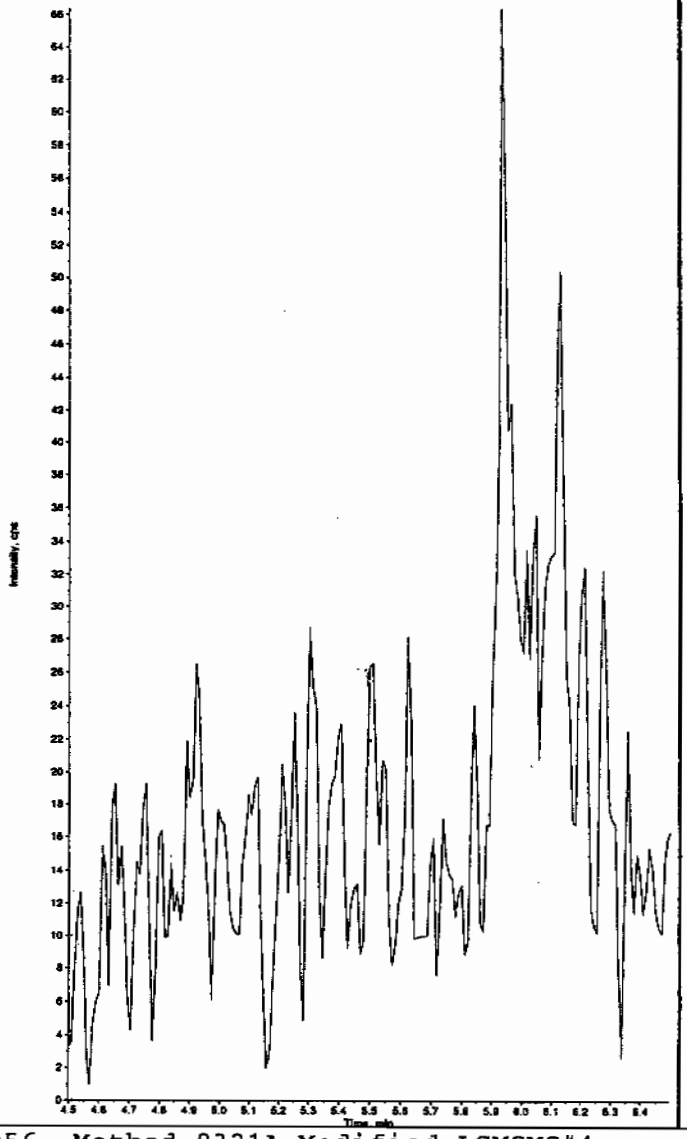
Sample Name: "244852002" Sample ID: "942335[2]LER" File: "EXS01250029.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/45.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:52:36 PM

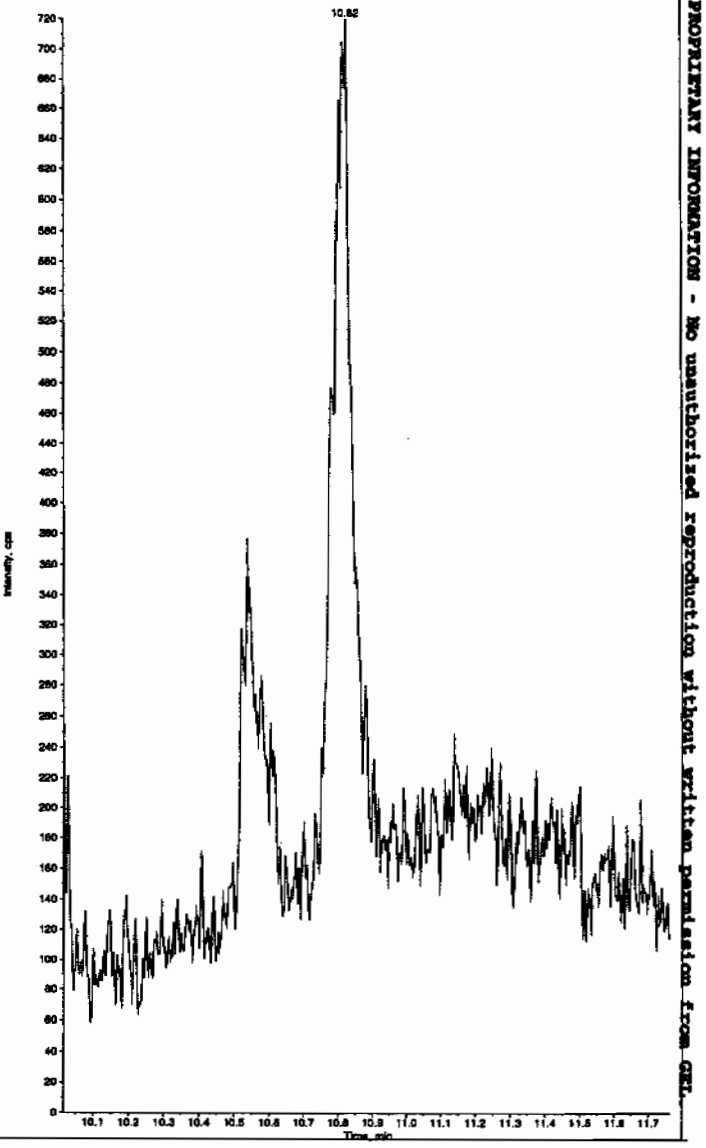
Modified: No



Sample Name: "244852002" Sample ID: "942335[2]LER" File: "EXS01250029.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "368.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:52:36 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7855

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852003

Sample Amount 2

Moisture: 7.5

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0131026a

Date Analyzed: 01-FEB-10 00:53

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

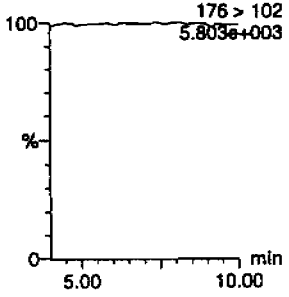
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

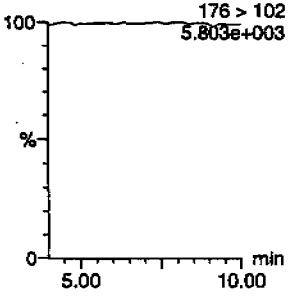
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131026a
Date: 01-Feb-2010
Time: 00:53:15
ID: 244852003 | LANL | 942335 | Soil | 2 |
Vial: 1:5,E

MM 2/1/10

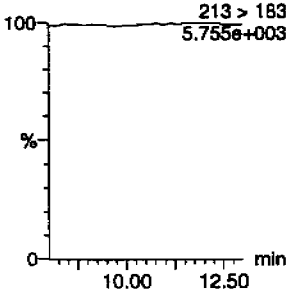
HMX
F2:MRM of 1 channel,AP-
176 > 102
5.803e+003



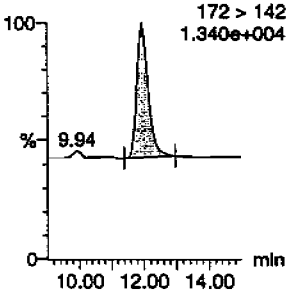
RDX
F2:MRM of 1 channel,AP-
176 > 102
5.803e+003



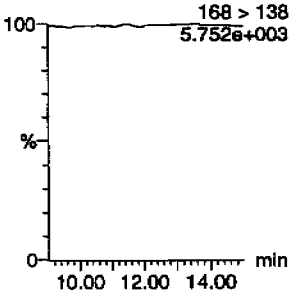
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
5.755e+003



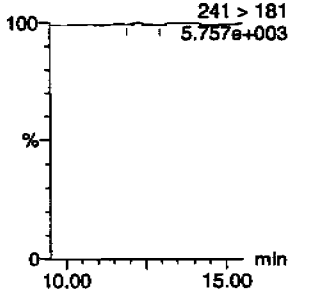
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.340e+004



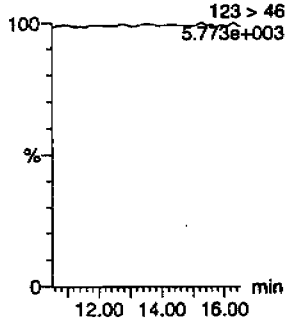
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
5.752e+003



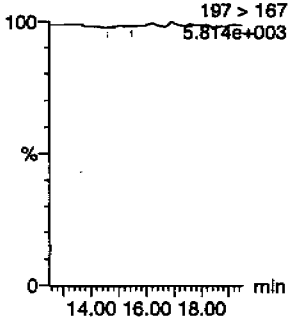
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
5.757e+003



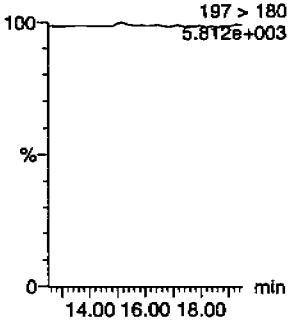
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
5.773e+003



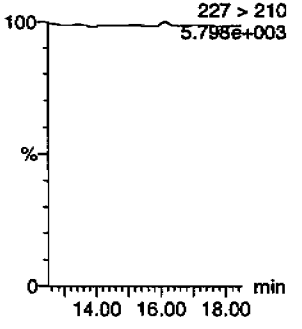
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
5.814e+003



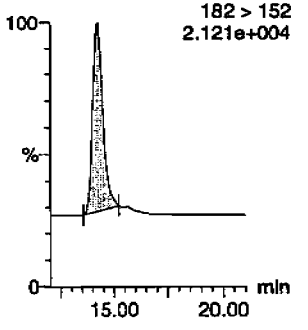
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
5.812e+003



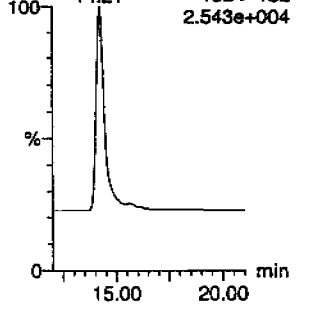
246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
5.798e+003



34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
2.121e+004



26-dinitrotoluene
F9:MRM of 2 channels,AP-
14.21
182 > 152
2.543e+004



HMM 02/02/10

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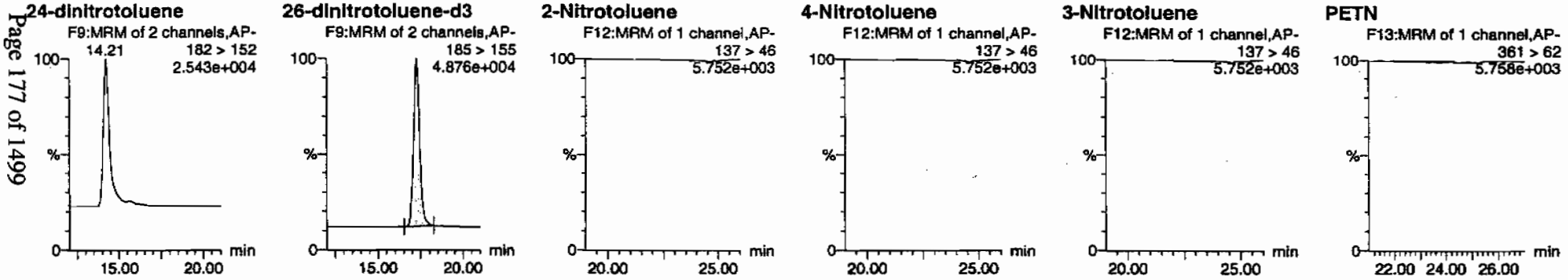
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
244852003	HMX	176 > 102			3084.143									
244852003	RDX	176 > 102			3084.143									
244852003	135-Trinitrobenzene	213 > 183			3084.143									
244852003	13-Dinitrobenzene-d4	172 > 142	11.95	3084.143		3084.143	3084.143	bb			466.0910	93.2	-6.8	332.9
244852003	13-Dinitrobenzene	168 > 138			3084.143									
244852003	Tetryl	241 > 181			3084.143			MM-	01-Feb-10	14:07:16				
244852003	Nitrobenzene	123 > 46			3084.143									
244852003	4-Amino-26-dinitrotoluene	197 > 167			18377.564			MM-	01-Feb-10	14:10:20				
244852003	2-Amino-46-dinitrotoluene	197 > 180			18377.564									
244852003	246-Trinitrotoluene	227 > 210			18377.564									
244852003	34-dinitrotoluene	182 > 152	14.25	8334.370	18377.564	8334.370	226.754	bb			242.6242	97.0	-3.0	504.1
244852003	26-dinitrotoluene	182 > 152			18377.564									
244852003	24-dinitrotoluene	182 > 152			18377.564									
244852003	26-dinitrotoluene-d3	185 > 155	17.25	18377.564		18377.564	18377.564	bb			505.5128	101.1	1.1	960.6
244852003	2-Nitrotoluene	137 > 46			18377.564									
244852003	4-Nitrotoluene	137 > 46			18377.564									
244852003	3-Nitrotoluene	137 > 46			18377.564									
244852003	PETN	361 > 62			18377.564									

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7855

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852003

Sample Amount 2

Moisture: 7.5

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01250030.wiff

Date Analyzed: 25-JAN-10 18:08

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

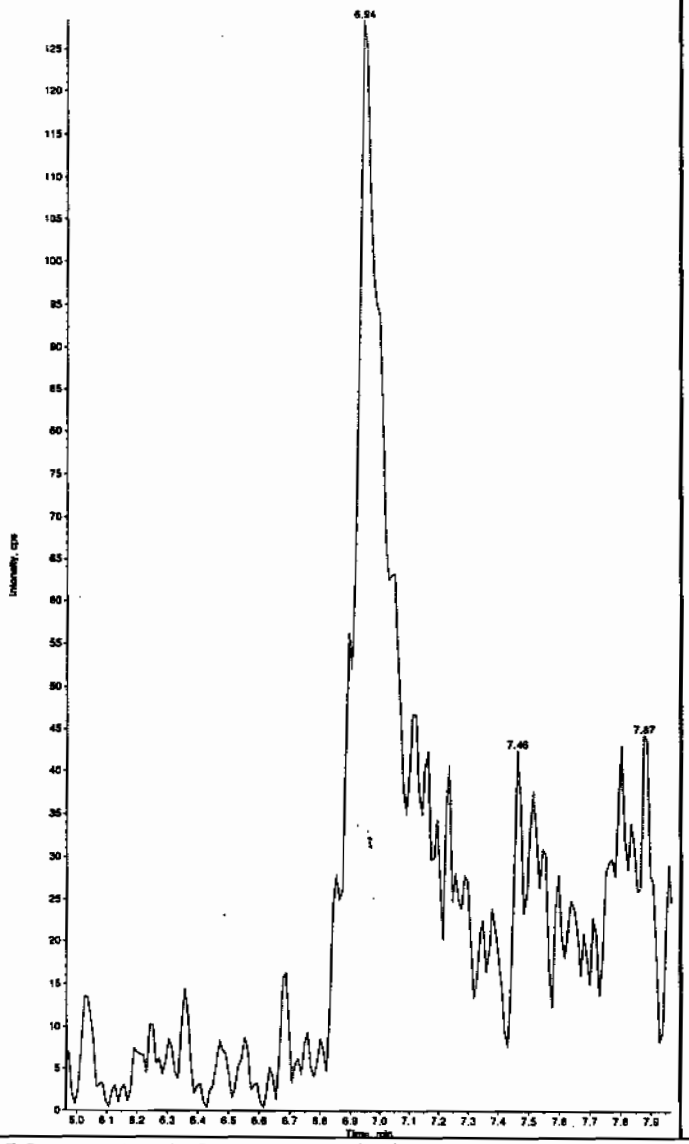
*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Lan 1/27/10

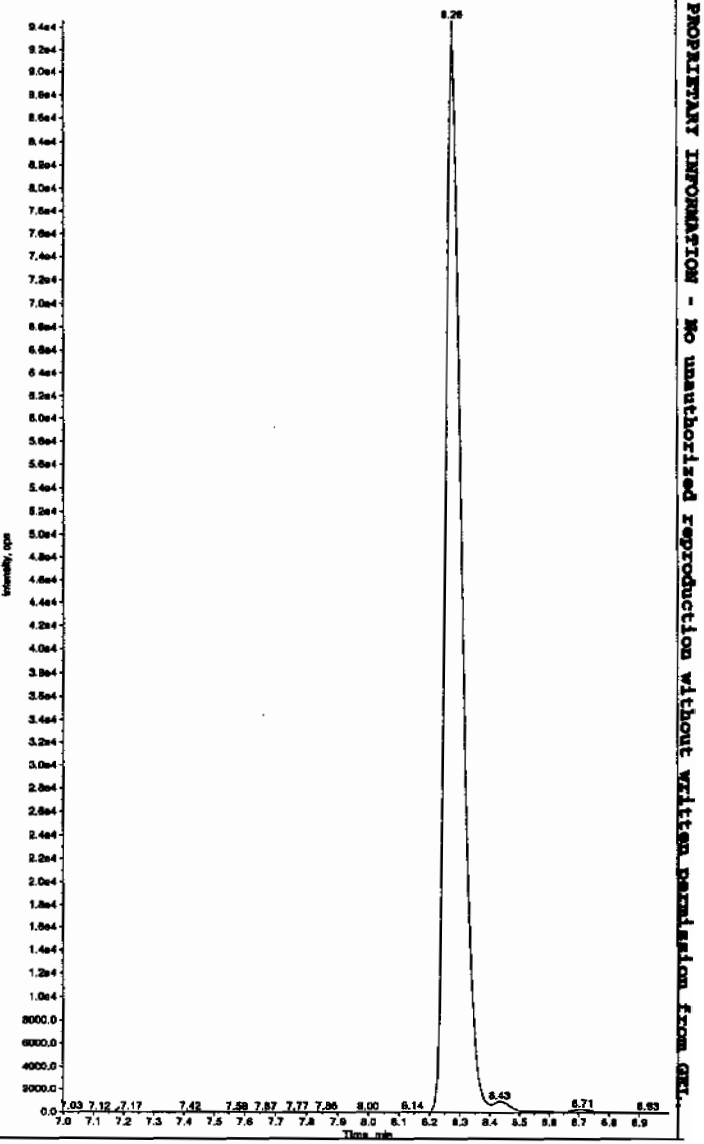
Sample Name: "244852003" Sample ID: "942335|2|LER" File: "EXS01250030.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 6:08:20 PM

Modified: No



Sample Name: "244852003" Sample ID: "942335|2|LER" File: "EXS01250030.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 6:08:20 PM

Modified: Yes



Hnm 01/27/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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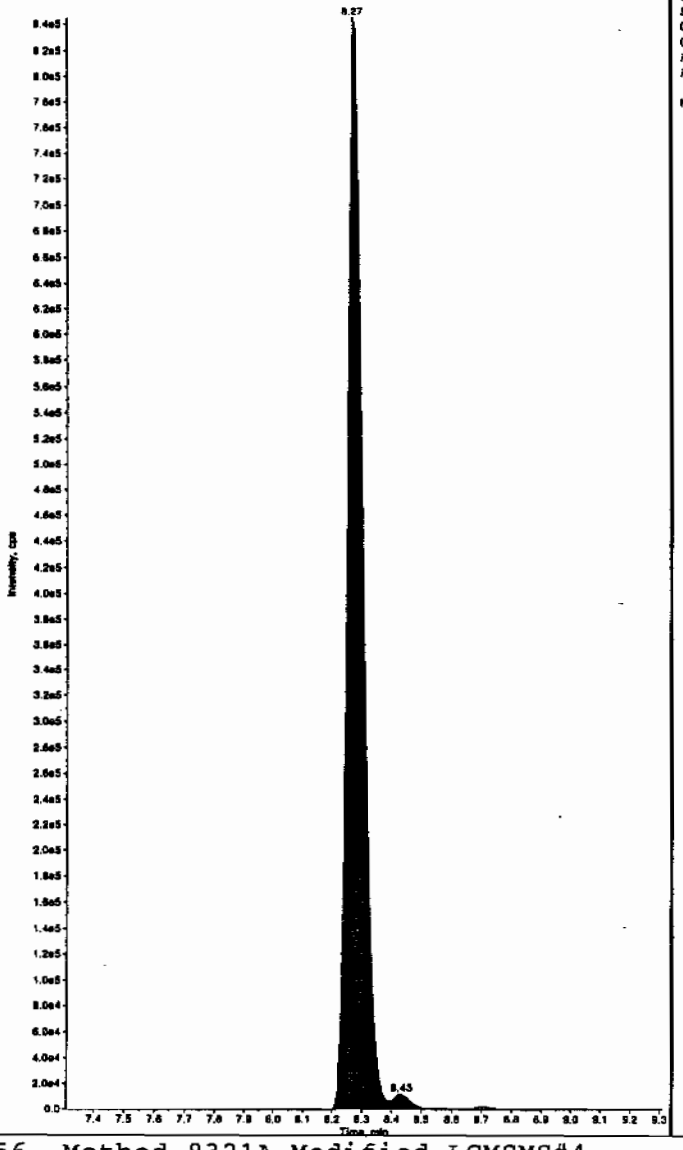
Sample Name: "244852003" Sample ID: "942335[2]LER" File: "EXS01250030.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 345. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 6:08:20 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.31 min
Use Relative RT: No

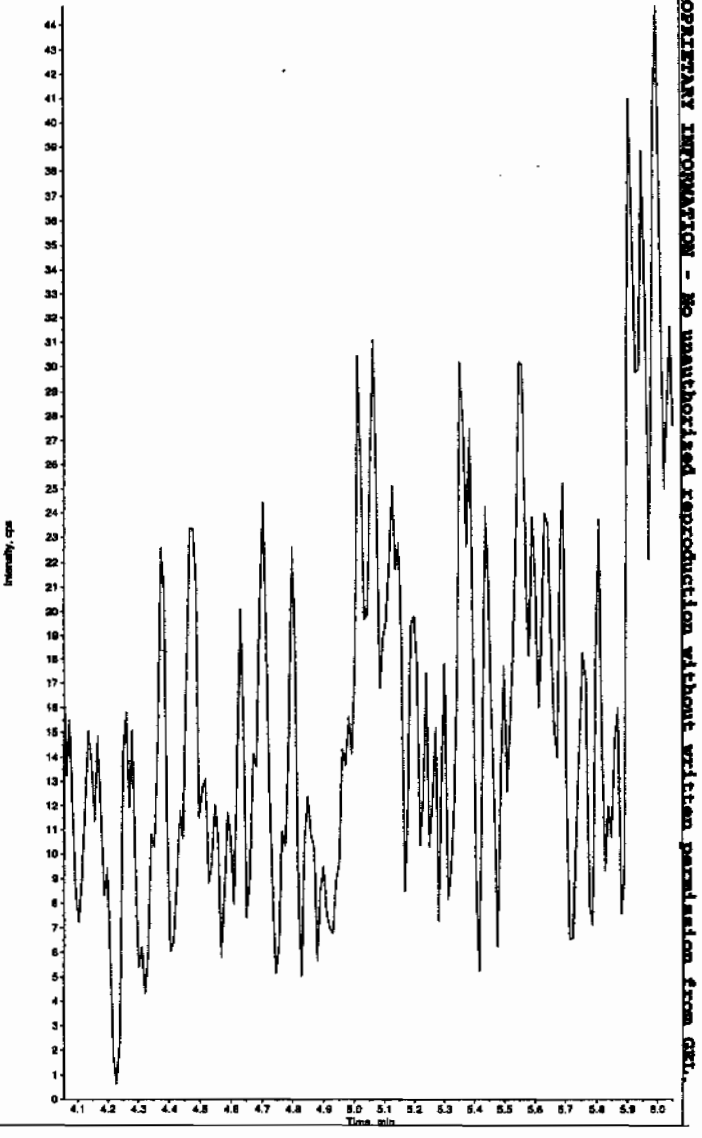
Int. Type: Valley
Retention Time: 8.27 min
Area: 3.25e+006 counts
Height: 845214.172 cps
Start Time: 8.15 min
End Time: 8.62 min



Sample Name: "244852003" Sample ID: "942335[2]LER" File: "EXS01250030.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 6:08:20 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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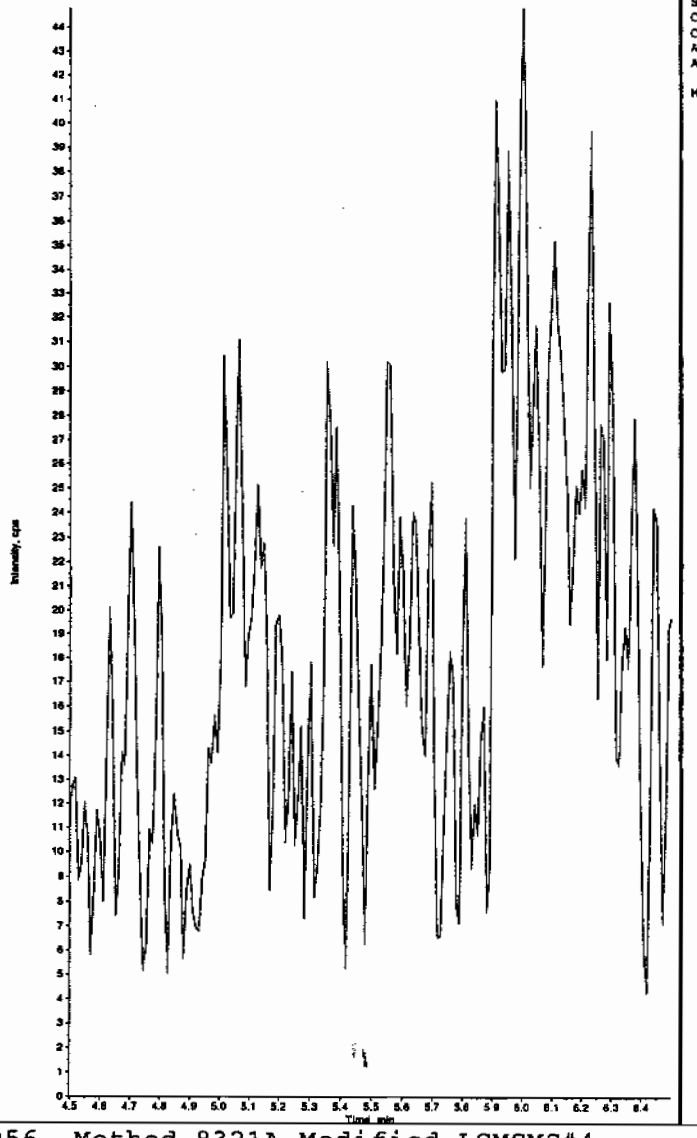
Sample Name: "244852003" Sample ID: "942335|2|LER" File: "EXS01250030.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/48.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 6:08:20 PM

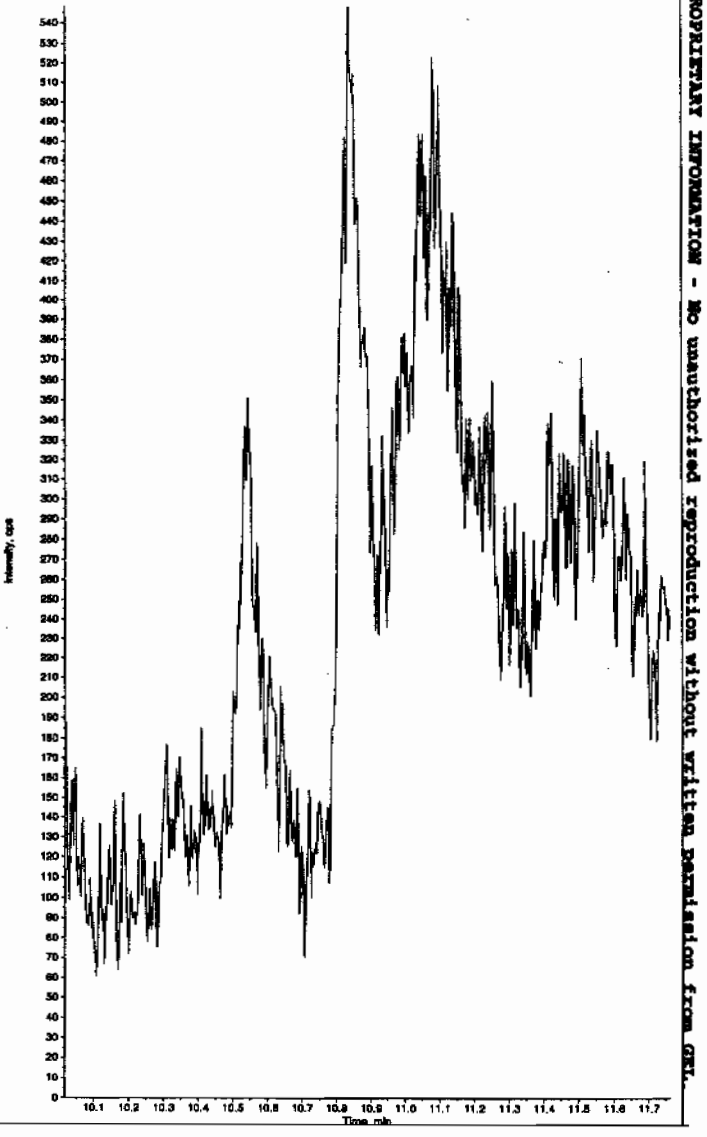
Modified: No



Sample Name: "244852003" Sample ID: "942335|2|LER" File: "EXS01250030.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 6:08:20 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7854

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852004

Sample Amount 2

Moisture: 13.8

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0131027a

Date Analyzed: 01-FEB-10 01:22

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

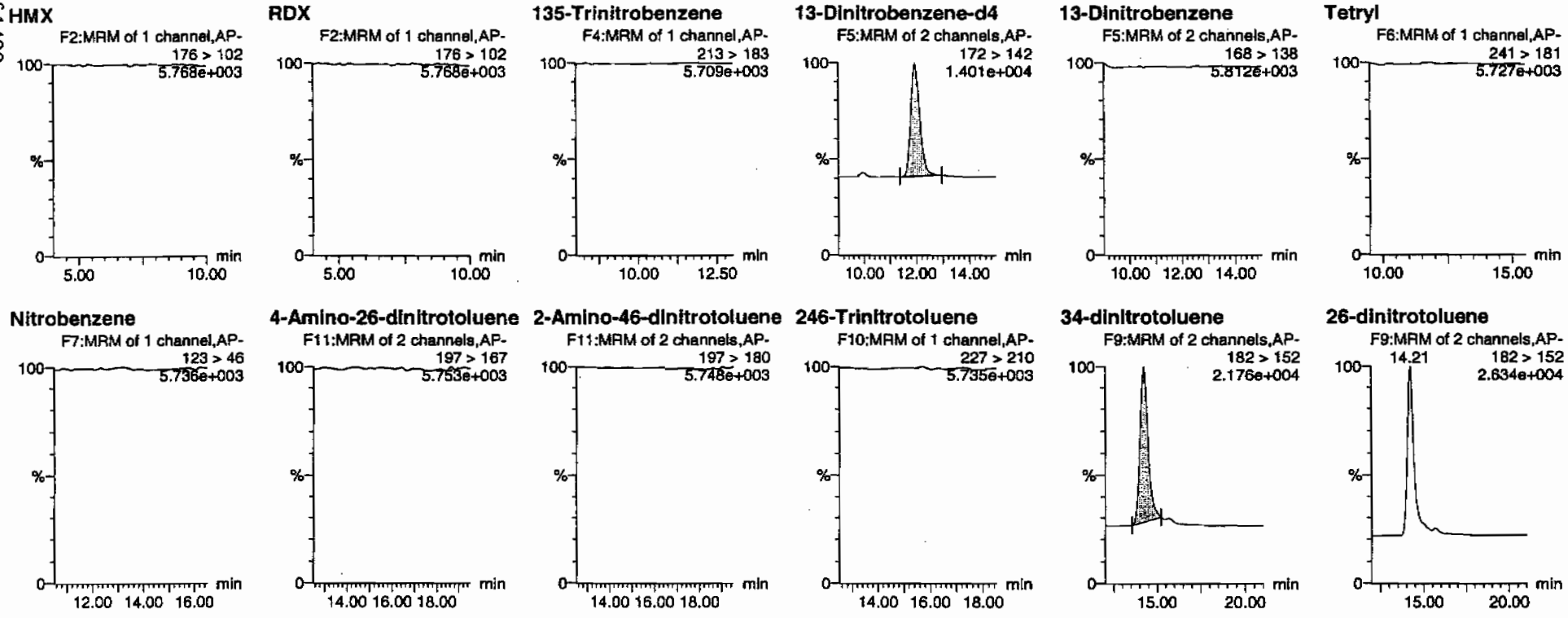
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Mon Feb 01 14:31:20 2010, Page 53 of 103

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131027a
Date: 01-Feb-2010
Time: 01:22:44
ID: 244852004 | LANL | 942335 | SOLID | 2 |
Vial: 1:5,F

MAP 2/1/10



Hnm 02/02/10

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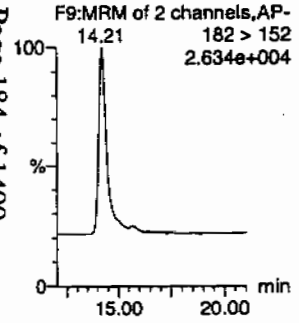
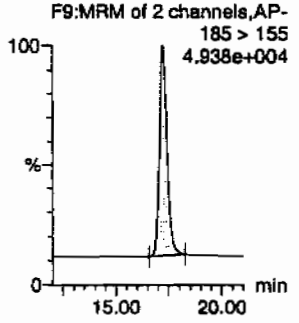
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

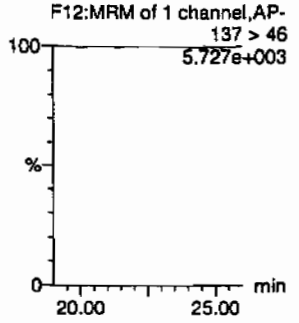
24-dinitrotoluene



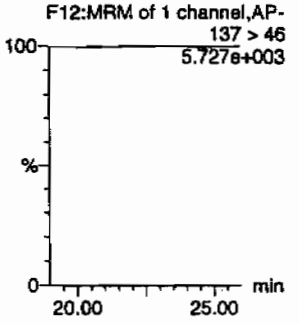
26-dinitrotoluene-d3



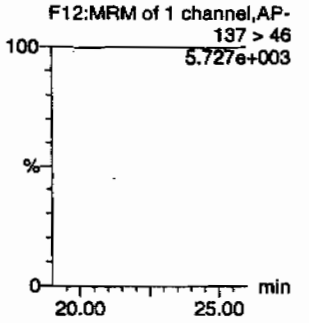
2-Nitrotoluene



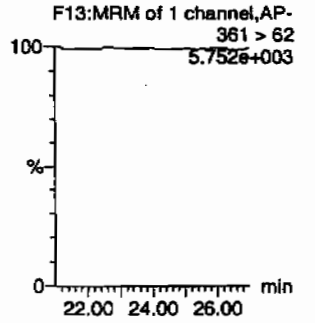
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
244852004	HMX	176 > 102			3234.981									
244852004	RDX	176 > 102			3234.981									
244852004	135-Trinitrobenzene	213 > 183			3234.981									
244852004	13-Dinitrobenzene-d4	172 > 142	11.95	3234.981		3234.981	3234.981	bb			488.8864	97.8	-2.2	293.8
244852004	13-Dinitrobenzene	168 > 138			3234.981									
244852004	Tetryl	241 > 181			3234.981									
244852004	Nitrobenzene	123 > 46			3234.981									
244852004	4-Amino-26-dinitrotoluene	197 > 167			18645.186									
244852004	2-Amino-46-dinitrotoluene	197 > 180			18645.186									
244852004	246-Trinitrotoluene	227 > 210			18645.186									
244852004	34-dinitrotoluene	182 > 152	14.25	8531.729	18645.186	8531.729	228.792	bb			244.8046	97.9	-2.1	313.8
244852004	26-dinitrotoluene	182 > 152			18645.186									
244852004	24-dinitrotoluene	182 > 152			18645.186									
244852004	26-dinitrotoluene-d3	185 > 155	17.25	18645.186		18645.186	18645.186	bb			512.8743	102.6	2.6	1951.5
244852004	2-Nitrotoluene	137 > 46			18645.186									
244852004	4-Nitrotoluene	137 > 46			18645.186									
244852004	3-Nitrotoluene	137 > 46			18645.186									
244852004	PETN	361 > 62			18645.186									

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE12-10-7854

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 244852004

Sample Amount 2

Moisture: 13.8

Amount Units g

Date Received: 15-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01250031.wiff

Date Analyzed: 25-JAN-10 18:24

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

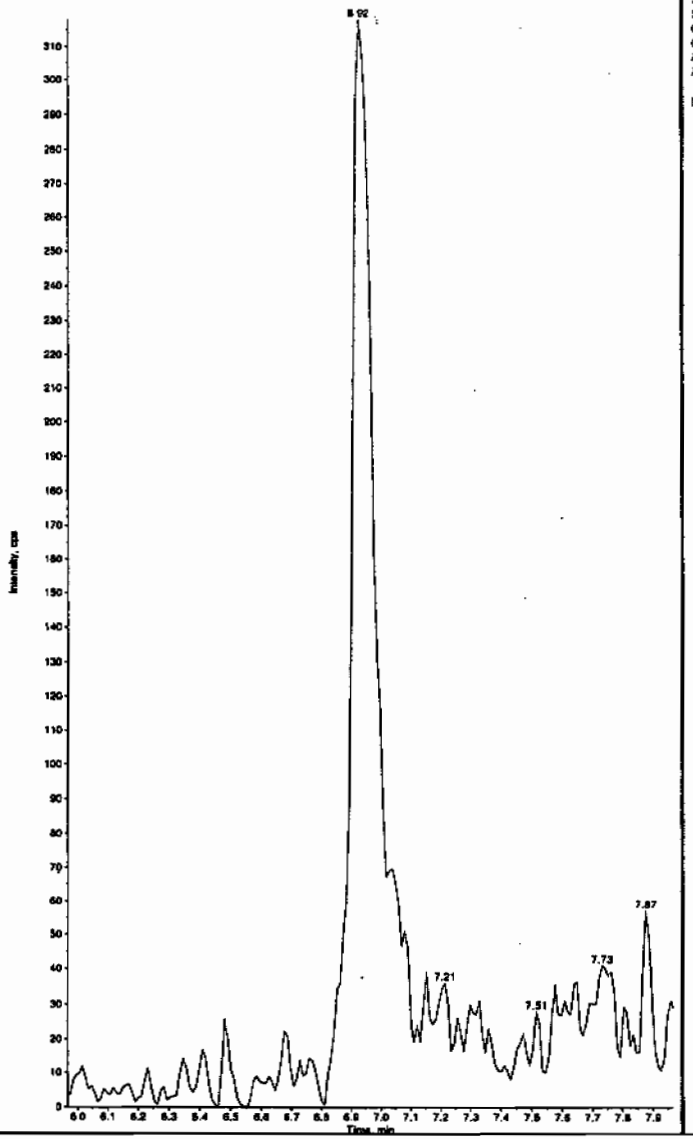
*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

LCer 1/27/10

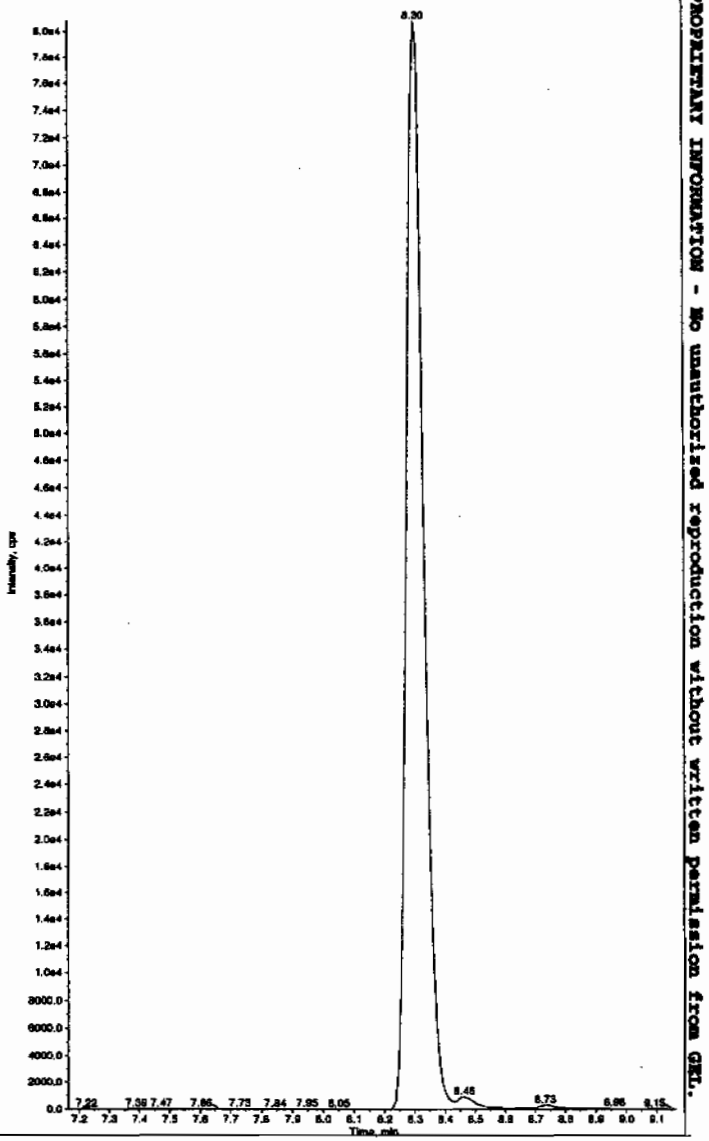
Sample Name: "244852004" Sample ID: "942335[2]LER" File: "EXS01250031.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 6:24:03 PM

Modified: No



Sample Name: "244852004" Sample ID: "942335[2]LER" File: "EXS01250031.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 6:24:03 PM

Modified: No



HMM 01/27/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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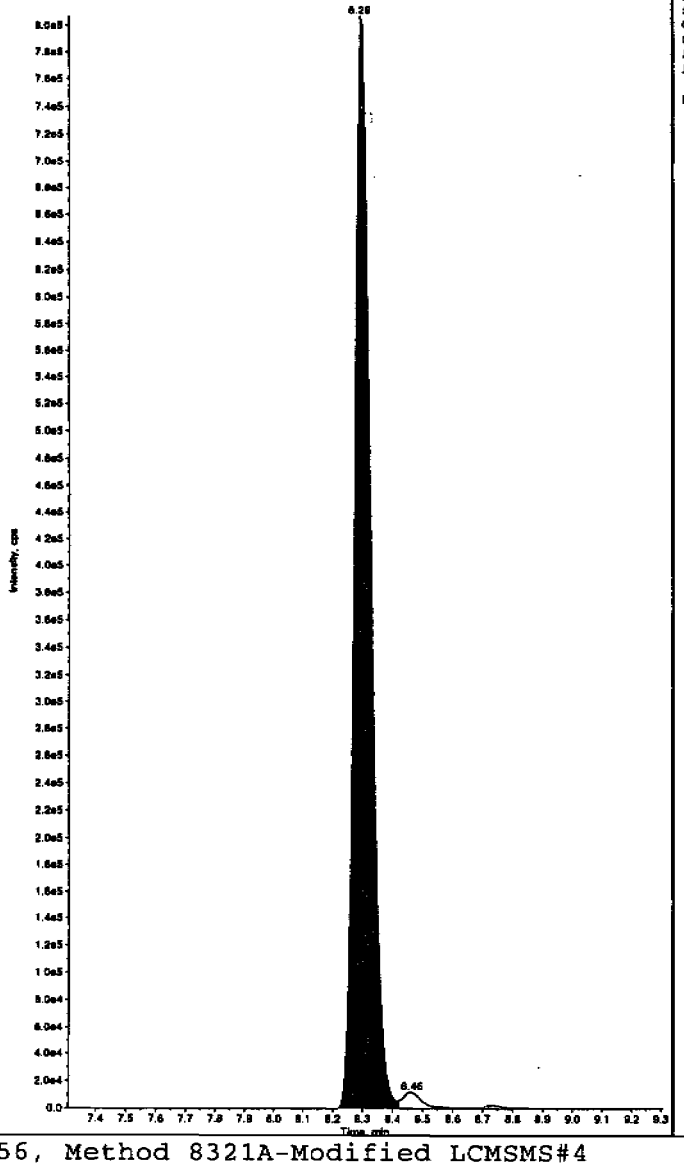
Sample Name: "244852004" Sample ID: "942335|2|LER" File: "EXS01250031.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 240. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 6:24:03 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Avg. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.31 min
Use Relative RT: No

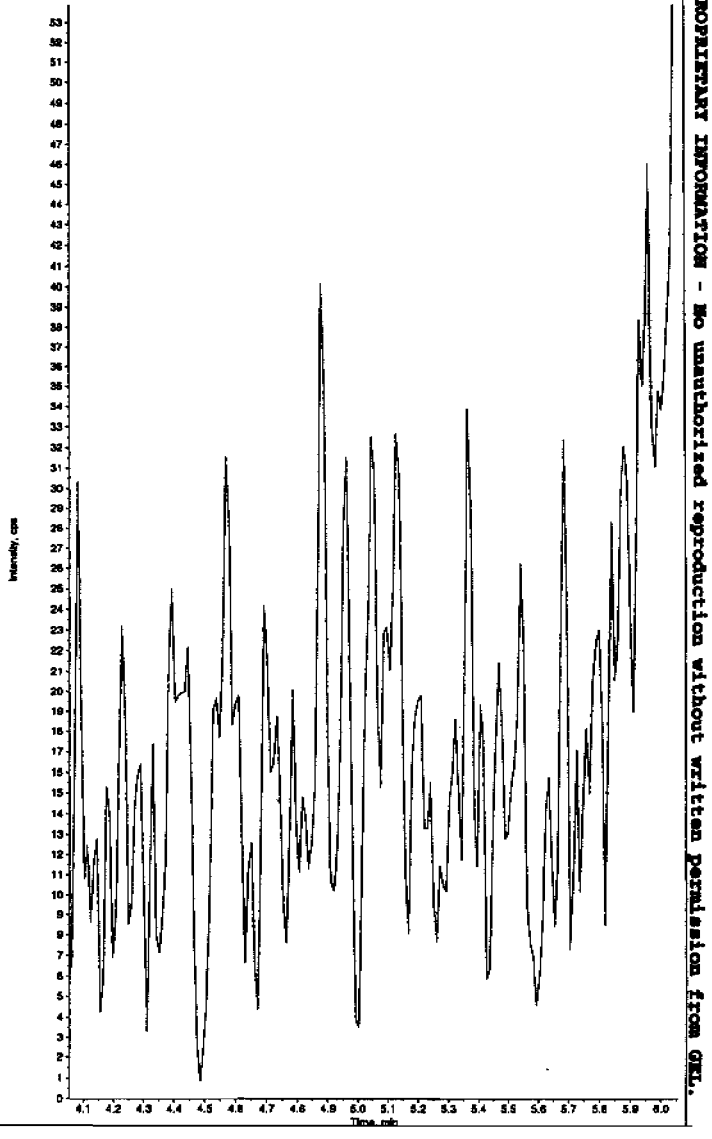
Int. Type: Valley
Retention Time: 8.29 min
Area: 3.18e+006 counts
Height: 807545.166 cps
Start Time: 8.26 min
End Time: 8.42 min



Sample Name: "244852004" Sample ID: "942335|2|LER" File: "EXS01250031.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 6:24:03 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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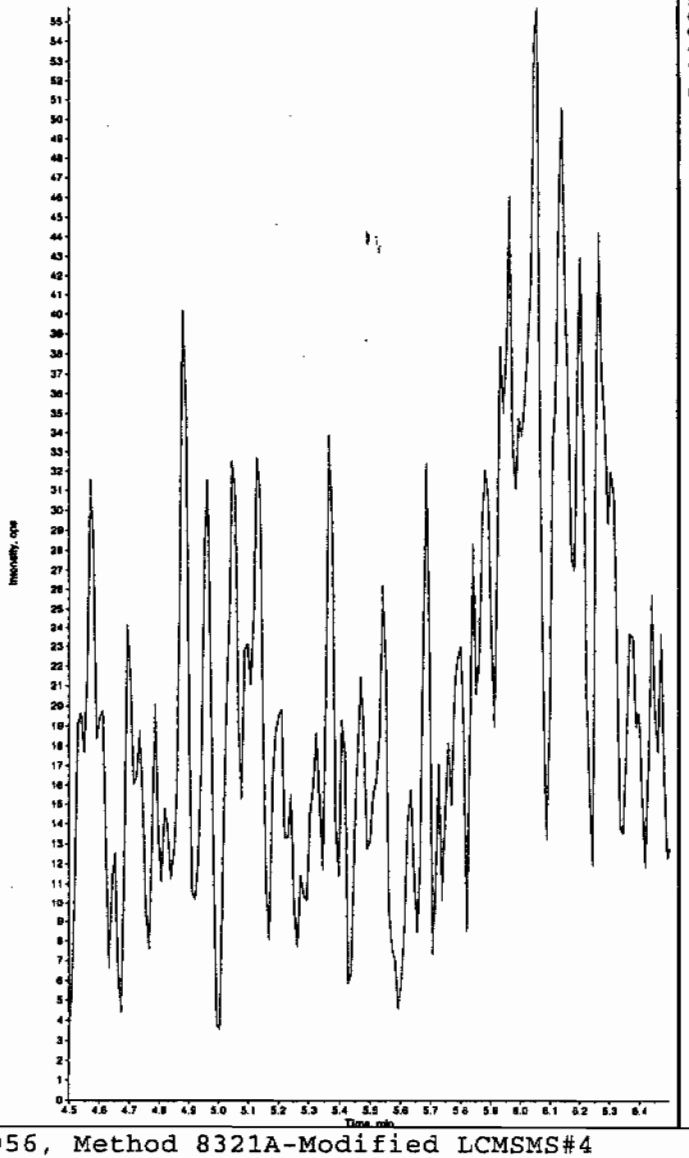
Sample Name: "244852004" Sample ID: "942335[2]LER" File: "EXS01250031.wiff"
Peak Name: "24-Diamino-5-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 6:24:03 PM

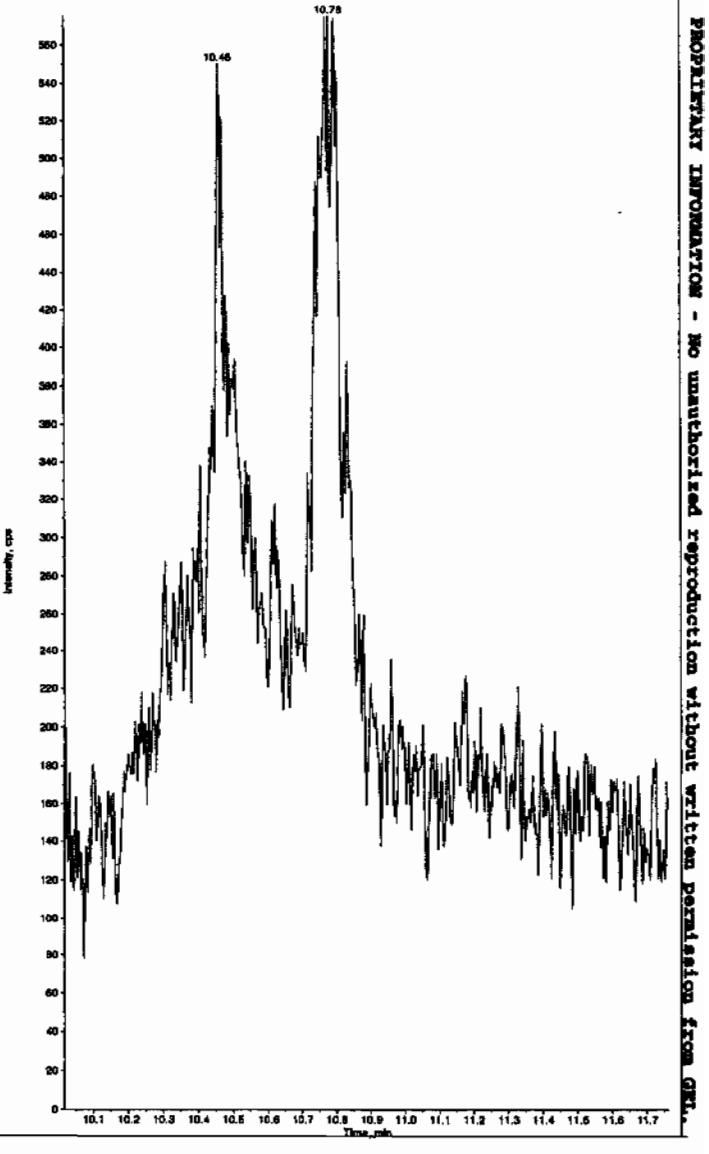
Modified: No



Sample Name: "244852004" Sample ID: "942335[2]LER" File: "EXS01250031.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 6:24:03 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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STANDARDS DATA

SW846 8321A Modified-Explosives
Calibration Standard Concentration Levels

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	CCV
3,4-Dinitrotoluene (Surrogate)	12.5	25	100	200	400	500		300
Primary Analytes								
HMX	25	50	200	400	800	1000	na	600
RDX	25	50	200	400	800	1000	na	600
DNX	25	50	200	400	800	1000	na	600
MNX	25	50	200	400	800	1000	na	600
TNX	25	50	200	400	800	1000	na	600
1,3,5-Trinitrobenzene	25	50	200	400	800	1000	na	600
1,3-Dinitrobenzene	25	50	200	400	800	1000	na	600
Nitrobenzene	25	50	200	400	800	1000	na	600
Tetryl	25	50	200	400	800	1000	na	600
Nitroglycerin	50	100	200	400	800	1000	na	600
2,4,6-Trinitrotoluene	25	50	200	400	800	1000	na	600
2-Amino-4,6-dinitrotoluene	25	50	200	400	800	1000	na	600
4-Amino-2,6-dinitrotoluene	25	50	200	400	800	1000	na	600
2,4-Dinitrotoluene	25	50	200	400	800	1000	na	600
2,6-Dinitrotoluene	25	50	200	400	800	1000	na	600
2-Nitrotoluene	25	50	200	400	800	1000	na	600
4-Nitrotoluene	25	50	200	400	800	1000	an	600
3-Nitrotoluene	25	50	200	400	800	1000	na	600
PETN	25	50	200	400	800	1000	na	600
Picric Acid	200	400	1600	3200	6400	8000	na	4800
3,4-Dinitrotoluene (Surrogate)	25	50	125	250	375	500	1000	250
Secondary Analytes								
2,4-Diamino-6-nitrotoluene	50	100	250	500	750	1000	2000	500
2,6-Diamino-4-nitrotoluene	50	100	250	500	750	1000	2000	500
3,5-Dinitroaniline	50	100	250	500	750	1000	2000	500
TATB	50	100	250	500	750	1000	2000	500
tris(o-Cresyl)phosphate	50	100	250	500	750	1000	2000	500

All values are ug/L without the prep factor

Calibration Levels 8321A-Modified-EXPL.xls (08/09A)

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Explosives Initial Calibration

Form 6

Lab Name: GEL Laboratories LLC

GEL Job No: 10-1263

Lab Code: GEL

Run Date: 25-JAN-10,31-JAN-10

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: Average RF

Calibration Level:	1	2	3	4	5	6	Ave RF	RSD	Q
Data File:	EXP0131003a	EXP0131004a	EXP0131005a	EXP0131006a	EXP0131007a	EXP0131008a			
Parmname									
1,3-Dinitrobenzene-d4	6.817	6.914	7.084	6.68	6.053	6.154	6.617	6.35	
2,4,6-Trinitrotoluene	.295	.339	.31	.306	.338	.353	0.324	7.032	
2,4-Dinitrotoluene	.218	.221	.235	.245	.266	.269	0.242	9.045	
2,6-Dinitrotoluene	1.128	1.167	1.048	1.099	1.099	1.104	1.108	3.534	
2,6-Dinitrotoluene-d3	38.769	38.103	38.437	36.61	34.533	31.673	36.354	7.635	
2-Amino-4,6-dinitrotoluene	.416	.381	.381	.395	.412	.445	0.405	6.043	
3,4-Dinitrotoluene	.957	.893	.877	.919	.979	.983	0.935	4.811	
4-Amino-2,6-dinitrotoluene	.23	.23	.276	.291	.298	.319	0.274	13.366	
HMX	3.605	3.476	3.373	3.479	3.76	3.523	3.536	3.761	
Nitrobenzene	.639	.744	.762	.798	.876	.803	0.770	10.21	
PETN	2.471	2.449	1.998	1.841	1.518	.307	1.764	19.85	
RDX	2.199	2.109	2.168	2.219	2.463	2.423	2.264	6.382	
Tetryl	.945	.774	.832	.817	.844	.751	0.827	8.193	
m-Dinitrobenzene	1.34	1.134	1.093	1.184	1.209	1.14	1.183	7.337	
m-Nitrotoluene	.108	.109	.091	.092	.09	.096	0.098	8.887	
o-Nitrotoluene	.143	.172	.146	.151	.152	.167	0.155	7.546	
p-Nitrotoluene	.089	.085	.076	.074	.074	.08	0.080	7.916	

Q column used to flag RSD values outside of Limit (>20%)
* Values outside of QC Limit

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Explosives Initial Calibration

Form 6

Lab Name: GEL Laboratories LLC

GEL Job No: 10-1263

Lab Code: GEL

Run Date: 25-JAN-10,31-JAN-10

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: Linear

Calibration Level:	1	2	3	4	5	6	Slope	Intercept	COD	Q
Data File:	EXP0131003a	EXP0131004a	EXP0131005a	EXP0131006a	EXP0131007a	EXP0131008a				
Parmname										
1,3,5-Trinitrobenzene	817.757	1447.53	4695.28	8548.34	16411.1	20141.8	3.277	24.282	.999	

Linear fit : Y=mx +b
where b is Intercept and m is slope

COD is Coefficient of Determination

Q column used to flag COD values outside of Limit (<0.990)
* Values outside of QC Limit

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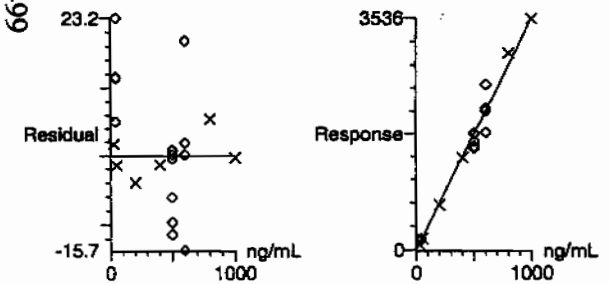
Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

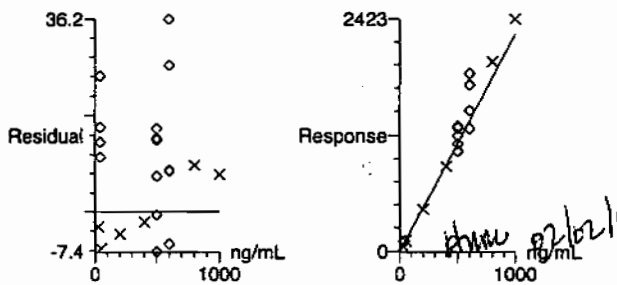
Method: C:\MASSLYNX\NEW_EXP.PRO\MethDB\013110expa.mdb, Time: Mon Feb 01 10:41:50 2010
Calibration: Untitled, Time: Mon Feb 01 14:26:07 2010

Compound name: HMX
Response Factor: 3.53591
RRF SD: 0.132997, % Relative SD: 3.76133
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF



MM 2/1/10

Compound name: RDX
Response Factor: 2.26349
RRF SD: 0.144453, % Relative SD: 6.38187
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF



MM 02/02/10

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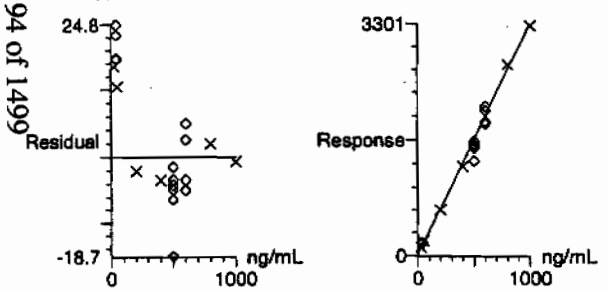
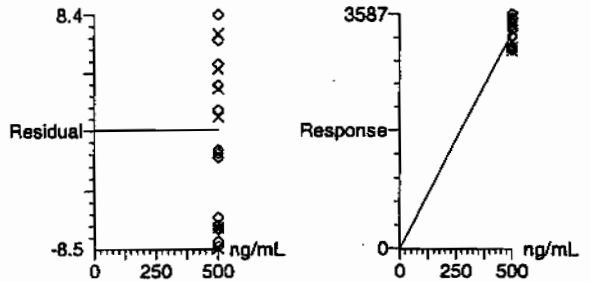
Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Compound name: 135-Trinitrobenzene
Correlation coefficient: r = 0.999487, r^2 = 0.998974
Calibration curve: 3.27689 * x + 24.2817
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: Null, Axis trans: None



Compound name: 13-Dinitrobenzene-d4
Response Factor: 6.61704
RRF SD: 0.420192, % Relative SD: 6.35015
Response type: External Std, Area
Curve type: RF



Page 194 of 1499

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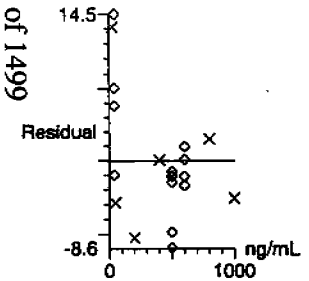
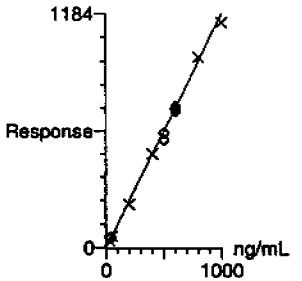
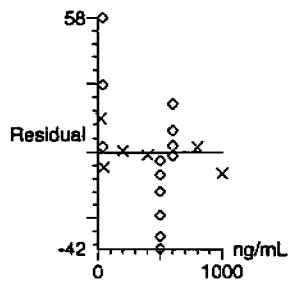
Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

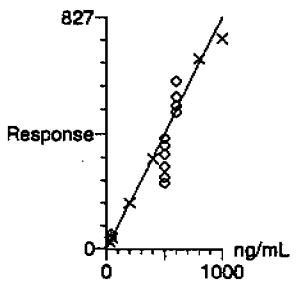
Compound name: 13-Dinitrobenzene
Response Factor: 1.18353
RRF SD: 0.0868371, % Relative SD: 7.33714
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF





Compound name: Tetryl
Response Factor: 0.82703
RRF SD: 0.0677622, % Relative SD: 8.19344
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF





Page 195 of 1499

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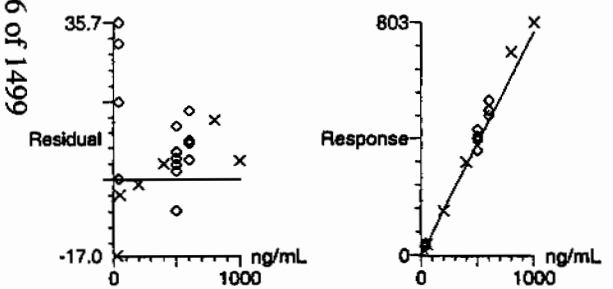
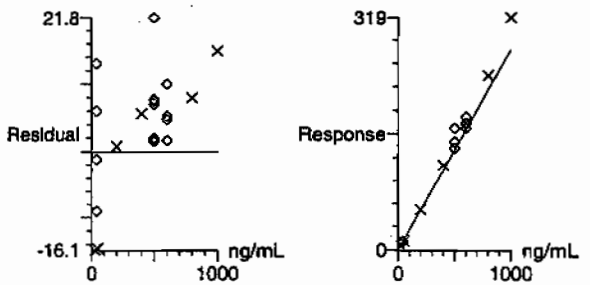
Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Compound name: Nitrobenzene
Response Factor: 0.770294
RRF SD: 0.0786442, % Relative SD: 10.2096
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 4-Amino-26-dinitrotoluene
Response Factor: 0.274065
RRF SD: 0.0366302, % Relative SD: 13.3655
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



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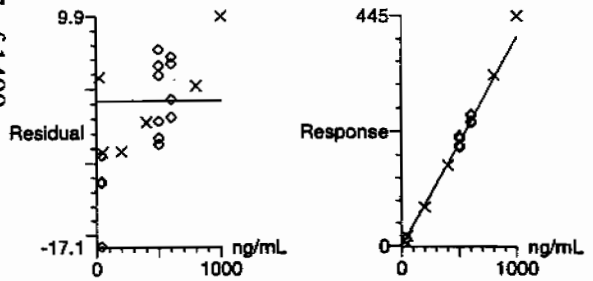
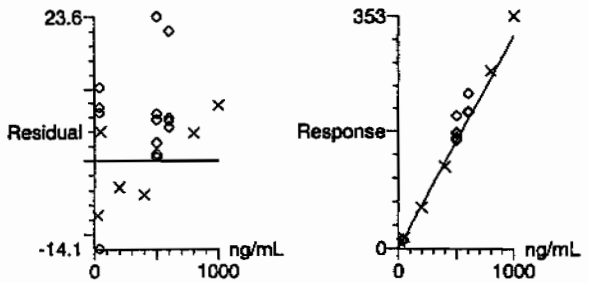
Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Compound name: 2-Amino-46-dinitrotoluene
Response Factor: 0.404725
RRF SD: 0.0244566, % Relative SD: 6.04278
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 246-Trinitrotoluene
Response Factor: 0.323375
RRF SD: 0.022739, % Relative SD: 7.03176
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



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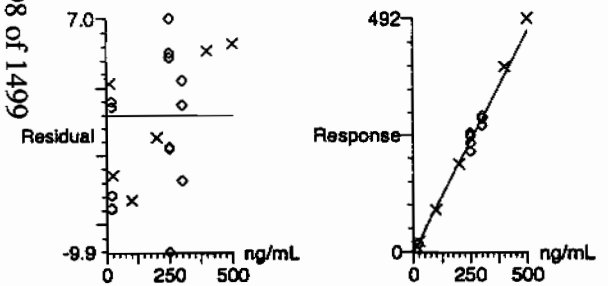
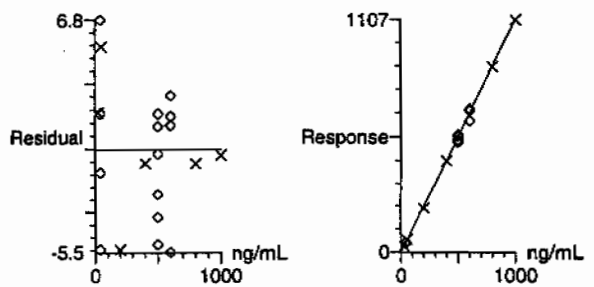
Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Compound name: 34-dinitrotoluene
Response Factor: 0.934589
RRF SD: 0.0449669, % Relative SD: 4.8114
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 26-dinitrotoluene
Response Factor: 1.10747
RRF SD: 0.0391335, % Relative SD: 3.53361
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



Page 198 of 1499

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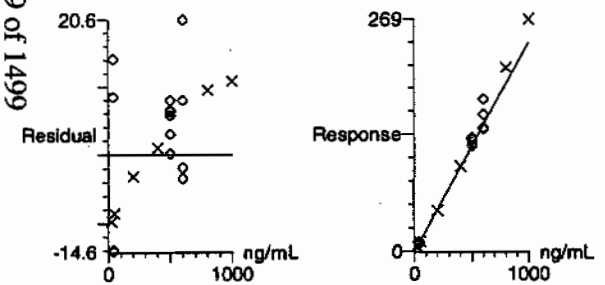
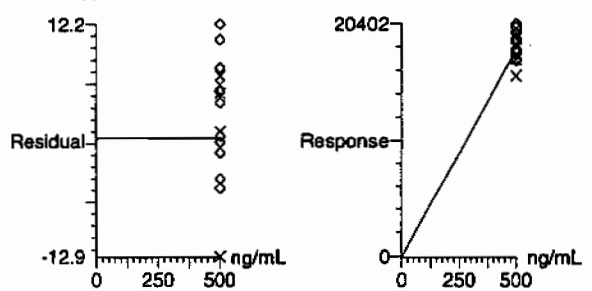
Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Compound name: 24-dinitrotoluene
Response Factor: 0.242324
RRF SD: 0.0219184, % Relative SD: 9.0451
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 26-dinitrotoluene-d3
Response Factor: 36.3543
RRF SD: 2.7758, % Relative SD: 7.6354
Response type: External Std, Area
Curve type: RF



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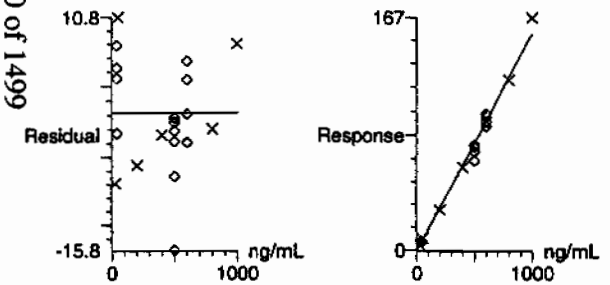
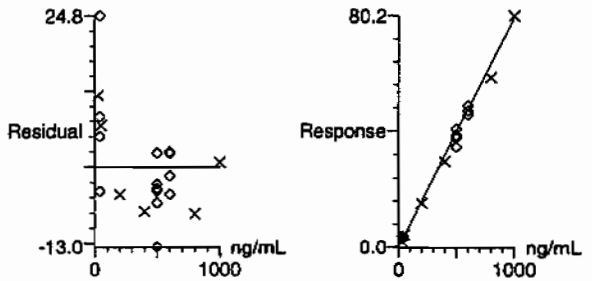
Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Compound name: 2-Nitrotoluene
Response Factor: 0.155239
RRF SD: 0.0117139, % Relative SD: 7.54574
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: 4-Nitrotoluene
Response Factor: 0.0795663
RRF SD: 0.00629818, % Relative SD: 7.91564
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



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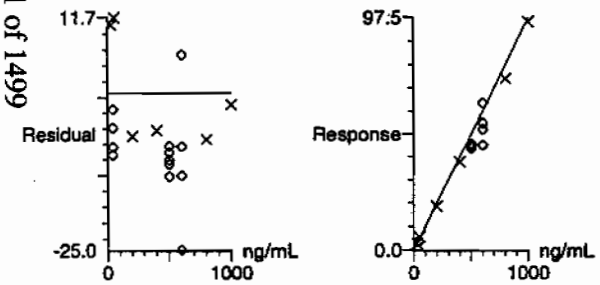
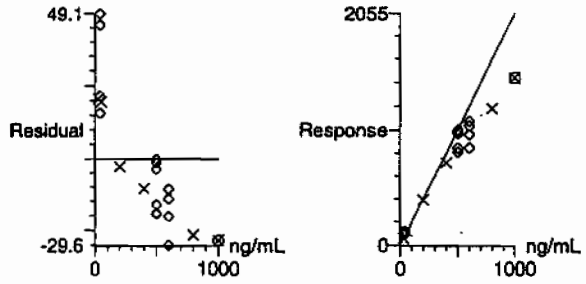
Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Compound name: 3-Nitrotoluene
Response Factor: 0.0975163
RRF SD: 0.00866625, % Relative SD: 8.88697
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: PETN
Response Factor: 2.05549
RRF SD: 0.408005, % Relative SD: 19.8495
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



Page 201 of 1499

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7

Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1263

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXP0131010a

Analysis Date: 31-JAN-10 17:01

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	574.951	96	
1,3-Dinitrobenzene-d4	500	507.449	101	
2,4,6-Trinitrotoluene	600	632.569	105	
2,4-Dinitrotoluene	600	723.495	121	*
2,6-Dinitrotoluene	600	610.251	102	
2,6-Dinitrotoluene-d3	500	500.938	100	
2-Amino-4,6-dinitrotoluene	600	600.809	100	
3,4-Dinitrotoluene	300	307.705	103	
4-Amino-2,6-dinitrotoluene	600	631.208	105	
HMX	600	601.092	100	
Nitrobenzene	600	653.475	109	
PETN	600	480.333	80	
RDX	600	646.666	108	
Tetryl	600	616.556	103	
m-Dinitrobenzene	600	608.411	101	
m-Nitrotoluene	600	635.669	106	
o-Nitrotoluene	600	633.972	106	
p-Nitrotoluene	600	613.107	102	

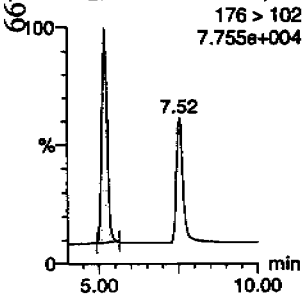
Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

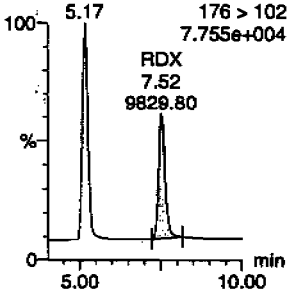
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131010a
Date: 31-Jan-2010
Time: 17:01:32
ID: WXX100131-07ICV
Vial: 1:1,B

MM 2/1/10

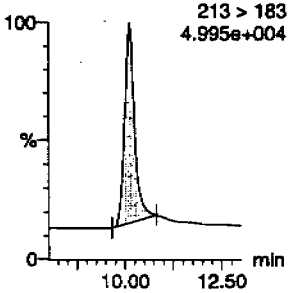
HMX
F2:MRM of 1 channel,AP-
176 > 102
7.755e+004



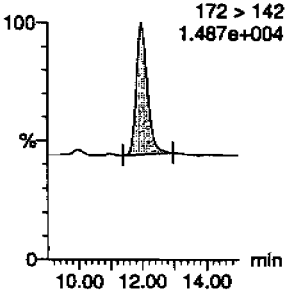
RDX
F2:MRM of 1 channel,AP-
176 > 102
7.755e+004



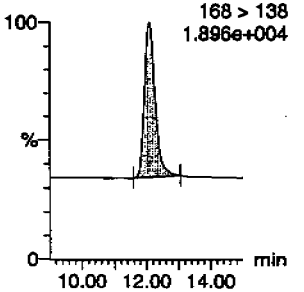
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
4.995e+004



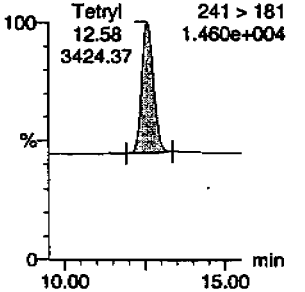
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.487e+004



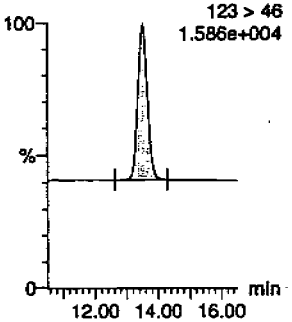
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
1.896e+004



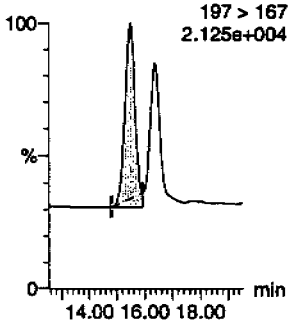
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
1.460e+004



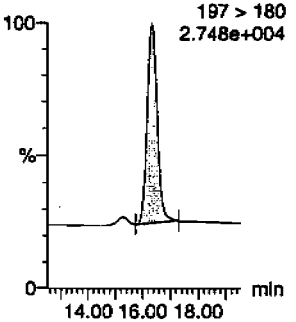
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
1.586e+004



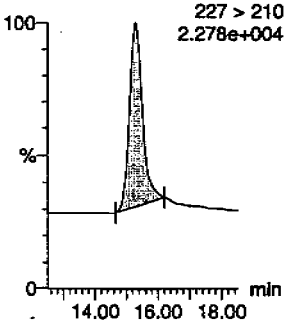
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
2.125e+004



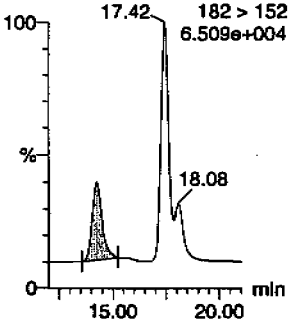
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
2.748e+004



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
2.278e+004

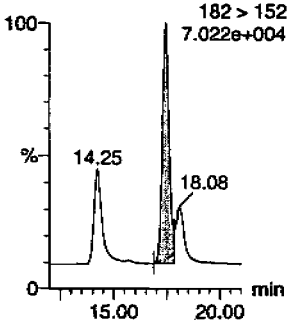


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.509e+004



Hmm 02/02/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
7.022e+004



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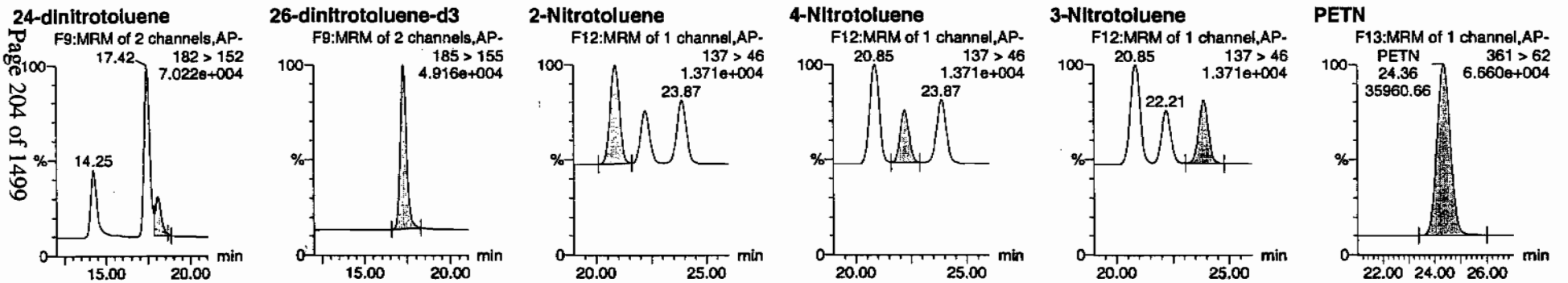
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100131-07ICV	HMX	176 > 102	5.17	14273.410	3357.813	14273.410	2125.403	bb			601.0916	100.2	0.2	1839.9
WXX100131-07ICV	RDX	176 > 102	7.52	9829.800	3357.813	9829.800	1463.721	bb			646.6664	107.8	7.8	1058.7
WXX100131-07ICV	135-Trinitrobenzene	213 > 183	10.12	12815.647	3357.813	12815.647	1908.332	bb			574.9511	95.8	-4.2	641.7
WXX100131-07ICV	13-Dinitrobenzene-d4	172 > 142	11.95	3357.813		3357.813	3357.813	bb			507.4494	101.5	1.5	373.2
WXX100131-07ICV	13-Dinitrobenzene	168 > 138	12.07	4835.725	3357.813	4835.725	720.071	bb			608.4105	101.4	1.4	417.4
WXX100131-07ICV	Tetryl	241 > 181	12.58	3424.366	3357.813	3424.366	509.910	bb			616.5560	102.8	2.8	275.6
WXX100131-07ICV	Nitrobenzene	123 > 46	13.50	3380.434	3357.813	3380.434	503.368	bb			653.4753	108.9	8.9	257.9
WXX100131-07ICV	4-Amino-26-dinitrotoluene	197 > 167	15.46	6300.810	18211.244	6300.810	172.992	MM	01-Feb-10	14:09:25	631.2081	105.2	5.2	190.1
WXX100131-07ICV	2-Amino-46-dinitrotoluene	197 > 180	16.34	8856.581	18211.244	8856.581	243.162	bb			600.8089	100.1	0.1	611.8
WXX100131-07ICV	246-Trinitrotoluene	227 > 210	15.28	7450.480	18211.244	7450.480	204.557	bb			632.5693	105.4	5.4	255.6
WXX100131-07ICV	34-dinitrotoluene	182 > 152	14.25	10474.310	18211.244	10474.310	287.578	bb			307.7054	102.6	2.6	546.3
WXX100131-07ICV	26-dinitrotoluene	182 > 152	17.42	24615.543	18211.244	24615.543	675.834	MM	01-Feb-10	14:14:31	610.2514	101.7	1.7	823.3
WXX100131-07ICV	24-dinitrotoluene	182 > 152	18.08	6385.596	18211.244	6385.596	175.320	MM	01-Feb-10	14:19:01	723.4953	120.6	20.6	188.0
WXX100131-07ICV	26-dinitrotoluene-d3	185 > 155	17.27	18211.244		18211.244	18211.244	bb			500.9378	100.2	0.2	1965.1
WXX100131-07ICV	2-Nitrotoluene	137 > 46	20.85	3584.595	18211.244	3584.595	98.417	bb			633.9724	105.7	5.7	773.5
WXX100131-07ICV	4-Nitrotoluene	137 > 46	22.21	1776.785	18211.244	1776.785	48.783	bb			613.1070	102.2	2.2	407.7
WXX100131-07ICV	3-Nitrotoluene	137 > 46	23.87	2257.761	18211.244	2257.761	61.988	bb			635.6689	105.9	5.9	490.8
WXX100131-07ICV	PETN	361 > 62	24.36	35960.660	18211.244	35960.660	987.320	bb			480.3325	80.1	-19.9	3900.0

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/31/10
Time of Injection: 1701
Standard Number: WXX100131-07ICV
Data File: EXP0131010a

HMX		100.2
RDX		107.8
135-TNB		95.8
13-DNB		101.4
Tetryl		102.8
Nitrobenzene		108.9
4A-26-DNT		105.2
2A-46-DNT		100.1
246-TNT		105.4
34-DNT(surr)		102.6
26-DNT		101.7
24-DNT		120.6
2-NT		105.7
4-NT		102.2
3-NT		105.9
PETN		80.1
Total		1646.4
Average		102.9

2/1/10

Hmm 02/02/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

Explosives Initial Calibration

Form 6

Lab Name: GEL Laboratories LLC

GEL Job No: 10-1263

Lab Code: GEL

Run Date: 25-JAN-10,31-JAN-10

LCMSMS Instrument ID: LCMSMS4

Method: 8321A Modified

HPLC Column: YMC J-Sphere ODS-H80

Calibration Type: 2nd Order

Calibration Level:	19	20	21	22	23	24	25	X	X^2	Intercept	COD	Q
Data File:	EXS01250003.wifl	EXS01250004.wifl	EXS01250005.wifl	EXS01250006.wifl	EXS01250007.wifl	EXS01250008.wifl	EXS01250009.wifl					
Parmname:												
2,4-Diamino-6-nitrotoluene	124000	243000	556000	1130000	1930000	2390000	4860000	-20500	2450	-.006	.9993	
2,6-Diamino-4-nitrotoluene	196000	379000	859000	1770000	2910000	3810000	7350000	-50100	3930	-.114	.9996	
3,4-Dinitrotoluene	318000	666000	1460000	3270000	4740000	5910000	10800000	-61500	14400	-3.5	.9975	
3,5-Dinitroaniline	504000	1060000	2200000	4760000	6820000	8600000	14400000	-27700	10200	-1.48	.9998	
TATB	71000	141000	345000	692000	1070000	1350000	2660000	-94.4	1410	-.043	.9998	
tris(o-cresyl) phosphate	456000	2410000	5510000	10100000	15300000	19000000	29700000	-337000	23800	-4.41	.9996	

Quadradic Fit: $y = Ax^2 + Bx + C$
where X^2 column above is coefficient A
X column above is coefficient B
intercept is C

COD is Coefficient of Determination

Q column used to flag COD outside of Limit (<0.990)
* Values outside of QC Limit

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Peak Name: TATB
No Internal Standard
Q1/Q3 Masses: 257.20/204.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-94.4			
a1	1.41e+003			
a2	-0.043			

Correlation coefficient 0.9998
Use Area

Peak Name: 35-Dinitroaniline
No Internal Standard
Q1/Q3 Masses: 182.00/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-2.77e+004			
a1	1.02e+004			
a2	-1.48			

Correlation coefficient 0.9998
Use Area

Peak Name: 34-Dinitrotoluene
No Internal Standard
Q1/Q3 Masses: 182.08/151.90 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-6.15e+004			
a1	1.44e+004			
a2	-3.5			

Correlation coefficient 0.9975
Use Area

Peak Name: 26-Diamino-4-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-5.01e+004			
a1	3.93e+003			
a2	-0.114			

Correlation coefficient 0.9996
Use Area

Lar
1/27/10

Amw 01/27/10

Peak Name: 24-Diamino-6-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-2.05e+004			
a1	2.45e+003			
a2	-0.00578			

Correlation coefficient 0.9993
Use Area

Peak Name: tris(o-cresyl) phosphate
No Internal Standard
Q1/Q3 Masses: 369.15/91.00 amu

Fit	Quadratic	Weighting	None	Iterate No
a0	-3.37e+005			
a1	2.38e+004			
a2	-4.41			

Correlation coefficient 0.9996
Use Area

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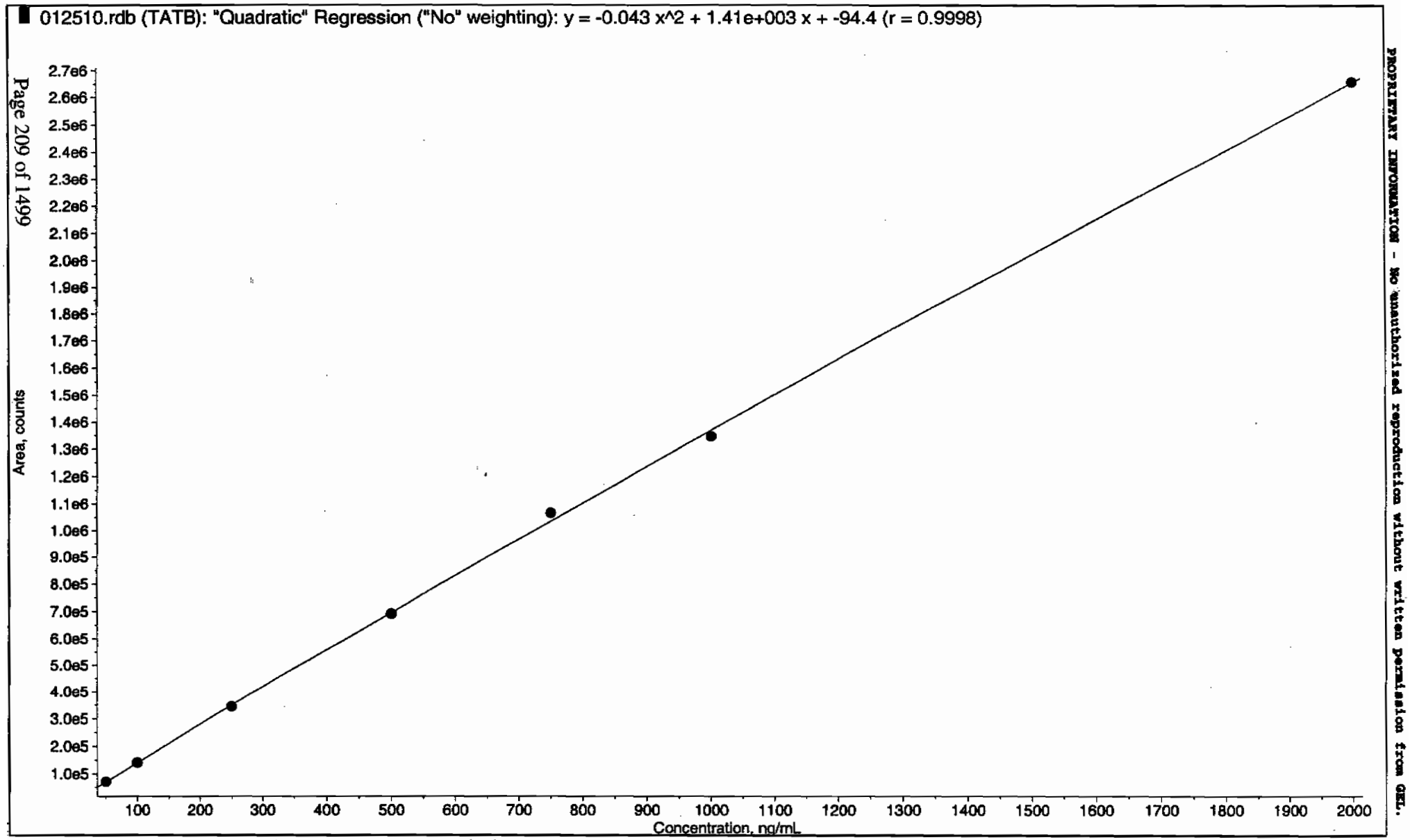

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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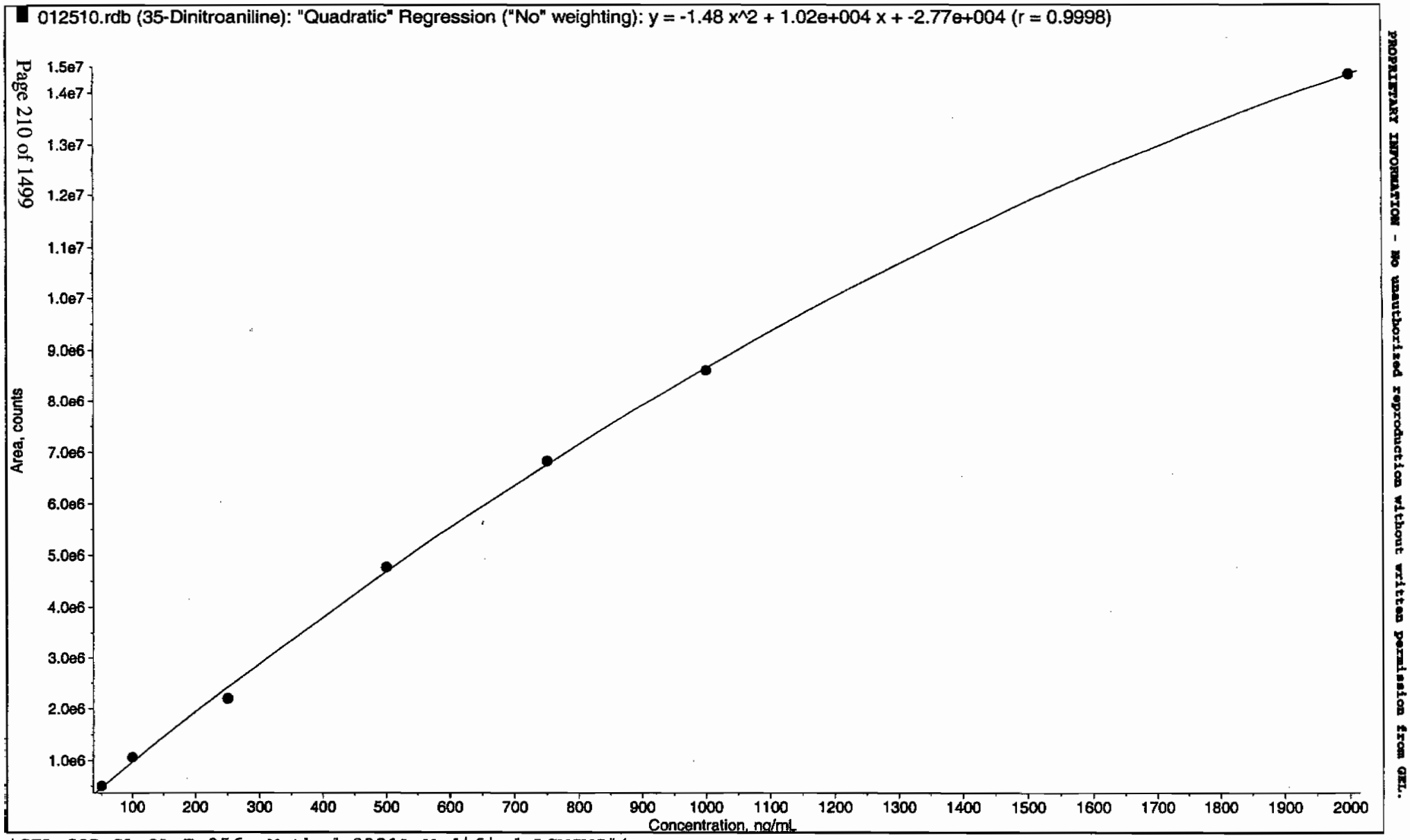

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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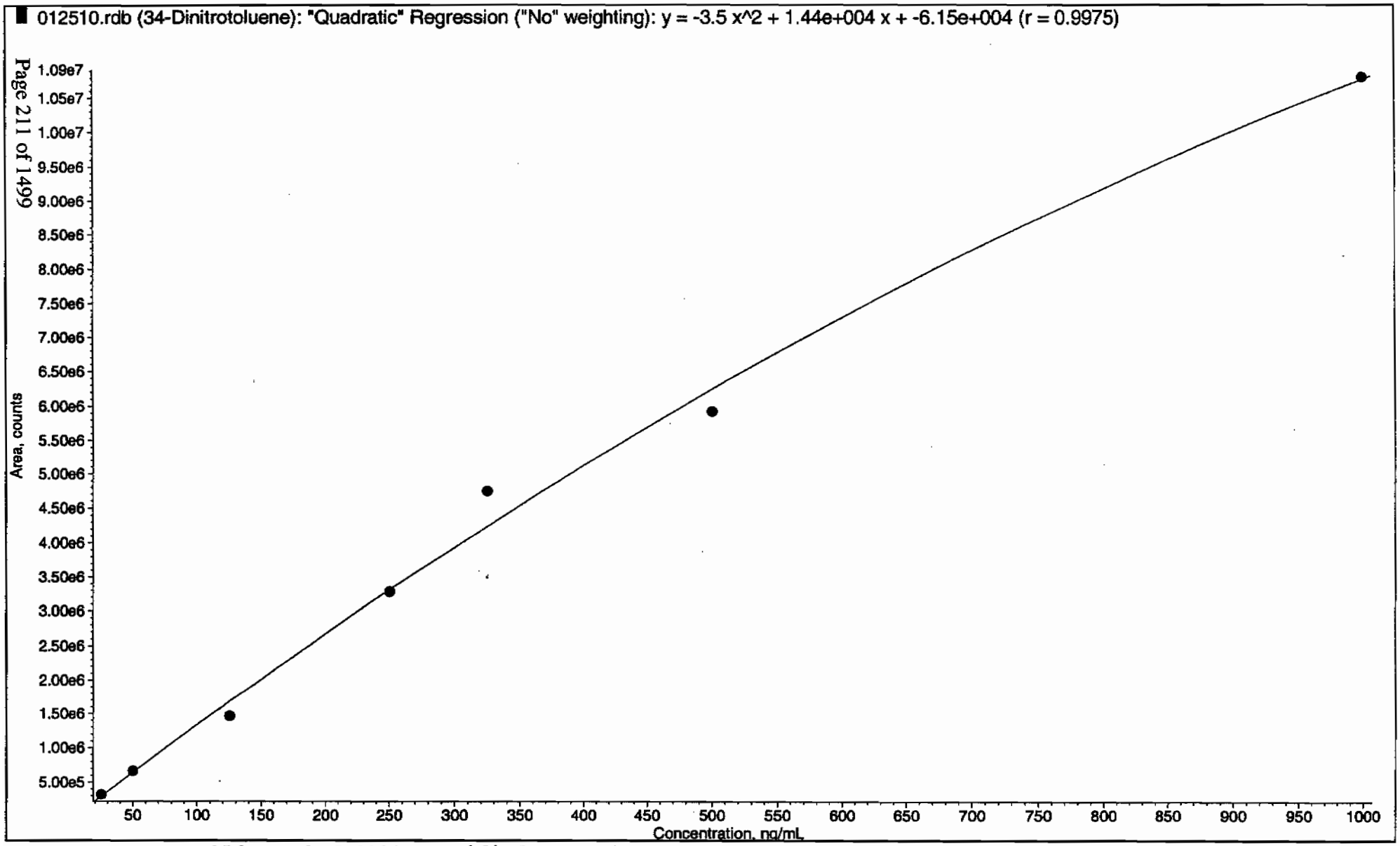

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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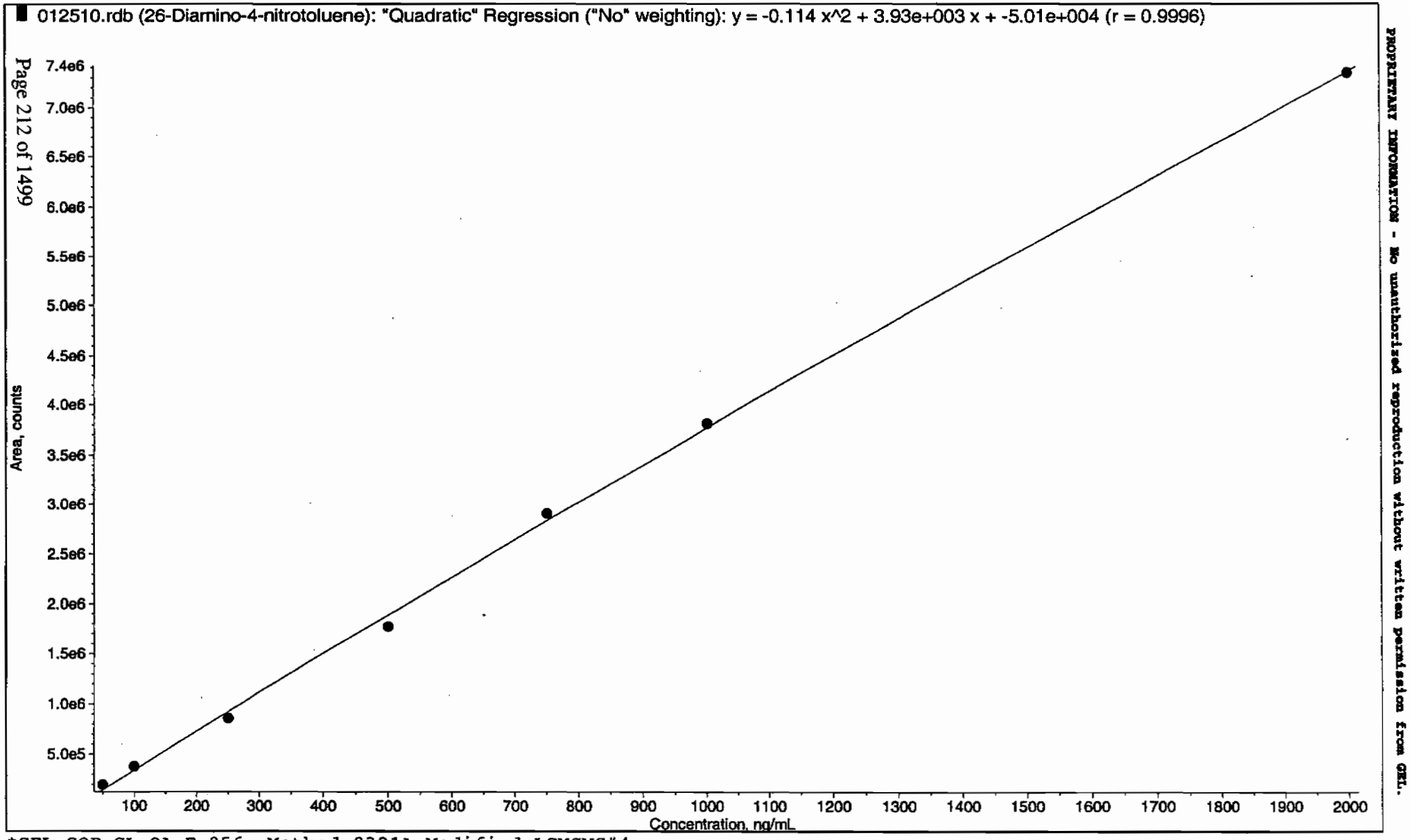
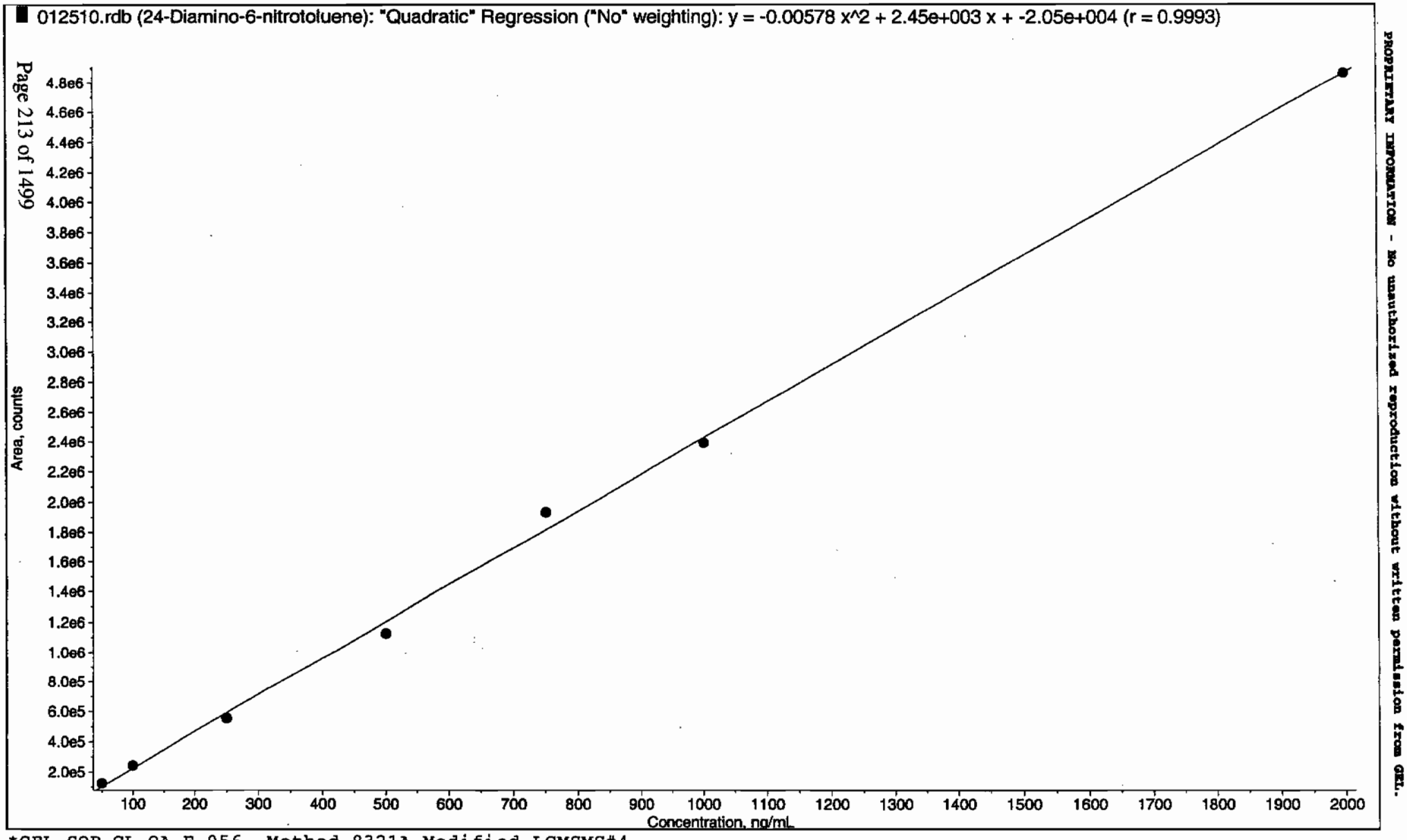
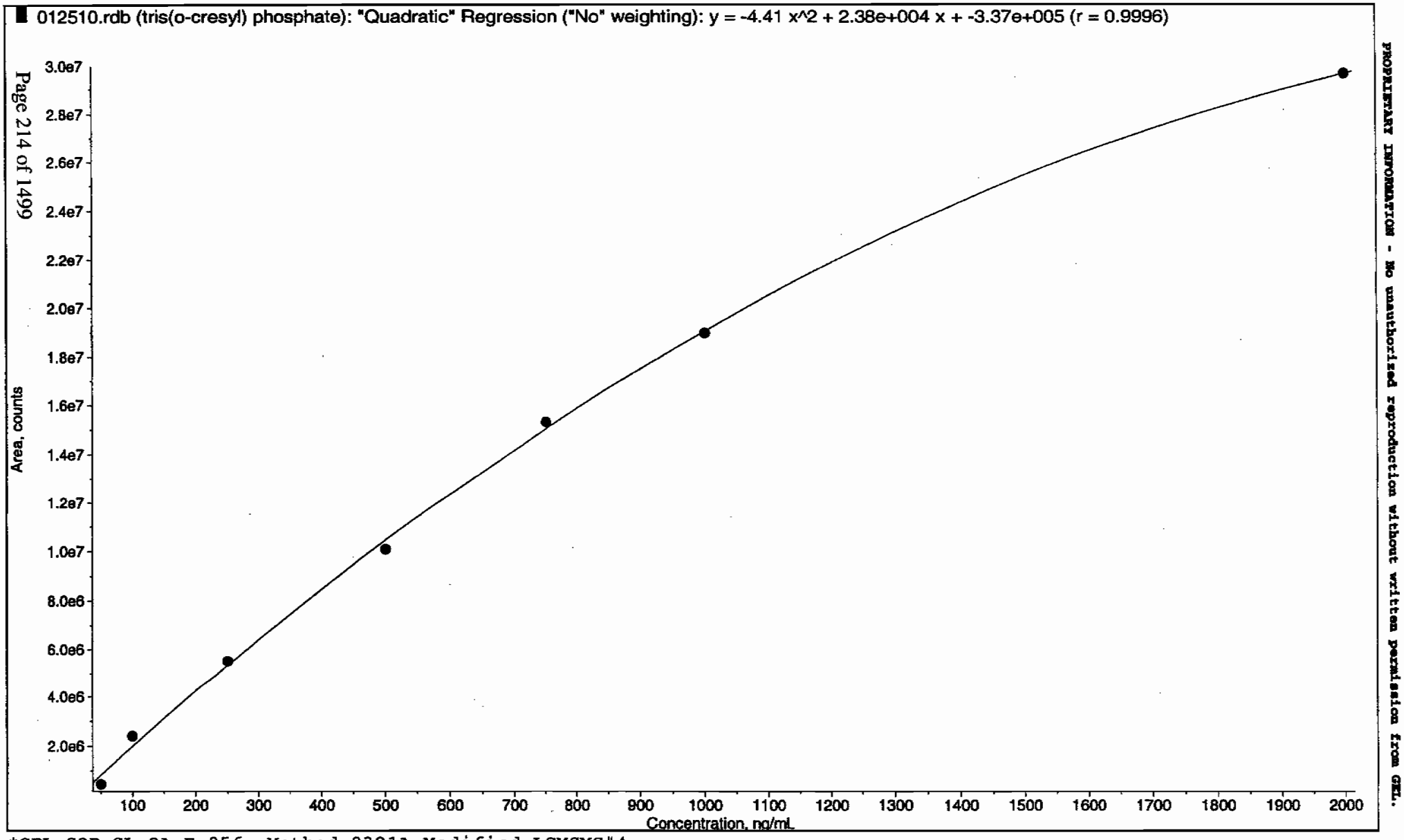


*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7

Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1263

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXS01250011.wiff

Analysis Date: 25-JAN-10 13:09

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	486	97	
2,6-Diamino-4-nitrotoluene	500	478	96	
3,4-Dinitrotoluene	250	228	91	
3,5-Dinitroaniline	500	485	97	
TATB	500	478	96	
tris(o-cresyl) phosphate	500	509	102	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

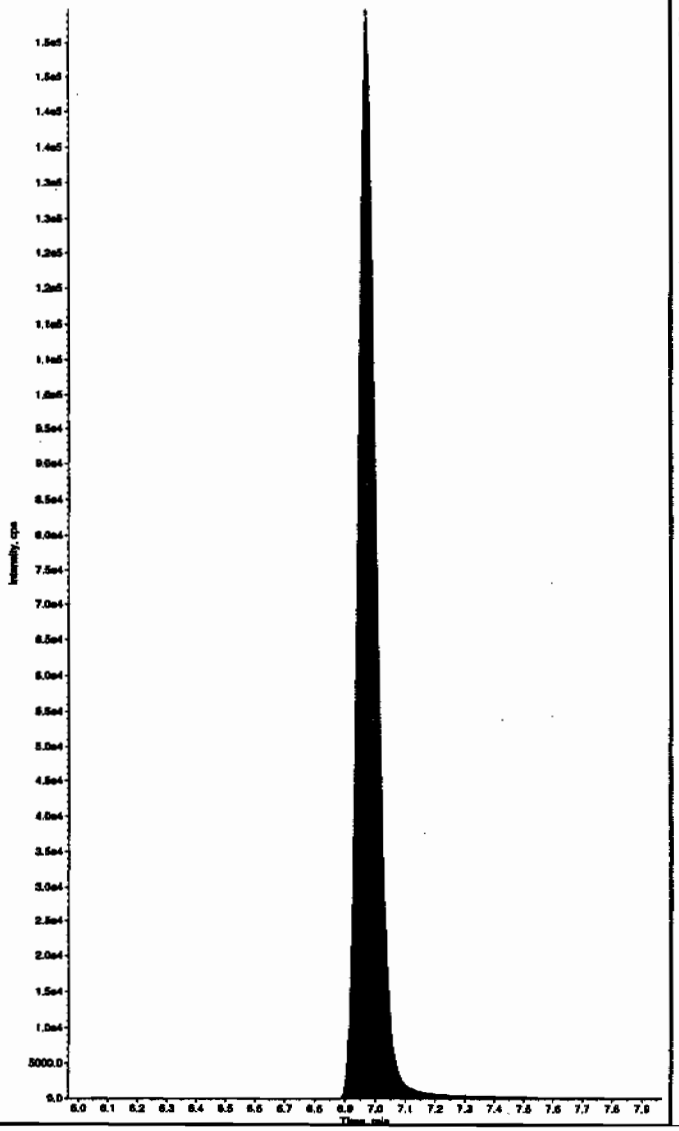
Before Dan 1/27/10

Sample Name: "WXX100125-26ICV" Sample ID: "[1]LER" File: "EXS01250011.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 478. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:09:52 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.97 min
Area: 6.66e+005 counts
Height: 154763.809 cps
Start Time: 6.86 min
End Time: 7.63 min

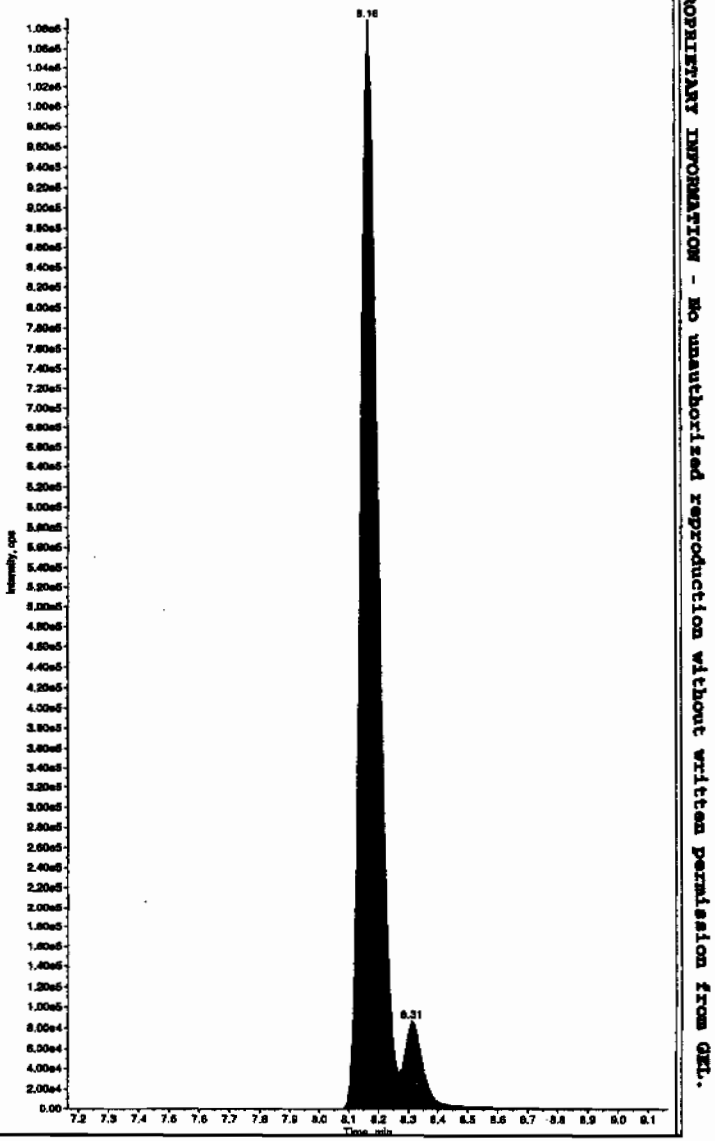


Sample Name: "WXX100125-26ICV" Sample ID: "[1]LER" File: "EXS01250011.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 538. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:09:52 PM

Modified: Yes
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.16 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.16 min
Area: 5.01e+006 counts
Height: 1089891.846 cps
Start Time: 8.05 min
End Time: 8.73 min



HM 01/27/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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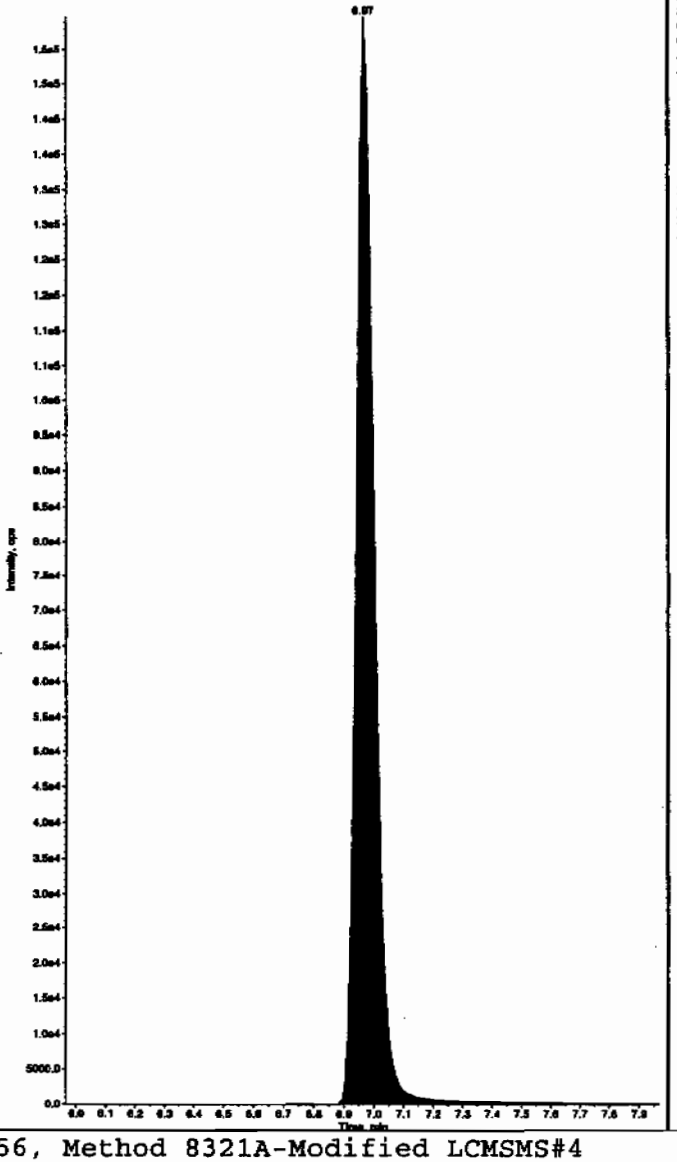
after Lan 1/27/10

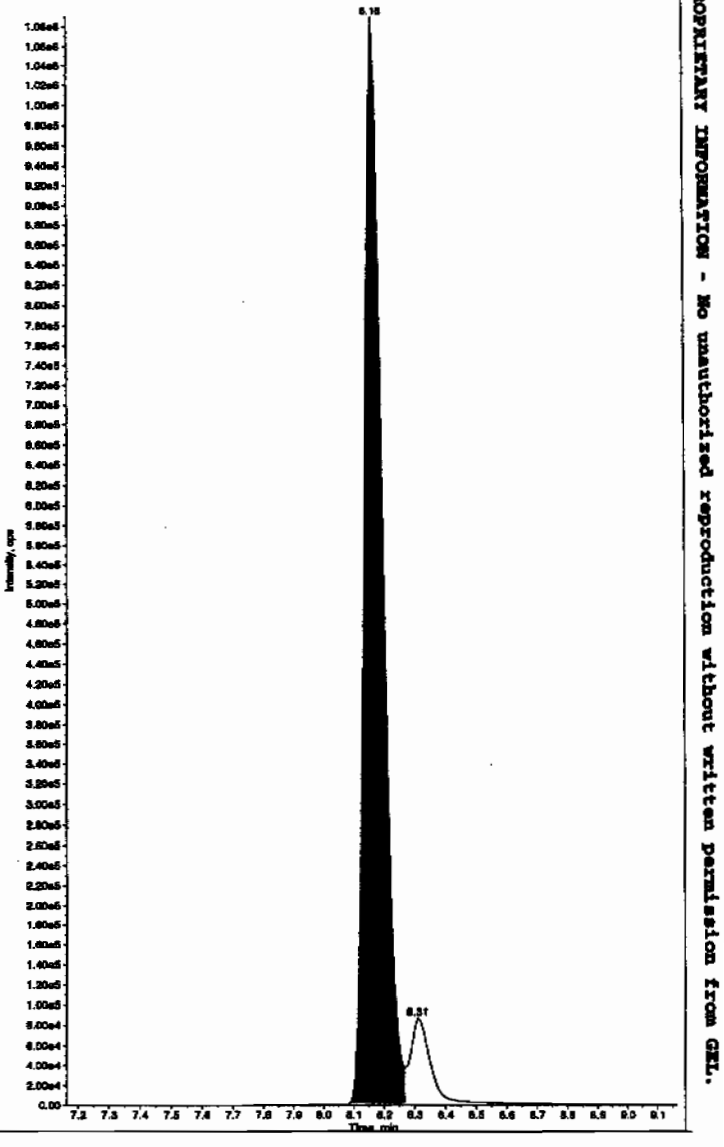
Sample Name: "WXX100125-26ICV" Sample ID: "|1|LER" File: "EXS01250011.wiff"
Peak Name: "TATB" Mass(as): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index:	1	
Sample Type:	QC	
Concentration:	500.	ng/mL
Calculated Conc:	478.	ng/mL
Acq. Date:	1/25/2010	
Acq. Time:	1:09:52 PM	
Modified:	No	
Proc. Algorithm:	IntelliQuan - IQA	
Min. Peak Height:	2500.00	cps
Min. Peak Width:	0.00	sec
Smoothing Width:	3	points
RT Window:	30.0	sec
Expected RT:	6.97	min
Use Relative RT:	No	
Int. Type:	Valley	
Retention Time:	6.97	min
Area:	6.66e+005	counts
Height:	154763.809	cps
Start Time:	6.86	min
End Time:	7.63	min



Sample Name: "WXX100125-26ICV" Sample ID: "|1|LER" File: "EXS01250011.wiff"
Peak Name: "35-Dinitroaniline" Mass(as): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index:	1	
Sample Type:	QC	
Concentration:	500.	ng/mL
Calculated Conc:	485.	ng/mL
Acq. Date:	1/25/2010	
Acq. Time:	1:09:52 PM	
Modified:	Yes	
RT Window:	15.0	sec
Expected RT:	8.16	min
Use Relative RT:	No	
Int. Type:	Manual	
Retention Time:	8.17	min
Area:	4.55e+006	counts
Height:	1088114.981	cps
Start Time:	8.09	min
End Time:	8.27	min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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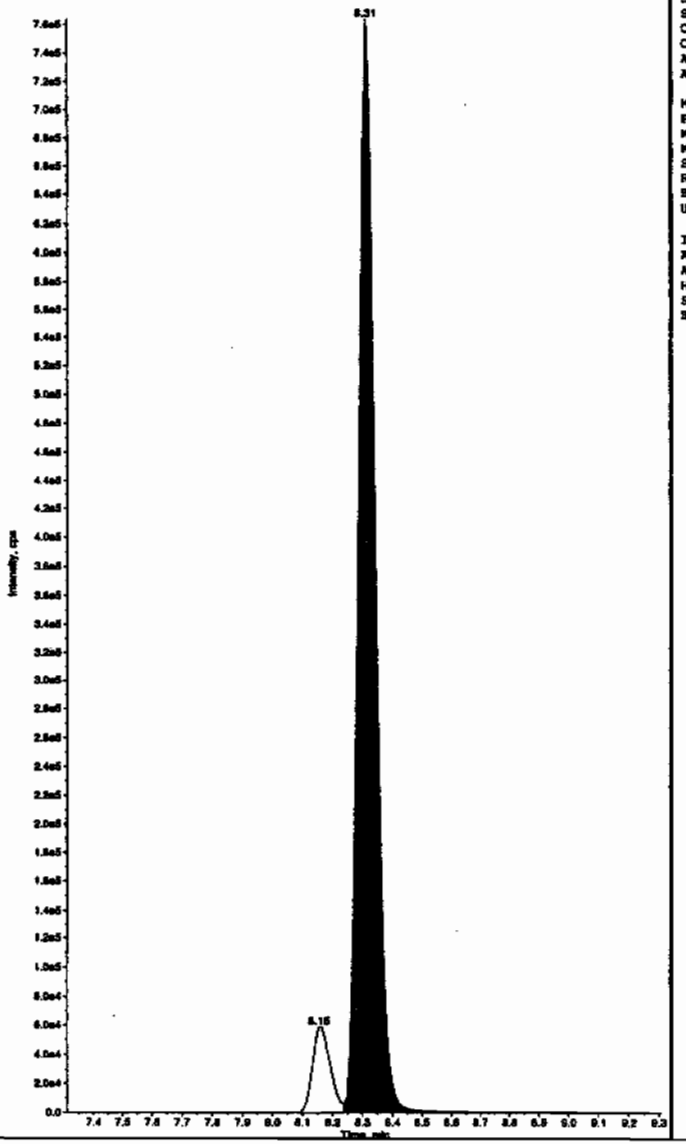
Sample Name: "WXX100125-26ICV" Sample ID: "[1]LER" File: "EXS01250011.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 228. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:09:52 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.31 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.31 min
Area: 3.03e+006 counts
Height: 763790.466 cps
Start Time: 8.24 min
End Time: 8.64 min

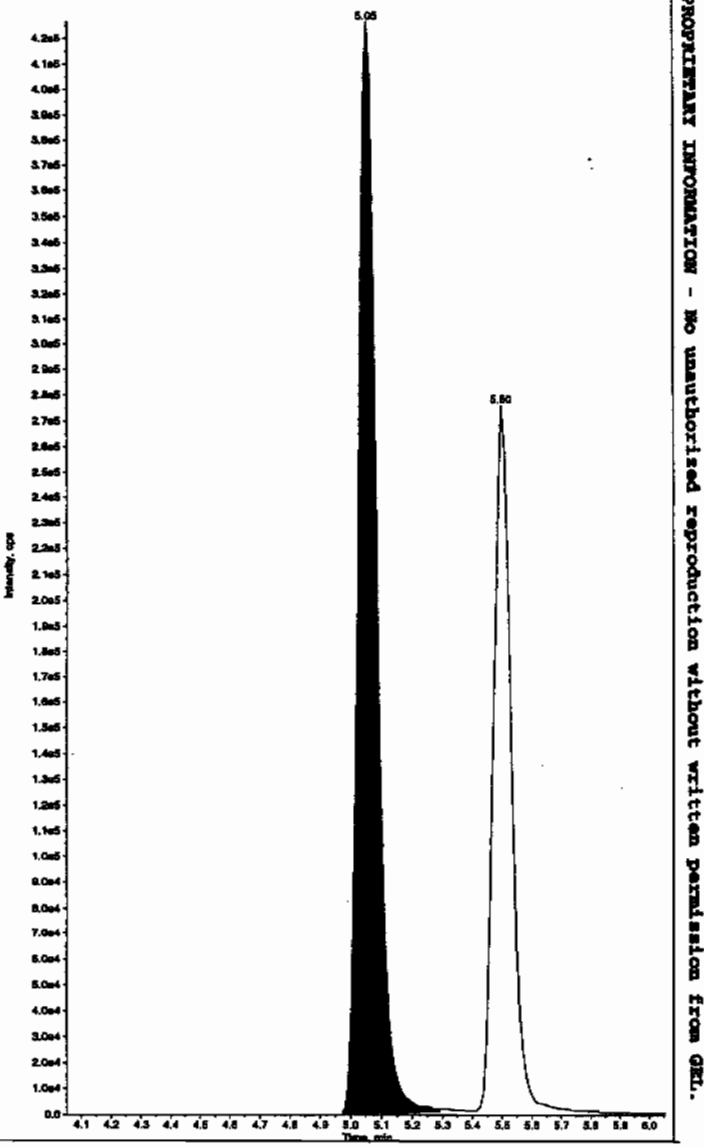


Sample Name: "WXX100125-26ICV" Sample ID: "[1]LER" File: "EXS01250011.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/48.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 478. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:09:52 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.05 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.05 min
Area: 1.81e+006 counts
Height: 426538.788 cps
Start Time: 4.96 min
End Time: 5.29 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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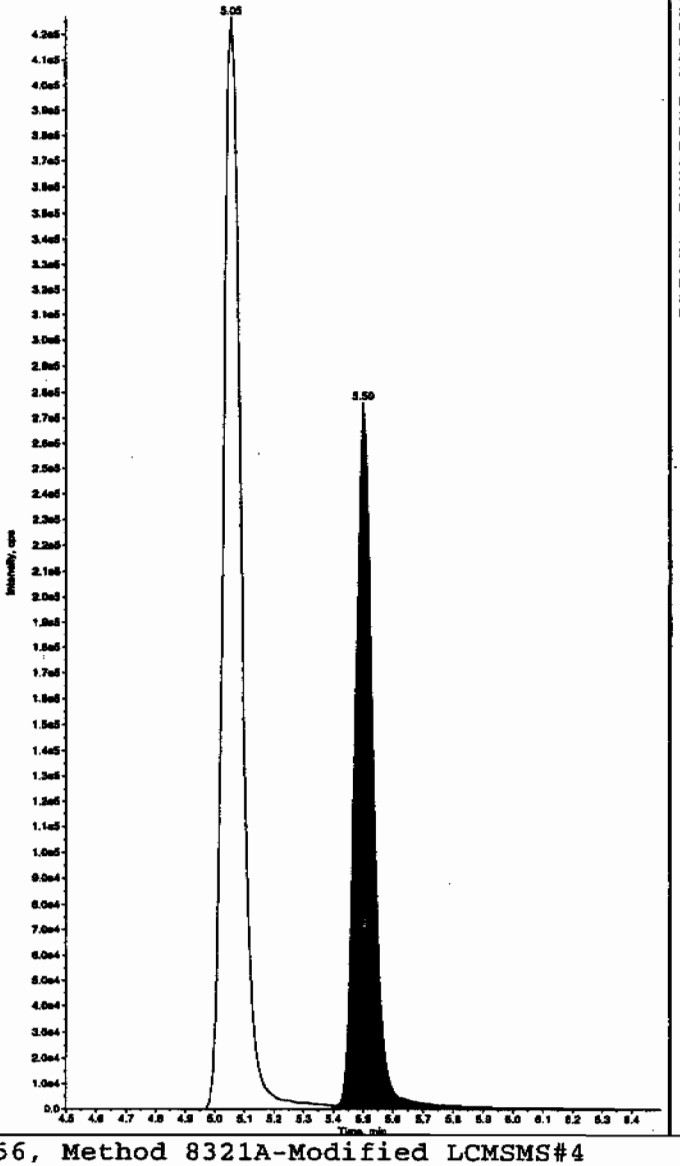
Sample Name: "WXX100125-28ICV" Sample ID: "[1]LER" File: "EXS01250011.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 486. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:09:52 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.50 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.50 min
Area: 1.17e+006 counts
Height: 275918.610 cps
Start Time: 5.39 min
End Time: 5.98 min

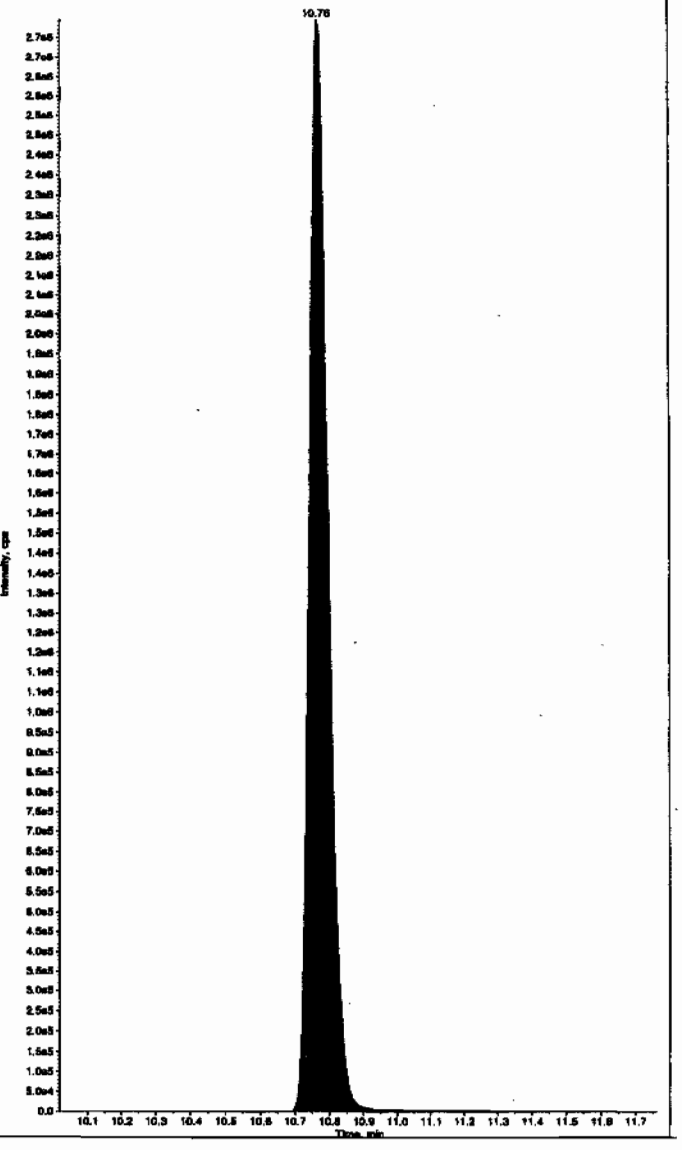


Sample Name: "WXX100125-28ICV" Sample ID: "[1]LER" File: "EXS01250011.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 509. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:09:52 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 1.06e+007 counts
Height: 2746726.563 cps
Start Time: 10.7 min
End Time: 11.1 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1263

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0131012a

Analysis Date: 31-JAN-10 18:00

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

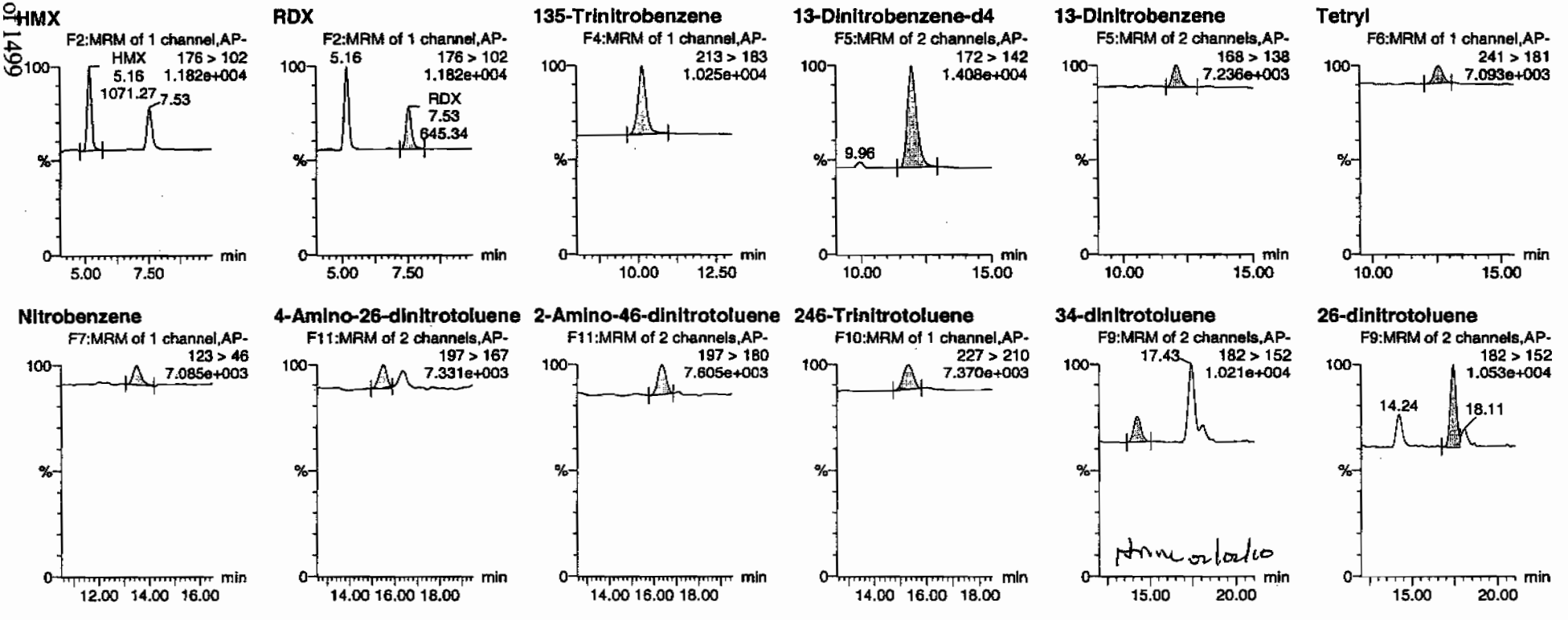
Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	49.91	125	
1,3-Dinitrobenzene-d4	500	464.651	93	
2,4,6-Trinitrotoluene	40	34.349	86	
2,4-Dinitrotoluene	40	34.169	85	
2,6-Dinitrotoluene	40	40.741	102	
2,6-Dinitrotoluene-d3	500	491.472	98	
2-Amino-4,6-dinitrotoluene	40	33.169	83	
3,4-Dinitrotoluene	20	18.64	93	
4-Amino-2,6-dinitrotoluene	40	36.063	90	
HMX	40	49.27	123	
Nitrobenzene	40	54.27	136	*
PETN	40	48.438	121	
RDX	40	46.365	116	
Tetryl	40	51.492	129	
m-Dinitrobenzene	40	42.934	107	
m-Nitrotoluene	40	36.494	91	
o-Nitrotoluene	40	42.977	107	
p-Nitrotoluene	40	42.008	105	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131012a
Date: 31-Jan-2010
Time: 18:00:29
ID: WXX100131-08CRI
Vial: 1:1,C

HMX
2/1/10



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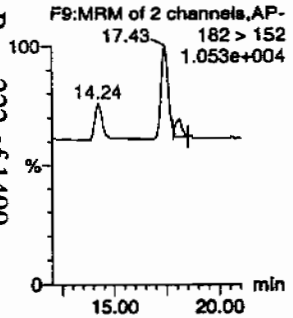
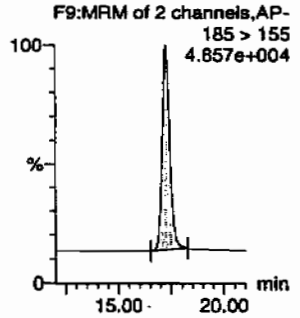
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

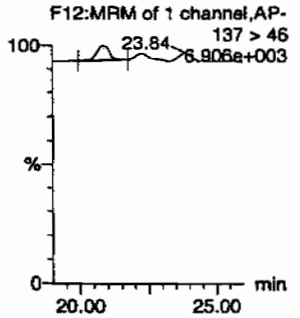
24-dinitrotoluene



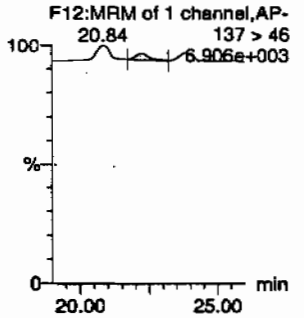
26-dinitrotoluene-d3



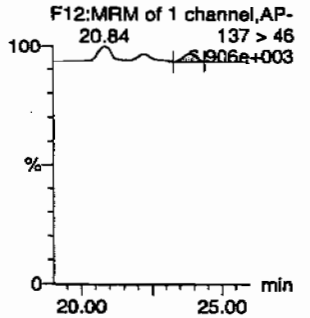
2-Nitrotoluene



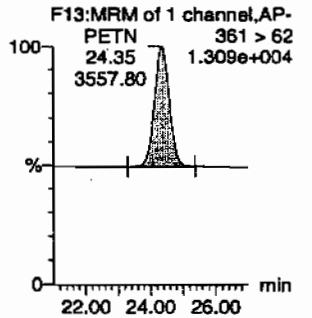
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	mg/mL	%Rec	%Dev	S/N
WXX100131-08CRI	HMX	176 > 102	5.16	1071.274	3074.615	1071.274	174.213	bb			49.2696	123.2	23.2	176.9
WXX100131-08CRI	RDX	176 > 102	7.53	645.342	3074.615	645.342	104.947	bb			46.3651	115.9	15.9	87.8
WXX100131-08CRI	135-Trinitrobenzene	213 > 183	10.12	1155.013	3074.615	1155.013	187.831	bb			49.9098	124.8	24.8	285.9
WXX100131-08CRI	13-Dinitrobenzene-d4	172 > 142	11.94	3074.615		3074.615	3074.615	bb			464.6511	92.9	-7.1	285.6
WXX100131-08CRI	13-Dinitrobenzene	168 > 138	12.06	312.461	3074.615	312.461	50.813	bb			42.9335	107.3	7.3	28.6
WXX100131-08CRI	Tetryl	241 > 181	12.56	261.867	3074.615	261.867	42.585	bb			51.4919	128.7	28.7	26.8
WXX100131-08CRI	Nitrobenzene	123 > 46	13.48	257.061	3074.615	257.061	41.804	bb			54.2699	135.7	35.7	18.5
WXX100131-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.48	353.181	17867.123	353.181	9.884	MM	01-Feb-10	14:09:31	36.0627	90.2	-9.8	29.8
WXX100131-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.33	479.701	17867.123	479.701	13.424	bb			33.1685	82.9	-17.1	40.0
WXX100131-08CRI	246-Trinitrotoluene	227 > 210	15.30	396.924	17867.123	396.924	11.108	bb			34.3492	85.9	-14.1	63.0
WXX100131-08CRI	34-dinitrotoluene	182 > 152	14.24	622.514	17867.123	622.514	17.421	bb			18.6399	93.2	-6.8	61.2
WXX100131-08CRI	26-dinitrotoluene	182 > 152	17.43	1612.311	17867.123	1612.311	45.119	MM	01-Feb-10	14:14:41	40.7411	101.9	1.9	102.6
WXX100131-08CRI	24-dinitrotoluene	182 > 152	18.11	295.880	17867.123	295.880	8.280	MM	01-Feb-10	14:19:10	34.1692	85.4	-14.6	19.5
WXX100131-08CRI	26-dinitrotoluene-d3	185 > 155	17.26	17867.123		17867.123	17867.123	bb			491.4721	98.3	-1.7	2404.7
WXX100131-08CRI	2-Nitrotoluene	137 > 46	20.84	238.405	17867.123	238.405	6.672	bb			42.9765	107.4	7.4	72.7
WXX100131-08CRI	4-Nitrotoluene	137 > 46	22.26	119.440	17867.123	119.440	3.342	bb			42.0084	105.0	5.0	31.8
WXX100131-08CRI	3-Nitrotoluene	137 > 46	23.84	127.168	17867.123	127.168	3.559	bb			36.4935	91.2	-8.8	39.4
WXX100131-08CRI	PETN	361 > 62	24.35	3557.804	17867.123	3557.804	99.563	bb			48.4375	121.1	21.1	1061.2

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	01/31/10
Time of Injection	1800
Standard Number	WXX100131-08CRI
Data File	EXP0131012a

HMX	123.2
RDX	115.9
135-TNB	124.8
13-DNB	107.3
Tetryl	128.7
Nitrobenzene	135.7
4A-26-DNT	90.2
2A-46-DNT	82.9
246-TNT	85.9
34-DNT(surr)	93.2
26-DNT	101.9
24-DNT	85.4
2-NT	107.4
4-NT	105.0
3-NT	91.2
PETN	121.1
Total	1699.8
Average	106.2

MAP 2/1/10

Hmm 02/02/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1263

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0131023a

Analysis Date: 31-JAN-10 23:24

LCMSMS ID: 903

Column ID Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	637.282	106	
1,3-Dinitrobenzene-d4	500	464.266	93	
2,4,6-Trinitrotoluene	600	638.785	106	
2,4-Dinitrotoluene	600	588.5	98	
2,6-Dinitrotoluene	600	607.361	101	
2,6-Dinitrotoluene-d3	500	497.466	99	
2-Amino-4,6-dinitrotoluene	600	588.786	98	
3,4-Dinitrotoluene	300	285.637	95	
4-Amino-2,6-dinitrotoluene	600	610.979	102	
HMX	600	612.887	102	
Nitrobenzene	600	627.147	105	
PETN	600	516.513	86	
RDX	600	764.781	127	*
Tetryl	600	654.376	109	
m-Dinitrobenzene	600	600.713	100	
m-Nitrotoluene	600	547.947	91	
o-Nitrotoluene	600	598.923	100	
p-Nitrotoluene	600	615.302	103	

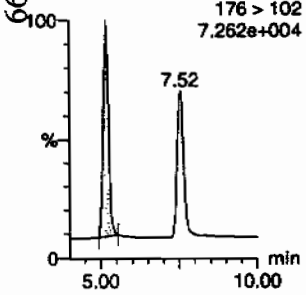
Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

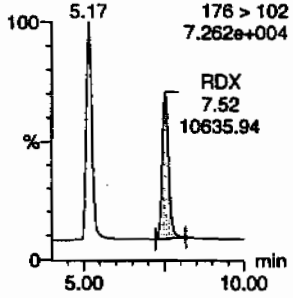
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131023a
Date: 31-Jan-2010
Time: 23:24:50
ID: WXX100131-07CCV
Vial: 1:1,B

MMT 2/1/10

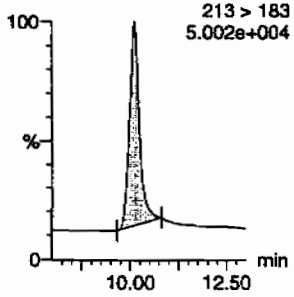
HMX
F2:MRM of 1 channel,AP-
176 > 102
7.262e+004



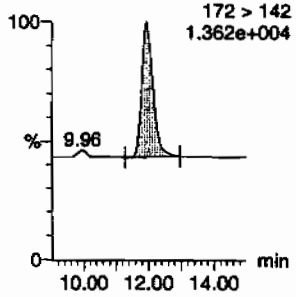
RDX
F2:MRM of 1 channel,AP-
176 > 102
7.262e+004



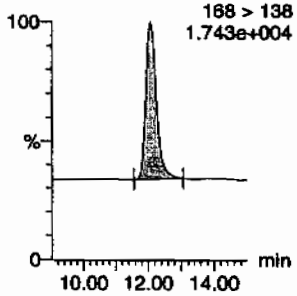
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
5.002e+004



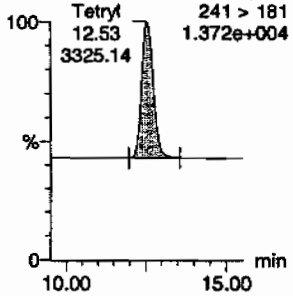
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.362e+004



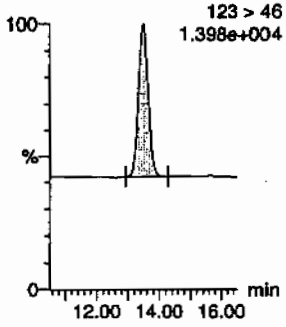
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
1.743e+004



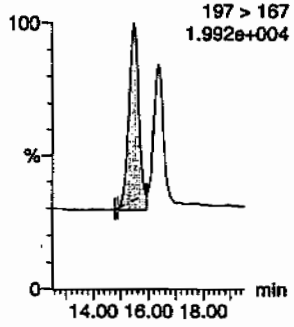
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
1.372e+004



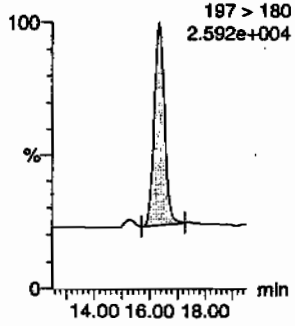
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
1.398e+004



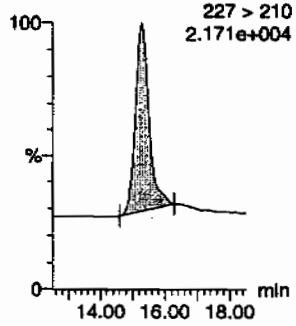
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
1.992e+004



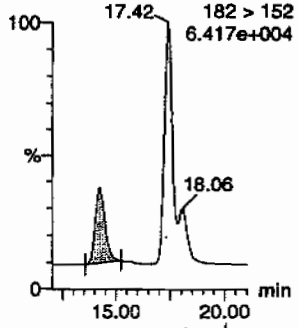
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
2.592e+004



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
2.171e+004

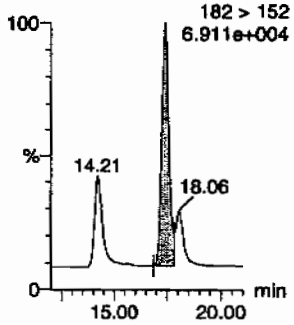


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.417e+004



HMM 02/02/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.911e+004



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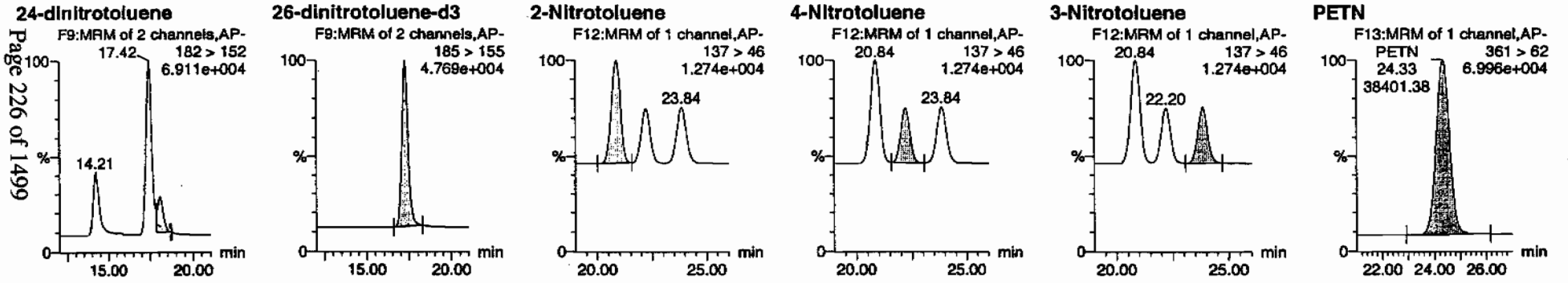
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	IS Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
WXX100131-07CCV	HMX	176 > 102	5.17	13315.021	3072.067	13315.021	2167.111	bb			612.8872	102.1	2.1	1699.3
WXX100131-07CCV	RDX	176 > 102	7.52	10635.938	3072.067	10635.938	1731.072	bb			764.7812	127.5	27.5	1152.2
WXX100131-07CCV	135-Trinitrobenzene	213 > 183	10.11	12980.002	3072.067	12980.002	2112.584	bb			637.2822	106.2	6.2	408.1
WXX100131-07CCV	13-Dinitrobenzene-d4	172 > 142	11.95	3072.067		3072.067	3072.067	bb			464.2660	92.9	-7.1	199.8
WXX100131-07CCV	13-Dinitrobenzene	168 > 138	12.07	4368.239	3072.067	4368.239	710.961	bb			600.7134	100.1	0.1	639.4
WXX100131-07CCV	Tetryl	241 > 181	12.53	3325.136	3072.067	3325.136	541.189	bb			654.3764	109.1	9.1	174.0
WXX100131-07CCV	Nitrobenzene	123 > 46	13.50	2968.155	3072.067	2968.155	483.088	bb			627.1467	104.5	4.5	145.4
WXX100131-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.46	6056.611	18085.023	6056.611	167.448	MM	01-Feb-10	14:10:08	610.9791	101.8	1.8	613.1
WXX100131-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.34	8619.199	18085.023	8619.199	238.297	bb			588.7863	98.1	-1.9	342.7
WXX100131-07CCV	246-Trinitrotoluene	227 > 210	15.28	7471.539	18085.023	7471.539	206.567	bb			638.7847	106.5	6.5	374.9
WXX100131-07CCV	34-dinitrotoluene	182 > 152	14.25	9655.705	18085.023	9655.705	266.953	bb			285.6368	95.2	-4.8	337.9
WXX100131-07CCV	26-dinitrotoluene	182 > 152	17.42	24329.137	18085.023	24329.137	672.632	MM	01-Feb-10	14:15:38	607.3606	101.2	1.2	799.7
WXX100131-07CCV	24-dinitrotoluene	182 > 152	18.06	5158.121	18085.023	5158.121	142.608	MM	01-Feb-10	14:20:21	588.4998	98.1	-1.9	165.1
WXX100131-07CCV	26-dinitrotoluene-d3	185 > 155	17.25	18085.023		18085.023	18085.023	bb			497.4659	99.5	-0.5	1384.8
WXX100131-07CCV	2-Nitrotoluene	137 > 46	20.84	3362.948	18085.023	3362.948	92.976	bb			598.9229	99.8	-0.2	410.2
WXX100131-07CCV	4-Nitrotoluene	137 > 46	22.20	1770.788	18085.023	1770.788	48.957	bb			615.3022	102.6	2.6	219.8
WXX100131-07CCV	3-Nitrotoluene	137 > 46	23.84	1932.704	18085.023	1932.704	53.434	bb			547.9474	91.3	-8.7	224.7
WXX100131-07CCV	PETN	361 > 62	24.33	38401.375	18085.023	38401.375	1061.690	bb			516.5135	86.1	-13.9	7743.6

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 01/31/10
Time of Injection: 2324
Standard Number: WXX100131-07CCV
Data File: EXP0131023a

HMX		102.1
RDX		127.5
135-TNB		106.2
13-DNB		100.1
Tetryl		109.1
Nitrobenzene		104.5
4A-26-DNT		101.8
2A-46-DNT		98.1
246-TNT		106.5
34-DNT(surr)		95.2
26-DNT		101.2
24-DNT		98.1
2-NT		99.8
4-NT		102.6
3-NT		91.3
PETN		86.1
	Total	1630.2
	Average	101.9

MAT 2/1/10

Hmm 02/02/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1263

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0131025a

Analysis Date: 01-FEB-10 00:23

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	47.388	118	
1,3-Dinitrobenzene-d4	500	460.081	92	
2,4,6-Trinitrotoluene	40	44.837	112	
2,4-Dinitrotoluene	40	34.303	86	
2,6-Dinitrotoluene	40	37.847	95	
2,6-Dinitrotoluene-d3	500	472.155	94	
2-Amino-4,6-dinitrotoluene	40	37.493	94	
3,4-Dinitrotoluene	20	20.126	101	
4-Amino-2,6-dinitrotoluene	40	42.632	107	
HMX	40	42.352	106	
Nitrobenzene	40	52.368	131	*
PETN	40	58.047	145	*
RDX	40	45.288	113	
Tetryl	40	51.384	128	
m-Dinitrobenzene	40	42.219	106	
m-Nitrotoluene	40	38.946	97	
o-Nitrotoluene	40	41.495	104	
p-Nitrotoluene	40	38.44	96	

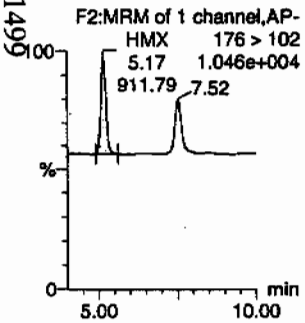
Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

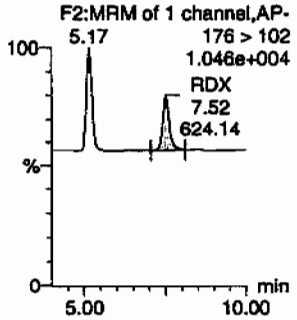
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131025a
Date: 01-Feb-2010
Time: 00:23:47
ID: WXX100131-08CRI
Vial: 1:1,C

Page 229 of 1499

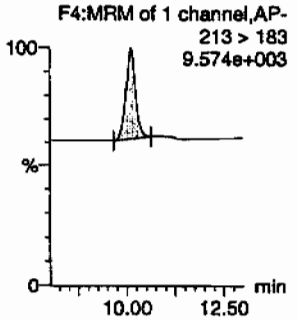
HMX



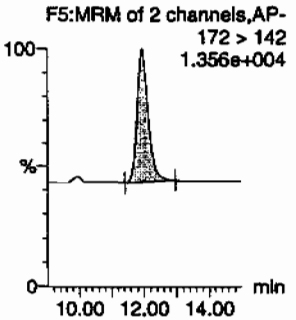
RDX



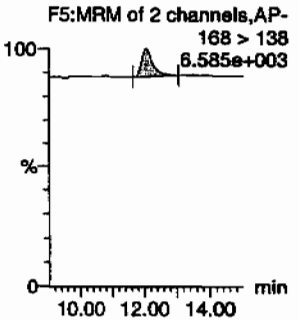
135-Trinitrobenzene



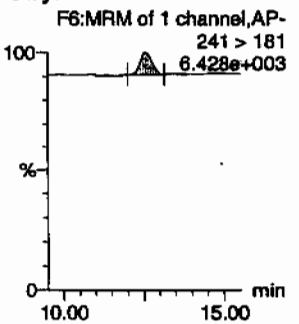
13-Dinitrobenzene-d4



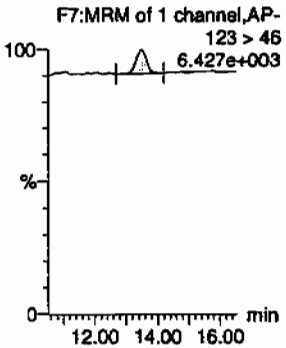
13-Dinitrobenzene



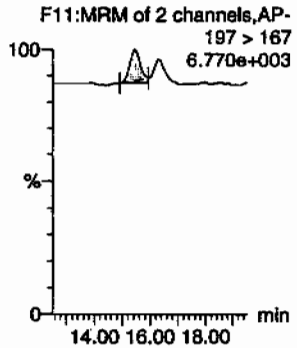
Tetryl



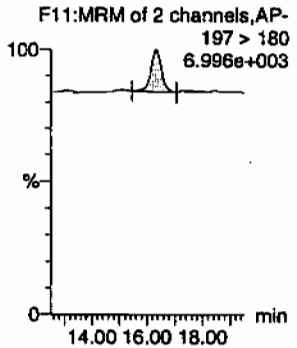
Nitrobenzene



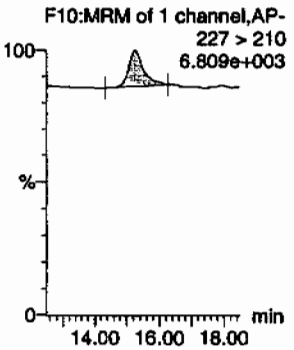
4-Amino-26-dinitrotoluene



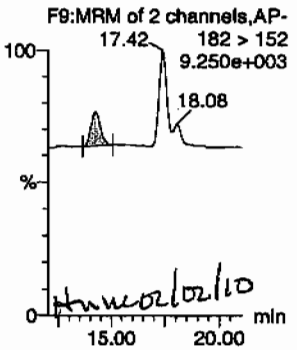
2-Amino-46-dinitrotoluene



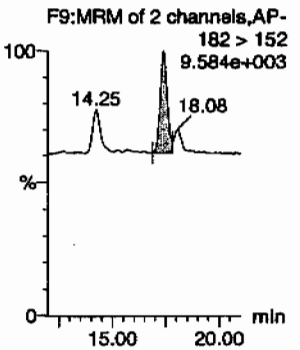
246-Trinitrotoluene



34-dinitrotoluene



26-dinitrotoluene



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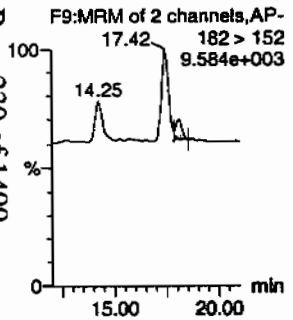
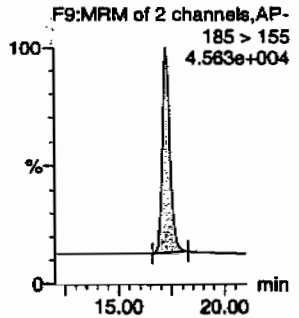
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

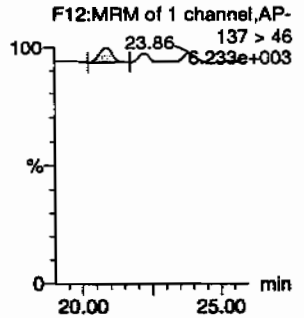
24-dinitrotoluene



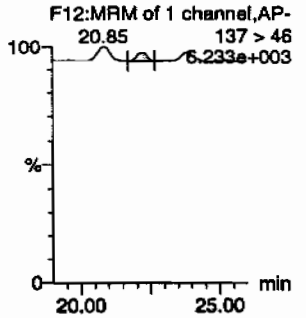
26-dinitrotoluene-d3



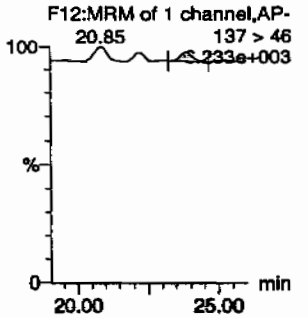
2-Nitrotoluene



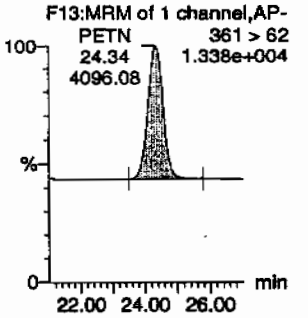
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	Conc.	%Rec	%Dev	S/N
WXX100131-08CRI	HMX	176 > 102	5.17		911.795	3044.375	911.795	149.751	bb			42.3515	105.9	5.9	185.5
WXX100131-08CRI	RDX	176 > 102	7.52		624.144	3044.375	624.144	102.508	bb			45.2875	113.2	13.2	100.1
WXX100131-08CRI	135-Trinitrobenzene	213 > 183	10.11		1093.339	3044.375	1093.339	179.567	bb			47.3880	118.5	18.5	72.0
WXX100131-08CRI	13-Dinitrobenzene-d4	172 > 142	11.95		3044.375		3044.375	3044.375	bb			460.0810	92.0	-8.0	193.5
WXX100131-08CRI	13-Dinitrobenzene	168 > 138	12.07		304.238	3044.375	304.238	49.967	bb			42.2189	105.5	5.5	35.5
WXX100131-08CRI	Tetryl	241 > 181	12.58		258.749	3044.375	258.749	42.496	bb			51.3842	128.5	28.5	22.8
WXX100131-08CRI	Nitrobenzene	123 > 46	13.50		245.613	3044.375	245.613	40.339	bb			52.3681	130.9	30.9	20.0
WXX100131-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.46		401.109	17164.877	401.109	11.684	MM	01-Feb-10	14:10:17	42.6322	106.6	6.6	34.9
WXX100131-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.34		520.935	17164.877	520.935	15.174	bb			37.4932	93.7	-6.3	44.9
WXX100131-08CRI	246-Trinitrotoluene	227 > 210	15.28		497.747	17164.877	497.747	14.499	bb			44.8365	112.1	12.1	49.0
WXX100131-08CRI	34-dinitrotoluene	182 > 152	14.25		645.738	17164.877	645.738	18.810	bb			20.1263	100.6	0.6	56.2
WXX100131-08CRI	26-dinitrotoluene	182 > 152	17.42		1438.912	17164.877	1438.912	41.914	MM	01-Feb-10	14:15:45	37.8471	94.6	-5.4	100.7
WXX100131-08CRI	24-dinitrotoluene	182 > 152	18.08		285.367	17164.877	285.367	8.313	MM	01-Feb-10	14:20:28	34.3034	85.8	-14.2	21.7
WXX100131-08CRI	26-dinitrotoluene-d3	185 > 155	17.25		17164.877		17164.877	17164.877	bb			472.1553	94.4	-5.6	1913.1
WXX100131-08CRI	2-Nitrotoluene	137 > 46	20.85		221.138	17164.877	221.138	6.442	bb			41.4947	103.7	3.7	36.8
WXX100131-08CRI	4-Nitrotoluene	137 > 46	22.22		104.999	17164.877	104.999	3.059	bb			38.4402	96.1	-3.9	22.0
WXX100131-08CRI	3-Nitrotoluene	137 > 46	23.86		130.381	17164.877	130.381	3.798	bb			38.9463	97.4	-2.6	23.3
WXX100131-08CRI	PETN	361 > 62	24.34		4096.076	17164.877	4096.076	119.316	bb			58.0472	145.1	45.1	964.5

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	02/01/10
Time of Injection	0023
Standard Number	WXX100131-08CRI
Data File	EXP0131025a

HMX	105.9
RDX	113.2
135-TNB	118.5
13-DNB	105.5
Tetryl	128.5
Nitrobenzene	130.9
4A-26-DNT	106.6
2A-46-DNT	93.7
246-TNT	112.1
34-DNT(surr)	100.6
26-DNT	94.6
24-DNT	85.8
2-NT	103.7
4-NT	96.1
3-NT	97.4
PETN	145.1
Total	1738.2
Average	108.6

MMP
2/1/10

Hmm 02/02/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1263

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0131036a

Analysis Date: 01–FEB–10 05:48

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5–Trinitrobenzene	600	619.54	103	
1,3–Dinitrobenzene–d4	500	465.834	93	
2,4,6–Trinitrotoluene	600	727.525	121	*
2,4–Dinitrotoluene	600	578.961	96	
2,6–Dinitrotoluene	600	566.88	94	
2,6–Dinitrotoluene–d3	500	497.579	100	
2–Amino–4,6–dinitrotoluene	600	625.459	104	
3,4–Dinitrotoluene	300	307.704	103	
4–Amino–2,6–dinitrotoluene	600	665.68	111	
HMX	600	716.713	119	
Nitrobenzene	600	695.32	116	
PETN	600	536.263	89	
RDX	600	817.178	136	*
Tetryl	600	720.721	120	*
m–Dinitrobenzene	600	590.68	98	
m–Nitrotoluene	600	520.045	87	
o–Nitrotoluene	600	580	97	
p–Nitrotoluene	600	591.823	99	

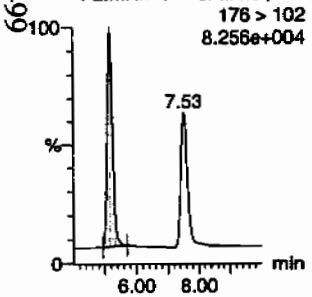
Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

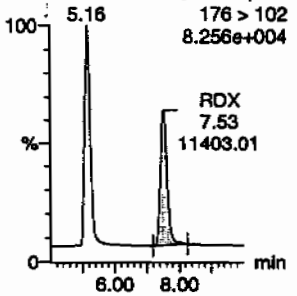
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131036a
Date: 01-Feb-2010
Time: 05:48:12
ID: WXX100131-07CCV
Vial: 1:1,B

MMT 2/1/10

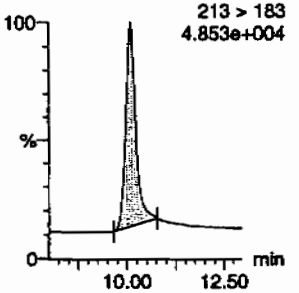
HMX
F2:MRM of 1 channel,AP-
176 > 102
8.256e+004



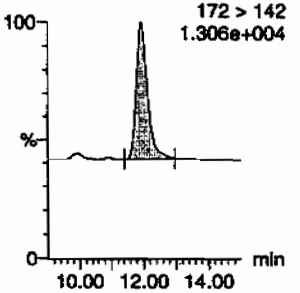
RDX
F2:MRM of 1 channel,AP-
176 > 102
8.256e+004



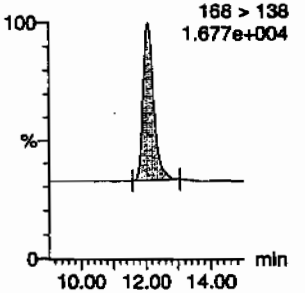
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
4.853e+004



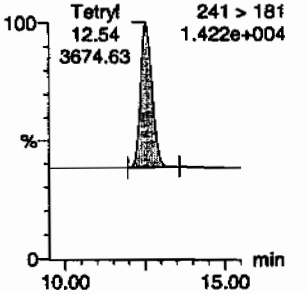
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.306e+004



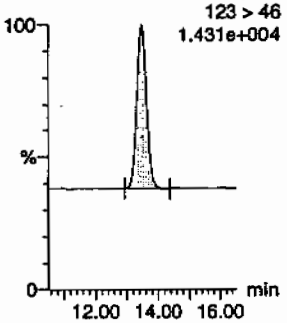
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
1.677e+004



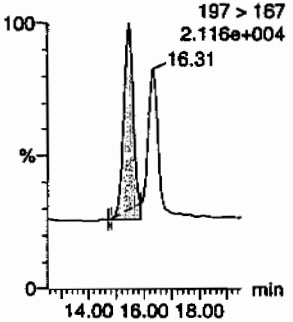
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
1.422e+004



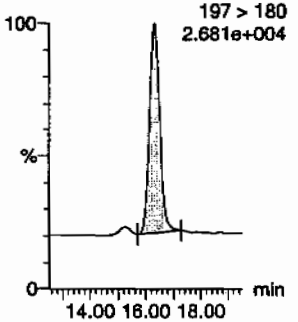
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
1.431e+004



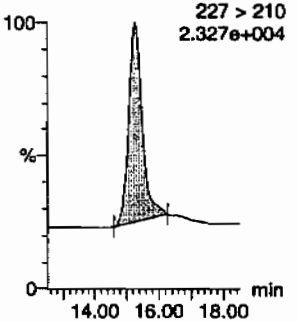
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
2.116e+004



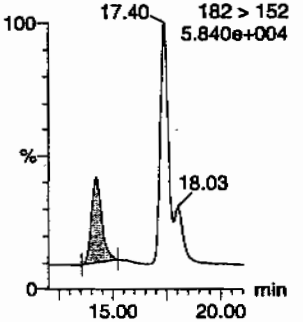
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
2.681e+004



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
2.327e+004

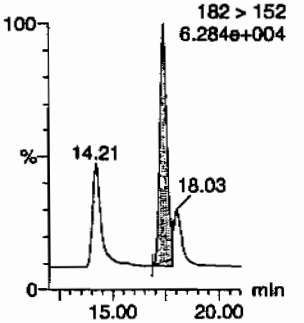


34-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
5.840e+004



Hmm overlap

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
6.284e+004



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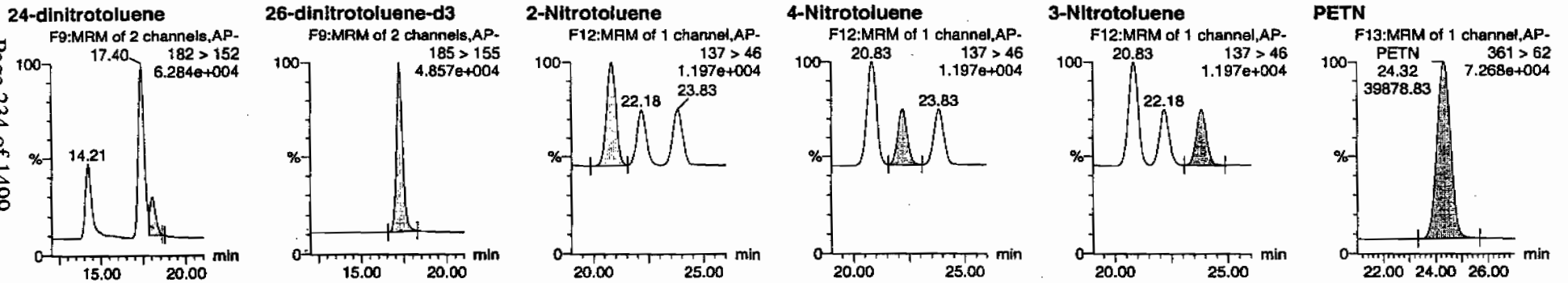
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/ml	%Rec	%Dev	S/N
WXX100131-07CCV	HMX	176 > 102	5.16	15623.238	3082.442	15623.238	2534.231	bb			716.7134	119.5	19.5	2072.3
WXX100131-07CCV	RDX	176 > 102	7.53	11403.013	3082.442	11403.013	1849.672	bb			817.1783	136.2	36.2	1271.9
WXX100131-07CCV	135-Trinitrobenzene	213 > 183	10.09	12665.418	3082.442	12665.418	2054.445	bb			619.5401	103.3	3.3	1135.2
WXX100131-07CCV	13-Dinitrobenzene-d4	172 > 142	11.92	3082.442		3082.442	3082.442	bb			465.8339	93.2	-6.8	478.9
WXX100131-07CCV	13-Dinitrobenzene	168 > 138	12.07	4309.785	3082.442	4309.785	699.086	bb			590.6801	98.4	-1.6	345.9
WXX100131-07CCV	Tetryl	241 > 181	12.54	3674.627	3082.442	3674.627	596.058	bb			720.7211	120.1	20.1	491.3
WXX100131-07CCV	Nitrobenzene	123 > 46	13.46	3301.918	3082.442	3301.918	535.601	bb			695.3198	115.9	15.9	343.4
WXX100131-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.46	6600.366	18089.152	6600.366	182.440	MM	01-Feb-10	14:10:36	665.6801	110.9	10.9	365.6
WXX100131-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.31	9158.141	18089.152	9158.141	253.139	bb			625.4592	104.2	4.2	793.7
WXX100131-07CCV	246-Trinitrotoluene	227 > 210	15.28	8511.433	18089.152	8511.433	235.263	bb			727.5251	121.3	21.3	532.5
WXX100131-07CCV	34-dinitrotoluene	182 > 152	14.21	10404.037	18089.152	10404.037	287.577	bb			307.7039	102.6	2.6	683.5
WXX100131-07CCV	26-dinitrotoluene	182 > 152	17.40	22712.801	18089.152	22712.801	627.802	MM	01-Feb-10	14:15:59	566.8805	94.5	-5.5	643.1
WXX100131-07CCV	24-dinitrotoluene	182 > 152	18.03	5075.671	18089.152	5075.671	140.296	MM	01-Feb-10	14:20:48	578.9608	96.5	-3.5	138.5
WXX100131-07CCV	26-dinitrotoluene-d3	185 > 155	17.22	18089.152		18089.152	18089.152	bb			497.5794	99.5	-0.5	2304.2
WXX100131-07CCV	2-Nitrotoluene	137 > 46	20.83	3257.440	18089.152	3257.440	90.038	bb			580.0001	96.7	-3.3	289.4
WXX100131-07CCV	4-Nitrotoluene	137 > 46	22.18	1703.607	18089.152	1703.607	47.089	bb			591.8235	98.6	-1.4	156.5
WXX100131-07CCV	3-Nitrotoluene	137 > 46	23.83	1834.705	18089.152	1834.705	50.713	bb			520.0447	86.7	-13.3	156.5
WXX100131-07CCV	PETN	361 > 62	24.32	39878.832	18089.152	39878.832	1102.286	bb			536.2634	89.4	-10.6	13772.9

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor: Restek
Date of Analysis: 02/01/10
Time of Injection: 0548
Standard Number: WXX100131-07CCV
Data File: EXP0131036a

HMX	119.5
RDX	136.2
135-TNB	103.3
13-DNB	98.4
Tetryl	120.1
Nitrobenzene	115.9
4A-26-DNT	110.9
2A-46-DNT	104.2
246-TNT	121.3
34-DNT(surr)	102.6
26-DNT	94.5
24-DNT	96.5
2-NT	96.7
4-NT	98.6
3-NT	86.7
PETN	89.4
Total	1694.8
Average	105.9

2/1/10

Hnm 02/02/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1263

Lab Code: GEI

GEL Sample ID: WXXCRI

GEL Data File EXP0131038a

Analysis Date: 01-FEB-10 06:47

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	49.136	123	
1,3-Dinitrobenzene-d4	500	458.24	92	
2,4,6-Trinitrotoluene	40	43.141	108	
2,4-Dinitrotoluene	40	43.475	109	
2,6-Dinitrotoluene	40	39.505	99	
2,6-Dinitrotoluene-d3	500	477.39	95	
2-Amino-4,6-dinitrotoluene	40	36.273	91	
3,4-Dinitrotoluene	20	20.207	101	
4-Amino-2,6-dinitrotoluene	40	45.674	114	
HMX	40	45.383	113	
Nitrobenzene	40	47.136	118	
PETN	40	59.642	149	*
RDX	40	44.161	110	
Tetryl	40	63.108	158	*
m-Dinitrobenzene	40	45.819	115	
m-Nitrotoluene	40	35.978	90	
o-Nitrotoluene	40	39.069	98	
p-Nitrotoluene	40	49.932	125	

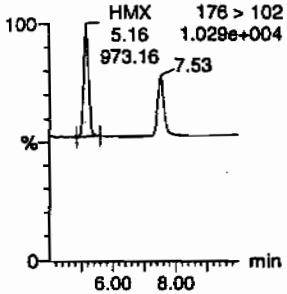
Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

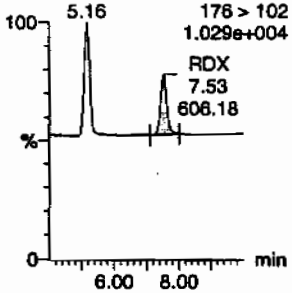
Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131038a
Date: 01-Feb-2010
Time: 06:47:09
ID: WXX100131-08CRI
Vial: 1:1,C

MMT 2/1/10

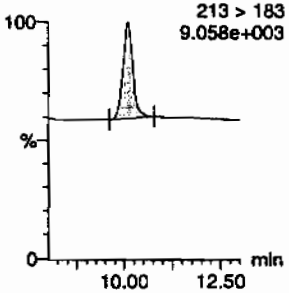
HMX
F2:MRM of 1 channel,AP-
HMX 176 > 102
5.16 1.029e+004
973.16 7.53



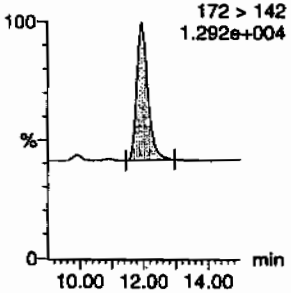
RDX
F2:MRM of 1 channel,AP-
5.16 176 > 102
1.029e+004
RDX
7.53
606.18



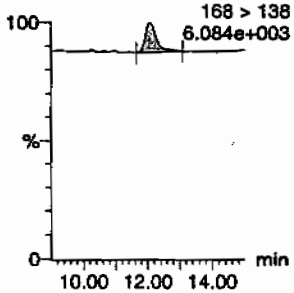
135-Trinitrobenzene
F4:MRM of 1 channel,AP-
213 > 183
9.058e+003



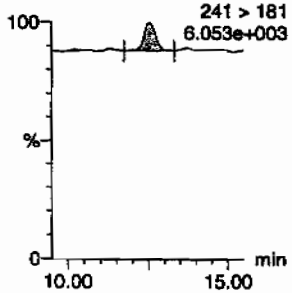
13-Dinitrobenzene-d4
F5:MRM of 2 channels,AP-
172 > 142
1.292e+004



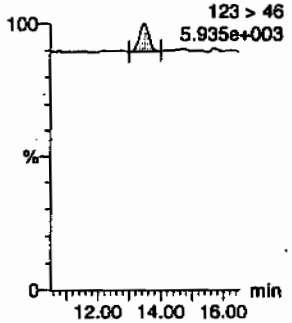
13-Dinitrobenzene
F5:MRM of 2 channels,AP-
168 > 138
6.084e+003



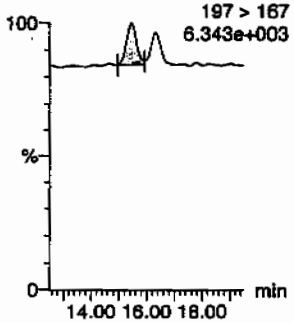
Tetryl
F6:MRM of 1 channel,AP-
241 > 181
6.053e+003



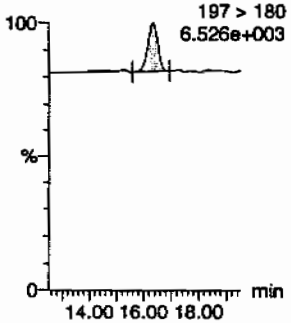
Nitrobenzene
F7:MRM of 1 channel,AP-
123 > 46
5.935e+003



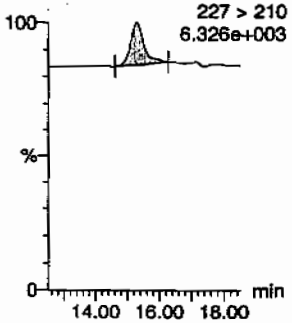
4-Amino-26-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 167
6.343e+003



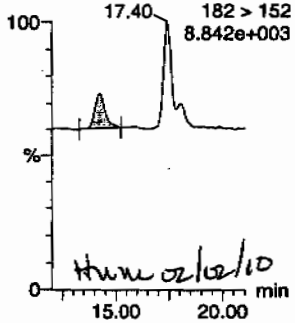
2-Amino-46-dinitrotoluene
F11:MRM of 2 channels,AP-
197 > 180
6.526e+003



246-Trinitrotoluene
F10:MRM of 1 channel,AP-
227 > 210
6.326e+003

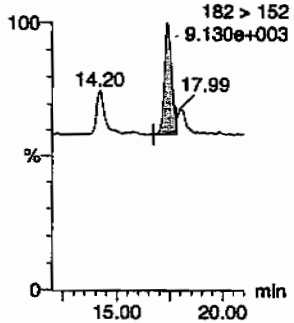


34-dinitrotoluene
F9:MRM of 2 channels,AP-
17.40 182 > 152
8.842e+003



Hmm 02/02/10

26-dinitrotoluene
F9:MRM of 2 channels,AP-
182 > 152
9.130e+003
14.20 17.99



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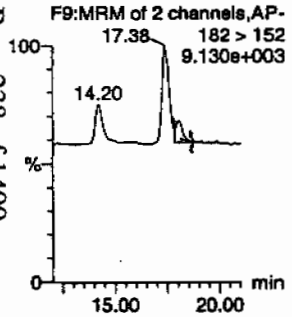
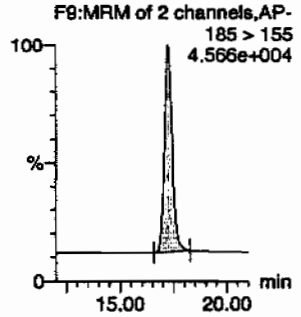
Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

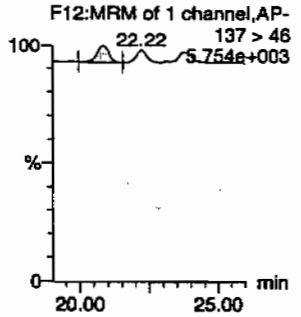
24-dinitrotoluene



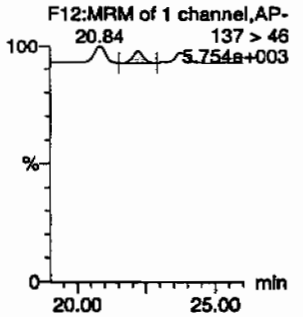
26-dinitrotoluene-d3



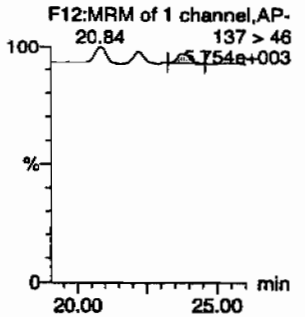
2-Nitrotoluene



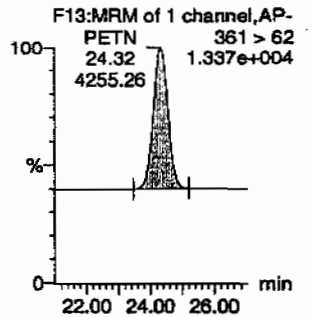
4-Nitrotoluene



3-Nitrotoluene



PETN



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flag	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N
WXX100131-08CRI	HMX	176 > 102	5.16	973.159	3032.190	973.159	160.471	bb			45.3834	113.5	13.5	210.9
WXX100131-08CRI	RDX	176 > 102	7.53	606.176	3032.190	606.176	99.957	bb			44.1605	110.4	10.4	111.8
WXX100131-08CRI	135-Trinitrobenzene	213 > 183	10.11	1123.688	3032.190	1123.688	185.293	bb			49.1355	122.8	22.8	304.7
WXX100131-08CRI	13-Dinitrobenzene-d4	172 > 142	11.95	3032.190		3032.190	3032.190	bb			458.2396	91.6	-8.4	290.2
WXX100131-08CRI	13-Dinitrobenzene	168 > 138	12.07	328.857	3032.190	328.857	54.228	bb			45.8187	114.5	14.5	30.7
WXX100131-08CRI	Tetryl	241 > 181	12.54	316.515	3032.190	316.515	52.192	bb			63.1083	157.8	57.8	27.7
WXX100131-08CRI	Nitrobenzene	123 > 46	13.49	220.189	3032.190	220.189	36.309	bb			47.1360	117.8	17.8	16.0
WXX100131-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.45	434.492	17355.168	434.492	12.518	MM	01-Feb-10	14:10:44	45.6740	114.2	14.2	62.3
WXX100131-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.34	509.563	17355.168	509.563	14.680	bb			36.2726	90.7	-9.3	67.2
WXX100131-08CRI	246-Trinitrotoluene	227 > 210	15.27	484.235	17355.168	484.235	13.951	bb			43.1411	107.9	7.9	19.0
WXX100131-08CRI	34-dinitrotoluene	182 > 152	14.25	655.501	17355.168	655.501	18.885	bb			20.2066	101.0	1.0	40.2
WXX100131-08CRI	26-dinitrotoluene	182 > 152	17.38	1518.583	17355.168	1518.583	43.750	MM	01-Feb-10	14:16:07	39.5047	98.8	-1.2	55.8
WXX100131-08CRI	24-dinitrotoluene	182 > 152	17.99	365.673	17355.168	365.673	10.535	MM	01-Feb-10	14:20:58	43.4748	108.7	8.7	12.3
WXX100131-08CRI	26-dinitrotoluene-d3	185 > 155	17.25	17355.168		17355.168	17355.168	bb			477.3897	95.5	-4.5	1309.3
WXX100131-08CRI	2-Nitrotoluene	137 > 46	20.84	210.520	17355.168	210.520	6.065	bb			39.0692	97.7	-2.3	34.0
WXX100131-08CRI	4-Nitrotoluene	137 > 46	22.22	137.901	17355.168	137.901	3.973	bb			49.9321	124.8	24.8	25.2
WXX100131-08CRI	3-Nitrotoluene	137 > 46	23.75	121.779	17355.168	121.779	3.508	bb			35.9779	89.9	-10.1	18.8
WXX100131-08CRI	PETN	361 > 62	24.32	4255.262	17355.168	4255.262	122.594	bb			59.6419	149.1	49.1	227.7

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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GRAND MEAN AVERAGE

Vendor:	UltraScientific
Date of Analysis	02/01/10
Time of Injection	0647
Standard Number	WXX100131-08CRI
Data File	EXP0131038a

HMX		113.5
RDX		110.4
135-TNB		122.8
13-DNB		114.5
Tetryl		157.8
Nitrobenzene		117.8
4A-26-DNT		114.2
2A-46-DNT		90.7
246-TNT		107.9
34-DNT(surr)		101.0
26-DNT		98.8
24-DNT		108.7
2-NT		97.7
4-NT		124.8
3-NT		89.9
PETN		149.1
	Total	1819.6
	Average	113.7

MAT 2/1/10

Hmm 02/02/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1263

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS01250013.wiff

Analysis Date: 25-JAN-10 13:41

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	104	104	
2,6-Diamino-4-nitrotoluene	100	106	106	
3,4-Dinitrotoluene	50	46.7	94	
3,5-Dinitroaniline	100	104	104	
TATB	100	96.4	96	
tris(o-cresyl) phosphate	100	117	117	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

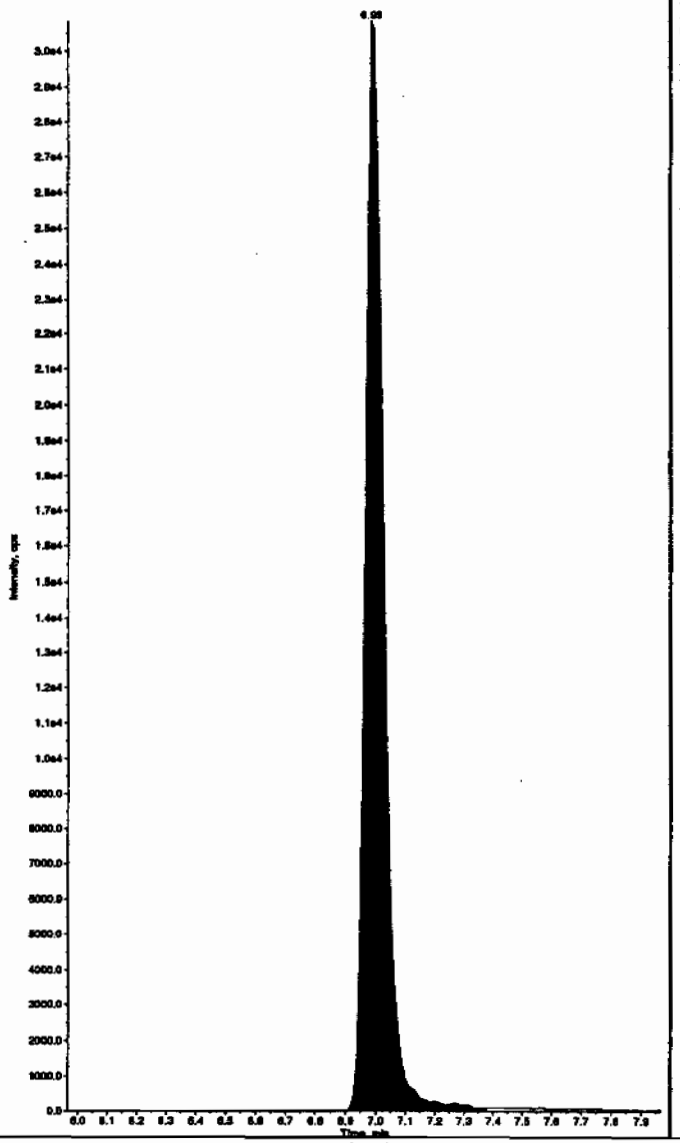
Lar 1/27/10

Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250013.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 96.4 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:41:16 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.99 min
Area: 1.36e+005 counts
Height: 30825.148 cps
Start Time: 6.88 min
End Time: 7.38 min

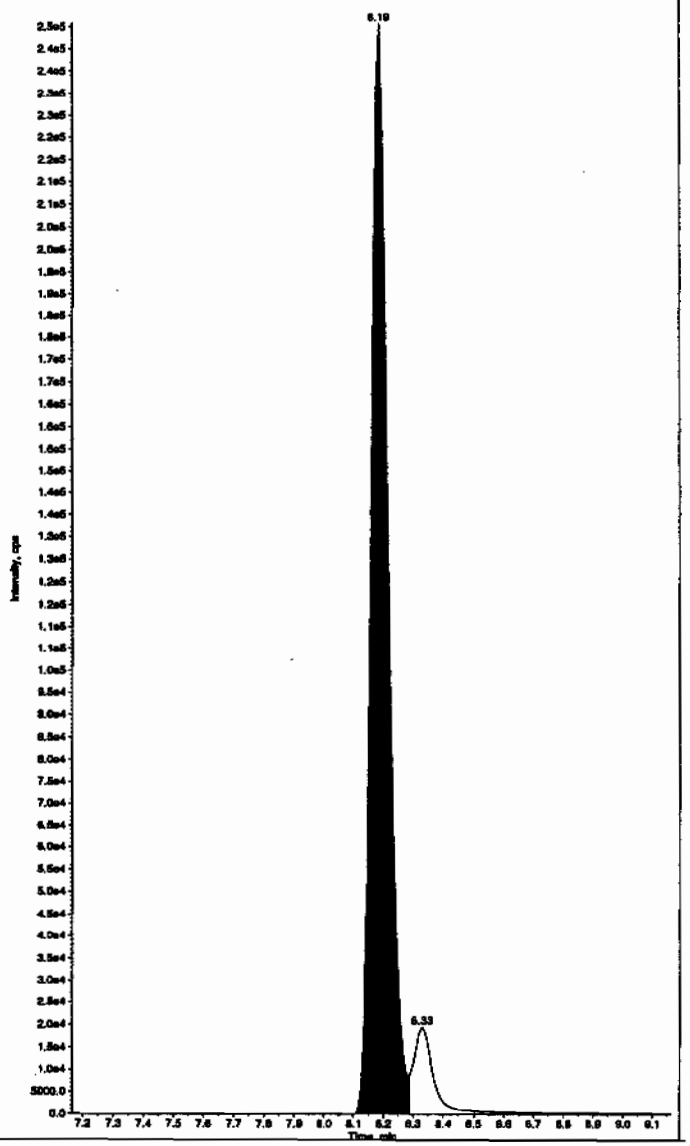


Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250013.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 104. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:41:16 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.16 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.19 min
Area: 1.01e+006 counts
Height: 245777.557 cps
Start Time: 8.07 min
End Time: 8.29 min



Hmm 01/27/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

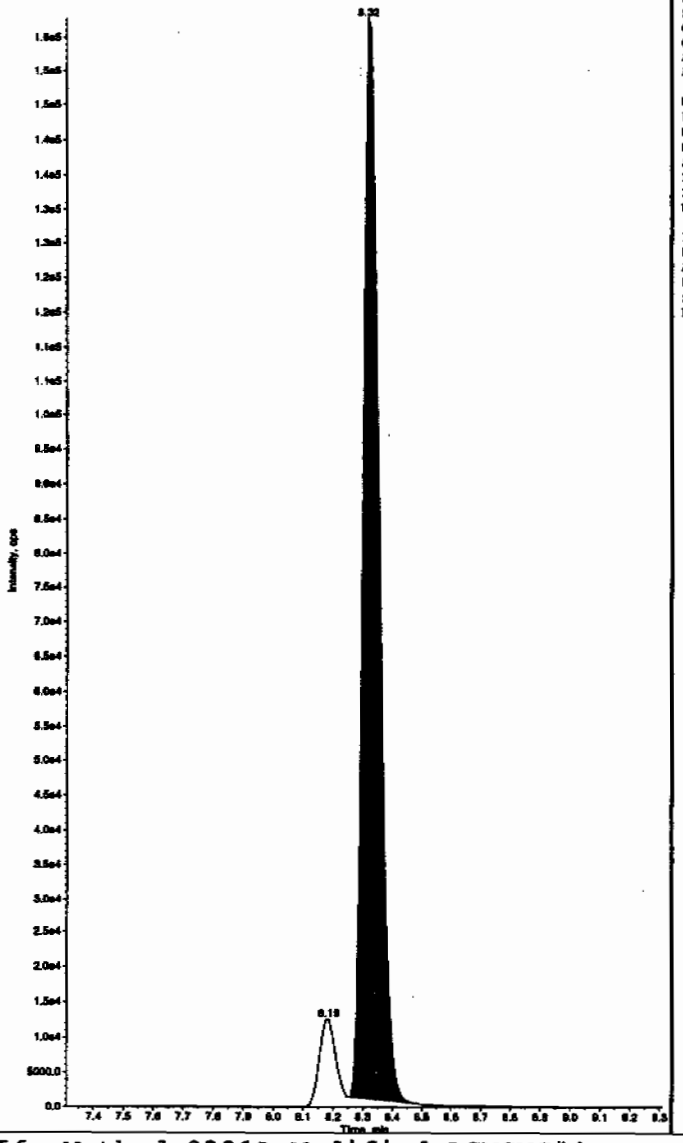
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100125-27CRI" Sample ID: "|1|LER" File: "EXS01250013.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 46.7 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:41:16 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.31 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.32 min
Area: 6.01e+005 counts
Height: 156632.233 cps
Start Time: 8.25 min
End Time: 8.47 min

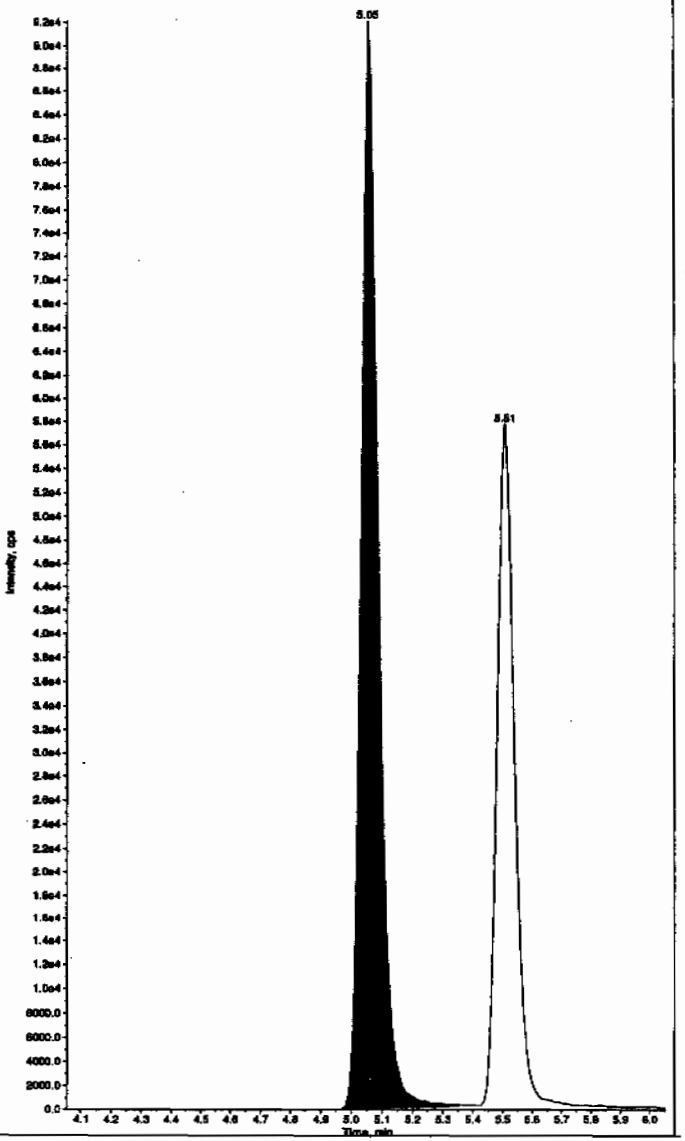


Sample Name: "WXX100125-27CRI" Sample ID: "|1|LER" File: "EXS01250013.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 106. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:41:16 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.05 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.05 min
Area: 3.64e+005 counts
Height: 92080.063 cps
Start Time: 4.96 min
End Time: 5.35 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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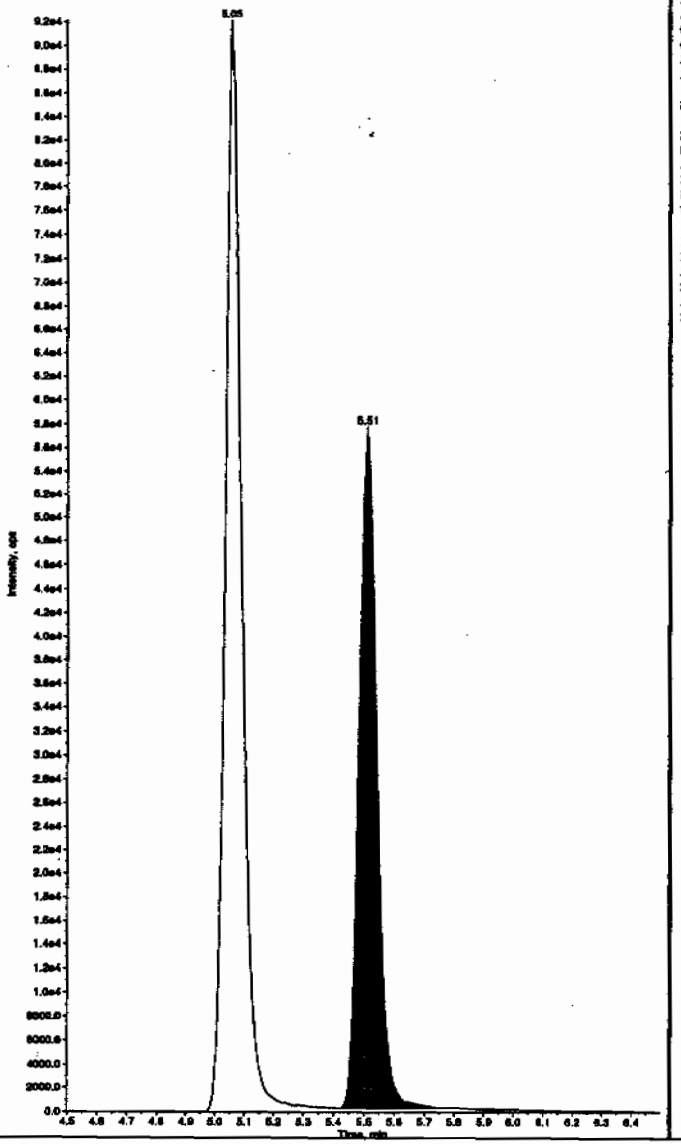
Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250013.wiff"
Peak Name: "2,4-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 104. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:41:16 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.50 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.51 min
Area: 2.36e+005 counts
Height: 57473.637 cps
Start Time: 5.42 min
End Time: 5.76 min

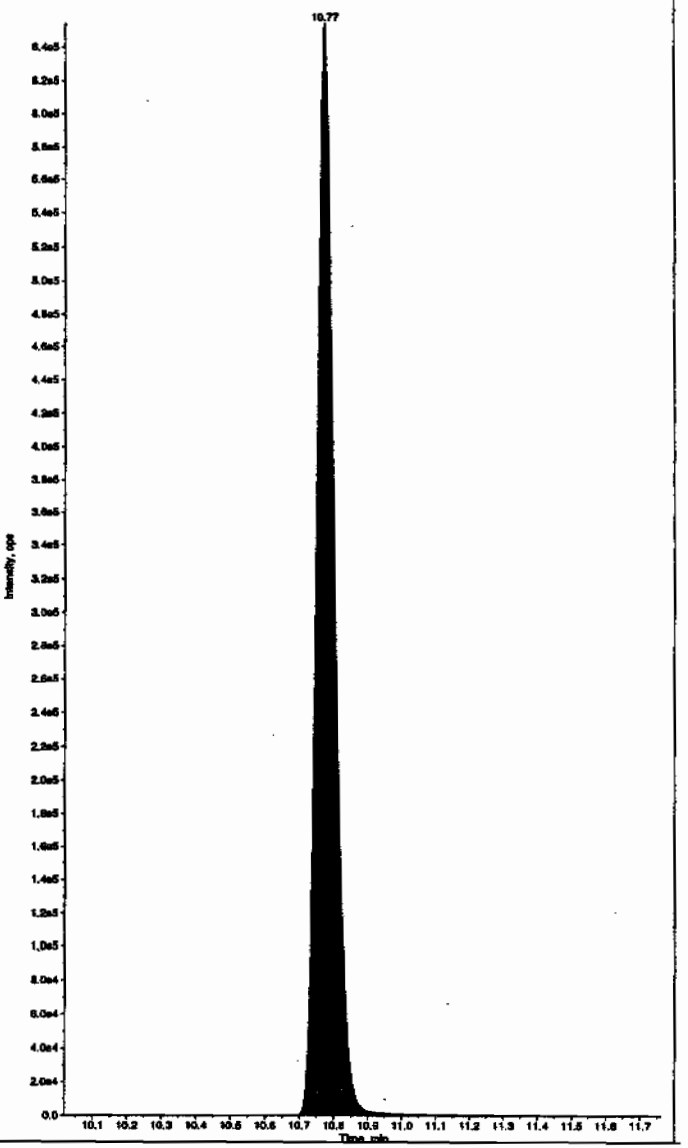


Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250013.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 117. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 1:41:16 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 2.38e+006 counts
Height: 654498.474 cps
Start Time: 10.6 min
End Time: 11.1 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10–1263

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS01250024.wiff

Analysis Date: 25–JAN–10 16:33

LCMSMS ID: 1358

Column ID: JSphere ODS–H80

Compound	True	Found	Recovery	Q
2,4–Diamino–6–nitrotoluene	500	456	91	
2,6–Diamino–4–nitrotoluene	500	429	86	
3,4–Dinitrotoluene	250	232	93	
3,5–Dinitroaniline	500	523	105	
TATB	500	534	107	
tris(o–cresyl) phosphate	500	455	91	

Recovery Limits:
3,4–Dinitrotoluene (Surrogate),TATB, tris(o–cresyl)phosphate, 3,5–Dinitroaniline, 2,6–Diamino–4–nitrotoluene , 2,4–Diamino–6–nitrotoluene 70–130%
OtherTarget Analytes 80–120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

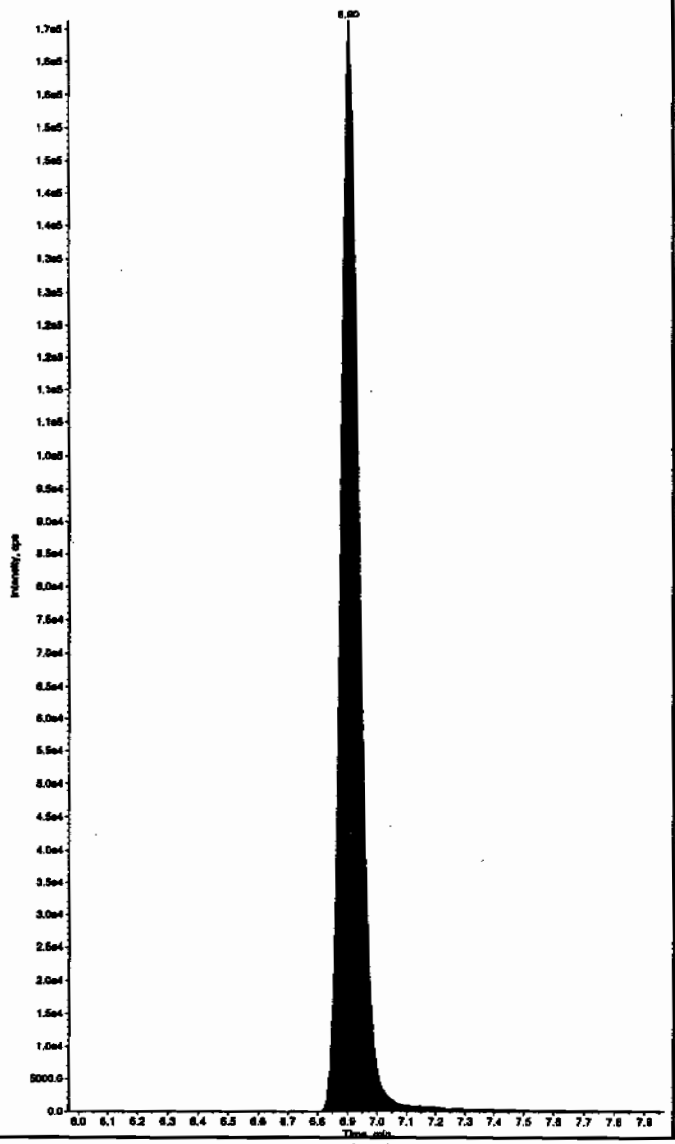
Before Chan 1/27/10

Sample Name: "WXX100125-26CCV" Sample ID: "|1|LER" File: "EXS01250024.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 534. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 4:33:57 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.90 min
Area: 7.43e+005 counts
Height: 166416.412 cps
Start Time: 6.76 min
End Time: 7.60 min

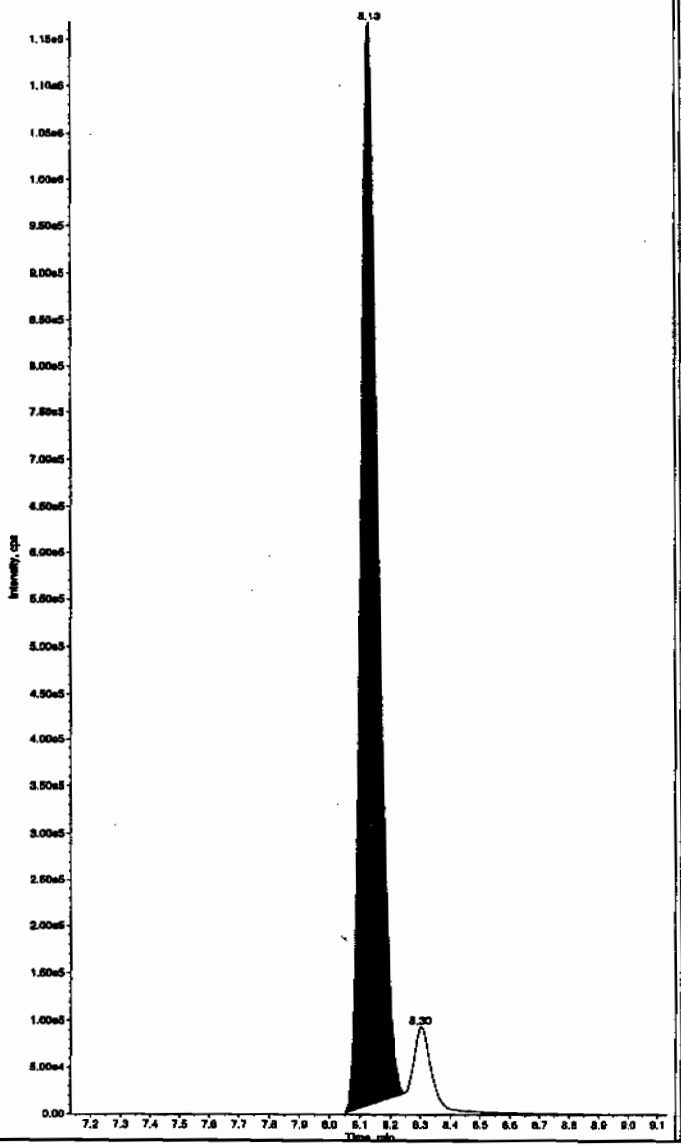


Sample Name: "WXX100125-26CCV" Sample ID: "|1|LER" File: "EXS01250024.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 509. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 4:33:57 PM

Modified: Yes
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.13 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.13 min
Area: 4.76e+006 counts
Height: 1159311.279 cps
Start Time: 8.05 min
End Time: 8.25 min



Hmm 01/27/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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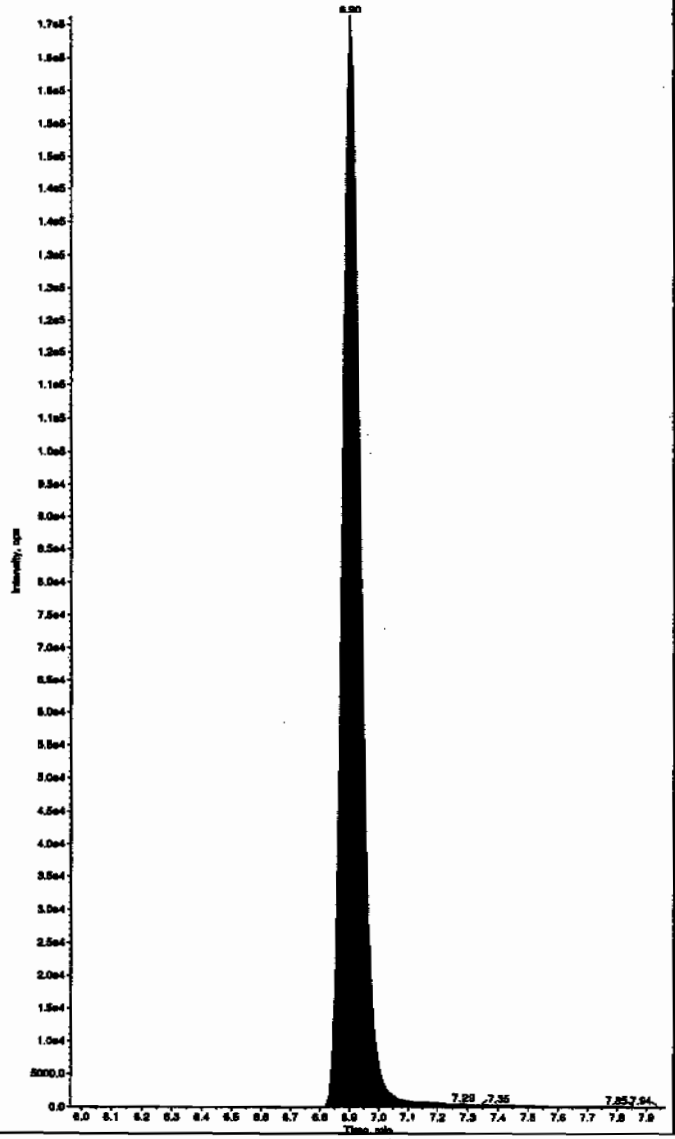
after Lan 1/27/10

Sample Name: "WXX100125-28CCV" Sample ID: "[1]LER" File: "EXS01250024.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 534. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 4:33:57 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.90 min
Area: 7.43e+005 counts
Height: 166416.412 cps
Start Time: 6.76 min
End Time: 7.60 min

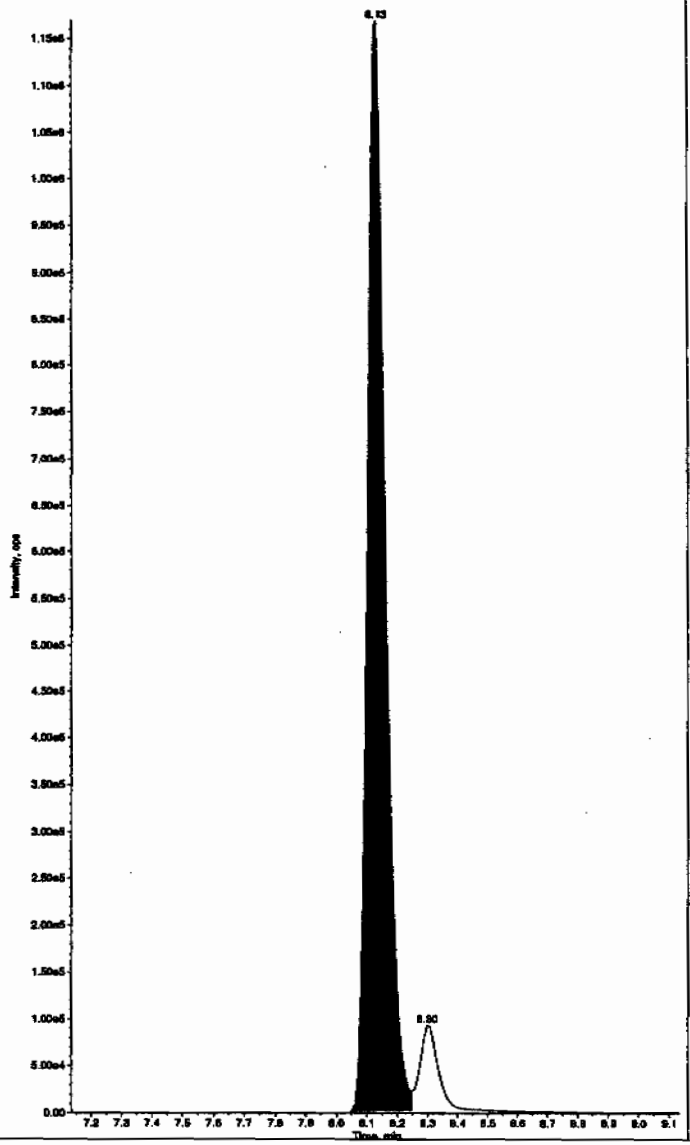


Sample Name: "WXX100125-28CCV" Sample ID: "[1]LER" File: "EXS01250024.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 523. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 4:33:57 PM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.13 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.13 min
Area: 4.88e+006 counts
Height: 1185042.830 cps
Start Time: 8.05 min
End Time: 8.25 min



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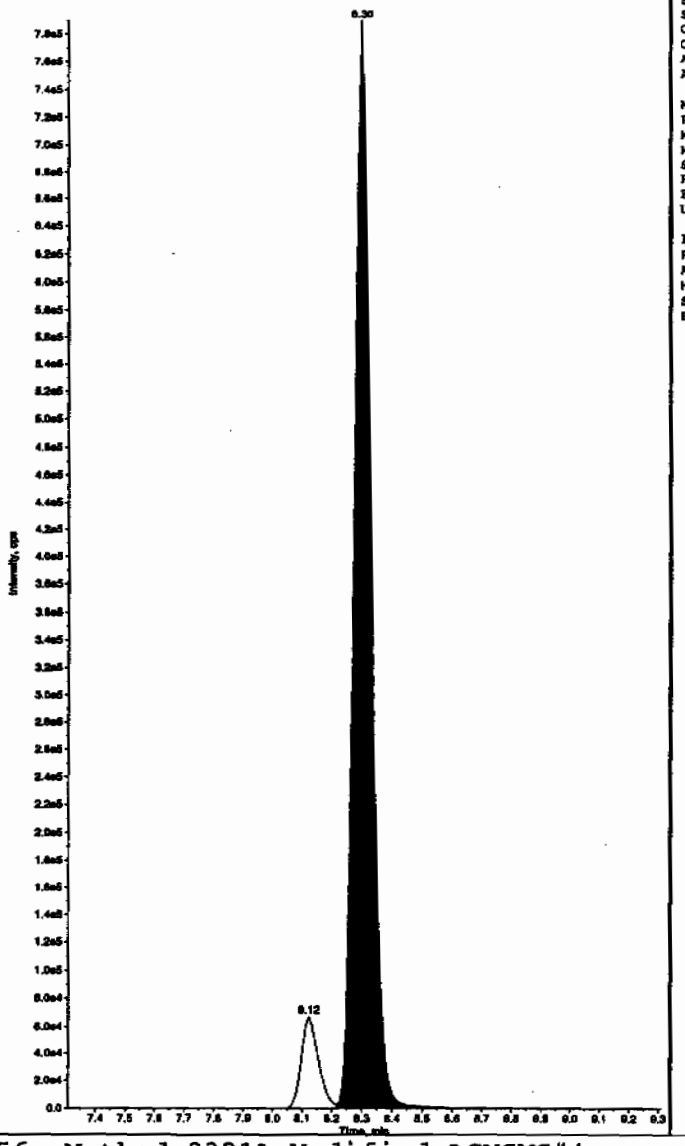
*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX100125-26CCV" Sample ID: "[1]LER" File: "EXS01250024.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 232. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 4:33:57 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.31 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.30 min
Area: 1.08e+006 counts
Height: 790474.792 cps
Start Time: 8.22 min
End Time: 8.63 min

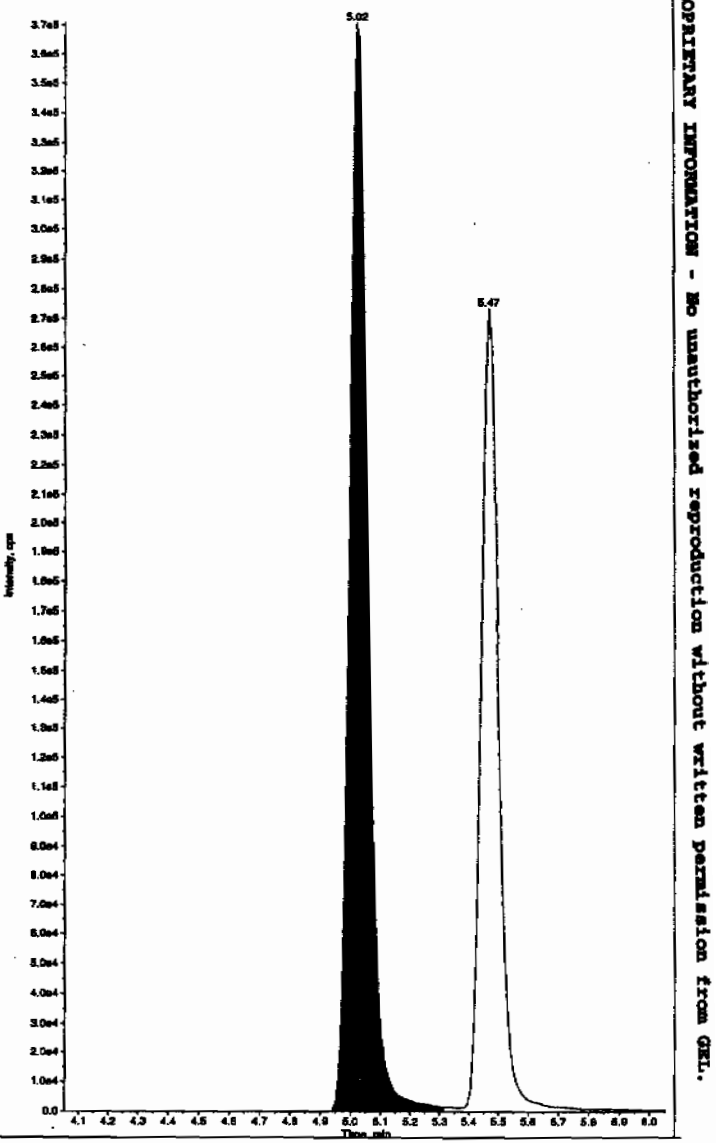


Sample Name: "WXX100125-26CCV" Sample ID: "[1]LER" File: "EXS01250024.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 429. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 4:33:57 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.05 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.02 min
Area: 1.62e+006 counts
Height: 370936.981 cps
Start Time: 4.91 min
End Time: 5.31 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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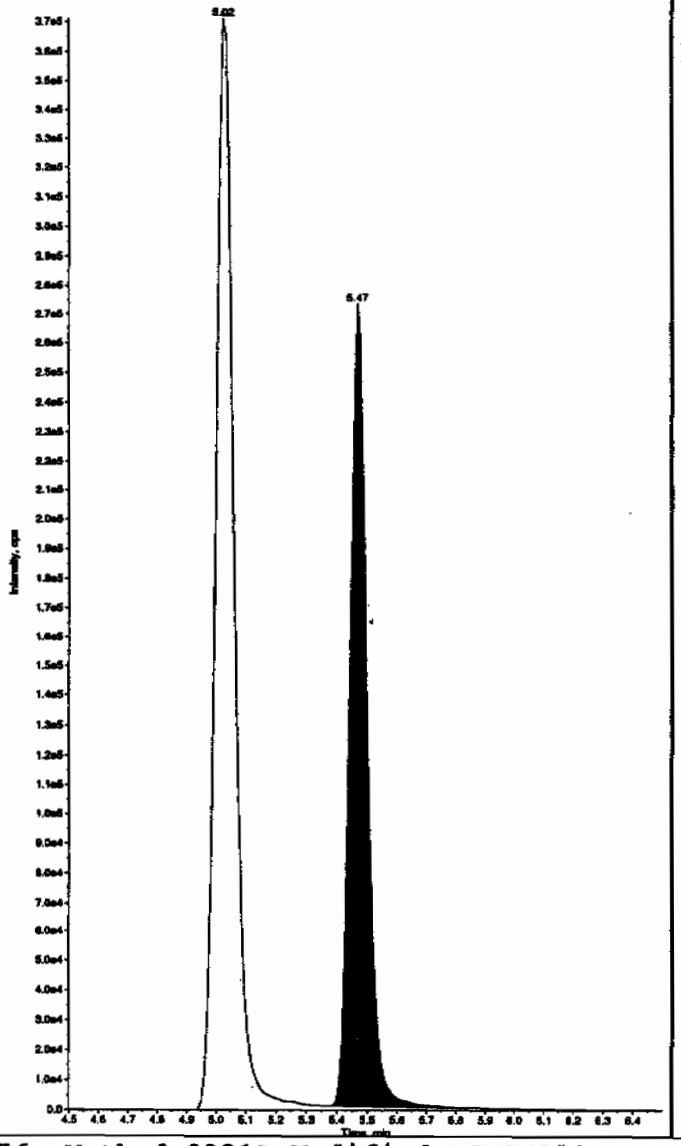
Sample Name: "WXX100125-26CCV" Sample ID: "[1]LER" File: "EXS01250024.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 456. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 4:33:57 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.50 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.47 min
Area: 1.10e+006 counts
Height: 272505.035 cps
Start Time: 5.36 min
End Time: 5.81 min

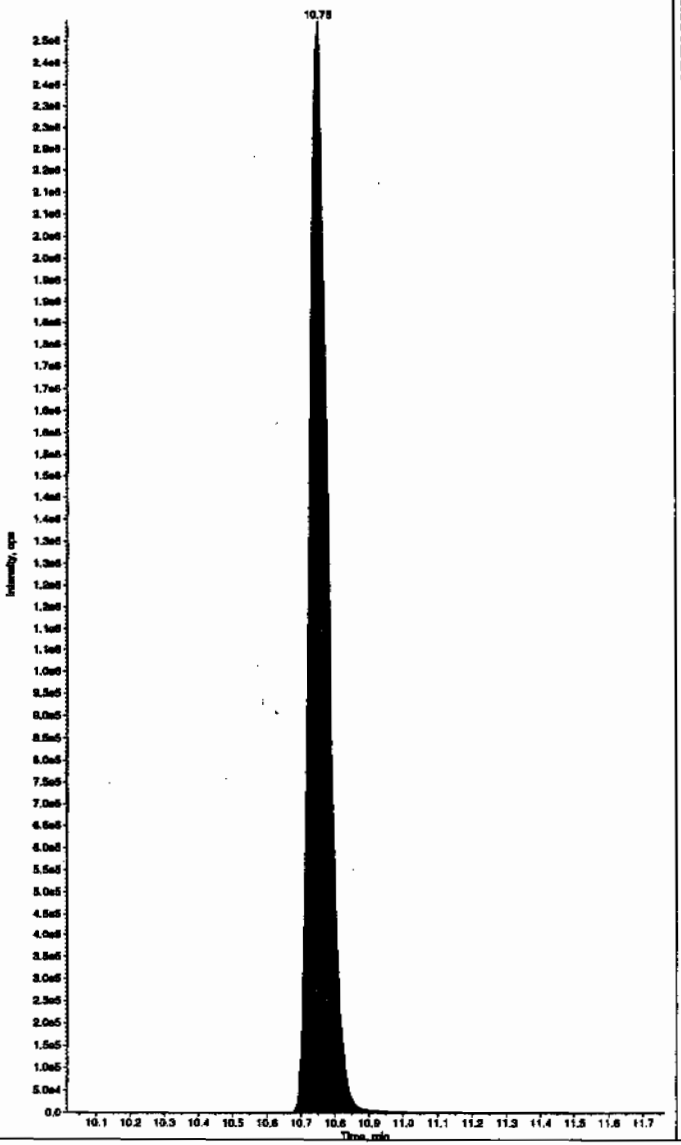


Sample Name: "WXX100125-26CCV" Sample ID: "[1]LER" File: "EXS01250024.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 455. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 4:33:57 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 9.58e+006 counts
Height: 2495266.602 cps
Start Time: 10.7 min
End Time: 11.0 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1263

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS01250026.wiff

Analysis Date: 25-JAN-10 17:05

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	104	104	
2,6-Diamino-4-nitrotoluene	100	108	108	
3,4-Dinitrotoluene	50	46.3	93	
3,5-Dinitroaniline	100	105	105	
TATB	100	99.8	100	
tris(o-cresyl) phosphate	100	110	110	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

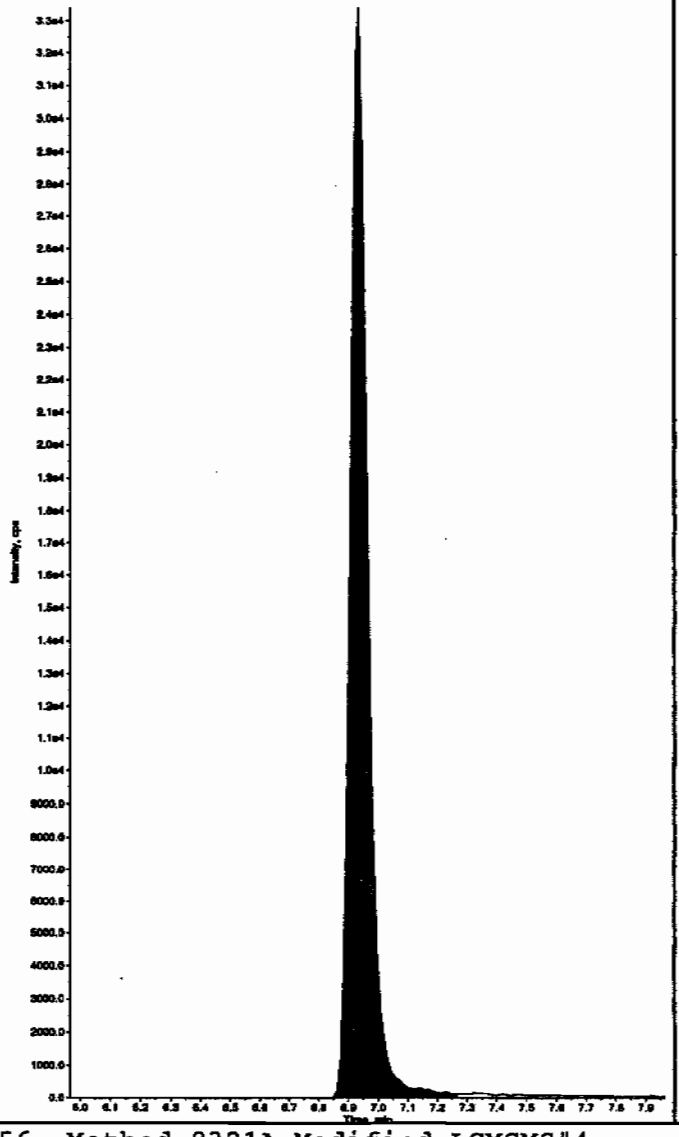
Before Ken 1/27/10

Sample Name: "WXX100125-27CRI" Sample ID: "|1|LER" File: "EXS01250026.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 99.8 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:05:21 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.93 min
Area: 1.41e+005 counts
Height: 33422.733 cps
Start Time: 6.83 min
End Time: 7.27 min

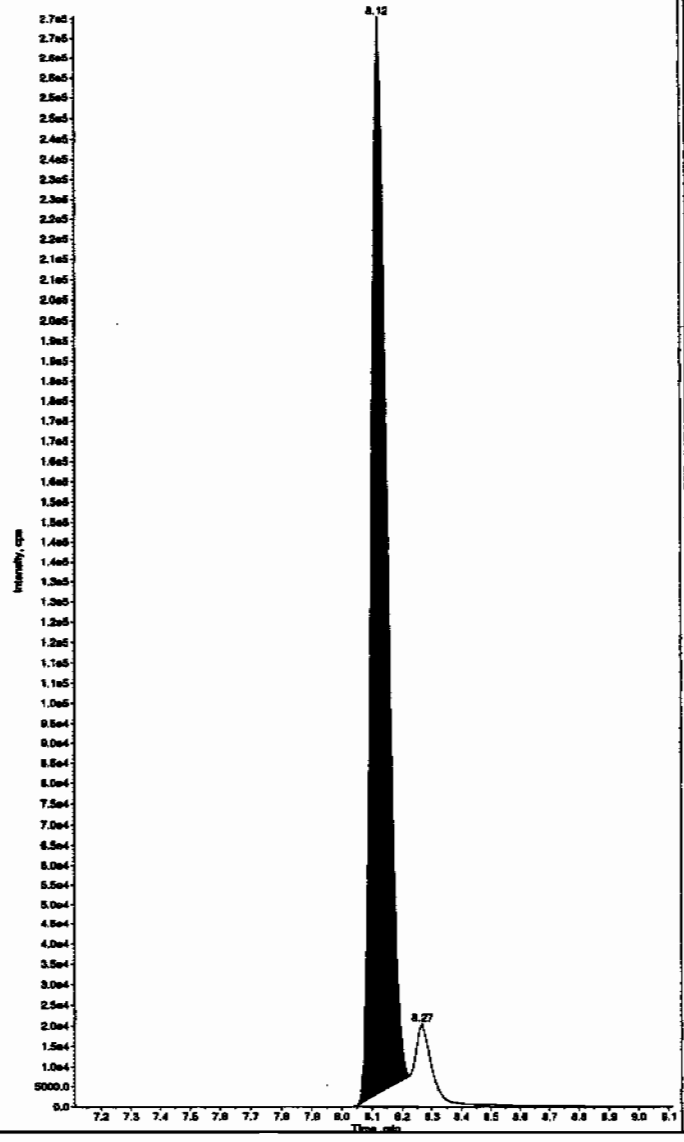


Sample Name: "WXX100125-27CRI" Sample ID: "|1|LER" File: "EXS01250026.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 100. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:05:21 PM

Modified: Yes
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.11 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.12 min
Area: 9.77e+005 counts
Height: 267289.063 cps
Start Time: 8.05 min
End Time: 8.23 min



Hmm 01/27/10

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*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

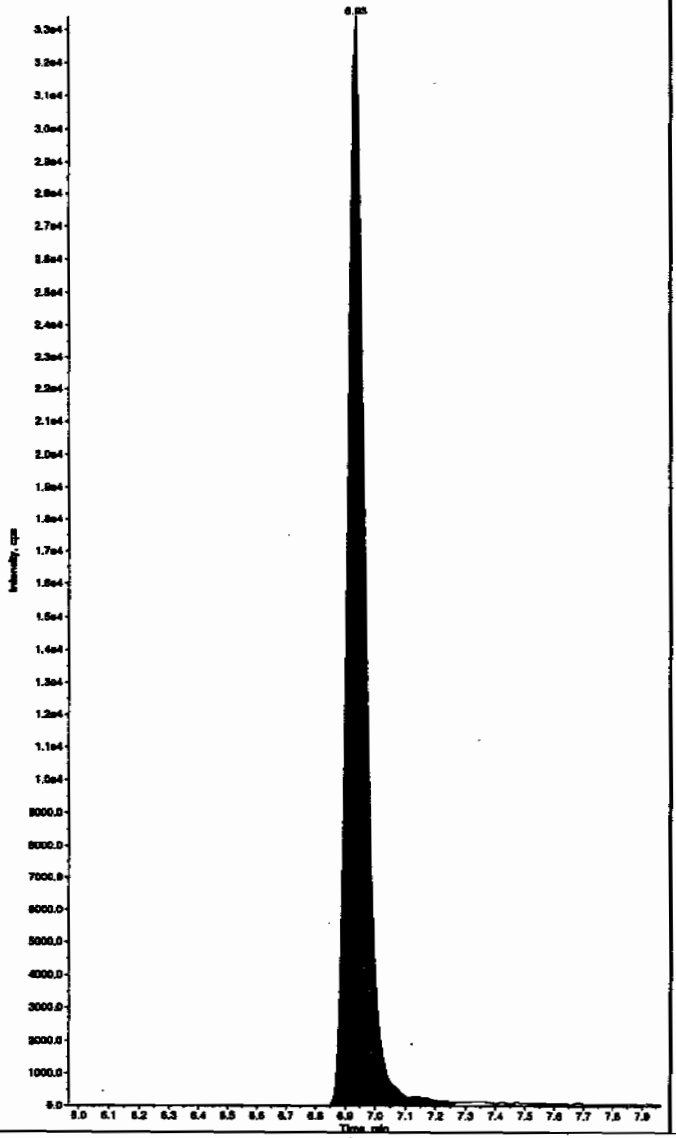
after Lcn 1b7/10

Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250026.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 99.8 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:05:21 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.93 min
Area: 1.41e+005 counts
Height: 33422.733 cps
Start Time: 6.83 min
End Time: 7.27 min

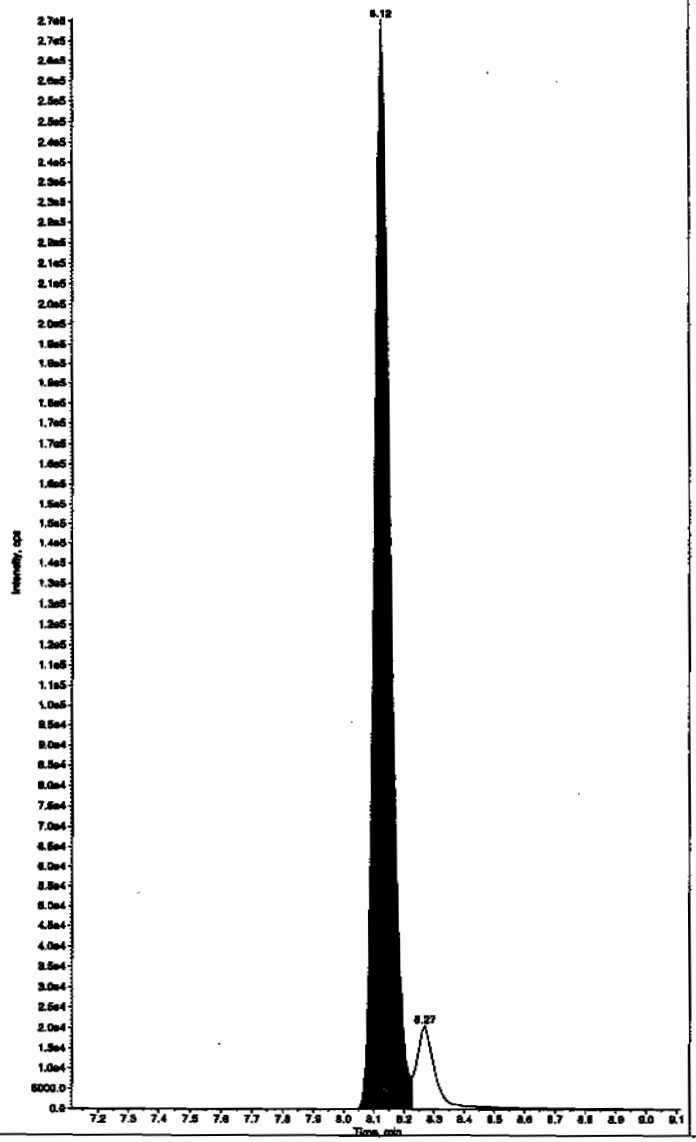


Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250026.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 105. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:05:21 PM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.11 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.12 min
Area: 1.02e+006 counts
Height: 271013.843 cps
Start Time: 8.03 min
End Time: 8.23 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

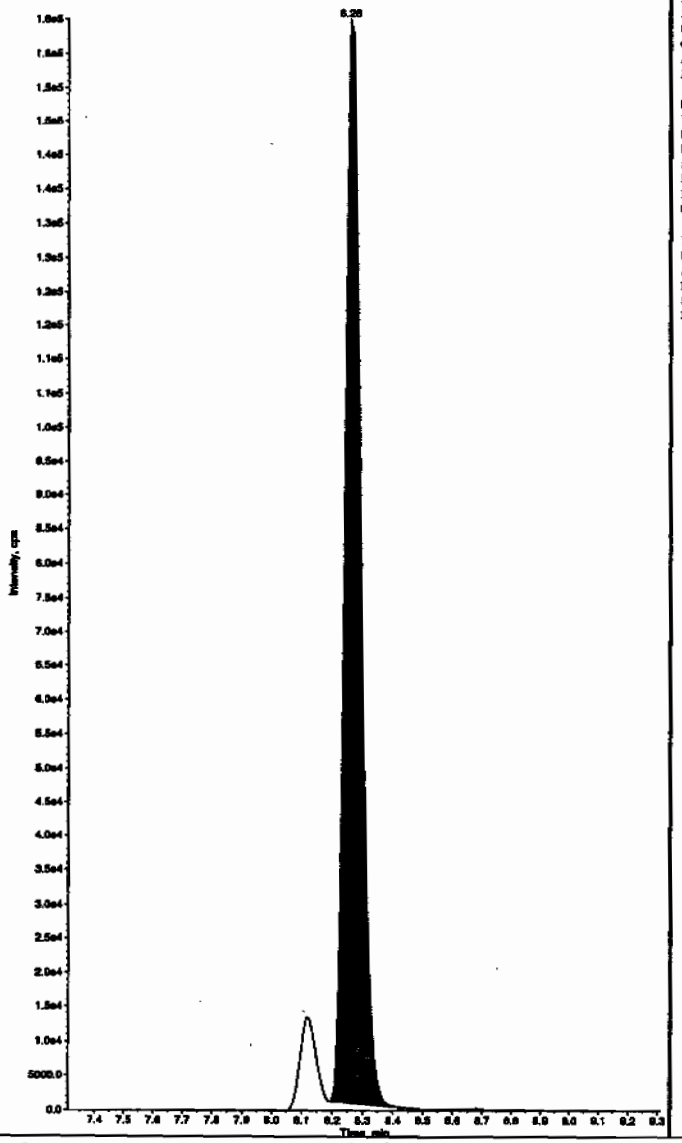
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250026.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 46.3 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:05:21 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.31 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.26 min
Area: 5.96e+005 counts
Height: 159003.006 cps
Start Time: 8.20 min
End Time: 8.44 min

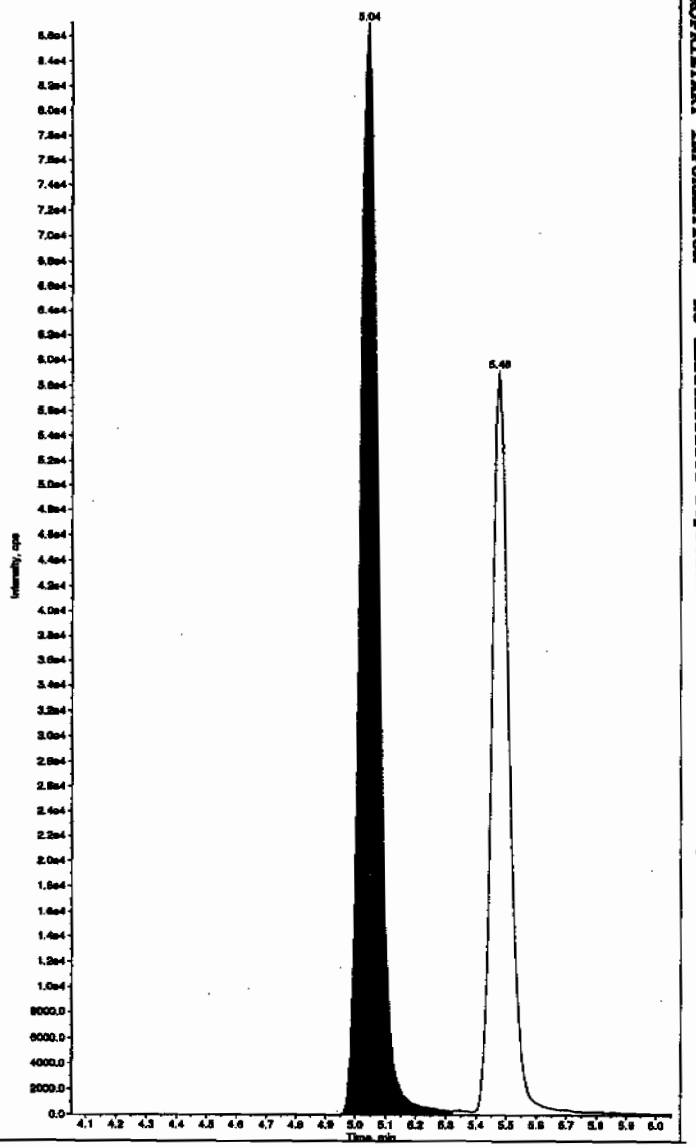


Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250026.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 108. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:05:21 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.05 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.04 min
Area: 3.74e+005 counts
Height: 87061.371 cps
Start Time: 4.93 min
End Time: 5.32 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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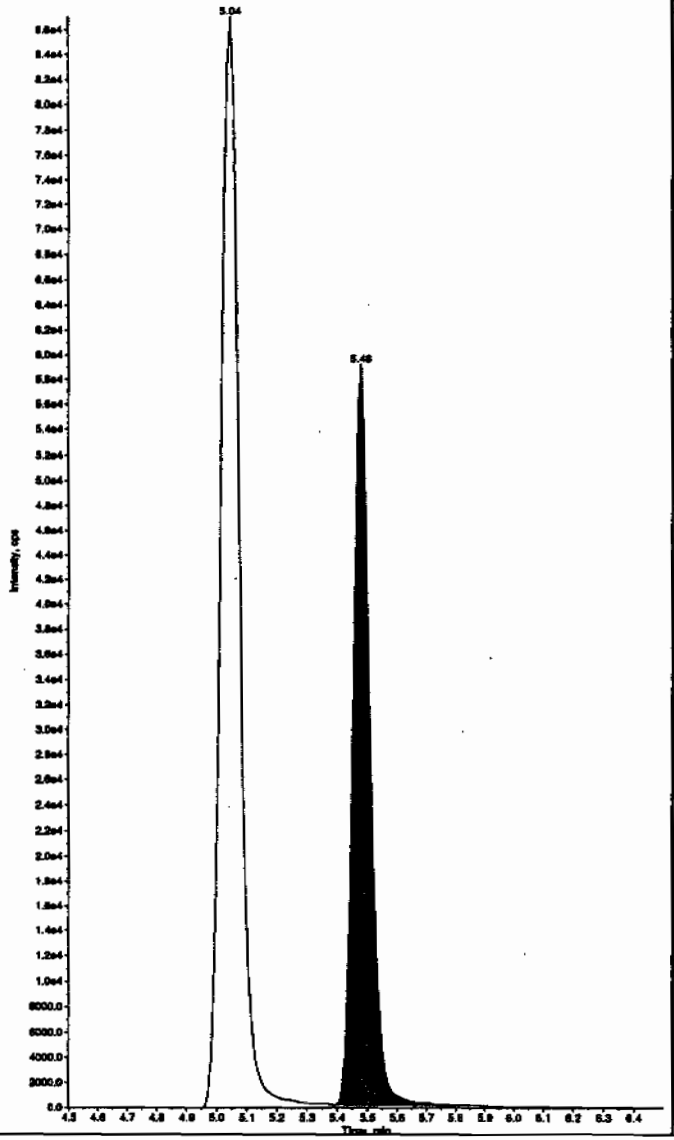
Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250026.wiff"
Peak Name: "2,4-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 104. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:05:21 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.50 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.48 min
Area: 2.36e+005 counts
Height: 59024.681 cps
Start Time: 5.38 min
End Time: 5.84 min

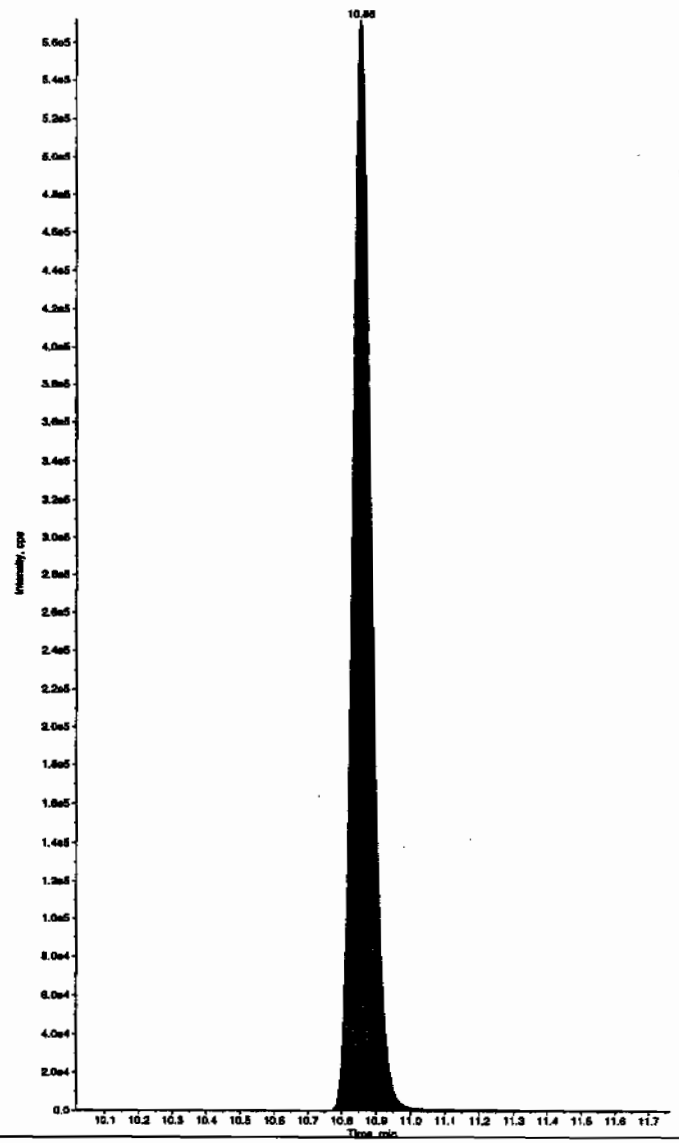


Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250026.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 110. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 5:05:21 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.9 min
Area: 2.23e+006 counts
Height: 572155.151 cps
Start Time: 10.8 min
End Time: 11.1 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1263

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS01250037.wiff

Analysis Date: 25-JAN-10 19:58

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	471	94	
2,6-Diamino-4-nitrotoluene	500	433	87	
3,4-Dinitrotoluene	250	219	88	
3,5-Dinitroaniline	500	494	99	
TATB	500	508	102	
tris(o-cresyl) phosphate	500	486	97	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 70-130%
OtherTarget Analytes 80-120%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

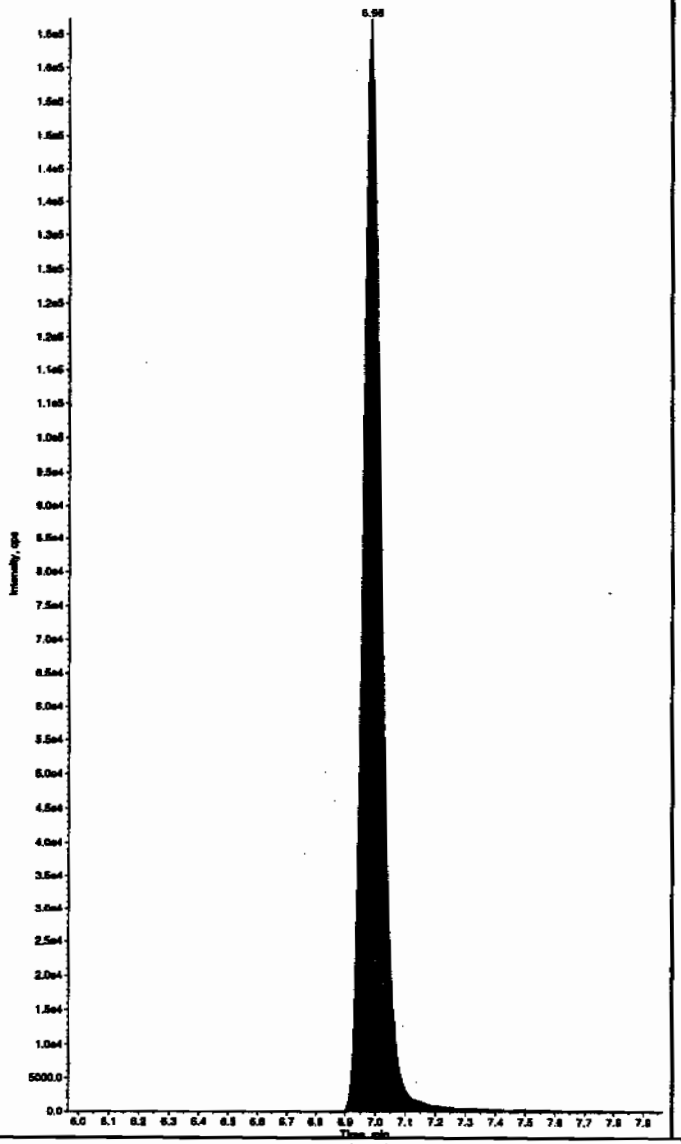
Before LCR 1/27/10

Sample Name: "WXX100125-26CCV" Sample ID: "[1]LER" File: "EXS01250037.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 508. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 7:58:18 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.99 min
Area: 7.06e+005 counts
Height: 162492.188 cps
Start Time: 6.87 min
End Time: 7.46 min

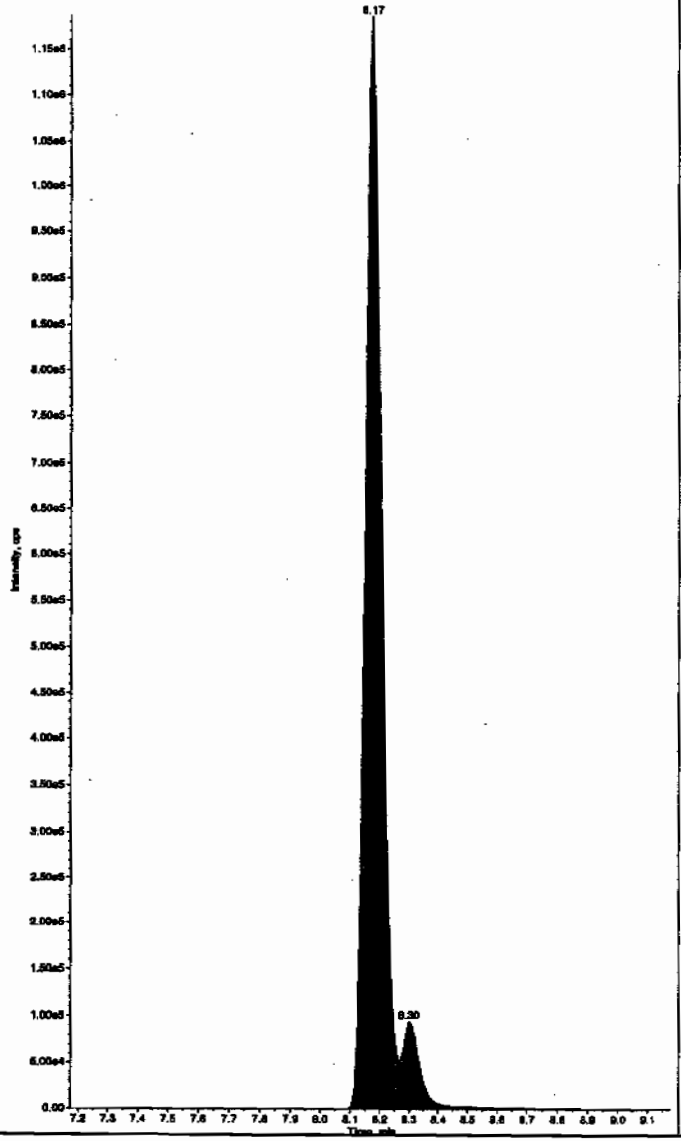


Sample Name: "WXX100125-26CCV" Sample ID: "[1]LER" File: "EXS01250037.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 551. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 7:58:18 PM

Modified: Yes
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.17 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.17 min
Area: 5.12e+006 counts
Height: 1187286.499 cps
Start Time: 8.07 min
End Time: 8.73 min



Hmm 01/27/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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

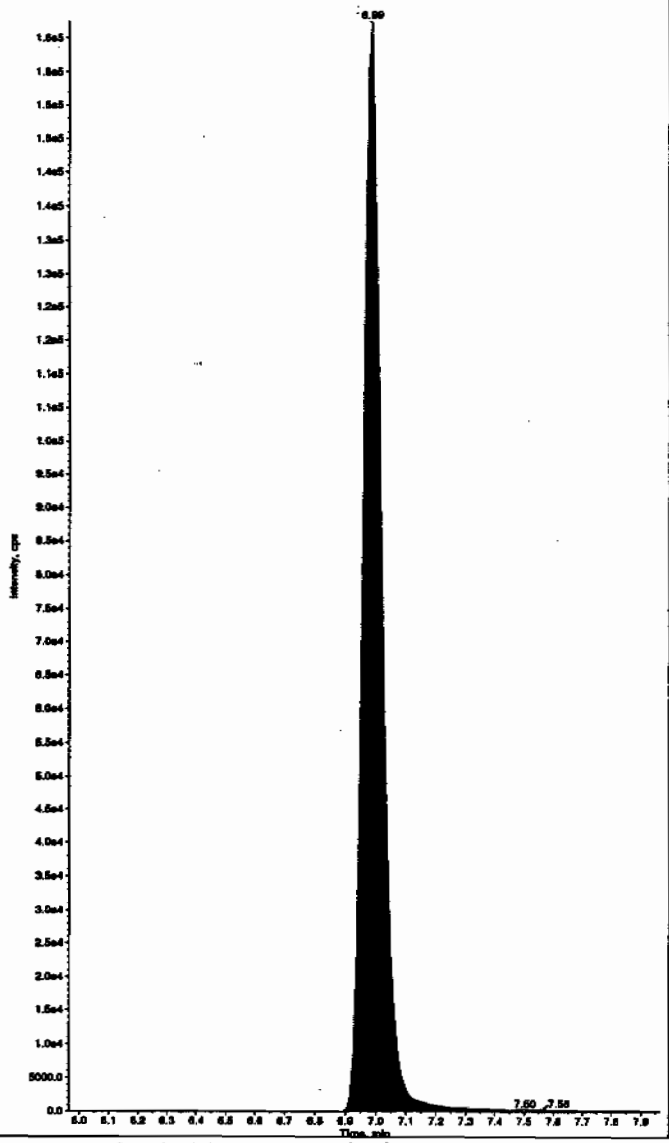
after Lan 1/27/10

Sample Name: "WXX100125-28CCV" Sample ID: "[1]LER" File: "EXS01250037.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 508. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 7:58:18 PM

Modified: No
Alg. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.99 min
Area: 7.06e+005 counts
Height: 162492.188 cps
Start Time: 6.87 min
End Time: 7.46 min

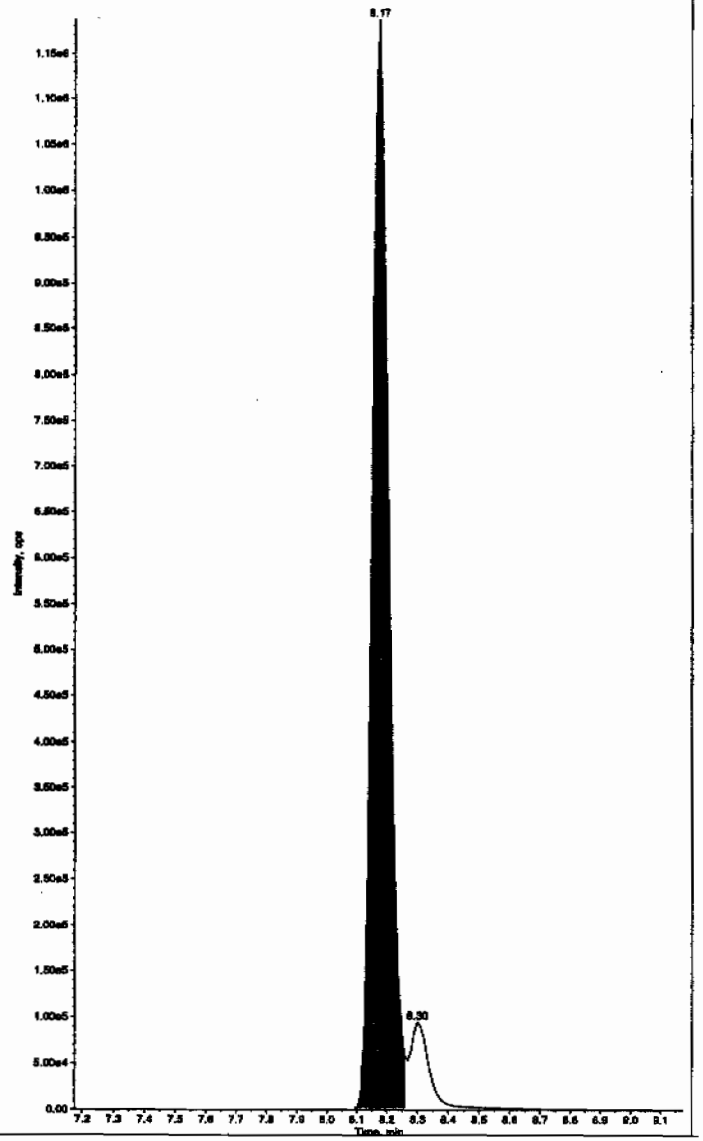


Sample Name: "WXX100125-28CCV" Sample ID: "[1]LER" File: "EXS01250037.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 494. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 7:58:18 PM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.17 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.17 min
Area: 4.63e+006 counts
Height: 1185297.641 cps
Start Time: 8.09 min
End Time: 8.26 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

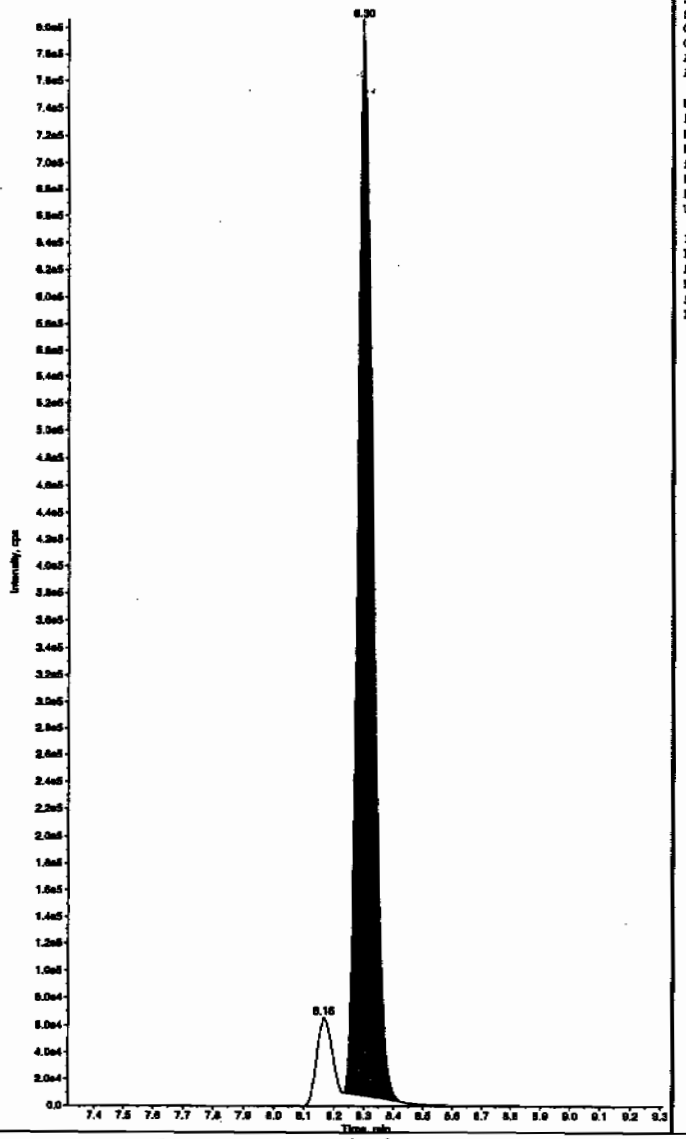
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100125-26CCV" Sample ID: "[1]LER" File: "EXS01250037.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 250. ng/mL
Calculated Conc: 219. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 7:58:18 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.31 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.30 min
Area: 2.91e+006 counts
Height: 799018.311 cps
Start Time: 8.24 min
End Time: 8.42 min

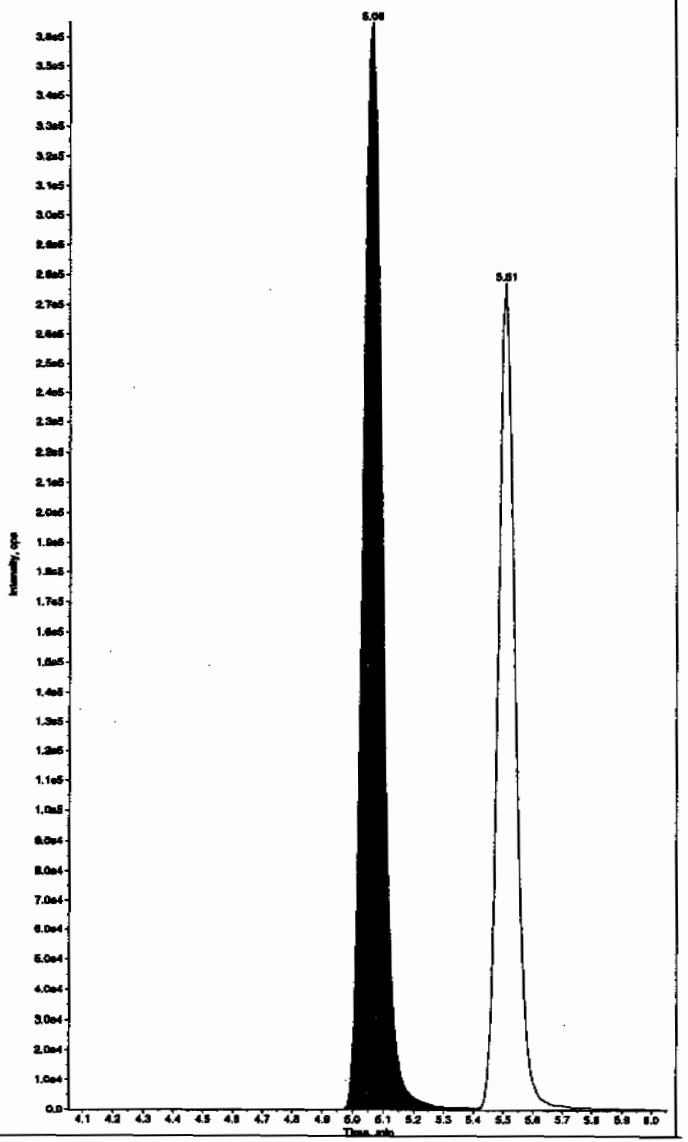


Sample Name: "WXX100125-26CCV" Sample ID: "[1]LER" File: "EXS01250037.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 433. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 7:58:18 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.05 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.06 min
Area: 1.63e+006 counts
Height: 365158.569 cps
Start Time: 4.95 min
End Time: 5.34 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

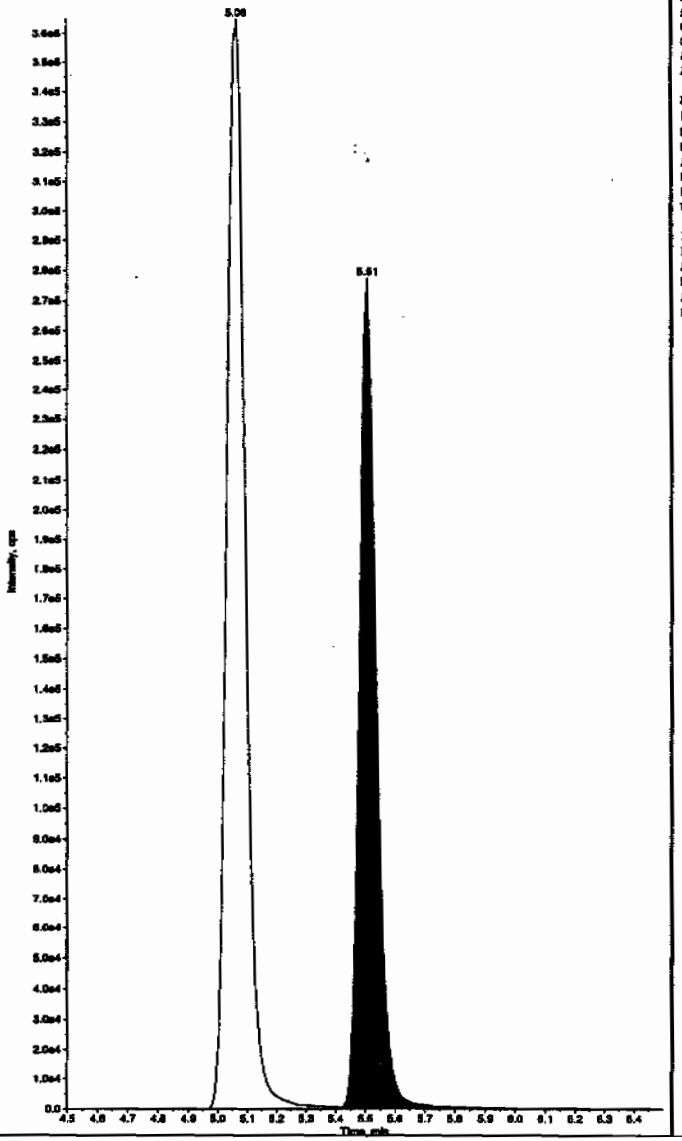
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100125-26CCV" Sample ID: "[1]LER" File: "EXS01250037.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 471. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 7:58:18 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.50 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.51 min
Area: 1.13e+006 counts
Height: 277376.404 cps
Start Time: 5.42 min
End Time: 6.00 min

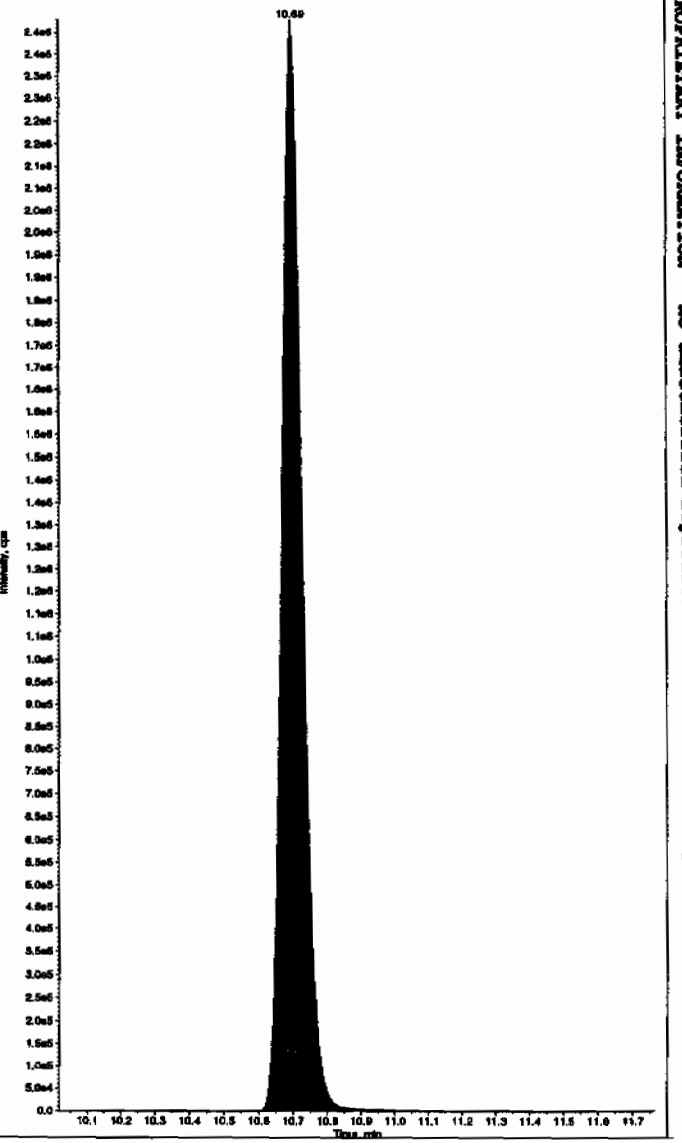


Sample Name: "WXX100125-26CCV" Sample ID: "[1]LER" File: "EXS01250037.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 500. ng/mL
Calculated Conc: 486. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 7:58:18 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.7 min
Area: 1.02e+007 counts
Height: 2430585.938 cps
Start Time: 10.6 min
End Time: 11.0 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1263

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS01250039.wiff

Analysis Date: 25-JAN-10 20:29

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	107	107	
2,6-Diamino-4-nitrotoluene	100	97.3	97	
3,4-Dinitrotoluene	50	46.6	93	
3,5-Dinitroaniline	100	104	104	
TATB	100	103	103	
tris(o-cresyl) phosphate	100	111	111	

Recovery Limits:
3,4-Dinitrotoluene (Surrogate),TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene , 2,4-Diamino-6-nitrotoluene 50-150%
OtherTarget Analytes 70-130%
Column used to flag Recovery outside of Limits
* Value outside of Recovery Limits

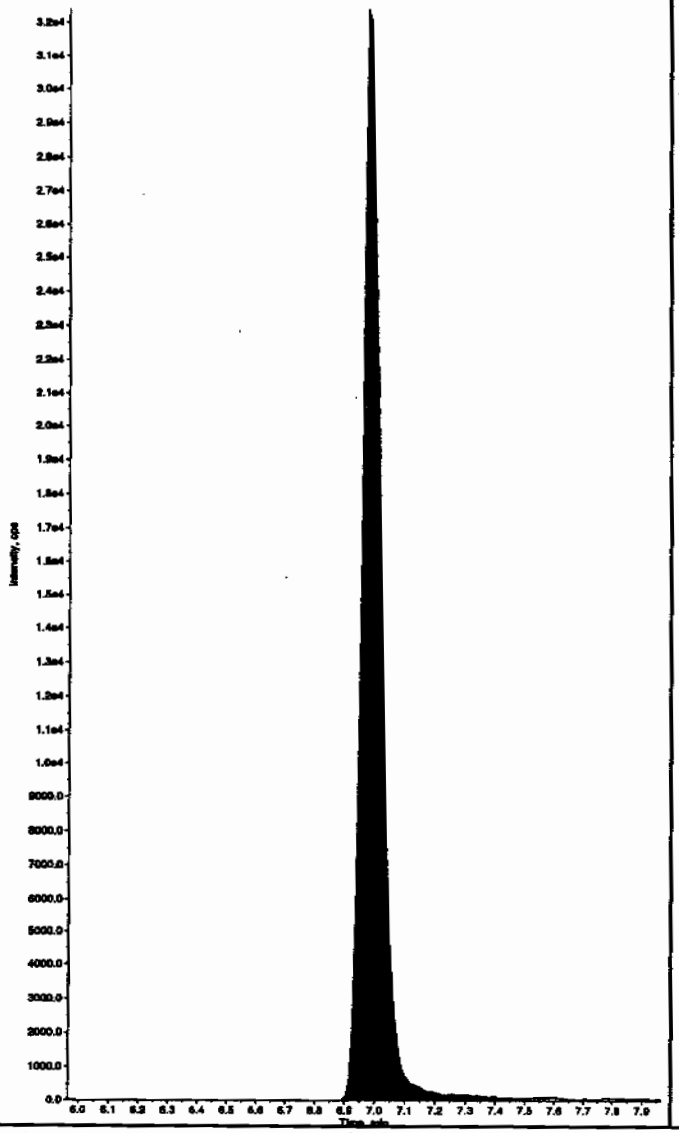
Before LER 1/27/10

Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250039.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 103. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 8:29:44 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.98 min
Area: 1.46e+005 counts
Height: 32398.766 cps
Start Time: 6.87 min
End Time: 7.50 min

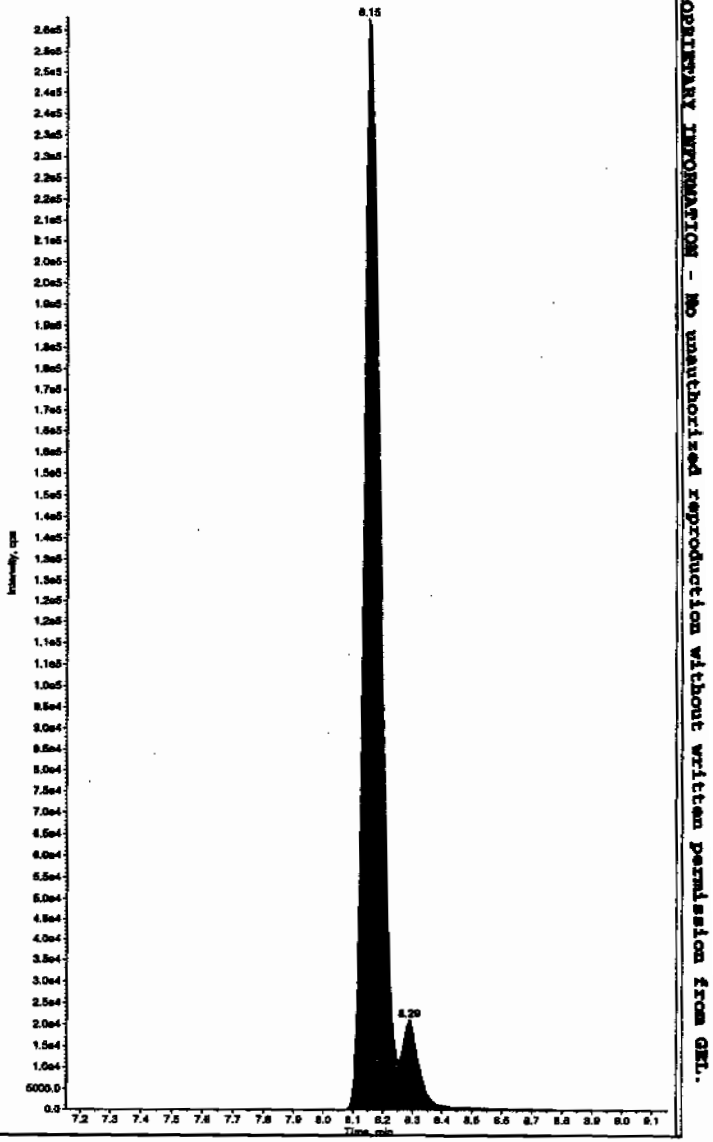


Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250039.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 114. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 8:29:44 PM

Modified: Yes
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.15 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.15 min
Area: 1.11e+006 counts
Height: 258078.857 cps
Start Time: 8.02 min
End Time: 8.84 min



Hnm 01/27/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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

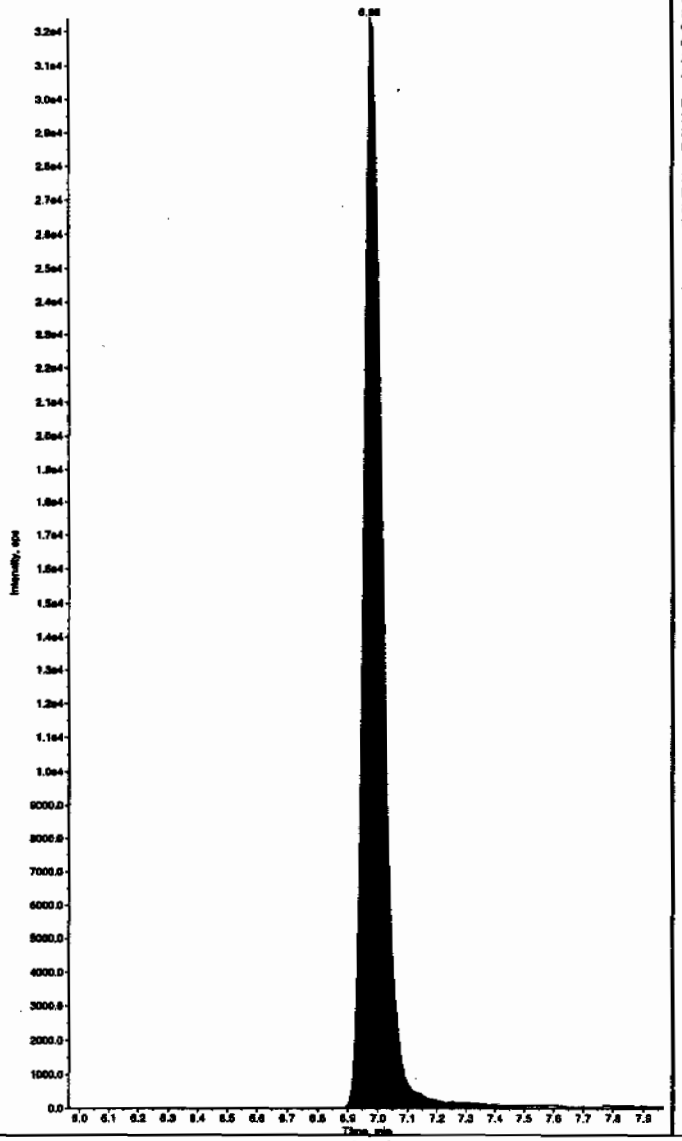
after Ker 11/27/10

Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250039.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 103. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 8:29:44 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.60 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.98 min
Area: 1.46e+005 counts
Height: 32398.766 cps
Start Time: 6.87 min
End Time: 7.50 min

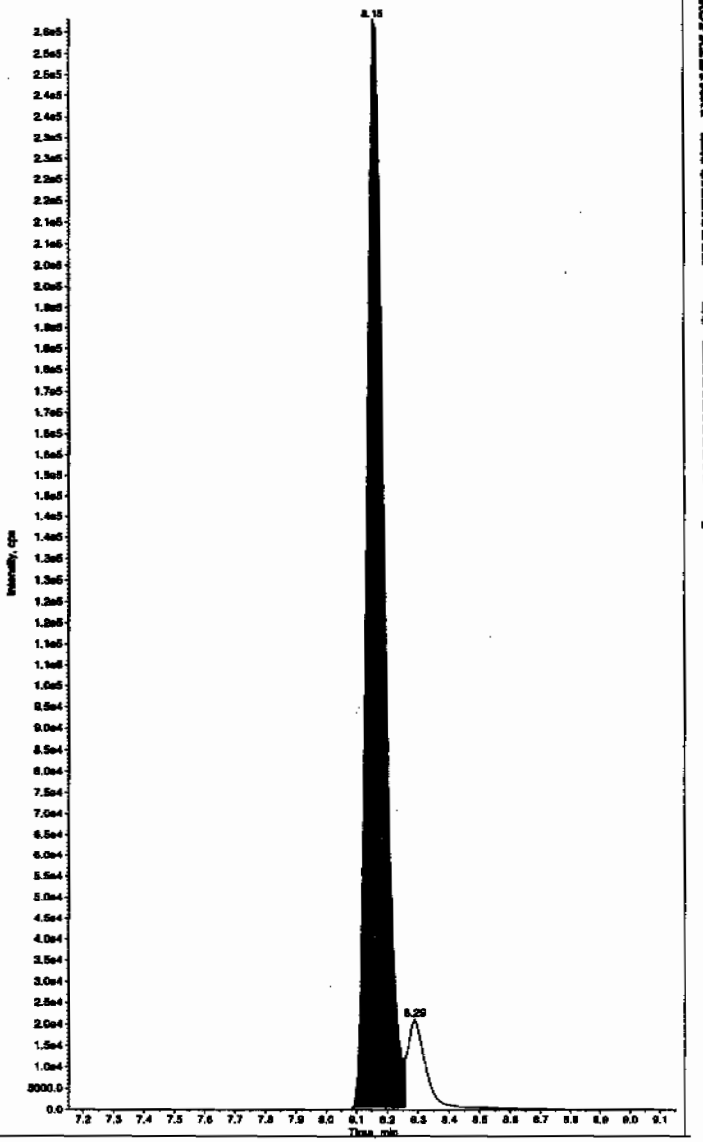


Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250039.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 104. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 8:29:44 PM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.15 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.16 min
Area: 1.01e+006 counts
Height: 262430.703 cps
Start Time: 8.08 min
End Time: 8.26 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

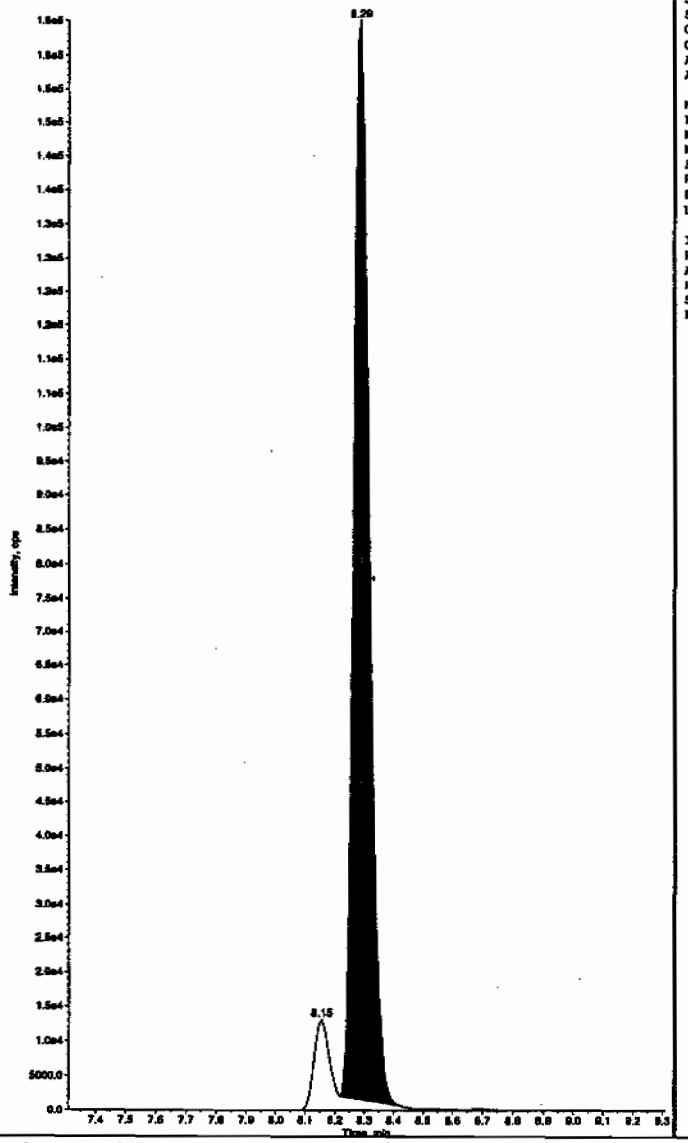
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250039.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 50.0 ng/mL
Calculated Conc: 46.6 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 8:29:44 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.31 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.28 min
Area: 6.00e+005 counts
Height: 158537.292 cps
Start Time: 8.22 min
End Time: 8.42 min

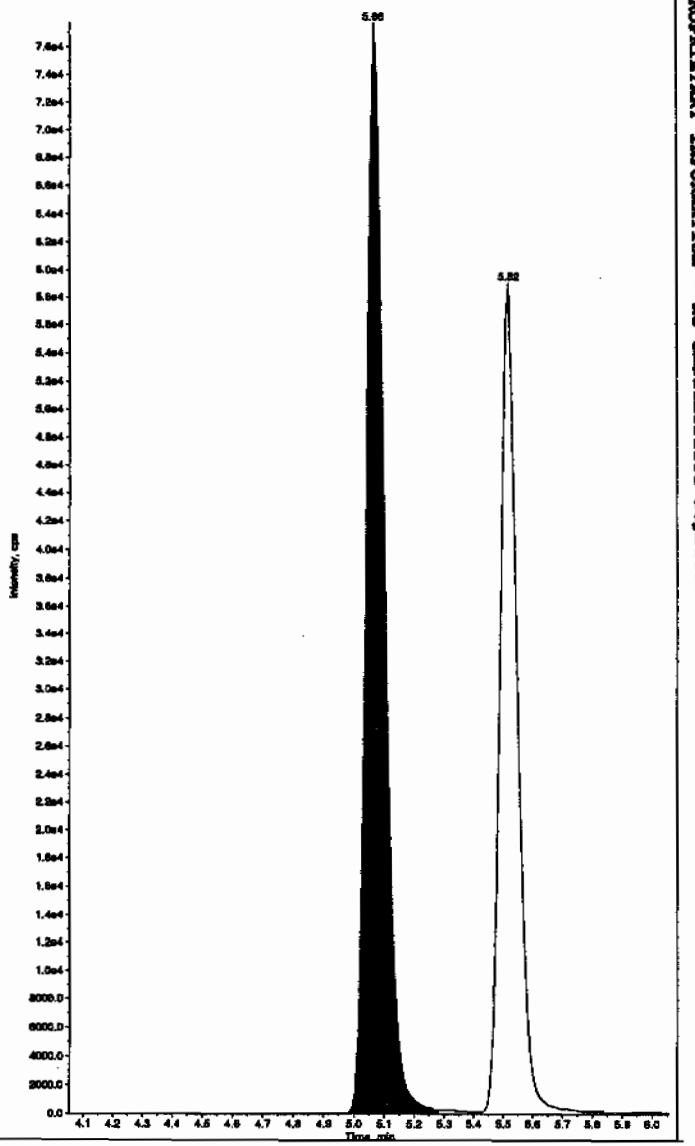


Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250039.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 97.3 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 8:29:44 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.05 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.05 min
Area: 3.32e+005 counts
Height: 77676.033 cps
Start Time: 4.96 min
End Time: 5.28 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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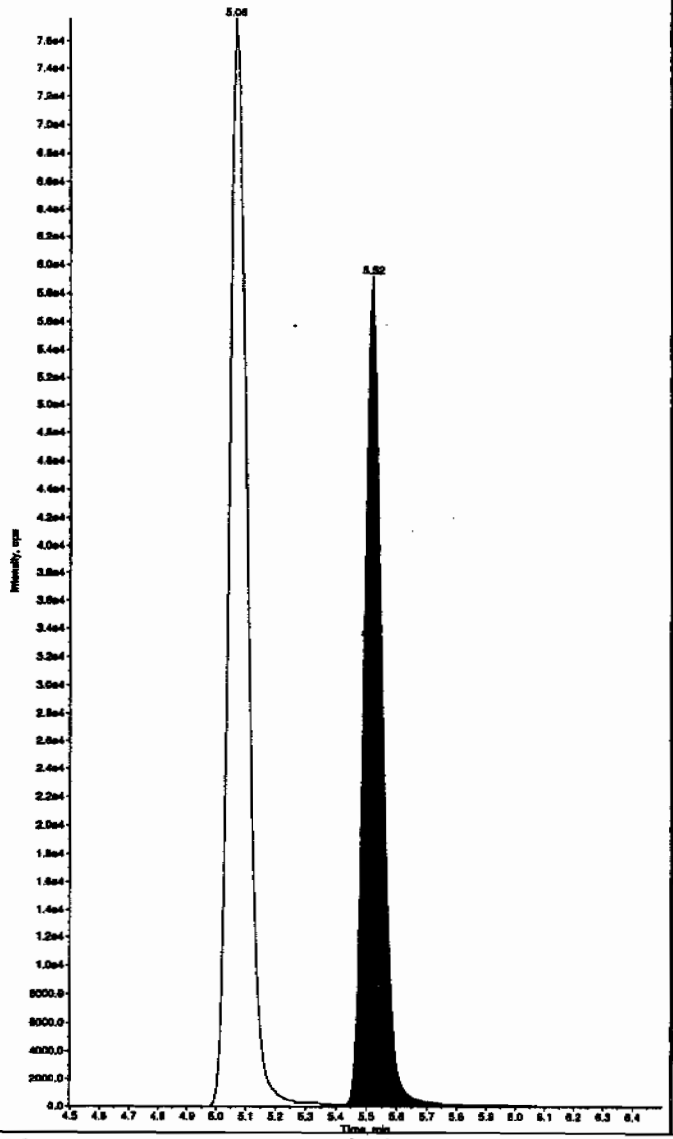
Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250039.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 107. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 8:29:44 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.50 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.52 min
Area: 2.42e+005 counts
Height: 59116.123 cps
Start Time: 5.41 min
End Time: 5.93 min

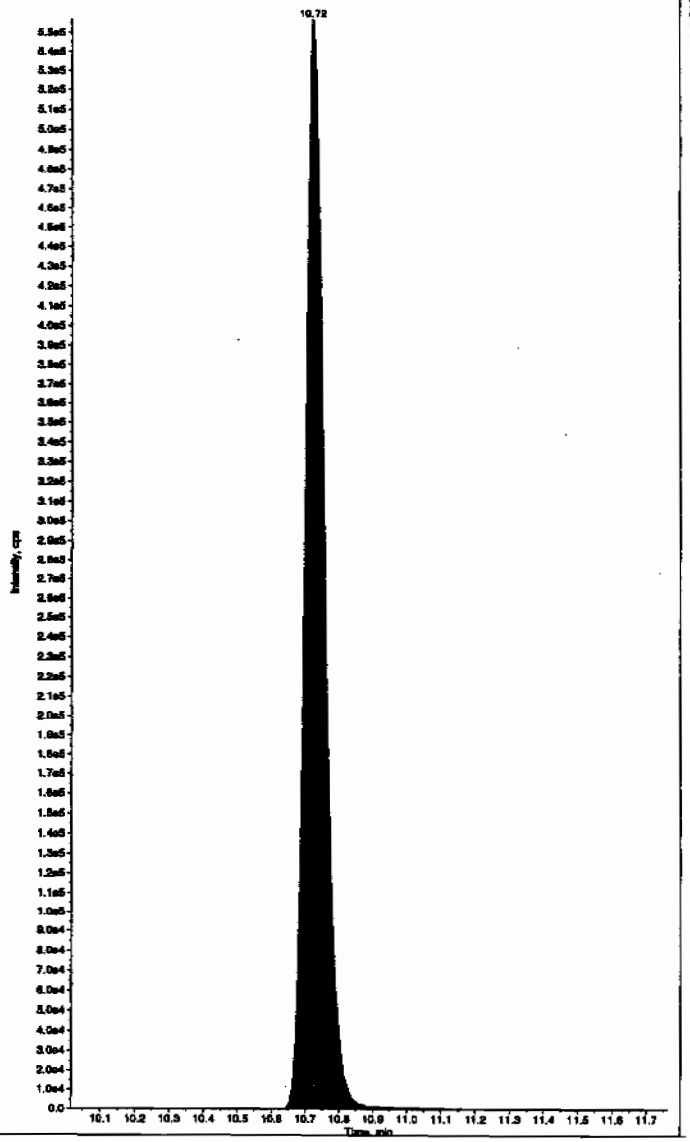


Sample Name: "WXX100125-27CRI" Sample ID: "[1]LER" File: "EXS01250039.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCMSEXP_C" Annotation: ""

Sample Index: 1
Sample Type: QC
Concentration: 100. ng/mL
Calculated Conc: 111. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 8:29:44 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.7 min
Area: 2.24e+006 counts
Height: 556912.964 cps
Start Time: 10.6 min
End Time: 11.0 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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QUALITY CONTROL DATA

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

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 942334

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 1202017300

Sample Amount 2

Moisture:

Amount Units g

Date Received: 17-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0131013a

Date Analyzed: 31-JAN-10 18:29

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

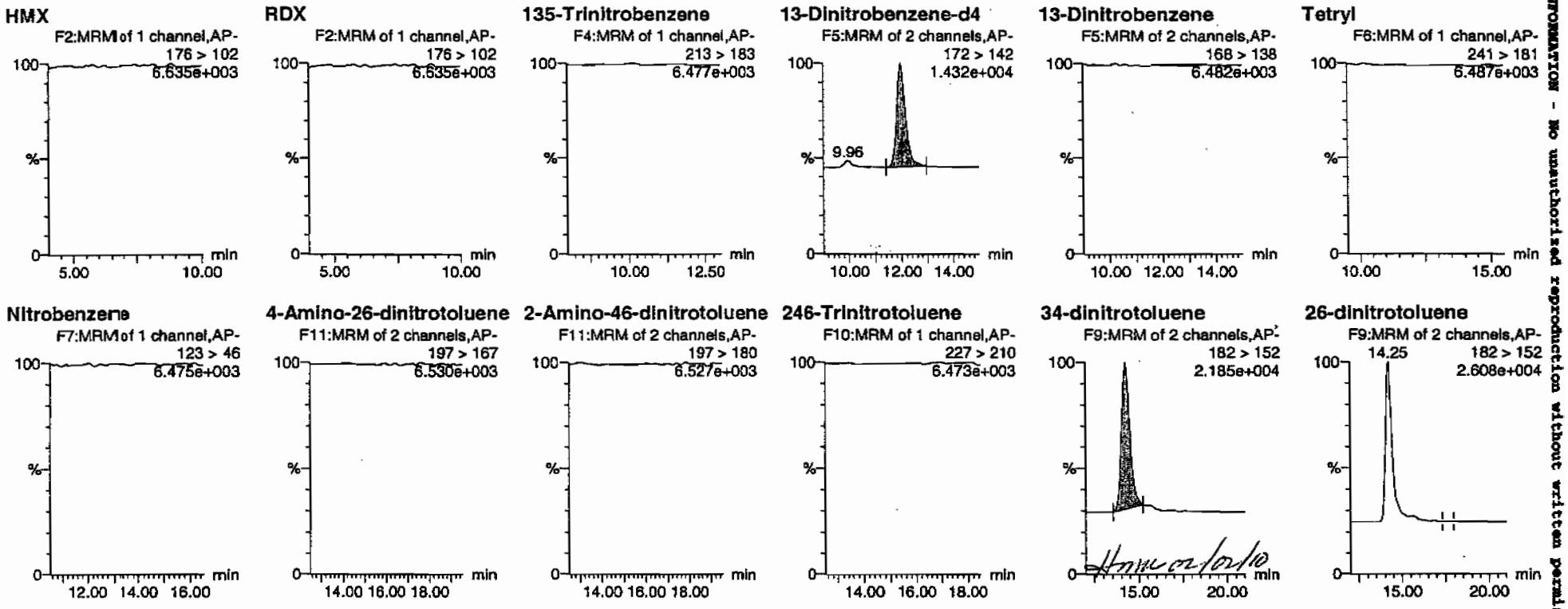
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131013a
Date: 31-Jan-2010
Time: 18:29:57
ID: 1202017300 | LANU | 942335 | Soil | MB | 2 |
Vial: 1:4,A

MM 2/1/10



HMW 02/02/10

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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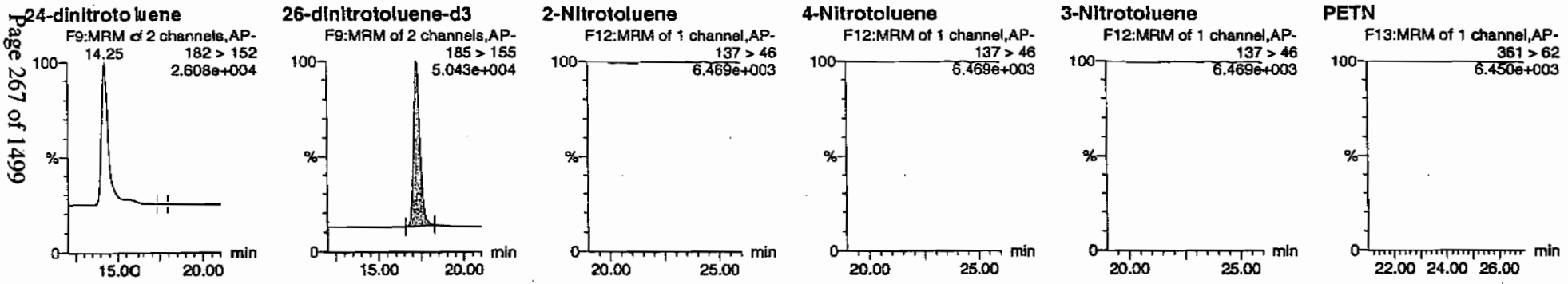
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\NASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010



ID	Name	Trace Area	RT	Area	IS Area	Resp	Response	Flags	Mod Date	Mod Time	Height	Width	Skew	S/N
1202017300	HMX	176 > 102			3132.801									
1202017300	RDX	176 > 102			3132.801									
1202017300	135-Trinitrobenzene	213 > 183			3132.801									
1202017300	13-Dinitrobenzene-d4	172 > 142	11.95	3132.801		3132.801	3132.801	bb			473.4444	94.7	-5.3	358.9
1202017300	13-Dinitrobenzene	168 > 138			3132.801									
1202017300	Tetryl	241 > 181			3132.801									
1202017300	Nitrobenzene	123 > 46			3132.801									
1202017300	4-Amino-26-dinitrotoluene	197 > 167			18680.096									
1202017300	2-Amino-46-dinitrotoluene	197 > 180			18680.096									
1202017300	246-Trinitrotoluene	227 > 210			18680.096									
1202017300	34-dinitrotoluene	182 > 152	14.25	8171.918	18680.096	8171.918	218.733	bb			234.0422	93.6	-6.4	539.9
1202017300	26-dinitrotoluene	182 > 152			18680.096			MM-	01-Feb-10	14:14:45				
1202017300	24-dinitrotoluene	182 > 152			18680.096			MM-	01-Feb-10	14:19:28				
1202017300	26-dinitrotoluene-d3	185 > 155	17.27	18680.096		18680.096	18680.096	bb			513.8346	102.8	2.8	1172.6
1202017300	2-Nitrotoluene	137 > 46			18680.096									
1202017300	4-Nitrotoluene	137 > 46			18680.096									
1202017300	3-Nitrotoluene	137 > 46			18680.096									
1202017300	PETN	361 > 62			18680.096									

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 942334

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 1202017300

Sample Amount 2

Moisture:

Amount Units g

Date Received: 17-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS01250017.wiff

Date Analyzed: 25-JAN-10 14:44

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

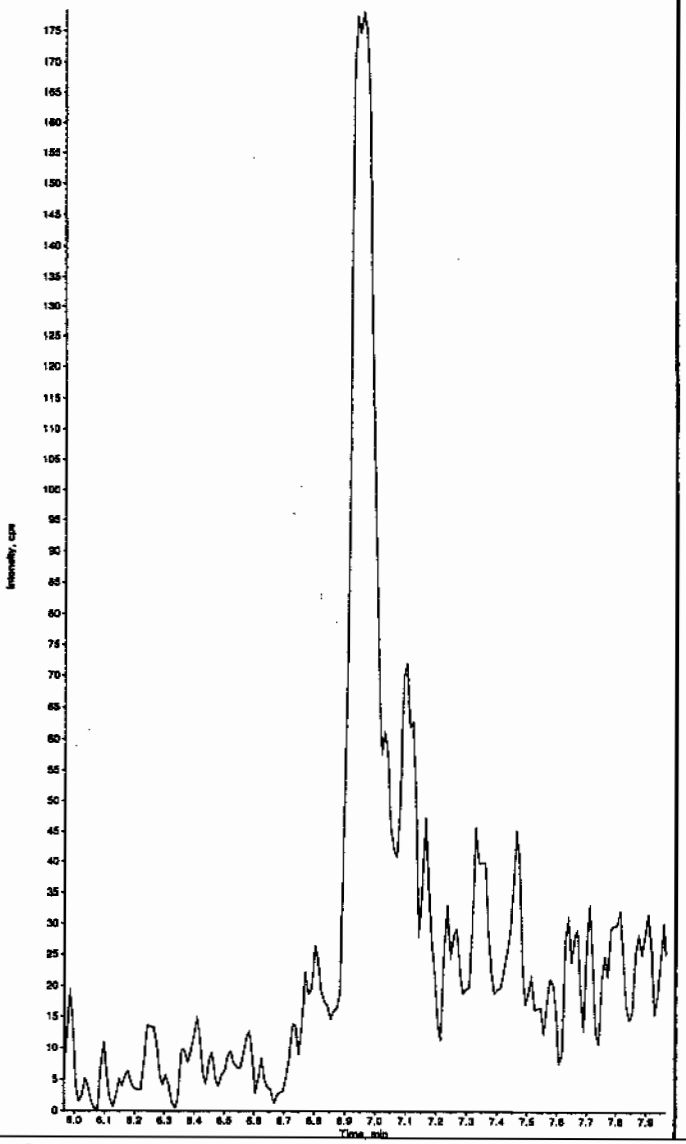
*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Dan 1/27/10

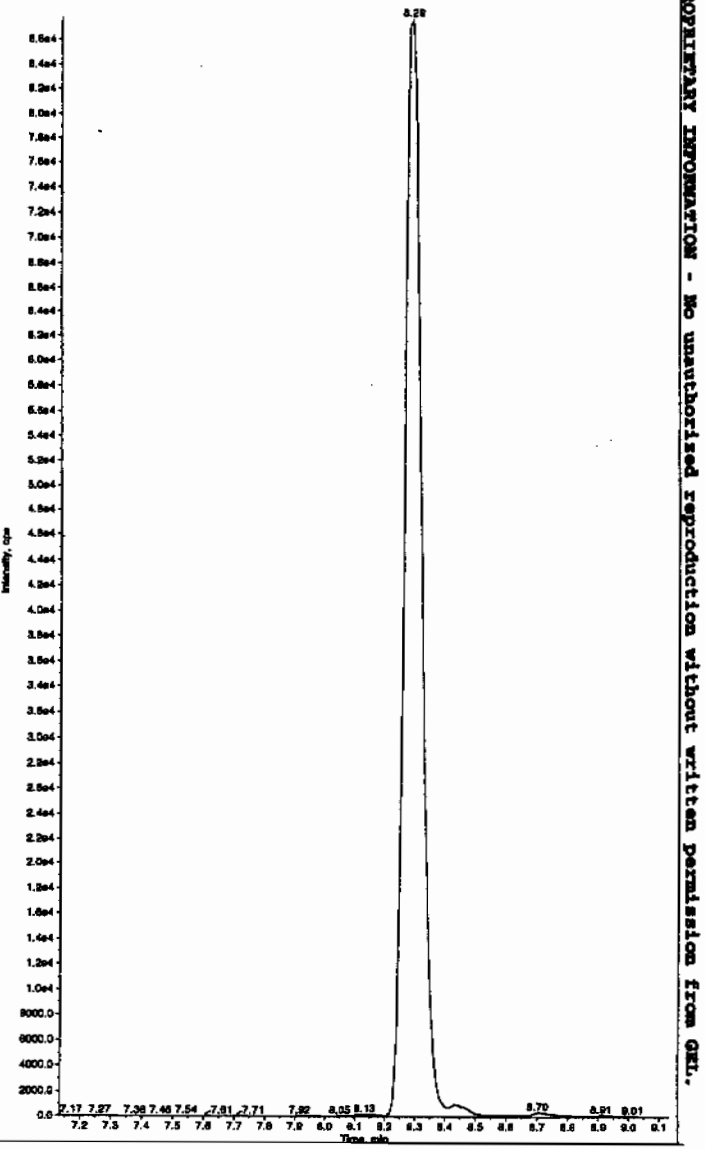
Sample Name: "1202017300" Sample ID: "942335|2|LER" File: "EXS01250017.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:44:04 PM

Modified: No



Sample Name: "1202017300" Sample ID: "942335|2|LER" File: "EXS01250017.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/45.0 amu"
Comment: "LCX83212S" Annotation: ""
Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:44:04 PM

Modified: Yes



Hmm 01/27/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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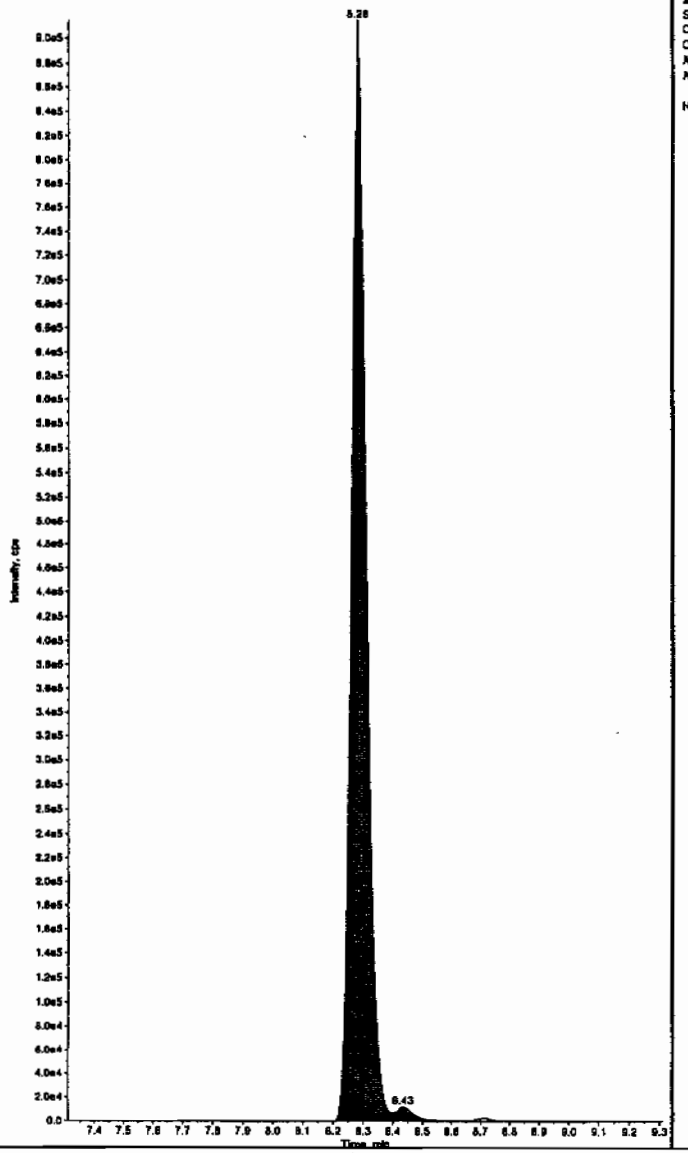
Sample Name: "1202017300" Sample ID: "942335|2|LER" File: "EXS01250017.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX832128" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 255. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:44:04 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
MTA. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.31 min
Use Relative RT: No

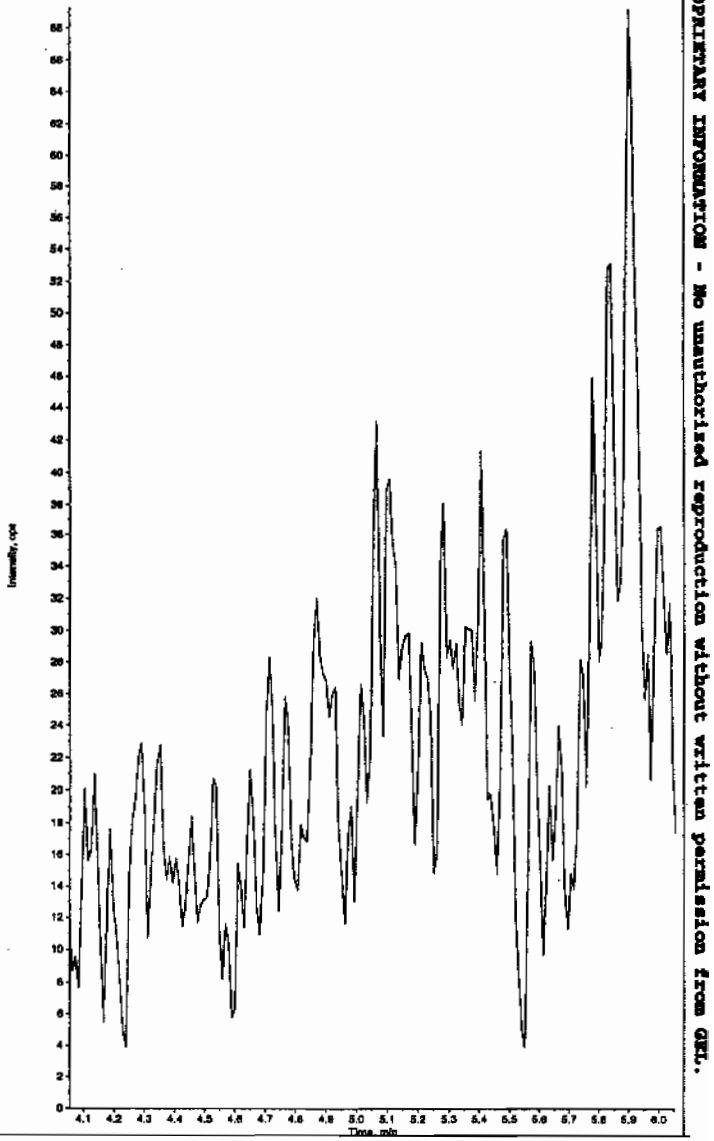
Int. Type: Valley
Retention Time: 8.28 min
Area: 3.37e+006 counts
Height: 915359.070 cps
Start Time: 8.18 min
End Time: 8.60 min



Sample Name: "1202017300" Sample ID: "942335|2|LER" File: "EXS01250017.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX832128" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:44:04 PM

Modified: No



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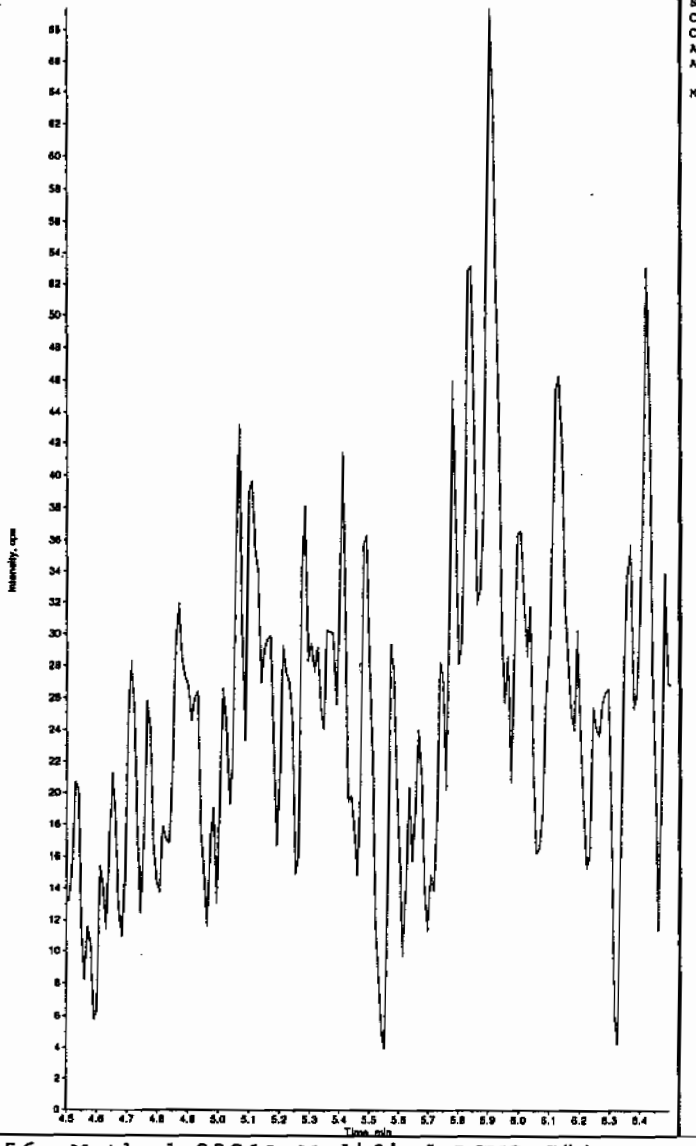
Sample Name: "1202017300" Sample ID: "942335[2]LER" File: "EXS01250017.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX632125" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:44:04 PM

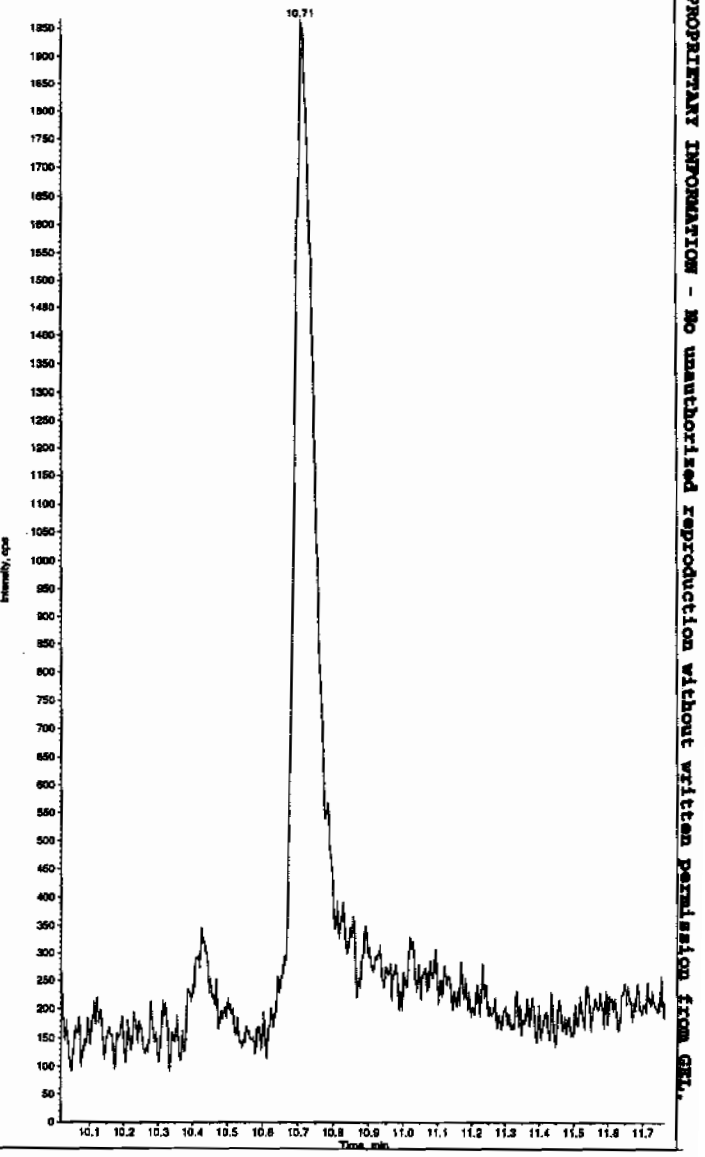
Modified: No



Sample Name: "1202017300" Sample ID: "942335[2]LER" File: "EXS01250017.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX632125" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:44:04 PM

Modified: No



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 942334

Lab Code: GEL

GEL Job No (SDG) 10-1263

Matrix: SOIL

GEL Sample ID: 1202017301

Sample Amount 2

Moisture:

Amount Units g

Date Received: 17-JAN-10

Extraction Type Sonication

Extraction Batch ID: 942334

Concentrated Extract Volume (mL) 10

Date Extracted: 22-JAN-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0131014a

Date Analyzed: 31-JAN-10 18:59

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	5030	
121-14-2	2,4-Dinitrotoluene	5150	
121-82-4	RDX	4970	
19406-51-0	4-Amino-2,6-dinitrotoluene	5080	
2691-41-0	HMX	4340	
35572-78-2	2-Amino-4,6-dinitrotoluene	4750	
479-45-8	Tetryl	3150	
606-20-2	2,6-Dinitrotoluene	4740	
78-11-5	PETN	4210	
88-72-2	o-Nitrotoluene	4840	
98-95-3	Nitrobenzene	5170	
99-08-1	m-Nitrotoluene	4460	
99-35-4	1,3,5-Trinitrobenzene	4060	
99-65-0	m-Dinitrobenzene	4570	
99-99-0	p-Nitrotoluene	4830	

*Concentration =

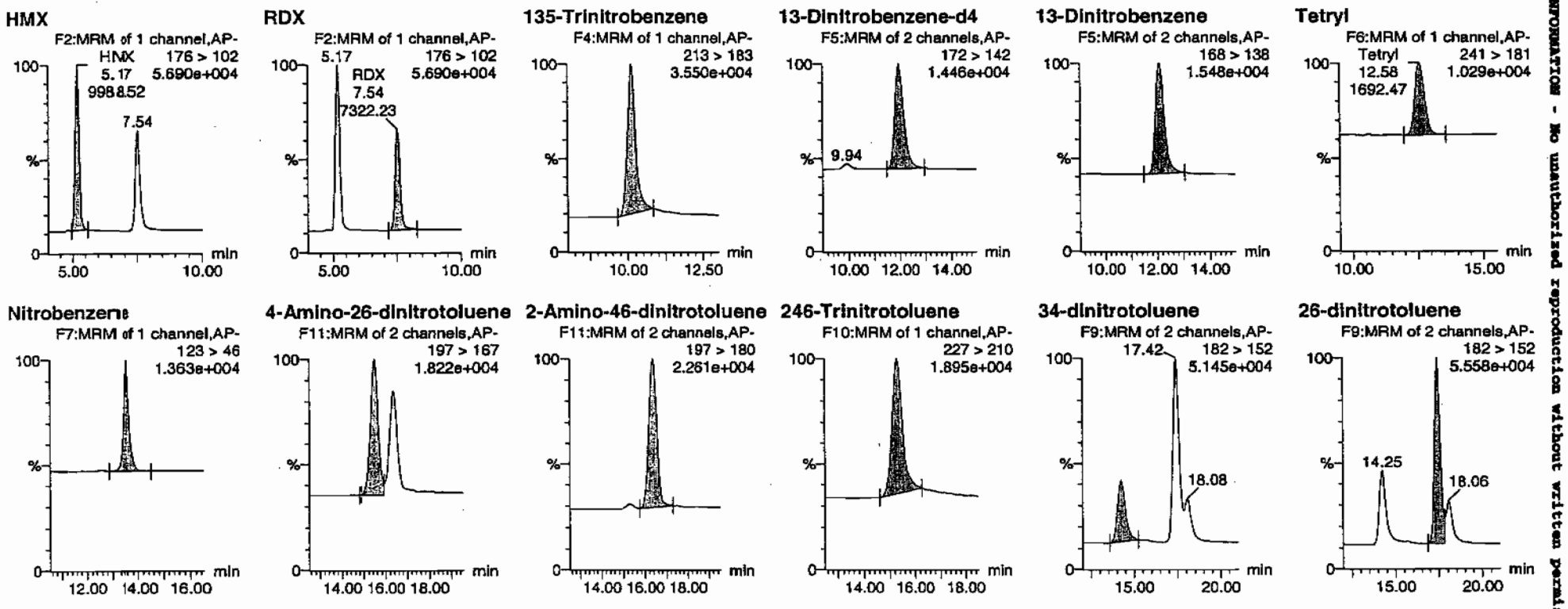
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131014a
Date: 31-Jan-2010
Time: 18:59:27
ID: 1202017301 | LANL | 942335 | Soils | LCS | 2 |
Vial: 1:4,B

MAT 2/1/10



HMW 02/02/10

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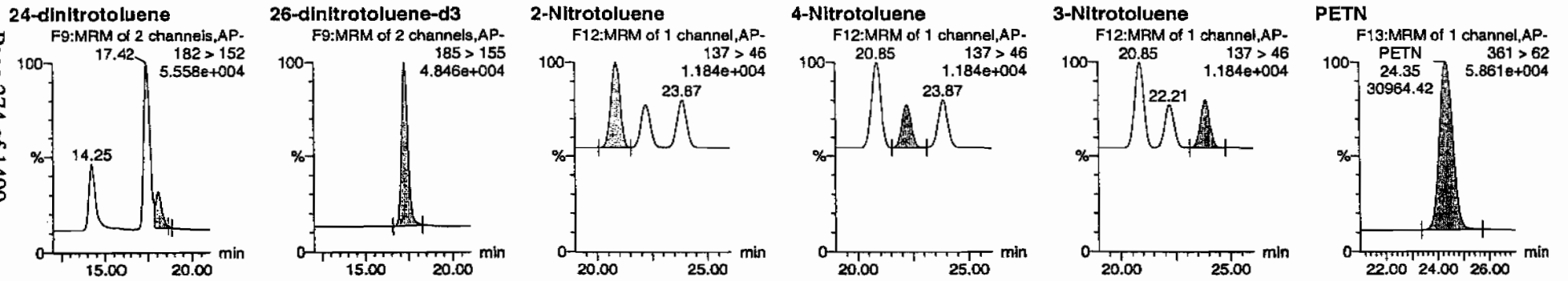
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flag	Mod Date	Mod Time	Theo	RPD	RDev	S/N
1202017301	HMX	176 > 102	5.17	9988.520	3252.728	9988.520	1535.407	bb			434.2330	86.8	-13.2	1419.7
1202017301	RDX	176 > 102	7.54	7322.235	3252.728	7322.235	1125.553	bb			497.2652	99.5	-0.5	870.3
1202017301	135-Trinitrobenzene	213 > 183	10.12	8819.491	3252.728	8819.491	1355.707	bb			406.3077	81.3	-18.7	1850.5
1202017301	13-Dinitrobenzene-d4	172 > 142	11.95	3252.728		3252.728	3252.728	bb			491.5684	98.3	-1.7	413.4
1202017301	13-Dinitrobenzene	168 > 138	12.07	3518.384	3252.728	3518.384	540.836	bb			456.9694	91.4	-8.6	263.0
1202017301	Tetryl	241 > 181	12.58	1692.473	3252.728	1692.473	260.162	bb			314.5740	62.9	-37.1	88.5
1202017301	Nitrobenzene	123 > 46	13.50	2592.329	3252.728	2592.329	398.485	bb			517.3156	103.5	3.5	331.9
1202017301	4-Amino-26-dinitrotoluene	197 > 167	15.49	4984.807	17898.418	4984.807	139.253	MM	01-Feb-10	14:09:41	508.1003	101.6	1.6	257.2
1202017301	2-Amino-46-dinitrotoluene	197 > 180	16.34	6881.896	17898.418	6881.896	192.249	bb			475.0106	95.0	-5.0	232.9
1202017301	246-Trinitrotoluene	227 > 210	15.31	5823.210	17898.418	5823.210	162.674	bb			503.0502	100.6	0.6	450.6
1202017301	34-dinitrotoluene	182 > 152	14.25	8155.697	17898.418	8155.697	227.833	bb			243.7787	97.5	-2.5	243.5
1202017301	26-dinitrotoluene	182 > 152	17.42	18806.660	17898.418	18806.660	525.372	MM	01-Feb-10	14:14:51	474.3905	94.9	-5.1	437.4
1202017301	24-dinitrotoluene	182 > 152	18.06	4471.658	17898.418	4471.658	124.918	MM	01-Feb-10	14:19:40	515.4990	103.1	3.1	94.8
1202017301	26-dinitrotoluene-d3	185 > 155	17.25	17898.418		17898.418	17898.418	bb			492.3329	98.5	-1.5	1990.9
1202017301	2-Nitrotoluene	137 > 46	20.85	2689.089	17898.418	2689.089	75.121	bb			483.9053	96.8	-3.2	381.0
1202017301	4-Nitrotoluene	137 > 46	22.21	1375.278	17898.418	1375.278	38.419	bb			482.8551	96.6	-3.4	194.7
1202017301	3-Nitrotoluene	137 > 46	23.87	1555.691	17898.418	1555.691	43.459	bb			445.6576	89.1	-10.9	216.3
1202017301	PETN	361 > 62	24.35	30964.418	17898.418	30964.418	865.004	bb			420.8257	84.2	-15.8	7073.3

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1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Matrix: SOIL

Sample Amount 2

Amount Units g

Extraction Type Sonication

Concentrated Extract Volume (mL) 10

Dilution Factor: 2

GEL data file: EXS01250018.wiff

Client Sample ID: LCS for batch 942334

GEL Job No (SDG) 10-1263

GEL Sample ID: 1202017301

Moisture:

Date Received: 17-JAN-10

Extraction Batch ID: 942334

Date Extracted: 22-JAN-10

Injection Volume (uL): 50

Date Analyzed: 25-JAN-10 14:59

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	5370	
59229-75-3	2,6-Diamino-4-nitrotoluene	4930	
618-87-1	3,5-Dinitroaniline	5260	
6629-29-4	2,4-Diamino-6-nitrotoluene	5410	
78-30-8	tris(o-cresyl) phosphate	5040	

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

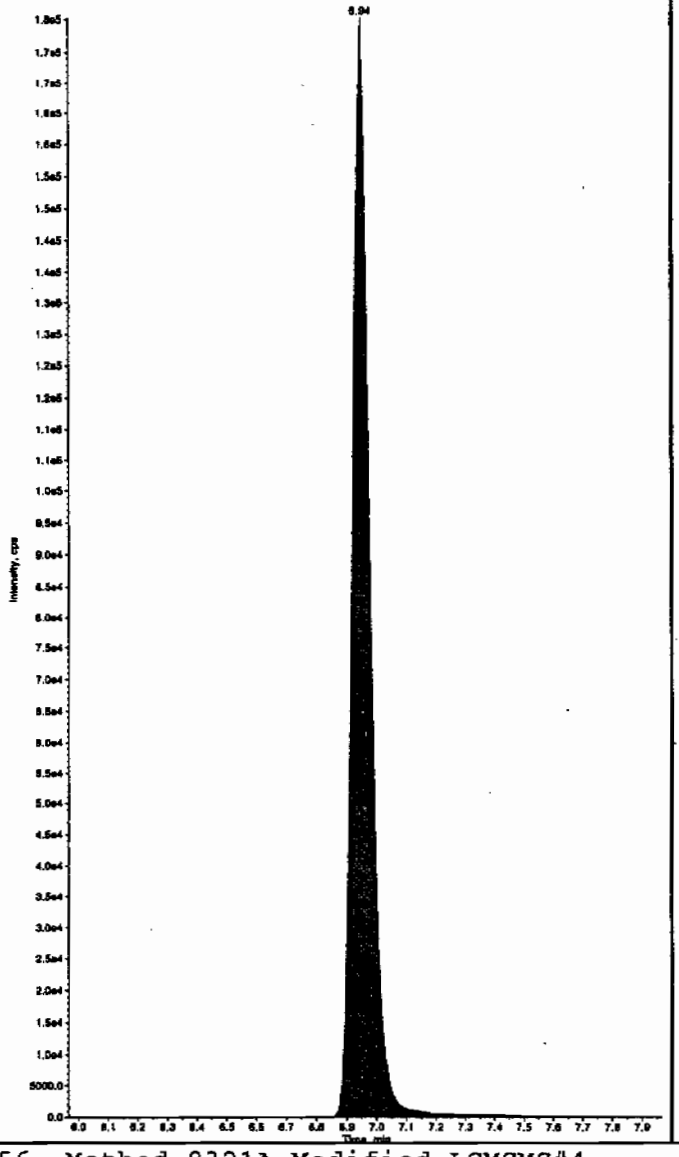
Before Lan 1/27/10

Sample Name: "1202017301" Sample ID: "942335|2|LER" File: "EXS01250018.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 537. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:59:47 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.94 min
Area: 7.46e+005 counts
Height: 175360.611 cps
Start Time: 6.78 min
End Time: 7.45 min

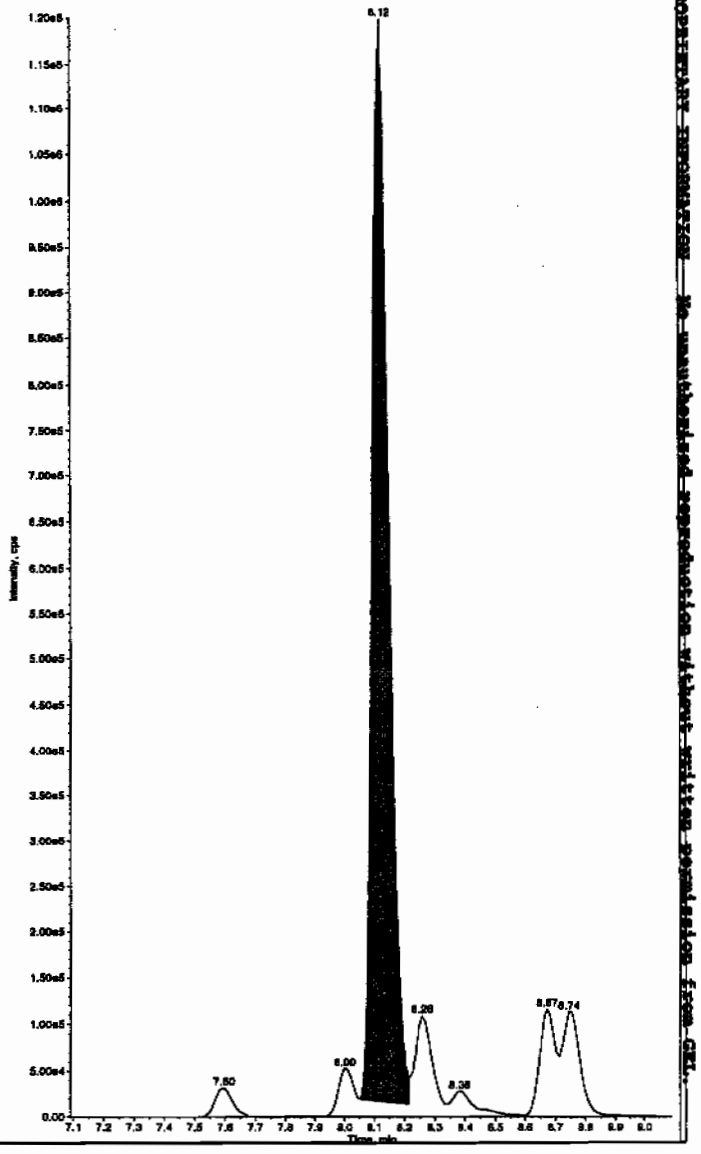


Sample Name: "1202017301" Sample ID: "942335|2|LER" File: "EXS01250018.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 511. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:59:47 PM

Modified: Yes
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.09 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.12 min
Area: 4.77e+006 counts
Height: 1183250.366 cps
Start Time: 8.05 min
End Time: 8.22 min



Hmm 01/27/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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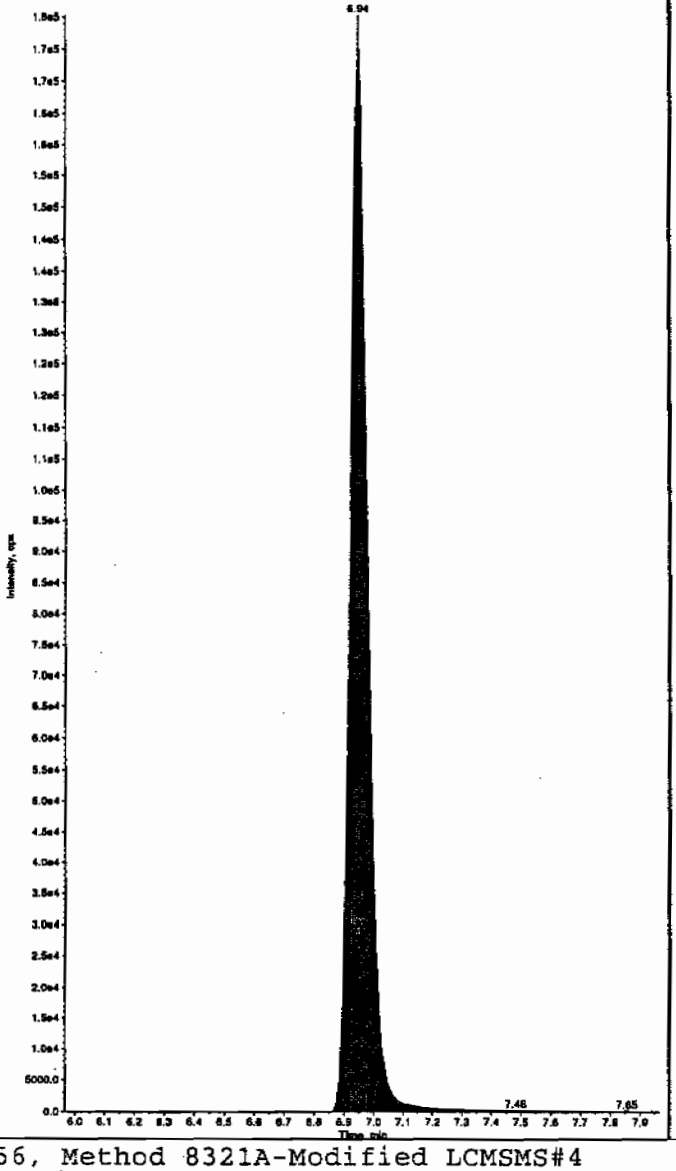
after Ler 11/27/10

Sample Name: "1202017301" Sample ID: "942335|2|LER" File: "EXS01250016.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 537. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:59:47 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.94 min
Area: 7.46e+005 counts
Height: 175360.611 cps
Start Time: 6.78 min
End Time: 7.45 min

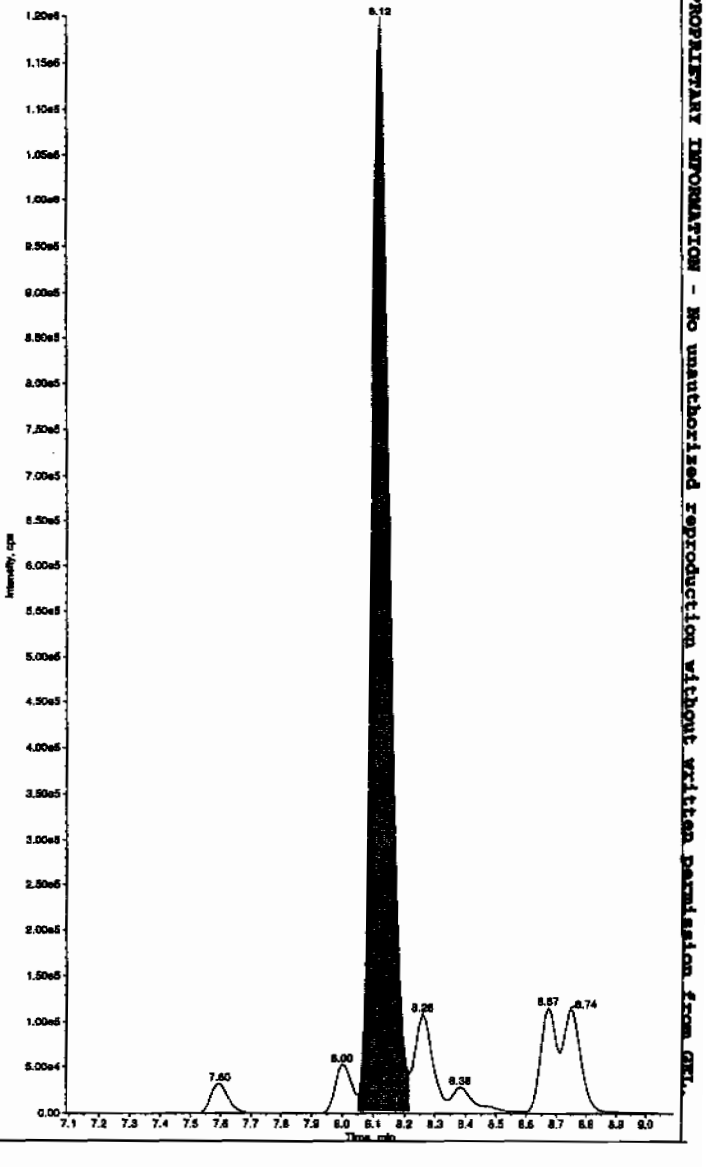


Sample Name: "1202017301" Sample ID: "942335|2|LER" File: "EXS01250018.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 526. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:59:47 PM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.09 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.12 min
Area: 4.90e+006 counts
Height: 1200369.891 cps
Start Time: 8.05 min
End Time: 8.22 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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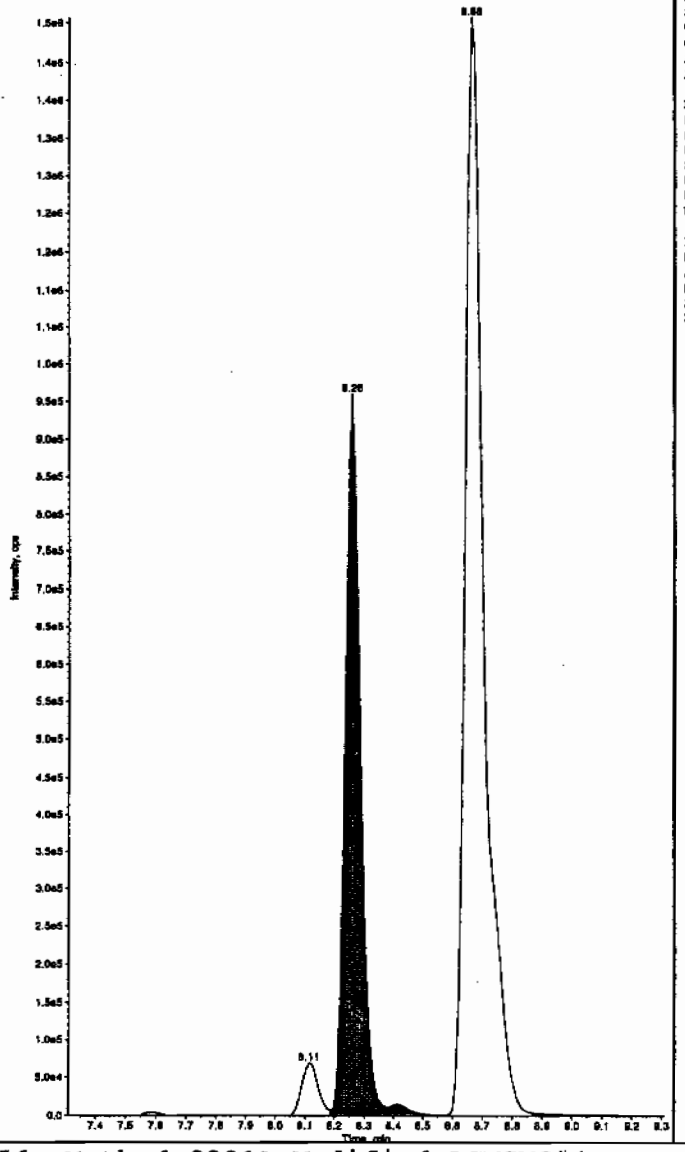
Sample Name: "1202017301" Sample ID: "942335|2|LER" File: "EXS01250018.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX832128" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 274. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:59:47 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.31 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.26 min
Area: 3.61e+006 counts
Height: 957163.025 cps
Start Time: 8.19 min
End Time: 8.50 min

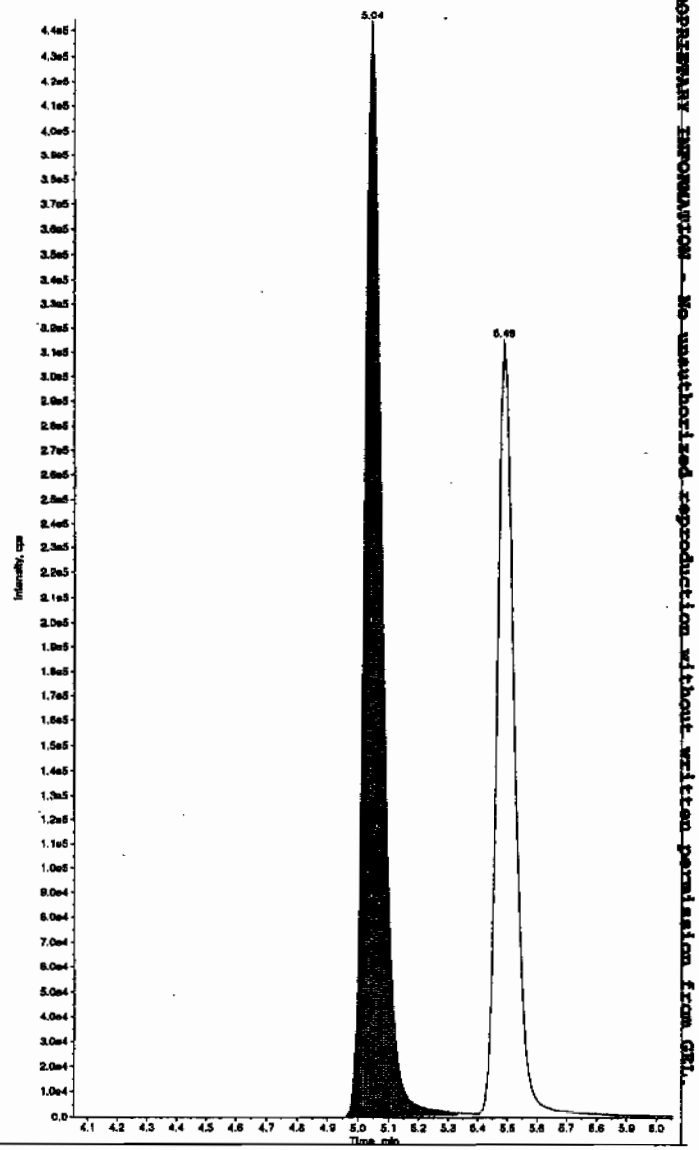


Sample Name: "1202017301" Sample ID: "942335|2|LER" File: "EXS01250018.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX832128" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 493. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:59:47 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.05 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.04 min
Area: 1.86e+006 counts
Height: 444153.076 cps
Start Time: 4.95 min
End Time: 5.33 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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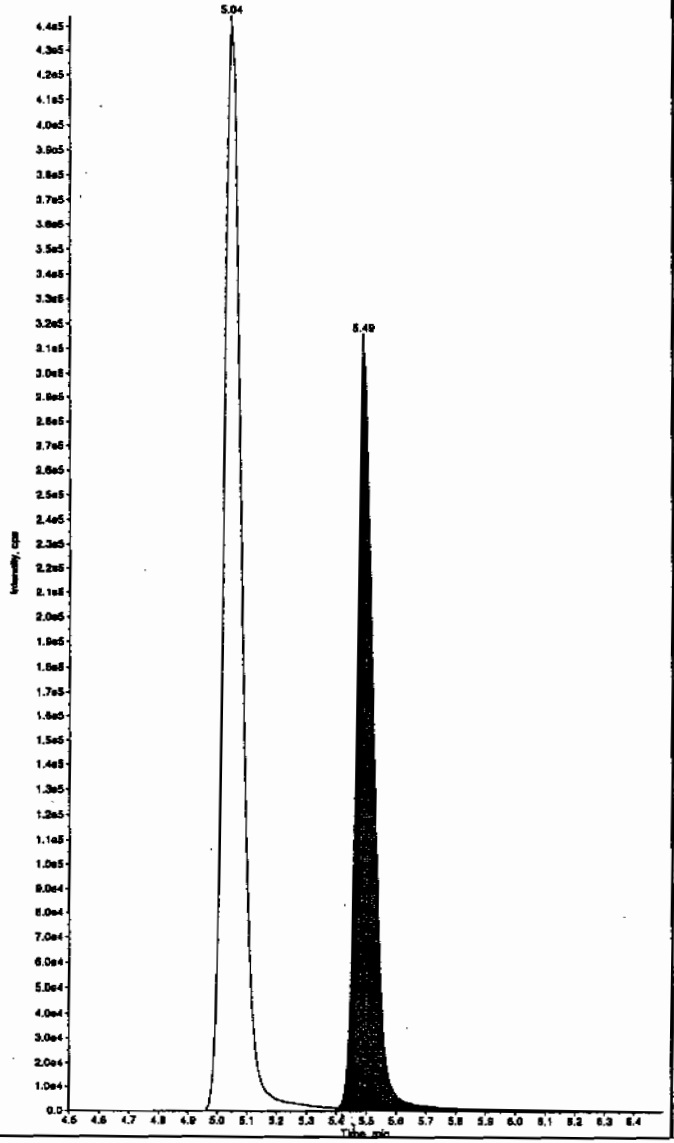
Sample Name: "1202017301" Sample ID: "942335|2|LER" File: "EXS01250018.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX832125" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 541. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:59:47 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.50 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.49 min
Area: 1.31e+006 counts
Height: 315591.461 cps
Start Time: 5.39 min
End Time: 6.15 min

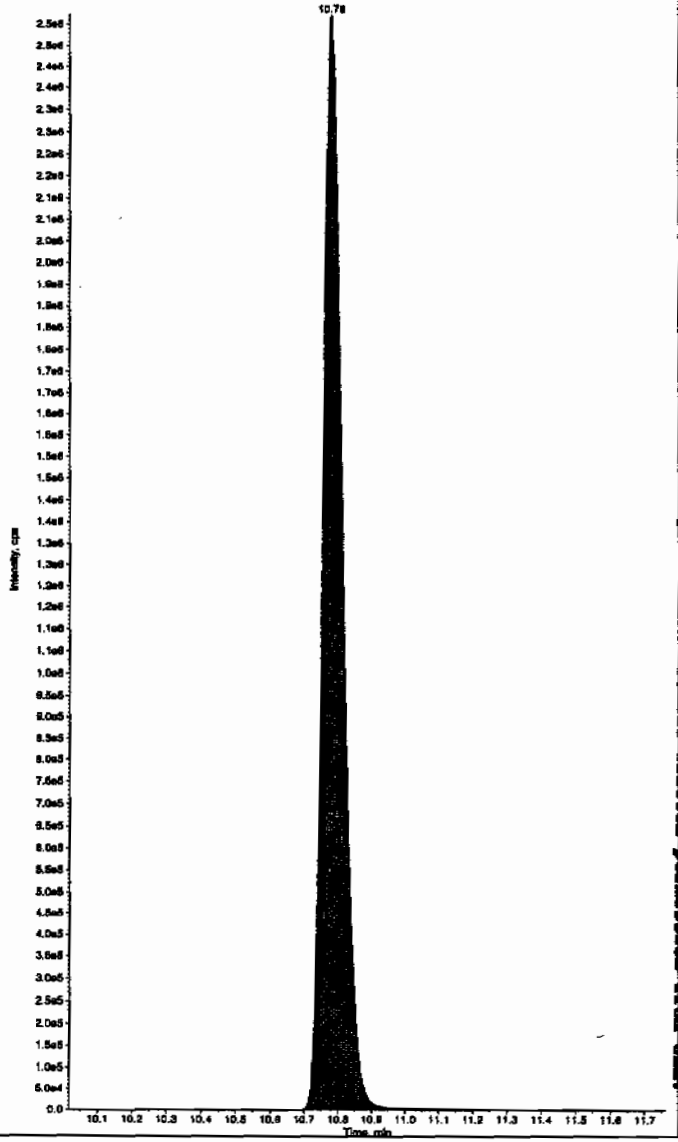


Sample Name: "1202017301" Sample ID: "942335|2|LER" File: "EXS01250018.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX832125" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 504. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 2:59:47 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 1.05e+007 counts
Height: 2523965.332 cps
Start Time: 10.7 min
End Time: 11.1 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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MISCELLANEOUS DATA

Prep Logbook

Nitroaromatics and Nitramines by High Performance Liquid Chromatography (HPLC)

Batch ID: 942334 **Verified by:** _____

Analyst: Sirena White

Method: SW846 8330 PREP

Lab SOP: GL-OA-E-033 REV# 17

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202017300 MB	22-JAN-2010 14:22:11	2	10	5
1202017301 LCS	22-JAN-2010 14:22:11	2	10	5
244847001	22-JAN-2010 14:22:11	2	10	5
1202017302 MS (244847001)	22-JAN-2010 14:22:11	2	10	5
1202017303 MSD (244847001)	22-JAN-2010 14:22:11	2	10	5
244847002	22-JAN-2010 14:22:11	2	10	5
244847003	22-JAN-2010 14:22:11	2	10	5
244847004	22-JAN-2010 14:22:11	2	10	5
244852001	22-JAN-2010 14:22:11	2	10	5
244852002	22-JAN-2010 14:22:11	2	10	5
244852003	22-JAN-2010 14:22:11	2	10	5
244852004	22-JAN-2010 14:22:11	2	10	5
244881001	22-JAN-2010 14:22:11	2	10	5
244881002	22-JAN-2010 14:22:11	2	10	5
244881003	22-JAN-2010 14:22:11	2	10	5
244881004	22-JAN-2010 14:22:11	2	10	5
244905001	22-JAN-2010 14:22:11	2	10	5
244905002	22-JAN-2010 14:22:11	2	10	5
244905003	22-JAN-2010 14:22:11	2	10	5
244905004	22-JAN-2010 14:22:11	2	10	5
244905005	22-JAN-2010 14:22:11	2	10	5
244905006	22-JAN-2010 14:22:11	2	10	5

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1202017301	8321 Explosives LCS	IXX091230-03	.1	mL
LCS	1202017301	8321 LANL Explosives Mix 10mg/L	UXX100108-01.1	1	mL
MS	1202017302	8321 Explosives LCS	IXX091230-03	.1	mL
MS	1202017302	8321 LANL Explosives Mix 10mg/L	UXX100108-01.1	1	mL
MSD	1202017303	8321 Explosives LCS	IXX091230-03	.1	mL
MSD	1202017303	8321 LANL Explosives Mix 10mg/L	UXX100108-01.1	1	mL
SURR	All	3,4-Dinitrotoluene (8330 Surr.) 100ppm	IXP100121-02	.05	mL

Comments:

Final Solvent: ACN

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS #1

Date: 01/31/10
Extr. Injection Volume: 50uL
Sequence Number: 013110expA
Initial Calibration Date: 01/31/10

Method: SW846 8321A-Modified
Int. Std.: UXX091230-01.4
Mobile Phase Lot#: 1261302, 1250738
Standard-Samp Reagent Lot#: 1260901, 1246195

Reviewed BY: HMK
Date: 02/02/10
SOP: GL-OA-E-056 Rev.12
Alt Check Std. ID: WXX100131-07

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
EXP0131001a	XIBLK01	MAP	1/31/10 12:35			1		USE	B
EXP0131002a	XIBLK01	MAP	1/31/10 13:05			1		USE	B
EXP0131003a	WXXICAL-01	MAP	1/31/10 13:34			1		USE	I
EXP0131004a	WXXICAL-02	MAP	1/31/10 14:04			1		USE	I
EXP0131005a	WXXICAL-03	MAP	1/31/10 14:34			1		USE	I
EXP0131006a	WXXICAL-04	MAP	1/31/10 15:03			1		USE	I
EXP0131007a	WXXICAL-05	MAP	1/31/10 15:33			1		USE	I
EXP0131008a	WXXICAL-06	MAP	1/31/10 16:02			1		USE	I
EXP0131009a	XIBLK02	MAP	1/31/10 16:32			1		USE	B
EXP0131010a	WXXICV	MAP	1/31/10 17:01			1		USE	C
EXP0131011a	XIBLK03	MAP	1/31/10 17:31			1		USE	B
EXP0131012a	WXXCRI	MAP	1/31/10 18:00			1		USE	C
EXP0131013a	1202017300	MAP	1/31/10 18:29	942335	Various	2	LANL	USE	S
EXP0131014a	1202017301	MAP	1/31/10 18:59	942335	Various	2	LANL	USE	S
EXP0131015a	244847001	MAP	1/31/10 19:28	942335	~~10-1266~~	2	LANL	USE	S
EXP0131016a	1202017302	MAP	1/31/10 19:58	942335	~~10-1266~~	2	LANL	USE	S
EXP0131017a	1202017303	MAP	1/31/10 20:27	942335	~~10-1266~~	2	LANL	USE	S
EXP0131018a	244847002	MAP	1/31/10 20:57	942335	~~10-1266~~ 10-1262	2	LANL	USE	S
EXP0131019a	244847003	MAP	1/31/10 21:26	942335	~~10-1266~~ HMK	2	LANL	USE	S
EXP0131020a	244847004	MAP	1/31/10 21:56	942335	~~10-1266~~ 02/02/10	2	LANL	USE	S
EXP0131021a	244852001	MAP	1/31/10 22:25	942335	10-1263	2	LANL	USE	S
EXP0131022a	244852002	MAP	1/31/10 22:55	942335	10-1263	2	LANL	USE	S
EXP0131023a	WXXCCV	MAP	1/31/10 23:24			1		USE	C
EXP0131024a	XIBLK04	MAP	1/31/10 23:54			1		USE	B
EXP0131025a	WXXCRI	MAP	2/1/10 0:23			1		USE	C
EXP0131026a	244852003	MAP	2/1/10 0:53	942335	10-1263	2	LANL	USE	S
EXP0131027a	244852004	MAP	2/1/10 1:22	942335	10-1263	2	LANL	USE	S
EXP0131028a	244881001	MAP	2/1/10 1:52	942335	10-1264-1	2	LANL	USE	S
EXP0131029a	244881002	MAP	2/1/10 2:21	942335	10-1264-1	2	LANL	USE	S

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EXP0131030a	244881003	MAP	2/1/10 2:51	942335	10-1264-1	2	LANL	USE	S
EXP0131031a	244881004	MAP	2/1/10 3:20	942335	10-1264-1	2	LANL	USE	S
EXP0131032a	244905001	MAP	2/1/10 3:50	942335	10-1277	2	LANL	USE	S
EXP0131033a	244905002	MAP	2/1/10 4:19	942335	10-1277	2	LANL	USE	S
EXP0131034a	244905003	MAP	2/1/10 4:49	942335	10-1277	2	LANL	USE	S
EXP0131035a	244905004	MAP	2/1/10 5:18	942335	10-1277	2	LANL	USE	S
EXP0131036a	WXXCCV	MAP	2/1/10 5:48			1		USE	C
EXP0131037a	XIBLK05	MAP	2/1/10 6:17			1		USE	B
EXP0131038a	WXXCRI	MAP	2/1/10 6:47			1		USE	C
EXP0131039a	244905005	MAP	2/1/10 7:16	942335	10-1277	2	LANL	USE	S
EXP0131040a	244905006	MAP	2/1/10 7:46	942335	10-1277	2	LANL	USE	S
EXP0131041a	XIBLK06	MAP	2/1/10 8:15			1		USE	B
EXP0131042a	1202021892	MAP	2/1/10 8:45	944240	10-1294	2	LANL	USE	S
EXP0131043a	1202021893	MAP	2/1/10 9:14	944240	10-1294	2	LANL	USE	S
EXP0131044a	245090002	MAP	2/1/10 9:44	944240	10-1294	2	LANL	USE	S
EXP0131045a	1202021894	MAP	2/1/10 10:13	944240	10-1294	2	LANL	USE	S
EXP0131046a	1202021895	MAP	2/1/10 10:43	944240	10-1294	2	LANL	USE	S
EXP0131047a	245090003	MAP	2/1/10 11:12	944240	10-1294	2	LANL	USE	S
EXP0131048a	245090004	MAP	2/1/10 11:41	944240	10-1294	2	LANL	USE	S
EXP0131049a	WXXCCV	MAP	2/1/10 12:29			1		USE	C
EXP0131050a	XIBLK07	MAP	2/1/10 12:58			1		USE	B
EXP0131051a	WXXCRI	MAP	2/1/10 13:28			1		USE	C

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS4

Date: 01/25/10
Extr. Injection Volume: 10uL
Sequence Number: 012510exs
Initial Calibration Date: 012510

Method: 8321A-Modified
Int. Std.: N/A
Mobile Phase Lot#:1250738, 1246467
Standard-Samp Reagent Lot# :1246195, 1253092

Reviewed By: HMW
Date: 01/27/10
SOP: GL-OA-E-056 Rev.12
Alt Check Std. ID: WXX100125-26

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC Flag
EXS01250001.wiff	XIBLK01	LER	1/25/2010 10:28			1		USE	B
EXS01250002.wiff	XIBLK01	LER	1/25/2010 10:46			1		USE	B
EXS01250003.wiff	WXXICAL-19	LER	1/25/2010 11:02			1		USE	I
EXS01250004.wiff	WXXICAL-20	LER	1/25/2010 11:18			1		USE	I
EXS01250005.wiff	WXXICAL-21	LER	1/25/2010 11:33			1		USE	I
EXS01250006.wiff	WXXICAL-22	LER	1/25/2010 11:51			1		USE	I
EXS01250007.wiff	WXXICAL-23	LER	1/25/2010 12:07			1		USE	I
EXS01250008.wiff	WXXICAL-24	LER	1/25/2010 12:22			1		USE	I
EXS01250009.wiff	WXXICAL-25	LER	1/25/2010 12:38			1		USE	I
EXS01250010.wiff	XIBLK02	LER	1/25/2010 12:54			1		USE	B
EXS01250011.wiff	WXXICV	LER	1/25/2010 13:09			1		USE	C
EXS01250012.wiff	XIBLK03	LER	1/25/2010 13:25			1		USE	B
EXS01250013.wiff	WXXCRI	LER	1/25/2010 13:41			1		USE	C
EXS01250014.wiff	1202015503	LER	1/25/2010 13:56	941660	VARIOUS	2	LANL	USE	S
EXS01250015.wiff	1202015504	LER	1/25/2010 14:12	941660	10-1214	2	LANL	USE	S
EXS01250016.wiff	XIBLK04	LER	1/25/2010 14:28			1		USE	B
EXS01250017.wiff	1202017300	LER	1/25/2010 14:44	942335	VARIOUS	2	LANL	USE	S
EXS01250018.wiff	1202017301	LER	1/25/2010 14:59	942335	VARIOUS	2	LANL	USE	S
EXS01250019.wiff	244847001	LER	1/25/2010 15:15	942335	10-1262	2	LANL	USE	S
EXS01250020.wiff	1202017302	LER	1/25/2010 15:31	942335	10-1262	2	LANL	USE	S
EXS01250021.wiff	1202017303	LER	1/25/2010 15:46	942335	10-1262	2	LANL	USE	S
EXS01250022.wiff	244847002	LER	1/25/2010 16:02	942335	10-1262	2	LANL	DUSE-RA	S
EXS01250023.wiff	244847003	LER	1/25/2010 16:18	942335	10-1262	2	LANL	USE	S
EXS01250024.wiff	WXXCCV	LER	1/25/2010 16:33			1		USE	C
EXS01250025.wiff	XIBLK05	LER	1/25/2010 16:49			1		USE	B
EXS01250026.wiff	WXXCRI	LER	1/25/2010 17:05			1		USE	C
EXS01250027.wiff	244847004	LER	1/25/2010 17:21	942335	10-1262	2	LANL	USE	S
EXS01250028.wiff	244852001	LER	1/25/2010 17:36	942335	10-1263	2	LANL	USE	S
EXS01250029.wiff	244852002	LER	1/25/2010 17:52	942335	10-1263	2	LANL	USE	S
EXS01250030.wiff	244852003	LER	1/25/2010 18:08	942335	10-1263	2	LANL	USE	S

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EXS01250031.wiff	244852004	LER	1/25/2010 18:24	942335	10-1263	2	LANL	USE	S
EXS01250032.wiff	244881001	LER	1/25/2010 18:39	942335	10-1264-1	2	LANL	USE	S
EXS01250033.wiff	244881002	LER	1/25/2010 18:55	942335	10-1264-1	2	LANL	USE	S
EXS01250034.wiff	244881003	LER	1/25/2010 19:11	942335	10-1264-1	2	LANL	USE	S
EXS01250035.wiff	244881004	LER	1/25/2010 19:26	942335	10-1264-1	2	LANL	USE	S
EXS01250036.wiff	244905001	LER	1/25/2010 19:42	942335	10-1277	2	LANL	USE	S
EXS01250037.wiff	WXXCCV	LER	1/25/2010 19:58			1		USE	C
EXS01250038.wiff	XIBLK06	LER	1/25/2010 20:14			1		USE	B
EXS01250039.wiff	WXXCRI	LER	1/25/2010 20:29			1		USE	C
EXS01250040.wiff	244905002	LER	1/25/2010 20:45	942335	10-1277	2	LANL	USE	S
EXS01250041.wiff	244905003	LER	1/25/2010 21:01	942335	10-1277	2	LANL	USE	S
EXS01250042.wiff	244905004	LER	1/25/2010 21:16	942335	10-1277	2	LANL	USE	S
EXS01250043.wiff	244905005	LER	1/25/2010 21:32	942335	10-1277	2	LANL	USE	S
EXS01250044.wiff	244905006	LER	1/25/2010 21:48	942335	10-1277	2	LANL	USE	S
EXS01250045.wiff	WXXCCV	LER	1/25/2010 22:04			1		USE	C
EXS01250046.wiff	XIBLK07	LER	1/25/2010 22:19			1		USE	B
EXS01250047.wiff	WXXCRI	LER	1/25/2010 22:35			1		USE	C
EXS01250048.wiff	1202017304	LER	1/25/2010 22:51	942337	VARIOUS	2	LANL	USE	S
EXS01250049.wiff	1202017305	LER	1/25/2010 23:06	942337	VARIOUS	2	LANL	USE	S
EXS01250050.wiff	244909001	LER	1/25/2010 23:22	942337	10-1279	2	LANL	USE	S
EXS01250051.wiff	244909002	LER	1/25/2010 23:38	942337	10-1279	2	LANL	USE	S
EXS01250052.wiff	244909003	LER	1/25/2010 23:54	942337	10-1279	2	LANL	USE	S
EXS01250053.wiff	244909004	LER	1/26/2010 0:09	942337	10-1279	2	LANL	USE	S
EXS01250054.wiff	244910002	LER	1/26/2010 0:25	942337	10-1281	2	LANL	USE	S
EXS01250055.wiff	1202017306	LER	1/26/2010 0:41	942337	10-1281	2	LANL	USE	S
EXS01250056.wiff	1202017307	LER	1/26/2010 0:56	942337	10-1281	2	LANL	USE	S
EXS01250057.wiff	244910003	LER	1/26/2010 1:12	942337	10-1281	2	LANL	USE	S
EXS01250058.wiff	WXXCCV	LER	1/26/2010 1:28			1		USE	C
EXS01250059.wiff	XIBLK08	LER	1/26/2010 1:44			1		USE	B
EXS01250060.wiff	WXXCRI	LER	1/26/2010 1:59			1		USE	C
EXS01250061.wiff	244910004	LER	1/26/2010 2:15	942337	10-1281	2	LANL	USE	S
EXS01250062.wiff	244910005	LER	1/26/2010 2:31	942337	10-1281	2	LANL	USE	S
EXS01250063.wiff	244910006	LER	1/26/2010 2:46	942337	10-1281	2	LANL	USE	S
EXS01250064.wiff	244910007	LER	1/26/2010 3:02	942337	10-1281	2	LANL	USE	S
EXS01250065.wiff	244910008	LER	1/26/2010 3:18	942337	10-1281	2	LANL	USE	S
EXS01250066.wiff	244910009	LER	1/26/2010 3:33	942337	10-1281	2	LANL	USE	S
EXS01250067.wiff	WXXCCV	LER	1/26/2010 3:49			1		USE	C

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EXS01250068.wiff	XIBLK09	LER	1/26/2010 4:05			1		USE	B
EXS01250069.wiff	WXXCRI	LER	1/26/2010 4:21			1		USE	C
EXS01250070.wiff	1202015510	LER	1/26/2010 4:36	941664	10-1225	2	LANL	USE	S
EXS01250071.wiff	1202015511	LER	1/26/2010 4:52	941664	10-1225	2	LANL	USE	S
EXS01250072.wiff	244626001	LER	1/26/2010 5:08	941664	10-1225	2	LANL	USE	S
EXS01250073.wiff	1202015512	LER	1/26/2010 5:23	941664	10-1225	2	LANL	USE	S
EXS01250074.wiff	1202015513	LER	1/26/2010 5:39	941664	10-1225	2	LANL	USE	S
EXS01250075.wiff	244626002	LER	1/26/2010 5:55	941664	10-1225	2	LANL	USE	S
EXS01250076.wiff	244626003	LER	1/26/2010 6:11	941664	10-1225	2	LANL	USE	S
EXS01250077.wiff	244626004	LER	1/26/2010 6:26	941664	10-1225	2	LANL	USE	S
EXS01250078.wiff	244626005	LER	1/26/2010 6:42	941664	10-1225	2	LANL	USE	S
EXS01250079.wiff	244626006	LER	1/26/2010 6:58	941664	10-1225	2	LANL	USE	S
EXS01250080.wiff	WXXCCV	LER	1/26/2010 7:13			1		USE	C
EXS01250081.wiff	XIBLK10	LER	1/26/2010 7:29			1		USE	B
EXS01250082.wiff	WXXCRI	LER	1/26/2010 7:45			1		USE	C
EXS01250083.wiff	244626007	LER	1/26/2010 8:00	941664	10-1225	2	LANL	USE	S
EXS01250084.wiff	244626008	LER	1/26/2010 8:16	941664	10-1225	2	LANL	USE	S
EXS01250085.wiff	244626009	LER	1/26/2010 8:32	941664	10-1225	2	LANL	USE	S
EXS01250086.wiff	244626010	LER	1/26/2010 8:48	941664	10-1225	2	LANL	USE	S
EXS01250087.wiff	244626011	LER	1/26/2010 9:03	941664	10-1225	2	LANL	USE	S
EXS01250088.wiff	244626012	LER	1/26/2010 9:19	941664	10-1225	2	LANL	USE	S
EXS01250089.wiff	244626013	LER	1/26/2010 9:35	941664	10-1225	2	LANL	USE	S
EXS01250090.wiff	244626014	LER	1/26/2010 9:50	941664	10-1225	2	LANL	USE	S
EXS01250091.wiff	244626015	LER	1/26/2010 10:06	941664	10-1225	2	LANL	USE	S
EXS01250092.wiff	244626016	LER	1/26/2010 10:22	941664	10-1225	2	LANL	USE	S
EXS01250093.wiff	WXXCCV	LER	1/26/2010 10:37			1		USE	C
EXS01250094.wiff	XIBLK11	LER	1/26/2010 10:53			1		USE	B
EXS01250095.wiff	WXXCRI	LER	1/26/2010 11:09			1		USE	C
EXS01250096.wiff	244847002	LER	1/26/2010 11:25	942335	10-1262	2	LANL	USE	S
EXS01250097.wiff	XIBLK12	LER	1/26/2010 11:40			1		USE	B
EXS01250098.wiff	1202015498	LER	1/26/2010 11:56	941658	VARIOUS	2	LANL	USE	S
EXS01250099.wiff	1202015499	LER	1/26/2010 12:12	941658	VARIOUS	2	LANL	USE	S
EXS01250100.wiff	244597001	LER	1/26/2010 12:27	941658	10-1209	2	LANL	USE	S
EXS01250101.wiff	244599001	LER	1/26/2010 12:43	941658	10-1210	2	LANL	USE	S
EXS01250102.wiff	1202015500	LER	1/26/2010 12:59	941658	10-1210	2	LANL	USE	S
EXS01250103.wiff	1202015501	LER	1/26/2010 13:15	941658	10-1210	2	LANL	USE	S
EXS01250104.wiff	244599002	LER	1/26/2010 13:30	941658	10-1210	2	LANL	USE	S

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EXS01250105.wiff	244599003	LER	1/26/2010 13:46	941658	10-1210	2	LANL	USE	S
EXS01250106.wiff	WXXCCV	LER	1/26/2010 14:02			1		USE	C
EXS01250107.wiff	XIBLK13	LER	1/26/2010 14:17			1		USE	B
EXS01250108.wiff	WXXCRI	LER	1/26/2010 14:33			1		USE	C
EXS01250109.wiff	244599004	LER	1/26/2010 14:49	941658	10-1210	2	LANL	USE	S
EXS01250110.wiff	244599005	LER	1/26/2010 15:05	941658	10-1210	2	LANL	DUSE-RA	S
EXS01250111.wiff	244599006	LER	1/26/2010 15:20	941658	10-1210	2	LANL	USE	S
EXS01250112.wiff	244599007	LER	1/26/2010 15:36	941658	10-1210	2	LANL	USE	S
EXS01250113.wiff	244599008	LER	1/26/2010 15:52	941658	10-1210	2	LANL	USE	S
EXS01250114.wiff	244599009	LER	1/26/2010 16:07	941658	10-1210	2	LANL	USE	S
EXS01250115.wiff	244599010	LER	1/26/2010 16:23	941658	10-1210	2	LANL	DUSE-RA	S
EXS01250116.wiff	244599011	LER	1/26/2010 16:39	941658	10-1210	2	LANL	USE	S
EXS01250117.wiff	244599012	LER	1/26/2010 16:55	941658	10-1210	2	LANL	USE	S
EXS01250118.wiff	244599013	LER	1/26/2010 17:10	941658	10-1210	2	LANL	DUSE-RA	S
EXS01250119.wiff	WXXCCV	LER	1/26/2010 17:26			1		USE	C
EXS01250120.wiff	XIBLK14	LER	1/26/2010 17:42			1		USE	B
EXS01250121.wiff	WXXCRI	LER	1/26/2010 17:57			1		USE	C
EXS01250122.wiff	1202017308	LER	1/26/2010 18:13	942339	VARIOUS	2	LANL	USE	S
EXS01250123.wiff	1202017309	LER	1/26/2010 18:29	942339	VARIOUS	2	LANL	USE	S
EXS01250124.wiff	244916002	LER	1/26/2010 18:45	942339	10-1284	2	LANL	USE	S
EXS01250125.wiff	244916003	LER	1/26/2010 19:00	942339	10-1284	2	LANL	USE	S
EXS01250126.wiff	244917002	LER	1/26/2010 19:16	942339	10-1285	2	LANL	USE	S
EXS01250127.wiff	244917003	LER	1/26/2010 19:32	942339	10-1285	2	LANL	USE	S
EXS01250128.wiff	244917004	LER	1/26/2010 19:47	942339	10-1285	2	LANL	USE	S
EXS01250129.wiff	244923001	LER	1/26/2010 20:03	942339	10-1287	2	LANL	USE	S
EXS01250130.wiff	1202017310	LER	1/26/2010 20:19	942339	10-1287	2	LANL	USE	S
EXS01250131.wiff	1202017311	LER	1/26/2010 20:34	942339	10-1287	2	LANL	USE	S
EXS01250132.wiff	WXXCCV	LER	1/26/2010 20:50			1		USE	C
EXS01250133.wiff	XIBLK15	LER	1/26/2010 21:06			1		USE	B
EXS01250134.wiff	WXXCRI	LER	1/26/2010 21:22			1		USE	C
EXS01250135.wiff	244923002	LER	1/26/2010 21:37	942339	10-1287	2	LANL	USE	S
EXS01250136.wiff	244923003	LER	1/26/2010 21:53	942339	10-1287	2	LANL	USE	S
EXS01250137.wiff	244923004	LER	1/26/2010 22:09	942339	10-1287	2	LANL	USE	S
EXS01250138.wiff	244923005	LER	1/26/2010 22:24	942339	10-1287	2	LANL	USE	S
EXS01250139.wiff	244923006	LER	1/26/2010 22:40	942339	10-1287	2	LANL	USE	S
EXS01250140.wiff	244923007	LER	1/26/2010 22:56	942339	10-1287	2	LANL	USE	S
EXS01250141.wiff	244923008	LER	1/26/2010 23:12	942339	10-1287	2	LANL	USE	S

EXS01250142.wiff	244923009	LER	1/26/2010 23:27	942339	10-1287	2	LANL	USE	S
EXS01250143.wiff	244923010	LER	1/26/2010 23:43	942339	10-1287	2	LANL	USE	S
EXS01250144.wiff	WXXCCV	LER	1/26/2010 23:59			1		USE	C
EXS01250145.wiff	XIBLK16	LER	1/27/2010 0:14			1		USE	B
EXS01250146.wiff	WXXCRI	LER	1/27/2010 0:30			1		USE	C
EXS01250147.wiff	UXX100108-01.2	LER	1/27/2010 0:46	SCREEN	SOLID	2	O2SI	USE	S
EXS01250148.wiff	244599005	LER	1/27/2010 1:02	941658	10-1210	2	LANL	USE	S
EXS01250149.wiff	244599010	LER	1/27/2010 1:17	941658	10-1210	2	LANL	USE	S
EXS01250150.wiff	WXXCCV	LER	1/27/2010 1:33			1		USE	C
EXS01250151.wiff	XIBLK17	LER	1/27/2010 1:49			1		USE	B
EXS01250152.wiff	WXXCRI	LER	1/27/2010 2:04			1		USE	C

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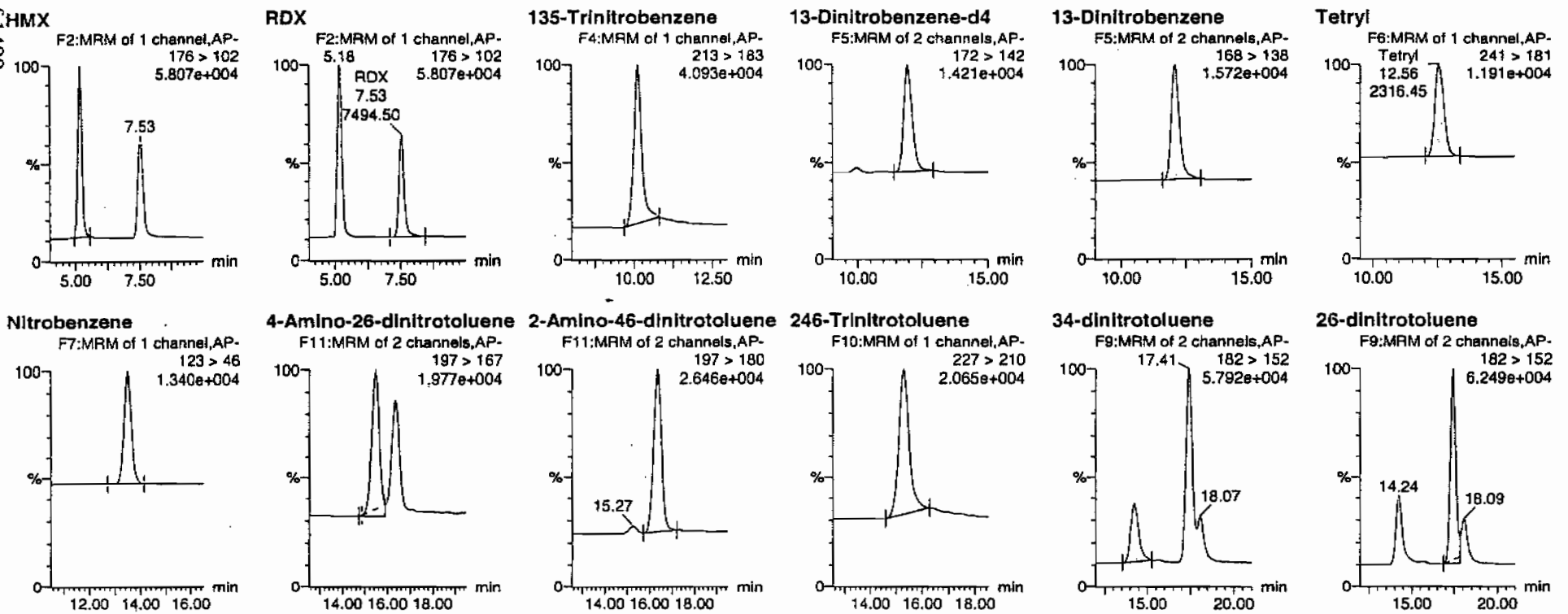
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Mon Feb 01 14:31:20 2010, Page 31 of 103

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131016a
Date: 31-Jan-2010
Time: 19:58:25
ID: 1202017302 | LANL | 942335 | Soils | 244847001MS | 2 |
Vial: 1:4,D

MAP 2/1/10



HMM 02/02/10

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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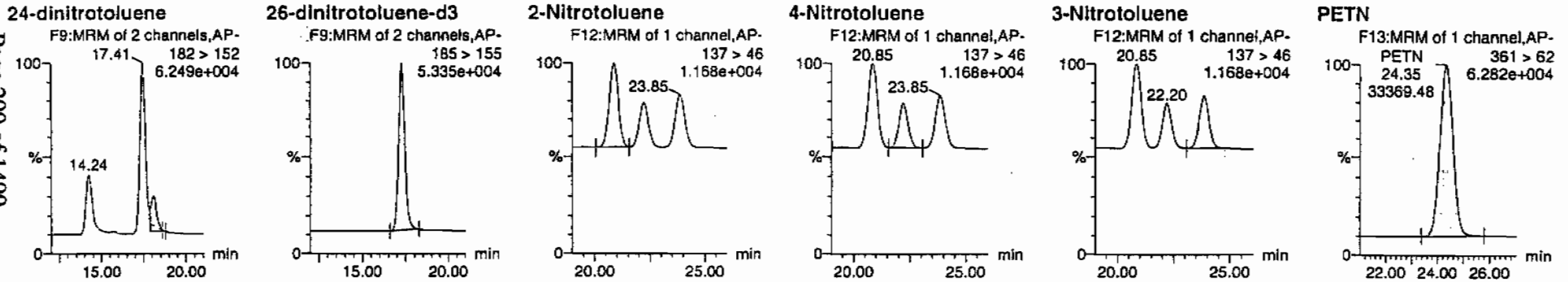
Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
1202017302	HMX	176 > 102	5.18	10198.284	3101.361	10198.284	1644.163	bb			464.9906	93.0	-7.0	1154.7
1202017302	RDX	176 > 102	7.53	7494.498	3101.361	7494.498	1208.260	bb			533.8046	106.8	6.8	700.4
1202017302	135-Trinitrobenzene	213 > 183	10.10	10132.606	3101.361	10132.606	1633.574	bb			491.1038	98.2	-1.8	433.2
1202017302	13-Dinitrobenzene-d4	172 > 142	11.94	3101.361		3101.361	3101.361	bb			468.6931	93.7	-6.3	168.4
1202017302	13-Dinitrobenzene	168 > 138	12.06	3615.544	3101.361	3615.544	582.896	bb			492.5076	98.5	-1.5	308.9
1202017302	Tetryl	241 > 181	12.56	2316.445	3101.361	2316.445	373.456	bb			451.5632	90.3	-9.7	421.7
1202017302	Nitrobenzene	123 > 46	13.48	2505.239	3101.361	2505.239	403.893	bb			524.3365	104.9	4.9	202.7
1202017302	4-Amino-26-dinitrotoluene	197 > 167	15.48	5624.023	20092.520	5624.023	139.953	MM	01-Feb-10	14:09:48	510.6560	102.1	2.1	241.6
1202017302	2-Amino-46-dinitrotoluene	197 > 180	16.36	8367.474	20092.520	8367.474	208.224	bb			514.4816	102.9	2.9	417.8
1202017302	246-Trinitrotoluene	227 > 210	15.30	6569.961	20092.520	6569.961	163.493	bb			505.5823	101.1	1.1	580.5
1202017302	34-dinitrotoluene	182 > 152	14.24	8456.171	20092.520	8456.171	210.431	bb			225.1587	90.1	-9.9	299.2
1202017302	26-dinitrotoluene	182 > 152	17.41	21711.627	20092.520	21711.627	540.291	MM	01-Feb-10	14:15:02	487.8620	97.6	-2.4	739.8
1202017302	24-dinitrotoluene	182 > 152	18.09	4875.436	20092.520	4875.436	121.325	MM	01-Feb-10	14:19:47	500.6716	100.1	0.1	156.6
1202017302	26-dinitrotoluene-d3	185 > 155	17.26	20092.520		20092.520	20092.520	bb			552.6862	110.5	10.5	2000.7
1202017302	2-Nitrotoluene	137 > 46	20.85	2625.734	20092.520	2625.734	65.341	bb			420.9070	84.2	-15.8	441.0
1202017302	4-Nitrotoluene	137 > 46	22.20	1390.536	20092.520	1390.536	34.603	bb			434.8994	87.0	-13.0	239.4
1202017302	3-Nitrotoluene	137 > 46	23.85	1734.341	20092.520	1734.341	43.159	bb			442.5809	88.5	-11.5	279.3
1202017302	PETN	361 > 62	24.35	33369.480	20092.520	33369.480	830.396	bb			403.9885	80.8	-19.2	8917.8

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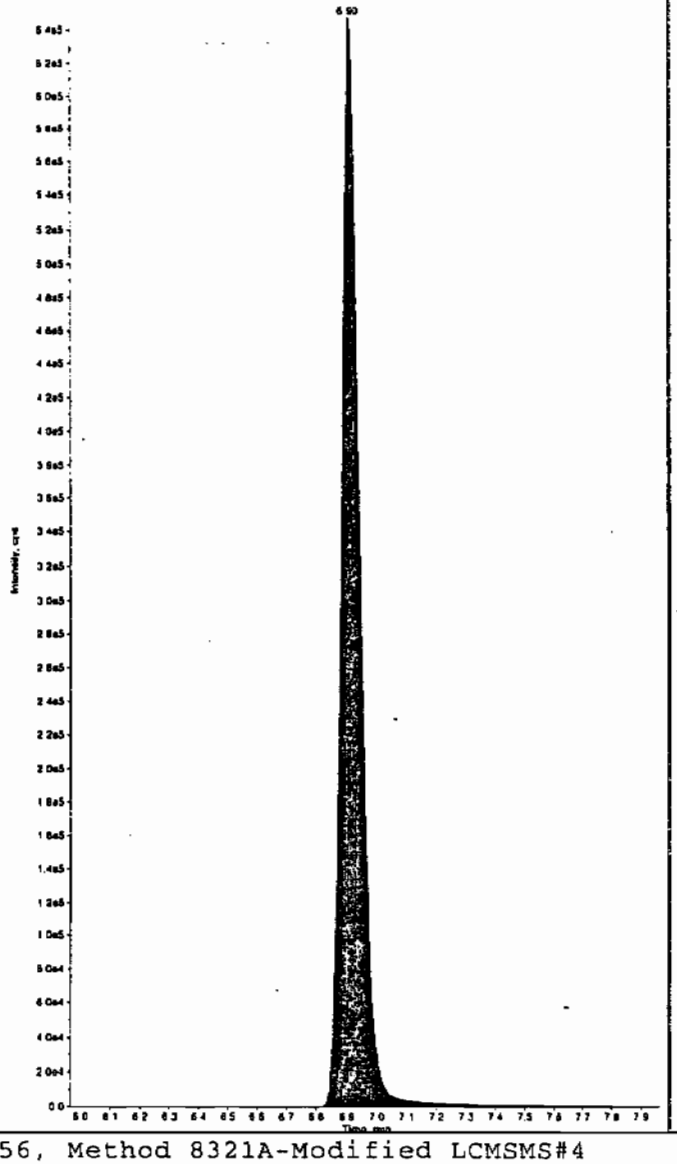
Before JAN 1/27/10

Sample Name: "1202017302" Sample ID: "942335[2]LER" File: "EXS01250020.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: [illegible] ng/mL
Acq. Date: [illegible] 2010
Acq. Time: 3:31:11 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 1 points
RT Window: 15.0 sec
Expected RT: 6.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.97 min
Area: 3.61e+006 counts
Height: 447606.459 cps
Start Time: 6.77 min
End Time: 7.49 min

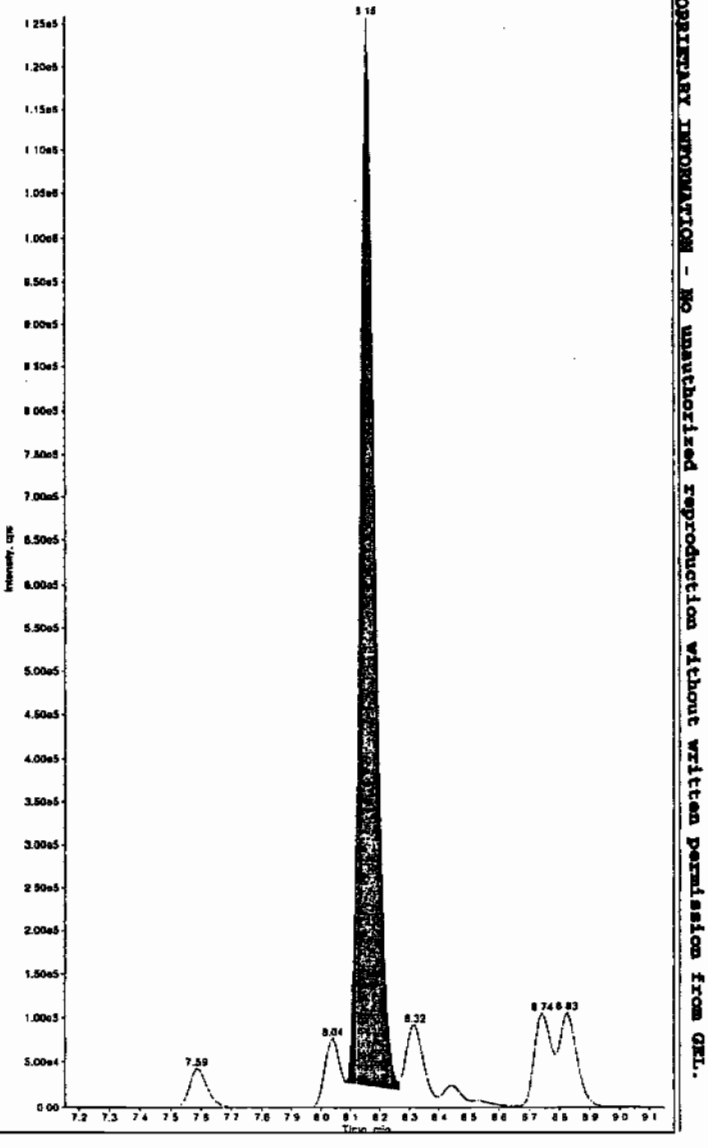


Sample Name: "1202017302" Sample ID: "942335[2]LER" File: "EXS01250020.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/45.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 494. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 3:31:11 PM

Modified: Yes
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 1 points
RT Window: 15.0 sec
Expected RT: 8.15 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.15 min
Area: 4.62e+006 counts
Height: 1234231.924 cps
Start Time: 5.05 min
End Time: 8.27 min



HJ/MC 01/27/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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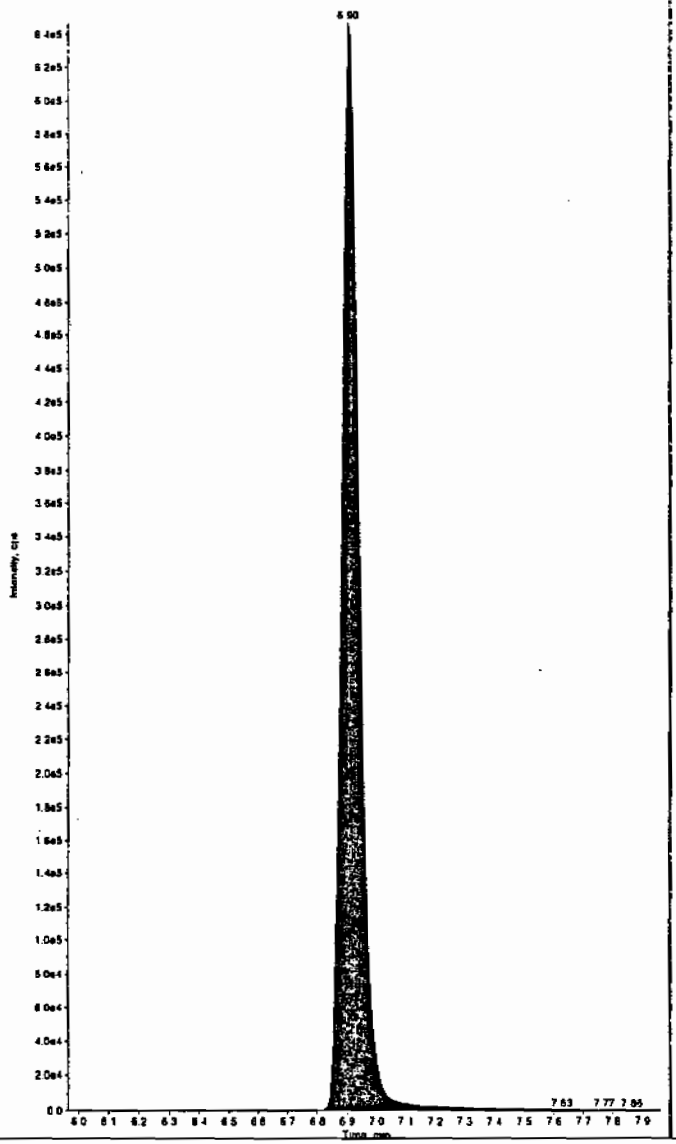
after Lan 1/27/10

Sample Name: "1202017302" Sample ID: "942335|2|LER" File: "EXS01250020.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 2200. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 3:31:11 PM

Modified: No
Proc. Algorithm: IntelliQuan - IOA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 1 points
RT Window: 30.0 sec
Expected RT: 6.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.90 min
Area: 2.91e+006 counts
Height: 647605.459 cps
Start Time: 6.77 min
End Time: 7.49 min

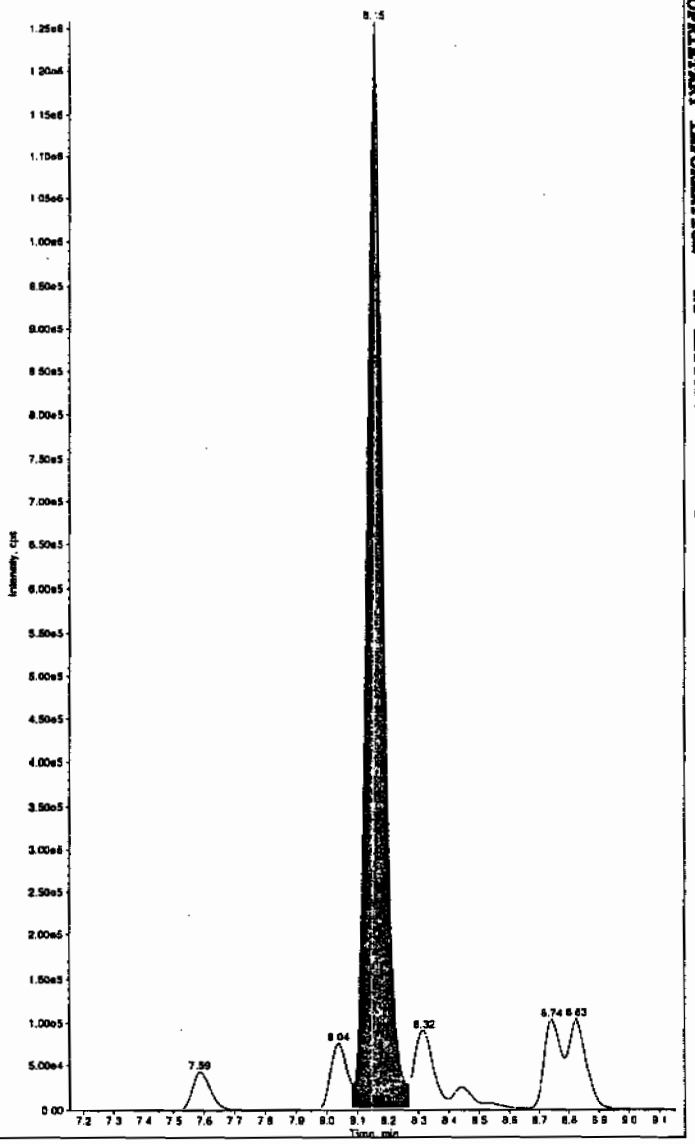


Sample Name: "1202017302" Sample ID: "942335|2|LER" File: "EXS01250020.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 520. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 3:31:11 PM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.15 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.16 min
Area: 4.86e+006 counts
Height: 1260291.825 cps
Start Time: 8.08 min
End Time: 8.27 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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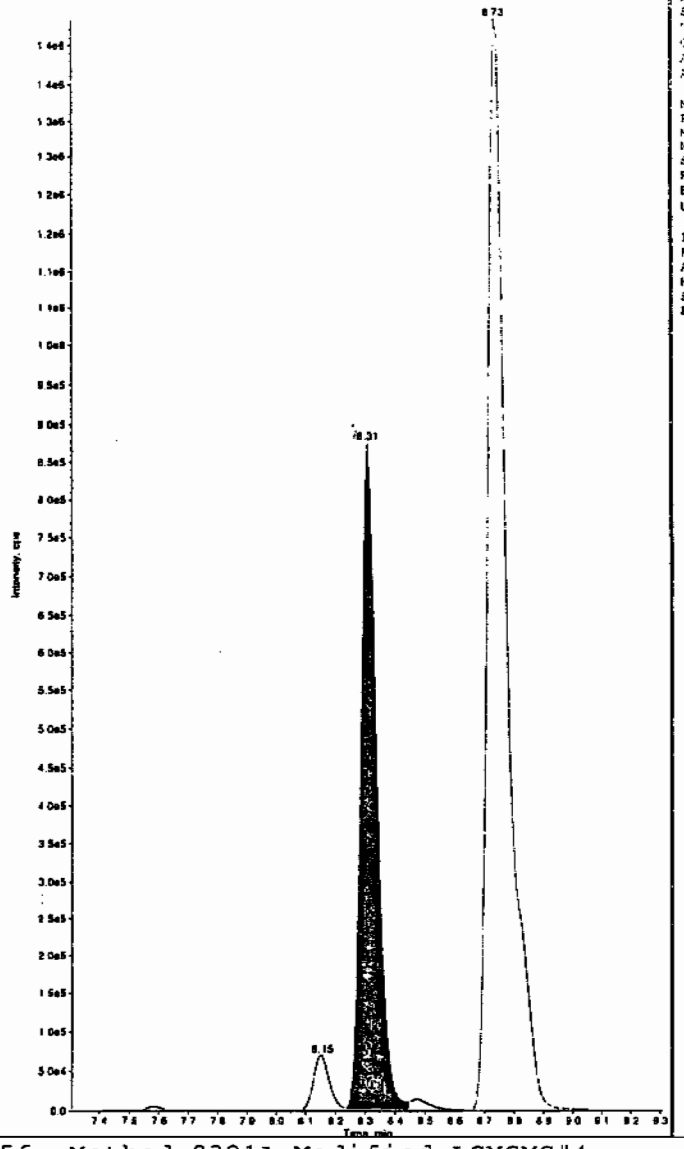
Sample Name: "1202017302" Sample ID: "942335|2|LER" File: "EXS01250020.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX832125" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 257. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 3:31:11 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.31 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.31 min
Area: 1.39e+006 counts
Height: 372830.188 cps
Start Time: 8.14 min
End Time: 8.44 min

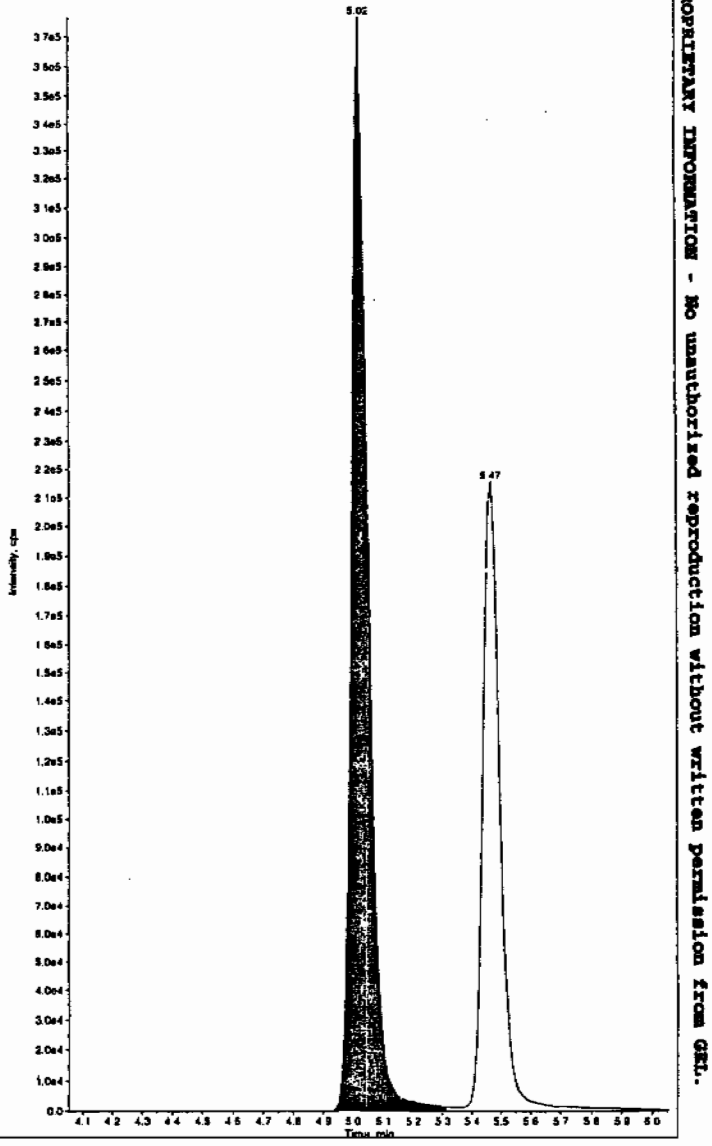


Sample Name: "1202017302" Sample ID: "942335|2|LER" File: "EXS01250020.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX832125" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 403. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 3:31:11 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.05 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.03 min
Area: 1.52e+006 counts
Height: 376457.375 cps
Start Time: 4.93 min
End Time: 5.31 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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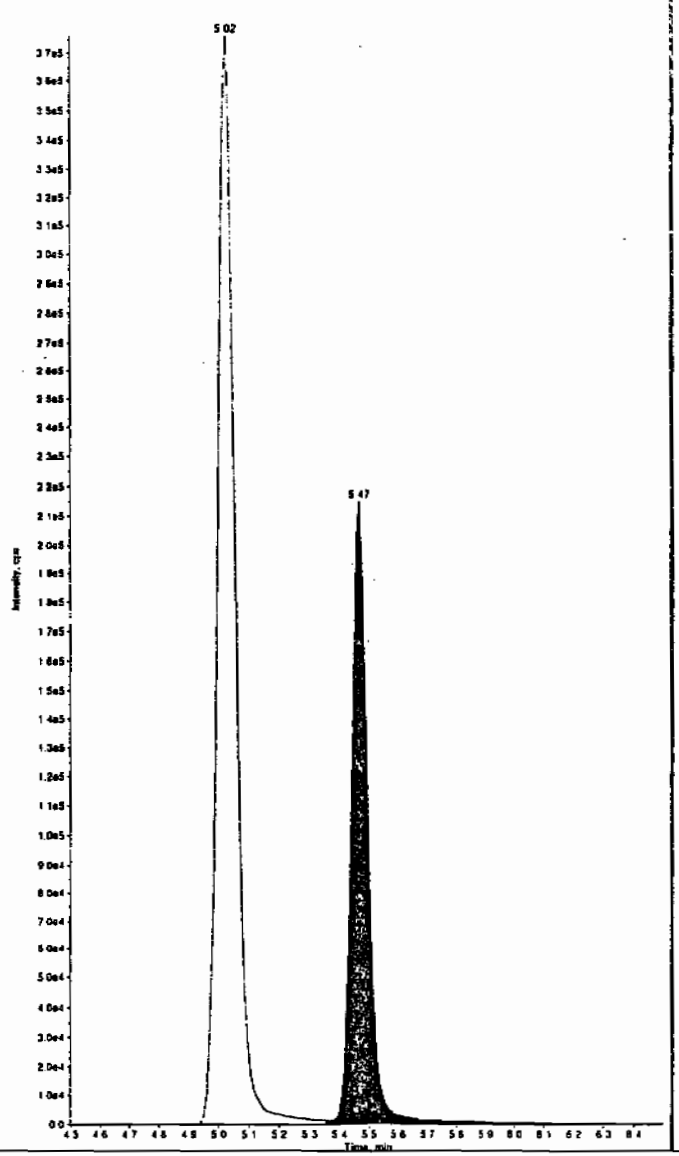
Sample Name: "1202017302" Sample ID: "942335|2|LER" File: "EXS01250020.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 173. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 3:31:11 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.50 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.47 min
Area: 5.91e+005 counts
Height: 215077.438 cps
Start Time: 5.35 min
End Time: 6.11 min

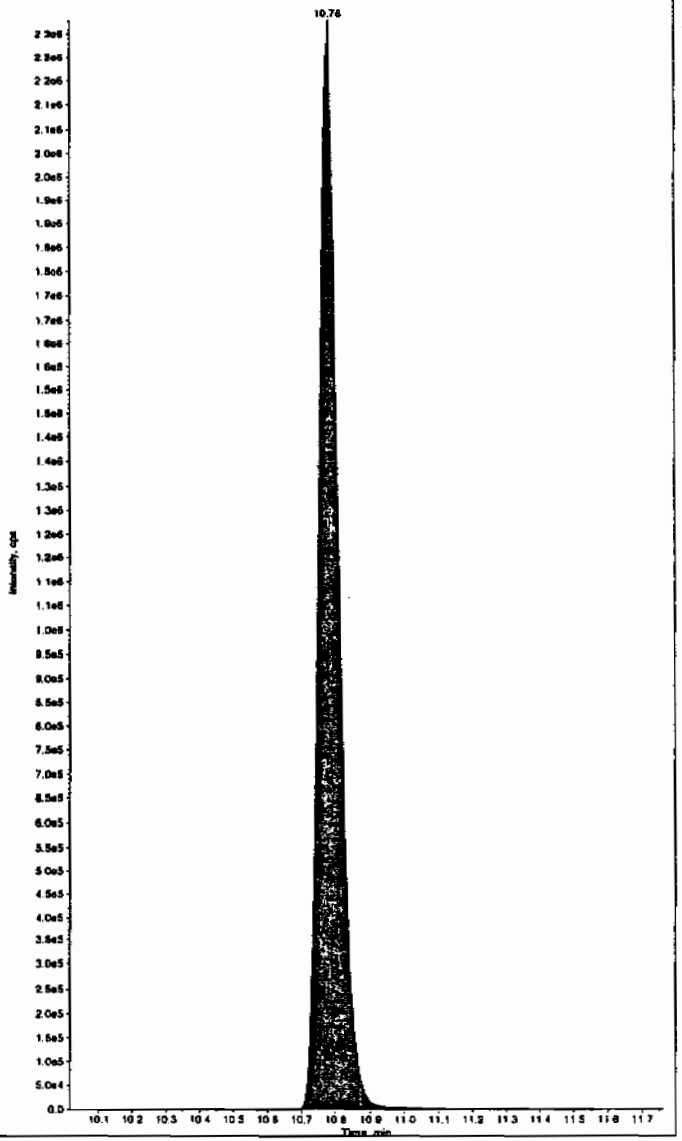


Sample Name: "1202017302" Sample ID: "942335|2|LER" File: "EXS01250020.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 454. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 3:31:11 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.5 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.8 min
Area: 9.56e+006 counts
Height: 2382519.287 cps
Start Time: 10.7 min
End Time: 11.1 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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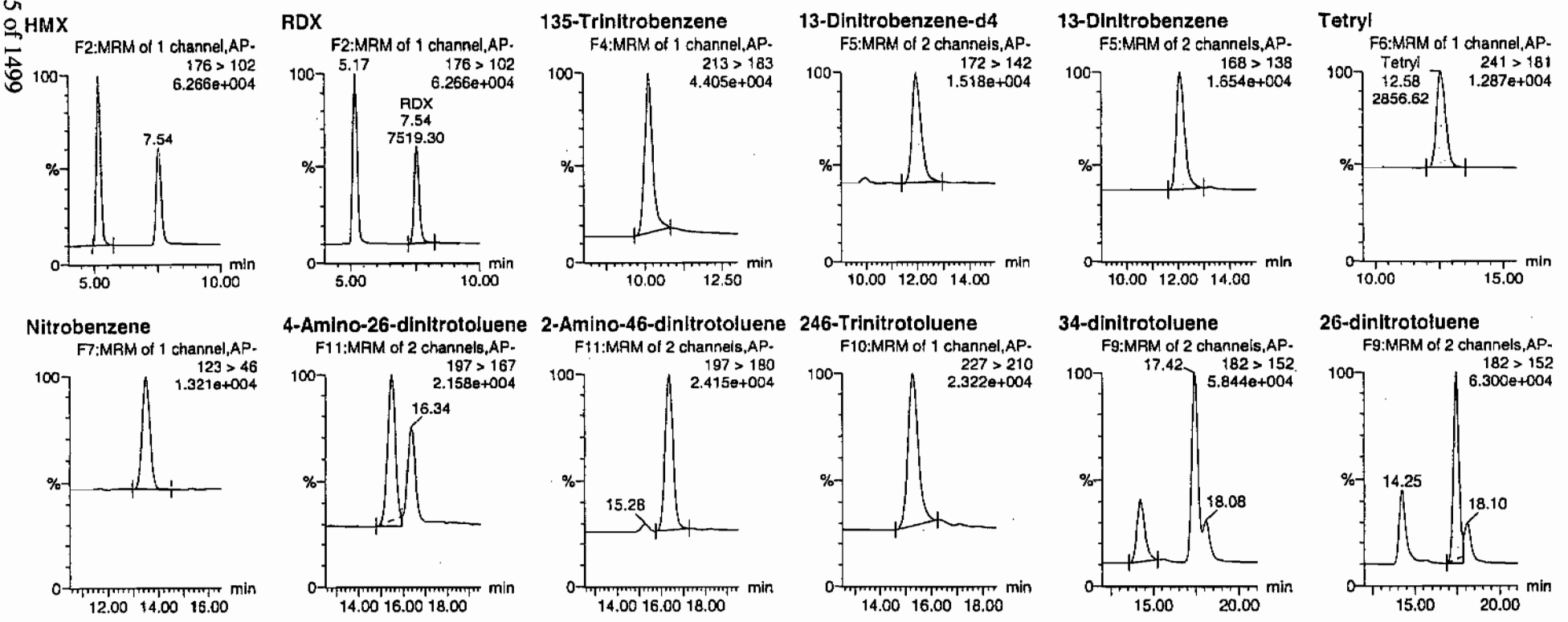
Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0131017a
Date: 31-Jan-2010
Time: 20:27:55
ID: 1202017303 | LANL | 942335 | SOLID | 244847001 MSD | 2. |
Vial: 1:4,E

MAP 2/1/10



Hmm 02/02/10

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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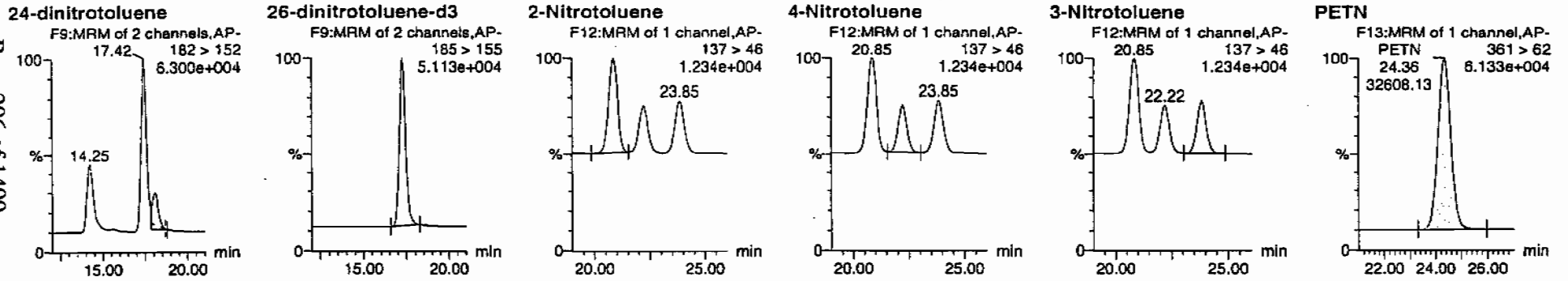
Quantify Sample Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\013110expA.qld, Time: Mon Feb 01 14:26:08 2010



ID	Name	Trace	RT	Area	IS Area	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N
1202017303	HMX	176 > 102	5.17	11270.311	3587.381	11270.311	1570.827	bb			444.2504	88.9	-11.1	1194.7
1202017303	RDX	176 > 102	7.54	7519.304	3587.381	7519.304	1048.021	bb			463.0120	92.6	-7.4	669.6
1202017303	135-Trinitrobenzene	213 > 183	10.12	11232.459	3587.381	11232.459	1565.551	bb			470.3455	94.1	-5.9	478.9
1202017303	13-Dinitrobenzene-d4	172 > 142	11.95	3587.381		3587.381	3587.381	bb			542.1428	108.4	8.4	380.4
1202017303	13-Dinitrobenzene	168 > 138	12.07	3947.202	3587.381	3947.202	550.151	bb			464.8400	93.0	-7.0	396.3
1202017303	Tetryl	241 > 181	12.58	2856.616	3587.381	2856.616	398.148	bb			481.4190	96.3	-3.7	243.0
1202017303	Nitrobenzene	123 > 46	13.50	2573.150	3587.381	2573.150	358.639	bb			465.5870	93.1	-6.9	157.9
1202017303	4-Amino-26-dinitrotoluene	197 > 167	15.46	6528.462	19555.832	6528.462	166.919	MM	01-Feb-10	14:09:56	609.0463	121.8	21.8	305.0
1202017303	2-Amino-46-dinitrotoluene	197 > 180	16.34	7574.657	19555.832	7574.657	193.667	bb			478.5161	95.7	-4.3	637.4
1202017303	246-Trinitrotoluene	227 > 210	15.28	7815.055	19555.832	7815.055	199.814	bb			617.9015	123.6	23.6	211.0
1202017303	34-dinitrotoluene	182 > 152	14.25	9775.375	19555.832	9775.375	249.935	bb			267.4277	107.0	7.0	489.0
1202017303	26-dinitrotoluene	182 > 152	17.42	21912.270	19555.832	21912.270	560.249	MM	01-Feb-10	14:15:15	505.8830	101.2	1.2	714.5
1202017303	24-dinitrotoluene	182 > 152	18.10	5057.919	19555.832	5057.919	129.320	MM	01-Feb-10	14:19:58	533.6659	106.7	6.7	145.9
1202017303	26-dinitrotoluene-d3	185 > 155	17.27	19555.832		19555.832	19555.832	bb			537.9235	107.6	7.6	1600.0
1202017303	2-Nitrotoluene	137 > 46	20.85	2974.468	19555.832	2974.468	76.051	bb			489.8948	98.0	-2.0	372.2
1202017303	4-Nitrotoluene	137 > 46	22.22	1496.106	19555.832	1496.106	38.252	bb			480.7586	96.2	-3.8	189.8
1202017303	3-Nitrotoluene	137 > 46	23.85	1723.415	19555.832	1723.415	44.064	bb			451.8624	90.4	-9.6	210.0
1202017303	PETN	361 > 62	24.36	32608.129	19555.832	32608.129	833.719	bb			405.6052	81.1	-18.9	6212.6

GEL SOP GL-OA-E-056, Method 8321A-Modified / MM = Manual Modification

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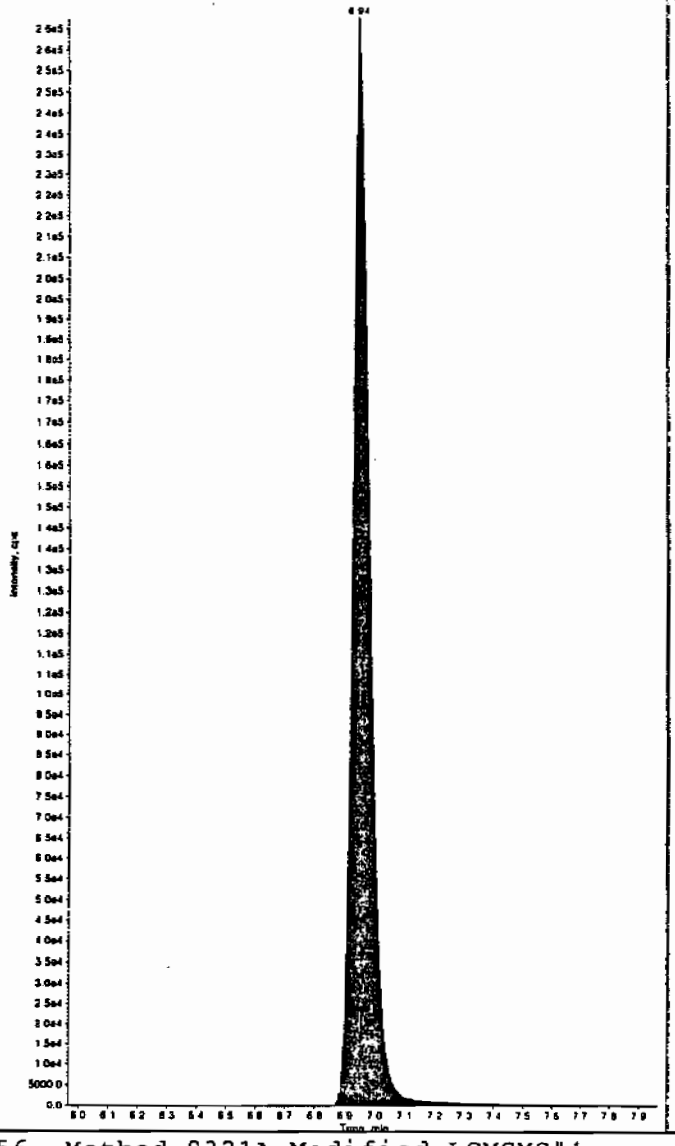
Before Clean 11/27/10

Sample Name: "1202017303" Sample ID: "942335|2|LER" File: "EXS01250021.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 812. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 3:46:53 PM

Modified: No
Proc. Algorithm: IntelliQuan - TQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 1.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 6.97 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.94 min
Area: 1.12e+006 counts
Height: 162906.677 cps
Start Time: 6.79 min
End Time: 7.12 min

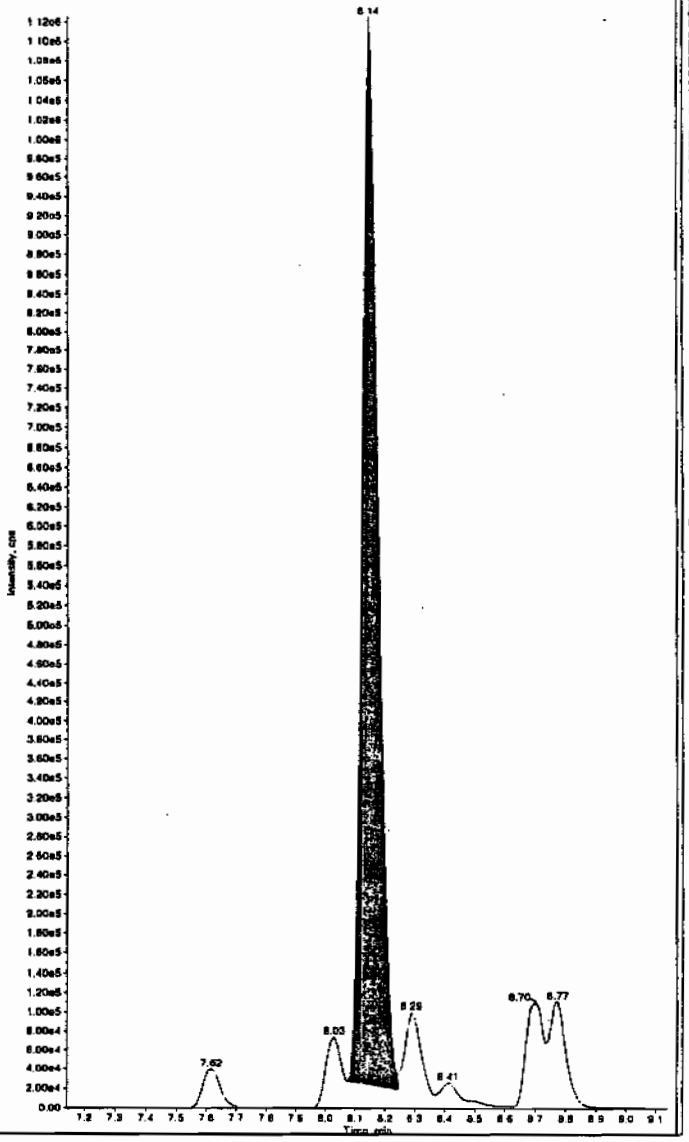


Sample Name: "1202017303" Sample ID: "942335|2|LER" File: "EXS01250021.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 473. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 3:46:53 PM

Modified: Yes
Proc. Algorithm: IntelliQuan - TQA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.14 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.14 min
Area: 4.44e+006 counts
Height: 1102246.704 cps
Start Time: 8.07 min
End Time: 8.25 min



CH 11/27/10

*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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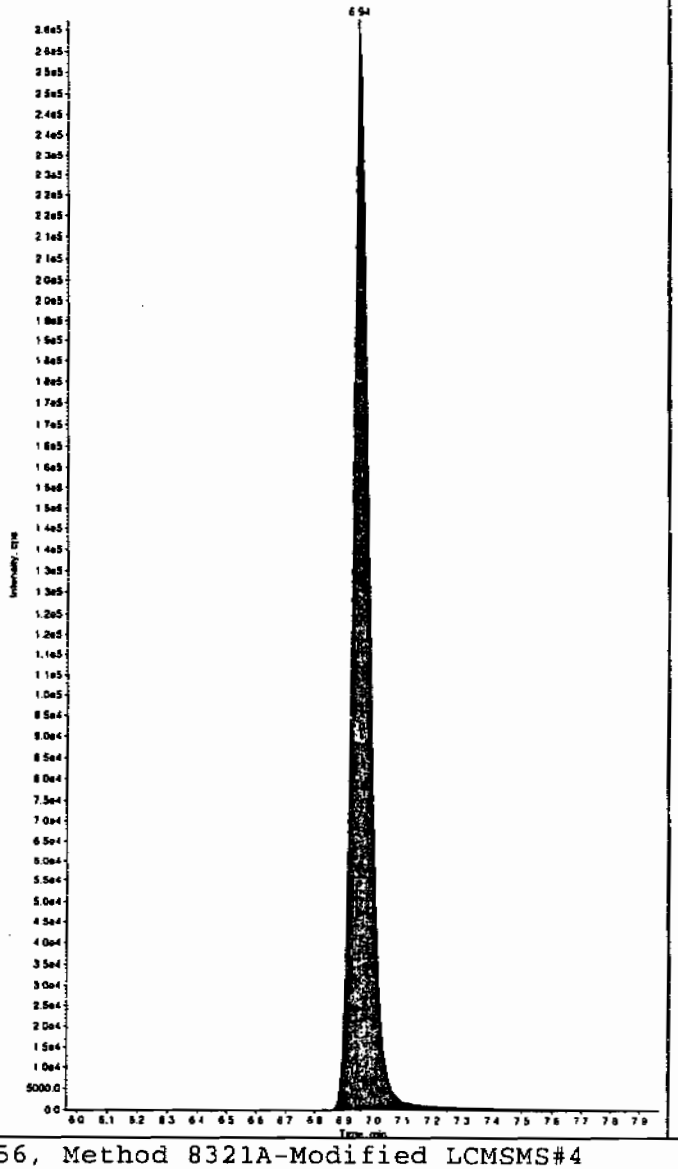
after Scan 11/27/10

Sample Name: "1202017303" Sample ID: "942335|2|LER" File: "EXS01250021.wiff"
Peak Name: "TATB" Mass(es): "257.2/204.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 513. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 3:46:53 PM

Modified: No
Acc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 3.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 6.57 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 6.94 min
Area: 1.12e+006 counts
Height: 362906.677 cps
Start Time: 6.79 min
End Time: 7.53 min

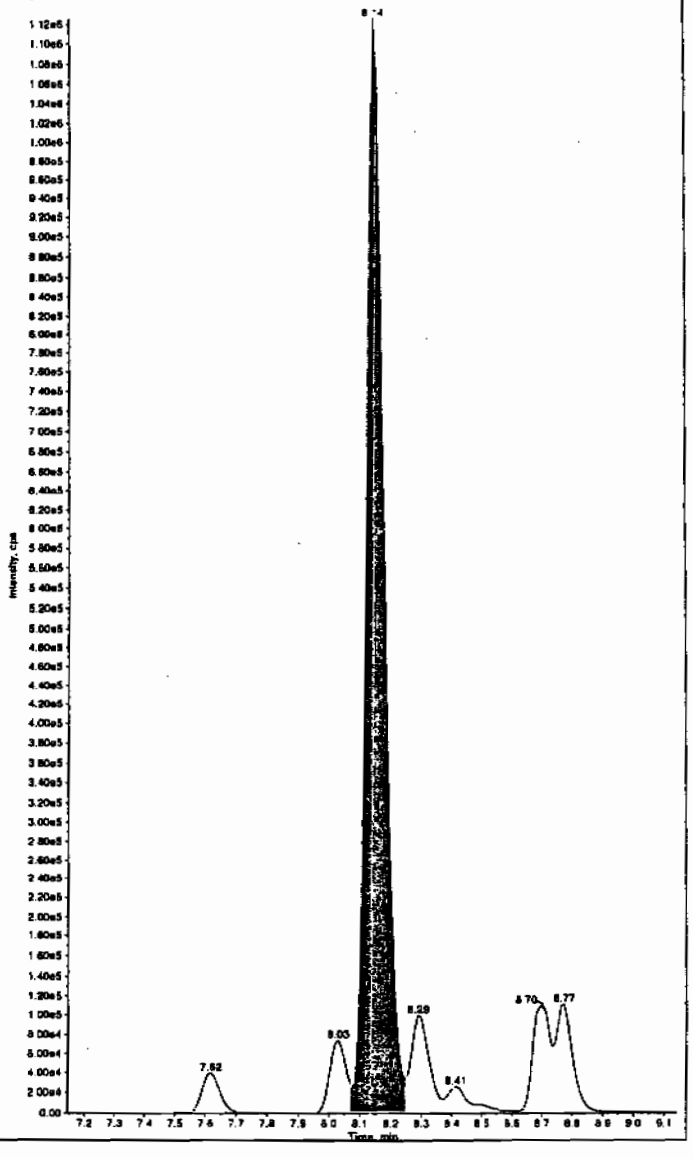


Sample Name: "1202017303" Sample ID: "942335|2|LER" File: "EXS01250021.wiff"
Peak Name: "35-Dinitroaniline" Mass(es): "182.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 497. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 3:46:53 PM

Modified: Yes
RT Window: 15.0 sec
Expected RT: 8.14 min
Use Relative RT: No

Int. Type: Manual
Retention Time: 8.15 min
Area: 4.66e+006 counts
Height: 1126642.596 cps
Start Time: 8.07 min
End Time: 8.25 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

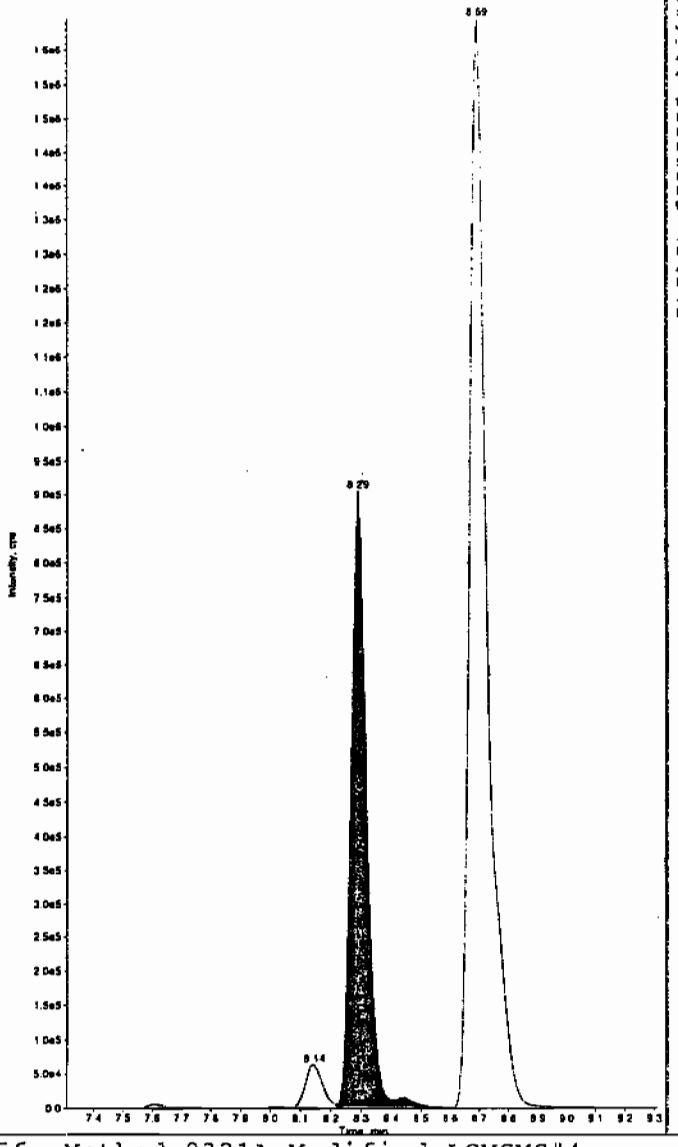
PROPRIETARY INFORMATION - No unauthorized reproduction without written permission from GEL.

Sample Name: "1202017303" Sample ID: "942335[2]LER" File: "EXS01250021.wiff"
Peak Name: "34-Dinitrotoluene" Mass(es): "182.1/151.9 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 242. ng/mL
Acq. Date: 1-25-2010
Acq. Time: 3:46:53 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1460.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.31 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 8.29 min
Area: 1.46e+006 counts
Height: 903934.570 cps
Start Time: 8.22 min
End Time: 8.53 min

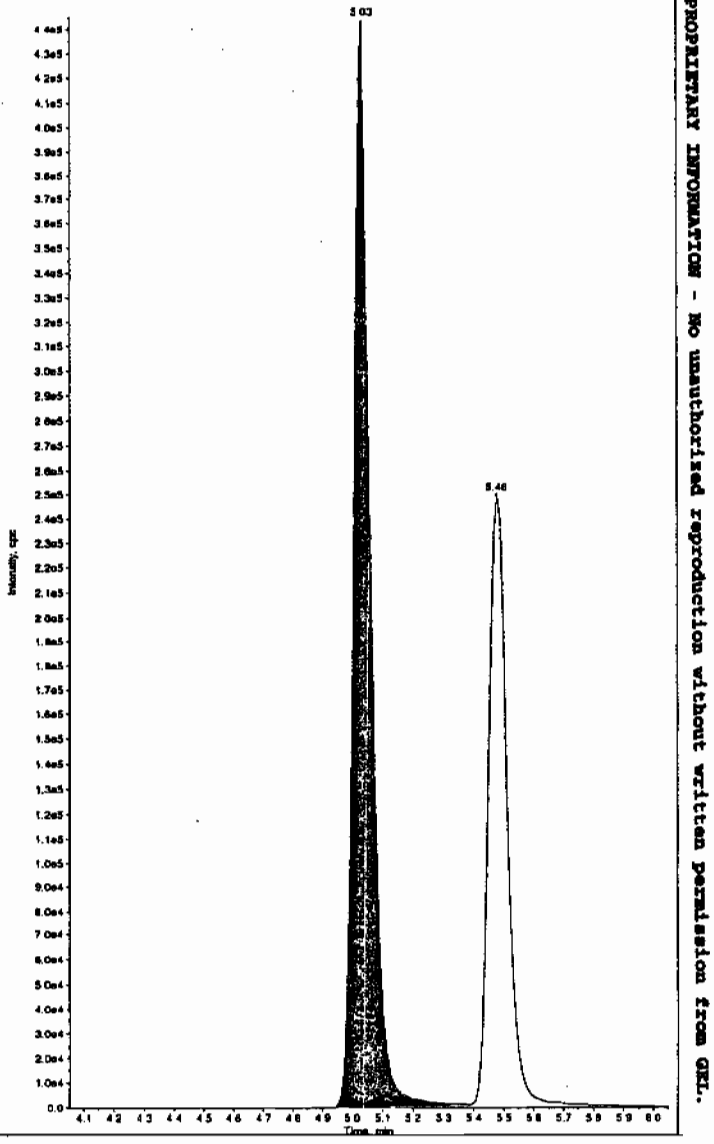


Sample Name: "1202017303" Sample ID: "942335[2]LER" File: "EXS01250021.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "168.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 475. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 3:46:53 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 450.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.25 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.03 min
Area: 1.78e+006 counts
Height: 444790.466 cps
Start Time: 4.93 min
End Time: 5.32 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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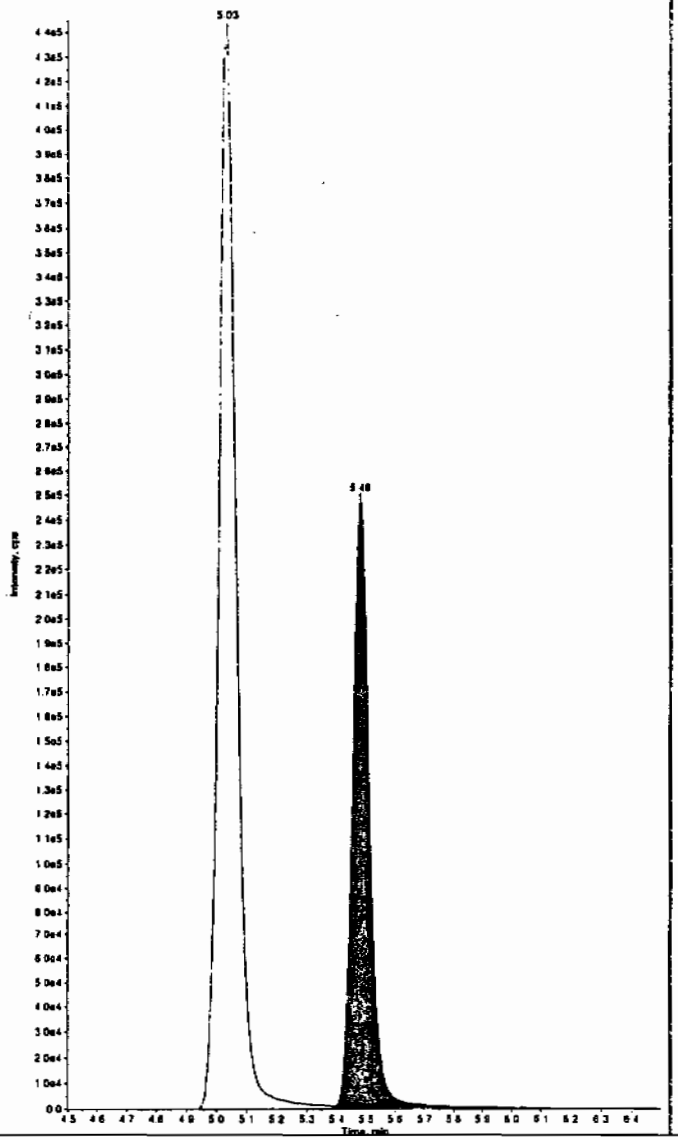
Sample Name: "1202017303" Sample ID: "942335[2]LER" File: "EXS01250021.wiff"
Peak Name: "24-Diamino-6-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 449. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 3:46:53 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 350.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 5.50 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 5.48 min
Area: 1.08e+006 counts
Height: 250340.546 cps
Start Time: 5.38 min
End Time: 5.91 min

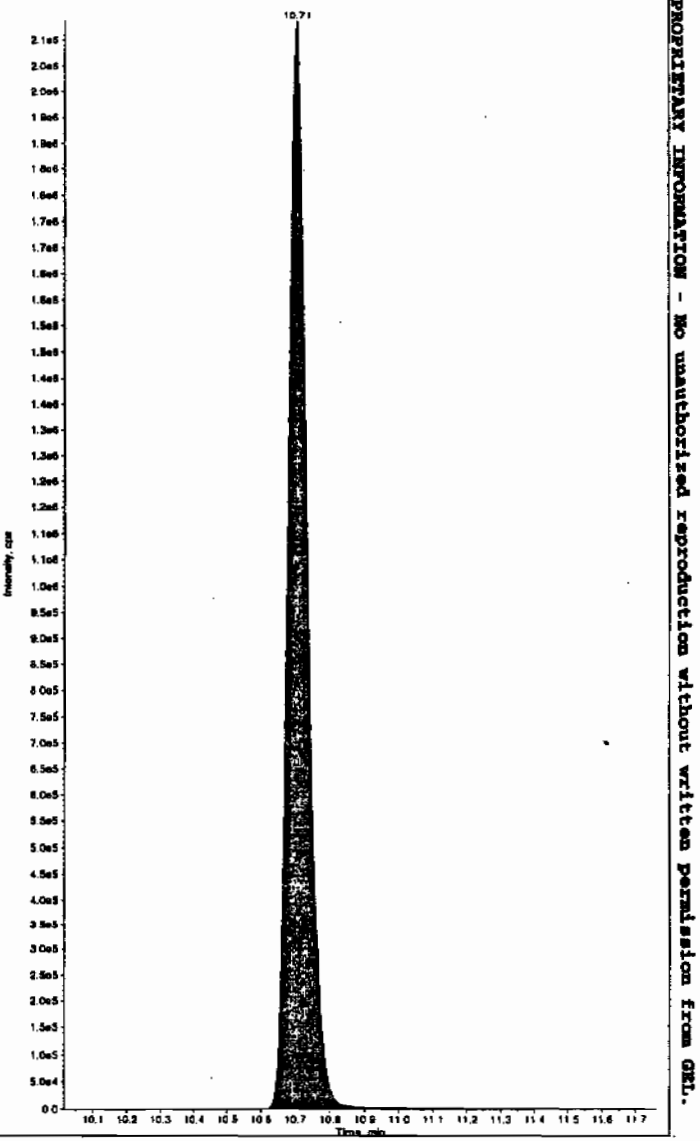


Sample Name: "1202017303" Sample ID: "942335[2]LER" File: "EXS01250021.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369.1/91.0 amu"
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 369. ng/mL
Acq. Date: 1/25/2010
Acq. Time: 3:46:53 PM

Modified: No
Proc. Algorithm: IntelliQuan - IQA
Min. Peak Height: 1.00e4 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 10.8 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 10.7 min
Area: 8.46e+006 counts
Height: 2087538.564 cps
Start Time: 10.6 min
End Time: 11.0 min



*GEL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

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GEL Laboratories LLC
Form GEL-DER

DER Report No.: 785558
Revision No.:

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
01-FEB-10	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
LC-MS/MS	SW846 8321A Modified	Solid	LANL
Batch ID:	**Sample Numbers:**		
942335	See Below		

Potentially affected work order(s)(SDG): 244847(10-1262),244852(10-1263),244881(10-1264-1),244905(10-1277)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for MS/MSD, or PS/PSD

Specification and Requirements Exception Description:	DER Disposition:
1. The Matrix Spike (1202017302) did not meet spike recovery limits for TATB at 440%. The recovery limits are 44-166%.	1. Since the Laboratory Control Sample met acceptance limits for TATB, the noted exception is attributed to vagaries in the extraction process. The data are reported with the appropriate DER. The discrepancy is noted in the case narrative.
2. The MS/MSD pair (1202017302/3) did not meet RPD acceptance limits for TATB at 92.2%. The acceptance limits are 0-30%.	2. Since all other RPD recoveries met acceptance criteria, the noted exception is attributed to vagaries in the extraction process. The data are reported with the appropriate DER. The discrepancy is noted in the case narrative.

Originator's Name:
Michael Penny 01-FEB-10

Data Validator/Group Leader:
Herbert Maier 02-FEB-10

GC SEMIVOLATILE PCB ANALYSIS

PCB Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1263

Method/Analysis Information

Procedure:	**Analysis of Polychlorinated Biphenyls by ECD**
Analytical Method:	SW846 8082
Prep Method:	SW846 3550B
Analytical Batch Number:	943205
Prep Batch Number:	943204

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 8082:

Sample ID	Client ID
244852001	RE12-10-7856
244852002	RE12-10-7857
1202019498	Method Blank (MB)
1202019499	Laboratory Control Sample (LCS)
1202019500	244881001(RE12-10-8096) Matrix Spike (MS)
1202019501	244881001(RE12-10-8096) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" 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-040 REV# 14.

Raw data reports are processed and reviewed by the analyst using the Target software package. False positives have been removed from the Target quantitation reports per standard operating procedures (SOP) section 23.0.

Calibration Information

Please note that the 'Cal Date' indicated on each quantitation report reflects the date and time of the most recent calibrated analyte(s) in the Target processing method. Since the laboratory may calibrate with multiple solutions on different days using the same processing method, the Target software will update the 'Cal Date' to the last calibration file, date and time. The correct dates and times for all calibration files are located on the Calibration History report in the Standard Data section in the data package.

Due to software limitations, the Calibration Summary Form 6 may not indicate all the calibration files comprising the initial calibration. A complete list of the initial calibration data files are shown in the Calibration History report located in the Standard Data section of the data package.

Initial Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

The linear equation used in Target and indicated on the initial calibration summary form is not a conventional linear equation (slope intercept formula) and does not match the equation found in SW-846 method 8000B. The x and y axes are inversed in Target, so that the instrument response is treated as the independent variable (x) and the concentration ratio is treated as the dependent variable (y). The equation used in Target to calculate sample results is adjusted to account for the linear equation inversion and reciprocal slope. The adjusted calculation has been independently verified to produce valid results.

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

Quality Control (QC) Information

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

Surrogate Recoveries
All surrogate recoveries were within the established acceptance criteria for this SDG.

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

QC Sample Designation
A LANL sample of similar matrix associated with another SDG (#10-1264-1) was selected for the matrix spike and matrix spike duplicate analysis. A Form III and QCC raw data are included in the package summarizing the results.

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 between the MS and MSD met the acceptance limits.

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.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP. All sample extracts were cleaned using alumina. Additionally, copper was added to all sample extracts to remove sulfur.

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.

Miscellaneous Information

Electronic Package Comment

The following package was generated using an electronic data processing program referred to as "virtual packaging". In an effort to increase quality and efficiency, the laboratory is developing systems to eventually 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. An electronic signature page inserted after the case narrative of each electronic package will indicate the analyst, reviewer, and report specialist names associated with the generation of the data and package. 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 report (DER) is for documentation of any procedural anomalies that may deviate from referenced

SOP or contractual document. A DER was not required for this SDG.

Manual Integration
Certain standards and samples may have required manual integration to correctly position the baseline as set in the calibration standard injections. If manual integration was performed, copies of all manual integration peak profiles are included in the raw data section of this PCB fraction.

Additional Comments
The additional comments field is used to address special issues associated with each analysis, clarify method/contractual issues pertaining to the analysis, and to list any report documents generated as a result of sample analysis or review. The following additional comments were required:

The higher results from either column have been chosen and reported in the data package for the client samples, MB and LCS.

The data reported on the form I and III may differ slightly from the data reported on the form X. This is due to software limitations in rounding differences between the forms.

Aroclors quantitated on the raw data report by the Target data system do not necessarily represent positive Aroclor identification. In order for positive identification to be made, the Aroclor must match in pattern and retention time; as well as quantitate relatively close between the primary and confirmation columns, as specified in SW846 method 8000. When these conditions are not met, the Aroclor is reported as a non-detect on the data report. These situations will be noted on the raw data as DMP, representing does not match pattern, or DNC does not confirm.

Due to software limitation, the Form VIIs will display the results either in the % difference or % drift depending on the type of the calibration curve. If the curve of all analytes is generated using an average response factor (RF), the Form VII will display results using the %difference calculation (RF). If the curve of one or more analytes is generated using a linear curve, the Form VII will display results using the % drift calculation (by concentration) for all analytes.

System Configuration

The Semi-Volatiles-PCB analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
ECD2A.I_1	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP I	30m x 0.25mm, 0.25um (Rtx-CLPesticide)
ECD2A.I_2	HP Gas Chromatograph	HP6890 Series ECD	Rtx-CLP II	30m x 0.25mm, 0.20um (Rtx-CLPesticide II)

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: Jimi Cao Date: 2/11/10

Roadmap for LANL 10-1263 PCB

This roadmap was analyzed by jcn01212 on 01-21-2010, 15:35.
This roadmap was reviewed by rob01090 on 01-26-2010, 16:21.
This roadmap was packaged by yml on 02-10-2010, 17:02.
This roadmap was validated by jim01140 on 02-11-2010, 08:11.

Front Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd2a.i/012010.b/027f2701.d	244852001	sample	20-JAN-2010	13:06	10-1263.sub	RE12-10-7856	1.00000	943205	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd2a.i/012010.b/030f3001.d	244852002	sample	20-JAN-2010	13:40	10-1263.sub	RE12-10-7857	1.00000	943205	UPLOAD BOTH, USE HIGHER

Back Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd2a.i/012010.b/027b2701.d	244852001	sample	20-JAN-2010	13:06	10-1263.sub	RE12-10-7856	1.00000	943205	UPLOAD BOTH, USE HIGHER
☐	N	/chem/ecd2a.i/012010.b/030b3001.d	244852002	sample	20-JAN-2010	13:40	10-1263.sub	RE12-10-7857	1.00000	943205	UPLOAD BOTH, USE HIGHER

Front QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd2a.i/012010.b/018f1801-2.d	1202019498	mb	20-JAN-2010	11:26	10-1263.sub	PBLK01	1.00000	943205	
☐	N	/chem/ecd2a.i/012010.b/019f1901-2.d	1202019499	lcs	20-JAN-2010	11:38	10-1263.sub	PBLK01LCS	1.00000	943205	

Back QC Sample Column

exclude	manual	datafile	smpid	sampletype	injdate	injtime	sublist	clientid	dilution	prepbatchid	comment
☐	N	/chem/ecd2a.i/012010.b/018b1801-2.d	1202019498	mb	20-JAN-2010	11:26	10-1263.sub	PBLK01	1.00000	943205	
☐	N	/chem/ecd2a.i/012010.b/019b1901-2.d	1202019499	lcs	20-JAN-2010	11:38	10-1263.sub	PBLK01LCS	1.00000	943205	

SAMPLE DATA SUMMARY

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**10-1263**	**Date Collected:**	**01/11/2010 12:00**	**Matrix:**	**R**
Lab Sample ID:	**244852001**	**Date Received:**	**01/15/2010 08:50**	**%Moisture:**	**9.4**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**RE12-10-7856**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL-OA-E-040**
Batch ID:	**943205**	**Inst:**	**ECD2A.I**	**Dilution:**	**1**
Run Date:	**01/20/2010 13:06**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**01/19/2010 20:46**	**Aliquot:**	**30.09 g**	**Final Volume:**	**1 mL**
Data File:	**027f2701.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	027b2701.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.67	ug/kg	1.22	3.67	1
11104-28-2	Aroclor-1221	U	3.67	ug/kg	1.22	3.67	1
11141-16-5	Aroclor-1232	U	3.67	ug/kg	1.22	3.67	1
53469-21-9	Aroclor-1242	U	3.67	ug/kg	1.22	3.67	1
12672-29-6	Aroclor-1248	U	3.67	ug/kg	1.22	3.67	1
11097-69-1	Aroclor-1254	U	3.67	ug/kg	1.22	3.67	1
11096-82-5	Aroclor-1260	U	3.67	ug/kg	1.22	3.67	1

PCB
Certificate of Analysis
Sample Summary

SDG Number:	10-1263	**Date Collected:**	01/11/2010 12:00	**Matrix:**	R
Lab Sample ID:	244852002	**Date Received:**	01/15/2010 08:50	**%Moisture:**	6.3
		Client:	LANL010	**Project:**	LANL01004
Client ID:	RE12-10-7857	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	943205	**Inst:**	ECD2A.I	**Dilution:**	1
Run Date:	01/20/2010 13:40	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	01/19/2010 20:46	**Aliquot:**	30.09 g	**Final Volume:**	1 mL
Data File:	030f3001.d	**Column:**	1 CLP1	**Level:**	LOW
	030b3001.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.55	ug/kg	1.18	3.55	1
11104-28-2	Aroclor-1221	U	3.55	ug/kg	1.18	3.55	1
11141-16-5	Aroclor-1232	U	3.55	ug/kg	1.18	3.55	1
53469-21-9	Aroclor-1242	U	3.55	ug/kg	1.18	3.55	1
12672-29-6	Aroclor-1248	U	3.55	ug/kg	1.18	3.55	1
11097-69-1	Aroclor-1254	U	3.55	ug/kg	1.18	3.55	1
11096-82-5	Aroclor-1260	U	3.55	ug/kg	1.18	3.55	1

QUALITY CONTROL SUMMARY

PCB

Surrogate Recovery Report

SDG Number: 10-1263

Matrix Type: SOLID

CAP Column (1) : CLP1 **CAP Column (2) : CLP2**

Sample ID	Client ID	4CMX 1 %REC #	4CMX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #
1202019498	MB for batch 943204	66	71	73	78
1202019499	LCS for batch 943204	62	66	67	73
244852001	RE12-10-7856	44	47	49	50
244852002	RE12-10-7857	49	51	55	58

Surrogate	Acceptance Limits
4CMX = 4cmx	(34%-105%)
DCB = Decachlorobiphenyl	(33%-115%)

* Recovery outside Acceptance Limits

\# Column to be used to flag recovery values

D Sample Diluted

PCB

Quality Control Summary
Spike Recovery Report

SDG Number: 10-1263
Client ID: LCS for batch 943204
Lab Sample ID: 1202019499
Instrument: ECD2A.I
Analyst: JAOC
Inj. Vol: 1 uL

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 01/20/2010 11:38
Dilution: 1
Prep Batch ID 943204
Batch ID: 943205

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	LCS	Aroclor-1016	33.3	0.0	22.9	69	41-110
11096-82-5	LCS	Aroclor-1260	33.3	0.0	25.8	77	48-110

PCB

Quality Control Summary
Spike Recovery Report

SDG Number:	**10-1264-1**	**Sample Type:**	**Matrix Spike**	
Client ID:	**RE12-10-8096MS**	**Matrix:**	**R**	
Lab Sample ID:	**1202019500**	**%Moisture:**	**6.1**	
Instrument:	**ECD2A.I**	**Analysis Date:**	**01/20/2010 14:02**	**Dilution: 1**
Analyst:	**JAOC**	**Prep Batch ID**	**943204**	
Inj. Vol:	**1 uL**	**Batch ID:**	**943205**	

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits
12674-11-2	MS	Aroclor-1016	35.4	0.00	U	23.0	65	23-117
11096-82-5	MS	Aroclor-1260	35.4	0.00	U	26.6	75	27-116

Quality Control Summary
Spike Recovery Report

SDG Number:	**10-1264-1**	**Sample Type:**	**Matrix Spike Duplicate**
Client ID:	**RE12-10-8096MSD**	**Matrix:**	**R**
Lab Sample ID:	**1202019501**	**%Moisture:**	**6.1**
Instrument:	**ECD2A.I**	**Analysis Date:**	**01/20/2010 14:13**
Analyst:	**JAOC**	**Prep Batch ID:**	**943204**
Inj. Vol:	**1 uL**	**Batch ID:**	**943205**

Dilution: 1

CAS No	Parmname	Amount Added ug/kg	Sample Conc. ug/kg		Spike Conc. ug/kg	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
12674-11-2	MSD Aroclor-1016	35.4	0.00	U	24.6	70	23-117	7	0-30
11096-82-5	MSD Aroclor-1260	35.4	0.00	U	28.4	80	27-116	7	0-30

Method Blank Summary

SDG Number:	10-1263	Client:	LANL010	Matrix:	SOIL
Client ID:	MB for batch 943204	Instrument ID:	ECD2A.I_2 ECD2A.I_1	Data File:	018b1801-1.d 018f1801-1.d
Lab Sample ID:	1202019498				
Column:	CLP2 CLP1	Prep Date:	01/19/2010 20:46	Analyzed:	01/20/10 11:26
		Level:	LOW		

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 943204	1202019499	019f1901-1.d 019b1901-1.d	01/20/10	1138
02 RE12-10-7856	244852001	027f2701.d 027b2701.d	01/20/10	1306
03 RE12-10-7857	244852002	030f3001.d 030b3001.d	01/20/10	1340

SAMPLE DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	10-1263	**Date Collected:**	01/11/2010 12:00	**Matrix:**	R
Lab Sample ID:	244852001	**Date Received:**	01/15/2010 08:50	**%Moisture:**	9.4
		Client:	LANL010	**Project:**	LANL01004
Client ID:	RE12-10-7856	**Method:**	SW846 8082	**SOP Ref:**	GL-OA-E-040
Batch ID:	943205	**Inst:**	ECD2A.I	**Dilution:**	1
Run Date:	01/20/2010 13:06	**Analyst:**	JAOC	**Inj. Vol:**	1 uL
Prep Date:	01/19/2010 20:46	**Aliquot:**	30.09 g	**Final Volume:**	1 mL
Data File:	027f2701.d	**Column:**	1 CLP1	**Level:**	LOW
	027b2701.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.67	ug/kg	1.22	3.67	1
11104-28-2	Aroclor-1221	U	3.67	ug/kg	1.22	3.67	1
11141-16-5	Aroclor-1232	U	3.67	ug/kg	1.22	3.67	1
53469-21-9	Aroclor-1242	U	3.67	ug/kg	1.22	3.67	1
12672-29-6	Aroclor-1248	U	3.67	ug/kg	1.22	3.67	1
11097-69-1	Aroclor-1254	U	3.67	ug/kg	1.22	3.67	1
11096-82-5	Aroclor-1260	U	3.67	ug/kg	1.22	3.67	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/027f2701.d
Lab Smp Id: 244852001 Client Smp ID: RE12-10-7856
Inj Date : 20-JAN-2010 13:06
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |244852001|1|
Misc Info : |ECD82P_1S|943205|SVA|LANL|SOIL|RE12-10-7856|||
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Meth Date : 21-Jan-2010 07:18 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012f1201.d
Als bottle: 27
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1263.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.09000	Weight of sample extracted (g)
M	9.43830	% Moisture

Cpnd Variable Local Compound Variable

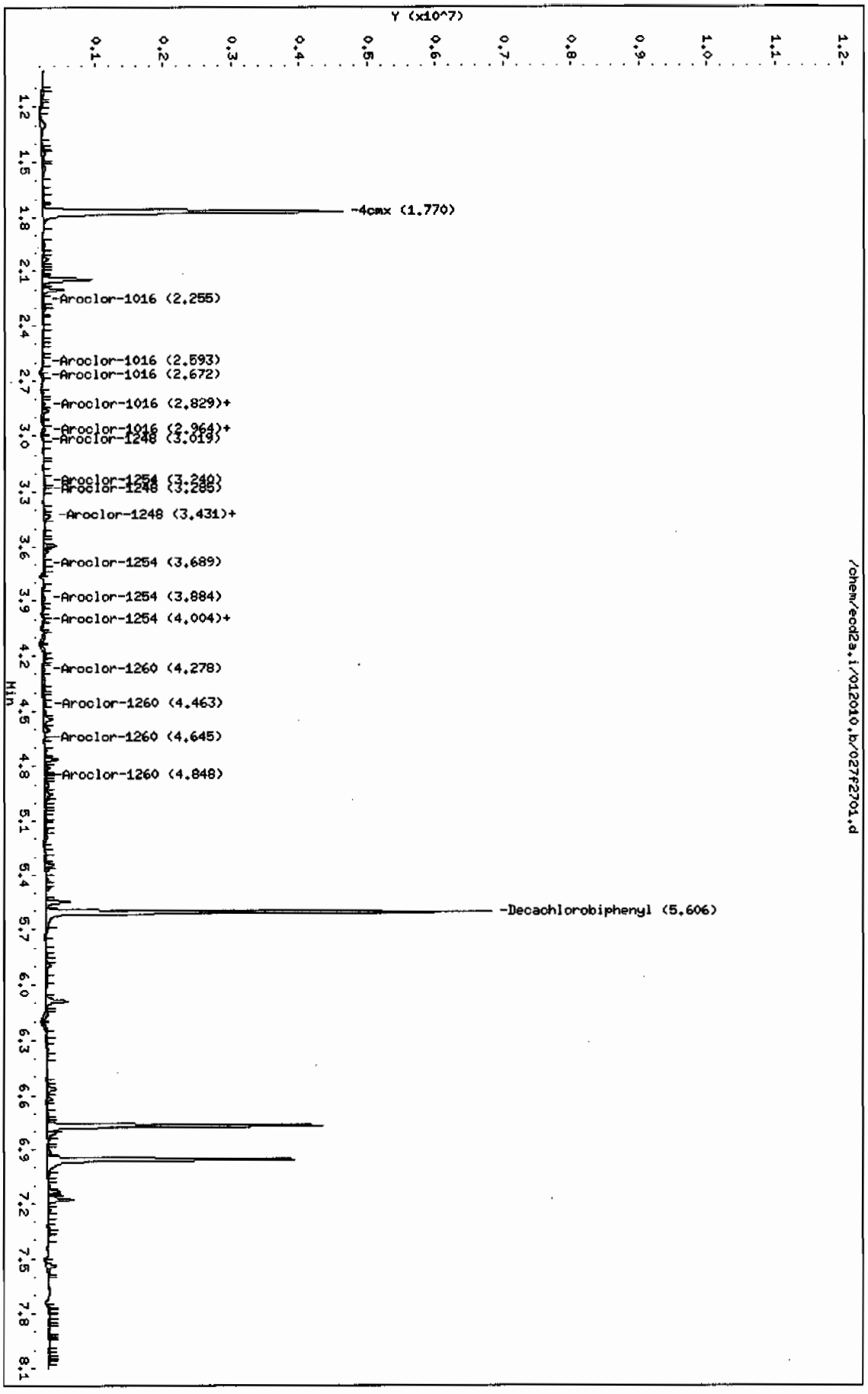
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.770	1.772	-0.002	5904551	88.0849	3.2	80.00- 120.00	100.00(M)
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.606	5.607	-0.001	6227033	98.2193	3.6	80.00- 120.00	100.00

QC Flag Legend

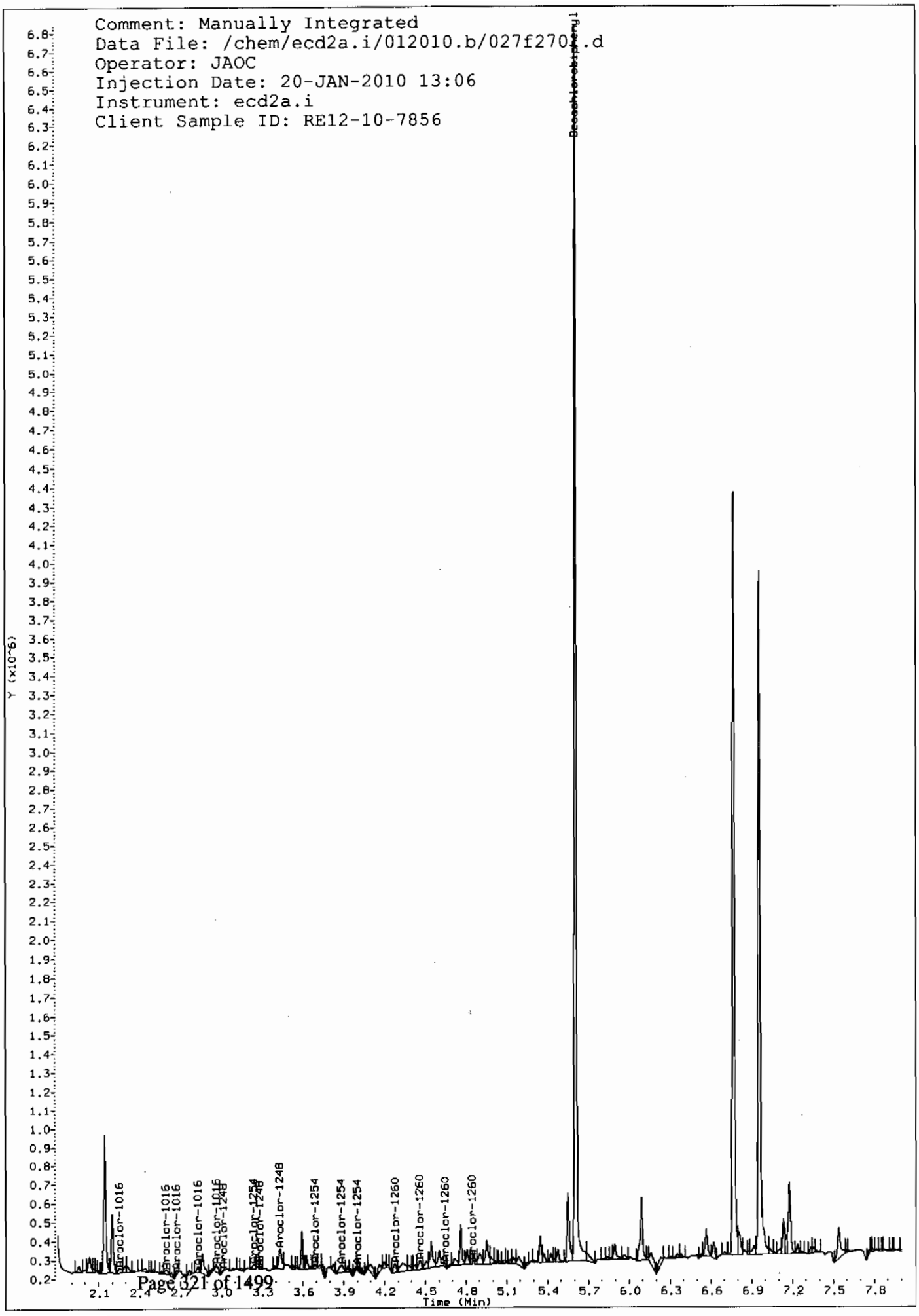
M - Compound response manually integrated.

Data File: /chem/ecd2a.i/012010.b/027f2701.d
Date : 20-JAN-2010 13:06
Client ID: RE12-10-7856
Sample Info: 1244852001|1|
Volume Injected (uL): 1.0
Column phase: CLP1

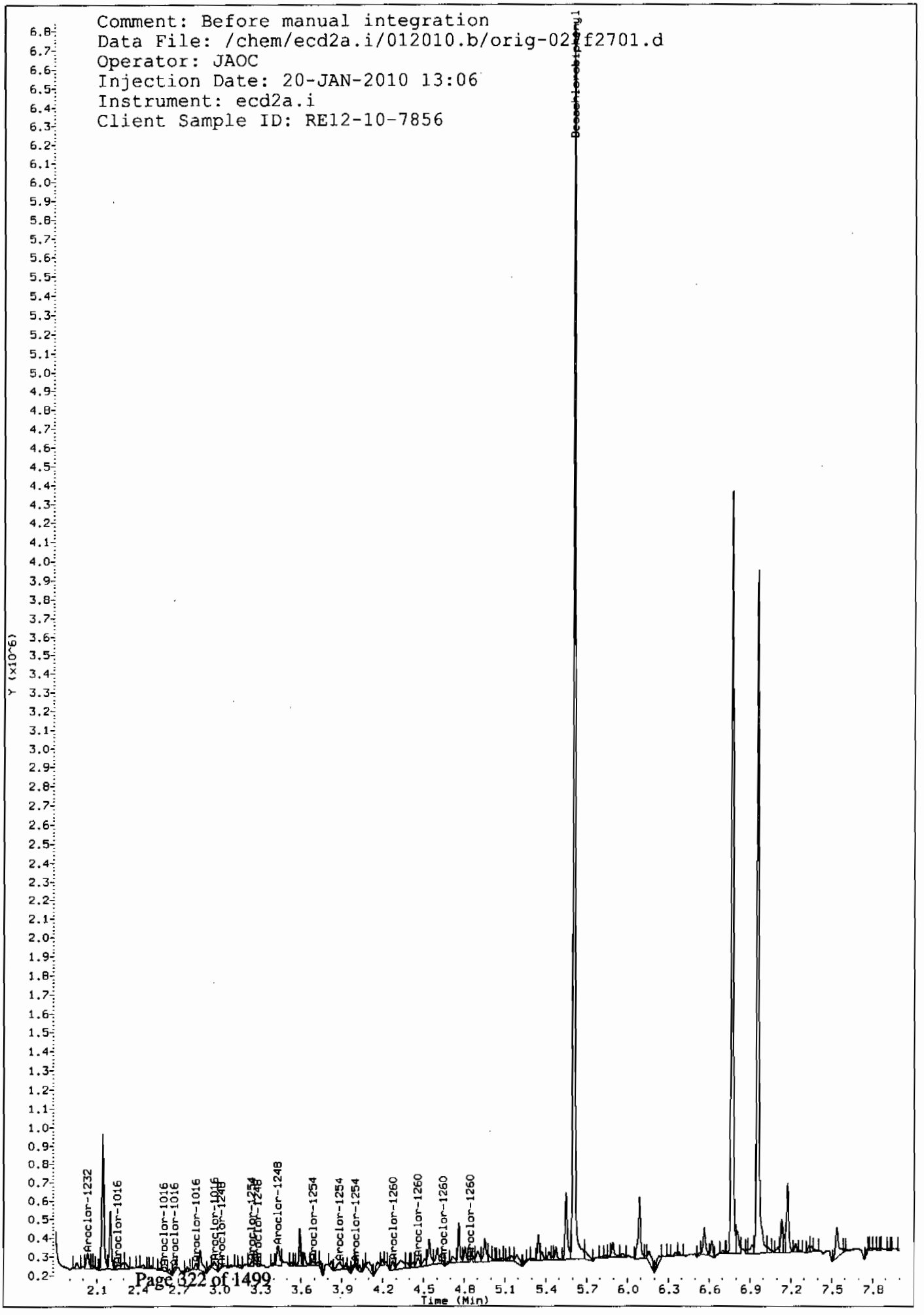
Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



Comment: Manually Integrated
Data File: /chem/ecd2a.i/012010.b/027f2701.d
Operator: JAOC
Injection Date: 20-JAN-2010 13:06
Instrument: ecd2a.i
Client Sample ID: RE12-10-7856



Comment: Before manual integration
Data File: /chem/ecd2a.i/012010.b/orig-02 f2701.d
Operator: JAOC
Injection Date: 20-JAN-2010 13:06
Instrument: ecd2a.i
Client Sample ID: RE12-10-7856



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/027b2701.d
Lab Smp Id: 244852001 Client Smp ID: RE12-10-7856
Inj Date : 20-JAN-2010 13:06
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |244852001|1|
Misc Info : |ECD82P_1S|943205|SVA|LANL|SOIL|RE12-10-7856|||
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Meth Date : 21-Jan-2010 07:43 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012b1201.d
Als bottle: 27
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1263.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

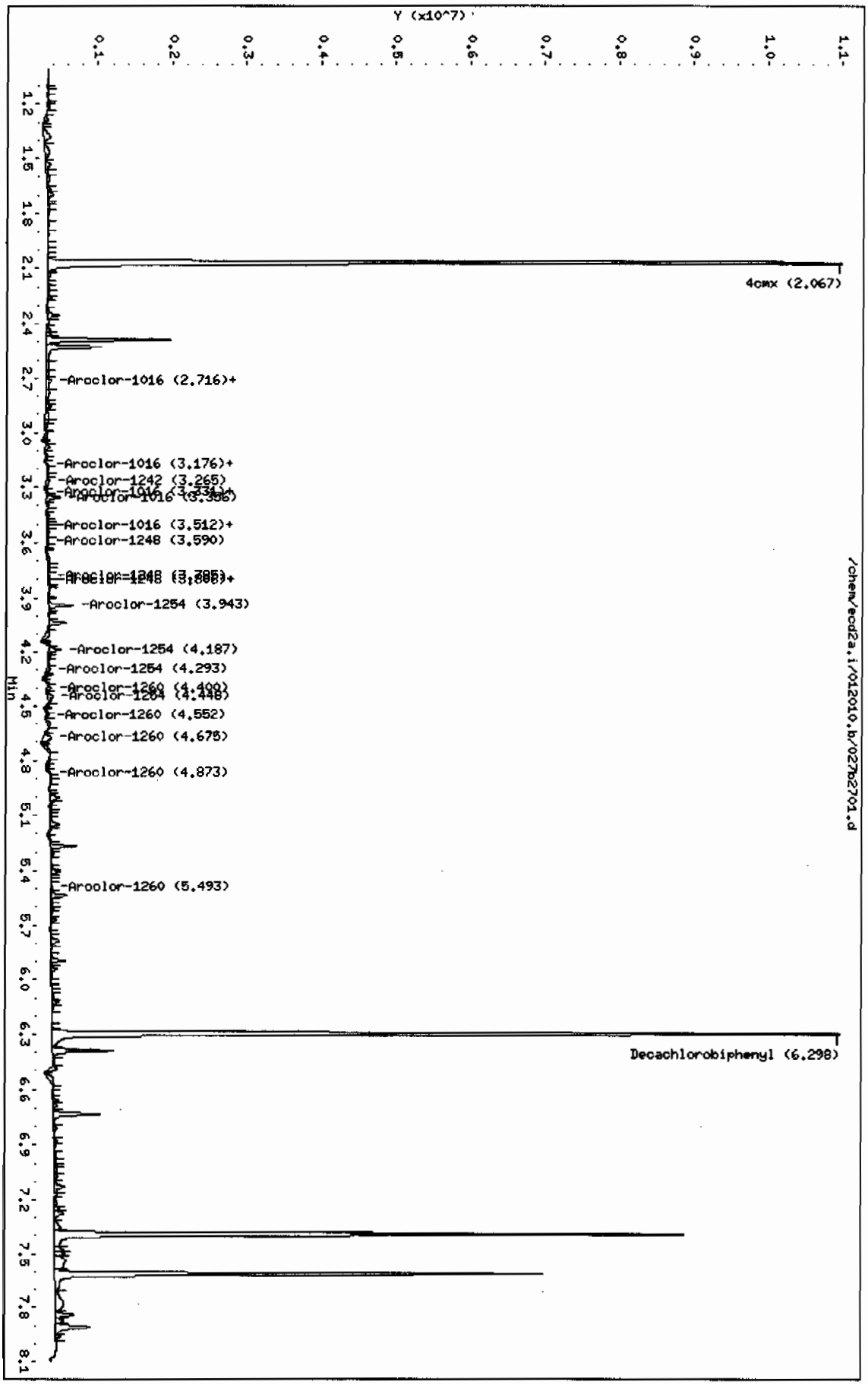
Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.09000	Weight of sample extracted (g)
M	9.43830	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.067	2.068	-0.001	13121210	94.0205	3.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.298	6.298	0.000	12505270	100.402	3.7	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/012010.b/027b2701.d
Date : 20-JAN-2010 13:06
Client ID: RE12-10-7856
Sample Info: 1244952001111
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd2a.i
Operator: JADC
Column diameter: 0.25



Page 1

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**10–1263**	**Date Collected:**	**01/11/2010 12:00**	**Matrix:**	**R**
Lab Sample ID:	**244852002**	**Date Received:**	**01/15/2010 08:50**	**%Moisture:**	**6.3**
		Client:	**LANL010**	**Project:**	**LANL01004**
Client ID:	**RE12–10–7857**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL–OA–E–040**
Batch ID:	**943205**	**Inst:**	**ECD2A.I**	**Dilution:**	**1**
Run Date:	**01/20/2010 13:40**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**01/19/2010 20:46**	**Aliquot:**	**30.09 g**	**Final Volume:**	**1 mL**
Data File:	**030f3001.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	030b3001.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674–11–2	Aroclor–1016	U	3.55	ug/kg	1.18	3.55	1
11104–28–2	Aroclor–1221	U	3.55	ug/kg	1.18	3.55	1
11141–16–5	Aroclor–1232	U	3.55	ug/kg	1.18	3.55	1
53469–21–9	Aroclor–1242	U	3.55	ug/kg	1.18	3.55	1
12672–29–6	Aroclor–1248	U	3.55	ug/kg	1.18	3.55	1
11097–69–1	Aroclor–1254	U	3.55	ug/kg	1.18	3.55	1
11096–82–5	Aroclor–1260	U	3.55	ug/kg	1.18	3.55	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/030f3001.d
Lab Smp Id: 244852002 Client Smp ID: RE12-10-7857
Inj Date : 20-JAN-2010 13:40
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |244852002|1|
Misc Info : |ECD82P_1S|943205|SVA|LANL|SOIL|RE12-10-7857|||
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Meth Date : 21-Jan-2010 07:18 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012f1201.d
Als bottle: 30
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1263.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

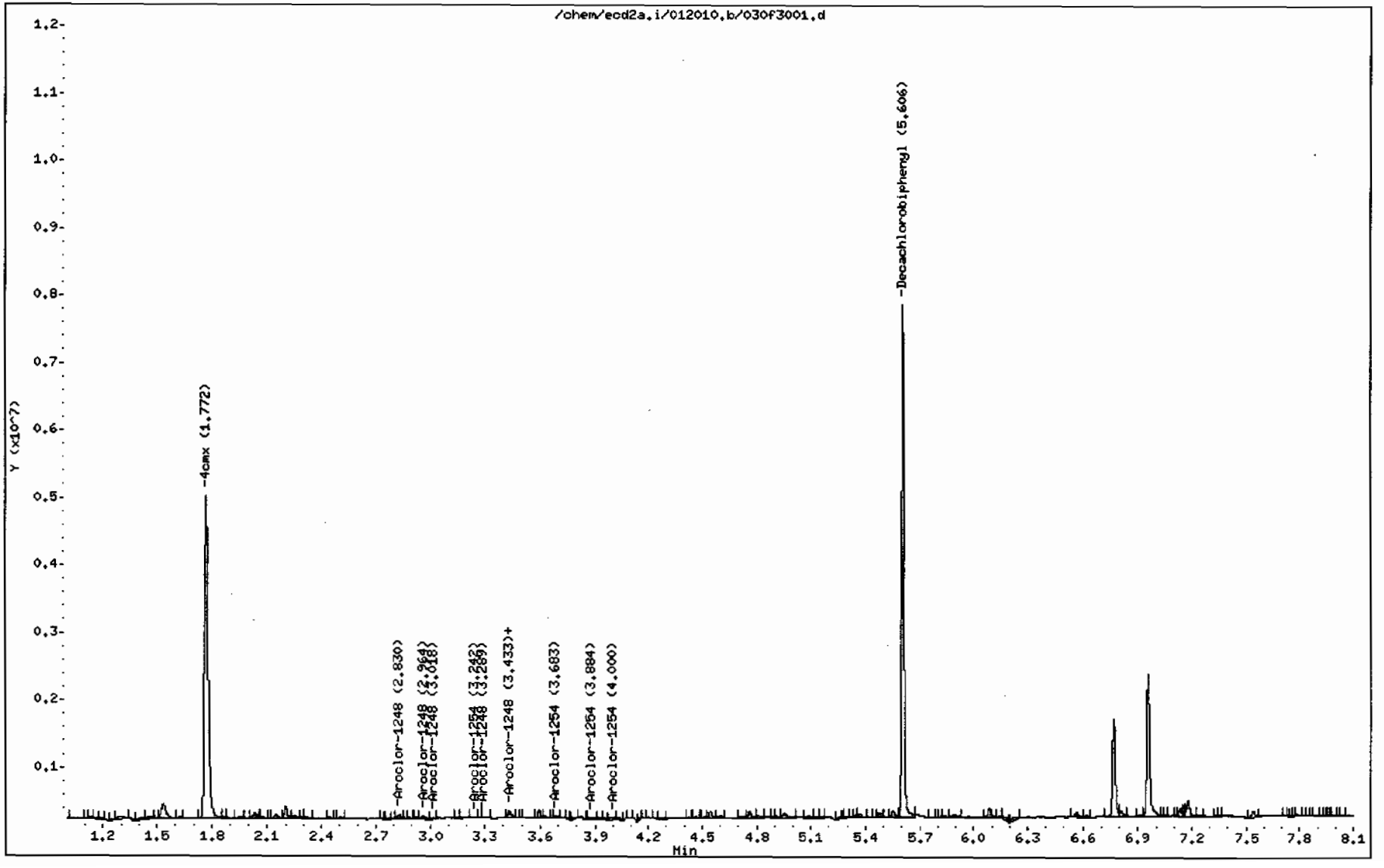
Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.09000	Weight of sample extracted (g)
M	6.27700	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.772	1.772	0.000	6516094	97.2079	3.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.606	5.607	-0.001	7030971	110.900	3.9	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/012010.b/030f3001.d
Date : 20-JAN-2010 13:40
Client ID: RE12-10-7857
Sample Info: |244852002|1|
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/030b3001.d
Lab Smp Id: 244852002 Client Smp ID: RE12-10-7857
Inj Date : 20-JAN-2010 13:40
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |244852002|1|
Misc Info : |ECD82P_1S|943205|SVA|LANL|SOIL|RE12-10-7857|||
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Meth Date : 21-Jan-2010 07:43 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012b1201.d
Als bottle: 30
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1263.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

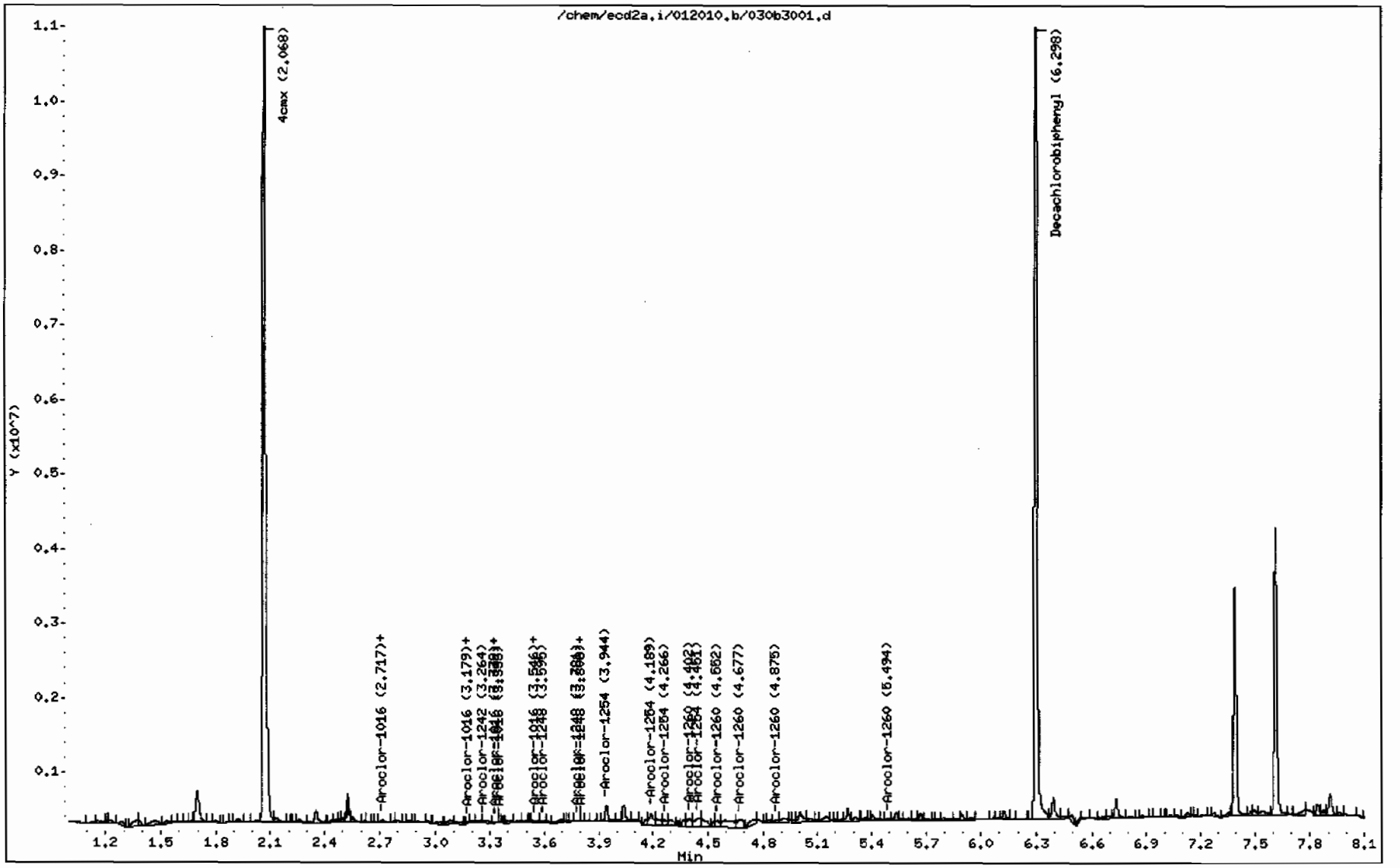
Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.09000	Weight of sample extracted (g)
M	6.27700	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.068	2.068	0.000	14345876	102.796	3.6	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.298	6.298	0.000	14450393	116.019	4.1	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/012010.b/030b3001.d
Date : 20-JAN-2010 13:40
Client ID: RE12-10-7857
Sample Info: |244852002|1|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



STANDARDS DATA

Report Date: 21-Jan-2010 08:17

Calibration History

Method : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Start Cal Date: 12-NOV-2009 11:00
End Cal Date : 20-JAN-2010 10:31

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
02-DEC-2009 07:05	AR1262	/chem/ecd2a.i/120209.b/008f0801.d
07-JAN-2010 08:16	AR1268	/chem/ecd2a.i/010710.b/009f0901.d
30-NOV-2009 10:12	AR1248	/chem/ecd2a.i/113009a.b/011f1101.d
12-NOV-2009 14:09	AR1242	/chem/ecd2a.i/111209a.b/023f2301.d
30-NOV-2009 08:43	AR1254	/chem/ecd2a.i/113009a.b/003f0301.d
20-JAN-2010 09:46	AR1660	/chem/ecd2a.i/012010.b/009f0901.d
Cal Level: 2 , Cal Amount: 250.00000		
02-DEC-2009 07:16	AR1262	/chem/ecd2a.i/120209.b/009f0901.d
07-JAN-2010 08:27	AR1268	/chem/ecd2a.i/010710.b/010f1001.d
30-NOV-2009 10:23	AR1248	/chem/ecd2a.i/113009a.b/012f1201.d
12-NOV-2009 14:20	AR1242	/chem/ecd2a.i/111209a.b/024f2401.d
30-NOV-2009 08:54	AR1254	/chem/ecd2a.i/113009a.b/004f0401.d
20-JAN-2010 09:57	AR1660	/chem/ecd2a.i/012010.b/010f1001.d
Cal Level: 3 , Cal Amount: 500.00000		
02-DEC-2009 07:27	AR1262	/chem/ecd2a.i/120209.b/010f1001.d
07-JAN-2010 08:38	AR1268	/chem/ecd2a.i/010710.b/011f1101.d
30-NOV-2009 10:34	AR1248	/chem/ecd2a.i/113009a.b/013f1301.d
12-NOV-2009 14:31	AR1242	/chem/ecd2a.i/111209a.b/025f2501.d
30-NOV-2009 09:05	AR1254	/chem/ecd2a.i/113009a.b/005f0501.d
20-JAN-2010 10:09	AR1660	/chem/ecd2a.i/012010.b/011f1101.d
Cal Level: 4 , Cal Amount: 1000.00000		
30-NOV-2009 10:45	AR1248	/chem/ecd2a.i/113009a.b/014f1401.d
12-NOV-2009 14:42	AR1242	/chem/ecd2a.i/111209a.b/026f2601.d
30-NOV-2009 09:16	AR1254	/chem/ecd2a.i/113009a.b/006f0601.d
20-JAN-2010 10:20	AR1660	/chem/ecd2a.i/012010.b/012f1201.d
12-NOV-2009 11:45	DDTANALOGSTD	/chem/ecd2a.i/111209a.b/010f1001.d
07-JAN-2010 08:49	AR1268	/chem/ecd2a.i/010710.b/012f1201.d
02-DEC-2009 07:38	AR1262	/chem/ecd2a.i/120209.b/011f1101.d
12-NOV-2009 11:11	AR1221	/chem/ecd2a.i/111209a.b/007f0701.d
12-NOV-2009 11:00	AR1232	/chem/ecd2a.i/111209a.b/006f0601.d
Cal Level: 5 , Cal Amount: 4000.00000		
02-DEC-2009 07:50	AR1262	/chem/ecd2a.i/120209.b/012f1201.d
07-JAN-2010 09:00	AR1268	/chem/ecd2a.i/010710.b/013f1301.d
30-NOV-2009 10:56	AR1248	/chem/ecd2a.i/113009a.b/015f1501.d

12-NOV-2009 14:53	AR1242	/chem/ecd2a.i/111209a.b/027f2701.d
30-NOV-2009 09:27	AR1254	/chem/ecd2a.i/113009a.b/007f0701.d
20-JAN-2010 10:31	AR1660	/chem/ecd2a.i/012010.b/013f1301.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 19:35	AR1660	/chem/ecd2a.i/012010.b/062f6201.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 18:06	AR1660	/chem/ecd2a.i/012010.b/054f5401.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 16:37	AR1660	/chem/ecd2a.i/012010.b/046f4601.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 14:57	AR1660	/chem/ecd2a.i/012010.b/037f3701.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 13:17	AR1660	/chem/ecd2a.i/012010.b/028f2801.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 13:06	AR1660	/chem/ecd2a.i/012010.b/027f2701.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 10:53	AR1268	/chem/ecd2a.i/012010.b/015f1501.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 10:42	AR1660	/chem/ecd2a.i/012010.b/014f1401.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 10:20	AR1660	/chem/ecd2a.i/012010.b/012f1201.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 09:35	AR1262	/chem/ecd2a.i/012010.b/008f0801.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 09:24	AR1221	/chem/ecd2a.i/012010.b/007f0701.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 09:13	AR1232	/chem/ecd2a.i/012010.b/006f0601.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 09:02	AR1248	/chem/ecd2a.i/012010.b/005f0501.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 08:51	AR1242	/chem/ecd2a.i/012010.b/004f0401.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 08:40	AR1254	/chem/ecd2a.i/012010.b/003f0301.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 08:29	AR1660	/chem/ecd2a.i/012010.b/002f0201.d

Report Date: 21-Jan-2010 08:17

Calibration History

Method : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Start Cal Date: 12-NOV-2009 11:00
End Cal Date : 20-JAN-2010 10:31

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 100.00000		
02-DEC-2009 07:05	AR1262	/chem/ecd2a.i/120209.b/008b0801.d
07-JAN-2010 08:16	AR1268	/chem/ecd2a.i/010710.b/009b0901.d
30-NOV-2009 10:12	AR1248	/chem/ecd2a.i/113009a.b/011b1101.d
12-NOV-2009 14:09	AR1242	/chem/ecd2a.i/111209a.b/023b2301.d
30-NOV-2009 08:43	AR1254	/chem/ecd2a.i/113009a.b/003b0301.d
20-JAN-2010 09:46	AR1660	/chem/ecd2a.i/012010.b/009b0901.d
Cal Level: 2 , Cal Amount: 250.00000		
02-DEC-2009 07:16	AR1262	/chem/ecd2a.i/120209.b/009b0901.d
07-JAN-2010 08:27	AR1268	/chem/ecd2a.i/010710.b/010b1001.d
30-NOV-2009 10:23	AR1248	/chem/ecd2a.i/113009a.b/012b1201.d
12-NOV-2009 14:20	AR1242	/chem/ecd2a.i/111209a.b/024b2401.d
30-NOV-2009 08:54	AR1254	/chem/ecd2a.i/113009a.b/004b0401.d
20-JAN-2010 09:57	AR1660	/chem/ecd2a.i/012010.b/010b1001.d
Cal Level: 3 , Cal Amount: 500.00000		
02-DEC-2009 07:27	AR1262	/chem/ecd2a.i/120209.b/010b1001.d
07-JAN-2010 08:38	AR1268	/chem/ecd2a.i/010710.b/011b1101.d
30-NOV-2009 10:34	AR1248	/chem/ecd2a.i/113009a.b/013b1301.d
12-NOV-2009 14:31	AR1242	/chem/ecd2a.i/111209a.b/025b2501.d
30-NOV-2009 09:05	AR1254	/chem/ecd2a.i/113009a.b/005b0501.d
20-JAN-2010 10:09	AR1660	/chem/ecd2a.i/012010.b/011b1101.d
Cal Level: 4 , Cal Amount: 1000.00000		
30-NOV-2009 10:45	AR1248	/chem/ecd2a.i/113009a.b/014b1401.d
12-NOV-2009 14:42	AR1242	/chem/ecd2a.i/111209a.b/026b2601.d
30-NOV-2009 09:16	AR1254	/chem/ecd2a.i/113009a.b/006b0601.d
20-JAN-2010 10:20	AR1660	/chem/ecd2a.i/012010.b/012b1201.d
12-NOV-2009 11:45	DDTANALOGSTD	/chem/ecd2a.i/111209a.b/010b1001.d
07-JAN-2010 08:49	AR1268	/chem/ecd2a.i/010710.b/012b1201.d
02-DEC-2009 07:38	AR1262	/chem/ecd2a.i/120209.b/011b1101.d
12-NOV-2009 11:11	AR1221	/chem/ecd2a.i/111209a.b/007b0701.d
12-NOV-2009 11:00	AR1232	/chem/ecd2a.i/111209a.b/006b0601.d
Cal Level: 5 , Cal Amount: 4000.00000		
02-DEC-2009 07:50	AR1262	/chem/ecd2a.i/120209.b/012b1201.d
07-JAN-2010 09:00	AR1268	/chem/ecd2a.i/010710.b/013b1301.d
30-NOV-2009 10:56	AR1248	/chem/ecd2a.i/113009a.b/015b1501.d

12-NOV-2009 14:53	AR1242	/chem/ecd2a.i/111209a.b/027b2701.d
30-NOV-2009 09:27	AR1254	/chem/ecd2a.i/113009a.b/007b0701.d
20-JAN-2010 10:31	AR1660	/chem/ecd2a.i/012010.b/013b1301.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 4

Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 18:06	AR1660	/chem/ecd2a.i/012010.b/054b5401.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 19:35	AR1660	/chem/ecd2a.i/012010.b/062b6201.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 16:37	AR1660	/chem/ecd2a.i/012010.b/046b4601.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 14:57	AR1660	/chem/ecd2a.i/012010.b/037b3701.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 13:17	AR1660	/chem/ecd2a.i/012010.b/028b2801.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 13:06	AR1660	/chem/ecd2a.i/012010.b/027b2701.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 10:53	AR1268	/chem/ecd2a.i/012010.b/015b1501.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 10:42	AR1660	/chem/ecd2a.i/012010.b/014b1401.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 10:20	AR1660	/chem/ecd2a.i/012010.b/012b1201.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 09:35	AR1262	/chem/ecd2a.i/012010.b/008b0801.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 09:24	AR1221	/chem/ecd2a.i/012010.b/007b0701.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 09:13	AR1232	/chem/ecd2a.i/012010.b/006b0601.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 09:02	AR1248	/chem/ecd2a.i/012010.b/005b0501.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 08:51	AR1242	/chem/ecd2a.i/012010.b/004b0401.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 08:40	AR1254	/chem/ecd2a.i/012010.b/003b0301.d
Ccal Level: 4 , Ccal Amount: 1000		
20-JAN-2010 08:29	AR1660	/chem/ecd2a.i/012010.b/002b0201.d

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COMPOUND LISTING

Method file : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Quant Method : ESTD Target Version : 3.50
Last Update : 21-Jan-2010 07:18 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	500.000000
Initial:End Threshold	250.000000
Initial:Area Threshold	10000.000000
Initial:P-P Resolution	1.000000
Initial:Bunch Factor	2.000000
Initial:Negative Peaks	OFF
Initial:Tension	1.100000
8.500:Bunch Factor	2.000000

Compound	RT	RT Window	RF
1 Aroclor-1016	2.273	2.243-2.303	2.258e+03
	2.597	2.567-2.627	4.629e+03
	2.687	2.657-2.717	1.900e+03
	2.822	2.792-2.852	9.835e+02
	2.974	2.944-3.004	1.450e+03
2 Aroclor-1221	1.437	1.407-1.467	4.641e+02
	1.897	1.867-1.927	6.570e+02
	1.996	1.966-2.026	3.467e+02
3 Aroclor-1232	2.026	1.996-2.056	1.165e+03
	2.274	2.244-2.304	9.314e+02
	2.688	2.658-2.718	8.004e+02
	2.730	2.700-2.760	5.102e+02
	2.974	2.944-3.004	5.840e+02
4 Aroclor-1242	2.273	2.243-2.303	1.733e+03
	2.687	2.657-2.717	1.484e+03
	2.730	2.700-2.760	9.058e+02
	2.822	2.792-2.852	7.269e+02
	2.974	2.944-3.004	1.120e+03
5 Aroclor-1248	2.822	2.792-2.852	1.527e+03
	2.974	2.944-3.004	2.027e+03
	3.033	3.003-3.063	1.571e+03
	3.268	3.238-3.298	2.218e+03
	3.422	3.392-3.452	1.913e+03

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COMPOUND LISTING

Method file : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m

	Compound	RT	RT Window	RF
	6 Aroclor-1254	3.240	3.210-3.270	2.080e+03
		3.422	3.392-3.452	2.772e+03
		3.692	3.662-3.722	3.742e+03
		3.885	3.855-3.915	2.783e+03
		4.013	3.983-4.043	2.760e+03
	7 Aroclor-1260	4.013	3.983-4.043	4.303e+03
		4.285	4.255-4.315	2.791e+03
		4.451	4.421-4.481	2.867e+03
		4.662	4.632-4.692	6.579e+03
		4.852	4.822-4.882	3.193e+03
	8 Aroclor-1262	3.822	3.792-3.852	2.273e+03
		4.014	3.984-4.044	3.072e+03
		4.285	4.255-4.316	4.004e+03
		4.450	4.420-4.481	3.573e+03
		4.852	4.822-4.882	2.501e+03
	9 Aroclor-1268	4.882	4.852-4.912	9.782e+03
		4.908	4.878-4.938	9.839e+03
		5.041	5.011-5.071	7.469e+03
		5.279	5.249-5.309	3.239e+03
		5.476	5.446-5.506	2.294e+04
M	10 Aroclor-Total	1.000	0.980-1.020	
$	11 4cmx	1.772	1.742-1.802	6.703e+04
$	12 Decachlorobiphenyl	5.607	5.577-5.637	6.340e+04
	13 4,4'-DDT	4.229	4.209-4.249	5.006e+04
	14 4,4'-DDD	4.036	4.016-4.056	7.298e+04
	15 4,4'-DDE	3.632	3.612-3.652	7.426e+04

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COMPOUND LISTING

Method file : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Quant Method : ESTD Target Version : 3.50
Last Update : 21-Jan-2010 07:43 Number of Cpnds : 15
Data Type : GC MULTI COMP

Global Integrator : Falcon

Chromat Events	Values
Initial:Start Threshold	1000.000000
Initial:End Threshold	500.000000
Initial:Area Threshold	500.000000
Initial:P-P Resolution	0.000000
Initial:Bunch Factor	3.000000
Initial:Negative Peaks	OFF
Initial:Tension	4.000000
4.200:Tension	1.000000

Compound	RT	RT Window	RF
1 Aroclor-1016	2.744	2.714-2.774	4.489e+03
	3.178	3.148-3.208	3.434e+03
	3.329	3.299-3.359	2.017e+03
	3.357	3.327-3.387	2.106e+03
	3.516	3.486-3.546	2.794e+03
2 Aroclor-1221	2.290	2.260-2.320	1.263e+03
	2.395	2.365-2.425	7.739e+02
	2.439	2.409-2.469	3.051e+03
3 Aroclor-1232	2.441	2.411-2.471	2.061e+03
	2.744	2.714-2.774	1.960e+03
	3.178	3.148-3.208	1.498e+03
	3.250	3.220-3.280	9.309e+02
	3.516	3.486-3.546	1.107e+03
4 Aroclor-1242	2.744	2.714-2.774	3.445e+03
	3.178	3.148-3.208	2.681e+03
	3.251	3.221-3.281	1.637e+03
	3.329	3.299-3.359	1.508e+03
	3.516	3.486-3.546	2.145e+03
5 Aroclor-1248	3.329	3.299-3.359	3.282e+03
	3.516	3.486-3.546	4.187e+03
	3.603	3.573-3.633	4.451e+03
	3.792	3.762-3.822	4.697e+03
	3.821	3.791-3.851	5.389e+03

GEL Laboratories LLC

COMPOUND LISTING

Method file : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m

	Compound	RT	RT Window	RF
	6 Aroclor-1254	3.815	3.785-3.845	4.985e+03
		3.957	3.927-3.987	5.799e+03
		4.193	4.163-4.223	4.023e+03
		4.274	4.244-4.304	7.731e+03
		4.438	4.408-4.468	5.608e+03
	7 Aroclor-1260	4.411	4.381-4.441	5.785e+03
		4.564	4.534-4.594	7.263e+03
		4.674	4.644-4.704	5.004e+03
		4.872	4.842-4.902	5.795e+03
		5.498	5.468-5.528	9.394e+03
	8 Aroclor-1262	4.412	4.383-4.442	4.703e+03
		4.563	4.533-4.593	5.853e+03
		4.872	4.843-4.902	8.946e+03
		5.072	5.043-5.103	7.772e+03
		5.251	5.221-5.281	1.672e+04
	9 Aroclor-1268	5.496	5.466-5.526	2.078e+04
		5.528	5.498-5.558	2.083e+04
		5.700	5.670-5.730	1.556e+04
		5.900	5.870-5.930	6.423e+03
		6.124	6.094-6.154	4.919e+04
M	10 Aroclor-Total	1.000	0.980-1.020	
$	11 4cmx	2.068	2.038-2.098	1.396e+05
$	12 Decachlorobiphenyl	6.298	6.268-6.328	1.246e+05
	13 4,4'-DDT	4.814	4.794-4.834	8.705e+04
	14 4,4'-DDD	4.600	4.580-4.620	1.499e+05
	15 4,4'-DDE	4.195	4.175-4.215	1.504e+05

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INITIAL CALIBRATION DATA

Start Cal Date : 12-NOV-2009 11:00
End Cal Date : 20-JAN-2010 10:31
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Cal Date : 21-Jan-2010 07:18 jen01212
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd2a.i/120209.b/008f0801.d
Level 2: /chem/ecd2a.i/120209.b/009f0901.d
Level 3: /chem/ecd2a.i/120209.b/010f1001.d
Level 4: /chem/ecd2a.i/113009a.b/014f1401.d
Level 5: /chem/ecd2a.i/120209.b/012f1201.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	2582	2384	2270	2158	1895	2258	11.359
(2)	4964	4712	4611	4536	4322	4629	5.094
(3)	2119	1992	1883	1834	1673	1900	8.824
(4)	1123	1028	978	934	855	983	10.212
(5)	1592	1492	1430	1418	1320	1450	6.903
2 Aroclor-1221(1)	+++++	+++++	+++++	464	+++++	464	0.000
(2)	+++++	+++++	+++++	657	+++++	657	0.000
(3)	+++++	+++++	+++++	347	+++++	347	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	1165	+++++	1165	0.000
(2)	+++++	+++++	+++++	931	+++++	931	0.000
(3)	+++++	+++++	+++++	800	+++++	800	0.000
(4)	+++++	+++++	+++++	510	+++++	510	0.000
(5)	+++++	+++++	+++++	584	+++++	584	0.000
4 Aroclor-1242(1)	1990	1799	1692	1619	1566	1733	9.686
(2)	1678	1536	1439	1387	1381	1484	8.410
(3)	1015	931	874	843	866	906	7.639
(4)	817	761	714	669	673	727	8.615
(5)	1272	1143	1059	1036	1087	1120	8.434
5 Aroclor-1248(1)	1738	1529	1527	1515	1325	1527	9.560
(2)	2238	2070	1990	2006	1832	2027	7.247
(3)	1706	1611	1571	1551	1415	1571	6.718
(4)	2322	2198	2161	2230	2178	2218	2.874
(5)	2083	1922	1902	1885	1770	1913	5.861
6 Aroclor-1254(1)	2304	2118	2048	2007	1924	2080	6.888
(2)	2981	2797	2739	2702	2642	2772	4.677
(3)	3870	3712	3711	3744	3675	3742	2.011
(4)	2886	2776	2725	2760	2767	2783	2.186
(5)	2994	2820	2741	2711	2533	2760	6.080

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INITIAL CALIBRATION DATA

Start Cal Date : 12-NOV-2009 11:00
End Cal Date : 20-JAN-2010 10:31
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Cal Date : 21-Jan-2010 07:18 jen01212
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
7 Aroclor-1260(1)	4564	4184	4324	4273	4168	4303	3.706
(2)	3136	2679	2808	2745	2587	2791	7.510
(3)	3148	2736	2898	2878	2673	2867	6.405
(4)	6841	6399	6600	6582	6474	6579	2.551
(5)	3315	3117	3229	3192	3115	3193	2.623
8 Aroclor-1262(1)	2530	2266	2239	2239	2092	2273	6.993
(2)	3295	3066	3031	3051	2917	3072	4.482
(3)	4237	3997	3977	3997	3815	4004	3.763
(4)	3754	3532	3556	3594	3430	3573	3.295
(5)	2578	2453	2481	2538	2454	2501	2.217
9 Aroclor-1268(1)	9960	9712	9638	9856	9743	9782	1.295
(2)	10427	9736	9819	9812	9401	9839	3.768
(3)	7803	7453	7371	7450	7266	7469	2.702
(4)	3410	3296	3214	3182	3091	3239	3.727
(5)	23130	22747	22846	23230	22770	22944	0.963
M 10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
13 4,4'-DDT	+++++	+++++	+++++	50063	+++++	50063	0.000
14 4,4'-DDD	+++++	+++++	+++++	72978	+++++	72978	0.000
15 4,4'-DDE	+++++	+++++	+++++	74262	+++++	74262	0.000
$ 11 4cmx	71691	67209	66904	66042	63316	67033	4.509
$ 12 Decachlorobiphenyl	69072	64043	62394	61590	59897	63399	5.529

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 12-NOV-2009 11:00
End Cal Date : 20-JAN-2010 10:31
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Cal Date : 21-Jan-2010 07:43 jen01212
Curve Type : Average

Calibration File Names:
Level 1: /chem/ecd2a.i/120209.b/008b0801.d
Level 2: /chem/ecd2a.i/120209.b/009b0901.d
Level 3: /chem/ecd2a.i/120209.b/010b1001.d
Level 4: /chem/ecd2a.i/113009a.b/014b1401.d
Level 5: /chem/ecd2a.i/120209.b/012b1201.d

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
1 Aroclor-1016(1)	4662	4548	4537	4546	4153	4489	4.347
(2)	3382	3406	3459	3527	3397	3434	1.731
(3)	2031	1985	2035	2051	1984	2017	1.523
(4)	2110	2098	2116	2131	2073	2106	1.046
(5)	2721	2745	2805	2886	2815	2794	2.320
2 Aroclor-1221(1)	+++++	+++++	+++++	1263	+++++	1263	0.000
(2)	+++++	+++++	+++++	774	+++++	774	0.000
(3)	+++++	+++++	+++++	3051	+++++	3051	0.000
3 Aroclor-1232(1)	+++++	+++++	+++++	2061	+++++	2061	0.000
(2)	+++++	+++++	+++++	1960	+++++	1960	0.000
(3)	+++++	+++++	+++++	1498	+++++	1498	0.000
(4)	+++++	+++++	+++++	931	+++++	931	0.000
(5)	+++++	+++++	+++++	1107	+++++	1107	0.000
4 Aroclor-1242(1)	3674	3489	3409	3384	3271	3445	4.346
(2)	2815	2677	2634	2637	2644	2681	2.863
(3)	1696	1624	1594	1606	1663	1637	2.599
(4)	1601	1513	1471	1467	1487	1508	3.655
(5)	2235	2100	2068	2141	2180	2145	3.068
5 Aroclor-1248(1)	3439	3315	3263	3296	3099	3282	3.723
(2)	4291	4205	4192	4250	3996	4187	2.717
(3)	4601	4495	4377	4484	4299	4451	2.609
(4)	4665	4612	4696	4831	4682	4697	1.733
(5)	5471	5399	5390	5477	5208	5389	2.022
6 Aroclor-1254(1)	5121	4955	4998	5025	4828	4985	2.145
(2)	5885	5693	5812	5852	5753	5799	1.330
(3)	4010	3906	3992	4126	4082	4023	2.109
(4)	7559	7611	7766	7925	7797	7731	1.909
(5)	5659	5569	5439	5821	5553	5608	2.538

GEL Laboratories LLC

INITIAL CALIBRATION DATA

Start Cal Date : 12-NOV-2009 11:00
End Cal Date : 20-JAN-2010 10:31
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Cal Date : 21-Jan-2010 07:43 jen01212
Curve Type : Average

	Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	1000.000 Level 4	4000.000 Level 5	RRF	% RSD
	7 Aroclor-1260(1)	5608	5607	5911	6004	5797	5785	3.079
	(2)	6845	7033	7506	7660	7272	7263	4.586
	(3)	4810	4804	5158	5233	5016	5004	3.919
	(4)	5752	5570	5927	6012	5715	5795	3.029
	(5)	8958	8757	9595	9936	9726	9394	5.425
	8 Aroclor-1262(1)	4855	4536	4634	4812	4677	4703	2.776
	(2)	5760	5648	5834	6083	5942	5853	2.859
	(3)	8687	8674	9001	9349	9021	8946	3.121
	(4)	7559	7507	7790	8124	7880	7772	3.221
	(5)	15890	16154	16824	17584	17141	16719	4.167
	9 Aroclor-1268(1)	19681	20538	20944	21652	21077	20778	3.522
	(2)	20049	20780	21168	21526	20631	20831	2.683
	(3)	14816	15313	15674	16201	15813	15563	3.374
	(4)	6082	6303	6421	6627	6683	6423	3.811
	(5)	47383	48640	49735	50972	49227	49192	2.697
M	10 Aroclor-Total	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	13 4,4'-DDT	+++++	+++++	+++++	87046	+++++	87046	0.000
	14 4,4'-DDD	+++++	+++++	+++++	149858	+++++	149858	0.000
	15 4,4'-DDE	+++++	+++++	+++++	150414	+++++	150414	0.000
$	11 4cmx	134308	136410	140413	144013	142640	139557	2.945
$	12 Decachlorobiphenyl	121777	119955	124484	128763	127780	124552	3.031

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1263

Instrument ID: ECD2A Calibration Date: 01/20/10 Time: 1042

Lab File ID: 014F1401 Init. Calib. Date(s): 01/20/10 01/20/10

Heated Purge: (Y/N) N Init. Calib. Times: 0946 1031

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2257.882	2198.691	0.01	-2.6	15.0
(2)	4628.914	4649.732	0.01	0.4	15.0
(3)	1900.304	1876.324	0.01	-1.3	15.0
(4)	983.497	959.236	0.01	-2.5	15.0
(5)	1450.304	1426.869	0.01	-1.6	15.0
Aroclor-1260	4302.665	4447.698	0.01	3.4	15.0
(2)	2791.028	2849.302	0.01	2.1	15.0
(3)	2866.828	2992.152	0.01	4.4	15.0
(4)	6579.193	6851.364	0.01	4.1	15.0
(5)	3193.316	3286.091	0.01	2.9	15.0
4cmx	67032.526	69128.000	0.01	3.1	15.0
Decachlorobiphenyl	63399.298	63600.520	0.01	0.3	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1263

Instrument ID: ECD2A Calibration Date: 01/20/10 Time: 1042

Lab File ID: 014B1401 Init. Calib. Date(s): 01/20/10 01/20/10

Heated Purge: (Y/N) N Init. Calib. Times: 0946 1031

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	4489.288	4641.615	0.01	3.4	15.0
(2)	3434.131	3641.300	0.01	6.0	15.0
(3)	2017.371	2107.405	0.01	4.5	15.0
(4)	2105.569	2219.093	0.01	5.4	15.0
(5)	2794.468	2980.439	0.01	6.6	15.0
Aroclor-1260	5785.200	6300.864	0.01	8.9	15.0
(2)	7263.142	7996.785	0.01	10.1	15.0
(3)	5004.167	5508.886	0.01	10.1	15.0
(4)	5795.185	6286.593	0.01	8.5	15.0
(5)	9394.449	10332.067	0.01	10.0	15.0
4cmx	139556.85	151115.54	0.01	8.3	15.0
Decachlorobiphenyl	124551.80	133386.68	0.01	7.1	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1263

Instrument ID: ECD2A Calibration Date: 01/20/10 Time: 1317

Lab File ID: 028F2801 Init. Calib. Date(s): 01/20/10 01/20/10

Heated Purge: (Y/N) N Init. Calib. Times: 0946 1031

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	$\overline{RRF}$	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2257.882	2129.526	0.01	-5.7	15.0
(2)	4628.914	4530.205	0.01	-2.1	15.0
(3)	1900.304	1818.396	0.01	-4.3	15.0
(4)	983.497	935.634	0.01	-4.9	15.0
(5)	1450.304	1396.003	0.01	-3.7	15.0
Aroclor-1260	4302.665	4308.956	0.01	0.1	15.0
(2)	2791.028	2708.943	0.01	-2.9	15.0
(3)	2866.828	2790.743	0.01	-2.6	15.0
(4)	6579.193	6631.352	0.01	0.8	15.0
(5)	3193.316	3227.168	0.01	1.1	15.0
4cmx	67032.526	67395.450	0.01	0.5	15.0
Decachlorobiphenyl	63399.298	61616.980	0.01	-2.8	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1263

Instrument ID: ECD2A Calibration Date: 01/20/10 Time: 1317

Lab File ID: 028B2801 Init. Calib. Date(s): 01/20/10 01/20/10

Heated Purge: (Y/N) N Init. Calib. Times: 0946 1031

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	4489.288	4494.509	0.01	0.1	15.0
(2)	3434.131	3522.680	0.01	2.6	15.0
(3)	2017.371	2024.957	0.01	0.4	15.0
(4)	2105.569	2127.507	0.01	1.0	15.0
(5)	2794.468	2863.002	0.01	2.4	15.0
Aroclor-1260	5785.200	5974.213	0.01	3.3	15.0
(2)	7263.142	7576.802	0.01	4.3	15.0
(3)	5004.167	5176.517	0.01	3.4	15.0
(4)	5795.185	5899.725	0.01	1.8	15.0
(5)	9394.449	9862.945	0.01	5.0	15.0
4cmx	139556.85	147480.22	0.01	5.7	15.0
Decachlorobiphenyl	124551.80	124634.29	0.01	0.1	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1263

Instrument ID: ECD2A Calibration Date: 01/20/10 Time: 1457

Lab File ID: 037F3701 Init. Calib. Date(s): 01/20/10 01/20/10

Heated Purge: (Y/N) N Init. Calib. Times: 0946 1031

GC Column: CLP1 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	2257.882	2157.818	0.01	-4.4	15.0
(2)	4628.914	4612.339	0.01	-0.4	15.0
(3)	1900.304	1847.242	0.01	-2.8	15.0
(4)	983.497	947.696	0.01	-3.6	15.0
(5)	1450.304	1410.346	0.01	-2.8	15.0
Aroclor-1260	4302.665	4429.387	0.01	2.9	15.0
(2)	2791.028	2793.144	0.01	0.1	15.0
(3)	2866.828	2873.803	0.01	0.2	15.0
(4)	6579.193	6775.868	0.01	3.0	15.0
(5)	3193.316	3282.519	0.01	2.8	15.0
4cmx	67032.526	67848.100	0.01	1.2	15.0
Decachlorobiphenyl	63399.298	61533.200	0.01	-2.9	15.0

FORM VII PEST

FORM 7
PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1263

Instrument ID: ECD2A Calibration Date: 01/20/10 Time: 1457

Lab File ID: 037B3701 Init. Calib. Date(s): 01/20/10 01/20/10

Heated Purge: (Y/N) N Init. Calib. Times: 0946 1031

GC Column: CLP2 ID: 0.25 (mm)

COMPOUND	RRF	RRF 1000	MIN RRF	%D	MAX %D
Aroclor-1016	4489.288	4542.551	0.01	1.2	15.0
(2)	3434.131	3561.354	0.01	3.7	15.0
(3)	2017.371	2036.038	0.01	0.9	15.0
(4)	2105.569	2150.694	0.01	2.1	15.0
(5)	2794.468	2909.995	0.01	4.1	15.0
Aroclor-1260	5785.200	6107.583	0.01	5.6	15.0
(2)	7263.142	7758.930	0.01	6.8	15.0
(3)	5004.167	5258.912	0.01	5.1	15.0
(4)	5795.185	5990.873	0.01	3.4	15.0
(5)	9394.449	9837.211	0.01	4.7	15.0
4cmx	139556.85	148251.80	0.01	6.2	15.0
Decachlorobiphenyl	124551.80	122573.96	0.01	-1.6	15.0

FORM VII PEST

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/003f0301.d
Lab Smp Id: WAR091102-54 Client Smp ID: AR125401
Inj Date : 20-JAN-2010 08:40
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR091102-54
Misc Info : |PCB_CVS|1254||CVS|
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Meth Date : 21-Jan-2010 07:18 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012f1201.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
6 Aroclor-1254					CAS #: 11097-69-1		
3.240	3.240	0.000	2166314	1000.00	1040	80.00- 120.00	100.00
3.422	3.422	0.000	2884126	1000.00	1040	113.14- 153.14	133.14
3.692	3.692	0.000	3941427	1000.00	1050	161.94- 201.94	181.94
3.885	3.885	0.000	2880533	1000.00	1040	112.97- 152.97	132.97
4.013	4.013	0.000	2975958	1000.00	1080	117.37- 157.37	137.37

Average of Peak Amounts = 1.05e+03

Data File: /chem/ecd2a.i/012010.b/003f0301.d

Date : 20-JAN-2010 08:40

Client ID: AR125401

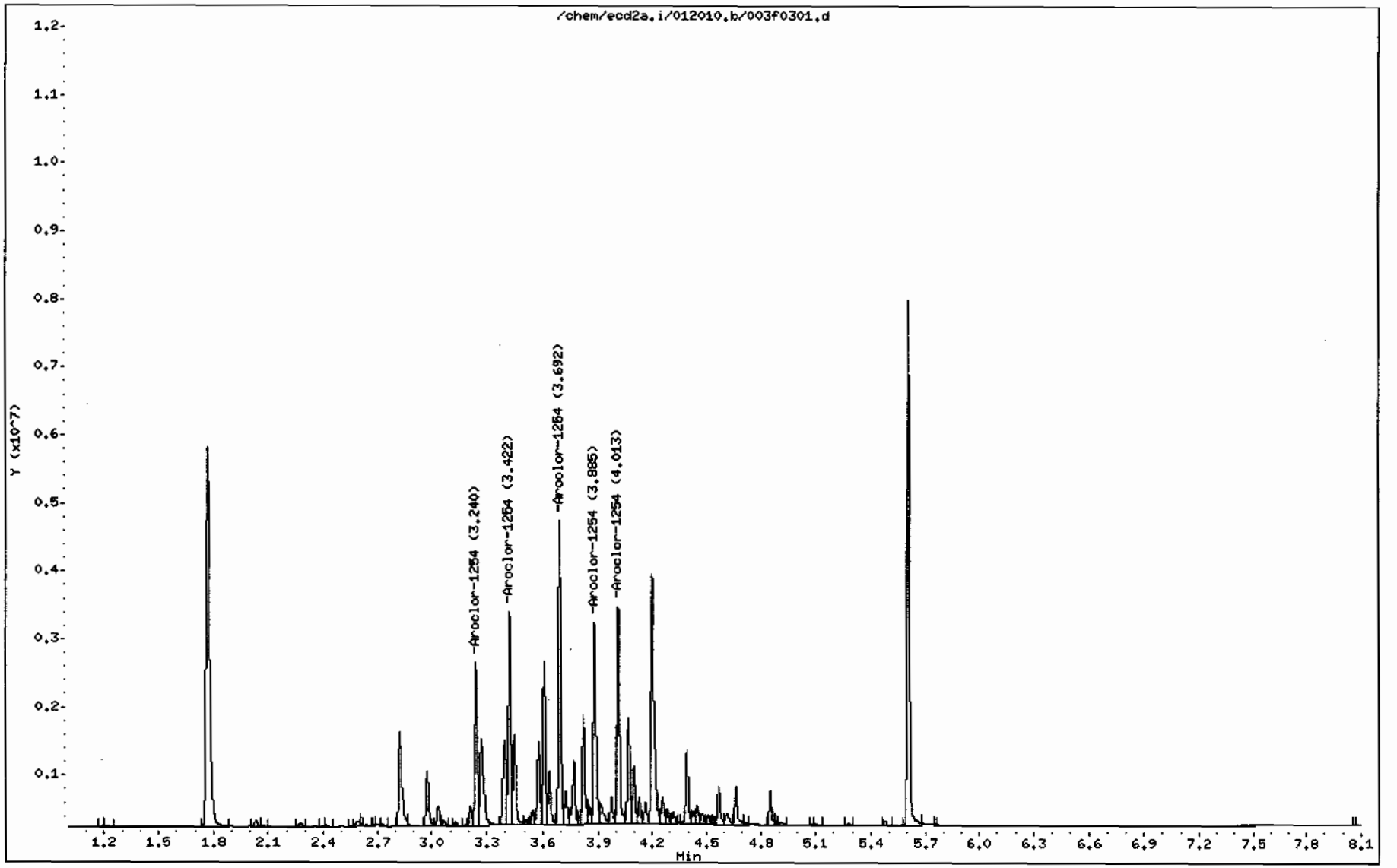
Sample Info: IWAR091102-54

Column phase: CLP1

Instrument: ecd2a.i

Operator: JAOC

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/003b0301.d
Lab Smp Id: WAR091102-54 Client Smp ID: AR125401
Inj Date : 20-JAN-2010 08:40
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR091102-54
Misc Info : |PCB_CVS|1254||CVS|
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Meth Date : 21-Jan-2010 07:43 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012b1201.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1254.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
6 Aroclor-1254					CAS #: 11097-69-1		
3.815	3.815	0.000	5433134	1000.00	1090	80.00- 120.00	100.00
3.957	3.957	0.000	6190489	1000.00	1070	59.28- 99.28	113.94
4.193	4.193	0.000	4416585	1000.00	1100	0.00- 32.39	81.29
4.274	4.274	0.000	8479694	1000.00	1100	14.94- 54.94	156.07
4.438	4.438	0.000	6121213	1000.00	1090	0.00- 36.25	112.66

Average of Peak Amounts = 1.09e+03

Data File: /chem/ecd2a.i/012010.b/003b0301.d

Date : 20-JAN-2010 08:40

Client ID: AR125401

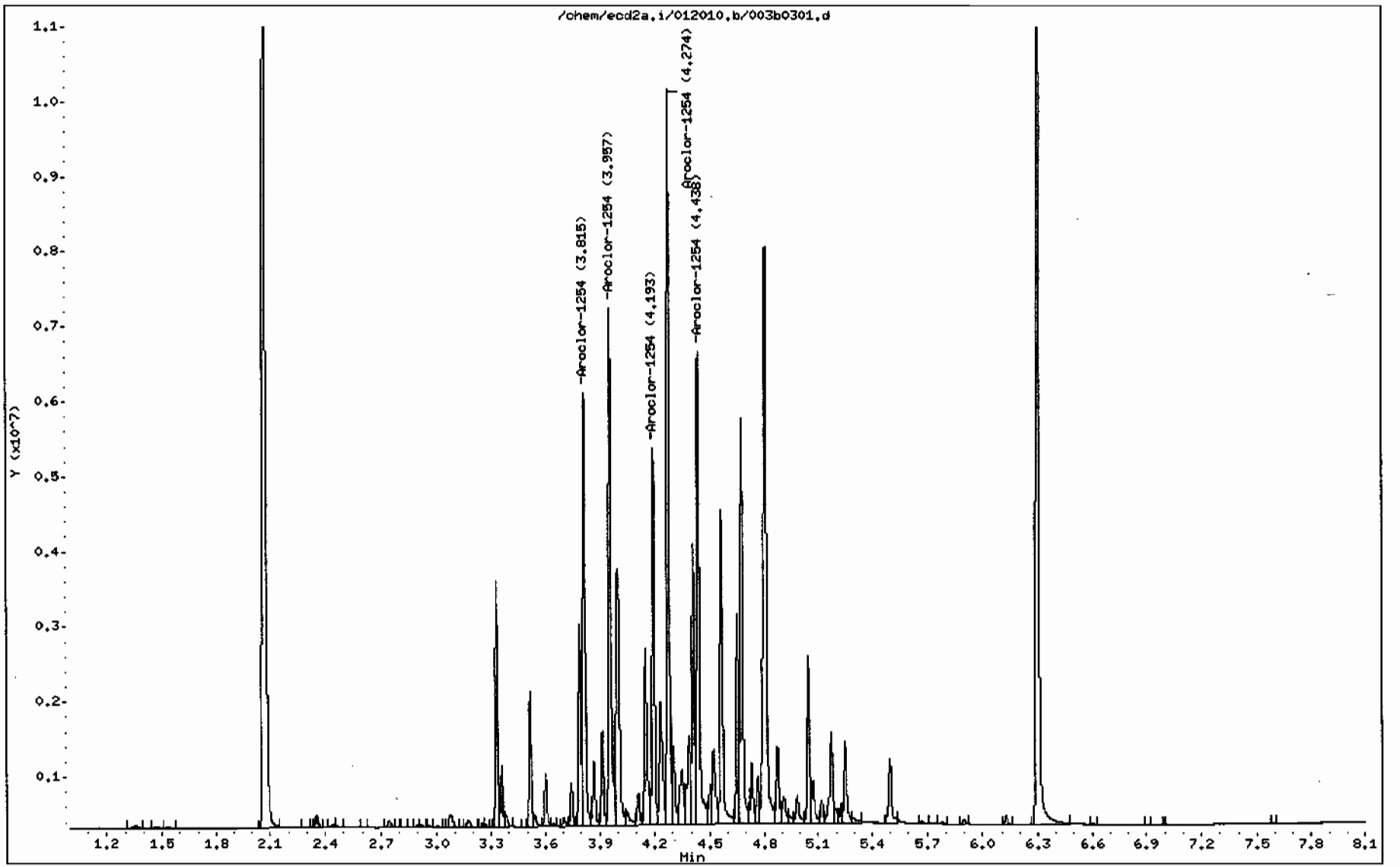
Sample Info: IWAR091102-54

Column phase: CLP2

Instrument: ecd2a.i

Operator: JAOC

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/004f0401.d
Lab Smp Id: WAR100104-42 Client Smp ID: AR124201
Inj Date : 20-JAN-2010 08:51
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100104-42
Misc Info : |PCB_CVS|1242||CVS|
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Meth Date : 21-Jan-2010 07:18 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012f1201.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
4 Aroclor-1242					CAS #: 53469-21-9		
2.273	2.273	0.000	1875234	1000.00	1080	80.00- 120.00	100.00
2.687	2.687	0.000	1571531	1000.00	1060	63.80- 103.80	83.80
2.730	2.730	0.000	972681	1000.00	1070	31.87- 71.87	51.87
2.822	2.822	0.000	814351	1000.00	1120	23.43- 63.43	43.43
2.974	2.974	0.000	1240605	1000.00	1110	46.16- 86.16	66.16

Average of Peak Amounts = 1.09e+03

Data File: /chem/ecd2a.i/012010.b/004f0401.d

Page 1

Date : 20-JAN-2010 08:51

Client ID: AR124201

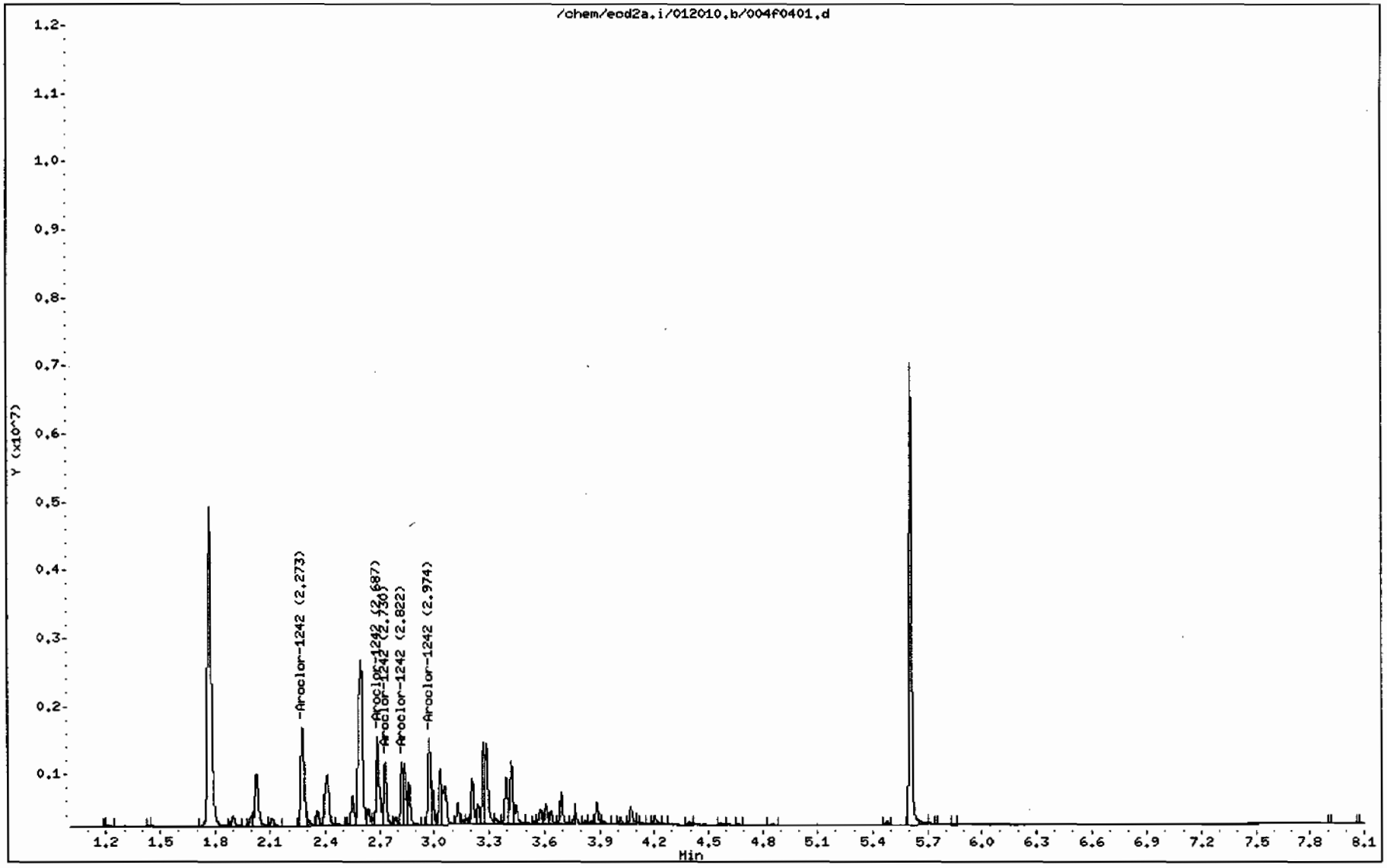
Instrument: ecd2a.i

Sample Info: IWAR091217-42

Operator: JAOC

Column phase: CLP1

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/004b0401.d
Lab Smp Id: WAR100104-42 Client Smp ID: AR124201
Inj Date : 20-JAN-2010 08:51
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100104-42
Misc Info : |PCB_CVS|1242||CVS|
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Meth Date : 21-Jan-2010 07:43 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012b1201.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
4 Aroclor-1242					CAS #: 53469-21-9		
2.744	2.744	0.000	3912542	1000.00	1140	80.00- 120.00	100.00
3.178	3.178	0.000	2995536	1000.00	1120	56.56- 96.56	76.56
3.251	3.251	0.000	1793113	1000.00	1100	25.83- 65.83	45.83
3.329	3.329	0.000	1717280	1000.00	1140	23.89- 63.89	43.89
3.516	3.516	0.000	2490008	1000.00	1160	43.64- 83.64	63.64

Average of Peak Amounts = 1.13e+03

Data File: /chem/ecd2a.i/012010.b/004b0401.d

Date : 20-JAN-2010 08:51

Client ID: AR124201

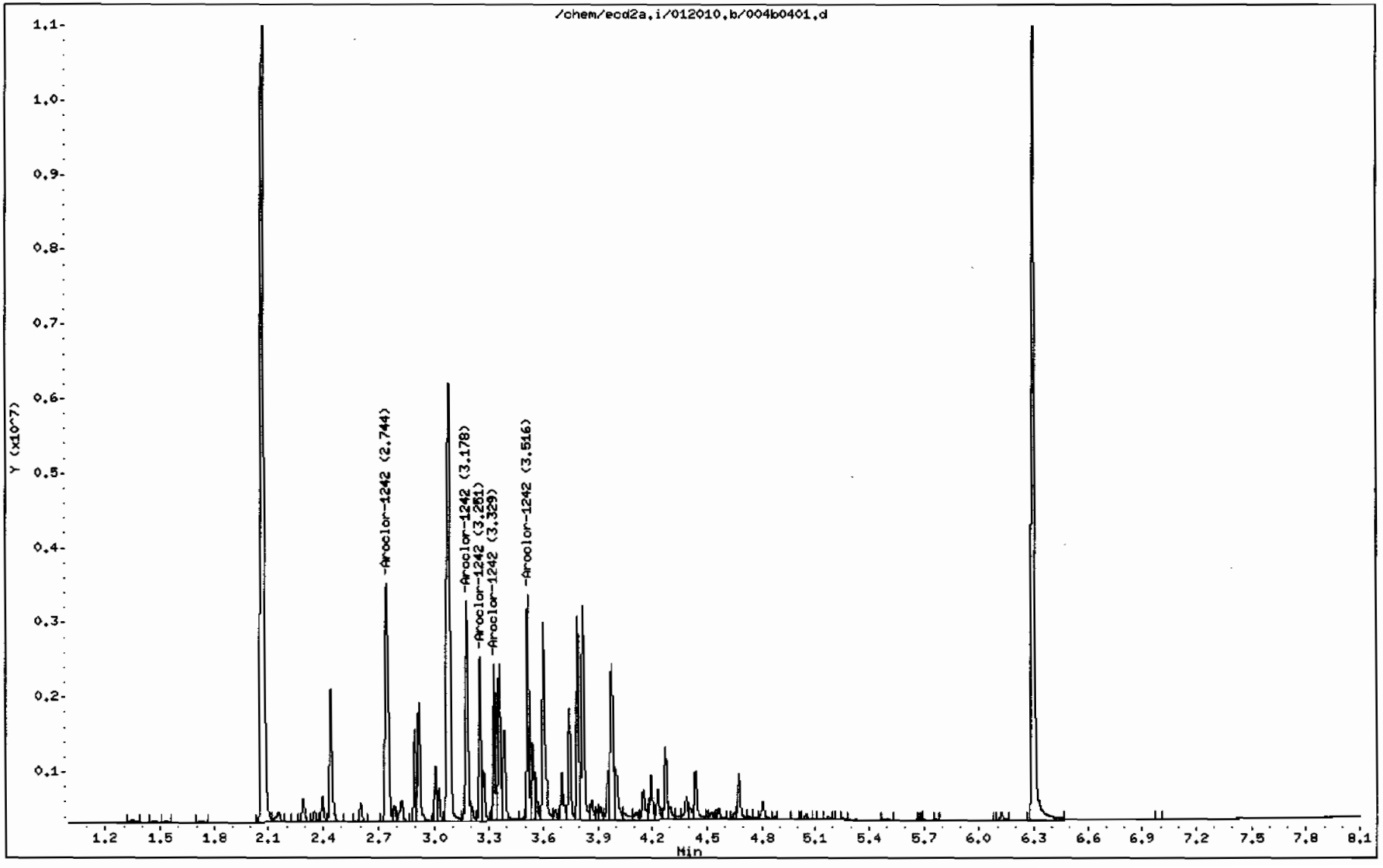
Sample Info: IWAR091217-42

Column phase: CLP2

Instrument: ecd2a.i

Operator: JAOC

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/005f0501.d
Lab Smp Id: WAR100104-48 Client Smp ID: AR124801
Inj Date : 20-JAN-2010 09:02
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100104-48
Misc Info : |PCB_CVS|1248||CVS|
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Meth Date : 21-Jan-2010 07:18 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012f1201.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None

AMOUNTS

RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
5 Aroclor-1248					CAS #: 12672-29-6		
2.822	2.822	0.000	1538789	1000.00	1010	80.00- 120.00	100.00
2.974	2.974	0.000	2050172	1000.00	1010	113.23- 153.23	133.23
3.033	3.033	0.000	1529787	1000.00	974	79.42- 119.42	99.42
3.268	3.268	0.000	2102388	1000.00	948	116.63- 156.63	136.63
3.422	3.422	0.000	1847950	1000.00	966	100.09- 140.09	120.09
Average of Peak Amounts =					981		

Data File: /chem/ecd2a.i/012010.b/005f0501.d

Date : 20-JAN-2010 09:02

Client ID: AR124801

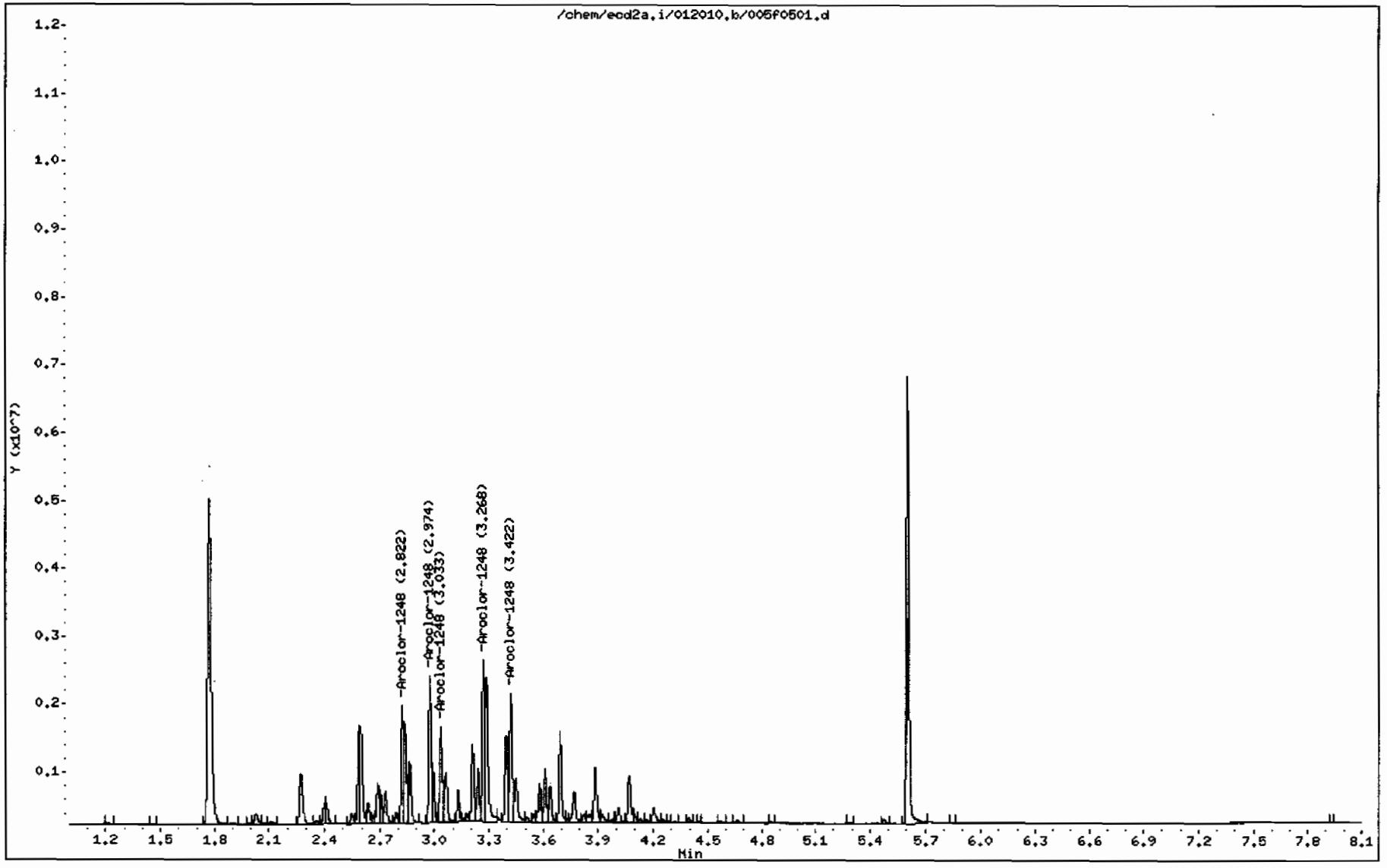
Sample Info: IWAR091217-48

Column phase: CLP1

Instrument: ecd2a.i

Operator: JAOC

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/005b0501.d
Lab Smp Id: WAR100104-48 Client Smp ID: AR124801
Inj Date : 20-JAN-2010 09:02
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100104-48
Misc Info : |PCB_CVS|1248||CVS|
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Meth Date : 21-Jan-2010 07:43 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012b1201.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
5 Aroclor-1248					CAS #: 12672-29-6		
3.329	3.329	0.000	3288926	1000.00	1000	80.00- 120.00	100.00
3.516	3.516	0.000	4228638	1000.00	1010	108.57- 148.57	128.57
3.603	3.603	0.000	4521541	1000.00	1020	117.48- 157.48	137.48
3.792	3.792	0.000	4591096	1000.00	977	119.59- 159.59	139.59
3.821	3.821	0.000	5464642	1000.00	1010	146.15- 186.15	166.15
Average of Peak Amounts =					1e+03		

Data File: /chem/ecd2a.i/012010.b/005b0501.d

Date : 20-JAN-2010 09:02

Client ID: AR124801

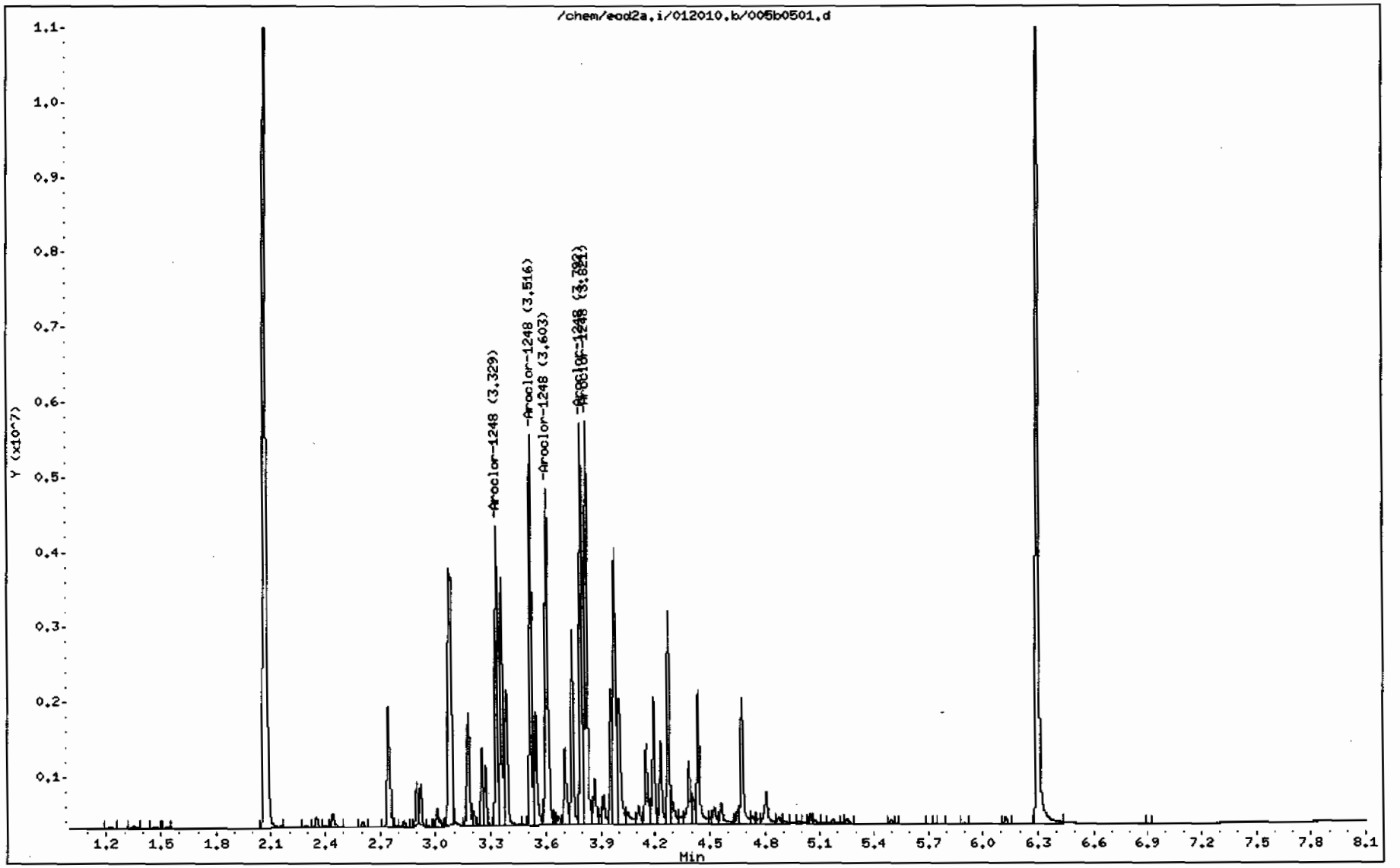
Sample Info: IWAR091217-48

Column phase: CLP2

Instrument: ecd2a.i

Operator: JAOC

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/006f0601.d
Lab Smp Id: WAR100104-32 Client Smp ID: AR123201
Inj Date : 20-JAN-2010 09:13
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100104-32
Misc Info : |PCB_CVS|1232||CVS|
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Meth Date : 21-Jan-2010 07:18 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012f1201.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
3 Aroclor-1232					CAS #: 11141-16-5		
2.026	2.026	0.000	1311036	1000.00	1120	80.00- 120.00	100.00
2.274	2.274	0.000	1064011	1000.00	1140	61.16- 101.16	81.16
2.688	2.688	0.000	900043	1000.00	1120	48.65- 88.65	68.65
2.730	2.730	0.000	578738	1000.00	1130	24.14- 64.14	44.14
2.974	2.974	0.000	683865	1000.00	1170	32.16- 72.16	52.16

Average of Peak Amounts = 1.14e+03

Data File: /chem/ecd2a.i/012010.b/006f0601.d

Date : 20-JAN-2010 09:13

Client ID: AR123201

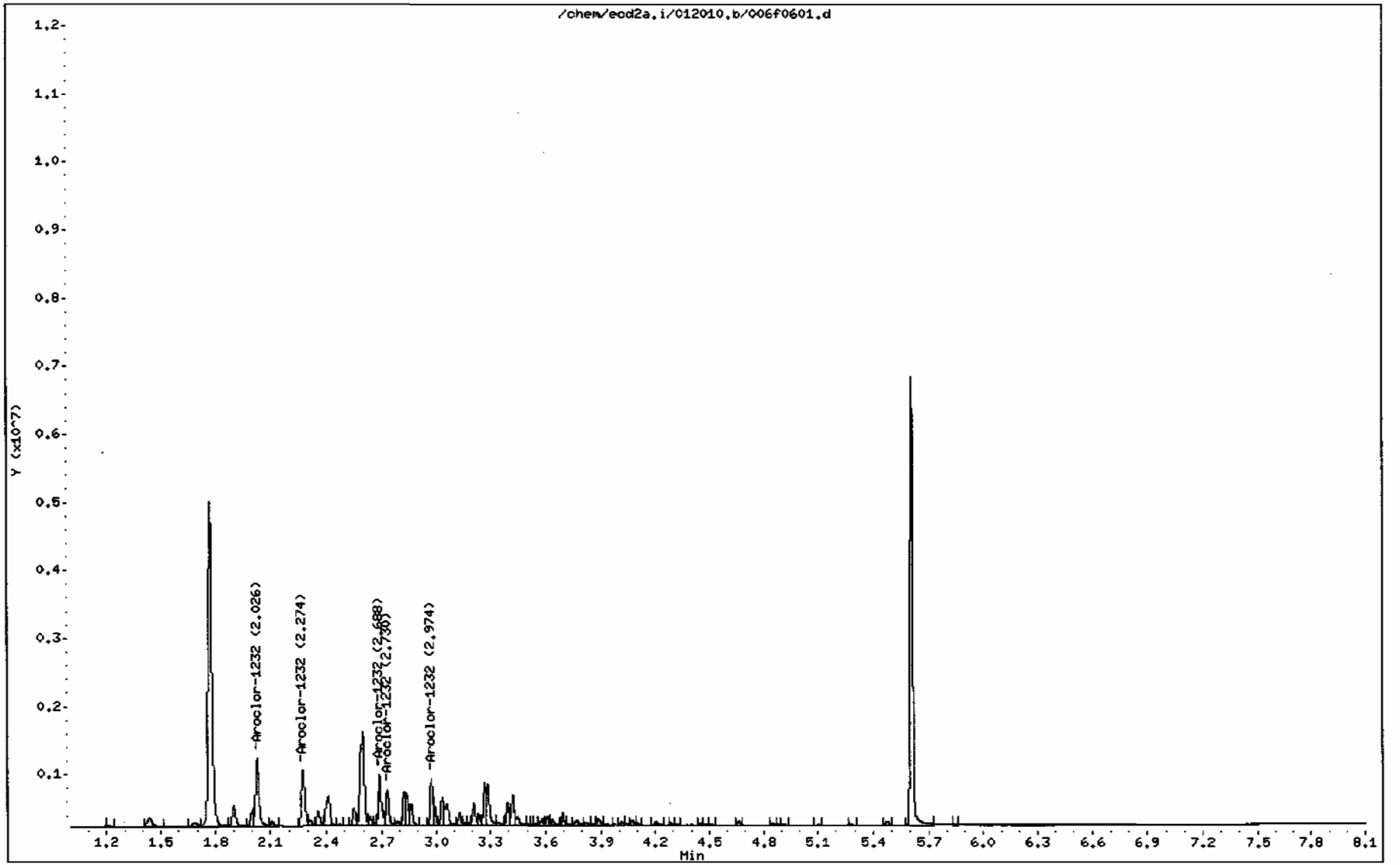
Sample Info: IWAR100104-32

Column phase: CLP1

Instrument: ecd2a.i

Operator: JAOC

Column diameter: 0.25



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RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/006b0601.d
Lab Smp Id: WAR100104-32 Client Smp ID: AR123201
Inj Date : 20-JAN-2010 09:13
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100104-32
Misc Info : |PCB_CVS|1232||CVS|
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Meth Date : 21-Jan-2010 07:43 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012b1201.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
3 Aroclor-1232					CAS #: 11141-16-5		
2.441	2.441	0.000	2327135	1000.00	1130	80.00- 120.00	100.00
2.744	2.744	0.000	2232621	1000.00	1140	75.94- 115.94	95.94
3.178	3.178	0.000	1588238	1000.00	1060	48.25- 88.25	68.25
3.250	3.250	0.000	968593	1000.00	1040	21.62- 61.62	41.62
3.516	3.516	0.000	1253282	1000.00	1130	33.86- 73.86	53.86

Average of Peak Amounts = 1.1e+03

Data File: /chem/ecd2a.i/012010.b/006b0601.d

Date : 20-JAN-2010 09:13

Client ID: AR123201

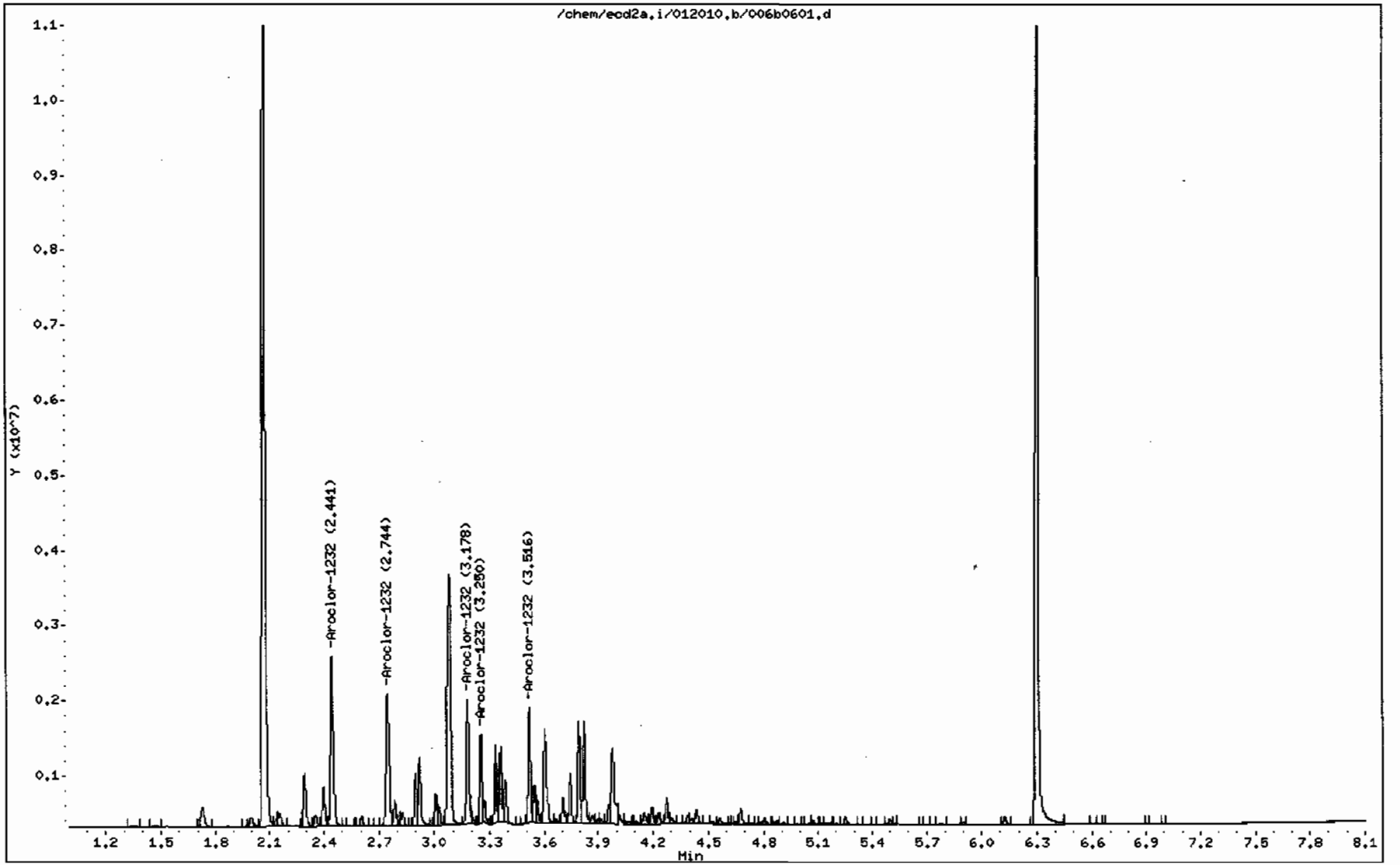
Sample Info: IWAR100104-32

Column phase: CLP2

Instrument: ecd2a.i

Operator: JAOC

Column diameter: 0.25



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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/007f0701.d
Lab Smp Id: WAR100104-21 Client Smp ID: AR122101
Inj Date : 20-JAN-2010 09:24
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100104-21
Misc Info : |PCB_CVS|1221||CVS|
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Meth Date : 21-Jan-2010 07:18 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012f1201.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
2 Aroclor-1221					CAS #: 11104-28-2		
1.437	1.437	0.000	536762	1000.00	1160	80.00- 120.00	100.00
1.897	1.897	0.000	717743	1000.00	1090	113.72- 153.72	133.72
1.996	1.996	0.000	378073	1000.00	1090	50.44- 90.44	70.44

Average of Peak Amounts = 1.11e+03

Data File: /chem/ecd2a.i/012010.b/007f0701.d

Date : 20-JAN-2010 09:24

Client ID: AR122101

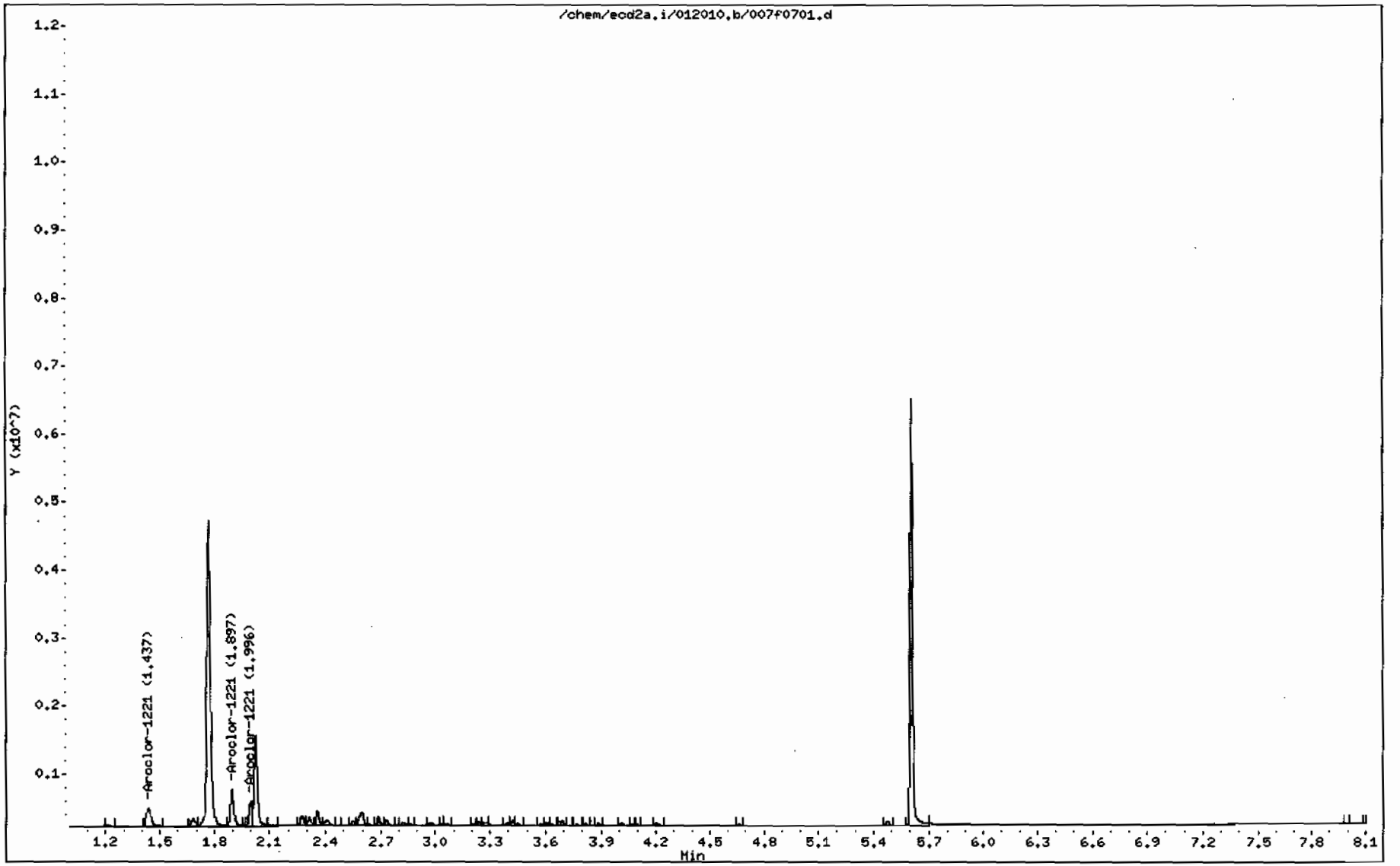
Sample Info: IWAR100104-21

Column phase: CLP1

Instrument: ecd2a.i

Operator: JAOC

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/007b0701.d
Lab Smp Id: WAR100104-21 Client Smp ID: AR122101
Inj Date : 20-JAN-2010 09:24
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100104-21
Misc Info : |PCB_CVS|1221||CVS|
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Meth Date : 21-Jan-2010 07:43 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012b1201.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1221.sub
Target Version: 3.50 Sample Matrix: None

AMOUNTS

RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
2 Aroclor-1221					CAS #: 11104-28-2		
2.290	2.290	0.000	1315448	1000.00	1040	80.00- 120.00	100.00
2.395	2.395	0.000	799084	1000.00	1030	40.75- 80.75	60.75
2.439	2.439	0.000	3203175	1000.00	1050	223.50- 263.50	243.50

Average of Peak Amounts = 1.04e+03

Data File: /chem/ecd2a.i/012010.b/007b0701.d

Date : 20-JAN-2010 09:24

Client ID: AR122101

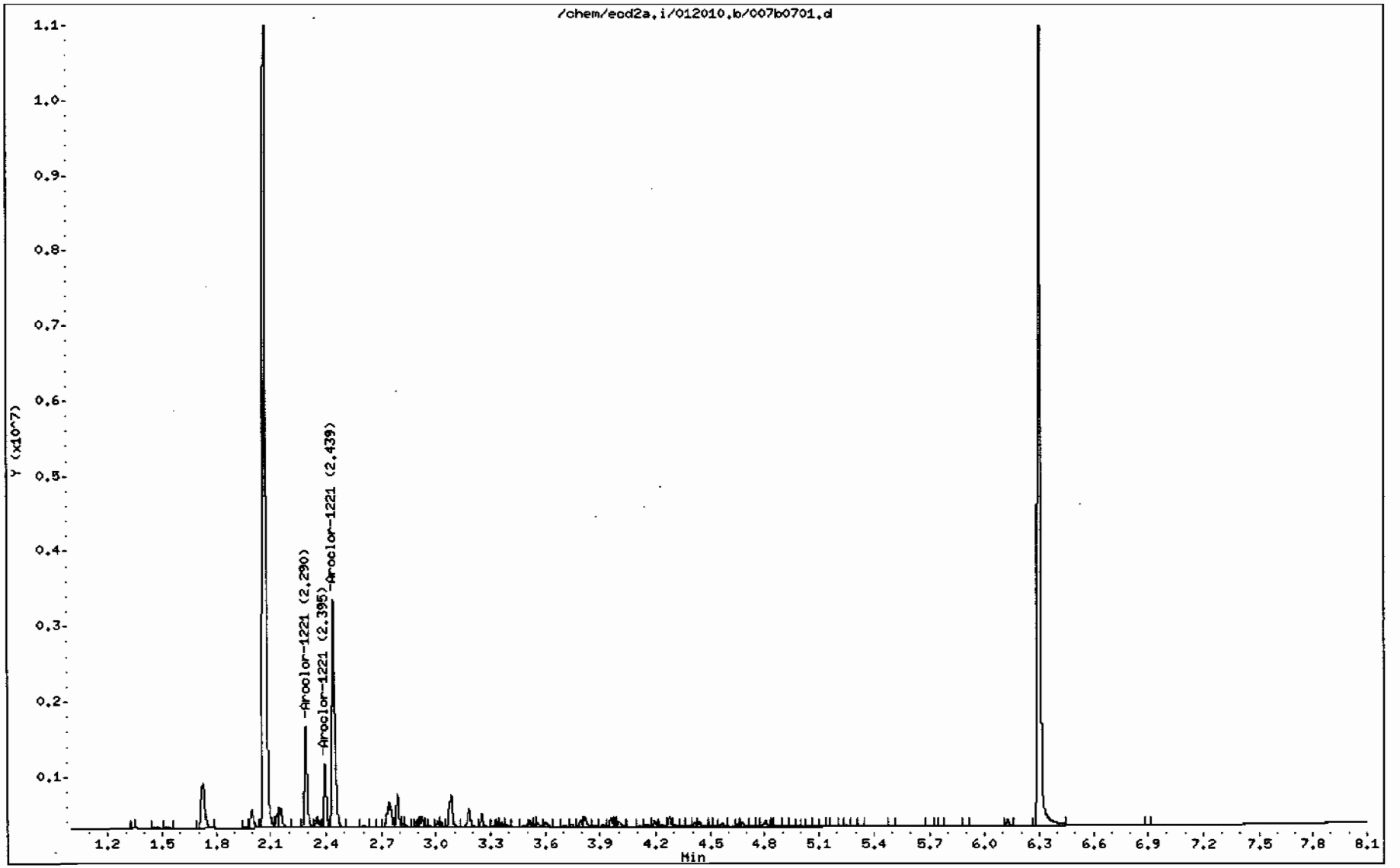
Sample Info: IWAR100104-21

Column phase: CLP2

Instrument: ecd2a.i

Operator: JAOC

Column diameter: 0.25



GEL Laboratories LLC

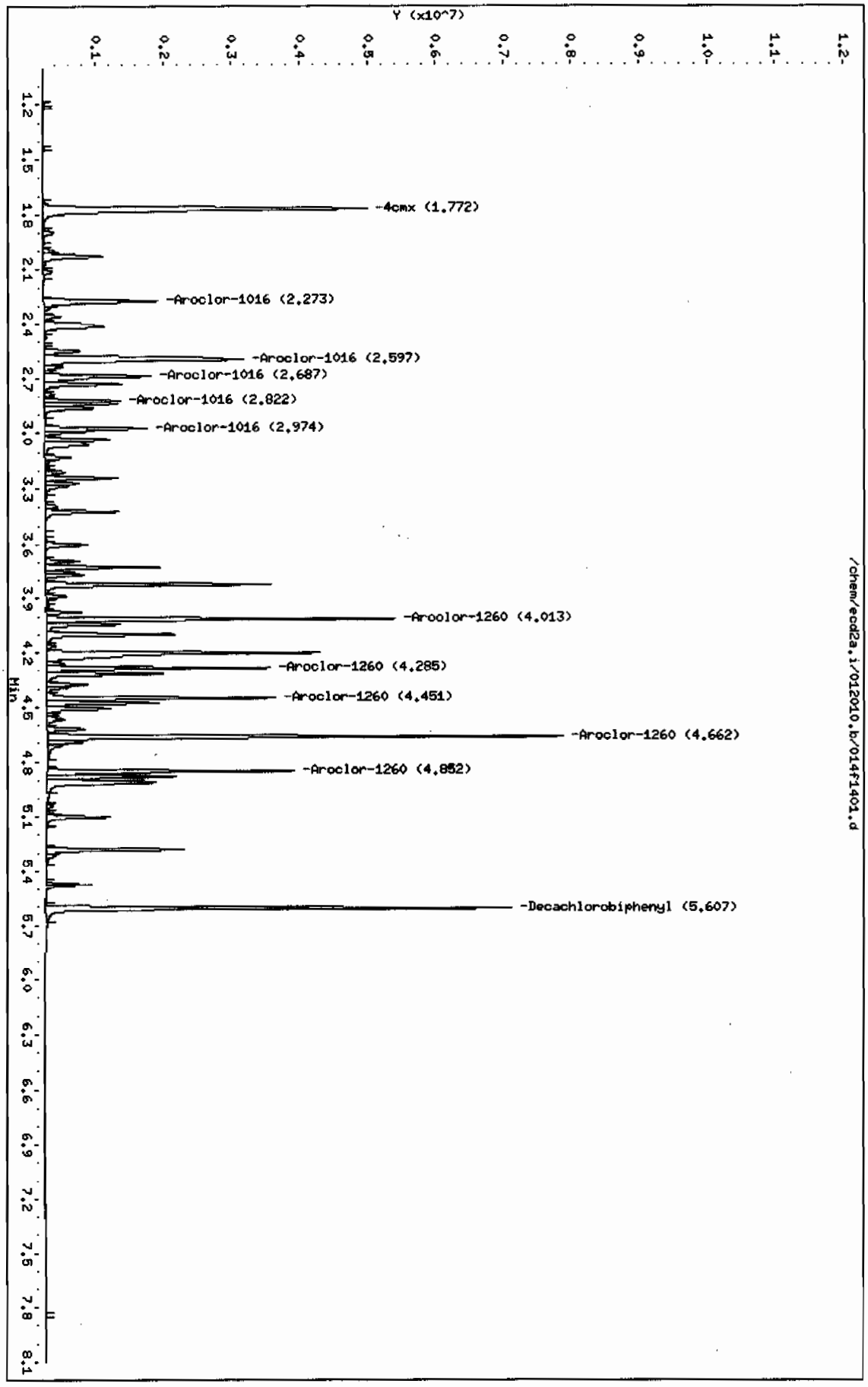
RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/014f1401.d
Lab Smp Id: WAR100104-60 01 Client Smp ID: AR166001
Inj Date : 20-JAN-2010 10:42
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100104-60 01
Misc Info : |PCB_CVS|1660||CVS|
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Meth Date : 21-Jan-2010 07:18 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012f1201.d
Als bottle: 14 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.772	1.772	0.000	6912800	100.000	103	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.607	5.607	0.000	6360052	100.000	100	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.273	2.273	0.000	2198690	1000.00	974	80.00- 120.00	100.00
2.597	2.597	0.000	4649732	1000.00	1000	195.96- 235.96	211.48
2.687	2.687	0.000	1876323	1000.00	987	66.90- 106.90	85.34
2.822	2.822	0.000	959235	1000.00	975	24.29- 64.29	43.63
2.974	2.974	0.000	1426869	1000.00	984	46.26- 86.26	64.90
Average of Peak Amounts =					985		
7 Aroclor-1260					CAS #: 11096-82-5		
4.013	4.013	0.000	4447698	1000.00	1030	80.00- 120.00	100.00
4.285	4.285	0.000	2849302	1000.00	1020	42.54- 82.54	64.06
4.451	4.451	0.000	2992152	1000.00	1040	44.25- 84.25	67.27
4.662	4.662	0.000	6851364	1000.00	1040	135.08- 175.08	154.04
4.852	4.852	0.000	3286090	1000.00	1030	54.83- 94.83	73.88
Average of Peak Amounts =					1.03e+03		

Data File: /chem/ecd2a.i/012010.b/014f1401.d
Date : 20-JAN-2010 10:42
Client ID: AR166001
Sample Info: IWAR100104-60 01
Column phase: CLP1

Instrument: ecd2a.i
Operator: JADC
Column diameter: 0.25



Page 1

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RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/014b1401.d
Lab Smp Id: WAR100104-60 01 Client Smp ID: AR166001
Inj Date : 20-JAN-2010 10:42
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100104-60 01
Misc Info : |PCB_CVS|1660||CVS|
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Meth Date : 21-Jan-2010 07:43 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012b1201.d
Als bottle: 14 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.068	2.068	0.000	15111554	100.000	108	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.298	6.298	0.000	13338668	100.000	107	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.744	2.744	0.000	4641615	1000.00	1030	80.00- 120.00	100.00
3.178	3.178	0.000	3641300	1000.00	1060	59.59- 99.59	78.45
3.329	3.329	0.000	2107404	1000.00	1040	25.93- 65.93	45.40
3.357	3.357	0.000	2219093	1000.00	1050	27.78- 67.78	47.81
3.516	3.516	0.000	2980438	1000.00	1070	45.06- 85.06	64.21
Average of Peak Amounts =					1.05e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.411	4.411	0.000	6300863	1000.00	1090	80.00- 120.00	100.00
4.564	4.564	0.000	7996784	1000.00	1100	108.00- 148.00	126.92
4.674	4.674	0.000	5508885	1000.00	1100	67.45- 107.45	87.43
4.872	4.872	0.000	6286593	1000.00	1080	79.37- 119.37	99.77
5.498	5.498	0.000	10332066	1000.00	1100	145.12- 185.12	163.98
Average of Peak Amounts =					1.1e+03		

Data File: /chem/ecd2a.i/012010.b/014b1401.d

Date : 20-JAN-2010 10:42

Client ID: AR166001

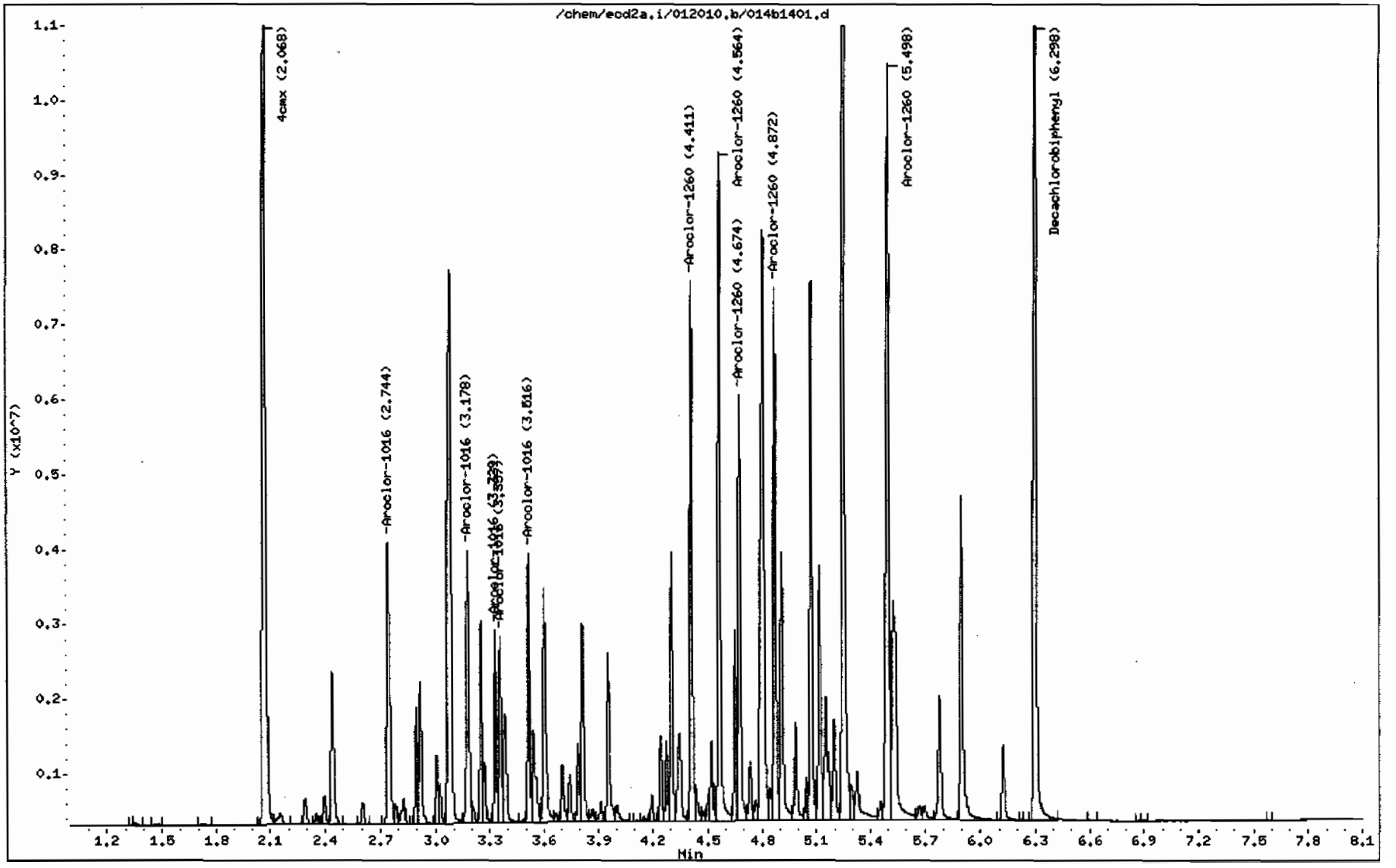
Sample Info: IWAR100104-60 01

Column phase: CLP2

Instrument: ecd2a.i

Operator: JAOC

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/028f2801.d
Lab Smp Id: WAR100104-60 02 Client Smp ID: AR166002
Inj Date : 20-JAN-2010 13:17
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100104-60 02
Misc Info : |1660
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Meth Date : 21-Jan-2010 07:18 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012f1201.d
Als bottle: 28 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

AMOUNTS

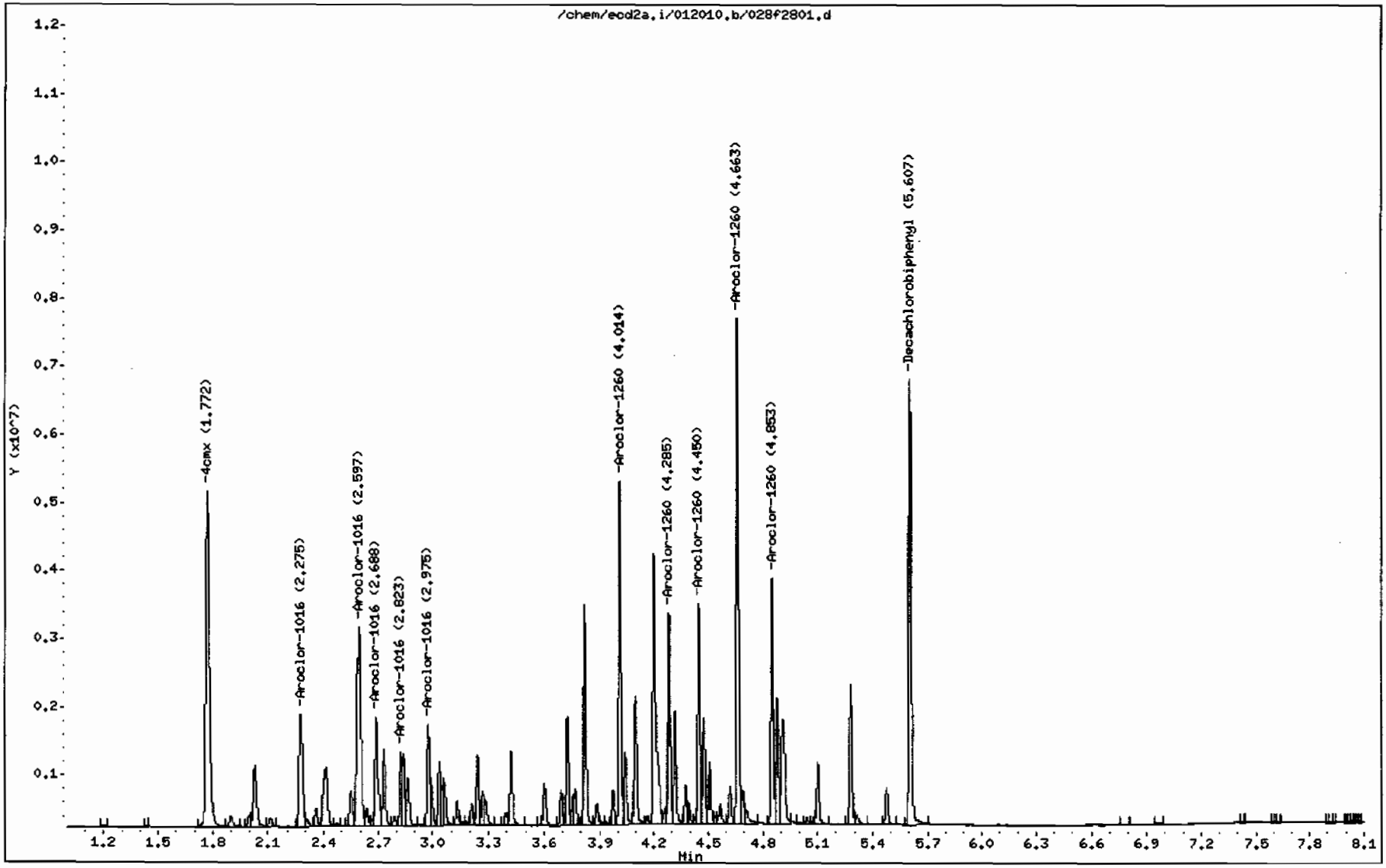
RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ug/L)	ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.772	1.772	0.000	6739545	100.000	100	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.607	5.607	0.000	6161698	100.000	97.2	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.275	2.273	0.002	2129526	1000.00	943	80.00- 120.00	100.00
2.597	2.597	0.000	4530205	1000.00	979	195.96- 235.96	212.73
2.688	2.687	0.001	1818396	1000.00	957	66.90- 106.90	85.39
2.823	2.822	0.001	935634	1000.00	951	24.29- 64.29	43.94
2.975	2.974	0.001	1396003	1000.00	962	46.26- 86.26	65.55
Average of Peak Amounts =					959		
7 Aroclor-1260					CAS #: 11096-82-5		
4.014	4.013	0.001	4308956	1000.00	1000	80.00- 120.00	100.00
4.285	4.285	0.000	2708943	1000.00	970	42.54- 82.54	62.87
4.450	4.451	-0.001	2790743	1000.00	973	44.25- 84.25	64.77
4.663	4.662	0.001	6631352	1000.00	1010	135.08- 175.08	153.90
4.853	4.852	0.001	3227168	1000.00	1010	54.83- 94.83	74.89
Average of Peak Amounts =					993		

Data File: /chem/ecd2a.i/012010.b/028f2801.d
Date : 20-JAN-2010 13:17
Client ID: AR166002
Sample Info: IWAR100104-60 02

Column phase: CLP1

Instrument: ecd2a.i

Operator: JAOC
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/028b2801.d
Lab Smp Id: WAR100104-60 02 Client Smp ID: AR166002
Inj Date : 20-JAN-2010 13:17
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100104-60 02
Misc Info : |16660
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Meth Date : 21-Jan-2010 07:43 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012b1201.d
Als bottle: 28 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

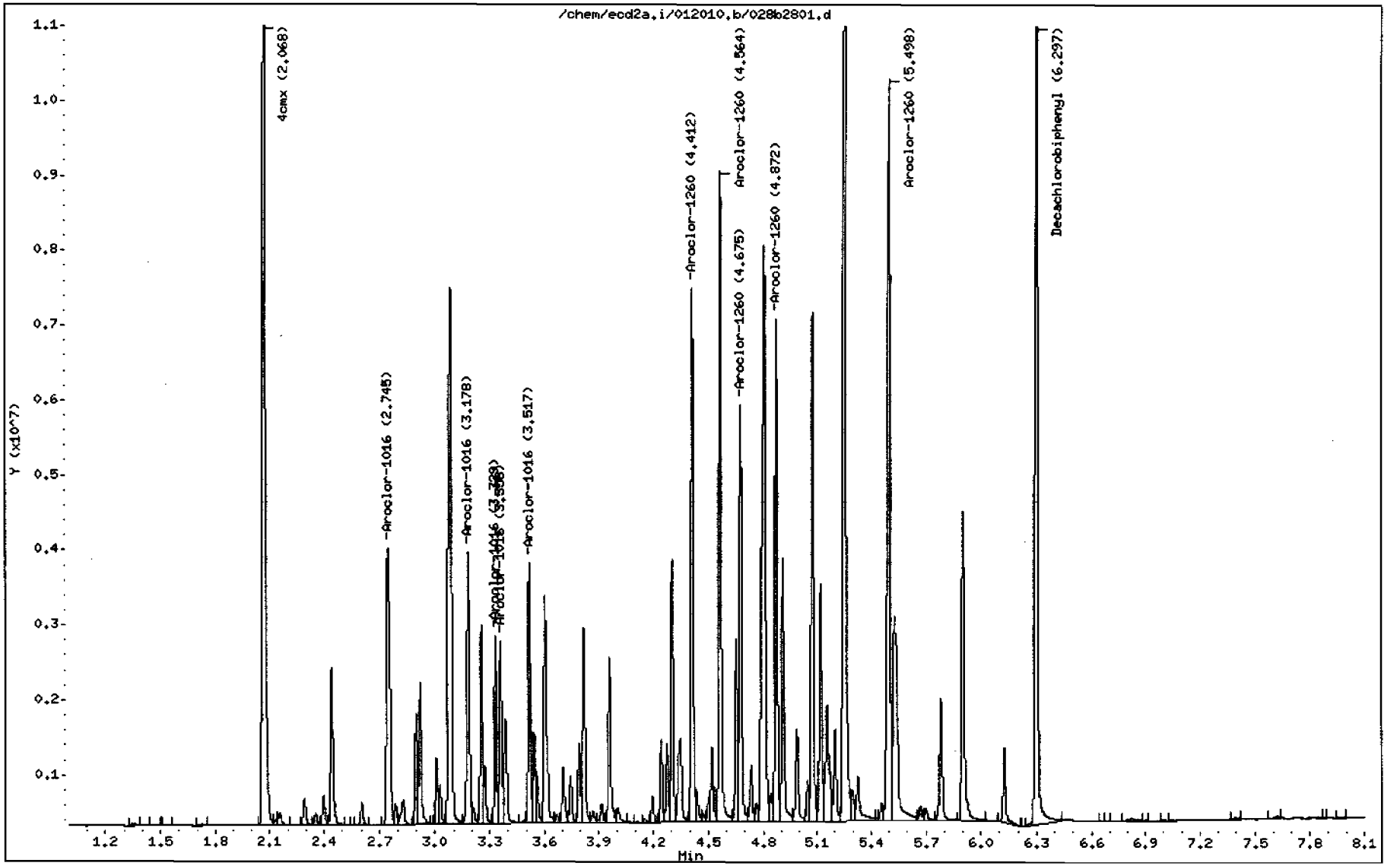
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.068	2.068	0.000	14748022	100.000	106	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.297	6.298	-0.001	12463429	100.000	100	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.745	2.744	0.001	4494509	1000.00	1000	80.00- 120.00	100.00
3.178	3.178	0.000	3522680	1000.00	1020	59.59- 99.59	78.38
3.329	3.329	0.000	2024957	1000.00	1000	25.93- 65.93	45.05
3.358	3.357	0.001	2127507	1000.00	1010	27.78- 67.78	47.34
3.517	3.516	0.001	2863002	1000.00	1020	45.06- 85.06	63.70
Average of Peak Amounts =					1.01e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.412	4.411	0.001	5974213	1000.00	1030	80.00- 120.00	100.00
4.564	4.564	0.000	7576802	1000.00	1040	108.00- 148.00	126.83
4.675	4.674	0.001	5176517	1000.00	1030	67.45- 107.45	86.65
4.872	4.872	0.000	5899725	1000.00	1020	79.37- 119.37	98.75
5.498	5.498	0.000	9862945	1000.00	1050	145.12- 185.12	165.09
Average of Peak Amounts =					1.04e+03		

Data File: /chem/ecd2a.i/012010.b/028b2801.d
Date : 20-JAN-2010 13:17
Client ID: AR166002
Sample Info: IWAR100104-60 02

Column phase: CLP2

Instrument: ecd2a.i

Operator: JAOC
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/037f3701.d
Lab Smp Id: WAR100104-60 03 Client Smp ID: AR166003
Inj Date : 20-JAN-2010 14:57
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100104-60 03
Misc Info : |PCB_CVS|1660||CVS|
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Meth Date : 21-Jan-2010 07:18 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012f1201.d
Als bottle: 37 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

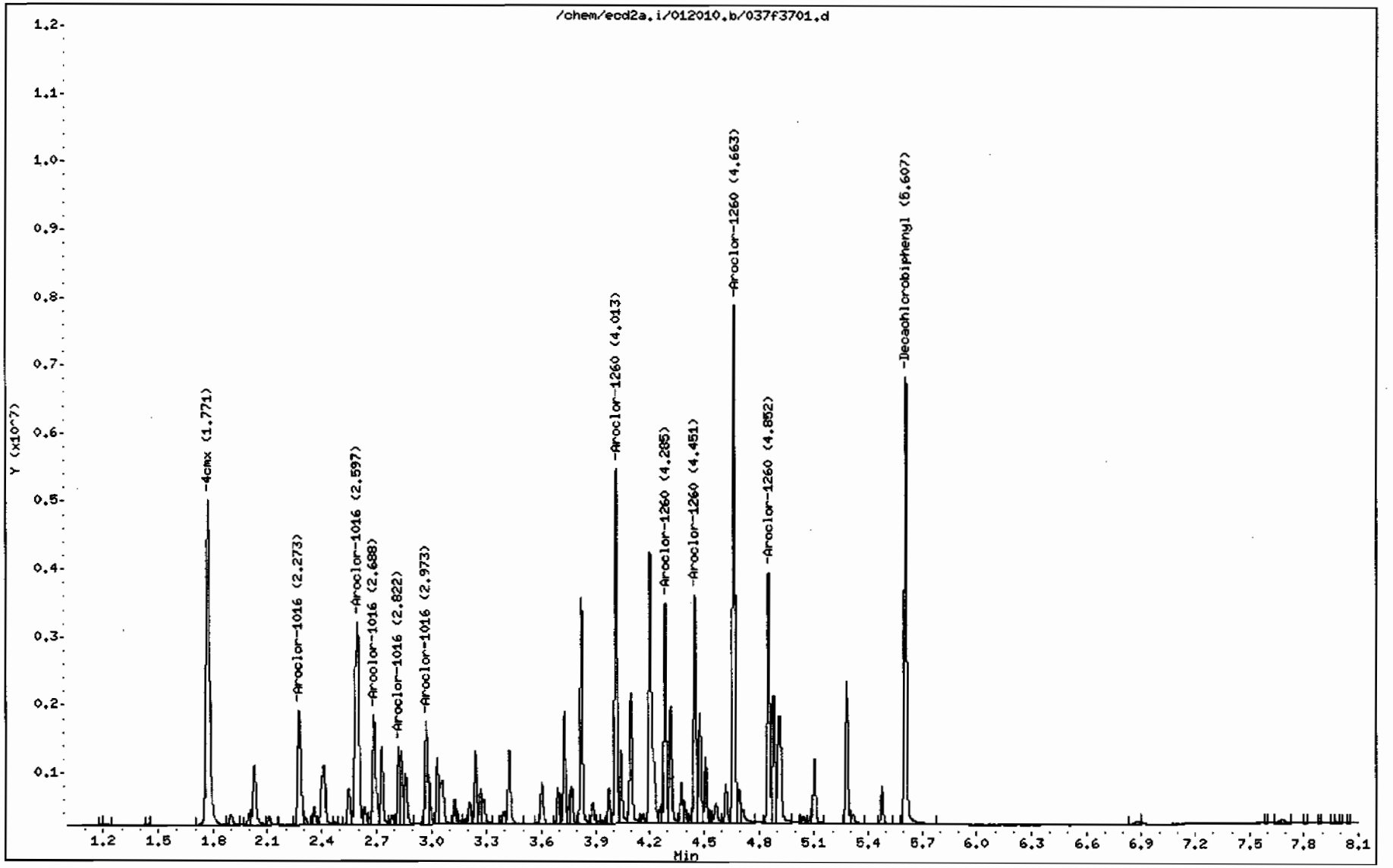
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.771	1.772	-0.001	6784810	100.000	101	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.607	5.607	0.000	6153320	100.000	97.0	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.273	2.273	0.000	2157817	1000.00	956	80.00- 120.00	100.00
2.597	2.597	0.000	4612339	1000.00	996	195.96- 235.96	213.75
2.688	2.687	0.001	1847242	1000.00	972	66.90- 106.90	85.61
2.822	2.822	0.000	947695	1000.00	964	24.29- 64.29	43.92
2.973	2.974	-0.001	1410345	1000.00	972	46.26- 86.26	65.36
Average of Peak Amounts =					972		
7 Aroclor-1260					CAS #: 11096-82-5		
4.013	4.013	0.000	4429386	1000.00	1030	80.00- 120.00	100.00
4.285	4.285	0.000	2793144	1000.00	1000	42.54- 82.54	63.06
4.451	4.451	0.000	2873803	1000.00	1000	44.25- 84.25	64.88
4.663	4.662	0.001	6775868	1000.00	1030	135.08- 175.08	152.98
4.852	4.852	0.000	3282519	1000.00	1030	54.83- 94.83	74.11
Average of Peak Amounts =					1.02e+03		

Data File: /chem/ecd2a.i/012010.b/037f3701.d
Date : 20-JAN-2010 14:57
Client ID: AR166003
Sample Info: IWAR100104-60 03

Column phase: CLP1

Instrument: ecd2a.i

Operator: JAOC
Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/037b3701.d
Lab Smp Id: WAR100104-60 03 Client Smp ID: AR166003
Inj Date : 20-JAN-2010 14:57
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |WAR100104-60 03
Misc Info : |PCB_CVS|1660||CVS|
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Meth Date : 21-Jan-2010 07:43 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012b1201.d
Als bottle: 37 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660.sub
Target Version: 3.50 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.068	2.068	0.000	14825180	100.000	106	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.299	6.298	0.001	12257396	100.000	98.4	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.744	2.744	0.000	4542550	1000.00	1010	80.00- 120.00	100.00
3.178	3.178	0.000	3561353	1000.00	1040	59.59- 99.59	78.40
3.329	3.329	0.000	2036038	1000.00	1010	25.93- 65.93	44.82
3.357	3.357	0.000	2150693	1000.00	1020	27.78- 67.78	47.35
3.516	3.516	0.000	2909995	1000.00	1040	45.06- 85.06	64.06
Average of Peak Amounts =					1.02e+03		
7 Aroclor-1260					CAS #: 11096-82-5		
4.412	4.411	0.001	6107582	1000.00	1060	80.00- 120.00	100.00
4.564	4.564	0.000	7758929	1000.00	1070	108.00- 148.00	127.04
4.675	4.674	0.001	5258912	1000.00	1050	67.45- 107.45	86.10
4.872	4.872	0.000	5990872	1000.00	1030	79.37- 119.37	98.09
5.499	5.498	0.001	9837210	1000.00	1050	145.12- 185.12	161.07
Average of Peak Amounts =					1.05e+03		

Data File: /chem/ecd2a.i/012010.b/037b3701.d

Date : 20-JAN-2010 14:57

Client ID: AR166003

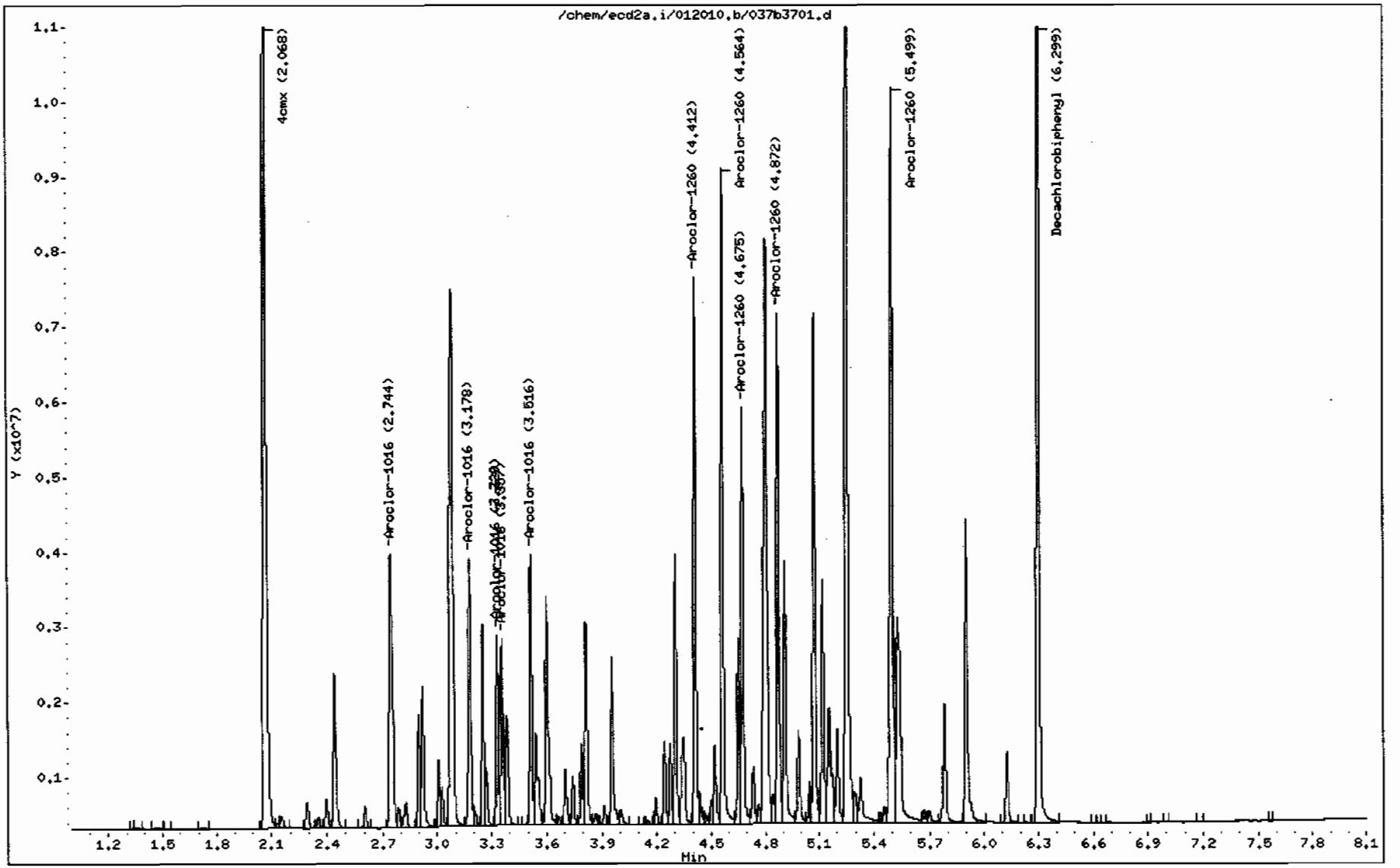
Sample Info: IWAR100104-60 03

Column phase: CLP2

Instrument: ecd2a.i

Operator: JAOC

Column diameter: 0.25



8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1263

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 01/20/10 01/20/10

Instrument ID: ECD2A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.77 DCB: 5.61

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR091130-99	01/20/10	0817	1.77	5.60
02	ZZZZZ	ZZZZZ	01/20/10	0829	1.77	5.61
03	AR125401	WAR091102-54	01/20/10	0840		
04	AR124201	WAR100104-42	01/20/10	0851		
05	AR124801	WAR100104-48	01/20/10	0902		
06	AR123201	WAR100104-32	01/20/10	0913		
07	AR122101	WAR100104-21	01/20/10	0924		
08	AR126201	WAR100104-62	01/20/10	0935		
09	AR166001	WAR100120-01	01/20/10	0946	1.77	5.61
10	AR166002	WAR100120-02	01/20/10	0957	1.77	5.61
11	AR166003	WAR100120-03	01/20/10	1009	1.77	5.61
12	AR166004	WAR100120-04	01/20/10	1020	1.77	5.61
13	AR166005	IAR100104-01	01/20/10	1031	1.77	5.61
14	AR166001	WAR100104-60	01/20/10	1042	1.77	5.61
15	AR126801	WAR091106-68	01/20/10	1053		
16	DDTANALOGSTD	WAR091219-DD	01/20/10	1104		
17	PIBLK02	WAR091130-99	01/20/10	1115	1.77	5.61
18	PBLK01	1202019498	01/20/10	1126	1.77	5.61
19	PBLK01LCS	1202019499	01/20/10	1138	1.77	5.61
20	ZZZZZ	ZZZZZ	01/20/10	1149	1.77	5.61
21	ZZZZZ	ZZZZZ	01/20/10	1200	1.77	5.61
22	ZZZZZ	ZZZZZ	01/20/10	1211	1.77	5.61
23	ZZZZZ	ZZZZZ	01/20/10	1222	1.77	5.61
24	ZZZZZ	ZZZZZ	01/20/10	1233	1.77	5.61
25	ZZZZZ	ZZZZZ	01/20/10	1244	1.77	5.61
26	ZZZZZ	ZZZZZ	01/20/10	1255	1.77	5.61
27	RE12-10-7856	244852001	01/20/10	1306	1.77	5.61
28	AR166002	WAR100104-60	01/20/10	1317	1.77	5.61
29	PIBLK03	WAR091130-99	01/20/10	1328	1.77	5.61
30	RE12-10-7857	244852002	01/20/10	1340	1.77	5.61
31	ZZZZZ	ZZZZZ	01/20/10	1351	1.77	5.61
32	ZZZZZ	ZZZZZ	01/20/10	1402	1.77	5.61

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1263

GC Column: CLP1 ID: 0.25 (mm) Init. Calib. Date(s): 01/20/10 01/20/10

Instrument ID: ECD2A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.77 DCB: 5.61

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	ZZZZZ	ZZZZZ	01/20/10	1413	1.77	5.61
02	ZZZZZ	ZZZZZ	01/20/10	1424	1.77	5.61
03	ZZZZZ	ZZZZZ	01/20/10	1435	1.77	5.61
04	ZZZZZ	ZZZZZ	01/20/10	1446	1.77	5.61
05	AR166003	WAR100104-60	01/20/10	1457	1.77	5.61
06	PIBLK04	WAR091130-99	01/20/10	1509	1.77	5.61
07	ZZZZZ	ZZZZZ	01/20/10	1520	1.77	5.61
08	ZZZZZ	ZZZZZ	01/20/10	1531	1.77	5.61
09	ZZZZZ	ZZZZZ	01/20/10	1542	1.77	5.61
10	ZZZZZ	ZZZZZ	01/20/10	1553	1.77	5.61
11	ZZZZZ	ZZZZZ	01/20/10	1604	1.77	5.61
12	ZZZZZ	ZZZZZ	01/20/10	1615	1.77	5.61
13	ZZZZZ	ZZZZZ	01/20/10	1626	1.77	5.61
14	AR166004	WAR100104-60	01/20/10	1637	1.77	5.61
15	PIBLK05	WAR091130-99	01/20/10	1648	1.77	5.61
16	ZZZZZ	ZZZZZ	01/20/10	1700	1.77	5.61
17	ZZZZZ	ZZZZZ	01/20/10	1711	1.77	5.61
18	ZZZZZ	ZZZZZ	01/20/10	1722	1.77	5.61
19	ZZZZZ	ZZZZZ	01/20/10	1733	1.77	5.61
20	ZZZZZ	ZZZZZ	01/20/10	1744	1.77	5.61
21	ZZZZZ	ZZZZZ	01/20/10	1755	1.77	5.61
22	AR166005	WAR100104-60	01/20/10	1806	1.77	5.61
23	PIBLK06	WAR091130-99	01/20/10	1818	1.77	5.61
24	ZZZZZ	ZZZZZ	01/20/10	1829	1.77	5.61
25	ZZZZZ	ZZZZZ	01/20/10	1840	1.78	5.61
26	ZZZZZ	ZZZZZ	01/20/10	1851	1.78	5.61
27	ZZZZZ	ZZZZZ	01/20/10	1902	1.78	5.61
28	ZZZZZ	ZZZZZ	01/20/10	1913	1.78	5.61
29	ZZZZZ	ZZZZZ	01/20/10	1924	1.77	5.61
30	AR166006	WAR100104-60	01/20/10	1935	1.77	5.61
31	PIBLK07	WAR091130-99	01/20/10	1947	1.77	5.61
32						

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1263

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 01/20/10 01/20/10

Instrument ID: ECD2A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.07 DCB: 6.30

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	PIBLK01	WAR091130-99	01/20/10	0817	2.06	6.29
02	ZZZZZ	ZZZZZ	01/20/10	0829	2.07	6.30
03	AR125401	WAR091102-54	01/20/10	0840		
04	AR124201	WAR100104-42	01/20/10	0851		
05	AR124801	WAR100104-48	01/20/10	0902		
06	AR123201	WAR100104-32	01/20/10	0913		
07	AR122101	WAR100104-21	01/20/10	0924		
08	AR126201	WAR100104-62	01/20/10	0935		
09	AR166001	WAR100120-01	01/20/10	0946	2.07	6.30
10	AR166002	WAR100120-02	01/20/10	0957	2.07	6.30
11	AR166003	WAR100120-03	01/20/10	1009	2.07	6.30
12	AR166004	WAR100120-04	01/20/10	1020	2.07	6.30
13	AR166005	IAR100104-01	01/20/10	1031	2.07	6.30
14	AR166001	WAR100104-60	01/20/10	1042	2.07	6.30
15	AR126801	WAR091106-68	01/20/10	1053		
16	DDTANALOGSTD	WAR091219-DD	01/20/10	1104		
17	PIBLK02	WAR091130-99	01/20/10	1115	2.07	6.30
18	PBLK01	1202019498	01/20/10	1126	2.07	6.30
19	PBLK01LCS	1202019499	01/20/10	1138	2.07	6.30
20	ZZZZZ	ZZZZZ	01/20/10	1149	2.07	6.30
21	ZZZZZ	ZZZZZ	01/20/10	1200	2.07	6.30
22	ZZZZZ	ZZZZZ	01/20/10	1211	2.07	6.30
23	ZZZZZ	ZZZZZ	01/20/10	1222	2.07	6.30
24	ZZZZZ	ZZZZZ	01/20/10	1233	2.07	6.30
25	ZZZZZ	ZZZZZ	01/20/10	1244	2.07	6.30
26	ZZZZZ	ZZZZZ	01/20/10	1255	2.07	6.30
27	RE12-10-7856	244852001	01/20/10	1306	2.07	6.30
28	AR166002	WAR100104-60	01/20/10	1317	2.07	6.30
29	PIBLK03	WAR091130-99	01/20/10	1328	2.07	6.30
30	RE12-10-7857	244852002	01/20/10	1340	2.07	6.30
31	ZZZZZ	ZZZZZ	01/20/10	1351	2.07	6.30
32	ZZZZZ	ZZZZZ	01/20/10	1402	2.07	6.30

QC LIMITS
S1 = 4cmx (+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST OLM03.0

8D
PCB ANALYTICAL SEQUENCE

Lab Name: GENERAL ENGINEERING LAB, Contract: N/A

Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: 10-1263

GC Column: CLP2 ID: 0.25 (mm) Init. Calib. Date(s): 01/20/10 01/20/10

Instrument ID: ECD2A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.07 DCB: 6.30

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	DCB RT #
01	ZZZZZ	ZZZZZ	01/20/10	1413	2.07	6.30
02	ZZZZZ	ZZZZZ	01/20/10	1424	2.07	6.30
03	ZZZZZ	ZZZZZ	01/20/10	1435	2.07	6.30
04	ZZZZZ	ZZZZZ	01/20/10	1446	2.07	6.30
05	AR166003	WAR100104-60	01/20/10	1457	2.07	6.30
06	PIBLK04	WAR091130-99	01/20/10	1509	2.07	6.30
07	ZZZZZ	ZZZZZ	01/20/10	1520	2.07	6.30
08	ZZZZZ	ZZZZZ	01/20/10	1531	2.07	6.30
09	ZZZZZ	ZZZZZ	01/20/10	1542	2.07	6.30
10	ZZZZZ	ZZZZZ	01/20/10	1553	2.07	6.30
11	ZZZZZ	ZZZZZ	01/20/10	1604	2.07	6.30
12	ZZZZZ	ZZZZZ	01/20/10	1615	2.07	6.30
13	ZZZZZ	ZZZZZ	01/20/10	1626	2.07	6.30
14	AR166004	WAR100104-60	01/20/10	1637	2.07	6.30
15	PIBLK05	WAR091130-99	01/20/10	1648	2.07	6.30
16	ZZZZZ	ZZZZZ	01/20/10	1700	2.07	6.30
17	ZZZZZ	ZZZZZ	01/20/10	1711	2.07	6.30
18	ZZZZZ	ZZZZZ	01/20/10	1722	2.07	6.30
19	ZZZZZ	ZZZZZ	01/20/10	1733	2.07	6.30
20	ZZZZZ	ZZZZZ	01/20/10	1744	2.07	6.30
21	ZZZZZ	ZZZZZ	01/20/10	1755	2.07	6.30
22	AR166005	WAR100104-60	01/20/10	1806	2.07	6.30
23	PIBLK06	WAR091130-99	01/20/10	1818	2.07	6.30
24	ZZZZZ	ZZZZZ	01/20/10	1829	2.07	6.30
25	ZZZZZ	ZZZZZ	01/20/10	1840	2.07	6.30
26	ZZZZZ	ZZZZZ	01/20/10	1851	2.07	6.30
27	ZZZZZ	ZZZZZ	01/20/10	1902	2.07	6.30
28	ZZZZZ	ZZZZZ	01/20/10	1913	2.07	6.30
29	ZZZZZ	ZZZZZ	01/20/10	1924	2.07	6.30
30	AR166006	WAR100104-60	01/20/10	1935	2.07	6.30
31	PIBLK07	WAR091130-99	01/20/10	1947	2.07	6.30
32						

	QC LIMITS
S1 = 4cmx	(+/- 0.03 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.03 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Identification Summary

SDG Number: 10-1263 **Client ID:** LCS for batch 943204

Lab Sample ID: 1202019499

Data File:	019f1901.d	**Data File:**	019b1901.d
Inst:	ECD2A.I_1	**Inst:**	ECD2A.I_2
Column:	CLP1	**Column:**	CLP2
Analyzed:	20-JAN-10 11:38	**Analyzed:**	20-JAN-10 11:38

Analyte	Peak	RT	RT Window	Conc.	Ave Conc.	Units	RPD
Aroclor-1016							2.6
Column 1	1	2.27	2.24 - 2.3	21.9		ug/kg	
	2	2.6	2.57 - 2.63	21.8		ug/kg	
	3	2.69	2.66 - 2.72	21.5		ug/kg	
	4	2.82	2.79 - 2.85	21.5		ug/kg	
	5	2.97	2.94 - 3	27.6		ug/kg	
					22.8		
Column 2	1	2.74	2.71 - 2.77	22.1		ug/kg	
	2	3.18	3.15 - 3.21	22.5		ug/kg	
	3	3.33	3.3 - 3.36	22		ug/kg	
	4	3.36	3.33 - 3.39	22.1		ug/kg	
	5	3.52	3.49 - 3.55	22.5		ug/kg	
					22.3		
Aroclor-1260							2.59
Column 1	1	4.01	3.98 - 4.04	24.7		ug/kg	
	2	4.29	4.25 - 4.31	24.6		ug/kg	
	3	4.45	4.42 - 4.48	24.9		ug/kg	
	4	4.66	4.63 - 4.69	25.6		ug/kg	
	5	4.85	4.82 - 4.88	26.1		ug/kg	
					25.2		
Column 2	1	4.41	4.38 - 4.44	25.3		ug/kg	
	2	4.56	4.53 - 4.59	25.8		ug/kg	
	3	4.68	4.64 - 4.7	25.5		ug/kg	
	4	4.87	4.84 - 4.9	25.5		ug/kg	
	5	5.5	5.47 - 5.53	27		ug/kg	
					25.8		

QUALITY CONTROL DATA

PCB
Certificate of Analysis
Sample Summary

SDG Number:	**10-1263**			**Matrix:**	**SOIL**
Lab Sample ID:	**1202019498**				
Client Sample:	**QC for batch 943204**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**MB for batch 943204**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL-OA-E-040**
Batch ID:	**943205**	**Inst:**	**ECD2A.I**	**Dilution:**	**1**
Run Date:	**01/20/2010 11:26**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**01/19/2010 20:46**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**018f1801-1.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	018b1801-1.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.33	ug/kg	1.11	3.33	1
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260	U	3.33	ug/kg	1.11	3.33	1

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/018f1801-2.d
Lab Smp Id: 1202019498 Client Smp ID: PBLK01
Inj Date : 20-JAN-2010 11:26
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |1202019498|1|
Misc Info : |ECD82P_1S|943205|SVA|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Meth Date : 21-Jan-2010 07:18 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012f1201.d
Als bottle: 18 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1263.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.772	1.772	0.000	8889881	132.620	4.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.606	5.607	-0.001	9206422	145.213	4.8	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/012010.b/018f1801-2.d

Date : 20-JAN-2010 11:26

Client ID: PBLK01

Sample Info: |1202019498|1|

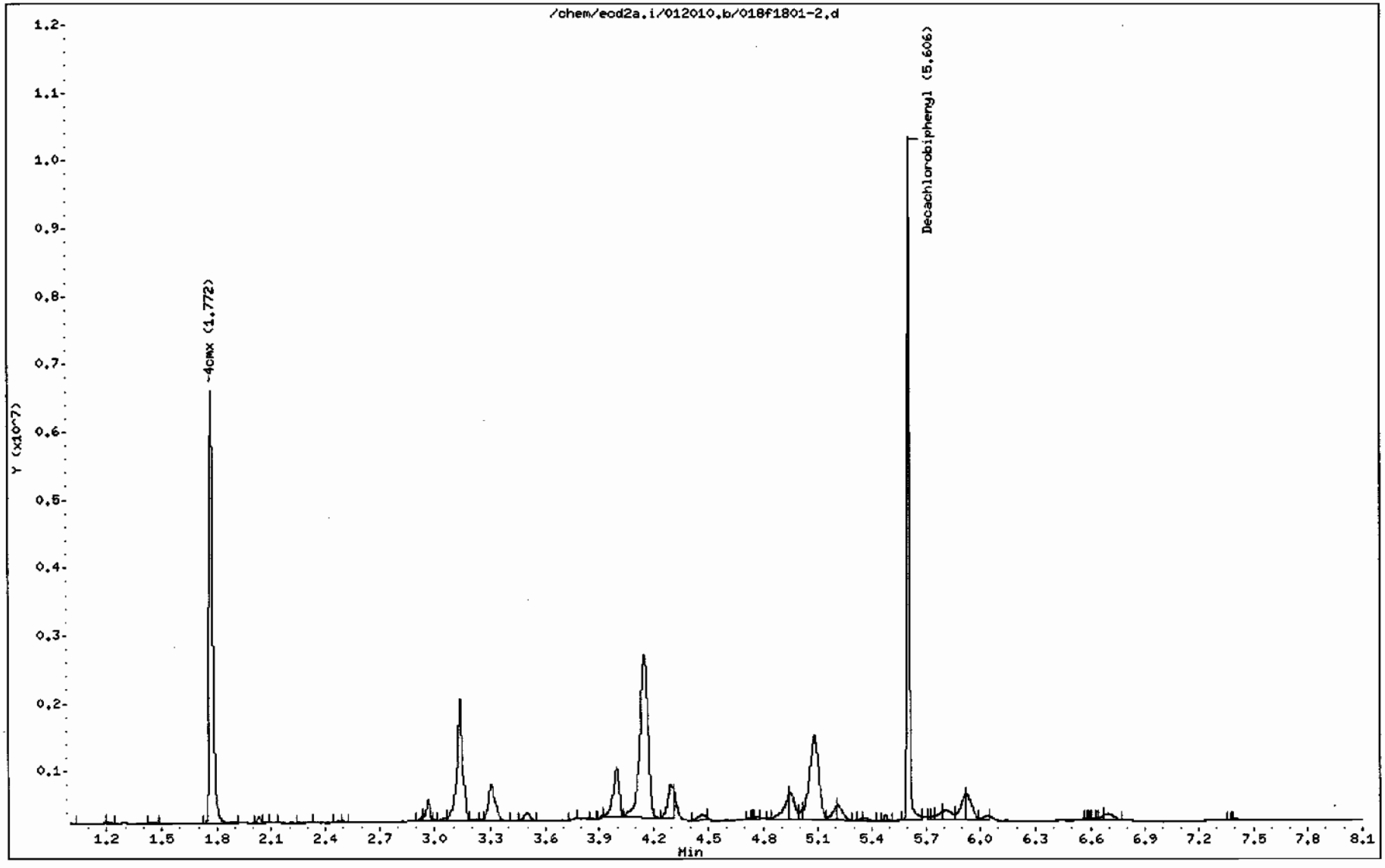
Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd2a.i

Operator: JAOC

Column diameter: 0.25



GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/018b1801-2.d
Lab Smp Id: 1202019498 Client Smp ID: PBLK01
Inj Date : 20-JAN-2010 11:26
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |1202019498|1|
Misc Info : |ECD82P_1S|943205|SVA|QC A|SOIL|MB|||
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Meth Date : 21-Jan-2010 07:43 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012b1201.d
Als bottle: 18 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1263.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclpl

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

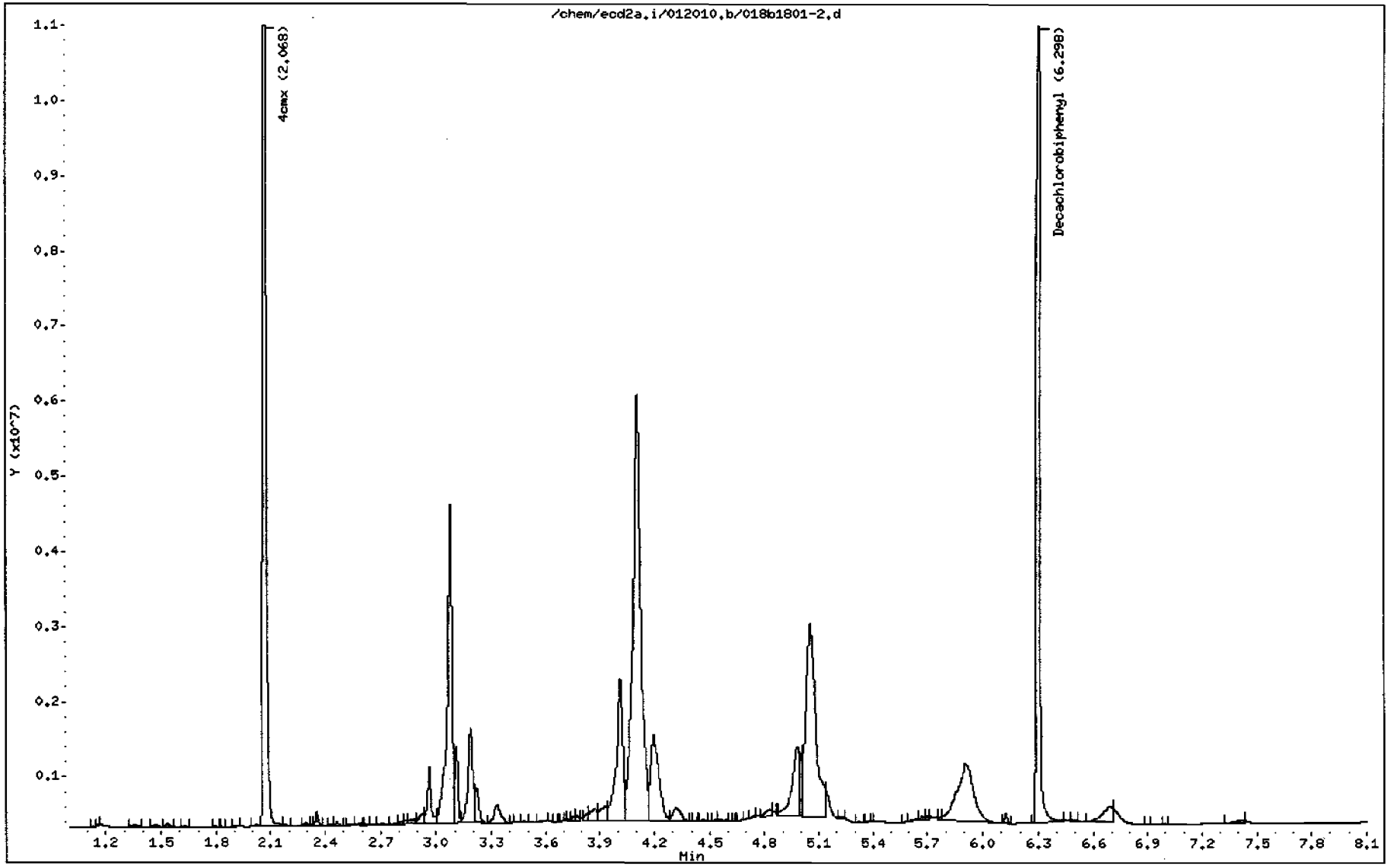
Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.068	2.068	0.000	19726832	141.353	4.7	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.298	6.298	0.000	19435554	156.044	5.2	80.00- 120.00	100.00

Data File: /chem/ecd2a.i/012010.b/018b1801-2.d
Date : 20-JAN-2010 11:26
Client ID: PBLK01
Sample Info: |12020194981|1|
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



PCB
Certificate of Analysis
Sample Summary

SDG Number:	**10-1263**			**Matrix:**	**SOIL**
Lab Sample ID:	**1202019499**				
Client Sample:	**QC for batch 943204**	**Client:**	**LANL010**	**Project:**	**QC**
Client ID:	**LCS for batch 943204**	**Method:**	**SW846 8082**	**SOP Ref:**	**GL-OA-E-040**
Batch ID:	**943205**	**Inst:**	**ECD2A.I**	**Dilution:**	**1**
Run Date:	**01/20/2010 11:38**	**Analyst:**	**JAOC**	**Inj. Vol:**	**1 uL**
Prep Date:	**01/19/2010 20:46**	**Aliquot:**	**30 g**	**Final Volume:**	**1 mL**
Data File:	**019f1901-1.d**	**Column:**	**1 CLP1**	**Level:**	**LOW**
	019b1901-1.d		**2 CLP2**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016		22.9	ug/kg	1.11	3.33	1
11104-28-2	Aroclor-1221	U	3.33	ug/kg	1.11	3.33	1
11141-16-5	Aroclor-1232	U	3.33	ug/kg	1.11	3.33	1
53469-21-9	Aroclor-1242	U	3.33	ug/kg	1.11	3.33	1
12672-29-6	Aroclor-1248	U	3.33	ug/kg	1.11	3.33	1
11097-69-1	Aroclor-1254	U	3.33	ug/kg	1.11	3.33	1
11096-82-5	Aroclor-1260		25.8	ug/kg	1.11	3.33	2

GEL Laboratories LLC

RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/019f1901-2.d
Lab Smp Id: 1202019499 Client Smp ID: PBLK01LCS
Inj Date : 20-JAN-2010 11:38
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |1202019499|1|
Misc Info : |ECD82P_1S|943205|SVA|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Meth Date : 21-Jan-2010 07:18 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012f1201.d
Als bottle: 19 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1263.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

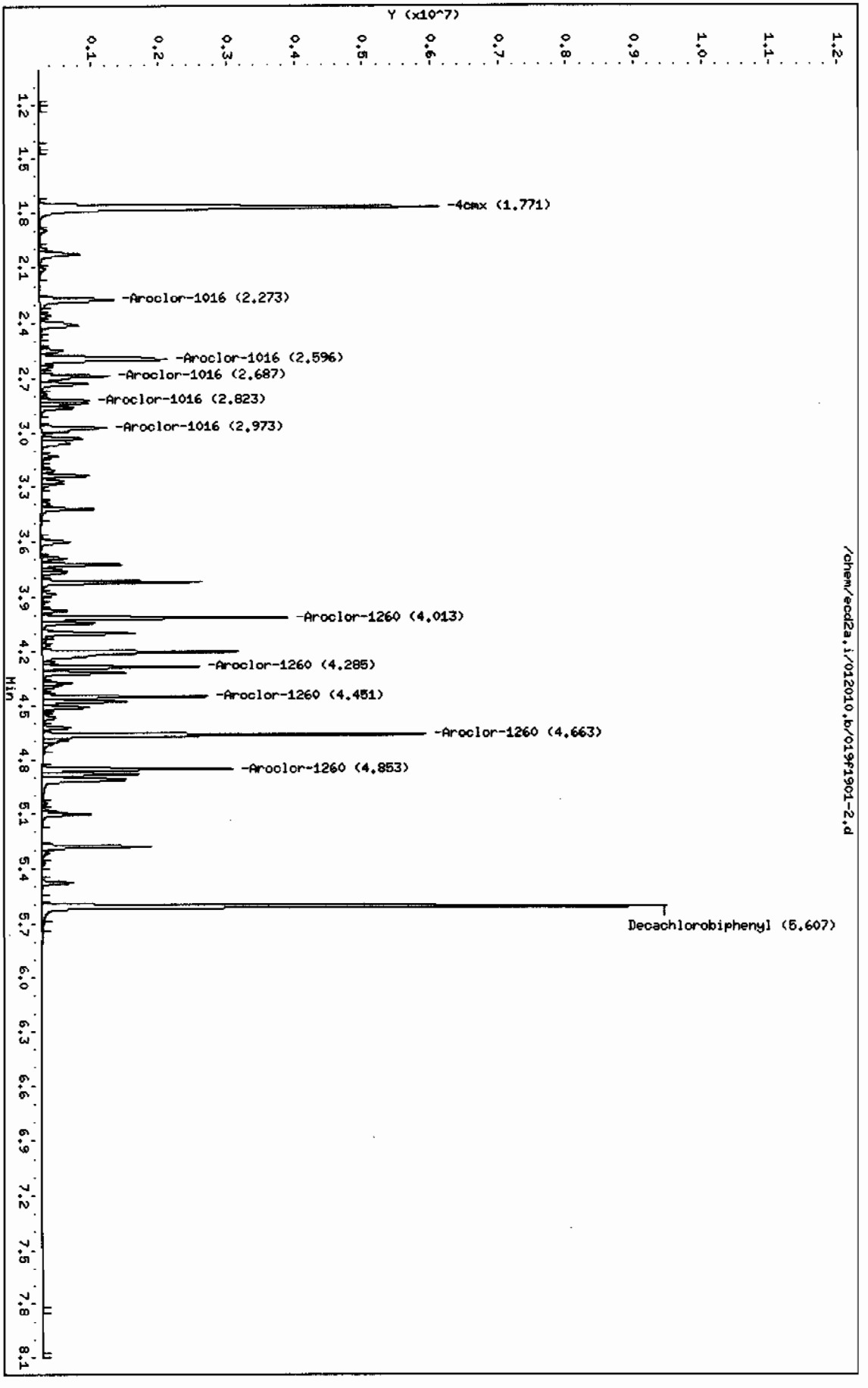
Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.771	1.772	-0.001	8323513	124.171	4.1	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.607	5.607	0.000	8506547	134.174	4.5	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.273	2.273	0.000	1484964	657.680	21.9	80.00- 120.00	100.00
2.596	2.597	-0.001	3022099	652.874	21.8	195.96- 235.96	203.51
2.687	2.687	0.000	1224094	644.157	21.5	66.90- 106.90	82.43
2.823	2.822	0.001	633892	644.529	21.5	24.29- 64.29	42.69

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
2.973	2.974	-0.001	1199691	827.200	27.6	46.26- 86.26	80.79
			Average of Peak Concentrations =		22.8		
7 Aroclor-1260					CAS #: 11096-82-5		
4.013	4.013	0.000	3185673	740.395	24.7	80.00- 120.00	100.00
4.285	4.285	0.000	2059062	737.743	24.6	42.54- 82.54	64.64
4.451	4.451	0.000	2142407	747.309	24.9	44.25- 84.25	67.25
4.663	4.662	0.001	5057896	768.771	25.6	135.08- 175.08	158.77
4.853	4.852	0.001	2502252	783.591	26.1	54.83- 94.83	78.55
			Average of Peak Concentrations =		25.2		

Data File: /chem/ecd2a.i/012010.b/019f1901-2.d
Date : 20-JAN-2010 11:38
Client ID: PBLK01LCS
Sample Info: 1120201949911
Volume Injected (uL): 1.0
Column phase: CLP1

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



Page 1

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/019b1901-2.d
Lab Smp Id: 1202019499 Client Smp ID: PBLK01LCS
Inj Date : 20-JAN-2010 11:38
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |1202019499|1|
Misc Info : |ECD82P_1S|943205|SVA|QC A|SOIL|LCS|||
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Meth Date : 21-Jan-2010 07:43 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012b1201.d
Als bottle: 19 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1263.sub
Target Version: 3.50 Sample Matrix: Soil
Processing Host: hpclp1

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

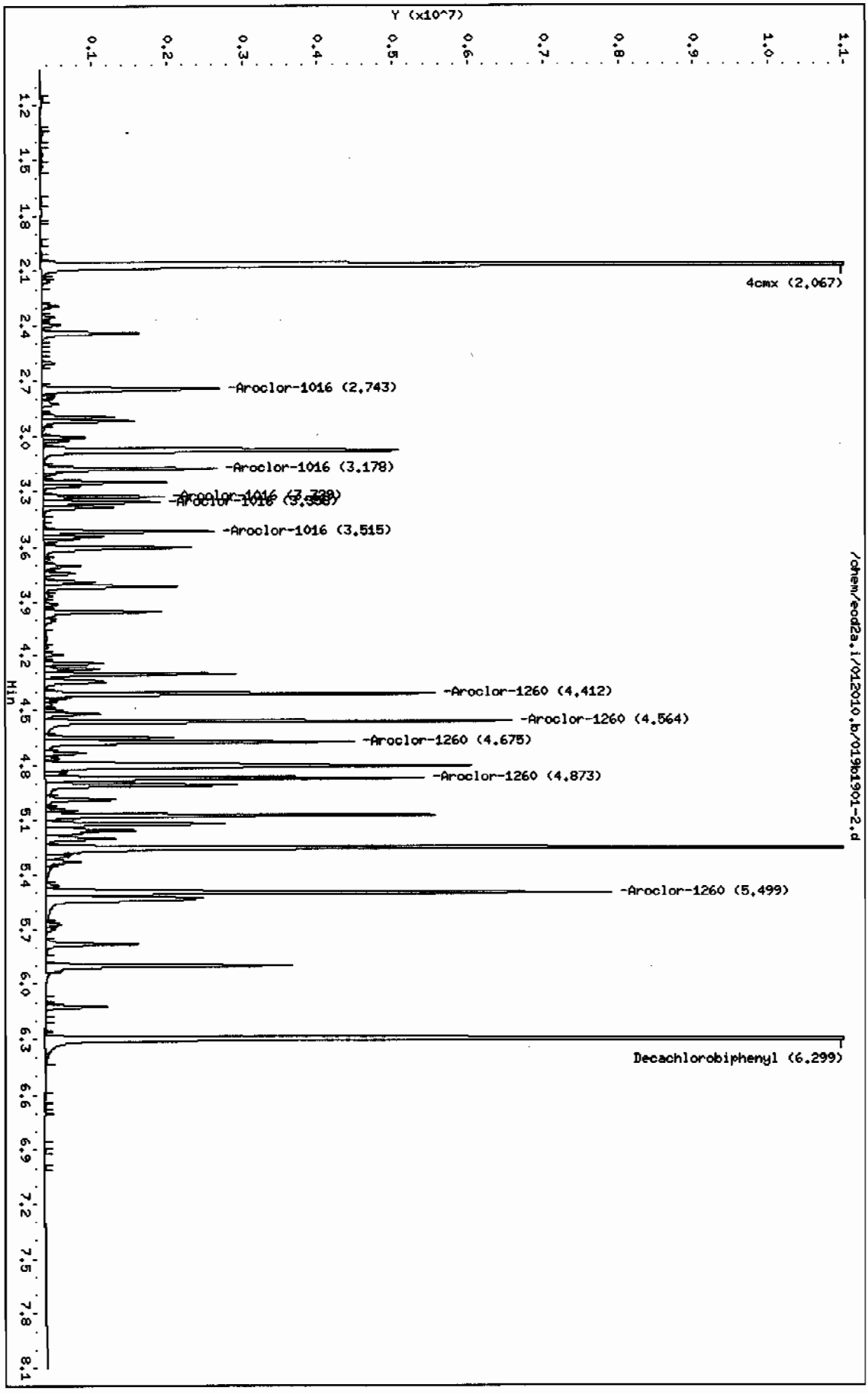
Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.067	2.068	-0.001	18404875	131.881	4.4	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.299	6.298	0.001	18114339	145.436	4.8	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.743	2.744	-0.001	2976782	663.086	22.1	80.00- 120.00	100.00
3.178	3.178	0.000	2316918	674.674	22.5	59.59- 99.59	77.83
3.329	3.329	0.000	1334489	661.499	22.0	25.93- 65.93	44.83
3.358	3.357	0.001	1399179	664.514	22.2	27.78- 67.78	47.00

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
1 Aroclor-1016 (continued)							
3.515	3.516	-0.001	1885708	674.800	22.5	45.06- 85.06	63.35
Average of Peak Concentrations =					22.2		
7 Aroclor-1260					CAS #: 11096-82-5		
4.412	4.411	0.001	4398795	760.353	25.3	80.00- 120.00	100.00
4.564	4.564	0.000	5630047	775.153	25.8	108.00- 148.00	127.99
4.675	4.674	0.001	3835500	766.461	25.5	67.45- 107.45	87.19
4.873	4.872	0.001	4431145	764.625	25.5	79.37- 119.37	100.74
5.499	5.498	0.001	7613487	810.424	27.0	145.12- 185.12	173.08
Average of Peak Concentrations =					25.8		

Data File: /chem/ecd2a.i/012010.b/019b1901-2.d
Date : 20-JAN-2010 11:38
Client ID: PBLK01LCS
Sample Info: 1120201949911
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



Page 1

MISCELLANEOUS DATA

GEL ORGANIC RUN LOG INSTRUMENT ID: ECD2

DATE: 01/21/2010 METHOD: ECD2-F-8082-111209A.m OPERATOR:JAOC REVIEWED BY:_____
DATE:_____

HARDWARE CONFIGURATION & METHOD SUMMARY: No. 1 on pg. 1 SOLVENT LOT:DA699
ALUMINA LOT:1240553-A
COPPER LOT:236547-A

Calibration & QC Information
Initial Calibration Dates: See Calibration History and Standards Log
Initial Calibration Std ID's: See Calibration History and Standards Log
GEL SOP GL-OA-E-040
EPA Method: 8082 Polychlorinated Biphenyls PCBs by Gas Chromatography
Sequence Number:012010.B Injection Volume: 1.0 uL

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
001f0101.d	WAR091130-99 IB	JAOC	20-JAN-2010 08:17		012010	1.0	CLEAN	
002f0201.d	WAR100104-60 01	JAOC	20-JAN-2010 08:29		012010	1.0	DUSE	
003f0301.d	WAR091102-54	JAOC	20-JAN-2010 08:40		012010	1.0	PASSES BOTH COLUMNS	
004f0401.d	WAR091217-42	JAOC	20-JAN-2010 08:51		012010	1.0	PASSES BOTH COLUMNS	
005f0501.d	WAR091217-48	JAOC	20-JAN-2010 09:02		012010	1.0	PASSES BOTH COLUMNS	
006f0601.d	WAR100104-32	JAOC	20-JAN-2010 09:13		012010	1.0	PATTERN ONLY	
007f0701.d	WAR100104-21	JAOC	20-JAN-2010 09:24		012010	1.0	PATTERN ONLY	
008f0801.d	WAR100104-62	JAOC	20-JAN-2010 09:35		012010	1.0	PASSES BOTH COLUMNS	
009f0901.d	WAR100120-01 60	JAOC	20-JAN-2010 09:46		012010	1.0	1660 LEVEL 1	
010f1001.d	WAR100120-02 60	JAOC	20-JAN-2010 09:57		012010	1.0	1660 LEVEL 2	
011f1101.d	WAR100120-03 60	JAOC	20-JAN-2010 10:09		012010	1.0	1660 LEVEL 3	
012f1201.d	WAR100120-04 60	JAOC	20-JAN-2010 10:20		012010	1.0	1660 LEVEL 4	
013f1301.d	IAR100104-01 60	JAOC	20-JAN-2010 10:31		012010	1.0	1660 LEVEL 5	
014f1401.d	WAR100104-60 01	JAOC	20-JAN-2010 10:42		012010	1.0	PASSES BOTH COLUMNS	
015f1501.d	WAR091106-68	JAOC	20-JAN-2010 10:53		012010	1.0	PASSES BOTH COLUMNS	

Instrument Batch: /chem/ecd2a.i/012010.b Page: 1

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
016f1601.d	WAR091219-DDT	JAOC	20-JAN-2010 11:04		012010	1.0	DDT	

017f1701.d	WAR091130-99 02	JAOC	20-JAN-2010 11:15		012010	1.0		CLEAN
018f1801.d	1202019498	JAOC	20-JAN-2010 11:26	943205	10-1256	1.0	QC A	UPLOAD BOTH, USE HIGHER
019f1901.d	1202019499	JAOC	20-JAN-2010 11:38	943205	10-1256	1.0	QC A	UPLOAD BOTH, USE HIGHER
020f2001.d	244837001	JAOC	20-JAN-2010 11:49	943205	10-1256	1.0	LANL	UPLOAD BOTH, USE HIGHER
021f2101.d	244837002	JAOC	20-JAN-2010 12:00	943205	10-1256	1.0	LANL	UPLOAD BOTH, USE HIGHER
022f2201.d	244837003	JAOC	20-JAN-2010 12:11	943205	10-1256	1.0	LANL	UPLOAD BOTH, USE HIGHER
023f2301.d	244837004	JAOC	20-JAN-2010 12:22	943205	10-1256	1.0	LANL	UPLOAD BOTH, USE HIGHER
024f2401.d	244837005	JAOC	20-JAN-2010 12:33	943205	10-1256	1.0	LANL	UPLOAD BOTH, USE HIGHER
025f2501.d	244837006	JAOC	20-JAN-2010 12:44	943205	10-1256	1.0	LANL	UPLOAD BOTH, USE HIGHER
026f2601.d	244847004	JAOC	20-JAN-2010 12:55	943205	10-1262	5.0	LANL	UPLOAD BOTH, USE HIGHER
027f2701.d	244852001	JAOC	20-JAN-2010 13:06	943205	10-1263	1.0	LANL	UPLOAD BOTH, USE HIGHER
028f2801.d	WAR100104-60 02	JAOC	20-JAN-2010 13:17		012010	1.0	CCV	PASSES BOTH COLUMNS
029f2901.d	WAR091130-99 03	JAOC	20-JAN-2010 13:28		012010	1.0	IB	CLEAN
030f3001.d	244852002	JAOC	20-JAN-2010 13:40	943205	10-1263	1.0	LANL	UPLOAD BOTH, USE HIGHER
031f3101.d	244881001	JAOC	20-JAN-2010 13:51	943205	10-1264-1	1.0	LANL	UPLOAD BOTH, USE HIGHER
032f3201.d	1202019500	JAOC	20-JAN-2010 14:02	943205	10-1264-1	1.0	QC A	UPLOAD BOTH, USE HIGHER
033f3301.d	1202019501	JAOC	20-JAN-2010 14:13	943205	10-1264-1	1.0	QC A	UPLOAD BOTH, USE HIGHER
034f3401.d	244881002	JAOC	20-JAN-2010 14:24	943205	10-1264-1	10.0	LANL	UPLOAD BOTH, USE HIGHER
035f3501.d	244881003	JAOC	20-JAN-2010 14:35	943205	10-1264-1	1.0	LANL	UPLOAD BOTH, USE HIGHER

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
036f3601.d	244881004	JAOC	20-JAN-2010 14:46	943205	10-1264-1	1.0	LANL	UPLOAD BOTH, USE HIGHER
037f3701.d	WAR100104-60 03	JAOC	20-JAN-2010 14:57		012010	1.0		PASSES BOTH COLUMNS
038f3801.d	WAR091130-99 04	JAOC	20-JAN-2010 15:09		012010	1.0		CLEAN
039f3901.d	1202018783	JAOC	20-JAN-2010 15:20	942921	244874	1.0	QC A	UPLOAD BOTH, USE HIGHER
040f4001.d	1202018784	JAOC	20-JAN-2010 15:31	942921	244874	1.0	QC A	UPLOAD BOTH, USE HIGHER
041f4101.d	244937001	JAOC	20-JAN-2010 15:42	942921	244937	1.0	WSRB	UPLOAD BOTH, USE HIGHER

042f4201.d	1202018785	JAOC	20-JAN-2010 15:53	942921	244937		1.0	MS	UPLOAD BOTH, USE HIGHER
043f4301.d	1202018786	JAOC	20-JAN-2010 16:04	942921	244937		1.0	MSD	UPLOAD BOTH, USE HIGHER
044f4401.d	244937002	JAOC	20-JAN-2010 16:15	942921	244937		1.0	WSRB	UPLOAD BOTH, USE HIGHER
045f4501.d	244874002	JAOC	20-JAN-2010 16:26	942921	244874		1.0	GEEL	SENT FOR RE, LOW SURROGATES
046f4601.d	WAR100104-60 04	JAOC	20-JAN-2010 16:37		012010		1.0		PASSES BOTH COLUMNS
047f4701.d	WAR091130-99 05	JAOC	20-JAN-2010 16:48		012010		1.0		CLEAN
048f4801.d	1202017036	JAOC	20-JAN-2010 17:00	942243	2010MDLVECD21254-S		1.0	QC A	UPLOAD BOTH, USE BOTH
049f4901.d	1202017037	JAOC	20-JAN-2010 17:11	942243	2010MDLVECD21254-S		1.0	QC A	UPLOAD BOTH, USE BOTH
050f5001.d	244388001	JAOC	20-JAN-2010 17:22	942243	2010MDLVECD21254-S		1.0	QCQA	UPLOAD BOTH, USE BOTH
051f5101.d	244388002	JAOC	20-JAN-2010 17:33	942243	2010MDLVECD21254-S		1.0	QCQA	UPLOAD BOTH, USE BOTH
052f5201.d	244388003	JAOC	20-JAN-2010 17:44	942243	2010MDLVECD21254-S		1.0	QCQA	UPLOAD BOTH, USE BOTH
053f5301.d	244388004	JAOC	20-JAN-2010 17:55	942243	2010MDLVECD21254-S		1.0	QCQA	UPLOAD BOTH, USE BOTH
054f5401.d	WAR100104-60 05	JAOC	20-JAN-2010 18:06		012010		1.0		PASSES BOTH COLUMNS
055f5501.d	WAR091130-99 06	JAOC	20-JAN-2010 18:18		012010		1.0		CLEAN

Instrument Batch: /chem/ecd2a.i/012010.b

Data File	GEL Lab Sample ID	Analyst	Injection Date/Time	Batch	SDG	Dilution	Client	Comments
056f5601.d	1202016956	JAOC	20-JAN-2010 18:29	942219	2010MDLVECD21254-L	1.0	QC A	UPLOAD BOTH, USE BOTH
057f5701.d	1202016957	JAOC	20-JAN-2010 18:40	942219	2010MDLVECD21254-L	1.0	QC A	UPLOAD BOTH, USE BOTH
058f5801.d	243868001	JAOC	20-JAN-2010 18:51	942219	2010MDLVECD21254-L	1.0	QCQA	UPLOAD BOTH, USE BOTH
059f5901.d	243868002	JAOC	20-JAN-2010 19:02	942219	2010MDLVECD21254-L	1.0	QCQA	UPLOAD BOTH, USE BOTH
060f6001.d	243868003	JAOC	20-JAN-2010 19:13	942219	2010MDLVECD21254-L	1.0	QCQA	UPLOAD BOTH, USE BOTH
061f6101.d	243868004	JAOC	20-JAN-2010 19:24	942219	2010MDLVECD21254-L	1.0	QCQA	UPLOAD BOTH, USE BOTH
062f6201.d	WAR100104-60 06	JAOC	20-JAN-2010 19:35		012010	1.0		PASSES BOTH COLUMNS
063f6301.d	WAR091130-99 07	JAOC	20-JAN-2010 19:47		012010	1.0		CLEAN

GEL Laboratories LLC

RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/032b3201.d
Lab Smp Id: 1202019500 Client Smp ID: RE12-10-8096MS
Inj Date : 20-JAN-2010 14:02
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |1202019500|1|
Misc Info : |ECD82P_1S|943205|SVA|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Meth Date : 21-Jan-2010 07:43 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012b1201.d
Als bottle: 32 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1264-1.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.12000	Weight of sample extracted (g)
M	6.13020	% Moisture

Cpnd Variable Local Compound Variable

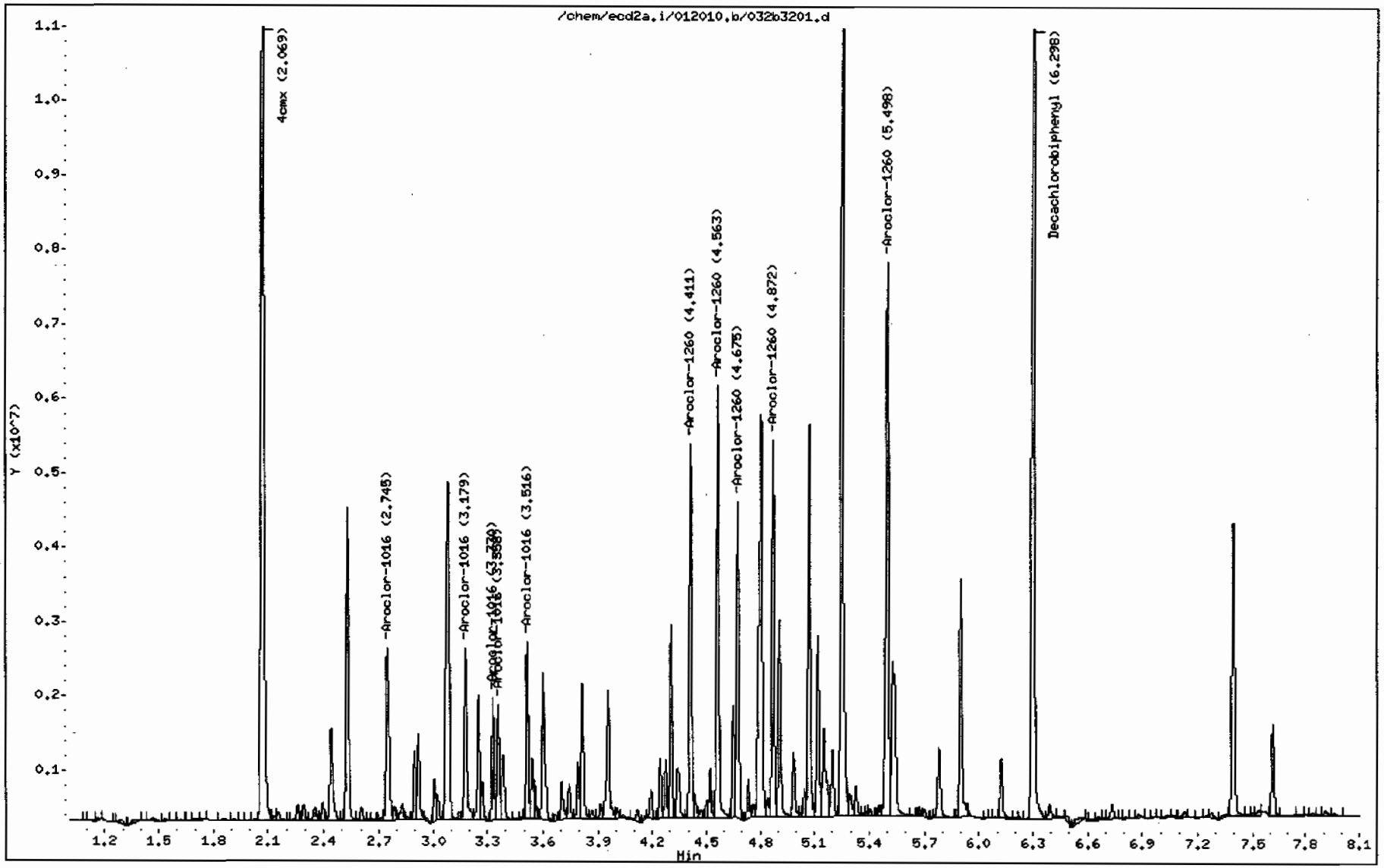
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.069	2.068	0.001	16875005	120.918	4.3	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.298	6.298	0.000	16680678	133.926	4.7	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.745	2.744	0.001	2809573	625.839	22.1	80.00- 120.00	100.00
3.179	3.178	0.001	2338019	680.818	24.1	59.59- 99.59	83.22
3.330	3.329	0.001	1329972	659.260	23.3	25.93- 65.93	47.34
3.358	3.357	0.001	1341249	637.001	22.5	27.78- 67.78	47.74
3.516	3.516	0.000	1925404	689.006	24.4	45.06- 85.06	68.53
Average of Peak Concentrations =					23.3		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.411	4.411	0.000	4342275	750.583	26.5	80.00- 120.00	100.00
4.563	4.564	-0.001	5137682	707.364	25.0	108.00- 148.00	118.32
4.675	4.674	0.001	3826884	764.740	27.0	67.45- 107.45	88.13
4.872	4.872	0.000	4360257	752.393	26.6	79.37- 119.37	100.41
5.498	5.498	0.000	7391456	786.790	27.8	145.12- 185.12	170.22
		Average of Peak Concentrations =			26.6		

Data File: /chem/ecd2a.i/012010.b/032b3201.d
Date : 20-JAN-2010 14:02
Client ID: RE12-10-8096MS
Sample Info: {120201950011}
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd2a.i

Operator: JAOC
Column diameter: 0.25



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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/032f3201.d
Lab Smp Id: 1202019500 Client Smp ID: RE12-10-8096MS
Inj Date : 20-JAN-2010 14:02
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |1202019500|1|
Misc Info : |ECD82P_1S|943205|SVA|QC A|SOIL|MS|||
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Meth Date : 21-Jan-2010 07:18 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012f1201.d
Als bottle: 32 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1264-1.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.12000	Weight of sample extracted (g)
M	6.13020	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.774	1.772	0.002	7575084	113.006	4.0	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.606	5.607	-0.001	8269512	130.435	4.6	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.274	2.273	0.001	1412065	625.394	22.1	80.00- 120.00	100.00(M)
2.597	2.597	0.000	2996929	647.437	22.9	195.96- 235.96	212.24
2.688	2.687	0.001	1193463	628.038	22.2	66.90- 106.90	84.52
2.823	2.822	0.001	651891	662.830	23.4	24.29- 64.29	46.17
2.974	2.974	0.000	1009395	695.988	24.6	46.26- 86.26	88.06
			Average of Peak Concentrations =		23.0		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.013	4.013	0.000	3082489	716.414	25.3	80.00- 120.00	100.00(M)
4.284	4.285	-0.001	2093906	750.227	26.5	42.54- 82.54	67.93
4.450	4.451	-0.001	2169201	756.655	26.8	44.25- 84.25	70.37
4.663	4.662	0.001	4797545	729.200	25.8	135.08- 175.08	155.64
4.852	4.852	0.000	2561759	802.225	28.4	54.83- 94.83	83.11
			Average of Peak Concentrations =		26.6		

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/ecd2a.i/012010.b/032f3201.d

Date : 20-JAN-2010 14:02

Client ID: RE12-10-8096MS

Sample Info: |1202019500|1|

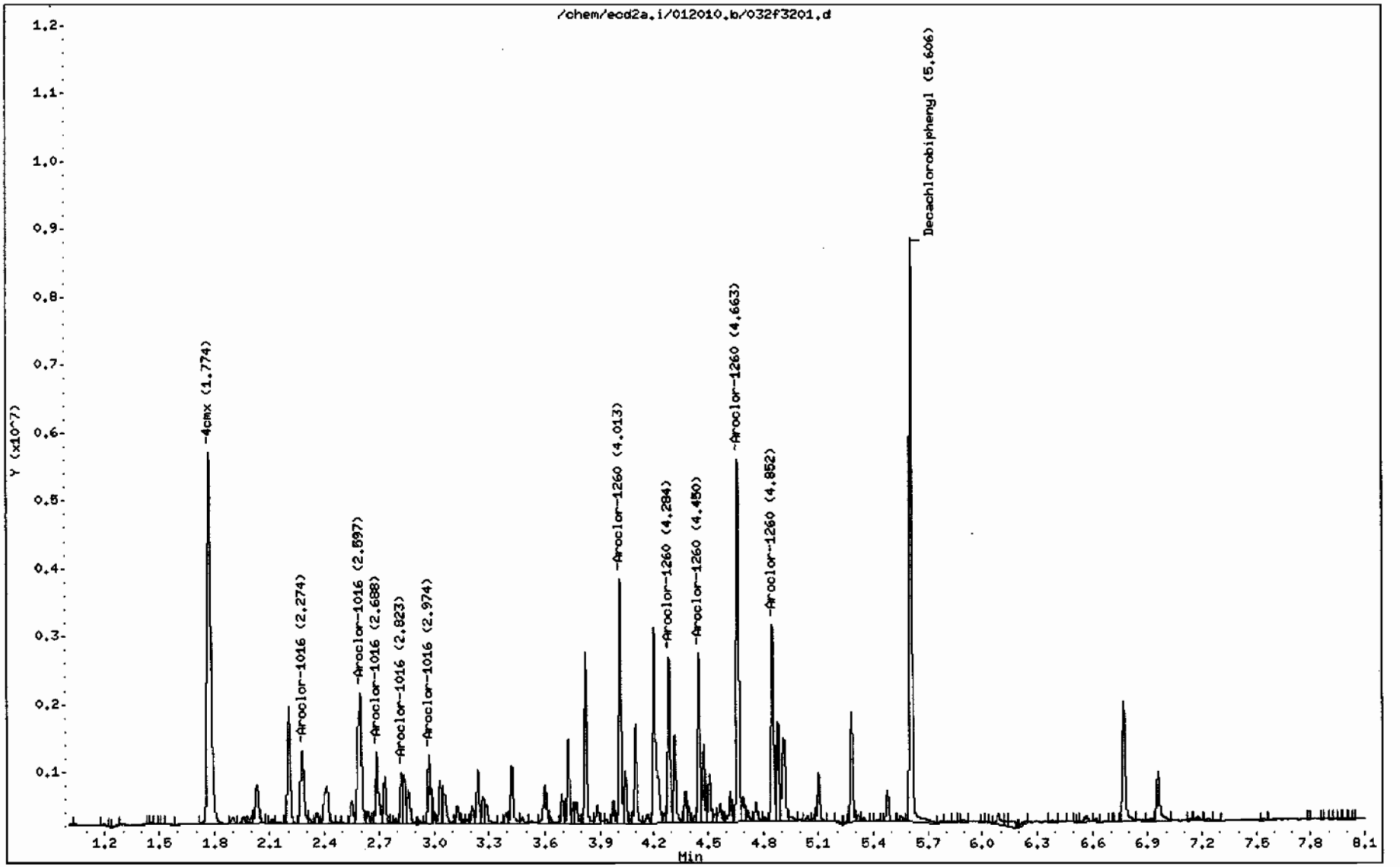
Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd2a.i

Operator: JAOC

Column diameter: 0.25



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RTX-CLPEST2 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/033b3301.d
Lab Smp Id: 1202019501 Client Smp ID: RE12-10-8096MSD
Inj Date : 20-JAN-2010 14:13
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |1202019501|1|
Misc Info : |ECD82P_1S|943205|SVA|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-B-8082-111209A.m
Meth Date : 21-Jan-2010 07:43 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012b1201.d
Als bottle: 33 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1264-1.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.13000	Weight of sample extracted (g)
M	6.13020	% Moisture

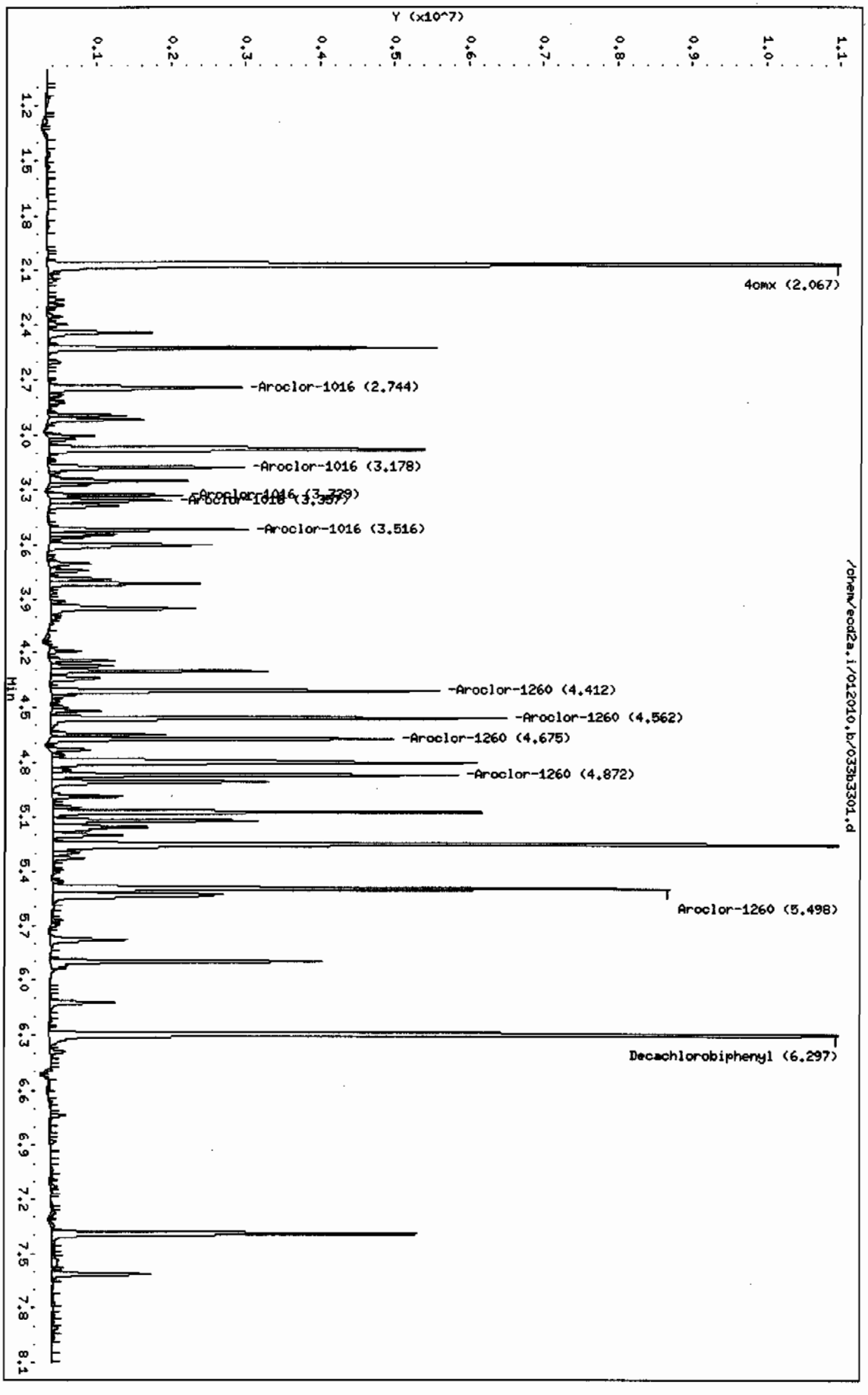
Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
2.067	2.068	-0.001	18861357	135.152	4.8	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
6.297	6.298	-0.001	18483051	148.396	5.2	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.744	2.744	0.000	3109352	692.616	24.5	80.00- 120.00	100.00
3.178	3.178	0.000	2440738	710.729	25.1	59.59- 99.59	78.50
3.329	3.329	0.000	1467291	727.328	25.7	25.93- 65.93	47.19
3.357	3.357	0.000	1423045	675.848	23.9	27.78- 67.78	45.77
3.516	3.516	0.000	2122858	759.665	26.8	45.06- 85.06	68.27
Average of Peak Concentrations =					25.2		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.412	4.411	0.001	4546420	785.871	27.8	80.00- 120.00	100.00
4.562	4.564	-0.002	5382617	741.087	26.2	108.00- 148.00	118.39
4.675	4.674	0.001	4201288	839.558	29.7	67.45- 107.45	92.41
4.872	4.872	0.000	4655702	803.374	28.4	79.37- 119.37	102.40
5.498	5.498	0.000	8226860	875.715	31.0	145.12- 185.12	180.95
			Average of Peak Concentrations =		28.6		

Data File: /chem/ecd2a.i/012010.b/033b3301.d
Date : 20-JAN-2010 14:13
Client ID: RE12-10-8096HSD
Sample Info: 1120201950111
Volume Injected (uL): 1.0
Column phase: CLP2

Instrument: ecd2a.i
Operator: JAOC
Column diameter: 0.25



Page 1

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RTX-CLPEST1 30m/0.25 mm 1.0 INJ VOL

Data file : /chem/ecd2a.i/012010.b/033f3301.d
Lab Smp Id: 1202019501 Client Smp ID: RE12-10-8096MSD
Inj Date : 20-JAN-2010 14:13
Operator : JAOC Inst ID: ecd2a.i
Smp Info : |1202019501|1|
Misc Info : |ECD82P_1S|943205|SVA|QC A|SOIL|MSD|||
Comment :
Method : /chem/ecd2a.i/012010.b/ECD2-F-8082-111209A.m
Meth Date : 21-Jan-2010 07:18 jen01212 Quant Type: ESTD
Cal Date : 02-DEC-2009 07:50 Cal File: 012f1201.d
Als bottle: 33 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10-1264-1.sub
Target Version: 3.50 Sample Matrix: Soil

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Correction factor
Vt	1.00000	Volume of final extract (mL)
Vi	1.00000	Volume injected (uL)
Ws	30.13000	Weight of sample extracted (g)
M	6.13020	% Moisture

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
$ 11 4cmx					CAS #: 877-09-8		
1.771	1.772	-0.001	8482573	126.544	4.5	80.00- 120.00	100.00
$ 12 Decachlorobiphenyl					CAS #: 2051-24-3		
5.606	5.607	-0.001	9045758	142.679	5.0	80.00- 120.00	100.00
1 Aroclor-1016					CAS #: 12674-11-2		
2.273	2.273	0.000	1556273	689.262	24.4	80.00- 120.00	100.00
2.596	2.597	-0.001	3275969	707.719	25.0	195.96- 235.96	210.50
2.687	2.687	0.000	1279738	673.439	23.8	66.90- 106.90	82.23
2.822	2.822	0.000	679604	691.008	24.4	24.29- 64.29	43.67
2.973	2.974	-0.001	1047333	722.147	25.5	46.26- 86.26	67.30
Average of Peak Concentrations =					24.6		

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/Kg)	TARGET RANGE	RATIO
7 Aroclor-1260					CAS #: 11096-82-5		
4.011	4.013	-0.002	3205725	745.056	26.3	80.00- 120.00	100.00
4.284	4.285	-0.001	2222689	796.369	28.2	42.54- 82.54	69.34
4.450	4.451	-0.001	2320016	809.262	28.6	44.25- 84.25	72.37
4.663	4.662	0.001	5142132	781.575	27.6	135.08- 175.08	160.40
4.852	4.852	0.000	2829123	885.952	31.3	54.83- 94.83	88.25
			Average of Peak Concentrations =		28.4		

Data File: /chem/ecd2a.i/012010.b/033f3301.d

Date : 20-JAN-2010 14:13

Client ID: RE12-10-8096MSD

Sample Info: |120201950111|

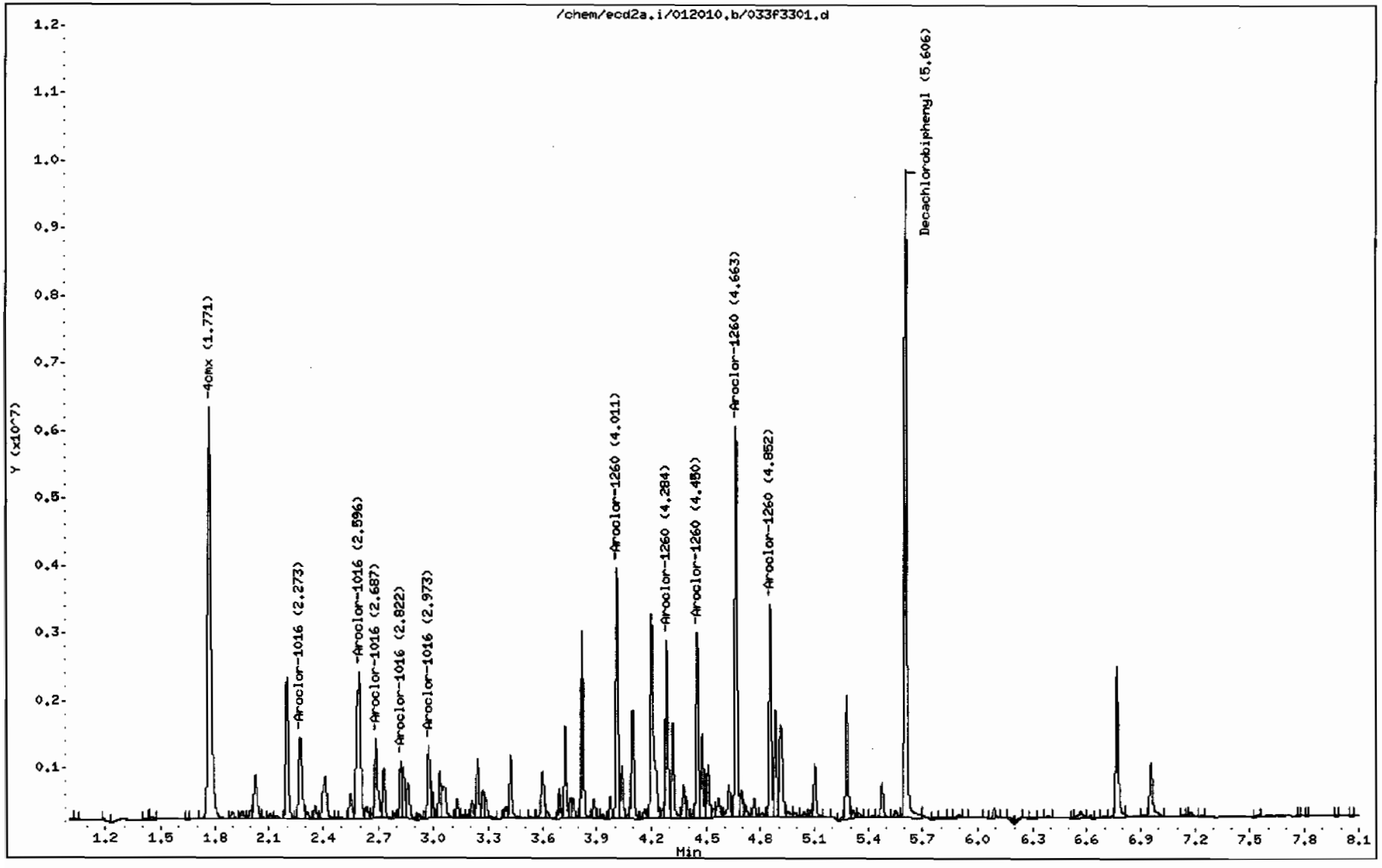
Volume Injected (uL): 1.0

Column phase: CLP1

Instrument: ecd2a.i

Operator: JAOC

Column diameter: 0.25



Prep Logbook

Extraction of Semivolatile and Nonvolatile Organic Compounds from Soil, Sludge, and Other Miscellaneous Solid Samples

Batch ID: 943204 **Verified by:** _____

Analyst: Andrew Schwemin

Method: SW846 3550B

Lab SOP: GL-OA-E-010 REV# 18

Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Clean Up	Prior to Clean up (mL)	Amount Cleaned (mL)	After Clean up (mL)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202019498 MB	19-JAN-2010 20:46:16	30	H2SO4/KMn2		2	9	1	0.03333
1202019499 LCS	19-JAN-2010 20:46:16	30	H2SO4/KMn2		2	9	1	0.03333
244837001	19-JAN-2010 20:46:16	30.07	H2SO4/KMn2		2	9	1	0.03326
244837002	19-JAN-2010 20:46:16	30.03	H2SO4/KMn2		2	9	1	0.0333
244837003	19-JAN-2010 20:46:16	30.19	H2SO4/KMn2		2	9	1	0.03312
244837004	19-JAN-2010 20:46:16	30.02	H2SO4/KMn2		2	9	1	0.03331
244837005	19-JAN-2010 20:46:16	30.08	H2SO4/KMn2		2	9	1	0.03324
244837006	19-JAN-2010 20:46:16	30.02	H2SO4/KMn2		2	9	1	0.03331
244847004	19-JAN-2010 20:46:16	30.02	H2SO4/KMn2		2	9	1	0.03331
244852001	19-JAN-2010 20:46:16	30.09	H2SO4/KMn2		2	9	1	0.03323
244852002	19-JAN-2010 20:46:16	30.09	H2SO4/KMn2		2	9	1	0.03323
244881001	19-JAN-2010 20:46:16	30.03	H2SO4/KMn2		2	9	1	0.0333
1202019500 MS (244881001)	19-JAN-2010 20:46:16	30.12	H2SO4/KMn2		2	9	1	0.0332
1202019501 MSD (244881001)	19-JAN-2010 20:46:16	30.13	H2SO4/KMn2		2	9	1	0.03319
244881002	19-JAN-2010 20:46:16	30.02	H2SO4/KMn2		2	9	1	0.03331
244881003	19-JAN-2010 20:46:16	30.03	H2SO4/KMn2		2	9	1	0.0333
244881004	19-JAN-2010 20:46:16	30.08	H2SO4/KMn2		2	9	1	0.03324

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1202019499	PCB Laboratory Control	WE100105-07	1	mL
MS	1202019500	PCB Laboratory Control	WE100105-07	1	mL
MSD	1202019501	PCB Laboratory Control	WE100105-07	1	mL
SURR	All	PEST LOW LEVEL SURROGATE 200 UG/L	UE091229-15	1	mL
REGNT	All	1:1 sulfuric acid	1133264a	5	mL
REGNT	All	Hexane	1256896-B2	150	mL
REGNT	All	Acetone	1256900	150	mL
REGNT	All	5% Potassium Permanganate	B1202457-F	5	mL
SOURC	All	SODIUM SULFATE	1256907	30	g

Comments:

Clean up Date: 01/19/10

Clean up Initials: AJS

Verified By: AV

Final Solvent: Hexane

Clean Up SOP: GL-OA-E-037

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1263

Sample Analysis

Sample ID	Client ID
244852001	RE12-10-7856
244852002	RE12-10-7857
244852003	RE12-10-7855
244852004	RE12-10-7854
1202018099	Method Blank (MB) **ICP**
1202018100	Laboratory Control Sample (LCS)
1202018103	244881001(RE12-10-8096L) Serial Dilution (SD)
1202018101	244881001(RE12-10-8096D) Sample Duplicate (DUP)
1202018102	244881001(RE12-10-8096S) Matrix Spike (MS)
1202018104	244881001(RE12-10-8096SD) Matrix Spike Duplicate (MSD)
1202018068	Method Blank (MB) **ICP-MS**
1202037284	Method Blank (MB) **ICP-MS**
1202018069	Laboratory Control Sample (LCS)
1202037289	Laboratory Control Sample (LCS)
1202037286	244847001(RE12-10-7272L) Serial Dilution (SD)
1202018072	244881001(RE12-10-8096L) Serial Dilution (SD)
1202037285	244847001(RE12-10-7272D) Sample Duplicate (DUP)
1202018070	244881001(RE12-10-8096D) Sample Duplicate (DUP)
1202037287	244847001(RE12-10-7272S) Matrix Spike (MS)
1202018071	244881001(RE12-10-8096S) Matrix Spike (MS)

1202037288	244847001(RE12-10-7272SD) Matrix Spike Duplicate (MSD)
1202018073	244881001(RE12-10-8096SD) 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

Analytical Batch:	942648, 942638, 950661 and 943320
Prep Batch :	942644, 942632, 950660 and 943319
Standard Operating Procedures:	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
Analytical Method:	SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A
Prep Method :	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 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 exception of antimony, 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 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 method blank analyzed with this SDG did not contain analytes of interest above the CRDL, with the exception of iron. The samples in this SDG contained iron at concentrations more than ten times the amount present in the method blank (MB), therefore the data was not adversely affected.

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: 244881001, 244847001 and 244921001.

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 exception of magnesium, manganese and potassium, 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 met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exception of magnesium, manganese 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%.

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.

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.

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: 787486. 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: Kristen Parson **Date:** 2/11/10

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1263 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 244852001 **BASIS:** Dry Weight **DATE COLLECTED** 11-JAN-10

CLIENT ID: RE12-10-7856 **LEVEL:** Low **DATE RECEIVED** 15-JAN-10

MATRIX: SOIL **%SOLIDS:** 90.6

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2820000	ug/Kg		7350	21600	21600	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-36-0	Antimony	1080	ug/Kg	U	357	1080	1080	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-38-2	Arsenic	1.14	mg/kg		0.22	1.1	1.1	2	MS	BAJ	02/08/10 04:11	100207-3	942638
7440-39-3	Barium	40500	ug/Kg		108	540	540	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-41-7	Beryllium	0.447	mg/kg		0.022	0.11	0.11	2	MS	BAJ	02/08/10 07:48	100207-4	942638
7440-43-9	Cadmium	540	ug/Kg	U	108	540	540	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-70-2	Calcium	991000	ug/Kg		8640	27000	27000	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-47-3	Chromium	4630	ug/Kg		162	540	540	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-48-4	Cobalt	1820	ug/Kg		162	540	540	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-50-8	Copper	3250	ug/Kg		324	1080	1080	1	P	HSC	02/02/10 01:56	020110-1	942648
7439-89-6	Iron	8330000	ug/Kg		8640	27000	27000	1	P	HSC	02/02/10 01:56	020110-1	942648
7439-92-1	Lead	6430	ug/Kg		270	1080	1080	1	P	HSC	02/02/10 01:56	020110-1	942648
7439-95-4	Magnesium	662000	ug/Kg		9180	32400	32400	1	P	HSC	02/02/10 01:56	020110-1	942648
7439-96-5	Manganese	238000	ug/Kg		216	1080	1080	1	P	HSC	02/02/10 01:56	020110-1	942648
7439-97-6	Mercury	5.84	ug/kg	J	4.49	13.2	13.2	1	AV	JXL1	01/28/10 09:51	012810S1-6	943320
7440-02-0	Nickel	2.63	mg/kg		0.11	0.44	0.44	2	MS	BAJ	02/08/10 04:11	100207-3	942638
7440-09-7	Potassium	515000	ug/Kg		6910	27000	27000	1	P	HSC	02/02/10 01:56	020110-1	942648
7782-49-2	Selenium	1.1	mg/kg	U	0.55	1.1	1.1	2	MS	BAJ	02/08/10 04:11	100207-3	942638
7440-22-4	Silver	540	ug/Kg	U	108	540	540	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-23-5	Sodium	60500	ug/Kg		7560	27000	27000	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-28-0	Thallium	0.220	mg/kg	U	0.066	0.22	0.22	2	MS	BAJ	02/08/10 04:11	100207-3	942638
7440-61-1	Uranium	1.25	mg/kg		0.0145	0.0438	0.0438	2	MS	SKJ	02/09/10 21:41	100209-2	950661
7440-62-2	Vanadium	9360	ug/Kg		108	540	540	1	P	HSC	02/02/10 01:56	020110-1	942648
7440-66-6	Zinc	34000	ug/Kg		357	1080	1080	1	P	HSC	02/02/10 01:56	020110-1	942648

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942638	942632	SW846 3050B	0.502	g	50	mL	01/21/10	AXG2
942648	942644	SW846 3050B	0.511	g	50	mL	01/21/10	AXG2
943320	943319	SW846 7471A Prep	0.502	g	30	mL	01/27/10	TXB3
950661	950660	SW846 3050B	0.504	g	50	mL	02/09/10	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1263 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 244852002 **BASIS:** Dry Weight **DATE COLLECTED** 11-JAN-10

CLIENT ID: RE12-10-7857 **LEVEL:** Low **DATE RECEIVED** 15-JAN-10

MATRIX: SOIL **%SOLIDS:** 93.7

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	3100000	ug/Kg		6990	20600	20600	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-36-0	Antimony	1030	ug/Kg	U	339	1030	1030	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-38-2	Arsenic	1.17	mg/kg		0.21	1.05	1.05	2	MS	BAJ	02/08/10 04:17	100207-3	942638
7440-39-3	Barium	37600	ug/Kg		103	514	514	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-41-7	Beryllium	0.484	mg/kg		0.021	0.105	0.105	2	MS	BAJ	02/08/10 07:52	100207-4	942638
7440-43-9	Cadmium	514	ug/Kg	U	103	514	514	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-70-2	Calcium	968000	ug/Kg		8220	25700	25700	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-47-3	Chromium	5050	ug/Kg		154	514	514	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-48-4	Cobalt	1430	ug/Kg		154	514	514	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-50-8	Copper	2980	ug/Kg		308	1030	1030	1	P	HSC	02/02/10 02:03	020110-1	942648
7439-89-6	Iron	9960000	ug/Kg		8220	25700	25700	1	P	HSC	02/02/10 02:03	020110-1	942648
7439-92-1	Lead	5280	ug/Kg		257	1030	1030	1	P	HSC	02/02/10 02:03	020110-1	942648
7439-95-4	Magnesium	692000	ug/Kg		8740	30800	30800	1	P	HSC	02/02/10 02:03	020110-1	942648
7439-96-5	Manganese	215000	ug/Kg		206	1030	1030	1	P	HSC	02/02/10 02:03	020110-1	942648
7439-97-6	Mercury	12.4	ug/kg	U	4.22	12.4	12.4	1	AV	JXL1	01/28/10 09:53	012810S1-6	943320
7440-02-0	Nickel	2.57	mg/kg		0.105	0.42	0.42	2	MS	BAJ	02/08/10 04:17	100207-3	942638
7440-09-7	Potassium	561000	ug/Kg		6580	25700	25700	1	P	HSC	02/02/10 02:03	020110-1	942648
7782-49-2	Selenium	1.05	mg/kg	U	0.525	1.05	1.05	2	MS	BAJ	02/08/10 04:17	100207-3	942638
7440-22-4	Silver	255	ug/Kg	J	103	514	514	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-23-5	Sodium	75700	ug/Kg		7200	25700	25700	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-28-0	Thallium	0.210	mg/kg	U	0.063	0.21	0.21	2	MS	BAJ	02/08/10 04:17	100207-3	942638
7440-61-1	Uranium	0.857	mg/kg		0.014	0.0423	0.0423	2	MS	SKJ	02/09/10 21:43	100209-2	950661
7440-62-2	Vanadium	9300	ug/Kg		103	514	514	1	P	HSC	02/02/10 02:03	020110-1	942648
7440-66-6	Zinc	37800	ug/Kg		339	1030	1030	1	P	HSC	02/02/10 02:03	020110-1	942648

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942638	942632	SW846 3050B	0.508	g	50	mL	01/21/10	AXG2
942648	942644	SW846 3050B	0.519	g	50	mL	01/21/10	AXG2
943320	943319	SW846 7471A Prep	0.516	g	30	mL	01/27/10	TXB3
950661	950660	SW846 3050B	0.504	g	50	mL	02/09/10	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1263 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 244852003 **BASIS:** Dry Weight **DATE COLLECTED** 11-JAN-10

CLIENT ID: RE12-10-7855 **LEVEL:** Low **DATE RECEIVED** 15-JAN-10

MATRIX: SOIL **%SOLIDS:** 92.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	11400000	ug/Kg		7110	20900	20900	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-36-0	Antimony	1050	ug/Kg	U	345	1050	1050	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-38-2	Arsenic	1.87	mg/kg		0.209	1.04	1.04	2	MS	BAJ	02/08/10 04:36	100207-3	942638
7440-39-3	Barium	243000	ug/Kg		105	523	523	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-41-7	Beryllium	1.05	mg/kg		0.0209	0.104	0.104	2	MS	BAJ	02/08/10 08:03	100207-4	942638
7440-43-9	Cadmium	523	ug/Kg	U	105	523	523	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-70-2	Calcium	2400000	ug/Kg		8360	26100	26100	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-47-3	Chromium	11500	ug/Kg		157	523	523	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-48-4	Cobalt	7080	ug/Kg		157	523	523	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-50-8	Copper	7070	ug/Kg		314	1050	1050	1	P	HSC	02/02/10 02:11	020110-1	942648
7439-89-6	Iron	13600000	ug/Kg		8360	26100	26100	1	P	HSC	02/02/10 02:11	020110-1	942648
7439-92-1	Lead	14700	ug/Kg		261	1050	1050	1	P	HSC	02/02/10 02:11	020110-1	942648
7439-95-4	Magnesium	2040000	ug/Kg		8880	31400	31400	1	P	HSC	02/02/10 02:11	020110-1	942648
7439-96-5	Manganese	474000	ug/Kg		209	1050	1050	1	P	HSC	02/02/10 02:11	020110-1	942648
7439-97-6	Mercury	9	ug/kg	J	4.27	12.6	12.6	1	AV	JXL1	01/28/10 09:55	012810S1-6	943320
7440-02-0	Nickel	8.43	mg/kg		0.104	0.417	0.417	2	MS	BAJ	02/08/10 04:36	100207-3	942638
7440-09-7	Potassium	1850000	ug/Kg		6690	26100	26100	1	P	HSC	02/02/10 02:11	020110-1	942648
7782-49-2	Selenium	1.04	mg/kg	U	0.522	1.04	1.04	2	MS	BAJ	02/08/10 04:36	100207-3	942638
7440-22-4	Silver	138	ug/Kg	J	105	523	523	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-23-5	Sodium	89200	ug/Kg		7320	26100	26100	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-28-0	Thallium	0.257	mg/kg		0.0626	0.209	0.209	2	MS	BAJ	02/08/10 04:36	100207-3	942638
7440-61-1	Uranium	1.11	mg/kg		0.0137	0.0414	0.0414	2	MS	SKJ	02/09/10 21:46	100209-2	950661
7440-62-2	Vanadium	28800	ug/Kg		105	523	523	1	P	HSC	02/02/10 02:11	020110-1	942648
7440-66-6	Zinc	25800	ug/Kg		345	1050	1050	1	P	HSC	02/02/10 02:11	020110-1	942648

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942638	942632	SW846 3050B	0.518	g	50	mL	01/21/10	AXG2
942648	942644	SW846 3050B	0.517	g	50	mL	01/21/10	AXG2
943320	943319	SW846 7471A Prep	0.516	g	30	mL	01/27/10	TXB3
950661	950660	SW846 3050B	0.522	g	50	mL	02/09/10	AXG2

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1263 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 244852004 **BASIS:** Dry Weight **DATE COLLECTED** 11-JAN-10

CLIENT ID: RE12-10-7854 **LEVEL:** Low **DATE RECEIVED** 15-JAN-10

MATRIX: SOIL **%SOLIDS:** 86

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9660000	ug/Kg		7810	23000	23000	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-36-0	Antimony	1150	ug/Kg	U	379	1150	1150	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-38-2	Arsenic	2.03	mg/kg		0.222	1.11	1.11	2	MS	BAJ	02/08/10 04:42	100207-3	942638
7440-39-3	Barium	209000	ug/Kg		115	574	574	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-41-7	Beryllium	1.02	mg/kg		0.0222	0.111	0.111	2	MS	BAJ	02/08/10 08:07	100207-4	942638
7440-43-9	Cadmium	574	ug/Kg	U	115	574	574	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-70-2	Calcium	2280000	ug/Kg		9190	28700	28700	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-47-3	Chromium	13300	ug/Kg		172	574	574	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-48-4	Cobalt	6560	ug/Kg		172	574	574	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-50-8	Copper	10400	ug/Kg		345	1150	1150	1	P	HSC	02/02/10 02:18	020110-1	942648
7439-89-6	Iron	13900000	ug/Kg		9190	28700	28700	1	P	HSC	02/02/10 02:18	020110-1	942648
7439-92-1	Lead	15200	ug/Kg		287	1150	1150	1	P	HSC	02/02/10 02:18	020110-1	942648
7439-95-4	Magnesium	1980000	ug/Kg		9770	34500	34500	1	P	HSC	02/02/10 02:18	020110-1	942648
7439-96-5	Manganese	468000	ug/Kg		230	1150	1150	1	P	HSC	02/02/10 02:18	020110-1	942648
7439-97-6	Mercury	11.3	ug/kg	J	4.38	12.9	12.9	1	AV	JXL1	01/28/10 09:57	012810S1-6	943320
7440-02-0	Nickel	8.54	mg/kg		0.111	0.444	0.444	2	MS	BAJ	02/08/10 04:42	100207-3	942638
7440-09-7	Potassium	2110000	ug/Kg		7350	28700	28700	1	P	HSC	02/02/10 02:18	020110-1	942648
7782-49-2	Selenium	1.11	mg/kg	U	0.555	1.11	1.11	2	MS	BAJ	02/08/10 04:42	100207-3	942638
7440-22-4	Silver	193	ug/Kg	J	115	574	574	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-23-5	Sodium	137000	ug/Kg		8040	28700	28700	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-28-0	Thallium	0.253	mg/kg		0.0666	0.222	0.222	2	MS	BAJ	02/08/10 04:42	100207-3	942638
7440-61-1	Uranium	3.2	mg/kg		0.0151	0.0459	0.0459	2	MS	SKJ	02/09/10 21:52	100209-2	950661
7440-62-2	Vanadium	30700	ug/Kg		115	574	574	1	P	HSC	02/02/10 02:18	020110-1	942648
7440-66-6	Zinc	31000	ug/Kg		379	1150	1150	1	P	HSC	02/02/10 02:18	020110-1	942648

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
942638	942632	SW846 3050B	0.523	g	50	mL	01/21/10	AXG2
942648	942644	SW846 3050B	0.505	g	50	mL	01/21/10	AXG2
943320	943319	SW846 7471A Prep	0.541	g	30	mL	01/27/10	TXB3
950661	950660	SW846 3050B	0.506	g	50	mL	02/09/10	AXG2

Quality Control Summary

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1263

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
ICV01										
	Mercury	5.08	ug/L	5	ug/L	101.7	90.0 – 110.0	AV	28–JAN–10 09:37	012810S1–6
	Aluminum	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Antimony	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Barium	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Cadmium	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Calcium	4980	ug/L	5000	ug/L	99.5	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Chromium	481	ug/L	500	ug/L	96.3	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Cobalt	495	ug/L	500	ug/L	98.9	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Copper	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Iron	4980	ug/L	5000	ug/L	99.5	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Lead	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Magnesium	5360	ug/L	5000	ug/L	107.2	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Manganese	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Potassium	2450	ug/L	2500	ug/L	98.1	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Silver	256	ug/L	250	ug/L	102.6	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Sodium	2350	ug/L	2500	ug/L	93.9	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Vanadium	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Zinc	500	ug/L	500	ug/L	100	90.0 – 110.0	P	01–FEB–10 07:22	020110–1
	Arsenic	48.5	ug/L	50	ug/L	97	90.0 – 110.0	MS	08–FEB–10 01:44	100207–3
	Nickel	51.8	ug/L	50	ug/L	103.7	90.0 – 110.0	MS	08–FEB–10 01:44	100207–3
	Selenium	49.3	ug/L	50	ug/L	98.7	90.0 – 110.0	MS	08–FEB–10 01:44	100207–3
	Thallium	53.2	ug/L	50	ug/L	106.3	90.0 – 110.0	MS	08–FEB–10 01:44	100207–3
	Beryllium	51.7	ug/L	50	ug/L	103.4	90.0 – 110.0	MS	08–FEB–10 06:19	100207–4
	Uranium	49.9	ug/L	50	ug/L	99.7	90.0 – 110.0	MS	09–FEB–10 20:58	100209–2
CCV01										
	Mercury	5.09	ug/L	5	ug/L	101.8	80.0 – 120.0	AV	28–JAN–10 09:43	012810S1–6
	Aluminum	4890	ug/L	5000	ug/L	97.8	90.0 – 110.0	P	01–FEB–10 08:25	020110–1
	Antimony	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	01–FEB–10 08:25	020110–1
	Barium	484	ug/L	500	ug/L	96.8	90.0 – 110.0	P	01–FEB–10 08:25	020110–1
	Cadmium	485	ug/L	500	ug/L	97.1	90.0 – 110.0	P	01–FEB–10 08:25	020110–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1263

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
	Calcium	5020	ug/L	5000	ug/L	100.4	90.0 – 110.0	P	01–FEB–10 08:25	020110–1
	Chromium	484	ug/L	500	ug/L	96.9	90.0 – 110.0	P	01–FEB–10 08:25	020110–1
	Cobalt	483	ug/L	500	ug/L	96.7	90.0 – 110.0	P	01–FEB–10 08:25	020110–1
	Copper	474	ug/L	500	ug/L	94.7	90.0 – 110.0	P	01–FEB–10 08:25	020110–1
	Iron	5130	ug/L	5000	ug/L	102.5	90.0 – 110.0	P	01–FEB–10 08:25	020110–1
	Lead	485	ug/L	500	ug/L	97	90.0 – 110.0	P	01–FEB–10 08:25	020110–1
	Magnesium	5210	ug/L	5000	ug/L	104.3	90.0 – 110.0	P	01–FEB–10 08:25	020110–1
	Manganese	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	01–FEB–10 08:25	020110–1
	Potassium	4880	ug/L	5000	ug/L	97.6	90.0 – 110.0	P	01–FEB–10 08:25	020110–1
	Silver	481	ug/L	500	ug/L	96.2	90.0 – 110.0	P	01–FEB–10 08:25	020110–1
	Sodium	9950	ug/L	10000	ug/L	99.5	90.0 – 110.0	P	01–FEB–10 08:25	020110–1
	Vanadium	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	01–FEB–10 08:25	020110–1
	Zinc	477	ug/L	500	ug/L	95.5	90.0 – 110.0	P	01–FEB–10 08:25	020110–1
	Arsenic	46.6	ug/L	50	ug/L	93.2	90.0 – 110.0	MS	08–FEB–10 02:14	100207–3
	Nickel	49.4	ug/L	50	ug/L	98.7	90.0 – 110.0	MS	08–FEB–10 02:14	100207–3
	Selenium	47.8	ug/L	50	ug/L	95.5	90.0 – 110.0	MS	08–FEB–10 02:14	100207–3
	Thallium	51.5	ug/L	50	ug/L	103.1	90.0 – 110.0	MS	08–FEB–10 02:14	100207–3
	Beryllium	48.9	ug/L	50	ug/L	97.8	90.0 – 110.0	MS	08–FEB–10 06:37	100207–4
	Uranium	54.3	ug/L	50	ug/L	108.5	90.0 – 110.0	MS	09–FEB–10 21:09	100209–2
CCV02										
	Mercury	5.19	ug/L	5	ug/L	103.7	80.0 – 120.0	AV	28–JAN–10 10:07	012810S1–6
	Aluminum	4970	ug/L	5000	ug/L	99.4	90.0 – 110.0	P	01–FEB–10 08:53	020110–1
	Antimony	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	01–FEB–10 08:53	020110–1
	Barium	484	ug/L	500	ug/L	96.7	90.0 – 110.0	P	01–FEB–10 08:53	020110–1
	Cadmium	483	ug/L	500	ug/L	96.6	90.0 – 110.0	P	01–FEB–10 08:53	020110–1
	Calcium	4990	ug/L	5000	ug/L	99.8	90.0 – 110.0	P	01–FEB–10 08:53	020110–1
	Chromium	482	ug/L	500	ug/L	96.5	90.0 – 110.0	P	01–FEB–10 08:53	020110–1
	Cobalt	481	ug/L	500	ug/L	96.3	90.0 – 110.0	P	01–FEB–10 08:53	020110–1
	Copper	475	ug/L	500	ug/L	95	90.0 – 110.0	P	01–FEB–10 08:53	020110–1
	Iron	4950	ug/L	5000	ug/L	99	90.0 – 110.0	P	01–FEB–10 08:53	020110–1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1263

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
	Lead	482	ug/L	500	ug/L	96.4	90.0 - 110.0	P	01-FEB-10 08:53	020110-1
	Magnesium	5120	ug/L	5000	ug/L	102.3	90.0 - 110.0	P	01-FEB-10 08:53	020110-1
	Manganese	485	ug/L	500	ug/L	96.9	90.0 - 110.0	P	01-FEB-10 08:53	020110-1
	Potassium	4870	ug/L	5000	ug/L	97.4	90.0 - 110.0	P	01-FEB-10 08:53	020110-1
	Silver	481	ug/L	500	ug/L	96.2	90.0 - 110.0	P	01-FEB-10 08:53	020110-1
	Sodium	9510	ug/L	10000	ug/L	95.1	90.0 - 110.0	P	01-FEB-10 08:53	020110-1
	Vanadium	488	ug/L	500	ug/L	97.6	90.0 - 110.0	P	01-FEB-10 08:53	020110-1
	Zinc	477	ug/L	500	ug/L	95.4	90.0 - 110.0	P	01-FEB-10 08:53	020110-1
	Arsenic	48.3	ug/L	50	ug/L	96.7	90.0 - 110.0	MS	08-FEB-10 02:33	100207-3
	Nickel	51.3	ug/L	50	ug/L	102.6	90.0 - 110.0	MS	08-FEB-10 02:33	100207-3
	Selenium	49.8	ug/L	50	ug/L	99.6	90.0 - 110.0	MS	08-FEB-10 02:33	100207-3
	Thallium	53.7	ug/L	50	ug/L	107.3	90.0 - 110.0	MS	08-FEB-10 02:33	100207-3
	Beryllium	50.7	ug/L	50	ug/L	101.3	90.0 - 110.0	MS	08-FEB-10 06:48	100207-4
	Uranium	49.3	ug/L	50	ug/L	98.5	90.0 - 110.0	MS	09-FEB-10 21:30	100209-2
CCV03										
	Mercury	5.29	ug/L	5	ug/L	105.9	80.0 - 120.0	AV	28-JAN-10 10:31	012810S1-6
	Aluminum	5220	ug/L	5000	ug/L	104.3	90.0 - 110.0	P	01-FEB-10 10:18	020110-1
	Antimony	494	ug/L	500	ug/L	98.7	90.0 - 110.0	P	01-FEB-10 10:18	020110-1
	Barium	487	ug/L	500	ug/L	97.5	90.0 - 110.0	P	01-FEB-10 10:18	020110-1
	Cadmium	486	ug/L	500	ug/L	97.3	90.0 - 110.0	P	01-FEB-10 10:18	020110-1
	Calcium	5190	ug/L	5000	ug/L	103.8	90.0 - 110.0	P	01-FEB-10 10:18	020110-1
	Chromium	487	ug/L	500	ug/L	97.3	90.0 - 110.0	P	01-FEB-10 10:18	020110-1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	01-FEB-10 10:18	020110-1
	Copper	480	ug/L	500	ug/L	96.1	90.0 - 110.0	P	01-FEB-10 10:18	020110-1
	Iron	5080	ug/L	5000	ug/L	101.6	90.0 - 110.0	P	01-FEB-10 10:18	020110-1
	Lead	483	ug/L	500	ug/L	96.6	90.0 - 110.0	P	01-FEB-10 10:18	020110-1
	Magnesium	5240	ug/L	5000	ug/L	104.8	90.0 - 110.0	P	01-FEB-10 10:18	020110-1
	Manganese	485	ug/L	500	ug/L	97	90.0 - 110.0	P	01-FEB-10 10:18	020110-1
	Potassium	5110	ug/L	5000	ug/L	102.3	90.0 - 110.0	P	01-FEB-10 10:18	020110-1
	Silver	486	ug/L	500	ug/L	97.2	90.0 - 110.0	P	01-FEB-10 10:18	020110-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1263

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
	Sodium	9810	ug/L	10000	ug/L	98.1	90.0 – 110.0	P	01-FEB-10 10:18	020110-1
	Vanadium	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	01-FEB-10 10:18	020110-1
	Zinc	480	ug/L	500	ug/L	96	90.0 – 110.0	P	01-FEB-10 10:18	020110-1
	Arsenic	47.8	ug/L	50	ug/L	95.5	90.0 – 110.0	MS	08-FEB-10 03:28	100207-3
	Nickel	51.1	ug/L	50	ug/L	102.2	90.0 – 110.0	MS	08-FEB-10 03:28	100207-3
	Selenium	48.8	ug/L	50	ug/L	97.6	90.0 – 110.0	MS	08-FEB-10 03:28	100207-3
	Thallium	53.2	ug/L	50	ug/L	106.3	90.0 – 110.0	MS	08-FEB-10 03:28	100207-3
	Beryllium	49	ug/L	50	ug/L	97.9	90.0 – 110.0	MS	08-FEB-10 07:22	100207-4
	Uranium	48.7	ug/L	50	ug/L	97.5	90.0 – 110.0	MS	09-FEB-10 21:48	100209-2
CCV04										
	Aluminum	4970	ug/L	5000	ug/L	99.4	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Antimony	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Barium	486	ug/L	500	ug/L	97.1	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Cadmium	480	ug/L	500	ug/L	96.1	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Calcium	4920	ug/L	5000	ug/L	98.4	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Chromium	483	ug/L	500	ug/L	96.5	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Cobalt	476	ug/L	500	ug/L	95.2	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Copper	485	ug/L	500	ug/L	97	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Iron	4870	ug/L	5000	ug/L	97.5	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Lead	483	ug/L	500	ug/L	96.7	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Magnesium	4980	ug/L	5000	ug/L	99.5	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Manganese	484	ug/L	500	ug/L	96.9	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Potassium	4780	ug/L	5000	ug/L	95.6	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Silver	485	ug/L	500	ug/L	97	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Sodium	9600	ug/L	10000	ug/L	96	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Vanadium	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Zinc	476	ug/L	500	ug/L	95.2	90.0 – 110.0	P	01-FEB-10 11:44	020110-1
	Arsenic	48.2	ug/L	50	ug/L	96.3	90.0 – 110.0	MS	08-FEB-10 04:24	100207-3
	Nickel	52	ug/L	50	ug/L	104	90.0 – 110.0	MS	08-FEB-10 04:24	100207-3
	Selenium	50.5	ug/L	50	ug/L	101	90.0 – 110.0	MS	08-FEB-10 04:24	100207-3

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1263

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
	Thallium	54.1	ug/L	50	ug/L	108.2	90.0 – 110.0	MS	08–FEB–10 04:24	100207–3
	Beryllium	50.8	ug/L	50	ug/L	101.6	90.0 – 110.0	MS	08–FEB–10 07:55	100207–4
	Uranium	49.2	ug/L	50	ug/L	98.4	90.0 – 110.0	MS	09–FEB–10 22:04	100209–2
CCV05										
	Aluminum	4840	ug/L	5000	ug/L	96.8	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Antimony	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Barium	500	ug/L	500	ug/L	99.9	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Cadmium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Calcium	4930	ug/L	5000	ug/L	98.5	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Chromium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Copper	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Iron	5090	ug/L	5000	ug/L	101.7	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Lead	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Magnesium	5180	ug/L	5000	ug/L	103.6	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Manganese	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Potassium	4810	ug/L	5000	ug/L	96.3	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Silver	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Sodium	10300	ug/L	10000	ug/L	102.7	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Vanadium	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Zinc	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	01–FEB–10 12:46	020110–1
	Arsenic	48.1	ug/L	50	ug/L	96.3	90.0 – 110.0	MS	08–FEB–10 05:19	100207–3
	Nickel	51.9	ug/L	50	ug/L	103.9	90.0 – 110.0	MS	08–FEB–10 05:19	100207–3
	Selenium	50.1	ug/L	50	ug/L	100.1	90.0 – 110.0	MS	08–FEB–10 05:19	100207–3
	Thallium	52.9	ug/L	50	ug/L	105.9	90.0 – 110.0	MS	08–FEB–10 05:19	100207–3
	Beryllium	49.8	ug/L	50	ug/L	99.6	90.0 – 110.0	MS	08–FEB–10 08:29	100207–4
CCV06										
	Aluminum	5060	ug/L	5000	ug/L	101.2	90.0 – 110.0	P	01–FEB–10 14:11	020110–1
	Antimony	481	ug/L	500	ug/L	96.2	90.0 – 110.0	P	01–FEB–10 14:11	020110–1
	Barium	486	ug/L	500	ug/L	97.3	90.0 – 110.0	P	01–FEB–10 14:11	020110–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1263

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
	Cadmium	485	ug/L	500	ug/L	97	90.0 – 110.0	P	01–FEB–10 14:11	020110–1
	Calcium	5240	ug/L	5000	ug/L	104.7	90.0 – 110.0	P	01–FEB–10 14:11	020110–1
	Chromium	484	ug/L	500	ug/L	96.8	90.0 – 110.0	P	01–FEB–10 14:11	020110–1
	Cobalt	475	ug/L	500	ug/L	95.1	90.0 – 110.0	P	01–FEB–10 14:11	020110–1
	Copper	478	ug/L	500	ug/L	95.7	90.0 – 110.0	P	01–FEB–10 14:11	020110–1
	Iron	5370	ug/L	5000	ug/L	107.4	90.0 – 110.0	P	01–FEB–10 14:11	020110–1
	Lead	483	ug/L	500	ug/L	96.5	90.0 – 110.0	P	01–FEB–10 14:11	020110–1
	Magnesium	5450	ug/L	5000	ug/L	109.1	90.0 – 110.0	P	01–FEB–10 14:11	020110–1
	Manganese	485	ug/L	500	ug/L	96.9	90.0 – 110.0	P	01–FEB–10 14:11	020110–1
	Potassium	5120	ug/L	5000	ug/L	102.3	90.0 – 110.0	P	01–FEB–10 14:11	020110–1
	Silver	483	ug/L	500	ug/L	96.5	90.0 – 110.0	P	01–FEB–10 14:11	020110–1
	Sodium	10700	ug/L	10000	ug/L	107.1	90.0 – 110.0	P	01–FEB–10 14:11	020110–1
	Vanadium	490	ug/L	500	ug/L	98	90.0 – 110.0	P	01–FEB–10 14:11	020110–1
	Zinc	475	ug/L	500	ug/L	95.1	90.0 – 110.0	P	01–FEB–10 14:11	020110–1
CCV07										
	Aluminum	4860	ug/L	5000	ug/L	97.1	90.0 – 110.0	P	01–FEB–10 15:23	020110–1
	Antimony	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	01–FEB–10 15:23	020110–1
	Barium	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	01–FEB–10 15:23	020110–1
	Cadmium	487	ug/L	500	ug/L	97.3	90.0 – 110.0	P	01–FEB–10 15:23	020110–1
	Calcium	5030	ug/L	5000	ug/L	100.5	90.0 – 110.0	P	01–FEB–10 15:23	020110–1
	Chromium	488	ug/L	500	ug/L	97.7	90.0 – 110.0	P	01–FEB–10 15:23	020110–1
	Cobalt	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	01–FEB–10 15:23	020110–1
	Copper	484	ug/L	500	ug/L	96.9	90.0 – 110.0	P	01–FEB–10 15:23	020110–1
	Iron	5200	ug/L	5000	ug/L	104	90.0 – 110.0	P	01–FEB–10 15:23	020110–1
	Lead	481	ug/L	500	ug/L	96.2	90.0 – 110.0	P	01–FEB–10 15:23	020110–1
	Magnesium	5250	ug/L	5000	ug/L	105	90.0 – 110.0	P	01–FEB–10 15:23	020110–1
	Manganese	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	01–FEB–10 15:23	020110–1
	Potassium	4890	ug/L	5000	ug/L	97.8	90.0 – 110.0	P	01–FEB–10 15:23	020110–1
	Silver	485	ug/L	500	ug/L	97	90.0 – 110.0	P	01–FEB–10 15:23	020110–1
	Sodium	10300	ug/L	10000	ug/L	103.1	90.0 – 110.0	P	01–FEB–10 15:23	020110–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1263

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
	Vanadium	493	ug/L	500	ug/L	98.5	90.0 – 110.0	P	01–FEB–10 15:23	020110–1
	Zinc	476	ug/L	500	ug/L	95.3	90.0 – 110.0	P	01–FEB–10 15:23	020110–1
CCV08										
	Aluminum	4930	ug/L	5000	ug/L	98.5	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
	Antimony	528	ug/L	500	ug/L	105.6	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
	Barium	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
	Cadmium	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
	Calcium	5080	ug/L	5000	ug/L	101.5	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
	Chromium	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
	Cobalt	511	ug/L	500	ug/L	102.3	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
	Copper	515	ug/L	500	ug/L	102.9	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
	Iron	5260	ug/L	5000	ug/L	105.2	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
	Lead	520	ug/L	500	ug/L	104	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
	Magnesium	5280	ug/L	5000	ug/L	105.6	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
	Manganese	516	ug/L	500	ug/L	103.1	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
	Potassium	4870	ug/L	5000	ug/L	97.5	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
	Silver	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
	Sodium	10300	ug/L	10000	ug/L	102.7	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
	Vanadium	515	ug/L	500	ug/L	103.1	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
	Zinc	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	01–FEB–10 16:35	020110–1
CCV09										
	Aluminum	4780	ug/L	5000	ug/L	95.6	90.0 – 110.0	P	01–FEB–10 17:04	020110–1
	Antimony	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	01–FEB–10 17:04	020110–1
	Barium	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	01–FEB–10 17:04	020110–1
	Cadmium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	01–FEB–10 17:04	020110–1
	Calcium	4890	ug/L	5000	ug/L	97.7	90.0 – 110.0	P	01–FEB–10 17:04	020110–1
	Chromium	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	01–FEB–10 17:04	020110–1
	Cobalt	488	ug/L	500	ug/L	97.6	90.0 – 110.0	P	01–FEB–10 17:04	020110–1
	Copper	492	ug/L	500	ug/L	98.5	90.0 – 110.0	P	01–FEB–10 17:04	020110–1
	Iron	4990	ug/L	5000	ug/L	99.8	90.0 – 110.0	P	01–FEB–10 17:04	020110–1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1263

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
	Lead	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	01-FEB-10 17:04	020110-1
	Magnesium	5090	ug/L	5000	ug/L	101.9	90.0 – 110.0	P	01-FEB-10 17:04	020110-1
	Manganese	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	01-FEB-10 17:04	020110-1
	Potassium	4690	ug/L	5000	ug/L	93.8	90.0 – 110.0	P	01-FEB-10 17:04	020110-1
	Silver	490	ug/L	500	ug/L	98	90.0 – 110.0	P	01-FEB-10 17:04	020110-1
	Sodium	9840	ug/L	10000	ug/L	98.4	90.0 – 110.0	P	01-FEB-10 17:04	020110-1
	Vanadium	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	01-FEB-10 17:04	020110-1
	Zinc	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	01-FEB-10 17:04	020110-1
CCV10										
	Aluminum	4940	ug/L	5000	ug/L	98.8	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
	Antimony	512	ug/L	500	ug/L	102.3	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
	Barium	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
	Cadmium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
	Calcium	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
	Chromium	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
	Cobalt	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
	Copper	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
	Iron	5220	ug/L	5000	ug/L	104.5	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
	Lead	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
	Magnesium	5340	ug/L	5000	ug/L	106.7	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
	Manganese	491	ug/L	500	ug/L	98.1	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
	Potassium	4840	ug/L	5000	ug/L	96.9	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
	Silver	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
	Sodium	10200	ug/L	10000	ug/L	102.1	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
	Vanadium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
	Zinc	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	01-FEB-10 18:26	020110-1
CCV11										
	Aluminum	5020	ug/L	5000	ug/L	100.4	90.0 – 110.0	P	01-FEB-10 19:41	020110-1
	Antimony	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	01-FEB-10 19:41	020110-1
	Barium	476	ug/L	500	ug/L	95.2	90.0 – 110.0	P	01-FEB-10 19:41	020110-1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1263

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
	Cadmium	484	ug/L	500	ug/L	96.7	90.0 – 110.0	P	01–FEB–10 19:41	020110–1
	Calcium	5170	ug/L	5000	ug/L	103.4	90.0 – 110.0	P	01–FEB–10 19:41	020110–1
	Chromium	477	ug/L	500	ug/L	95.3	90.0 – 110.0	P	01–FEB–10 19:41	020110–1
	Cobalt	481	ug/L	500	ug/L	96.2	90.0 – 110.0	P	01–FEB–10 19:41	020110–1
	Copper	475	ug/L	500	ug/L	94.9	90.0 – 110.0	P	01–FEB–10 19:41	020110–1
	Iron	5350	ug/L	5000	ug/L	107.1	90.0 – 110.0	P	01–FEB–10 19:41	020110–1
	Lead	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	01–FEB–10 19:41	020110–1
	Magnesium	5450	ug/L	5000	ug/L	109	90.0 – 110.0	P	01–FEB–10 19:41	020110–1
	Manganese	479	ug/L	500	ug/L	95.9	90.0 – 110.0	P	01–FEB–10 19:41	020110–1
	Potassium	5000	ug/L	5000	ug/L	100	90.0 – 110.0	P	01–FEB–10 19:41	020110–1
	Silver	475	ug/L	500	ug/L	95	90.0 – 110.0	P	01–FEB–10 19:41	020110–1
	Sodium	10400	ug/L	10000	ug/L	103.7	90.0 – 110.0	P	01–FEB–10 19:41	020110–1
	Vanadium	478	ug/L	500	ug/L	95.6	90.0 – 110.0	P	01–FEB–10 19:41	020110–1
	Zinc	476	ug/L	500	ug/L	95.3	90.0 – 110.0	P	01–FEB–10 19:41	020110–1
CCV12										
	Aluminum	4990	ug/L	5000	ug/L	99.9	90.0 – 110.0	P	01–FEB–10 20:50	020110–1
	Antimony	513	ug/L	500	ug/L	102.7	90.0 – 110.0	P	01–FEB–10 20:50	020110–1
	Barium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	01–FEB–10 20:50	020110–1
	Cadmium	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	01–FEB–10 20:50	020110–1
	Calcium	5010	ug/L	5000	ug/L	100.3	90.0 – 110.0	P	01–FEB–10 20:50	020110–1
	Chromium	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	01–FEB–10 20:50	020110–1
	Cobalt	500	ug/L	500	ug/L	99.9	90.0 – 110.0	P	01–FEB–10 20:50	020110–1
	Copper	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	01–FEB–10 20:50	020110–1
	Iron	5210	ug/L	5000	ug/L	104.3	90.0 – 110.0	P	01–FEB–10 20:50	020110–1
	Lead	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	01–FEB–10 20:50	020110–1
	Magnesium	5190	ug/L	5000	ug/L	103.8	90.0 – 110.0	P	01–FEB–10 20:50	020110–1
	Manganese	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	01–FEB–10 20:50	020110–1
	Potassium	4840	ug/L	5000	ug/L	96.8	90.0 – 110.0	P	01–FEB–10 20:50	020110–1
	Silver	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	01–FEB–10 20:50	020110–1
	Sodium	10300	ug/L	10000	ug/L	102.7	90.0 – 110.0	P	01–FEB–10 20:50	020110–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1263

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
	Vanadium	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	01–FEB–10 20:50	020110–1
	Zinc	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	01–FEB–10 20:50	020110–1
CCV13										
	Aluminum	4890	ug/L	5000	ug/L	97.8	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
	Antimony	504	ug/L	500	ug/L	100.7	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
	Barium	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
	Calcium	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
	Chromium	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
	Cobalt	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
	Copper	492	ug/L	500	ug/L	98.5	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
	Iron	5250	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
	Lead	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
	Magnesium	5280	ug/L	5000	ug/L	105.5	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
	Manganese	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
	Potassium	4850	ug/L	5000	ug/L	97.1	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
	Silver	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
	Sodium	10300	ug/L	10000	ug/L	103	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
	Vanadium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
	Zinc	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	01–FEB–10 21:59	020110–1
CCV14										
	Aluminum	4930	ug/L	5000	ug/L	98.6	90.0 – 110.0	P	01–FEB–10 23:02	020110–1
	Antimony	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	01–FEB–10 23:02	020110–1
	Barium	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	01–FEB–10 23:02	020110–1
	Cadmium	491	ug/L	500	ug/L	98.1	90.0 – 110.0	P	01–FEB–10 23:02	020110–1
	Calcium	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	01–FEB–10 23:02	020110–1
	Chromium	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	01–FEB–10 23:02	020110–1
	Cobalt	487	ug/L	500	ug/L	97.3	90.0 – 110.0	P	01–FEB–10 23:02	020110–1
	Copper	485	ug/L	500	ug/L	97	90.0 – 110.0	P	01–FEB–10 23:02	020110–1
	Iron	5260	ug/L	5000	ug/L	105.3	90.0 – 110.0	P	01–FEB–10 23:02	020110–1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1263

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
	Lead	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	01-FEB-10 23:02	020110-1
	Magnesium	5290	ug/L	5000	ug/L	105.9	90.0 – 110.0	P	01-FEB-10 23:02	020110-1
	Manganese	488	ug/L	500	ug/L	97.7	90.0 – 110.0	P	01-FEB-10 23:02	020110-1
	Potassium	4920	ug/L	5000	ug/L	98.4	90.0 – 110.0	P	01-FEB-10 23:02	020110-1
	Silver	487	ug/L	500	ug/L	97.3	90.0 – 110.0	P	01-FEB-10 23:02	020110-1
	Sodium	10500	ug/L	10000	ug/L	105.1	90.0 – 110.0	P	01-FEB-10 23:02	020110-1
	Vanadium	490	ug/L	500	ug/L	98	90.0 – 110.0	P	01-FEB-10 23:02	020110-1
	Zinc	483	ug/L	500	ug/L	96.7	90.0 – 110.0	P	01-FEB-10 23:02	020110-1
CCV15										
	Aluminum	4890	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
	Antimony	512	ug/L	500	ug/L	102.3	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
	Barium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
	Cadmium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
	Calcium	4990	ug/L	5000	ug/L	99.8	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
	Chromium	495	ug/L	500	ug/L	98.9	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
	Cobalt	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
	Copper	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
	Iron	5070	ug/L	5000	ug/L	101.3	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
	Lead	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
	Magnesium	5250	ug/L	5000	ug/L	105	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
	Manganese	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
	Potassium	4890	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
	Silver	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
	Sodium	10200	ug/L	10000	ug/L	101.6	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
	Vanadium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
	Zinc	491	ug/L	500	ug/L	98.3	90.0 – 110.0	P	02-FEB-10 00:05	020110-1
CCV16										
	Aluminum	5190	ug/L	5000	ug/L	103.8	90.0 – 110.0	P	02-FEB-10 01:14	020110-1
	Antimony	516	ug/L	500	ug/L	103.3	90.0 – 110.0	P	02-FEB-10 01:14	020110-1
	Barium	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	02-FEB-10 01:14	020110-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1263

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
	Cadmium	505	ug/L	500	ug/L	101	90.0 - 110.0	P	02-FEB-10 01:14	020110-1
	Calcium	5330	ug/L	5000	ug/L	106.7	90.0 - 110.0	P	02-FEB-10 01:14	020110-1
	Chromium	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	02-FEB-10 01:14	020110-1
	Cobalt	500	ug/L	500	ug/L	100	90.0 - 110.0	P	02-FEB-10 01:14	020110-1
	Copper	498	ug/L	500	ug/L	99.5	90.0 - 110.0	P	02-FEB-10 01:14	020110-1
	Iron	5440	ug/L	5000	ug/L	108.9	90.0 - 110.0	P	02-FEB-10 01:14	020110-1
	Lead	506	ug/L	500	ug/L	101.2	90.0 - 110.0	P	02-FEB-10 01:14	020110-1
	Magnesium	5520	ug/L	5000	ug/L	110.5	90.0 - 110.0	P	02-FEB-10 01:14	020110-1
	Manganese	503	ug/L	500	ug/L	100.6	90.0 - 110.0	P	02-FEB-10 01:14	020110-1
	Potassium	5250	ug/L	5000	ug/L	105	90.0 - 110.0	P	02-FEB-10 01:14	020110-1
	Silver	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	02-FEB-10 01:14	020110-1
	Sodium	10800	ug/L	10000	ug/L	108.4	90.0 - 110.0	P	02-FEB-10 01:14	020110-1
	Vanadium	501	ug/L	500	ug/L	100.1	90.0 - 110.0	P	02-FEB-10 01:14	020110-1
	Zinc	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	02-FEB-10 01:14	020110-1
CCV17										
	Aluminum	5220	ug/L	5000	ug/L	104.3	90.0 - 110.0	P	02-FEB-10 02:25	020110-1
	Antimony	538	ug/L	500	ug/L	107.6	90.0 - 110.0	P	02-FEB-10 02:25	020110-1
	Barium	520	ug/L	500	ug/L	104.1	90.0 - 110.0	P	02-FEB-10 02:25	020110-1
	Cadmium	526	ug/L	500	ug/L	105.2	90.0 - 110.0	P	02-FEB-10 02:25	020110-1
	Calcium	5280	ug/L	5000	ug/L	105.5	90.0 - 110.0	P	02-FEB-10 02:25	020110-1
	Chromium	519	ug/L	500	ug/L	103.8	90.0 - 110.0	P	02-FEB-10 02:25	020110-1
	Cobalt	520	ug/L	500	ug/L	103.9	90.0 - 110.0	P	02-FEB-10 02:25	020110-1
	Copper	520	ug/L	500	ug/L	104	90.0 - 110.0	P	02-FEB-10 02:25	020110-1
	Iron	5170	ug/L	5000	ug/L	103.5	90.0 - 110.0	P	02-FEB-10 02:25	020110-1
	Lead	523	ug/L	500	ug/L	104.6	90.0 - 110.0	P	02-FEB-10 02:25	020110-1
	Magnesium	5460	ug/L	5000	ug/L	109.2	90.0 - 110.0	P	02-FEB-10 02:25	020110-1
	Manganese	524	ug/L	500	ug/L	104.9	90.0 - 110.0	P	02-FEB-10 02:25	020110-1
	Potassium	5200	ug/L	5000	ug/L	104	90.0 - 110.0	P	02-FEB-10 02:25	020110-1
	Silver	519	ug/L	500	ug/L	103.8	90.0 - 110.0	P	02-FEB-10 02:25	020110-1
	Sodium	10300	ug/L	10000	ug/L	102.6	90.0 - 110.0	P	02-FEB-10 02:25	020110-1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1263

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
	Vanadium	522	ug/L	500	ug/L	104.4	90.0 – 110.0	P	02–FEB–10 02:25	020110–1
	Zinc	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	02–FEB–10 02:25	020110–1
CCV18										
	Aluminum	5190	ug/L	5000	ug/L	103.7	90.0 – 110.0	P	02–FEB–10 03:35	020110–1
	Antimony	533	ug/L	500	ug/L	106.6	90.0 – 110.0	P	02–FEB–10 03:35	020110–1
	Barium	515	ug/L	500	ug/L	103	90.0 – 110.0	P	02–FEB–10 03:35	020110–1
	Cadmium	520	ug/L	500	ug/L	104	90.0 – 110.0	P	02–FEB–10 03:35	020110–1
	Calcium	5250	ug/L	5000	ug/L	105	90.0 – 110.0	P	02–FEB–10 03:35	020110–1
	Chromium	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	02–FEB–10 03:35	020110–1
	Cobalt	516	ug/L	500	ug/L	103.1	90.0 – 110.0	P	02–FEB–10 03:35	020110–1
	Copper	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	02–FEB–10 03:35	020110–1
	Iron	5170	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	02–FEB–10 03:35	020110–1
	Lead	521	ug/L	500	ug/L	104.1	90.0 – 110.0	P	02–FEB–10 03:35	020110–1
	Magnesium	5480	ug/L	5000	ug/L	109.5	90.0 – 110.0	P	02–FEB–10 03:35	020110–1
	Manganese	519	ug/L	500	ug/L	103.7	90.0 – 110.0	P	02–FEB–10 03:35	020110–1
	Potassium	5210	ug/L	5000	ug/L	104.3	90.0 – 110.0	P	02–FEB–10 03:35	020110–1
	Silver	514	ug/L	500	ug/L	102.9	90.0 – 110.0	P	02–FEB–10 03:35	020110–1
	Sodium	10300	ug/L	10000	ug/L	103.3	90.0 – 110.0	P	02–FEB–10 03:35	020110–1
	Vanadium	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	02–FEB–10 03:35	020110–1
	Zinc	512	ug/L	500	ug/L	102.3	90.0 – 110.0	P	02–FEB–10 03:35	020110–1

METALS
–2b–
CRDL Standard for AA & ICP

SDG No: 10–1263

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	.233	ug/L	.2	ug/L	116.4	70.0 – 130.0	AV	28–JAN–10 09:41	012810S1–6
	Nickel	2.27	ug/L	2	ug/L	113.6	70.0 – 130.0	MS	08–FEB–10 01:56	100207–3
	Thallium	1.29	ug/L	1	ug/L	129.1	70.0 – 130.0	MS	08–FEB–10 01:56	100207–3
	Arsenic	5.5	ug/L	5	ug/L	110	70.0 – 130.0	MS	08–FEB–10 01:56	100207–3
	Selenium	5.65	ug/L	5	ug/L	113	70.0 – 130.0	MS	08–FEB–10 01:56	100207–3
	Beryllium	.501	ug/L	.5	ug/L	100.2	70.0 – 130.0	MS	08–FEB–10 06:26	100207–4
	Uranium	.207	ug/L	.2	ug/L	103.5	70.0 – 130.0	MS	09–FEB–10 21:03	100209–2
PQL01										
	Manganese	10.7	ug/L	10	ug/L	107.3	70.0 – 130.0	P	01–FEB–10 07:35	020110–1
	Potassium	141	ug/L	150	ug/L	94.3	70.0 – 130.0	P	01–FEB–10 07:35	020110–1
	Silver	4.98	ug/L	5	ug/L	99.7	70.0 – 130.0	P	01–FEB–10 07:35	020110–1
	Sodium	299	ug/L	300	ug/L	99.7	70.0 – 130.0	P	01–FEB–10 07:35	020110–1
	Antimony	13.4	ug/L	10	ug/L	134.2	70.0 – 130.0	P	01–FEB–10 07:35	020110–1
	Barium	5.21	ug/L	5	ug/L	104.2	70.0 – 130.0	P	01–FEB–10 07:35	020110–1
	Magnesium	387	ug/L	300	ug/L	129.1	70.0 – 130.0	P	01–FEB–10 07:35	020110–1
	Lead	12	ug/L	10	ug/L	119.7	70.0 – 130.0	P	01–FEB–10 07:35	020110–1
	Iron	107	ug/L	100	ug/L	107.1	70.0 – 130.0	P	01–FEB–10 07:35	020110–1
	Aluminum	210	ug/L	200	ug/L	104.8	70.0 – 130.0	P	01–FEB–10 07:35	020110–1
	Cadmium	5.04	ug/L	5	ug/L	100.7	70.0 – 130.0	P	01–FEB–10 07:35	020110–1
	Chromium	5.34	ug/L	5	ug/L	106.8	70.0 – 130.0	P	01–FEB–10 07:35	020110–1
	Cobalt	5.09	ug/L	5	ug/L	101.8	70.0 – 130.0	P	01–FEB–10 07:35	020110–1
	Copper	10.4	ug/L	10	ug/L	104.3	70.0 – 130.0	P	01–FEB–10 07:35	020110–1
	Vanadium	5.38	ug/L	5	ug/L	107.6	70.0 – 130.0	P	01–FEB–10 07:35	020110–1
	Zinc	10.4	ug/L	10	ug/L	103.7	70.0 – 130.0	P	01–FEB–10 07:35	020110–1
	Calcium	212	ug/L	200	ug/L	106.1	70.0 – 130.0	P	01–FEB–10 07:35	020110–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1263

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Mercury	-0.08	+/-.2	J	0.068	0.2	SOL	AV	28-JAN-10 09:39	012810S1-6
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-FEB-10 07:28	020110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 07:28	020110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 07:28	020110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 07:28	020110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 07:28	020110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 07:28	020110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 07:28	020110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-FEB-10 07:28	020110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 07:28	020110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-FEB-10 07:28	020110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	01-FEB-10 07:28	020110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-FEB-10 07:28	020110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-FEB-10 07:28	020110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 07:28	020110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	01-FEB-10 07:28	020110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 07:28	020110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 07:28	020110-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	08-FEB-10 01:50	100207-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	08-FEB-10 01:50	100207-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	08-FEB-10 01:50	100207-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	08-FEB-10 01:50	100207-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	08-FEB-10 06:23	100207-4
	Uranium	0.066	+/-.2	U	0.066	0.2	SOL	MS	09-FEB-10 21:00	100209-2
CCB01										
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	28-JAN-10 09:45	012810S1-6
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-FEB-10 08:32	020110-1
	Antimony	4.88	+/-10	J	3.3	10.0	SOL	P	01-FEB-10 08:32	020110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 08:32	020110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 08:32	020110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 08:32	020110-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1263

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 08:32	020110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 08:32	020110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-FEB-10 08:32	020110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 08:32	020110-1
	Lead	3.53	+/-10	J	2.5	10.0	SOL	P	01-FEB-10 08:32	020110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	01-FEB-10 08:32	020110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-FEB-10 08:32	020110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-FEB-10 08:32	020110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 08:32	020110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	01-FEB-10 08:32	020110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 08:32	020110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 08:32	020110-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	08-FEB-10 02:20	100207-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	08-FEB-10 02:20	100207-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	08-FEB-10 02:20	100207-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	08-FEB-10 02:20	100207-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	08-FEB-10 06:41	100207-4
	Uranium	0.066	+/-.2	U	0.066	0.2	SOL	MS	09-FEB-10 21:11	100209-2
CCB02										
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	28-JAN-10 10:09	012810S1-6
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-FEB-10 09:00	020110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 09:00	020110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 09:00	020110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 09:00	020110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 09:00	020110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 09:00	020110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 09:00	020110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-FEB-10 09:00	020110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 09:00	020110-1
	Lead	2.92	+/-10	J	2.5	10.0	SOL	P	01-FEB-10 09:00	020110-1
	Magnesium	91.63	+/-300	J	85.0	300	SOL	P	01-FEB-10 09:00	020110-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 10–1263

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	01–FEB–10 09:00	020110–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	01–FEB–10 09:00	020110–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 09:00	020110–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	01–FEB–10 09:00	020110–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 09:00	020110–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	01–FEB–10 09:00	020110–1
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	08–FEB–10 02:39	100207–3
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	08–FEB–10 02:39	100207–3
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	08–FEB–10 02:39	100207–3
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	08–FEB–10 02:39	100207–3
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	08–FEB–10 06:52	100207–4
	Uranium	0.066	+/–.2	U	0.066	0.2	SOL	MS	09–FEB–10 21:32	100209–2
CCB03										
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	28–JAN–10 10:33	012810S1–6
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	01–FEB–10 10:26	020110–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	01–FEB–10 10:26	020110–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 10:26	020110–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 10:26	020110–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	01–FEB–10 10:26	020110–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	01–FEB–10 10:26	020110–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	01–FEB–10 10:26	020110–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	01–FEB–10 10:26	020110–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	01–FEB–10 10:26	020110–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	01–FEB–10 10:26	020110–1
	Magnesium	126.34	+/–300	J	85.0	300	SOL	P	01–FEB–10 10:26	020110–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	01–FEB–10 10:26	020110–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	01–FEB–10 10:26	020110–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 10:26	020110–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	01–FEB–10 10:26	020110–1
	Vanadium	1.11	+/–5	J	1.0	5.0	SOL	P	01–FEB–10 10:26	020110–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	01–FEB–10 10:26	020110–1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 10–1263

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	08–FEB–10 03:34	100207–3
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	08–FEB–10 03:34	100207–3
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	08–FEB–10 03:34	100207–3
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	08–FEB–10 03:34	100207–3
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	08–FEB–10 07:26	100207–4
	Uranium	0.066	+/–.2	U	0.066	0.2	SOL	MS	09–FEB–10 21:50	100209–2
CCB04										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	01–FEB–10 11:51	020110–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	01–FEB–10 11:51	020110–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 11:51	020110–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 11:51	020110–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	01–FEB–10 11:51	020110–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	01–FEB–10 11:51	020110–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	01–FEB–10 11:51	020110–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	01–FEB–10 11:51	020110–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	01–FEB–10 11:51	020110–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	01–FEB–10 11:51	020110–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	01–FEB–10 11:51	020110–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	01–FEB–10 11:51	020110–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	01–FEB–10 11:51	020110–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 11:51	020110–1
	Sodium	78.72	+/–250	J	70.0	250	SOL	P	01–FEB–10 11:51	020110–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 11:51	020110–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	01–FEB–10 11:51	020110–1
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	08–FEB–10 04:30	100207–3
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	08–FEB–10 04:30	100207–3
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	08–FEB–10 04:30	100207–3
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	08–FEB–10 04:30	100207–3
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	08–FEB–10 07:59	100207–4
	Uranium	0.066	+/–.2	U	0.066	0.2	SOL	MS	09–FEB–10 22:06	100209–2

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1263

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
CCB05										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-FEB-10 12:53	020110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 12:53	020110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 12:53	020110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 12:53	020110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 12:53	020110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 12:53	020110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 12:53	020110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-FEB-10 12:53	020110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 12:53	020110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-FEB-10 12:53	020110-1
	Magnesium	90.46	+/-300	J	85.0	300	SOL	P	01-FEB-10 12:53	020110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-FEB-10 12:53	020110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-FEB-10 12:53	020110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 12:53	020110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	01-FEB-10 12:53	020110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 12:53	020110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 12:53	020110-1
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	08-FEB-10 05:25	100207-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	08-FEB-10 05:25	100207-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	08-FEB-10 05:25	100207-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	08-FEB-10 05:25	100207-3
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	08-FEB-10 08:33	100207-4
CCB06										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-FEB-10 14:18	020110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 14:18	020110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 14:18	020110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 14:18	020110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 14:18	020110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 14:18	020110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 14:18	020110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-FEB-10 14:18	020110-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1263

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 14:18	020110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-FEB-10 14:18	020110-1
	Magnesium	156.35	+/-300	J	85.0	300	SOL	P	01-FEB-10 14:18	020110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-FEB-10 14:18	020110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-FEB-10 14:18	020110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 14:18	020110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	01-FEB-10 14:18	020110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 14:18	020110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 14:18	020110-1
CCB07										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-FEB-10 15:30	020110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 15:30	020110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 15:30	020110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 15:30	020110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 15:30	020110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 15:30	020110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 15:30	020110-1
	Copper	4.74	+/-10	J	3.0	10.0	SOL	P	01-FEB-10 15:30	020110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 15:30	020110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-FEB-10 15:30	020110-1
	Magnesium	114.11	+/-300	J	85.0	300	SOL	P	01-FEB-10 15:30	020110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-FEB-10 15:30	020110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-FEB-10 15:30	020110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 15:30	020110-1
	Sodium	77.2	+/-250	J	70.0	250	SOL	P	01-FEB-10 15:30	020110-1
	Vanadium	1.1	+/-5	J	1.0	5.0	SOL	P	01-FEB-10 15:30	020110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 15:30	020110-1
CCB08										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-FEB-10 16:42	020110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 16:42	020110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 16:42	020110-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 10–1263

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 16:42	020110–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	01–FEB–10 16:42	020110–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	01–FEB–10 16:42	020110–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	01–FEB–10 16:42	020110–1
	Copper	4.35	+/–10	J	3.0	10.0	SOL	P	01–FEB–10 16:42	020110–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	01–FEB–10 16:42	020110–1
	Lead	2.61	+/–10	J	2.5	10.0	SOL	P	01–FEB–10 16:42	020110–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	01–FEB–10 16:42	020110–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	01–FEB–10 16:42	020110–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	01–FEB–10 16:42	020110–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 16:42	020110–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	01–FEB–10 16:42	020110–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 16:42	020110–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	01–FEB–10 16:42	020110–1
CCB09										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	01–FEB–10 17:11	020110–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	01–FEB–10 17:11	020110–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 17:11	020110–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 17:11	020110–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	01–FEB–10 17:11	020110–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	01–FEB–10 17:11	020110–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	01–FEB–10 17:11	020110–1
	Copper	3.12	+/–10	J	3.0	10.0	SOL	P	01–FEB–10 17:11	020110–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	01–FEB–10 17:11	020110–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	01–FEB–10 17:11	020110–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	01–FEB–10 17:11	020110–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	01–FEB–10 17:11	020110–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	01–FEB–10 17:11	020110–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 17:11	020110–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	01–FEB–10 17:11	020110–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 17:11	020110–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1263

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 17:11	020110-1
CCB10										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-FEB-10 18:33	020110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 18:33	020110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 18:33	020110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 18:33	020110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 18:33	020110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 18:33	020110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 18:33	020110-1
	Copper	5.22	+/-10	J	3.0	10.0	SOL	P	01-FEB-10 18:33	020110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 18:33	020110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-FEB-10 18:33	020110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	01-FEB-10 18:33	020110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-FEB-10 18:33	020110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-FEB-10 18:33	020110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 18:33	020110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	01-FEB-10 18:33	020110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 18:33	020110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 18:33	020110-1
CCB11										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-FEB-10 19:48	020110-1
	Antimony	4.11	+/-10	J	3.3	10.0	SOL	P	01-FEB-10 19:48	020110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 19:48	020110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 19:48	020110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 19:48	020110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 19:48	020110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 19:48	020110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-FEB-10 19:48	020110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 19:48	020110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-FEB-10 19:48	020110-1
	Magnesium	103.92	+/-300	J	85.0	300	SOL	P	01-FEB-10 19:48	020110-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 10–1263

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	01–FEB–10 19:48	020110–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	01–FEB–10 19:48	020110–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 19:48	020110–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	01–FEB–10 19:48	020110–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 19:48	020110–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	01–FEB–10 19:48	020110–1
CCB12										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	01–FEB–10 20:57	020110–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	01–FEB–10 20:57	020110–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 20:57	020110–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 20:57	020110–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	01–FEB–10 20:57	020110–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	01–FEB–10 20:57	020110–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	01–FEB–10 20:57	020110–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	01–FEB–10 20:57	020110–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	01–FEB–10 20:57	020110–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	01–FEB–10 20:57	020110–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	01–FEB–10 20:57	020110–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	01–FEB–10 20:57	020110–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	01–FEB–10 20:57	020110–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 20:57	020110–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	01–FEB–10 20:57	020110–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 20:57	020110–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	01–FEB–10 20:57	020110–1
CCB13										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	01–FEB–10 22:06	020110–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	01–FEB–10 22:06	020110–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 22:06	020110–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	01–FEB–10 22:06	020110–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	01–FEB–10 22:06	020110–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	01–FEB–10 22:06	020110–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1263

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 22:06	020110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-FEB-10 22:06	020110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 22:06	020110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-FEB-10 22:06	020110-1
	Magnesium	130.04	+/-300	J	85.0	300	SOL	P	01-FEB-10 22:06	020110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-FEB-10 22:06	020110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-FEB-10 22:06	020110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 22:06	020110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	01-FEB-10 22:06	020110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 22:06	020110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 22:06	020110-1
CCB14										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	01-FEB-10 23:09	020110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 23:09	020110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 23:09	020110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 23:09	020110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 23:09	020110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 23:09	020110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	01-FEB-10 23:09	020110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	01-FEB-10 23:09	020110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	01-FEB-10 23:09	020110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	01-FEB-10 23:09	020110-1
	Magnesium	92.11	+/-300	J	85.0	300	SOL	P	01-FEB-10 23:09	020110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	01-FEB-10 23:09	020110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	01-FEB-10 23:09	020110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 23:09	020110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	01-FEB-10 23:09	020110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	01-FEB-10 23:09	020110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	01-FEB-10 23:09	020110-1
CCB15										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-FEB-10 00:12	020110-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1263

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	02-FEB-10 00:12	020110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-FEB-10 00:12	020110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-FEB-10 00:12	020110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-FEB-10 00:12	020110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-FEB-10 00:12	020110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-FEB-10 00:12	020110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-FEB-10 00:12	020110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-FEB-10 00:12	020110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-FEB-10 00:12	020110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-FEB-10 00:12	020110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-FEB-10 00:12	020110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-FEB-10 00:12	020110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-FEB-10 00:12	020110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	02-FEB-10 00:12	020110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	02-FEB-10 00:12	020110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	02-FEB-10 00:12	020110-1
CCB16										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	02-FEB-10 01:21	020110-1
	Antimony	3.93	+/-10	J	3.3	10.0	SOL	P	02-FEB-10 01:21	020110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	02-FEB-10 01:21	020110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	02-FEB-10 01:21	020110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	02-FEB-10 01:21	020110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	02-FEB-10 01:21	020110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	02-FEB-10 01:21	020110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	02-FEB-10 01:21	020110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	02-FEB-10 01:21	020110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	02-FEB-10 01:21	020110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	02-FEB-10 01:21	020110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	02-FEB-10 01:21	020110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	02-FEB-10 01:21	020110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	02-FEB-10 01:21	020110-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 10–1263

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	02–FEB–10 01:21	020110–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	02–FEB–10 01:21	020110–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	02–FEB–10 01:21	020110–1
CCB17										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	02–FEB–10 02:32	020110–1
	Antimony	3.97	+/–10	J	3.3	10.0	SOL	P	02–FEB–10 02:32	020110–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	02–FEB–10 02:32	020110–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	02–FEB–10 02:32	020110–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	02–FEB–10 02:32	020110–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	02–FEB–10 02:32	020110–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	02–FEB–10 02:32	020110–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	02–FEB–10 02:32	020110–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	02–FEB–10 02:32	020110–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	02–FEB–10 02:32	020110–1
	Magnesium	200.23	+/–300	J	85.0	300	SOL	P	02–FEB–10 02:32	020110–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	02–FEB–10 02:32	020110–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	02–FEB–10 02:32	020110–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	02–FEB–10 02:32	020110–1
	Sodium	100.58	+/–250	J	70.0	250	SOL	P	02–FEB–10 02:32	020110–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	02–FEB–10 02:32	020110–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	02–FEB–10 02:32	020110–1
CCB18										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	02–FEB–10 03:42	020110–1
	Antimony	4.15	+/–10	J	3.3	10.0	SOL	P	02–FEB–10 03:42	020110–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	02–FEB–10 03:42	020110–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	02–FEB–10 03:42	020110–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	02–FEB–10 03:42	020110–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	02–FEB–10 03:42	020110–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	02–FEB–10 03:42	020110–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	02–FEB–10 03:42	020110–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	02–FEB–10 03:42	020110–1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 10–1263

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	02–FEB–10 03:42	020110–1
	Magnesium	95.57	+/–300	J	85.0	300	SOL	P	02–FEB–10 03:42	020110–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	02–FEB–10 03:42	020110–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	02–FEB–10 03:42	020110–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	02–FEB–10 03:42	020110–1
	Sodium	120.04	+/–250	J	70.0	250	SOL	P	02–FEB–10 03:42	020110–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	02–FEB–10 03:42	020110–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	02–FEB–10 03:42	020110–1

METALS
–3b–
PREPARATION BLANK SUMMARY

SDG NO. 10--1263

Contract: LANL01004

Matrix: SOIL

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1202018068								
	Arsenic	0.193	mg/kg	+/–0.963	U	MS	0.193	0.963
	Beryllium	0.0193	mg/kg	+/–0.0963	U	MS	0.0193	0.0963
	Nickel	0.0963	mg/kg	+/–0.385	U	MS	0.0963	0.385
	Selenium	0.482	mg/kg	+/–0.963	U	MS	0.482	0.963
	Thallium	0.0578	mg/kg	+/–0.193	U	MS	0.0578	0.193
1202018099								
	Aluminum	6640	ug/Kg	+/–19500	U	P	6640	19500
	Antimony	339	ug/Kg	+/–977	J	P	322	977
	Barium	97.7	ug/Kg	+/–488	U	P	97.7	488
	Cadmium	97.7	ug/Kg	+/–488	U	P	97.7	488
	Calcium	7810	ug/Kg	+/–24400	U	P	7810	24400
	Chromium	146	ug/Kg	+/–488	U	P	146	488
	Cobalt	146	ug/Kg	+/–488	U	P	146	488
	Copper	293	ug/Kg	+/–977	U	P	293	977
	Iron	33400	ug/Kg	+/–24400		P	7810	24400
	Lead	244	ug/Kg	+/–977	U	P	244	977
	Magnesium	9610	ug/Kg	+/–29300	J	P	8300	29300
	Manganese	300	ug/Kg	+/–977	J	P	195	977
	Potassium	6250	ug/Kg	+/–24400	U	P	6250	24400
	Silver	–113	ug/Kg	+/–488	J	P	97.7	488
	Sodium	8430	ug/Kg	+/–24400	J	P	6840	24400
	Vanadium	97.7	ug/Kg	+/–488	U	P	97.7	488
	Zinc	322	ug/Kg	+/–977	U	P	322	977
1202019779								
	Mercury	3.72	ug/kg	+/–10.9	U	AV	3.72	10.9
1202037284								
	Uranium	0.0126	mg/kg	+/–0.0383	U	MS	0.0126	0.0383

METALS
–4–
Interference Check Sample

SDG No: 10–1263

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	506000	ug/L	500000	ug/L	101	80.0 – 120.0	01–FEB–10 07:42	020110–1
	Antimony	7.16	ug/L					01–FEB–10 07:42	020110–1
	Barium	–0.15	ug/L					01–FEB–10 07:42	020110–1
	Cadmium	–2.3	ug/L					01–FEB–10 07:42	020110–1
	Calcium	475000	ug/L	500000	ug/L	94.9	80.0 – 120.0	01–FEB–10 07:42	020110–1
	Chromium	0.95	ug/L					01–FEB–10 07:42	020110–1
	Cobalt	–1.68	ug/L					01–FEB–10 07:42	020110–1
	Copper	2.21	ug/L					01–FEB–10 07:42	020110–1
	Iron	188000	ug/L	200000	ug/L	94.1	80.0 – 120.0	01–FEB–10 07:42	020110–1
	Lead	–4.5	ug/L					01–FEB–10 07:42	020110–1
	Magnesium	492000	ug/L	500000	ug/L	98.4	80.0 – 120.0	01–FEB–10 07:42	020110–1
	Manganese	–1.75	ug/L					01–FEB–10 07:42	020110–1
	Potassium	–204.0	ug/L					01–FEB–10 07:42	020110–1
	Silver	1.06	ug/L					01–FEB–10 07:42	020110–1
	Sodium	–2.95	ug/L					01–FEB–10 07:42	020110–1
	Vanadium	–2.64	ug/L					01–FEB–10 07:42	020110–1
	Zinc	7.68	ug/L					01–FEB–10 07:42	020110–1
ICSAB01									
	Aluminum	508000	ug/L	500000	ug/L	102	80.0 – 120.0	01–FEB–10 07:48	020110–1
	Antimony	523	ug/L	500	ug/L	105	80.0 – 120.0	01–FEB–10 07:48	020110–1
	Barium	469	ug/L	500	ug/L	93.8	80.0 – 120.0	01–FEB–10 07:48	020110–1
	Cadmium	460	ug/L	500	ug/L	91.9	80.0 – 120.0	01–FEB–10 07:48	020110–1
	Calcium	475000	ug/L	500000	ug/L	94.9	80.0 – 120.0	01–FEB–10 07:48	020110–1
	Chromium	465	ug/L	500	ug/L	93	80.0 – 120.0	01–FEB–10 07:48	020110–1
	Cobalt	436	ug/L	500	ug/L	87.2	80.0 – 120.0	01–FEB–10 07:48	020110–1
	Copper	539	ug/L	500	ug/L	108	80.0 – 120.0	01–FEB–10 07:48	020110–1
	Iron	187000	ug/L	200000	ug/L	93.6	80.0 – 120.0	01–FEB–10 07:48	020110–1
	Lead	448	ug/L	500	ug/L	89.5	80.0 – 120.0	01–FEB–10 07:48	020110–1
	Magnesium	492000	ug/L	500000	ug/L	98.4	80.0 – 120.0	01–FEB–10 07:48	020110–1

METALS
-4-
Interference Check Sample

SDG No: 10-1263

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Manganese	469	ug/L	500	ug/L	93.7	80.0 - 120.0	01-FEB-10 07:48	020110-1
	Potassium	5160	ug/L	5000	ug/L	103	80.0 - 120.0	01-FEB-10 07:48	020110-1
	Silver	265	ug/L	250	ug/L	106	80.0 - 120.0	01-FEB-10 07:48	020110-1
	Sodium	5290	ug/L	5000	ug/L	106	80.0 - 120.0	01-FEB-10 07:48	020110-1
	Vanadium	494	ug/L	500	ug/L	98.7	80.0 - 120.0	01-FEB-10 07:48	020110-1
	Zinc	482	ug/L	500	ug/L	96.4	80.0 - 120.0	01-FEB-10 07:48	020110-1

METALS
-4-
Interference Check Sample

SDG No: 10-1263

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium	-0.025	ug/L					09-FEB-10 21:05	100209-2
ICSAB01									
	Uranium	19.2	ug/L	20	ug/L	95.9	80.0 - 120.0	09-FEB-10 21:07	100209-2

METALS
-4-
Interference Check Sample

SDG No: 10-1263

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Arsenic	0.304	ug/L					08-FEB-10 02:02	100207-3
	Nickel	3.36	ug/L					08-FEB-10 02:02	100207-3
	Selenium	-1.31	ug/L					08-FEB-10 02:02	100207-3
	Thallium	0.013	ug/L					08-FEB-10 02:02	100207-3
ICSAB01									
	Arsenic	20.5	ug/L	20	ug/L	103	80.0 - 120.0	08-FEB-10 02:08	100207-3
	Nickel	22.8	ug/L	23.31	ug/L	97.6	80.0 - 120.0	08-FEB-10 02:08	100207-3
	Selenium	18.6	ug/L	20	ug/L	93.1	80.0 - 120.0	08-FEB-10 02:08	100207-3
	Thallium	22.3	ug/L	20	ug/L	111	80.0 - 120.0	08-FEB-10 02:08	100207-3

METALS
-4-
Interference Check Sample

SDG No: 10-1263

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Beryllium	0.096	ug/L					08-FEB-10 06:30	100207-4
ICSAB01									
	Beryllium	17.6	ug/L	20	ug/L	87.9	80.0 - 120.0	08-FEB-10 06:34	100207-4

METALS
–5a–
Matrix Spike Summary

SDG NO. 10–1263 **Client ID** RE12–10–8096S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 93.9

Sample ID: 244881001 **Spike ID:** 1202018071

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Beryllium	mg/kg	75–125	5.13		0.527		5.27	87.3		MS
Nickel	mg/kg	75–125	6.64		1.97		5.27	88.6		MS
Selenium	mg/kg	75–125	1.76		0.529	U	2.11	83.5		MS
Thallium	mg/kg	75–125	10.4		0.0635	U	10.5	98.1		MS
Arsenic	mg/kg	75–125	7.93		0.68	J	8.44	85.9		MS

METALS
-5a-

Matrix Spike Duplicate Summary

SDG NO.	10-1263	**Client ID**	RE12-10-8096SD
Contract:	LANL01004	**Level:**	Low
Matrix:	SOIL	**% Solids:**	93.9
Sample ID:	244881001	**Spike ID:**	1202018073

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/kg	75-125	7.99		0.68	J	8.47	86.2		MS
Beryllium	mg/kg	75-125	5.2		0.527		5.29	88.2		MS
Nickel	mg/kg	75-125	6.81		1.97		5.29	91.5		MS
Selenium	mg/kg	75-125	1.83		0.529	U	2.12	86.3		MS
Thallium	mg/kg	75-125	10.3		0.0635	U	10.6	96.5		MS

METALS
–5a–

Matrix Spike Summary

SDG NO. 10–1263 **Client ID** RE12–10–8096S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 93.9

Sample ID: 244881001 **Spike ID:** 1202018102

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		4750000		2280000		515000	479	N/A	P
Antimony	ug/Kg	75–125	50900		343	U	51500	98.3		P
Barium	ug/Kg	75–125	77800		23700		51500	105		P
Cadmium	ug/Kg	75–125	50800		104	U	51500	98.7		P
Calcium	ug/Kg	75–125	1270000		761000		515000	98.9		P
Chromium	ug/Kg	75–125	57700		5740		51500	101		P
Cobalt	ug/Kg	75–125	50500		893		51500	96.3		P
Copper	ug/Kg	75–125	56200		2490		51500	104		P
Iron	ug/Kg		9150000		7990000		515000	225	N/A	P
Lead	ug/Kg	75–125	55400		4750		51500	98.4		P
Magnesium	ug/Kg	75–125	1220000		476000		515000	144	N	P
Manganese	ug/Kg	75–125	276000		203000		51500	141	N	P
Potassium	ug/Kg	75–125	1170000		462000		515000	138	N	P
Silver	ug/Kg	75–125	51700		118	J	51500	100		P
Sodium	ug/Kg	75–125	597000		51400		515000	106		P
Vanadium	ug/Kg	75–125	57300		6110		51500	99.5		P
Zinc	ug/Kg	75–125	90100		35900		51500	105		P

METALS
–5a–

Matrix Spike Duplicate Summary

SDG NO. 10–1263 **Client ID** RE12–10–8096SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 93.9

Sample ID: 244881001 **Spike ID:** 1202018104

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Sodium	ug/Kg	75–125	575000		51400		529000	98.9		P
Vanadium	ug/Kg	75–125	59200		6110		52900	100		P
Zinc	ug/Kg	75–125	94600		35900		52900	111		P
Aluminum	ug/Kg		5410000		2280000		529000	592	N/A	P
Antimony	ug/Kg	75–125	51500		343	U	52900	96.9		P
Barium	ug/Kg	75–125	80900		23700		52900	108		P
Cadmium	ug/Kg	75–125	52600		104	U	52900	99.4		P
Calcium	ug/Kg	75–125	1270000		761000		529000	96		P
Chromium	ug/Kg	75–125	59300		5740		52900	101		P
Cobalt	ug/Kg	75–125	52500		893		52900	97.6		P
Copper	ug/Kg	75–125	58400		2490		52900	106		P
Iron	ug/Kg		9500000		7990000		529000	285	N/A	P
Lead	ug/Kg	75–125	57600		4750		52900	99.9		P
Magnesium	ug/Kg	75–125	1230000		476000		529000	141	N	P
Manganese	ug/Kg	75–125	285000		203000		52900	156	N	P
Potassium	ug/Kg	75–125	1180000		462000		529000	136	N	P
Silver	ug/Kg	75–125	53400		118	J	52900	101		P

METALS
–5a–

Matrix Spike Summary

SDG NO.	10–1263	**Client ID**	RE15–10–7163S
Contract:	LANL01004	**Level:**	Low
Matrix:	SOIL	**% Solids:**	93.4
Sample ID:	244921001	**Spike ID:**	1202019782

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg		818		542		126	220	N/A	AV

METALS
-5a-

Matrix Spike Duplicate Summary

SDG NO.	10-1263	**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
–5a–

Matrix Spike Summary

SDG NO. 10–1263 **Client ID** RE12–10–7272S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 87

Sample ID: 244847001 **Spike ID:** 1202037287

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Uranium	mg/kg	75–125	7.02		1.84		5.47	94.7		MS

METALS
–5a–

Matrix Spike Duplicate Summary

SDG NO.	10–1263	**Client ID**	RE12–10–7272SD
Contract:	LANL01004	**Level:**	Low
Matrix:	SOIL	**% Solids:**	87
Sample ID:	244847001	**Spike ID:**	1202037288

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Uranium	mg/kg	75–125	7.23		1.84		5.52	97.7		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1263

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** RE12–10–8096D

Sample ID: 244881001 **Duplicate ID:** 1202018070 **Percent Solids for Dup:** 93.9

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/–1.06	0.68	J	0.706	J	3.67		MS
Beryllium	mg/kg	+/–.106	0.527		0.473		10.7		MS
Nickel	mg/kg	+/–.425	1.97		1.8		8.73		MS
Selenium	mg/kg		0.529	U	0.532	U			MS
Thallium	mg/kg		0.0635	U	0.0638	U			MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1263

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** RE12–10–8096SD

Sample ID: 1202018071 **Duplicate ID:** 1202018073 **Percent Solids for Dup:** 93.9

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/–20	7.93		7.99		.684		MS
Beryllium	mg/kg	+/–20	5.13		5.2		1.3		MS
Nickel	mg/kg	+/–20	6.64		6.81		2.59		MS
Selenium	mg/kg	+/–20	1.76		1.83		3.75		MS
Thallium	mg/kg	+/–20	10.4		10.3		1.25		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1263

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** RE12–10–8096D

Sample ID: 244881001 **Duplicate ID:** 1202018101 **Percent Solids for Dup:** 93.9

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20%	2280000		2450000		7.29		P
Antimony	ug/Kg		343	U	347	U			P
Barium	ug/Kg	+/–20%	23700		28200		17.2		P
Cadmium	ug/Kg		104	U	105	U			P
Calcium	ug/Kg	+/–20%	761000		788000		3.48		P
Chromium	ug/Kg	+/–20%	5740		5810		1.27		P
Cobalt	ug/Kg	+/–525	893		1250		33.3		P
Copper	ug/Kg	+/–1050	2490		2590		4.09		P
Iron	ug/Kg	+/–20%	7990000		8840000		10.1		P
Lead	ug/Kg	+/–1050	4750		5400		13		P
Magnesium	ug/Kg	+/–20%	476000		551000		14.4		P
Manganese	ug/Kg	+/–20%	203000		246000		19		P
Potassium	ug/Kg	+/–20%	462000		506000		9.11		P
Silver	ug/Kg	+/–525	118	J	193	J	48.2		P
Sodium	ug/Kg	+/–26300	51400		54600		6.06		P
Vanadium	ug/Kg	+/–20%	6110		6390		4.5		P
Zinc	ug/Kg	+/–20%	35900		40500		12.2		P

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1263

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** RE12–10–8096SD

Sample ID: 1202018102 **Duplicate ID:** 1202018104 **Percent Solids for Dup:** 93.9

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20	4750000		5410000		13.1		P
Antimony	ug/Kg	+/–20	50900		51500		1.27		P
Barium	ug/Kg	+/–20	77800		80900		3.88		P
Cadmium	ug/Kg	+/–20	50800		52600		3.47		P
Calcium	ug/Kg	+/–20	1270000		1270000		.109		P
Chromium	ug/Kg	+/–20	57700		59300		2.73		P
Cobalt	ug/Kg	+/–20	50500		52500		4		P
Copper	ug/Kg	+/–20	56200		58400		3.84		P
Iron	ug/Kg	+/–20	9150000		9500000		3.78		P
Lead	ug/Kg	+/–20	55400		57600		3.87		P
Magnesium	ug/Kg	+/–20	1220000		1230000		.506		P
Manganese	ug/Kg	+/–20	276000		285000		3.46		P
Potassium	ug/Kg	+/–20	1170000		1180000		.73		P
Silver	ug/Kg	+/–20	51700		53400		3.2		P
Sodium	ug/Kg	+/–20	597000		575000		3.78		P
Vanadium	ug/Kg	+/–20	57300		59200		3.22		P
Zinc	ug/Kg	+/–20	90100		94600		4.87		P

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1263

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.: 10-1263

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
-6-
Duplicate Sample Summary

SDG No.: 10-1263

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** RE12-10-7272D

Sample ID: 244847001 **Duplicate ID:** 1202037285 **Percent Solids for Dup:** 87

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Uranium	mg/kg	+/-20%	1.84		2.05		10.7		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1263

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** RE12–10–7272SD

Sample ID: 1202037287 **Duplicate ID:** 1202037288 **Percent Solids for Dup:** 87

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Uranium	mg/kg	+/–20	7.02		7.23		2.97		MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 10-1263

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202018069								
	Arsenic	mg/kg	104	104		99.6	83-120	MS
	Beryllium	mg/kg	77.6	81		104	81.2-126.8	MS
	Nickel	mg/kg	134	147		110	83.3-121.4	MS
	Selenium	mg/kg	286	300		105	80.2-125.9	MS
	Thallium	mg/kg	121	135		111	78-123.2	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 10-1263

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202018100								
	Sodium	ug/Kg	1020000	1170000		114	74-127	P
	Vanadium	ug/Kg	115000	120000		105	79-121	P
	Zinc	ug/Kg	594000	621000		104	80-121	P
	Aluminum	ug/Kg	10500000	7920000		75.4	56-144	P
	Antimony	ug/Kg	173000	153000		88.4	71-130	P
	Barium	ug/Kg	198000	185000		93.2	80-120	P
	Cadmium	ug/Kg	60700	66000		109	81-120	P
	Calcium	ug/Kg	9870000	10300000		104	83-117	P
	Chromium	ug/Kg	236000	269000		114	80-120	P
	Cobalt	ug/Kg	91200	100000		110	81-120	P
	Copper	ug/Kg	174000	202000		116	81-118	P
	Iron	ug/Kg	18000000	17000000		94.4	51-149	P
	Lead	ug/Kg	86000	78000		90.7	79-121	P
	Magnesium	ug/Kg	4000000	3770000		94.3	79-122	P
	Manganese	ug/Kg	558000	548000		98.3	81-119	P
	Potassium	ug/Kg	4300000	3880000		90.1	74-127	P
	Silver	ug/Kg	30100	31400		104	66-134	P

METALS
–7–
Laboratory Control Sample Summary

SDG NO. 10–1263

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202019780								
	Mercury	ug/kg	5150	5830		113	71.6–128.3	AV

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 10-1263

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202037289								
	Uranium	mg/kg	2.13	1.38		65	61.9-130.7	MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 10-1263 **Client ID** RE12-10-8096L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 244881001 **Serial Dilution ID:** 1202018072

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	3.21	J	5	U	100			MS
Beryllium	2.49		2.62		5.02			MS
Nickel	9.29		9.9	J	6.57			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.3	U	1.5	U				MS

METALS
–9–
Serial Dilution Sample Summary

SDG NO. 10–1263 **Client ID** RE12–10–8096L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 244881001 **Serial Dilution ID:** 1202018103

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	21900		20400		6.85		10	P
Antimony	3.3	U	18.3	J				P
Barium	228		218		4.39		10	P
Cadmium	1	U	5	U				P
Calcium	7310		7050		3.56		10	P
Chromium	55.1		55.5		.726			P
Cobalt	8.59		7.5	U	100			P
Copper	23.9		24.9	J	4.18			P
Iron	76800		76000		1.04		10	P
Lead	45.6		49.4	J	8.22			P
Magnesium	4580		5000		9.17		10	P
Manganese	1950		1910		2.31		10	P
Potassium	4440		4180		5.97		10	P
Silver	1.13	J	5	U	100			P
Sodium	494		875	J	77.1			P
Vanadium	58.7		57		2.9		10	P
Zinc	345		331		4.06		10	P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 10-1263 **Client ID** RE15-10-7163L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 244921001 **Serial Dilution ID:** 1202019783

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	8.59		8.1		5.7		10	AV

METALS
–9–
Serial Dilution Sample Summary

SDG NO. 10–1263 **Client ID** RE12–10–7272L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 244847001 **Serial Dilution ID:** 1202037286

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Uranium	8.36		8.5		1.67		10	MS

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-1263 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 942644							
1202018099	MB for batch 942644	MB	S	21-JAN-10	.512g	50mL	
1202018100	LCS for batch 942644	LCS	S	21-JAN-10	.501g	50mL	
1202018102	RE12-10-8096S	MS	S	21-JAN-10	.517g	50mL	
1202018104	RE12-10-8096SD	MSD	S	21-JAN-10	.503g	50mL	
1202018101	RE12-10-8096D	DUP	S	21-JAN-10	.507g	50mL	
244852001	RE12-10-7856	SAMPLE	S	21-JAN-10	.511g	50mL	
244852002	RE12-10-7857	SAMPLE	S	21-JAN-10	.519g	50mL	
244852003	RE12-10-7855	SAMPLE	S	21-JAN-10	.517g	50mL	
244852004	RE12-10-7854	SAMPLE	S	21-JAN-10	.505g	50mL	

METALS
–13–
SAMPLE PREPARATION SUMMARY

SDG No: 10–1263 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 942632							
1202018068	MB for batch 942632	MB	S	21–JAN–10	.519g	50mL	
1202018069	LCS for batch 942632	LCS	S	21–JAN–10	.518g	50mL	
1202018071	RE12–10–8096S	MS	S	21–JAN–10	.505g	50mL	
1202018073	RE12–10–8096SD	MSD	S	21–JAN–10	.503g	50mL	
1202018070	RE12–10–8096D	DUP	S	21–JAN–10	.501g	50mL	
244852001	RE12–10–7856	SAMPLE	S	21–JAN–10	.502g	50mL	
244852002	RE12–10–7857	SAMPLE	S	21–JAN–10	.508g	50mL	
244852003	RE12–10–7855	SAMPLE	S	21–JAN–10	.518g	50mL	
244852004	RE12–10–7854	SAMPLE	S	21–JAN–10	.523g	50mL	
Batch Number 950660							
1202037284	MB for batch 950660	MB	S	09–FEB–10	.522g	50mL	
1202037289	LCS for batch 950660	LCS	S	09–FEB–10	.52g	50mL	
1202037287	RE12–10–7272S	MS	S	09–FEB–10	.523g	50mL	
1202037288	RE12–10–7272SD	MSD	S	09–FEB–10	.518g	50mL	
1202037285	RE12–10–7272D	DUP	S	09–FEB–10	.5g	50mL	
244852001	RE12–10–7856	SAMPLE	S	09–FEB–10	.504g	50mL	
244852002	RE12–10–7857	SAMPLE	S	09–FEB–10	.504g	50mL	
244852003	RE12–10–7855	SAMPLE	S	09–FEB–10	.522g	50mL	
244852004	RE12–10–7854	SAMPLE	S	09–FEB–10	.506g	50mL	

METALS
–13–
SAMPLE PREPARATION SUMMARY

SDG No: 10–1263 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
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	
244852001	RE12–10–7856	SAMPLE	S	27–JAN–10	.502g	30mL	
244852002	RE12–10–7857	SAMPLE	S	27–JAN–10	.516g	30mL	
244852003	RE12–10–7855	SAMPLE	S	27–JAN–10	.516g	30mL	
244852004	RE12–10–7854	SAMPLE	S	27–JAN–10	.541g	30mL	

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 08–FEB–10 **End Date:** 08–FEB–10

Client Sdg: 10–1263
Method MS
Data File: 100207–3

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	01:25			X													X		X			X			
S10	1	01:31			X													X		X			X			
S100	1	01:38			X													X		X			X			
ICV01	1	01:44			X													X		X			X			
ICB01	1	01:50			X													X		X			X			
CRDL01	1	01:56			X													X		X			X			
ICSA01	1	02:02			X													X		X			X			
ICSAB01	1	02:08			X													X		X			X			
CCV01	1	02:14			X													X		X			X			
CCB01	1	02:20			X													X		X			X			
LR01	1	02:26			X													X		X			X			
CCV02	1	02:33			X													X		X			X			
CCB02	1	02:39			X													X		X			X			
1202018068	2	02:45			X													X		X			X			
1202018069	40	02:51			X													X		X			X			
ZZZZZZ	2	02:57																								
ZZZZZZ	2	03:03																								
ZZZZZZ	2	03:09																								
ZZZZZZ	2	03:16																								
ZZZZZZ	2	03:22																								
CCV03	1	03:28			X													X		X			X			
CCB03	1	03:34			X													X		X			X			
ZZZZZZ	2	03:40																								
ZZZZZZ	2	03:46																								
ZZZZZZ	2	03:53																								
ZZZZZZ	2	03:59																								
ZZZZZZ	2	04:05																								
244852001	2	04:11			X													X		X			X			
244852002	2	04:17			X													X		X			X			
CCV04	1	04:24			X													X		X			X			
CCB04	1	04:30			X													X		X			X			
244852003	2	04:36			X													X		X			X			
244852004	2	04:42			X													X		X			X			
ZZZZZZ	2	04:48																								
1202018070	2	04:54			X													X		X			X			
1202018071	2	05:01			X													X		X			X			
1202018073	2	05:07			X													X		X			X			
1202018072	10	05:13			X													X		X			X			
CCV05	1	05:19			X													X		X			X			
CCB05	1	05:25			X													X		X			X			

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 08–FEB–10 **End Date:** 08–FEB–10

Client Sdg: 10–1263
Method MS
Data File: 100207–4

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	06:08					X																			
S10	1	06:12					X																			
S100	1	06:15					X																			
ICV01	1	06:19					X																			
ICB01	1	06:23					X																			
CRDL01	1	06:26					X																			
ICSA01	1	06:30					X																			
ICSAB01	1	06:34					X																			
CCV01	1	06:37					X																			
CCB01	1	06:41					X																			
LR01	1	06:45					X																			
CCV02	1	06:48					X																			
CCB02	1	06:52					X																			
1202018068	2	06:56					X																			
1202018069	40	07:00					X																			
ZZZZZZ	2	07:03																								
ZZZZZZ	2	07:07																								
ZZZZZZ	2	07:11																								
ZZZZZZ	2	07:14																								
ZZZZZZ	2	07:18																								
CCV03	1	07:22					X																			
CCB03	1	07:26					X																			
ZZZZZZ	2	07:29																								
ZZZZZZ	2	07:33																								
ZZZZZZ	2	07:37																								
ZZZZZZ	2	07:41																								
ZZZZZZ	2	07:44																								
244852001	2	07:48					X																			
244852002	2	07:52					X																			
CCV04	1	07:55					X																			
CCB04	1	07:59					X																			
244852003	2	08:03					X																			
244852004	2	08:07					X																			
ZZZZZZ	2	08:10																								
1202018070	2	08:14					X																			
1202018071	2	08:18					X																			
1202018073	2	08:22					X																			
1202018072	10	08:25					X																			
CCV05	1	08:29					X																			
CCB05	1	08:33					X																			

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 01–FEB–10 **End Date:** 02–FEB–10

Client Sdg: 10–1263
Method P
Data File: 020110–1

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	06:49	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S0.1	1	06:56		X		X		X		X	X	X		X		X			X		X				X	X
S0.5	1	07:02	X	X		X		X	X	X	X	X		X	X	X			X		X				X	X
SCAL	1	07:09	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S10	1	07:16	X						X				X		X							X				
ICV01	1	07:22	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICB01	1	07:28	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
PQL01	1	07:35	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSA01	1	07:42	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSAB01	1	07:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR01	1	07:54	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR02	1	08:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	08:08																								
ZZZZZZ	1	08:15																								
CCV01	1	08:25	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB01	1	08:32	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR03	1	08:39	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR04	1	08:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV02	1	08:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB02	1	09:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	09:10																								
ZZZZZZ	1	09:17																								
ZZZZZZ	1	09:24																								
ZZZZZZ	1	09:31																								
ZZZZZZ	1	09:38																								
ZZZZZZ	1	09:44																								
ZZZZZZ	1	09:51																								
ZZZZZZ	1	09:58																								
ZZZZZZ	1	10:05																								
ZZZZZZ	1	10:11																								
CCV03	1	10:18	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB03	1	10:26	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	10:41																								
ZZZZZZ	1	10:48																								
ZZZZZZ	1	10:55																								
ZZZZZZ	1	11:02																								
ZZZZZZ	1	11:09																								
ZZZZZZ	5	11:16																								
ZZZZZZ	1	11:23																								
ZZZZZZ	1	11:30																								

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time																								
ZZZZZZ	1	11:37																								
CCV04	1	11:44	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB04	1	11:51	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	10	11:58																								
ZZZZZZ	10	12:05																								
ZZZZZZ	10	12:12																								
ZZZZZZ	50	12:19																								
ZZZZZZ	10	12:25																								
ZZZZZZ	5	12:32																								
ZZZZZZ	5	12:39																								
CCV05	1	12:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB05	1	12:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	50	13:03																								
ZZZZZZ	50	13:10																								
ZZZZZZ	50	13:17																								
ZZZZZZ	50	13:24																								
ZZZZZZ	250	13:30																								
ZZZZZZ	50	13:37																								
ZZZZZZ	50	13:44																								
ZZZZZZ	50	13:51																								
ZZZZZZ	50	13:58																								
ZZZZZZ	50	14:04																								
CCV06	1	14:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB06	1	14:18	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	14:34																								
ZZZZZZ	1	14:41																								
ZZZZZZ	50	14:47																								
ZZZZZZ	10	14:54																								
ZZZZZZ	10	15:02																								
ZZZZZZ	10	15:09																								
ZZZZZZ	10	15:16																								
CCV07	1	15:23	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB07	1	15:30	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	10	15:37																								
ZZZZZZ	10	15:44																								
ZZZZZZ	50	15:51																								
ZZZZZZ	10	15:58																								
ZZZZZZ	50	16:05																								
ZZZZZZ	1	16:12																								
ZZZZZZ	50	16:21																								

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	100	16:28																								
CCV08	1	16:35	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB08	1	16:42	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV09	1	17:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB09	1	17:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	17:18																								
ZZZZZZ	1	17:24																								
ZZZZZZ	1	17:31																								
ZZZZZZ	50	17:38																								
ZZZZZZ	1	17:45																								
ZZZZZZ	1	17:52																								
ZZZZZZ	1	17:59																								
ZZZZZZ	1	18:05																								
ZZZZZZ	5	18:12																								
ZZZZZZ	50	18:19																								
CCV10	1	18:26	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB10	1	18:33	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	100	18:40																								
ZZZZZZ	100	18:47																								
ZZZZZZ	100	18:53																								
ZZZZZZ	100	19:00																								
ZZZZZZ	100	19:07																								
ZZZZZZ	100	19:14																								
ZZZZZZ	50	19:21																								
ZZZZZZ	50	19:28																								
ZZZZZZ	50	19:35																								
CCV11	1	19:41	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB11	1	19:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	100	19:55																								
ZZZZZZ	50	20:02																								
ZZZZZZ	50	20:09																								
ZZZZZZ	1	20:15																								
ZZZZZZ	1	20:22																								
ZZZZZZ	100	20:29																								
ZZZZZZ	1	20:36																								
ZZZZZZ	1	20:43																								
CCV12	1	20:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB12	1	20:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	21:04																								
ZZZZZZ	1	21:11																								

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	1	21:17																							
ZZZZZZ	1	21:24																							
ZZZZZZ	1	21:31																							
ZZZZZZ	1	21:38																							
ZZZZZZ	1	21:45																							
ZZZZZZ	1	21:52																							
CCV13	1	21:59	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB13	1	22:06	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	22:13																							
ZZZZZZ	1	22:20																							
ZZZZZZ	1	22:27																							
ZZZZZZ	1	22:34																							
ZZZZZZ	1	22:41																							
ZZZZZZ	1	22:48																							
ZZZZZZ	1	22:55																							
CCV14	1	23:02	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB14	1	23:09	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	23:16																							
ZZZZZZ	5	23:23																							
ZZZZZZ	1	23:30																							
ZZZZZZ	1	23:37																							
ZZZZZZ	1	23:43																							
ZZZZZZ	1	23:51																							
ZZZZZZ	1	23:58																							
CCV15	1	00:05	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB15	1	00:12	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202018099	1	00:18	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202018100	1	00:25	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	00:32																							
ZZZZZZ	1	00:39																							
ZZZZZZ	1	00:46																							
ZZZZZZ	1	00:53																							
ZZZZZZ	1	01:00																							
ZZZZZZ	1	01:07																							
CCV16	1	01:14	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB16	1	01:21	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	01:28																							
ZZZZZZ	1	01:35																							
ZZZZZZ	1	01:42																							
ZZZZZZ	1	01:49																							

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
244852001	1	01:56	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244852002	1	02:03	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244852003	1	02:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
244852004	1	02:18	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV17	1	02:25	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB17	1	02:32	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	02:38																								
1202018101	1	02:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202018102	1	02:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202018104	1	03:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202018103	5	03:07	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	03:14																								
ZZZZZZ	1	03:21																								
ZZZZZZ	1	03:28																								
CCV18	1	03:35	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB18	1	03:42	X	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: 28–JAN–10 **End Date:** 28–JAN–10

Client Sdg: 10–1263
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									
244852001	1	09:51															X									
244852002	1	09:53															X									
244852003	1	09:55															X									
244852004	1	09:57															X									
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																								
ZZZZZZ	1	10:13																								
1202019781	1	10:15															X									
1202019782	1	10:17															X									
1202019784	1	10:19															X									
1202019783	5	10:21															X									
ZZZZZZ	1	10:23																								
ZZZZZZ	1	10:25																								
ZZZZZZ	1	10:27																								
ZZZZZZ	1	10:29																								
CCV03	1	10:31															X									
CCB03	1	10:33															X									

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS4
Start Date: 09-FEB-10 **End Date:** 09-FEB-10

Client Sdg: 10-1263
Method MS
Data File: 100209-2

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	20:52																						X		
S10	1	20:54																						X		
S100	1	20:56																						X		
ICV01	1	20:58																						X		
ICB01	1	21:00																						X		
CRDL01	1	21:03																						X		
ICSA01	1	21:05																						X		
ICSAB01	1	21:07																						X		
CCV01	1	21:09																						X		
CCB01	1	21:11																						X		
1202037284	2	21:14																						X		
1202037289	40	21:16																						X		
ZZZZZZ	2	21:18																								
1202037285	2	21:21																						X		
1202037287	2	21:23																						X		
1202037288	2	21:25																						X		
1202037286	10	21:27																						X		
CCV02	1	21:30																						X		
CCB02	1	21:32																						X		
ZZZZZZ	2	21:34																								
ZZZZZZ	2	21:36																								
ZZZZZZ	2	21:39																								
244852001	2	21:41																						X		
244852002	2	21:43																						X		
244852003	2	21:46																						X		
CCV03	1	21:48																						X		
CCB03	1	21:50																						X		
244852004	2	21:52																						X		
ZZZZZZ	2	21:55																								
ZZZZZZ	2	21:57																								
ZZZZZZ	2	21:59																								
ZZZZZZ	2	22:01																								
CCV04	1	22:04																						X		
CCB04	1	22:06																						X		

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 10-1263

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
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

METALS
–10–
Instrument Detection Limits

SDG NO. 10–1263

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 15–JUN–09

MERCURY	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Mercury		0.068	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 10-1263

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL 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:** 10-1263
Contract: LANL01004
Instrument: OPTIMA3 **Effective Dates:** 01-FEB-10
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	0.02697	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	-0.05186	0.00000	0.00000	0.00000	0.00000
Silica	251.611	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	0.18741	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
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 10-1263
Effective Dates: 01-FEB-10

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	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
Silica	251.611	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	4.37985	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.36147	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	2.23785	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.36818	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.35273

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 10-1263
Effective Dates: 01-FEB-10

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
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	-3.27508	0.00000	0.00000	0.00000	-3.07287
Silica	251.611	0.00000	0.00000	0.00000	0.00000	27.2377
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	12.3082
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	-4.77918	0.00000
Tin	189.927	-0.01682	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.08168	0.00000	0.00000
Uranium	409.014	0.11400	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.14564	0.00000	-0.01931	0.00000	-14.1293
Zinc	213.857	0.09701	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 10-1263
Effective Dates: 01-FEB-10

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silica
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
Silica	251.611	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	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	6.37026	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 10-1263
Contract: LANL01004
Instrument: OPTIMA3
Effective Dates: 01-FEB-10
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Silicon	Silver	Strontium	Sulfur	Thallium
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	0.00000	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
Silica	251.611	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	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
Contract: LANL01004
Instrument: OPTIMA3
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

GEL Job No: 10-1263
Effective Dates: 01-FEB-10

Parmname	Wavelength	Tin	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	-15.4932	3.30431	0.00000	-2.81282	0.00000
Arsenic	188.979	0.00000	-8.66313	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	-2.20293	0.00000
Beryllium	313.107	0.00000	-2.27027	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	-0.19473	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.39645	-1.41250	0.00000
Cobalt	228.616	0.00000	2.09497	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.55360	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	-9.37529	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
Silica	251.611	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	0.81635	-4.04400	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	-8.29801	0.00000	1.88584	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.43915	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	1.05947	-1.91382	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 10-1263

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS5

Analyte	Integration Time (msec)	LDR	Units	Effective Date
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. 10-1263

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
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

METALS
-12-
Linear Ranges

SDG NO. 10-1263

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS4

Analyte	Integration Time (msec)	LDR	Units	Effective Date
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
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

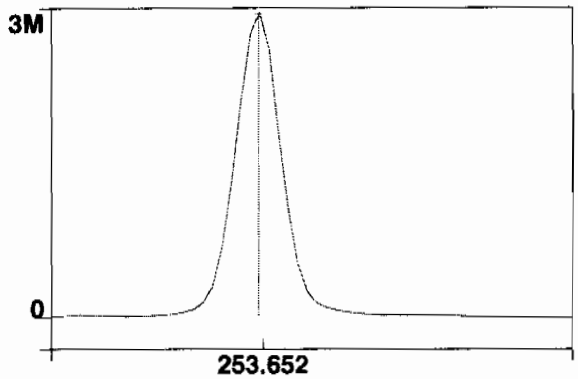
Raw Data

Method: Hg_ReAlign
Result: 021010

Sample ID: Hg_ReAlign

Hg 253.652

Rep: 1



Intensity: 3340909.4 cps
Conc:

1

-2.0	15.0	10950.7
-1.5	15.0	13356.1
-1.0	15.0	18207.6
-0.5	15.0	21698.6
0.0	15.0	22605.7
0.5	15.0	20975.3
1.0	15.0	17444.4
1.5	15.0	11061.7
2.0	15.0	6169.3
2.5	15.0	4491.1
3.0	15.0	2833.9
3.5	15.0	1906.5
4.0	15.0	1346.0
4.5	15.0	994.3
5.0	15.0	892.7
5.5	15.0	962.2
6.0	15.0	1130.4
6.5	15.0	1498.4
7.0	15.0	1651.0

2/1/2010 05:58:43 aligned for analyte Mn 257.610
X viewing position set to 0.0 mm having Peak intensity 22605.7 for Radial viewing

Analysis Begun

Start Time: 2/1/2010 06:49:48 **Plasma On Time: 2/1/2010 05:43:14**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\020110.sif
Batch ID:
Results Data Set: 020110
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1 **Autosampler Location: 8**
Sample ID: S0 **Date Collected: 2/1/2010 06:49:48**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	4121.5	4121.5	0.000	%	06:52:01
1	Y RADIAL	4829.5	4829.5	0.000	%	06:51:41
1	Al 396.153Radial†	-161.7	-161.9	[0.00]	ug/L	06:51:41
1	Ca 317.933Radial†	10.8	10.8	[0.00]	ug/L	06:52:01
1	Fe 238.204 Radial†	12.2	12.2	[0.00]	ug/L	06:52:01
1	K 766.490 Radial†	2566.6	2569.1	[0.00]	ug/L	06:51:41
1	Mg 279.077 IEC†	-0.6	-0.6	[0.00]	ug/L	06:52:01
1	Na 589.592 Radial†	-1699.0	-1700.7	[0.00]	ug/L	06:51:41
1	Sr 421.552†	46.0	46.0	[0.00]	ug/L	06:51:41
1	Sc 361.383	894016.3	894016.3	0.0000	%	06:52:58
1	Y 371.029	735292.5	735292.5	0.0000	%	06:52:58
1	Ag 328.068†	563.6	561.5	[0.00]	ug/L	06:52:58
1	As 188.979†	-26.4	-26.3	[0.00]	ug/L	06:53:18
1	B 249.677†	-761.3	-758.6	[0.00]	ug/L	06:53:18
1	Ba 233.527†	-11.8	-11.8	[0.00]	ug/L	06:53:18
1	Be 313.107†	-4449.3	-4433.4	[0.00]	ug/L	06:52:58
1	Cd 226.502†	-195.6	-194.9	[0.00]	ug/L	06:53:18
1	Co 228.616†	-73.1	-72.8	[0.00]	ug/L	06:53:18
1	Cr 267.716†	65.4	65.2	[0.00]	ug/L	06:52:58
1	Cu 324.752†	6876.8	6852.3	[0.00]	ug/L	06:52:58
1	Mn 257.610†	533.5	531.6	[0.00]	ug/L	06:53:18
1	Mo 202.031†	6.3	6.2	[0.00]	ug/L	06:53:18
1	Ni 231.604†	83.0	82.7	[0.00]	ug/L	06:53:18
1	P 214.914†	219.2	218.4	[0.00]	ug/L	06:53:18

1	Pb 220.353†	-72.2	-71.9	[0.00]	ug/L	06:53:18
1	S 181.975 Axial†	43.8	43.7	[0.00]	ug/L	06:53:18
1	Sb 206.836†	39.1	39.0	[0.00]	ug/L	06:53:18
1	Se 196.026†	-28.3	-28.2	[0.00]	ug/L	06:53:18
1	Si 251.611†	537.0	535.1	[0.00]	ug/L	06:53:18
1	Sn 189.927†	8.3	8.3	[0.00]	ug/L	06:53:18
1	Ti 334.940†	-1827.5	-1821.0	[0.00]	ug/L	06:52:58
1	Tl 190.801†	-49.8	-49.6	[0.00]	ug/L	06:53:18
1	U 409.014†	-5120.4	-5102.1	[0.00]	ug/L	06:52:58
1	V 292.402†	-1768.4	-1762.1	[0.00]	ug/L	06:52:58
1	Zn 213.857†	703.9	701.4	[0.00]	ug/L	06:53:18
1	SiO2†	571.2	569.1	[0.00]	ug/L	06:54:14
2	Sc Radial	4130.1	4130.1	0.000	%	06:52:26
2	Y RADIAL	4825.8	4825.8	0.000	%	06:52:06
2	Al 396.153Radial†	-198.2	-198.0	[0.00]	ug/L	06:52:06
2	Ca 317.933Radial†	16.1	16.1	[0.00]	ug/L	06:52:26
2	Fe 238.204 Radial†	8.8	8.8	[0.00]	ug/L	06:52:26
2	K 766.490 Radial†	2672.8	2669.8	[0.00]	ug/L	06:52:06
2	Mg 279.077 IEC†	1.4	1.4	[0.00]	ug/L	06:52:26
2	Na 589.592 Radial†	-1651.2	-1649.4	[0.00]	ug/L	06:52:06
2	Sr 421.552†	27.0	26.9	[0.00]	ug/L	06:52:06
2	Sc 361.383	888912.0	888912.0	0.0000	%	06:53:23
2	Y 371.029	733255.9	733255.9	0.0000	%	06:53:23
2	Ag 328.068†	594.3	595.6	[0.00]	ug/L	06:53:23
2	As 188.979†	-22.4	-22.5	[0.00]	ug/L	06:53:43
2	B 249.677†	-763.7	-765.4	[0.00]	ug/L	06:53:43
2	Ba 233.527†	-12.6	-12.6	[0.00]	ug/L	06:53:43
2	Be 313.107†	-4389.8	-4399.3	[0.00]	ug/L	06:53:23
2	Cd 226.502†	-209.5	-210.0	[0.00]	ug/L	06:53:43
2	Co 228.616†	-103.3	-103.5	[0.00]	ug/L	06:53:43
2	Cr 267.716†	44.7	44.8	[0.00]	ug/L	06:53:23
2	Cu 324.752†	6954.3	6969.2	[0.00]	ug/L	06:53:23
2	Mn 257.610†	543.8	545.0	[0.00]	ug/L	06:53:43
2	Mo 202.031†	5.2	5.2	[0.00]	ug/L	06:53:43
2	Ni 231.604†	91.9	92.1	[0.00]	ug/L	06:53:43
2	P 214.914†	224.3	224.8	[0.00]	ug/L	06:53:43
2	Pb 220.353†	-76.8	-76.9	[0.00]	ug/L	06:53:43
2	S 181.975 Axial†	51.8	51.9	[0.00]	ug/L	06:53:43
2	Sb 206.836†	37.1	37.2	[0.00]	ug/L	06:53:43
2	Se 196.026†	-30.3	-30.3	[0.00]	ug/L	06:53:43
2	Si 251.611†	543.2	544.3	[0.00]	ug/L	06:53:43
2	Sn 189.927†	9.6	9.6	[0.00]	ug/L	06:53:43
2	Ti 334.940†	-1777.3	-1781.1	[0.00]	ug/L	06:53:23
2	Tl 190.801†	-39.8	-39.9	[0.00]	ug/L	06:53:43
2	U 409.014†	-5031.9	-5042.8	[0.00]	ug/L	06:53:23
2	V 292.402†	-1771.2	-1775.0	[0.00]	ug/L	06:53:23
2	Zn 213.857†	727.3	728.8	[0.00]	ug/L	06:53:43
2	SiO2†	574.5	575.8	[0.00]	ug/L	06:54:19
3	Sc Radial	4124.9	4124.9	0.000	%	06:52:51
3	Y RADIAL	4868.9	4868.9	0.000	%	06:52:31
3	Al 396.153Radial†	-210.4	-210.5	[0.00]	ug/L	06:52:31
3	Ca 317.933Radial†	13.1	13.1	[0.00]	ug/L	06:52:51
3	Fe 238.204 Radial†	9.4	9.4	[0.00]	ug/L	06:52:51
3	K 766.490 Radial†	2633.7	2634.1	[0.00]	ug/L	06:52:31
3	Mg 279.077 IEC†	-0.9	-0.9	[0.00]	ug/L	06:52:51
3	Na 589.592 Radial†	-1606.5	-1606.8	[0.00]	ug/L	06:52:31
3	Sr 421.552†	36.4	36.4	[0.00]	ug/L	06:52:31
3	Sc 361.383	889548.9	889548.9	0.0000	%	06:53:48
3	Y 371.029	734192.1	734192.1	0.0000	%	06:53:48
3	Ag 328.068†	715.4	716.4	[0.00]	ug/L	06:53:48
3	As 188.979†	-37.4	-37.4	[0.00]	ug/L	06:54:08
3	B 249.677†	-758.2	-759.3	[0.00]	ug/L	06:54:08
3	Ba 233.527†	-21.5	-21.5	[0.00]	ug/L	06:54:08
3	Be 313.107†	-4370.2	-4376.5	[0.00]	ug/L	06:53:48
3	Cd 226.502†	-207.2	-207.5	[0.00]	ug/L	06:54:08
3	Co 228.616†	-79.0	-79.1	[0.00]	ug/L	06:54:08
3	Cr 267.716†	75.3	75.5	[0.00]	ug/L	06:53:48
3	Cu 324.752†	6829.2	6839.0	[0.00]	ug/L	06:53:48
3	Mn 257.610†	518.0	518.8	[0.00]	ug/L	06:54:08
3	Mo 202.031†	4.2	4.2	[0.00]	ug/L	06:54:08
3	Ni 231.604†	80.5	80.7	[0.00]	ug/L	06:54:08

3	P 214.914†	226.3	226.6	[0.00] ug/L	06:54:08
3	Pb 220.353†	-89.9	-90.1	[0.00] ug/L	06:54:08
3	S 181.975 Axial†	51.0	51.1	[0.00] ug/L	06:54:08
3	Sb 206.836†	39.0	39.1	[0.00] ug/L	06:54:08
3	Se 196.026†	-19.3	-19.4	[0.00] ug/L	06:54:08
3	Si 251.611†	527.0	527.8	[0.00] ug/L	06:54:08
3	Sn 189.927†	10.4	10.4	[0.00] ug/L	06:54:08
3	Ti 334.940†	-1808.4	-1811.0	[0.00] ug/L	06:53:48
3	Tl 190.801†	-43.8	-43.9	[0.00] ug/L	06:54:08
3	U 409.014†	-5187.0	-5194.4	[0.00] ug/L	06:53:48
3	V 292.402†	-1717.0	-1719.4	[0.00] ug/L	06:53:48
3	Zn 213.857†	696.1	697.1	[0.00] ug/L	06:54:08
3	SiO2†	541.1	541.8	[0.00] ug/L	06:54:24

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	890825.7	2781.41	0.31%	0.0000	%
Sc Radial	4125.5	4.36	0.11%	0.000	%
Y 371.029	734246.9	1019.38	0.14%	0.0000	%
Y RADIAL	4841.4	23.88	0.49%	0.000	%
Ag 328.068†	624.5	81.40	13.03%	[0.00]	ug/L
Al 396.153Radial†	-190.1	25.23	13.27%	[0.00]	ug/L
As 188.979†	-28.7	7.75	26.96%	[0.00]	ug/L
B 249.677†	-761.1	3.71	0.49%	[0.00]	ug/L
Ba 233.527†	-15.3	5.38	35.20%	[0.00]	ug/L
Be 313.107†	-4403.1	28.67	0.65%	[0.00]	ug/L
Ca 317.933Radial†	13.3	2.67	20.00%	[0.00]	ug/L
Cd 226.502†	-204.1	8.07	3.95%	[0.00]	ug/L
Co 228.616†	-85.1	16.21	19.04%	[0.00]	ug/L
Cr 267.716†	61.8	15.58	25.20%	[0.00]	ug/L
Cu 324.752†	6886.8	71.68	1.04%	[0.00]	ug/L
Fe 238.204 Radial†	10.1	1.81	17.88%	[0.00]	ug/L
K 766.490 Radial†	2624.3	51.05	1.95%	[0.00]	ug/L
Mg 279.077 IEC†	-0.0	1.23	>999.9%	[0.00]	ug/L
Mn 257.610†	531.8	13.10	2.46%	[0.00]	ug/L
Mo 202.031†	5.2	0.99	19.05%	[0.00]	ug/L
Na 589.592 Radial†	-1652.3	47.02	2.85%	[0.00]	ug/L
Ni 231.604†	85.2	6.09	7.16%	[0.00]	ug/L
P 214.914†	223.3	4.32	1.93%	[0.00]	ug/L
Pb 220.353†	-79.6	9.38	11.78%	[0.00]	ug/L
S 181.975 Axial†	48.9	4.54	9.28%	[0.00]	ug/L
Sb 206.836†	38.4	1.09	2.84%	[0.00]	ug/L
Se 196.026†	-26.0	5.82	22.40%	[0.00]	ug/L
Si 251.611†	535.7	8.30	1.55%	[0.00]	ug/L
Sn 189.927†	9.4	1.08	11.46%	[0.00]	ug/L
Sr 421.552†	36.4	9.54	26.19%	[0.00]	ug/L
Ti 334.940†	-1804.4	20.78	1.15%	[0.00]	ug/L
Tl 190.801†	-44.5	4.91	11.03%	[0.00]	ug/L
U 409.014†	-5113.1	76.43	1.49%	[0.00]	ug/L
V 292.402†	-1752.2	29.09	1.66%	[0.00]	ug/L
Zn 213.857†	709.1	17.20	2.43%	[0.00]	ug/L
SiO2†	562.2	17.98	3.20%	[0.00]	ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 2/1/2010 06:56:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	4182.2	4182.2	101	%	06:58:31
1	Y RADIAL	4693.6	4693.6	96.95	%	06:58:31
1	K 766.490 Radial†	7847.3	5116.7	[1000]	ug/L	06:58:26
1	Sr 421.552†	14891.6	14653.5	[100]	ug/L	06:58:31
1	Sc 361.383	883810.0	883810.0	99.212	%	06:58:58
1	Y 371.029	726199.0	726199.0	98.904	%	06:58:58
1	Ag 328.068†	22943.9	22501.5	[100]	ug/L	06:58:58
1	As 188.979†	229.8	260.3	[100]	ug/L	06:59:18
1	B 249.677†	3752.8	4543.7	[100]	ug/L	06:58:58
1	Ba 233.527†	13593.2	13716.4	[100]	ug/L	06:58:58
1	Be 313.107†	287034.7	293716.2	[100]	ug/L	06:58:58
1	Cd 226.502†	9251.0	9528.5	[100]	ug/L	06:59:18
1	Co 228.616†	5300.6	5427.8	[100]	ug/L	06:59:18
1	Cr 267.716†	9640.2	9654.9	[100]	ug/L	06:58:58
1	Cu 324.752†	41869.9	35315.4	[100]	ug/L	06:58:58
1	Mn 257.610†	100487.5	100753.4	[100]	ug/L	06:58:58
1	Mo 202.031†	1478.0	1484.6	[100]	ug/L	06:59:18
1	Ni 231.604†	4541.8	4492.7	[100]	ug/L	06:59:18
1	P 214.914†	1156.0	941.9	[500]	ug/L	06:59:18
1	Pb 220.353†	864.7	951.2	[100]	ug/L	06:59:18
1	S 181.975 Axial†	202.4	155.1	[200]	ug/L	06:59:18
1	Sb 206.836†	352.7	317.1	[100]	ug/L	06:59:18
1	Se 196.026†	151.2	178.3	[100]	ug/L	06:59:18
1	Si 251.611†	16849.6	16447.6	[500]	ug/L	06:58:58
1	Sn 189.927†	614.2	609.7	[100]	ug/L	06:59:18
1	Ti 334.940†	64694.2	67012.2	[100]	ug/L	06:58:58
1	Tl 190.801†	322.1	369.1	[100]	ug/L	06:59:18
1	U 409.014†	-1801.9	3296.9	[100]	ug/L	06:58:58
1	V 292.402†	12853.2	14707.4	[100]	ug/L	06:58:58
1	Zn 213.857†	12331.5	11720.2	[100]	ug/L	06:58:58
1	SiO2†	17098.5	16672.0	[1069.5]	ug/L	07:00:14
2	Sc Radial	4160.3	4160.3	101	%	06:58:41
2	Y RADIAL	4684.5	4684.5	96.76	%	06:58:41
2	K 766.490 Radial†	7770.4	5081.1	[1000]	ug/L	06:58:36
2	Sr 421.552†	14865.3	14704.5	[100]	ug/L	06:58:41
2	Sc 361.383	884769.3	884769.3	99.320	%	06:59:24
2	Y 371.029	726094.9	726094.9	98.890	%	06:59:24
2	Ag 328.068†	22917.0	22449.4	[100]	ug/L	06:59:24
2	As 188.979†	217.1	247.4	[100]	ug/L	06:59:44
2	B 249.677†	3734.5	4521.1	[100]	ug/L	06:59:24
2	Ba 233.527†	13604.3	13712.7	[100]	ug/L	06:59:24
2	Be 313.107†	286532.5	292896.9	[100]	ug/L	06:59:24
2	Cd 226.502†	9269.6	9537.2	[100]	ug/L	06:59:44
2	Co 228.616†	5284.4	5405.7	[100]	ug/L	06:59:44
2	Cr 267.716†	9584.1	9587.9	[100]	ug/L	06:59:24
2	Cu 324.752†	41885.5	35285.4	[100]	ug/L	06:59:24
2	Mn 257.610†	100587.2	100743.9	[100]	ug/L	06:59:24
2	Mo 202.031†	1497.8	1502.9	[100]	ug/L	06:59:44
2	Ni 231.604†	4538.7	4484.6	[100]	ug/L	06:59:44
2	P 214.914†	1171.5	956.2	[500]	ug/L	06:59:44
2	Pb 220.353†	850.6	936.1	[100]	ug/L	06:59:44
2	S 181.975 Axial†	212.7	165.3	[200]	ug/L	06:59:44
2	Sb 206.836†	350.9	314.8	[100]	ug/L	06:59:44
2	Se 196.026†	148.1	175.0	[100]	ug/L	06:59:44
2	Si 251.611†	16849.7	16429.3	[500]	ug/L	06:59:24
2	Sn 189.927†	620.2	615.0	[100]	ug/L	06:59:44
2	Ti 334.940†	64724.8	66972.2	[100]	ug/L	06:59:24
2	Tl 190.801†	308.9	355.5	[100]	ug/L	06:59:44
2	U 409.014†	-1729.1	3372.1	[100]	ug/L	06:59:24

2	V 292.402†	12818.2	14658.1	[100]	ug/L	06:59:24
2	Zn 213.857†	12328.4	11703.7	[100]	ug/L	06:59:24
2	SiO2†	17022.0	16576.3	[1069.5]	ug/L	07:00:20
3	Sc Radial	4193.6	4193.6	102	%	06:58:51
3	Y RADIAL	4758.4	4758.4	98.29	%	06:58:51
3	K 766.490 Radial†	7759.2	5008.9	[1000]	ug/L	06:58:46
3	Sr 421.552†	14976.1	14696.5	[100]	ug/L	06:58:51
3	Sc 361.383	886938.7	886938.7	99.564	%	06:59:49
3	Y 371.029	727133.3	727133.3	99.031	%	06:59:49
3	Ag 328.068†	23120.3	22597.1	[100]	ug/L	06:59:49
3	As 188.979†	215.1	244.8	[100]	ug/L	07:00:09
3	B 249.677†	3788.5	4566.2	[100]	ug/L	06:59:49
3	Ba 233.527†	13610.3	13685.3	[100]	ug/L	06:59:49
3	Be 313.107†	286917.6	292578.1	[100]	ug/L	06:59:49
3	Cd 226.502†	9263.1	9507.9	[100]	ug/L	07:00:09
3	Co 228.616†	5276.3	5384.6	[100]	ug/L	07:00:09
3	Cr 267.716†	9649.4	9629.9	[100]	ug/L	06:59:49
3	Cu 324.752†	41983.0	35280.1	[100]	ug/L	06:59:49
3	Mn 257.610†	100693.3	100602.8	[100]	ug/L	06:59:49
3	Mo 202.031†	1488.5	1489.8	[100]	ug/L	07:00:09
3	Ni 231.604†	4511.6	4446.2	[100]	ug/L	07:00:09
3	P 214.914†	1158.9	940.7	[500]	ug/L	07:00:09
3	Pb 220.353†	859.3	942.7	[100]	ug/L	07:00:09
3	S 181.975 Axial†	212.5	164.6	[200]	ug/L	07:00:09
3	Sb 206.836†	349.1	312.2	[100]	ug/L	07:00:09
3	Se 196.026†	158.9	185.6	[100]	ug/L	07:00:09
3	Si 251.611†	16941.2	16479.7	[500]	ug/L	06:59:49
3	Sn 189.927†	614.8	608.1	[100]	ug/L	07:00:09
3	Ti 334.940†	64903.7	66992.5	[100]	ug/L	06:59:49
3	Tl 190.801†	315.7	361.6	[100]	ug/L	07:00:09
3	U 409.014†	-1622.8	3483.2	[100]	ug/L	06:59:49
3	V 292.402†	12779.0	14587.2	[100]	ug/L	06:59:49
3	Zn 213.857†	12364.6	11709.7	[100]	ug/L	06:59:49
3	SiO2†	16843.4	16355.0	[1069.5]	ug/L	07:00:25

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	885172.7	1602.91	0.18%	99.365	%
Sc Radial	4178.7	16.91	0.40%	101	%
Y 371.029	726475.7	571.83	0.08%	98.942	%
Y RADIAL	4712.2	40.31	0.86%	97.33	%
Ag 328.068†	22516.0	74.92	0.33%	[100]	ug/L
As 188.979†	250.8	8.33	3.32%	[100]	ug/L
B 249.677†	4543.7	22.53	0.50%	[100]	ug/L
Ba 233.527†	13704.8	17.01	0.12%	[100]	ug/L
Be 313.107†	293063.8	587.12	0.20%	[100]	ug/L
Cd 226.502†	9524.5	15.06	0.16%	[100]	ug/L
Co 228.616†	5406.1	21.62	0.40%	[100]	ug/L
Cr 267.716†	9624.2	33.83	0.35%	[100]	ug/L
Cu 324.752†	35293.7	19.04	0.05%	[100]	ug/L
K 766.490 Radial†	5068.9	54.92	1.08%	[1000]	ug/L
Mn 257.610†	100700.0	84.31	0.08%	[100]	ug/L
Mo 202.031†	1492.4	9.43	0.63%	[100]	ug/L
Ni 231.604†	4474.5	24.84	0.56%	[100]	ug/L
P 214.914†	946.3	8.64	0.91%	[500]	ug/L
Pb 220.353†	943.3	7.59	0.80%	[100]	ug/L
S 181.975 Axial†	161.7	5.67	3.51%	[200]	ug/L
Sb 206.836†	314.7	2.44	0.78%	[100]	ug/L
Se 196.026†	179.6	5.39	3.00%	[100]	ug/L
Si 251.611†	16452.2	25.50	0.16%	[500]	ug/L
Sn 189.927†	610.9	3.62	0.59%	[100]	ug/L
Sr 421.552†	14684.8	27.45	0.19%	[100]	ug/L
Ti 334.940†	66992.3	19.97	0.03%	[100]	ug/L
Tl 190.801†	362.1	6.84	1.89%	[100]	ug/L
U 409.014†	3384.1	93.70	2.77%	[100]	ug/L
V 292.402†	14650.9	60.41	0.41%	[100]	ug/L
Zn 213.857†	11711.2	8.40	0.07%	[100]	ug/L
SiO2†	16534.4	162.57	0.98%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 2/1/2010 07:02:35
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	4334.7	4334.7	105	%	07:04:27
1	Y RADIAL	4822.7	4822.7	99.61	%	07:04:27
1	Al 396.153Radial†	5965.3	5867.5	[5000]	ug/L	07:04:27
1	Ca 317.933Radial†	2801.5	2652.9	[5000]	ug/L	07:04:47
1	K 766.490 Radial†	29150.9	25119.6	[5000]	ug/L	07:04:27
1	Mg 279.077 IEC†	124.9	118.9	[5000]	ug/L	07:04:47
1	Sr 421.552†	78200.0	74389.2	[500]	ug/L	07:04:27
1	Sc 361.383	903192.1	903192.1	101.39	%	07:05:46
1	Y 371.029	730028.1	730028.1	99.425	%	07:05:46
1	Ag 328.068†	111244.4	109096.7	[500]	ug/L	07:05:46
1	As 188.979†	1237.4	1249.2	[500]	ug/L	07:06:06
1	B 249.677†	22220.3	22677.2	[500]	ug/L	07:05:46
1	Ba 233.527†	66590.1	65693.7	[500]	ug/L	07:05:46
1	Be 313.107†	1454957.1	1439439.1	[500]	ug/L	07:05:46
1	Cd 226.502†	46400.2	45969.0	[500]	ug/L	07:06:06
1	Co 228.616†	26245.0	25970.8	[500]	ug/L	07:06:06
1	Cr 267.716†	47322.8	46613.0	[500]	ug/L	07:05:46
1	Cu 324.752†	182170.6	172789.6	[500]	ug/L	07:05:46
1	Mn 257.610†	488465.4	481245.6	[500]	ug/L	07:05:46
1	Mo 202.031†	7379.0	7272.8	[500]	ug/L	07:06:06
1	Ni 231.604†	21920.2	21534.9	[500]	ug/L	07:06:06
1	P 214.914†	4931.9	4641.1	[2500]	ug/L	07:06:06
1	Pb 220.353†	4507.7	4525.6	[500]	ug/L	07:06:06
1	S 181.975 Axial†	842.6	782.2	[1000]	ug/L	07:06:06
1	Sb 206.836†	1634.0	1573.2	[500]	ug/L	07:06:06
1	Se 196.026†	846.0	860.3	[500]	ug/L	07:06:06
1	Si 251.611†	81967.5	80309.5	[2500]	ug/L	07:05:46
1	Sn 189.927†	3026.5	2975.6	[500]	ug/L	07:06:06
1	Ti 334.940†	328761.3	326064.4	[500]	ug/L	07:05:46
1	Tl 190.801†	1697.6	1718.8	[500]	ug/L	07:06:06
1	U 409.014†	10709.7	15676.2	[500]	ug/L	07:05:46
1	V 292.402†	71122.1	71900.5	[500]	ug/L	07:05:46
1	Zn 213.857†	58250.7	56744.0	[500]	ug/L	07:05:46
1	SiO2†	82584.0	80891.1	[5347.5]	ug/L	07:07:06
2	Sc Radial	4220.7	4220.7	102	%	07:04:52
2	Y RADIAL	4732.6	4732.6	97.75	%	07:04:52
2	Al 396.153Radial†	5872.4	5930.1	[5000]	ug/L	07:04:52
2	Ca 317.933Radial†	2775.3	2699.3	[5000]	ug/L	07:05:12
2	K 766.490 Radial†	28794.4	25520.5	[5000]	ug/L	07:04:52
2	Mg 279.077 IEC†	124.8	122.0	[5000]	ug/L	07:05:12
2	Sr 421.552†	76618.8	74853.8	[500]	ug/L	07:04:52
2	Sc 361.383	902688.9	902688.9	101.33	%	07:06:13
2	Y 371.029	728805.7	728805.7	99.259	%	07:06:13
2	Ag 328.068†	111133.5	109048.4	[500]	ug/L	07:06:13
2	As 188.979†	1255.9	1268.2	[500]	ug/L	07:06:34
2	B 249.677†	22306.7	22774.7	[500]	ug/L	07:06:13
2	Ba 233.527†	66955.9	66091.3	[500]	ug/L	07:06:13
2	Be 313.107†	1454911.9	1440194.5	[500]	ug/L	07:06:13
2	Cd 226.502†	46440.6	46034.4	[500]	ug/L	07:06:34
2	Co 228.616†	26295.3	26034.9	[500]	ug/L	07:06:34
2	Cr 267.716†	47454.0	46768.5	[500]	ug/L	07:06:13
2	Cu 324.752†	181595.7	172322.3	[500]	ug/L	07:06:13
2	Mn 257.610†	490072.3	483100.0	[500]	ug/L	07:06:13
2	Mo 202.031†	7390.5	7288.1	[500]	ug/L	07:06:34
2	Ni 231.604†	21932.4	21559.0	[500]	ug/L	07:06:34
2	P 214.914†	4941.0	4652.8	[2500]	ug/L	07:06:34
2	Pb 220.353†	4530.3	4550.4	[500]	ug/L	07:06:34
2	S 181.975 Axial†	850.8	790.7	[1000]	ug/L	07:06:34
2	Sb 206.836†	1626.3	1566.5	[500]	ug/L	07:06:34

2	Se 196.026†	874.4	888.9	[500]	ug/L	07:06:34
2	Si 251.611†	82091.5	80476.9	[2500]	ug/L	07:06:13
2	Sn 189.927†	3039.3	2989.9	[500]	ug/L	07:06:34
2	Ti 334.940†	329225.7	326703.4	[500]	ug/L	07:06:13
2	Tl 190.801†	1695.8	1718.0	[500]	ug/L	07:06:34
2	U 409.014†	10772.1	15743.6	[500]	ug/L	07:06:13
2	V 292.402†	71266.5	72082.1	[500]	ug/L	07:06:13
2	Zn 213.857†	58337.4	56861.7	[500]	ug/L	07:06:13
2	SiO2†	81654.0	80018.7	[5347.5]	ug/L	07:07:11
3	Sc Radial	4266.0	4266.0	103	%	07:05:17
3	Y RADIAL	4761.0	4761.0	98.34	%	07:05:17
3	Al 396.153Radial†	5925.6	5920.5	[5000]	ug/L	07:05:17
3	Ca 317.933Radial†	2795.5	2690.1	[5000]	ug/L	07:05:37
3	K 766.490 Radial†	28913.9	25337.1	[5000]	ug/L	07:05:17
3	Mg 279.077 IEC†	130.7	126.5	[5000]	ug/L	07:05:37
3	Sr 421.552†	76974.2	74402.0	[500]	ug/L	07:05:17
3	Sc 361.383	905981.2	905981.2	101.70	%	07:06:41
3	Y 371.029	730908.5	730908.5	99.545	%	07:06:41
3	Ag 328.068†	111474.6	108985.3	[500]	ug/L	07:06:41
3	As 188.979†	1240.8	1248.8	[500]	ug/L	07:07:01
3	B 249.677†	22398.2	22784.6	[500]	ug/L	07:06:41
3	Ba 233.527†	66877.2	65773.7	[500]	ug/L	07:06:41
3	Be 313.107†	1453470.2	1433559.2	[500]	ug/L	07:06:41
3	Cd 226.502†	46050.6	45484.3	[500]	ug/L	07:07:01
3	Co 228.616†	26071.6	25720.6	[500]	ug/L	07:07:01
3	Cr 267.716†	47318.8	46465.4	[500]	ug/L	07:06:41
3	Cu 324.752†	182660.7	172718.3	[500]	ug/L	07:06:41
3	Mn 257.610†	489731.4	481007.2	[500]	ug/L	07:06:41
3	Mo 202.031†	7335.3	7207.3	[500]	ug/L	07:07:01
3	Ni 231.604†	21786.5	21336.9	[500]	ug/L	07:07:01
3	P 214.914†	4898.2	4593.0	[2500]	ug/L	07:07:01
3	Pb 220.353†	4489.2	4493.8	[500]	ug/L	07:07:01
3	S 181.975 Axial†	846.8	783.8	[1000]	ug/L	07:07:01
3	Sb 206.836†	1617.1	1551.6	[500]	ug/L	07:07:01
3	Se 196.026†	855.9	867.5	[500]	ug/L	07:07:01
3	Si 251.611†	82277.3	80365.2	[2500]	ug/L	07:06:41
3	Sn 189.927†	2993.0	2933.5	[500]	ug/L	07:07:01
3	Ti 334.940†	329678.4	325967.8	[500]	ug/L	07:06:41
3	Tl 190.801†	1685.0	1701.2	[500]	ug/L	07:07:01
3	U 409.014†	10853.0	15784.5	[500]	ug/L	07:06:41
3	V 292.402†	71204.0	71765.1	[500]	ug/L	07:06:41
3	Zn 213.857†	58274.7	56590.8	[500]	ug/L	07:06:41
3	SiO2†	81651.5	79723.4	[5347.5]	ug/L	07:07:17

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	903954.1	1773.52	0.20%	101.47	%
Sc Radial	4273.8	57.40	1.34%	104	%
Y 371.029	729914.1	1056.04	0.14%	99.410	%
Y RADIAL	4772.1	46.06	0.97%	98.57	%
Ag 328.068†	109043.5	55.88	0.05%	[500]	ug/L
Al 396.153Radial†	5906.0	33.70	0.57%	[5000]	ug/L
As 188.979†	1255.4	11.04	0.88%	[500]	ug/L
B 249.677†	22745.5	59.37	0.26%	[500]	ug/L
Ba 233.527†	65852.9	210.30	0.32%	[500]	ug/L
Be 313.107†	1437730.9	3632.52	0.25%	[500]	ug/L
Ca 317.933Radial†	2680.8	24.57	0.92%	[5000]	ug/L
Cd 226.502†	45829.2	300.47	0.66%	[500]	ug/L
Co 228.616†	25908.8	166.04	0.64%	[500]	ug/L
Cr 267.716†	46615.7	151.58	0.33%	[500]	ug/L
Cu 324.752†	172610.0	251.72	0.15%	[500]	ug/L
K 766.490 Radial†	25325.7	200.70	0.79%	[5000]	ug/L
Mg 279.077 IEC†	122.5	3.80	3.10%	[5000]	ug/L
Mn 257.610†	481784.3	1145.66	0.24%	[500]	ug/L
Mo 202.031†	7256.1	42.91	0.59%	[500]	ug/L
Ni 231.604†	21476.9	121.87	0.57%	[500]	ug/L
P 214.914†	4629.0	31.72	0.69%	[2500]	ug/L
Pb 220.353†	4523.2	28.37	0.63%	[500]	ug/L
S 181.975 Axial†	785.6	4.55	0.58%	[1000]	ug/L

Sb 206.836†	1563.8	11.03	0.71%	[500]	ug/L
Se 196.026†	872.3	14.85	1.70%	[500]	ug/L
Si 251.611†	80383.9	85.26	0.11%	[2500]	ug/L
Sn 189.927†	2966.3	29.35	0.99%	[500]	ug/L
Sr 421.552†	74548.3	264.66	0.36%	[500]	ug/L
Ti 334.940†	326245.2	399.73	0.12%	[500]	ug/L
Tl 190.801†	1712.7	9.91	0.58%	[500]	ug/L
U 409.014†	15734.8	54.69	0.35%	[500]	ug/L
V 292.402†	71915.9	159.09	0.22%	[500]	ug/L
Zn 213.857†	56732.2	135.82	0.24%	[500]	ug/L
SiO2†	80211.0	607.15	0.76%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 2/1/2010 07:09:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	4067.6	4067.6	98.6	%	07:11:41
1	Y RADIAL	4639.8	4639.8	95.84	%	07:11:21
1	Al 396.153Radial†	11936.1	12296.2	[10000]	ug/L	07:11:21
1	Ca 317.933Radial†	5478.3	5543.0	[10000]	ug/L	07:11:21
1	Fe 238.204 Radial†	871.5	873.8	[10000]	ug/L	07:11:41
1	K 766.490 Radial†	54365.8	52516.0	[10000]	ug/L	07:11:21
1	Mg 279.077 IEC†	246.5	250.0	[10000]	ug/L	07:11:41
1	Na 589.592 Radial†	28997.9	31063.3	[10000]	ug/L	07:11:21
1	Sr 421.552†	148685.2	150767.0	[1000]	ug/L	07:11:21
1	Sc 361.383	860217.0	860217.0	96.564	%	07:12:44
1	Y 371.029	714425.1	714425.1	97.300	%	07:12:44
1	Ag 328.068†	224794.6	232168.9	[1000]	ug/L	07:12:44
1	As 188.979†	2515.7	2634.0	[1000]	ug/L	07:13:04
1	B 249.677†	46269.1	48676.5	[1000]	ug/L	07:12:44
1	Ba 233.527†	133717.6	138490.9	[1000]	ug/L	07:12:44
1	Be 313.107†	2895485.2	3002916.9	[1000]	ug/L	07:12:39
1	Cd 226.502†	94970.6	98554.0	[1000]	ug/L	07:12:44
1	Co 228.616†	53087.3	55061.5	[1000]	ug/L	07:12:44
1	Cr 267.716†	95155.3	98479.3	[1000]	ug/L	07:12:44
1	Cu 324.752†	358914.0	364798.2	[1000]	ug/L	07:12:44
1	Mn 257.610†	968048.7	1001962.5	[1000]	ug/L	07:12:39
1	Mo 202.031†	14676.7	15193.7	[1000]	ug/L	07:13:04
1	Ni 231.604†	44072.6	45555.6	[1000]	ug/L	07:12:44
1	P 214.914†	9619.9	9739.0	[5000]	ug/L	07:13:04
1	Pb 220.353†	9017.8	9418.3	[1000]	ug/L	07:13:04
1	S 181.975 Axial†	1649.5	1659.3	[2000]	ug/L	07:13:04
1	Sb 206.836†	3252.6	3329.9	[1000]	ug/L	07:13:04
1	Se 196.026†	1731.6	1819.1	[1000]	ug/L	07:13:04
1	Si 251.611†	165205.0	170547.6	[5000]	ug/L	07:12:44
1	Sn 189.927†	6060.2	6266.4	[1000]	ug/L	07:13:04
1	Ti 334.940†	650722.5	675681.2	[1000]	ug/L	07:12:44
1	Tl 190.801†	3412.2	3578.1	[1000]	ug/L	07:13:04
1	U 409.014†	28530.3	34658.6	[1000]	ug/L	07:12:44
1	V 292.402†	145607.4	152540.7	[1000]	ug/L	07:12:44
1	Zn 213.857†	116074.8	119496.0	[1000]	ug/L	07:12:44
1	SiO2†	164839.1	170142.3	[10695]	ug/L	07:14:13
2	Sc Radial	4052.1	4052.1	98.2	%	07:12:06
2	Y RADIAL	4727.6	4727.6	97.65	%	07:11:46
2	Al 396.153Radial†	12099.0	12508.3	[10000]	ug/L	07:11:46
2	Ca 317.933Radial†	5566.6	5654.2	[10000]	ug/L	07:11:46
2	Fe 238.204 Radial†	863.1	868.6	[10000]	ug/L	07:12:06
2	K 766.490 Radial†	54997.4	53369.9	[10000]	ug/L	07:11:46
2	Mg 279.077 IEC†	246.6	251.1	[10000]	ug/L	07:12:06
2	Na 589.592 Radial†	29278.5	31461.4	[10000]	ug/L	07:11:46
2	Sr 421.552†	150433.1	153123.1	[1000]	ug/L	07:11:46
2	Sc 361.383	859244.7	859244.7	96.455	%	07:13:16
2	Y 371.029	710644.9	710644.9	96.786	%	07:13:16
2	Ag 328.068†	223469.8	231058.8	[1000]	ug/L	07:13:16
2	As 188.979†	2487.0	2607.1	[1000]	ug/L	07:13:36
2	B 249.677†	46062.9	48517.0	[1000]	ug/L	07:13:16
2	Ba 233.527†	133445.4	138365.4	[1000]	ug/L	07:13:16
2	Be 313.107†	2879006.3	2989225.4	[1000]	ug/L	07:13:10
2	Cd 226.502†	94725.3	98411.0	[1000]	ug/L	07:13:16
2	Co 228.616†	52924.4	54954.8	[1000]	ug/L	07:13:16
2	Cr 267.716†	94837.2	98261.1	[1000]	ug/L	07:13:16
2	Cu 324.752†	356858.6	363087.9	[1000]	ug/L	07:13:16
2	Mn 257.610†	965804.9	1000770.7	[1000]	ug/L	07:13:10
2	Mo 202.031†	14545.0	15074.3	[1000]	ug/L	07:13:36
2	Ni 231.604†	43935.5	45465.1	[1000]	ug/L	07:13:16

2	P 214.914†	9528.1	9655.0	[5000]	ug/L	07:13:36
2	Pb 220.353†	8921.6	9329.1	[1000]	ug/L	07:13:36
2	S 181.975 Axial†	1626.5	1637.4	[2000]	ug/L	07:13:36
2	Sb 206.836†	3208.0	3287.5	[1000]	ug/L	07:13:36
2	Se 196.026†	1718.3	1807.4	[1000]	ug/L	07:13:36
2	Si 251.611†	164506.7	170017.3	[5000]	ug/L	07:13:16
2	Sn 189.927†	5980.2	6190.6	[1000]	ug/L	07:13:36
2	Ti 334.940†	648219.5	673848.8	[1000]	ug/L	07:13:16
2	Tl 190.801†	3375.1	3543.6	[1000]	ug/L	07:13:36
2	U 409.014†	28413.3	34570.7	[1000]	ug/L	07:13:16
2	V 292.402†	144896.1	151973.8	[1000]	ug/L	07:13:16
2	Zn 213.857†	115587.8	119127.1	[1000]	ug/L	07:13:16
2	SiO2†	162693.2	168110.6	[10695]	ug/L	07:14:18
3	Sc Radial	4042.0	4042.0	98.0	%	07:12:32
3	Y RADIAL	4680.3	4680.3	96.67	%	07:12:11
3	Al 396.153Radial†	12023.2	12461.8	[10000]	ug/L	07:12:11
3	Ca 317.933Radial†	5505.6	5606.0	[10000]	ug/L	07:12:11
3	Fe 238.204 Radial†	865.6	873.3	[10000]	ug/L	07:12:32
3	K 766.490 Radial†	54684.2	53190.1	[10000]	ug/L	07:12:11
3	Mg 279.077 IEC†	243.6	248.7	[10000]	ug/L	07:12:32
3	Na 589.592 Radial†	28977.7	31228.9	[10000]	ug/L	07:12:11
3	Sr 421.552†	149331.3	152381.3	[1000]	ug/L	07:12:11
3	Sc 361.383	850734.3	850734.3	95.500	%	07:13:47
3	Y 371.029	702601.7	702601.7	95.690	%	07:13:47
3	Ag 328.068†	220695.7	230471.6	[1000]	ug/L	07:13:47
3	As 188.979†	2496.1	2642.5	[1000]	ug/L	07:14:08
3	B 249.677†	45221.5	48113.7	[1000]	ug/L	07:13:47
3	Ba 233.527†	131216.4	137415.3	[1000]	ug/L	07:13:47
3	Be 313.107†	2889101.4	3029655.2	[1000]	ug/L	07:13:42
3	Cd 226.502†	92917.1	97500.0	[1000]	ug/L	07:13:47
3	Co 228.616†	52020.0	54556.6	[1000]	ug/L	07:13:47
3	Cr 267.716†	93296.3	97631.1	[1000]	ug/L	07:13:47
3	Cu 324.752†	351933.6	361631.9	[1000]	ug/L	07:13:47
3	Mn 257.610†	966766.5	1011794.2	[1000]	ug/L	07:13:42
3	Mo 202.031†	14594.5	15277.0	[1000]	ug/L	07:14:08
3	Ni 231.604†	43114.9	45061.5	[1000]	ug/L	07:13:47
3	P 214.914†	9552.8	9779.7	[5000]	ug/L	07:14:08
3	Pb 220.353†	8917.0	9416.8	[1000]	ug/L	07:14:08
3	S 181.975 Axial†	1636.8	1665.0	[2000]	ug/L	07:14:08
3	Sb 206.836†	3205.0	3317.6	[1000]	ug/L	07:14:08
3	Se 196.026†	1723.5	1830.6	[1000]	ug/L	07:14:08
3	Si 251.611†	161788.6	168877.2	[5000]	ug/L	07:13:47
3	Sn 189.927†	6033.8	6308.7	[1000]	ug/L	07:14:08
3	Ti 334.940†	638924.1	670838.2	[1000]	ug/L	07:13:47
3	Tl 190.801†	3394.8	3599.2	[1000]	ug/L	07:14:08
3	U 409.014†	27702.6	34121.2	[1000]	ug/L	07:13:47
3	V 292.402†	142912.7	151399.8	[1000]	ug/L	07:13:47
3	Zn 213.857†	113650.5	118297.3	[1000]	ug/L	07:13:47
3	SiO2†	163294.0	170427.1	[10695]	ug/L	07:14:24

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	856732.0	5216.86	0.61%	96.173	%
Sc Radial	4053.9	12.89	0.32%	98.3	%
Y 371.029	709223.9	6038.45	0.85%	96.592	%
Y RADIAL	4682.6	43.94	0.94%	96.72	%
Ag 328.068†	231233.1	861.95	0.37%	[1000]	ug/L
Al 396.153Radial†	12422.1	111.47	0.90%	[10000]	ug/L
As 188.979†	2627.9	18.48	0.70%	[1000]	ug/L
B 249.677†	48435.7	290.11	0.60%	[1000]	ug/L
Ba 233.527†	138090.6	588.13	0.43%	[1000]	ug/L
Be 313.107†	3007265.8	20562.73	0.68%	[1000]	ug/L
Ca 317.933Radial†	5601.1	55.76	1.00%	[10000]	ug/L
Cd 226.502†	98155.0	571.71	0.58%	[1000]	ug/L
Co 228.616†	54857.6	266.10	0.49%	[1000]	ug/L
Cr 267.716†	98123.8	440.42	0.45%	[1000]	ug/L
Cu 324.752†	363172.6	1584.87	0.44%	[1000]	ug/L
Fe 238.204 Radial†	871.9	2.86	0.33%	[10000]	ug/L
K 766.490 Radial†	53025.4	450.17	0.85%	[10000]	ug/L

Mg 279.077 IEC†	249.9	1.20	0.48%	[10000]	ug/L
Mn 257.610†	1004842.5	6049.82	0.60%	[1000]	ug/L
Mo 202.031†	15181.7	101.87	0.67%	[1000]	ug/L
Na 589.592 Radial†	31251.2	199.99	0.64%	[10000]	ug/L
Ni 231.604†	45360.8	263.07	0.58%	[1000]	ug/L
P 214.914†	9724.6	63.58	0.65%	[5000]	ug/L
Pb 220.353†	9388.1	51.06	0.54%	[1000]	ug/L
S 181.975 Axial†	1653.9	14.56	0.88%	[2000]	ug/L
Sb 206.836†	3311.7	21.84	0.66%	[1000]	ug/L
Se 196.026†	1819.1	11.61	0.64%	[1000]	ug/L
Si 251.611†	169814.1	853.55	0.50%	[5000]	ug/L
Sn 189.927†	6255.2	59.83	0.96%	[1000]	ug/L
Sr 421.552†	152090.5	1204.70	0.79%	[1000]	ug/L
Ti 334.940†	673456.1	2445.27	0.36%	[1000]	ug/L
Tl 190.801†	3573.6	28.08	0.79%	[1000]	ug/L
U 409.014†	34450.2	288.25	0.84%	[1000]	ug/L
V 292.402†	151971.4	570.46	0.38%	[1000]	ug/L
Zn 213.857†	118973.4	613.94	0.52%	[1000]	ug/L
SiO2†	169560.0	1263.23	0.75%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 2/1/2010 07:16:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	4147.6	4147.6	101	%	07:18:48
1	Y RADIAL	4606.9	4606.9	95.16	%	07:18:48
1	Al 396.153Radial†	61537.3	61399.0	[50000]	ug/L	07:18:28
1	Ca 317.933Radial†	27469.9	27309.9	[50000]	ug/L	07:18:28
1	Fe 238.204 Radial†	1737.5	1718.1	[20000]	ug/L	07:18:48
1	Mg 279.077 IEC†	1189.6	1183.3	[50000]	ug/L	07:18:48
1	Na 589.592 Radial†	65560.3	66862.7	[20000]	ug/L	07:18:28
1	Sc 361.383	869098.2	869098.2	97.561	%	07:19:45
1	Y 371.029	699611.1	699611.1	95.283	%	07:19:45
2	Sc Radial	4212.4	4212.4	102	%	07:19:13
2	Y RADIAL	4675.4	4675.4	96.57	%	07:19:13
2	Al 396.153Radial†	60504.4	59446.1	[50000]	ug/L	07:18:53
2	Ca 317.933Radial†	27160.3	26586.5	[50000]	ug/L	07:18:53
2	Fe 238.204 Radial†	1754.6	1708.3	[20000]	ug/L	07:19:13
2	Mg 279.077 IEC†	1206.6	1181.8	[50000]	ug/L	07:19:13
2	Na 589.592 Radial†	64106.4	64435.9	[20000]	ug/L	07:18:53
2	Sc 361.383	873224.5	873224.5	98.024	%	07:19:51
2	Y 371.029	702255.1	702255.1	95.643	%	07:19:51
3	Sc Radial	4185.0	4185.0	101	%	07:19:38
3	Y RADIAL	4664.1	4664.1	96.34	%	07:19:38
3	Al 396.153Radial†	61364.1	60681.3	[50000]	ug/L	07:19:18
3	Ca 317.933Radial†	27424.7	27021.3	[50000]	ug/L	07:19:18
3	Fe 238.204 Radial†	1754.6	1719.5	[20000]	ug/L	07:19:38
3	Mg 279.077 IEC†	1202.9	1185.9	[50000]	ug/L	07:19:38
3	Na 589.592 Radial†	64476.1	65211.2	[20000]	ug/L	07:19:18
3	Sc 361.383	875695.6	875695.6	98.302	%	07:19:56
3	Y 371.029	704060.8	704060.8	95.889	%	07:19:56

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	872672.8	3333.10	0.38%	97.962	%
Sc Radial	4181.7	32.52	0.78%	101	%
Y 371.029	701975.7	2237.95	0.32%	95.605	%
Y RADIAL	4648.8	36.69	0.79%	96.02	%
Al 396.153Radial†	60508.8	987.85	1.63%	[50000]	ug/L
Ca 317.933Radial†	26972.6	364.16	1.35%	[50000]	ug/L
Fe 238.204 Radial†	1715.3	6.14	0.36%	[20000]	ug/L
Mg 279.077 IEC†	1183.7	2.07	0.17%	[50000]	ug/L
Na 589.592 Radial†	65503.3	1239.50	1.89%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	228.6	0.00000	0.999737	
Al 396.153Radial	3	Lin Thru 0	0.0	1.211	0.00000	0.999984	
As 188.979	3	Lin Thru 0	0.0	2.604	0.00000	0.999834	
B 249.677	3	Lin Thru 0	0.0	47.83	0.00000	0.999689	
Ba 233.527	3	Lin Thru 0	0.0	136.8	0.00000	0.999827	
Be 313.107	3	Lin Thru 0	0.0	2981	0.00000	0.999844	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.5402	0.00000	0.999973	
Cd 226.502	3	Lin Thru 0	0.0	96.84	0.00000	0.999642	
Co 228.616	3	Lin Thru 0	0.0	54.25	0.00000	0.999751	
Cr 267.716	3	Lin Thru 0	0.0	97.14	0.00000	0.999798	
Cu 324.752	3	Lin Thru 0	0.0	359.5	0.00000	0.999801	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.0861	0.00000	0.999978	
K 766.490 Radial	3	Lin Thru 0	0.0	5.254	0.00000	0.999833	

Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0237	0.00000	0.999938
Mn 257.610	3	Lin Thru 0	0.0	996.7	0.00000	0.999863
Mo 202.031	3	Lin Thru 0	0.0	15.05	0.00000	0.999843
Na 589.592 Radia	2	Lin Thru 0	0.0	3.245	0.00000	0.999829
Ni 231.604	3	Lin Thru 0	0.0	44.88	0.00000	0.999772
P 214.914	3	Lin Thru 0	0.0	1.926	0.00000	0.999812
Pb 220.353	3	Lin Thru 0	0.0	9.321	0.00000	0.999893
S 181.975 Axial	3	Lin Thru 0	0.0	0.8186	0.00000	0.999796
Sb 206.836	3	Lin Thru 0	0.0	3.274	0.00000	0.999743
Se 196.026	3	Lin Thru 0	0.0	1.804	0.00000	0.999864
Si 251.611	3	Lin Thru 0	0.0	33.60	0.00000	0.999768
Sn 189.927	3	Lin Thru 0	0.0	6.190	0.00000	0.999784
Sr 421.552	3	Lin Thru 0	0.0	151.5	0.00000	0.999965
Ti 334.940	3	Lin Thru 0	0.0	669.3	0.00000	0.999922
Tl 190.801	3	Lin Thru 0	0.0	3.545	0.00000	0.999859
U 409.014	3	Lin Thru 0	0.0	33.85	0.00000	0.999385
V 292.402	3	Lin Thru 0	0.0	150.3	0.00000	0.999765
Zn 213.857	3	Lin Thru 0	0.0	117.9	0.00000	0.999826
SiO2	3	Lin Thru 0	0.0	15.68	0.00000	0.999764

Sequence No.: 6
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 2/1/2010 07:22:08
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4239.2	4239.2	103	%			07:24:01
1	Y RADIAL	4763.8	4763.8	98.40	%			07:24:01
1	Al 396.153Radial†	6185.1	6209.3	5101.2	ug/L	5101.2	ppb	07:24:01
1	Ca 317.933Radial†	2785.4	2697.4	4993.2	ug/L	4993.2	ppb	07:24:21
1	Fe 238.204 Radial†	448.9	426.8	4974.5	ug/L	4974.5	ppb	07:24:21
1	K 766.490 Radial†	16026.5	12972.4	2465.8	ug/L	2465.8	ppb	07:24:01
1	Mg 279.077 IEC†	131.8	128.3	5407.8	ug/L	5407.8	ppb	07:24:21
1	Na 589.592 Radial†	6166.0	7652.8	2358.2	ug/L	2358.2	ppb	07:24:01
1	Sr 421.552†	80213.8	78026.0	515.14	ug/L	515.14	ppb	07:24:01
1	Sc 361.383	902268.8	902268.8	101.28	%			07:25:19
1	Y 371.029	731990.5	731990.5	99.693	%			07:25:19
1	Ag 328.068†	59208.3	57832.9	256.17	ug/L	256.17	ppb	07:25:19
1	As 188.979†	1206.5	1219.9	472.71	ug/L	472.71	ppb	07:25:39
1	B 249.677†	24094.3	24549.8	511.08	ug/L	511.08	ppb	07:25:19
1	Ba 233.527†	69728.6	68859.6	504.56	ug/L	504.56	ppb	07:25:19
1	Be 313.107†	769474.7	764118.8	257.50	ug/L	257.50	ppb	07:25:19
1	Cd 226.502†	48380.2	47970.7	495.24	ug/L	495.24	ppb	07:25:19
1	Co 228.616†	27146.1	26887.0	495.78	ug/L	495.78	ppb	07:25:39
1	Cr 267.716†	47403.1	46740.0	481.78	ug/L	481.78	ppb	07:25:19
1	Cu 324.752†	189523.1	180232.6	501.29	ug/L	501.29	ppb	07:25:19
1	Mn 257.610†	513126.6	506087.1	508.05	ug/L	508.05	ppb	07:25:19
1	Mo 202.031†	8074.9	7967.2	529.94	ug/L	529.94	ppb	07:25:39
1	Ni 231.604†	22387.8	22018.7	490.33	ug/L	490.33	ppb	07:25:39
1	P 214.914†	5061.5	4774.0	2381.4	ug/L	2381.4	ppb	07:25:39
1	Pb 220.353†	4611.0	4632.1	498.72	ug/L	498.72	ppb	07:25:39
1	S 181.975 Axial†	2080.4	2005.1	2448.5	ug/L	2448.5	ppb	07:25:39
1	Sb 206.836†	1666.6	1607.0	510.10	ug/L	510.10	ppb	07:25:39
1	Se 196.026†	4613.5	4581.0	2557.6	ug/L	2557.6	ppb	07:25:39
1	Si 251.611†	162651.0	160052.5	4757.6	ug/L	4757.6	ppb	07:25:19
1	Sn 189.927†	3328.5	3276.8	530.21	ug/L	530.21	ppb	07:25:39
1	Ti 334.940†	334931.1	332487.7	496.63	ug/L	496.63	ppb	07:25:19
1	Tl 190.801†	1833.4	1854.6	526.66	ug/L	526.66	ppb	07:25:39
1	U 409.014†	12028.1	16988.6	500.18	ug/L	500.18	ppb	07:25:19
1	V 292.402†	74502.9	75310.2	508.14	ug/L	508.14	ppb	07:25:19
1	Zn 213.857†	60914.4	59432.7	499.96	ug/L	499.96	ppb	07:25:19
1	SiO2†	161908.2	159292.6	10144	ug/L	10144	ppb	07:26:36
2	Sc Radial	4299.3	4299.3	104	%			07:24:26
2	Y RADIAL	4787.9	4787.9	98.90	%			07:24:26
2	Al 396.153Radial†	6242.7	6180.5	5077.3	ug/L	5077.3	ppb	07:24:26
2	Ca 317.933Radial†	2789.4	2663.3	4930.1	ug/L	4930.1	ppb	07:24:46
2	Fe 238.204 Radial†	451.9	423.5	4936.3	ug/L	4936.3	ppb	07:24:46
2	K 766.490 Radial†	16095.8	12820.8	2437.0	ug/L	2437.0	ppb	07:24:26
2	Mg 279.077 IEC†	129.5	124.3	5238.2	ug/L	5238.2	ppb	07:24:46
2	Na 589.592 Radial†	6209.9	7611.1	2345.4	ug/L	2345.4	ppb	07:24:26
2	Sr 421.552†	80767.7	77465.9	511.44	ug/L	511.44	ppb	07:24:26
2	Sc 361.383	900788.3	900788.3	101.12	%			07:25:45
2	Y 371.029	731838.1	731838.1	99.672	%			07:25:45
2	Ag 328.068†	59227.3	57947.7	256.65	ug/L	256.65	ppb	07:25:45
2	As 188.979†	1206.5	1221.9	473.47	ug/L	473.47	ppb	07:26:05
2	B 249.677†	23990.6	24486.4	509.76	ug/L	509.76	ppb	07:25:45
2	Ba 233.527†	69427.1	68674.6	503.20	ug/L	503.20	ppb	07:25:45
2	Be 313.107†	768547.9	764450.9	257.61	ug/L	257.61	ppb	07:25:45
2	Cd 226.502†	48226.2	47897.0	494.49	ug/L	494.49	ppb	07:25:45
2	Co 228.616†	27115.4	26900.6	496.04	ug/L	496.04	ppb	07:26:05
2	Cr 267.716†	47342.1	46756.6	481.94	ug/L	481.94	ppb	07:25:45
2	Cu 324.752†	189087.4	180109.3	500.94	ug/L	500.94	ppb	07:25:45
2	Mn 257.610†	511128.5	504943.7	506.90	ug/L	506.90	ppb	07:25:45
2	Mo 202.031†	8087.0	7992.3	531.60	ug/L	531.60	ppb	07:26:05
2	Ni 231.604†	22457.9	22124.4	492.69	ug/L	492.69	ppb	07:26:05

2	P 214.914†	5058.8	4779.6	2384.5	ug/L	2384.5 ppb	07:26:05
2	Pb 220.353†	4566.4	4595.5	494.79	ug/L	494.79 ppb	07:26:05
2	S 181.975 Axial†	2084.9	2012.9	2458.1	ug/L	2458.1 ppb	07:26:05
2	Sb 206.836†	1673.8	1616.9	513.19	ug/L	513.19 ppb	07:26:05
2	Se 196.026†	4611.2	4586.2	2560.3	ug/L	2560.3 ppb	07:26:05
2	Si 251.611†	161826.5	159501.0	4741.2	ug/L	4741.2 ppb	07:25:45
2	Sn 189.927†	3345.8	3299.3	533.84	ug/L	533.84 ppb	07:26:05
2	Ti 334.940†	333937.0	332048.1	495.98	ug/L	495.98 ppb	07:25:45
2	Tl 190.801†	1829.2	1853.4	526.32	ug/L	526.32 ppb	07:26:05
2	U 409.014†	11943.6	16924.6	498.29	ug/L	498.29 ppb	07:25:45
2	V 292.402†	74154.7	75086.7	506.68	ug/L	506.68 ppb	07:25:45
2	Zn 213.857†	60744.7	59363.7	499.36	ug/L	499.36 ppb	07:25:45
2	SiO2†	162391.6	160033.3	10191	ug/L	10191 ppb	07:26:42
3	Sc Radial	4224.1	4224.1	102	%		07:24:51
3	Y RADIAL	4714.9	4714.9	97.39	%		07:24:51
3	Al 396.153Radial†	6113.1	6160.5	5061.0	ug/L	5061.0 ppb	07:24:51
3	Ca 317.933Radial†	2783.1	2704.8	5007.0	ug/L	5007.0 ppb	07:25:11
3	Fe 238.204 Radial†	451.3	430.7	5019.6	ug/L	5019.6 ppb	07:25:11
3	K 766.490 Radial†	15911.0	12915.3	2455.0	ug/L	2455.0 ppb	07:24:51
3	Mg 279.077 IEC†	131.9	128.9	5430.3	ug/L	5430.3 ppb	07:25:11
3	Na 589.592 Radial†	6087.5	7597.6	2341.2	ug/L	2341.2 ppb	07:24:51
3	Sr 421.552†	79755.8	77857.4	514.03	ug/L	514.03 ppb	07:24:51
3	Sc 361.383	909939.7	909939.7	102.15	%		07:26:11
3	Y 371.029	738228.6	738228.6	100.54	%		07:26:11
3	Ag 328.068†	59777.0	57896.8	256.46	ug/L	256.46 ppb	07:26:11
3	As 188.979†	1203.7	1207.2	467.84	ug/L	467.84 ppb	07:26:31
3	B 249.677†	24396.6	24645.3	513.08	ug/L	513.08 ppb	07:26:11
3	Ba 233.527†	70317.2	68855.4	504.53	ug/L	504.53 ppb	07:26:11
3	Be 313.107†	777506.6	765577.5	257.99	ug/L	257.99 ppb	07:26:11
3	Cd 226.502†	48636.3	47818.8	493.67	ug/L	493.67 ppb	07:26:11
3	Co 228.616†	27184.9	26699.0	492.31	ug/L	492.31 ppb	07:26:31
3	Cr 267.716†	47673.7	46610.5	480.44	ug/L	480.44 ppb	07:26:11
3	Cu 324.752†	191928.8	181010.3	503.45	ug/L	503.45 ppb	07:26:11
3	Mn 257.610†	517249.9	505852.9	507.82	ug/L	507.82 ppb	07:26:11
3	Mo 202.031†	8124.4	7948.5	528.70	ug/L	528.70 ppb	07:26:31
3	Ni 231.604†	22446.7	21890.0	487.47	ug/L	487.47 ppb	07:26:31
3	P 214.914†	5055.2	4725.8	2355.9	ug/L	2355.9 ppb	07:26:31
3	Pb 220.353†	4605.4	4588.3	494.00	ug/L	494.00 ppb	07:26:31
3	S 181.975 Axial†	2080.5	1987.9	2427.5	ug/L	2427.5 ppb	07:26:31
3	Sb 206.836†	1680.9	1607.2	510.08	ug/L	510.08 ppb	07:26:31
3	Se 196.026†	4623.6	4552.5	2541.9	ug/L	2541.9 ppb	07:26:31
3	Si 251.611†	164136.3	160152.7	4760.6	ug/L	4760.6 ppb	07:26:11
3	Sn 189.927†	3339.2	3259.6	527.43	ug/L	527.43 ppb	07:26:31
3	Ti 334.940†	337909.7	332616.0	496.82	ug/L	496.82 ppb	07:26:11
3	Tl 190.801†	1835.9	1841.8	523.06	ug/L	523.06 ppb	07:26:31
3	U 409.014†	12198.0	17054.9	502.13	ug/L	502.13 ppb	07:26:11
3	V 292.402†	75087.0	75261.9	507.80	ug/L	507.80 ppb	07:26:11
3	Zn 213.857†	61481.6	59481.0	500.38	ug/L	500.38 ppb	07:26:11
3	SiO2†	163257.9	159266.3	10142	ug/L	10142 ppb	07:26:47

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	904332.3	101.52	%	0.551				0.54%
Sc Radial	4254.2	103	%	1.0				0.94%
Y 371.029	734019.1	99.969	%	0.4966				0.50%
Y RADIAL	4755.6	98.23	%	0.768				0.78%
Ag 328.068†	57892.5	256.43	ug/L	0.245	256.43	ppb	0.245	0.10%
QC value within limits for Ag 328.068 Recovery = 102.57%								
Al 396.153Radial†	6183.4	5079.8	ug/L	20.24	5079.8	ppb	20.24	0.40%
QC value within limits for Al 396.153Radial Recovery = 101.60%								
As 188.979†	1216.3	471.34	ug/L	3.052	471.34	ppb	3.052	0.65%
QC value within limits for As 188.979 Recovery = 94.27%								
B 249.677†	24560.5	511.30	ug/L	1.671	511.30	ppb	1.671	0.33%
QC value within limits for B 249.677 Recovery = 102.26%								
Ba 233.527†	68796.5	504.10	ug/L	0.775	504.10	ppb	0.775	0.15%
QC value within limits for Ba 233.527 Recovery = 100.82%								
Be 313.107†	764715.8	257.70	ug/L	0.257	257.70	ppb	0.257	0.10%
QC value within limits for Be 313.107 Recovery = 103.08%								
Ca 317.933Radial†	2688.5	4976.8	ug/L	41.02	4976.8	ppb	41.02	0.82%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.54%
Cd 226.502†            47895.5      494.47 ug/L         0.788      494.47 ppb          0.788   0.16%
   QC value within limits for Cd 226.502  Recovery = 98.89%
Co 228.616†            26828.9      494.71 ug/L         2.080      494.71 ppb          2.080   0.42%
   QC value within limits for Co 228.616  Recovery = 98.94%
Cr 267.716†            46702.4      481.39 ug/L         0.823      481.39 ppb          0.823   0.17%
   QC value within limits for Cr 267.716  Recovery = 96.28%
Cu 324.752†           180450.7      501.89 ug/L         1.360      501.89 ppb          1.360   0.27%
   QC value within limits for Cu 324.752  Recovery = 100.38%
Fe 238.204 Radial†       427.0      4976.8 ug/L        41.71      4976.8 ppb         41.71   0.84%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.54%
K 766.490 Radial†      12902.8      2452.6 ug/L        14.56      2452.6 ppb         14.56   0.59%
   QC value within limits for K 766.490 Radial  Recovery = 98.10%
Mg 279.077 IEC†          127.2      5358.8 ug/L       105.02      5358.8 ppb        105.02   1.96%
   QC value within limits for Mg 279.077 IEC  Recovery = 107.18%.
Mn 257.610†           505627.9      507.59 ug/L         0.605      507.59 ppb          0.605   0.12%
   QC value within limits for Mn 257.610  Recovery = 101.52%
Mo 202.031†             7969.3      530.08 ug/L         1.458      530.08 ppb          1.458   0.28%
   QC value within limits for Mo 202.031  Recovery = 106.02%
Na 589.592 Radial†      7620.5      2348.3 ug/L          8.87      2348.3 ppb           8.87   0.38%
   QC value within limits for Na 589.592 Radial  Recovery = 93.93%
Ni 231.604†            22011.0      490.16 ug/L         2.614      490.16 ppb          2.614   0.53%
   QC value within limits for Ni 231.604  Recovery = 98.03%
P 214.914†              4759.8      2373.9 ug/L        15.71      2373.9 ppb         15.71   0.66%
   QC value within limits for P 214.914  Recovery = 94.96%
Pb 220.353†             4605.3      495.84 ug/L         2.525      495.84 ppb          2.525   0.51%
   QC value within limits for Pb 220.353  Recovery = 99.17%
S 181.975 Axial†        2002.0      2444.7 ug/L        15.62      2444.7 ppb         15.62   0.64%
   QC value within limits for S 181.975 Axial  Recovery = 97.79%
Sb 206.836†             1610.4      511.12 ug/L         1.792      511.12 ppb          1.792   0.35%
   QC value within limits for Sb 206.836  Recovery = 102.22%
Se 196.026†             4573.2      2553.3 ug/L         9.92      2553.3 ppb          9.92   0.39%
   QC value within limits for Se 196.026  Recovery = 102.13%
Si 251.611†           159902.1      4753.1 ug/L        10.46      4753.1 ppb         10.46   0.22%
   QC value within limits for Si 251.611  Recovery = 95.06%
Sn 189.927†             3278.6      530.49 ug/L         3.212      530.49 ppb          3.212   0.61%
   QC value within limits for Sn 189.927  Recovery = 106.10%
Sr 421.552†            77783.1      513.54 ug/L         1.897      513.54 ppb          1.897   0.37%
   QC value within limits for Sr 421.552  Recovery = 102.71%
Ti 334.940†           332383.9      496.47 ug/L         0.441      496.47 ppb          0.441   0.09%
   QC value within limits for Ti 334.940  Recovery = 99.29%
Tl 190.801†             1849.9      525.35 ug/L         1.987      525.35 ppb          1.987   0.38%
   QC value within limits for Tl 190.801  Recovery = 105.07%
U 409.014†             16989.4      500.20 ug/L         1.921      500.20 ppb          1.921   0.38%
   QC value within limits for U 409.014  Recovery = 100.04%
V 292.402†             75219.6      507.54 ug/L         0.766      507.54 ppb          0.766   0.15%
   QC value within limits for V 292.402  Recovery = 101.51%
Zn 213.857†            59425.8      499.90 ug/L         0.511      499.90 ppb          0.511   0.10%
   QC value within limits for Zn 213.857  Recovery = 99.98%
SiO2†                 159530.7       10159 ug/L          27.7       10159 ppb           27.7   0.27%
   QC value within limits for SiO2  Recovery = 94.99%
All analyte(s) passed QC.
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Sequence No.: 7
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 2/1/2010 07:28:58
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4117.5	4117.5	99.8	%			07:31:12
1	Y RADIAL	4870.1	4870.1	100.6	%			07:30:52
1	Al 396.153Radial†	-213.4	-23.8	-19.631	ug/L	-19.631	ppb	07:30:52
1	Ca 317.933Radial†	16.6	3.3	6.1595	ug/L	6.1595	ppb	07:31:12
1	Fe 238.204 Radial†	11.3	1.2	13.968	ug/L	13.968	ppb	07:31:12
1	K 766.490 Radial†	2774.1	155.2	29.547	ug/L	29.547	ppb	07:30:52
1	Mg 279.077 IEC†	0.9	0.9	38.047	ug/L	38.047	ppb	07:31:12
1	Na 589.592 Radial†	-1741.2	-92.3	-28.447	ug/L	-28.447	ppb	07:30:52
1	Sr 421.552†	31.0	-5.4	-0.0354	ug/L	-0.0354	ppb	07:30:52
1	Sc 361.383	886439.1	886439.1	99.508	%			07:32:09
1	Y 371.029	729838.0	729838.0	99.400	%			07:32:09
1	Ag 328.068†	574.7	-46.9	-0.2016	ug/L	-0.2016	ppb	07:32:09
1	As 188.979†	-25.0	3.6	1.3864	ug/L	1.3864	ppb	07:32:29
1	B 249.677†	-230.9	529.1	11.059	ug/L	11.059	ppb	07:32:09
1	Ba 233.527†	-26.3	-11.1	-0.0816	ug/L	-0.0816	ppb	07:32:29
1	Be 313.107†	-4351.9	29.7	0.0103	ug/L	0.0103	ppb	07:32:09
1	Cd 226.502†	-208.9	-5.8	-0.0613	ug/L	-0.0613	ppb	07:32:29
1	Co 228.616†	-79.9	4.8	0.0893	ug/L	0.0893	ppb	07:32:29
1	Cr 267.716†	59.8	-1.8	-0.0179	ug/L	-0.0179	ppb	07:32:09
1	Cu 324.752†	6981.5	129.2	0.3608	ug/L	0.3608	ppb	07:32:09
1	Mn 257.610†	721.2	192.9	0.1934	ug/L	0.1934	ppb	07:32:09
1	Mo 202.031†	10.2	5.0	0.3324	ug/L	0.3324	ppb	07:32:29
1	Ni 231.604†	80.2	-4.6	-0.1021	ug/L	-0.1021	ppb	07:32:29
1	P 214.914†	232.2	10.1	5.1500	ug/L	5.1500	ppb	07:32:29
1	Pb 220.353†	-78.7	0.5	0.0495	ug/L	0.0495	ppb	07:32:29
1	S 181.975 Axial†	49.5	0.8	1.0370	ug/L	1.0370	ppb	07:32:29
1	Sb 206.836†	50.7	12.6	3.8625	ug/L	3.8625	ppb	07:32:29
1	Se 196.026†	-26.3	-0.5	-0.2036	ug/L	-0.2036	ppb	07:32:29
1	Si 251.611†	523.0	-10.1	-0.3054	ug/L	-0.3054	ppb	07:32:29
1	Sn 189.927†	15.5	6.1	0.9886	ug/L	0.9886	ppb	07:32:29
1	Ti 334.940†	-1681.0	115.1	0.1701	ug/L	0.1701	ppb	07:32:09
1	Tl 190.801†	-40.4	3.9	1.0992	ug/L	1.0992	ppb	07:32:29
1	U 409.014†	-5123.7	-35.9	-1.0625	ug/L	-1.0625	ppb	07:32:09
1	V 292.402†	-1800.1	-56.9	-0.3770	ug/L	-0.3770	ppb	07:32:09
1	Zn 213.857†	725.5	20.0	0.1684	ug/L	0.1684	ppb	07:32:29
1	SiO2†	566.8	7.4	0.4603	ug/L	0.4603	ppb	07:33:25
2	Sc Radial	4143.7	4143.7	100	%			07:31:37
2	Y RADIAL	4910.4	4910.4	101.4	%			07:31:17
2	Al 396.153Radial†	-198.1	-7.1	-5.8996	ug/L	-5.8996	ppb	07:31:17
2	Ca 317.933Radial†	17.0	3.6	6.7108	ug/L	6.7108	ppb	07:31:37
2	Fe 238.204 Radial†	14.1	3.9	45.776	ug/L	45.776	ppb	07:31:37
2	K 766.490 Radial†	2619.6	-16.2	-3.0786	ug/L	-3.0786	ppb	07:31:17
2	Mg 279.077 IEC†	2.5	2.6	107.82	ug/L	107.82	ppb	07:31:37
2	Na 589.592 Radial†	-1695.5	-35.8	-11.028	ug/L	-11.028	ppb	07:31:17
2	Sr 421.552†	33.0	-3.6	-0.0236	ug/L	-0.0236	ppb	07:31:17
2	Sc 361.383	887663.3	887663.3	99.645	%			07:32:34
2	Y 371.029	732390.2	732390.2	99.747	%			07:32:34
2	Ag 328.068†	574.4	-48.1	-0.1967	ug/L	-0.1967	ppb	07:32:34
2	As 188.979†	-36.3	-7.7	-2.9322	ug/L	-2.9322	ppb	07:32:55
2	B 249.677†	-300.3	459.7	9.6040	ug/L	9.6040	ppb	07:32:34
2	Ba 233.527†	-19.8	-4.5	-0.0314	ug/L	-0.0314	ppb	07:32:55
2	Be 313.107†	-4354.4	33.2	0.0112	ug/L	0.0112	ppb	07:32:34
2	Cd 226.502†	-199.0	4.4	0.0415	ug/L	0.0415	ppb	07:32:55
2	Co 228.616†	-75.5	9.4	0.1733	ug/L	0.1733	ppb	07:32:55
2	Cr 267.716†	78.6	17.0	0.1753	ug/L	0.1753	ppb	07:32:34
2	Cu 324.752†	6956.9	94.8	0.2649	ug/L	0.2649	ppb	07:32:34
2	Mn 257.610†	744.0	214.8	0.2157	ug/L	0.2157	ppb	07:32:34
2	Mo 202.031†	7.6	2.4	0.1625	ug/L	0.1625	ppb	07:32:55
2	Ni 231.604†	86.1	1.2	0.0271	ug/L	0.0271	ppb	07:32:55

2	P 214.914†	225.3	2.8	1.3734 ug/L	1.3734 ppb	07:32:55
2	Pb 220.353†	-67.3	12.1	1.2904 ug/L	1.2904 ppb	07:32:55
2	S 181.975 Axial†	47.3	-1.4	-1.7527 ug/L	-1.7527 ppb	07:32:55
2	Sb 206.836†	48.8	10.6	3.2272 ug/L	3.2272 ppb	07:32:55
2	Se 196.026†	-35.0	-9.1	-4.9197 ug/L	-4.9197 ppb	07:32:55
2	Si 251.611†	539.8	6.0	0.1761 ug/L	0.1761 ppb	07:32:55
2	Sn 189.927†	6.2	-3.2	-0.5161 ug/L	-0.5161 ppb	07:32:55
2	Ti 334.940†	-1776.9	21.1	0.0226 ug/L	0.0226 ppb	07:32:34
2	Tl 190.801†	-35.7	8.7	2.4494 ug/L	2.4494 ppb	07:32:55
2	U 409.014†	-5014.4	80.8	2.3822 ug/L	2.3822 ppb	07:32:34
2	V 292.402†	-1716.1	30.0	0.2016 ug/L	0.2016 ppb	07:32:34
2	Zn 213.857†	710.8	4.3	0.0311 ug/L	0.0311 ppb	07:32:55
2	SiO2†	601.0	40.9	2.6068 ug/L	2.6068 ppb	07:33:30
3	Sc Radial	4120.5	4120.5	99.9 %		07:32:02
3	Y RADIAL	4885.5	4885.5	100.9 %		07:31:42
3	Al 396.153Radial†	-214.3	-24.4	-20.160 ug/L	-20.160 ppb	07:31:42
3	Ca 317.933Radial†	17.7	4.4	8.1803 ug/L	8.1803 ppb	07:32:02
3	Fe 238.204 Radial†	11.0	0.9	10.564 ug/L	10.564 ppb	07:32:02
3	K 766.490 Radial†	2707.5	86.6	16.478 ug/L	16.478 ppb	07:31:42
3	Mg 279.077 IEC†	-0.8	-0.8	-32.545 ug/L	-32.545 ppb	07:32:02
3	Na 589.592 Radial†	-1687.5	-37.3	-11.492 ug/L	-11.492 ppb	07:31:42
3	Sr 421.552†	2.7	-33.8	-0.2229 ug/L	-0.2229 ppb	07:31:42
3	Sc 361.383	885940.1	885940.1	99.452 %		07:33:00
3	Y 371.029	730246.2	730246.2	99.455 %		07:33:00
3	Ag 328.068†	505.4	-116.3	-0.5068 ug/L	-0.5068 ppb	07:33:00
3	As 188.979†	-28.3	0.3	0.1284 ug/L	0.1284 ppb	07:33:20
3	B 249.677†	-388.7	370.2	7.7387 ug/L	7.7387 ppb	07:33:00
3	Ba 233.527†	-15.6	-0.4	-0.0027 ug/L	-0.0027 ppb	07:33:20
3	Be 313.107†	-4401.1	-22.3	-0.0074 ug/L	-0.0074 ppb	07:33:00
3	Cd 226.502†	-207.1	-4.1	-0.0429 ug/L	-0.0429 ppb	07:33:20
3	Co 228.616†	-82.9	1.7	0.0315 ug/L	0.0315 ppb	07:33:20
3	Cr 267.716†	87.0	25.6	0.2633 ug/L	0.2633 ppb	07:33:00
3	Cu 324.752†	6927.3	78.7	0.2184 ug/L	0.2184 ppb	07:33:00
3	Mn 257.610†	737.7	209.9	0.2130 ug/L	0.2130 ppb	07:33:00
3	Mo 202.031†	2.8	-2.4	-0.1574 ug/L	-0.1574 ppb	07:33:20
3	Ni 231.604†	104.8	20.2	0.4500 ug/L	0.4500 ppb	07:33:20
3	P 214.914†	209.4	-12.7	-6.6317 ug/L	-6.6317 ppb	07:33:20
3	Pb 220.353†	-77.5	1.7	0.1743 ug/L	0.1743 ppb	07:33:20
3	S 181.975 Axial†	50.7	2.1	2.6172 ug/L	2.6172 ppb	07:33:20
3	Sb 206.836†	41.5	3.3	1.0223 ug/L	1.0223 ppb	07:33:20
3	Se 196.026†	-35.8	-10.1	-5.5503 ug/L	-5.5503 ppb	07:33:20
3	Si 251.611†	545.0	12.2	0.3663 ug/L	0.3663 ppb	07:33:20
3	Sn 189.927†	10.3	1.0	0.1584 ug/L	0.1584 ppb	07:33:20
3	Ti 334.940†	-1763.9	30.7	0.0487 ug/L	0.0487 ppb	07:33:00
3	Tl 190.801†	-25.2	19.1	5.4021 ug/L	5.4021 ppb	07:33:20
3	U 409.014†	-5022.2	63.2	1.8649 ug/L	1.8649 ppb	07:33:00
3	V 292.402†	-1738.4	4.2	0.0270 ug/L	0.0270 ppb	07:33:00
3	Zn 213.857†	718.2	13.1	0.1068 ug/L	0.1068 ppb	07:33:20
3	SiO2†	612.1	53.2	3.3996 ug/L	3.3996 ppb	07:33:35

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	886680.8	99.535	%	0.0995				0.10%
Sc Radial	4127.2	100	%	0.3				0.35%
Y 371.029	730824.8	99.534	%	0.1867				0.19%
Y RADIAL	4888.7	101.0	%	0.42				0.42%
Ag 328.068†	-70.4	-0.3017	ug/L	0.17767	-0.3017	ppb	0.17767	58.89%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-18.4	-15.230	ug/L	8.0849	-15.230	ppb	8.0849	53.08%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-1.2	-0.4724	ug/L	2.22111	-0.4724	ppb	2.22111	470.13%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	453.0	9.4673	ug/L	1.66442	9.4673	ppb	1.66442	17.58%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-5.4	-0.0386	ug/L	0.03994	-0.0386	ppb	0.03994	103.58%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	13.5	0.0047	ug/L	0.01049	0.0047	ppb	0.01049	222.37%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	3.8	7.0169	ug/L	1.04459	7.0169	ppb	1.04459	14.89%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -1.8     -0.0209 ug/L       0.05482     -0.0209 ppb        0.05482 262.18%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 5.3      0.0980 ug/L       0.07128      0.0980 ppb        0.07128  72.71%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                13.6      0.1402 ug/L       0.14385      0.1402 ppb        0.14385 102.57%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               100.9      0.2813 ug/L       0.07261      0.2813 ppb        0.07261  25.81%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          2.0     23.436 ug/L       19.4214     23.436 ppb        19.4214  82.87%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          75.2     14.315 ug/L       16.4199     14.315 ppb        16.4199 114.70%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.9     37.775 ug/L       70.1845     37.775 ppb        70.1845 185.80%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               205.9      0.2074 ug/L       0.01216      0.2074 ppb        0.01216   5.86%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 1.7      0.1125 ug/L       0.24869      0.1125 ppb        0.24869 221.05%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        -55.1    -16.989 ug/L        9.9256    -16.989 ppb         9.9256  58.42%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 5.6      0.1250 ug/L       0.28877      0.1250 ppb        0.28877 231.00%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                  0.1     -0.0361 ug/L       6.01599     -0.0361 ppb        6.01599 >999.9%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 4.8      0.5047 ug/L       0.68328      0.5047 ppb        0.68328 135.37%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            0.5      0.6338 ug/L       2.21269      0.6338 ppb        2.21269 349.11%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 8.8      2.7040 ug/L       1.49064      2.7040 ppb        1.49064  55.13%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -6.6     -3.5579 ug/L       2.92196     -3.5579 ppb        2.92196  82.13%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                 2.7      0.0790 ug/L       0.34623      0.0790 ppb        0.34623 438.12%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 1.3      0.2103 ug/L       0.75366      0.2103 ppb        0.75366 358.40%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -14.2     -0.0940 ug/L       0.11181     -0.0940 ppb        0.11181 118.97%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                55.6      0.0805 ug/L       0.07872      0.0805 ppb        0.07872  97.83%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                10.6      2.9836 ug/L       2.20065      2.9836 ppb        2.20065  73.76%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                 36.0      1.0616 ug/L       1.85755      1.0616 ppb        1.85755 174.98%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 -7.6     -0.0495 ug/L       0.29681     -0.0495 ppb        0.29681 599.83%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                12.4      0.1021 ug/L       0.06876      0.1021 ppb        0.06876  67.35%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      33.8      2.1556 ug/L       1.52074      2.1556 ppb        1.52074  70.55%
   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: 2/1/2010 07:35:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4328.1	4328.1	105	%			07:37:39
1	Y RADIAL	4882.4	4882.4	100.8	%			07:37:39
1	Al 396.153Radial†	70.4	257.2	211.95	ug/L	211.95	ppb	07:37:39
1	Ca 317.933Radial†	137.3	117.6	217.61	ug/L	217.61	ppb	07:37:59
1	Fe 238.204 Radial†	20.6	9.6	111.16	ug/L	111.16	ppb	07:37:59
1	K 766.490 Radial†	3472.1	685.2	130.22	ug/L	130.22	ppb	07:37:39
1	Mg 279.077 IEC†	8.0	7.7	325.22	ug/L	325.22	ppb	07:37:59
1	Na 589.592 Radial†	-712.9	972.7	299.75	ug/L	299.75	ppb	07:37:39
1	Sr 421.552†	790.5	717.1	4.7329	ug/L	4.7329	ppb	07:37:39
1	Sc 361.383	889809.8	889809.8	99.886	%			07:38:56
1	Y 371.029	732038.2	732038.2	99.699	%			07:38:56
1	Ag 328.068†	1832.3	1209.9	5.3045	ug/L	5.3045	ppb	07:38:56
1	As 188.979†	47.1	75.9	29.203	ug/L	29.203	ppb	07:39:16
1	B 249.677†	1940.6	2703.9	56.502	ug/L	56.502	ppb	07:38:56
1	Ba 233.527†	686.2	702.3	5.1488	ug/L	5.1488	ppb	07:39:16
1	Be 313.107†	10762.2	15177.5	5.1040	ug/L	5.1040	ppb	07:38:56
1	Cd 226.502†	288.6	493.0	5.0931	ug/L	5.0931	ppb	07:39:16
1	Co 228.616†	191.5	276.9	5.1127	ug/L	5.1127	ppb	07:39:16
1	Cr 267.716†	600.1	539.0	5.5373	ug/L	5.5373	ppb	07:38:56
1	Cu 324.752†	10663.6	3789.0	10.515	ug/L	10.515	ppb	07:38:56
1	Mn 257.610†	11284.4	10765.5	10.799	ug/L	10.799	ppb	07:38:56
1	Mo 202.031†	142.8	137.8	9.1679	ug/L	9.1679	ppb	07:39:16
1	Ni 231.604†	307.5	222.6	4.9578	ug/L	4.9578	ppb	07:39:16
1	P 214.914†	505.4	282.7	144.77	ug/L	144.77	ppb	07:39:16
1	Pb 220.353†	32.5	112.2	12.093	ug/L	12.093	ppb	07:39:16
1	S 181.975 Axial†	132.6	83.9	102.43	ug/L	102.43	ppb	07:39:16
1	Sb 206.836†	88.4	50.1	15.666	ug/L	15.666	ppb	07:39:16
1	Se 196.026†	25.0	51.0	28.656	ug/L	28.656	ppb	07:39:16
1	Si 251.611†	3951.5	3420.3	101.69	ug/L	101.69	ppb	07:38:56
1	Sn 189.927†	79.8	70.5	11.421	ug/L	11.421	ppb	07:39:16
1	Ti 334.940†	1649.3	3455.6	5.1401	ug/L	5.1401	ppb	07:38:56
1	Tl 190.801†	16.6	61.1	17.291	ug/L	17.291	ppb	07:39:16
1	U 409.014†	-3278.1	1831.3	54.068	ug/L	54.068	ppb	07:38:56
1	V 292.402†	-917.9	833.3	5.7590	ug/L	5.7590	ppb	07:38:56
1	Zn 213.857†	1937.4	1230.5	10.383	ug/L	10.383	ppb	07:39:16
1	SiO2†	3980.4	3422.7	218.01	ug/L	218.01	ppb	07:40:13
2	Sc Radial	4281.1	4281.1	104	%			07:38:04
2	Y RADIAL	4822.6	4822.6	99.61	%			07:38:04
2	Al 396.153Radial†	50.3	238.6	196.49	ug/L	196.49	ppb	07:38:04
2	Ca 317.933Radial†	130.9	112.8	208.78	ug/L	208.78	ppb	07:38:24
2	Fe 238.204 Radial†	20.6	9.7	113.37	ug/L	113.37	ppb	07:38:24
2	K 766.490 Radial†	3553.3	799.8	152.04	ug/L	152.04	ppb	07:38:04
2	Mg 279.077 IEC†	12.4	12.0	507.58	ug/L	507.58	ppb	07:38:24
2	Na 589.592 Radial†	-741.8	937.4	288.87	ug/L	288.87	ppb	07:38:04
2	Sr 421.552†	824.4	758.0	5.0030	ug/L	5.0030	ppb	07:38:04
2	Sc 361.383	881278.7	881278.7	98.928	%			07:39:22
2	Y 371.029	726823.0	726823.0	98.989	%			07:39:22
2	Ag 328.068†	1676.4	1070.0	4.6934	ug/L	4.6934	ppb	07:39:22
2	As 188.979†	54.4	83.7	32.195	ug/L	32.195	ppb	07:39:42
2	B 249.677†	1940.6	2722.7	56.895	ug/L	56.895	ppb	07:39:22
2	Ba 233.527†	699.1	722.0	5.2919	ug/L	5.2919	ppb	07:39:42
2	Be 313.107†	10551.9	15069.3	5.0678	ug/L	5.0678	ppb	07:39:22
2	Cd 226.502†	276.0	483.1	4.9901	ug/L	4.9901	ppb	07:39:42
2	Co 228.616†	185.9	273.1	5.0446	ug/L	5.0446	ppb	07:39:42
2	Cr 267.716†	567.2	511.5	5.2550	ug/L	5.2550	ppb	07:39:22
2	Cu 324.752†	10472.0	3698.6	10.265	ug/L	10.265	ppb	07:39:22
2	Mn 257.610†	11081.3	10669.6	10.696	ug/L	10.696	ppb	07:39:22
2	Mo 202.031†	152.1	148.5	9.8834	ug/L	9.8834	ppb	07:39:42
2	Ni 231.604†	325.4	243.8	5.4296	ug/L	5.4296	ppb	07:39:42

2	P 214.914†	524.7	307.1	157.46 ug/L	157.46 ppb	07:39:42
2	Pb 220.353†	38.8	118.8	12.804 ug/L	12.804 ppb	07:39:42
2	S 181.975 Axial†	127.7	80.2	97.937 ug/L	97.937 ppb	07:39:42
2	Sb 206.836†	72.0	34.4	10.889 ug/L	10.889 ppb	07:39:42
2	Se 196.026†	30.8	57.1	32.092 ug/L	32.092 ppb	07:39:42
2	Si 251.611†	3965.1	3472.3	103.24 ug/L	103.24 ppb	07:39:22
2	Sn 189.927†	81.1	72.6	11.760 ug/L	11.760 ppb	07:39:42
2	Ti 334.940†	1680.6	3503.1	5.1960 ug/L	5.1960 ppb	07:39:22
2	Tl 190.801†	34.6	79.4	22.473 ug/L	22.473 ppb	07:39:42
2	U 409.014†	-3312.8	1764.4	52.093 ug/L	52.093 ppb	07:39:22
2	V 292.402†	-969.2	772.5	5.3643 ug/L	5.3643 ppb	07:39:22
2	Zn 213.857†	1909.8	1221.4	10.303 ug/L	10.303 ppb	07:39:42
2	SiO2†	3915.6	3395.8	216.28 ug/L	216.28 ppb	07:40:18
3	Sc Radial	4295.7	4295.7	104 %		07:38:30
3	Y RADIAL	4792.8	4792.8	99.00 %		07:38:30
3	Al 396.153Radial†	80.3	267.3	220.18 ug/L	220.18 ppb	07:38:30
3	Ca 317.933Radial†	132.1	113.6	210.24 ug/L	210.24 ppb	07:38:50
3	Fe 238.204 Radial†	19.2	8.3	96.697 ug/L	96.697 ppb	07:38:50
3	K 766.490 Radial†	3509.9	746.5	141.88 ug/L	141.88 ppb	07:38:30
3	Mg 279.077 IEC†	8.1	7.8	328.68 ug/L	328.68 ppb	07:38:50
3	Na 589.592 Radial†	-676.6	1002.5	308.91 ug/L	308.91 ppb	07:38:30
3	Sr 421.552†	829.4	760.1	5.0169 ug/L	5.0169 ppb	07:38:30
3	Sc 361.383	886926.6	886926.6	99.562 %		07:39:47
3	Y 371.029	731155.1	731155.1	99.579 %		07:39:47
3	Ag 328.068†	1748.0	1131.2	4.9533 ug/L	4.9533 ppb	07:39:47
3	As 188.979†	52.6	81.6	31.368 ug/L	31.368 ppb	07:40:07
3	B 249.677†	2056.1	2826.2	59.061 ug/L	59.061 ppb	07:39:47
3	Ba 233.527†	688.8	707.1	5.1821 ug/L	5.1821 ppb	07:40:07
3	Be 313.107†	10601.5	15051.2	5.0616 ug/L	5.0616 ppb	07:39:47
3	Cd 226.502†	280.8	486.2	5.0241 ug/L	5.0241 ppb	07:40:07
3	Co 228.616†	190.8	276.7	5.1130 ug/L	5.1130 ppb	07:40:07
3	Cr 267.716†	569.0	509.7	5.2344 ug/L	5.2344 ppb	07:39:47
3	Cu 324.752†	10632.5	3792.4	10.524 ug/L	10.524 ppb	07:39:47
3	Mn 257.610†	11144.2	10661.4	10.693 ug/L	10.693 ppb	07:39:47
3	Mo 202.031†	156.7	152.2	10.123 ug/L	10.123 ppb	07:40:07
3	Ni 231.604†	316.4	232.6	5.1795 ug/L	5.1795 ppb	07:40:07
3	P 214.914†	521.0	300.0	153.76 ug/L	153.76 ppb	07:40:07
3	Pb 220.353†	22.4	102.1	11.016 ug/L	11.016 ppb	07:40:07
3	S 181.975 Axial†	122.8	74.5	90.964 ug/L	90.964 ppb	07:40:07
3	Sb 206.836†	81.7	43.7	13.715 ug/L	13.715 ppb	07:40:07
3	Se 196.026†	36.2	62.3	34.905 ug/L	34.905 ppb	07:40:07
3	Si 251.611†	3941.0	3422.6	101.75 ug/L	101.75 ppb	07:39:47
3	Sn 189.927†	75.2	66.1	10.704 ug/L	10.704 ppb	07:40:07
3	Ti 334.940†	1654.8	3466.5	5.1557 ug/L	5.1557 ppb	07:39:47
3	Tl 190.801†	26.6	71.2	20.153 ug/L	20.153 ppb	07:40:07
3	U 409.014†	-3306.8	1791.7	52.903 ug/L	52.903 ppb	07:39:47
3	V 292.402†	-1029.2	718.5	5.0090 ug/L	5.0090 ppb	07:39:47
3	Zn 213.857†	1936.9	1236.3	10.432 ug/L	10.432 ppb	07:40:07
3	SiO2†	3941.0	3396.1	216.29 ug/L	216.29 ppb	07:40:23

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	886005.0	99.459	%	0.4871				0.49%
Sc Radial	4301.7	104	%	0.6				0.56%
Y 371.029	730005.4	99.422	%	0.3801				0.38%
Y RADIAL	4832.6	99.82	%	0.943				0.94%
Ag 328.068†	1137.0	4.9837	ug/L	0.30668	4.9837	ppb	0.30668	6.15%
QC value within limits for Ag 328.068 Recovery = 99.67%								
Al 396.153Radial†	254.4	209.54	ug/L	12.027	209.54	ppb	12.027	5.74%
QC value within limits for Al 396.153Radial Recovery = 104.77%								
As 188.979†	80.4	30.922	ug/L	1.5446	30.922	ppb	1.5446	5.00%
QC value within limits for As 188.979 Recovery = 103.07%								
B 249.677†	2750.9	57.486	ug/L	1.3780	57.486	ppb	1.3780	2.40%
QC value within limits for B 249.677 Recovery = 114.97%								
Ba 233.527†	710.5	5.2076	ug/L	0.07485	5.2076	ppb	0.07485	1.44%
QC value within limits for Ba 233.527 Recovery = 104.15%								
Be 313.107†	15099.3	5.0778	ug/L	0.02287	5.0778	ppb	0.02287	0.45%
QC value within limits for Be 313.107 Recovery = 101.56%								
Ca 317.933Radial†	114.6	212.21	ug/L	4.737	212.21	ppb	4.737	2.23%

```
   QC value within limits for Ca 317.933Radial  Recovery = 106.10%
Cd 226.502†              487.4      5.0358 ug/L       0.05248      5.0358 ppb        0.05248   1.04%
   QC value within limits for Cd 226.502  Recovery = 100.72%
Co 228.616†              275.6      5.0901 ug/L       0.03940      5.0901 ppb        0.03940   0.77%
   QC value within limits for Co 228.616  Recovery = 101.80%
Cr 267.716†              520.1      5.3422 ug/L       0.16928      5.3422 ppb        0.16928   3.17%
   QC value within limits for Cr 267.716  Recovery = 106.84%
Cu 324.752†             3760.0      10.434 ug/L        0.1472      10.434 ppb         0.1472   1.41%
   QC value within limits for Cu 324.752  Recovery = 104.34%
Fe 238.204 Radial†        9.2      107.07 ug/L         9.054      107.07 ppb          9.054   8.46%
   QC value within limits for Fe 238.204 Radial  Recovery = 107.07%
K 766.490 Radial†        743.8      141.38 ug/L        10.920      141.38 ppb         10.920   7.72%
   QC value within limits for K 766.490 Radial  Recovery = 94.25%
Mg 279.077 IEC†           9.2      387.16 ug/L       104.299      387.16 ppb        104.299  26.94%
   QC value within limits for Mg 279.077 IEC  Recovery = 129.05%
Mn 257.610†            10698.8      10.729 ug/L        0.0605      10.729 ppb         0.0605   0.56%
   QC value within limits for Mn 257.610  Recovery = 107.29%
Mo 202.031†              146.2      9.7247 ug/L       0.49686      9.7247 ppb        0.49686   5.11%
   QC value within limits for Mo 202.031  Recovery = 97.25%
Na 589.592 Radial†       970.9      299.18 ug/L        10.032      299.18 ppb         10.032   3.35%
   QC value within limits for Na 589.592 Radial  Recovery = 99.73%
Ni 231.604†              233.0      5.1890 ug/L       0.23603      5.1890 ppb        0.23603   4.55%
   QC value within limits for Ni 231.604  Recovery = 103.78%
P 214.914†               296.6      152.00 ug/L         6.525      152.00 ppb          6.525   4.29%
   QC value within limits for P 214.914  Recovery = 101.33%
Pb 220.353†              111.0      11.971 ug/L        0.9005      11.971 ppb         0.9005   7.52%
   QC value within limits for Pb 220.353  Recovery = 119.71%
S 181.975 Axial†          79.5      97.109 ug/L        5.7754      97.109 ppb         5.7754   5.95%
   QC value within limits for S 181.975 Axial  Recovery = 97.11%
Sb 206.836†               42.7      13.423 ug/L        2.4021      13.423 ppb         2.4021  17.90%
   QC value greater than the upper limit for Sb 206.836  Recovery = 134.23%
Se 196.026†               56.8      31.884 ug/L        3.1296      31.884 ppb         3.1296   9.82%
   QC value within limits for Se 196.026  Recovery = 106.28%
Si 251.611†             3438.4      102.23 ug/L         0.874      102.23 ppb          0.874   0.85%
   QC value within limits for Si 251.611  Recovery = 102.23%
Sn 189.927†               69.7      11.295 ug/L        0.5388      11.295 ppb         0.5388   4.77%
   QC value within limits for Sn 189.927  Recovery = 112.95%
Sr 421.552†              745.0      4.9176 ug/L       0.16014      4.9176 ppb        0.16014   3.26%
   QC value within limits for Sr 421.552  Recovery = 98.35%
Ti 334.940†             3475.1      5.1639 ug/L       0.02888      5.1639 ppb        0.02888   0.56%
   QC value within limits for Ti 334.940  Recovery = 103.28%
Tl 190.801†               70.6      19.972 ug/L        2.5955      19.972 ppb         2.5955  13.00%
   QC value within limits for Tl 190.801  Recovery = 99.86%
U 409.014†              1795.8      53.021 ug/L        0.9928      53.021 ppb         0.9928   1.87%
   QC value within limits for U 409.014  Recovery = 106.04%
V 292.402†               774.7      5.3774 ug/L       0.37518      5.3774 ppb        0.37518   6.98%
   QC value within limits for V 292.402  Recovery = 107.55%
Zn 213.857†             1229.4      10.373 ug/L        0.0650      10.373 ppb         0.0650   0.63%
   QC value within limits for Zn 213.857  Recovery = 103.73%
SiO2†                   3404.9      216.86 ug/L         0.998      216.86 ppb          0.998   0.46%
   QC value within limits for SiO2  Recovery = 101.81%
QC Failed.  Continue with analysis.
```

Sequence No.: 9
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 2/1/2010 07:42:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	3853.3	3853.3	93.4	%			07:44:32
1	Y RADIAL	4287.2	4287.2	88.55	%			07:44:32
1	Al 396.153Radial†	574220.9	614973.5	507770	ug/L	507770	ppb	07:44:27
1	Ca 317.933Radial†	240944.8	257951.5	477510	ug/L	477510	ppb	07:44:27
1	Fe 238.204 Radial†	15056.7	16110.2	187220	ug/L	187220	ppb	07:44:32
1	K 766.490 Radial†	2209.4	-258.8	-208.96	ug/L	-208.96	ppb	07:44:27
1	Mg 279.077 IEC†	10888.3	11657.5	491030	ug/L	491030	ppb	07:44:32
1	Na 589.592 Radial†	-1550.1	-7.3	-2.2447	ug/L	-2.2447	ppb	07:44:32
1	Sr 421.552†	570.8	574.6	0.2286	ug/L	0.2286	ppb	07:44:32
1	Sc 361.383	766844.6	766844.6	86.082	%			07:44:59
1	Y 371.029	617439.5	617439.5	84.092	%			07:44:59
1	Ag 328.068†	-9923.8	-12152.8	1.0062	ug/L	1.0062	ppb	07:44:59
1	As 188.979†	-97.1	-84.0	11.448	ug/L	11.448	ppb	07:45:20
1	B 249.677†	216.8	1012.9	-9.2281	ug/L	-9.2281	ppb	07:44:59
1	Ba 233.527†	-704.0	-802.5	-0.1361	ug/L	-0.1361	ppb	07:45:20
1	Be 313.107†	-4593.3	-932.9	-0.3641	ug/L	-0.3641	ppb	07:44:59
1	Cd 226.502†	1260.1	1668.0	-2.1064	ug/L	-2.1064	ppb	07:45:20
1	Co 228.616†	-19.1	63.0	-1.5484	ug/L	-1.5484	ppb	07:45:20
1	Cr 267.716†	-144.6	-229.8	1.2817	ug/L	1.2817	ppb	07:45:20
1	Cu 324.752†	3515.6	-2802.8	2.0955	ug/L	2.0955	ppb	07:44:59
1	Mn 257.610†	310.8	-170.7	-1.7654	ug/L	-1.7654	ppb	07:44:59
1	Mo 202.031†	-279.7	-330.1	-1.7232	ug/L	-1.7232	ppb	07:45:20
1	Ni 231.604†	199.9	147.0	3.2759	ug/L	3.2759	ppb	07:45:20
1	P 214.914†	201.1	10.3	-17.911	ug/L	-17.911	ppb	07:45:20
1	Pb 220.353†	-896.7	-962.1	-3.6673	ug/L	-3.6673	ppb	07:45:20
1	S 181.975 Axial†	83.0	47.6	-37.059	ug/L	-37.059	ppb	07:45:20
1	Sb 206.836†	95.0	71.9	11.578	ug/L	11.578	ppb	07:45:20
1	Se 196.026†	-1012.1	-1149.8	13.958	ug/L	13.958	ppb	07:45:20
1	Si 251.611†	482.0	24.2	0.9893	ug/L	0.9893	ppb	07:45:20
1	Sn 189.927†	-357.5	-424.7	7.1019	ug/L	7.1019	ppb	07:45:20
1	Ti 334.940†	-14522.7	-15066.3	1.3981	ug/L	1.3981	ppb	07:44:59
1	Tl 190.801†	-103.7	-76.0	-21.650	ug/L	-21.650	ppb	07:45:20
1	U 409.014†	-3444.3	1111.9	11.505	ug/L	11.505	ppb	07:44:59
1	V 292.402†	464.8	2292.1	-2.7532	ug/L	-2.7532	ppb	07:45:20
1	Zn 213.857†	3259.0	3076.7	7.9325	ug/L	7.9325	ppb	07:45:20
1	SiO2†	461.2	-26.5	-1.0897	ug/L	-1.0897	ppb	07:46:16
2	Sc Radial	3829.3	3829.3	92.8	%			07:44:43
2	Y RADIAL	4298.4	4298.4	88.78	%			07:44:43
2	Al 396.153Radial†	569564.3	613803.5	506810	ug/L	506810	ppb	07:44:37
2	Ca 317.933Radial†	237983.1	256375.0	474590	ug/L	474590	ppb	07:44:37
2	Fe 238.204 Radial†	15045.4	16198.9	188250	ug/L	188250	ppb	07:44:43
2	K 766.490 Radial†	2235.5	-215.9	-199.83	ug/L	-199.83	ppb	07:44:37
2	Mg 279.077 IEC†	10875.0	11716.1	493500	ug/L	493500	ppb	07:44:43
2	Na 589.592 Radial†	-1533.6	0.0	0.0066	ug/L	0.0066	ppb	07:44:43
2	Sr 421.552†	543.1	548.7	0.0789	ug/L	0.0789	ppb	07:44:43
2	Sc 361.383	772400.6	772400.6	86.706	%			07:45:25
2	Y 371.029	620923.4	620923.4	84.566	%			07:45:25
2	Ag 328.068†	-10137.6	-12316.4	0.6611	ug/L	0.6611	ppb	07:45:25
2	As 188.979†	-105.6	-93.1	8.2069	ug/L	8.2069	ppb	07:45:45
2	B 249.677†	284.6	1089.3	-7.7974	ug/L	-7.7974	ppb	07:45:25
2	Ba 233.527†	-716.5	-811.1	-0.1653	ug/L	-0.1653	ppb	07:45:45
2	Be 313.107†	-4698.3	-1015.6	-0.3924	ug/L	-0.3924	ppb	07:45:25
2	Cd 226.502†	1262.7	1660.4	-2.2890	ug/L	-2.2890	ppb	07:45:45
2	Co 228.616†	-36.1	43.5	-1.9241	ug/L	-1.9241	ppb	07:45:45
2	Cr 267.716†	-159.0	-245.2	1.1409	ug/L	1.1409	ppb	07:45:45
2	Cu 324.752†	3568.1	-2771.6	2.2327	ug/L	2.2327	ppb	07:45:25
2	Mn 257.610†	293.2	-193.6	-1.7874	ug/L	-1.7874	ppb	07:45:25
2	Mo 202.031†	-296.3	-347.0	-2.8000	ug/L	-2.8000	ppb	07:45:45
2	Ni 231.604†	243.6	195.8	4.3622	ug/L	4.3622	ppb	07:45:45

2	P 214.914†	204.0	12.0	-18.204 ug/L	-18.204 ppb	07:45:45
2	Pb 220.353†	-935.6	-999.4	-8.0375 ug/L	-8.0375 ppb	07:45:45
2	S 181.975 Axial†	83.3	47.2	-37.319 ug/L	-37.319 ppb	07:45:45
2	Sb 206.836†	61.9	33.0	-0.3271 ug/L	-0.3271 ppb	07:45:45
2	Se 196.026†	-1043.0	-1177.0	2.2233 ug/L	2.2233 ppb	07:45:45
2	Si 251.611†	449.8	-17.0	-0.2219 ug/L	-0.2219 ppb	07:45:45
2	Sn 189.927†	-383.5	-451.7	2.3091 ug/L	2.3091 ppb	07:45:45
2	Ti 334.940†	-14776.5	-15237.7	0.5458 ug/L	0.5458 ppb	07:45:25
2	Tl 190.801†	-80.2	-48.0	-13.776 ug/L	-13.776 ppb	07:45:45
2	U 409.014†	-3252.3	1362.2	18.782 ug/L	18.782 ppb	07:45:25
2	V 292.402†	569.9	2409.5	-2.0765 ug/L	-2.0765 ppb	07:45:45
2	Zn 213.857†	3261.6	3052.5	7.6201 ug/L	7.6201 ppb	07:45:45
2	SiO2†	444.8	-49.2	-2.5111 ug/L	-2.5111 ppb	07:46:21
3	Sc Radial	3848.6	3848.6	93.3 %		07:44:53
3	Y RADIAL	4331.3	4331.3	89.46 %		07:44:53
3	Al 396.153Radial†	568951.0	610073.0	503730 ug/L	503730 ppb	07:44:48
3	Ca 317.933Radial†	237689.6	254776.3	471630 ug/L	471630 ppb	07:44:48
3	Fe 238.204 Radial†	15172.1	16253.5	188880 ug/L	188880 ppb	07:44:53
3	K 766.490 Radial†	2226.6	-237.5	-202.94 ug/L	-202.94 ppb	07:44:48
3	Mg 279.077 IEC†	10881.6	11664.5	491320 ug/L	491320 ppb	07:44:53
3	Na 589.592 Radial†	-1561.4	-21.5	-6.6106 ug/L	-6.6106 ppb	07:44:53
3	Sr 421.552†	581.3	586.7	0.3520 ug/L	0.3520 ppb	07:44:53
3	Sc 361.383	768526.8	768526.8	86.271 %		07:45:50
3	Y 371.029	617575.3	617575.3	84.110 %		07:45:50
3	Ag 328.068†	-9966.4	-12176.9	1.5149 ug/L	1.5149 ppb	07:45:50
3	As 188.979†	-104.4	-92.2	8.6748 ug/L	8.6748 ppb	07:46:11
3	B 249.677†	228.6	1026.1	-9.2237 ug/L	-9.2237 ppb	07:45:50
3	Ba 233.527†	-713.0	-811.2	-0.1489 ug/L	-0.1489 ppb	07:46:11
3	Be 313.107†	-4719.1	-1067.1	-0.4093 ug/L	-0.4093 ppb	07:45:50
3	Cd 226.502†	1243.1	1645.0	-2.5143 ug/L	-2.5143 ppb	07:46:11
3	Co 228.616†	-19.3	62.8	-1.5772 ug/L	-1.5772 ppb	07:46:11
3	Cr 267.716†	-219.0	-315.7	0.4268 ug/L	0.4268 ppb	07:46:11
3	Cu 324.752†	3557.6	-2763.1	2.2909 ug/L	2.2909 ppb	07:45:50
3	Mn 257.610†	245.4	-247.3	-1.6897 ug/L	-1.6897 ppb	07:45:50
3	Mo 202.031†	-284.4	-334.8	-1.9794 ug/L	-1.9794 ppb	07:46:11
3	Ni 231.604†	210.1	158.3	3.5275 ug/L	3.5275 ppb	07:46:11
3	P 214.914†	219.8	31.5	-9.3604 ug/L	-9.3604 ppb	07:46:11
3	Pb 220.353†	-874.4	-933.9	-1.7833 ug/L	-1.7833 ppb	07:46:11
3	S 181.975 Axial†	62.7	23.8	-65.373 ug/L	-65.373 ppb	07:46:11
3	Sb 206.836†	91.1	67.2	10.230 ug/L	10.230 ppb	07:46:11
3	Se 196.026†	-1031.3	-1169.4	8.3357 ug/L	8.3357 ppb	07:46:11
3	Si 251.611†	411.1	-59.2	-1.4897 ug/L	-1.4897 ppb	07:46:11
3	Sn 189.927†	-379.8	-449.6	2.2137 ug/L	2.2137 ppb	07:46:11
3	Ti 334.940†	-14587.6	-15104.7	0.5261 ug/L	0.5261 ppb	07:45:50
3	Tl 190.801†	-91.7	-61.9	-17.677 ug/L	-17.677 ppb	07:46:11
3	U 409.014†	-3278.1	1313.4	17.269 ug/L	17.269 ppb	07:45:50
3	V 292.402†	452.1	2276.2	-3.0890 ug/L	-3.0890 ppb	07:46:11
3	Zn 213.857†	3237.8	3043.9	7.4908 ug/L	7.4908 ppb	07:46:11
3	SiO2†	439.5	-52.8	-2.7629 ug/L	-2.7629 ppb	07:46:26

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	769257.3	86.353	%	0.3198				0.37%
Sc Radial	3843.8	93.2	%	0.31				0.33%
Y 371.029	618646.1	84.256	%	0.2688				0.32%
Y RADIAL	4305.6	88.93	%	0.474				0.53%
Ag 328.068†	-12215.4	1.0607	ug/L	0.42949	1.0607	ppb	0.42949	40.49%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	612950.0	506100	ug/L	2113.2	506100	ppb	2113.2	0.42%
QC value within limits for Al 396.153Radial Recovery = 101.22%								
As 188.979†	-89.8	9.4433	ug/L	1.75201	9.4433	ppb	1.75201	18.55%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	1042.8	-8.7497	ug/L	0.82473	-8.7497	ppb	0.82473	9.43%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-808.3	-0.1501	ug/L	0.01466	-0.1501	ppb	0.01466	9.76%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-1005.2	-0.3886	ug/L	0.02281	-0.3886	ppb	0.02281	5.87%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	256367.6	474570	ug/L	2939.0	474570	ppb	2939.0	0.62%

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   QC value within limits for Ca 317.933Radial  Recovery = 94.91%
Cd 226.502†            1657.8     -2.3032 ug/L       0.20435     -2.3032 ppb        0.20435   8.87%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              56.4     -1.6833 ug/L       0.20909     -1.6833 ppb        0.20909  12.42%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†            -263.6      0.9498 ug/L       0.45835      0.9498 ppb        0.45835  48.26%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†           -2779.2      2.2064 ug/L       0.10037      2.2064 ppb        0.10037   4.55%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†    16187.5      188120 ug/L         840.8      188120 ppb          840.8   0.45%
   QC value within limits for Fe 238.204 Radial  Recovery = 94.06%
K 766.490 Radial†       -237.4     -203.91 ug/L         4.645     -203.91 ppb          4.645   2.28%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†        11679.4      491950 ug/L        1347.8      491950 ppb         1347.8   0.27%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.39%
Mn 257.610†            -203.9     -1.7475 ug/L       0.05126     -1.7475 ppb        0.05126   2.93%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†            -337.3     -2.1676 ug/L       0.56253     -2.1676 ppb        0.56253  25.95%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -9.6     -2.9495 ug/L       3.36446     -2.9495 ppb        3.36446 114.07%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              167.1      3.7218 ug/L       0.56867      3.7218 ppb        0.56867  15.28%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               17.9     -15.158 ug/L        5.0232     -15.158 ppb         5.0232  33.14%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†            -965.1     -4.4960 ug/L       3.20837     -4.4960 ppb        3.20837  71.36%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         39.5     -46.584 ug/L       16.2724     -46.584 ppb        16.2724  34.93%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              57.4      7.1604 ug/L       6.51934      7.1604 ppb        6.51934  91.05%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†           -1165.4      8.1725 ug/L       5.86926      8.1725 ppb        5.86926  71.82%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              -17.4     -0.2408 ug/L       1.23957     -0.2408 ppb        1.23957 514.83%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†            -442.0      3.8749 ug/L       2.79510      3.8749 ppb        2.79510  72.13%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              570.0      0.2198 ug/L       0.13676      0.2198 ppb        0.13676  62.22%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†          -15136.2      0.8233 ug/L       0.49784      0.8233 ppb        0.49784  60.47%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -62.0     -17.701 ug/L        3.9375     -17.701 ppb         3.9375  22.24%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†             1262.5      15.852 ug/L        3.8398      15.852 ppb         3.8398  24.22%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†             2325.9     -2.6395 ug/L       0.51570     -2.6395 ppb        0.51570  19.54%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†            3057.7      7.6811 ug/L       0.22708      7.6811 ppb        0.22708   2.96%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   -42.8     -2.1213 ug/L       0.90215     -2.1213 ppb        0.90215  42.53%
   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: 2/1/2010 07:48:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	3852.1	3852.1	93.4	%			07:50:50
1	Y RADIAL	4315.0	4315.0	89.13	%			07:50:50
1	Al 396.153Radial†	577511.4	618698.0	510830	ug/L	510830	ppb	07:50:30
1	Ca 317.933Radial†	240794.8	257875.0	477360	ug/L	477360	ppb	07:50:30
1	Fe 238.204 Radial†	15074.7	16134.7	187520	ug/L	187520	ppb	07:50:50
1	K 766.490 Radial†	28692.3	28104.8	5187.1	ug/L	5187.1	ppb	07:50:30
1	Mg 279.077 IEC†	10920.4	11695.7	492650	ug/L	492650	ppb	07:50:50
1	Na 589.592 Radial†	14692.6	17387.9	5358.1	ug/L	5358.1	ppb	07:50:30
1	Sr 421.552†	71766.2	76824.3	503.68	ug/L	503.68	ppb	07:50:30
1	Sc 361.383	785454.3	785454.3	88.171	%			07:51:48
1	Y 371.029	630650.7	630650.7	85.891	%			07:51:48
1	Ag 328.068†	42897.6	48027.9	265.96	ug/L	265.96	ppb	07:51:48
1	As 188.979†	1097.4	1273.3	535.96	ug/L	535.96	ppb	07:51:53
1	B 249.677†	21400.4	25032.4	491.68	ug/L	491.68	ppb	07:51:48
1	Ba 233.527†	56114.5	63657.8	472.10	ug/L	472.10	ppb	07:51:53
1	Be 313.107†	619847.6	707405.4	238.42	ug/L	238.42	ppb	07:51:48
1	Cd 226.502†	40976.7	46678.0	463.02	ug/L	463.02	ppb	07:51:53
1	Co 228.616†	21032.3	23939.0	438.67	ug/L	438.67	ppb	07:51:53
1	Cr 267.716†	39707.7	44972.8	467.13	ug/L	467.13	ppb	07:51:53
1	Cu 324.752†	173865.2	190303.0	538.95	ug/L	538.95	ppb	07:51:48
1	Mn 257.610†	413319.0	468235.4	468.17	ug/L	468.17	ppb	07:51:48
1	Mo 202.031†	6075.3	6885.1	477.82	ug/L	477.82	ppb	07:51:53
1	Ni 231.604†	17797.3	20099.7	447.61	ug/L	447.61	ppb	07:51:53
1	P 214.914†	4389.1	4754.6	2343.7	ug/L	2343.7	ppb	07:51:53
1	Pb 220.353†	2800.0	3255.3	450.32	ug/L	450.32	ppb	07:51:53
1	S 181.975 Axial†	1906.9	2113.8	2486.5	ug/L	2486.5	ppb	07:51:53
1	Sb 206.836†	1554.0	1724.0	533.42	ug/L	533.42	ppb	07:51:53
1	Se 196.026†	2926.5	3345.1	2508.1	ug/L	2508.1	ppb	07:51:53
1	Si 251.611†	150592.9	170259.7	5062.3	ug/L	5062.3	ppb	07:51:48
1	Sn 189.927†	2217.4	2505.4	480.44	ug/L	480.44	ppb	07:51:53
1	Ti 334.940†	277971.7	317067.0	497.13	ug/L	497.13	ppb	07:51:48
1	Tl 190.801†	1328.1	1550.8	440.80	ug/L	440.80	ppb	07:51:53
1	U 409.014†	11089.2	17689.9	500.12	ug/L	500.12	ppb	07:51:48
1	V 292.402†	65239.2	75743.4	492.91	ug/L	492.91	ppb	07:51:48
1	Zn 213.857†	53360.7	59810.2	485.69	ug/L	485.69	ppb	07:51:53
1	SiO2†	150246.1	169839.9	10818	ug/L	10818	ppb	07:52:20
2	Sc Radial	3887.5	3887.5	94.2	%			07:51:16
2	Y RADIAL	4354.8	4354.8	89.95	%			07:51:16
2	Al 396.153Radial†	575431.9	610850.1	504350	ug/L	504350	ppb	07:50:56
2	Ca 317.933Radial†	239671.2	254330.6	470800	ug/L	470800	ppb	07:50:56
2	Fe 238.204 Radial†	15137.3	16053.9	186580	ug/L	186580	ppb	07:51:16
2	K 766.490 Radial†	28590.2	27716.1	5115.4	ug/L	5115.4	ppb	07:50:56
2	Mg 279.077 IEC†	10966.8	11638.2	490220	ug/L	490220	ppb	07:51:16
2	Na 589.592 Radial†	14466.6	17004.6	5240.0	ug/L	5240.0	ppb	07:50:56
2	Sr 421.552†	71333.0	75663.5	496.06	ug/L	496.06	ppb	07:50:56
2	Sc 361.383	793999.8	793999.8	89.131	%			07:51:59
2	Y 371.029	637016.5	637016.5	86.758	%			07:51:59
2	Ag 328.068†	43228.1	47875.1	265.07	ug/L	265.07	ppb	07:51:59
2	As 188.979†	1019.4	1172.5	497.04	ug/L	497.04	ppb	07:52:04
2	B 249.677†	21641.6	25041.9	492.06	ug/L	492.06	ppb	07:51:59
2	Ba 233.527†	55497.8	62280.9	462.01	ug/L	462.01	ppb	07:52:04
2	Be 313.107†	626788.6	707626.7	238.49	ug/L	238.49	ppb	07:51:59
2	Cd 226.502†	40422.4	45555.9	451.52	ug/L	451.52	ppb	07:52:04
2	Co 228.616†	20783.6	23403.3	428.78	ug/L	428.78	ppb	07:52:04
2	Cr 267.716†	39413.4	44157.9	458.72	ug/L	458.72	ppb	07:52:04
2	Cu 324.752†	175916.8	190482.4	539.39	ug/L	539.39	ppb	07:51:59
2	Mn 257.610†	417773.0	468187.4	468.13	ug/L	468.13	ppb	07:51:59
2	Mo 202.031†	5986.0	6710.7	466.07	ug/L	466.07	ppb	07:52:04
2	Ni 231.604†	17633.1	19698.2	438.67	ug/L	438.67	ppb	07:52:04

2	P 214.914†	4344.5	4651.1	2288.9 ug/L	2288.9 ppb	07:52:04
2	Pb 220.353†	2813.3	3236.0	446.80 ug/L	446.80 ppb	07:52:04
2	S 181.975 Axial†	1933.5	2120.4	2495.8 ug/L	2495.8 ppb	07:52:04
2	Sb 206.836†	1488.5	1631.6	505.02 ug/L	505.02 ppb	07:52:04
2	Se 196.026†	2872.7	3249.0	2451.2 ug/L	2451.2 ppb	07:52:04
2	Si 251.611†	152190.5	170213.9	5061.1 ug/L	5061.1 ppb	07:51:59
2	Sn 189.927†	2211.9	2472.3	474.08 ug/L	474.08 ppb	07:52:04
2	Ti 334.940†	281151.6	317241.5	496.71 ug/L	496.71 ppb	07:51:59
2	Tl 190.801†	1267.0	1466.0	416.93 ug/L	416.93 ppb	07:52:04
2	U 409.014†	11511.7	18028.6	510.25 ug/L	510.25 ppb	07:51:59
2	V 292.402†	66065.8	75874.6	493.73 ug/L	493.73 ppb	07:51:59
2	Zn 213.857†	52632.9	58342.2	473.38 ug/L	473.38 ppb	07:52:04
2	SiO2†	150682.2	168495.2	10733 ug/L	10733 ppb	07:52:26
3	Sc Radial	3850.9	3850.9	93.3 %		07:51:41
3	Y RADIAL	4332.8	4332.8	89.49 %		07:51:41
3	Al 396.153Radial†	575439.7	616660.4	509140 ug/L	509140 ppb	07:51:21
3	Ca 317.933Radial†	239897.4	256989.5	475720 ug/L	475720 ppb	07:51:21
3	Fe 238.204 Radial†	15062.0	16125.8	187410 ug/L	187410 ppb	07:51:41
3	K 766.490 Radial†	28648.9	28067.3	5180.6 ug/L	5180.6 ppb	07:51:21
3	Mg 279.077 IEC†	10910.7	11688.7	492350 ug/L	492350 ppb	07:51:41
3	Na 589.592 Radial†	14390.7	17069.0	5259.8 ug/L	5259.8 ppb	07:51:21
3	Sr 421.552†	71306.1	76354.0	500.58 ug/L	500.58 ppb	07:51:21
3	Sc 361.383	776467.5	776467.5	87.163 %		07:52:10
3	Y 371.029	622200.4	622200.4	84.740 %		07:52:10
3	Ag 328.068†	42266.9	47867.5	265.26 ug/L	265.26 ppb	07:52:10
3	As 188.979†	1019.6	1198.5	507.20 ug/L	507.20 ppb	07:52:15
3	B 249.677†	21218.0	25104.1	493.19 ug/L	493.19 ppb	07:52:10
3	Ba 233.527†	55563.5	63762.1	472.86 ug/L	472.86 ppb	07:52:15
3	Be 313.107†	613165.9	707876.2	238.58 ug/L	238.58 ppb	07:52:10
3	Cd 226.502†	40603.4	46787.6	464.16 ug/L	464.16 ppb	07:52:15
3	Co 228.616†	20855.7	24012.4	440.02 ug/L	440.02 ppb	07:52:15
3	Cr 267.716†	39397.3	45138.0	468.83 ug/L	468.83 ppb	07:52:15
3	Cu 324.752†	171506.3	189879.0	537.76 ug/L	537.76 ppb	07:52:10
3	Mn 257.610†	409833.8	469662.4	469.60 ug/L	469.60 ppb	07:52:10
3	Mo 202.031†	5996.8	6874.7	477.10 ug/L	477.10 ppb	07:52:15
3	Ni 231.604†	17680.5	20199.4	449.82 ug/L	449.82 ppb	07:52:15
3	P 214.914†	4390.3	4813.6	2374.3 ug/L	2374.3 ppb	07:52:15
3	Pb 220.353†	2732.0	3214.0	445.51 ug/L	445.51 ppb	07:52:15
3	S 181.975 Axial†	1908.2	2140.3	2519.2 ug/L	2519.2 ppb	07:52:15
3	Sb 206.836†	1525.9	1712.2	530.06 ug/L	530.06 ppb	07:52:15
3	Se 196.026†	2898.8	3351.7	2511.2 ug/L	2511.2 ppb	07:52:15
3	Si 251.611†	148926.2	170324.4	5064.2 ug/L	5064.2 ppb	07:52:10
3	Sn 189.927†	2264.2	2588.2	493.57 ug/L	493.57 ppb	07:52:15
3	Ti 334.940†	275404.9	317770.9	497.98 ug/L	497.98 ppb	07:52:10
3	Tl 190.801†	1307.7	1544.8	439.12 ug/L	439.12 ppb	07:52:15
3	U 409.014†	10922.9	17644.7	498.80 ug/L	498.80 ppb	07:52:10
3	V 292.402†	64679.2	75957.3	494.33 ug/L	494.33 ppb	07:52:10
3	Zn 213.857†	52836.0	59908.6	486.52 ug/L	486.52 ppb	07:52:15
3	SiO2†	150701.6	172334.7	10977 ug/L	10977 ppb	07:52:31

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	785307.2	88.155	%	0.9842				1.12%
Sc Radial	3863.5	93.6	%	0.50				0.54%
Y 371.029	629955.9	85.796	%	1.0123				1.18%
Y RADIAL	4334.2	89.52	%	0.412				0.46%
Ag 328.068†	47923.5	265.43	ug/L	0.469	265.43	ppb	0.469	0.18%
QC value within limits for Ag 328.068 Recovery = 106.17%								
Al 396.153Radial†	615402.8	508100	ug/L	3362.1	508100	ppb	3362.1	0.66%
QC value within limits for Al 396.153Radial Recovery = 101.62%								
As 188.979†	1214.7	513.40	ug/L	20.187	513.40	ppb	20.187	3.93%
QC value within limits for As 188.979 Recovery = 102.68%								
B 249.677†	25059.5	492.31	ug/L	0.787	492.31	ppb	0.787	0.16%
QC value within limits for B 249.677 Recovery = 98.46%								
Ba 233.527†	63233.6	468.99	ug/L	6.058	468.99	ppb	6.058	1.29%
QC value within limits for Ba 233.527 Recovery = 93.80%								
Be 313.107†	707636.1	238.50	ug/L	0.080	238.50	ppb	0.080	0.03%
QC value within limits for Be 313.107 Recovery = 95.40%								
Ca 317.933Radial†	256398.4	474630	ug/L	3414.7	474630	ppb	3414.7	0.72%

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   QC value within limits for Ca 317.933Radial  Recovery = 94.93%
Cd 226.502†            46340.5      459.57 ug/L         6.989      459.57 ppb          6.989   1.52%
   QC value within limits for Cd 226.502  Recovery = 91.91%
Co 228.616†            23784.9      435.83 ug/L         6.138      435.83 ppb          6.138   1.41%
   QC value within limits for Co 228.616  Recovery = 87.17%
Cr 267.716†            44756.2      464.89 ug/L         5.414      464.89 ppb          5.414   1.16%
   QC value within limits for Cr 267.716  Recovery = 92.98%
Cu 324.752†           190221.5      538.70 ug/L         0.842      538.70 ppb          0.842   0.16%
   QC value within limits for Cu 324.752  Recovery = 107.74%
Fe 238.204 Radial†     16104.8      187170 ug/L         515.1      187170 ppb          515.1   0.28%
   QC value within limits for Fe 238.204 Radial  Recovery = 93.58%
K 766.490 Radial†      27962.8      5161.1 ug/L         39.66      5161.1 ppb          39.66   0.77%
   QC value within limits for K 766.490 Radial  Recovery = 103.22%
Mg 279.077 IEC†        11674.2      491740 ug/L        1321.4      491740 ppb         1321.4   0.27%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.35%
Mn 257.610†           468695.1      468.63 ug/L         0.840      468.63 ppb          0.840   0.18%
   QC value within limits for Mn 257.610  Recovery = 93.73%
Mo 202.031†             6823.5      473.66 ug/L         6.583      473.66 ppb          6.583   1.39%
   QC value within limits for Mo 202.031  Recovery = 94.73%
Na 589.592 Radial†     17153.8      5286.0 ug/L         63.25      5286.0 ppb          63.25   1.20%
   QC value within limits for Na 589.592 Radial  Recovery = 105.72%
Ni 231.604†            19999.1      445.36 ug/L         5.907      445.36 ppb          5.907   1.33%
   QC value within limits for Ni 231.604  Recovery = 89.07%
P 214.914†              4739.8      2335.6 ug/L         43.27      2335.6 ppb          43.27   1.85%
   QC value within limits for P 214.914  Recovery = 93.43%
Pb 220.353†             3235.1      447.54 ug/L         2.489      447.54 ppb          2.489   0.56%
   QC value within limits for Pb 220.353  Recovery = 89.51%
S 181.975 Axial†        2124.9      2500.5 ug/L         16.85      2500.5 ppb          16.85   0.67%
   QC value within limits for S 181.975 Axial  Recovery = 100.02%
Sb 206.836†             1689.3      522.83 ug/L        15.517      522.83 ppb         15.517   2.97%
   QC value within limits for Sb 206.836  Recovery = 104.57%
Se 196.026†             3315.2      2490.2 ug/L         33.78      2490.2 ppb          33.78   1.36%
   QC value within limits for Se 196.026  Recovery = 99.61%
Si 251.611†           170266.0      5062.5 ug/L          1.59      5062.5 ppb           1.59   0.03%
   QC value within limits for Si 251.611  Recovery = 101.25%
Sn 189.927†             2521.9      482.70 ug/L         9.940      482.70 ppb          9.940   2.06%
   QC value within limits for Sn 189.927  Recovery = 96.54%
Sr 421.552†            76280.6      500.11 ug/L         3.830      500.11 ppb          3.830   0.77%
   QC value within limits for Sr 421.552  Recovery = 100.02%
Ti 334.940†           317359.8      497.27 ug/L         0.652      497.27 ppb          0.652   0.13%
   QC value within limits for Ti 334.940  Recovery = 99.45%
Tl 190.801†             1520.5      432.28 ug/L        13.324      432.28 ppb         13.324   3.08%
   QC value within limits for Tl 190.801  Recovery = 86.46%
U 409.014†             17787.7      503.06 ug/L         6.267      503.06 ppb          6.267   1.25%
   QC value within limits for U 409.014  Recovery = 100.61%
V 292.402†             75858.4      493.65 ug/L         0.712      493.65 ppb          0.712   0.14%
   QC value within limits for V 292.402  Recovery = 98.73%
Zn 213.857†            59353.7      481.86 ug/L         7.358      481.86 ppb          7.358   1.53%
   QC value within limits for Zn 213.857  Recovery = 96.37%
SiO2†                 170223.2       10843 ug/L         124.1       10843 ppb          124.1   1.14%
   QC value within limits for SiO2  Recovery = 101.38%
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: LR1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 2/1/2010 07:54:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	3669.3	3669.3	88.9	%			07:56:54
1	Y RADIAL	4126.6	4126.6	85.24	%			07:56:54
1	Al 396.153Radial†	562801.2	632958.2	522620	ug/L	522620	ppb	07:56:34
1	Ca 317.933Radial†	234941.9	264136.3	488950	ug/L	488950	ppb	07:56:34
1	Fe 238.204 Radial†	34688.1	38990.4	453110	ug/L	453110	ppb	07:56:54
1	K 766.490 Radial†	2316.9	-19.4	-372.90	ug/L	-372.90	ppb	07:56:34
1	Mg 279.077 IEC†	10640.0	11962.8	503620	ug/L	503620	ppb	07:56:54
1	Na 589.592 Radial†	1520658.2	1711357.2	527360	ug/L	527360	ppb	07:56:34
1	Sr 421.552†	786.5	847.9	1.9470	ug/L	1.9470	ppb	07:56:54
1	Sc 361.383	761936.5	761936.5	85.531	%			07:57:52
1	Y 371.029	613490.1	613490.1	83.554	%			07:57:52
1	Ag 328.068†	-24179.8	-28894.5	2.8488	ug/L	2.8488	ppb	07:57:52
1	As 188.979†	-222.3	-231.2	17.294	ug/L	17.294	ppb	07:58:12
1	B 249.677†	1047.0	1985.2	-32.092	ug/L	-32.092	ppb	07:57:52
1	Ba 233.527†	-1944.4	-2258.1	-2.6584	ug/L	-2.6584	ppb	07:58:12
1	Be 313.107†	-10117.8	-7426.3	-2.5308	ug/L	-2.5308	ppb	07:57:52
1	Cd 226.502†	3280.0	4039.0	-2.4824	ug/L	-2.4824	ppb	07:58:12
1	Co 228.616†	181.4	297.2	-1.1359	ug/L	-1.1359	ppb	07:58:12
1	Cr 267.716†	-120.0	-202.1	1.4499	ug/L	1.4499	ppb	07:58:12
1	Cu 324.752†	133.0	-6731.3	-2.1605	ug/L	-2.1605	ppb	07:57:52
1	Mn 257.610†	-25018.6	-29782.5	-5.7408	ug/L	-5.7408	ppb	07:57:52
1	Mo 202.031†	-543.5	-640.6	-1.5818	ug/L	-1.5818	ppb	07:58:12
1	Ni 231.604†	299.5	265.0	5.9025	ug/L	5.9025	ppb	07:58:12
1	P 214.914†	611.5	491.7	23.601	ug/L	23.601	ppb	07:58:12
1	Pb 220.353†	-726.2	-769.4	-5.0527	ug/L	-5.0527	ppb	07:58:12
1	S 181.975 Axial†	95.4	62.7	-21.394	ug/L	-21.394	ppb	07:58:12
1	Sb 206.836†	77.9	52.6	11.405	ug/L	11.405	ppb	07:58:12
1	Se 196.026†	-2442.2	-2829.4	-36.864	ug/L	-36.864	ppb	07:58:12
1	Si 251.611†	-582.0	-1216.2	-35.677	ug/L	-35.677	ppb	07:58:12
1	Sn 189.927†	-413.6	-493.0	2.2797	ug/L	2.2797	ppb	07:58:12
1	Ti 334.940†	-11424.3	-11552.5	1.2605	ug/L	1.2605	ppb	07:57:52
1	Tl 190.801†	-129.4	-106.8	-30.504	ug/L	-30.504	ppb	07:58:12
1	U 409.014†	383788.9	453823.7	13354	ug/L	13354	ppb	07:57:52
1	V 292.402†	2012.8	4105.5	-3.8711	ug/L	-3.8711	ppb	07:58:12
1	Zn 213.857†	5982.7	6285.6	9.3621	ug/L	9.3621	ppb	07:58:12
1	SiO2†	-608.4	-1273.6	-80.055	ug/L	-80.055	ppb	07:59:09
2	Sc Radial	3843.1	3843.1	93.2	%			07:57:20
2	Y RADIAL	4355.4	4355.4	89.96	%			07:57:20
2	Al 396.153Radial†	567574.6	609478.6	503240	ug/L	503240	ppb	07:57:00
2	Ca 317.933Radial†	236996.6	254401.3	470930	ug/L	470930	ppb	07:57:00
2	Fe 238.204 Radial†	34821.3	37370.4	434290	ug/L	434290	ppb	07:57:20
2	K 766.490 Radial†	2248.9	-210.1	-395.41	ug/L	-395.41	ppb	07:57:00
2	Mg 279.077 IEC†	10696.4	11482.6	483400	ug/L	483400	ppb	07:57:20
2	Na 589.592 Radial†	1532477.2	1646758.9	507450	ug/L	507450	ppb	07:57:00
2	Sr 421.552†	798.1	820.3	1.9000	ug/L	1.9000	ppb	07:57:20
2	Sc 361.383	761916.5	761916.5	85.529	%			07:58:18
2	Y 371.029	614167.4	614167.4	83.646	%			07:58:18
2	Ag 328.068†	-24042.0	-28734.3	-2.3205	ug/L	-2.3205	ppb	07:58:18
2	As 188.979†	-234.0	-244.9	7.6388	ug/L	7.6388	ppb	07:58:38
2	B 249.677†	926.6	1844.5	-31.980	ug/L	-31.980	ppb	07:58:18
2	Ba 233.527†	-1952.0	-2266.9	-3.2943	ug/L	-3.2943	ppb	07:58:38
2	Be 313.107†	-10052.3	-7350.0	-2.5055	ug/L	-2.5055	ppb	07:58:18
2	Cd 226.502†	3254.5	4009.2	-0.8396	ug/L	-0.8396	ppb	07:58:38
2	Co 228.616†	242.7	368.9	0.4512	ug/L	0.4512	ppb	07:58:38
2	Cr 267.716†	-94.2	-172.0	1.3846	ug/L	1.3846	ppb	07:58:38
2	Cu 324.752†	37.3	-6843.2	-3.4828	ug/L	-3.4828	ppb	07:58:18
2	Mn 257.610†	-25217.2	-30015.5	-7.0065	ug/L	-7.0065	ppb	07:58:18
2	Mo 202.031†	-575.2	-677.7	-5.7262	ug/L	-5.7262	ppb	07:58:38
2	Ni 231.604†	313.8	281.7	6.2727	ug/L	6.2727	ppb	07:58:38

2	P 214.914†	603.0	481.7	28.869	ug/L	28.869 ppb	07:58:38
2	Pb 220.353†	-645.4	-674.9	2.3912	ug/L	2.3912 ppb	07:58:38
2	S 181.975 Axial†	99.1	67.0	-12.445	ug/L	-12.445 ppb	07:58:38
2	Sb 206.836†	104.4	83.7	20.914	ug/L	20.914 ppb	07:58:38
2	Se 196.026†	-2453.2	-2842.3	-107.53	ug/L	-107.53 ppb	07:58:38
2	Si 251.611†	-584.0	-1218.6	-35.717	ug/L	-35.717 ppb	07:58:38
2	Sn 189.927†	-403.4	-481.0	1.1609	ug/L	1.1609 ppb	07:58:38
2	Ti 334.940†	-11493.4	-11633.6	0.3635	ug/L	0.3635 ppb	07:58:18
2	Tl 190.801†	-99.9	-72.3	-20.780	ug/L	-20.780 ppb	07:58:38
2	U 409.014†	384539.0	454712.5	13382	ug/L	13382 ppb	07:58:18
2	V 292.402†	2103.2	4211.2	-0.8011	ug/L	-0.8011 ppb	07:58:38
2	Zn 213.857†	5989.5	6293.8	11.256	ug/L	11.256 ppb	07:58:38
2	SiO2†	-596.2	-1259.4	-79.081	ug/L	-79.081 ppb	07:59:14
3	Sc Radial	3788.3	3788.3	91.8	%		07:57:45
3	Y RADIAL	4267.6	4267.6	88.15	%		07:57:45
3	Al 396.153Radial†	564386.2	614816.9	507650	ug/L	507650 ppb	07:57:25
3	Ca 317.933Radial†	236255.9	257273.7	476250	ug/L	476250 ppb	07:57:25
3	Fe 238.204 Radial†	34352.0	37399.8	434630	ug/L	434630 ppb	07:57:45
3	K 766.490 Radial†	2149.2	-283.8	-414.39	ug/L	-414.39 ppb	07:57:25
3	Mg 279.077 IEC†	10540.4	11478.7	483240	ug/L	483240 ppb	07:57:45
3	Na 589.592 Radial†	1534948.6	1673239.3	515610	ug/L	515610 ppb	07:57:25
3	Sr 421.552†	762.9	794.4	1.6887	ug/L	1.6887 ppb	07:57:45
3	Sc 361.383	754492.3	754492.3	84.696	%		07:58:44
3	Y 371.029	608099.8	608099.8	82.820	%		07:58:44
3	Ag 328.068†	-23979.5	-28937.0	-3.1769	ug/L	-3.1769 ppb	07:58:44
3	As 188.979†	-219.7	-230.6	13.209	ug/L	13.209 ppb	07:59:04
3	B 249.677†	1101.5	2061.7	-27.492	ug/L	-27.492 ppb	07:58:44
3	Ba 233.527†	-2025.0	-2375.6	-4.0766	ug/L	-4.0766 ppb	07:59:04
3	Be 313.107†	-10038.2	-7449.0	-2.5321	ug/L	-2.5321 ppb	07:58:44
3	Cd 226.502†	3237.9	4027.1	-0.6876	ug/L	-0.6876 ppb	07:59:04
3	Co 228.616†	195.8	316.3	-0.5267	ug/L	-0.5267 ppb	07:59:04
3	Cr 267.716†	-124.7	-209.1	1.0046	ug/L	1.0046 ppb	07:59:04
3	Cu 324.752†	-28.9	-6920.9	-3.6886	ug/L	-3.6886 ppb	07:58:44
3	Mn 257.610†	-24654.6	-29641.4	-6.5907	ug/L	-6.5907 ppb	07:58:44
3	Mo 202.031†	-556.4	-662.2	-4.6028	ug/L	-4.6028 ppb	07:59:04
3	Ni 231.604†	301.9	271.2	6.0403	ug/L	6.0403 ppb	07:59:04
3	P 214.914†	601.3	486.7	32.274	ug/L	32.274 ppb	07:59:04
3	Pb 220.353†	-646.5	-683.6	2.4689	ug/L	2.4689 ppb	07:59:04
3	S 181.975 Axial†	100.3	69.5	-10.180	ug/L	-10.180 ppb	07:59:04
3	Sb 206.836†	79.4	55.3	12.139	ug/L	12.139 ppb	07:59:04
3	Se 196.026†	-2452.0	-2869.0	-120.93	ug/L	-120.93 ppb	07:59:04
3	Si 251.611†	-540.2	-1173.6	-34.390	ug/L	-34.390 ppb	07:59:04
3	Sn 189.927†	-404.5	-487.1	1.0001	ug/L	1.0001 ppb	07:59:04
3	Ti 334.940†	-9728.9	-9682.5	3.9994	ug/L	3.9994 ppb	07:58:44
3	Tl 190.801†	-101.3	-75.1	-21.540	ug/L	-21.540 ppb	07:59:04
3	U 409.014†	381191.7	455184.4	13396	ug/L	13396 ppb	07:58:44
3	V 292.402†	2193.6	4342.1	0.0549	ug/L	0.0549 ppb	07:59:04
3	Zn 213.857†	5965.7	6334.5	11.570	ug/L	11.570 ppb	07:59:04
3	SiO2†	-718.6	-1410.7	-88.763	ug/L	-88.763 ppb	07:59:19

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	759448.5	85.252	%	0.4818				0.57%
Sc Radial	3766.9	91.3	%	2.15				2.36%
Y 371.029	611919.1	83.340	%	0.4528				0.54%
Y RADIAL	4249.9	87.78	%	2.384				2.72%
Ag 328.068†	-28855.2	-0.8828	ug/L	3.25997	-0.8828	ppb	3.25997	369.26%
Al 396.153Radial†	619084.6	511170	ug/L	10162.3	511170	ppb	10162.3	1.99%
QC value within limits for Al 396.153Radial Recovery = 102.23%								
As 188.979†	-235.6	12.714	ug/L	4.8468	12.714	ppb	4.8468	38.12%
B 249.677†	1963.8	-30.521	ug/L	2.6240	-30.521	ppb	2.6240	8.60%
Ba 233.527†	-2300.2	-3.3431	ug/L	0.71038	-3.3431	ppb	0.71038	21.25%
Be 313.107†	-7408.5	-2.5228	ug/L	0.01499	-2.5228	ppb	0.01499	0.59%
Ca 317.933Radial†	258603.8	478710	ug/L	9259.2	478710	ppb	9259.2	1.93%
QC value within limits for Ca 317.933Radial Recovery = 95.74%								
Cd 226.502†	4025.1	-1.3366	ug/L	0.99525	-1.3366	ppb	0.99525	74.46%
Co 228.616†	327.4	-0.4038	ug/L	0.80064	-0.4038	ppb	0.80064	198.27%
Cr 267.716†	-194.4	1.2797	ug/L	0.24047	1.2797	ppb	0.24047	18.79%
Cu 324.752†	-6831.8	-3.1106	ug/L	0.82924	-3.1106	ppb	0.82924	26.66%

Fe 238.204 Radial†	37920.2	440680	ug/L	10772.1	440680	ppb	10772.1	2.44%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 88.14%								
K 766.490 Radial†	-171.1	-394.23	ug/L	20.771	-394.23	ppb	20.771	5.27%
Mg 279.077 IEC†	11641.4	490090	ug/L	11720.1	490090	ppb	11720.1	2.39%
QC value within limits for Mg 279.077 IEC Recovery = 98.02%								
Mn 257.610†	-29813.1	-6.4460	ug/L	0.64515	-6.4460	ppb	0.64515	10.01%
Mo 202.031†	-660.2	-3.9703	ug/L	2.14342	-3.9703	ppb	2.14342	53.99%
Na 589.592 Radial†	1677118.5	516810	ug/L	10006.7	516810	ppb	10006.7	1.94%
QC value within limits for Na 589.592 Radial Recovery = 103.36%								
Ni 231.604†	272.7	6.0718	ug/L	0.18709	6.0718	ppb	0.18709	3.08%
P 214.914†	486.7	28.248	ug/L	4.3698	28.248	ppb	4.3698	15.47%
Pb 220.353†	-709.3	-0.0642	ug/L	4.32033	-0.0642	ppb	4.32033	>999.9%
S 181.975 Axial†	66.4	-14.673	ug/L	5.9299	-14.673	ppb	5.9299	40.41%
Sb 206.836†	63.9	14.819	ug/L	5.2911	14.819	ppb	5.2911	35.70%
Se 196.026†	-2846.9	-88.444	ug/L	45.1696	-88.444	ppb	45.1696	51.07%
Si 251.611†	-1202.8	-35.261	ug/L	0.7548	-35.261	ppb	0.7548	2.14%
Sn 189.927†	-487.0	1.4802	ug/L	0.69698	1.4802	ppb	0.69698	47.09%
Sr 421.552†	820.9	1.8452	ug/L	0.13758	1.8452	ppb	0.13758	7.46%
Ti 334.940†	-10956.2	1.8745	ug/L	1.89410	1.8745	ppb	1.89410	101.05%
Tl 190.801†	-84.8	-24.275	ug/L	5.4083	-24.275	ppb	5.4083	22.28%
U 409.014†	454573.5	13377	ug/L	21.6	13377	ppb	21.6	0.16%
QC value less than the lower limit for U 409.014 Recovery = 89.18%								
V 292.402†	4219.6	-1.5391	ug/L	2.06443	-1.5391	ppb	2.06443	134.13%
Zn 213.857†	6304.6	10.729	ug/L	1.1945	10.729	ppb	1.1945	11.13%
SiO2†	-1314.6	-82.633	ug/L	5.3307	-82.633	ppb	5.3307	6.45%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 2/1/2010 08:01:29
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4014.3	4014.3	97.3	%			08:03:47
1	Y RADIAL	4558.5	4558.5	94.16	%			08:03:27
1	Al 396.153Radial†	359.8	559.8	9.5325	ug/L	9.5325	ppb	08:03:27
1	Ca 317.933Radial†	25.7	13.1	24.253	ug/L	24.253	ppb	08:03:47
1	Fe 238.204 Radial†	-12.5	-22.9	-0.5626	ug/L	-0.5626	ppb	08:03:47
1	K 766.490 Radial†	1531275.7	1571076.4	299030	ug/L	299030	ppb	08:03:22
1	Mg 279.077 IEC†	-2.9	-3.0	-26.818	ug/L	-26.818	ppb	08:03:47
1	Na 589.592 Radial†	-1240.5	377.4	116.30	ug/L	116.30	ppb	08:03:27
1	Sr 421.552†	1443823.4	1483789.0	9796.9	ug/L	9796.9	ppb	08:03:22
1	Sc 361.383	858361.3	858361.3	96.356	%			08:05:05
1	Y 371.029	689000.0	689000.0	93.838	%			08:05:05
1	Ag 328.068†	-7360.9	-8263.8	2.7759	ug/L	2.7759	ppb	08:05:10
1	As 188.979†	23449.1	24364.7	9418.8	ug/L	9418.8	ppb	08:05:10
1	B 249.677†	216026.3	224957.8	4678.2	ug/L	4678.2	ppb	08:05:05
1	Ba 233.527†	1793913.8	1861777.5	13629	ug/L	13629	ppb	08:05:05
1	Be 313.107†	7868597.7	8170602.5	2763.3	ug/L	2763.3	ppb	08:04:58
1	Cd 226.502†	868322.7	901368.0	9313.5	ug/L	9313.5	ppb	08:05:05
1	Co 228.616†	464772.3	482435.8	8891.0	ug/L	8891.0	ppb	08:05:10
1	Cr 267.716†	2149318.6	2230547.1	22976	ug/L	22976	ppb	08:05:05
1	Cu 324.752†	6736940.0	6984854.0	19428	ug/L	19428	ppb	08:04:58
1	Mn 257.610†	8732566.5	9062313.0	9092.6	ug/L	9092.6	ppb	08:04:58
1	Mo 202.031†	135350.6	140464.6	9335.2	ug/L	9335.2	ppb	08:05:10
1	Ni 231.604†	403588.7	418767.9	9325.8	ug/L	9325.8	ppb	08:05:05
1	P 214.914†	31667.6	32642.0	13182	ug/L	13182	ppb	08:05:10
1	Pb 220.353†	209670.3	217680.0	23367	ug/L	23367	ppb	08:05:10
1	S 181.975 Axial†	39512.3	40957.8	50034	ug/L	50034	ppb	08:05:10
1	Sb 206.836†	31743.4	32905.6	10399	ug/L	10399	ppb	08:05:10
1	Se 196.026†	16938.6	17605.3	9786.3	ug/L	9786.3	ppb	08:05:10
1	Si 251.611†	1491065.0	1546923.5	45931	ug/L	45931	ppb	08:05:05
1	Sn 189.927†	58917.1	61136.0	9876.5	ug/L	9876.5	ppb	08:05:10
1	Ti 334.940†	6226002.1	6463282.8	9648.9	ug/L	9648.9	ppb	08:04:58
1	Tl 190.801†	31425.4	32658.4	9280.1	ug/L	9280.1	ppb	08:05:10
1	U 409.014†	-3794.7	1174.9	-16.651	ug/L	-16.651	ppb	08:05:10
1	V 292.402†	1396671.4	1451247.7	9768.1	ug/L	9768.1	ppb	08:05:05
1	Zn 213.857†	1531870.8	1589099.3	13397	ug/L	13397	ppb	08:05:05
1	SiO2†	1503318.3	1559613.7	99201	ug/L	99201	ppb	08:05:56
2	Sc Radial	4030.3	4030.3	97.7	%			08:04:18
2	Y RADIAL	4570.0	4570.0	94.39	%			08:03:58
2	Al 396.153Radial†	367.1	565.9	9.2780	ug/L	9.2780	ppb	08:03:58
2	Ca 317.933Radial†	32.9	20.3	37.669	ug/L	37.669	ppb	08:04:18
2	Fe 238.204 Radial†	-13.1	-23.5	-2.9495	ug/L	-2.9495	ppb	08:04:18
2	K 766.490 Radial†	1498402.8	1531160.0	291440	ug/L	291440	ppb	08:03:53
2	Mg 279.077 IEC†	-3.2	-3.2	-36.182	ug/L	-36.182	ppb	08:04:18
2	Na 589.592 Radial†	-1279.0	343.0	105.71	ug/L	105.71	ppb	08:03:58
2	Sr 421.552†	1412164.6	1445473.3	9543.9	ug/L	9543.9	ppb	08:03:53
2	Sc 361.383	863833.4	863833.4	96.970	%			08:05:25
2	Y 371.029	692829.4	692829.4	94.359	%			08:05:25
2	Ag 328.068†	-7423.7	-8280.2	2.7172	ug/L	2.7172	ppb	08:05:30
2	As 188.979†	24149.3	24932.6	9636.8	ug/L	9636.8	ppb	08:05:30
2	B 249.677†	218470.9	226058.6	4700.8	ug/L	4700.8	ppb	08:05:25
2	Ba 233.527†	1805185.6	1861607.8	13628	ug/L	13628	ppb	08:05:25
2	Be 313.107†	7937989.5	8190432.3	2770.0	ug/L	2770.0	ppb	08:05:18
2	Cd 226.502†	874791.0	902329.8	9323.4	ug/L	9323.4	ppb	08:05:25
2	Co 228.616†	474843.5	489766.1	9026.3	ug/L	9026.3	ppb	08:05:30
2	Cr 267.716†	2163749.1	2231298.3	22984	ug/L	22984	ppb	08:05:25
2	Cu 324.752†	6789832.5	6995108.7	19456	ug/L	19456	ppb	08:05:18
2	Mn 257.610†	8809007.4	9083732.3	9114.1	ug/L	9114.1	ppb	08:05:18
2	Mo 202.031†	137798.9	142099.5	9443.8	ug/L	9443.8	ppb	08:05:30
2	Ni 231.604†	406601.8	419221.8	9335.8	ug/L	9335.8	ppb	08:05:25

2	P 214.914†	32565.7	33360.0	13551 ug/L	13551 ppb		08:05:30
2	Pb 220.353†	213846.0	220607.7	23681 ug/L	23681 ppb		08:05:30
2	S 181.975 Axial†	40714.3	41937.6	51231 ug/L	51231 ppb		08:05:30
2	Sb 206.836†	32599.4	33579.7	10609 ug/L	10609 ppb		08:05:30
2	Se 196.026†	17370.1	17938.8	9971.5 ug/L	9971.5 ppb		08:05:30
2	Si 251.611†	1508646.3	1555251.5	46177 ug/L	46177 ppb		08:05:25
2	Sn 189.927†	60229.7	62102.3	10033 ug/L	10033 ppb		08:05:30
2	Ti 334.940†	6277439.9	6475396.5	9667.0 ug/L	9667.0 ppb		08:05:18
2	Tl 190.801†	32204.9	33255.7	9448.3 ug/L	9448.3 ppb		08:05:30
2	U 409.014†	-3740.6	1255.6	-14.283 ug/L	-14.283 ppb		08:05:30
2	V 292.402†	1406197.7	1451889.6	9773.9 ug/L	9773.9 ppb		08:05:25
2	Zn 213.857†	1544094.1	1591633.6	13418 ug/L	13418 ppb		08:05:25
2	SiO2†	1492544.9	1538620.4	97860 ug/L	97860 ppb		08:06:02
3	Sc Radial	4001.5	4001.5	97.0 %			08:04:48
3	Y RADIAL	4684.0	4684.0	96.75 %			08:04:28
3	Al 396.153Radial†	399.4	601.9	49.546 ug/L	49.546 ppb		08:04:28
3	Ca 317.933Radial†	34.4	22.1	40.911 ug/L	40.911 ppb		08:04:48
3	Fe 238.204 Radial†	-10.7	-21.1	18.267 ug/L	18.267 ppb		08:04:48
3	K 766.490 Radial†	1529699.4	1574496.0	299690 ug/L	299690 ppb		08:04:23
3	Mg 279.077 IEC†	-1.8	-1.8	19.159 ug/L	19.159 ppb		08:04:48
3	Na 589.592 Radial†	-1259.8	353.4	108.89 ug/L	108.89 ppb		08:04:28
3	Sr 421.552†	1441542.8	1486194.4	9812.8 ug/L	9812.8 ppb		08:04:23
3	Sc 361.383	864270.2	864270.2	97.019 %			08:05:44
3	Y 371.029	692615.7	692615.7	94.330 %			08:05:44
3	Ag 328.068†	-7387.0	-8238.4	2.8643 ug/L	2.8643 ppb		08:05:50
3	As 188.979†	23394.6	24142.2	9334.2 ug/L	9334.2 ppb		08:05:50
3	B 249.677†	218984.7	226474.3	4710.1 ug/L	4710.1 ppb		08:05:44
3	Ba 233.527†	1809123.7	1864725.9	13651 ug/L	13651 ppb		08:05:44
3	Be 313.107†	7991190.5	8241130.1	2787.1 ug/L	2787.1 ppb		08:05:38
3	Cd 226.502†	875084.5	902176.4	9321.8 ug/L	9321.8 ppb		08:05:44
3	Co 228.616†	463863.5	478201.3	8812.5 ug/L	8812.5 ppb		08:05:50
3	Cr 267.716†	2162753.0	2229143.8	22962 ug/L	22962 ppb		08:05:44
3	Cu 324.752†	6834822.1	7037941.4	19575 ug/L	19575 ppb		08:05:38
3	Mn 257.610†	8872965.3	9145063.4	9175.6 ug/L	9175.6 ppb		08:05:38
3	Mo 202.031†	134685.5	138818.7	9225.8 ug/L	9225.8 ppb		08:05:50
3	Ni 231.604†	406771.1	419184.3	9335.1 ug/L	9335.1 ppb		08:05:44
3	P 214.914†	31727.3	32478.9	13067 ug/L	13067 ppb		08:05:50
3	Pb 220.353†	208980.6	215481.3	23130 ug/L	23130 ppb		08:05:50
3	S 181.975 Axial†	39298.1	40456.7	49422 ug/L	49422 ppb		08:05:50
3	Sb 206.836†	31676.7	32611.5	10305 ug/L	10305 ppb		08:05:50
3	Se 196.026†	16839.4	17382.7	9662.7 ug/L	9662.7 ppb		08:05:50
3	Si 251.611†	1511058.6	1556951.5	46231 ug/L	46231 ppb		08:05:44
3	Sn 189.927†	58716.9	60511.6	9775.6 ug/L	9775.6 ppb		08:05:50
3	Ti 334.940†	6318743.9	6514697.5	9725.8 ug/L	9725.8 ppb		08:05:38
3	Tl 190.801†	31320.3	32327.1	9188.0 ug/L	9188.0 ppb		08:05:50
3	U 409.014†	-3903.4	1089.8	-19.136 ug/L	-19.136 ppb		08:05:50
3	V 292.402†	1405162.5	1450089.6	9758.8 ug/L	9758.8 ppb		08:05:44
3	Zn 213.857†	1544325.1	1591066.8	13413 ug/L	13413 ppb		08:05:44
3	SiO2†	1501540.7	1547114.7	98407 ug/L	98407 ppb		08:06:08

Mean Data: LR2

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	862155.0	96.782	%	0.3696				0.38%
Sc Radial	4015.4	97.3	%	0.35				0.36%
Y 371.029	691481.7	94.176	%	0.2931				0.31%
Y RADIAL	4604.2	95.10	%	1.433				1.51%
Ag 328.068†	-8260.8	2.7858	ug/L	0.07406	2.7858	ppb	0.07406	2.66%
Al 396.153Radial†	575.9	22.786	ug/L	23.1757	22.786	ppb	23.1757	101.71%
As 188.979†	24479.8	9463.3	ug/L	156.10	9463.3	ppb	156.10	1.65%
QC value within limits for As 188.979 Recovery = 94.63%								
B 249.677†	225830.2	4696.3	ug/L	16.42	4696.3	ppb	16.42	0.35%
QC value within limits for B 249.677 Recovery = 93.93%								
Ba 233.527†	1862703.8	13636	ug/L	12.8	13636	ppb	12.8	0.09%
QC value within limits for Ba 233.527 Recovery = 90.91%								
Be 313.107†	8200721.7	2773.4	ug/L	12.29	2773.4	ppb	12.29	0.44%
QC value within limits for Be 313.107 Recovery = 92.45%								
Ca 317.933Radial†	18.5	34.278	ug/L	8.8317	34.278	ppb	8.8317	25.77%
Cd 226.502†	901958.1	9319.6	ug/L	5.34	9319.6	ppb	5.34	0.06%
QC value within limits for Cd 226.502 Recovery = 93.20%								

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Co 228.616†          483467.7      8910.0 ug/L        108.15      8910.0 ppb        108.15   1.21%
   QC value less than the lower limit for Co 228.616  Recovery = 89.10%
Cr 267.716†         2230329.7       22974 ug/L          11.3       22974 ppb          11.3   0.05%
   QC value within limits for Cr 267.716  Recovery = 91.90%
Cu 324.752†         7005968.0       19486 ug/L          78.3       19486 ppb          78.3   0.40%
   QC value within limits for Cu 324.752  Recovery = 97.43%
Fe 238.204 Radial†      -22.5      4.9181 ug/L      11.62148      4.9181 ppb      11.62148 236.30%
K 766.490 Radial†   1558910.8      296720 ug/L        4586.3      296720 ppb        4586.3   1.55%
   QC value within limits for K 766.490 Radial  Recovery = 98.91%
Mg 279.077 IEC†         -2.7     -14.614 ug/L       29.6204     -14.614 ppb       29.6204 202.69%
Mn 257.610†         9097036.2      9127.4 ug/L        43.09      9127.4 ppb         43.09   0.47%
   QC value within limits for Mn 257.610  Recovery = 91.27%
Mo 202.031†          140460.9      9334.9 ug/L       109.02      9334.9 ppb        109.02   1.17%
   QC value within limits for Mo 202.031  Recovery = 93.35%
Na 589.592 Radial†      357.9      110.30 ug/L        5.433      110.30 ppb         5.433   4.93%
Ni 231.604†          419058.0      9332.3 ug/L         5.60      9332.3 ppb          5.60   0.06%
   QC value within limits for Ni 231.604  Recovery = 93.32%
P 214.914†            32827.0       13267 ug/L        252.6       13267 ppb        252.6   1.90%
   QC value less than the lower limit for P 214.914  Recovery = 88.45%
Pb 220.353†          217923.0       23393 ug/L        276.2       23393 ppb        276.2   1.18%
   QC value within limits for Pb 220.353  Recovery = 93.57%
S 181.975 Axial†      41117.4       50229 ug/L        920.2       50229 ppb        920.2   1.83%
   QC value within limits for S 181.975 Axial  Recovery = 100.46%
Sb 206.836†           33032.3       10438 ug/L        155.9       10438 ppb        155.9   1.49%
   QC value within limits for Sb 206.836  Recovery = 104.38%
Se 196.026†           17642.3      9806.8 ug/L       155.42      9806.8 ppb       155.42   1.58%
   QC value within limits for Se 196.026  Recovery = 98.07%
Si 251.611†         1553042.2       46113 ug/L        160.0       46113 ppb        160.0   0.35%
   QC value within limits for Si 251.611  Recovery = 92.23%
Sn 189.927†           61250.0      9894.9 ug/L       129.47      9894.9 ppb       129.47   1.31%
   QC value within limits for Sn 189.927  Recovery = 98.95%
Sr 421.552†         1471818.9      9717.9 ug/L       150.85      9717.9 ppb       150.85   1.55%
   QC value within limits for Sr 421.552  Recovery = 97.18%
Ti 334.940†         6484458.9      9680.6 ug/L        40.16      9680.6 ppb        40.16   0.41%
   QC value within limits for Ti 334.940  Recovery = 96.81%
Tl 190.801†           32747.1      9305.5 ug/L       131.96      9305.5 ppb       131.96   1.42%
   QC value within limits for Tl 190.801  Recovery = 93.05%
U 409.014†             1173.4     -16.690 ug/L       2.4264     -16.690 ppb       2.4264  14.54%
V 292.402†          1451075.6      9767.0 ug/L         7.63      9767.0 ppb         7.63   0.08%
   QC value within limits for V 292.402  Recovery = 97.67%
Zn 213.857†         1590599.9       13409 ug/L         11.2       13409 ppb         11.2   0.08%
   QC value less than the lower limit for Zn 213.857  Recovery = 89.39%
SiO2†               1548449.6       98490 ug/L        674.6       98490 ppb        674.6   0.68%
   QC value within limits for SiO2  Recovery = 92.05%
QC Failed.  Continue with analysis.
```

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Analysis Begun

Start Time: 2/1/2010 08:25:10 **Plasma On Time: 2/1/2010 05:43:14**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\020110.sif
Batch ID:
Results Data Set: 020110
Results Library: C:\pe\Optima3\Results\Results.mdb

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Method Loaded
Method Name: General Eng.2AX **Method Last Saved: 1/29/2010 17:34:26**
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

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Sequence No.: 1 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 2/1/2010 08:25:11**
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.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4311.4	4311.4	105	%			08:27:04
1	Y RADIAL	4820.6	4820.6	99.57	%			08:27:04
1	Al 396.153Radial†	6020.1	5950.6	4889.7	ug/L	4889.7	ppb	08:27:04

1	Ca 317.933Radial†	2799.7	2665.6	4934.4 ug/L	4934.4 ppb	08:27:24
1	Fe 238.204 Radial†	459.4	429.4	5005.1 ug/L	5005.1 ppb	08:27:24
1	K 766.490 Radial†	29494.4	25598.4	4866.3 ug/L	4866.3 ppb	08:27:04
1	Mg 279.077 IEC†	125.3	120.0	5054.8 ug/L	5054.8 ppb	08:27:24
1	Na 589.592 Radial†	31969.1	32243.0	9935.7 ug/L	9935.7 ppb	08:27:04
1	Sr 421.552†	78221.0	74811.9	493.92 ug/L	493.92 ppb	08:27:04
1	Sc 361.383	894409.5	894409.5	100.40 %		08:28:21
1	Y 371.029	722744.5	722744.5	98.433 %		08:28:21
1	Ag 328.068†	111621.5	110549.8	486.76 ug/L	486.76 ppb	08:28:26
1	As 188.979†	1258.2	1281.9	496.49 ug/L	496.49 ppb	08:28:46
1	B 249.677†	23242.5	23910.5	497.72 ug/L	497.72 ppb	08:28:26
1	Ba 233.527†	67119.8	66866.2	489.96 ug/L	489.96 ppb	08:28:26
1	Be 313.107†	1444984.4	1443597.5	485.44 ug/L	485.44 ppb	08:28:21
1	Cd 226.502†	47588.4	47601.9	491.43 ug/L	491.43 ppb	08:28:26
1	Co 228.616†	26583.4	26562.1	489.71 ug/L	489.71 ppb	08:28:26
1	Cr 267.716†	47738.9	47485.8	489.44 ug/L	489.44 ppb	08:28:26
1	Cu 324.752†	180264.7	172655.5	480.22 ug/L	480.22 ppb	08:28:26
1	Mn 257.610†	491503.9	489002.7	490.92 ug/L	490.92 ppb	08:28:21
1	Mo 202.031†	7359.9	7325.2	487.28 ug/L	487.28 ppb	08:28:46
1	Ni 231.604†	22241.5	22067.2	491.42 ug/L	491.42 ppb	08:28:26
1	P 214.914†	4887.0	4644.2	2317.7 ug/L	2317.7 ppb	08:28:46
1	Pb 220.353†	4502.0	4563.6	491.22 ug/L	491.22 ppb	08:28:46
1	S 181.975 Axial†	843.7	791.5	965.95 ug/L	965.95 ppb	08:28:46
1	Sb 206.836†	1624.4	1579.5	500.21 ug/L	500.21 ppb	08:28:46
1	Se 196.026†	847.6	870.2	500.65 ug/L	500.65 ppb	08:28:46
1	Si 251.611†	82379.1	81513.3	2420.3 ug/L	2420.3 ppb	08:28:26
1	Sn 189.927†	3049.8	3028.1	490.03 ug/L	490.03 ppb	08:28:46
1	Ti 334.940†	322546.6	323058.6	482.56 ug/L	482.56 ppb	08:28:26
1	Tl 190.801†	1702.9	1740.5	494.32 ug/L	494.32 ppb	08:28:46
1	U 409.014†	11725.0	16791.1	494.33 ug/L	494.33 ppb	08:28:26
1	V 292.402†	71827.8	73292.1	494.10 ug/L	494.10 ppb	08:28:26
1	Zn 213.857†	58414.7	57471.5	483.34 ug/L	483.34 ppb	08:28:26
1	SiO2†	82162.7	81271.2	5169.4 ug/L	5169.4 ppb	08:29:54
2	Sc Radial	4297.4	4297.4	104 %		08:27:29
2	Y RADIAL	4813.8	4813.8	99.43 %		08:27:29
2	Al 396.153Radial†	5952.8	5904.8	4852.2 ug/L	4852.2 ppb	08:27:29
2	Ca 317.933Radial†	2805.5	2679.9	4960.8 ug/L	4960.8 ppb	08:27:49
2	Fe 238.204 Radial†	464.0	435.3	5073.2 ug/L	5073.2 ppb	08:27:49
2	K 766.490 Radial†	29262.2	25467.1	4841.3 ug/L	4841.3 ppb	08:27:29
2	Mg 279.077 IEC†	128.7	123.6	5207.5 ug/L	5207.5 ppb	08:27:49
2	Na 589.592 Radial†	31624.2	32011.2	9864.3 ug/L	9864.3 ppb	08:27:29
2	Sr 421.552†	77507.1	74369.7	491.00 ug/L	491.00 ppb	08:27:29
2	Sc 361.383	905273.7	905273.7	101.62 %		08:28:52
2	Y 371.029	732078.4	732078.4	99.705 %		08:28:52
2	Ag 328.068†	111297.5	108896.7	479.53 ug/L	479.53 ppb	08:28:57
2	As 188.979†	1259.8	1268.4	491.29 ug/L	491.29 ppb	08:29:17
2	B 249.677†	23112.4	23504.6	489.25 ug/L	489.25 ppb	08:28:57
2	Ba 233.527†	66881.3	65829.2	482.37 ug/L	482.37 ppb	08:28:57
2	Be 313.107†	1457415.2	1438558.2	483.73 ug/L	483.73 ppb	08:28:52
2	Cd 226.502†	47439.9	46886.9	484.03 ug/L	484.03 ppb	08:28:57
2	Co 228.616†	26445.0	26108.1	481.34 ug/L	481.34 ppb	08:28:57
2	Cr 267.716†	47742.9	46919.1	483.60 ug/L	483.60 ppb	08:28:57
2	Cu 324.752†	179270.7	169522.8	471.51 ug/L	471.51 ppb	08:28:57
2	Mn 257.610†	494480.5	486056.9	487.97 ug/L	487.97 ppb	08:28:52
2	Mo 202.031†	7345.3	7222.8	480.48 ug/L	480.48 ppb	08:29:17
2	Ni 231.604†	22119.6	21681.4	482.82 ug/L	482.82 ppb	08:28:57
2	P 214.914†	4872.0	4571.0	2281.4 ug/L	2281.4 ppb	08:29:17
2	Pb 220.353†	4484.9	4493.0	483.62 ug/L	483.62 ppb	08:29:17
2	S 181.975 Axial†	839.2	776.9	948.18 ug/L	948.18 ppb	08:29:17
2	Sb 206.836†	1628.5	1564.1	495.32 ug/L	495.32 ppb	08:29:17
2	Se 196.026†	845.6	858.0	494.11 ug/L	494.11 ppb	08:29:17
2	Si 251.611†	81947.2	80103.6	2378.5 ug/L	2378.5 ppb	08:28:57
2	Sn 189.927†	3062.9	3004.6	486.23 ug/L	486.23 ppb	08:29:17
2	Ti 334.940†	321443.9	318118.1	475.17 ug/L	475.17 ppb	08:28:57
2	Tl 190.801†	1703.0	1720.2	488.58 ug/L	488.58 ppb	08:29:17
2	U 409.014†	11693.2	16619.7	489.27 ug/L	489.27 ppb	08:28:57
2	V 292.402†	71663.7	72272.1	487.21 ug/L	487.21 ppb	08:28:57
2	Zn 213.857†	58248.6	56609.9	476.09 ug/L	476.09 ppb	08:28:57
2	SiO2†	82592.4	80712.0	5133.9 ug/L	5133.9 ppb	08:29:59
3	Sc Radial	4162.4	4162.4	101 %		08:27:54
3	Y RADIAL	4664.2	4664.2	96.34 %		08:27:54

3	Al 396.153Radial†	5862.7	6000.8	4931.5 ug/L	4931.5 ppb	08:27:54
3	Ca 317.933Radial†	2824.8	2786.5	5158.2 ug/L	5158.2 ppb	08:28:14
3	Fe 238.204 Radial†	469.0	454.7	5298.7 ug/L	5298.7 ppb	08:28:14
3	K 766.490 Radial†	28800.3	25920.8	4927.5 ug/L	4927.5 ppb	08:27:54
3	Mg 279.077 IEC†	128.8	127.7	5379.3 ug/L	5379.3 ppb	08:28:14
3	Na 589.592 Radial†	31214.0	32589.6	10043 ug/L	10043 ppb	08:27:54
3	Sr 421.552†	76193.3	75481.6	498.34 ug/L	498.34 ppb	08:27:54
3	Sc 361.383	907242.2	907242.2	101.84 %		08:29:23
3	Y 371.029	733735.8	733735.8	99.930 %		08:29:23
3	Ag 328.068†	110823.0	108193.2	476.51 ug/L	476.51 ppb	08:29:28
3	As 188.979†	1273.8	1279.5	495.57 ug/L	495.57 ppb	08:29:48
3	B 249.677†	23123.3	23465.9	488.41 ug/L	488.41 ppb	08:29:28
3	Ba 233.527†	66666.9	65475.8	479.79 ug/L	479.79 ppb	08:29:28
3	Be 313.107†	1457687.6	1435713.9	482.77 ug/L	482.77 ppb	08:29:23
3	Cd 226.502†	47232.4	46581.8	480.86 ug/L	480.86 ppb	08:29:28
3	Co 228.616†	26380.9	25988.7	479.14 ug/L	479.14 ppb	08:29:28
3	Cr 267.716†	47479.3	46558.3	479.89 ug/L	479.89 ppb	08:29:28
3	Cu 324.752†	178650.1	168530.6	468.76 ug/L	468.76 ppb	08:29:28
3	Mn 257.610†	495186.5	485694.4	487.62 ug/L	487.62 ppb	08:29:23
3	Mo 202.031†	7344.4	7206.3	479.40 ug/L	479.40 ppb	08:29:48
3	Ni 231.604†	22118.8	21633.4	481.76 ug/L	481.76 ppb	08:29:28
3	P 214.914†	4853.9	4542.8	2267.1 ug/L	2267.1 ppb	08:29:48
3	Pb 220.353†	4458.1	4457.1	479.76 ug/L	479.76 ppb	08:29:48
3	S 181.975 Axial†	837.7	773.6	944.12 ug/L	944.12 ppb	08:29:48
3	Sb 206.836†	1642.5	1574.4	498.39 ug/L	498.39 ppb	08:29:48
3	Se 196.026†	844.4	855.1	493.24 ug/L	493.24 ppb	08:29:48
3	Si 251.611†	81702.1	79687.9	2366.1 ug/L	2366.1 ppb	08:29:28
3	Sn 189.927†	3051.3	2986.6	483.36 ug/L	483.36 ppb	08:29:48
3	Ti 334.940†	320090.4	316102.7	472.18 ug/L	472.18 ppb	08:29:28
3	Tl 190.801†	1689.7	1703.6	483.86 ug/L	483.86 ppb	08:29:48
3	U 409.014†	11594.2	16497.5	485.64 ug/L	485.64 ppb	08:29:28
3	V 292.402†	71474.3	71933.2	484.91 ug/L	484.91 ppb	08:29:28
3	Zn 213.857†	58003.8	56245.1	472.98 ug/L	472.98 ppb	08:29:28
3	SiO2†	81695.2	79654.7	5066.5 ug/L	5066.5 ppb	08:30:04

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	902308.5	101.29	%	0.776				0.77%
Sc Radial	4257.1	103	%	2.0				1.93%
Y 371.029	729519.6	99.356	%	0.8070				0.81%
Y RADIAL	4766.2	98.45	%	1.827				1.86%
Ag 328.068†	109213.2	480.93	ug/L	5.266	480.93	ppb	5.266	1.10%
QC value within limits for Ag 328.068 Recovery = 96.19%								
Al 396.153Radial†	5952.1	4891.1	ug/L	39.70	4891.1	ppb	39.70	0.81%
QC value within limits for Al 396.153Radial Recovery = 97.82%								
As 188.979†	1276.6	494.45	ug/L	2.775	494.45	ppb	2.775	0.56%
QC value within limits for As 188.979 Recovery = 98.89%								
B 249.677†	23627.0	491.79	ug/L	5.151	491.79	ppb	5.151	1.05%
QC value within limits for B 249.677 Recovery = 98.36%								
Ba 233.527†	66057.1	484.04	ug/L	5.288	484.04	ppb	5.288	1.09%
QC value within limits for Ba 233.527 Recovery = 96.81%								
Be 313.107†	1439289.9	483.98	ug/L	1.352	483.98	ppb	1.352	0.28%
QC value within limits for Be 313.107 Recovery = 96.80%								
Ca 317.933Radial†	2710.7	5017.8	ug/L	122.26	5017.8	ppb	122.26	2.44%
QC value within limits for Ca 317.933Radial Recovery = 100.36%								
Cd 226.502†	47023.5	485.44	ug/L	5.424	485.44	ppb	5.424	1.12%
QC value within limits for Cd 226.502 Recovery = 97.09%								
Co 228.616†	26219.6	483.40	ug/L	5.577	483.40	ppb	5.577	1.15%
QC value within limits for Co 228.616 Recovery = 96.68%								
Cr 267.716†	46987.7	484.31	ug/L	4.815	484.31	ppb	4.815	0.99%
QC value within limits for Cr 267.716 Recovery = 96.86%								
Cu 324.752†	170236.3	473.50	ug/L	5.979	473.50	ppb	5.979	1.26%
QC value within limits for Cu 324.752 Recovery = 94.70%								
Fe 238.204 Radial†	439.8	5125.7	ug/L	153.65	5125.7	ppb	153.65	3.00%
QC value within limits for Fe 238.204 Radial Recovery = 102.51%								
K 766.490 Radial†	25662.1	4878.4	ug/L	44.36	4878.4	ppb	44.36	0.91%
QC value within limits for K 766.490 Radial Recovery = 97.57%								
Mg 279.077 IEC†	123.7	5213.9	ug/L	162.33	5213.9	ppb	162.33	3.11%
QC value within limits for Mg 279.077 IEC Recovery = 104.28%								

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Mn 257.610†          486918.0      488.84 ug/L        1.815      488.84 ppb        1.815   0.37%
   QC value within limits for Mn 257.610  Recovery = 97.77%
Mo 202.031†            7251.5      482.38 ug/L        4.271      482.38 ppb        4.271   0.89%
   QC value within limits for Mo 202.031  Recovery = 96.48%
Na 589.592 Radial†    32281.3      9947.5 ug/L       89.70      9947.5 ppb       89.70   0.90%
   QC value within limits for Na 589.592 Radial  Recovery = 99.48%
Ni 231.604†           21794.0      485.33 ug/L        5.297      485.33 ppb        5.297   1.09%
   QC value within limits for Ni 231.604  Recovery = 97.07%
P 214.914†             4586.0      2288.7 ug/L       26.12      2288.7 ppb       26.12   1.14%
   QC value within limits for P 214.914  Recovery = 91.55%
Pb 220.353†            4504.5      484.87 ug/L        5.830      484.87 ppb        5.830   1.20%
   QC value within limits for Pb 220.353  Recovery = 96.97%
S 181.975 Axial†        780.7      952.75 ug/L       11.609      952.75 ppb       11.609   1.22%
   QC value within limits for S 181.975 Axial  Recovery = 95.28%
Sb 206.836†            1572.7      497.98 ug/L        2.473      497.98 ppb        2.473   0.50%
   QC value within limits for Sb 206.836  Recovery = 99.60%
Se 196.026†             861.1      496.00 ug/L        4.046      496.00 ppb        4.046   0.82%
   QC value within limits for Se 196.026  Recovery = 99.20%
Si 251.611†           80434.9      2388.3 ug/L       28.42      2388.3 ppb       28.42   1.19%
   QC value within limits for Si 251.611  Recovery = 95.53%
Sn 189.927†            3006.4      486.54 ug/L        3.345      486.54 ppb        3.345   0.69%
   QC value within limits for Sn 189.927  Recovery = 97.31%
Sr 421.552†           74887.7      494.42 ug/L        3.696      494.42 ppb        3.696   0.75%
   QC value within limits for Sr 421.552  Recovery = 98.88%
Ti 334.940†          319093.1      476.64 ug/L        5.344      476.64 ppb        5.344   1.12%
   QC value within limits for Ti 334.940  Recovery = 95.33%
Tl 190.801†            1721.4      488.92 ug/L        5.237      488.92 ppb        5.237   1.07%
   QC value within limits for Tl 190.801  Recovery = 97.78%
U 409.014†            16636.1      489.74 ug/L        4.362      489.74 ppb        4.362   0.89%
   QC value within limits for U 409.014  Recovery = 97.95%
V 292.402†            72499.1      488.74 ug/L        4.783      488.74 ppb        4.783   0.98%
   QC value within limits for V 292.402  Recovery = 97.75%
Zn 213.857†           56775.5      477.47 ug/L        5.315      477.47 ppb        5.315   1.11%
   QC value within limits for Zn 213.857  Recovery = 95.49%
SiO2†                 80546.0      5123.2 ug/L       52.25      5123.2 ppb       52.25   1.02%
   QC value within limits for SiO2  Recovery = 95.81%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 2/1/2010 08:32:15
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4325.7	4325.7	105	%			08:34:08
1	Y RADIAL	4908.7	4908.7	101.4	%			08:34:08
1	Al 396.153Radial†	-199.8	-0.4	-0.3681	ug/L	-0.3681	ppb	08:34:08
1	Ca 317.933Radial†	22.4	8.0	14.848	ug/L	14.848	ppb	08:34:28
1	Fe 238.204 Radial†	11.7	1.1	12.247	ug/L	12.247	ppb	08:34:28
1	K 766.490 Radial†	2943.7	183.2	34.860	ug/L	34.860	ppb	08:34:08
1	Mg 279.077 IEC†	-0.1	-0.0	-1.6767	ug/L	-1.6767	ppb	08:34:28
1	Na 589.592 Radial†	-1702.0	29.0	8.9370	ug/L	8.9370	ppb	08:34:08
1	Sr 421.552†	6.3	-30.4	-0.2009	ug/L	-0.2009	ppb	08:34:08
1	Sc 361.383	910215.6	910215.6	102.18	%			08:35:24
1	Y 371.029	746917.6	746917.6	101.73	%			08:35:24
1	Ag 328.068†	597.5	-39.7	-0.1807	ug/L	-0.1807	ppb	08:35:29
1	As 188.979†	-8.7	20.3	7.7827	ug/L	7.7827	ppb	08:35:50
1	B 249.677†	386.4	1139.2	23.817	ug/L	23.817	ppb	08:35:29
1	Ba 233.527†	4.1	19.3	0.1427	ug/L	0.1427	ppb	08:35:50
1	Be 313.107†	-4268.1	225.9	0.0764	ug/L	0.0764	ppb	08:35:29
1	Cd 226.502†	-192.0	16.2	0.1693	ug/L	0.1693	ppb	08:35:50
1	Co 228.616†	-78.0	8.8	0.1614	ug/L	0.1614	ppb	08:35:50
1	Cr 267.716†	114.5	50.2	0.5122	ug/L	0.5122	ppb	08:35:29
1	Cu 324.752†	6879.6	-153.8	-0.4356	ug/L	-0.4356	ppb	08:35:29
1	Mn 257.610†	525.3	-17.7	-0.0165	ug/L	-0.0165	ppb	08:35:50
1	Mo 202.031†	5.6	0.2	0.0167	ug/L	0.0167	ppb	08:35:50
1	Ni 231.604†	107.8	20.3	0.4520	ug/L	0.4520	ppb	08:35:50
1	P 214.914†	222.1	-5.9	-2.9883	ug/L	-2.9883	ppb	08:35:50
1	Pb 220.353†	-42.6	37.9	4.0644	ug/L	4.0644	ppb	08:35:50
1	S 181.975 Axial†	46.9	-2.9	-3.5914	ug/L	-3.5914	ppb	08:35:50
1	Sb 206.836†	56.9	17.2	5.2829	ug/L	5.2829	ppb	08:35:50
1	Se 196.026†	-16.3	10.0	5.5720	ug/L	5.5720	ppb	08:35:50
1	Si 251.611†	588.5	40.2	1.1963	ug/L	1.1963	ppb	08:35:50
1	Sn 189.927†	18.1	8.3	1.3450	ug/L	1.3450	ppb	08:35:50
1	Ti 334.940†	-1652.0	187.6	0.2756	ug/L	0.2756	ppb	08:35:29
1	Tl 190.801†	-39.7	5.6	1.5906	ug/L	1.5906	ppb	08:35:50
1	U 409.014†	-4702.4	510.8	15.087	ug/L	15.087	ppb	08:35:24
1	V 292.402†	-1722.0	66.9	0.4718	ug/L	0.4718	ppb	08:35:29
1	Zn 213.857†	758.6	33.4	0.2796	ug/L	0.2796	ppb	08:35:50
1	SiO2†	589.8	14.9	0.9527	ug/L	0.9527	ppb	08:36:56
2	Sc Radial	4273.2	4273.2	104	%			08:34:33
2	Y RADIAL	4834.6	4834.6	99.86	%			08:34:33
2	Al 396.153Radial†	-194.0	2.8	2.2420	ug/L	2.2420	ppb	08:34:33
2	Ca 317.933Radial†	25.9	11.7	21.679	ug/L	21.679	ppb	08:34:53
2	Fe 238.204 Radial†	11.6	1.1	12.908	ug/L	12.908	ppb	08:34:53
2	K 766.490 Radial†	2925.2	199.8	38.022	ug/L	38.022	ppb	08:34:33
2	Mg 279.077 IEC†	0.4	0.4	18.314	ug/L	18.314	ppb	08:34:53
2	Na 589.592 Radial†	-1753.8	-40.9	-12.616	ug/L	-12.616	ppb	08:34:33
2	Sr 421.552†	66.1	27.4	0.1806	ug/L	0.1806	ppb	08:34:33
2	Sc 361.383	914171.7	914171.7	102.62	%			08:35:55
2	Y 371.029	751212.3	751212.3	102.31	%			08:35:55
2	Ag 328.068†	565.8	-73.2	-0.3256	ug/L	-0.3256	ppb	08:36:00
2	As 188.979†	-7.3	21.6	8.3144	ug/L	8.3144	ppb	08:36:20
2	B 249.677†	435.2	1185.2	24.778	ug/L	24.778	ppb	08:36:00
2	Ba 233.527†	16.5	31.3	0.2312	ug/L	0.2312	ppb	08:36:20
2	Be 313.107†	-4156.1	353.1	0.1192	ug/L	0.1192	ppb	08:36:00
2	Cd 226.502†	-197.8	11.4	0.1193	ug/L	0.1193	ppb	08:36:20
2	Co 228.616†	-74.8	12.2	0.2264	ug/L	0.2264	ppb	08:36:20
2	Cr 267.716†	80.1	16.2	0.1622	ug/L	0.1622	ppb	08:36:00
2	Cu 324.752†	6805.3	-255.4	-0.7180	ug/L	-0.7180	ppb	08:36:00
2	Mn 257.610†	522.1	-23.1	-0.0226	ug/L	-0.0226	ppb	08:36:20
2	Mo 202.031†	18.8	13.1	0.8726	ug/L	0.8726	ppb	08:36:20
2	Ni 231.604†	85.1	-2.3	-0.0506	ug/L	-0.0506	ppb	08:36:20

2	P 214.914†	219.7	-9.2	-4.6034	ug/L	-4.6034 ppb	08:36:20
2	Pb 220.353†	-61.8	19.5	2.0896	ug/L	2.0896 ppb	08:36:20
2	S 181.975 Axial†	46.5	-3.6	-4.4080	ug/L	-4.4080 ppb	08:36:20
2	Sb 206.836†	53.7	13.9	4.3034	ug/L	4.3034 ppb	08:36:20
2	Se 196.026†	-27.9	-1.2	-0.6150	ug/L	-0.6150 ppb	08:36:20
2	Si 251.611†	585.6	34.9	1.0271	ug/L	1.0271 ppb	08:36:20
2	Sn 189.927†	25.1	15.1	2.4357	ug/L	2.4357 ppb	08:36:20
2	Ti 334.940†	-1635.9	210.2	0.3088	ug/L	0.3088 ppb	08:36:00
2	Tl 190.801†	-43.7	1.9	0.5291	ug/L	0.5291 ppb	08:36:20
2	U 409.014†	-4717.3	516.3	15.248	ug/L	15.248 ppb	08:35:55
2	V 292.402†	-1681.2	113.9	0.7973	ug/L	0.7973 ppb	08:36:00
2	Zn 213.857†	767.7	39.0	0.3307	ug/L	0.3307 ppb	08:36:20
2	SiO2†	569.5	-7.3	-0.4889	ug/L	-0.4889 ppb	08:37:01
3	Sc Radial	4372.4	4372.4	106	%		08:34:58
3	Y RADIAL	4899.7	4899.7	101.2	%		08:34:58
3	Al 396.153Radial†	-181.1	19.3	15.901	ug/L	15.901 ppb	08:34:58
3	Ca 317.933Radial†	20.7	6.2	11.394	ug/L	11.394 ppb	08:35:18
3	Fe 238.204 Radial†	9.7	-1.0	-11.178	ug/L	-11.178 ppb	08:35:18
3	K 766.490 Radial†	2870.8	84.4	16.051	ug/L	16.051 ppb	08:34:58
3	Mg 279.077 IEC†	1.8	1.8	73.954	ug/L	73.954 ppb	08:35:18
3	Na 589.592 Radial†	-1690.9	56.9	17.519	ug/L	17.519 ppb	08:34:58
3	Sr 421.552†	82.7	41.6	0.2744	ug/L	0.2744 ppb	08:34:58
3	Sc 361.383	913189.9	913189.9	102.51	%		08:36:25
3	Y 371.029	749036.3	749036.3	102.01	%		08:36:25
3	Ag 328.068†	545.1	-92.7	-0.4204	ug/L	-0.4204 ppb	08:36:30
3	As 188.979†	-8.7	20.3	7.7798	ug/L	7.7798 ppb	08:36:50
3	B 249.677†	354.4	1106.8	23.144	ug/L	23.144 ppb	08:36:30
3	Ba 233.527†	6.6	21.7	0.1596	ug/L	0.1596 ppb	08:36:50
3	Be 313.107†	-4273.3	234.4	0.0796	ug/L	0.0796 ppb	08:36:30
3	Cd 226.502†	-205.5	3.6	0.0419	ug/L	0.0419 ppb	08:36:50
3	Co 228.616†	-92.3	-4.9	-0.0905	ug/L	-0.0905 ppb	08:36:50
3	Cr 267.716†	61.6	-1.7	-0.0236	ug/L	-0.0236 ppb	08:36:30
3	Cu 324.752†	6805.2	-248.3	-0.7002	ug/L	-0.7002 ppb	08:36:30
3	Mn 257.610†	522.8	-21.7	-0.0259	ug/L	-0.0259 ppb	08:36:50
3	Mo 202.031†	5.3	-0.0	-0.0036	ug/L	-0.0036 ppb	08:36:50
3	Ni 231.604†	98.1	10.5	0.2348	ug/L	0.2348 ppb	08:36:50
3	P 214.914†	226.3	-2.5	-1.1295	ug/L	-1.1295 ppb	08:36:50
3	Pb 220.353†	-39.4	41.2	4.4297	ug/L	4.4297 ppb	08:36:50
3	S 181.975 Axial†	45.8	-4.2	-5.1765	ug/L	-5.1765 ppb	08:36:50
3	Sb 206.836†	56.3	16.5	5.0469	ug/L	5.0469 ppb	08:36:50
3	Se 196.026†	-30.4	-3.7	-2.0656	ug/L	-2.0656 ppb	08:36:50
3	Si 251.611†	554.8	5.5	0.1645	ug/L	0.1645 ppb	08:36:50
3	Sn 189.927†	13.8	4.0	0.6551	ug/L	0.6551 ppb	08:36:50
3	Ti 334.940†	-1569.7	273.1	0.3965	ug/L	0.3965 ppb	08:36:30
3	Tl 190.801†	-35.4	9.9	2.8071	ug/L	2.8071 ppb	08:36:50
3	U 409.014†	-4683.3	544.5	16.085	ug/L	16.085 ppb	08:36:25
3	V 292.402†	-1713.3	80.9	0.5714	ug/L	0.5714 ppb	08:36:30
3	Zn 213.857†	770.9	42.9	0.3644	ug/L	0.3644 ppb	08:36:50
3	SiO2†	589.0	12.3	0.7848	ug/L	0.7848 ppb	08:37:06

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	912525.7	102.44	%	0.231				0.23%
Sc Radial	4323.8	105	%	1.2				1.15%
Y 371.029	749055.4	102.02	%	0.292				0.29%
Y RADIAL	4881.0	100.8	%	0.83				0.83%
Ag 328.068†	-68.5	-0.3089	ug/L	0.12076	-0.3089	ppb	0.12076	39.09%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	7.2	5.9250	ug/L	8.73750	5.9250	ppb	8.73750	147.47%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	20.7	7.9589	ug/L	0.30780	7.9589	ppb	0.30780	3.87%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	1143.7	23.913	ug/L	0.8212	23.913	ppb	0.8212	3.43%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	24.1	0.1778	ug/L	0.04696	0.1778	ppb	0.04696	26.41%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	271.1	0.0917	ug/L	0.02382	0.0917	ppb	0.02382	25.97%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	8.6	15.974	ug/L	5.2338	15.974	ppb	5.2338	32.77%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                10.4      0.1101 ug/L       0.06417      0.1101 ppb        0.06417  58.26%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 5.4      0.0991 ug/L       0.16740      0.0991 ppb        0.16740 168.93%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                21.6      0.2169 ug/L       0.27206      0.2169 ppb        0.27206 125.43%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -219.2     -0.6179 ug/L       0.15820     -0.6179 ppb        0.15820  25.60%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.4      4.6591 ug/L      13.71912      4.6591 ppb       13.71912 294.46%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         155.8     29.644 ug/L       11.8780      29.644 ppb        11.8780  40.07%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.7     30.197 ug/L       39.1904      30.197 ppb        39.1904 129.78%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -20.8     -0.0217 ug/L       0.00481     -0.0217 ppb        0.00481  22.20%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 4.4      0.2952 ug/L       0.50009      0.2952 ppb        0.50009 169.38%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         15.0      4.6133 ug/L      15.52557      4.6133 ppb       15.52557 336.54%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 9.5      0.2121 ug/L       0.25207      0.2121 ppb        0.25207 118.85%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -5.9     -2.9071 ug/L       1.73840     -2.9071 ppb        1.73840  59.80%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                32.9      3.5279 ug/L       1.25894      3.5279 ppb        1.25894  35.69%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -3.6     -4.3919 ug/L       0.79269     -4.3919 ppb        0.79269  18.05%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                15.9      4.8777 ug/L       0.51120      4.8777 ppb        0.51120  10.48%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 1.7      0.9638 ug/L       4.05621      0.9638 ppb        4.05621 420.85%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                26.9      0.7960 ug/L       0.55339      0.7960 ppb        0.55339  69.52%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 9.1      1.4786 ug/L       0.89782      1.4786 ppb        0.89782  60.72%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                12.8      0.0847 ug/L       0.25175      0.0847 ppb        0.25175 297.27%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               223.6      0.3270 ug/L       0.06250      0.3270 ppb        0.06250  19.12%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 5.8      1.6423 ug/L       1.13989      1.6423 ppb        1.13989  69.41%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                523.9     15.473 ug/L        0.5360      15.473 ppb         0.5360   3.46%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 87.2      0.6135 ug/L       0.16679      0.6135 ppb        0.16679  27.19%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                38.4      0.3249 ug/L       0.04271      0.3249 ppb        0.04271  13.15%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                       6.7      0.4162 ug/L       0.78830      0.4162 ppb        0.78830 189.41%
   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: 36
Date Collected: 2/1/2010 08:39:16
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4227.1	4227.1	102	%			08:41:10
1	Y RADIAL	4756.3	4756.3	98.24	%			08:41:10
1	Al 396.153Radial†	-240.3	-44.4	-35.316	ug/L	-35.316	ppb	08:41:10
1	Ca 317.933Radial†	19.9	6.0	11.178	ug/L	11.178	ppb	08:41:30
1	Fe 238.204 Radial†	33783.1	32961.4	383050	ug/L	383050	ppb	08:41:10
1	K 766.490 Radial†	2510.9	-173.7	-33.029	ug/L	-33.029	ppb	08:41:10
1	Mg 279.077 IEC†	8.0	7.9	-69.314	ug/L	-69.314	ppb	08:41:30
1	Na 589.592 Radial†	-1602.6	88.2	27.166	ug/L	27.166	ppb	08:41:10
1	Sr 421.552†	82.9	44.4	0.2934	ug/L	0.2934	ppb	08:41:10
1	Sc 361.383	903404.7	903404.7	101.41	%			08:42:27
1	Y 371.029	737290.3	737290.3	100.41	%			08:42:27
1	Ag 328.068†	-27433.5	-27676.0	3.1145	ug/L	3.1145	ppb	08:42:27
1	As 188.979†	-239.2	-207.1	10.250	ug/L	10.250	ppb	08:42:47
1	B 249.677†	2087.2	2819.2	-3.2733	ug/L	-3.2733	ppb	08:42:27
1	Ba 233.527†	-2168.5	-2123.0	-3.7459	ug/L	-3.7459	ppb	08:42:47
1	Be 313.107†	-4182.5	278.8	0.0942	ug/L	0.0942	ppb	08:42:27
1	Cd 226.502†	3209.6	3369.0	-4.7600	ug/L	-4.7600	ppb	08:42:47
1	Co 228.616†	186.1	268.7	-0.6502	ug/L	-0.6502	ppb	08:42:47
1	Cr 267.716†	-635.9	-688.9	0.3936	ug/L	0.3936	ppb	08:42:47
1	Cu 324.752†	-1815.9	-8677.5	-3.9083	ug/L	-3.9083	ppb	08:42:27
1	Mn 257.610†	-40634.2	-40600.2	-2.9172	ug/L	-2.9172	ppb	08:42:27
1	Mo 202.031†	-426.8	-426.1	1.4184	ug/L	1.4184	ppb	08:42:47
1	Ni 231.604†	168.8	81.3	1.8081	ug/L	1.8081	ppb	08:42:47
1	P 214.914†	758.2	524.4	-31.518	ug/L	-31.518	ppb	08:42:47
1	Pb 220.353†	215.0	291.6	-5.3760	ug/L	-5.3760	ppb	08:42:47
1	S 181.975 Axial†	64.4	14.7	17.918	ug/L	17.918	ppb	08:42:47
1	Sb 206.836†	16.7	-21.9	2.4327	ug/L	2.4327	ppb	08:42:47
1	Se 196.026†	-2240.8	-2183.6	56.244	ug/L	56.244	ppb	08:42:47
1	Si 251.611†	-790.5	-1315.3	-38.801	ug/L	-38.801	ppb	08:42:47
1	Sn 189.927†	-20.3	-29.4	1.6910	ug/L	1.6910	ppb	08:42:47
1	Ti 334.940†	-1627.8	199.2	0.2370	ug/L	0.2370	ppb	08:42:47
1	Tl 190.801†	-47.3	-2.2	-0.9374	ug/L	-0.9374	ppb	08:42:47
1	U 409.014†	-2241.6	2902.7	42.090	ug/L	42.090	ppb	08:42:27
1	V 292.402†	6314.5	7978.7	-2.9346	ug/L	-2.9346	ppb	08:42:47
1	Zn 213.857†	4745.3	3970.1	-3.4533	ug/L	-3.4533	ppb	08:42:47
1	SiO2†	-858.9	-1409.2	-89.090	ug/L	-89.090	ppb	08:43:43
2	Sc Radial	4249.9	4249.9	103	%			08:41:35
2	Y RADIAL	4777.7	4777.7	98.68	%			08:41:35
2	Al 396.153Radial†	-226.1	-29.3	-22.815	ug/L	-22.815	ppb	08:41:35
2	Ca 317.933Radial†	16.8	3.0	5.4873	ug/L	5.4873	ppb	08:41:55
2	Fe 238.204 Radial†	33671.4	32675.6	379730	ug/L	379730	ppb	08:41:35
2	K 766.490 Radial†	2683.2	-19.7	-3.6933	ug/L	-3.6933	ppb	08:41:35
2	Mg 279.077 IEC†	9.6	9.4	-3.0144	ug/L	-3.0144	ppb	08:41:55
2	Na 589.592 Radial†	-1690.6	11.2	3.4490	ug/L	3.4490	ppb	08:41:35
2	Sr 421.552†	113.4	73.6	0.4859	ug/L	0.4859	ppb	08:41:35
2	Sc 361.383	894155.4	894155.4	100.37	%			08:42:52
2	Y 371.029	730534.2	730534.2	99.494	%			08:42:52
2	Ag 328.068†	-27012.8	-27536.7	2.6524	ug/L	2.6524	ppb	08:42:52
2	As 188.979†	-220.4	-190.9	15.708	ug/L	15.708	ppb	08:43:12
2	B 249.677†	2222.6	2975.5	0.5313	ug/L	0.5313	ppb	08:42:52
2	Ba 233.527†	-2226.2	-2202.6	-4.4259	ug/L	-4.4259	ppb	08:43:12
2	Be 313.107†	-4140.1	278.3	0.0937	ug/L	0.0937	ppb	08:42:52
2	Cd 226.502†	3224.6	3416.7	-3.9239	ug/L	-3.9239	ppb	08:43:12
2	Co 228.616†	201.1	285.5	-0.2937	ug/L	-0.2937	ppb	08:43:12
2	Cr 267.716†	-652.5	-711.9	0.0933	ug/L	0.0933	ppb	08:43:12
2	Cu 324.752†	-1708.0	-8588.5	-3.8377	ug/L	-3.8377	ppb	08:42:52
2	Mn 257.610†	-39880.4	-40263.7	-2.9101	ug/L	-2.9101	ppb	08:42:52
2	Mo 202.031†	-435.2	-438.8	0.3165	ug/L	0.3165	ppb	08:43:12
2	Ni 231.604†	166.6	80.9	1.7986	ug/L	1.7986	ppb	08:43:12

2	P 214.914†	773.5	547.4	-16.940	ug/L	-16.940 ppb	08:43:12
2	Pb 220.353†	233.5	312.2	-2.8459	ug/L	-2.8459 ppb	08:43:12
2	S 181.975 Axial†	66.4	17.3	21.090	ug/L	21.090 ppb	08:43:12
2	Sb 206.836†	40.6	2.0	9.6406	ug/L	9.6406 ppb	08:43:12
2	Se 196.026†	-2219.9	-2185.6	44.151	ug/L	44.151 ppb	08:43:12
2	Si 251.611†	-751.0	-1283.9	-37.858	ug/L	-37.858 ppb	08:43:12
2	Sn 189.927†	-25.2	-34.5	0.8165	ug/L	0.8165 ppb	08:43:12
2	Ti 334.940†	-1708.4	102.4	0.0856	ug/L	0.0856 ppb	08:43:12
2	Tl 190.801†	-56.5	-11.8	-3.6558	ug/L	-3.6558 ppb	08:43:12
2	U 409.014†	-2149.9	2971.2	44.493	ug/L	44.493 ppb	08:42:52
2	V 292.402†	6455.6	8183.8	-1.0934	ug/L	-1.0934 ppb	08:43:12
2	Zn 213.857†	4750.8	4024.0	-2.6742	ug/L	-2.6742 ppb	08:43:12
2	SiO2†	-887.6	-1446.5	-91.448	ug/L	-91.448 ppb	08:43:48
3	Sc Radial	4394.7	4394.7	107	%		08:42:00
3	Y RADIAL	4934.2	4934.2	101.9	%		08:42:00
3	Al 396.153Radial†	-229.1	-24.9	-19.221	ug/L	-19.221 ppb	08:42:00
3	Ca 317.933Radial†	17.9	3.5	6.4657	ug/L	6.4657 ppb	08:42:20
3	Fe 238.204 Radial†	34179.4	32075.8	372760	ug/L	372760 ppb	08:42:00
3	K 766.490 Radial†	2560.9	-220.3	-41.900	ug/L	-41.900 ppb	08:42:00
3	Mg 279.077 IEC†	10.4	9.8	22.527	ug/L	22.527 ppb	08:42:20
3	Na 589.592 Radial†	-1609.3	141.6	43.625	ug/L	43.625 ppb	08:42:00
3	Sr 421.552†	130.0	85.6	0.5649	ug/L	0.5649 ppb	08:42:00
3	Sc 361.383	891183.3	891183.3	100.04	%		08:43:18
3	Y 371.029	728513.8	728513.8	99.219	%		08:43:18
3	Ag 328.068†	-27219.0	-27832.6	-0.8972	ug/L	-0.8972 ppb	08:43:18
3	As 188.979†	-238.2	-209.4	6.9682	ug/L	6.9682 ppb	08:43:38
3	B 249.677†	2078.8	2839.0	-1.1889	ug/L	-1.1889 ppb	08:43:18
3	Ba 233.527†	-2230.4	-2214.2	-4.7220	ug/L	-4.7220 ppb	08:43:38
3	Be 313.107†	-4142.4	262.3	0.0884	ug/L	0.0884 ppb	08:43:18
3	Cd 226.502†	3253.8	3456.6	-2.7912	ug/L	-2.7912 ppb	08:43:38
3	Co 228.616†	192.3	277.4	-0.3424	ug/L	-0.3424 ppb	08:43:38
3	Cr 267.716†	-613.4	-675.0	0.3389	ug/L	0.3389 ppb	08:43:38
3	Cu 324.752†	-1564.8	-8451.0	-3.8237	ug/L	-3.8237 ppb	08:43:18
3	Mn 257.610†	-39760.0	-40275.8	-3.6115	ug/L	-3.6115 ppb	08:43:18
3	Mo 202.031†	-422.5	-427.6	0.5195	ug/L	0.5195 ppb	08:43:38
3	Ni 231.604†	201.5	116.3	2.5874	ug/L	2.5874 ppb	08:43:38
3	P 214.914†	788.6	565.0	-2.2685	ug/L	-2.2685 ppb	08:43:38
3	Pb 220.353†	245.2	324.8	-0.8322	ug/L	-0.8322 ppb	08:43:38
3	S 181.975 Axial†	65.7	16.8	20.536	ug/L	20.536 ppb	08:43:38
3	Sb 206.836†	36.0	-2.5	8.1040	ug/L	8.1040 ppb	08:43:38
3	Se 196.026†	-2242.9	-2216.1	4.2305	ug/L	4.2305 ppb	08:43:38
3	Si 251.611†	-736.8	-1272.3	-37.521	ug/L	-37.521 ppb	08:43:38
3	Sn 189.927†	-27.4	-36.8	0.3220	ug/L	0.3220 ppb	08:43:38
3	Ti 334.940†	-1693.1	111.9	0.0987	ug/L	0.0987 ppb	08:43:38
3	Tl 190.801†	-51.2	-6.7	-2.2036	ug/L	-2.2036 ppb	08:43:38
3	U 409.014†	-2173.6	2940.4	44.377	ug/L	44.377 ppb	08:43:18
3	V 292.402†	6489.7	8239.3	0.2998	ug/L	0.2998 ppb	08:43:38
3	Zn 213.857†	4808.8	4097.8	-1.3776	ug/L	-1.3776 ppb	08:43:38
3	SiO2†	-816.7	-1378.6	-87.141	ug/L	-87.141 ppb	08:43:54

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	896247.8	100.61	%	0.715				0.71%
Sc Radial	4290.5	104	%	2.2				2.12%
Y 371.029	732112.8	99.709	%	0.6260				0.63%
Y RADIAL	4822.7	99.61	%	2.006				2.01%
Ag 328.068†	-27681.8	1.6233	ug/L	2.19496	1.6233	ppb	2.19496	135.22%
Al 396.153Radial†	-32.9	-25.784	ug/L	8.4486	-25.784	ppb	8.4486	32.77%
As 188.979†	-202.5	10.975	ug/L	4.4149	10.975	ppb	4.4149	40.23%
B 249.677†	2877.9	-1.3103	ug/L	1.90520	-1.3103	ppb	1.90520	145.40%
Ba 233.527†	-2179.9	-4.2979	ug/L	0.50051	-4.2979	ppb	0.50051	11.65%
Be 313.107†	273.1	0.0921	ug/L	0.00323	0.0921	ppb	0.00323	3.51%
Ca 317.933Radial†	4.2	7.7102	ug/L	3.04242	7.7102	ppb	3.04242	39.46%
Cd 226.502†	3414.1	-3.8250	ug/L	0.98813	-3.8250	ppb	0.98813	25.83%
Co 228.616†	277.2	-0.4287	ug/L	0.19328	-0.4287	ppb	0.19328	45.08%
Cr 267.716†	-691.9	0.2753	ug/L	0.15992	0.2753	ppb	0.15992	58.10%
Cu 324.752†	-8572.3	-3.8566	ug/L	0.04538	-3.8566	ppb	0.04538	1.18%
Fe 238.204 Radial†	32570.9	378510	ug/L	5252.1	378510	ppb	5252.1	1.39%
K 766.490 Radial†	-137.9	-26.207	ug/L	19.9958	-26.207	ppb	19.9958	76.30%

Mg 279.077 IEC†	9.0	-16.600	ug/L	47.4037	-16.600	ppb	47.4037 285.56%
Mn 257.610†	-40379.9	-3.1463	ug/L	0.40290	-3.1463	ppb	0.40290 12.81%
Mo 202.031†	-430.8	0.7515	ug/L	0.58645	0.7515	ppb	0.58645 78.04%
Na 589.592 Radial†	80.3	24.747	ug/L	20.1971	24.747	ppb	20.1971 81.62%
Ni 231.604†	92.8	2.0647	ug/L	0.45266	2.0647	ppb	0.45266 21.92%
P 214.914†	545.6	-16.909	ug/L	14.6249	-16.909	ppb	14.6249 86.49%
Pb 220.353†	309.5	-3.0180	ug/L	2.27674	-3.0180	ppb	2.27674 75.44%
S 181.975 Axial†	16.2	19.848	ug/L	1.6944	19.848	ppb	1.6944 8.54%
Sb 206.836†	-7.5	6.7258	ug/L	3.79647	6.7258	ppb	3.79647 56.45%
Se 196.026†	-2195.1	34.875	ug/L	27.2192	34.875	ppb	27.2192 78.05%
Si 251.611†	-1290.5	-38.060	ug/L	0.6636	-38.060	ppb	0.6636 1.74%
Sn 189.927†	-33.6	0.9432	ug/L	0.69326	0.9432	ppb	0.69326 73.50%
Sr 421.552†	67.9	0.4480	ug/L	0.13966	0.4480	ppb	0.13966 31.17%
Ti 334.940†	137.8	0.1404	ug/L	0.08390	0.1404	ppb	0.08390 59.74%
Tl 190.801†	-6.9	-2.2656	ug/L	1.36028	-2.2656	ppb	1.36028 60.04%
U 409.014†	2938.1	43.653	ug/L	1.3553	43.653	ppb	1.3553 3.10%
V 292.402†	8133.9	-1.2427	ug/L	1.62237	-1.2427	ppb	1.62237 130.55%
Zn 213.857†	4030.6	-2.5017	ug/L	1.04856	-2.5017	ppb	1.04856 41.91%
SiO2†	-1411.4	-89.227	ug/L	2.1567	-89.227	ppb	2.1567 2.42%

Sequence No.: 4
Sample ID: LR2
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 2/1/2010 08:46:05
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4336.9	4336.9	105	%			08:47:58
1	Y RADIAL	4927.3	4927.3	101.8	%			08:47:58
1	Al 396.153Radial†	-218.0	-17.3	-14.112	ug/L	-14.112	ppb	08:47:58
1	Ca 317.933Radial†	22.9	8.4	15.574	ug/L	15.574	ppb	08:48:18
1	Fe 238.204 Radial†	-0.6	-10.7	9.0767	ug/L	9.0767	ppb	08:48:18
1	K 766.490 Radial†	2746.6	-11.6	-2.2080	ug/L	-2.2080	ppb	08:47:58
1	Mg 279.077 IEC†	0.0	0.1	2.2972	ug/L	2.2972	ppb	08:48:18
1	Na 589.592 Radial†	-1762.5	-24.4	-7.5051	ug/L	-7.5051	ppb	08:47:58
1	Sr 421.552†	61.2	21.8	0.1438	ug/L	0.1438	ppb	08:47:58
1	Sc 361.383	922327.1	922327.1	103.54	%			08:49:15
1	Y 371.029	755890.1	755890.1	102.95	%			08:49:15
1	Ag 328.068†	465.3	-175.1	-0.8183	ug/L	-0.8183	ppb	08:49:20
1	As 188.979†	-19.1	10.3	3.9344	ug/L	3.9344	ppb	08:49:40
1	B 249.677†	642.7	1381.9	16.190	ug/L	16.190	ppb	08:49:20
1	Ba 233.527†	-3.3	12.1	0.0870	ug/L	0.0870	ppb	08:49:40
1	Be 313.107†	-4239.2	308.7	0.1048	ug/L	0.1048	ppb	08:49:20
1	Cd 226.502†	-220.0	-8.4	-0.0684	ug/L	-0.0684	ppb	08:49:40
1	Co 228.616†	250132.8	241674.9	4455.0	ug/L	4455.0	ppb	08:49:15
1	Cr 267.716†	59.7	-4.2	-0.0521	ug/L	-0.0521	ppb	08:49:20
1	Cu 324.752†	6151.9	-945.0	-2.6463	ug/L	-2.6463	ppb	08:49:20
1	Mn 257.610†	486.4	-62.0	-0.0746	ug/L	-0.0746	ppb	08:49:40
1	Mo 202.031†	-36.5	-40.5	-2.7018	ug/L	-2.7018	ppb	08:49:40
1	Ni 231.604†	196.7	104.8	-0.3536	ug/L	-0.3536	ppb	08:49:40
1	P 214.914†	18762.9	17898.8	9294.0	ug/L	9294.0	ppb	08:49:20
1	Pb 220.353†	-38.6	42.3	4.5436	ug/L	4.5436	ppb	08:49:40
1	S 181.975 Axial†	47.8	-2.8	-3.3662	ug/L	-3.3662	ppb	08:49:40
1	Sb 206.836†	43.7	3.8	1.0929	ug/L	1.0929	ppb	08:49:40
1	Se 196.026†	-36.3	-9.1	-5.4550	ug/L	-5.4550	ppb	08:49:40
1	Si 251.611†	582.0	26.3	0.8174	ug/L	0.8174	ppb	08:49:40
1	Sn 189.927†	9.2	-0.5	-0.0831	ug/L	-0.0831	ppb	08:49:40
1	Ti 334.940†	-1500.4	355.2	0.5237	ug/L	0.5237	ppb	08:49:20
1	Tl 190.801†	36.0	79.2	2.8463	ug/L	2.8463	ppb	08:49:40
1	U 409.014†	-4577.7	691.8	20.449	ug/L	20.449	ppb	08:49:15
1	V 292.402†	-1632.3	175.6	1.1868	ug/L	1.1868	ppb	08:49:20
1	Zn 213.857†	1187238.4	1145980.1	9722.8	ug/L	9722.8	ppb	08:49:15
1	SiO2†	625.3	41.7	2.7316	ug/L	2.7316	ppb	08:50:47
2	Sc Radial	4404.3	4404.3	107	%			08:48:23
2	Y RADIAL	4933.1	4933.1	101.9	%			08:48:23
2	Al 396.153Radial†	-196.0	6.5	5.4996	ug/L	5.4996	ppb	08:48:23
2	Ca 317.933Radial†	22.6	7.8	14.519	ug/L	14.519	ppb	08:48:43
2	Fe 238.204 Radial†	1.4	-8.9	30.604	ug/L	30.604	ppb	08:48:43
2	K 766.490 Radial†	2834.1	30.4	5.7899	ug/L	5.7899	ppb	08:48:23
2	Mg 279.077 IEC†	2.1	2.0	86.052	ug/L	86.052	ppb	08:48:43
2	Na 589.592 Radial†	-1757.2	6.2	1.9217	ug/L	1.9217	ppb	08:48:23
2	Sr 421.552†	42.5	3.3	0.0219	ug/L	0.0219	ppb	08:48:23
2	Sc 361.383	924561.9	924561.9	103.79	%			08:49:46
2	Y 371.029	757976.3	757976.3	103.23	%			08:49:46
2	Ag 328.068†	482.1	-160.0	-0.7504	ug/L	-0.7504	ppb	08:49:51
2	As 188.979†	-30.4	-0.6	-0.2415	ug/L	-0.2415	ppb	08:50:11
2	B 249.677†	633.7	1371.7	15.956	ug/L	15.956	ppb	08:49:51
2	Ba 233.527†	-0.0	15.3	0.1098	ug/L	0.1098	ppb	08:50:11
2	Be 313.107†	-4242.4	315.5	0.1067	ug/L	0.1067	ppb	08:49:51
2	Cd 226.502†	-217.5	-5.4	-0.0391	ug/L	-0.0391	ppb	08:50:11
2	Co 228.616†	251082.0	242005.5	4461.1	ug/L	4461.1	ppb	08:49:46
2	Cr 267.716†	93.7	28.5	0.2824	ug/L	0.2824	ppb	08:49:51
2	Cu 324.752†	6137.6	-973.2	-2.7255	ug/L	-2.7255	ppb	08:49:51
2	Mn 257.610†	476.8	-72.4	-0.0863	ug/L	-0.0863	ppb	08:50:11
2	Mo 202.031†	-34.9	-38.8	-2.5879	ug/L	-2.5879	ppb	08:50:11
2	Ni 231.604†	209.0	116.2	-0.1034	ug/L	-0.1034	ppb	08:50:11

2	P 214.914†	18713.0	17806.9	9246.3 ug/L	9246.3 ppb	08:49:51
2	Pb 220.353†	-31.1	49.7	5.3351 ug/L	5.3351 ppb	08:50:11
2	S 181.975 Axial†	48.5	-2.2	-2.6508 ug/L	-2.6508 ppb	08:50:11
2	Sb 206.836†	64.6	23.9	7.2458 ug/L	7.2458 ppb	08:50:11
2	Se 196.026†	-26.3	0.6	0.0118 ug/L	0.0118 ppb	08:50:11
2	Si 251.611†	581.8	24.9	0.7723 ug/L	0.7723 ppb	08:50:11
2	Sn 189.927†	13.1	3.2	0.5210 ug/L	0.5210 ppb	08:50:11
2	Ti 334.940†	-1625.2	238.5	0.3406 ug/L	0.3406 ppb	08:49:51
2	Tl 190.801†	37.9	81.0	3.3044 ug/L	3.3044 ppb	08:50:11
2	U 409.014†	-4458.3	817.4	24.157 ug/L	24.157 ppb	08:49:46
2	V 292.402†	-1715.8	99.0	0.6846 ug/L	0.6846 ppb	08:49:51
2	Zn 213.857†	1191075.7	1146905.7	9730.6 ug/L	9730.6 ppb	08:49:46
2	SiO2†	583.5	-0.0	0.0691 ug/L	0.0691 ppb	08:50:52
3	Sc Radial	4406.0	4406.0	107 %		08:48:49
3	Y RADIAL	4964.6	4964.6	102.5 %		08:48:49
3	Al 396.153Radial†	-213.1	-9.4	-7.6227 ug/L	-7.6227 ppb	08:48:49
3	Ca 317.933Radial†	19.5	4.9	9.1366 ug/L	9.1366 ppb	08:49:09
3	Fe 238.204 Radial†	-0.1	-10.2	15.234 ug/L	15.234 ppb	08:49:09
3	K 766.490 Radial†	2659.0	-134.6	-25.628 ug/L	-25.628 ppb	08:48:49
3	Mg 279.077 IEC†	-0.6	-0.5	-20.657 ug/L	-20.657 ppb	08:49:09
3	Na 589.592 Radial†	-1714.4	47.0	14.473 ug/L	14.473 ppb	08:48:49
3	Sr 421.552†	50.0	10.4	0.0687 ug/L	0.0687 ppb	08:48:49
3	Sc 361.383	928239.4	928239.4	104.20 %		08:50:16
3	Y 371.029	759161.1	759161.1	103.39 %		08:50:16
3	Ag 328.068†	569.0	-78.4	-0.3997 ug/L	-0.3997 ppb	08:50:21
3	As 188.979†	-29.1	0.8	0.3086 ug/L	0.3086 ppb	08:50:41
3	B 249.677†	569.3	1307.5	14.608 ug/L	14.608 ppb	08:50:21
3	Ba 233.527†	2.4	17.6	0.1278 ug/L	0.1278 ppb	08:50:41
3	Be 313.107†	-4203.2	369.2	0.1249 ug/L	0.1249 ppb	08:50:21
3	Cd 226.502†	-225.2	-12.0	-0.1049 ug/L	-0.1049 ppb	08:50:41
3	Co 228.616†	252248.9	242166.9	4464.1 ug/L	4464.1 ppb	08:50:16
3	Cr 267.716†	100.7	34.8	0.3467 ug/L	0.3467 ppb	08:50:21
3	Cu 324.752†	6177.7	-958.2	-2.6870 ug/L	-2.6870 ppb	08:50:21
3	Mn 257.610†	493.0	-58.6	-0.0697 ug/L	-0.0697 ppb	08:50:41
3	Mo 202.031†	-46.7	-50.0	-3.3316 ug/L	-3.3316 ppb	08:50:41
3	Ni 231.604†	210.4	116.7	-0.0938 ug/L	-0.0938 ppb	08:50:41
3	P 214.914†	18921.3	17935.4	9313.0 ug/L	9313.0 ppb	08:50:21
3	Pb 220.353†	-24.3	56.4	6.0490 ug/L	6.0490 ppb	08:50:41
3	S 181.975 Axial†	48.8	-2.0	-2.4706 ug/L	-2.4706 ppb	08:50:41
3	Sb 206.836†	49.2	8.8	2.6422 ug/L	2.6422 ppb	08:50:41
3	Se 196.026†	-25.5	1.5	0.4342 ug/L	0.4342 ppb	08:50:41
3	Si 251.611†	579.7	20.6	0.6530 ug/L	0.6530 ppb	08:50:41
3	Sn 189.927†	15.1	5.0	0.8110 ug/L	0.8110 ppb	08:50:41
3	Ti 334.940†	-1575.3	292.6	0.4275 ug/L	0.4275 ppb	08:50:21
3	Tl 190.801†	40.4	83.2	3.9179 ug/L	3.9179 ppb	08:50:41
3	U 409.014†	-4327.1	960.4	28.381 ug/L	28.381 ppb	08:50:16
3	V 292.402†	-1634.9	183.1	1.2420 ug/L	1.2420 ppb	08:50:21
3	Zn 213.857†	1195364.4	1146474.9	9727.0 ug/L	9727.0 ppb	08:50:16
3	SiO2†	613.3	26.3	1.7687 ug/L	1.7687 ppb	08:50:57

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	925042.8	103.84	%	0.335				0.32%
Sc Radial	4382.4	106	%	1.0				0.90%
Y 371.029	757675.8	103.19	%	0.226				0.22%
Y RADIAL	4941.7	102.1	%	0.41				0.41%
Ag 328.068†	-137.8	-0.6561	ug/L	0.22467	-0.6561	ppb	0.22467	34.24%
Al 396.153Radial†	-6.7	-5.4119	ug/L	9.99118	-5.4119	ppb	9.99118	184.62%
As 188.979†	3.5	1.3338	ug/L	2.26886	1.3338	ppb	2.26886	170.10%
B 249.677†	1353.7	15.585	ug/L	0.8540	15.585	ppb	0.8540	5.48%
Ba 233.527†	15.0	0.1082	ug/L	0.02042	0.1082	ppb	0.02042	18.87%
Be 313.107†	331.1	0.1121	ug/L	0.01110	0.1121	ppb	0.01110	9.90%
Ca 317.933Radial†	7.1	13.077	ug/L	3.4526	13.077	ppb	3.4526	26.40%
Cd 226.502†	-8.6	-0.0708	ug/L	0.03299	-0.0708	ppb	0.03299	46.60%
Co 228.616†	241949.1	4460.0	ug/L	4.62	4460.0	ppb	4.62	0.10%
Cr 267.716†	19.7	0.1923	ug/L	0.21409	0.1923	ppb	0.21409	111.31%
Cu 324.752†	-958.8	-2.6863	ug/L	0.03962	-2.6863	ppb	0.03962	1.47%
Fe 238.204 Radial†	-9.9	18.305	ug/L	11.0874	18.305	ppb	11.0874	60.57%
K 766.490 Radial†	-38.6	-7.3487	ug/L	16.32763	-7.3487	ppb	16.32763	222.18%

Mg 279.077 IEC†	0.5	22.564	ug/L	56.1674	22.564	ppb	56.1674	248.92%
Mn 257.610†	-64.3	-0.0768	ug/L	0.00853	-0.0768	ppb	0.00853	11.10%
Mo 202.031†	-43.1	-2.8738	ug/L	0.40061	-2.8738	ppb	0.40061	13.94%
Na 589.592 Radial†	9.6	2.9631	ug/L	11.02580	2.9631	ppb	11.02580	372.10%
Ni 231.604†	112.6	-0.1836	ug/L	0.14730	-0.1836	ppb	0.14730	80.23%
P 214.914†	17880.4	9284.4	ug/L	34.38	9284.4	ppb	34.38	0.37%
Pb 220.353†	49.4	5.3093	ug/L	0.75302	5.3093	ppb	0.75302	14.18%
S 181.975 Axial†	-2.3	-2.8292	ug/L	0.47372	-2.8292	ppb	0.47372	16.74%
Sb 206.836†	12.2	3.6603	ug/L	3.20035	3.6603	ppb	3.20035	87.43%
Se 196.026†	-2.3	-1.6697	ug/L	3.28497	-1.6697	ppb	3.28497	196.75%
Si 251.611†	23.9	0.7475	ug/L	0.08495	0.7475	ppb	0.08495	11.36%
Sn 189.927†	2.6	0.4163	ug/L	0.45617	0.4163	ppb	0.45617	109.59%
Sr 421.552†	11.8	0.0781	ug/L	0.06149	0.0781	ppb	0.06149	78.70%
Ti 334.940†	295.4	0.4306	ug/L	0.09160	0.4306	ppb	0.09160	21.27%
Tl 190.801†	81.1	3.3562	ug/L	0.53771	3.3562	ppb	0.53771	16.02%
U 409.014†	823.2	24.329	ug/L	3.9688	24.329	ppb	3.9688	16.31%
V 292.402†	152.6	1.0378	ug/L	0.30710	1.0378	ppb	0.30710	29.59%
Zn 213.857†	1146453.6	9726.8	ug/L	3.93	9726.8	ppb	3.93	0.04%
SiO2†	22.7	1.5231	ug/L	1.34809	1.5231	ppb	1.34809	88.51%

Sequence No.: 5
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 2/1/2010 08:53:08
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4224.9	4224.9	102	%			08:55:00
1	Y RADIAL	4781.9	4781.9	98.77	%			08:55:00
1	Al 396.153Radial†	5976.8	6026.2	4952.4	ug/L	4952.4	ppb	08:55:00
1	Ca 317.933Radial†	2810.6	2731.1	5055.7	ug/L	5055.7	ppb	08:55:20
1	Fe 238.204 Radial†	451.3	430.6	5018.1	ug/L	5018.1	ppb	08:55:20
1	K 766.490 Radial†	28935.5	25630.2	4872.4	ug/L	4872.4	ppb	08:55:00
1	Mg 279.077 IEC†	128.8	125.8	5300.5	ug/L	5300.5	ppb	08:55:20
1	Na 589.592 Radial†	29871.3	30820.5	9497.4	ug/L	9497.4	ppb	08:55:00
1	Sr 421.552†	76278.2	74446.6	491.51	ug/L	491.51	ppb	08:55:00
1	Sc 361.383	912358.4	912358.4	102.42	%			08:56:18
1	Y 371.029	738573.3	738573.3	100.59	%			08:56:18
1	Ag 328.068†	112005.0	108737.1	478.81	ug/L	478.81	ppb	08:56:23
1	As 188.979†	1255.5	1254.6	485.97	ug/L	485.97	ppb	08:56:43
1	B 249.677†	22789.5	23012.8	478.98	ug/L	478.98	ppb	08:56:23
1	Ba 233.527†	67390.9	65815.7	482.26	ug/L	482.26	ppb	08:56:23
1	Be 313.107†	1454339.2	1424418.3	478.99	ug/L	478.99	ppb	08:56:18
1	Cd 226.502†	47508.2	46591.0	480.98	ug/L	480.98	ppb	08:56:23
1	Co 228.616†	26485.2	25945.2	478.34	ug/L	478.34	ppb	08:56:23
1	Cr 267.716†	47920.9	46728.1	481.63	ug/L	481.63	ppb	08:56:23
1	Cu 324.752†	181020.5	169861.4	472.45	ug/L	472.45	ppb	08:56:23
1	Mn 257.610†	493696.2	481512.7	483.40	ug/L	483.40	ppb	08:56:18
1	Mo 202.031†	7430.3	7249.7	482.26	ug/L	482.26	ppb	08:56:43
1	Ni 231.604†	22188.5	21579.6	480.56	ug/L	480.56	ppb	08:56:23
1	P 214.914†	4918.9	4579.5	2285.7	ug/L	2285.7	ppb	08:56:43
1	Pb 220.353†	4522.3	4495.2	483.89	ug/L	483.89	ppb	08:56:43
1	S 181.975 Axial†	836.3	767.7	936.87	ug/L	936.87	ppb	08:56:43
1	Sb 206.836†	1634.4	1557.4	493.29	ug/L	493.29	ppb	08:56:43
1	Se 196.026†	869.7	875.2	503.44	ug/L	503.44	ppb	08:56:43
1	Si 251.611†	82440.4	79959.0	2374.1	ug/L	2374.1	ppb	08:56:23
1	Sn 189.927†	3084.7	3002.4	485.89	ug/L	485.89	ppb	08:56:43
1	Ti 334.940†	323919.4	318078.9	475.12	ug/L	475.12	ppb	08:56:23
1	Tl 190.801†	1724.4	1728.1	490.79	ug/L	490.79	ppb	08:56:43
1	U 409.014†	11811.6	16645.9	490.05	ug/L	490.05	ppb	08:56:23
1	V 292.402†	72118.5	72168.7	486.56	ug/L	486.56	ppb	08:56:23
1	Zn 213.857†	58644.3	56551.2	475.61	ug/L	475.61	ppb	08:56:23
1	SiO2†	83817.1	81276.7	5169.8	ug/L	5169.8	ppb	08:57:50
2	Sc Radial	4277.2	4277.2	104	%			08:55:25
2	Y RADIAL	4811.5	4811.5	99.38	%			08:55:25
2	Al 396.153Radial†	6076.3	6050.9	4972.7	ug/L	4972.7	ppb	08:55:25
2	Ca 317.933Radial†	2791.2	2678.8	4958.9	ug/L	4958.9	ppb	08:55:45
2	Fe 238.204 Radial†	448.7	422.6	4925.8	ug/L	4925.8	ppb	08:55:45
2	K 766.490 Radial†	29393.8	25726.8	4890.9	ug/L	4890.9	ppb	08:55:25
2	Mg 279.077 IEC†	122.3	118.0	4972.7	ug/L	4972.7	ppb	08:55:45
2	Na 589.592 Radial†	30373.8	30948.6	9536.9	ug/L	9536.9	ppb	08:55:25
2	Sr 421.552†	77363.9	74583.2	492.41	ug/L	492.41	ppb	08:55:25
2	Sc 361.383	915886.7	915886.7	102.81	%			08:56:49
2	Y 371.029	741304.0	741304.0	100.96	%			08:56:49
2	Ag 328.068†	113191.5	109469.8	481.98	ug/L	481.98	ppb	08:56:54
2	As 188.979†	1263.0	1257.2	486.96	ug/L	486.96	ppb	08:57:14
2	B 249.677†	23006.9	23138.5	481.61	ug/L	481.61	ppb	08:56:54
2	Ba 233.527†	67951.2	66107.2	484.40	ug/L	484.40	ppb	08:56:54
2	Be 313.107†	1461344.6	1425761.6	479.45	ug/L	479.45	ppb	08:56:49
2	Cd 226.502†	48040.9	46930.5	484.50	ug/L	484.50	ppb	08:56:54
2	Co 228.616†	26827.4	26178.5	482.64	ug/L	482.64	ppb	08:56:54
2	Cr 267.716†	48250.1	46868.0	483.06	ug/L	483.06	ppb	08:56:54
2	Cu 324.752†	182851.9	170961.8	475.50	ug/L	475.50	ppb	08:56:54
2	Mn 257.610†	497074.7	482941.7	484.84	ug/L	484.84	ppb	08:56:49
2	Mo 202.031†	7472.1	7262.4	483.10	ug/L	483.10	ppb	08:57:14
2	Ni 231.604†	22471.5	21771.5	484.83	ug/L	484.83	ppb	08:56:54

2	P 214.914†	4921.1	4563.2	2276.6 ug/L	2276.6 ppb	08:57:14
2	Pb 220.353†	4512.7	4468.8	481.07 ug/L	481.07 ppb	08:57:14
2	S 181.975 Axial†	854.6	782.3	954.78 ug/L	954.78 ppb	08:57:14
2	Sb 206.836†	1650.9	1567.3	496.27 ug/L	496.27 ppb	08:57:14
2	Se 196.026†	867.7	870.0	500.25 ug/L	500.25 ppb	08:57:14
2	Si 251.611†	83208.0	80395.5	2387.1 ug/L	2387.1 ppb	08:56:54
2	Sn 189.927†	3075.8	2982.2	482.61 ug/L	482.61 ppb	08:57:14
2	Ti 334.940†	327159.9	320012.4	478.02 ug/L	478.02 ppb	08:56:54
2	Tl 190.801†	1725.7	1723.0	489.34 ug/L	489.34 ppb	08:57:14
2	U 409.014†	12277.9	17055.1	502.14 ug/L	502.14 ppb	08:56:54
2	V 292.402†	72698.8	72461.8	488.55 ug/L	488.55 ppb	08:56:54
2	Zn 213.857†	59162.4	56834.5	477.99 ug/L	477.99 ppb	08:56:54
2	SiO2†	83723.9	80870.7	5143.9 ug/L	5143.9 ppb	08:57:56
3	Sc Radial	4327.0	4327.0	105 %		08:55:50
3	Y RADIAL	4869.0	4869.0	100.6 %		08:55:50
3	Al 396.153Radial†	6153.7	6057.2	4978.0 ug/L	4978.0 ppb	08:55:50
3	Ca 317.933Radial†	2820.5	2675.8	4953.2 ug/L	4953.2 ppb	08:56:11
3	Fe 238.204 Radial†	452.0	420.8	4904.9 ug/L	4904.9 ppb	08:56:11
3	K 766.490 Radial†	29526.9	25527.4	4852.9 ug/L	4852.9 ppb	08:55:50
3	Mg 279.077 IEC†	126.3	120.5	5077.1 ug/L	5077.1 ppb	08:56:11
3	Na 589.592 Radial†	30555.2	30784.4	9486.3 ug/L	9486.3 ppb	08:55:50
3	Sr 421.552†	78128.0	74452.9	491.55 ug/L	491.55 ppb	08:55:50
3	Sc 361.383	914913.9	914913.9	102.70 %		08:57:20
3	Y 371.029	739644.3	739644.3	100.74 %		08:57:20
3	Ag 328.068†	113195.8	109591.0	482.51 ug/L	482.51 ppb	08:57:25
3	As 188.979†	1266.8	1262.2	488.90 ug/L	488.90 ppb	08:57:45
3	B 249.677†	23012.2	23167.4	482.22 ug/L	482.22 ppb	08:57:25
3	Ba 233.527†	67891.7	66119.5	484.49 ug/L	484.49 ppb	08:57:25
3	Be 313.107†	1459466.8	1425444.5	479.34 ug/L	479.34 ppb	08:57:20
3	Cd 226.502†	47821.6	46766.7	482.81 ug/L	482.81 ppb	08:57:25
3	Co 228.616†	26818.6	26197.6	482.99 ug/L	482.99 ppb	08:57:25
3	Cr 267.716†	48127.1	46798.2	482.35 ug/L	482.35 ppb	08:57:25
3	Cu 324.752†	182986.7	171282.2	476.39 ug/L	476.39 ppb	08:57:25
3	Mn 257.610†	497023.3	483405.7	485.30 ug/L	485.30 ppb	08:57:20
3	Mo 202.031†	7442.8	7241.6	481.71 ug/L	481.71 ppb	08:57:45
3	Ni 231.604†	22408.8	21733.6	483.99 ug/L	483.99 ppb	08:57:25
3	P 214.914†	4915.1	4562.5	2276.1 ug/L	2276.1 ppb	08:57:45
3	Pb 220.353†	4513.8	4474.6	481.69 ug/L	481.69 ppb	08:57:45
3	S 181.975 Axial†	838.9	767.9	937.12 ug/L	937.12 ppb	08:57:45
3	Sb 206.836†	1636.9	1555.4	492.66 ug/L	492.66 ppb	08:57:45
3	Se 196.026†	860.7	864.0	496.89 ug/L	496.89 ppb	08:57:45
3	Si 251.611†	83211.6	80485.0	2389.8 ug/L	2389.8 ppb	08:57:25
3	Sn 189.927†	3095.2	3004.3	486.18 ug/L	486.18 ppb	08:57:45
3	Ti 334.940†	326890.1	320088.0	478.12 ug/L	478.12 ppb	08:57:25
3	Tl 190.801†	1718.5	1717.7	487.86 ug/L	487.86 ppb	08:57:45
3	U 409.014†	12131.2	16924.9	498.30 ug/L	498.30 ppb	08:57:25
3	V 292.402†	72680.5	72519.1	488.91 ug/L	488.91 ppb	08:57:25
3	Zn 213.857†	59046.4	56782.7	477.55 ug/L	477.55 ppb	08:57:25
3	SiO2†	83482.7	80722.5	5134.5 ug/L	5134.5 ppb	08:58:01

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	914386.3	102.64	%	0.205				0.20%
Sc Radial	4276.4	104	%	1.2				1.19%
Y 371.029	739840.5	100.76	%	0.187				0.19%
Y RADIAL	4820.8	99.57	%	0.915				0.92%
Ag 328.068†	109266.0	481.10	ug/L	2.003	481.10	ppb	2.003	0.42%
QC value within limits for Ag 328.068 Recovery = 96.22%								
Al 396.153Radial†	6044.8	4967.7	ug/L	13.51	4967.7	ppb	13.51	0.27%
QC value within limits for Al 396.153Radial Recovery = 99.35%								
As 188.979†	1258.0	487.28	ug/L	1.489	487.28	ppb	1.489	0.31%
QC value within limits for As 188.979 Recovery = 97.46%								
B 249.677†	23106.2	480.94	ug/L	1.722	480.94	ppb	1.722	0.36%
QC value within limits for B 249.677 Recovery = 96.19%								
Ba 233.527†	66014.1	483.72	ug/L	1.258	483.72	ppb	1.258	0.26%
QC value within limits for Ba 233.527 Recovery = 96.74%								
Be 313.107†	1425208.1	479.26	ug/L	0.239	479.26	ppb	0.239	0.05%
QC value within limits for Be 313.107 Recovery = 95.85%								
Ca 317.933Radial†	2695.2	4989.3	ug/L	57.62	4989.3	ppb	57.62	1.15%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.79%
Cd 226.502†            46762.7      482.77 ug/L         1.761      482.77 ppb          1.761   0.36%
   QC value within limits for Cd 226.502  Recovery = 96.55%
Co 228.616†            26107.1      481.32 ug/L         2.588      481.32 ppb          2.588   0.54%
   QC value within limits for Co 228.616  Recovery = 96.26%
Cr 267.716†            46798.1      482.35 ug/L         0.718      482.35 ppb          0.718   0.15%
   QC value within limits for Cr 267.716  Recovery = 96.47%
Cu 324.752†           170701.8      474.78 ug/L         2.067      474.78 ppb          2.067   0.44%
   QC value within limits for Cu 324.752  Recovery = 94.96%
Fe 238.204 Radial†       424.7      4949.6 ug/L        60.23      4949.6 ppb         60.23   1.22%
   QC value within limits for Fe 238.204 Radial  Recovery = 98.99%
K 766.490 Radial†      25628.1      4872.1 ug/L        18.97      4872.1 ppb         18.97   0.39%
   QC value within limits for K 766.490 Radial  Recovery = 97.44%
Mg 279.077 IEC†          121.4      5116.8 ug/L       167.42      5116.8 ppb        167.42   3.27%
   QC value within limits for Mg 279.077 IEC  Recovery = 102.34%
Mn 257.610†           482620.0      484.51 ug/L         0.990      484.51 ppb          0.990   0.20%
   QC value within limits for Mn 257.610  Recovery = 96.90%
Mo 202.031†             7251.3      482.36 ug/L         0.699      482.36 ppb          0.699   0.14%
   QC value within limits for Mo 202.031  Recovery = 96.47%
Na 589.592 Radial†     30851.2      9506.8 ug/L        26.59      9506.8 ppb         26.59   0.28%
   QC value within limits for Na 589.592 Radial  Recovery = 95.07%
Ni 231.604†            21694.9      483.13 ug/L         2.263      483.13 ppb          2.263   0.47%
   QC value within limits for Ni 231.604  Recovery = 96.63%
P 214.914†              4568.4      2279.5 ug/L         5.37      2279.5 ppb          5.37   0.24%
   QC value within limits for P 214.914  Recovery = 91.18%
Pb 220.353†             4479.5      482.22 ug/L         1.480      482.22 ppb          1.480   0.31%
   QC value within limits for Pb 220.353  Recovery = 96.44%
S 181.975 Axial†         772.6      942.92 ug/L        10.264      942.92 ppb         10.264   1.09%
   QC value within limits for S 181.975 Axial  Recovery = 94.29%
Sb 206.836†             1560.0      494.07 ug/L         1.927      494.07 ppb          1.927   0.39%
   QC value within limits for Sb 206.836  Recovery = 98.81%
Se 196.026†              869.7      500.19 ug/L         3.275      500.19 ppb          3.275   0.65%
   QC value within limits for Se 196.026  Recovery = 100.04%
Si 251.611†            80279.8      2383.7 ug/L         8.38      2383.7 ppb          8.38   0.35%
   QC value within limits for Si 251.611  Recovery = 95.35%
Sn 189.927†             2996.3      484.89 ug/L         1.982      484.89 ppb          1.982   0.41%
   QC value within limits for Sn 189.927  Recovery = 96.98%
Sr 421.552†            74494.2      491.82 ug/L         0.509      491.82 ppb          0.509   0.10%
   QC value within limits for Sr 421.552  Recovery = 98.36%
Ti 334.940†           319393.1      477.09 ug/L         1.704      477.09 ppb          1.704   0.36%
   QC value within limits for Ti 334.940  Recovery = 95.42%
Tl 190.801†             1722.9      489.33 ug/L         1.465      489.33 ppb          1.465   0.30%
   QC value within limits for Tl 190.801  Recovery = 97.87%
U 409.014†             16875.3      496.83 ug/L         6.179      496.83 ppb          6.179   1.24%
   QC value within limits for U 409.014  Recovery = 99.37%
V 292.402†             72383.2      488.01 ug/L         1.265      488.01 ppb          1.265   0.26%
   QC value within limits for V 292.402  Recovery = 97.60%
Zn 213.857†            56722.8      477.05 ug/L         1.268      477.05 ppb          1.268   0.27%
   QC value within limits for Zn 213.857  Recovery = 95.41%
SiO2†                  80956.6      5149.4 ug/L        18.29      5149.4 ppb         18.29   0.36%
   QC value within limits for SiO2  Recovery = 96.30%
All analyte(s) passed QC.
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Sequence No.: 6
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 2/1/2010 09:00:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4283.6	4283.6	104	%			09:02:03
1	Y RADIAL	4854.0	4854.0	100.3	%			09:02:03
1	Al 396.153Radial†	-201.6	-4.1	-3.3652	ug/L	-3.3652	ppb	09:02:03
1	Ca 317.933Radial†	19.7	5.7	10.487	ug/L	10.487	ppb	09:02:23
1	Fe 238.204 Radial†	12.4	1.8	21.197	ug/L	21.197	ppb	09:02:23
1	K 766.490 Radial†	2712.4	-12.0	-2.2944	ug/L	-2.2944	ppb	09:02:03
1	Mg 279.077 IEC†	0.1	0.2	6.9147	ug/L	6.9147	ppb	09:02:23
1	Na 589.592 Radial†	-1655.4	57.9	17.848	ug/L	17.848	ppb	09:02:03
1	Sr 421.552†	53.4	15.0	0.0990	ug/L	0.0990	ppb	09:02:03
1	Sc 361.383	900112.9	900112.9	101.04	%			09:03:20
1	Y 371.029	745334.2	745334.2	101.51	%			09:03:20
1	Ag 328.068†	566.8	-63.5	-0.2848	ug/L	-0.2848	ppb	09:03:20
1	As 188.979†	-23.8	5.1	1.9814	ug/L	1.9814	ppb	09:03:40
1	B 249.677†	-97.2	664.9	13.900	ug/L	13.900	ppb	09:03:20
1	Ba 233.527†	16.4	31.6	0.2311	ug/L	0.2311	ppb	09:03:40
1	Be 313.107†	-4223.4	223.2	0.0756	ug/L	0.0756	ppb	09:03:20
1	Cd 226.502†	-173.8	32.1	0.3328	ug/L	0.3328	ppb	09:03:40
1	Co 228.616†	-88.8	-2.7	-0.0507	ug/L	-0.0507	ppb	09:03:40
1	Cr 267.716†	67.8	5.3	0.0483	ug/L	0.0483	ppb	09:03:20
1	Cu 324.752†	6741.7	-214.7	-0.6051	ug/L	-0.6051	ppb	09:03:20
1	Mn 257.610†	496.9	-40.0	-0.0384	ug/L	-0.0384	ppb	09:03:40
1	Mo 202.031†	6.3	1.1	0.0716	ug/L	0.0716	ppb	09:03:40
1	Ni 231.604†	97.2	11.0	0.2449	ug/L	0.2449	ppb	09:03:40
1	P 214.914†	214.4	-11.1	-5.6347	ug/L	-5.6347	ppb	09:03:40
1	Pb 220.353†	-73.6	6.8	0.7236	ug/L	0.7236	ppb	09:03:40
1	S 181.975 Axial†	49.9	0.5	0.5621	ug/L	0.5621	ppb	09:03:40
1	Sb 206.836†	42.1	3.2	1.0039	ug/L	1.0039	ppb	09:03:40
1	Se 196.026†	-35.1	-8.7	-4.7777	ug/L	-4.7777	ppb	09:03:40
1	Si 251.611†	573.7	32.1	0.9537	ug/L	0.9537	ppb	09:03:40
1	Sn 189.927†	19.7	10.1	1.6273	ug/L	1.6273	ppb	09:03:40
1	Ti 334.940†	-1617.9	203.2	0.2972	ug/L	0.2972	ppb	09:03:20
1	Tl 190.801†	-37.7	7.2	2.0230	ug/L	2.0230	ppb	09:03:40
1	U 409.014†	-4609.4	551.2	16.280	ug/L	16.280	ppb	09:03:20
1	V 292.402†	-1783.2	-12.6	-0.0550	ug/L	-0.0550	ppb	09:03:20
1	Zn 213.857†	796.6	79.3	0.6698	ug/L	0.6698	ppb	09:03:40
1	SiO2†	610.4	41.9	2.6683	ug/L	2.6683	ppb	09:04:36
2	Sc Radial	4293.6	4293.6	104	%			09:02:28
2	Y RADIAL	4851.2	4851.2	100.2	%			09:02:28
2	Al 396.153Radial†	-209.1	-10.8	-8.9120	ug/L	-8.9120	ppb	09:02:28
2	Ca 317.933Radial†	18.5	4.4	8.1418	ug/L	8.1418	ppb	09:02:48
2	Fe 238.204 Radial†	10.5	-0.0	-0.1979	ug/L	-0.1979	ppb	09:02:48
2	K 766.490 Radial†	2837.0	101.6	19.336	ug/L	19.336	ppb	09:02:28
2	Mg 279.077 IEC†	5.2	5.0	212.08	ug/L	212.08	ppb	09:02:48
2	Na 589.592 Radial†	-1656.4	60.8	18.721	ug/L	18.721	ppb	09:02:28
2	Sr 421.552†	35.2	-2.6	-0.0171	ug/L	-0.0171	ppb	09:02:28
2	Sc 361.383	902460.7	902460.7	101.31	%			09:03:45
2	Y 371.029	745338.4	745338.4	101.51	%			09:03:45
2	Ag 328.068†	538.1	-93.4	-0.4176	ug/L	-0.4176	ppb	09:03:45
2	As 188.979†	-20.6	8.4	3.2465	ug/L	3.2465	ppb	09:04:05
2	B 249.677†	-125.6	637.1	13.320	ug/L	13.320	ppb	09:03:45
2	Ba 233.527†	15.5	30.6	0.2257	ug/L	0.2257	ppb	09:04:05
2	Be 313.107†	-4256.9	201.0	0.0680	ug/L	0.0680	ppb	09:03:45
2	Cd 226.502†	-196.2	10.4	0.1106	ug/L	0.1106	ppb	09:04:05
2	Co 228.616†	-77.0	9.1	0.1663	ug/L	0.1663	ppb	09:04:05
2	Cr 267.716†	65.3	2.7	0.0227	ug/L	0.0227	ppb	09:03:45
2	Cu 324.752†	6856.8	-118.4	-0.3381	ug/L	-0.3381	ppb	09:03:45
2	Mn 257.610†	520.6	-17.9	-0.0266	ug/L	-0.0266	ppb	09:04:05
2	Mo 202.031†	-0.6	-5.9	-0.3891	ug/L	-0.3891	ppb	09:04:05
2	Ni 231.604†	87.3	1.0	0.0227	ug/L	0.0227	ppb	09:04:05

2	P 214.914†	216.1	-10.0	-5.1057	ug/L	-5.1057 ppb	09:04:05
2	Pb 220.353†	-44.1	36.1	3.8706	ug/L	3.8706 ppb	09:04:05
2	S 181.975 Axial†	34.5	-14.8	-18.091	ug/L	-18.091 ppb	09:04:05
2	Sb 206.836†	51.7	12.7	3.8780	ug/L	3.8780 ppb	09:04:05
2	Se 196.026†	-25.0	1.3	0.7075	ug/L	0.7075 ppb	09:04:05
2	Si 251.611†	566.8	23.8	0.7133	ug/L	0.7133 ppb	09:04:05
2	Sn 189.927†	16.2	6.6	1.0618	ug/L	1.0618 ppb	09:04:05
2	Ti 334.940†	-1663.5	162.3	0.2194	ug/L	0.2194 ppb	09:03:45
2	Tl 190.801†	-42.5	2.5	0.7084	ug/L	0.7084 ppb	09:04:05
2	U 409.014†	-4639.6	533.3	15.754	ug/L	15.754 ppb	09:03:45
2	V 292.402†	-1625.7	147.4	1.0092	ug/L	1.0092 ppb	09:03:45
2	Zn 213.857†	786.5	67.2	0.5708	ug/L	0.5708 ppb	09:04:05
2	SiO2†	611.3	41.1	2.6344	ug/L	2.6344 ppb	09:04:41
3	Sc Radial	4352.6	4352.6	106	%		09:02:53
3	Y RADIAL	4899.3	4899.3	101.2	%		09:02:53
3	Al 396.153Radial†	-204.4	-3.6	-2.9635	ug/L	-2.9635 ppb	09:02:53
3	Ca 317.933Radial†	16.1	2.0	3.6101	ug/L	3.6101 ppb	09:03:13
3	Fe 238.204 Radial†	9.6	-1.0	-12.177	ug/L	-12.177 ppb	09:03:13
3	K 766.490 Radial†	2786.0	16.3	3.0975	ug/L	3.0975 ppb	09:02:53
3	Mg 279.077 IEC†	1.3	1.3	55.900	ug/L	55.900 ppb	09:03:13
3	Na 589.592 Radial†	-1635.9	101.7	31.346	ug/L	31.346 ppb	09:02:53
3	Sr 421.552†	41.0	2.4	0.0158	ug/L	0.0158 ppb	09:02:53
3	Sc 361.383	900590.7	900590.7	101.10	%		09:04:11
3	Y 371.029	744841.6	744841.6	101.44	%		09:04:11
3	Ag 328.068†	515.9	-114.2	-0.5142	ug/L	-0.5142 ppb	09:04:11
3	As 188.979†	-20.1	8.9	3.4200	ug/L	3.4200 ppb	09:04:31
3	B 249.677†	-115.2	647.1	13.531	ug/L	13.531 ppb	09:04:11
3	Ba 233.527†	-0.9	14.5	0.1073	ug/L	0.1073 ppb	09:04:31
3	Be 313.107†	-4210.7	238.0	0.0803	ug/L	0.0803 ppb	09:04:11
3	Cd 226.502†	-207.3	-0.9	-0.0048	ug/L	-0.0048 ppb	09:04:31
3	Co 228.616†	-75.3	10.7	0.1954	ug/L	0.1954 ppb	09:04:31
3	Cr 267.716†	78.0	15.3	0.1516	ug/L	0.1516 ppb	09:04:11
3	Cu 324.752†	6848.4	-112.7	-0.3238	ug/L	-0.3238 ppb	09:04:11
3	Mn 257.610†	485.3	-51.7	-0.0554	ug/L	-0.0554 ppb	09:04:31
3	Mo 202.031†	-0.4	-5.6	-0.3761	ug/L	-0.3761 ppb	09:04:31
3	Ni 231.604†	90.4	4.3	0.0950	ug/L	0.0950 ppb	09:04:31
3	P 214.914†	228.3	2.5	1.3948	ug/L	1.3948 ppb	09:04:31
3	Pb 220.353†	-41.1	38.9	4.1787	ug/L	4.1787 ppb	09:04:31
3	S 181.975 Axial†	44.3	-5.1	-6.1697	ug/L	-6.1697 ppb	09:04:31
3	Sb 206.836†	41.4	2.5	0.7677	ug/L	0.7677 ppb	09:04:31
3	Se 196.026†	-23.3	3.0	1.5989	ug/L	1.5989 ppb	09:04:31
3	Si 251.611†	575.5	33.6	1.0033	ug/L	1.0033 ppb	09:04:31
3	Sn 189.927†	15.1	5.5	0.8947	ug/L	0.8947 ppb	09:04:31
3	Ti 334.940†	-1692.1	130.7	0.1834	ug/L	0.1834 ppb	09:04:11
3	Tl 190.801†	-49.2	-4.2	-1.1754	ug/L	-1.1754 ppb	09:04:31
3	U 409.014†	-4568.6	594.0	17.547	ug/L	17.547 ppb	09:04:11
3	V 292.402†	-1628.1	141.7	0.9738	ug/L	0.9738 ppb	09:04:11
3	Zn 213.857†	798.2	80.4	0.6835	ug/L	0.6835 ppb	09:04:31
3	SiO2†	602.9	34.1	2.1850	ug/L	2.1850 ppb	09:04:46

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	901054.8	101.15	%	0.139				0.14%
Sc Radial	4310.0	104	%	0.9				0.87%
Y 371.029	745171.4	101.49	%	0.039				0.04%
Y RADIAL	4868.2	100.6	%	0.56				0.55%
Ag 328.068†	-90.4	-0.4056	ug/L	0.11516	-0.4056	ppb	0.11516	28.40%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-6.2	-5.0803	ug/L	3.32448	-5.0803	ppb	3.32448	65.44%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	7.5	2.8826	ug/L	0.78525	2.8826	ppb	0.78525	27.24%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	649.7	13.584	ug/L	0.2933	13.584	ppb	0.2933	2.16%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	25.5	0.1880	ug/L	0.06994	0.1880	ppb	0.06994	37.19%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	220.8	0.0746	ug/L	0.00621	0.0746	ppb	0.00621	8.32%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	4.0	7.4128	ug/L	3.49573	7.4128	ppb	3.49573	47.16%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                13.9      0.1462 ug/L       0.17157      0.1462 ppb        0.17157 117.35%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 5.7      0.1037 ug/L       0.13451      0.1037 ppb        0.13451 129.75%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 7.8      0.0742 ug/L       0.06824      0.0742 ppb        0.06824  91.98%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -148.6     -0.4223 ug/L       0.15848     -0.4223 ppb        0.15848  37.53%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.3      2.9406 ug/L      16.90715      2.9406 ppb       16.90715 574.96%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          35.3      6.7129 ug/L      11.25916      6.7129 ppb       11.25916 167.72%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             2.2     91.632 ug/L      107.1487     91.632 ppb       107.1487 116.93%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -36.5     -0.0401 ug/L       0.01446     -0.0401 ppb        0.01446  36.04%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -3.5     -0.2312 ug/L       0.26232     -0.2312 ppb        0.26232 113.45%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         73.5     22.638 ug/L        7.5538     22.638 ppb         7.5538  33.37%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 5.4      0.1209 ug/L       0.11338      0.1209 ppb        0.11338  93.81%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -6.2     -3.1152 ug/L       3.91473     -3.1152 ppb        3.91473 125.67%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                27.3      2.9243 ug/L       1.91208      2.9243 ppb        1.91208  65.39%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -6.5     -7.8996 ug/L       9.44627     -7.8996 ppb        9.44627 119.58%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 6.1      1.8832 ug/L       1.73158      1.8832 ppb        1.73158  91.95%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -1.5     -0.8238 ug/L       3.45309     -0.8238 ppb        3.45309 419.19%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                29.8      0.8901 ug/L       0.15511      0.8901 ppb        0.15511  17.43%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 7.4      1.1946 ug/L       0.38392      1.1946 ppb        0.38392  32.14%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                 4.9      0.0326 ug/L       0.05984      0.0326 ppb        0.05984 183.64%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               165.4      0.2333 ug/L       0.05818      0.2333 ppb        0.05818  24.94%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 1.8      0.5186 ug/L       1.60764      0.5186 ppb        1.60764 309.98%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                559.5     16.527 ug/L        0.9215     16.527 ppb         0.9215   5.58%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 92.2      0.6427 ug/L       0.60451      0.6427 ppb        0.60451  94.06%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                75.7      0.6414 ug/L       0.06148      0.6414 ppb        0.06148   9.59%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      39.0      2.4959 ug/L       0.26975      2.4959 ppb        0.26975  10.81%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 2/1/2010 10:18:57
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4128.4	4128.4	100	%			10:21:09
1	Y RADIAL	4866.2	4866.2	100.5	%			10:20:49
1	Al 396.153Radial†	6223.3	6409.0	5268.4	ug/L	5268.4	ppb	10:20:49
1	Ca 317.933Radial†	2838.8	2823.5	5226.7	ug/L	5226.7	ppb	10:21:09
1	Fe 238.204 Radial†	452.6	442.2	5153.4	ug/L	5153.4	ppb	10:21:09
1	K 766.490 Radial†	29770.3	27125.3	5156.8	ug/L	5156.8	ppb	10:20:49
1	Mg 279.077 IEC†	123.1	123.1	5186.7	ug/L	5186.7	ppb	10:21:09
1	Na 589.592 Radial†	30647.0	32277.9	9946.5	ug/L	9946.5	ppb	10:20:49
1	Sr 421.552†	78851.4	78760.0	519.98	ug/L	519.98	ppb	10:20:49
1	Sc 361.383	914389.7	914389.7	102.65	%			10:22:07
1	Y 371.029	739674.6	739674.6	100.74	%			10:22:07
1	Ag 328.068†	115329.9	111733.3	491.99	ug/L	491.99	ppb	10:22:12
1	As 188.979†	1246.5	1243.1	481.70	ug/L	481.70	ppb	10:22:32
1	B 249.677†	22974.1	23143.1	481.65	ug/L	481.65	ppb	10:22:12
1	Ba 233.527†	68991.3	67228.7	492.62	ug/L	492.62	ppb	10:22:12
1	Be 313.107†	1464884.5	1431537.3	481.41	ug/L	481.41	ppb	10:22:07
1	Cd 226.502†	48652.8	47603.1	491.43	ug/L	491.43	ppb	10:22:12
1	Co 228.616†	27322.9	26703.9	492.30	ug/L	492.30	ppb	10:22:12
1	Cr 267.716†	48918.2	47595.8	490.57	ug/L	490.57	ppb	10:22:12
1	Cu 324.752†	187065.2	175357.7	487.73	ug/L	487.73	ppb	10:22:12
1	Mn 257.610†	497911.7	484548.7	486.46	ug/L	486.46	ppb	10:22:07
1	Mo 202.031†	7474.8	7277.0	484.08	ug/L	484.08	ppb	10:22:32
1	Ni 231.604†	22757.4	22085.7	491.83	ug/L	491.83	ppb	10:22:12
1	P 214.914†	4909.2	4559.4	2272.2	ug/L	2272.2	ppb	10:22:32
1	Pb 220.353†	4516.3	4479.6	482.27	ug/L	482.27	ppb	10:22:32
1	S 181.975 Axial†	847.9	777.2	948.39	ug/L	948.39	ppb	10:22:32
1	Sb 206.836†	1636.0	1555.5	492.69	ug/L	492.69	ppb	10:22:32
1	Se 196.026†	870.8	874.3	503.43	ug/L	503.43	ppb	10:22:32
1	Si 251.611†	84794.5	82073.6	2437.0	ug/L	2437.0	ppb	10:22:12
1	Sn 189.927†	3079.2	2990.4	483.97	ug/L	483.97	ppb	10:22:32
1	Ti 334.940†	333404.6	326617.1	487.90	ug/L	487.90	ppb	10:22:12
1	Tl 190.801†	1706.3	1706.8	484.81	ug/L	484.81	ppb	10:22:32
1	U 409.014†	12445.3	17237.6	507.49	ug/L	507.49	ppb	10:22:12
1	V 292.402†	73960.9	73807.1	497.48	ug/L	497.48	ppb	10:22:12
1	Zn 213.857†	60071.7	57814.5	486.22	ug/L	486.22	ppb	10:22:12
1	SiO2†	83478.4	80764.9	5137.2	ug/L	5137.2	ppb	10:23:40
2	Sc Radial	4138.4	4138.4	100	%			10:21:35
2	Y RADIAL	4880.6	4880.6	100.8	%			10:21:15
2	Al 396.153Radial†	6171.7	6342.5	5213.1	ug/L	5213.1	ppb	10:21:15
2	Ca 317.933Radial†	2821.9	2799.8	5182.8	ug/L	5182.8	ppb	10:21:35
2	Fe 238.204 Radial†	440.8	429.3	5003.4	ug/L	5003.4	ppb	10:21:35
2	K 766.490 Radial†	29479.1	26762.7	5087.9	ug/L	5087.9	ppb	10:21:15
2	Mg 279.077 IEC†	127.4	127.0	5351.6	ug/L	5351.6	ppb	10:21:35
2	Na 589.592 Radial†	30182.9	31740.9	9781.0	ug/L	9781.0	ppb	10:21:15
2	Sr 421.552†	77983.1	77702.9	513.00	ug/L	513.00	ppb	10:21:15
2	Sc 361.383	901542.8	901542.8	101.20	%			10:22:38
2	Y 371.029	730447.2	730447.2	99.483	%			10:22:38
2	Ag 328.068†	112704.4	110740.1	487.59	ug/L	487.59	ppb	10:22:43
2	As 188.979†	1248.2	1262.1	488.91	ug/L	488.91	ppb	10:23:03
2	B 249.677†	22294.8	22790.8	474.32	ug/L	474.32	ppb	10:22:43
2	Ba 233.527†	67565.7	66777.9	489.31	ug/L	489.31	ppb	10:22:43
2	Be 313.107†	1437494.5	1424809.3	479.14	ug/L	479.14	ppb	10:22:38
2	Cd 226.502†	47639.4	47277.2	488.08	ug/L	488.08	ppb	10:22:43
2	Co 228.616†	26624.6	26393.2	486.60	ug/L	486.60	ppb	10:22:43
2	Cr 267.716†	48085.7	47452.3	489.09	ug/L	489.09	ppb	10:22:43
2	Cu 324.752†	181828.5	172780.2	480.56	ug/L	480.56	ppb	10:22:43
2	Mn 257.610†	489165.3	482818.6	484.71	ug/L	484.71	ppb	10:22:38
2	Mo 202.031†	7452.7	7358.9	489.52	ug/L	489.52	ppb	10:23:03
2	Ni 231.604†	22363.9	22012.8	490.21	ug/L	490.21	ppb	10:22:43

2	P 214.914†	4923.7	4641.9	2316.6	ug/L	2316.6	ppb	10:23:03
2	Pb 220.353†	4524.4	4550.2	489.87	ug/L	489.87	ppb	10:23:03
2	S 181.975 Axial†	843.9	785.0	958.01	ug/L	958.01	ppb	10:23:03
2	Sb 206.836†	1635.8	1577.9	499.75	ug/L	499.75	ppb	10:23:03
2	Se 196.026†	861.6	877.3	504.61	ug/L	504.61	ppb	10:23:03
2	Si 251.611†	82570.9	81053.6	2406.6	ug/L	2406.6	ppb	10:22:43
2	Sn 189.927†	3071.1	3025.1	489.58	ug/L	489.58	ppb	10:23:03
2	Ti 334.940†	325381.8	323318.2	482.95	ug/L	482.95	ppb	10:22:43
2	Tl 190.801†	1733.6	1757.5	499.09	ug/L	499.09	ppb	10:23:03
2	U 409.014†	11941.1	16912.2	497.90	ug/L	497.90	ppb	10:22:43
2	V 292.402†	72518.5	73408.6	494.92	ug/L	494.92	ppb	10:22:43
2	Zn 213.857†	58597.9	57192.2	480.97	ug/L	480.97	ppb	10:22:43
2	SiO2†	83813.7	82255.1	5232.0	ug/L	5232.0	ppb	10:23:45
3	Sc Radial	4142.2	4142.2	100	%			10:22:00
3	Y RADIAL	4826.6	4826.6	99.70	%			10:21:40
3	Al 396.153Radial†	6116.4	6281.9	5163.7	ug/L	5163.7	ppb	10:21:40
3	Ca 317.933Radial†	2812.2	2787.5	5160.0	ug/L	5160.0	ppb	10:22:00
3	Fe 238.204 Radial†	447.5	435.6	5076.0	ug/L	5076.0	ppb	10:22:00
3	K 766.490 Radial†	29566.0	26822.4	5099.3	ug/L	5099.3	ppb	10:21:40
3	Mg 279.077 IEC†	123.2	122.8	5174.2	ug/L	5174.2	ppb	10:22:00
3	Na 589.592 Radial†	29940.2	31471.7	9698.0	ug/L	9698.0	ppb	10:21:40
3	Sr 421.552†	77308.2	76959.9	508.10	ug/L	508.10	ppb	10:21:40
3	Sc 361.383	924214.7	924214.7	103.75	%			10:23:09
3	Y 371.029	748508.7	748508.7	101.94	%			10:23:09
3	Ag 328.068†	113420.2	108698.1	478.65	ug/L	478.65	ppb	10:23:14
3	As 188.979†	1250.8	1234.3	478.23	ug/L	478.23	ppb	10:23:34
3	B 249.677†	22576.2	22521.7	468.70	ug/L	468.70	ppb	10:23:14
3	Ba 233.527†	68022.3	65580.2	480.54	ug/L	480.54	ppb	10:23:14
3	Be 313.107†	1478262.4	1429260.4	480.61	ug/L	480.61	ppb	10:23:09
3	Cd 226.502†	47969.4	46440.5	479.42	ug/L	479.42	ppb	10:23:14
3	Co 228.616†	26884.5	25998.4	479.31	ug/L	479.31	ppb	10:23:14
3	Cr 267.716†	48411.0	46600.2	480.31	ug/L	480.31	ppb	10:23:14
3	Cu 324.752†	183582.5	170063.4	473.01	ug/L	473.01	ppb	10:23:14
3	Mn 257.610†	501010.8	482379.1	484.28	ug/L	484.28	ppb	10:23:09
3	Mo 202.031†	7433.3	7159.5	476.27	ug/L	476.27	ppb	10:23:34
3	Ni 231.604†	22455.4	21559.0	480.10	ug/L	480.10	ppb	10:23:14
3	P 214.914†	4901.8	4501.5	2245.0	ug/L	2245.0	ppb	10:23:34
3	Pb 220.353†	4506.0	4422.8	476.15	ug/L	476.15	ppb	10:23:34
3	S 181.975 Axial†	848.5	768.9	938.36	ug/L	938.36	ppb	10:23:34
3	Sb 206.836†	1639.2	1541.5	488.15	ug/L	488.15	ppb	10:23:34
3	Se 196.026†	852.3	847.4	488.25	ug/L	488.25	ppb	10:23:34
3	Si 251.611†	83347.9	79801.1	2369.5	ug/L	2369.5	ppb	10:23:14
3	Sn 189.927†	3058.7	2938.8	475.63	ug/L	475.63	ppb	10:23:34
3	Ti 334.940†	328008.0	317962.5	474.97	ug/L	474.97	ppb	10:23:14
3	Tl 190.801†	1721.9	1704.2	484.04	ug/L	484.04	ppb	10:23:34
3	U 409.014†	12046.7	16724.5	492.37	ug/L	492.37	ppb	10:23:14
3	V 292.402†	73057.1	72169.9	486.48	ug/L	486.48	ppb	10:23:14
3	Zn 213.857†	59053.8	56211.2	472.72	ug/L	472.72	ppb	10:23:14
3	SiO2†	82960.6	79401.2	5050.4	ug/L	5050.4	ppb	10:23:50

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	913382.4	102.53	%	1.276				1.24%
Sc Radial	4136.3	100	%	0.2				0.17%
Y 371.029	739543.5	100.72	%	1.230				1.22%
Y RADIAL	4857.8	100.3	%	0.58				0.57%
Ag 328.068†	110390.5	486.08	ug/L	6.795	486.08	ppb	6.795	1.40%
QC value within limits for Ag 328.068 Recovery = 97.22%								
Al 396.153Radial†	6344.5	5215.1	ug/L	52.34	5215.1	ppb	52.34	1.00%
QC value within limits for Al 396.153Radial Recovery = 104.30%								
As 188.979†	1246.5	482.95	ug/L	5.452	482.95	ppb	5.452	1.13%
QC value within limits for As 188.979 Recovery = 96.59%								
B 249.677†	22818.6	474.89	ug/L	6.490	474.89	ppb	6.490	1.37%
QC value within limits for B 249.677 Recovery = 94.98%								
Ba 233.527†	66528.9	487.49	ug/L	6.240	487.49	ppb	6.240	1.28%
QC value within limits for Ba 233.527 Recovery = 97.50%								
Be 313.107†	1428535.7	480.39	ug/L	1.151	480.39	ppb	1.151	0.24%
QC value within limits for Be 313.107 Recovery = 96.08%								
Ca 317.933Radial†	2803.6	5189.8	ug/L	33.89	5189.8	ppb	33.89	0.65%

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   QC value within limits for Ca 317.933Radial  Recovery = 103.80%
Cd 226.502†            47106.9      486.31 ug/L         6.196      486.31 ppb          6.196   1.27%
   QC value within limits for Cd 226.502  Recovery = 97.26%
Co 228.616†            26365.2      486.07 ug/L         6.515      486.07 ppb          6.515   1.34%
   QC value within limits for Co 228.616  Recovery = 97.21%
Cr 267.716†            47216.1      486.66 ug/L         5.546      486.66 ppb          5.546   1.14%
   QC value within limits for Cr 267.716  Recovery = 97.33%
Cu 324.752†           172733.8      480.43 ug/L         7.361      480.43 ppb          7.361   1.53%
   QC value within limits for Cu 324.752  Recovery = 96.09%
Fe 238.204 Radial†       435.7      5077.6 ug/L        75.01      5077.6 ppb          75.01   1.48%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.55%
K 766.490 Radial†      26903.5      5114.7 ug/L        36.95      5114.7 ppb          36.95   0.72%
   QC value within limits for K 766.490 Radial  Recovery = 102.29%
Mg 279.077 IEC†          124.3      5237.5 ug/L        98.99      5237.5 ppb          98.99   1.89%
   QC value within limits for Mg 279.077 IEC  Recovery = 104.75%
Mn 257.610†           483248.8      485.15 ug/L         1.158      485.15 ppb          1.158   0.24%
   QC value within limits for Mn 257.610  Recovery = 97.03%
Mo 202.031†             7265.1      483.29 ug/L         6.658      483.29 ppb          6.658   1.38%
   QC value within limits for Mo 202.031  Recovery = 96.66%
Na 589.592 Radial†     31830.1      9808.5 ug/L       126.49      9808.5 ppb         126.49   1.29%
   QC value within limits for Na 589.592 Radial  Recovery = 98.09%
Ni 231.604†            21885.8      487.38 ug/L         6.356      487.38 ppb          6.356   1.30%
   QC value within limits for Ni 231.604  Recovery = 97.48%
P 214.914†              4567.6      2277.9 ug/L        36.15      2277.9 ppb          36.15   1.59%
   QC value within limits for P 214.914  Recovery = 91.12%
Pb 220.353†             4484.2      482.76 ug/L         6.872      482.76 ppb          6.872   1.42%
   QC value within limits for Pb 220.353  Recovery = 96.55%
S 181.975 Axial†         777.0      948.25 ug/L         9.823      948.25 ppb          9.823   1.04%
   QC value within limits for S 181.975 Axial  Recovery = 94.83%
Sb 206.836†             1558.3      493.53 ug/L         5.845      493.53 ppb          5.845   1.18%
   QC value within limits for Sb 206.836  Recovery = 98.71%
Se 196.026†              866.3      498.76 ug/L         9.119      498.76 ppb          9.119   1.83%
   QC value within limits for Se 196.026  Recovery = 99.75%
Si 251.611†            80976.1      2404.4 ug/L        33.83      2404.4 ppb          33.83   1.41%
   QC value within limits for Si 251.611  Recovery = 96.18%
Sn 189.927†             2984.8      483.06 ug/L         7.022      483.06 ppb          7.022   1.45%
   QC value within limits for Sn 189.927  Recovery = 96.61%
Sr 421.552†            77807.6      513.70 ug/L         5.973      513.70 ppb          5.973   1.16%
   QC value within limits for Sr 421.552  Recovery = 102.74%
Ti 334.940†           322632.6      481.94 ug/L         6.524      481.94 ppb          6.524   1.35%
   QC value within limits for Ti 334.940  Recovery = 96.39%
Tl 190.801†             1722.8      489.31 ug/L         8.474      489.31 ppb          8.474   1.73%
   QC value within limits for Tl 190.801  Recovery = 97.86%
U 409.014†             16958.1      499.26 ug/L         7.653      499.26 ppb          7.653   1.53%
   QC value within limits for U 409.014  Recovery = 99.85%
V 292.402†             73128.5      492.96 ug/L         5.757      492.96 ppb          5.757   1.17%
   QC value within limits for V 292.402  Recovery = 98.59%
Zn 213.857†            57072.7      479.97 ug/L         6.806      479.97 ppb          6.806   1.42%
   QC value within limits for Zn 213.857  Recovery = 95.99%
SiO2†                  80807.1      5139.9 ug/L        90.85      5139.9 ppb          90.85   1.77%
   QC value within limits for SiO2  Recovery = 96.12%
All analyte(s) passed QC.
```

Sequence No.: 12
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 2/1/2010 10:26:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4383.8	4383.8	106	%			10:27:53
1	Y RADIAL	4933.8	4933.8	101.9	%			10:27:53
1	Al 396.153Radial†	-205.4	-3.2	-2.6713	ug/L	-2.6713	ppb	10:27:53
1	Ca 317.933Radial†	20.2	5.7	10.583	ug/L	10.583	ppb	10:28:13
1	Fe 238.204 Radial†	12.2	1.3	15.386	ug/L	15.386	ppb	10:28:13
1	K 766.490 Radial†	2805.9	16.2	3.0792	ug/L	3.0792	ppb	10:27:53
1	Mg 279.077 IEC†	3.6	3.5	145.91	ug/L	145.91	ppb	10:28:13
1	Na 589.592 Radial†	-1682.8	68.7	21.161	ug/L	21.161	ppb	10:27:53
1	Sr 421.552†	13.8	-23.4	-0.1547	ug/L	-0.1547	ppb	10:27:53
1	Sc 361.383	923905.1	923905.1	103.71	%			10:29:10
1	Y 371.029	757414.7	757414.7	103.16	%			10:29:10
1	Ag 328.068†	764.6	112.7	0.4837	ug/L	0.4837	ppb	10:29:15
1	As 188.979†	-30.2	-0.4	-0.1535	ug/L	-0.1535	ppb	10:29:35
1	B 249.677†	-476.6	301.6	6.3020	ug/L	6.3020	ppb	10:29:35
1	Ba 233.527†	6.3	21.4	0.1589	ug/L	0.1589	ppb	10:29:35
1	Be 313.107†	-4196.7	356.6	0.1205	ug/L	0.1205	ppb	10:29:15
1	Cd 226.502†	-192.2	18.8	0.1965	ug/L	0.1965	ppb	10:29:35
1	Co 228.616†	-79.6	8.4	0.1542	ug/L	0.1542	ppb	10:29:35
1	Cr 267.716†	73.2	8.8	0.0835	ug/L	0.0835	ppb	10:29:35
1	Cu 324.752†	6800.5	-329.9	-0.9290	ug/L	-0.9290	ppb	10:29:15
1	Mn 257.610†	479.3	-69.6	-0.0743	ug/L	-0.0743	ppb	10:29:35
1	Mo 202.031†	10.4	4.9	0.3238	ug/L	0.3238	ppb	10:29:35
1	Ni 231.604†	92.7	4.2	0.0942	ug/L	0.0942	ppb	10:29:35
1	P 214.914†	220.2	-10.9	-5.5078	ug/L	-5.5078	ppb	10:29:35
1	Pb 220.353†	-59.2	22.6	2.4217	ug/L	2.4217	ppb	10:29:35
1	S 181.975 Axial†	51.6	0.8	1.0139	ug/L	1.0139	ppb	10:29:35
1	Sb 206.836†	50.9	10.6	3.2470	ug/L	3.2470	ppb	10:29:35
1	Se 196.026†	-28.5	-1.5	-0.8032	ug/L	-0.8032	ppb	10:29:35
1	Si 251.611†	513.5	-40.6	-1.2131	ug/L	-1.2131	ppb	10:29:35
1	Sn 189.927†	4.3	-5.3	-0.8578	ug/L	-0.8578	ppb	10:29:35
1	Ti 334.940†	-1624.1	238.5	0.3360	ug/L	0.3360	ppb	10:29:15
1	Tl 190.801†	-49.3	-3.1	-0.8674	ug/L	-0.8674	ppb	10:29:35
1	U 409.014†	-4522.6	752.4	22.224	ug/L	22.224	ppb	10:29:10
1	V 292.402†	-1662.0	149.7	1.0432	ug/L	1.0432	ppb	10:29:15
1	Zn 213.857†	749.0	13.0	0.1098	ug/L	0.1098	ppb	10:29:35
1	SiO2†	502.7	-77.5	-4.9521	ug/L	-4.9521	ppb	10:30:41
2	Sc Radial	4356.4	4356.4	106	%			10:28:18
2	Y RADIAL	4918.9	4918.9	101.6	%			10:28:18
2	Al 396.153Radial†	-182.8	16.9	13.967	ug/L	13.967	ppb	10:28:18
2	Ca 317.933Radial†	21.1	6.6	12.266	ug/L	12.266	ppb	10:28:38
2	Fe 238.204 Radial†	12.0	1.3	14.982	ug/L	14.982	ppb	10:28:38
2	K 766.490 Radial†	2764.3	-6.5	-1.2568	ug/L	-1.2568	ppb	10:28:18
2	Mg 279.077 IEC†	3.0	2.9	121.82	ug/L	121.82	ppb	10:28:38
2	Na 589.592 Radial†	-1641.6	97.6	30.086	ug/L	30.086	ppb	10:28:18
2	Sr 421.552†	48.3	9.3	0.0611	ug/L	0.0611	ppb	10:28:18
2	Sc 361.383	925215.0	925215.0	103.86	%			10:29:40
2	Y 371.029	760268.3	760268.3	103.54	%			10:29:40
2	Ag 328.068†	665.4	16.1	0.0568	ug/L	0.0568	ppb	10:29:45
2	As 188.979†	-30.4	-0.5	-0.1860	ug/L	-0.1860	ppb	10:30:05
2	B 249.677†	-484.4	294.7	6.1587	ug/L	6.1587	ppb	10:30:05
2	Ba 233.527†	5.3	20.4	0.1523	ug/L	0.1523	ppb	10:30:05
2	Be 313.107†	-4170.7	387.3	0.1306	ug/L	0.1306	ppb	10:29:45
2	Cd 226.502†	-184.0	26.9	0.2821	ug/L	0.2821	ppb	10:30:05
2	Co 228.616†	-71.4	16.4	0.3028	ug/L	0.3028	ppb	10:30:05
2	Cr 267.716†	88.3	23.2	0.2292	ug/L	0.2292	ppb	10:30:05
2	Cu 324.752†	6743.7	-393.8	-1.1102	ug/L	-1.1102	ppb	10:29:45
2	Mn 257.610†	496.1	-54.1	-0.0578	ug/L	-0.0578	ppb	10:30:05
2	Mo 202.031†	13.5	7.7	0.5156	ug/L	0.5156	ppb	10:30:05
2	Ni 231.604†	103.7	14.7	0.3278	ug/L	0.3278	ppb	10:30:05

2	P 214.914†	225.2	-6.5	-3.1434	ug/L	-3.1434 ppb	10:30:05
2	Pb 220.353†	-75.5	7.0	0.7501	ug/L	0.7501 ppb	10:30:05
2	S 181.975 Axial†	42.8	-7.7	-9.4040	ug/L	-9.4040 ppb	10:30:05
2	Sb 206.836†	47.7	7.6	2.3180	ug/L	2.3180 ppb	10:30:05
2	Se 196.026†	-27.1	-0.1	-0.0074	ug/L	-0.0074 ppb	10:30:05
2	Si 251.611†	534.1	-21.5	-0.6453	ug/L	-0.6453 ppb	10:30:05
2	Sn 189.927†	9.1	-0.7	-0.1050	ug/L	-0.1050 ppb	10:30:05
2	Ti 334.940†	-1670.0	196.5	0.2726	ug/L	0.2726 ppb	10:29:45
2	Tl 190.801†	-40.3	5.7	1.5954	ug/L	1.5954 ppb	10:30:05
2	U 409.014†	-4307.3	965.9	28.529	ug/L	28.529 ppb	10:29:40
2	V 292.402†	-1634.9	178.0	1.2460	ug/L	1.2460 ppb	10:29:45
2	Zn 213.857†	751.3	14.3	0.1191	ug/L	0.1191 ppb	10:30:05
2	SiO2†	535.8	-46.4	-2.9721	ug/L	-2.9721 ppb	10:30:46
3	Sc Radial	4412.4	4412.4	107	%		10:28:43
3	Y RADIAL	4982.5	4982.5	102.9	%		10:28:43
3	Al 396.153Radial†	-200.2	2.9	2.3959	ug/L	2.3959 ppb	10:28:43
3	Ca 317.933Radial†	21.1	6.3	11.744	ug/L	11.744 ppb	10:29:03
3	Fe 238.204 Radial†	10.6	-0.2	-2.0901	ug/L	-2.0901 ppb	10:29:03
3	K 766.490 Radial†	2738.0	-64.3	-12.264	ug/L	-12.264 ppb	10:28:43
3	Mg 279.077 IEC†	2.8	2.6	111.31	ug/L	111.31 ppb	10:29:03
3	Na 589.592 Radial†	-1640.0	118.9	36.633	ug/L	36.633 ppb	10:28:43
3	Sr 421.552†	27.0	-11.2	-0.0741	ug/L	-0.0741 ppb	10:28:43
3	Sc 361.383	932362.3	932362.3	104.66	%		10:30:11
3	Y 371.029	765328.6	765328.6	104.23	%		10:30:11
3	Ag 328.068†	711.3	55.1	0.2240	ug/L	0.2240 ppb	10:30:16
3	As 188.979†	-29.2	0.9	0.3399	ug/L	0.3399 ppb	10:30:36
3	B 249.677†	-500.7	282.7	5.9098	ug/L	5.9098 ppb	10:30:36
3	Ba 233.527†	4.3	19.4	0.1439	ug/L	0.1439 ppb	10:30:36
3	Be 313.107†	-4171.2	417.6	0.1407	ug/L	0.1407 ppb	10:30:16
3	Cd 226.502†	-196.9	16.0	0.1701	ug/L	0.1701 ppb	10:30:36
3	Co 228.616†	-77.5	11.1	0.2026	ug/L	0.2026 ppb	10:30:36
3	Cr 267.716†	79.7	14.3	0.1389	ug/L	0.1389 ppb	10:30:36
3	Cu 324.752†	6694.8	-490.2	-1.3773	ug/L	-1.3773 ppb	10:30:16
3	Mn 257.610†	486.7	-66.8	-0.0718	ug/L	-0.0718 ppb	10:30:36
3	Mo 202.031†	-1.2	-6.3	-0.4209	ug/L	-0.4209 ppb	10:30:36
3	Ni 231.604†	104.3	14.5	0.3226	ug/L	0.3226 ppb	10:30:36
3	P 214.914†	225.1	-8.2	-3.9748	ug/L	-3.9748 ppb	10:30:36
3	Pb 220.353†	-57.2	25.0	2.6840	ug/L	2.6840 ppb	10:30:36
3	S 181.975 Axial†	44.4	-6.5	-7.9436	ug/L	-7.9436 ppb	10:30:36
3	Sb 206.836†	49.1	8.5	2.6269	ug/L	2.6269 ppb	10:30:36
3	Se 196.026†	-23.8	3.2	1.7566	ug/L	1.7566 ppb	10:30:36
3	Si 251.611†	533.0	-26.5	-0.7824	ug/L	-0.7824 ppb	10:30:36
3	Sn 189.927†	21.4	11.1	1.7884	ug/L	1.7884 ppb	10:30:36
3	Ti 334.940†	-1718.2	162.7	0.2248	ug/L	0.2248 ppb	10:30:16
3	Tl 190.801†	-33.5	12.4	3.5105	ug/L	3.5105 ppb	10:30:36
3	U 409.014†	-4480.3	832.4	24.589	ug/L	24.589 ppb	10:30:11
3	V 292.402†	-1677.2	149.7	1.0390	ug/L	1.0390 ppb	10:30:16
3	Zn 213.857†	747.6	5.2	0.0438	ug/L	0.0438 ppb	10:30:36
3	SiO2†	520.2	-65.2	-4.1492	ug/L	-4.1492 ppb	10:30:51

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	927160.8	104.08	%	0.511				0.49%
Sc Radial	4384.2	106	%	0.7				0.64%
Y 371.029	761003.9	103.64	%	0.546				0.53%
Y RADIAL	4945.1	102.1	%	0.69				0.67%
Ag 328.068†	61.3	0.2548	ug/L	0.21515	0.2548	ppb	0.21515	84.43%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.5	4.5640	ug/L	8.52851	4.5640	ppb	8.52851	186.87%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-0.0	0.0001	ug/L	0.29468	0.0001	ppb	0.29468	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	293.0	6.1235	ug/L	0.19850	6.1235	ppb	0.19850	3.24%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	20.4	0.1517	ug/L	0.00751	0.1517	ppb	0.00751	4.95%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	387.2	0.1306	ug/L	0.01010	0.1306	ppb	0.01010	7.74%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	6.2	11.531	ug/L	0.8619	11.531	ppb	0.8619	7.47%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                20.5      0.2162 ug/L       0.05854      0.2162 ppb        0.05854  27.08%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                12.0      0.2199 ug/L       0.07580      0.2199 ppb        0.07580  34.47%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                15.4      0.1505 ug/L       0.07355      0.1505 ppb        0.07355  48.87%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -404.6     -1.1388 ug/L       0.22554     -1.1388 ppb        0.22554  19.80%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.8      9.4258 ug/L       9.97511      9.4258 ppb        9.97511 105.83%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -18.2     -3.4804 ug/L       7.90954     -3.4804 ppb        7.90954 227.26%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             3.0      126.34 ug/L        17.739      126.34 ppb         17.739  14.04%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -63.5     -0.0680 ug/L       0.00888     -0.0680 ppb        0.00888  13.06%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 2.1      0.1395 ug/L       0.49472      0.1395 ppb        0.49472 354.63%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         95.1      29.293 ug/L        7.7663      29.293 ppb         7.7663  26.51%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                11.1      0.2482 ug/L       0.13340      0.2482 ppb        0.13340  53.76%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 -8.5     -4.2087 ug/L       1.19944     -4.2087 ppb        1.19944  28.50%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                18.2      1.9519 ug/L       1.04907      1.9519 ppb        1.04907  53.75%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -4.5     -5.4446 ug/L       5.64063     -5.4446 ppb        5.64063 103.60%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 8.9      2.7306 ug/L       0.47310      2.7306 ppb        0.47310  17.33%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.5      0.3153 ug/L       1.31008      0.3153 ppb        1.31008 415.46%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               -29.5     -0.8803 ug/L       0.29625     -0.8803 ppb        0.29625  33.66%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 1.7      0.2752 ug/L       1.36343      0.2752 ppb        1.36343 495.48%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                -8.5     -0.0559 ug/L       0.10906     -0.0559 ppb        0.10906 195.08%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               199.2      0.2778 ug/L       0.05579      0.2778 ppb        0.05579  20.08%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 5.0      1.4129 ug/L       2.19465      1.4129 ppb        2.19465 155.33%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                850.3      25.114 ug/L        3.1854      25.114 ppb         3.1854  12.68%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                159.1      1.1094 ug/L       0.11830      1.1094 ppb        0.11830  10.66%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                10.8      0.0909 ug/L       0.04108      0.0909 ppb        0.04108  45.19%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     -63.1     -4.0245 ug/L       0.99589     -4.0245 ppb        0.99589  24.75%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 2/1/2010 11:44:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4546.4	4546.4	110	%			11:46:47
1	Y RADIAL	5092.8	5092.8	105.2	%			11:46:47
1	Al 396.153Radial†	6459.2	6051.3	4972.8	ug/L	4972.8	ppb	11:46:47
1	Ca 317.933Radial†	2947.8	2661.6	4927.0	ug/L	4927.0	ppb	11:47:07
1	Fe 238.204 Radial†	472.6	418.7	4880.0	ug/L	4880.0	ppb	11:47:07
1	K 766.490 Radial†	30609.2	25151.0	4781.2	ug/L	4781.2	ppb	11:46:47
1	Mg 279.077 IEC†	129.5	117.5	4952.4	ug/L	4952.4	ppb	11:47:07
1	Na 589.592 Radial†	32558.3	31196.2	9613.2	ug/L	9613.2	ppb	11:46:47
1	Sr 421.552†	82548.5	74869.5	494.30	ug/L	494.30	ppb	11:46:47
1	Sc 361.383	929704.5	929704.5	104.36	%			11:48:06
1	Y 371.029	754281.0	754281.0	102.73	%			11:48:06
1	Ag 328.068†	115491.3	110037.1	484.46	ug/L	484.46	ppb	11:48:06
1	As 188.979†	1264.5	1240.3	480.62	ug/L	480.62	ppb	11:48:26
1	B 249.677†	22645.1	22459.2	467.43	ug/L	467.43	ppb	11:48:06
1	Ba 233.527†	69095.0	66220.9	485.23	ug/L	485.23	ppb	11:48:06
1	Be 313.107†	1484965.8	1427270.0	479.99	ug/L	479.99	ppb	11:48:06
1	Cd 226.502†	48261.7	46447.6	479.52	ug/L	479.52	ppb	11:48:06
1	Co 228.616†	26955.4	25913.3	477.73	ug/L	477.73	ppb	11:48:26
1	Cr 267.716†	48922.1	46814.4	482.52	ug/L	482.52	ppb	11:48:06
1	Cu 324.752†	189151.7	174354.8	484.93	ug/L	484.93	ppb	11:48:06
1	Mn 257.610†	503466.3	481880.4	483.77	ug/L	483.77	ppb	11:48:06
1	Mo 202.031†	7659.2	7333.7	487.83	ug/L	487.83	ppb	11:48:26
1	Ni 231.604†	22519.0	21492.2	478.61	ug/L	478.61	ppb	11:48:26
1	P 214.914†	4995.4	4563.3	2274.8	ug/L	2274.8	ppb	11:48:26
1	Pb 220.353†	4611.9	4498.6	484.28	ug/L	484.28	ppb	11:48:26
1	S 181.975 Axial†	949.5	860.9	1050.8	ug/L	1050.8	ppb	11:48:26
1	Sb 206.836†	1663.0	1555.1	492.56	ug/L	492.56	ppb	11:48:26
1	Se 196.026†	873.8	863.3	496.41	ug/L	496.41	ppb	11:48:26
1	Si 251.611†	84750.8	80670.9	2395.2	ug/L	2395.2	ppb	11:48:06
1	Sn 189.927†	3113.3	2973.7	481.22	ug/L	481.22	ppb	11:48:26
1	Ti 334.940†	343069.0	330526.8	493.73	ug/L	493.73	ppb	11:48:06
1	Tl 190.801†	1744.7	1716.2	487.59	ug/L	487.59	ppb	11:48:26
1	U 409.014†	12343.3	16940.2	498.76	ug/L	498.76	ppb	11:48:06
1	V 292.402†	74111.3	72764.3	490.62	ug/L	490.62	ppb	11:48:06
1	Zn 213.857†	59642.0	56438.7	474.66	ug/L	474.66	ppb	11:48:06
1	SiO2†	84411.0	80318.9	5108.6	ug/L	5108.6	ppb	11:49:26
2	Sc Radial	4482.6	4482.6	109	%			11:47:12
2	Y RADIAL	5001.3	5001.3	103.3	%			11:47:12
2	Al 396.153Radial†	6390.0	6071.0	4989.0	ug/L	4989.0	ppb	11:47:12
2	Ca 317.933Radial†	2931.5	2684.6	4969.7	ug/L	4969.7	ppb	11:47:32
2	Fe 238.204 Radial†	469.8	422.2	4921.2	ug/L	4921.2	ppb	11:47:32
2	K 766.490 Radial†	30218.0	25186.2	4787.9	ug/L	4787.9	ppb	11:47:12
2	Mg 279.077 IEC†	132.7	122.2	5148.9	ug/L	5148.9	ppb	11:47:32
2	Na 589.592 Radial†	32028.6	31129.2	9592.5	ug/L	9592.5	ppb	11:47:12
2	Sr 421.552†	80999.5	74510.0	491.92	ug/L	491.92	ppb	11:47:12
2	Sc 361.383	923929.7	923929.7	103.72	%			11:48:33
2	Y 371.029	748895.9	748895.9	102.00	%			11:48:33
2	Ag 328.068†	114941.8	110199.0	485.18	ug/L	485.18	ppb	11:48:33
2	As 188.979†	1258.7	1242.3	481.39	ug/L	481.39	ppb	11:48:53
2	B 249.677†	22583.4	22535.3	469.02	ug/L	469.02	ppb	11:48:33
2	Ba 233.527†	68755.4	66307.2	485.86	ug/L	485.86	ppb	11:48:33
2	Be 313.107†	1475302.6	1426846.4	479.85	ug/L	479.85	ppb	11:48:33
2	Cd 226.502†	48129.4	46609.1	481.18	ug/L	481.18	ppb	11:48:33
2	Co 228.616†	26794.2	25919.3	477.84	ug/L	477.84	ppb	11:48:53
2	Cr 267.716†	48690.0	46883.6	483.23	ug/L	483.23	ppb	11:48:33
2	Cu 324.752†	187878.3	174259.9	484.67	ug/L	484.67	ppb	11:48:33
2	Mn 257.610†	501199.2	482709.7	484.60	ug/L	484.60	ppb	11:48:33
2	Mo 202.031†	7628.2	7349.7	488.90	ug/L	488.90	ppb	11:48:53
2	Ni 231.604†	22399.6	21511.9	479.05	ug/L	479.05	ppb	11:48:53

2	P 214.914†	4970.8	4569.4	2278.0	ug/L	2278.0 ppb	11:48:53
2	Pb 220.353†	4593.1	4508.1	485.30	ug/L	485.30 ppb	11:48:53
2	S 181.975 Axial†	903.5	822.3	1003.6	ug/L	1003.6 ppb	11:48:53
2	Sb 206.836†	1659.0	1561.2	494.45	ug/L	494.45 ppb	11:48:53
2	Se 196.026†	867.7	862.5	496.14	ug/L	496.14 ppb	11:48:53
2	Si 251.611†	84504.9	80941.4	2403.3	ug/L	2403.3 ppb	11:48:33
2	Sn 189.927†	3099.0	2978.5	482.01	ug/L	482.01 ppb	11:48:53
2	Ti 334.940†	341064.4	330648.6	493.90	ug/L	493.90 ppb	11:48:33
2	Tl 190.801†	1746.0	1727.9	490.88	ug/L	490.88 ppb	11:48:53
2	U 409.014†	12240.0	16914.6	497.99	ug/L	497.99 ppb	11:48:33
2	V 292.402†	73720.7	72831.5	491.07	ug/L	491.07 ppb	11:48:33
2	Zn 213.857†	59444.0	56605.1	476.07	ug/L	476.07 ppb	11:48:33
2	SiO2†	83979.5	80408.3	5114.3	ug/L	5114.3 ppb	11:49:31
3	Sc Radial	4556.0	4556.0	110	%		11:47:37
3	Y RADIAL	5094.6	5094.6	105.2	%		11:47:37
3	Al 396.153Radial†	6439.0	6020.7	4947.8	ug/L	4947.8 ppb	11:47:37
3	Ca 317.933Radial†	2912.7	2624.1	4857.6	ug/L	4857.6 ppb	11:47:57
3	Fe 238.204 Radial†	467.8	413.4	4818.7	ug/L	4818.7 ppb	11:47:57
3	K 766.490 Radial†	30619.2	25101.8	4771.9	ug/L	4771.9 ppb	11:47:37
3	Mg 279.077 IEC†	126.5	114.6	4829.3	ug/L	4829.3 ppb	11:47:57
3	Na 589.592 Radial†	32543.2	31120.6	9589.9	ug/L	9589.9 ppb	11:47:37
3	Sr 421.552†	82260.6	74451.7	491.54	ug/L	491.54 ppb	11:47:37
3	Sc 361.383	929436.6	929436.6	104.33	%		11:49:01
3	Y 371.029	752506.4	752506.4	102.49	%		11:49:01
3	Ag 328.068†	115762.1	110328.6	485.72	ug/L	485.72 ppb	11:49:01
3	As 188.979†	1251.3	1228.1	475.91	ug/L	475.91 ppb	11:49:21
3	B 249.677†	22843.7	22655.8	471.57	ug/L	471.57 ppb	11:49:01
3	Ba 233.527†	69102.1	66246.7	485.42	ug/L	485.42 ppb	11:49:01
3	Be 313.107†	1483984.2	1426739.1	479.81	ug/L	479.81 ppb	11:49:01
3	Cd 226.502†	48326.9	46523.4	480.30	ug/L	480.30 ppb	11:49:01
3	Co 228.616†	26612.5	25592.1	471.80	ug/L	471.80 ppb	11:49:21
3	Cr 267.716†	48879.7	46787.3	482.24	ug/L	482.24 ppb	11:49:01
3	Cu 324.752†	189463.8	174706.2	485.91	ug/L	485.91 ppb	11:49:01
3	Mn 257.610†	504659.2	483162.8	485.05	ug/L	485.05 ppb	11:49:01
3	Mo 202.031†	7576.5	7256.5	482.70	ug/L	482.70 ppb	11:49:21
3	Ni 231.604†	22285.8	21274.9	473.77	ug/L	473.77 ppb	11:49:21
3	P 214.914†	4927.5	4499.5	2241.5	ug/L	2241.5 ppb	11:49:21
3	Pb 220.353†	4570.0	4459.8	480.10	ug/L	480.10 ppb	11:49:21
3	S 181.975 Axial†	869.7	784.7	957.63	ug/L	957.63 ppb	11:49:21
3	Sb 206.836†	1653.3	1546.2	489.62	ug/L	489.62 ppb	11:49:21
3	Se 196.026†	856.0	846.4	486.85	ug/L	486.85 ppb	11:49:21
3	Si 251.611†	85063.9	80994.4	2404.9	ug/L	2404.9 ppb	11:49:01
3	Sn 189.927†	3069.8	2932.9	474.63	ug/L	474.63 ppb	11:49:21
3	Ti 334.940†	343569.1	331100.8	494.58	ug/L	494.58 ppb	11:49:01
3	Tl 190.801†	1720.7	1693.7	481.27	ug/L	481.27 ppb	11:49:21
3	U 409.014†	12356.3	16956.1	499.24	ug/L	499.24 ppb	11:49:01
3	V 292.402†	74231.6	72900.0	491.45	ug/L	491.45 ppb	11:49:01
3	Zn 213.857†	59908.0	56710.2	477.00	ug/L	477.00 ppb	11:49:01
3	SiO2†	83949.0	79899.4	5082.0	ug/L	5082.0 ppb	11:49:36

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	927690.3	104.14	%	0.366				0.35%
Sc Radial	4528.3	110	%	1.0				0.88%
Y 371.029	751894.4	102.40	%	0.374				0.36%
Y RADIAL	5062.9	104.6	%	1.10				1.05%
Ag 328.068†	110188.2	485.12	ug/L	0.632	485.12	ppb	0.632	0.13%
QC value within limits for Ag 328.068 Recovery = 97.02%								
Al 396.153Radial†	6047.7	4969.9	ug/L	20.79	4969.9	ppb	20.79	0.42%
QC value within limits for Al 396.153Radial Recovery = 99.40%								
As 188.979†	1236.9	479.31	ug/L	2.966	479.31	ppb	2.966	0.62%
QC value within limits for As 188.979 Recovery = 95.86%								
B 249.677†	22550.1	469.34	ug/L	2.087	469.34	ppb	2.087	0.44%
QC value within limits for B 249.677 Recovery = 93.87%								
Ba 233.527†	66258.3	485.50	ug/L	0.325	485.50	ppb	0.325	0.07%
QC value within limits for Ba 233.527 Recovery = 97.10%								
Be 313.107†	1426951.8	479.88	ug/L	0.093	479.88	ppb	0.093	0.02%
QC value within limits for Be 313.107 Recovery = 95.98%								
Ca 317.933Radial†	2656.8	4918.1	ug/L	56.54	4918.1	ppb	56.54	1.15%

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   QC value within limits for Ca 317.933Radial  Recovery = 98.36%
Cd 226.502†            46526.7      480.33 ug/L        0.832      480.33 ppb        0.832   0.17%
   QC value within limits for Cd 226.502  Recovery = 96.07%
Co 228.616†            25808.2      475.79 ug/L        3.459      475.79 ppb        3.459   0.73%
   QC value within limits for Co 228.616  Recovery = 95.16%
Cr 267.716†            46828.5      482.66 ug/L        0.512      482.66 ppb        0.512   0.11%
   QC value within limits for Cr 267.716  Recovery = 96.53%
Cu 324.752†           174440.3      485.17 ug/L        0.651      485.17 ppb        0.651   0.13%
   QC value within limits for Cu 324.752  Recovery = 97.03%
Fe 238.204 Radial†       418.1      4873.3 ug/L       51.54      4873.3 ppb       51.54   1.06%
   QC value within limits for Fe 238.204 Radial  Recovery = 97.47%
K 766.490 Radial†      25146.3      4780.4 ug/L        8.05      4780.4 ppb        8.05   0.17%
   QC value within limits for K 766.490 Radial  Recovery = 95.61%
Mg 279.077 IEC†          118.1      4976.9 ug/L      161.16      4976.9 ppb      161.16   3.24%
   QC value within limits for Mg 279.077 IEC  Recovery = 99.54%
Mn 257.610†           482584.3      484.47 ug/L        0.652      484.47 ppb        0.652   0.13%
   QC value within limits for Mn 257.610  Recovery = 96.89%
Mo 202.031†             7313.3      486.47 ug/L        3.316      486.47 ppb        3.316   0.68%
   QC value within limits for Mo 202.031  Recovery = 97.29%
Na 589.592 Radial†     31148.7      9598.5 ug/L       12.75      9598.5 ppb       12.75   0.13%
   QC value within limits for Na 589.592 Radial  Recovery = 95.99%
Ni 231.604†            21426.3      477.14 ug/L        2.928      477.14 ppb        2.928   0.61%
   QC value within limits for Ni 231.604  Recovery = 95.43%
P 214.914†              4544.1      2264.8 ug/L       20.22      2264.8 ppb       20.22   0.89%
   QC value within limits for P 214.914  Recovery = 90.59%
Pb 220.353†             4488.9      483.23 ug/L        2.756      483.23 ppb        2.756   0.57%
   QC value within limits for Pb 220.353  Recovery = 96.65%
S 181.975 Axial†         822.6      1004.0 ug/L       46.58      1004.0 ppb       46.58   4.64%
   QC value within limits for S 181.975 Axial  Recovery = 100.40%
Sb 206.836†             1554.1      492.21 ug/L        2.433      492.21 ppb        2.433   0.49%
   QC value within limits for Sb 206.836  Recovery = 98.44%
Se 196.026†              857.4      493.13 ug/L        5.439      493.13 ppb        5.439   1.10%
   QC value within limits for Se 196.026  Recovery = 98.63%
Si 251.611†            80868.9      2401.2 ug/L        5.18      2401.2 ppb        5.18   0.22%
   QC value within limits for Si 251.611  Recovery = 96.05%
Sn 189.927†             2961.7      479.29 ug/L        4.056      479.29 ppb        4.056   0.85%
   QC value within limits for Sn 189.927  Recovery = 95.86%
Sr 421.552†            74610.4      492.59 ug/L        1.494      492.59 ppb        1.494   0.30%
   QC value within limits for Sr 421.552  Recovery = 98.52%
Ti 334.940†           330758.7      494.07 ug/L        0.454      494.07 ppb        0.454   0.09%
   QC value within limits for Ti 334.940  Recovery = 98.81%
Tl 190.801†             1712.6      486.58 ug/L        4.881      486.58 ppb        4.881   1.00%
   QC value within limits for Tl 190.801  Recovery = 97.32%
U 409.014†             16937.0      498.66 ug/L        0.626      498.66 ppb        0.626   0.13%
   QC value within limits for U 409.014  Recovery = 99.73%
V 292.402†             72831.9      491.05 ug/L        0.419      491.05 ppb        0.419   0.09%
   QC value within limits for V 292.402  Recovery = 98.21%
Zn 213.857†            56584.7      475.91 ug/L        1.177      475.91 ppb        1.177   0.25%
   QC value within limits for Zn 213.857  Recovery = 95.18%
SiO2†                  80208.9      5101.6 ug/L       17.24      5101.6 ppb       17.24   0.34%
   QC value within limits for SiO2  Recovery = 95.40%
All analyte(s) passed QC.
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Sequence No.: 11
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 2/1/2010 11:51:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4381.5	4381.5	106	%			11:53:39
1	Y RADIAL	4967.6	4967.6	102.6	%			11:53:39
1	Al 396.153Radial†	-166.0	33.8	27.854	ug/L	27.854	ppb	11:53:39
1	Ca 317.933Radial†	20.5	6.0	11.093	ug/L	11.093	ppb	11:53:59
1	Fe 238.204 Radial†	13.9	3.0	34.300	ug/L	34.300	ppb	11:53:59
1	K 766.490 Radial†	2689.6	-91.9	-17.520	ug/L	-17.520	ppb	11:53:39
1	Mg 279.077 IEC†	0.1	0.1	4.1367	ug/L	4.1367	ppb	11:53:59
1	Na 589.592 Radial†	-1506.1	234.2	72.159	ug/L	72.159	ppb	11:53:39
1	Sr 421.552†	26.7	-11.3	-0.0746	ug/L	-0.0746	ppb	11:53:39
1	Sc 361.383	906602.8	906602.8	101.77	%			11:54:56
1	Y 371.029	751757.2	751757.2	102.38	%			11:54:56
1	Ag 328.068†	545.6	-88.5	-0.3892	ug/L	-0.3892	ppb	11:54:56
1	As 188.979†	-27.1	2.1	0.8061	ug/L	0.8061	ppb	11:55:16
1	B 249.677†	-517.4	252.7	5.2781	ug/L	5.2781	ppb	11:55:16
1	Ba 233.527†	-7.5	8.0	0.0610	ug/L	0.0610	ppb	11:55:16
1	Be 313.107†	-4130.1	344.9	0.1166	ug/L	0.1166	ppb	11:54:56
1	Cd 226.502†	-180.5	26.7	0.2767	ug/L	0.2767	ppb	11:55:16
1	Co 228.616†	-88.8	-2.1	-0.0380	ug/L	-0.0380	ppb	11:55:16
1	Cr 267.716†	84.7	21.4	0.2140	ug/L	0.2140	ppb	11:55:16
1	Cu 324.752†	6783.1	-221.8	-0.6261	ug/L	-0.6261	ppb	11:54:56
1	Mn 257.610†	523.4	-17.5	-0.0143	ug/L	-0.0143	ppb	11:55:16
1	Mo 202.031†	14.8	9.3	0.6194	ug/L	0.6194	ppb	11:55:16
1	Ni 231.604†	123.6	36.3	0.8087	ug/L	0.8087	ppb	11:55:16
1	P 214.914†	224.4	-2.7	-1.3278	ug/L	-1.3278	ppb	11:55:16
1	Pb 220.353†	-61.6	19.1	2.0558	ug/L	2.0558	ppb	11:55:16
1	S 181.975 Axial†	55.9	6.0	7.3835	ug/L	7.3835	ppb	11:55:16
1	Sb 206.836†	45.9	6.6	2.0211	ug/L	2.0211	ppb	11:55:16
1	Se 196.026†	-23.7	2.6	1.5840	ug/L	1.5840	ppb	11:55:16
1	Si 251.611†	530.4	-14.5	-0.4403	ug/L	-0.4403	ppb	11:55:16
1	Sn 189.927†	1.7	-7.7	-1.2435	ug/L	-1.2435	ppb	11:55:16
1	Ti 334.940†	-1569.8	261.9	0.3836	ug/L	0.3836	ppb	11:54:56
1	Tl 190.801†	-29.8	15.2	4.2855	ug/L	4.2855	ppb	11:55:16
1	U 409.014†	-4516.4	675.2	19.942	ug/L	19.942	ppb	11:54:56
1	V 292.402†	-1664.4	116.7	0.8180	ug/L	0.8180	ppb	11:54:56
1	Zn 213.857†	762.3	39.9	0.3309	ug/L	0.3309	ppb	11:55:16
1	SiO2†	507.0	-64.1	-4.1050	ug/L	-4.1050	ppb	11:56:12
2	Sc Radial	4377.4	4377.4	106	%			11:54:04
2	Y RADIAL	4955.9	4955.9	102.4	%			11:54:04
2	Al 396.153Radial†	-167.9	31.9	26.310	ug/L	26.310	ppb	11:54:04
2	Ca 317.933Radial†	22.8	8.1	15.072	ug/L	15.072	ppb	11:54:24
2	Fe 238.204 Radial†	10.9	0.2	1.8592	ug/L	1.8592	ppb	11:54:24
2	K 766.490 Radial†	2798.2	12.9	2.4172	ug/L	2.4172	ppb	11:54:04
2	Mg 279.077 IEC†	-2.0	-1.8	-76.615	ug/L	-76.615	ppb	11:54:24
2	Na 589.592 Radial†	-1506.7	232.3	71.583	ug/L	71.583	ppb	11:54:04
2	Sr 421.552†	34.8	-3.7	-0.0243	ug/L	-0.0243	ppb	11:54:04
2	Sc 361.383	908404.8	908404.8	101.97	%			11:55:21
2	Y 371.029	752737.0	752737.0	102.52	%			11:55:21
2	Ag 328.068†	518.4	-116.2	-0.5197	ug/L	-0.5197	ppb	11:55:21
2	As 188.979†	-32.5	-3.1	-1.2059	ug/L	-1.2059	ppb	11:55:41
2	B 249.677†	-536.1	235.3	4.9191	ug/L	4.9191	ppb	11:55:41
2	Ba 233.527†	11.3	26.4	0.1955	ug/L	0.1955	ppb	11:55:41
2	Be 313.107†	-4202.9	281.5	0.0952	ug/L	0.0952	ppb	11:55:21
2	Cd 226.502†	-186.1	21.6	0.2274	ug/L	0.2274	ppb	11:55:41
2	Co 228.616†	-71.2	15.3	0.2824	ug/L	0.2824	ppb	11:55:41
2	Cr 267.716†	76.6	13.3	0.1307	ug/L	0.1307	ppb	11:55:41
2	Cu 324.752†	6671.7	-344.2	-0.9684	ug/L	-0.9684	ppb	11:55:21
2	Mn 257.610†	514.8	-26.9	-0.0237	ug/L	-0.0237	ppb	11:55:41
2	Mo 202.031†	7.0	1.7	0.1115	ug/L	0.1115	ppb	11:55:41
2	Ni 231.604†	102.8	15.7	0.3493	ug/L	0.3493	ppb	11:55:41

2	P 214.914†	229.9	2.2	1.3065	ug/L	1.3065 ppb	11:55:41
2	Pb 220.353†	-58.2	22.6	2.4316	ug/L	2.4316 ppb	11:55:41
2	S 181.975 Axial†	56.5	6.5	7.9756	ug/L	7.9756 ppb	11:55:41
2	Sb 206.836†	43.8	4.5	1.3630	ug/L	1.3630 ppb	11:55:41
2	Se 196.026†	-24.4	2.0	1.1126	ug/L	1.1126 ppb	11:55:41
2	Si 251.611†	550.0	3.6	0.1061	ug/L	0.1061 ppb	11:55:41
2	Sn 189.927†	4.7	-4.9	-0.7821	ug/L	-0.7821 ppb	11:55:41
2	Ti 334.940†	-1609.1	226.4	0.3378	ug/L	0.3378 ppb	11:55:21
2	Tl 190.801†	-43.5	1.9	0.5215	ug/L	0.5215 ppb	11:55:41
2	U 409.014†	-4522.6	678.0	20.027	ug/L	20.027 ppb	11:55:21
2	V 292.402†	-1616.6	166.9	1.1480	ug/L	1.1480 ppb	11:55:21
2	Zn 213.857†	757.2	33.4	0.2823	ug/L	0.2823 ppb	11:55:41
2	SiO2†	520.5	-51.8	-3.3089	ug/L	-3.3089 ppb	11:56:17
3	Sc Radial	4408.5	4408.5	107	%		11:54:29
3	Y RADIAL	4998.9	4998.9	103.3	%		11:54:29
3	Al 396.153Radial†	-197.3	5.5	4.5234	ug/L	4.5234 ppb	11:54:29
3	Ca 317.933Radial†	25.6	10.6	19.571	ug/L	19.571 ppb	11:54:49
3	Fe 238.204 Radial†	9.4	-1.3	-14.932	ug/L	-14.932 ppb	11:54:49
3	K 766.490 Radial†	2709.7	-88.6	-16.907	ug/L	-16.907 ppb	11:54:29
3	Mg 279.077 IEC†	2.9	2.8	116.58	ug/L	116.58 ppb	11:54:49
3	Na 589.592 Radial†	-1445.1	299.9	92.412	ug/L	92.412 ppb	11:54:29
3	Sr 421.552†	15.2	-22.2	-0.1468	ug/L	-0.1468 ppb	11:54:29
3	Sc 361.383	903494.4	903494.4	101.42	%		11:55:46
3	Y 371.029	748032.8	748032.8	101.88	%		11:55:46
3	Ag 328.068†	557.1	-75.2	-0.3436	ug/L	-0.3436 ppb	11:55:46
3	As 188.979†	-32.3	-3.1	-1.2021	ug/L	-1.2021 ppb	11:56:06
3	B 249.677†	-494.0	274.0	5.7309	ug/L	5.7309 ppb	11:56:06
3	Ba 233.527†	-2.2	13.2	0.0974	ug/L	0.0974 ppb	11:56:06
3	Be 313.107†	-4177.9	283.7	0.0958	ug/L	0.0958 ppb	11:55:46
3	Cd 226.502†	-199.1	7.8	0.0851	ug/L	0.0851 ppb	11:56:06
3	Co 228.616†	-73.9	12.3	0.2259	ug/L	0.2259 ppb	11:56:06
3	Cr 267.716†	73.6	10.8	0.1057	ug/L	0.1057 ppb	11:56:06
3	Cu 324.752†	6770.8	-210.9	-0.5961	ug/L	-0.5961 ppb	11:55:46
3	Mn 257.610†	523.0	-16.1	-0.0224	ug/L	-0.0224 ppb	11:56:06
3	Mo 202.031†	1.5	-3.7	-0.2468	ug/L	-0.2468 ppb	11:56:06
3	Ni 231.604†	91.0	4.6	0.1015	ug/L	0.1015 ppb	11:56:06
3	P 214.914†	224.4	-2.0	-0.8843	ug/L	-0.8843 ppb	11:56:06
3	Pb 220.353†	-69.2	11.4	1.2228	ug/L	1.2228 ppb	11:56:06
3	S 181.975 Axial†	57.0	7.3	8.9049	ug/L	8.9049 ppb	11:56:06
3	Sb 206.836†	40.8	1.8	0.5501	ug/L	0.5501 ppb	11:56:06
3	Se 196.026†	-33.0	-6.6	-3.7144	ug/L	-3.7144 ppb	11:56:06
3	Si 251.611†	512.7	-30.3	-0.8977	ug/L	-0.8977 ppb	11:56:06
3	Sn 189.927†	13.7	4.1	0.6661	ug/L	0.6661 ppb	11:56:06
3	Ti 334.940†	-1643.1	184.3	0.2616	ug/L	0.2616 ppb	11:55:46
3	Tl 190.801†	-41.1	4.0	1.1229	ug/L	1.1229 ppb	11:56:06
3	U 409.014†	-4652.2	526.1	15.543	ug/L	15.543 ppb	11:55:46
3	V 292.402†	-1658.2	117.2	0.8102	ug/L	0.8102 ppb	11:55:46
3	Zn 213.857†	779.5	59.5	0.5062	ug/L	0.5062 ppb	11:56:06
3	SiO2†	577.1	6.8	0.4376	ug/L	0.4376 ppb	11:56:22

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	906167.3	101.72	%	0.279				0.27%
Sc Radial	4389.1	106	%	0.4				0.39%
Y 371.029	750842.4	102.26	%	0.338				0.33%
Y RADIAL	4974.1	102.7	%	0.46				0.45%
Ag 328.068†	-93.3	-0.4175	ug/L	0.09142	-0.4175	ppb	0.09142	21.90%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	23.7	19.562	ug/L	13.0471	19.562	ppb	13.0471	66.69%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-1.4	-0.5340	ug/L	1.16051	-0.5340	ppb	1.16051	217.34%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	254.0	5.3094	ug/L	0.40680	5.3094	ppb	0.40680	7.66%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	15.8	0.1180	ug/L	0.06955	0.1180	ppb	0.06955	58.96%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	303.4	0.1025	ug/L	0.01218	0.1025	ppb	0.01218	11.88%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	8.2	15.245	ug/L	4.2414	15.245	ppb	4.2414	27.82%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              18.7      0.1964 ug/L       0.09946      0.1964 ppb        0.09946  50.64%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               8.5      0.1568 ug/L       0.17100      0.1568 ppb        0.17100 109.07%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              15.2      0.1501 ug/L       0.05670      0.1501 ppb        0.05670  37.77%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -259.0     -0.7302 ug/L       0.20687     -0.7302 ppb        0.20687  28.33%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.6      7.0759 ug/L      25.02714      7.0759 ppb       25.02714 353.69%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       -55.9     -10.670 ug/L       11.3379     -10.670 ppb        11.3379 106.26%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.3      14.699 ug/L       97.0272      14.699 ppb        97.0272 660.08%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             -20.2     -0.0201 ug/L       0.00506     -0.0201 ppb        0.00506  25.14%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               2.4      0.1613 ug/L       0.43524      0.1613 ppb        0.43524 269.77%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      255.5      78.718 ug/L       11.8630      78.718 ppb        11.8630  15.07%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              18.8      0.4198 ug/L       0.35883      0.4198 ppb        0.35883  85.47%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -0.8     -0.3019 ug/L       1.41042     -0.3019 ppb        1.41042 467.24%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              17.7      1.9034 ug/L       0.61863      1.9034 ppb        0.61863  32.50%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          6.6      8.0880 ug/L       0.76690      8.0880 ppb        0.76690   9.48%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               4.3      1.3114 ug/L       0.73688      1.3114 ppb        0.73688  56.19%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -0.7     -0.3393 ug/L       2.93244     -0.3393 ppb        2.93244 864.36%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -13.7     -0.4106 ug/L       0.50253     -0.4106 ppb        0.50253 122.38%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -2.8     -0.4532 ug/L       0.99638     -0.4532 ppb        0.99638 219.87%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†             -12.4     -0.0819 ug/L       0.06161     -0.0819 ppb        0.06161  75.21%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             224.2      0.3277 ug/L       0.06160      0.3277 ppb        0.06160  18.80%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               7.0      1.9766 ug/L       2.02201      1.9766 ppb        2.02201 102.30%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              626.5      18.504 ug/L        2.5646      18.504 ppb         2.5646  13.86%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              133.6      0.9254 ug/L       0.19282      0.9254 ppb        0.19282  20.84%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              44.3      0.3732 ug/L       0.11777      0.3732 ppb        0.11777  31.56%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   -36.4     -2.3254 ug/L       2.42574     -2.3254 ppb        2.42574 104.31%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 19
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 2/1/2010 12:46:11
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4351.0	4351.0	105	%			12:48:03
1	Y RADIAL	4848.6	4848.6	100.1	%			12:48:03
1	Al 396.153Radial†	6090.9	5965.3	4900.6	ug/L	4900.6	ppb	12:48:03
1	Ca 317.933Radial†	2862.6	2700.9	4999.7	ug/L	4999.7	ppb	12:48:23
1	Fe 238.204 Radial†	479.1	444.2	5176.5	ug/L	5176.5	ppb	12:48:23
1	K 766.490 Radial†	29675.8	25513.4	4849.9	ug/L	4849.9	ppb	12:48:03
1	Mg 279.077 IEC†	130.1	123.4	5198.2	ug/L	5198.2	ppb	12:48:23
1	Na 589.592 Radial†	33713.1	33618.1	10359	ug/L	10359	ppb	12:48:03
1	Sr 421.552†	81139.3	76897.6	507.69	ug/L	507.69	ppb	12:48:03
1	Sc 361.383	858739.4	858739.4	96.398	%			12:49:22
1	Y 371.029	697012.5	697012.5	94.929	%			12:49:22
1	Ag 328.068†	114055.9	117693.0	518.17	ug/L	518.17	ppb	12:49:22
1	As 188.979†	1224.7	1299.2	503.55	ug/L	503.55	ppb	12:49:42
1	B 249.677†	22229.3	23821.0	495.79	ug/L	495.79	ppb	12:49:22
1	Ba 233.527†	68537.5	71113.7	521.08	ug/L	521.08	ppb	12:49:22
1	Be 313.107†	1469089.3	1528384.2	514.00	ug/L	514.00	ppb	12:49:22
1	Cd 226.502†	48069.3	50069.5	516.91	ug/L	516.91	ppb	12:49:22
1	Co 228.616†	26129.6	27191.0	501.26	ug/L	501.26	ppb	12:49:42
1	Cr 267.716†	48802.8	50564.5	521.17	ug/L	521.17	ppb	12:49:22
1	Cu 324.752†	186335.1	186410.6	518.47	ug/L	518.47	ppb	12:49:22
1	Mn 257.610†	499649.6	517787.0	519.81	ug/L	519.81	ppb	12:49:22
1	Mo 202.031†	7424.1	7696.3	511.95	ug/L	511.95	ppb	12:49:42
1	Ni 231.604†	21859.7	22591.3	503.09	ug/L	503.09	ppb	12:49:42
1	P 214.914†	4797.4	4753.4	2366.9	ug/L	2366.9	ppb	12:49:42
1	Pb 220.353†	4473.3	4720.0	508.03	ug/L	508.03	ppb	12:49:42
1	S 181.975 Axial†	834.7	817.0	997.17	ug/L	997.17	ppb	12:49:42
1	Sb 206.836†	1605.3	1626.9	515.38	ug/L	515.38	ppb	12:49:42
1	Se 196.026†	841.3	898.7	517.12	ug/L	517.12	ppb	12:49:42
1	Si 251.611†	83806.0	86401.6	2565.5	ug/L	2565.5	ppb	12:49:22
1	Sn 189.927†	3023.5	3127.0	506.02	ug/L	506.02	ppb	12:49:42
1	Ti 334.940†	339834.3	354336.4	529.27	ug/L	529.27	ppb	12:49:22
1	Tl 190.801†	1696.1	1803.9	512.63	ug/L	512.63	ppb	12:49:42
1	U 409.014†	12200.8	17769.8	523.14	ug/L	523.14	ppb	12:49:22
1	V 292.402†	73581.3	78082.8	526.30	ug/L	526.30	ppb	12:49:22
1	Zn 213.857†	59207.3	60710.4	510.67	ug/L	510.67	ppb	12:49:22
1	SiO2†	84005.5	86582.0	5507.4	ug/L	5507.4	ppb	12:50:43
2	Sc Radial	4352.1	4352.1	105	%			12:48:28
2	Y RADIAL	4860.4	4860.4	100.4	%			12:48:28
2	Al 396.153Radial†	6056.1	5930.9	4873.5	ug/L	4873.5	ppb	12:48:28
2	Ca 317.933Radial†	2833.1	2672.3	4946.8	ug/L	4946.8	ppb	12:48:48
2	Fe 238.204 Radial†	470.8	436.2	5083.2	ug/L	5083.2	ppb	12:48:48
2	K 766.490 Radial†	29762.4	25588.4	4864.2	ug/L	4864.2	ppb	12:48:28
2	Mg 279.077 IEC†	128.1	121.4	5117.3	ug/L	5117.3	ppb	12:48:48
2	Na 589.592 Radial†	33933.9	33819.3	10421	ug/L	10421	ppb	12:48:28
2	Sr 421.552†	80977.7	76724.8	506.55	ug/L	506.55	ppb	12:48:28
2	Sc 361.383	910883.3	910883.3	102.25	%			12:49:50
2	Y 371.029	738493.9	738493.9	100.58	%			12:49:50
2	Ag 328.068†	113597.5	110471.5	486.43	ug/L	486.43	ppb	12:49:50
2	As 188.979†	1237.8	1239.3	480.28	ug/L	480.28	ppb	12:50:10
2	B 249.677†	22229.3	22500.9	468.28	ug/L	468.28	ppb	12:49:50
2	Ba 233.527†	68151.7	66666.3	488.50	ug/L	488.50	ppb	12:49:50
2	Be 313.107†	1458300.2	1430591.6	481.11	ug/L	481.11	ppb	12:49:50
2	Cd 226.502†	47791.1	46942.9	484.61	ug/L	484.61	ppb	12:49:50
2	Co 228.616†	26330.3	25835.6	476.29	ug/L	476.29	ppb	12:50:10
2	Cr 267.716†	48289.4	47164.3	486.12	ug/L	486.12	ppb	12:49:50
2	Cu 324.752†	185294.5	174327.5	484.87	ug/L	484.87	ppb	12:49:50
2	Mn 257.610†	496417.8	484955.0	486.87	ug/L	486.87	ppb	12:49:50
2	Mo 202.031†	7471.9	7302.1	485.75	ug/L	485.75	ppb	12:50:10
2	Ni 231.604†	22036.6	21466.2	478.03	ug/L	478.03	ppb	12:50:10

2	P 214.914†	4853.4	4523.3	2253.9 ug/L	2253.9 ppb	12:50:10
2	Pb 220.353†	4520.1	4500.2	484.41 ug/L	484.41 ppb	12:50:10
2	S 181.975 Axial†	841.8	774.3	945.03 ug/L	945.03 ppb	12:50:10
2	Sb 206.836†	1613.4	1539.4	487.79 ug/L	487.79 ppb	12:50:10
2	Se 196.026†	854.0	861.2	495.90 ug/L	495.90 ppb	12:50:10
2	Si 251.611†	83408.6	81036.2	2406.1 ug/L	2406.1 ppb	12:49:50
2	Sn 189.927†	3065.7	2988.7	483.67 ug/L	483.67 ppb	12:50:10
2	Ti 334.940†	337497.2	331869.9	495.72 ug/L	495.72 ppb	12:49:50
2	Tl 190.801†	1708.5	1715.4	487.38 ug/L	487.38 ppb	12:50:10
2	U 409.014†	12159.9	17005.2	500.65 ug/L	500.65 ppb	12:49:50
2	V 292.402†	72979.4	73124.6	492.96 ug/L	492.96 ppb	12:49:50
2	Zn 213.857†	58813.2	56809.0	477.79 ug/L	477.79 ppb	12:49:50
2	SiO2†	82816.9	80431.0	5115.8 ug/L	5115.8 ppb	12:50:48
3	Sc Radial	4405.4	4405.4	107 %		12:48:53
3	Y RADIAL	4944.4	4944.4	102.1 %		12:48:53
3	Al 396.153Radial†	5961.8	5773.2	4743.1 ug/L	4743.1 ppb	12:48:53
3	Ca 317.933Radial†	2802.9	2611.5	4834.2 ug/L	4834.2 ppb	12:49:13
3	Fe 238.204 Radial†	468.6	428.7	4996.4 ug/L	4996.4 ppb	12:49:13
3	K 766.490 Radial†	29351.6	24862.6	4726.2 ug/L	4726.2 ppb	12:48:53
3	Mg 279.077 IEC†	132.2	123.8	5217.7 ug/L	5217.7 ppb	12:49:13
3	Na 589.592 Radial†	32939.1	32498.8	10015 ug/L	10015 ppb	12:48:53
3	Sr 421.552†	79200.3	74132.2	489.43 ug/L	489.43 ppb	12:48:53
3	Sc 361.383	900833.1	900833.1	101.12 %		12:50:17
3	Y 371.029	730952.9	730952.9	99.551 %		12:50:17
3	Ag 328.068†	112468.3	110594.4	486.95 ug/L	486.95 ppb	12:50:17
3	As 188.979†	1212.9	1228.2	475.98 ug/L	475.98 ppb	12:50:37
3	B 249.677†	22133.5	22648.7	471.37 ug/L	471.37 ppb	12:50:17
3	Ba 233.527†	67475.3	66741.0	489.04 ug/L	489.04 ppb	12:50:17
3	Be 313.107†	1441166.4	1429559.4	480.76 ug/L	480.76 ppb	12:50:17
3	Cd 226.502†	47421.3	47098.6	486.23 ug/L	486.23 ppb	12:50:17
3	Co 228.616†	26242.1	26035.7	479.98 ug/L	479.98 ppb	12:50:37
3	Cr 267.716†	47864.9	47271.4	487.23 ug/L	487.23 ppb	12:50:17
3	Cu 324.752†	182988.4	174068.8	484.15 ug/L	484.15 ppb	12:50:17
3	Mn 257.610†	491613.6	485620.5	487.52 ug/L	487.52 ppb	12:50:17
3	Mo 202.031†	7442.2	7354.3	489.21 ug/L	489.21 ppb	12:50:37
3	Ni 231.604†	21992.9	21663.4	482.43 ug/L	482.43 ppb	12:50:37
3	P 214.914†	4839.7	4562.6	2274.5 ug/L	2274.5 ppb	12:50:37
3	Pb 220.353†	4515.7	4545.1	489.21 ug/L	489.21 ppb	12:50:37
3	S 181.975 Axial†	832.2	774.1	944.76 ug/L	944.76 ppb	12:50:37
3	Sb 206.836†	1628.9	1572.4	497.93 ug/L	497.93 ppb	12:50:37
3	Se 196.026†	849.8	866.3	498.48 ug/L	498.48 ppb	12:50:37
3	Si 251.611†	82500.3	81048.1	2406.5 ug/L	2406.5 ppb	12:50:17
3	Sn 189.927†	3035.4	2992.2	484.21 ug/L	484.21 ppb	12:50:37
3	Ti 334.940†	333897.9	331993.0	495.88 ug/L	495.88 ppb	12:50:17
3	Tl 190.801†	1703.3	1728.8	491.17 ug/L	491.17 ppb	12:50:37
3	U 409.014†	11838.2	16819.8	495.18 ug/L	495.18 ppb	12:50:17
3	V 292.402†	72159.0	73109.6	492.91 ug/L	492.91 ppb	12:50:17
3	Zn 213.857†	58269.9	56913.5	478.65 ug/L	478.65 ppb	12:50:17
3	SiO2†	82591.9	81112.1	5159.2 ug/L	5159.2 ppb	12:50:53

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	890151.9	99.924	%	3.1055				3.11%
Sc Radial	4369.5	106	%	0.8				0.71%
Y 371.029	722153.1	98.353	%	3.0094				3.06%
Y RADIAL	4884.5	100.9	%	1.08				1.07%
Ag 328.068†	112919.7	497.18	ug/L	18.177	497.18	ppb	18.177	3.66%
QC value within limits for Ag 328.068 Recovery = 99.44%								
Al 396.153Radial†	5889.8	4839.1	ug/L	84.23	4839.1	ppb	84.23	1.74%
QC value within limits for Al 396.153Radial Recovery = 96.78%								
As 188.979†	1255.6	486.61	ug/L	14.830	486.61	ppb	14.830	3.05%
QC value within limits for As 188.979 Recovery = 97.32%								
B 249.677†	22990.2	478.48	ug/L	15.071	478.48	ppb	15.071	3.15%
QC value within limits for B 249.677 Recovery = 95.70%								
Ba 233.527†	68173.7	499.54	ug/L	18.656	499.54	ppb	18.656	3.73%
QC value within limits for Ba 233.527 Recovery = 99.91%								
Be 313.107†	1462845.1	491.96	ug/L	19.088	491.96	ppb	19.088	3.88%
QC value within limits for Be 313.107 Recovery = 98.39%								
Ca 317.933Radial†	2661.5	4926.9	ug/L	84.53	4926.9	ppb	84.53	1.72%

```
   QC value within limits for Ca 317.933Radial  Recovery = 98.54%
Cd 226.502†            48037.0      495.92 ug/L        18.197      495.92 ppb        18.197   3.67%
   QC value within limits for Cd 226.502  Recovery = 99.18%
Co 228.616†            26354.1      485.84 ug/L        13.480      485.84 ppb        13.480   2.77%
   QC value within limits for Co 228.616  Recovery = 97.17%
Cr 267.716†            48333.4      498.17 ug/L        19.921      498.17 ppb        19.921   4.00%
   QC value within limits for Cr 267.716  Recovery = 99.63%
Cu 324.752†           178268.9      495.83 ug/L        19.611      495.83 ppb        19.611   3.96%
   QC value within limits for Cu 324.752  Recovery = 99.17%
Fe 238.204 Radial†       436.3      5085.4 ug/L         90.08      5085.4 ppb         90.08   1.77%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.71%
K 766.490 Radial†      25321.5      4813.4 ug/L         75.86      4813.4 ppb         75.86   1.58%
   QC value within limits for K 766.490 Radial  Recovery = 96.27%
Mg 279.077 IEC†          122.9      5177.7 ug/L         53.22      5177.7 ppb         53.22   1.03%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.55%
Mn 257.610†           496120.8      498.07 ug/L        18.836      498.07 ppb        18.836   3.78%
   QC value within limits for Mn 257.610  Recovery = 99.61%
Mo 202.031†             7450.9      495.63 ug/L        14.234      495.63 ppb        14.234   2.87%
   QC value within limits for Mo 202.031  Recovery = 99.13%
Na 589.592 Radial†     33312.1       10265 ug/L         219.2       10265 ppb         219.2   2.14%
   QC value within limits for Na 589.592 Radial  Recovery = 102.65%
Ni 231.604†            21907.0      487.85 ug/L        13.379      487.85 ppb        13.379   2.74%
   QC value within limits for Ni 231.604  Recovery = 97.57%
P 214.914†              4613.1      2298.4 ug/L         60.16      2298.4 ppb         60.16   2.62%
   QC value within limits for P 214.914  Recovery = 91.94%
Pb 220.353†             4588.5      493.88 ug/L        12.487      493.88 ppb        12.487   2.53%
   QC value within limits for Pb 220.353  Recovery = 98.78%
S 181.975 Axial†         788.5      962.32 ug/L        30.183      962.32 ppb        30.183   3.14%
   QC value within limits for S 181.975 Axial  Recovery = 96.23%
Sb 206.836†             1579.6      500.37 ug/L        13.956      500.37 ppb        13.956   2.79%
   QC value within limits for Sb 206.836  Recovery = 100.07%
Se 196.026†              875.4      503.83 ug/L        11.579      503.83 ppb        11.579   2.30%
   QC value within limits for Se 196.026  Recovery = 100.77%
Si 251.611†            82828.6      2459.4 ug/L         91.93      2459.4 ppb         91.93   3.74%
   QC value within limits for Si 251.611  Recovery = 98.38%
Sn 189.927†             3036.0      491.30 ug/L        12.749      491.30 ppb        12.749   2.60%
   QC value within limits for Sn 189.927  Recovery = 98.26%
Sr 421.552†            75918.2      501.22 ug/L        10.228      501.22 ppb        10.228   2.04%
   QC value within limits for Sr 421.552  Recovery = 100.24%
Ti 334.940†           339399.8      506.96 ug/L        19.321      506.96 ppb        19.321   3.81%
   QC value within limits for Ti 334.940  Recovery = 101.39%
Tl 190.801†             1749.4      497.06 ug/L        13.613      497.06 ppb        13.613   2.74%
   QC value within limits for Tl 190.801  Recovery = 99.41%
U 409.014†             17198.2      506.32 ug/L        14.822      506.32 ppb        14.822   2.93%
   QC value within limits for U 409.014  Recovery = 101.26%
V 292.402†             74772.3      504.05 ug/L        19.262      504.05 ppb        19.262   3.82%
   QC value within limits for V 292.402  Recovery = 100.81%
Zn 213.857†            58144.3      489.04 ug/L        18.742      489.04 ppb        18.742   3.83%
   QC value within limits for Zn 213.857  Recovery = 97.81%
SiO2†                  82708.4      5260.8 ug/L        214.64      5260.8 ppb        214.64   4.08%
   QC value within limits for SiO2  Recovery = 98.38%
All analyte(s) passed QC.
```

Sequence No.: 20
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 2/1/2010 12:53:02
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4167.1	4167.1	101	%			12:55:15
1	Y RADIAL	4891.2	4891.2	101.0	%			12:54:55
1	Al 396.153Radial†	-189.3	2.7	2.2497	ug/L	2.2497	ppb	12:54:55
1	Ca 317.933Radial†	17.2	3.7	6.8320	ug/L	6.8320	ppb	12:55:15
1	Fe 238.204 Radial†	10.3	0.1	1.2330	ug/L	1.2330	ppb	12:55:15
1	K 766.490 Radial†	2773.8	121.8	23.179	ug/L	23.179	ppb	12:54:55
1	Mg 279.077 IEC†	1.5	1.6	66.564	ug/L	66.564	ppb	12:55:15
1	Na 589.592 Radial†	-1616.3	52.1	16.064	ug/L	16.064	ppb	12:54:55
1	Sr 421.552†	28.3	-8.5	-0.0560	ug/L	-0.0560	ppb	12:54:55
1	Sc 361.383	921617.4	921617.4	103.46	%			12:56:12
1	Y 371.029	758801.7	758801.7	103.34	%			12:56:12
1	Ag 328.068†	641.6	-4.4	-0.0372	ug/L	-0.0372	ppb	12:56:17
1	As 188.979†	-23.7	5.8	2.2498	ug/L	2.2498	ppb	12:56:37
1	B 249.677†	-486.5	290.9	6.0815	ug/L	6.0815	ppb	12:56:37
1	Ba 233.527†	-5.4	10.1	0.0766	ug/L	0.0766	ppb	12:56:37
1	Be 313.107†	-4208.6	335.0	0.1132	ug/L	0.1132	ppb	12:56:17
1	Cd 226.502†	-211.5	-0.4	0.0016	ug/L	0.0016	ppb	12:56:37
1	Co 228.616†	-86.8	1.3	0.0225	ug/L	0.0225	ppb	12:56:37
1	Cr 267.716†	68.0	3.9	0.0305	ug/L	0.0305	ppb	12:56:17
1	Cu 324.752†	6775.4	-337.8	-0.9552	ug/L	-0.9552	ppb	12:56:17
1	Mn 257.610†	507.7	-41.0	-0.0438	ug/L	-0.0438	ppb	12:56:37
1	Mo 202.031†	5.0	-0.4	-0.0279	ug/L	-0.0279	ppb	12:56:37
1	Ni 231.604†	88.5	0.3	0.0077	ug/L	0.0077	ppb	12:56:37
1	P 214.914†	230.9	-0.0	0.1661	ug/L	0.1661	ppb	12:56:37
1	Pb 220.353†	-62.3	19.4	2.0790	ug/L	2.0790	ppb	12:56:37
1	S 181.975 Axial†	55.6	4.9	5.9832	ug/L	5.9832	ppb	12:56:37
1	Sb 206.836†	33.0	-6.5	-1.9791	ug/L	-1.9791	ppb	12:56:37
1	Se 196.026†	-18.6	7.9	4.4103	ug/L	4.4103	ppb	12:56:37
1	Si 251.611†	494.9	-57.3	-1.7066	ug/L	-1.7066	ppb	12:56:37
1	Sn 189.927†	10.8	1.0	0.1650	ug/L	0.1650	ppb	12:56:37
1	Ti 334.940†	-1636.3	222.7	0.3158	ug/L	0.3158	ppb	12:56:17
1	Tl 190.801†	-35.8	9.9	2.7855	ug/L	2.7855	ppb	12:56:37
1	U 409.014†	-4299.8	956.9	28.266	ug/L	28.266	ppb	12:56:12
1	V 292.402†	-1626.9	179.7	1.2496	ug/L	1.2496	ppb	12:56:17
1	Zn 213.857†	747.7	13.6	0.1165	ug/L	0.1165	ppb	12:56:37
1	SiO2†	506.3	-72.8	-4.6442	ug/L	-4.6442	ppb	12:57:43
2	Sc Radial	4194.4	4194.4	102	%			12:55:40
2	Y RADIAL	4849.9	4849.9	100.2	%			12:55:20
2	Al 396.153Radial†	-190.7	2.5	2.0879	ug/L	2.0879	ppb	12:55:20
2	Ca 317.933Radial†	19.3	5.6	10.403	ug/L	10.403	ppb	12:55:40
2	Fe 238.204 Radial†	10.7	0.4	4.8848	ug/L	4.8848	ppb	12:55:40
2	K 766.490 Radial†	2799.0	128.7	24.464	ug/L	24.464	ppb	12:55:20
2	Mg 279.077 IEC†	3.5	3.5	146.58	ug/L	146.58	ppb	12:55:40
2	Na 589.592 Radial†	-1486.8	189.9	58.518	ug/L	58.518	ppb	12:55:20
2	Sr 421.552†	30.9	-6.1	-0.0401	ug/L	-0.0401	ppb	12:55:20
2	Sc 361.383	920753.8	920753.8	103.36	%			12:56:42
2	Y 371.029	757096.3	757096.3	103.11	%			12:56:42
2	Ag 328.068†	527.7	-114.0	-0.5136	ug/L	-0.5136	ppb	12:56:47
2	As 188.979†	-22.3	7.2	2.7623	ug/L	2.7623	ppb	12:57:07
2	B 249.677†	-536.4	242.1	5.0611	ug/L	5.0611	ppb	12:57:07
2	Ba 233.527†	-8.9	6.7	0.0508	ug/L	0.0508	ppb	12:57:07
2	Be 313.107†	-4187.0	352.1	0.1188	ug/L	0.1188	ppb	12:56:47
2	Cd 226.502†	-189.0	21.3	0.2241	ug/L	0.2241	ppb	12:57:07
2	Co 228.616†	-89.9	-1.8	-0.0338	ug/L	-0.0338	ppb	12:57:07
2	Cr 267.716†	67.1	3.1	0.0234	ug/L	0.0234	ppb	12:56:47
2	Cu 324.752†	6611.1	-490.6	-1.3776	ug/L	-1.3776	ppb	12:56:47
2	Mn 257.610†	535.5	-13.7	-0.0193	ug/L	-0.0193	ppb	12:57:07
2	Mo 202.031†	10.5	4.9	0.3267	ug/L	0.3267	ppb	12:57:07
2	Ni 231.604†	99.4	11.0	0.2453	ug/L	0.2453	ppb	12:57:07

2	P 214.914†	233.4	2.5	1.6006 ug/L	1.6006 ppb	12:57:07
2	Pb 220.353†	-70.3	11.6	1.2465 ug/L	1.2465 ppb	12:57:07
2	S 181.975 Axial†	57.0	6.3	7.7022 ug/L	7.7022 ppb	12:57:07
2	Sb 206.836†	44.6	4.7	1.4571 ug/L	1.4571 ppb	12:57:07
2	Se 196.026†	-28.3	-1.4	-0.7534 ug/L	-0.7534 ppb	12:57:07
2	Si 251.611†	494.0	-57.8	-1.7238 ug/L	-1.7238 ppb	12:57:07
2	Sn 189.927†	17.0	7.1	1.1416 ug/L	1.1416 ppb	12:57:07
2	Ti 334.940†	-1665.1	193.4	0.2679 ug/L	0.2679 ppb	12:56:47
2	Tl 190.801†	-25.7	19.6	5.5297 ug/L	5.5297 ppb	12:57:07
2	U 409.014†	-4446.2	811.4	23.966 ug/L	23.966 ppb	12:56:42
2	V 292.402†	-1691.9	115.2	0.8190 ug/L	0.8190 ppb	12:56:47
2	Zn 213.857†	758.2	24.4	0.2071 ug/L	0.2071 ppb	12:57:07
2	SiO2†	519.1	-60.0	-3.8378 ug/L	-3.8378 ppb	12:57:48
3	Sc Radial	4175.4	4175.4	101 %		12:56:05
3	Y RADIAL	4960.3	4960.3	102.5 %		12:55:45
3	Al 396.153Radial†	-181.2	11.1	9.1237 ug/L	9.1237 ppb	12:55:45
3	Ca 317.933Radial†	23.6	10.0	18.553 ug/L	18.553 ppb	12:56:05
3	Fe 238.204 Radial†	10.5	0.3	3.4989 ug/L	3.4989 ppb	12:56:05
3	K 766.490 Radial†	2725.0	68.1	12.946 ug/L	12.946 ppb	12:55:45
3	Mg 279.077 IEC†	1.3	1.4	58.232 ug/L	58.232 ppb	12:56:05
3	Na 589.592 Radial†	-1589.6	81.7	25.172 ug/L	25.172 ppb	12:55:45
3	Sr 421.552†	3.2	-33.2	-0.2196 ug/L	-0.2196 ppb	12:55:45
3	Sc 361.383	912583.9	912583.9	102.44 %		12:57:12
3	Y 371.029	750268.6	750268.6	102.18 %		12:57:12
3	Ag 328.068†	540.1	-97.3	-0.4399 ug/L	-0.4399 ppb	12:57:18
3	As 188.979†	-35.9	-6.3	-2.4321 ug/L	-2.4321 ppb	12:57:38
3	B 249.677†	-541.4	232.6	4.8631 ug/L	4.8631 ppb	12:57:38
3	Ba 233.527†	-15.1	0.6	0.0050 ug/L	0.0050 ppb	12:57:38
3	Be 313.107†	-4106.6	394.4	0.1332 ug/L	0.1332 ppb	12:57:18
3	Cd 226.502†	-182.5	26.0	0.2718 ug/L	0.2718 ppb	12:57:38
3	Co 228.616†	-82.7	4.5	0.0835 ug/L	0.0835 ppb	12:57:38
3	Cr 267.716†	89.0	25.0	0.2500 ug/L	0.2500 ppb	12:57:18
3	Cu 324.752†	6709.3	-337.5	-0.9498 ug/L	-0.9498 ppb	12:57:18
3	Mn 257.610†	521.2	-23.0	-0.0251 ug/L	-0.0251 ppb	12:57:38
3	Mo 202.031†	20.0	14.3	0.9479 ug/L	0.9479 ppb	12:57:38
3	Ni 231.604†	90.0	2.7	0.0592 ug/L	0.0592 ppb	12:57:38
3	P 214.914†	234.0	5.1	2.8577 ug/L	2.8577 ppb	12:57:38
3	Pb 220.353†	-63.4	17.8	1.9113 ug/L	1.9113 ppb	12:57:38
3	S 181.975 Axial†	49.4	-0.6	-0.7571 ug/L	-0.7571 ppb	12:57:38
3	Sb 206.836†	36.6	-2.7	-0.7971 ug/L	-0.7971 ppb	12:57:38
3	Se 196.026†	-24.4	2.1	1.1812 ug/L	1.1812 ppb	12:57:38
3	Si 251.611†	494.4	-53.1	-1.5932 ug/L	-1.5932 ppb	12:57:38
3	Sn 189.927†	15.4	5.6	0.9131 ug/L	0.9131 ppb	12:57:38
3	Ti 334.940†	-1595.7	246.7	0.3572 ug/L	0.3572 ppb	12:57:18
3	Tl 190.801†	-46.4	-0.8	-0.2302 ug/L	-0.2302 ppb	12:57:38
3	U 409.014†	-4527.5	693.5	20.485 ug/L	20.485 ppb	12:57:12
3	V 292.402†	-1736.6	57.0	0.4316 ug/L	0.4316 ppb	12:57:18
3	Zn 213.857†	751.4	24.4	0.2073 ug/L	0.2073 ppb	12:57:38
3	SiO2†	525.7	-49.1	-3.1566 ug/L	-3.1566 ppb	12:57:53

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	918318.4	103.09	%	0.560				0.54%
Sc Radial	4178.9	101	%	0.3				0.34%
Y 371.029	755388.8	102.88	%	0.615				0.60%
Y RADIAL	4900.5	101.2	%	1.15				1.14%
Ag 328.068†	-71.9	-0.3302	ug/L	0.25647	-0.3302	ppb	0.25647	77.66%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.5	4.4871	ug/L	4.01622	4.4871	ppb	4.01622	89.51%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.2	0.8600	ug/L	2.86253	0.8600	ppb	2.86253	332.85%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	255.2	5.3352	ug/L	0.65384	5.3352	ppb	0.65384	12.26%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	5.8	0.0441	ug/L	0.03628	0.0441	ppb	0.03628	82.19%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	360.5	0.1217	ug/L	0.01032	0.1217	ppb	0.01032	8.48%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	6.4	11.929	ug/L	6.0076	11.929	ppb	6.0076	50.36%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              15.6      0.1658 ug/L       0.14421      0.1658 ppb        0.14421  86.96%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               1.3      0.0240 ug/L       0.05864      0.0240 ppb        0.05864 243.88%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              10.7      0.1013 ug/L       0.12886      0.1013 ppb        0.12886 127.19%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -388.6     -1.0942 ug/L       0.24542     -1.0942 ppb        0.24542  22.43%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.3      3.2056 ug/L       1.84350      3.2056 ppb        1.84350  57.51%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       106.2     20.196 ug/L        6.3121     20.196 ppb         6.3121  31.25%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           2.1     90.458 ug/L       48.7809     90.458 ppb        48.7809  53.93%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             -25.9     -0.0294 ug/L       0.01280     -0.0294 ppb        0.01280  43.54%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               6.2      0.4156 ug/L       0.49396      0.4156 ppb        0.49396 118.87%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      107.9     33.251 ug/L       22.3503     33.251 ppb        22.3503  67.22%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               4.7      0.1041 ug/L       0.12497      0.1041 ppb        0.12497 120.10%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                2.5      1.5415 ug/L       1.34674      1.5415 ppb        1.34674  87.37%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              16.2      1.7456 ug/L       0.44025      1.7456 ppb        0.44025  25.22%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          3.5      4.3094 ug/L       4.47110      4.3094 ppb        4.47110 103.75%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              -1.5     -0.4397 ug/L       1.74572     -0.4397 ppb        1.74572 397.03%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               2.9      1.6127 ug/L       2.60876      1.6127 ppb        2.60876 161.76%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -56.1     -1.6745 ug/L       0.07097     -1.6745 ppb        0.07097   4.24%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               4.6      0.7399 ug/L       0.51083      0.7399 ppb        0.51083  69.04%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†             -15.9     -0.1052 ug/L       0.09940     -0.1052 ppb        0.09940  94.47%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             220.9      0.3136 ug/L       0.04473      0.3136 ppb        0.04473  14.26%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               9.5      2.6950 ug/L       2.88102      2.6950 ppb        2.88102 106.90%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              820.6     24.239 ug/L        3.8973     24.239 ppb         3.8973  16.08%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              117.3      0.8334 ug/L       0.40919      0.8334 ppb        0.40919  49.10%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              20.8      0.1770 ug/L       0.05234      0.1770 ppb        0.05234  29.57%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   -60.7     -3.8795 ug/L       0.74470     -3.8795 ppb        0.74470  19.20%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 11
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 2/1/2010 14:11:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4180.5	4180.5	101	%			14:13:56
1	Y RADIAL	4842.6	4842.6	100.0	%			14:13:36
1	Al 396.153Radial†	6113.5	6223.2	5115.2	ug/L	5115.2	ppb	14:13:36
1	Ca 317.933Radial†	2895.5	2844.1	5264.8	ug/L	5264.8	ppb	14:13:56
1	Fe 238.204 Radial†	477.0	460.6	5366.9	ug/L	5366.9	ppb	14:13:56
1	K 766.490 Radial†	30144.3	27123.3	5156.1	ug/L	5156.1	ppb	14:13:36
1	Mg 279.077 IEC†	128.7	127.1	5353.6	ug/L	5353.6	ppb	14:13:56
1	Na 589.592 Radial†	33805.4	35012.7	10789	ug/L	10789	ppb	14:13:36
1	Sr 421.552†	81251.8	80145.9	529.13	ug/L	529.13	ppb	14:13:36
1	Sc 361.383	927392.8	927392.8	104.10	%			14:14:55
1	Y 371.029	752959.8	752959.8	102.55	%			14:14:55
1	Ag 328.068†	113342.9	108249.3	476.77	ug/L	476.77	ppb	14:14:55
1	As 188.979†	1237.7	1217.7	471.97	ug/L	471.97	ppb	14:15:15
1	B 249.677†	22021.4	21914.2	455.98	ug/L	455.98	ppb	14:14:55
1	Ba 233.527†	68092.7	65423.1	479.40	ug/L	479.40	ppb	14:14:55
1	Be 313.107†	1451990.3	1399141.4	470.53	ug/L	470.53	ppb	14:14:55
1	Cd 226.502†	48017.2	46328.0	478.23	ug/L	478.23	ppb	14:14:55
1	Co 228.616†	26438.1	25480.8	469.75	ug/L	469.75	ppb	14:15:15
1	Cr 267.716†	48266.0	46301.1	477.23	ug/L	477.23	ppb	14:14:55
1	Cu 324.752†	183377.6	169260.2	470.79	ug/L	470.79	ppb	14:14:55
1	Mn 257.610†	495675.9	475599.7	477.50	ug/L	477.50	ppb	14:14:55
1	Mo 202.031†	7482.5	7182.2	477.80	ug/L	477.80	ppb	14:15:15
1	Ni 231.604†	22180.3	21220.6	472.56	ug/L	472.56	ppb	14:15:15
1	P 214.914†	4899.9	4483.5	2235.8	ug/L	2235.8	ppb	14:15:15
1	Pb 220.353†	4545.2	4445.7	478.57	ug/L	478.57	ppb	14:15:15
1	S 181.975 Axial†	823.0	741.7	905.09	ug/L	905.09	ppb	14:15:15
1	Sb 206.836†	1593.8	1492.5	473.11	ug/L	473.11	ppb	14:15:15
1	Se 196.026†	842.6	835.3	482.50	ug/L	482.50	ppb	14:15:15
1	Si 251.611†	83114.4	79301.5	2354.6	ug/L	2354.6	ppb	14:14:55
1	Sn 189.927†	3044.3	2914.8	471.78	ug/L	471.78	ppb	14:15:15
1	Ti 334.940†	335703.9	324271.5	484.40	ug/L	484.40	ppb	14:14:55
1	Tl 190.801†	1701.7	1679.1	477.04	ug/L	477.04	ppb	14:15:15
1	U 409.014†	12028.9	16667.7	490.67	ug/L	490.67	ppb	14:14:55
1	V 292.402†	72759.9	71643.2	482.95	ug/L	482.95	ppb	14:14:55
1	Zn 213.857†	58785.7	55758.7	468.90	ug/L	468.90	ppb	14:14:55
1	SiO2†	83716.3	79853.1	5079.2	ug/L	5079.2	ppb	14:16:15
2	Sc Radial	4157.4	4157.4	101	%			14:14:21
2	Y RADIAL	4790.4	4790.4	98.95	%			14:14:01
2	Al 396.153Radial†	5964.0	6108.3	5020.0	ug/L	5020.0	ppb	14:14:01
2	Ca 317.933Radial†	2876.3	2840.9	5258.8	ug/L	5258.8	ppb	14:14:21
2	Fe 238.204 Radial†	479.8	466.0	5429.5	ug/L	5429.5	ppb	14:14:21
2	K 766.490 Radial†	29654.6	26802.5	5095.1	ug/L	5095.1	ppb	14:14:01
2	Mg 279.077 IEC†	131.0	130.0	5478.5	ug/L	5478.5	ppb	14:14:21
2	Na 589.592 Radial†	33303.2	34699.7	10693	ug/L	10693	ppb	14:14:01
2	Sr 421.552†	79771.2	79122.2	522.38	ug/L	522.38	ppb	14:14:01
2	Sc 361.383	915553.4	915553.4	102.78	%			14:15:22
2	Y 371.029	741342.4	741342.4	100.97	%			14:15:22
2	Ag 328.068†	113693.9	109998.7	484.48	ug/L	484.48	ppb	14:15:22
2	As 188.979†	1235.6	1231.0	477.15	ug/L	477.15	ppb	14:15:42
2	B 249.677†	22230.7	22391.4	465.92	ug/L	465.92	ppb	14:15:22
2	Ba 233.527†	68673.9	66834.4	489.74	ug/L	489.74	ppb	14:15:22
2	Be 313.107†	1461365.9	1426299.7	479.67	ug/L	479.67	ppb	14:15:22
2	Cd 226.502†	48354.1	47252.2	487.77	ug/L	487.77	ppb	14:15:22
2	Co 228.616†	26551.2	25919.2	477.82	ug/L	477.82	ppb	14:15:42
2	Cr 267.716†	48670.1	47293.8	487.47	ug/L	487.47	ppb	14:15:22
2	Cu 324.752†	184835.4	172956.4	481.07	ug/L	481.07	ppb	14:15:22
2	Mn 257.610†	500254.1	486211.3	488.15	ug/L	488.15	ppb	14:15:22
2	Mo 202.031†	7501.2	7293.4	485.20	ug/L	485.20	ppb	14:15:42
2	Ni 231.604†	22250.4	21564.3	480.22	ug/L	480.22	ppb	14:15:42

2	P 214.914†	4902.2	4546.5	2266.5 ug/L	2266.5 ppb	14:15:42
2	Pb 220.353†	4539.8	4496.9	484.05 ug/L	484.05 ppb	14:15:42
2	S 181.975 Axial†	817.8	746.8	911.35 ug/L	911.35 ppb	14:15:42
2	Sb 206.836†	1608.9	1527.0	483.91 ug/L	483.91 ppb	14:15:42
2	Se 196.026†	852.7	855.6	493.98 ug/L	493.98 ppb	14:15:42
2	Si 251.611†	83707.2	80910.7	2402.4 ug/L	2402.4 ppb	14:15:22
2	Sn 189.927†	3051.4	2959.5	479.00 ug/L	479.00 ppb	14:15:42
2	Ti 334.940†	338447.8	331111.3	494.60 ug/L	494.60 ppb	14:15:22
2	Tl 190.801†	1711.6	1709.9	485.82 ug/L	485.82 ppb	14:15:42
2	U 409.014†	12041.8	16829.6	495.42 ug/L	495.42 ppb	14:15:22
2	V 292.402†	73291.9	73064.6	492.50 ug/L	492.50 ppb	14:15:22
2	Zn 213.857†	59178.3	56870.8	478.27 ug/L	478.27 ppb	14:15:22
2	SiO2†	83093.5	80287.0	5106.7 ug/L	5106.7 ppb	14:16:20
3	Sc Radial	4205.0	4205.0	102 %		14:14:46
3	Y RADIAL	4870.2	4870.2	100.6 %		14:14:26
3	Al 396.153Radial†	6060.3	6135.8	5042.7 ug/L	5042.7 ppb	14:14:26
3	Ca 317.933Radial†	2870.0	2802.5	5187.7 ug/L	5187.7 ppb	14:14:46
3	Fe 238.204 Radial†	475.2	456.1	5315.0 ug/L	5315.0 ppb	14:14:46
3	K 766.490 Radial†	29986.8	26795.7	5093.8 ug/L	5093.8 ppb	14:14:26
3	Mg 279.077 IEC†	133.7	131.2	5528.2 ug/L	5528.2 ppb	14:14:46
3	Na 589.592 Radial†	33560.2	34578.1	10655 ug/L	10655 ppb	14:14:26
3	Sr 421.552†	80769.2	79206.2	522.93 ug/L	522.93 ppb	14:14:26
3	Sc 361.383	917204.4	917204.4	102.96 %		14:15:50
3	Y 371.029	742712.8	742712.8	101.15 %		14:15:50
3	Ag 328.068†	114406.9	110492.0	486.60 ug/L	486.60 ppb	14:15:50
3	As 188.979†	1244.7	1237.6	479.70 ug/L	479.70 ppb	14:16:10
3	B 249.677†	22327.0	22446.0	467.08 ug/L	467.08 ppb	14:15:50
3	Ba 233.527†	68810.4	66846.7	489.83 ug/L	489.83 ppb	14:15:50
3	Be 313.107†	1465998.1	1428239.2	480.32 ug/L	480.32 ppb	14:15:50
3	Cd 226.502†	48584.4	47391.3	489.22 ug/L	489.22 ppb	14:15:50
3	Co 228.616†	26632.0	25951.2	478.42 ug/L	478.42 ppb	14:16:10
3	Cr 267.716†	48797.2	47332.0	487.86 ug/L	487.86 ppb	14:15:50
3	Cu 324.752†	186087.0	173848.3	483.55 ug/L	483.55 ppb	14:15:50
3	Mn 257.610†	501527.6	486572.0	488.50 ug/L	488.50 ppb	14:15:50
3	Mo 202.031†	7533.1	7311.2	486.37 ug/L	486.37 ppb	14:16:10
3	Ni 231.604†	22275.9	21550.1	479.90 ug/L	479.90 ppb	14:16:10
3	P 214.914†	4929.6	4564.6	2275.5 ug/L	2275.5 ppb	14:16:10
3	Pb 220.353†	4561.3	4509.8	485.45 ug/L	485.45 ppb	14:16:10
3	S 181.975 Axial†	823.0	750.5	915.85 ug/L	915.85 ppb	14:16:10
3	Sb 206.836†	1617.1	1532.2	485.54 ug/L	485.54 ppb	14:16:10
3	Se 196.026†	860.9	862.1	497.22 ug/L	497.22 ppb	14:16:10
3	Si 251.611†	84172.0	81215.5	2411.5 ug/L	2411.5 ppb	14:15:50
3	Sn 189.927†	3063.4	2965.8	480.00 ug/L	480.00 ppb	14:16:10
3	Ti 334.940†	340044.8	332069.6	496.02 ug/L	496.02 ppb	14:15:50
3	Tl 190.801†	1706.7	1702.0	483.62 ug/L	483.62 ppb	14:16:10
3	U 409.014†	12169.3	16932.4	498.47 ug/L	498.47 ppb	14:15:50
3	V 292.402†	73657.1	73290.9	494.04 ug/L	494.04 ppb	14:15:50
3	Zn 213.857†	59372.6	56955.9	479.00 ug/L	479.00 ppb	14:15:50
3	SiO2†	82711.1	79770.1	5073.7 ug/L	5073.7 ppb	14:16:26

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	920050.2	103.28	%	0.720				0.70%
Sc Radial	4181.0	101	%	0.6				0.57%
Y 371.029	745671.7	101.56	%	0.865				0.85%
Y RADIAL	4834.4	99.86	%	0.837				0.84%
Ag 328.068†	109580.0	482.61	ug/L	5.174	482.61	ppb	5.174	1.07%
QC value within limits for Ag 328.068 Recovery = 96.52%								
Al 396.153Radial†	6155.8	5059.3	ug/L	49.73	5059.3	ppb	49.73	0.98%
QC value within limits for Al 396.153Radial Recovery = 101.19%								
As 188.979†	1228.8	476.27	ug/L	3.938	476.27	ppb	3.938	0.83%
QC value within limits for As 188.979 Recovery = 95.25%								
B 249.677†	22250.5	463.00	ug/L	6.103	463.00	ppb	6.103	1.32%
QC value within limits for B 249.677 Recovery = 92.60%								
Ba 233.527†	66368.1	486.32	ug/L	5.995	486.32	ppb	5.995	1.23%
QC value within limits for Ba 233.527 Recovery = 97.26%								
Be 313.107†	1417893.5	476.84	ug/L	5.473	476.84	ppb	5.473	1.15%
QC value within limits for Be 313.107 Recovery = 95.37%								
Ca 317.933Radial†	2829.1	5237.1	ug/L	42.88	5237.1	ppb	42.88	0.82%

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   QC value within limits for Ca 317.933Radial  Recovery = 104.74%
Cd 226.502†            46990.5      485.07 ug/L         5.971      485.07 ppb          5.971   1.23%
   QC value within limits for Cd 226.502  Recovery = 97.01%
Co 228.616†            25783.8      475.33 ug/L         4.843      475.33 ppb          4.843   1.02%
   QC value within limits for Co 228.616  Recovery = 95.07%
Cr 267.716†            46975.6      484.19 ug/L         6.024      484.19 ppb          6.024   1.24%
   QC value within limits for Cr 267.716  Recovery = 96.84%
Cu 324.752†           172021.6      478.47 ug/L         6.764      478.47 ppb          6.764   1.41%
   QC value within limits for Cu 324.752  Recovery = 95.69%
Fe 238.204 Radial†       460.9      5370.5 ug/L        57.35      5370.5 ppb         57.35   1.07%
   QC value within limits for Fe 238.204 Radial  Recovery = 107.41%
K 766.490 Radial†      26907.2      5115.0 ug/L        35.60      5115.0 ppb         35.60   0.70%
   QC value within limits for K 766.490 Radial  Recovery = 102.30%
Mg 279.077 IEC†          129.4      5453.4 ug/L        89.96      5453.4 ppb         89.96   1.65%
   QC value within limits for Mg 279.077 IEC  Recovery = 109.07%
Mn 257.610†           482794.3      484.71 ug/L         6.251      484.71 ppb          6.251   1.29%
   QC value within limits for Mn 257.610  Recovery = 96.94%
Mo 202.031†             7262.3      483.12 ug/L         4.646      483.12 ppb          4.646   0.96%
   QC value within limits for Mo 202.031  Recovery = 96.62%
Na 589.592 Radial†     34763.5       10712 ug/L          69.1       10712 ppb           69.1   0.64%
   QC value within limits for Na 589.592 Radial  Recovery = 107.12%
Ni 231.604†            21445.0      477.56 ug/L         4.331      477.56 ppb          4.331   0.91%
   QC value within limits for Ni 231.604  Recovery = 95.51%
P 214.914†              4531.5      2259.2 ug/L        20.81      2259.2 ppb         20.81   0.92%
   QC value within limits for P 214.914  Recovery = 90.37%
Pb 220.353†             4484.1      482.69 ug/L         3.637      482.69 ppb          3.637   0.75%
   QC value within limits for Pb 220.353  Recovery = 96.54%
S 181.975 Axial†         746.3      910.77 ug/L         5.405      910.77 ppb          5.405   0.59%
   QC value within limits for S 181.975 Axial  Recovery = 91.08%
Sb 206.836†             1517.2      480.86 ug/L         6.753      480.86 ppb          6.753   1.40%
   QC value within limits for Sb 206.836  Recovery = 96.17%
Se 196.026†              851.0      491.23 ug/L         7.733      491.23 ppb          7.733   1.57%
   QC value within limits for Se 196.026  Recovery = 98.25%
Si 251.611†            80475.9      2389.5 ug/L        30.55      2389.5 ppb         30.55   1.28%
   QC value within limits for Si 251.611  Recovery = 95.58%
Sn 189.927†             2946.7      476.93 ug/L         4.487      476.93 ppb          4.487   0.94%
   QC value within limits for Sn 189.927  Recovery = 95.39%
Sr 421.552†            79491.4      524.81 ug/L         3.752      524.81 ppb          3.752   0.72%
   QC value within limits for Sr 421.552  Recovery = 104.96%
Ti 334.940†           329150.8      491.67 ug/L         6.339      491.67 ppb          6.339   1.29%
   QC value within limits for Ti 334.940  Recovery = 98.33%
Tl 190.801†             1697.0      482.16 ug/L         4.566      482.16 ppb          4.566   0.95%
   QC value within limits for Tl 190.801  Recovery = 96.43%
U 409.014†             16809.9      494.85 ug/L         3.931      494.85 ppb          3.931   0.79%
   QC value within limits for U 409.014  Recovery = 98.97%
V 292.402†             72666.2      489.83 ug/L         6.008      489.83 ppb          6.008   1.23%
   QC value within limits for V 292.402  Recovery = 97.97%
Zn 213.857†            56528.5      475.39 ug/L         5.631      475.39 ppb          5.631   1.18%
   QC value within limits for Zn 213.857  Recovery = 95.08%
SiO2†                  79970.1      5086.5 ug/L        17.67      5086.5 ppb         17.67   0.35%
   QC value within limits for SiO2  Recovery = 95.12%
All analyte(s) passed QC.
```

Sequence No.: 12
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 2/1/2010 14:18:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4374.4	4374.4	106	%			14:20:28
1	Y RADIAL	4951.8	4951.8	102.3	%			14:20:28
1	Al 396.153Radial†	-217.3	-14.8	-12.220	ug/L	-12.220	ppb	14:20:28
1	Ca 317.933Radial†	27.7	12.8	23.717	ug/L	23.717	ppb	14:20:48
1	Fe 238.204 Radial†	15.1	4.1	47.803	ug/L	47.803	ppb	14:20:48
1	K 766.490 Radial†	2652.1	-123.2	-23.472	ug/L	-23.472	ppb	14:20:28
1	Mg 279.077 IEC†	2.5	2.4	102.00	ug/L	102.00	ppb	14:20:48
1	Na 589.592 Radial†	-1558.2	182.7	56.303	ug/L	56.303	ppb	14:20:28
1	Sr 421.552†	9.7	-27.3	-0.1802	ug/L	-0.1802	ppb	14:20:28
1	Sc 361.383	889564.5	889564.5	99.858	%			14:21:45
1	Y 371.029	735982.5	735982.5	100.24	%			14:21:45
1	Ag 328.068†	504.6	-119.2	-0.5156	ug/L	-0.5156	ppb	14:21:45
1	As 188.979†	-27.0	1.7	0.6717	ug/L	0.6717	ppb	14:22:05
1	B 249.677†	-522.5	237.9	4.9652	ug/L	4.9652	ppb	14:22:05
1	Ba 233.527†	-21.1	-5.9	-0.0393	ug/L	-0.0393	ppb	14:22:05
1	Be 313.107†	-4160.9	236.3	0.0800	ug/L	0.0800	ppb	14:21:45
1	Cd 226.502†	-184.9	19.0	0.1940	ug/L	0.1940	ppb	14:22:05
1	Co 228.616†	-73.9	11.1	0.2028	ug/L	0.2028	ppb	14:22:05
1	Cr 267.716†	90.5	28.8	0.2929	ug/L	0.2929	ppb	14:21:45
1	Cu 324.752†	6632.3	-245.1	-0.6879	ug/L	-0.6879	ppb	14:21:45
1	Mn 257.610†	467.6	-63.5	-0.0632	ug/L	-0.0632	ppb	14:22:05
1	Mo 202.031†	1.5	-3.7	-0.2437	ug/L	-0.2437	ppb	14:22:05
1	Ni 231.604†	85.7	0.7	0.0146	ug/L	0.0146	ppb	14:22:05
1	P 214.914†	226.3	3.4	1.8491	ug/L	1.8491	ppb	14:22:05
1	Pb 220.353†	-60.6	19.0	2.0274	ug/L	2.0274	ppb	14:22:05
1	S 181.975 Axial†	43.6	-5.2	-6.3544	ug/L	-6.3544	ppb	14:22:05
1	Sb 206.836†	46.3	8.0	2.4398	ug/L	2.4398	ppb	14:22:05
1	Se 196.026†	-25.2	0.7	0.5631	ug/L	0.5631	ppb	14:22:05
1	Si 251.611†	488.1	-47.0	-1.3945	ug/L	-1.3945	ppb	14:22:05
1	Sn 189.927†	13.5	4.1	0.6606	ug/L	0.6606	ppb	14:22:05
1	Ti 334.940†	-1575.4	226.7	0.3266	ug/L	0.3266	ppb	14:21:45
1	Tl 190.801†	-40.0	4.4	1.2552	ug/L	1.2552	ppb	14:22:05
1	U 409.014†	-4575.3	531.3	15.686	ug/L	15.686	ppb	14:21:45
1	V 292.402†	-1610.1	139.8	0.9513	ug/L	0.9513	ppb	14:21:45
1	Zn 213.857†	797.9	89.9	0.7590	ug/L	0.7590	ppb	14:22:05
1	SiO2†	499.9	-61.7	-3.9253	ug/L	-3.9253	ppb	14:23:01
2	Sc Radial	4460.3	4460.3	108	%			14:20:53
2	Y RADIAL	5022.1	5022.1	103.7	%			14:20:53
2	Al 396.153Radial†	-208.5	-2.7	-2.2426	ug/L	-2.2426	ppb	14:20:53
2	Ca 317.933Radial†	23.3	8.2	15.175	ug/L	15.175	ppb	14:21:13
2	Fe 238.204 Radial†	11.0	0.0	0.3843	ug/L	0.3843	ppb	14:21:13
2	K 766.490 Radial†	2557.5	-258.8	-49.291	ug/L	-49.291	ppb	14:20:53
2	Mg 279.077 IEC†	6.1	5.7	241.59	ug/L	241.59	ppb	14:21:13
2	Na 589.592 Radial†	-1547.8	220.6	67.987	ug/L	67.987	ppb	14:20:53
2	Sr 421.552†	18.2	-19.7	-0.1299	ug/L	-0.1299	ppb	14:20:53
2	Sc 361.383	902955.6	902955.6	101.36	%			14:22:10
2	Y 371.029	746559.0	746559.0	101.68	%			14:22:10
2	Ag 328.068†	570.3	-61.9	-0.2866	ug/L	-0.2866	ppb	14:22:10
2	As 188.979†	-32.9	-3.8	-1.4416	ug/L	-1.4416	ppb	14:22:31
2	B 249.677†	-581.9	187.0	3.9097	ug/L	3.9097	ppb	14:22:31
2	Ba 233.527†	-5.5	9.8	0.0730	ug/L	0.0730	ppb	14:22:31
2	Be 313.107†	-4229.1	230.8	0.0779	ug/L	0.0779	ppb	14:22:10
2	Cd 226.502†	-199.2	7.6	0.0824	ug/L	0.0824	ppb	14:22:31
2	Co 228.616†	-79.5	6.7	0.1229	ug/L	0.1229	ppb	14:22:31
2	Cr 267.716†	53.9	-8.6	-0.0970	ug/L	-0.0970	ppb	14:22:10
2	Cu 324.752†	6639.7	-336.3	-0.9474	ug/L	-0.9474	ppb	14:22:10
2	Mn 257.610†	507.5	-31.1	-0.0411	ug/L	-0.0411	ppb	14:22:31
2	Mo 202.031†	7.5	2.2	0.1473	ug/L	0.1473	ppb	14:22:31
2	Ni 231.604†	92.5	6.1	0.1353	ug/L	0.1353	ppb	14:22:31

2	P 214.914†	244.8	18.2	9.6283	ug/L	9.6283 ppb	14:22:31
2	Pb 220.353†	-44.7	35.6	3.8180	ug/L	3.8180 ppb	14:22:31
2	S 181.975 Axial†	51.7	2.1	2.5484	ug/L	2.5484 ppb	14:22:31
2	Sb 206.836†	43.0	4.0	1.1986	ug/L	1.1986 ppb	14:22:31
2	Se 196.026†	-22.9	3.4	1.8784	ug/L	1.8784 ppb	14:22:31
2	Si 251.611†	466.5	-75.5	-2.2494	ug/L	-2.2494 ppb	14:22:31
2	Sn 189.927†	0.2	-9.2	-1.4895	ug/L	-1.4895 ppb	14:22:31
2	Ti 334.940†	-1704.7	122.6	0.1559	ug/L	0.1559 ppb	14:22:10
2	Tl 190.801†	-44.8	0.2	0.0679	ug/L	0.0679 ppb	14:22:31
2	U 409.014†	-4432.8	739.8	21.853	ug/L	21.853 ppb	14:22:10
2	V 292.402†	-1701.6	73.5	0.5371	ug/L	0.5371 ppb	14:22:10
2	Zn 213.857†	782.0	62.4	0.5296	ug/L	0.5296 ppb	14:22:31
2	SiO2†	507.9	-61.2	-3.9042	ug/L	-3.9042 ppb	14:23:06
3	Sc Radial	4388.1	4388.1	106	%		14:21:18
3	Y RADIAL	4950.0	4950.0	102.2	%		14:21:18
3	Al 396.153Radial†	-202.0	0.2	0.2013	ug/L	0.2013 ppb	14:21:18
3	Ca 317.933Radial†	22.5	7.8	14.410	ug/L	14.410 ppb	14:21:38
3	Fe 238.204 Radial†	10.0	-0.7	-7.8747	ug/L	-7.8747 ppb	14:21:38
3	K 766.490 Radial†	2671.2	-112.9	-21.524	ug/L	-21.524 ppb	14:21:18
3	Mg 279.077 IEC†	3.1	3.0	125.45	ug/L	125.45 ppb	14:21:38
3	Na 589.592 Radial†	-1536.4	207.8	64.034	ug/L	64.034 ppb	14:21:18
3	Sr 421.552†	-1.2	-37.6	-0.2484	ug/L	-0.2484 ppb	14:21:18
3	Sc 361.383	898376.7	898376.7	100.85	%		14:22:36
3	Y 371.029	741180.2	741180.2	100.94	%		14:22:36
3	Ag 328.068†	493.8	-134.8	-0.6051	ug/L	-0.6051 ppb	14:22:36
3	As 188.979†	-35.3	-6.3	-2.4011	ug/L	-2.4011 ppb	14:22:56
3	B 249.677†	-599.1	167.0	3.4936	ug/L	3.4936 ppb	14:22:56
3	Ba 233.527†	-4.7	10.6	0.0802	ug/L	0.0802 ppb	14:22:56
3	Be 313.107†	-4248.9	189.8	0.0644	ug/L	0.0644 ppb	14:22:36
3	Cd 226.502†	-190.1	15.6	0.1665	ug/L	0.1665 ppb	14:22:56
3	Co 228.616†	-80.9	4.9	0.0896	ug/L	0.0896 ppb	14:22:56
3	Cr 267.716†	108.4	45.6	0.4626	ug/L	0.4626 ppb	14:22:36
3	Cu 324.752†	6795.3	-148.7	-0.4258	ug/L	-0.4258 ppb	14:22:36
3	Mn 257.610†	472.1	-63.7	-0.0698	ug/L	-0.0698 ppb	14:22:56
3	Mo 202.031†	3.0	-2.3	-0.1526	ug/L	-0.1526 ppb	14:22:56
3	Ni 231.604†	97.8	11.8	0.2636	ug/L	0.2636 ppb	14:22:56
3	P 214.914†	239.9	14.6	7.7032	ug/L	7.7032 ppb	14:22:56
3	Pb 220.353†	-66.8	13.4	1.4397	ug/L	1.4397 ppb	14:22:56
3	S 181.975 Axial†	47.3	-2.0	-2.4713	ug/L	-2.4713 ppb	14:22:56
3	Sb 206.836†	41.3	2.6	0.8085	ug/L	0.8085 ppb	14:22:56
3	Se 196.026†	-30.8	-4.6	-2.5690	ug/L	-2.5690 ppb	14:22:56
3	Si 251.611†	460.7	-78.9	-2.3470	ug/L	-2.3470 ppb	14:22:56
3	Sn 189.927†	20.4	10.8	1.7440	ug/L	1.7440 ppb	14:22:56
3	Ti 334.940†	-1620.1	197.9	0.2778	ug/L	0.2778 ppb	14:22:36
3	Tl 190.801†	-46.1	-1.3	-0.3567	ug/L	-0.3567 ppb	14:22:56
3	U 409.014†	-4423.5	726.8	21.468	ug/L	21.468 ppb	14:22:36
3	V 292.402†	-1577.9	187.5	1.2897	ug/L	1.2897 ppb	14:22:36
3	Zn 213.857†	790.2	74.4	0.6312	ug/L	0.6312 ppb	14:22:56
3	SiO2†	459.1	-107.0	-6.8168	ug/L	-6.8168 ppb	14:23:11

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	896965.6	100.69	%	0.764				0.76%
Sc Radial	4407.6	107	%	1.1				1.05%
Y 371.029	741240.6	100.95	%	0.720				0.71%
Y RADIAL	4974.6	102.8	%	0.85				0.83%
Ag 328.068†	-105.3	-0.4691	ug/L	0.16430	-0.4691	ppb	0.16430	35.03%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-5.8	-4.7537	ug/L	6.58030	-4.7537	ppb	6.58030	138.42%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-2.8	-1.0570	ug/L	1.57206	-1.0570	ppb	1.57206	148.73%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	197.3	4.1229	ug/L	0.75862	4.1229	ppb	0.75862	18.40%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	4.9	0.0379	ug/L	0.06702	0.0379	ppb	0.06702	176.65%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	219.0	0.0741	ug/L	0.00849	0.0741	ppb	0.00849	11.46%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	9.6	17.767	ug/L	5.1668	17.767	ppb	5.1668	29.08%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              14.1      0.1476 ug/L       0.05816      0.1476 ppb        0.05816  39.40%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               7.6      0.1384 ug/L       0.05817      0.1384 ppb        0.05817  42.03%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              21.9      0.2195 ug/L       0.28694      0.2195 ppb        0.28694 130.70%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -243.4     -0.6870 ug/L       0.26081     -0.6870 ppb        0.26081  37.96%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        1.2      13.438 ug/L       30.0466      13.438 ppb        30.0466 223.60%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†      -165.0     -31.429 ug/L       15.4992     -31.429 ppb        15.4992  49.31%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           3.7      156.35 ug/L        74.750      156.35 ppb         74.750  47.81%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             -52.8     -0.0580 ug/L       0.01505     -0.0580 ppb        0.01505  25.93%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -1.3     -0.0830 ug/L       0.20458     -0.0830 ppb        0.20458 246.50%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      203.7      62.775 ug/L        5.9429      62.775 ppb         5.9429   9.47%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               6.2      0.1378 ug/L       0.12456      0.1378 ppb        0.12456  90.37%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               12.1      6.3935 ug/L       4.05156      6.3935 ppb        4.05156  63.37%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              22.7      2.4284 ug/L       1.23880      2.4284 ppb        1.23880  51.01%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -1.7     -2.0924 ug/L       4.46347     -2.0924 ppb        4.46347 213.32%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               4.8      1.4823 ug/L       0.85183      1.4823 ppb        0.85183  57.47%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -0.2     -0.0425 ug/L       2.28474     -0.0425 ppb        2.28474 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -67.1     -1.9970 ug/L       0.52401     -1.9970 ppb        0.52401  26.24%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               1.9      0.3050 ug/L       1.64582      0.3050 ppb        1.64582 539.58%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†             -28.2     -0.1862 ug/L       0.05950     -0.1862 ppb        0.05950  31.97%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             182.4      0.2534 ug/L       0.08792      0.2534 ppb        0.08792  34.69%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               1.1      0.3222 ug/L       0.83546      0.3222 ppb        0.83546 259.33%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              665.9      19.669 ug/L        3.4546      19.669 ppb         3.4546  17.56%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              133.6      0.9260 ug/L       0.37696      0.9260 ppb        0.37696  40.71%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              75.6      0.6399 ug/L       0.11494      0.6399 ppb        0.11494  17.96%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   -76.6     -4.8821 ug/L       1.67554     -4.8821 ppb        1.67554  34.32%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 2/1/2010 15:23:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4324.0	4324.0	105	%			15:25:37
1	Y RADIAL	4839.8	4839.8	99.97	%			15:25:37
1	Al 396.153Radial†	6002.2	5916.7	4861.8	ug/L	4861.8	ppb	15:25:37
1	Ca 317.933Radial†	2915.9	2768.7	5125.2	ug/L	5125.2	ppb	15:25:57
1	Fe 238.204 Radial†	489.6	457.0	5325.3	ug/L	5325.3	ppb	15:25:57
1	K 766.490 Radial†	29725.3	25736.2	4892.3	ug/L	4892.3	ppb	15:25:37
1	Mg 279.077 IEC†	132.2	126.1	5314.9	ug/L	5314.9	ppb	15:25:57
1	Na 589.592 Radial†	33325.3	33447.4	10307	ug/L	10307	ppb	15:25:37
1	Sr 421.552†	80087.6	76373.9	504.23	ug/L	504.23	ppb	15:25:37
1	Sc 361.383	908890.7	908890.7	102.03	%			15:26:55
1	Y 371.029	736593.9	736593.9	100.32	%			15:26:55
1	Ag 328.068†	112014.1	109163.2	480.76	ug/L	480.76	ppb	15:27:00
1	As 188.979†	1241.0	1245.1	482.56	ug/L	482.56	ppb	15:27:20
1	B 249.677†	21719.7	22049.1	458.78	ug/L	458.78	ppb	15:27:00
1	Ba 233.527†	67268.0	65946.3	483.23	ug/L	483.23	ppb	15:27:00
1	Be 313.107†	1446843.4	1422489.3	478.39	ug/L	478.39	ppb	15:26:55
1	Cd 226.502†	47360.1	46622.9	481.29	ug/L	481.29	ppb	15:27:00
1	Co 228.616†	26484.6	26043.3	480.11	ug/L	480.11	ppb	15:27:00
1	Cr 267.716†	47928.5	46914.0	483.54	ug/L	483.54	ppb	15:27:00
1	Cu 324.752†	183020.8	172496.3	479.78	ug/L	479.78	ppb	15:27:00
1	Mn 257.610†	496305.2	485908.9	487.84	ug/L	487.84	ppb	15:26:55
1	Mo 202.031†	7456.6	7303.2	485.84	ug/L	485.84	ppb	15:27:20
1	Ni 231.604†	22219.9	21693.1	483.09	ug/L	483.09	ppb	15:27:00
1	P 214.914†	4896.3	4575.8	2281.9	ug/L	2281.9	ppb	15:27:20
1	Pb 220.353†	4488.0	4478.5	482.05	ug/L	482.05	ppb	15:27:20
1	S 181.975 Axial†	815.7	750.6	915.98	ug/L	915.98	ppb	15:27:20
1	Sb 206.836†	1608.6	1538.2	487.33	ug/L	487.33	ppb	15:27:20
1	Se 196.026†	851.9	860.9	496.55	ug/L	496.55	ppb	15:27:20
1	Si 251.611†	82144.0	79975.6	2374.6	ug/L	2374.6	ppb	15:27:00
1	Sn 189.927†	3029.9	2960.3	479.10	ug/L	479.10	ppb	15:27:20
1	Ti 334.940†	336421.2	331538.9	495.23	ug/L	495.23	ppb	15:26:55
1	Tl 190.801†	1715.3	1725.7	490.27	ug/L	490.27	ppb	15:27:20
1	U 409.014†	12508.7	17373.1	511.49	ug/L	511.49	ppb	15:27:00
1	V 292.402†	72167.5	72485.3	488.70	ug/L	488.70	ppb	15:27:00
1	Zn 213.857†	57930.8	56070.3	471.47	ug/L	471.47	ppb	15:27:00
1	SiO2†	82102.5	79908.4	5082.5	ug/L	5082.5	ppb	15:28:28
2	Sc Radial	4399.7	4399.7	107	%			15:26:02
2	Y RADIAL	4930.9	4930.9	101.8	%			15:26:02
2	Al 396.153Radial†	6106.9	5916.3	4861.6	ug/L	4861.6	ppb	15:26:02
2	Ca 317.933Radial†	2882.4	2689.4	4978.5	ug/L	4978.5	ppb	15:26:22
2	Fe 238.204 Radial†	482.5	442.3	5154.9	ug/L	5154.9	ppb	15:26:22
2	K 766.490 Radial†	30275.2	25763.8	4897.6	ug/L	4897.6	ppb	15:26:02
2	Mg 279.077 IEC†	129.9	121.9	5134.6	ug/L	5134.6	ppb	15:26:22
2	Na 589.592 Radial†	34129.0	33653.9	10371	ug/L	10371	ppb	15:26:02
2	Sr 421.552†	81681.4	76553.5	505.42	ug/L	505.42	ppb	15:26:02
2	Sc 361.383	907620.9	907620.9	101.89	%			15:27:26
2	Y 371.029	734823.1	734823.1	100.08	%			15:27:26
2	Ag 328.068†	112963.6	110248.7	485.47	ug/L	485.47	ppb	15:27:31
2	As 188.979†	1233.6	1239.5	480.40	ug/L	480.40	ppb	15:27:51
2	B 249.677†	22093.8	22446.1	467.09	ug/L	467.09	ppb	15:27:31
2	Ba 233.527†	67833.3	66593.4	487.97	ug/L	487.97	ppb	15:27:31
2	Be 313.107†	1447770.4	1425383.0	479.36	ug/L	479.36	ppb	15:27:26
2	Cd 226.502†	47891.2	47209.1	487.36	ug/L	487.36	ppb	15:27:31
2	Co 228.616†	26809.7	26398.7	486.65	ug/L	486.65	ppb	15:27:31
2	Cr 267.716†	48424.5	47466.6	489.23	ug/L	489.23	ppb	15:27:31
2	Cu 324.752†	184496.9	174196.0	484.50	ug/L	484.50	ppb	15:27:31
2	Mn 257.610†	497568.7	487829.6	489.76	ug/L	489.76	ppb	15:27:26
2	Mo 202.031†	7401.7	7259.6	482.92	ug/L	482.92	ppb	15:27:51
2	Ni 231.604†	22343.9	21845.3	486.47	ug/L	486.47	ppb	15:27:31

2	P 214.914†	4882.0	4568.4	2277.3	ug/L	2277.3 ppb	15:27:51
2	Pb 220.353†	4472.6	4469.4	481.09	ug/L	481.09 ppb	15:27:51
2	S 181.975 Axial†	823.8	759.7	927.13	ug/L	927.13 ppb	15:27:51
2	Sb 206.836†	1618.9	1550.5	491.07	ug/L	491.07 ppb	15:27:51
2	Se 196.026†	855.1	865.3	498.41	ug/L	498.41 ppb	15:27:51
2	Si 251.611†	83074.2	81001.2	2405.1	ug/L	2405.1 ppb	15:27:31
2	Sn 189.927†	3041.8	2976.1	481.63	ug/L	481.63 ppb	15:27:51
2	Ti 334.940†	337341.1	332903.1	497.26	ug/L	497.26 ppb	15:27:26
2	Tl 190.801†	1713.3	1726.0	490.37	ug/L	490.37 ppb	15:27:51
2	U 409.014†	12687.8	17566.1	517.20	ug/L	517.20 ppb	15:27:31
2	V 292.402†	72601.6	73010.3	492.18	ug/L	492.18 ppb	15:27:31
2	Zn 213.857†	58558.5	56765.7	477.36	ug/L	477.36 ppb	15:27:31
2	SiO2†	82500.8	80411.9	5114.7	ug/L	5114.7 ppb	15:28:33
3	Sc Radial	4387.0	4387.0	106	%		15:26:27
3	Y RADIAL	4891.2	4891.2	101.0	%		15:26:27
3	Al 396.153Radial†	6067.4	5895.9	4844.6	ug/L	4844.6 ppb	15:26:27
3	Ca 317.933Radial†	2873.6	2689.0	4977.7	ug/L	4977.7 ppb	15:26:47
3	Fe 238.204 Radial†	478.3	439.7	5124.3	ug/L	5124.3 ppb	15:26:47
3	K 766.490 Radial†	30092.6	25674.5	4880.6	ug/L	4880.6 ppb	15:26:27
3	Mg 279.077 IEC†	133.8	125.9	5305.2	ug/L	5305.2 ppb	15:26:47
3	Na 589.592 Radial†	33666.9	33312.2	10265	ug/L	10265 ppb	15:26:27
3	Sr 421.552†	81394.9	76506.5	505.11	ug/L	505.11 ppb	15:26:27
3	Sc 361.383	908526.6	908526.6	101.99	%		15:27:57
3	Y 371.029	735248.8	735248.8	100.14	%		15:27:57
3	Ag 328.068†	113966.3	111121.4	489.29	ug/L	489.29 ppb	15:28:02
3	As 188.979†	1226.6	1231.5	477.30	ug/L	477.30 ppb	15:28:22
3	B 249.677†	22251.6	22579.1	469.86	ug/L	469.86 ppb	15:28:02
3	Ba 233.527†	68487.4	67168.4	492.18	ug/L	492.18 ppb	15:28:02
3	Be 313.107†	1447718.5	1423915.6	478.87	ug/L	478.87 ppb	15:27:57
3	Cd 226.502†	48304.3	47567.3	491.07	ug/L	491.07 ppb	15:28:02
3	Co 228.616†	27050.4	26608.6	490.53	ug/L	490.53 ppb	15:28:02
3	Cr 267.716†	48746.2	47734.7	492.00	ug/L	492.00 ppb	15:28:02
3	Cu 324.752†	186397.9	175879.5	489.18	ug/L	489.18 ppb	15:28:02
3	Mn 257.610†	497823.9	487593.1	489.51	ug/L	489.51 ppb	15:27:57
3	Mo 202.031†	7441.9	7291.7	485.05	ug/L	485.05 ppb	15:28:22
3	Ni 231.604†	22586.2	22061.0	491.28	ug/L	491.28 ppb	15:28:02
3	P 214.914†	4875.9	4557.6	2270.8	ug/L	2270.8 ppb	15:28:22
3	Pb 220.353†	4471.2	4463.7	480.48	ug/L	480.48 ppb	15:28:22
3	S 181.975 Axial†	826.9	761.9	929.87	ug/L	929.87 ppb	15:28:22
3	Sb 206.836†	1614.0	1544.1	489.18	ug/L	489.18 ppb	15:28:22
3	Se 196.026†	840.4	850.0	489.83	ug/L	489.83 ppb	15:28:22
3	Si 251.611†	83722.7	81555.8	2421.6	ug/L	2421.6 ppb	15:28:02
3	Sn 189.927†	3038.7	2970.1	480.66	ug/L	480.66 ppb	15:28:22
3	Ti 334.940†	337324.0	332556.3	496.72	ug/L	496.72 ppb	15:27:57
3	Tl 190.801†	1710.1	1721.2	488.99	ug/L	488.99 ppb	15:28:22
3	U 409.014†	12730.9	17595.9	518.08	ug/L	518.08 ppb	15:28:02
3	V 292.402†	73364.0	73686.8	496.72	ug/L	496.72 ppb	15:28:02
3	Zn 213.857†	58969.1	57111.1	480.26	ug/L	480.26 ppb	15:28:02
3	SiO2†	81425.1	79276.5	5042.2	ug/L	5042.2 ppb	15:28:38

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	908346.0	101.97	%	0.073				0.07%
Sc Radial	4370.3	106	%	1.0				0.93%
Y 371.029	735555.2	100.18	%	0.126				0.13%
Y RADIAL	4887.3	100.9	%	0.94				0.93%
Ag 328.068†	110177.8	485.17	ug/L	4.273	485.17	ppb	4.273	0.88%
QC value within limits for Ag 328.068 Recovery = 97.03%								
Al 396.153Radial†	5909.6	4856.0	ug/L	9.86	4856.0	ppb	9.86	0.20%
QC value within limits for Al 396.153Radial Recovery = 97.12%								
As 188.979†	1238.7	480.09	ug/L	2.643	480.09	ppb	2.643	0.55%
QC value within limits for As 188.979 Recovery = 96.02%								
B 249.677†	22358.1	465.24	ug/L	5.769	465.24	ppb	5.769	1.24%
QC value within limits for B 249.677 Recovery = 93.05%								
Ba 233.527†	66569.4	487.79	ug/L	4.474	487.79	ppb	4.474	0.92%
QC value within limits for Ba 233.527 Recovery = 97.56%								
Be 313.107†	1423929.3	478.87	ug/L	0.488	478.87	ppb	0.488	0.10%
QC value within limits for Be 313.107 Recovery = 95.77%								
Ca 317.933Radial†	2715.7	5027.1	ug/L	84.94	5027.1	ppb	84.94	1.69%

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   QC value within limits for Ca 317.933Radial  Recovery = 100.54%
Cd 226.502†            47133.1      486.57 ug/L         4.937      486.57 ppb          4.937   1.01%
   QC value within limits for Cd 226.502  Recovery = 97.31%
Co 228.616†            26350.2      485.77 ug/L         5.265      485.77 ppb          5.265   1.08%
   QC value within limits for Co 228.616  Recovery = 97.15%
Cr 267.716†            47371.8      488.26 ug/L         4.310      488.26 ppb          4.310   0.88%
   QC value within limits for Cr 267.716  Recovery = 97.65%
Cu 324.752†           174190.6      484.48 ug/L         4.698      484.48 ppb          4.698   0.97%
   QC value within limits for Cu 324.752  Recovery = 96.90%
Fe 238.204 Radial†       446.3      5201.5 ug/L        108.31      5201.5 ppb         108.31   2.08%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.03%
K 766.490 Radial†      25724.8      4890.2 ug/L          8.68      4890.2 ppb           8.68   0.18%
   QC value within limits for K 766.490 Radial  Recovery = 97.80%
Mg 279.077 IEC†          124.6      5251.6 ug/L        101.41      5251.6 ppb         101.41   1.93%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.03%
Mn 257.610†           487110.5      489.04 ug/L         1.043      489.04 ppb          1.043   0.21%
   QC value within limits for Mn 257.610  Recovery = 97.81%
Mo 202.031†             7284.8      484.60 ug/L         1.508      484.60 ppb          1.508   0.31%
   QC value within limits for Mo 202.031  Recovery = 96.92%
Na 589.592 Radial†     33471.2       10314 ug/L          53.0       10314 ppb           53.0   0.51%
   QC value within limits for Na 589.592 Radial  Recovery = 103.14%
Ni 231.604†            21866.4      486.95 ug/L         4.116      486.95 ppb          4.116   0.85%
   QC value within limits for Ni 231.604  Recovery = 97.39%
P 214.914†              4567.3      2276.7 ug/L          5.58      2276.7 ppb           5.58   0.25%
   QC value within limits for P 214.914  Recovery = 91.07%
Pb 220.353†             4470.5      481.21 ug/L         0.794      481.21 ppb          0.794   0.16%
   QC value within limits for Pb 220.353  Recovery = 96.24%
S 181.975 Axial†         757.4      924.33 ug/L         7.357      924.33 ppb          7.357   0.80%
   QC value within limits for S 181.975 Axial  Recovery = 92.43%
Sb 206.836†             1544.3      489.20 ug/L         1.870      489.20 ppb          1.870   0.38%
   QC value within limits for Sb 206.836  Recovery = 97.84%
Se 196.026†              858.7      494.93 ug/L         4.513      494.93 ppb          4.513   0.91%
   QC value within limits for Se 196.026  Recovery = 98.99%
Si 251.611†            80844.2      2400.4 ug/L         23.87      2400.4 ppb         23.87   0.99%
   QC value within limits for Si 251.611  Recovery = 96.02%
Sn 189.927†             2968.8      480.46 ug/L         1.276      480.46 ppb          1.276   0.27%
   QC value within limits for Sn 189.927  Recovery = 96.09%
Sr 421.552†            76478.0      504.92 ug/L         0.616      504.92 ppb          0.616   0.12%
   QC value within limits for Sr 421.552  Recovery = 100.98%
Ti 334.940†           332332.8      496.40 ug/L         1.052      496.40 ppb          1.052   0.21%
   QC value within limits for Ti 334.940  Recovery = 99.28%
Tl 190.801†             1724.3      489.88 ug/L         0.774      489.88 ppb          0.774   0.16%
   QC value within limits for Tl 190.801  Recovery = 97.98%
U 409.014†             17511.7      515.59 ug/L         3.575      515.59 ppb          3.575   0.69%
   QC value within limits for U 409.014  Recovery = 103.12%
V 292.402†             73060.8      492.53 ug/L         4.022      492.53 ppb          4.022   0.82%
   QC value within limits for V 292.402  Recovery = 98.51%
Zn 213.857†            56649.0      476.36 ug/L         4.477      476.36 ppb          4.477   0.94%
   QC value within limits for Zn 213.857  Recovery = 95.27%
SiO2†                  79865.6      5079.8 ug/L         36.31      5079.8 ppb         36.31   0.71%
   QC value within limits for SiO2  Recovery = 94.99%
All analyte(s) passed QC.
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Sequence No.: 9
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 2/1/2010 15:30:49
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4410.8	4410.8	107	%			15:32:41
1	Y RADIAL	5034.9	5034.9	104.0	%			15:32:41
1	Al 396.153Radial†	-194.1	8.5	7.0662	ug/L	7.0662	ppb	15:32:41
1	Ca 317.933Radial†	21.7	6.9	12.799	ug/L	12.799	ppb	15:33:01
1	Fe 238.204 Radial†	10.1	-0.7	-7.8201	ug/L	-7.8201	ppb	15:33:01
1	K 766.490 Radial†	2679.2	-118.4	-22.570	ug/L	-22.570	ppb	15:32:41
1	Mg 279.077 IEC†	2.3	2.2	90.856	ug/L	90.856	ppb	15:33:01
1	Na 589.592 Radial†	-1495.7	253.3	78.056	ug/L	78.056	ppb	15:32:41
1	Sr 421.552†	-13.1	-48.7	-0.3215	ug/L	-0.3215	ppb	15:32:41
1	Sc 361.383	918284.0	918284.0	103.08	%			15:33:58
1	Y 371.029	756017.4	756017.4	102.97	%			15:33:58
1	Ag 328.068†	524.4	-115.8	-0.5260	ug/L	-0.5260	ppb	15:34:03
1	As 188.979†	-31.4	-1.7	-0.6498	ug/L	-0.6498	ppb	15:34:23
1	B 249.677†	-582.5	196.0	4.0998	ug/L	4.0998	ppb	15:34:23
1	Ba 233.527†	-6.0	9.5	0.0729	ug/L	0.0729	ppb	15:34:23
1	Be 313.107†	-4282.4	248.7	0.0846	ug/L	0.0846	ppb	15:34:03
1	Cd 226.502†	-197.3	12.7	0.1377	ug/L	0.1377	ppb	15:34:23
1	Co 228.616†	-87.5	0.2	0.0026	ug/L	0.0026	ppb	15:34:23
1	Cr 267.716†	201.0	133.2	1.3615	ug/L	1.3615	ppb	15:34:23
1	Cu 324.752†	8758.4	1609.7	4.4607	ug/L	4.4607	ppb	15:34:03
1	Mn 257.610†	510.2	-36.8	-0.0414	ug/L	-0.0414	ppb	15:34:23
1	Mo 202.031†	2.3	-3.0	-0.1990	ug/L	-0.1990	ppb	15:34:23
1	Ni 231.604†	69.6	-17.6	-0.3932	ug/L	-0.3932	ppb	15:34:23
1	P 214.914†	243.8	13.2	5.9885	ug/L	5.9885	ppb	15:34:23
1	Pb 220.353†	-60.8	20.6	2.2132	ug/L	2.2132	ppb	15:34:23
1	S 181.975 Axial†	51.0	0.6	0.6870	ug/L	0.6870	ppb	15:34:23
1	Sb 206.836†	51.9	12.0	3.6588	ug/L	3.6588	ppb	15:34:23
1	Se 196.026†	-29.3	-2.5	-1.3984	ug/L	-1.3984	ppb	15:34:23
1	Si 251.611†	501.3	-49.5	-1.4700	ug/L	-1.4700	ppb	15:34:23
1	Sn 189.927†	11.8	2.0	0.3255	ug/L	0.3255	ppb	15:34:23
1	Ti 334.940†	-1514.4	335.3	0.4820	ug/L	0.4820	ppb	15:34:03
1	Tl 190.801†	-32.4	13.1	3.6900	ug/L	3.6900	ppb	15:34:23
1	U 409.014†	-4258.6	981.8	28.999	ug/L	28.999	ppb	15:33:58
1	V 292.402†	-1546.1	252.3	1.7333	ug/L	1.7333	ppb	15:34:03
1	Zn 213.857†	807.8	74.6	0.6298	ug/L	0.6298	ppb	15:34:23
1	SiO2†	543.5	-35.0	-2.2234	ug/L	-2.2234	ppb	15:35:29
2	Sc Radial	4455.7	4455.7	108	%			15:33:06
2	Y RADIAL	5018.4	5018.4	103.7	%			15:33:06
2	Al 396.153Radial†	-167.7	34.9	28.768	ug/L	28.768	ppb	15:33:06
2	Ca 317.933Radial†	22.2	7.3	13.435	ug/L	13.435	ppb	15:33:26
2	Fe 238.204 Radial†	13.7	2.5	29.517	ug/L	29.517	ppb	15:33:26
2	K 766.490 Radial†	2807.6	-24.8	-4.7460	ug/L	-4.7460	ppb	15:33:06
2	Mg 279.077 IEC†	3.3	3.1	131.57	ug/L	131.57	ppb	15:33:26
2	Na 589.592 Radial†	-1525.4	239.9	73.935	ug/L	73.935	ppb	15:33:06
2	Sr 421.552†	-0.8	-37.2	-0.2458	ug/L	-0.2458	ppb	15:33:06
2	Sc 361.383	911731.9	911731.9	102.35	%			15:34:28
2	Y 371.029	749647.5	749647.5	102.10	%			15:34:28
2	Ag 328.068†	438.7	-195.8	-0.8714	ug/L	-0.8714	ppb	15:34:33
2	As 188.979†	-28.8	0.6	0.2431	ug/L	0.2431	ppb	15:34:53
2	B 249.677†	-576.6	197.7	4.1278	ug/L	4.1278	ppb	15:34:53
2	Ba 233.527†	-5.9	9.6	0.0718	ug/L	0.0718	ppb	15:34:53
2	Be 313.107†	-4302.2	199.5	0.0677	ug/L	0.0677	ppb	15:34:33
2	Cd 226.502†	-191.9	16.6	0.1748	ug/L	0.1748	ppb	15:34:53
2	Co 228.616†	-75.6	11.3	0.2074	ug/L	0.2074	ppb	15:34:53
2	Cr 267.716†	169.1	103.4	1.0532	ug/L	1.0532	ppb	15:34:53
2	Cu 324.752†	8822.4	1733.3	4.8048	ug/L	4.8048	ppb	15:34:33
2	Mn 257.610†	509.7	-33.8	-0.0364	ug/L	-0.0364	ppb	15:34:53
2	Mo 202.031†	8.8	3.4	0.2290	ug/L	0.2290	ppb	15:34:53
2	Ni 231.604†	89.0	1.8	0.0407	ug/L	0.0407	ppb	15:34:53

2	P 214.914†	243.5	14.6	6.6360 ug/L	6.6360 ppb	15:34:53
2	Pb 220.353†	-58.3	22.7	2.4329 ug/L	2.4329 ppb	15:34:53
2	S 181.975 Axial†	48.9	-1.1	-1.3323 ug/L	-1.3323 ppb	15:34:53
2	Sb 206.836†	43.5	4.1	1.2606 ug/L	1.2606 ppb	15:34:53
2	Se 196.026†	-25.8	0.8	0.5442 ug/L	0.5442 ppb	15:34:53
2	Si 251.611†	510.0	-37.4	-1.1171 ug/L	-1.1171 ppb	15:34:53
2	Sn 189.927†	14.2	4.5	0.7246 ug/L	0.7246 ppb	15:34:53
2	Ti 334.940†	-1604.3	236.9	0.3306 ug/L	0.3306 ppb	15:34:33
2	Tl 190.801†	-51.9	-6.2	-1.7501 ug/L	-1.7501 ppb	15:34:53
2	U 409.014†	-4125.1	1082.6	31.972 ug/L	31.972 ppb	15:34:28
2	V 292.402†	-1714.7	76.8	0.5727 ug/L	0.5727 ppb	15:34:33
2	Zn 213.857†	786.5	59.3	0.4938 ug/L	0.4938 ppb	15:34:53
2	SiO2†	515.6	-58.5	-3.7363 ug/L	-3.7363 ppb	15:35:34
3	Sc Radial	4358.9	4358.9	106 %		15:33:31
3	Y RADIAL	4912.7	4912.7	101.5 %		15:33:31
3	Al 396.153Radial†	-201.5	-0.6	-0.5317 ug/L	-0.5317 ppb	15:33:31
3	Ca 317.933Radial†	22.4	7.8	14.469 ug/L	14.469 ppb	15:33:51
3	Fe 238.204 Radial†	13.6	2.7	31.519 ug/L	31.519 ppb	15:33:51
3	K 766.490 Radial†	2717.8	-52.0	-9.9366 ug/L	-9.9366 ppb	15:33:31
3	Mg 279.077 IEC†	3.0	2.8	119.90 ug/L	119.90 ppb	15:33:51
3	Na 589.592 Radial†	-1472.7	258.4	79.620 ug/L	79.620 ppb	15:33:31
3	Sr 421.552†	12.0	-25.1	-0.1655 ug/L	-0.1655 ppb	15:33:31
3	Sc 361.383	915193.5	915193.5	102.74 %		15:34:59
3	Y 371.029	752575.1	752575.1	102.50 %		15:34:59
3	Ag 328.068†	492.2	-145.4	-0.6472 ug/L	-0.6472 ppb	15:35:04
3	As 188.979†	-36.6	-6.9	-2.6461 ug/L	-2.6461 ppb	15:35:24
3	B 249.677†	-560.1	215.9	4.5090 ug/L	4.5090 ppb	15:35:24
3	Ba 233.527†	-2.4	13.0	0.0977 ug/L	0.0977 ppb	15:35:24
3	Be 313.107†	-4289.8	227.5	0.0770 ug/L	0.0770 ppb	15:35:04
3	Cd 226.502†	-188.3	20.8	0.2179 ug/L	0.2179 ppb	15:35:24
3	Co 228.616†	-67.4	19.6	0.3593 ug/L	0.3593 ppb	15:35:24
3	Cr 267.716†	169.4	103.1	1.0510 ug/L	1.0510 ppb	15:35:24
3	Cu 324.752†	8909.6	1785.6	4.9512 ug/L	4.9512 ppb	15:35:04
3	Mn 257.610†	504.9	-40.3	-0.0423 ug/L	-0.0423 ppb	15:35:24
3	Mo 202.031†	6.7	1.3	0.0870 ug/L	0.0870 ppb	15:35:24
3	Ni 231.604†	108.8	20.7	0.4620 ug/L	0.4620 ppb	15:35:24
3	P 214.914†	223.6	-5.6	-3.9095 ug/L	-3.9095 ppb	15:35:24
3	Pb 220.353†	-66.2	15.2	1.6260 ug/L	1.6260 ppb	15:35:24
3	S 181.975 Axial†	51.2	1.0	1.1967 ug/L	1.1967 ppb	15:35:24
3	Sb 206.836†	46.8	7.2	2.1915 ug/L	2.1915 ppb	15:35:24
3	Se 196.026†	-34.8	-7.9	-4.2850 ug/L	-4.2850 ppb	15:35:24
3	Si 251.611†	512.9	-36.5	-1.0865 ug/L	-1.0865 ppb	15:35:24
3	Sn 189.927†	9.6	-0.0	-0.0036 ug/L	-0.0036 ppb	15:35:24
3	Ti 334.940†	-1654.8	193.6	0.2678 ug/L	0.2678 ppb	15:35:04
3	Tl 190.801†	-43.8	1.8	0.5140 ug/L	0.5140 ppb	15:35:24
3	U 409.014†	-4196.5	1028.3	30.369 ug/L	30.369 ppb	15:34:59
3	V 292.402†	-1656.2	140.0	0.9880 ug/L	0.9880 ppb	15:35:04
3	Zn 213.857†	805.4	74.9	0.6226 ug/L	0.6226 ppb	15:35:24
3	SiO2†	510.2	-65.6	-4.1880 ug/L	-4.1880 ppb	15:35:39

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	915069.8	102.72	%	0.368				0.36%
Sc Radial	4408.5	107	%	1.2				1.10%
Y 371.029	752746.7	102.52	%	0.434				0.42%
Y RADIAL	4988.7	103.0	%	1.37				1.33%
Ag 328.068†	-152.3	-0.6815	ug/L	0.17525	-0.6815	ppb	0.17525	25.71%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	14.3	11.768	ug/L	15.2053	11.768	ppb	15.2053	129.21%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-2.7	-1.0176	ug/L	1.47929	-1.0176	ppb	1.47929	145.37%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	203.2	4.2455	ug/L	0.22861	4.2455	ppb	0.22861	5.38%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.7	0.0808	ug/L	0.01464	0.0808	ppb	0.01464	18.12%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	225.2	0.0764	ug/L	0.00844	0.0764	ppb	0.00844	11.04%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	7.3	13.568	ug/L	0.8430	13.568	ppb	0.8430	6.21%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              16.7      0.1768 ug/L       0.04016      0.1768 ppb        0.04016  22.72%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              10.4      0.1898 ug/L       0.17900      0.1898 ppb        0.17900  94.33%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             113.2      1.1553 ug/L       0.17866      1.1553 ppb        0.17866  15.46%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            1709.5      4.7389 ug/L       0.25183      4.7389 ppb        0.25183   5.31%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        1.5      17.739 ug/L       22.1574      17.739 ppb        22.1574 124.91%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       -65.1     -12.418 ug/L        9.1673     -12.418 ppb         9.1673  73.83%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           2.7      114.11 ug/L        20.967      114.11 ppb         20.967  18.37%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             -37.0     -0.0400 ug/L       0.00320     -0.0400 ppb        0.00320   7.99%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               0.6      0.0390 ug/L       0.21798      0.0390 ppb        0.21798 558.70%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      250.5      77.204 ug/L        2.9368      77.204 ppb         2.9368   3.80%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               1.6      0.0365 ug/L       0.42760      0.0365 ppb        0.42760 >999.9%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                7.4      2.9050 ug/L       5.91042      2.9050 ppb        5.91042 203.46%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              19.5      2.0907 ug/L       0.41712      2.0907 ppb        0.41712  19.95%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          0.2      0.1838 ug/L       1.33748      0.1838 ppb        1.33748 727.64%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               7.7      2.3703 ug/L       1.20904      2.3703 ppb        1.20904  51.01%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -3.2     -1.7131 ug/L       2.42988     -1.7131 ppb        2.42988 141.84%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -41.1     -1.2245 ug/L       0.21315     -1.2245 ppb        0.21315  17.41%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               2.1      0.3488 ug/L       0.36466      0.3488 ppb        0.36466 104.53%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†             -37.0     -0.2443 ug/L       0.07800     -0.2443 ppb        0.07800  31.93%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             255.3      0.3601 ug/L       0.11015      0.3601 ppb        0.11015  30.59%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               2.9      0.8180 ug/L       2.73277      0.8180 ppb        2.73277 334.10%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†             1030.9      30.447 ug/L        1.4882      30.447 ppb         1.4882   4.89%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              156.4      1.0980 ug/L       0.58806      1.0980 ppb        0.58806  53.56%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              69.6      0.5821 ug/L       0.07651      0.5821 ppb        0.07651  13.15%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   -53.0     -3.3826 ug/L       1.02898     -3.3826 ppb        1.02898  30.42%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 18
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 2/1/2010 16:35:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4325.1	4325.1	105	%			16:37:32
1	Y RADIAL	4800.8	4800.8	99.16	%			16:37:32
1	Al 396.153Radial†	6153.3	6059.4	4978.6	ug/L	4978.6	ppb	16:37:32
1	Ca 317.933Radial†	2924.5	2776.2	5139.2	ug/L	5139.2	ppb	16:37:52
1	Fe 238.204 Radial†	492.5	459.7	5357.0	ug/L	5357.0	ppb	16:37:52
1	K 766.490 Radial†	29903.1	25898.8	4923.2	ug/L	4923.2	ppb	16:37:32
1	Mg 279.077 IEC†	136.3	130.0	5479.3	ug/L	5479.3	ppb	16:37:52
1	Na 589.592 Radial†	33546.7	33650.7	10370	ug/L	10370	ppb	16:37:32
1	Sr 421.552†	80234.6	76495.2	505.03	ug/L	505.03	ppb	16:37:32
1	Sc 361.383	893101.7	893101.7	100.26	%			16:38:51
1	Y 371.029	718786.3	718786.3	97.894	%			16:38:51
1	Ag 328.068†	112267.4	111356.8	490.42	ug/L	490.42	ppb	16:38:51
1	As 188.979†	1296.6	1322.1	512.11	ug/L	512.11	ppb	16:39:11
1	B 249.677†	22151.4	22856.1	475.58	ug/L	475.58	ppb	16:38:51
1	Ba 233.527†	67662.7	67505.5	494.65	ug/L	494.65	ppb	16:38:51
1	Be 313.107†	1453833.4	1454531.5	489.15	ug/L	489.15	ppb	16:38:51
1	Cd 226.502†	48166.1	48247.5	498.07	ug/L	498.07	ppb	16:38:51
1	Co 228.616†	27264.6	27280.3	502.96	ug/L	502.96	ppb	16:39:11
1	Cr 267.716†	48026.9	47842.7	493.12	ug/L	493.12	ppb	16:38:51
1	Cu 324.752†	185439.6	178080.2	495.33	ug/L	495.33	ppb	16:38:51
1	Mn 257.610†	495470.4	493676.0	495.63	ug/L	495.63	ppb	16:38:51
1	Mo 202.031†	7640.2	7615.5	506.59	ug/L	506.59	ppb	16:39:11
1	Ni 231.604†	22761.3	22618.1	503.68	ug/L	503.68	ppb	16:39:11
1	P 214.914†	5125.0	4888.7	2441.6	ug/L	2441.6	ppb	16:39:11
1	Pb 220.353†	4682.0	4749.7	511.22	ug/L	511.22	ppb	16:39:11
1	S 181.975 Axial†	865.7	814.6	994.23	ug/L	994.23	ppb	16:39:11
1	Sb 206.836†	1672.8	1630.1	516.35	ug/L	516.35	ppb	16:39:11
1	Se 196.026†	892.1	915.8	527.15	ug/L	527.15	ppb	16:39:11
1	Si 251.611†	83473.6	82725.1	2456.2	ug/L	2456.2	ppb	16:38:51
1	Sn 189.927†	3172.2	3154.7	510.51	ug/L	510.51	ppb	16:39:11
1	Ti 334.940†	332865.8	333821.9	498.63	ug/L	498.63	ppb	16:38:51
1	Tl 190.801†	1766.2	1806.1	512.93	ug/L	512.93	ppb	16:39:11
1	U 409.014†	11542.6	16626.3	489.41	ug/L	489.41	ppb	16:38:51
1	V 292.402†	72084.9	73653.4	496.71	ug/L	496.71	ppb	16:38:51
1	Zn 213.857†	59146.1	58286.3	490.12	ug/L	490.12	ppb	16:38:51
1	SiO2†	84765.5	83987.3	5342.0	ug/L	5342.0	ppb	16:40:11
2	Sc Radial	4359.5	4359.5	106	%			16:37:57
2	Y RADIAL	4820.1	4820.1	99.56	%			16:37:57
2	Al 396.153Radial†	6151.3	6011.2	4937.0	ug/L	4937.0	ppb	16:37:57
2	Ca 317.933Radial†	2930.0	2759.3	5107.9	ug/L	5107.9	ppb	16:38:17
2	Fe 238.204 Radial†	491.0	454.5	5298.1	ug/L	5298.1	ppb	16:38:17
2	K 766.490 Radial†	30014.6	25779.1	4900.4	ug/L	4900.4	ppb	16:37:57
2	Mg 279.077 IEC†	132.6	125.5	5290.5	ug/L	5290.5	ppb	16:38:17
2	Na 589.592 Radial†	33641.9	33488.2	10319	ug/L	10319	ppb	16:37:57
2	Sr 421.552†	80469.7	76113.5	502.51	ug/L	502.51	ppb	16:37:57
2	Sc 361.383	818456.7	818456.7	91.876	%			16:39:18
2	Y 371.029	659233.1	659233.1	89.784	%			16:39:18
2	Ag 328.068†	114773.0	124296.8	547.20	ug/L	547.20	ppb	16:39:18
2	As 188.979†	1250.1	1389.4	538.38	ug/L	538.38	ppb	16:39:38
2	B 249.677†	22635.6	25398.2	528.64	ug/L	528.64	ppb	16:39:18
2	Ba 233.527†	69349.4	75496.6	553.18	ug/L	553.18	ppb	16:39:18
2	Be 313.107†	1488831.5	1624879.0	546.44	ug/L	546.44	ppb	16:39:18
2	Cd 226.502†	49437.9	54013.3	557.64	ug/L	557.64	ppb	16:39:18
2	Co 228.616†	26771.5	29223.9	538.75	ug/L	538.75	ppb	16:39:38
2	Cr 267.716†	49347.4	53648.9	552.96	ug/L	552.96	ppb	16:39:18
2	Cu 324.752†	189595.0	199472.5	554.80	ug/L	554.80	ppb	16:39:18
2	Mn 257.610†	508803.2	553260.5	555.41	ug/L	555.41	ppb	16:39:18
2	Mo 202.031†	7510.6	8169.5	543.41	ug/L	543.41	ppb	16:39:38
2	Ni 231.604†	22303.9	24190.8	538.71	ug/L	538.71	ppb	16:39:38

2	P 214.914†	5051.0	5274.3	2630.4 ug/L	2630.4 ppb	16:39:38
2	Pb 220.353†	4587.4	5072.7	545.93 ug/L	545.93 ppb	16:39:38
2	S 181.975 Axial†	859.1	886.2	1081.6 ug/L	1081.6 ppb	16:39:38
2	Sb 206.836†	1654.2	1762.1	557.91 ug/L	557.91 ppb	16:39:38
2	Se 196.026†	862.1	964.3	553.93 ug/L	553.93 ppb	16:39:38
2	Si 251.611†	85425.2	92442.9	2745.0 ug/L	2745.0 ppb	16:39:18
2	Sn 189.927†	3089.9	3353.6	542.64 ug/L	542.64 ppb	16:39:38
2	Ti 334.940†	342020.0	374066.3	558.74 ug/L	558.74 ppb	16:39:18
2	Tl 190.801†	1726.1	1923.2	546.47 ug/L	546.47 ppb	16:39:38
2	U 409.014†	11952.0	18121.9	533.46 ug/L	533.46 ppb	16:39:18
2	V 292.402†	73825.7	82105.7	553.46 ug/L	553.46 ppb	16:39:18
2	Zn 213.857†	60659.0	65313.5	549.44 ug/L	549.44 ppb	16:39:18
2	SiO2†	82582.6	89322.4	5681.3 ug/L	5681.3 ppb	16:40:16
3	Sc Radial	4400.2	4400.2	107 %		16:38:22
3	Y RADIAL	4916.9	4916.9	101.6 %		16:38:22
3	Al 396.153Radial†	6105.4	5914.3	4859.3 ug/L	4859.3 ppb	16:38:22
3	Ca 317.933Radial†	2883.0	2689.7	4979.0 ug/L	4979.0 ppb	16:38:42
3	Fe 238.204 Radial†	479.9	439.9	5126.3 ug/L	5126.3 ppb	16:38:42
3	K 766.490 Radial†	29724.0	25243.8	4798.7 ug/L	4798.7 ppb	16:38:22
3	Mg 279.077 IEC†	128.2	120.3	5067.6 ug/L	5067.6 ppb	16:38:42
3	Na 589.592 Radial†	33241.1	32817.9	10113 ug/L	10113 ppb	16:38:22
3	Sr 421.552†	79835.7	74814.5	493.93 ug/L	493.93 ppb	16:38:22
3	Sc 361.383	889726.2	889726.2	99.877 %		16:39:46
3	Y 371.029	716638.6	716638.6	97.602 %		16:39:46
3	Ag 328.068†	112011.0	111524.9	491.08 ug/L	491.08 ppb	16:39:46
3	As 188.979†	1245.4	1275.7	494.27 ug/L	494.27 ppb	16:40:06
3	B 249.677†	22138.9	22927.4	477.14 ug/L	477.14 ppb	16:39:46
3	Ba 233.527†	67311.8	67410.3	493.94 ug/L	493.94 ppb	16:39:46
3	Be 313.107†	1443799.9	1449987.2	487.62 ug/L	487.62 ppb	16:39:46
3	Cd 226.502†	48009.5	48273.0	498.35 ug/L	498.35 ppb	16:39:46
3	Co 228.616†	26609.4	26727.4	492.74 ug/L	492.74 ppb	16:40:06
3	Cr 267.716†	47836.7	47834.0	493.03 ug/L	493.03 ppb	16:39:46
3	Cu 324.752†	184279.1	177620.0	494.03 ug/L	494.03 ppb	16:39:46
3	Mn 257.610†	493861.0	493939.5	495.89 ug/L	495.89 ppb	16:39:46
3	Mo 202.031†	7455.3	7459.3	496.19 ug/L	496.19 ppb	16:40:06
3	Ni 231.604†	22220.1	22162.4	493.53 ug/L	493.53 ppb	16:40:06
3	P 214.914†	5004.4	4787.3	2389.3 ug/L	2389.3 ppb	16:40:06
3	Pb 220.353†	4580.8	4666.1	502.22 ug/L	502.22 ppb	16:40:06
3	S 181.975 Axial†	841.3	793.4	968.36 ug/L	968.36 ppb	16:40:06
3	Sb 206.836†	1645.3	1609.0	509.46 ug/L	509.46 ppb	16:40:06
3	Se 196.026†	866.5	893.6	514.04 ug/L	514.04 ppb	16:40:06
3	Si 251.611†	83087.7	82654.7	2454.2 ug/L	2454.2 ppb	16:39:46
3	Sn 189.927†	3077.6	3072.0	497.12 ug/L	497.12 ppb	16:40:06
3	Ti 334.940†	331823.3	334037.7	498.97 ug/L	498.97 ppb	16:39:46
3	Tl 190.801†	1716.4	1763.0	500.81 ug/L	500.81 ppb	16:40:06
3	U 409.014†	11452.0	16579.3	488.05 ug/L	488.05 ppb	16:39:46
3	V 292.402†	71727.8	73568.6	496.02 ug/L	496.02 ppb	16:39:46
3	Zn 213.857†	58811.4	58175.0	489.26 ug/L	489.26 ppb	16:39:46
3	SiO2†	82716.4	82256.4	5231.9 ug/L	5231.9 ppb	16:40:21

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	867094.9	97.336	%	4.7322				4.86%
Sc Radial	4361.6	106	%	0.9				0.86%
Y 371.029	698219.3	95.093	%	4.6007				4.84%
Y RADIAL	4846.0	100.1	%	1.28				1.28%
Ag 328.068†	115726.2	509.56	ug/L	32.595	509.56	ppb	32.595	6.40%
QC value within limits for Ag 328.068 Recovery = 101.91%								
Al 396.153Radial†	5995.0	4925.0	ug/L	60.55	4925.0	ppb	60.55	1.23%
QC value within limits for Al 396.153Radial Recovery = 98.50%								
As 188.979†	1329.0	514.92	ug/L	22.187	514.92	ppb	22.187	4.31%
QC value within limits for As 188.979 Recovery = 102.98%								
B 249.677†	23727.2	493.79	ug/L	30.194	493.79	ppb	30.194	6.11%
QC value within limits for B 249.677 Recovery = 98.76%								
Ba 233.527†	70137.5	513.92	ug/L	33.997	513.92	ppb	33.997	6.62%
QC value within limits for Ba 233.527 Recovery = 102.78%								
Be 313.107†	1509799.2	507.74	ug/L	33.525	507.74	ppb	33.525	6.60%
QC value within limits for Be 313.107 Recovery = 101.55%								
Ca 317.933Radial†	2741.8	5075.4	ug/L	84.91	5075.4	ppb	84.91	1.67%

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   QC value within limits for Ca 317.933Radial  Recovery = 101.51%
Cd 226.502†            50177.9      518.02 ug/L        34.315      518.02 ppb        34.315   6.62%
   QC value within limits for Cd 226.502  Recovery = 103.60%
Co 228.616†            27743.8      511.48 ug/L        24.158      511.48 ppb        24.158   4.72%
   QC value within limits for Co 228.616  Recovery = 102.30%
Cr 267.716†            49775.2      513.04 ug/L        34.572      513.04 ppb        34.572   6.74%
   QC value within limits for Cr 267.716  Recovery = 102.61%
Cu 324.752†           185057.5      514.72 ug/L        34.716      514.72 ppb        34.716   6.74%
   QC value within limits for Cu 324.752  Recovery = 102.94%
Fe 238.204 Radial†       451.4      5260.5 ug/L        119.88      5260.5 ppb        119.88   2.28%
   QC value within limits for Fe 238.204 Radial  Recovery = 105.21%
K 766.490 Radial†      25640.5      4874.1 ug/L         66.29      4874.1 ppb         66.29   1.36%
   QC value within limits for K 766.490 Radial  Recovery = 97.48%
Mg 279.077 IEC†          125.3      5279.1 ug/L        206.11      5279.1 ppb        206.11   3.90%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.58%
Mn 257.610†           513625.3      515.64 ug/L        34.443      515.64 ppb        34.443   6.68%
   QC value within limits for Mn 257.610  Recovery = 103.13%
Mo 202.031†             7748.1      515.40 ug/L        24.808      515.40 ppb        24.808   4.81%
   QC value within limits for Mo 202.031  Recovery = 103.08%
Na 589.592 Radial†     33318.9       10267 ug/L         136.0       10267 ppb         136.0   1.33%
   QC value within limits for Na 589.592 Radial  Recovery = 102.67%
Ni 231.604†            22990.4      511.98 ug/L        23.700      511.98 ppb        23.700   4.63%
   QC value within limits for Ni 231.604  Recovery = 102.40%
P 214.914†              4983.4      2487.1 ug/L        126.82      2487.1 ppb        126.82   5.10%
   QC value within limits for P 214.914  Recovery = 99.48%
Pb 220.353†             4829.5      519.79 ug/L        23.079      519.79 ppb        23.079   4.44%
   QC value within limits for Pb 220.353  Recovery = 103.96%
S 181.975 Axial†         831.4      1014.7 ug/L         59.35      1014.7 ppb         59.35   5.85%
   QC value within limits for S 181.975 Axial  Recovery = 101.47%
Sb 206.836†             1667.1      527.90 ug/L        26.209      527.90 ppb        26.209   4.96%
   QC value within limits for Sb 206.836  Recovery = 105.58%
Se 196.026†              924.5      531.71 ug/L        20.331      531.71 ppb        20.331   3.82%
   QC value within limits for Se 196.026  Recovery = 106.34%
Si 251.611†            85940.9      2551.8 ug/L        167.31      2551.8 ppb        167.31   6.56%
   QC value within limits for Si 251.611  Recovery = 102.07%
Sn 189.927†             3193.4      516.76 ug/L        23.395      516.76 ppb        23.395   4.53%
   QC value within limits for Sn 189.927  Recovery = 103.35%
Sr 421.552†            75807.7      500.49 ug/L         5.817      500.49 ppb         5.817   1.16%
   QC value within limits for Sr 421.552  Recovery = 100.10%
Ti 334.940†           347308.6      518.78 ug/L        34.604      518.78 ppb        34.604   6.67%
   QC value within limits for Ti 334.940  Recovery = 103.76%
Tl 190.801†             1830.8      520.07 ug/L        23.652      520.07 ppb        23.652   4.55%
   QC value within limits for Tl 190.801  Recovery = 104.01%
U 409.014†             17109.2      503.64 ug/L        25.836      503.64 ppb        25.836   5.13%
   QC value within limits for U 409.014  Recovery = 100.73%
V 292.402†             76442.6      515.40 ug/L        32.968      515.40 ppb        32.968   6.40%
   QC value within limits for V 292.402  Recovery = 103.08%
Zn 213.857†            60591.6      509.60 ug/L        34.499      509.60 ppb        34.499   6.77%
   QC value within limits for Zn 213.857  Recovery = 101.92%
SiO2†                  85188.7      5418.4 ug/L        234.19      5418.4 ppb        234.19   4.32%
   QC value within limits for SiO2  Recovery = 101.33%
All analyte(s) passed QC.
```

Sequence No.: 19
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 2/1/2010 16:42:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4432.1	4432.1	107	%			16:44:24
1	Y RADIAL	4989.4	4989.4	103.1	%			16:44:24
1	Al 396.153Radial†	-149.0	51.4	42.401	ug/L	42.401	ppb	16:44:24
1	Ca 317.933Radial†	25.1	10.0	18.601	ug/L	18.601	ppb	16:44:45
1	Fe 238.204 Radial†	10.3	-0.6	-6.5727	ug/L	-6.5727	ppb	16:44:45
1	K 766.490 Radial†	2657.6	-150.6	-28.682	ug/L	-28.682	ppb	16:44:24
1	Mg 279.077 IEC†	1.0	1.0	42.055	ug/L	42.055	ppb	16:44:45
1	Na 589.592 Radial†	-1612.1	151.6	46.728	ug/L	46.728	ppb	16:44:24
1	Sr 421.552†	2.1	-34.5	-0.2279	ug/L	-0.2279	ppb	16:44:24
1	Sc 361.383	902754.0	902754.0	101.34	%			16:45:41
1	Y 371.029	738257.2	738257.2	100.55	%			16:45:41
1	Ag 328.068†	532.4	-99.2	-0.4556	ug/L	-0.4556	ppb	16:45:46
1	As 188.979†	-34.9	-5.7	-2.1785	ug/L	-2.1785	ppb	16:46:06
1	B 249.677†	-614.2	155.0	3.2413	ug/L	3.2413	ppb	16:46:06
1	Ba 233.527†	-3.9	11.5	0.0849	ug/L	0.0849	ppb	16:46:06
1	Be 313.107†	-4307.3	152.7	0.0514	ug/L	0.0514	ppb	16:45:46
1	Cd 226.502†	-192.3	14.4	0.1545	ug/L	0.1545	ppb	16:46:06
1	Co 228.616†	-83.9	2.3	0.0433	ug/L	0.0433	ppb	16:46:06
1	Cr 267.716†	78.5	15.6	0.1512	ug/L	0.1512	ppb	16:45:46
1	Cu 324.752†	8459.0	1460.4	4.0469	ug/L	4.0469	ppb	16:45:46
1	Mn 257.610†	501.6	-36.8	-0.0393	ug/L	-0.0393	ppb	16:46:06
1	Mo 202.031†	9.1	3.7	0.2466	ug/L	0.2466	ppb	16:46:06
1	Ni 231.604†	95.1	8.7	0.1941	ug/L	0.1941	ppb	16:46:06
1	P 214.914†	235.8	9.4	4.1195	ug/L	4.1195	ppb	16:46:06
1	Pb 220.353†	-51.2	29.2	3.1361	ug/L	3.1361	ppb	16:46:06
1	S 181.975 Axial†	44.9	-4.6	-5.6528	ug/L	-5.6528	ppb	16:46:06
1	Sb 206.836†	47.9	8.9	2.7204	ug/L	2.7204	ppb	16:46:06
1	Se 196.026†	-23.7	2.6	1.4336	ug/L	1.4336	ppb	16:46:06
1	Si 251.611†	499.6	-42.7	-1.2746	ug/L	-1.2746	ppb	16:46:06
1	Sn 189.927†	12.3	2.7	0.4400	ug/L	0.4400	ppb	16:46:06
1	Ti 334.940†	-1784.3	43.7	0.0527	ug/L	0.0527	ppb	16:45:46
1	Tl 190.801†	-43.1	1.9	0.5405	ug/L	0.5405	ppb	16:46:06
1	U 409.014†	-4274.7	894.9	26.435	ug/L	26.435	ppb	16:45:41
1	V 292.402†	-1696.2	78.4	0.5772	ug/L	0.5772	ppb	16:45:46
1	Zn 213.857†	787.0	67.5	0.5663	ug/L	0.5663	ppb	16:46:06
1	SiO2†	509.2	-59.7	-3.8162	ug/L	-3.8162	ppb	16:47:12
2	Sc Radial	4542.8	4542.8	110	%			16:44:50
2	Y RADIAL	5125.6	5125.6	105.9	%			16:44:50
2	Al 396.153Radial†	-157.2	47.3	39.034	ug/L	39.034	ppb	16:44:50
2	Ca 317.933Radial†	18.8	3.7	6.8848	ug/L	6.8848	ppb	16:45:10
2	Fe 238.204 Radial†	8.9	-2.0	-23.759	ug/L	-23.759	ppb	16:45:10
2	K 766.490 Radial†	2653.2	-214.8	-40.911	ug/L	-40.911	ppb	16:44:50
2	Mg 279.077 IEC†	4.1	3.7	158.04	ug/L	158.04	ppb	16:45:10
2	Na 589.592 Radial†	-1614.2	186.3	57.420	ug/L	57.420	ppb	16:44:50
2	Sr 421.552†	19.6	-18.6	-0.1232	ug/L	-0.1232	ppb	16:44:50
2	Sc 361.383	901197.1	901197.1	101.16	%			16:46:12
2	Y 371.029	736312.6	736312.6	100.28	%			16:46:12
2	Ag 328.068†	581.7	-49.5	-0.2414	ug/L	-0.2414	ppb	16:46:17
2	As 188.979†	-19.3	9.7	3.7220	ug/L	3.7220	ppb	16:46:37
2	B 249.677†	-650.3	118.3	2.4776	ug/L	2.4776	ppb	16:46:37
2	Ba 233.527†	-4.4	11.0	0.0825	ug/L	0.0825	ppb	16:46:37
2	Be 313.107†	-4306.6	146.0	0.0496	ug/L	0.0496	ppb	16:46:17
2	Cd 226.502†	-209.5	-2.9	-0.0226	ug/L	-0.0226	ppb	16:46:37
2	Co 228.616†	-104.3	-17.9	-0.3290	ug/L	-0.3290	ppb	16:46:37
2	Cr 267.716†	79.1	16.4	0.1588	ug/L	0.1588	ppb	16:46:17
2	Cu 324.752†	8727.0	1739.7	4.8223	ug/L	4.8223	ppb	16:46:17
2	Mn 257.610†	512.1	-25.6	-0.0345	ug/L	-0.0345	ppb	16:46:37
2	Mo 202.031†	14.6	9.2	0.6121	ug/L	0.6121	ppb	16:46:37
2	Ni 231.604†	84.0	-2.1	-0.0473	ug/L	-0.0473	ppb	16:46:37

2	P 214.914†	236.0	10.0	4.2626 ug/L	4.2626 ppb	16:46:37
2	Pb 220.353†	-64.3	16.1	1.7317 ug/L	1.7317 ppb	16:46:37
2	S 181.975 Axial†	54.7	5.2	6.3601 ug/L	6.3601 ppb	16:46:37
2	Sb 206.836†	44.1	5.2	1.6034 ug/L	1.6034 ppb	16:46:37
2	Se 196.026†	-44.3	-17.8	-9.9593 ug/L	-9.9593 ppb	16:46:37
2	Si 251.611†	501.0	-40.5	-1.2131 ug/L	-1.2131 ppb	16:46:37
2	Sn 189.927†	13.3	3.7	0.5947 ug/L	0.5947 ppb	16:46:37
2	Ti 334.940†	-1651.0	172.4	0.2334 ug/L	0.2334 ppb	16:46:17
2	Tl 190.801†	-41.9	3.0	0.8588 ug/L	0.8588 ppb	16:46:37
2	U 409.014†	-4223.7	938.0	27.709 ug/L	27.709 ppb	16:46:12
2	V 292.402†	-1568.2	202.0	1.4120 ug/L	1.4120 ppb	16:46:17
2	Zn 213.857†	802.9	84.6	0.7137 ug/L	0.7137 ppb	16:46:37
2	SiO2†	482.9	-84.9	-5.4300 ug/L	-5.4300 ppb	16:47:17
3	Sc Radial	4499.0	4499.0	109 %		16:45:15
3	Y RADIAL	5042.0	5042.0	104.1 %		16:45:15
3	Al 396.153Radial†	-148.6	53.8	44.428 ug/L	44.428 ppb	16:45:15
3	Ca 317.933Radial†	24.3	9.0	16.599 ug/L	16.599 ppb	16:45:35
3	Fe 238.204 Radial†	10.5	-0.5	-5.6373 ug/L	-5.6373 ppb	16:45:35
3	K 766.490 Radial†	2711.8	-137.6	-26.216 ug/L	-26.216 ppb	16:45:15
3	Mg 279.077 IEC†	-2.6	-2.3	-98.109 ug/L	-98.109 ppb	16:45:35
3	Na 589.592 Radial†	-1606.9	178.8	55.095 ug/L	55.095 ppb	16:45:15
3	Sr 421.552†	10.1	-27.2	-0.1795 ug/L	-0.1795 ppb	16:45:15
3	Sc 361.383	911824.6	911824.6	102.36 %		16:46:42
3	Y 371.029	744775.4	744775.4	101.43 %		16:46:42
3	Ag 328.068†	489.0	-146.7	-0.6655 ug/L	-0.6655 ppb	16:46:47
3	As 188.979†	-25.6	3.7	1.4362 ug/L	1.4362 ppb	16:47:07
3	B 249.677†	-669.5	107.0	2.2389 ug/L	2.2389 ppb	16:47:07
3	Ba 233.527†	-17.6	-1.9	-0.0130 ug/L	-0.0130 ppb	16:47:07
3	Be 313.107†	-4251.6	249.4	0.0844 ug/L	0.0844 ppb	16:46:47
3	Cd 226.502†	-208.4	0.6	0.0120 ug/L	0.0120 ppb	16:47:07
3	Co 228.616†	-94.6	-7.2	-0.1330 ug/L	-0.1330 ppb	16:47:07
3	Cr 267.716†	118.0	53.5	0.5397 ug/L	0.5397 ppb	16:46:47
3	Cu 324.752†	8594.6	1509.8	4.1832 ug/L	4.1832 ppb	16:46:47
3	Mn 257.610†	482.3	-60.5	-0.0573 ug/L	-0.0573 ppb	16:47:07
3	Mo 202.031†	14.2	8.6	0.5727 ug/L	0.5727 ppb	16:47:07
3	Ni 231.604†	89.2	1.9	0.0434 ug/L	0.0434 ppb	16:47:07
3	P 214.914†	228.7	0.2	-0.7338 ug/L	-0.7338 ppb	16:47:07
3	Pb 220.353†	-53.4	27.4	2.9541 ug/L	2.9541 ppb	16:47:07
3	S 181.975 Axial†	47.8	-2.2	-2.7119 ug/L	-2.7119 ppb	16:47:07
3	Sb 206.836†	42.6	3.2	0.9855 ug/L	0.9855 ppb	16:47:07
3	Se 196.026†	-37.2	-10.3	-5.7412 ug/L	-5.7412 ppb	16:47:07
3	Si 251.611†	487.9	-59.1	-1.7661 ug/L	-1.7661 ppb	16:47:07
3	Sn 189.927†	14.2	4.5	0.7278 ug/L	0.7278 ppb	16:47:07
3	Ti 334.940†	-1617.0	224.6	0.3330 ug/L	0.3330 ppb	16:46:47
3	Tl 190.801†	-49.7	-4.1	-1.1624 ug/L	-1.1624 ppb	16:47:07
3	U 409.014†	-4234.6	976.0	28.830 ug/L	28.830 ppb	16:46:42
3	V 292.402†	-1715.1	76.5	0.5708 ug/L	0.5708 ppb	16:46:47
3	Zn 213.857†	783.2	56.0	0.4701 ug/L	0.4701 ppb	16:47:07
3	SiO2†	459.3	-113.5	-7.2552 ug/L	-7.2552 ppb	16:47:22

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	905258.6	101.62	%	0.644				0.63%
Sc Radial	4491.3	109	%	1.4				1.24%
Y 371.029	739781.7	100.75	%	0.604				0.60%
Y RADIAL	5052.3	104.4	%	1.42				1.36%
Ag 328.068†	-98.5	-0.4542	ug/L	0.21205	-0.4542	ppb	0.21205	46.69%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	50.8	41.955	ug/L	2.7245	41.955	ppb	2.7245	6.49%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.6	0.9932	ug/L	2.97505	0.9932	ppb	2.97505	299.53%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	126.8	2.6526	ug/L	0.52361	2.6526	ppb	0.52361	19.74%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	6.9	0.0515	ug/L	0.05586	0.0515	ppb	0.05586	108.53%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	182.7	0.0618	ug/L	0.01962	0.0618	ppb	0.01962	31.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	7.6	14.028	ug/L	6.2668	14.028	ppb	6.2668	44.67%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                4.0      0.0480 ug/L       0.09388      0.0480 ppb        0.09388 195.66%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -7.6     -0.1396 ug/L       0.18620     -0.1396 ppb        0.18620 133.40%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               28.5      0.2832 ug/L       0.22216      0.2832 ppb        0.22216  78.44%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             1570.0      4.3508 ug/L       0.41396      4.3508 ppb        0.41396   9.51%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -1.0    -11.990 ug/L       10.2031    -11.990 ppb        10.2031  85.10%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       -167.6    -31.936 ug/L        7.8692    -31.936 ppb         7.8692  24.64%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            0.8     33.995 ug/L      128.2650     33.995 ppb       128.2650 377.30%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -41.0     -0.0437 ug/L       0.01201     -0.0437 ppb        0.01201  27.49%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                7.2      0.4771 ug/L       0.20057      0.4771 ppb        0.20057  42.04%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       172.3     53.081 ug/L        5.6229     53.081 ppb         5.6229  10.59%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                2.8      0.0634 ug/L       0.12198      0.0634 ppb        0.12198 192.43%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 6.5      2.5494 ug/L       2.84425      2.5494 ppb        2.84425 111.56%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               24.2      2.6073 ug/L       0.76373      2.6073 ppb        0.76373  29.29%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -0.5     -0.6682 ug/L       6.26176     -0.6682 ppb        6.26176 937.13%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                5.7      1.7698 ug/L       0.87935      1.7698 ppb        0.87935  49.69%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -8.5     -4.7556 ug/L       5.76009     -4.7556 ppb        5.76009 121.12%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              -47.4     -1.4180 ug/L       0.30305     -1.4180 ppb        0.30305  21.37%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                3.6      0.5875 ug/L       0.14400      0.5875 ppb        0.14400  24.51%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              -26.8     -0.1769 ug/L       0.05245     -0.1769 ppb        0.05245  29.65%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              146.9      0.2064 ug/L       0.14211      0.2064 ppb        0.14211  68.87%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                0.3      0.0790 ug/L       1.08676      0.0790 ppb        1.08676 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               936.3     27.658 ug/L        1.1985     27.658 ppb         1.1985   4.33%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               119.0      0.8533 ug/L       0.48382      0.8533 ppb        0.48382  56.70%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               69.4      0.5833 ug/L       0.12270      0.5833 ppb        0.12270  21.03%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    -86.1     -5.5004 ug/L       1.72060     -5.5004 ppb        1.72060  31.28%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
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Analysis Begun

Start Time: 2/1/2010 17:04:26 **Plasma On Time: 2/1/2010 05:43:14**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\020110.sif
Batch ID:
Results Data Set: 020110
Results Library: C:\pe\Optima3\Results\Results.mdb

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Sequence No.: 1 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 2/1/2010 17:04:27**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4520.1	4520.1	110	%			17:06:19
1	Y RADIAL	5033.1	5033.1	104.0	%			17:06:19
1	Al 396.153Radial†	6233.7	5879.6	4830.7	ug/L	4830.7	ppb	17:06:19
1	Ca 317.933Radial†	2951.5	2680.5	4962.0	ug/L	4962.0	ppb	17:06:39
1	Fe 238.204 Radial†	483.6	431.3	5026.9	ug/L	5026.9	ppb	17:06:39
1	K 766.490 Radial†	30249.2	24984.2	4749.3	ug/L	4749.3	ppb	17:06:19
1	Mg 279.077 IEC†	135.2	123.4	5200.8	ug/L	5200.8	ppb	17:06:39
1	Na 589.592 Radial†	33570.0	32291.7	9950.7	ug/L	9950.7	ppb	17:06:19
1	Sr 421.552†	81361.1	74222.0	490.02	ug/L	490.02	ppb	17:06:19
1	Sc 361.383	903485.0	903485.0	101.42	%			17:07:38
1	Y 371.029	728529.9	728529.9	99.221	%			17:07:38
1	Ag 328.068†	113713.8	111496.0	490.92	ug/L	490.92	ppb	17:07:38
1	As 188.979†	1269.4	1280.4	496.05	ug/L	496.05	ppb	17:07:58
1	B 249.677†	22321.8	22770.1	473.88	ug/L	473.88	ppb	17:07:38
1	Ba 233.527†	68183.3	67243.3	492.72	ug/L	492.72	ppb	17:07:38
1	Be 313.107†	1466366.4	1450223.3	487.70	ug/L	487.70	ppb	17:07:38
1	Cd 226.502†	48470.4	47995.3	495.49	ug/L	495.49	ppb	17:07:38
1	Co 228.616†	26795.3	26505.0	488.64	ug/L	488.64	ppb	17:07:58
1	Cr 267.716†	48493.6	47752.3	492.18	ug/L	492.18	ppb	17:07:38
1	Cu 324.752†	186344.7	176846.8	491.87	ug/L	491.87	ppb	17:07:38
1	Mn 257.610†	499032.0	491508.0	493.43	ug/L	493.43	ppb	17:07:38
1	Mo 202.031†	7553.1	7442.1	495.04	ug/L	495.04	ppb	17:07:58
1	Ni 231.604†	22344.7	21946.4	488.73	ug/L	488.73	ppb	17:07:58
1	P 214.914†	5001.1	4707.7	2348.4	ug/L	2348.4	ppb	17:07:58
1	Pb 220.353†	4605.1	4620.2	497.30	ug/L	497.30	ppb	17:07:58
1	S 181.975 Axial†	842.7	782.0	954.44	ug/L	954.44	ppb	17:07:58
1	Sb 206.836†	1646.8	1585.3	502.11	ug/L	502.11	ppb	17:07:58
1	Se 196.026†	878.7	892.3	513.01	ug/L	513.01	ppb	17:07:58
1	Si 251.611†	83949.5	82237.5	2441.8	ug/L	2441.8	ppb	17:07:38
1	Sn 189.927†	3081.5	3028.9	490.15	ug/L	490.15	ppb	17:07:58
1	Ti 334.940†	336658.6	333745.8	498.52	ug/L	498.52	ppb	17:07:38
1	Tl 190.801†	1722.7	1743.1	495.19	ug/L	495.19	ppb	17:07:58
1	U 409.014†	11877.4	16824.1	495.29	ug/L	495.29	ppb	17:07:38
1	V 292.402†	72952.4	73682.4	496.79	ug/L	496.79	ppb	17:07:38
1	Zn 213.857†	59371.7	57830.6	486.38	ug/L	486.38	ppb	17:07:38
1	SiO2†	83626.9	81892.9	5208.8	ug/L	5208.8	ppb	17:08:58
2	Sc Radial	4636.7	4636.7	112	%			17:06:44
2	Y RADIAL	5174.0	5174.0	106.9	%			17:06:44
2	Al 396.153Radial†	6021.9	5548.1	4557.0	ug/L	4557.0	ppb	17:06:44
2	Ca 317.933Radial†	2876.0	2545.6	4712.3	ug/L	4712.3	ppb	17:07:04
2	Fe 238.204 Radial†	475.0	412.5	4808.2	ug/L	4808.2	ppb	17:07:04
2	K 766.490 Radial†	29342.0	23482.9	4463.8	ug/L	4463.8	ppb	17:06:44
2	Mg 279.077 IEC†	128.8	114.6	4831.3	ug/L	4831.3	ppb	17:07:04
2	Na 589.592 Radial†	32528.3	30594.5	9427.7	ug/L	9427.7	ppb	17:06:44
2	Sr 421.552†	79115.6	70357.1	464.51	ug/L	464.51	ppb	17:06:44
2	Sc 361.383	898415.2	898415.2	100.85	%			17:08:05
2	Y 371.029	724172.6	724172.6	98.628	%			17:08:05

2	Ag 328.068†	112673.3	111097.0	489.09 ug/L	489.09 ppb	17:08:05
2	As 188.979†	1254.2	1272.3	492.90 ug/L	492.90 ppb	17:08:25
2	B 249.677†	22156.0	22730.0	473.07 ug/L	473.07 ppb	17:08:05
2	Ba 233.527†	67815.1	67257.5	492.81 ug/L	492.81 ppb	17:08:05
2	Be 313.107†	1452052.1	1444188.7	485.67 ug/L	485.67 ppb	17:08:05
2	Cd 226.502†	47999.6	47798.2	493.48 ug/L	493.48 ppb	17:08:05
2	Co 228.616†	26647.2	26507.2	488.69 ug/L	488.69 ppb	17:08:25
2	Cr 267.716†	48023.2	47555.7	490.15 ug/L	490.15 ppb	17:08:05
2	Cu 324.752†	185062.4	176612.2	491.21 ug/L	491.21 ppb	17:08:05
2	Mn 257.610†	495982.9	491261.2	493.18 ug/L	493.18 ppb	17:08:05
2	Mo 202.031†	7493.7	7425.2	493.90 ug/L	493.90 ppb	17:08:25
2	Ni 231.604†	22236.3	21963.3	489.10 ug/L	489.10 ppb	17:08:25
2	P 214.914†	4975.7	4710.4	2350.0 ug/L	2350.0 ppb	17:08:25
2	Pb 220.353†	4565.1	4606.2	495.75 ug/L	495.75 ppb	17:08:25
2	S 181.975 Axial†	838.4	782.5	954.99 ug/L	954.99 ppb	17:08:25
2	Sb 206.836†	1635.7	1583.5	501.54 ug/L	501.54 ppb	17:08:25
2	Se 196.026†	860.7	879.4	505.12 ug/L	505.12 ppb	17:08:25
2	Si 251.611†	83364.3	82124.4	2438.4 ug/L	2438.4 ppb	17:08:05
2	Sn 189.927†	3077.1	3041.7	492.18 ug/L	492.18 ppb	17:08:25
2	Ti 334.940†	334135.1	333116.8	497.57 ug/L	497.57 ppb	17:08:05
2	Tl 190.801†	1708.7	1738.7	493.96 ug/L	493.96 ppb	17:08:25
2	U 409.014†	11898.6	16911.2	497.89 ug/L	497.89 ppb	17:08:05
2	V 292.402†	72210.2	73352.3	494.61 ug/L	494.61 ppb	17:08:05
2	Zn 213.857†	58819.2	57613.2	484.56 ug/L	484.56 ppb	17:08:05
2	SiO2†	83821.4	82551.1	5250.8 ug/L	5250.8 ppb	17:09:03
3	Sc Radial	4408.3	4408.3	107 %		17:07:09
3	Y RADIAL	4889.5	4889.5	101.0 %		17:07:09
3	Al 396.153Radial†	6245.3	6034.7	4958.9 ug/L	4958.9 ppb	17:07:09
3	Ca 317.933Radial†	2891.5	2692.7	4984.5 ug/L	4984.5 ppb	17:07:29
3	Fe 238.204 Radial†	481.9	440.9	5138.2 ug/L	5138.2 ppb	17:07:29
3	K 766.490 Radial†	30111.4	25555.1	4857.9 ug/L	4857.9 ppb	17:07:09
3	Mg 279.077 IEC†	133.1	124.7	5252.4 ug/L	5252.4 ppb	17:07:29
3	Na 589.592 Radial†	33358.0	32870.0	10129 ug/L	10129 ppb	17:07:09
3	Sr 421.552†	80956.8	75726.0	499.95 ug/L	499.95 ppb	17:07:09
3	Sc 361.383	906367.2	906367.2	101.74 %		17:08:33
3	Y 371.029	729807.2	729807.2	99.395 %		17:08:33
3	Ag 328.068†	113986.1	111407.0	490.55 ug/L	490.55 ppb	17:08:33
3	As 188.979†	1244.8	1252.2	485.27 ug/L	485.27 ppb	17:08:53
3	B 249.677†	22467.0	22842.9	475.39 ug/L	475.39 ppb	17:08:33
3	Ba 233.527†	68411.5	67253.8	492.80 ug/L	492.80 ppb	17:08:33
3	Be 313.107†	1466062.3	1445326.7	486.06 ug/L	486.06 ppb	17:08:33
3	Cd 226.502†	48645.2	48015.2	495.68 ug/L	495.68 ppb	17:08:33
3	Co 228.616†	26743.2	26369.8	486.14 ug/L	486.14 ppb	17:08:53
3	Cr 267.716†	48548.0	47653.7	491.17 ug/L	491.17 ppb	17:08:33
3	Cu 324.752†	187688.0	177582.9	493.93 ug/L	493.93 ppb	17:08:33
3	Mn 257.610†	500884.2	491763.8	493.70 ug/L	493.70 ppb	17:08:33
3	Mo 202.031†	7530.0	7395.7	491.97 ug/L	491.97 ppb	17:08:53
3	Ni 231.604†	22313.7	21845.9	486.49 ug/L	486.49 ppb	17:08:53
3	P 214.914†	5035.8	4726.2	2357.5 ug/L	2357.5 ppb	17:08:53
3	Pb 220.353†	4606.5	4607.1	495.90 ug/L	495.90 ppb	17:08:53
3	S 181.975 Axial†	842.8	779.4	951.24 ug/L	951.24 ppb	17:08:53
3	Sb 206.836†	1651.2	1584.5	501.75 ug/L	501.75 ppb	17:08:53
3	Se 196.026†	875.5	886.4	510.12 ug/L	510.12 ppb	17:08:53
3	Si 251.611†	84321.6	82340.0	2444.9 ug/L	2444.9 ppb	17:08:33
3	Sn 189.927†	3086.7	3024.3	489.42 ug/L	489.42 ppb	17:08:53
3	Ti 334.940†	337936.4	333946.2	498.82 ug/L	498.82 ppb	17:08:33
3	Tl 190.801†	1717.7	1732.7	492.29 ug/L	492.29 ppb	17:08:53
3	U 409.014†	11933.9	16842.4	495.82 ug/L	495.82 ppb	17:08:33
3	V 292.402†	72836.8	73340.1	494.46 ug/L	494.46 ppb	17:08:33
3	Zn 213.857†	59637.7	57906.0	487.02 ug/L	487.02 ppb	17:08:33
3	SiO2†	83024.9	81039.0	5154.4 ug/L	5154.4 ppb	17:09:09

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	902755.8	101.34	%	0.452				0.45%
Sc Radial	4521.7	110	%	2.8				2.52%
Y 371.029	727503.2	99.082	%	0.4024				0.41%
Y RADIAL	5032.2	103.9	%	2.94				2.83%
Ag 328.068†	111333.3	490.19	ug/L	0.966	490.19	ppb	0.966	0.20%

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   QC value within limits for Ag 328.068  Recovery = 98.04%
Al 396.153Radial†       5820.8      4782.2 ug/L        205.28      4782.2 ppb        205.28   4.29%
   QC value within limits for Al 396.153Radial  Recovery = 95.64%
As 188.979†             1268.3      491.41 ug/L         5.544      491.41 ppb         5.544   1.13%
   QC value within limits for As 188.979  Recovery = 98.28%
B 249.677†             22781.0      474.11 ug/L         1.175      474.11 ppb         1.175   0.25%
   QC value within limits for B 249.677  Recovery = 94.82%
Ba 233.527†            67251.5      492.78 ug/L         0.049      492.78 ppb         0.049   0.01%
   QC value within limits for Ba 233.527  Recovery = 98.56%
Be 313.107†          1446579.6      486.48 ug/L         1.076      486.48 ppb         1.076   0.22%
   QC value within limits for Be 313.107  Recovery = 97.30%
Ca 317.933Radial†       2639.6      4886.3 ug/L       151.07      4886.3 ppb       151.07   3.09%
   QC value within limits for Ca 317.933Radial  Recovery = 97.73%
Cd 226.502†            47936.3      494.88 ug/L         1.221      494.88 ppb         1.221   0.25%
   QC value within limits for Cd 226.502  Recovery = 98.98%
Co 228.616†            26460.7      487.82 ug/L         1.457      487.82 ppb         1.457   0.30%
   QC value within limits for Co 228.616  Recovery = 97.56%
Cr 267.716†            47653.9      491.17 ug/L         1.016      491.17 ppb         1.016   0.21%
   QC value within limits for Cr 267.716  Recovery = 98.23%
Cu 324.752†           177014.0      492.34 ug/L         1.417      492.34 ppb         1.417   0.29%
   QC value within limits for Cu 324.752  Recovery = 98.47%
Fe 238.204 Radial†       428.2      4991.1 ug/L       167.87      4991.1 ppb       167.87   3.36%
   QC value within limits for Fe 238.204 Radial  Recovery = 99.82%
K 766.490 Radial†      24674.1      4690.4 ug/L       203.55      4690.4 ppb       203.55   4.34%
   QC value within limits for K 766.490 Radial  Recovery = 93.81%
Mg 279.077 IEC†          120.9      5094.8 ug/L       229.68      5094.8 ppb       229.68   4.51%
   QC value within limits for Mg 279.077 IEC  Recovery = 101.90%
Mn 257.610†           491511.0      493.44 ug/L         0.260      493.44 ppb         0.260   0.05%
   QC value within limits for Mn 257.610  Recovery = 98.69%
Mo 202.031†             7421.0      493.64 ug/L         1.553      493.64 ppb         1.553   0.31%
   QC value within limits for Mo 202.031  Recovery = 98.73%
Na 589.592 Radial†     31918.7      9835.8 ug/L       364.46      9835.8 ppb       364.46   3.71%
   QC value within limits for Na 589.592 Radial  Recovery = 98.36%
Ni 231.604†            21918.6      488.11 ug/L         1.413      488.11 ppb         1.413   0.29%
   QC value within limits for Ni 231.604  Recovery = 97.62%
P 214.914†              4714.8      2352.0 ug/L          4.85      2352.0 ppb          4.85   0.21%
   QC value within limits for P 214.914  Recovery = 94.08%
Pb 220.353†             4611.2      496.31 ug/L         0.853      496.31 ppb         0.853   0.17%
   QC value within limits for Pb 220.353  Recovery = 99.26%
S 181.975 Axial†         781.3      953.56 ug/L         2.027      953.56 ppb         2.027   0.21%
   QC value within limits for S 181.975 Axial  Recovery = 95.36%
Sb 206.836†             1584.4      501.80 ug/L         0.287      501.80 ppb         0.287   0.06%
   QC value within limits for Sb 206.836  Recovery = 100.36%
Se 196.026†              886.1      509.42 ug/L         3.993      509.42 ppb         3.993   0.78%
   QC value within limits for Se 196.026  Recovery = 101.88%
Si 251.611†            82233.9      2441.7 ug/L          3.22      2441.7 ppb          3.22   0.13%
   QC value within limits for Si 251.611  Recovery = 97.67%
Sn 189.927†             3031.6      490.58 ug/L         1.433      490.58 ppb         1.433   0.29%
   QC value within limits for Sn 189.927  Recovery = 98.12%
Sr 421.552†            73435.0      484.83 ug/L        18.286      484.83 ppb        18.286   3.77%
   QC value within limits for Sr 421.552  Recovery = 96.97%
Ti 334.940†           333602.9      498.30 ug/L         0.648      498.30 ppb         0.648   0.13%
   QC value within limits for Ti 334.940  Recovery = 99.66%
Tl 190.801†             1738.2      493.81 ug/L         1.453      493.81 ppb         1.453   0.29%
   QC value within limits for Tl 190.801  Recovery = 98.76%
U 409.014†             16859.2      496.33 ug/L         1.375      496.33 ppb         1.375   0.28%
   QC value within limits for U 409.014  Recovery = 99.27%
V 292.402†             73458.3      495.29 ug/L         1.306      495.29 ppb         1.306   0.26%
   QC value within limits for V 292.402  Recovery = 99.06%
Zn 213.857†            57783.3      485.99 ug/L         1.279      485.99 ppb         1.279   0.26%
   QC value within limits for Zn 213.857  Recovery = 97.20%
SiO2†                  81827.7      5204.7 ug/L        48.32      5204.7 ppb        48.32   0.93%
   QC value within limits for SiO2  Recovery = 97.33%
All analyte(s) passed QC.
```

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 2/1/2010 17:11:18
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4183.0	4183.0	101	%			17:13:31
1	Y RADIAL	4799.6	4799.6	99.14	%			17:13:11
1	Al 396.153Radial†	-170.2	22.2	18.332	ug/L	18.332	ppb	17:13:11
1	Ca 317.933Radial†	18.0	4.4	8.1497	ug/L	8.1497	ppb	17:13:31
1	Fe 238.204 Radial†	10.5	0.3	2.9009	ug/L	2.9009	ppb	17:13:31
1	K 766.490 Radial†	2563.1	-96.4	-18.376	ug/L	-18.376	ppb	17:13:11
1	Mg 279.077 IEC†	0.4	0.4	18.050	ug/L	18.050	ppb	17:13:31
1	Na 589.592 Radial†	-1543.1	130.4	40.172	ug/L	40.172	ppb	17:13:11
1	Sr 421.552†	27.2	-9.6	-0.0633	ug/L	-0.0633	ppb	17:13:11
1	Sc 361.383	883603.0	883603.0	99.189	%			17:14:28
1	Y 371.029	725805.8	725805.8	98.850	%			17:14:28
1	Ag 328.068†	500.6	-119.8	-0.5329	ug/L	-0.5329	ppb	17:14:28
1	As 188.979†	-26.0	2.5	0.9625	ug/L	0.9625	ppb	17:14:48
1	B 249.677†	-607.0	149.1	3.1181	ug/L	3.1181	ppb	17:14:48
1	Ba 233.527†	-10.6	4.6	0.0348	ug/L	0.0348	ppb	17:14:48
1	Be 313.107†	-4151.7	217.4	0.0733	ug/L	0.0733	ppb	17:14:28
1	Cd 226.502†	-199.3	3.1	0.0350	ug/L	0.0350	ppb	17:14:48
1	Co 228.616†	-100.6	-16.3	-0.3007	ug/L	-0.3007	ppb	17:14:48
1	Cr 267.716†	112.7	51.8	0.5278	ug/L	0.5278	ppb	17:14:28
1	Cu 324.752†	7982.8	1161.2	3.2218	ug/L	3.2218	ppb	17:14:28
1	Mn 257.610†	500.8	-26.9	-0.0275	ug/L	-0.0275	ppb	17:14:48
1	Mo 202.031†	7.3	2.2	0.1435	ug/L	0.1435	ppb	17:14:48
1	Ni 231.604†	85.4	1.0	0.0220	ug/L	0.0220	ppb	17:14:48
1	P 214.914†	229.7	8.3	3.6854	ug/L	3.6854	ppb	17:14:48
1	Pb 220.353†	-60.0	19.1	2.0537	ug/L	2.0537	ppb	17:14:48
1	S 181.975 Axial†	55.0	6.6	8.0561	ug/L	8.0561	ppb	17:14:48
1	Sb 206.836†	45.8	7.8	2.3908	ug/L	2.3908	ppb	17:14:48
1	Se 196.026†	-24.8	1.0	0.5570	ug/L	0.5570	ppb	17:14:48
1	Si 251.611†	478.8	-53.0	-1.5791	ug/L	-1.5791	ppb	17:14:48
1	Sn 189.927†	11.9	2.5	0.4105	ug/L	0.4105	ppb	17:14:48
1	Ti 334.940†	-1684.8	105.8	0.1511	ug/L	0.1511	ppb	17:14:28
1	Tl 190.801†	-43.5	0.6	0.1761	ug/L	0.1761	ppb	17:14:48
1	U 409.014†	-4578.5	497.2	14.686	ug/L	14.686	ppb	17:14:28
1	V 292.402†	-1653.0	85.7	0.5996	ug/L	0.5996	ppb	17:14:28
1	Zn 213.857†	781.9	79.2	0.6671	ug/L	0.6671	ppb	17:14:48
1	SiO2†	478.2	-80.1	-5.1118	ug/L	-5.1118	ppb	17:15:44
2	Sc Radial	4247.2	4247.2	103	%			17:13:56
2	Y RADIAL	4895.6	4895.6	101.1	%			17:13:36
2	Al 396.153Radial†	-126.6	67.1	55.375	ug/L	55.375	ppb	17:13:36
2	Ca 317.933Radial†	23.0	9.0	16.619	ug/L	16.619	ppb	17:13:56
2	Fe 238.204 Radial†	10.5	0.1	1.4227	ug/L	1.4227	ppb	17:13:56
2	K 766.490 Radial†	2675.6	-25.4	-4.8479	ug/L	-4.8479	ppb	17:13:36
2	Mg 279.077 IEC†	1.9	1.9	78.957	ug/L	78.957	ppb	17:13:56
2	Na 589.592 Radial†	-1563.9	133.2	41.050	ug/L	41.050	ppb	17:13:36
2	Sr 421.552†	32.1	-5.2	-0.0347	ug/L	-0.0347	ppb	17:13:36
2	Sc 361.383	903631.4	903631.4	101.44	%			17:14:54
2	Y 371.029	742223.6	742223.6	101.09	%			17:14:54
2	Ag 328.068†	481.1	-150.3	-0.6668	ug/L	-0.6668	ppb	17:14:54
2	As 188.979†	-28.6	0.6	0.2164	ug/L	0.2164	ppb	17:15:14
2	B 249.677†	-591.7	177.8	3.7167	ug/L	3.7167	ppb	17:15:14
2	Ba 233.527†	-2.6	12.7	0.0955	ug/L	0.0955	ppb	17:15:14
2	Be 313.107†	-4262.7	200.7	0.0681	ug/L	0.0681	ppb	17:14:54
2	Cd 226.502†	-192.6	14.2	0.1503	ug/L	0.1503	ppb	17:15:14
2	Co 228.616†	-76.8	9.5	0.1750	ug/L	0.1750	ppb	17:15:14
2	Cr 267.716†	163.0	98.9	1.0124	ug/L	1.0124	ppb	17:14:54
2	Cu 324.752†	8144.0	1141.8	3.1663	ug/L	3.1663	ppb	17:14:54
2	Mn 257.610†	513.9	-25.1	-0.0283	ug/L	-0.0283	ppb	17:15:14
2	Mo 202.031†	16.1	10.6	0.7058	ug/L	0.7058	ppb	17:15:14
2	Ni 231.604†	92.7	6.2	0.1390	ug/L	0.1390	ppb	17:15:14

2	P 214.914†	249.9	23.1	11.399 ug/L	11.399 ppb	17:15:14
2	Pb 220.353†	-67.0	13.6	1.4738 ug/L	1.4738 ppb	17:15:14
2	S 181.975 Axial†	49.2	-0.3	-0.4372 ug/L	-0.4372 ppb	17:15:14
2	Sb 206.836†	52.4	13.2	4.0600 ug/L	4.0600 ppb	17:15:14
2	Se 196.026†	-24.9	1.4	0.7753 ug/L	0.7753 ppb	17:15:14
2	Si 251.611†	479.1	-63.4	-1.8957 ug/L	-1.8957 ppb	17:15:14
2	Sn 189.927†	11.5	1.9	0.3121 ug/L	0.3121 ppb	17:15:14
2	Ti 334.940†	-1615.2	212.0	0.3047 ug/L	0.3047 ppb	17:14:54
2	Tl 190.801†	-33.6	11.4	3.2056 ug/L	3.2056 ppb	17:15:14
2	U 409.014†	-4595.6	582.6	17.207 ug/L	17.207 ppb	17:14:54
2	V 292.402†	-1610.1	164.9	1.1406 ug/L	1.1406 ppb	17:14:54
2	Zn 213.857†	794.0	73.6	0.6191 ug/L	0.6191 ppb	17:15:14
2	SiO2†	533.8	-36.0	-2.3144 ug/L	-2.3144 ppb	17:15:49
3	Sc Radial	4226.0	4226.0	102 %		17:14:21
3	Y RADIAL	5020.7	5020.7	103.7 %		17:14:01
3	Al 396.153Radial†	-175.5	18.8	15.485 ug/L	15.485 ppb	17:14:01
3	Ca 317.933Radial†	17.4	3.7	6.8398 ug/L	6.8398 ppb	17:14:21
3	Fe 238.204 Radial†	11.8	1.4	16.692 ug/L	16.692 ppb	17:14:21
3	K 766.490 Radial†	2718.2	29.3	5.5542 ug/L	5.5542 ppb	17:14:01
3	Mg 279.077 IEC†	-0.1	-0.0	-0.0921 ug/L	-0.0921 ppb	17:14:21
3	Na 589.592 Radial†	-1584.4	105.5	32.512 ug/L	32.512 ppb	17:14:01
3	Sr 421.552†	-26.1	-62.0	-0.4091 ug/L	-0.4091 ppb	17:14:01
3	Sc 361.383	896686.3	896686.3	100.66 %		17:15:19
3	Y 371.029	735449.3	735449.3	100.16 %		17:15:19
3	Ag 328.068†	463.6	-164.0	-0.7205 ug/L	-0.7205 ppb	17:15:19
3	As 188.979†	-26.1	2.8	1.0877 ug/L	1.0877 ppb	17:15:39
3	B 249.677†	-577.3	187.6	3.9208 ug/L	3.9208 ppb	17:15:39
3	Ba 233.527†	-19.9	-4.5	-0.0307 ug/L	-0.0307 ppb	17:15:39
3	Be 313.107†	-4232.4	198.3	0.0672 ug/L	0.0672 ppb	17:15:19
3	Cd 226.502†	-187.8	17.5	0.1823 ug/L	0.1823 ppb	17:15:39
3	Co 228.616†	-100.9	-15.1	-0.2796 ug/L	-0.2796 ppb	17:15:39
3	Cr 267.716†	99.1	36.6	0.3726 ug/L	0.3726 ppb	17:15:19
3	Cu 324.752†	8013.6	1074.4	2.9818 ug/L	2.9818 ppb	17:15:19
3	Mn 257.610†	505.0	-30.1	-0.0286 ug/L	-0.0286 ppb	17:15:39
3	Mo 202.031†	4.5	-0.7	-0.0476 ug/L	-0.0476 ppb	17:15:39
3	Ni 231.604†	112.2	26.3	0.5852 ug/L	0.5852 ppb	17:15:39
3	P 214.914†	243.2	18.4	8.9549 ug/L	8.9549 ppb	17:15:39
3	Pb 220.353†	-73.6	6.5	0.7019 ug/L	0.7019 ppb	17:15:39
3	S 181.975 Axial†	41.5	-7.6	-9.3197 ug/L	-9.3197 ppb	17:15:39
3	Sb 206.836†	47.5	8.8	2.6998 ug/L	2.6998 ppb	17:15:39
3	Se 196.026†	-25.9	0.3	0.2084 ug/L	0.2084 ppb	17:15:39
3	Si 251.611†	493.1	-45.8	-1.3640 ug/L	-1.3640 ppb	17:15:39
3	Sn 189.927†	14.4	4.9	0.7859 ug/L	0.7859 ppb	17:15:39
3	Ti 334.940†	-1616.0	199.0	0.2922 ug/L	0.2922 ppb	17:15:19
3	Tl 190.801†	-32.7	12.0	3.3868 ug/L	3.3868 ppb	17:15:39
3	U 409.014†	-4686.3	457.4	13.509 ug/L	13.509 ppb	17:15:19
3	V 292.402†	-1668.3	94.8	0.6527 ug/L	0.6527 ppb	17:15:19
3	Zn 213.857†	778.2	64.0	0.5333 ug/L	0.5333 ppb	17:15:39
3	SiO2†	455.4	-109.8	-7.0001 ug/L	-7.0001 ppb	17:15:54

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	894640.2	100.43	%	1.142				1.14%
Sc Radial	4218.7	102	%	0.8				0.78%
Y 371.029	734492.9	100.03	%	1.124				1.12%
Y RADIAL	4905.3	101.3	%	2.29				2.26%
Ag 328.068†	-144.7	-0.6400	ug/L	0.09659	-0.6400	ppb	0.09659	15.09%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	36.0	29.731	ug/L	22.2545	29.731	ppb	22.2545	74.85%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.0	0.7555	ug/L	0.47105	0.7555	ppb	0.47105	62.35%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	171.5	3.5852	ug/L	0.41718	3.5852	ppb	0.41718	11.64%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	4.3	0.0332	ug/L	0.06314	0.0332	ppb	0.06314	190.26%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	205.5	0.0695	ug/L	0.00331	0.0695	ppb	0.00331	4.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	5.7	10.536	ug/L	5.3082	10.536	ppb	5.3082	50.38%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                11.6      0.1225 ug/L       0.07747      0.1225 ppb        0.07747  63.22%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -7.3     -0.1351 ug/L       0.26878     -0.1351 ppb        0.26878 198.99%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                62.4      0.6376 ug/L       0.33371      0.6376 ppb        0.33371  52.34%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              1125.8      3.1233 ug/L       0.12568      3.1233 ppb        0.12568   4.02%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          0.6      7.0053 ug/L       8.42167      7.0053 ppb        8.42167 120.22%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         -30.8     -5.8898 ug/L      11.99891     -5.8898 ppb       11.99891 203.72%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.8      32.305 ug/L       41.4074      32.305 ppb        41.4074 128.18%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               -27.4     -0.0281 ug/L       0.00056     -0.0281 ppb        0.00056   2.01%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 4.0      0.2672 ug/L       0.39167      0.2672 ppb        0.39167 146.56%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        123.0      37.911 ug/L        4.6966      37.911 ppb         4.6966  12.39%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                11.2      0.2487 ug/L       0.29719      0.2487 ppb        0.29719 119.48%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 16.6      8.0131 ug/L       3.94216      8.0131 ppb        3.94216  49.20%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                13.1      1.4098 ug/L       0.67819      1.4098 ppb        0.67819  48.11%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           -0.5     -0.5669 ug/L       8.68862     -0.5669 ppb        8.68862 >999.9%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 9.9      3.0502 ug/L       0.88806      3.0502 ppb        0.88806  29.11%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                 0.9      0.5136 ug/L       0.28592      0.5136 ppb        0.28592  55.67%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               -54.1     -1.6129 ug/L       0.26749     -1.6129 ppb        0.26749  16.58%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 3.1      0.5028 ug/L       0.25000      0.5028 ppb        0.25000  49.72%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -25.6     -0.1690 ug/L       0.20842     -0.1690 ppb        0.20842 123.30%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               172.3      0.2493 ug/L       0.08530      0.2493 ppb        0.08530  34.22%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 8.0      2.2562 ug/L       1.80367      2.2562 ppb        1.80367  79.94%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                512.4      15.134 ug/L        1.8895      15.134 ppb         1.8895  12.49%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                115.1      0.7976 ug/L       0.29818      0.7976 ppb        0.29818  37.38%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†                72.3      0.6065 ug/L       0.06779      0.6065 ppb        0.06779  11.18%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     -75.3     -4.8088 ug/L       2.35749     -4.8088 ppb        2.35749  49.03%
   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: 1
Date Collected: 2/1/2010 18:26:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4150.3	4150.3	101	%			18:28:22
1	Y RADIAL	4614.6	4614.6	95.32	%			18:28:22
1	Al 396.153Radial†	6004.7	6159.0	5061.8	ug/L	5061.8	ppb	18:28:22
1	Ca 317.933Radial†	2811.1	2781.0	5148.0	ug/L	5148.0	ppb	18:28:42
1	Fe 238.204 Radial†	476.6	463.7	5403.2	ug/L	5403.2	ppb	18:28:42
1	K 766.490 Radial†	29078.2	26280.5	4995.8	ug/L	4995.8	ppb	18:28:22
1	Mg 279.077 IEC†	130.9	130.1	5482.6	ug/L	5482.6	ppb	18:28:42
1	Na 589.592 Radial†	32666.6	34124.0	10515	ug/L	10515	ppb	18:28:22
1	Sr 421.552†	77989.3	77487.6	511.58	ug/L	511.58	ppb	18:28:22
1	Sc 361.383	882596.8	882596.8	99.076	%			18:29:40
1	Y 371.029	709820.3	709820.3	96.673	%			18:29:40
1	Ag 328.068†	111164.0	111575.9	491.38	ug/L	491.38	ppb	18:29:45
1	As 188.979†	1237.3	1277.6	495.02	ug/L	495.02	ppb	18:30:05
1	B 249.677†	22126.4	23093.8	480.57	ug/L	480.57	ppb	18:29:45
1	Ba 233.527†	66137.8	66769.8	489.27	ug/L	489.27	ppb	18:29:45
1	Be 313.107†	1427946.8	1445663.4	486.16	ug/L	486.16	ppb	18:29:40
1	Cd 226.502†	47374.8	48020.6	495.72	ug/L	495.72	ppb	18:29:45
1	Co 228.616†	26530.5	26863.1	495.23	ug/L	495.23	ppb	18:29:45
1	Cr 267.716†	47240.7	47619.3	490.82	ug/L	490.82	ppb	18:29:45
1	Cu 324.752†	182328.3	177141.4	492.71	ug/L	492.71	ppb	18:29:45
1	Mn 257.610†	483051.8	487023.8	488.96	ug/L	488.96	ppb	18:29:40
1	Mo 202.031†	7245.5	7307.9	486.16	ug/L	486.16	ppb	18:30:05
1	Ni 231.604†	22075.2	22195.9	494.28	ug/L	494.28	ppb	18:29:45
1	P 214.914†	4881.0	4703.2	2345.6	ug/L	2345.6	ppb	18:30:05
1	Pb 220.353†	4408.1	4528.8	487.49	ug/L	487.49	ppb	18:30:05
1	S 181.975 Axial†	838.6	797.5	973.27	ug/L	973.27	ppb	18:30:05
1	Sb 206.836†	1631.4	1608.1	508.90	ug/L	508.90	ppb	18:30:05
1	Se 196.026†	853.0	887.0	511.27	ug/L	511.27	ppb	18:30:05
1	Si 251.611†	82548.6	82782.5	2458.1	ug/L	2458.1	ppb	18:29:45
1	Sn 189.927†	3002.0	3020.5	488.84	ug/L	488.84	ppb	18:30:05
1	Ti 334.940†	324136.6	328963.1	491.37	ug/L	491.37	ppb	18:29:40
1	Tl 190.801†	1672.4	1732.5	492.09	ug/L	492.09	ppb	18:30:05
1	U 409.014†	11624.5	16846.0	495.90	ug/L	495.90	ppb	18:29:45
1	V 292.402†	70944.3	73358.0	494.47	ug/L	494.47	ppb	18:29:45
1	Zn 213.857†	58560.3	58397.2	491.12	ug/L	491.12	ppb	18:29:45
1	SiO2†	82570.0	82777.6	5265.5	ug/L	5265.5	ppb	18:31:13
2	Sc Radial	4355.2	4355.2	106	%			18:28:47
2	Y RADIAL	4843.0	4843.0	100.0	%			18:28:47
2	Al 396.153Radial†	6015.9	5888.7	4838.6	ug/L	4838.6	ppb	18:28:47
2	Ca 317.933Radial†	2845.5	2682.0	4964.8	ug/L	4964.8	ppb	18:29:07
2	Fe 238.204 Radial†	475.1	439.9	5127.4	ug/L	5127.4	ppb	18:29:07
2	K 766.490 Radial†	29513.3	25332.1	4815.5	ug/L	4815.5	ppb	18:28:47
2	Mg 279.077 IEC†	131.5	124.6	5249.0	ug/L	5249.0	ppb	18:29:07
2	Na 589.592 Radial†	32995.2	32906.9	10140	ug/L	10140	ppb	18:28:47
2	Sr 421.552†	79036.3	74830.6	494.04	ug/L	494.04	ppb	18:28:47
2	Sc 361.383	880581.3	880581.3	98.850	%			18:30:11
2	Y 371.029	706591.9	706591.9	96.234	%			18:30:11
2	Ag 328.068†	111192.9	111862.0	492.55	ug/L	492.55	ppb	18:30:16
2	As 188.979†	1220.7	1263.7	489.63	ug/L	489.63	ppb	18:30:36
2	B 249.677†	22139.1	23157.8	481.95	ug/L	481.95	ppb	18:30:16
2	Ba 233.527†	66305.8	67092.5	491.62	ug/L	491.62	ppb	18:30:16
2	Be 313.107†	1427309.7	1448317.6	487.05	ug/L	487.05	ppb	18:30:11
2	Cd 226.502†	47338.4	48093.2	496.49	ug/L	496.49	ppb	18:30:16
2	Co 228.616†	26520.8	26914.4	496.18	ug/L	496.18	ppb	18:30:16
2	Cr 267.716†	47210.3	47697.7	491.62	ug/L	491.62	ppb	18:30:16
2	Cu 324.752†	182241.8	177475.1	493.63	ug/L	493.63	ppb	18:30:16
2	Mn 257.610†	484895.0	490004.3	491.93	ug/L	491.93	ppb	18:30:11
2	Mo 202.031†	7247.4	7326.5	487.37	ug/L	487.37	ppb	18:30:36
2	Ni 231.604†	22093.9	22265.8	495.84	ug/L	495.84	ppb	18:30:16

2	P 214.914†	4906.2	4740.0	2364.7 ug/L	2364.7 ppb	18:30:36
2	Pb 220.353†	4387.7	4518.4	486.34 ug/L	486.34 ppb	18:30:36
2	S 181.975 Axial†	826.3	787.0	960.54 ug/L	960.54 ppb	18:30:36
2	Sb 206.836†	1637.4	1618.1	511.94 ug/L	511.94 ppb	18:30:36
2	Se 196.026†	855.8	891.7	513.00 ug/L	513.00 ppb	18:30:36
2	Si 251.611†	82582.3	83007.3	2464.8 ug/L	2464.8 ppb	18:30:16
2	Sn 189.927†	2990.3	3015.7	488.03 ug/L	488.03 ppb	18:30:36
2	Ti 334.940†	325141.5	330728.5	494.01 ug/L	494.01 ppb	18:30:11
2	Tl 190.801†	1674.0	1737.9	493.67 ug/L	493.67 ppb	18:30:36
2	U 409.014†	11576.8	16824.5	495.29 ug/L	495.29 ppb	18:30:16
2	V 292.402†	70928.0	73505.3	495.50 ug/L	495.50 ppb	18:30:16
2	Zn 213.857†	58606.8	58579.5	492.68 ug/L	492.68 ppb	18:30:16
2	SiO2†	82303.2	82698.5	5260.4 ug/L	5260.4 ppb	18:31:18
3	Sc Radial	4404.9	4404.9	107 %		18:29:13
3	Y RADIAL	4911.7	4911.7	101.5 %		18:29:13
3	Al 396.153Radial†	6194.5	5991.7	4923.4 ug/L	4923.4 ppb	18:29:13
3	Ca 317.933Radial†	2850.2	2656.1	4916.8 ug/L	4916.8 ppb	18:29:33
3	Fe 238.204 Radial†	481.7	441.0	5140.0 ug/L	5140.0 ppb	18:29:33
3	K 766.490 Radial†	29302.2	24819.3	4718.0 ug/L	4718.0 ppb	18:29:13
3	Mg 279.077 IEC†	133.6	125.2	5275.5 ug/L	5275.5 ppb	18:29:33
3	Na 589.592 Radial†	32837.8	32407.3	9986.4 ug/L	9986.4 ppb	18:29:13
3	Sr 421.552†	78839.5	73802.6	487.25 ug/L	487.25 ppb	18:29:13
3	Sc 361.383	871892.5	871892.5	97.875 %		18:30:42
3	Y 371.029	699971.8	699971.8	95.332 %		18:30:42
3	Ag 328.068†	110686.6	112465.7	495.19 ug/L	495.19 ppb	18:30:48
3	As 188.979†	1226.4	1281.8	496.59 ug/L	496.59 ppb	18:31:08
3	B 249.677†	22064.5	23304.7	485.01 ug/L	485.01 ppb	18:30:48
3	Ba 233.527†	65745.8	67188.8	492.33 ug/L	492.33 ppb	18:30:48
3	Be 313.107†	1410812.7	1445851.7	486.22 ug/L	486.22 ppb	18:30:42
3	Cd 226.502†	47094.3	48321.1	498.85 ug/L	498.85 ppb	18:30:48
3	Co 228.616†	26396.9	27055.3	498.79 ug/L	498.79 ppb	18:30:48
3	Cr 267.716†	46986.2	47944.7	494.17 ug/L	494.17 ppb	18:30:48
3	Cu 324.752†	181575.4	178631.5	496.84 ug/L	496.84 ppb	18:30:48
3	Mn 257.610†	479136.2	489008.9	490.93 ug/L	490.93 ppb	18:30:42
3	Mo 202.031†	7243.5	7395.6	491.96 ug/L	491.96 ppb	18:31:08
3	Ni 231.604†	21991.7	22384.0	498.47 ug/L	498.47 ppb	18:30:48
3	P 214.914†	4897.7	4780.8	2385.3 ug/L	2385.3 ppb	18:31:08
3	Pb 220.353†	4405.0	4580.3	493.01 ug/L	493.01 ppb	18:31:08
3	S 181.975 Axial†	827.8	796.9	972.56 ug/L	972.56 ppb	18:31:08
3	Sb 206.836†	1627.2	1624.1	514.00 ug/L	514.00 ppb	18:31:08
3	Se 196.026†	855.1	899.6	517.41 ug/L	517.41 ppb	18:31:08
3	Si 251.611†	82194.9	83444.1	2477.7 ug/L	2477.7 ppb	18:30:48
3	Sn 189.927†	3000.8	3056.5	494.61 ug/L	494.61 ppb	18:31:08
3	Ti 334.940†	321124.0	329901.6	492.76 ug/L	492.76 ppb	18:30:42
3	Tl 190.801†	1678.4	1759.3	499.66 ug/L	499.66 ppb	18:31:08
3	U 409.014†	11677.3	17043.9	501.77 ug/L	501.77 ppb	18:30:48
3	V 292.402†	70541.4	73825.4	497.70 ug/L	497.70 ppb	18:30:48
3	Zn 213.857†	58320.7	58878.0	495.19 ug/L	495.19 ppb	18:30:48
3	SiO2†	82021.4	83240.3	5294.8 ug/L	5294.8 ppb	18:31:23

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	878356.9	98.600	%	0.6385				0.65%
Sc Radial	4303.5	104	%	3.3				3.14%
Y 371.029	705461.4	96.080	%	0.6838				0.71%
Y RADIAL	4789.8	98.93	%	3.213				3.25%
Ag 328.068†	111967.8	493.04	ug/L	1.956	493.04	ppb	1.956	0.40%
QC value within limits for Ag 328.068 Recovery = 98.61%								
Al 396.153Radial†	6013.1	4941.3	ug/L	112.68	4941.3	ppb	112.68	2.28%
QC value within limits for Al 396.153Radial Recovery = 98.83%								
As 188.979†	1274.4	493.75	ug/L	3.648	493.75	ppb	3.648	0.74%
QC value within limits for As 188.979 Recovery = 98.75%								
B 249.677†	23185.4	482.51	ug/L	2.274	482.51	ppb	2.274	0.47%
QC value within limits for B 249.677 Recovery = 96.50%								
Ba 233.527†	67017.0	491.07	ug/L	1.603	491.07	ppb	1.603	0.33%
QC value within limits for Ba 233.527 Recovery = 98.21%								
Be 313.107†	1446610.9	486.48	ug/L	0.500	486.48	ppb	0.500	0.10%
QC value within limits for Be 313.107 Recovery = 97.30%								
Ca 317.933Radial†	2706.4	5009.9	ug/L	122.00	5009.9	ppb	122.00	2.44%

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   QC value within limits for Ca 317.933Radial  Recovery = 100.20%
Cd 226.502†            48145.0      497.02 ug/L         1.632      497.02 ppb         1.632   0.33%
   QC value within limits for Cd 226.502  Recovery = 99.40%
Co 228.616†            26944.2      496.73 ug/L         1.842      496.73 ppb         1.842   0.37%
   QC value within limits for Co 228.616  Recovery = 99.35%
Cr 267.716†            47753.9      492.20 ug/L         1.747      492.20 ppb         1.747   0.35%
   QC value within limits for Cr 267.716  Recovery = 98.44%
Cu 324.752†           177749.3      494.39 ug/L         2.168      494.39 ppb         2.168   0.44%
   QC value within limits for Cu 324.752  Recovery = 98.88%
Fe 238.204 Radial†       448.2      5223.5 ug/L        155.68      5223.5 ppb       155.68   2.98%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.47%
K 766.490 Radial†      25477.3      4843.1 ug/L        140.96      4843.1 ppb       140.96   2.91%
   QC value within limits for K 766.490 Radial  Recovery = 96.86%
Mg 279.077 IEC†          126.6      5335.7 ug/L        127.89      5335.7 ppb       127.89   2.40%
   QC value within limits for Mg 279.077 IEC  Recovery = 106.71%
Mn 257.610†           488679.0      490.61 ug/L         1.513      490.61 ppb         1.513   0.31%
   QC value within limits for Mn 257.610  Recovery = 98.12%
Mo 202.031†             7343.3      488.50 ug/L         3.062      488.50 ppb         3.062   0.63%
   QC value within limits for Mo 202.031  Recovery = 97.70%
Na 589.592 Radial†     33146.0       10214 ug/L         272.1       10214 ppb         272.1   2.66%
   QC value within limits for Na 589.592 Radial  Recovery = 102.14%
Ni 231.604†            22281.9      496.20 ug/L         2.118      496.20 ppb         2.118   0.43%
   QC value within limits for Ni 231.604  Recovery = 99.24%
P 214.914†              4741.3      2365.2 ug/L         19.84      2365.2 ppb         19.84   0.84%
   QC value within limits for P 214.914  Recovery = 94.61%
Pb 220.353†             4542.5      488.95 ug/L         3.568      488.95 ppb         3.568   0.73%
   QC value within limits for Pb 220.353  Recovery = 97.79%
S 181.975 Axial†         793.8      968.79 ug/L         7.153      968.79 ppb         7.153   0.74%
   QC value within limits for S 181.975 Axial  Recovery = 96.88%
Sb 206.836†             1616.8      511.61 ug/L         2.566      511.61 ppb         2.566   0.50%
   QC value within limits for Sb 206.836  Recovery = 102.32%
Se 196.026†              892.8      513.89 ug/L         3.165      513.89 ppb         3.165   0.62%
   QC value within limits for Se 196.026  Recovery = 102.78%
Si 251.611†            83078.0      2466.9 ug/L          9.98      2466.9 ppb          9.98   0.40%
   QC value within limits for Si 251.611  Recovery = 98.68%
Sn 189.927†             3030.9      490.49 ug/L         3.592      490.49 ppb         3.592   0.73%
   QC value within limits for Sn 189.927  Recovery = 98.10%
Sr 421.552†            75373.6      497.63 ug/L        12.555      497.63 ppb        12.555   2.52%
   QC value within limits for Sr 421.552  Recovery = 99.53%
Ti 334.940†           329864.4      492.71 ug/L         1.317      492.71 ppb         1.317   0.27%
   QC value within limits for Ti 334.940  Recovery = 98.54%
Tl 190.801†             1743.2      495.14 ug/L         3.996      495.14 ppb         3.996   0.81%
   QC value within limits for Tl 190.801  Recovery = 99.03%
U 409.014†             16904.8      497.65 ug/L         3.576      497.65 ppb         3.576   0.72%
   QC value within limits for U 409.014  Recovery = 99.53%
V 292.402†             73562.9      495.89 ug/L         1.653      495.89 ppb         1.653   0.33%
   QC value within limits for V 292.402  Recovery = 99.18%
Zn 213.857†            58618.2      492.99 ug/L         2.055      492.99 ppb         2.055   0.42%
   QC value within limits for Zn 213.857  Recovery = 98.60%
SiO2†                  82905.4      5273.5 ug/L         18.59      5273.5 ppb         18.59   0.35%
   QC value within limits for SiO2  Recovery = 98.62%
All analyte(s) passed QC.
```

Sequence No.: 14
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 2/1/2010 18:33:33
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4292.7	4292.7	104	%			18:35:25
1	Y RADIAL	4776.5	4776.5	98.66	%			18:35:25
1	Al 396.153Radial†	-183.4	13.8	11.429	ug/L	11.429	ppb	18:35:25
1	Ca 317.933Radial†	17.2	3.2	5.8501	ug/L	5.8501	ppb	18:35:45
1	Fe 238.204 Radial†	11.5	1.0	11.057	ug/L	11.057	ppb	18:35:45
1	K 766.490 Radial†	2718.5	-11.8	-2.2478	ug/L	-2.2478	ppb	18:35:25
1	Mg 279.077 IEC†	1.4	1.4	59.650	ug/L	59.650	ppb	18:35:45
1	Na 589.592 Radial†	-1654.4	62.3	19.203	ug/L	19.203	ppb	18:35:25
1	Sr 421.552†	17.6	-19.5	-0.1287	ug/L	-0.1287	ppb	18:35:25
1	Sc 361.383	874465.8	874465.8	98.164	%			18:36:42
1	Y 371.029	711494.8	711494.8	96.901	%			18:36:42
1	Ag 328.068†	435.6	-180.7	-0.7963	ug/L	-0.7963	ppb	18:36:42
1	As 188.979†	-32.6	-4.5	-1.7298	ug/L	-1.7298	ppb	18:37:02
1	B 249.677†	-548.2	202.7	4.2359	ug/L	4.2359	ppb	18:37:02
1	Ba 233.527†	-0.0	15.3	0.1114	ug/L	0.1114	ppb	18:37:02
1	Be 313.107†	-3995.0	333.3	0.1120	ug/L	0.1120	ppb	18:36:42
1	Cd 226.502†	-195.6	4.8	0.0509	ug/L	0.0509	ppb	18:37:02
1	Co 228.616†	-87.5	-4.0	-0.0744	ug/L	-0.0744	ppb	18:37:02
1	Cr 267.716†	104.7	44.8	0.4570	ug/L	0.4570	ppb	18:36:42
1	Cu 324.752†	8599.4	1873.4	5.2061	ug/L	5.2061	ppb	18:36:42
1	Mn 257.610†	858.8	343.1	0.3429	ug/L	0.3429	ppb	18:37:02
1	Mo 202.031†	6.9	1.9	0.1240	ug/L	0.1240	ppb	18:37:02
1	Ni 231.604†	96.3	13.0	0.2889	ug/L	0.2889	ppb	18:37:02
1	P 214.914†	240.6	21.8	10.296	ug/L	10.296	ppb	18:37:02
1	Pb 220.353†	-59.3	19.3	2.0650	ug/L	2.0650	ppb	18:37:02
1	S 181.975 Axial†	48.4	0.4	0.4989	ug/L	0.4989	ppb	18:37:02
1	Sb 206.836†	46.6	9.1	2.7843	ug/L	2.7843	ppb	18:37:02
1	Se 196.026†	-23.2	2.4	1.3544	ug/L	1.3544	ppb	18:37:02
1	Si 251.611†	672.8	149.6	4.4520	ug/L	4.4520	ppb	18:37:02
1	Sn 189.927†	15.0	5.9	0.9528	ug/L	0.9528	ppb	18:37:02
1	Ti 334.940†	-1720.2	52.0	0.0693	ug/L	0.0693	ppb	18:36:42
1	Tl 190.801†	-39.9	3.8	1.0720	ug/L	1.0720	ppb	18:37:02
1	U 409.014†	-4702.8	322.4	9.5196	ug/L	9.5196	ppb	18:36:42
1	V 292.402†	-1767.6	-48.5	-0.3035	ug/L	-0.3035	ppb	18:36:42
1	Zn 213.857†	878.9	186.2	1.5700	ug/L	1.5700	ppb	18:37:02
1	SiO2†	497.1	-55.8	-3.5633	ug/L	-3.5633	ppb	18:37:58
2	Sc Radial	4357.0	4357.0	106	%			18:35:50
2	Y RADIAL	4871.9	4871.9	100.6	%			18:35:50
2	Al 396.153Radial†	-142.0	55.7	45.981	ug/L	45.981	ppb	18:35:50
2	Ca 317.933Radial†	13.1	-0.9	-1.6745	ug/L	-1.6745	ppb	18:36:10
2	Fe 238.204 Radial†	13.1	2.3	26.739	ug/L	26.739	ppb	18:36:10
2	K 766.490 Radial†	2877.2	100.0	19.021	ug/L	19.021	ppb	18:35:50
2	Mg 279.077 IEC†	0.4	0.5	19.635	ug/L	19.635	ppb	18:36:10
2	Na 589.592 Radial†	-1634.1	105.0	32.352	ug/L	32.352	ppb	18:35:50
2	Sr 421.552†	6.2	-30.6	-0.2019	ug/L	-0.2019	ppb	18:35:50
2	Sc 361.383	881627.9	881627.9	98.967	%			18:37:07
2	Y 371.029	716931.9	716931.9	97.642	%			18:37:07
2	Ag 328.068†	474.1	-145.5	-0.6406	ug/L	-0.6406	ppb	18:37:07
2	As 188.979†	-34.6	-6.2	-2.3743	ug/L	-2.3743	ppb	18:37:27
2	B 249.677†	-569.2	185.9	3.8821	ug/L	3.8821	ppb	18:37:27
2	Ba 233.527†	-6.0	9.2	0.0691	ug/L	0.0691	ppb	18:37:27
2	Be 313.107†	-4260.2	98.4	0.0332	ug/L	0.0332	ppb	18:37:07
2	Cd 226.502†	-211.4	-9.5	-0.0969	ug/L	-0.0969	ppb	18:37:27
2	Co 228.616†	-74.0	10.3	0.1898	ug/L	0.1898	ppb	18:37:27
2	Cr 267.716†	109.6	48.9	0.4976	ug/L	0.4976	ppb	18:37:07
2	Cu 324.752†	8653.1	1856.6	5.1558	ug/L	5.1558	ppb	18:37:07
2	Mn 257.610†	537.3	11.1	0.0130	ug/L	0.0130	ppb	18:37:27
2	Mo 202.031†	4.9	-0.3	-0.0151	ug/L	-0.0151	ppb	18:37:27
2	Ni 231.604†	93.3	9.1	0.2026	ug/L	0.2026	ppb	18:37:27

2	P 214.914†	228.5	7.6	2.9208	ug/L	2.9208 ppb	18:37:27
2	Pb 220.353†	-65.0	14.0	1.5031	ug/L	1.5031 ppb	18:37:27
2	S 181.975 Axial†	53.5	5.1	6.2637	ug/L	6.2637 ppb	18:37:27
2	Sb 206.836†	50.2	12.3	3.7834	ug/L	3.7834 ppb	18:37:27
2	Se 196.026†	-28.5	-2.9	-1.5005	ug/L	-1.5005 ppb	18:37:27
2	Si 251.611†	554.5	24.6	0.7310	ug/L	0.7310 ppb	18:37:27
2	Sn 189.927†	18.2	9.0	1.4555	ug/L	1.4555 ppb	18:37:27
2	Ti 334.940†	-1741.5	44.7	0.0572	ug/L	0.0572 ppb	18:37:07
2	Tl 190.801†	-51.5	-7.6	-2.1444	ug/L	-2.1444 ppb	18:37:27
2	U 409.014†	-4482.3	584.0	17.246	ug/L	17.246 ppb	18:37:07
2	V 292.402†	-1684.4	50.2	0.3628	ug/L	0.3628 ppb	18:37:07
2	Zn 213.857†	778.1	77.1	0.6432	ug/L	0.6432 ppb	18:37:27
2	SiO2†	513.0	-43.9	-2.7983	ug/L	-2.7983 ppb	18:38:03
3	Sc Radial	4413.2	4413.2	107	%		18:36:15
3	Y RADIAL	4961.4	4961.4	102.5	%		18:36:15
3	Al 396.153Radial†	-219.4	-15.0	-12.434	ug/L	-12.434 ppb	18:36:15
3	Ca 317.933Radial†	16.5	2.1	3.9470	ug/L	3.9470 ppb	18:36:35
3	Fe 238.204 Radial†	11.9	1.0	11.758	ug/L	11.758 ppb	18:36:35
3	K 766.490 Radial†	2741.7	-61.3	-11.685	ug/L	-11.685 ppb	18:36:15
3	Mg 279.077 IEC†	-0.0	0.0	0.9725	ug/L	0.9725 ppb	18:36:35
3	Na 589.592 Radial†	-1670.6	90.5	27.898	ug/L	27.898 ppb	18:36:15
3	Sr 421.552†	57.5	17.3	0.1141	ug/L	0.1141 ppb	18:36:15
3	Sc 361.383	866348.2	866348.2	97.252	%		18:37:33
3	Y 371.029	705420.3	705420.3	96.074	%		18:37:33
3	Ag 328.068†	432.1	-180.2	-0.7888	ug/L	-0.7888 ppb	18:37:33
3	As 188.979†	-23.0	5.1	1.9540	ug/L	1.9540 ppb	18:37:53
3	B 249.677†	-579.9	164.8	3.4445	ug/L	3.4445 ppb	18:37:53
3	Ba 233.527†	-24.3	-9.7	-0.0699	ug/L	-0.0699 ppb	18:37:53
3	Be 313.107†	-4105.3	181.8	0.0613	ug/L	0.0613 ppb	18:37:33
3	Cd 226.502†	-217.0	-19.0	-0.1957	ug/L	-0.1957 ppb	18:37:53
3	Co 228.616†	-85.3	-2.6	-0.0463	ug/L	-0.0463 ppb	18:37:53
3	Cr 267.716†	113.6	55.0	0.5638	ug/L	0.5638 ppb	18:37:33
3	Cu 324.752†	8555.2	1910.0	5.3097	ug/L	5.3097 ppb	18:37:33
3	Mn 257.610†	488.5	-29.5	-0.0285	ug/L	-0.0285 ppb	18:37:53
3	Mo 202.031†	16.5	11.7	0.7809	ug/L	0.7809 ppb	18:37:53
3	Ni 231.604†	99.9	17.6	0.3923	ug/L	0.3923 ppb	18:37:53
3	P 214.914†	226.3	9.5	3.8571	ug/L	3.8571 ppb	18:37:53
3	Pb 220.353†	-77.7	-0.3	-0.0335	ug/L	-0.0335 ppb	18:37:53
3	S 181.975 Axial†	51.8	4.4	5.3384	ug/L	5.3384 ppb	18:37:53
3	Sb 206.836†	42.8	5.6	1.7441	ug/L	1.7441 ppb	18:37:53
3	Se 196.026†	-25.6	-0.3	-0.1360	ug/L	-0.1360 ppb	18:37:53
3	Si 251.611†	504.1	-17.4	-0.5285	ug/L	-0.5285 ppb	18:37:53
3	Sn 189.927†	15.1	6.1	0.9809	ug/L	0.9809 ppb	18:37:53
3	Ti 334.940†	-1674.9	82.1	0.1201	ug/L	0.1201 ppb	18:37:33
3	Tl 190.801†	-29.4	14.3	4.0219	ug/L	4.0219 ppb	18:37:53
3	U 409.014†	-4759.1	219.5	6.4824	ug/L	6.4824 ppb	18:37:33
3	V 292.402†	-1667.8	37.3	0.2696	ug/L	0.2696 ppb	18:37:33
3	Zn 213.857†	785.4	98.5	0.8247	ug/L	0.8247 ppb	18:37:53
3	SiO2†	533.3	-13.8	-0.9035	ug/L	-0.9035 ppb	18:38:08

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	874147.3	98.128	%	0.8582				0.87%
Sc Radial	4354.3	106	%	1.5				1.38%
Y 371.029	711282.3	96.872	%	0.7843				0.81%
Y RADIAL	4869.9	100.6	%	1.91				1.90%
Ag 328.068†	-168.8	-0.7419	ug/L	0.08779	-0.7419	ppb	0.08779	11.83%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	18.2	14.992	ug/L	29.3702	14.992	ppb	29.3702	195.90%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-1.9	-0.7167	ug/L	2.33524	-0.7167	ppb	2.33524	325.84%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	184.5	3.8542	ug/L	0.39644	3.8542	ppb	0.39644	10.29%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	4.9	0.0368	ug/L	0.09483	0.0368	ppb	0.09483	257.37%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	204.5	0.0688	ug/L	0.03996	0.0688	ppb	0.03996	58.07%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.5	2.7075	ug/L	3.91245	2.7075	ppb	3.91245	144.50%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -7.9     -0.0806 ug/L       0.12415     -0.0806 ppb        0.12415 154.08%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                 1.2      0.0230 ug/L       0.14507      0.0230 ppb        0.14507 629.66%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                49.5      0.5061 ug/L       0.05393      0.5061 ppb        0.05393  10.66%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              1880.0      5.2239 ug/L       0.07846      5.2239 ppb        0.07846   1.50%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          1.4     16.518 ug/L        8.8585     16.518 ppb         8.8585  53.63%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†           9.0      1.6961 ug/L      15.72808      1.6961 ppb       15.72808 927.32%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             0.6     26.752 ug/L       29.9793     26.752 ppb        29.9793 112.06%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               108.3      0.1092 ug/L       0.20348      0.1092 ppb        0.20348 186.42%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 4.4      0.2966 ug/L       0.42517      0.2966 ppb        0.42517 143.36%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         85.9     26.484 ug/L        6.6877     26.484 ppb         6.6877  25.25%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                13.2      0.2946 ug/L       0.09497      0.2946 ppb        0.09497  32.24%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 13.0      5.6914 ug/L       4.01539      5.6914 ppb        4.01539  70.55%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                11.0      1.1782 ug/L       1.08630      1.1782 ppb        1.08630  92.20%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            3.3      4.0336 ug/L       3.09597      4.0336 ppb        3.09597  76.75%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 9.0      2.7706 ug/L       1.01972      2.7706 ppb        1.01972  36.80%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -0.3     -0.0941 ug/L       1.42789     -0.0941 ppb        1.42789 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                52.2      1.5515 ug/L       2.58967      1.5515 ppb        2.58967 166.91%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 7.0      1.1298 ug/L       0.28249      1.1298 ppb        0.28249  25.00%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -10.9     -0.0722 ug/L       0.16542     -0.0722 ppb        0.16542 229.27%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                59.6      0.0822 ug/L       0.03337      0.0822 ppb        0.03337  40.59%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 3.5      0.9831 ug/L       3.08412      0.9831 ppb        3.08412 313.70%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                375.3     11.083 ug/L        5.5495     11.083 ppb         5.5495  50.07%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 13.0      0.1096 ug/L       0.36080      0.1096 ppb        0.36080 329.17%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               120.6      1.0126 ug/L       0.49112      1.0126 ppb        0.49112  48.50%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     -37.8     -2.4217 ug/L       1.36932     -2.4217 ppb        1.36932  56.54%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 24
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 2/1/2010 19:41:49
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4243.6	4243.6	103	%			19:44:01
1	Y RADIAL	4564.8	4564.8	94.29	%			19:43:41
1	Al 396.153Radial†	6010.4	6033.2	4957.4	ug/L	4957.4	ppb	19:43:41
1	Ca 317.933Radial†	2792.3	2701.3	5000.4	ug/L	5000.4	ppb	19:44:01
1	Fe 238.204 Radial†	467.2	444.1	5175.8	ug/L	5175.8	ppb	19:44:01
1	K 766.490 Radial†	29278.7	25839.6	4912.0	ug/L	4912.0	ppb	19:43:41
1	Mg 279.077 IEC†	128.0	124.5	5246.2	ug/L	5246.2	ppb	19:44:01
1	Na 589.592 Radial†	32593.9	33339.1	10274	ug/L	10274	ppb	19:43:41
1	Sr 421.552†	78098.2	75888.4	501.03	ug/L	501.03	ppb	19:43:41
1	Sc 361.383	855531.9	855531.9	96.038	%			19:45:00
1	Y 371.029	686414.1	686414.1	93.485	%			19:45:00
1	Ag 328.068†	106955.4	110743.2	487.67	ug/L	487.67	ppb	19:45:00
1	As 188.979†	1205.7	1284.1	497.49	ug/L	497.49	ppb	19:45:20
1	B 249.677†	21182.7	22817.7	474.83	ug/L	474.83	ppb	19:45:00
1	Ba 233.527†	64332.0	67001.3	490.95	ug/L	490.95	ppb	19:45:00
1	Be 313.107†	1391310.5	1453110.2	488.66	ug/L	488.66	ppb	19:45:00
1	Cd 226.502†	46201.7	48311.8	498.74	ug/L	498.74	ppb	19:45:00
1	Co 228.616†	25622.6	26764.8	493.44	ug/L	493.44	ppb	19:45:20
1	Cr 267.716†	45981.5	47816.6	492.85	ug/L	492.85	ppb	19:45:00
1	Cu 324.752†	175069.2	175404.7	487.89	ug/L	487.89	ppb	19:45:00
1	Mn 257.610†	473012.3	491994.0	493.93	ug/L	493.93	ppb	19:45:00
1	Mo 202.031†	7184.2	7475.3	497.27	ug/L	497.27	ppb	19:45:20
1	Ni 231.604†	21386.0	22183.1	494.00	ug/L	494.00	ppb	19:45:20
1	P 214.914†	4861.8	4839.1	2417.4	ug/L	2417.4	ppb	19:45:20
1	Pb 220.353†	4401.4	4662.6	501.86	ug/L	501.86	ppb	19:45:20
1	S 181.975 Axial†	834.4	820.0	1000.8	ug/L	1000.8	ppb	19:45:20
1	Sb 206.836†	1584.5	1611.5	510.32	ug/L	510.32	ppb	19:45:20
1	Se 196.026†	843.9	904.6	520.34	ug/L	520.34	ppb	19:45:20
1	Si 251.611†	79711.6	82464.3	2448.5	ug/L	2448.5	ppb	19:45:00
1	Sn 189.927†	2981.8	3095.4	500.91	ug/L	500.91	ppb	19:45:20
1	Ti 334.940†	315976.9	330816.5	494.15	ug/L	494.15	ppb	19:45:00
1	Tl 190.801†	1656.0	1768.8	502.40	ug/L	502.40	ppb	19:45:20
1	U 409.014†	10422.0	15965.1	469.90	ug/L	469.90	ppb	19:45:00
1	V 292.402†	68483.0	73060.4	492.62	ug/L	492.62	ppb	19:45:00
1	Zn 213.857†	56635.0	58262.3	490.00	ug/L	490.00	ppb	19:45:00
1	SiO2†	80357.4	83110.2	5286.4	ug/L	5286.4	ppb	19:46:21
2	Sc Radial	4115.2	4115.2	99.8	%			19:44:26
2	Y RADIAL	4735.0	4735.0	97.80	%			19:44:06
2	Al 396.153Radial†	5855.2	6059.9	4979.7	ug/L	4979.7	ppb	19:44:06
2	Ca 317.933Radial†	2833.5	2827.2	5233.6	ug/L	5233.6	ppb	19:44:26
2	Fe 238.204 Radial†	474.3	465.4	5423.0	ug/L	5423.0	ppb	19:44:26
2	K 766.490 Radial†	28763.1	26210.5	4982.5	ug/L	4982.5	ppb	19:44:06
2	Mg 279.077 IEC†	131.9	132.3	5574.9	ug/L	5574.9	ppb	19:44:26
2	Na 589.592 Radial†	31614.2	33345.3	10275	ug/L	10275	ppb	19:44:06
2	Sr 421.552†	76157.1	76310.5	503.81	ug/L	503.81	ppb	19:44:06
2	Sc 361.383	875588.0	875588.0	98.289	%			19:45:28
2	Y 371.029	701128.0	701128.0	95.489	%			19:45:28
2	Ag 328.068†	108578.2	109843.3	483.79	ug/L	483.79	ppb	19:45:28
2	As 188.979†	1231.4	1281.6	496.54	ug/L	496.54	ppb	19:45:48
2	B 249.677†	21638.8	22776.5	473.94	ug/L	473.94	ppb	19:45:28
2	Ba 233.527†	65037.5	66184.6	484.97	ug/L	484.97	ppb	19:45:28
2	Be 313.107†	1408658.4	1437576.1	483.44	ug/L	483.44	ppb	19:45:28
2	Cd 226.502†	46671.9	47688.3	492.27	ug/L	492.27	ppb	19:45:28
2	Co 228.616†	26005.6	26543.3	489.35	ug/L	489.35	ppb	19:45:48
2	Cr 267.716†	46408.5	47154.4	486.03	ug/L	486.03	ppb	19:45:28
2	Cu 324.752†	178101.7	174314.3	484.86	ug/L	484.86	ppb	19:45:28
2	Mn 257.610†	479030.5	486835.2	488.77	ug/L	488.77	ppb	19:45:28
2	Mo 202.031†	7278.4	7399.8	492.27	ug/L	492.27	ppb	19:45:48
2	Ni 231.604†	21694.6	21987.0	489.63	ug/L	489.63	ppb	19:45:48

2	P 214.914†	4940.7	4803.4	2399.2 ug/L	2399.2 ppb	19:45:48
2	Pb 220.353†	4464.7	4622.0	497.48 ug/L	497.48 ppb	19:45:48
2	S 181.975 Axial†	834.2	799.9	976.21 ug/L	976.21 ppb	19:45:48
2	Sb 206.836†	1606.4	1595.9	505.37 ug/L	505.37 ppb	19:45:48
2	Se 196.026†	848.7	889.4	512.72 ug/L	512.72 ppb	19:45:48
2	Si 251.611†	80994.6	81868.4	2430.8 ug/L	2430.8 ppb	19:45:28
2	Sn 189.927†	3019.4	3062.5	495.63 ug/L	495.63 ppb	19:45:48
2	Ti 334.940†	320286.0	327664.2	489.45 ug/L	489.45 ppb	19:45:28
2	Tl 190.801†	1667.9	1741.4	494.64 ug/L	494.64 ppb	19:45:48
2	U 409.014†	10776.7	16077.3	473.20 ug/L	473.20 ppb	19:45:28
2	V 292.402†	69265.6	72223.2	486.97 ug/L	486.97 ppb	19:45:28
2	Zn 213.857†	57449.0	57739.7	485.58 ug/L	485.58 ppb	19:45:28
2	SiO2†	81746.4	82606.8	5254.4 ug/L	5254.4 ppb	19:46:26
3	Sc Radial	4090.7	4090.7	99.2 %		19:44:51
3	Y RADIAL	4771.2	4771.2	98.55 %		19:44:31
3	Al 396.153Radial†	5988.1	6229.1	5120.9 ug/L	5120.9 ppb	19:44:31
3	Ca 317.933Radial†	2842.3	2853.1	5281.5 ug/L	5281.5 ppb	19:44:51
3	Fe 238.204 Radial†	474.7	468.6	5459.5 ug/L	5459.5 ppb	19:44:51
3	K 766.490 Radial†	29239.1	26863.3	5106.7 ug/L	5106.7 ppb	19:44:31
3	Mg 279.077 IEC†	130.0	131.2	5526.2 ug/L	5526.2 ppb	19:44:51
3	Na 589.592 Radial†	32340.4	34267.6	10560 ug/L	10560 ppb	19:44:31
3	Sr 421.552†	77892.7	78518.3	518.39 ug/L	518.39 ppb	19:44:31
3	Sc 361.383	925912.9	925912.9	103.94 %		19:45:55
3	Y 371.029	742121.6	742121.6	101.07 %		19:45:55
3	Ag 328.068†	107531.7	102832.3	453.02 ug/L	453.02 ppb	19:45:55
3	As 188.979†	1229.5	1211.7	469.48 ug/L	469.48 ppb	19:46:15
3	B 249.677†	21335.3	21287.9	442.90 ug/L	442.90 ppb	19:45:55
3	Ba 233.527†	64095.0	61681.4	451.99 ug/L	451.99 ppb	19:45:55
3	Be 313.107†	1389903.2	1341636.3	451.17 ug/L	451.17 ppb	19:45:55
3	Cd 226.502†	46086.4	44544.1	459.78 ug/L	459.78 ppb	19:45:55
3	Co 228.616†	25835.2	24941.3	459.82 ug/L	459.82 ppb	19:46:15
3	Cr 267.716†	45532.5	43745.2	450.90 ug/L	450.90 ppb	19:45:55
3	Cu 324.752†	175630.6	162088.3	450.87 ug/L	450.87 ppb	19:45:55
3	Mn 257.610†	471756.0	453347.2	455.17 ug/L	455.17 ppb	19:45:55
3	Mo 202.031†	7230.4	6951.2	462.46 ug/L	462.46 ppb	19:46:15
3	Ni 231.604†	21564.8	20662.4	460.13 ug/L	460.13 ppb	19:46:15
3	P 214.914†	4911.3	4501.9	2249.2 ug/L	2249.2 ppb	19:46:15
3	Pb 220.353†	4434.6	4346.2	467.86 ug/L	467.86 ppb	19:46:15
3	S 181.975 Axial†	833.8	753.3	919.33 ug/L	919.33 ppb	19:46:15
3	Sb 206.836†	1597.6	1498.6	474.56 ug/L	474.56 ppb	19:46:15
3	Se 196.026†	845.6	839.5	485.11 ug/L	485.11 ppb	19:46:15
3	Si 251.611†	79930.4	76365.7	2267.4 ug/L	2267.4 ppb	19:45:55
3	Sn 189.927†	2997.3	2874.3	465.24 ug/L	465.24 ppb	19:46:15
3	Ti 334.940†	315105.2	304968.8	455.57 ug/L	455.57 ppb	19:45:55
3	Tl 190.801†	1671.9	1653.0	469.45 ug/L	469.45 ppb	19:46:15
3	U 409.014†	10604.7	15316.0	450.78 ug/L	450.78 ppb	19:45:55
3	V 292.402†	68280.0	67444.7	454.75 ug/L	454.75 ppb	19:45:55
3	Zn 213.857†	56752.3	53892.5	453.17 ug/L	453.17 ppb	19:45:55
3	SiO2†	81370.1	77724.4	4943.9 ug/L	4943.9 ppb	19:46:31

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	885677.6	99.422	%	4.0703				4.09%
Sc Radial	4149.9	101	%	2.0				1.98%
Y 371.029	709887.9	96.682	%	3.9317				4.07%
Y RADIAL	4690.4	96.88	%	2.276				2.35%
Ag 328.068†	107806.3	474.83	ug/L	18.987	474.83	ppb	18.987	4.00%
QC value within limits for Ag 328.068 Recovery = 94.97%								
Al 396.153Radial†	6107.4	5019.3	ug/L	88.64	5019.3	ppb	88.64	1.77%
QC value within limits for Al 396.153Radial Recovery = 100.39%								
As 188.979†	1259.1	487.84	ug/L	15.906	487.84	ppb	15.906	3.26%
QC value within limits for As 188.979 Recovery = 97.57%								
B 249.677†	22294.0	463.89	ug/L	18.187	463.89	ppb	18.187	3.92%
QC value within limits for B 249.677 Recovery = 92.78%								
Ba 233.527†	64955.8	475.97	ug/L	20.981	475.97	ppb	20.981	4.41%
QC value within limits for Ba 233.527 Recovery = 95.19%								
Be 313.107†	1410774.2	474.42	ug/L	20.305	474.42	ppb	20.305	4.28%
QC value within limits for Be 313.107 Recovery = 94.88%								
Ca 317.933Radial†	2793.9	5171.8	ug/L	150.38	5171.8	ppb	150.38	2.91%

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   QC value within limits for Ca 317.933Radial  Recovery = 103.44%
Cd 226.502†            46848.1      483.60 ug/L        20.879      483.60 ppb        20.879   4.32%
   QC value within limits for Cd 226.502  Recovery = 96.72%
Co 228.616†            26083.1      480.87 ug/L        18.344      480.87 ppb        18.344   3.81%
   QC value within limits for Co 228.616  Recovery = 96.17%
Cr 267.716†            46238.7      476.59 ug/L        22.512      476.59 ppb        22.512   4.72%
   QC value within limits for Cr 267.716  Recovery = 95.32%
Cu 324.752†           170602.4      474.54 ug/L        20.553      474.54 ppb        20.553   4.33%
   QC value within limits for Cu 324.752  Recovery = 94.91%
Fe 238.204 Radial†       459.4      5352.8 ug/L        154.32      5352.8 ppb        154.32   2.88%
   QC value within limits for Fe 238.204 Radial  Recovery = 107.06%
K 766.490 Radial†      26304.5      5000.4 ug/L         98.57      5000.4 ppb         98.57   1.97%
   QC value within limits for K 766.490 Radial  Recovery = 100.01%
Mg 279.077 IEC†          129.3      5449.1 ug/L        177.38      5449.1 ppb        177.38   3.26%
   QC value within limits for Mg 279.077 IEC  Recovery = 108.98%
Mn 257.610†           477392.1      479.29 ug/L        21.046      479.29 ppb        21.046   4.39%
   QC value within limits for Mn 257.610  Recovery = 95.86%
Mo 202.031†             7275.4      484.00 ug/L        18.821      484.00 ppb        18.821   3.89%
   QC value within limits for Mo 202.031  Recovery = 96.80%
Na 589.592 Radial†     33650.7       10370 ug/L         164.6       10370 ppb         164.6   1.59%
   QC value within limits for Na 589.592 Radial  Recovery = 103.70%
Ni 231.604†            21610.8      481.25 ug/L        18.421      481.25 ppb        18.421   3.83%
   QC value within limits for Ni 231.604  Recovery = 96.25%
P 214.914†              4714.8      2355.3 ug/L         92.33      2355.3 ppb         92.33   3.92%
   QC value within limits for P 214.914  Recovery = 94.21%
Pb 220.353†             4543.6      489.07 ug/L        18.497      489.07 ppb        18.497   3.78%
   QC value within limits for Pb 220.353  Recovery = 97.81%
S 181.975 Axial†         791.1      965.43 ug/L        41.774      965.43 ppb        41.774   4.33%
   QC value within limits for S 181.975 Axial  Recovery = 96.54%
Sb 206.836†             1568.7      496.75 ug/L        19.375      496.75 ppb        19.375   3.90%
   QC value within limits for Sb 206.836  Recovery = 99.35%
Se 196.026†              877.9      506.06 ug/L        18.539      506.06 ppb        18.539   3.66%
   QC value within limits for Se 196.026  Recovery = 101.21%
Si 251.611†            80232.8      2382.3 ug/L         99.85      2382.3 ppb         99.85   4.19%
   QC value within limits for Si 251.611  Recovery = 95.29%
Sn 189.927†             3010.7      487.26 ug/L        19.251      487.26 ppb        19.251   3.95%
   QC value within limits for Sn 189.927  Recovery = 97.45%
Sr 421.552†            76905.7      507.74 ug/L         9.325      507.74 ppb         9.325   1.84%
   QC value within limits for Sr 421.552  Recovery = 101.55%
Ti 334.940†           321149.8      479.72 ug/L        21.049      479.72 ppb        21.049   4.39%
   QC value within limits for Ti 334.940  Recovery = 95.94%
Tl 190.801†             1721.1      488.83 ug/L        17.222      488.83 ppb        17.222   3.52%
   QC value within limits for Tl 190.801  Recovery = 97.77%
U 409.014†             15786.1      464.63 ug/L        12.102      464.63 ppb        12.102   2.60%
   QC value within limits for U 409.014  Recovery = 92.93%
V 292.402†             70909.4      478.11 ug/L        20.427      478.11 ppb        20.427   4.27%
   QC value within limits for V 292.402  Recovery = 95.62%
Zn 213.857†            56631.5      476.25 ug/L        20.112      476.25 ppb        20.112   4.22%
   QC value within limits for Zn 213.857  Recovery = 95.25%
SiO2†                  81147.1      5161.5 ug/L        189.19      5161.5 ppb        189.19   3.67%
   QC value within limits for SiO2  Recovery = 96.52%
All analyte(s) passed QC.
```

Sequence No.: 25
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 2/1/2010 19:48:42
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4228.0	4228.0	102	%			19:50:34
1	Y RADIAL	4774.0	4774.0	98.61	%			19:50:34
1	Al 396.153Radial†	-117.9	75.1	61.957	ug/L	61.957	ppb	19:50:34
1	Ca 317.933Radial†	11.0	-2.6	-4.7396	ug/L	-4.7396	ppb	19:50:54
1	Fe 238.204 Radial†	9.4	-1.0	-11.140	ug/L	-11.140	ppb	19:50:54
1	K 766.490 Radial†	2738.8	48.2	9.1604	ug/L	9.1604	ppb	19:50:34
1	Mg 279.077 IEC†	1.9	1.9	79.204	ug/L	79.204	ppb	19:50:54
1	Na 589.592 Radial†	-1633.7	58.2	17.931	ug/L	17.931	ppb	19:50:34
1	Sr 421.552†	48.6	10.9	0.0722	ug/L	0.0722	ppb	19:50:34
1	Sc 361.383	860168.5	860168.5	96.559	%			19:51:50
1	Y 371.029	700716.5	700716.5	95.433	%			19:51:50
1	Ag 328.068†	458.5	-149.7	-0.6733	ug/L	-0.6733	ppb	19:51:50
1	As 188.979†	-32.3	-4.7	-1.8149	ug/L	-1.8149	ppb	19:52:11
1	B 249.677†	-652.0	85.9	1.7972	ug/L	1.7972	ppb	19:52:11
1	Ba 233.527†	-23.8	-9.4	-0.0692	ug/L	-0.0692	ppb	19:52:11
1	Be 313.107†	-4085.6	171.8	0.0579	ug/L	0.0579	ppb	19:51:50
1	Cd 226.502†	-197.1	-0.1	0.0041	ug/L	0.0041	ppb	19:52:11
1	Co 228.616†	-85.8	-3.7	-0.0669	ug/L	-0.0669	ppb	19:52:11
1	Cr 267.716†	102.7	44.5	0.4507	ug/L	0.4507	ppb	19:51:50
1	Cu 324.752†	7347.1	722.1	1.9983	ug/L	1.9983	ppb	19:51:50
1	Mn 257.610†	500.8	-13.1	-0.0175	ug/L	-0.0175	ppb	19:52:11
1	Mo 202.031†	14.2	9.5	0.6275	ug/L	0.6275	ppb	19:52:11
1	Ni 231.604†	93.0	11.2	0.2488	ug/L	0.2488	ppb	19:52:11
1	P 214.914†	237.0	22.2	11.151	ug/L	11.151	ppb	19:52:11
1	Pb 220.353†	-63.3	14.0	1.5201	ug/L	1.5201	ppb	19:52:11
1	S 181.975 Axial†	53.5	6.5	7.9363	ug/L	7.9363	ppb	19:52:11
1	Sb 206.836†	52.2	15.6	4.7724	ug/L	4.7724	ppb	19:52:11
1	Se 196.026†	-21.5	3.7	2.0055	ug/L	2.0055	ppb	19:52:11
1	Si 251.611†	485.2	-33.2	-0.9960	ug/L	-0.9960	ppb	19:52:11
1	Sn 189.927†	8.9	-0.2	-0.0335	ug/L	-0.0335	ppb	19:52:11
1	Ti 334.940†	-1655.8	89.5	0.1190	ug/L	0.1190	ppb	19:51:50
1	Tl 190.801†	-44.4	-1.5	-0.4131	ug/L	-0.4131	ppb	19:52:11
1	U 409.014†	-4376.0	581.1	17.166	ug/L	17.166	ppb	19:51:50
1	V 292.402†	-1717.4	-26.4	-0.1311	ug/L	-0.1311	ppb	19:51:50
1	Zn 213.857†	815.2	135.1	1.1430	ug/L	1.1430	ppb	19:52:11
1	SiO2†	486.4	-58.5	-3.7478	ug/L	-3.7478	ppb	19:53:07
2	Sc Radial	4218.7	4218.7	102	%			19:50:59
2	Y RADIAL	4740.8	4740.8	97.92	%			19:50:59
2	Al 396.153Radial†	-199.5	-5.0	-4.1090	ug/L	-4.1090	ppb	19:50:59
2	Ca 317.933Radial†	16.2	2.6	4.7244	ug/L	4.7244	ppb	19:51:19
2	Fe 238.204 Radial†	9.3	-1.0	-11.608	ug/L	-11.608	ppb	19:51:19
2	K 766.490 Radial†	2894.4	206.1	39.215	ug/L	39.215	ppb	19:50:59
2	Mg 279.077 IEC†	3.8	3.8	159.97	ug/L	159.97	ppb	19:51:19
2	Na 589.592 Radial†	-1620.0	68.1	20.988	ug/L	20.988	ppb	19:50:59
2	Sr 421.552†	6.4	-30.2	-0.1992	ug/L	-0.1992	ppb	19:50:59
2	Sc 361.383	862047.5	862047.5	96.769	%			19:52:16
2	Y 371.029	699940.4	699940.4	95.328	%			19:52:16
2	Ag 328.068†	543.7	-62.6	-0.2883	ug/L	-0.2883	ppb	19:52:16
2	As 188.979†	-18.4	9.7	3.7256	ug/L	3.7256	ppb	19:52:36
2	B 249.677†	-639.9	99.9	2.0894	ug/L	2.0894	ppb	19:52:36
2	Ba 233.527†	-17.1	-2.4	-0.0181	ug/L	-0.0181	ppb	19:52:36
2	Be 313.107†	-4149.3	115.2	0.0384	ug/L	0.0384	ppb	19:52:16
2	Cd 226.502†	-201.4	-4.0	-0.0380	ug/L	-0.0380	ppb	19:52:36
2	Co 228.616†	-74.7	8.0	0.1482	ug/L	0.1482	ppb	19:52:36
2	Cr 267.716†	66.3	6.7	0.0634	ug/L	0.0634	ppb	19:52:16
2	Cu 324.752†	7438.7	800.2	2.2182	ug/L	2.2182	ppb	19:52:16
2	Mn 257.610†	489.7	-25.8	-0.0335	ug/L	-0.0335	ppb	19:52:36
2	Mo 202.031†	7.7	2.7	0.1799	ug/L	0.1799	ppb	19:52:36
2	Ni 231.604†	81.0	-1.5	-0.0334	ug/L	-0.0334	ppb	19:52:36

2	P 214.914†	245.1	30.0	15.152	ug/L	15.152 ppb	19:52:36
2	Pb 220.353†	-75.6	1.5	0.1586	ug/L	0.1586 ppb	19:52:36
2	S 181.975 Axial†	51.2	4.0	4.9050	ug/L	4.9050 ppb	19:52:36
2	Sb 206.836†	57.7	21.2	6.4687	ug/L	6.4687 ppb	19:52:36
2	Se 196.026†	-24.6	0.5	0.2403	ug/L	0.2403 ppb	19:52:36
2	Si 251.611†	499.7	-19.4	-0.5784	ug/L	-0.5784 ppb	19:52:36
2	Sn 189.927†	8.7	-0.4	-0.0654	ug/L	-0.0654 ppb	19:52:36
2	Ti 334.940†	-1815.7	-71.9	-0.1255	ug/L	-0.1255 ppb	19:52:16
2	Tl 190.801†	-43.9	-0.9	-0.2566	ug/L	-0.2566 ppb	19:52:36
2	U 409.014†	-4534.9	426.8	12.608	ug/L	12.608 ppb	19:52:16
2	V 292.402†	-1700.4	-4.9	-0.0014	ug/L	-0.0014 ppb	19:52:16
2	Zn 213.857†	820.9	139.2	1.1790	ug/L	1.1790 ppb	19:52:36
2	SiO2†	523.8	-21.0	-1.3421	ug/L	-1.3421 ppb	19:53:12
3	Sc Radial	4154.0	4154.0	101	%		19:51:24
3	Y RADIAL	4671.8	4671.8	96.50	%		19:51:24
3	Al 396.153Radial†	-190.7	0.7	0.5493	ug/L	0.5493 ppb	19:51:24
3	Ca 317.933Radial†	11.5	-1.9	-3.5288	ug/L	-3.5288 ppb	19:51:44
3	Fe 238.204 Radial†	11.9	1.7	19.526	ug/L	19.526 ppb	19:51:44
3	K 766.490 Radial†	2728.2	85.2	16.220	ug/L	16.220 ppb	19:51:24
3	Mg 279.077 IEC†	1.7	1.7	72.588	ug/L	72.588 ppb	19:51:44
3	Na 589.592 Radial†	-1663.1	0.6	0.1700	ug/L	0.1700 ppb	19:51:24
3	Sr 421.552†	51.2	14.4	0.0949	ug/L	0.0949 ppb	19:51:24
3	Sc 361.383	859433.0	859433.0	96.476	%		19:52:41
3	Y 371.029	698373.2	698373.2	95.114	%		19:52:41
3	Ag 328.068†	486.3	-120.4	-0.5340	ug/L	-0.5340 ppb	19:52:41
3	As 188.979†	-24.2	3.6	1.3995	ug/L	1.3995 ppb	19:53:01
3	B 249.677†	-643.4	94.2	1.9663	ug/L	1.9663 ppb	19:53:01
3	Ba 233.527†	-6.3	8.8	0.0650	ug/L	0.0650 ppb	19:53:01
3	Be 313.107†	-4077.9	176.2	0.0590	ug/L	0.0590 ppb	19:52:41
3	Cd 226.502†	-208.3	-11.8	-0.1208	ug/L	-0.1208 ppb	19:53:01
3	Co 228.616†	-95.4	-13.8	-0.2537	ug/L	-0.2537 ppb	19:53:01
3	Cr 267.716†	97.9	39.6	0.4016	ug/L	0.4016 ppb	19:52:41
3	Cu 324.752†	7274.3	653.2	1.8086	ug/L	1.8086 ppb	19:52:41
3	Mn 257.610†	589.1	78.8	0.0780	ug/L	0.0780 ppb	19:53:01
3	Mo 202.031†	8.7	3.8	0.2537	ug/L	0.2537 ppb	19:53:01
3	Ni 231.604†	95.0	13.3	0.2958	ug/L	0.2958 ppb	19:53:01
3	P 214.914†	248.1	33.9	17.212	ug/L	17.212 ppb	19:53:01
3	Pb 220.353†	-63.4	13.9	1.4906	ug/L	1.4906 ppb	19:53:01
3	S 181.975 Axial†	48.8	1.7	2.1024	ug/L	2.1024 ppb	19:53:01
3	Sb 206.836†	40.4	3.5	1.0801	ug/L	1.0801 ppb	19:53:01
3	Se 196.026†	-39.2	-14.7	-8.0705	ug/L	-8.0705 ppb	19:53:01
3	Si 251.611†	519.8	3.1	0.0890	ug/L	0.0890 ppb	19:53:01
3	Sn 189.927†	13.0	4.1	0.6574	ug/L	0.6574 ppb	19:53:01
3	Ti 334.940†	-1771.9	-32.3	-0.0622	ug/L	-0.0622 ppb	19:52:41
3	Tl 190.801†	-48.3	-5.6	-1.5777	ug/L	-1.5777 ppb	19:53:01
3	U 409.014†	-4382.3	570.7	16.855	ug/L	16.855 ppb	19:52:41
3	V 292.402†	-1681.8	9.0	0.0939	ug/L	0.0939 ppb	19:52:41
3	Zn 213.857†	839.5	161.1	1.3604	ug/L	1.3604 ppb	19:53:01
3	SiO2†	542.1	-0.3	-0.0281	ug/L	-0.0281 ppb	19:53:17

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	860549.7	96.601	%	0.1514				0.16%
Sc Radial	4200.2	102	%	1.0				0.96%
Y 371.029	699676.7	95.292	%	0.1626				0.17%
Y RADIAL	4728.9	97.68	%	1.076				1.10%
Ag 328.068†	-110.9	-0.4985	ug/L	0.19495	-0.4985	ppb	0.19495	39.11%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	23.6	19.466	ug/L	36.8721	19.466	ppb	36.8721	189.42%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.9	1.1034	ug/L	2.78210	1.1034	ppb	2.78210	252.14%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	93.3	1.9510	ug/L	0.14669	1.9510	ppb	0.14669	7.52%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-1.0	-0.0074	ug/L	0.06772	-0.0074	ppb	0.06772	910.44%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	154.4	0.0518	ug/L	0.01161	0.0518	ppb	0.01161	22.41%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-0.6	-1.1814	ug/L	5.15021	-1.1814	ppb	5.15021	435.96%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -5.3     -0.0516 ug/L       0.06354     -0.0516 ppb        0.06354 123.21%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†                -3.2     -0.0575 ug/L       0.20112     -0.0575 ppb        0.20112 349.96%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                30.3      0.3052 ug/L       0.21087      0.3052 ppb        0.21087  69.09%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               725.2      2.0084 ug/L       0.20497      2.0084 ppb        0.20497  10.21%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         -0.1     -1.0738 ug/L      17.84151     -1.0738 ppb       17.84151 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         113.1      21.532 ug/L       15.7157      21.532 ppb        15.7157  72.99%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            2.5      103.92 ug/L        48.654      103.92 ppb         48.654  46.82%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†                13.3      0.0090 ug/L       0.06031      0.0090 ppb        0.06031 670.04%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 5.3      0.3537 ug/L       0.23996      0.3537 ppb        0.23996  67.84%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†         42.3      13.030 ug/L       11.2413      13.030 ppb        11.2413  86.27%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                 7.6      0.1704 ug/L       0.17809      0.1704 ppb        0.17809 104.51%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 28.7      14.505 ug/L        3.0815      14.505 ppb         3.0815  21.24%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 9.8      1.0564 ug/L       0.77771      1.0564 ppb        0.77771  73.62%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            4.1      4.9812 ug/L       2.91768      4.9812 ppb        2.91768  58.57%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                13.4      4.1071 ug/L       2.75523      4.1071 ppb        2.75523  67.08%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -3.5     -1.9416 ug/L       5.38069     -1.9416 ppb        5.38069 277.13%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               -16.5     -0.4951 ug/L       0.54727     -0.4951 ppb        0.54727 110.53%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 1.2      0.1862 ug/L       0.40841      0.1862 ppb        0.40841 219.35%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                -1.6     -0.0107 ug/L       0.16368     -0.0107 ppb        0.16368 >999.9%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†                -4.9     -0.0229 ug/L       0.12685     -0.0229 ppb        0.12685 554.26%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -2.7     -0.7492 ug/L       0.72181     -0.7492 ppb        0.72181  96.35%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                526.2      15.543 ug/L        2.5464      15.543 ppb         2.5464  16.38%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 -7.5     -0.0128 ug/L       0.11293     -0.0128 ppb        0.11293 880.00%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               145.1      1.2275 ug/L       0.11649      1.2275 ppb        0.11649   9.49%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     -26.6     -1.7060 ug/L       1.88636     -1.7060 ppb        1.88636 110.57%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 34
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 2/1/2010 20:50:11
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4355.7	4355.7	106	%			20:52:03
1	Y RADIAL	4884.9	4884.9	100.9	%			20:52:03
1	Al 396.153Radial†	6118.7	5985.4	4917.9	ug/L	4917.9	ppb	20:52:03
1	Ca 317.933Radial†	2889.9	2723.8	5042.1	ug/L	5042.1	ppb	20:52:23
1	Fe 238.204 Radial†	486.8	451.0	5255.8	ug/L	5255.8	ppb	20:52:23
1	K 766.490 Radial†	29868.7	25665.7	4878.9	ug/L	4878.9	ppb	20:52:03
1	Mg 279.077 IEC†	129.3	122.6	5163.8	ug/L	5163.8	ppb	20:52:23
1	Na 589.592 Radial†	33632.7	33507.3	10325	ug/L	10325	ppb	20:52:03
1	Sr 421.552†	80774.9	76469.1	504.86	ug/L	504.86	ppb	20:52:03
1	Sc 361.383	866378.0	866378.0	97.256	%			20:53:21
1	Y 371.029	697064.2	697064.2	94.936	%			20:53:21
1	Ag 328.068†	111267.6	113782.9	501.01	ug/L	501.01	ppb	20:53:26
1	As 188.979†	1236.9	1300.6	503.87	ug/L	503.87	ppb	20:53:46
1	B 249.677†	21912.3	23291.7	484.71	ug/L	484.71	ppb	20:53:26
1	Ba 233.527†	66037.6	67916.4	497.66	ug/L	497.66	ppb	20:53:26
1	Be 313.107†	1422438.9	1466980.8	493.33	ug/L	493.33	ppb	20:53:21
1	Cd 226.502†	47237.0	48774.0	503.52	ug/L	503.52	ppb	20:53:26
1	Co 228.616†	26425.8	27256.6	502.49	ug/L	502.49	ppb	20:53:26
1	Cr 267.716†	47363.2	48637.9	501.31	ug/L	501.31	ppb	20:53:26
1	Cu 324.752†	180436.4	178641.1	496.87	ug/L	496.87	ppb	20:53:26
1	Mn 257.610†	482197.7	495272.7	497.23	ug/L	497.23	ppb	20:53:21
1	Mo 202.031†	7276.6	7476.7	497.36	ug/L	497.36	ppb	20:53:46
1	Ni 231.604†	22057.7	22595.0	503.17	ug/L	503.17	ppb	20:53:26
1	P 214.914†	4900.7	4815.7	2403.4	ug/L	2403.4	ppb	20:53:46
1	Pb 220.353†	4433.0	4637.8	499.18	ug/L	499.18	ppb	20:53:46
1	S 181.975 Axial†	834.7	809.3	987.77	ug/L	987.77	ppb	20:53:46
1	Sb 206.836†	1624.5	1631.9	516.58	ug/L	516.58	ppb	20:53:46
1	Se 196.026†	859.0	909.2	523.16	ug/L	523.16	ppb	20:53:46
1	Si 251.611†	82629.0	84424.9	2506.9	ug/L	2506.9	ppb	20:53:26
1	Sn 189.927†	3017.2	3092.9	500.51	ug/L	500.51	ppb	20:53:46
1	Ti 334.940†	323952.1	334897.8	500.24	ug/L	500.24	ppb	20:53:21
1	Tl 190.801†	1667.5	1759.0	499.64	ug/L	499.64	ppb	20:53:46
1	U 409.014†	11855.7	17303.4	509.40	ug/L	509.40	ppb	20:53:26
1	V 292.402†	71043.8	74800.7	504.25	ug/L	504.25	ppb	20:53:26
1	Zn 213.857†	58336.4	59273.5	498.50	ug/L	498.50	ppb	20:53:26
1	SiO2†	82667.3	84437.8	5371.0	ug/L	5371.0	ppb	20:54:54
2	Sc Radial	4407.3	4407.3	107	%			20:52:28
2	Y RADIAL	4886.8	4886.8	100.9	%			20:52:28
2	Al 396.153Radial†	6127.1	5925.5	4868.5	ug/L	4868.5	ppb	20:52:28
2	Ca 317.933Radial†	2890.3	2692.2	4983.6	ug/L	4983.6	ppb	20:52:48
2	Fe 238.204 Radial†	484.7	443.6	5170.2	ug/L	5170.2	ppb	20:52:48
2	K 766.490 Radial†	29880.3	25345.5	4818.0	ug/L	4818.0	ppb	20:52:28
2	Mg 279.077 IEC†	127.9	119.8	5047.6	ug/L	5047.6	ppb	20:52:48
2	Na 589.592 Radial†	33769.2	33262.3	10250	ug/L	10250	ppb	20:52:28
2	Sr 421.552†	80983.0	75768.6	500.23	ug/L	500.23	ppb	20:52:28
2	Sc 361.383	864579.7	864579.7	97.054	%			20:53:52
2	Y 371.029	694380.3	694380.3	94.570	%			20:53:52
2	Ag 328.068†	110509.1	113239.3	498.60	ug/L	498.60	ppb	20:53:57
2	As 188.979†	1229.0	1295.1	501.75	ug/L	501.75	ppb	20:54:17
2	B 249.677†	21727.0	23147.6	481.70	ug/L	481.70	ppb	20:53:57
2	Ba 233.527†	65971.7	67989.7	498.19	ug/L	498.19	ppb	20:53:57
2	Be 313.107†	1418130.4	1465583.6	492.86	ug/L	492.86	ppb	20:53:52
2	Cd 226.502†	47042.0	48674.2	502.50	ug/L	502.50	ppb	20:53:57
2	Co 228.616†	26469.7	27358.4	504.37	ug/L	504.37	ppb	20:53:57
2	Cr 267.716†	47156.3	48526.0	500.16	ug/L	500.16	ppb	20:53:57
2	Cu 324.752†	179073.1	177622.4	494.03	ug/L	494.03	ppb	20:53:57
2	Mn 257.610†	482450.2	496564.1	498.53	ug/L	498.53	ppb	20:53:52
2	Mo 202.031†	7232.4	7446.7	495.36	ug/L	495.36	ppb	20:54:17
2	Ni 231.604†	22004.6	22587.5	503.00	ug/L	503.00	ppb	20:53:57

2	P 214.914†	4852.5	4776.6	2383.7 ug/L	2383.7 ppb	20:54:17
2	Pb 220.353†	4364.9	4577.0	492.65 ug/L	492.65 ppb	20:54:17
2	S 181.975 Axial†	838.6	815.2	994.94 ug/L	994.94 ppb	20:54:17
2	Sb 206.836†	1617.1	1627.8	515.21 ug/L	515.21 ppb	20:54:17
2	Se 196.026†	848.5	900.2	517.86 ug/L	517.86 ppb	20:54:17
2	Si 251.611†	82187.2	84146.4	2498.6 ug/L	2498.6 ppb	20:53:57
2	Sn 189.927†	2986.4	3067.6	496.41 ug/L	496.41 ppb	20:54:17
2	Ti 334.940†	323639.2	335268.3	500.80 ug/L	500.80 ppb	20:53:52
2	Tl 190.801†	1654.6	1749.3	496.91 ug/L	496.91 ppb	20:54:17
2	U 409.014†	11750.8	17220.6	506.97 ug/L	506.97 ppb	20:53:57
2	V 292.402†	70656.9	74554.0	502.59 ug/L	502.59 ppb	20:53:57
2	Zn 213.857†	58082.9	59137.0	497.36 ug/L	497.36 ppb	20:53:57
2	SiO2†	83367.5	85336.1	5428.4 ug/L	5428.4 ppb	20:54:59
3	Sc Radial	4368.2	4368.2	106 %		20:52:53
3	Y RADIAL	4890.2	4890.2	101.0 %		20:52:53
3	Al 396.153Radial†	6487.4	6317.0	5192.1 ug/L	5192.1 ppb	20:52:53
3	Ca 317.933Radial†	2882.3	2708.8	5014.4 ug/L	5014.4 ppb	20:53:13
3	Fe 238.204 Radial†	484.2	447.2	5211.6 ug/L	5211.6 ppb	20:53:13
3	K 766.490 Radial†	29611.4	25341.9	4817.3 ug/L	4817.3 ppb	20:52:53
3	Mg 279.077 IEC†	134.5	127.1	5354.1 ug/L	5354.1 ppb	20:53:13
3	Na 589.592 Radial†	33379.2	33176.9	10224 ug/L	10224 ppb	20:52:53
3	Sr 421.552†	79935.5	75457.8	498.18 ug/L	498.18 ppb	20:52:53
3	Sc 361.383	876177.5	876177.5	98.356 %		20:54:23
3	Y 371.029	703860.3	703860.3	95.862 %		20:54:23
3	Ag 328.068†	110151.2	111368.3	490.41 ug/L	490.41 ppb	20:54:29
3	As 188.979†	1231.0	1280.4	496.08 ug/L	496.08 ppb	20:54:49
3	B 249.677†	21696.4	22820.2	474.89 ug/L	474.89 ppb	20:54:29
3	Ba 233.527†	65543.3	66654.4	488.42 ug/L	488.42 ppb	20:54:29
3	Be 313.107†	1425646.9	1453884.4	488.93 ug/L	488.93 ppb	20:54:23
3	Cd 226.502†	46683.9	47668.5	492.10 ug/L	492.10 ppb	20:54:29
3	Co 228.616†	26163.5	26686.1	491.97 ug/L	491.97 ppb	20:54:29
3	Cr 267.716†	46855.7	47577.2	490.38 ug/L	490.38 ppb	20:54:29
3	Cu 324.752†	179106.0	175213.6	487.34 ug/L	487.34 ppb	20:54:29
3	Mn 257.610†	483909.9	491468.3	493.40 ug/L	493.40 ppb	20:54:23
3	Mo 202.031†	7246.6	7362.5	489.77 ug/L	489.77 ppb	20:54:49
3	Ni 231.604†	21848.5	22128.6	492.78 ug/L	492.78 ppb	20:54:29
3	P 214.914†	4871.0	4729.2	2360.4 ug/L	2360.4 ppb	20:54:49
3	Pb 220.353†	4394.5	4547.6	489.55 ug/L	489.55 ppb	20:54:49
3	S 181.975 Axial†	837.6	802.8	979.69 ug/L	979.69 ppb	20:54:49
3	Sb 206.836†	1616.2	1604.8	507.99 ug/L	507.99 ppb	20:54:49
3	Se 196.026†	848.3	888.4	511.47 ug/L	511.47 ppb	20:54:49
3	Si 251.611†	81667.4	82497.0	2449.6 ug/L	2449.6 ppb	20:54:29
3	Sn 189.927†	3003.2	3044.0	492.60 ug/L	492.60 ppb	20:54:49
3	Ti 334.940†	325395.6	332640.0	496.86 ug/L	496.86 ppb	20:54:23
3	Tl 190.801†	1672.2	1744.6	495.59 ug/L	495.59 ppb	20:54:49
3	U 409.014†	11596.1	16903.1	497.61 ug/L	497.61 ppb	20:54:29
3	V 292.402†	70393.6	73322.7	494.31 ug/L	494.31 ppb	20:54:29
3	Zn 213.857†	57712.6	57968.3	487.51 ug/L	487.51 ppb	20:54:29
3	SiO2†	82648.9	83468.4	5309.4 ug/L	5309.4 ppb	20:55:04

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	869045.1	97.555	%	0.7007				0.72%
Sc Radial	4377.1	106	%	0.7				0.61%
Y 371.029	698434.9	95.123	%	0.6655				0.70%
Y RADIAL	4887.3	100.9	%	0.05				0.05%
Ag 328.068†	112796.8	496.67	ug/L	5.561	496.67	ppb	5.561	1.12%
QC value within limits for Ag 328.068 Recovery = 99.33%								
Al 396.153Radial†	6076.0	4992.9	ug/L	174.32	4992.9	ppb	174.32	3.49%
QC value within limits for Al 396.153Radial Recovery = 99.86%								
As 188.979†	1292.0	500.57	ug/L	4.026	500.57	ppb	4.026	0.80%
QC value within limits for As 188.979 Recovery = 100.11%								
B 249.677†	23086.5	480.43	ug/L	5.032	480.43	ppb	5.032	1.05%
QC value within limits for B 249.677 Recovery = 96.09%								
Ba 233.527†	67520.2	494.76	ug/L	5.498	494.76	ppb	5.498	1.11%
QC value within limits for Ba 233.527 Recovery = 98.95%								
Be 313.107†	1462149.6	491.70	ug/L	2.418	491.70	ppb	2.418	0.49%
QC value within limits for Be 313.107 Recovery = 98.34%								
Ca 317.933Radial†	2708.3	5013.4	ug/L	29.26	5013.4	ppb	29.26	0.58%

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   QC value within limits for Ca 317.933Radial  Recovery = 100.27%
Cd 226.502†            48372.3      499.37 ug/L         6.319      499.37 ppb          6.319   1.27%
   QC value within limits for Cd 226.502  Recovery = 99.87%
Co 228.616†            27100.4      499.61 ug/L         6.684      499.61 ppb          6.684   1.34%
   QC value within limits for Co 228.616  Recovery = 99.92%
Cr 267.716†            48247.0      497.28 ug/L         6.004      497.28 ppb          6.004   1.21%
   QC value within limits for Cr 267.716  Recovery = 99.46%
Cu 324.752†           177159.0      492.75 ug/L         4.893      492.75 ppb          4.893   0.99%
   QC value within limits for Cu 324.752  Recovery = 98.55%
Fe 238.204 Radial†       447.3      5212.5 ug/L        42.77      5212.5 ppb         42.77   0.82%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.25%
K 766.490 Radial†      25451.0      4838.0 ug/L        35.36      4838.0 ppb         35.36   0.73%
   QC value within limits for K 766.490 Radial  Recovery = 96.76%
Mg 279.077 IEC†          123.1      5188.5 ug/L       154.72      5188.5 ppb        154.72   2.98%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.77%
Mn 257.610†           494435.0      496.39 ug/L         2.663      496.39 ppb          2.663   0.54%
   QC value within limits for Mn 257.610  Recovery = 99.28%
Mo 202.031†             7428.6      494.17 ug/L         3.936      494.17 ppb          3.936   0.80%
   QC value within limits for Mo 202.031  Recovery = 98.83%
Na 589.592 Radial†     33315.5       10266 ug/L          52.9       10266 ppb           52.9   0.51%
   QC value within limits for Na 589.592 Radial  Recovery = 102.66%
Ni 231.604†            22437.0      499.65 ug/L         5.948      499.65 ppb          5.948   1.19%
   QC value within limits for Ni 231.604  Recovery = 99.93%
P 214.914†              4773.8      2382.5 ug/L        21.53      2382.5 ppb         21.53   0.90%
   QC value within limits for P 214.914  Recovery = 95.30%
Pb 220.353†             4587.4      493.79 ug/L         4.915      493.79 ppb          4.915   1.00%
   QC value within limits for Pb 220.353  Recovery = 98.76%
S 181.975 Axial†         809.1      987.47 ug/L         7.627      987.47 ppb          7.627   0.77%
   QC value within limits for S 181.975 Axial  Recovery = 98.75%
Sb 206.836†             1621.5      513.26 ug/L         4.617      513.26 ppb          4.617   0.90%
   QC value within limits for Sb 206.836  Recovery = 102.65%
Se 196.026†              899.3      517.50 ug/L         5.854      517.50 ppb          5.854   1.13%
   QC value within limits for Se 196.026  Recovery = 103.50%
Si 251.611†            83689.4      2485.0 ug/L        30.97      2485.0 ppb         30.97   1.25%
   QC value within limits for Si 251.611  Recovery = 99.40%
Sn 189.927†             3068.2      496.51 ug/L         3.953      496.51 ppb          3.953   0.80%
   QC value within limits for Sn 189.927  Recovery = 99.30%
Sr 421.552†            75898.5      501.09 ug/L         3.420      501.09 ppb          3.420   0.68%
   QC value within limits for Sr 421.552  Recovery = 100.22%
Ti 334.940†           334268.7      499.30 ug/L         2.132      499.30 ppb          2.132   0.43%
   QC value within limits for Ti 334.940  Recovery = 99.86%
Tl 190.801†             1751.0      497.38 ug/L         2.066      497.38 ppb          2.066   0.42%
   QC value within limits for Tl 190.801  Recovery = 99.48%
U 409.014†             17142.4      504.66 ug/L         6.227      504.66 ppb          6.227   1.23%
   QC value within limits for U 409.014  Recovery = 100.93%
V 292.402†             74225.8      500.38 ug/L         5.327      500.38 ppb          5.327   1.06%
   QC value within limits for V 292.402  Recovery = 100.08%
Zn 213.857†            58792.9      494.46 ug/L         6.042      494.46 ppb          6.042   1.22%
   QC value within limits for Zn 213.857  Recovery = 98.89%
SiO2†                  84414.1      5369.6 ug/L        59.49      5369.6 ppb         59.49   1.11%
   QC value within limits for SiO2  Recovery = 100.41%
All analyte(s) passed QC.
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Sequence No.: 35
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 2/1/2010 20:57:14
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4397.5	4397.5	107	%			20:59:06
1	Y RADIAL	4916.4	4916.4	101.5	%			20:59:06
1	Al 396.153Radial†	-187.1	14.5	12.004	ug/L	12.004	ppb	20:59:06
1	Ca 317.933Radial†	13.1	-1.1	-1.9567	ug/L	-1.9567	ppb	20:59:26
1	Fe 238.204 Radial†	16.7	5.5	64.153	ug/L	64.153	ppb	20:59:26
1	K 766.490 Radial†	2813.2	14.9	2.8171	ug/L	2.8171	ppb	20:59:06
1	Mg 279.077 IEC†	2.1	2.0	84.967	ug/L	84.967	ppb	20:59:26
1	Na 589.592 Radial†	-1633.4	119.9	36.960	ug/L	36.960	ppb	20:59:06
1	Sr 421.552†	-2.8	-39.1	-0.2579	ug/L	-0.2579	ppb	20:59:06
1	Sc 361.383	915128.8	915128.8	102.73	%			21:00:23
1	Y 371.029	744248.7	744248.7	101.36	%			21:00:23
1	Ag 328.068†	487.7	-149.8	-0.6557	ug/L	-0.6557	ppb	21:00:28
1	As 188.979†	-29.1	0.4	0.1748	ug/L	0.1748	ppb	21:00:48
1	B 249.677†	-545.7	229.8	4.7952	ug/L	4.7952	ppb	21:00:48
1	Ba 233.527†	2.0	17.2	0.1294	ug/L	0.1294	ppb	21:00:48
1	Be 313.107†	-4124.0	388.6	0.1309	ug/L	0.1309	ppb	21:00:28
1	Cd 226.502†	-216.3	-6.5	-0.0677	ug/L	-0.0677	ppb	21:00:48
1	Co 228.616†	-88.8	-1.3	-0.0255	ug/L	-0.0255	ppb	21:00:48
1	Cr 267.716†	54.0	-9.3	-0.1049	ug/L	-0.1049	ppb	21:00:28
1	Cu 324.752†	7302.8	222.1	0.6045	ug/L	0.6045	ppb	21:00:28
1	Mn 257.610†	765.2	213.1	0.2166	ug/L	0.2166	ppb	21:00:48
1	Mo 202.031†	6.3	0.9	0.0676	ug/L	0.0676	ppb	21:00:48
1	Ni 231.604†	94.6	7.0	0.1552	ug/L	0.1552	ppb	21:00:48
1	P 214.914†	242.3	12.6	6.3947	ug/L	6.3947	ppb	21:00:48
1	Pb 220.353†	-65.8	15.6	1.6653	ug/L	1.6653	ppb	21:00:48
1	S 181.975 Axial†	56.7	6.3	7.7320	ug/L	7.7320	ppb	21:00:48
1	Sb 206.836†	40.8	1.3	0.4106	ug/L	0.4106	ppb	21:00:48
1	Se 196.026†	-35.8	-8.9	-4.7273	ug/L	-4.7273	ppb	21:00:48
1	Si 251.611†	633.8	81.3	2.4185	ug/L	2.4185	ppb	21:00:48
1	Sn 189.927†	14.1	4.3	0.7020	ug/L	0.7020	ppb	21:00:48
1	Ti 334.940†	-1685.1	164.0	0.2247	ug/L	0.2247	ppb	21:00:28
1	Tl 190.801†	-34.1	11.3	3.1758	ug/L	3.1758	ppb	21:00:48
1	U 409.014†	-4214.0	1011.0	29.858	ug/L	29.858	ppb	21:00:23
1	V 292.402†	-1683.5	113.4	0.8047	ug/L	0.8047	ppb	21:00:28
1	Zn 213.857†	910.8	177.5	1.4980	ug/L	1.4980	ppb	21:00:48
1	SiO2†	553.3	-23.7	-1.5102	ug/L	-1.5102	ppb	21:01:54
2	Sc Radial	4452.4	4452.4	108	%			20:59:31
2	Y RADIAL	4991.3	4991.3	103.1	%			20:59:31
2	Al 396.153Radial†	-215.8	-9.8	-8.1079	ug/L	-8.1079	ppb	20:59:31
2	Ca 317.933Radial†	19.0	4.3	7.8899	ug/L	7.8899	ppb	20:59:51
2	Fe 238.204 Radial†	13.8	2.6	30.677	ug/L	30.677	ppb	20:59:51
2	K 766.490 Radial†	2743.6	-82.2	-15.661	ug/L	-15.661	ppb	20:59:31
2	Mg 279.077 IEC†	1.7	1.7	70.306	ug/L	70.306	ppb	20:59:51
2	Na 589.592 Radial†	-1643.2	129.7	39.957	ug/L	39.957	ppb	20:59:31
2	Sr 421.552†	33.9	-5.0	-0.0332	ug/L	-0.0332	ppb	20:59:31
2	Sc 361.383	902848.4	902848.4	101.35	%			21:00:53
2	Y 371.029	732483.4	732483.4	99.760	%			21:00:53
2	Ag 328.068†	476.9	-154.0	-0.6827	ug/L	-0.6827	ppb	21:00:58
2	As 188.979†	-28.9	0.2	0.0955	ug/L	0.0955	ppb	21:01:18
2	B 249.677†	-581.6	187.3	3.9104	ug/L	3.9104	ppb	21:01:18
2	Ba 233.527†	-2.5	12.8	0.0959	ug/L	0.0959	ppb	21:01:18
2	Be 313.107†	-4139.2	319.0	0.1075	ug/L	0.1075	ppb	21:00:58
2	Cd 226.502†	-198.7	8.0	0.0850	ug/L	0.0850	ppb	21:01:18
2	Co 228.616†	-80.6	5.6	0.1021	ug/L	0.1021	ppb	21:01:18
2	Cr 267.716†	91.7	28.6	0.2857	ug/L	0.2857	ppb	21:00:58
2	Cu 324.752†	7154.6	172.5	0.4668	ug/L	0.4668	ppb	21:00:58
2	Mn 257.610†	523.0	-15.7	-0.0156	ug/L	-0.0156	ppb	21:01:18
2	Mo 202.031†	3.5	-1.8	-0.1169	ug/L	-0.1169	ppb	21:01:18
2	Ni 231.604†	86.0	-0.3	-0.0059	ug/L	-0.0059	ppb	21:01:18

2	P 214.914†	232.2	5.8	2.9245	ug/L	2.9245 ppb	21:01:18
2	Pb 220.353†	-76.6	4.1	0.4341	ug/L	0.4341 ppb	21:01:18
2	S 181.975 Axial†	56.0	6.4	7.7845	ug/L	7.7845 ppb	21:01:18
2	Sb 206.836†	56.4	17.3	5.2879	ug/L	5.2879 ppb	21:01:18
2	Se 196.026†	-31.5	-5.1	-2.7402	ug/L	-2.7402 ppb	21:01:18
2	Si 251.611†	529.8	-12.9	-0.3837	ug/L	-0.3837 ppb	21:01:18
2	Sn 189.927†	16.4	6.7	1.0902	ug/L	1.0902 ppb	21:01:18
2	Ti 334.940†	-1673.5	153.2	0.2125	ug/L	0.2125 ppb	21:00:58
2	Tl 190.801†	-43.3	1.7	0.4857	ug/L	0.4857 ppb	21:01:18
2	U 409.014†	-4284.0	886.1	26.171	ug/L	26.171 ppb	21:00:53
2	V 292.402†	-1683.0	91.6	0.6546	ug/L	0.6546 ppb	21:00:58
2	Zn 213.857†	818.7	98.7	0.8340	ug/L	0.8340 ppb	21:01:18
2	SiO2†	540.7	-28.7	-1.8290	ug/L	-1.8290 ppb	21:01:59
3	Sc Radial	4394.6	4394.6	107	%		20:59:56
3	Y RADIAL	4931.9	4931.9	101.9	%		20:59:56
3	Al 396.153Radial†	-194.1	7.9	6.5053	ug/L	6.5053 ppb	20:59:56
3	Ca 317.933Radial†	11.9	-2.1	-3.9560	ug/L	-3.9560 ppb	21:00:16
3	Fe 238.204 Radial†	12.6	1.7	20.072	ug/L	20.072 ppb	21:00:16
3	K 766.490 Radial†	2727.5	-63.8	-12.166	ug/L	-12.166 ppb	20:59:56
3	Mg 279.077 IEC†	1.7	1.6	67.767	ug/L	67.767 ppb	21:00:16
3	Na 589.592 Radial†	-1631.8	120.4	37.101	ug/L	37.101 ppb	20:59:56
3	Sr 421.552†	13.4	-23.8	-0.1573	ug/L	-0.1573 ppb	20:59:56
3	Sc 361.383	913585.5	913585.5	102.55	%		21:01:23
3	Y 371.029	741614.1	741614.1	101.00	%		21:01:23
3	Ag 328.068†	482.1	-154.5	-0.6937	ug/L	-0.6937 ppb	21:01:29
3	As 188.979†	-28.0	1.5	0.5746	ug/L	0.5746 ppb	21:01:49
3	B 249.677†	-605.4	170.8	3.5686	ug/L	3.5686 ppb	21:01:49
3	Ba 233.527†	-19.9	-4.1	-0.0277	ug/L	-0.0277 ppb	21:01:49
3	Be 313.107†	-4155.0	351.5	0.1184	ug/L	0.1184 ppb	21:01:29
3	Cd 226.502†	-209.4	-0.1	0.0037	ug/L	0.0037 ppb	21:01:49
3	Co 228.616†	-98.9	-11.3	-0.2077	ug/L	-0.2077 ppb	21:01:49
3	Cr 267.716†	84.0	20.1	0.1946	ug/L	0.1946 ppb	21:01:29
3	Cu 324.752†	7064.4	1.6	-0.0129	ug/L	-0.0129 ppb	21:01:29
3	Mn 257.610†	564.4	18.5	0.0178	ug/L	0.0178 ppb	21:01:49
3	Mo 202.031†	9.5	4.1	0.2707	ug/L	0.2707 ppb	21:01:49
3	Ni 231.604†	81.7	-5.5	-0.1219	ug/L	-0.1219 ppb	21:01:49
3	P 214.914†	240.1	10.8	5.5894	ug/L	5.5894 ppb	21:01:49
3	Pb 220.353†	-73.1	8.4	0.8964	ug/L	0.8964 ppb	21:01:49
3	S 181.975 Axial†	53.3	3.1	3.8215	ug/L	3.8215 ppb	21:01:49
3	Sb 206.836†	39.2	-0.2	-0.0733	ug/L	-0.0733 ppb	21:01:49
3	Se 196.026†	-37.8	-10.9	-5.9810	ug/L	-5.9810 ppb	21:01:49
3	Si 251.611†	540.3	-8.9	-0.2694	ug/L	-0.2694 ppb	21:01:49
3	Sn 189.927†	4.6	-4.9	-0.7989	ug/L	-0.7989 ppb	21:01:49
3	Ti 334.940†	-1709.4	137.5	0.1848	ug/L	0.1848 ppb	21:01:29
3	Tl 190.801†	-42.3	3.2	0.9170	ug/L	0.9170 ppb	21:01:49
3	U 409.014†	-4091.1	1123.9	33.195	ug/L	33.195 ppb	21:01:23
3	V 292.402†	-1699.6	94.9	0.6969	ug/L	0.6969 ppb	21:01:29
3	Zn 213.857†	818.8	89.3	0.7563	ug/L	0.7563 ppb	21:01:49
3	SiO2†	565.2	-11.1	-0.7145	ug/L	-0.7145 ppb	21:02:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	910520.9	102.21	%	0.751				0.73%
Sc Radial	4414.8	107	%	0.8				0.74%
Y 371.029	739448.7	100.71	%	0.841				0.83%
Y RADIAL	4946.5	102.2	%	0.82				0.80%
Ag 328.068†	-152.7	-0.6774	ug/L	0.01957	-0.6774	ppb	0.01957	2.89%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	4.2	3.4672	ug/L	10.39452	3.4672	ppb	10.39452	299.80%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	0.7	0.2816	ug/L	0.25679	0.2816	ppb	0.25679	91.18%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	196.0	4.0914	ug/L	0.63304	4.0914	ppb	0.63304	15.47%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	8.6	0.0659	ug/L	0.08273	0.0659	ppb	0.08273	125.64%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	353.0	0.1190	ug/L	0.01170	0.1190	ppb	0.01170	9.83%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.4	0.6591	ug/L	6.34140	0.6591	ppb	6.34140	962.19%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                0.5      0.0070 ug/L       0.07643      0.0070 ppb        0.07643 >999.9%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -2.3     -0.0437 ug/L       0.15568     -0.0437 ppb        0.15568 356.32%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               13.1      0.1251 ug/L       0.20436      0.1251 ppb        0.20436 163.34%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              132.0      0.3528 ug/L       0.32414      0.3528 ppb        0.32414  91.87%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         3.3      38.301 ug/L       23.0083      38.301 ppb        23.0083  60.07%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        -43.7     -8.3367 ug/L       9.81624     -8.3367 ppb        9.81624 117.75%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            1.8      74.347 ug/L        9.2845      74.347 ppb         9.2845  12.49%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               71.9      0.0729 ug/L       0.12558      0.0729 ppb        0.12558 172.19%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                1.1      0.0738 ug/L       0.19389      0.0738 ppb        0.19389 262.70%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       123.3      38.006 ug/L        1.6914      38.006 ppb         1.6914   4.45%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                0.4      0.0091 ug/L       0.13917      0.0091 ppb        0.13917 >999.9%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 9.8      4.9695 ug/L       1.81620      4.9695 ppb        1.81620  36.55%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                9.3      0.9986 ug/L       0.62193      0.9986 ppb        0.62193  62.28%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           5.3      6.4460 ug/L       2.27304      6.4460 ppb        2.27304  35.26%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                6.1      1.8751 ug/L       2.96549      1.8751 ppb        2.96549 158.15%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -8.3     -4.4829 ug/L       1.63422     -4.4829 ppb        1.63422  36.45%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               19.8      0.5885 ug/L       1.58588      0.5885 ppb        1.58588 269.49%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                2.0      0.3311 ug/L       0.99766      0.3311 ppb        0.99766 301.31%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              -22.6     -0.1495 ug/L       0.11258     -0.1495 ppb        0.11258  75.33%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              151.6      0.2073 ug/L       0.02048      0.2073 ppb        0.02048   9.88%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                5.4      1.5262 ug/L       1.44480      1.5262 ppb        1.44480  94.67%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              1007.0      29.741 ug/L        3.5136      29.741 ppb         3.5136  11.81%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               100.0      0.7187 ug/L       0.07740      0.7187 ppb        0.07740  10.77%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              121.8      1.0294 ug/L       0.40764      1.0294 ppb        0.40764  39.60%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    -21.2     -1.3512 ug/L       0.57399     -1.3512 ppb        0.57399  42.48%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 44
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 2/1/2010 21:59:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4381.1	4381.1	106	%			22:01:35
1	Y RADIAL	4883.4	4883.4	100.9	%			22:01:35
1	Al 396.153Radial†	6078.4	5913.8	4859.1	ug/L	4859.1	ppb	22:01:35
1	Ca 317.933Radial†	2877.1	2695.9	4990.5	ug/L	4990.5	ppb	22:01:55
1	Fe 238.204 Radial†	481.8	443.6	5169.8	ug/L	5169.8	ppb	22:01:55
1	K 766.490 Radial†	29862.0	25495.3	4846.5	ug/L	4846.5	ppb	22:01:35
1	Mg 279.077 IEC†	131.3	123.7	5211.0	ug/L	5211.0	ppb	22:01:55
1	Na 589.592 Radial†	33500.5	33198.1	10230	ug/L	10230	ppb	22:01:35
1	Sr 421.552†	80450.8	75720.1	499.91	ug/L	499.91	ppb	22:01:35
1	Sc 361.383	872561.1	872561.1	97.950	%			22:02:54
1	Y 371.029	700718.2	700718.2	95.434	%			22:02:54
1	Ag 328.068†	110155.3	111836.6	492.45	ug/L	492.45	ppb	22:02:54
1	As 188.979†	1205.7	1259.7	488.15	ug/L	488.15	ppb	22:03:14
1	B 249.677†	21688.3	22903.3	476.65	ug/L	476.65	ppb	22:02:54
1	Ba 233.527†	65824.5	67217.7	492.54	ug/L	492.54	ppb	22:02:54
1	Be 313.107†	1423617.2	1457819.7	490.25	ug/L	490.25	ppb	22:02:54
1	Cd 226.502†	46970.5	48157.8	497.15	ug/L	497.15	ppb	22:02:54
1	Co 228.616†	25712.3	26335.6	485.51	ug/L	485.51	ppb	22:03:14
1	Cr 267.716†	46906.4	47826.4	492.95	ug/L	492.95	ppb	22:02:54
1	Cu 324.752†	180114.1	176997.5	492.30	ug/L	492.30	ppb	22:02:54
1	Mn 257.610†	483729.7	493323.5	495.27	ug/L	495.27	ppb	22:02:54
1	Mo 202.031†	7226.9	7373.0	490.46	ug/L	490.46	ppb	22:03:14
1	Ni 231.604†	21469.1	21833.4	486.21	ug/L	486.21	ppb	22:03:14
1	P 214.914†	4844.2	4722.3	2355.8	ug/L	2355.8	ppb	22:03:14
1	Pb 220.353†	4395.6	4567.2	491.59	ug/L	491.59	ppb	22:03:14
1	S 181.975 Axial†	826.9	795.3	970.62	ug/L	970.62	ppb	22:03:14
1	Sb 206.836†	1591.0	1585.9	502.19	ug/L	502.19	ppb	22:03:14
1	Se 196.026†	839.9	883.4	508.55	ug/L	508.55	ppb	22:03:14
1	Si 251.611†	81777.8	82953.9	2463.2	ug/L	2463.2	ppb	22:02:54
1	Sn 189.927†	2980.3	3033.3	490.87	ug/L	490.87	ppb	22:03:14
1	Ti 334.940†	325023.3	333631.2	498.35	ug/L	498.35	ppb	22:02:54
1	Tl 190.801†	1658.0	1737.2	493.56	ug/L	493.56	ppb	22:03:14
1	U 409.014†	11331.0	16681.2	491.05	ug/L	491.05	ppb	22:02:54
1	V 292.402†	70348.8	73573.6	495.98	ug/L	495.98	ppb	22:02:54
1	Zn 213.857†	57951.5	58455.5	491.69	ug/L	491.69	ppb	22:02:54
1	SiO2†	80702.2	81829.3	5204.9	ug/L	5204.9	ppb	22:04:14
2	Sc Radial	4412.3	4412.3	107	%			22:02:00
2	Y RADIAL	4891.7	4891.7	101.0	%			22:02:00
2	Al 396.153Radial†	6150.2	5940.6	4880.8	ug/L	4880.8	ppb	22:02:00
2	Ca 317.933Radial†	2898.2	2696.4	4991.5	ug/L	4991.5	ppb	22:02:20
2	Fe 238.204 Radial†	487.8	446.0	5197.3	ug/L	5197.3	ppb	22:02:20
2	K 766.490 Radial†	29887.4	25320.4	4813.2	ug/L	4813.2	ppb	22:02:00
2	Mg 279.077 IEC†	131.0	122.5	5162.4	ug/L	5162.4	ppb	22:02:20
2	Na 589.592 Radial†	33927.3	33374.2	10284	ug/L	10284	ppb	22:02:00
2	Sr 421.552†	81242.5	75925.2	501.27	ug/L	501.27	ppb	22:02:00
2	Sc 361.383	860207.7	860207.7	96.563	%			22:03:21
2	Y 371.029	692008.4	692008.4	94.247	%			22:03:21
2	Ag 328.068†	108710.8	111955.7	492.99	ug/L	492.99	ppb	22:03:21
2	As 188.979†	1215.5	1287.5	498.83	ug/L	498.83	ppb	22:03:42
2	B 249.677†	21323.5	22843.6	475.37	ug/L	475.37	ppb	22:03:21
2	Ba 233.527†	64931.9	67258.4	492.84	ug/L	492.84	ppb	22:03:21
2	Be 313.107†	1403199.1	1457547.4	490.16	ug/L	490.16	ppb	22:03:21
2	Cd 226.502†	46205.4	48054.2	496.08	ug/L	496.08	ppb	22:03:21
2	Co 228.616†	25888.9	26895.5	495.85	ug/L	495.85	ppb	22:03:42
2	Cr 267.716†	46300.7	47886.9	493.58	ug/L	493.58	ppb	22:03:21
2	Cu 324.752†	177551.6	176984.5	492.27	ug/L	492.27	ppb	22:03:21
2	Mn 257.610†	475809.0	492213.0	494.16	ug/L	494.16	ppb	22:03:21
2	Mo 202.031†	7253.1	7506.0	499.31	ug/L	499.31	ppb	22:03:42
2	Ni 231.604†	21605.6	22289.5	496.37	ug/L	496.37	ppb	22:03:42

2	P 214.914†	4880.6	4831.1	2412.3 ug/L	2412.3 ppb	22:03:42
2	Pb 220.353†	4448.2	4686.1	504.37 ug/L	504.37 ppb	22:03:42
2	S 181.975 Axial†	826.9	807.5	985.52 ug/L	985.52 ppb	22:03:42
2	Sb 206.836†	1584.7	1602.7	507.64 ug/L	507.64 ppb	22:03:42
2	Se 196.026†	845.6	901.7	518.79 ug/L	518.79 ppb	22:03:42
2	Si 251.611†	80539.1	82870.1	2460.6 ug/L	2460.6 ppb	22:03:21
2	Sn 189.927†	2986.1	3082.9	498.89 ug/L	498.89 ppb	22:03:42
2	Ti 334.940†	319962.7	333155.8	497.65 ug/L	497.65 ppb	22:03:21
2	Tl 190.801†	1671.8	1775.8	504.38 ug/L	504.38 ppb	22:03:42
2	U 409.014†	10910.8	16412.3	483.10 ug/L	483.10 ppb	22:03:21
2	V 292.402†	69341.0	73561.3	496.00 ug/L	496.00 ppb	22:03:21
2	Zn 213.857†	56899.3	58215.4	489.58 ug/L	489.58 ppb	22:03:21
2	SiO2†	81269.7	83600.1	5317.5 ug/L	5317.5 ppb	22:04:20
3	Sc Radial	4305.5	4305.5	104 %		22:02:25
3	Y RADIAL	4785.7	4785.7	98.85 %		22:02:25
3	Al 396.153Radial†	6066.4	6002.9	4932.8 ug/L	4932.8 ppb	22:02:25
3	Ca 317.933Radial†	2908.2	2773.3	5133.8 ug/L	5133.8 ppb	22:02:45
3	Fe 238.204 Radial†	491.8	461.1	5373.4 ug/L	5373.4 ppb	22:02:45
3	K 766.490 Radial†	29658.7	25794.5	4903.3 ug/L	4903.3 ppb	22:02:25
3	Mg 279.077 IEC†	135.1	129.5	5456.1 ug/L	5456.1 ppb	22:02:45
3	Na 589.592 Radial†	33409.9	33665.4	10374 ug/L	10374 ppb	22:02:25
3	Sr 421.552†	80046.2	76663.4	506.14 ug/L	506.14 ppb	22:02:25
3	Sc 361.383	872231.1	872231.1	97.913 %		22:03:49
3	Y 371.029	700676.1	700676.1	95.428 %		22:03:49
3	Ag 328.068†	110240.1	111965.7	493.10 ug/L	493.10 ppb	22:03:49
3	As 188.979†	1203.2	1257.5	487.38 ug/L	487.38 ppb	22:04:09
3	B 249.677†	21745.6	22970.3	478.02 ug/L	478.02 ppb	22:03:49
3	Ba 233.527†	65910.3	67330.7	493.37 ug/L	493.37 ppb	22:03:49
3	Be 313.107†	1426556.8	1461371.9	491.44 ug/L	491.44 ppb	22:03:49
3	Cd 226.502†	47195.1	48405.4	499.68 ug/L	499.68 ppb	22:03:49
3	Co 228.616†	25700.4	26333.4	485.46 ug/L	485.46 ppb	22:04:09
3	Cr 267.716†	47059.3	48000.7	494.75 ug/L	494.75 ppb	22:03:49
3	Cu 324.752†	180096.4	177048.9	492.46 ug/L	492.46 ppb	22:03:49
3	Mn 257.610†	484816.1	494619.9	496.58 ug/L	496.58 ppb	22:03:49
3	Mo 202.031†	7221.3	7370.0	490.28 ug/L	490.28 ppb	22:04:09
3	Ni 231.604†	21501.3	21874.5	487.12 ug/L	487.12 ppb	22:04:09
3	P 214.914†	4841.2	4721.1	2355.0 ug/L	2355.0 ppb	22:04:09
3	Pb 220.353†	4403.0	4576.5	492.59 ug/L	492.59 ppb	22:04:09
3	S 181.975 Axial†	820.9	789.5	963.56 ug/L	963.56 ppb	22:04:09
3	Sb 206.836†	1587.5	1582.9	501.30 ug/L	501.30 ppb	22:04:09
3	Se 196.026†	842.0	885.9	510.59 ug/L	510.59 ppb	22:04:09
3	Si 251.611†	81953.1	83164.5	2469.4 ug/L	2469.4 ppb	22:03:49
3	Sn 189.927†	2984.2	3038.4	491.72 ug/L	491.72 ppb	22:04:09
3	Ti 334.940†	325042.7	333776.5	498.57 ug/L	498.57 ppb	22:03:49
3	Tl 190.801†	1656.2	1736.0	493.22 ug/L	493.22 ppb	22:04:09
3	U 409.014†	10867.3	16212.0	477.17 ug/L	477.17 ppb	22:03:49
3	V 292.402†	70409.6	73662.8	496.51 ug/L	496.51 ppb	22:03:49
3	Zn 213.857†	58002.9	58530.3	492.29 ug/L	492.29 ppb	22:03:49
3	SiO2†	81721.6	82901.6	5273.2 ug/L	5273.2 ppb	22:04:25

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	868333.3	97.475	%	0.7902				0.81%
Sc Radial	4366.3	106	%	1.3				1.26%
Y 371.029	697800.9	95.036	%	0.6832				0.72%
Y RADIAL	4853.6	100.3	%	1.22				1.22%
Ag 328.068†	111919.3	492.85	ug/L	0.344	492.85	ppb	0.344	0.07%
QC value within limits for Ag 328.068 Recovery = 98.57%								
Al 396.153Radial†	5952.4	4890.9	ug/L	37.82	4890.9	ppb	37.82	0.77%
QC value within limits for Al 396.153Radial Recovery = 97.82%								
As 188.979†	1268.3	491.45	ug/L	6.401	491.45	ppb	6.401	1.30%
QC value within limits for As 188.979 Recovery = 98.29%								
B 249.677†	22905.8	476.68	ug/L	1.325	476.68	ppb	1.325	0.28%
QC value within limits for B 249.677 Recovery = 95.34%								
Ba 233.527†	67268.9	492.91	ug/L	0.422	492.91	ppb	0.422	0.09%
QC value within limits for Ba 233.527 Recovery = 98.58%								
Be 313.107†	1458913.0	490.62	ug/L	0.717	490.62	ppb	0.717	0.15%
QC value within limits for Be 313.107 Recovery = 98.12%								
Ca 317.933Radial†	2721.9	5038.6	ug/L	82.46	5038.6	ppb	82.46	1.64%

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   QC value within limits for Ca 317.933Radial  Recovery = 100.77%
Cd 226.502†            48205.8      497.64 ug/L         1.850      497.64 ppb          1.850   0.37%
   QC value within limits for Cd 226.502  Recovery = 99.53%
Co 228.616†            26521.5      488.94 ug/L         5.984      488.94 ppb          5.984   1.22%
   QC value within limits for Co 228.616  Recovery = 97.79%
Cr 267.716†            47904.6      493.76 ug/L         0.916      493.76 ppb          0.916   0.19%
   QC value within limits for Cr 267.716  Recovery = 98.75%
Cu 324.752†           177010.3      492.35 ug/L         0.103      492.35 ppb          0.103   0.02%
   QC value within limits for Cu 324.752  Recovery = 98.47%
Fe 238.204 Radial†       450.2      5246.8 ug/L        110.48      5246.8 ppb         110.48   2.11%
   QC value within limits for Fe 238.204 Radial  Recovery = 104.94%
K 766.490 Radial†      25536.7      4854.3 ug/L         45.59      4854.3 ppb          45.59   0.94%
   QC value within limits for K 766.490 Radial  Recovery = 97.09%
Mg 279.077 IEC†          125.2      5276.5 ug/L        157.45      5276.5 ppb         157.45   2.98%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.53%
Mn 257.610†           493385.5      495.33 ug/L         1.212      495.33 ppb          1.212   0.24%
   QC value within limits for Mn 257.610  Recovery = 99.07%
Mo 202.031†             7416.3      493.35 ug/L         5.160      493.35 ppb          5.160   1.05%
   QC value within limits for Mo 202.031  Recovery = 98.67%
Na 589.592 Radial†     33412.6       10296 ug/L          72.7       10296 ppb           72.7   0.71%
   QC value within limits for Na 589.592 Radial  Recovery = 102.96%
Ni 231.604†            21999.1      489.90 ug/L         5.618      489.90 ppb          5.618   1.15%
   QC value within limits for Ni 231.604  Recovery = 97.98%
P 214.914†              4758.2      2374.4 ug/L         32.87      2374.4 ppb          32.87   1.38%
   QC value within limits for P 214.914  Recovery = 94.97%
Pb 220.353†             4610.0      496.18 ug/L         7.108      496.18 ppb          7.108   1.43%
   QC value within limits for Pb 220.353  Recovery = 99.24%
S 181.975 Axial†         797.4      973.23 ug/L        11.212      973.23 ppb         11.212   1.15%
   QC value within limits for S 181.975 Axial  Recovery = 97.32%
Sb 206.836†             1590.5      503.71 ug/L         3.430      503.71 ppb          3.430   0.68%
   QC value within limits for Sb 206.836  Recovery = 100.74%
Se 196.026†              890.3      512.64 ug/L         5.420      512.64 ppb          5.420   1.06%
   QC value within limits for Se 196.026  Recovery = 102.53%
Si 251.611†            82996.2      2464.4 ug/L          4.56      2464.4 ppb           4.56   0.19%
   QC value within limits for Si 251.611  Recovery = 98.58%
Sn 189.927†             3051.5      493.83 ug/L         4.405      493.83 ppb          4.405   0.89%
   QC value within limits for Sn 189.927  Recovery = 98.77%
Sr 421.552†            76102.9      502.44 ug/L         3.275      502.44 ppb          3.275   0.65%
   QC value within limits for Sr 421.552  Recovery = 100.49%
Ti 334.940†           333521.2      498.19 ug/L         0.483      498.19 ppb          0.483   0.10%
   QC value within limits for Ti 334.940  Recovery = 99.64%
Tl 190.801†             1749.7      497.05 ug/L         6.349      497.05 ppb          6.349   1.28%
   QC value within limits for Tl 190.801  Recovery = 99.41%
U 409.014†             16435.2      483.77 ug/L         6.968      483.77 ppb          6.968   1.44%
   QC value within limits for U 409.014  Recovery = 96.75%
V 292.402†             73599.2      496.16 ug/L         0.304      496.16 ppb          0.304   0.06%
   QC value within limits for V 292.402  Recovery = 99.23%
Zn 213.857†            58400.4      491.19 ug/L         1.424      491.19 ppb          1.424   0.29%
   QC value within limits for Zn 213.857  Recovery = 98.24%
SiO2†                  82777.0      5265.2 ug/L         56.77      5265.2 ppb          56.77   1.08%
   QC value within limits for SiO2  Recovery = 98.46%
All analyte(s) passed QC.
```

Sequence No.: 45
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 2/1/2010 22:06:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4140.3	4140.3	100	%			22:08:46
1	Y RADIAL	4426.5	4426.5	91.43	%			22:08:26
1	Al 396.153Radial†	-229.6	-38.7	-31.980	ug/L	-31.980	ppb	22:08:26
1	Ca 317.933Radial†	16.0	2.6	4.7506	ug/L	4.7506	ppb	22:08:46
1	Fe 238.204 Radial†	12.9	2.7	31.636	ug/L	31.636	ppb	22:08:46
1	K 766.490 Radial†	2900.7	266.0	50.635	ug/L	50.635	ppb	22:08:26
1	Mg 279.077 IEC†	4.7	4.8	200.88	ug/L	200.88	ppb	22:08:46
1	Na 589.592 Radial†	-1637.7	20.4	6.2786	ug/L	6.2786	ppb	22:08:26
1	Sr 421.552†	29.3	-7.2	-0.0477	ug/L	-0.0477	ppb	22:08:26
1	Sc 361.383	841490.2	841490.2	94.462	%			22:09:43
1	Y 371.029	686446.8	686446.8	93.490	%			22:09:43
1	Ag 328.068†	331.4	-273.7	-1.1969	ug/L	-1.1969	ppb	22:09:43
1	As 188.979†	-30.6	-3.7	-1.3977	ug/L	-1.3977	ppb	22:10:03
1	B 249.677†	-596.6	129.5	2.7023	ug/L	2.7023	ppb	22:10:03
1	Ba 233.527†	-22.2	-8.2	-0.0611	ug/L	-0.0611	ppb	22:10:03
1	Be 313.107†	-4104.9	57.5	0.0195	ug/L	0.0195	ppb	22:09:43
1	Cd 226.502†	-208.8	-16.9	-0.1764	ug/L	-0.1764	ppb	22:10:03
1	Co 228.616†	-87.0	-7.0	-0.1279	ug/L	-0.1279	ppb	22:10:03
1	Cr 267.716†	61.1	2.8	0.0255	ug/L	0.0255	ppb	22:09:43
1	Cu 324.752†	6984.7	507.4	1.4086	ug/L	1.4086	ppb	22:09:43
1	Mn 257.610†	528.4	27.6	0.0226	ug/L	0.0226	ppb	22:10:03
1	Mo 202.031†	12.1	7.6	0.5055	ug/L	0.5055	ppb	22:10:03
1	Ni 231.604†	71.6	-9.3	-0.2076	ug/L	-0.2076	ppb	22:10:03
1	P 214.914†	229.8	20.1	10.104	ug/L	10.104	ppb	22:10:03
1	Pb 220.353†	-55.0	21.4	2.2876	ug/L	2.2876	ppb	22:10:03
1	S 181.975 Axial†	45.8	-0.4	-0.4500	ug/L	-0.4500	ppb	22:10:03
1	Sb 206.836†	45.5	9.8	2.9990	ug/L	2.9990	ppb	22:10:03
1	Se 196.026†	-36.8	-13.0	-7.0750	ug/L	-7.0750	ppb	22:10:03
1	Si 251.611†	523.3	18.3	0.5381	ug/L	0.5381	ppb	22:10:03
1	Sn 189.927†	11.3	2.5	0.4030	ug/L	0.4030	ppb	22:10:03
1	Ti 334.940†	-1658.0	49.2	0.0542	ug/L	0.0542	ppb	22:09:43
1	Tl 190.801†	-41.9	0.1	0.0443	ug/L	0.0443	ppb	22:10:03
1	U 409.014†	-4578.0	266.7	7.8743	ug/L	7.8743	ppb	22:09:43
1	V 292.402†	-1773.2	-124.9	-0.8098	ug/L	-0.8098	ppb	22:09:43
1	Zn 213.857†	799.9	137.6	1.1641	ug/L	1.1641	ppb	22:10:03
1	SiO2†	537.3	6.6	0.4052	ug/L	0.4052	ppb	22:10:59
2	Sc Radial	4252.7	4252.7	103	%			22:09:11
2	Y RADIAL	5166.5	5166.5	106.7	%			22:08:51
2	Al 396.153Radial†	-200.2	-4.1	-3.3756	ug/L	-3.3756	ppb	22:08:51
2	Ca 317.933Radial†	18.2	4.3	7.9928	ug/L	7.9928	ppb	22:09:11
2	Fe 238.204 Radial†	12.2	1.7	20.213	ug/L	20.213	ppb	22:09:11
2	K 766.490 Radial†	2832.8	123.8	23.552	ug/L	23.552	ppb	22:08:51
2	Mg 279.077 IEC†	3.2	3.1	132.61	ug/L	132.61	ppb	22:09:11
2	Na 589.592 Radial†	-1623.1	77.7	23.931	ug/L	23.931	ppb	22:08:51
2	Sr 421.552†	31.2	-6.2	-0.0409	ug/L	-0.0409	ppb	22:08:51
2	Sc 361.383	870233.1	870233.1	97.688	%			22:10:08
2	Y 371.029	711050.8	711050.8	96.841	%			22:10:08
2	Ag 328.068†	355.1	-261.0	-1.1466	ug/L	-1.1466	ppb	22:10:08
2	As 188.979†	-30.4	-2.4	-0.9191	ug/L	-0.9191	ppb	22:10:29
2	B 249.677†	-585.1	162.2	3.3877	ug/L	3.3877	ppb	22:10:29
2	Ba 233.527†	-10.2	4.9	0.0362	ug/L	0.0362	ppb	22:10:29
2	Be 313.107†	-4027.2	280.6	0.0945	ug/L	0.0945	ppb	22:10:08
2	Cd 226.502†	-207.8	-8.6	-0.0881	ug/L	-0.0881	ppb	22:10:29
2	Co 228.616†	-81.7	1.5	0.0267	ug/L	0.0267	ppb	22:10:29
2	Cr 267.716†	91.5	31.8	0.3227	ug/L	0.3227	ppb	22:10:08
2	Cu 324.752†	7045.6	325.4	0.8987	ug/L	0.8987	ppb	22:10:08
2	Mn 257.610†	559.4	40.9	0.0376	ug/L	0.0376	ppb	22:10:29
2	Mo 202.031†	6.0	0.9	0.0645	ug/L	0.0645	ppb	22:10:29
2	Ni 231.604†	98.0	15.2	0.3380	ug/L	0.3380	ppb	22:10:29

2	P 214.914†	234.7	17.0	8.6436	ug/L	8.6436 ppb	22:10:29
2	Pb 220.353†	-61.7	16.4	1.7588	ug/L	1.7588 ppb	22:10:29
2	S 181.975 Axial†	47.7	-0.0	-0.0393	ug/L	-0.0393 ppb	22:10:29
2	Sb 206.836†	49.8	12.5	3.8093	ug/L	3.8093 ppb	22:10:29
2	Se 196.026†	-19.4	6.1	3.4613	ug/L	3.4613 ppb	22:10:29
2	Si 251.611†	537.7	14.7	0.4366	ug/L	0.4366 ppb	22:10:29
2	Sn 189.927†	4.0	-5.3	-0.8570	ug/L	-0.8570 ppb	22:10:29
2	Ti 334.940†	-1653.7	111.5	0.1507	ug/L	0.1507 ppb	22:10:08
2	Tl 190.801†	-37.9	5.6	1.5927	ug/L	1.5927 ppb	22:10:29
2	U 409.014†	-4545.4	460.1	13.587	ug/L	13.587 ppb	22:10:08
2	V 292.402†	-1718.7	-7.2	-0.0214	ug/L	-0.0214 ppb	22:10:08
2	Zn 213.857†	800.5	110.4	0.9312	ug/L	0.9312 ppb	22:10:29
2	SiO2†	522.1	-27.8	-1.7765	ug/L	-1.7765 ppb	22:11:04
3	Sc Radial	4190.5	4190.5	102	%		22:09:36
3	Y RADIAL	4991.7	4991.7	103.1	%		22:09:16
3	Al 396.153Radial†	-201.3	-8.1	-6.6983	ug/L	-6.6983 ppb	22:09:16
3	Ca 317.933Radial†	19.3	5.6	10.407	ug/L	10.407 ppb	22:09:36
3	Fe 238.204 Radial†	11.7	1.4	15.817	ug/L	15.817 ppb	22:09:36
3	K 766.490 Radial†	2842.6	174.2	33.162	ug/L	33.162 ppb	22:09:16
3	Mg 279.077 IEC†	1.3	1.3	56.624	ug/L	56.624 ppb	22:09:36
3	Na 589.592 Radial†	-1693.1	-14.6	-4.5057	ug/L	-4.5057 ppb	22:09:16
3	Sr 421.552†	38.1	1.1	0.0071	ug/L	0.0071 ppb	22:09:16
3	Sc 361.383	869898.3	869898.3	97.651	%		22:10:34
3	Y 371.029	708760.6	708760.6	96.529	%		22:10:34
3	Ag 328.068†	469.5	-143.7	-0.6354	ug/L	-0.6354 ppb	22:10:34
3	As 188.979†	-33.3	-5.4	-2.0546	ug/L	-2.0546 ppb	22:10:54
3	B 249.677†	-585.5	161.5	3.3741	ug/L	3.3741 ppb	22:10:54
3	Ba 233.527†	-41.4	-27.1	-0.1978	ug/L	-0.1978 ppb	22:10:54
3	Be 313.107†	-4111.3	192.8	0.0649	ug/L	0.0649 ppb	22:10:34
3	Cd 226.502†	-208.8	-9.7	-0.0993	ug/L	-0.0993 ppb	22:10:54
3	Co 228.616†	-89.1	-6.1	-0.1133	ug/L	-0.1133 ppb	22:10:54
3	Cr 267.716†	76.3	16.3	0.1626	ug/L	0.1626 ppb	22:10:34
3	Cu 324.752†	7139.4	424.3	1.1739	ug/L	1.1739 ppb	22:10:34
3	Mn 257.610†	507.9	-11.6	-0.0124	ug/L	-0.0124 ppb	22:10:54
3	Mo 202.031†	7.8	2.8	0.1885	ug/L	0.1885 ppb	22:10:54
3	Ni 231.604†	79.0	-4.3	-0.0953	ug/L	-0.0953 ppb	22:10:54
3	P 214.914†	247.9	30.6	15.674	ug/L	15.674 ppb	22:10:54
3	Pb 220.353†	-70.0	8.0	0.8543	ug/L	0.8543 ppb	22:10:54
3	S 181.975 Axial†	54.0	6.4	7.8662	ug/L	7.8662 ppb	22:10:54
3	Sb 206.836†	44.1	6.7	2.0680	ug/L	2.0680 ppb	22:10:54
3	Se 196.026†	-25.9	-0.5	-0.2434	ug/L	-0.2434 ppb	22:10:54
3	Si 251.611†	521.8	-1.4	-0.0426	ug/L	-0.0426 ppb	22:10:54
3	Sn 189.927†	17.0	8.0	1.2864	ug/L	1.2864 ppb	22:10:54
3	Ti 334.940†	-1705.2	58.2	0.0779	ug/L	0.0779 ppb	22:10:34
3	Tl 190.801†	-41.6	1.8	0.5229	ug/L	0.5229 ppb	22:10:54
3	U 409.014†	-4562.7	440.6	13.013	ug/L	13.013 ppb	22:10:34
3	V 292.402†	-1750.7	-40.6	-0.2438	ug/L	-0.2438 ppb	22:10:34
3	Zn 213.857†	794.9	104.9	0.8873	ug/L	0.8873 ppb	22:10:54
3	SiO2†	567.8	19.2	1.2215	ug/L	1.2215 ppb	22:11:09

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	860540.5	96.600	%	1.8521				1.92%
Sc Radial	4194.5	102	%	1.4				1.34%
Y 371.029	702086.1	95.620	%	1.8512				1.94%
Y RADIAL	4861.6	100.4	%	7.99				7.96%
Ag 328.068†	-226.1	-0.9929	ug/L	0.31069	-0.9929	ppb	0.31069	31.29%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-17.0	-14.018	ug/L	15.6442	-14.018	ppb	15.6442	111.60%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-3.8	-1.4571	ug/L	0.57006	-1.4571	ppb	0.57006	39.12%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	151.0	3.1547	ug/L	0.39187	3.1547	ppb	0.39187	12.42%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-10.1	-0.0742	ug/L	0.11759	-0.0742	ppb	0.11759	158.42%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	177.0	0.0596	ug/L	0.03780	0.0596	ppb	0.03780	63.40%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	4.2	7.7169	ug/L	2.83835	7.7169	ppb	2.83835	36.78%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -11.7     -0.1213 ug/L       0.04809     -0.1213 ppb        0.04809  39.65%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -3.9     -0.0715 ug/L       0.08538     -0.0715 ppb        0.08538 119.45%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               17.0      0.1703 ug/L       0.14875      0.1703 ppb        0.14875  87.36%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              419.1      1.1604 ug/L       0.25518      1.1604 ppb        0.25518  21.99%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         1.9     22.555 ug/L        8.1657     22.555 ppb         8.1657  36.20%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        188.0     35.783 ug/L       13.7304     35.783 ppb        13.7304  38.37%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            3.1    130.04 ug/L        72.161    130.04 ppb         72.161  55.49%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               18.9      0.0159 ug/L       0.02566      0.0159 ppb        0.02566 161.33%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                3.8      0.2528 ug/L       0.22740      0.2528 ppb        0.22740  89.94%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        27.8      8.5680 ug/L      14.35592      8.5680 ppb       14.35592 167.55%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                0.5      0.0117 ug/L       0.28811      0.0117 ppb        0.28811 >999.9%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                22.6     11.474 ug/L        3.7102     11.474 ppb         3.7102  32.34%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               15.3      1.6336 ug/L       0.72479      1.6336 ppb        0.72479  44.37%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           2.0      2.4590 ug/L       4.68730      2.4590 ppb        4.68730 190.62%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                9.7      2.9588 ug/L       0.87131      2.9588 ppb        0.87131  29.45%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -2.5     -1.2857 ug/L       5.34496     -1.2857 ppb        5.34496 415.72%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               10.5      0.3107 ug/L       0.31019      0.3107 ppb        0.31019  99.83%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                1.7      0.2774 ug/L       1.07719      0.2774 ppb        1.07719 388.25%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -4.1     -0.0272 ug/L       0.02987     -0.0272 ppb        0.02987 109.81%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               72.9      0.0943 ug/L       0.05031      0.0943 ppb        0.05031  53.37%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                2.5      0.7200 ug/L       0.79278      0.7200 ppb        0.79278 110.12%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               389.1     11.492 ug/L        3.1458     11.492 ppb         3.1458  27.37%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               -57.6     -0.3584 ug/L       0.40649     -0.3584 ppb        0.40649 113.43%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              117.6      0.9942 ug/L       0.14875      0.9942 ppb        0.14875  14.96%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     -0.7     -0.0499 ug/L       1.54995     -0.0499 ppb        1.54995 >999.9%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 53
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 2/1/2010 23:02:42
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4372.1	4372.1	106	%			23:04:35
1	Y RADIAL	4875.5	4875.5	100.7	%			23:04:35
1	Al 396.153Radial†	6060.6	5908.9	4855.5	ug/L	4855.5	ppb	23:04:35
1	Ca 317.933Radial†	2913.5	2735.8	5064.3	ug/L	5064.3	ppb	23:04:55
1	Fe 238.204 Radial†	489.3	451.6	5262.0	ug/L	5262.0	ppb	23:04:55
1	K 766.490 Radial†	29786.8	25482.3	4843.9	ug/L	4843.9	ppb	23:04:35
1	Mg 279.077 IEC†	134.2	126.6	5335.7	ug/L	5335.7	ppb	23:04:55
1	Na 589.592 Radial†	34043.6	33775.5	10408	ug/L	10408	ppb	23:04:35
1	Sr 421.552†	80729.4	76139.2	502.68	ug/L	502.68	ppb	23:04:35
1	Sc 361.383	891843.5	891843.5	100.11	%			23:05:54
1	Y 371.029	716823.9	716823.9	97.627	%			23:05:54
1	Ag 328.068†	108518.1	107769.7	474.63	ug/L	474.63	ppb	23:05:54
1	As 188.979†	1212.7	1240.1	480.51	ug/L	480.51	ppb	23:06:14
1	B 249.677†	21472.5	22209.1	462.14	ug/L	462.14	ppb	23:05:54
1	Ba 233.527†	64702.3	64643.7	473.69	ug/L	473.69	ppb	23:05:54
1	Be 313.107†	1393458.5	1396271.4	469.56	ug/L	469.56	ppb	23:05:54
1	Cd 226.502†	46284.1	46435.4	479.35	ug/L	479.35	ppb	23:05:54
1	Co 228.616†	25922.7	25978.3	478.94	ug/L	478.94	ppb	23:06:14
1	Cr 267.716†	46101.2	45986.7	474.00	ug/L	474.00	ppb	23:05:54
1	Cu 324.752†	176676.3	169587.8	471.71	ug/L	471.71	ppb	23:05:54
1	Mn 257.610†	475354.2	474280.0	476.16	ug/L	476.16	ppb	23:05:54
1	Mo 202.031†	7260.6	7247.1	482.10	ug/L	482.10	ppb	23:06:14
1	Ni 231.604†	21608.7	21498.9	478.76	ug/L	478.76	ppb	23:06:14
1	P 214.914†	4902.6	4673.7	2334.5	ug/L	2334.5	ppb	23:06:14
1	Pb 220.353†	4441.3	4515.9	486.07	ug/L	486.07	ppb	23:06:14
1	S 181.975 Axial†	830.9	781.0	953.21	ug/L	953.21	ppb	23:06:14
1	Sb 206.836†	1607.1	1566.8	496.10	ug/L	496.10	ppb	23:06:14
1	Se 196.026†	848.1	873.1	503.08	ug/L	503.08	ppb	23:06:14
1	Si 251.611†	80713.9	80086.0	2377.9	ug/L	2377.9	ppb	23:05:54
1	Sn 189.927†	3003.6	2990.8	484.02	ug/L	484.02	ppb	23:06:14
1	Ti 334.940†	319748.3	321187.8	479.77	ug/L	479.77	ppb	23:05:54
1	Tl 190.801†	1675.2	1717.8	487.89	ug/L	487.89	ppb	23:06:14
1	U 409.014†	10982.1	16082.7	473.40	ug/L	473.40	ppb	23:05:54
1	V 292.402†	69264.2	70937.4	478.30	ug/L	478.30	ppb	23:05:54
1	Zn 213.857†	56844.9	56070.9	471.52	ug/L	471.52	ppb	23:05:54
1	SiO2†	83135.5	82478.4	5246.5	ug/L	5246.5	ppb	23:07:14
2	Sc Radial	4283.0	4283.0	104	%			23:05:00
2	Y RADIAL	4756.2	4756.2	98.24	%			23:05:00
2	Al 396.153Radial†	6057.2	6024.6	4950.4	ug/L	4950.4	ppb	23:05:00
2	Ca 317.933Radial†	2872.8	2753.8	5097.7	ug/L	5097.7	ppb	23:05:20
2	Fe 238.204 Radial†	479.1	451.4	5260.2	ug/L	5260.2	ppb	23:05:20
2	K 766.490 Radial†	29662.2	25947.3	4932.4	ug/L	4932.4	ppb	23:05:00
2	Mg 279.077 IEC†	131.8	127.0	5352.3	ug/L	5352.3	ppb	23:05:20
2	Na 589.592 Radial†	33632.3	34048.0	10492	ug/L	10492	ppb	23:05:00
2	Sr 421.552†	80303.5	77314.6	510.44	ug/L	510.44	ppb	23:05:00
2	Sc 361.383	870239.0	870239.0	97.689	%			23:06:21
2	Y 371.029	698489.0	698489.0	95.130	%			23:06:21
2	Ag 328.068†	111308.5	113317.2	498.98	ug/L	498.98	ppb	23:06:21
2	As 188.979†	1201.5	1258.6	487.81	ug/L	487.81	ppb	23:06:41
2	B 249.677†	21944.7	23224.9	483.34	ug/L	483.34	ppb	23:06:21
2	Ba 233.527†	66312.8	67896.8	497.52	ug/L	497.52	ppb	23:06:21
2	Be 313.107†	1433496.0	1471810.4	494.96	ug/L	494.96	ppb	23:06:21
2	Cd 226.502†	47308.8	48632.0	502.04	ug/L	502.04	ppb	23:06:21
2	Co 228.616†	25973.1	26672.7	491.72	ug/L	491.72	ppb	23:06:41
2	Cr 267.716†	47168.1	48222.1	497.03	ug/L	497.03	ppb	23:06:21
2	Cu 324.752†	181850.9	179266.0	498.62	ug/L	498.62	ppb	23:06:21
2	Mn 257.610†	487502.5	498503.3	500.47	ug/L	500.47	ppb	23:06:21
2	Mo 202.031†	7284.1	7451.2	495.67	ug/L	495.67	ppb	23:06:41
2	Ni 231.604†	21618.5	22044.7	490.91	ug/L	490.91	ppb	23:06:41

2	P 214.914†	4890.0	4782.4	2385.7 ug/L	2385.7 ppb	23:06:41
2	Pb 220.353†	4425.5	4609.8	496.19 ug/L	496.19 ppb	23:06:41
2	S 181.975 Axial†	837.9	808.8	987.10 ug/L	987.10 ppb	23:06:41
2	Sb 206.836†	1601.2	1600.7	506.90 ug/L	506.90 ppb	23:06:41
2	Se 196.026†	846.3	892.2	513.74 ug/L	513.74 ppb	23:06:41
2	Si 251.611†	82868.6	84293.2	2503.0 ug/L	2503.0 ppb	23:06:21
2	Sn 189.927†	3008.2	3070.0	496.81 ug/L	496.81 ppb	23:06:41
2	Ti 334.940†	328468.9	338043.6	504.94 ug/L	504.94 ppb	23:06:21
2	Tl 190.801†	1678.2	1762.4	500.70 ug/L	500.70 ppb	23:06:41
2	U 409.014†	11350.4	16732.0	492.53 ug/L	492.53 ppb	23:06:21
2	V 292.402†	70956.3	74387.0	501.44 ug/L	501.44 ppb	23:06:21
2	Zn 213.857†	58177.4	58844.5	494.94 ug/L	494.94 ppb	23:06:21
2	SiO2†	81745.8	83117.4	5286.9 ug/L	5286.9 ppb	23:07:19
3	Sc Radial	4297.0	4297.0	104 %		23:05:25
3	Y RADIAL	4800.7	4800.7	99.16 %		23:05:25
3	Al 396.153Radial†	6114.0	6060.1	4979.9 ug/L	4979.9 ppb	23:05:25
3	Ca 317.933Radial†	2873.1	2745.1	5081.6 ug/L	5081.6 ppb	23:05:45
3	Fe 238.204 Radial†	481.6	452.3	5270.9 ug/L	5270.9 ppb	23:05:45
3	K 766.490 Radial†	30064.8	26240.7	4988.2 ug/L	4988.2 ppb	23:05:25
3	Mg 279.077 IEC†	128.4	123.3	5196.5 ug/L	5196.5 ppb	23:05:45
3	Na 589.592 Radial†	34159.0	34448.1	10615 ug/L	10615 ppb	23:05:25
3	Sr 421.552†	81233.0	77954.9	514.67 ug/L	514.67 ppb	23:05:25
3	Sc 361.383	872491.3	872491.3	97.942 %		23:06:49
3	Y 371.029	701227.7	701227.7	95.503 %		23:06:49
3	Ag 328.068†	108785.4	110446.9	486.39 ug/L	486.39 ppb	23:06:49
3	As 188.979†	1230.2	1284.8	497.78 ug/L	497.78 ppb	23:07:09
3	B 249.677†	21492.2	22705.0	472.47 ug/L	472.47 ppb	23:06:49
3	Ba 233.527†	65024.2	66405.9	486.59 ug/L	486.59 ppb	23:06:49
3	Be 313.107†	1400856.2	1434696.6	482.48 ug/L	482.48 ppb	23:06:49
3	Cd 226.502†	46346.1	47524.2	490.60 ug/L	490.60 ppb	23:06:49
3	Co 228.616†	25919.4	26549.2	489.46 ug/L	489.46 ppb	23:07:09
3	Cr 267.716†	46297.6	47208.7	486.59 ug/L	486.59 ppb	23:06:49
3	Cu 324.752†	177439.6	174281.4	484.76 ug/L	484.76 ppb	23:06:49
3	Mn 257.610†	477069.6	486562.8	488.49 ug/L	488.49 ppb	23:06:49
3	Mo 202.031†	7254.8	7402.0	492.40 ug/L	492.40 ppb	23:07:09
3	Ni 231.604†	21612.4	21981.4	489.50 ug/L	489.50 ppb	23:07:09
3	P 214.914†	4895.8	4775.4	2384.8 ug/L	2384.8 ppb	23:07:09
3	Pb 220.353†	4460.9	4634.3	498.81 ug/L	498.81 ppb	23:07:09
3	S 181.975 Axial†	831.1	799.7	976.01 ug/L	976.01 ppb	23:07:09
3	Sb 206.836†	1588.9	1583.8	501.65 ug/L	501.65 ppb	23:07:09
3	Se 196.026†	853.5	897.4	516.63 ug/L	516.63 ppb	23:07:09
3	Si 251.611†	81054.7	82222.3	2441.4 ug/L	2441.4 ppb	23:06:49
3	Sn 189.927†	2998.6	3052.2	493.94 ug/L	493.94 ppb	23:07:09
3	Ti 334.940†	320976.7	329526.0	492.24 ug/L	492.24 ppb	23:06:49
3	Tl 190.801†	1659.1	1738.4	493.81 ug/L	493.81 ppb	23:07:09
3	U 409.014†	10868.8	16210.2	477.14 ug/L	477.14 ppb	23:06:49
3	V 292.402†	69438.2	72649.5	489.82 ug/L	489.82 ppb	23:06:49
3	Zn 213.857†	56998.7	57487.3	483.45 ug/L	483.45 ppb	23:06:49
3	SiO2†	81944.7	83104.4	5286.1 ug/L	5286.1 ppb	23:07:25

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	878191.3	98.582	%	1.3332				1.35%
Sc Radial	4317.4	105	%	1.2				1.11%
Y 371.029	705513.5	96.087	%	1.3470				1.40%
Y RADIAL	4810.8	99.37	%	1.246				1.25%
Ag 328.068†	110511.3	486.67	ug/L	12.175	486.67	ppb	12.175	2.50%
QC value within limits for Ag 328.068 Recovery = 97.33%								
Al 396.153Radial†	5997.9	4928.6	ug/L	65.00	4928.6	ppb	65.00	1.32%
QC value within limits for Al 396.153Radial Recovery = 98.57%								
As 188.979†	1261.2	488.70	ug/L	8.669	488.70	ppb	8.669	1.77%
QC value within limits for As 188.979 Recovery = 97.74%								
B 249.677†	22713.0	472.65	ug/L	10.603	472.65	ppb	10.603	2.24%
QC value within limits for B 249.677 Recovery = 94.53%								
Ba 233.527†	66315.5	485.93	ug/L	11.928	485.93	ppb	11.928	2.45%
QC value within limits for Ba 233.527 Recovery = 97.19%								
Be 313.107†	1434259.5	482.33	ug/L	12.701	482.33	ppb	12.701	2.63%
QC value within limits for Be 313.107 Recovery = 96.47%								
Ca 317.933Radial†	2744.9	5081.2	ug/L	16.68	5081.2	ppb	16.68	0.33%

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   QC value within limits for Ca 317.933Radial  Recovery = 101.62%
Cd 226.502†            47530.5      490.66 ug/L        11.347      490.66 ppb        11.347   2.31%
   QC value within limits for Cd 226.502  Recovery = 98.13%
Co 228.616†            26400.0      486.71 ug/L         6.821      486.71 ppb         6.821   1.40%
   QC value within limits for Co 228.616  Recovery = 97.34%
Cr 267.716†            47139.2      485.87 ug/L        11.535      485.87 ppb        11.535   2.37%
   QC value within limits for Cr 267.716  Recovery = 97.17%
Cu 324.752†           174378.4      485.03 ug/L        13.456      485.03 ppb        13.456   2.77%
   QC value within limits for Cu 324.752  Recovery = 97.01%
Fe 238.204 Radial†       451.7      5264.4 ug/L          5.70     5264.4 ppb          5.70   0.11%
   QC value within limits for Fe 238.204 Radial  Recovery = 105.29%
K 766.490 Radial†      25890.1      4921.5 ug/L         72.74     4921.5 ppb         72.74   1.48%
   QC value within limits for K 766.490 Radial  Recovery = 98.43%
Mg 279.077 IEC†          125.7      5294.8 ug/L         85.54     5294.8 ppb         85.54   1.62%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.90%
Mn 257.610†           486448.7      488.38 ug/L        12.152      488.38 ppb        12.152   2.49%
   QC value within limits for Mn 257.610  Recovery = 97.68%
Mo 202.031†             7366.8      490.06 ug/L         7.079      490.06 ppb         7.079   1.44%
   QC value within limits for Mo 202.031  Recovery = 98.01%
Na 589.592 Radial†     34090.5       10505 ug/L         104.3       10505 ppb         104.3   0.99%
   QC value within limits for Na 589.592 Radial  Recovery = 105.05%
Ni 231.604†            21841.7      486.39 ug/L         6.648      486.39 ppb         6.648   1.37%
   QC value within limits for Ni 231.604  Recovery = 97.28%
P 214.914†              4743.8      2368.3 ug/L         29.31      2368.3 ppb         29.31   1.24%
   QC value within limits for P 214.914  Recovery = 94.73%
Pb 220.353†             4586.7      493.69 ug/L         6.730      493.69 ppb         6.730   1.36%
   QC value within limits for Pb 220.353  Recovery = 98.74%
S 181.975 Axial†         796.5      972.11 ug/L        17.281      972.11 ppb        17.281   1.78%
   QC value within limits for S 181.975 Axial  Recovery = 97.21%
Sb 206.836†             1583.8      501.55 ug/L         5.400      501.55 ppb         5.400   1.08%
   QC value within limits for Sb 206.836  Recovery = 100.31%
Se 196.026†              887.6      511.15 ug/L         7.138      511.15 ppb         7.138   1.40%
   QC value within limits for Se 196.026  Recovery = 102.23%
Si 251.611†            82200.5      2440.7 ug/L         62.53      2440.7 ppb         62.53   2.56%
   QC value within limits for Si 251.611  Recovery = 97.63%
Sn 189.927†             3037.6      491.59 ug/L         6.714      491.59 ppb         6.714   1.37%
   QC value within limits for Sn 189.927  Recovery = 98.32%
Sr 421.552†            77136.2      509.26 ug/L         6.080      509.26 ppb         6.080   1.19%
   QC value within limits for Sr 421.552  Recovery = 101.85%
Ti 334.940†           329585.8      492.32 ug/L        12.586      492.32 ppb        12.586   2.56%
   QC value within limits for Ti 334.940  Recovery = 98.46%
Tl 190.801†             1739.5      494.13 ug/L         6.409      494.13 ppb         6.409   1.30%
   QC value within limits for Tl 190.801  Recovery = 98.83%
U 409.014†             16341.6      481.03 ug/L        10.138      481.03 ppb        10.138   2.11%
   QC value within limits for U 409.014  Recovery = 96.21%
V 292.402†             72658.0      489.86 ug/L        11.572      489.86 ppb        11.572   2.36%
   QC value within limits for V 292.402  Recovery = 97.97%
Zn 213.857†            57467.6      483.30 ug/L        11.710      483.30 ppb        11.710   2.42%
   QC value within limits for Zn 213.857  Recovery = 96.66%
SiO2†                  82900.0      5273.2 ug/L         23.10      5273.2 ppb         23.10   0.44%
   QC value within limits for SiO2  Recovery = 98.61%
All analyte(s) passed QC.
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Sequence No.: 54
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 2/1/2010 23:09:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4307.6	4307.6	104	%			23:11:26
1	Y RADIAL	4866.4	4866.4	100.5	%			23:11:26
1	Al 396.153Radial†	-183.2	14.6	12.046	ug/L	12.046	ppb	23:11:26
1	Ca 317.933Radial†	12.7	-1.2	-2.2063	ug/L	-2.2063	ppb	23:11:46
1	Fe 238.204 Radial†	12.2	1.6	18.509	ug/L	18.509	ppb	23:11:46
1	K 766.490 Radial†	2868.6	123.0	23.408	ug/L	23.408	ppb	23:11:26
1	Mg 279.077 IEC†	3.5	3.4	143.25	ug/L	143.25	ppb	23:11:46
1	Na 589.592 Radial†	-1638.8	82.8	25.505	ug/L	25.505	ppb	23:11:26
1	Sr 421.552†	-2.6	-38.9	-0.2571	ug/L	-0.2571	ppb	23:11:26
1	Sc 361.383	841322.7	841322.7	94.443	%			23:12:43
1	Y 371.029	685364.7	685364.7	93.343	%			23:12:43
1	Ag 328.068†	411.2	-189.1	-0.8269	ug/L	-0.8269	ppb	23:12:43
1	As 188.979†	-24.9	2.4	0.9078	ug/L	0.9078	ppb	23:13:03
1	B 249.677†	-558.5	169.7	3.5469	ug/L	3.5469	ppb	23:13:03
1	Ba 233.527†	-33.8	-20.5	-0.1496	ug/L	-0.1496	ppb	23:13:03
1	Be 313.107†	-4078.8	84.2	0.0286	ug/L	0.0286	ppb	23:12:43
1	Cd 226.502†	-195.8	-3.2	-0.0343	ug/L	-0.0343	ppb	23:13:03
1	Co 228.616†	-103.9	-24.9	-0.4578	ug/L	-0.4578	ppb	23:13:03
1	Cr 267.716†	36.5	-23.2	-0.2413	ug/L	-0.2413	ppb	23:12:43
1	Cu 324.752†	7001.3	526.4	1.4621	ug/L	1.4621	ppb	23:12:43
1	Mn 257.610†	553.6	54.4	0.0506	ug/L	0.0506	ppb	23:13:03
1	Mo 202.031†	17.3	13.1	0.8729	ug/L	0.8729	ppb	23:13:03
1	Ni 231.604†	83.5	3.2	0.0726	ug/L	0.0726	ppb	23:13:03
1	P 214.914†	229.5	19.7	9.9414	ug/L	9.9414	ppb	23:13:03
1	Pb 220.353†	-49.7	27.1	2.9050	ug/L	2.9050	ppb	23:13:03
1	S 181.975 Axial†	48.3	2.2	2.6930	ug/L	2.6930	ppb	23:13:03
1	Sb 206.836†	34.7	-1.6	-0.4525	ug/L	-0.4525	ppb	23:13:03
1	Se 196.026†	-26.9	-2.5	-1.3029	ug/L	-1.3029	ppb	23:13:03
1	Si 251.611†	596.9	96.3	2.8550	ug/L	2.8550	ppb	23:13:03
1	Sn 189.927†	20.4	12.2	1.9664	ug/L	1.9664	ppb	23:13:03
1	Ti 334.940†	-1620.4	88.7	0.1182	ug/L	0.1182	ppb	23:12:43
1	Tl 190.801†	-27.9	15.0	4.2232	ug/L	4.2232	ppb	23:13:03
1	U 409.014†	-4655.2	184.0	5.4322	ug/L	5.4322	ppb	23:12:43
1	V 292.402†	-1695.7	-43.3	-0.2652	ug/L	-0.2652	ppb	23:12:43
1	Zn 213.857†	787.2	124.4	1.0513	ug/L	1.0513	ppb	23:13:03
1	SiO2†	628.6	103.3	6.5634	ug/L	6.5634	ppb	23:13:59
2	Sc Radial	4337.7	4337.7	105	%			23:11:51
2	Y RADIAL	4836.1	4836.1	99.89	%			23:11:51
2	Al 396.153Radial†	-185.8	13.4	11.062	ug/L	11.062	ppb	23:11:51
2	Ca 317.933Radial†	16.7	2.5	4.7006	ug/L	4.7006	ppb	23:12:11
2	Fe 238.204 Radial†	8.6	-2.0	-22.915	ug/L	-22.915	ppb	23:12:11
2	K 766.490 Radial†	2830.7	67.9	12.917	ug/L	12.917	ppb	23:11:51
2	Mg 279.077 IEC†	4.3	4.2	176.01	ug/L	176.01	ppb	23:12:11
2	Na 589.592 Radial†	-1625.9	105.9	32.635	ug/L	32.635	ppb	23:11:51
2	Sr 421.552†	30.8	-7.2	-0.0473	ug/L	-0.0473	ppb	23:11:51
2	Sc 361.383	871113.9	871113.9	97.787	%			23:13:09
2	Y 371.029	710151.9	710151.9	96.718	%			23:13:09
2	Ag 328.068†	423.9	-191.0	-0.8608	ug/L	-0.8608	ppb	23:13:09
2	As 188.979†	-30.6	-2.6	-0.9835	ug/L	-0.9835	ppb	23:13:29
2	B 249.677†	-550.9	197.7	4.1378	ug/L	4.1378	ppb	23:13:29
2	Ba 233.527†	-9.7	5.4	0.0392	ug/L	0.0392	ppb	23:13:29
2	Be 313.107†	-4091.0	219.5	0.0745	ug/L	0.0745	ppb	23:13:09
2	Cd 226.502†	-187.6	12.2	0.1333	ug/L	0.1333	ppb	23:13:29
2	Co 228.616†	-91.6	-8.5	-0.1568	ug/L	-0.1568	ppb	23:13:29
2	Cr 267.716†	104.8	45.3	0.4574	ug/L	0.4574	ppb	23:13:09
2	Cu 324.752†	7039.1	311.5	0.8525	ug/L	0.8525	ppb	23:13:09
2	Mn 257.610†	576.2	57.4	0.0481	ug/L	0.0481	ppb	23:13:29
2	Mo 202.031†	6.5	1.5	0.0947	ug/L	0.0947	ppb	23:13:29
2	Ni 231.604†	103.6	20.7	0.4623	ug/L	0.4623	ppb	23:13:29

2	P 214.914†	234.2	16.2	8.2829 ug/L	8.2829 ppb	23:13:29
2	Pb 220.353†	-69.7	8.4	0.9028 ug/L	0.9028 ppb	23:13:29
2	S 181.975 Axial†	48.8	1.1	1.2849 ug/L	1.2849 ppb	23:13:29
2	Sb 206.836†	55.6	18.5	5.6674 ug/L	5.6674 ppb	23:13:29
2	Se 196.026†	-30.0	-4.8	-2.7117 ug/L	-2.7117 ppb	23:13:29
2	Si 251.611†	587.9	65.4	1.9469 ug/L	1.9469 ppb	23:13:29
2	Sn 189.927†	17.7	8.7	1.4022 ug/L	1.4022 ppb	23:13:29
2	Ti 334.940†	-1512.7	257.4	0.3606 ug/L	0.3606 ppb	23:13:09
2	Tl 190.801†	-48.3	-4.9	-1.3756 ug/L	-1.3756 ppb	23:13:29
2	U 409.014†	-4241.3	775.8	22.918 ug/L	22.918 ppb	23:13:09
2	V 292.402†	-1674.0	40.3	0.3195 ug/L	0.3195 ppb	23:13:09
2	Zn 213.857†	807.5	116.7	0.9879 ug/L	0.9879 ppb	23:13:29
2	SiO2†	822.8	279.2	17.800 ug/L	17.800 ppb	23:14:04
3	Sc Radial	4335.7	4335.7	105 %		23:12:16
3	Y RADIAL	4867.2	4867.2	100.5 %		23:12:16
3	Al 396.153Radial†	-222.6	-21.7	-17.948 ug/L	-17.948 ppb	23:12:16
3	Ca 317.933Radial†	14.9	0.9	1.6121 ug/L	1.6121 ppb	23:12:36
3	Fe 238.204 Radial†	14.3	3.5	40.845 ug/L	40.845 ppb	23:12:36
3	K 766.490 Radial†	3005.3	235.3	44.766 ug/L	44.766 ppb	23:12:16
3	Mg 279.077 IEC†	-1.1	-1.0	-42.953 ug/L	-42.953 ppb	23:12:36
3	Na 589.592 Radial†	-1611.1	119.3	36.764 ug/L	36.764 ppb	23:12:16
3	Sr 421.552†	38.2	-0.1	-0.0005 ug/L	-0.0005 ppb	23:12:16
3	Sc 361.383	848843.7	848843.7	95.287 %		23:13:34
3	Y 371.029	693311.6	693311.6	94.425 %		23:13:34
3	Ag 328.068†	428.0	-175.3	-0.7584 ug/L	-0.7584 ppb	23:13:34
3	As 188.979†	-36.4	-9.4	-3.6074 ug/L	-3.6074 ppb	23:13:54
3	B 249.677†	-552.2	181.6	3.7913 ug/L	3.7913 ppb	23:13:54
3	Ba 233.527†	-6.6	8.4	0.0628 ug/L	0.0628 ppb	23:13:54
3	Be 313.107†	-3998.3	207.0	0.0701 ug/L	0.0701 ppb	23:13:34
3	Cd 226.502†	-199.3	-5.0	-0.0548 ug/L	-0.0548 ppb	23:13:54
3	Co 228.616†	-93.2	-12.7	-0.2330 ug/L	-0.2330 ppb	23:13:54
3	Cr 267.716†	90.5	33.2	0.3402 ug/L	0.3402 ppb	23:13:34
3	Cu 324.752†	6987.1	445.9	1.2389 ug/L	1.2389 ppb	23:13:34
3	Mn 257.610†	545.9	41.2	0.0471 ug/L	0.0471 ppb	23:13:54
3	Mo 202.031†	16.0	11.6	0.7753 ug/L	0.7753 ppb	23:13:54
3	Ni 231.604†	73.9	-7.6	-0.1698 ug/L	-0.1698 ppb	23:13:54
3	P 214.914†	232.2	20.4	10.316 ug/L	10.316 ppb	23:13:54
3	Pb 220.353†	-62.8	13.7	1.4632 ug/L	1.4632 ppb	23:13:54
3	S 181.975 Axial†	46.9	0.3	0.4170 ug/L	0.4170 ppb	23:13:54
3	Sb 206.836†	41.1	4.7	1.4266 ug/L	1.4266 ppb	23:13:54
3	Se 196.026†	-31.8	-7.5	-3.9955 ug/L	-3.9955 ppb	23:13:54
3	Si 251.611†	585.0	78.2	2.3176 ug/L	2.3176 ppb	23:13:54
3	Sn 189.927†	0.5	-8.9	-1.4407 ug/L	-1.4407 ppb	23:13:54
3	Ti 334.940†	-1536.9	191.5	0.2871 ug/L	0.2871 ppb	23:13:34
3	Tl 190.801†	-54.7	-12.9	-3.6339 ug/L	-3.6339 ppb	23:13:54
3	U 409.014†	-4676.4	205.4	6.0604 ug/L	6.0604 ppb	23:13:34
3	V 292.402†	-1659.0	11.1	0.0894 ug/L	0.0894 ppb	23:13:34
3	Zn 213.857†	783.4	113.0	0.9546 ug/L	0.9546 ppb	23:13:54
3	SiO2†	586.4	53.1	3.3662 ug/L	3.3662 ppb	23:14:09

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	853760.1	95.839	%	1.7391				1.81%
Sc Radial	4327.0	105	%	0.4				0.39%
Y 371.029	696276.1	94.829	%	1.7238				1.82%
Y RADIAL	4856.5	100.3	%	0.37				0.37%
Ag 328.068†	-185.1	-0.8154	ug/L	0.05214	-0.8154	ppb	0.05214	6.39%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	2.1	1.7200	ug/L	17.04002	1.7200	ppb	17.04002	990.67%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-3.2	-1.2277	ug/L	2.26751	-1.2277	ppb	2.26751	184.70%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	183.0	3.8253	ug/L	0.29692	3.8253	ppb	0.29692	7.76%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-2.2	-0.0158	ug/L	0.11640	-0.0158	ppb	0.11640	734.83%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	170.2	0.0577	ug/L	0.02535	0.0577	ppb	0.02535	43.91%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.7	1.3688	ug/L	3.45988	1.3688	ppb	3.45988	252.76%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                1.3      0.0147 ug/L       0.10320      0.0147 ppb        0.10320 701.32%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -15.4     -0.2825 ug/L       0.15648     -0.2825 ppb        0.15648  55.39%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               18.4      0.1854 ug/L       0.37421      0.1854 ppb        0.37421 201.81%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              427.9      1.1845 ug/L       0.30840      1.1845 ppb        0.30840  26.04%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         1.0      12.146 ug/L       32.3524      12.146 ppb        32.3524 266.36%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        142.1      27.030 ug/L       16.2306      27.030 ppb        16.2306  60.05%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            2.2      92.105 ug/L      118.1052      92.105 ppb       118.1052 128.23%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               51.0      0.0486 ug/L       0.00179      0.0486 ppb        0.00179   3.69%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                8.7      0.5810 ug/L       0.42391      0.5810 ppb        0.42391  72.97%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       102.7      31.634 ug/L        5.6957      31.634 ppb         5.6957  18.00%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                5.5      0.1217 ug/L       0.31888      0.1217 ppb        0.31888 262.02%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                18.8      9.5135 ug/L       1.08204      9.5135 ppb        1.08204  11.37%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               16.4      1.7570 ug/L       1.03292      1.7570 ppb        1.03292  58.79%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           1.2      1.4649 ug/L       1.14861      1.4649 ppb        1.14861  78.41%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                7.2      2.2138 ug/L       3.13500      2.2138 ppb        3.13500 141.61%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -4.9     -2.6700 ug/L       1.34675     -2.6700 ppb        1.34675  50.44%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               80.0      2.3732 ug/L       0.45662      2.3732 ppb        0.45662  19.24%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                4.0      0.6426 ug/L       1.82618      0.6426 ppb        1.82618 284.17%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              -15.4     -0.1016 ug/L       0.13663     -0.1016 ppb        0.13663 134.47%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              179.2      0.2553 ug/L       0.12430      0.2553 ppb        0.12430  48.69%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -0.9     -0.2621 ug/L       4.04515     -0.2621 ppb        4.04515 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               388.4      11.470 ug/L        9.9191      11.470 ppb         9.9191  86.48%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 2.7      0.0479 ug/L       0.29454      0.0479 ppb        0.29454 615.33%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              118.0      0.9979 ug/L       0.04912      0.9979 ppb        0.04912   4.92%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    145.2      9.2434 ug/L       7.58115      9.2434 ppb        7.58115  82.02%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 62
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 2/2/2010 00:05:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4386.0	4386.0	106	%			00:07:15
1	Y RADIAL	4884.6	4884.6	100.9	%			00:07:15
1	Al 396.153Radial†	6102.9	5930.5	4872.5	ug/L	4872.5	ppb	00:07:15
1	Ca 317.933Radial†	2843.0	2660.8	4925.6	ug/L	4925.6	ppb	00:07:35
1	Fe 238.204 Radial†	466.9	429.0	5000.8	ug/L	5000.8	ppb	00:07:35
1	K 766.490 Radial†	30180.1	25763.2	4897.5	ug/L	4897.5	ppb	00:07:15
1	Mg 279.077 IEC†	133.0	125.1	5272.2	ug/L	5272.2	ppb	00:07:35
1	Na 589.592 Radial†	33281.2	32956.8	10156	ug/L	10156	ppb	00:07:15
1	Sr 421.552†	80530.3	75710.8	499.85	ug/L	499.85	ppb	00:07:15
1	Sc 361.383	859975.9	859975.9	96.537	%			00:08:34
1	Y 371.029	691473.4	691473.4	94.175	%			00:08:34
1	Ag 328.068†	108820.3	112099.5	493.56	ug/L	493.56	ppb	00:08:34
1	As 188.979†	1214.5	1286.8	498.52	ug/L	498.52	ppb	00:08:54
1	B 249.677†	21361.2	22888.6	476.34	ug/L	476.34	ppb	00:08:34
1	Ba 233.527†	65096.0	67446.5	494.21	ug/L	494.21	ppb	00:08:34
1	Be 313.107†	1401295.2	1455966.7	489.63	ug/L	489.63	ppb	00:08:34
1	Cd 226.502†	46384.8	48252.9	498.15	ug/L	498.15	ppb	00:08:34
1	Co 228.616†	25857.7	26870.4	495.38	ug/L	495.38	ppb	00:08:54
1	Cr 267.716†	46352.6	47953.6	494.26	ug/L	494.26	ppb	00:08:34
1	Cu 324.752†	177205.0	176675.0	491.40	ug/L	491.40	ppb	00:08:34
1	Mn 257.610†	477731.0	494336.8	496.27	ug/L	496.27	ppb	00:08:34
1	Mo 202.031†	7246.6	7501.4	498.98	ug/L	498.98	ppb	00:08:54
1	Ni 231.604†	21485.4	22170.9	493.72	ug/L	493.72	ppb	00:08:54
1	P 214.914†	4883.2	4835.1	2414.7	ug/L	2414.7	ppb	00:08:54
1	Pb 220.353†	4405.5	4643.1	499.77	ug/L	499.77	ppb	00:08:54
1	S 181.975 Axial†	813.2	793.4	968.35	ug/L	968.35	ppb	00:08:54
1	Sb 206.836†	1595.8	1614.6	511.28	ug/L	511.28	ppb	00:08:54
1	Se 196.026†	853.1	909.7	522.56	ug/L	522.56	ppb	00:08:54
1	Si 251.611†	80900.1	83266.4	2472.4	ug/L	2472.4	ppb	00:08:34
1	Sn 189.927†	2991.4	3089.3	499.90	ug/L	499.90	ppb	00:08:54
1	Ti 334.940†	321487.1	334824.1	500.12	ug/L	500.12	ppb	00:08:34
1	Tl 190.801†	1658.3	1762.2	500.59	ug/L	500.59	ppb	00:08:54
1	U 409.014†	10884.0	16387.6	482.39	ug/L	482.39	ppb	00:08:34
1	V 292.402†	69384.2	73625.4	496.45	ug/L	496.45	ppb	00:08:34
1	Zn 213.857†	56995.5	58330.9	490.60	ug/L	490.60	ppb	00:08:34
1	SiO2†	82443.0	84838.2	5396.5	ug/L	5396.5	ppb	00:09:54
2	Sc Radial	4261.0	4261.0	103	%			00:07:40
2	Y RADIAL	4774.3	4774.3	98.61	%			00:07:40
2	Al 396.153Radial†	5999.6	5998.9	4929.1	ug/L	4929.1	ppb	00:07:40
2	Ca 317.933Radial†	2831.3	2727.9	5049.7	ug/L	5049.7	ppb	00:08:00
2	Fe 238.204 Radial†	463.6	438.8	5113.6	ug/L	5113.6	ppb	00:08:00
2	K 766.490 Radial†	29414.3	25854.4	4914.8	ug/L	4914.8	ppb	00:07:40
2	Mg 279.077 IEC†	129.8	125.7	5296.8	ug/L	5296.8	ppb	00:08:00
2	Na 589.592 Radial†	32602.8	33218.0	10236	ug/L	10236	ppb	00:07:40
2	Sr 421.552†	78525.5	75991.2	501.70	ug/L	501.70	ppb	00:07:40
2	Sc 361.383	859379.7	859379.7	96.470	%			00:09:01
2	Y 371.029	689121.8	689121.8	93.854	%			00:09:01
2	Ag 328.068†	108960.5	112323.0	494.57	ug/L	494.57	ppb	00:09:01
2	As 188.979†	1207.7	1280.7	496.20	ug/L	496.20	ppb	00:09:21
2	B 249.677†	21352.6	22895.0	476.46	ug/L	476.46	ppb	00:09:01
2	Ba 233.527†	65165.7	67565.5	495.08	ug/L	495.08	ppb	00:09:01
2	Be 313.107†	1398851.5	1454440.7	489.12	ug/L	489.12	ppb	00:09:01
2	Cd 226.502†	46512.1	48418.2	499.85	ug/L	499.85	ppb	00:09:01
2	Co 228.616†	25783.5	26812.1	494.30	ug/L	494.30	ppb	00:09:21
2	Cr 267.716†	46420.0	48056.7	495.32	ug/L	495.32	ppb	00:09:01
2	Cu 324.752†	177261.8	176861.3	491.92	ug/L	491.92	ppb	00:09:01
2	Mn 257.610†	479170.4	496172.2	498.12	ug/L	498.12	ppb	00:09:01
2	Mo 202.031†	7208.3	7466.8	496.70	ug/L	496.70	ppb	00:09:21
2	Ni 231.604†	21434.2	22133.4	492.89	ug/L	492.89	ppb	00:09:21

2	P 214.914†	4857.0	4811.4	2402.2	ug/L	2402.2 ppb	00:09:21
2	Pb 220.353†	4413.6	4654.7	501.01	ug/L	501.01 ppb	00:09:21
2	S 181.975 Axial†	824.7	806.0	983.68	ug/L	983.68 ppb	00:09:21
2	Sb 206.836†	1590.4	1610.2	509.82	ug/L	509.82 ppb	00:09:21
2	Se 196.026†	844.2	901.0	518.12	ug/L	518.12 ppb	00:09:21
2	Si 251.611†	81010.0	83438.5	2477.5	ug/L	2477.5 ppb	00:09:01
2	Sn 189.927†	2969.5	3068.7	496.61	ug/L	496.61 ppb	00:09:21
2	Ti 334.940†	321952.1	335537.2	501.20	ug/L	501.20 ppb	00:09:01
2	Tl 190.801†	1665.9	1771.3	503.18	ug/L	503.18 ppb	00:09:21
2	U 409.014†	10955.4	16469.3	484.79	ug/L	484.79 ppb	00:09:01
2	V 292.402†	69426.3	73718.9	497.02	ug/L	497.02 ppb	00:09:01
2	Zn 213.857†	57133.3	58514.8	492.15	ug/L	492.15 ppb	00:09:01
2	SiO2†	80844.6	83240.6	5294.7	ug/L	5294.7 ppb	00:09:59
3	Sc Radial	4325.9	4325.9	105	%		00:08:05
3	Y RADIAL	4802.3	4802.3	99.19	%		00:08:05
3	Al 396.153Radial†	6023.7	5934.7	4876.0	ug/L	4876.0 ppb	00:08:05
3	Ca 317.933Radial†	2838.9	2694.0	4987.0	ug/L	4987.0 ppb	00:08:25
3	Fe 238.204 Radial†	468.1	436.3	5085.5	ug/L	5085.5 ppb	00:08:25
3	K 766.490 Radial†	29618.1	25621.5	4870.6	ug/L	4870.6 ppb	00:08:05
3	Mg 279.077 IEC†	129.0	123.1	5186.8	ug/L	5186.8 ppb	00:08:25
3	Na 589.592 Radial†	32622.1	32762.8	10096	ug/L	10096 ppb	00:08:05
3	Sr 421.552†	79107.3	75405.5	497.84	ug/L	497.84 ppb	00:08:05
3	Sc 361.383	855748.0	855748.0	96.062	%		00:09:29
3	Y 371.029	687112.8	687112.8	93.581	%		00:09:29
3	Ag 328.068†	108506.6	112329.8	494.59	ug/L	494.59 ppb	00:09:29
3	As 188.979†	1202.0	1280.1	495.95	ug/L	495.95 ppb	00:09:49
3	B 249.677†	21342.6	22978.5	478.20	ug/L	478.20 ppb	00:09:29
3	Ba 233.527†	64939.2	67616.4	495.45	ug/L	495.45 ppb	00:09:29
3	Be 313.107†	1391647.8	1453095.6	488.67	ug/L	488.67 ppb	00:09:29
3	Cd 226.502†	46223.7	48322.5	498.87	ug/L	498.87 ppb	00:09:29
3	Co 228.616†	25785.0	26927.1	496.43	ug/L	496.43 ppb	00:09:49
3	Cr 267.716†	46146.6	47976.3	494.49	ug/L	494.49 ppb	00:09:29
3	Cu 324.752†	176500.9	176849.0	491.89	ug/L	491.89 ppb	00:09:29
3	Mn 257.610†	476260.9	495251.4	497.19	ug/L	497.19 ppb	00:09:29
3	Mo 202.031†	7214.4	7504.9	499.23	ug/L	499.23 ppb	00:09:49
3	Ni 231.604†	21490.3	22286.0	496.29	ug/L	496.29 ppb	00:09:49
3	P 214.914†	4846.5	4821.9	2407.7	ug/L	2407.7 ppb	00:09:49
3	Pb 220.353†	4391.6	4651.2	500.64	ug/L	500.64 ppb	00:09:49
3	S 181.975 Axial†	813.7	798.2	974.14	ug/L	974.14 ppb	00:09:49
3	Sb 206.836†	1596.7	1623.8	514.04	ug/L	514.04 ppb	00:09:49
3	Se 196.026†	857.2	918.3	527.62	ug/L	527.62 ppb	00:09:49
3	Si 251.611†	80518.0	83282.7	2472.9	ug/L	2472.9 ppb	00:09:29
3	Sn 189.927†	2960.1	3072.0	497.12	ug/L	497.12 ppb	00:09:49
3	Ti 334.940†	320257.5	335189.5	500.68	ug/L	500.68 ppb	00:09:29
3	Tl 190.801†	1657.4	1769.8	502.72	ug/L	502.72 ppb	00:09:49
3	U 409.014†	10992.5	16556.1	487.36	ug/L	487.36 ppb	00:09:29
3	V 292.402†	69083.7	73667.7	496.73	ug/L	496.73 ppb	00:09:29
3	Zn 213.857†	56835.0	58455.6	491.63	ug/L	491.63 ppb	00:09:29
3	SiO2†	81224.2	83991.4	5342.5	ug/L	5342.5 ppb	00:10:05

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	858367.9	96.356	%	0.2569				0.27%
Sc Radial	4324.3	105	%	1.5				1.45%
Y 371.029	689236.0	93.870	%	0.2972				0.32%
Y RADIAL	4820.4	99.57	%	1.184				1.19%
Ag 328.068†	112250.8	494.24	ug/L	0.590	494.24	ppb	0.590	0.12%
QC value within limits for Ag 328.068 Recovery = 98.85%								
Al 396.153Radial†	5954.7	4892.5	ug/L	31.71	4892.5	ppb	31.71	0.65%
QC value within limits for Al 396.153Radial Recovery = 97.85%								
As 188.979†	1282.5	496.89	ug/L	1.415	496.89	ppb	1.415	0.28%
QC value within limits for As 188.979 Recovery = 99.38%								
B 249.677†	22920.7	477.00	ug/L	1.043	477.00	ppb	1.043	0.22%
QC value within limits for B 249.677 Recovery = 95.40%								
Ba 233.527†	67542.8	494.91	ug/L	0.639	494.91	ppb	0.639	0.13%
QC value within limits for Ba 233.527 Recovery = 98.98%								
Be 313.107†	1454501.0	489.14	ug/L	0.481	489.14	ppb	0.481	0.10%
QC value within limits for Be 313.107 Recovery = 97.83%								
Ca 317.933Radial†	2694.2	4987.4	ug/L	62.04	4987.4	ppb	62.04	1.24%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.75%
Cd 226.502†            48331.2      498.96 ug/L         0.851      498.96 ppb          0.851   0.17%
   QC value within limits for Cd 226.502  Recovery = 99.79%
Co 228.616†            26869.9      495.37 ug/L         1.064      495.37 ppb          1.064   0.21%
   QC value within limits for Co 228.616  Recovery = 99.07%
Cr 267.716†            47995.5      494.69 ug/L         0.559      494.69 ppb          0.559   0.11%
   QC value within limits for Cr 267.716  Recovery = 98.94%
Cu 324.752†           176795.1      491.74 ug/L         0.292      491.74 ppb          0.292   0.06%
   QC value within limits for Cu 324.752  Recovery = 98.35%
Fe 238.204 Radial†       434.7      5066.6 ug/L        58.70      5066.6 ppb          58.70   1.16%
   QC value within limits for Fe 238.204 Radial  Recovery = 101.33%
K 766.490 Radial†      25746.4      4894.3 ug/L        22.30      4894.3 ppb          22.30   0.46%
   QC value within limits for K 766.490 Radial  Recovery = 97.89%
Mg 279.077 IEC†          124.6      5251.9 ug/L        57.73      5251.9 ppb          57.73   1.10%
   QC value within limits for Mg 279.077 IEC  Recovery = 105.04%
Mn 257.610†           495253.5      497.19 ug/L         0.926      497.19 ppb          0.926   0.19%
   QC value within limits for Mn 257.610  Recovery = 99.44%
Mo 202.031†             7491.0      498.30 ug/L         1.395      498.30 ppb          1.395   0.28%
   QC value within limits for Mo 202.031  Recovery = 99.66%
Na 589.592 Radial†     32979.2       10163 ug/L          70.4       10163 ppb           70.4   0.69%
   QC value within limits for Na 589.592 Radial  Recovery = 101.63%
Ni 231.604†            22196.8      494.30 ug/L         1.772      494.30 ppb          1.772   0.36%
   QC value within limits for Ni 231.604  Recovery = 98.86%
P 214.914†              4822.8      2408.2 ug/L          6.27      2408.2 ppb           6.27   0.26%
   QC value within limits for P 214.914  Recovery = 96.33%
Pb 220.353†             4649.7      500.47 ug/L         0.635      500.47 ppb          0.635   0.13%
   QC value within limits for Pb 220.353  Recovery = 100.09%
S 181.975 Axial†         799.2      975.39 ug/L         7.737      975.39 ppb          7.737   0.79%
   QC value within limits for S 181.975 Axial  Recovery = 97.54%
Sb 206.836†             1616.2      511.71 ug/L         2.142      511.71 ppb          2.142   0.42%
   QC value within limits for Sb 206.836  Recovery = 102.34%
Se 196.026†              909.7      522.77 ug/L         4.752      522.77 ppb          4.752   0.91%
   QC value within limits for Se 196.026  Recovery = 104.55%
Si 251.611†            83329.2      2474.2 ug/L          2.84      2474.2 ppb           2.84   0.11%
   QC value within limits for Si 251.611  Recovery = 98.97%
Sn 189.927†             3076.7      497.88 ug/L         1.773      497.88 ppb          1.773   0.36%
   QC value within limits for Sn 189.927  Recovery = 99.58%
Sr 421.552†            75702.5      499.80 ug/L         1.934      499.80 ppb          1.934   0.39%
   QC value within limits for Sr 421.552  Recovery = 99.96%
Ti 334.940†           335183.6      500.67 ug/L         0.539      500.67 ppb          0.539   0.11%
   QC value within limits for Ti 334.940  Recovery = 100.13%
Tl 190.801†             1767.8      502.16 ug/L         1.382      502.16 ppb          1.382   0.28%
   QC value within limits for Tl 190.801  Recovery = 100.43%
U 409.014†             16471.0      484.85 ug/L         2.485      484.85 ppb          2.485   0.51%
   QC value within limits for U 409.014  Recovery = 96.97%
V 292.402†             73670.7      496.73 ug/L         0.288      496.73 ppb          0.288   0.06%
   QC value within limits for V 292.402  Recovery = 99.35%
Zn 213.857†            58433.8      491.46 ug/L         0.791      491.46 ppb          0.791   0.16%
   QC value within limits for Zn 213.857  Recovery = 98.29%
SiO2†                  84023.4      5344.6 ug/L         50.94      5344.6 ppb          50.94   0.95%
   QC value within limits for SiO2  Recovery = 99.95%
All analyte(s) passed QC.
```

Sequence No.: 63
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 2/2/2010 00:12:14
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4368.4	4368.4	106	%			00:14:06
1	Y RADIAL	4887.6	4887.6	101.0	%			00:14:06
1	Al 396.153Radial†	-200.8	0.5	0.4061	ug/L	0.4061	ppb	00:14:06
1	Ca 317.933Radial†	12.8	-1.2	-2.2434	ug/L	-2.2434	ppb	00:14:26
1	Fe 238.204 Radial†	14.0	3.1	35.857	ug/L	35.857	ppb	00:14:26
1	K 766.490 Radial†	2773.4	-5.2	-0.9989	ug/L	-0.9989	ppb	00:14:06
1	Mg 279.077 IEC†	0.6	0.6	24.614	ug/L	24.614	ppb	00:14:26
1	Na 589.592 Radial†	-1596.5	144.5	44.536	ug/L	44.536	ppb	00:14:06
1	Sr 421.552†	44.3	5.4	0.0358	ug/L	0.0358	ppb	00:14:06
1	Sc 361.383	864631.8	864631.8	97.060	%			00:15:23
1	Y 371.029	703725.6	703725.6	95.843	%			00:15:23
1	Ag 328.068†	528.9	-79.6	-0.3466	ug/L	-0.3466	ppb	00:15:23
1	As 188.979†	-28.2	-0.3	-0.1125	ug/L	-0.1125	ppb	00:15:43
1	B 249.677†	-613.5	129.0	2.6929	ug/L	2.6929	ppb	00:15:43
1	Ba 233.527†	-7.1	8.0	0.0602	ug/L	0.0602	ppb	00:15:43
1	Be 313.107†	-4096.1	182.9	0.0620	ug/L	0.0620	ppb	00:15:23
1	Cd 226.502†	-192.1	6.2	0.0626	ug/L	0.0626	ppb	00:15:43
1	Co 228.616†	-96.7	-14.5	-0.2685	ug/L	-0.2685	ppb	00:15:43
1	Cr 267.716†	116.0	57.6	0.5889	ug/L	0.5889	ppb	00:15:23
1	Cu 324.752†	7141.7	471.3	1.3051	ug/L	1.3051	ppb	00:15:23
1	Mn 257.610†	790.3	282.4	0.2859	ug/L	0.2859	ppb	00:15:23
1	Mo 202.031†	0.8	-4.4	-0.2916	ug/L	-0.2916	ppb	00:15:43
1	Ni 231.604†	87.6	5.1	0.1146	ug/L	0.1146	ppb	00:15:43
1	P 214.914†	234.6	18.4	9.2728	ug/L	9.2728	ppb	00:15:43
1	Pb 220.353†	-65.8	11.8	1.2658	ug/L	1.2658	ppb	00:15:43
1	S 181.975 Axial†	52.2	4.9	5.9929	ug/L	5.9929	ppb	00:15:43
1	Sb 206.836†	36.3	-1.0	-0.2978	ug/L	-0.2978	ppb	00:15:43
1	Se 196.026†	-30.1	-5.1	-2.6934	ug/L	-2.6934	ppb	00:15:43
1	Si 251.611†	562.6	43.9	1.3094	ug/L	1.3094	ppb	00:15:43
1	Sn 189.927†	14.7	5.7	0.9238	ug/L	0.9238	ppb	00:15:43
1	Ti 334.940†	-1570.3	186.5	0.2702	ug/L	0.2702	ppb	00:15:23
1	Tl 190.801†	-41.6	1.6	0.4525	ug/L	0.4525	ppb	00:15:43
1	U 409.014†	-4513.3	463.0	13.672	ug/L	13.672	ppb	00:15:23
1	V 292.402†	-1667.2	34.5	0.2464	ug/L	0.2464	ppb	00:15:23
1	Zn 213.857†	784.3	98.9	0.8333	ug/L	0.8333	ppb	00:15:43
1	SiO2†	570.2	25.2	1.6165	ug/L	1.6165	ppb	00:16:39
2	Sc Radial	4408.0	4408.0	107	%			00:14:31
2	Y RADIAL	4949.7	4949.7	102.2	%			00:14:31
2	Al 396.153Radial†	-199.6	3.3	2.6955	ug/L	2.6955	ppb	00:14:31
2	Ca 317.933Radial†	15.5	1.2	2.1593	ug/L	2.1593	ppb	00:14:51
2	Fe 238.204 Radial†	12.8	1.9	21.894	ug/L	21.894	ppb	00:14:51
2	K 766.490 Radial†	2909.0	98.3	18.686	ug/L	18.686	ppb	00:14:31
2	Mg 279.077 IEC†	1.7	1.6	68.854	ug/L	68.854	ppb	00:14:51
2	Na 589.592 Radial†	-1562.6	189.8	58.477	ug/L	58.477	ppb	00:14:31
2	Sr 421.552†	43.6	4.3	0.0285	ug/L	0.0285	ppb	00:14:31
2	Sc 361.383	858077.8	858077.8	96.324	%			00:15:49
2	Y 371.029	699300.8	699300.8	95.241	%			00:15:49
2	Ag 328.068†	377.2	-232.9	-1.0196	ug/L	-1.0196	ppb	00:15:49
2	As 188.979†	-28.2	-0.5	-0.1904	ug/L	-0.1904	ppb	00:16:09
2	B 249.677†	-595.8	142.6	2.9784	ug/L	2.9784	ppb	00:16:09
2	Ba 233.527†	-37.6	-23.7	-0.1723	ug/L	-0.1723	ppb	00:16:09
2	Be 313.107†	-4076.1	171.4	0.0577	ug/L	0.0577	ppb	00:15:49
2	Cd 226.502†	-193.5	3.3	0.0332	ug/L	0.0332	ppb	00:16:09
2	Co 228.616†	-103.7	-22.5	-0.4157	ug/L	-0.4157	ppb	00:16:09
2	Cr 267.716†	119.9	62.6	0.6413	ug/L	0.6413	ppb	00:15:49
2	Cu 324.752†	6919.5	296.7	0.8205	ug/L	0.8205	ppb	00:15:49
2	Mn 257.610†	647.2	140.1	0.1399	ug/L	0.1399	ppb	00:15:49
2	Mo 202.031†	7.5	2.6	0.1718	ug/L	0.1718	ppb	00:16:09
2	Ni 231.604†	58.6	-24.4	-0.5427	ug/L	-0.5427	ppb	00:16:09

2	P 214.914†	231.4	17.0	8.6731	ug/L	8.6731 ppb	00:16:09
2	Pb 220.353†	-67.5	9.6	1.0259	ug/L	1.0259 ppb	00:16:09
2	S 181.975 Axial†	48.7	1.6	2.0097	ug/L	2.0097 ppb	00:16:09
2	Sb 206.836†	56.2	19.9	6.1184	ug/L	6.1184 ppb	00:16:09
2	Se 196.026†	-25.3	-0.3	-0.1114	ug/L	-0.1114 ppb	00:16:09
2	Si 251.611†	554.2	39.6	1.1779	ug/L	1.1779 ppb	00:16:09
2	Sn 189.927†	22.6	14.1	2.2742	ug/L	2.2742 ppb	00:16:09
2	Ti 334.940†	-1671.4	69.1	0.0930	ug/L	0.0930 ppb	00:15:49
2	Tl 190.801†	-39.1	3.8	1.0872	ug/L	1.0872 ppb	00:16:09
2	U 409.014†	-4574.2	364.3	10.757	ug/L	10.757 ppb	00:15:49
2	V 292.402†	-1651.3	37.8	0.2725	ug/L	0.2725 ppb	00:15:49
2	Zn 213.857†	771.8	92.1	0.7818	ug/L	0.7818 ppb	00:16:09
2	SiO2†	586.4	46.6	2.9648	ug/L	2.9648 ppb	00:16:45
3	Sc Radial	4355.3	4355.3	106	%		00:14:57
3	Y RADIAL	4897.4	4897.4	101.2	%		00:14:57
3	Al 396.153Radial†	-207.5	-6.5	-5.3591	ug/L	-5.3591 ppb	00:14:57
3	Ca 317.933Radial†	19.5	5.1	9.5319	ug/L	9.5319 ppb	00:15:17
3	Fe 238.204 Radial†	13.5	2.6	30.594	ug/L	30.594 ppb	00:15:17
3	K 766.490 Radial†	2952.7	172.6	32.829	ug/L	32.829 ppb	00:14:57
3	Mg 279.077 IEC†	1.8	1.7	73.134	ug/L	73.134 ppb	00:15:17
3	Na 589.592 Radial†	-1578.8	156.8	48.318	ug/L	48.318 ppb	00:14:57
3	Sr 421.552†	23.5	-14.2	-0.0938	ug/L	-0.0938 ppb	00:14:57
3	Sc 361.383	848400.1	848400.1	95.237	%		00:16:14
3	Y 371.029	691540.6	691540.6	94.184	%		00:16:14
3	Ag 328.068†	429.1	-174.0	-0.7655	ug/L	-0.7655 ppb	00:16:14
3	As 188.979†	-30.9	-3.7	-1.4143	ug/L	-1.4143 ppb	00:16:34
3	B 249.677†	-592.5	138.9	2.9010	ug/L	2.9010 ppb	00:16:34
3	Ba 233.527†	2.4	17.8	0.1319	ug/L	0.1319 ppb	00:16:34
3	Be 313.107†	-4085.9	112.8	0.0383	ug/L	0.0383 ppb	00:16:14
3	Cd 226.502†	-192.6	1.9	0.0196	ug/L	0.0196 ppb	00:16:34
3	Co 228.616†	-95.5	-15.1	-0.2800	ug/L	-0.2800 ppb	00:16:34
3	Cr 267.716†	112.0	55.8	0.5678	ug/L	0.5678 ppb	00:16:14
3	Cu 324.752†	6849.8	305.5	0.8412	ug/L	0.8412 ppb	00:16:14
3	Mn 257.610†	529.5	24.2	0.0243	ug/L	0.0243 ppb	00:16:14
3	Mo 202.031†	6.4	1.5	0.0989	ug/L	0.0989 ppb	00:16:34
3	Ni 231.604†	71.3	-10.3	-0.2298	ug/L	-0.2298 ppb	00:16:34
3	P 214.914†	230.1	18.3	9.2895	ug/L	9.2895 ppb	00:16:34
3	Pb 220.353†	-60.8	15.8	1.6886	ug/L	1.6886 ppb	00:16:34
3	S 181.975 Axial†	52.5	6.3	7.6715	ug/L	7.6715 ppb	00:16:34
3	Sb 206.836†	41.5	5.1	1.5487	ug/L	1.5487 ppb	00:16:34
3	Se 196.026†	-35.8	-11.6	-6.3537	ug/L	-6.3537 ppb	00:16:34
3	Si 251.611†	545.1	36.7	1.0905	ug/L	1.0905 ppb	00:16:34
3	Sn 189.927†	0.6	-8.8	-1.4124	ug/L	-1.4124 ppb	00:16:34
3	Ti 334.940†	-1582.7	142.5	0.1999	ug/L	0.1999 ppb	00:16:14
3	Tl 190.801†	-43.7	-1.5	-0.4137	ug/L	-0.4137 ppb	00:16:34
3	U 409.014†	-4275.9	623.4	18.408	ug/L	18.408 ppb	00:16:14
3	V 292.402†	-1633.5	37.0	0.2790	ug/L	0.2790 ppb	00:16:14
3	Zn 213.857†	780.1	110.0	0.9309	ug/L	0.9309 ppb	00:16:34
3	SiO2†	645.8	115.8	7.3844	ug/L	7.3844 ppb	00:16:50

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	857036.6	96.207	%	0.9167				0.95%
Sc Radial	4377.3	106	%	0.7				0.63%
Y 371.029	698189.0	95.089	%	0.8401				0.88%
Y RADIAL	4911.5	101.4	%	0.69				0.68%
Ag 328.068†	-162.1	-0.7106	ug/L	0.33981	-0.7106	ppb	0.33981	47.82%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-0.9	-0.7525	ug/L	4.15040	-0.7525	ppb	4.15040	551.54%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-1.5	-0.5724	ug/L	0.73015	-0.5724	ppb	0.73015	127.55%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	136.8	2.8574	ug/L	0.14762	2.8574	ppb	0.14762	5.17%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	0.7	0.0066	ug/L	0.15900	0.0066	ppb	0.15900	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	155.7	0.0527	ug/L	0.01260	0.0527	ppb	0.01260	23.92%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.7	3.1493	ug/L	5.94971	3.1493	ppb	5.94971	188.92%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                 3.8      0.0385 ug/L       0.02199      0.0385 ppb        0.02199  57.17%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -17.4     -0.3214 ug/L       0.08185     -0.3214 ppb        0.08185  25.47%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                58.7      0.5993 ug/L       0.03783      0.5993 ppb        0.03783   6.31%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               357.8      0.9889 ug/L       0.27401      0.9889 ppb        0.27401  27.71%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          2.5     29.448 ug/L        7.0513     29.448 ppb         7.0513  23.94%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          88.6     16.839 ug/L       16.9895     16.839 ppb        16.9895 100.90%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.3     55.534 ug/L       26.8630     55.534 ppb        26.8630  48.37%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               148.9      0.1500 ug/L       0.13111      0.1500 ppb        0.13111  87.39%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                -0.1     -0.0070 ug/L       0.24921     -0.0070 ppb        0.24921 >999.9%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        163.7     50.444 ug/L        7.2096     50.444 ppb         7.2096  14.29%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†                -9.9     -0.2193 ug/L       0.32880     -0.2193 ppb        0.32880 149.93%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 17.9      9.0785 ug/L       0.35113      9.0785 ppb        0.35113   3.87%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                12.4      1.3267 ug/L       0.33553      1.3267 ppb        0.33553  25.29%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†            4.3      5.2247 ug/L       2.90803      5.2247 ppb        2.90803  55.66%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                 8.0      2.4564 ug/L       3.30304      2.4564 ppb        3.30304 134.47%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -5.7     -3.0529 ug/L       3.13664     -3.0529 ppb        3.13664 102.74%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                40.1      1.1926 ug/L       0.11017      1.1926 ppb        0.11017   9.24%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 3.7      0.5952 ug/L       1.86514      0.5952 ppb        1.86514 313.35%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                -1.5     -0.0098 ug/L       0.07280     -0.0098 ppb        0.07280 741.13%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               132.7      0.1877 ug/L       0.08921      0.1877 ppb        0.08921  47.52%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 1.3      0.3753 ug/L       0.75341      0.3753 ppb        0.75341 200.74%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                483.6     14.279 ug/L        3.8619     14.279 ppb         3.8619  27.05%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 36.4      0.2660 ug/L       0.01724      0.2660 ppb        0.01724   6.48%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               100.4      0.8487 ug/L       0.07570      0.8487 ppb        0.07570   8.92%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      62.5      3.9886 ug/L       3.01715      3.9886 ppb        3.01715  75.64%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 64
Sample ID: 1202018099|942648|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 87
Date Collected: 2/2/2010 00:18:59
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202018099|942648|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4518.9	4518.9	110	%			00:20:53
1	Y RADIAL	5076.7	5076.7	104.9	%			00:20:53
1	Al 396.153Radial†	-179.2	26.5	21.844	ug/L	21.844	ppb	00:20:53
1	Ca 317.933Radial†	32.2	16.1	29.729	ug/L	29.729	ppb	00:21:13
1	Fe 238.204 Radial†	43.0	29.1	338.24	ug/L	338.24	ppb	00:21:13
1	K 766.490 Radial†	2970.9	88.0	16.703	ug/L	16.703	ppb	00:20:53
1	Mg 279.077 IEC†	1.4	1.3	55.454	ug/L	55.454	ppb	00:21:13
1	Na 589.592 Radial†	-1470.8	309.5	95.379	ug/L	95.379	ppb	00:20:53
1	Sr 421.552†	35.7	-3.9	-0.0257	ug/L	-0.0257	ppb	00:20:53
1	Sc 361.383	850902.1	850902.1	95.518	%			00:22:10
1	Y 371.029	693025.2	693025.2	94.386	%			00:22:10
1	Ag 328.068†	305.5	-304.7	-1.2410	ug/L	-1.2410	ppb	00:22:10
1	As 188.979†	-29.0	-1.6	-0.5443	ug/L	-0.5443	ppb	00:22:30
1	B 249.677†	-606.3	126.4	2.5877	ug/L	2.5877	ppb	00:22:30
1	Ba 233.527†	5.6	21.1	0.1654	ug/L	0.1654	ppb	00:22:30
1	Be 313.107†	-4095.4	115.5	0.0411	ug/L	0.0411	ppb	00:22:10
1	Cd 226.502†	-186.6	8.7	0.0614	ug/L	0.0614	ppb	00:22:30
1	Co 228.616†	-83.8	-2.6	-0.0532	ug/L	-0.0532	ppb	00:22:30
1	Cr 267.716†	119.0	62.7	0.6438	ug/L	0.6438	ppb	00:22:10
1	Cu 324.752†	7186.9	637.3	1.7780	ug/L	1.7780	ppb	00:22:10
1	Mn 257.610†	3373.5	3000.0	3.0412	ug/L	3.0412	ppb	00:22:10
1	Mo 202.031†	17.7	13.3	0.9077	ug/L	0.9077	ppb	00:22:30
1	Ni 231.604†	195.4	119.4	2.6600	ug/L	2.6600	ppb	00:22:30
1	P 214.914†	243.2	31.4	20.169	ug/L	20.169	ppb	00:22:30
1	Pb 220.353†	-69.4	7.0	0.7199	ug/L	0.7199	ppb	00:22:30
1	S 181.975 Axial†	47.8	1.2	1.4498	ug/L	1.4498	ppb	00:22:30
1	Sb 206.836†	20.4	-17.0	2.2658	ug/L	2.2658	ppb	00:22:30
1	Se 196.026†	-34.8	-10.5	-4.6742	ug/L	-4.6742	ppb	00:22:30
1	Si 251.611†	1182.6	702.3	20.895	ug/L	20.895	ppb	00:22:30
1	Sn 189.927†	2850.3	2974.6	480.55	ug/L	480.55	ppb	00:22:30
1	Ti 334.940†	-1068.1	686.2	1.0145	ug/L	1.0145	ppb	00:22:10
1	Tl 190.801†	-39.1	3.5	1.0174	ug/L	1.0174	ppb	00:22:30
1	U 409.014†	-4154.1	764.1	22.531	ug/L	22.531	ppb	00:22:10
1	V 292.402†	-1631.2	44.5	0.3021	ug/L	0.3021	ppb	00:22:10
1	Zn 213.857†	949.9	285.3	2.3685	ug/L	2.3685	ppb	00:22:30
1	SiO2†	1269.9	767.2	48.901	ug/L	48.901	ppb	00:23:26
2	Sc Radial	4380.6	4380.6	106	%			00:21:18
2	Y RADIAL	4900.3	4900.3	101.2	%			00:21:18
2	Al 396.153Radial†	-169.6	30.4	25.003	ug/L	25.003	ppb	00:21:18
2	Ca 317.933Radial†	29.6	14.5	26.846	ug/L	26.846	ppb	00:21:38
2	Fe 238.204 Radial†	42.6	30.0	348.59	ug/L	348.59	ppb	00:21:38
2	K 766.490 Radial†	2939.1	143.6	27.290	ug/L	27.290	ppb	00:21:18
2	Mg 279.077 IEC†	2.1	2.1	86.620	ug/L	86.620	ppb	00:21:38
2	Na 589.592 Radial†	-1454.8	282.2	86.969	ug/L	86.969	ppb	00:21:18
2	Sr 421.552†	41.0	2.1	0.0139	ug/L	0.0139	ppb	00:21:18
2	Sc 361.383	847817.6	847817.6	95.172	%			00:22:35
2	Y 371.029	691221.3	691221.3	94.140	%			00:22:35
2	Ag 328.068†	342.0	-265.1	-1.0620	ug/L	-1.0620	ppb	00:22:35
2	As 188.979†	-26.0	1.4	0.6269	ug/L	0.6269	ppb	00:22:55
2	B 249.677†	-598.2	132.5	2.7144	ug/L	2.7144	ppb	00:22:55
2	Ba 233.527†	73.1	92.1	0.6852	ug/L	0.6852	ppb	00:22:55
2	Be 313.107†	-4087.0	108.8	0.0388	ug/L	0.0388	ppb	00:22:35
2	Cd 226.502†	-181.9	13.0	0.1038	ug/L	0.1038	ppb	00:22:55
2	Co 228.616†	-75.8	5.5	0.0973	ug/L	0.0973	ppb	00:22:55
2	Cr 267.716†	213.4	162.4	1.6714	ug/L	1.6714	ppb	00:22:35
2	Cu 324.752†	7189.0	666.8	1.8616	ug/L	1.8616	ppb	00:22:35
2	Mn 257.610†	3262.1	2895.8	2.9363	ug/L	2.9363	ppb	00:22:35
2	Mo 202.031†	22.7	18.6	1.2625	ug/L	1.2625	ppb	00:22:55
2	Ni 231.604†	213.6	139.3	3.1034	ug/L	3.1034	ppb	00:22:55

2	P 214.914†	230.6	19.0	13.780 ug/L	13.780 ppb	00:22:55
2	Pb 220.353†	-66.7	9.6	1.0022 ug/L	1.0022 ppb	00:22:55
2	S 181.975 Axial†	54.7	8.6	10.526 ug/L	10.526 ppb	00:22:55
2	Sb 206.836†	28.8	-8.1	5.0764 ug/L	5.0764 ppb	00:22:55
2	Se 196.026†	-34.7	-10.5	-4.6345 ug/L	-4.6345 ppb	00:22:55
2	Si 251.611†	1860.2	1418.8	42.216 ug/L	42.216 ppb	00:22:55
2	Sn 189.927†	2870.6	3006.8	485.75 ug/L	485.75 ppb	00:22:55
2	Ti 334.940†	-1055.1	695.8	1.0263 ug/L	1.0263 ppb	00:22:35
2	Tl 190.801†	-43.1	-0.8	-0.2138 ug/L	-0.2138 ppb	00:22:55
2	U 409.014†	-4195.5	704.7	20.774 ug/L	20.774 ppb	00:22:35
2	V 292.402†	-1584.1	87.7	0.5899 ug/L	0.5899 ppb	00:22:35
2	Zn 213.857†	1149.0	498.2	4.1707 ug/L	4.1707 ppb	00:22:55
2	SiO2†	1188.0	686.0	43.713 ug/L	43.713 ppb	00:23:31
3	Sc Radial	4331.1	4331.1	105 %		00:21:43
3	Y RADIAL	4864.5	4864.5	100.5 %		00:21:43
3	Al 396.153Radial†	-179.6	19.0	15.731 ug/L	15.731 ppb	00:21:43
3	Ca 317.933Radial†	34.5	19.5	36.069 ug/L	36.069 ppb	00:22:03
3	Fe 238.204 Radial†	41.3	29.3	340.11 ug/L	340.11 ppb	00:22:03
3	K 766.490 Radial†	2961.0	196.2	37.295 ug/L	37.295 ppb	00:21:43
3	Mg 279.077 IEC†	3.8	3.6	153.30 ug/L	153.30 ppb	00:22:03
3	Na 589.592 Radial†	-1473.8	248.4	76.554 ug/L	76.554 ppb	00:21:43
3	Sr 421.552†	56.7	17.6	0.1159 ug/L	0.1159 ppb	00:21:43
3	Sc 361.383	805350.9	805350.9	90.405 %		00:23:01
3	Y 371.029	657213.0	657213.0	89.508 %		00:23:01
3	Ag 328.068†	303.7	-288.5	-1.1615 ug/L	-1.1615 ppb	00:23:01
3	As 188.979†	-25.7	0.3	0.1895 ug/L	0.1895 ppb	00:23:21
3	B 249.677†	-597.1	100.6	2.0487 ug/L	2.0487 ppb	00:23:21
3	Ba 233.527†	19.1	36.4	0.2758 ug/L	0.2758 ppb	00:23:21
3	Be 313.107†	-4134.3	-170.1	-0.0551 ug/L	-0.0551 ppb	00:23:01
3	Cd 226.502†	-182.1	2.7	-0.0038 ug/L	-0.0038 ppb	00:23:21
3	Co 228.616†	-83.7	-7.4	-0.1441 ug/L	-0.1441 ppb	00:23:21
3	Cr 267.716†	152.7	107.1	1.1045 ug/L	1.1045 ppb	00:23:01
3	Cu 324.752†	7170.1	1044.2	2.9169 ug/L	2.9169 ppb	00:23:01
3	Mn 257.610†	3363.9	3189.2	3.2271 ug/L	3.2271 ppb	00:23:01
3	Mo 202.031†	3.5	-1.4	-0.0660 ug/L	-0.0660 ppb	00:23:21
3	Ni 231.604†	204.6	141.2	3.1459 ug/L	3.1459 ppb	00:23:21
3	P 214.914†	244.3	46.9	28.348 ug/L	28.348 ppb	00:23:21
3	Pb 220.353†	-73.9	-2.1	-0.2545 ug/L	-0.2545 ppb	00:23:21
3	S 181.975 Axial†	55.2	12.2	14.921 ug/L	14.921 ppb	00:23:21
3	Sb 206.836†	20.2	-16.1	3.0579 ug/L	3.0579 ppb	00:23:21
3	Se 196.026†	-38.0	-16.1	-7.7814 ug/L	-7.7814 ppb	00:23:21
3	Si 251.611†	1193.8	784.8	23.361 ug/L	23.361 ppb	00:23:21
3	Sn 189.927†	2885.2	3182.0	514.06 ug/L	514.06 ppb	00:23:21
3	Ti 334.940†	-1120.2	565.3	0.8322 ug/L	0.8322 ppb	00:23:01
3	Tl 190.801†	-46.3	-6.7	-1.8714 ug/L	-1.8714 ppb	00:23:21
3	U 409.014†	-4318.7	336.0	9.8845 ug/L	9.8845 ppb	00:23:01
3	V 292.402†	-1609.4	-28.0	-0.2165 ug/L	-0.2165 ppb	00:23:01
3	Zn 213.857†	959.7	352.4	2.9330 ug/L	2.9330 ppb	00:23:21
3	SiO2†	1251.3	821.8	52.409 ug/L	52.409 ppb	00:23:36

Mean Data: 1202018099|942648|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	834690.2	93.698	%	2.8575				3.05%
Sc Radial	4410.2	107	%	2.4				2.21%
Y 371.029	680486.5	92.678	%	2.7478				2.96%
Y RADIAL	4947.1	102.2	%	2.35				2.30%
Ag 328.068†	-286.1	-1.1548	ug/L	0.08968	-1.1548	ppb	0.08968	7.77%
Al 396.153Radial†	25.3	20.859	ug/L	4.7140	20.859	ppb	4.7140	22.60%
As 188.979†	0.0	0.0907	ug/L	0.59180	0.0907	ppb	0.59180	652.30%
B 249.677†	119.8	2.4503	ug/L	0.35346	2.4503	ppb	0.35346	14.43%
Ba 233.527†	49.9	0.3754	ug/L	0.27386	0.3754	ppb	0.27386	72.94%
Be 313.107†	18.0	0.0083	ug/L	0.05492	0.0083	ppb	0.05492	665.15%
Ca 317.933Radial†	16.7	30.881	ug/L	4.7183	30.881	ppb	4.7183	15.28%
Cd 226.502†	8.1	0.0538	ug/L	0.05416	0.0538	ppb	0.05416	100.66%
Co 228.616†	-1.5	-0.0333	ug/L	0.12192	-0.0333	ppb	0.12192	365.75%
Cr 267.716†	110.7	1.1399	ug/L	0.51472	1.1399	ppb	0.51472	45.16%
Cu 324.752†	782.8	2.1855	ug/L	0.63482	2.1855	ppb	0.63482	29.05%
Fe 238.204 Radial†	29.5	342.32	ug/L	5.516	342.32	ppb	5.516	1.61%
K 766.490 Radial†	142.6	27.096	ug/L	10.2975	27.096	ppb	10.2975	38.00%

Mg 279.077 IEC†	2.3	98.457 ug/L	49.9837	98.457 ppb	49.9837	50.77%
Mn 257.610†	3028.3	3.0682 ug/L	0.14727	3.0682 ppb	0.14727	4.80%
Mo 202.031†	10.1	0.7014 ug/L	0.68782	0.7014 ppb	0.68782	98.06%
Na 589.592 Radial†	280.1	86.301 ug/L	9.4300	86.301 ppb	9.4300	10.93%
Ni 231.604†	133.3	2.9698 ug/L	0.26910	2.9698 ppb	0.26910	9.06%
P 214.914†	32.4	20.766 ug/L	7.3023	20.766 ppb	7.3023	35.16%
Pb 220.353†	4.8	0.4892 ug/L	0.65935	0.4892 ppb	0.65935	134.78%
S 181.975 Axial†	7.3	8.9655 ug/L	6.86967	8.9655 ppb	6.86967	76.62%
Sb 206.836†	-13.8	3.4667 ug/L	1.44924	3.4667 ppb	1.44924	41.80%
Se 196.026†	-12.3	-5.6967 ug/L	1.80552	-5.6967 ppb	1.80552	31.69%
Si 251.611†	968.6	28.824 ug/L	11.6634	28.824 ppb	11.6634	40.46%
Sn 189.927†	3054.5	493.46 ug/L	18.035	493.46 ppb	18.035	3.65%
Sr 421.552†	5.3	0.0347 ug/L	0.07306	0.0347 ppb	0.07306	210.45%
Ti 334.940†	649.1	0.9577 ug/L	0.10883	0.9577 ppb	0.10883	11.36%
Tl 190.801†	-1.3	-0.3559 ug/L	1.44964	-0.3559 ppb	1.44964	407.30%
U 409.014†	601.6	17.730 ug/L	6.8508	17.730 ppb	6.8508	38.64%
V 292.402†	34.7	0.2252 ug/L	0.40871	0.2252 ppb	0.40871	181.52%
Zn 213.857†	378.6	3.1574 ug/L	0.92182	3.1574 ppb	0.92182	29.20%
SiO2†	758.3	48.341 ug/L	4.3749	48.341 ppb	4.3749	9.05%

Sequence No.: 65
Sample ID: 1202018100|942648|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 88
Date Collected: 2/2/2010 00:25:48
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202018100|942648|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4473.6	4473.6	108	%			00:28:01
1	Y RADIAL	5426.9	5426.9	112.1	%			00:28:01
1	Al 396.153Radial†	104053.5	96146.8	79360	ug/L	79360	ppb	00:27:41
1	Ca 317.933Radial†	60400.5	55687.1	103080	ug/L	103080	ppb	00:27:41
1	Fe 238.204 Radial†	15911.9	14663.6	170440	ug/L	170440	ppb	00:27:41
1	K 766.490 Radial†	224669.3	204562.6	38896	ug/L	38896	ppb	00:27:41
1	Mg 279.077 IEC†	978.7	902.6	37861	ug/L	37861	ppb	00:28:01
1	Na 589.592 Radial†	39189.5	37792.3	11646	ug/L	11646	ppb	00:27:41
1	Sr 421.552†	406538.1	374867.3	2474.3	ug/L	2474.3	ppb	00:27:41
1	Sc 361.383	859234.6	859234.6	96.454	%			00:29:03
1	Y 371.029	748643.6	748643.6	101.96	%			00:29:03
1	Ag 328.068†	57035.0	58507.5	314.82	ug/L	314.82	ppb	00:29:03
1	As 188.979†	2485.9	2606.1	1084.6	ug/L	1084.6	ppb	00:29:08
1	B 249.677†	72546.8	75975.2	1557.9	ug/L	1557.9	ppb	00:29:03
1	Ba 233.527†	242696.3	251634.7	1847.1	ug/L	1847.1	ppb	00:29:03
1	Be 313.107†	2384529.0	2476603.1	842.76	ug/L	842.76	ppb	00:29:03
1	Cd 226.502†	63701.3	66247.5	667.43	ug/L	667.43	ppb	00:29:08
1	Co 228.616†	53660.1	55718.2	1014.7	ug/L	1014.7	ppb	00:29:08
1	Cr 267.716†	252051.0	261256.2	2694.6	ug/L	2694.6	ppb	00:29:03
1	Cu 324.752†	704413.1	723425.1	2021.2	ug/L	2021.2	ppb	00:29:03
1	Mn 257.610†	5258632.7	5451443.0	5484.9	ug/L	5484.9	ppb	00:29:03
1	Mo 202.031†	8024.7	8314.5	567.03	ug/L	567.03	ppb	00:29:08
1	Ni 231.604†	67351.0	69742.1	1553.4	ug/L	1553.4	ppb	00:29:03
1	P 214.914†	15197.8	15533.3	7557.3	ug/L	7557.3	ppb	00:29:08
1	Pb 220.353†	7004.8	7342.0	790.55	ug/L	790.55	ppb	00:29:08
1	S 181.975 Axial†	3392.1	3467.9	4221.6	ug/L	4221.6	ppb	00:29:08
1	Sb 206.836†	4869.8	5010.4	1546.7	ug/L	1546.7	ppb	00:29:08
1	Se 196.026†	4698.9	4897.7	3285.0	ug/L	3285.0	ppb	00:29:08
1	Si 251.611†	868187.6	899572.2	26770	ug/L	26770	ppb	00:29:03
1	Sn 189.927†	5889.4	6096.6	1003.4	ug/L	1003.4	ppb	00:29:08
1	Ti 334.940†	3362008.2	3487422.3	5220.6	ug/L	5220.6	ppb	00:29:03
1	Tl 190.801†	3970.6	4161.1	1236.5	ug/L	1236.5	ppb	00:29:08
1	U 409.014†	-8974.5	-4191.3	-149.25	ug/L	-149.25	ppb	00:29:03
1	V 292.402†	176438.6	184677.8	1205.6	ug/L	1205.6	ppb	00:29:03
1	Zn 213.857†	710177.4	735579.2	6211.7	ug/L	6211.7	ppb	00:29:03
1	SiO2†	872921.0	904453.1	57661	ug/L	57661	ppb	00:29:43
2	Sc Radial	4498.3	4498.3	109	%			00:28:26
2	Y RADIAL	5434.9	5434.9	112.3	%			00:28:26
2	Al 396.153Radial†	104933.0	96425.9	79591	ug/L	79591	ppb	00:28:06
2	Ca 317.933Radial†	60858.9	55801.3	103300	ug/L	103300	ppb	00:28:06
2	Fe 238.204 Radial†	16031.0	14692.2	170770	ug/L	170770	ppb	00:28:06
2	K 766.490 Radial†	226170.5	204800.5	38941	ug/L	38941	ppb	00:28:06
2	Mg 279.077 IEC†	981.0	899.7	37739	ug/L	37739	ppb	00:28:26
2	Na 589.592 Radial†	39796.8	38150.5	11756	ug/L	11756	ppb	00:28:06
2	Sr 421.552†	410756.9	376675.6	2486.3	ug/L	2486.3	ppb	00:28:06
2	Sc 361.383	859312.5	859312.5	96.462	%			00:29:17
2	Y 371.029	748196.5	748196.5	101.90	%			00:29:17
2	Ag 328.068†	57082.1	58550.9	315.12	ug/L	315.12	ppb	00:29:17
2	As 188.979†	2481.6	2601.3	1082.9	ug/L	1082.9	ppb	00:29:22
2	B 249.677†	72588.4	76011.5	1558.6	ug/L	1558.6	ppb	00:29:17
2	Ba 233.527†	243119.6	252050.7	1850.2	ug/L	1850.2	ppb	00:29:17
2	Be 313.107†	2387304.6	2479256.4	843.66	ug/L	843.66	ppb	00:29:17
2	Cd 226.502†	63376.6	65904.9	663.86	ug/L	663.86	ppb	00:29:22
2	Co 228.616†	53466.8	55512.7	1010.9	ug/L	1010.9	ppb	00:29:22
2	Cr 267.716†	252236.7	261425.1	2696.4	ug/L	2696.4	ppb	00:29:17
2	Cu 324.752†	704134.9	723070.6	2020.3	ug/L	2020.3	ppb	00:29:17
2	Mn 257.610†	5269912.9	5462642.6	5496.2	ug/L	5496.2	ppb	00:29:17
2	Mo 202.031†	7942.0	8228.0	561.31	ug/L	561.31	ppb	00:29:22
2	Ni 231.604†	67458.6	69847.3	1555.8	ug/L	1555.8	ppb	00:29:17

2	P 214.914†	15104.6	15435.2	7506.3	ug/L	7506.3	ppb	00:29:22
2	Pb 220.353†	6922.6	7256.1	781.34	ug/L	781.34	ppb	00:29:22
2	S 181.975 Axial†	3370.5	3445.3	4193.9	ug/L	4193.9	ppb	00:29:22
2	Sb 206.836†	4840.7	4979.8	1537.2	ug/L	1537.2	ppb	00:29:22
2	Se 196.026†	4666.9	4864.0	3267.4	ug/L	3267.4	ppb	00:29:22
2	Si 251.611†	868450.0	899762.6	26776	ug/L	26776	ppb	00:29:17
2	Sn 189.927†	5882.9	6089.3	1002.3	ug/L	1002.3	ppb	00:29:22
2	Ti 334.940†	3365129.4	3490341.9	5225.0	ug/L	5225.0	ppb	00:29:17
2	Tl 190.801†	3960.4	4150.1	1233.5	ug/L	1233.5	ppb	00:29:22
2	U 409.014†	-8986.2	-4202.6	-149.63	ug/L	-149.63	ppb	00:29:17
2	V 292.402†	176572.8	184800.4	1206.3	ug/L	1206.3	ppb	00:29:17
2	Zn 213.857†	711060.3	736427.6	6218.8	ug/L	6218.8	ppb	00:29:17
2	SiO2†	879353.1	911039.0	58082	ug/L	58082	ppb	00:29:49
3	Sc Radial	4522.2	4522.2	110	%			00:28:51
3	Y RADIAL	5470.3	5470.3	113.0	%			00:28:51
3	Al 396.153Radial†	104735.1	95737.6	79023	ug/L	79023	ppb	00:28:31
3	Ca 317.933Radial†	60791.1	55445.1	102640	ug/L	102640	ppb	00:28:31
3	Fe 238.204 Radial†	16024.6	14608.8	169800	ug/L	169800	ppb	00:28:31
3	K 766.490 Radial†	225764.3	203335.5	38662	ug/L	38662	ppb	00:28:31
3	Mg 279.077 IEC†	987.8	901.2	37803	ug/L	37803	ppb	00:28:51
3	Na 589.592 Radial†	39672.1	37844.2	11662	ug/L	11662	ppb	00:28:31
3	Sr 421.552†	410349.8	374316.6	2470.7	ug/L	2470.7	ppb	00:28:31
3	Sc 361.383	862106.0	862106.0	96.776	%			00:29:32
3	Y 371.029	749907.9	749907.9	102.13	%			00:29:32
3	Ag 328.068†	57095.3	58372.8	314.03	ug/L	314.03	ppb	00:29:32
3	As 188.979†	2417.5	2526.8	1054.1	ug/L	1054.1	ppb	00:29:37
3	B 249.677†	72848.8	76036.7	1559.4	ug/L	1559.4	ppb	00:29:32
3	Ba 233.527†	244220.9	252372.1	1852.5	ug/L	1852.5	ppb	00:29:32
3	Be 313.107†	2394038.9	2478195.6	843.32	ug/L	843.32	ppb	00:29:32
3	Cd 226.502†	62394.1	64676.8	651.28	ug/L	651.28	ppb	00:29:37
3	Co 228.616†	52531.0	54366.2	989.74	ug/L	989.74	ppb	00:29:37
3	Cr 267.716†	252974.6	261340.3	2695.5	ug/L	2695.5	ppb	00:29:32
3	Cu 324.752†	707256.7	723931.0	2022.6	ug/L	2022.6	ppb	00:29:32
3	Mn 257.610†	5290429.4	5466140.1	5499.6	ug/L	5499.6	ppb	00:29:32
3	Mo 202.031†	7869.6	8126.5	554.48	ug/L	554.48	ppb	00:29:37
3	Ni 231.604†	67701.1	69871.3	1556.3	ug/L	1556.3	ppb	00:29:32
3	P 214.914†	14820.2	15090.6	7327.3	ug/L	7327.3	ppb	00:29:37
3	Pb 220.353†	6865.4	7173.7	772.45	ug/L	772.45	ppb	00:29:37
3	S 181.975 Axial†	3288.1	3348.8	4076.1	ug/L	4076.1	ppb	00:29:37
3	Sb 206.836†	4783.7	4904.6	1513.7	ug/L	1513.7	ppb	00:29:37
3	Se 196.026†	4595.2	4774.3	3214.4	ug/L	3214.4	ppb	00:29:37
3	Si 251.611†	872681.5	901217.8	26819	ug/L	26819	ppb	00:29:32
3	Sn 189.927†	5744.6	5926.5	975.88	ug/L	975.88	ppb	00:29:37
3	Ti 334.940†	3378658.0	3493017.1	5228.9	ug/L	5228.9	ppb	00:29:32
3	Tl 190.801†	3846.8	4019.4	1196.8	ug/L	1196.8	ppb	00:29:37
3	U 409.014†	-8773.7	-3952.9	-142.14	ug/L	-142.14	ppb	00:29:32
3	V 292.402†	177156.5	184810.4	1206.4	ug/L	1206.4	ppb	00:29:32
3	Zn 213.857†	713774.9	736844.1	6222.5	ug/L	6222.5	ppb	00:29:32
3	SiO2†	871649.4	900124.8	57386	ug/L	57386	ppb	00:29:55

Mean Data: 1202018100|942648|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	860217.7	96.564	%	0.1836				0.19%
Sc Radial	4498.0	109	%	0.6				0.54%
Y 371.029	748916.0	102.00	%	0.121				0.12%
Y RADIAL	5444.0	112.4	%	0.48				0.42%
Ag 328.068†	58477.1	314.65	ug/L	0.563	314.65	ppb	0.563	0.18%
Al 396.153Radial†	96103.4	79324	ug/L	285.6	79324	ppb	285.6	0.36%
As 188.979†	2578.1	1073.9	ug/L	17.14	1073.9	ppb	17.14	1.60%
B 249.677†	76007.8	1558.6	ug/L	0.73	1558.6	ppb	0.73	0.05%
Ba 233.527†	252019.2	1849.9	ug/L	2.69	1849.9	ppb	2.69	0.15%
Be 313.107†	2478018.4	843.25	ug/L	0.454	843.25	ppb	0.454	0.05%
Ca 317.933Radial†	55644.5	103010	ug/L	336.8	103010	ppb	336.8	0.33%
Cd 226.502†	65609.7	660.86	ug/L	8.483	660.86	ppb	8.483	1.28%
Co 228.616†	55199.0	1005.1	ug/L	13.44	1005.1	ppb	13.44	1.34%
Cr 267.716†	261340.5	2695.5	ug/L	0.87	2695.5	ppb	0.87	0.03%
Cu 324.752†	723475.6	2021.4	ug/L	1.17	2021.4	ppb	1.17	0.06%
Fe 238.204 Radial†	14654.9	170340	ug/L	492.6	170340	ppb	492.6	0.29%
K 766.490 Radial†	204232.8	38833	ug/L	149.5	38833	ppb	149.5	0.39%

Mg 279.077 IEC†	901.2	37801	ug/L	61.0	37801	ppb	61.0	0.16%
Mn 257.610†	5460075.3	5493.6	ug/L	7.69	5493.6	ppb	7.69	0.14%
Mo 202.031†	8223.0	560.94	ug/L	6.283	560.94	ppb	6.283	1.12%
Na 589.592 Radial†	37929.0	11688	ug/L	59.7	11688	ppb	59.7	0.51%
Ni 231.604†	69820.3	1555.2	ug/L	1.54	1555.2	ppb	1.54	0.10%
P 214.914†	15353.0	7463.6	ug/L	120.77	7463.6	ppb	120.77	1.62%
Pb 220.353†	7257.2	781.45	ug/L	9.053	781.45	ppb	9.053	1.16%
S 181.975 Axial†	3420.7	4163.9	ug/L	77.24	4163.9	ppb	77.24	1.86%
Sb 206.836†	4965.0	1532.6	ug/L	17.00	1532.6	ppb	17.00	1.11%
Se 196.026†	4845.3	3255.6	ug/L	36.74	3255.6	ppb	36.74	1.13%
Si 251.611†	900184.2	26788	ug/L	26.9	26788	ppb	26.9	0.10%
Sn 189.927†	6037.4	993.86	ug/L	15.585	993.86	ppb	15.585	1.57%
Sr 421.552†	375286.5	2477.1	ug/L	8.15	2477.1	ppb	8.15	0.33%
Ti 334.940†	3490260.4	5224.8	ug/L	4.15	5224.8	ppb	4.15	0.08%
Tl 190.801†	4110.2	1222.3	ug/L	22.12	1222.3	ppb	22.12	1.81%
U 409.014†	-4115.6	-147.01	ug/L	4.220	-147.01	ppb	4.220	2.87%
V 292.402†	184762.8	1206.1	ug/L	0.43	1206.1	ppb	0.43	0.04%
Zn 213.857†	736283.6	6217.7	ug/L	5.48	6217.7	ppb	5.48	0.09%
SiO2†	905205.6	57710	ug/L	350.4	57710	ppb	350.4	0.61%

Sequence No.: 72
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 2/2/2010 01:14:53
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4094.6	4094.6	99.2	%			01:17:04
1	Y RADIAL	4418.1	4418.1	91.26	%			01:16:44
1	Al 396.153Radial†	6068.6	6304.6	5181.3	ug/L	5181.3	ppb	01:16:44
1	Ca 317.933Radial†	2899.9	2908.5	5384.0	ug/L	5384.0	ppb	01:17:04
1	Fe 238.204 Radial†	479.6	473.1	5512.8	ug/L	5512.8	ppb	01:17:04
1	K 766.490 Radial†	29889.6	27491.1	5226.0	ug/L	5226.0	ppb	01:16:44
1	Mg 279.077 IEC†	131.4	132.4	5579.7	ug/L	5579.7	ppb	01:17:04
1	Na 589.592 Radial†	33169.4	35072.3	10808	ug/L	10808	ppb	01:16:44
1	Sr 421.552†	79840.3	80407.2	530.86	ug/L	530.86	ppb	01:16:44
1	Sc 361.383	856586.7	856586.7	96.156	%			01:18:03
1	Y 371.029	685706.3	685706.3	93.389	%			01:18:03
1	Ag 328.068†	109313.5	113058.4	497.92	ug/L	497.92	ppb	01:18:03
1	As 188.979†	1201.9	1278.6	495.55	ug/L	495.55	ppb	01:18:23
1	B 249.677†	21615.8	23240.9	483.61	ug/L	483.61	ppb	01:18:03
1	Ba 233.527†	65504.3	68137.9	499.28	ug/L	499.28	ppb	01:18:03
1	Be 313.107†	1406311.3	1466926.7	493.32	ug/L	493.32	ppb	01:18:03
1	Cd 226.502†	46885.8	48964.0	505.45	ug/L	505.45	ppb	01:18:03
1	Co 228.616†	25935.9	27057.7	498.82	ug/L	498.82	ppb	01:18:23
1	Cr 267.716†	46693.0	48497.5	499.87	ug/L	499.87	ppb	01:18:03
1	Cu 324.752†	178509.0	178757.4	497.22	ug/L	497.22	ppb	01:18:03
1	Mn 257.610†	482219.8	500963.0	502.95	ug/L	502.95	ppb	01:18:03
1	Mo 202.031†	7240.1	7524.2	500.55	ug/L	500.55	ppb	01:18:23
1	Ni 231.604†	21532.5	22308.1	496.78	ug/L	496.78	ppb	01:18:23
1	P 214.914†	4897.4	4869.9	2431.3	ug/L	2431.3	ppb	01:18:23
1	Pb 220.353†	4418.4	4674.6	503.18	ug/L	503.18	ppb	01:18:23
1	S 181.975 Axial†	825.0	809.1	987.38	ug/L	987.38	ppb	01:18:23
1	Sb 206.836†	1602.3	1627.9	515.39	ug/L	515.39	ppb	01:18:23
1	Se 196.026†	849.5	909.4	524.11	ug/L	524.11	ppb	01:18:23
1	Si 251.611†	81611.8	84338.2	2504.3	ug/L	2504.3	ppb	01:18:03
1	Sn 189.927†	2992.2	3102.4	502.10	ug/L	502.10	ppb	01:18:23
1	Ti 334.940†	324110.4	338869.9	506.20	ug/L	506.20	ppb	01:18:03
1	Tl 190.801†	1654.2	1764.8	501.37	ug/L	501.37	ppb	01:18:23
1	U 409.014†	11152.3	16711.1	491.88	ug/L	491.88	ppb	01:18:03
1	V 292.402†	69715.0	74253.8	500.59	ug/L	500.59	ppb	01:18:03
1	Zn 213.857†	57517.6	59107.6	497.11	ug/L	497.11	ppb	01:18:03
1	SiO2†	81423.6	84115.9	5350.4	ug/L	5350.4	ppb	01:19:24
2	Sc Radial	4116.5	4116.5	99.8	%			01:17:30
2	Y RADIAL	4797.8	4797.8	99.10	%			01:17:09
2	Al 396.153Radial†	6082.8	6286.3	5166.2	ug/L	5166.2	ppb	01:17:09
2	Ca 317.933Radial†	2874.8	2867.7	5308.6	ug/L	5308.6	ppb	01:17:30
2	Fe 238.204 Radial†	474.5	465.5	5424.0	ug/L	5424.0	ppb	01:17:30
2	K 766.490 Radial†	30136.1	27578.0	5242.6	ug/L	5242.6	ppb	01:17:09
2	Mg 279.077 IEC†	130.0	130.3	5490.6	ug/L	5490.6	ppb	01:17:30
2	Na 589.592 Radial†	33427.2	35152.9	10832	ug/L	10832	ppb	01:17:09
2	Sr 421.552†	80402.6	80542.8	531.75	ug/L	531.75	ppb	01:17:09
2	Sc 361.383	857587.4	857587.4	96.269	%			01:18:31
2	Y 371.029	686516.2	686516.2	93.499	%			01:18:31
2	Ag 328.068†	109593.8	113216.9	498.58	ug/L	498.58	ppb	01:18:31
2	As 188.979†	1202.4	1277.7	495.17	ug/L	495.17	ppb	01:18:51
2	B 249.677†	21689.5	23291.2	484.68	ug/L	484.68	ppb	01:18:31
2	Ba 233.527†	65582.8	68140.0	499.29	ug/L	499.29	ppb	01:18:31
2	Be 313.107†	1408873.5	1467881.6	493.64	ug/L	493.64	ppb	01:18:31
2	Cd 226.502†	46833.5	48852.7	504.31	ug/L	504.31	ppb	01:18:31
2	Co 228.616†	25937.3	27027.7	498.27	ug/L	498.27	ppb	01:18:51
2	Cr 267.716†	46461.9	48200.8	496.81	ug/L	496.81	ppb	01:18:31
2	Cu 324.752†	179154.4	179211.2	498.47	ug/L	498.47	ppb	01:18:31
2	Mn 257.610†	482670.0	500845.5	502.83	ug/L	502.83	ppb	01:18:31
2	Mo 202.031†	7245.4	7521.0	500.32	ug/L	500.32	ppb	01:18:51
2	Ni 231.604†	21542.1	22291.9	496.42	ug/L	496.42	ppb	01:18:51

2	P 214.914†	4889.6	4855.8	2423.9 ug/L	2423.9 ppb	01:18:51
2	Pb 220.353†	4442.2	4694.1	505.27 ug/L	505.27 ppb	01:18:51
2	S 181.975 Axial†	813.5	796.2	971.65 ug/L	971.65 ppb	01:18:51
2	Sb 206.836†	1599.2	1622.8	513.86 ug/L	513.86 ppb	01:18:51
2	Se 196.026†	848.3	907.1	522.55 ug/L	522.55 ppb	01:18:51
2	Si 251.611†	81738.6	84370.9	2505.2 ug/L	2505.2 ppb	01:18:31
2	Sn 189.927†	3009.7	3117.0	504.44 ug/L	504.44 ppb	01:18:51
2	Ti 334.940†	324724.4	339114.4	506.56 ug/L	506.56 ppb	01:18:31
2	Tl 190.801†	1661.3	1770.1	502.88 ug/L	502.88 ppb	01:18:51
2	U 409.014†	11266.8	16816.5	495.01 ug/L	495.01 ppb	01:18:31
2	V 292.402†	69700.4	74154.0	499.94 ug/L	499.94 ppb	01:18:31
2	Zn 213.857†	57485.3	59004.2	496.24 ug/L	496.24 ppb	01:18:31
2	SiO2†	80223.3	82770.3	5264.6 ug/L	5264.6 ppb	01:19:29
3	Sc Radial	4128.1	4128.1	100 %		01:17:55
3	Y RADIAL	4880.1	4880.1	100.8 %		01:17:35
3	Al 396.153Radial†	6175.9	6362.1	5228.7 ug/L	5228.7 ppb	01:17:35
3	Ca 317.933Radial†	2881.1	2866.0	5305.3 ug/L	5305.3 ppb	01:17:55
3	Fe 238.204 Radial†	473.6	463.2	5398.0 ug/L	5398.0 ppb	01:17:55
3	K 766.490 Radial†	30397.2	27753.7	5276.0 ug/L	5276.0 ppb	01:17:35
3	Mg 279.077 IEC†	130.6	130.5	5500.0 ug/L	5500.0 ppb	01:17:55
3	Na 589.592 Radial†	33697.1	35328.2	10886 ug/L	10886 ppb	01:17:35
3	Sr 421.552†	80908.7	80821.3	533.59 ug/L	533.59 ppb	01:17:35
3	Sc 361.383	853432.8	853432.8	95.802 %		01:18:58
3	Y 371.029	685047.9	685047.9	93.299 %		01:18:58
3	Ag 328.068†	108961.4	113111.0	498.12 ug/L	498.12 ppb	01:18:58
3	As 188.979†	1215.1	1297.1	502.60 ug/L	502.60 ppb	01:19:18
3	B 249.677†	21514.7	23218.4	483.15 ug/L	483.15 ppb	01:18:58
3	Ba 233.527†	65333.9	68211.8	499.82 ug/L	499.82 ppb	01:18:58
3	Be 313.107†	1405910.1	1471912.8	494.99 ug/L	494.99 ppb	01:18:58
3	Cd 226.502†	46754.2	49006.8	505.90 ug/L	505.90 ppb	01:18:58
3	Co 228.616†	26028.9	27254.5	502.46 ug/L	502.46 ppb	01:19:18
3	Cr 267.716†	46568.3	48546.8	500.38 ug/L	500.38 ppb	01:18:58
3	Cu 324.752†	177738.1	178638.8	496.88 ug/L	496.88 ppb	01:18:58
3	Mn 257.610†	479977.0	500475.2	502.45 ug/L	502.45 ppb	01:18:58
3	Mo 202.031†	7263.8	7576.8	504.03 ug/L	504.03 ppb	01:19:18
3	Ni 231.604†	21601.5	22462.8	500.22 ug/L	500.22 ppb	01:19:18
3	P 214.914†	4914.8	4906.9	2450.8 ug/L	2450.8 ppb	01:19:18
3	Pb 220.353†	4464.1	4739.3	510.15 ug/L	510.15 ppb	01:19:18
3	S 181.975 Axial†	827.0	814.4	993.84 ug/L	993.84 ppb	01:19:18
3	Sb 206.836†	1609.2	1641.2	519.61 ug/L	519.61 ppb	01:19:18
3	Se 196.026†	853.4	916.8	527.85 ug/L	527.85 ppb	01:19:18
3	Si 251.611†	81159.0	84179.2	2499.5 ug/L	2499.5 ppb	01:18:58
3	Sn 189.927†	3003.1	3125.3	505.78 ug/L	505.78 ppb	01:19:18
3	Ti 334.940†	322605.1	338544.4	505.71 ug/L	505.71 ppb	01:18:58
3	Tl 190.801†	1661.8	1779.0	505.37 ug/L	505.37 ppb	01:19:18
3	U 409.014†	11186.8	16790.0	494.22 ug/L	494.22 ppb	01:18:58
3	V 292.402†	69574.5	74375.1	501.47 ug/L	501.47 ppb	01:18:58
3	Zn 213.857†	57371.5	59176.1	497.68 ug/L	497.68 ppb	01:18:58
3	SiO2†	81622.4	84636.4	5383.5 ug/L	5383.5 ppb	01:19:34

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	855869.0	96.076	%	0.2434				0.25%
Sc Radial	4113.0	99.7	%	0.41				0.41%
Y 371.029	685756.8	93.396	%	0.1002				0.11%
Y RADIAL	4698.7	97.05	%	5.091				5.25%
Ag 328.068†	113128.8	498.21	ug/L	0.339	498.21	ppb	0.339	0.07%
QC value within limits for Ag 328.068 Recovery = 99.64%								
Al 396.153Radial†	6317.7	5192.1	ug/L	32.59	5192.1	ppb	32.59	0.63%
QC value within limits for Al 396.153Radial Recovery = 103.84%								
As 188.979†	1284.5	497.78	ug/L	4.184	497.78	ppb	4.184	0.84%
QC value within limits for As 188.979 Recovery = 99.56%								
B 249.677†	23250.2	483.81	ug/L	0.784	483.81	ppb	0.784	0.16%
QC value within limits for B 249.677 Recovery = 96.76%								
Ba 233.527†	68163.2	499.47	ug/L	0.308	499.47	ppb	0.308	0.06%
QC value within limits for Ba 233.527 Recovery = 99.89%								
Be 313.107†	1468907.0	493.99	ug/L	0.887	493.99	ppb	0.887	0.18%
QC value within limits for Be 313.107 Recovery = 98.80%								
Ca 317.933Radial†	2880.7	5332.7	ug/L	44.54	5332.7	ppb	44.54	0.84%

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   QC value within limits for Ca 317.933Radial  Recovery = 106.65%
Cd 226.502†            48941.2      505.22 ug/L         0.822      505.22 ppb          0.822   0.16%
   QC value within limits for Cd 226.502  Recovery = 101.04%
Co 228.616†            27113.3      499.85 ug/L         2.276      499.85 ppb          2.276   0.46%
   QC value within limits for Co 228.616  Recovery = 99.97%
Cr 267.716†            48415.1      499.02 ug/L         1.928      499.02 ppb          1.928   0.39%
   QC value within limits for Cr 267.716  Recovery = 99.80%
Cu 324.752†           178869.1      497.52 ug/L         0.839      497.52 ppb          0.839   0.17%
   QC value within limits for Cu 324.752  Recovery = 99.50%
Fe 238.204 Radial†       467.3      5444.9 ug/L         60.20      5444.9 ppb          60.20   1.11%
   QC value within limits for Fe 238.204 Radial  Recovery = 108.90%
K 766.490 Radial†      27607.6      5248.2 ug/L         25.46      5248.2 ppb          25.46   0.49%
   QC value within limits for K 766.490 Radial  Recovery = 104.96%
Mg 279.077 IEC†          131.1      5523.4 ug/L         48.95      5523.4 ppb          48.95   0.89%
   QC value greater than the upper limit for Mg 279.077 IEC  Recovery = 110.47%
Mn 257.610†           500761.3      502.74 ug/L         0.259      502.74 ppb          0.259   0.05%
   QC value within limits for Mn 257.610  Recovery = 100.55%
Mo 202.031†             7540.7      501.63 ug/L         2.081      501.63 ppb          2.081   0.41%
   QC value within limits for Mo 202.031  Recovery = 100.33%
Na 589.592 Radial†     35184.5       10842 ug/L          40.3       10842 ppb           40.3   0.37%
   QC value within limits for Na 589.592 Radial  Recovery = 108.42%
Ni 231.604†            22354.3      497.81 ug/L         2.101      497.81 ppb          2.101   0.42%
   QC value within limits for Ni 231.604  Recovery = 99.56%
P 214.914†              4877.5      2435.3 ug/L         13.89      2435.3 ppb          13.89   0.57%
   QC value within limits for P 214.914  Recovery = 97.41%
Pb 220.353†             4702.6      506.20 ug/L         3.578      506.20 ppb          3.578   0.71%
   QC value within limits for Pb 220.353  Recovery = 101.24%
S 181.975 Axial†         806.5      984.29 ug/L        11.411      984.29 ppb         11.411   1.16%
   QC value within limits for S 181.975 Axial  Recovery = 98.43%
Sb 206.836†             1630.6      516.29 ug/L         2.974      516.29 ppb          2.974   0.58%
   QC value within limits for Sb 206.836  Recovery = 103.26%
Se 196.026†              911.1      524.84 ug/L         2.723      524.84 ppb          2.723   0.52%
   QC value within limits for Se 196.026  Recovery = 104.97%
Si 251.611†            84296.1      2503.0 ug/L          3.08      2503.0 ppb           3.08   0.12%
   QC value within limits for Si 251.611  Recovery = 100.12%
Sn 189.927†             3114.9      504.11 ug/L         1.861      504.11 ppb          1.861   0.37%
   QC value within limits for Sn 189.927  Recovery = 100.82%
Sr 421.552†            80590.4      532.07 ug/L         1.394      532.07 ppb          1.394   0.26%
   QC value within limits for Sr 421.552  Recovery = 106.41%
Ti 334.940†           338842.9      506.16 ug/L         0.429      506.16 ppb          0.429   0.08%
   QC value within limits for Ti 334.940  Recovery = 101.23%
Tl 190.801†             1771.3      503.21 ug/L         2.018      503.21 ppb          2.018   0.40%
   QC value within limits for Tl 190.801  Recovery = 100.64%
U 409.014†             16772.6      493.71 ug/L         1.629      493.71 ppb          1.629   0.33%
   QC value within limits for U 409.014  Recovery = 98.74%
V 292.402†             74260.9      500.67 ug/L         0.765      500.67 ppb          0.765   0.15%
   QC value within limits for V 292.402  Recovery = 100.13%
Zn 213.857†            59095.9      497.01 ug/L         0.725      497.01 ppb          0.725   0.15%
   QC value within limits for Zn 213.857  Recovery = 99.40%
SiO2†                  83840.9      5332.8 ug/L         61.36      5332.8 ppb          61.36   1.15%
   QC value within limits for SiO2  Recovery = 99.73%
QC Failed.  Continue with analysis.
```

Sequence No.: 73
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 2/2/2010 01:21:44
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4227.8	4227.8	102	%			01:23:36
1	Y RADIAL	4785.7	4785.7	98.85	%			01:23:36
1	Al 396.153Radial†	-189.1	5.6	4.5941	ug/L	4.5941	ppb	01:23:36
1	Ca 317.933Radial†	13.9	0.2	0.4397	ug/L	0.4397	ppb	01:23:56
1	Fe 238.204 Radial†	13.6	3.1	36.577	ug/L	36.577	ppb	01:23:56
1	K 766.490 Radial†	2887.6	193.4	36.790	ug/L	36.790	ppb	01:23:36
1	Mg 279.077 IEC†	1.6	1.6	66.218	ug/L	66.218	ppb	01:23:56
1	Na 589.592 Radial†	-1535.2	154.2	47.520	ug/L	47.520	ppb	01:23:36
1	Sr 421.552†	9.8	-26.9	-0.1776	ug/L	-0.1776	ppb	01:23:36
1	Sc 361.383	789819.9	789819.9	88.662	%			01:24:53
1	Y 371.029	641802.1	641802.1	87.410	%			01:24:53
1	Ag 328.068†	361.9	-216.3	-0.9478	ug/L	-0.9478	ppb	01:24:53
1	As 188.979†	-41.3	-17.8	-6.8505	ug/L	-6.8505	ppb	01:25:13
1	B 249.677†	-537.6	154.8	3.2318	ug/L	3.2318	ppb	01:25:13
1	Ba 233.527†	-21.8	-9.3	-0.0686	ug/L	-0.0686	ppb	01:25:13
1	Be 313.107†	-4200.2	-334.3	-0.1128	ug/L	-0.1128	ppb	01:24:53
1	Cd 226.502†	-195.5	-16.4	-0.1708	ug/L	-0.1708	ppb	01:25:13
1	Co 228.616†	-97.9	-25.2	-0.4643	ug/L	-0.4643	ppb	01:25:13
1	Cr 267.716†	82.2	30.8	0.3122	ug/L	0.3122	ppb	01:24:53
1	Cu 324.752†	6887.3	881.2	2.4461	ug/L	2.4461	ppb	01:24:53
1	Mn 257.610†	596.8	141.3	0.1427	ug/L	0.1427	ppb	01:24:53
1	Mo 202.031†	11.2	7.4	0.4933	ug/L	0.4933	ppb	01:25:13
1	Ni 231.604†	81.8	7.1	0.1579	ug/L	0.1579	ppb	01:25:13
1	P 214.914†	225.3	30.9	15.528	ug/L	15.528	ppb	01:25:13
1	Pb 220.353†	-63.5	8.0	0.8590	ug/L	0.8590	ppb	01:25:13
1	S 181.975 Axial†	51.0	8.6	10.516	ug/L	10.516	ppb	01:25:13
1	Sb 206.836†	52.3	20.5	6.2879	ug/L	6.2879	ppb	01:25:13
1	Se 196.026†	-24.3	-1.4	-0.6604	ug/L	-0.6604	ppb	01:25:13
1	Si 251.611†	518.0	48.5	1.4376	ug/L	1.4376	ppb	01:25:13
1	Sn 189.927†	10.8	2.7	0.4434	ug/L	0.4434	ppb	01:25:13
1	Ti 334.940†	-1773.2	-195.6	-0.3031	ug/L	-0.3031	ppb	01:24:53
1	Tl 190.801†	-44.9	-6.2	-1.7489	ug/L	-1.7489	ppb	01:25:13
1	U 409.014†	-4161.0	419.9	12.400	ug/L	12.400	ppb	01:24:53
1	V 292.402†	-1654.1	-113.4	-0.7276	ug/L	-0.7276	ppb	01:24:53
1	Zn 213.857†	753.4	140.6	1.1851	ug/L	1.1851	ppb	01:25:13
1	SiO2†	524.4	29.2	1.8516	ug/L	1.8516	ppb	01:26:09
2	Sc Radial	4493.5	4493.5	109	%			01:24:01
2	Y RADIAL	5040.6	5040.6	104.1	%			01:24:01
2	Al 396.153Radial†	-199.8	6.7	5.5056	ug/L	5.5056	ppb	01:24:01
2	Ca 317.933Radial†	13.5	-0.9	-1.7524	ug/L	-1.7524	ppb	01:24:21
2	Fe 238.204 Radial†	12.7	1.5	17.418	ug/L	17.418	ppb	01:24:21
2	K 766.490 Radial†	2786.4	-66.1	-12.615	ug/L	-12.615	ppb	01:24:01
2	Mg 279.077 IEC†	3.6	3.4	141.54	ug/L	141.54	ppb	01:24:21
2	Na 589.592 Radial†	-1511.7	264.4	81.475	ug/L	81.475	ppb	01:24:01
2	Sr 421.552†	54.6	13.7	0.0903	ug/L	0.0903	ppb	01:24:01
2	Sc 361.383	829972.6	829972.6	93.169	%			01:25:18
2	Y 371.029	674157.2	674157.2	91.816	%			01:25:18
2	Ag 328.068†	378.2	-218.6	-0.9619	ug/L	-0.9619	ppb	01:25:18
2	As 188.979†	-30.0	-3.4	-1.3045	ug/L	-1.3045	ppb	01:25:38
2	B 249.677†	-548.4	172.5	3.6045	ug/L	3.6045	ppb	01:25:38
2	Ba 233.527†	-14.3	-0.0	-0.0008	ug/L	-0.0008	ppb	01:25:38
2	Be 313.107†	-4237.5	-145.2	-0.0487	ug/L	-0.0487	ppb	01:25:18
2	Cd 226.502†	-195.4	-5.6	-0.0581	ug/L	-0.0581	ppb	01:25:38
2	Co 228.616†	-87.7	-9.0	-0.1664	ug/L	-0.1664	ppb	01:25:38
2	Cr 267.716†	28.3	-31.4	-0.3283	ug/L	-0.3283	ppb	01:25:18
2	Cu 324.752†	6934.3	555.9	1.5406	ug/L	1.5406	ppb	01:25:18
2	Mn 257.610†	642.7	158.1	0.1545	ug/L	0.1545	ppb	01:25:18
2	Mo 202.031†	6.6	1.8	0.1217	ug/L	0.1217	ppb	01:25:38
2	Ni 231.604†	56.3	-24.8	-0.5517	ug/L	-0.5517	ppb	01:25:38

2	P 214.914†	248.6	43.5	22.278	ug/L	22.278 ppb	01:25:38
2	Pb 220.353†	-66.8	7.9	0.8482	ug/L	0.8482 ppb	01:25:38
2	S 181.975 Axial†	52.6	7.6	9.2698	ug/L	9.2698 ppb	01:25:38
2	Sb 206.836†	39.2	3.7	1.1151	ug/L	1.1151 ppb	01:25:38
2	Se 196.026†	-34.3	-10.9	-5.9631	ug/L	-5.9631 ppb	01:25:38
2	Si 251.611†	514.9	16.9	0.5006	ug/L	0.5006 ppb	01:25:38
2	Sn 189.927†	4.4	-4.7	-0.7545	ug/L	-0.7545 ppb	01:25:38
2	Ti 334.940†	-1674.4	7.2	-0.0060	ug/L	-0.0060 ppb	01:25:18
2	Tl 190.801†	-52.8	-12.2	-3.4412	ug/L	-3.4412 ppb	01:25:38
2	U 409.014†	-4398.6	392.0	11.578	ug/L	11.578 ppb	01:25:18
2	V 292.402†	-1698.0	-70.3	-0.4434	ug/L	-0.4434 ppb	01:25:18
2	Zn 213.857†	770.4	117.8	0.9993	ug/L	0.9993 ppb	01:25:38
2	SiO2†	575.5	55.4	3.5326	ug/L	3.5326 ppb	01:26:14
3	Sc Radial	4260.1	4260.1	103	%		01:24:26
3	Y RADIAL	4816.1	4816.1	99.48	%		01:24:26
3	Al 396.153Radial†	-210.6	-13.9	-11.486	ug/L	-11.486 ppb	01:24:26
3	Ca 317.933Radial†	16.0	2.1	3.9401	ug/L	3.9401 ppb	01:24:46
3	Fe 238.204 Radial†	11.7	1.2	14.390	ug/L	14.390 ppb	01:24:46
3	K 766.490 Radial†	2871.5	156.5	29.755	ug/L	29.755 ppb	01:24:26
3	Mg 279.077 IEC†	-0.6	-0.5	-20.405	ug/L	-20.405 ppb	01:24:46
3	Na 589.592 Radial†	-1470.4	228.3	70.358	ug/L	70.358 ppb	01:24:26
3	Sr 421.552†	47.0	9.0	0.0596	ug/L	0.0596 ppb	01:24:26
3	Sc 361.383	849267.4	849267.4	95.335	%		01:25:44
3	Y 371.029	690749.4	690749.4	94.076	%		01:25:44
3	Ag 328.068†	430.9	-172.5	-0.7591	ug/L	-0.7591 ppb	01:25:44
3	As 188.979†	-27.6	-0.2	-0.0603	ug/L	-0.0603 ppb	01:26:04
3	B 249.677†	-527.3	208.0	4.3472	ug/L	4.3472 ppb	01:26:04
3	Ba 233.527†	-11.2	3.5	0.0261	ug/L	0.0261 ppb	01:26:04
3	Be 313.107†	-4208.5	-11.4	-0.0036	ug/L	-0.0036 ppb	01:25:44
3	Cd 226.502†	-183.5	11.6	0.1202	ug/L	0.1202 ppb	01:26:04
3	Co 228.616†	-88.3	-7.5	-0.1367	ug/L	-0.1367 ppb	01:26:04
3	Cr 267.716†	73.1	14.8	0.1485	ug/L	0.1485 ppb	01:25:44
3	Cu 324.752†	6950.3	403.6	1.1169	ug/L	1.1169 ppb	01:25:44
3	Mn 257.610†	516.5	10.0	0.0123	ug/L	0.0123 ppb	01:25:44
3	Mo 202.031†	13.3	8.7	0.5810	ug/L	0.5810 ppb	01:26:04
3	Ni 231.604†	68.9	-12.9	-0.2878	ug/L	-0.2878 ppb	01:26:04
3	P 214.914†	244.4	33.1	16.988	ug/L	16.988 ppb	01:26:04
3	Pb 220.353†	-70.4	5.8	0.6221	ug/L	0.6221 ppb	01:26:04
3	S 181.975 Axial†	61.1	15.2	18.592	ug/L	18.592 ppb	01:26:04
3	Sb 206.836†	50.2	14.2	4.3865	ug/L	4.3865 ppb	01:26:04
3	Se 196.026†	-26.8	-2.1	-1.1258	ug/L	-1.1258 ppb	01:26:04
3	Si 251.611†	528.7	18.9	0.5551	ug/L	0.5551 ppb	01:26:04
3	Sn 189.927†	18.1	9.5	1.5417	ug/L	1.5417 ppb	01:26:04
3	Ti 334.940†	-1655.8	67.5	0.0980	ug/L	0.0980 ppb	01:25:44
3	Tl 190.801†	-35.2	7.5	2.1170	ug/L	2.1170 ppb	01:26:04
3	U 409.014†	-4504.3	388.4	11.471	ug/L	11.471 ppb	01:25:44
3	V 292.402†	-1661.5	9.4	0.0902	ug/L	0.0902 ppb	01:25:44
3	Zn 213.857†	779.9	108.9	0.9230	ug/L	0.9230 ppb	01:26:04
3	SiO2†	569.5	35.1	2.2210	ug/L	2.2210 ppb	01:26:19

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	823019.9	92.388	%	3.4044				3.68%
Sc Radial	4327.1	105	%	3.5				3.35%
Y 371.029	668902.9	91.101	%	3.3903				3.72%
Y RADIAL	4880.8	100.8	%	2.88				2.85%
Ag 328.068†	-202.5	-0.8896	ug/L	0.11323	-0.8896	ppb	0.11323	12.73%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-0.5	-0.4619	ug/L	9.55755	-0.4619	ppb	9.55755	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-7.1	-2.7384	ug/L	3.61508	-2.7384	ppb	3.61508	132.01%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	178.4	3.7278	ug/L	0.56786	3.7278	ppb	0.56786	15.23%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-1.9	-0.0144	ug/L	0.04880	-0.0144	ppb	0.04880	339.04%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-163.6	-0.0550	ug/L	0.05490	-0.0550	ppb	0.05490	99.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.5	0.8758	ug/L	2.87119	0.8758	ppb	2.87119	327.84%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -3.5     -0.0362 ug/L       0.14669     -0.0362 ppb        0.14669 404.94%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -13.9     -0.2558 ug/L       0.18116     -0.2558 ppb        0.18116  70.82%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                 4.8      0.0441 ug/L       0.33279      0.0441 ppb        0.33279 753.77%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               613.5      1.7012 ug/L       0.67899      1.7012 ppb        0.67899  39.91%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†          2.0      22.795 ug/L       12.0309      22.795 ppb        12.0309  52.78%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†          94.6      17.977 ug/L       26.7256      17.977 ppb        26.7256 148.67%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†             1.5      62.452 ug/L       81.0401      62.452 ppb        81.0401 129.76%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               103.1      0.1032 ug/L       0.07893      0.1032 ppb        0.07893  76.49%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                 6.0      0.3987 ug/L       0.24385      0.3987 ppb        0.24385  61.17%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        215.6      66.451 ug/L       17.3112      66.451 ppb        17.3112  26.05%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               -10.2     -0.2272 ug/L       0.35868     -0.2272 ppb        0.35868 157.87%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 35.9      18.265 ug/L        3.5516      18.265 ppb         3.5516  19.44%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 7.3      0.7764 ug/L       0.13377      0.7764 ppb        0.13377  17.23%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           10.5      12.793 ug/L        5.0610      12.793 ppb         5.0610  39.56%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                12.8      3.9298 ug/L       2.61642      3.9298 ppb        2.61642  66.58%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -4.8     -2.5831 ug/L       2.93638     -2.5831 ppb        2.93638 113.68%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                28.1      0.8311 ug/L       0.52596      0.8311 ppb        0.52596  63.29%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 2.5      0.4102 ug/L       1.14848      0.4102 ppb        1.14848 279.98%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                -1.4     -0.0092 ug/L       0.14657     -0.0092 ppb        0.14657 >999.9%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               -40.3     -0.0704 ug/L       0.20816     -0.0704 ppb        0.20816 295.80%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                -3.6     -1.0244 ug/L       2.84906     -1.0244 ppb        2.84906 278.12%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                400.1      11.816 ug/L        0.5081      11.816 ppb         0.5081   4.30%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                -58.1     -0.3603 ug/L       0.41519     -0.3603 ppb        0.41519 115.24%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               122.4      1.0358 ug/L       0.13482      1.0358 ppb        0.13482  13.02%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                      39.9      2.5351 ug/L       0.88345      2.5351 ppb        0.88345  34.85%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 78
Sample ID: 244852001|942648|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 99
Date Collected: 2/2/2010 01:56:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 244852001|942648|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4937.5	4937.5	120	%			01:58:38
1	Y RADIAL	6103.1	6103.1	126.1	%			01:58:38
1	Al 396.153Radial†	33817.3	28446.2	23487	ug/L	23487	ppb	01:58:38
1	Ca 317.933Radial†	5354.5	4460.6	8257.3	ug/L	8257.3	ppb	01:58:38
1	Fe 238.204 Radial†	7157.0	5969.9	69378	ug/L	69378	ppb	01:58:38
1	K 766.490 Radial†	30220.4	22626.4	4303.0	ug/L	4303.0	ppb	01:58:38
1	Mg 279.077 IEC†	162.6	135.9	5655.0	ug/L	5655.0	ppb	01:58:58
1	Na 589.592 Radial†	149.3	1777.1	547.60	ug/L	547.60	ppb	01:58:38
1	Sr 421.552†	13472.9	11220.8	74.025	ug/L	74.025	ppb	01:58:38
1	Sc 361.383	857640.5	857640.5	96.275	%			01:59:56
1	Y 371.029	773093.6	773093.6	105.29	%			01:59:56
1	Ag 328.068†	-5128.6	-5951.5	-3.1437	ug/L	-3.1437	ppb	02:00:01
1	As 188.979†	-73.7	-47.8	26.094	ug/L	26.094	ppb	02:00:21
1	B 249.677†	196.8	965.5	8.8492	ug/L	8.8492	ppb	02:00:01
1	Ba 233.527†	50197.5	52155.1	383.55	ug/L	383.55	ppb	02:00:01
1	Be 313.107†	-11412.3	-7450.9	4.8938	ug/L	4.8938	ppb	02:00:01
1	Cd 226.502†	585.5	812.3	1.2146	ug/L	1.2146	ppb	02:00:21
1	Co 228.616†	1225.8	1358.4	17.384	ug/L	17.384	ppb	02:00:21
1	Cr 267.716†	3969.3	4061.0	43.359	ug/L	43.359	ppb	02:00:21
1	Cu 324.752†	16007.6	9740.1	30.843	ug/L	30.843	ppb	02:00:01
1	Mn 257.610†	2121741.0	2203307.1	2217.3	ug/L	2217.3	ppb	01:59:56
1	Mo 202.031†	29.7	25.6	7.1879	ug/L	7.1879	ppb	02:00:21
1	Ni 231.604†	1503.4	1476.5	32.884	ug/L	32.884	ppb	02:00:21
1	P 214.914†	1573.9	1411.5	677.41	ug/L	677.41	ppb	02:00:21
1	Pb 220.353†	485.0	583.4	61.124	ug/L	61.124	ppb	02:00:21
1	S 181.975 Axial†	269.8	231.3	278.19	ug/L	278.19	ppb	02:00:21
1	Sb 206.836†	70.3	34.6	1.1543	ug/L	1.1543	ppb	02:00:21
1	Se 196.026†	-409.3	-399.2	9.6463	ug/L	9.6463	ppb	02:00:21
1	Si 251.611†	688472.1	714575.9	21270	ug/L	21270	ppb	01:59:56
1	Sn 189.927†	-37.4	-48.2	-5.3699	ug/L	-5.3699	ppb	02:00:21
1	Ti 334.940†	2096705.7	2179639.4	3257.4	ug/L	3257.4	ppb	01:59:56
1	Tl 190.801†	-167.8	-129.9	0.6412	ug/L	0.6412	ppb	02:00:21
1	U 409.014†	-9590.3	-4848.3	-151.22	ug/L	-151.22	ppb	01:59:56
1	V 292.402†	13386.2	15656.3	90.448	ug/L	90.448	ppb	02:00:01
1	Zn 213.857†	38254.9	39026.0	324.13	ug/L	324.13	ppb	02:00:01
1	SiO2†	693783.9	720066.7	45918	ug/L	45918	ppb	02:01:29
2	Sc Radial	4299.8	4299.8	104	%			01:59:03
2	Y RADIAL	5429.1	5429.1	112.1	%			01:59:03
2	Al 396.153Radial†	34639.7	33425.5	27599	ug/L	27599	ppb	01:59:03
2	Ca 317.933Radial†	5487.6	5251.8	9721.8	ug/L	9721.8	ppb	01:59:03
2	Fe 238.204 Radial†	7360.4	7051.9	81951	ug/L	81951	ppb	01:59:03
2	K 766.490 Radial†	30484.3	26624.1	5063.5	ug/L	5063.5	ppb	01:59:03
2	Mg 279.077 IEC†	166.6	159.9	6653.8	ug/L	6653.8	ppb	01:59:23
2	Na 589.592 Radial†	159.7	1805.5	556.37	ug/L	556.37	ppb	01:59:03
2	Sr 421.552†	13796.2	13200.4	87.085	ug/L	87.085	ppb	01:59:03
2	Sc 361.383	869775.8	869775.8	97.637	%			02:00:27
2	Y 371.029	782243.7	782243.7	106.54	%			02:00:27
2	Ag 328.068†	-5004.4	-5750.0	1.7727	ug/L	1.7727	ppb	02:00:32
2	As 188.979†	-80.6	-53.8	26.502	ug/L	26.502	ppb	02:00:52
2	B 249.677†	292.8	1061.0	8.8065	ug/L	8.8065	ppb	02:00:32
2	Ba 233.527†	49556.7	50771.3	373.81	ug/L	373.81	ppb	02:00:32
2	Be 313.107†	-11104.2	-6969.9	4.9910	ug/L	4.9910	ppb	02:00:32
2	Cd 226.502†	597.1	815.7	-0.0481	ug/L	-0.0481	ppb	02:00:52
2	Co 228.616†	1204.6	1318.9	16.530	ug/L	16.530	ppb	02:00:52
2	Cr 267.716†	3950.1	3983.8	42.802	ug/L	42.802	ppb	02:00:52
2	Cu 324.752†	15735.3	9229.3	30.085	ug/L	30.085	ppb	02:00:32
2	Mn 257.610†	2135466.2	2186616.0	2201.7	ug/L	2201.7	ppb	02:00:27
2	Mo 202.031†	34.6	30.2	8.4845	ug/L	8.4845	ppb	02:00:52
2	Ni 231.604†	1500.5	1451.6	32.331	ug/L	32.331	ppb	02:00:52

2	P 214.914†	1574.6	1389.4	657.12 ug/L	657.12 ppb	02:00:52
2	Pb 220.353†	473.8	564.9	58.841 ug/L	58.841 ppb	02:00:52
2	S 181.975 Axial†	260.7	218.1	261.29 ug/L	261.29 ppb	02:00:52
2	Sb 206.836†	64.0	27.1	-0.8259 ug/L	-0.8259 ppb	02:00:52
2	Se 196.026†	-402.3	-386.1	58.739 ug/L	58.739 ppb	02:00:52
2	Si 251.611†	693098.6	709337.0	21114 ug/L	21114 ppb	02:00:27
2	Sn 189.927†	-37.1	-47.4	-4.8082 ug/L	-4.8082 ppb	02:00:52
2	Ti 334.940†	2107887.6	2160706.2	3229.3 ug/L	3229.3 ppb	02:00:27
2	Tl 190.801†	-174.9	-134.6	-1.0014 ug/L	-1.0014 ppb	02:00:52
2	U 409.014†	-9549.4	-4667.4	-147.30 ug/L	-147.30 ppb	02:00:27
2	V 292.402†	13112.6	15182.1	85.527 ug/L	85.527 ppb	02:00:32
2	Zn 213.857†	37520.4	37719.3	311.83 ug/L	311.83 ppb	02:00:32
2	SiO2†	693880.1	710110.8	45283 ug/L	45283 ppb	02:01:35
3	Sc Radial	4522.5	4522.5	110 %		01:59:29
3	Y RADIAL	5707.5	5707.5	117.9 %		01:59:29
3	Al 396.153Radial†	35857.8	32899.9	27165 ug/L	27165 ppb	01:59:29
3	Ca 317.933Radial†	5655.3	5145.4	9525.0 ug/L	9525.0 ppb	01:59:29
3	Fe 238.204 Radial†	7544.4	6872.0	79860 ug/L	79860 ppb	01:59:29
3	K 766.490 Radial†	31322.7	25948.6	4934.9 ug/L	4934.9 ppb	01:59:29
3	Mg 279.077 IEC†	159.9	145.9	6066.0 ug/L	6066.0 ppb	01:59:49
3	Na 589.592 Radial†	239.0	1870.3	576.34 ug/L	576.34 ppb	01:59:29
3	Sr 421.552†	14285.8	12995.1	85.731 ug/L	85.731 ppb	01:59:29
3	Sc 361.383	881070.8	881070.8	98.905 %		02:00:58
3	Y 371.029	791719.0	791719.0	107.83 %		02:00:58
3	Ag 328.068†	-5139.2	-5820.6	0.7826 ug/L	0.7826 ppb	02:01:03
3	As 188.979†	-84.8	-57.0	24.794 ug/L	24.794 ppb	02:01:23
3	B 249.677†	267.7	1031.7	8.5334 ug/L	8.5334 ppb	02:01:03
3	Ba 233.527†	49196.8	49756.8	366.33 ug/L	366.33 ppb	02:01:03
3	Be 313.107†	-10925.8	-6643.7	5.1040 ug/L	5.1040 ppb	02:01:03
3	Cd 226.502†	586.0	796.6	-0.0294 ug/L	-0.0294 ppb	02:01:23
3	Co 228.616†	1219.2	1317.8	16.534 ug/L	16.534 ppb	02:01:23
3	Cr 267.716†	3966.6	3948.7	42.397 ug/L	42.397 ppb	02:01:23
3	Cu 324.752†	15698.9	8985.9	29.297 ug/L	29.297 ppb	02:01:03
3	Mn 257.610†	2159977.9	2183360.7	2198.3 ug/L	2198.3 ppb	02:00:58
3	Mo 202.031†	33.3	28.4	8.2029 ug/L	8.2029 ppb	02:01:23
3	Ni 231.604†	1529.9	1461.7	32.555 ug/L	32.555 ppb	02:01:23
3	P 214.914†	1589.5	1383.8	655.91 ug/L	655.91 ppb	02:01:23
3	Pb 220.353†	475.5	560.4	58.468 ug/L	58.468 ppb	02:01:23
3	S 181.975 Axial†	266.0	220.0	263.72 ug/L	263.72 ppb	02:01:23
3	Sb 206.836†	72.3	34.7	1.4075 ug/L	1.4075 ppb	02:01:23
3	Se 196.026†	-414.7	-393.3	47.810 ug/L	47.810 ppb	02:01:23
3	Si 251.611†	702297.8	709537.7	21120 ug/L	21120 ppb	02:00:58
3	Sn 189.927†	-40.0	-49.9	-5.2738 ug/L	-5.2738 ppb	02:01:23
3	Ti 334.940†	2136318.1	2161775.2	3230.9 ug/L	3230.9 ppb	02:00:58
3	Tl 190.801†	-182.5	-140.1	-2.5361 ug/L	-2.5361 ppb	02:01:23
3	U 409.014†	-9688.0	-4682.2	-147.50 ug/L	-147.50 ppb	02:00:58
3	V 292.402†	13012.5	14908.8	83.997 ug/L	83.997 ppb	02:01:03
3	Zn 213.857†	37444.4	37149.8	307.20 ug/L	307.20 ppb	02:01:03
3	SiO2†	696535.8	703685.4	44874 ug/L	44874 ppb	02:01:40

Mean Data: 244852001|942648|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	869495.7	97.606	%	1.3154				1.35%
Sc Radial	4586.6	111	%	7.8				7.06%
Y 371.029	782352.1	106.55	%	1.268				1.19%
Y RADIAL	5746.5	118.7	%	7.00				5.89%
Ag 328.068†	-5840.7	-0.1961	ug/L	2.60023	-0.1961	ppb	2.60023	>999.9%
Al 396.153Radial†	31590.5	26084	ug/L	2258.8	26084	ppb	2258.8	8.66%
As 188.979†	-52.9	25.797	ug/L	0.8924	25.797	ppb	0.8924	3.46%
B 249.677†	1019.4	8.7297	ug/L	0.17134	8.7297	ppb	0.17134	1.96%
Ba 233.527†	50894.4	374.56	ug/L	8.635	374.56	ppb	8.635	2.31%
Be 313.107†	-7021.5	4.9963	ug/L	0.10521	4.9963	ppb	0.10521	2.11%
Ca 317.933Radial†	4952.6	9168.0	ug/L	794.84	9168.0	ppb	794.84	8.67%
Cd 226.502†	808.2	0.3790	ug/L	0.72370	0.3790	ppb	0.72370	190.94%
Co 228.616†	1331.7	16.816	ug/L	0.4920	16.816	ppb	0.4920	2.93%
Cr 267.716†	3997.9	42.853	ug/L	0.4829	42.853	ppb	0.4829	1.13%
Cu 324.752†	9318.4	30.075	ug/L	0.7730	30.075	ppb	0.7730	2.57%
Fe 238.204 Radial†	6631.2	77063	ug/L	6737.3	77063	ppb	6737.3	8.74%
K 766.490 Radial†	25066.4	4767.1	ug/L	407.06	4767.1	ppb	407.06	8.54%

Mg 279.077 IEC†	147.3	6124.9	ug/L	502.04	6124.9	ppb	502.04	8.20%
Mn 257.610†	2191094.6	2205.8	ug/L	10.12	2205.8	ppb	10.12	0.46%
Mo 202.031†	28.1	7.9584	ug/L	0.68198	7.9584	ppb	0.68198	8.57%
Na 589.592 Radial†	1817.6	560.10	ug/L	14.727	560.10	ppb	14.727	2.63%
Ni 231.604†	1463.2	32.590	ug/L	0.2783	32.590	ppb	0.2783	0.85%
P 214.914†	1394.9	663.48	ug/L	12.079	663.48	ppb	12.079	1.82%
Pb 220.353†	569.6	59.478	ug/L	1.4380	59.478	ppb	1.4380	2.42%
S 181.975 Axial†	223.2	267.73	ug/L	9.137	267.73	ppb	9.137	3.41%
Sb 206.836†	32.1	0.5786	ug/L	1.22296	0.5786	ppb	1.22296	211.35%
Se 196.026†	-392.9	38.732	ug/L	25.7746	38.732	ppb	25.7746	66.55%
Si 251.611†	711150.2	21168	ug/L	88.4	21168	ppb	88.4	0.42%
Sn 189.927†	-48.5	-5.1506	ug/L	0.30040	-5.1506	ppb	0.30040	5.83%
Sr 421.552†	12472.1	82.280	ug/L	7.1811	82.280	ppb	7.1811	8.73%
Ti 334.940†	2167373.6	3239.2	ug/L	15.82	3239.2	ppb	15.82	0.49%
Tl 190.801†	-134.9	-0.9655	ug/L	1.58894	-0.9655	ppb	1.58894	164.58%
U 409.014†	-4732.6	-148.67	ug/L	2.205	-148.67	ppb	2.205	1.48%
V 292.402†	15249.1	86.658	ug/L	3.3709	86.658	ppb	3.3709	3.89%
Zn 213.857†	37965.1	314.39	ug/L	8.750	314.39	ppb	8.750	2.78%
SiO2†	711287.7	45358	ug/L	526.3	45358	ppb	526.3	1.16%

Sequence No.: 79
Sample ID: 244852002|942648|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 100
Date Collected: 2/2/2010 02:03:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 244852002|942648|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4271.7	4271.7	104	%			02:05:46
1	Y RADIAL	5496.9	5496.9	113.5	%			02:05:46
1	Al 396.153Radial†	38202.1	37084.9	30620	ug/L	30620	ppb	02:05:46
1	Ca 317.933Radial†	5385.8	5188.2	9604.1	ug/L	9604.1	ppb	02:05:46
1	Fe 238.204 Radial†	8790.9	8479.9	98547	ug/L	98547	ppb	02:05:46
1	K 766.490 Radial†	32953.5	29201.5	5554.1	ug/L	5554.1	ppb	02:05:46
1	Mg 279.077 IEC†	172.3	166.4	6909.3	ug/L	6909.3	ppb	02:06:06
1	Na 589.592 Radial†	814.1	2438.5	751.43	ug/L	751.43	ppb	02:05:46
1	Sr 421.552†	14063.9	13546.2	89.368	ug/L	89.368	ppb	02:05:46
1	Sc 361.383	866694.2	866694.2	97.291	%			02:07:03
1	Y 371.029	793844.2	793844.2	108.12	%			02:07:03
1	Ag 328.068†	-5845.7	-6633.0	3.3339	ug/L	3.3339	ppb	02:07:08
1	As 188.979†	-95.5	-69.4	29.024	ug/L	29.024	ppb	02:07:28
1	B 249.677†	294.9	1064.3	6.1838	ug/L	6.1838	ppb	02:07:08
1	Ba 233.527†	48353.6	49715.3	366.61	ug/L	366.61	ppb	02:07:08
1	Be 313.107†	-13506.8	-9479.8	5.3647	ug/L	5.3647	ppb	02:07:08
1	Cd 226.502†	721.4	945.6	-0.4236	ug/L	-0.4236	ppb	02:07:28
1	Co 228.616†	1109.9	1225.9	13.454	ug/L	13.454	ppb	02:07:28
1	Cr 267.716†	4506.5	4570.1	49.179	ug/L	49.179	ppb	02:07:28
1	Cu 324.752†	15003.1	8534.0	29.039	ug/L	29.039	ppb	02:07:08
1	Mn 257.610†	2021590.6	2077346.4	2093.7	ug/L	2093.7	ppb	02:07:03
1	Mo 202.031†	72.3	69.1	12.359	ug/L	12.359	ppb	02:07:28
1	Ni 231.604†	1586.9	1545.9	34.433	ug/L	34.433	ppb	02:07:28
1	P 214.914†	1608.2	1429.7	665.81	ug/L	665.81	ppb	02:07:28
1	Pb 220.353†	386.8	477.2	48.501	ug/L	48.501	ppb	02:07:28
1	S 181.975 Axial†	310.7	270.5	324.67	ug/L	324.67	ppb	02:07:28
1	Sb 206.836†	69.1	32.6	-0.4842	ug/L	-0.4842	ppb	02:07:28
1	Se 196.026†	-451.1	-437.7	85.202	ug/L	85.202	ppb	02:07:28
1	Si 251.611†	768017.9	788866.3	23481	ug/L	23481	ppb	02:07:03
1	Sn 189.927†	-29.7	-40.0	-3.3419	ug/L	-3.3419	ppb	02:07:28
1	Ti 334.940†	2449145.9	2519142.4	3764.8	ug/L	3764.8	ppb	02:07:03
1	Tl 190.801†	-198.3	-159.4	-4.0829	ug/L	-4.0829	ppb	02:07:28
1	U 409.014†	-10111.8	-5280.3	-167.31	ug/L	-167.31	ppb	02:07:03
1	V 292.402†	14269.4	16418.9	90.775	ug/L	90.775	ppb	02:07:08
1	Zn 213.857†	44139.2	44659.0	369.09	ug/L	369.09	ppb	02:07:08
1	SiO2†	762456.2	783123.2	49939	ug/L	49939	ppb	02:08:37
2	Sc Radial	4362.4	4362.4	106	%			02:06:11
2	Y RADIAL	5601.3	5601.3	115.7	%			02:06:11
2	Al 396.153Radial†	38430.0	36533.1	30165	ug/L	30165	ppb	02:06:11
2	Ca 317.933Radial†	5385.2	5079.4	9402.7	ug/L	9402.7	ppb	02:06:11
2	Fe 238.204 Radial†	8838.7	8348.6	97020	ug/L	97020	ppb	02:06:11
2	K 766.490 Radial†	33142.0	28717.9	5462.1	ug/L	5462.1	ppb	02:06:11
2	Mg 279.077 IEC†	171.2	162.0	6724.3	ug/L	6724.3	ppb	02:06:31
2	Na 589.592 Radial†	736.6	2348.9	723.81	ug/L	723.81	ppb	02:06:11
2	Sr 421.552†	14045.2	13246.0	87.389	ug/L	87.389	ppb	02:06:11
2	Sc 361.383	865958.5	865958.5	97.209	%			02:07:34
2	Y 371.029	791799.5	791799.5	107.84	%			02:07:34
2	Ag 328.068†	-5974.9	-6771.0	2.2400	ug/L	2.2400	ppb	02:07:39
2	As 188.979†	-97.5	-71.5	27.818	ug/L	27.818	ppb	02:07:59
2	B 249.677†	303.7	1073.6	6.6240	ug/L	6.6240	ppb	02:07:39
2	Ba 233.527†	48177.0	49575.8	365.55	ug/L	365.55	ppb	02:07:39
2	Be 313.107†	-13276.2	-9254.4	5.4332	ug/L	5.4332	ppb	02:07:39
2	Cd 226.502†	695.7	919.8	-0.5327	ug/L	-0.5327	ppb	02:07:59
2	Co 228.616†	1155.0	1273.3	14.355	ug/L	14.355	ppb	02:07:59
2	Cr 267.716†	4510.7	4578.4	49.235	ug/L	49.235	ppb	02:07:59
2	Cu 324.752†	15081.7	8628.0	29.221	ug/L	29.221	ppb	02:07:39
2	Mn 257.610†	2016961.9	2074350.0	2090.6	ug/L	2090.6	ppb	02:07:34
2	Mo 202.031†	63.4	60.0	11.628	ug/L	11.628	ppb	02:07:59
2	Ni 231.604†	1570.6	1530.5	34.090	ug/L	34.090	ppb	02:07:59

2	P 214.914†	1591.8	1414.3	658.87	ug/L	658.87 ppb	02:07:59
2	Pb 220.353†	416.9	508.5	51.903	ug/L	51.903 ppb	02:07:59
2	S 181.975 Axial†	319.5	279.8	336.11	ug/L	336.11 ppb	02:07:59
2	Sb 206.836†	64.9	28.4	-1.7995	ug/L	-1.7995 ppb	02:07:59
2	Se 196.026†	-459.0	-446.2	75.446	ug/L	75.446 ppb	02:07:59
2	Si 251.611†	765605.0	787054.6	23427	ug/L	23427 ppb	02:07:34
2	Sn 189.927†	-23.0	-33.1	-2.2819	ug/L	-2.2819 ppb	02:07:59
2	Ti 334.940†	2445030.8	2517047.7	3761.7	ug/L	3761.7 ppb	02:07:34
2	Tl 190.801†	-197.8	-159.0	-4.0077	ug/L	-4.0077 ppb	02:07:59
2	U 409.014†	-10181.9	-5361.2	-169.53	ug/L	-169.53 ppb	02:07:34
2	V 292.402†	14245.0	16406.2	90.900	ug/L	90.900 ppb	02:07:39
2	Zn 213.857†	43940.8	44493.6	367.83	ug/L	367.83 ppb	02:07:39
2	SiO2†	769926.5	791473.7	50472	µg/L	50472 ppb	02:08:43
3	Sc Radial	4428.0	4428.0	107	%		02:06:36
3	Y RADIAL	5646.1	5646.1	116.6	%		02:06:36
3	Al 396.153Radial†	38327.9	35899.8	29642	ug/L	29642 ppb	02:06:36
3	Ca 317.933Radial†	5379.6	4998.7	9253.4	ug/L	9253.4 ppb	02:06:36
3	Fe 238.204 Radial†	8799.5	8188.3	95157	ug/L	95157 ppb	02:06:36
3	K 766.490 Radial†	33064.5	28181.5	5360.0	ug/L	5360.0 ppb	02:06:36
3	Mg 279.077 IEC†	169.9	158.4	6573.2	ug/L	6573.2 ppb	02:06:56
3	Na 589.592 Radial†	782.7	2381.5	733.86	ug/L	733.86 ppb	02:06:36
3	Sr 421.552†	14033.5	13038.4	86.019	ug/L	86.019 ppb	02:06:36
3	Sc 361.383	866475.3	866475.3	97.267	%		02:08:05
3	Y 371.029	793349.8	793349.8	108.05	%		02:08:05
3	Ag 328.068†	-5927.9	-6719.0	1.8621	ug/L	1.8621 ppb	02:08:10
3	As 188.979†	-97.1	-71.1	27.531	ug/L	27.531 ppb	02:08:31
3	B 249.677†	221.9	989.2	5.1644	ug/L	5.1644 ppb	02:08:10
3	Ba 233.527†	48083.1	49449.6	364.57	ug/L	364.57 ppb	02:08:10
3	Be 313.107†	-13394.5	-9367.9	5.3925	ug/L	5.3925 ppb	02:08:10
3	Cd 226.502†	698.5	922.3	-0.3151	ug/L	-0.3151 ppb	02:08:31
3	Co 228.616†	1125.3	1242.0	13.809	ug/L	13.809 ppb	02:08:31
3	Cr 267.716†	4505.0	4569.8	49.109	ug/L	49.109 ppb	02:08:31
3	Cu 324.752†	14911.2	8443.4	28.610	ug/L	28.610 ppb	02:08:10
3	Mn 257.610†	2014727.4	2070815.1	2086.9	ug/L	2086.9 ppb	02:08:05
3	Mo 202.031†	73.1	69.9	12.143	ug/L	12.143 ppb	02:08:31
3	Ni 231.604†	1559.8	1518.5	33.821	ug/L	33.821 ppb	02:08:31
3	P 214.914†	1590.9	1412.4	659.35	ug/L	659.35 ppb	02:08:31
3	Pb 220.353†	432.9	524.7	53.707	ug/L	53.707 ppb	02:08:31
3	S 181.975 Axial†	310.3	270.2	324.48	ug/L	324.48 ppb	02:08:31
3	Sb 206.836†	67.7	31.2	-0.9735	ug/L	-0.9735 ppb	02:08:31
3	Se 196.026†	-468.9	-456.1	63.768	ug/L	63.768 ppb	02:08:31
3	Si 251.611†	765424.6	786399.5	23408	ug/L	23408 ppb	02:08:05
3	Sn 189.927†	-27.0	-37.2	-3.0006	ug/L	-3.0006 ppb	02:08:31
3	Ti 334.940†	2445737.5	2516274.1	3760.5	ug/L	3760.5 ppb	02:08:05
3	Tl 190.801†	-197.2	-158.2	-3.8179	ug/L	-3.8179 ppb	02:08:31
3	U 409.014†	-10233.6	-5408.1	-170.70	ug/L	-170.70 ppb	02:08:05
3	V 292.402†	14054.4	16201.5	89.815	ug/L	89.815 ppb	02:08:10
3	Zn 213.857†	43668.0	44186.0	365.41	ug/L	365.41 ppb	02:08:10
3	SiO2†	775021.7	796239.8	50776	ug/L	50776 ppb	02:08:49

Mean Data: 244852002|942648|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	866376.0	97.255	%	0.0424				0.04%
Sc Radial	4354.0	106	%	1.9				1.80%
Y 371.029	792997.8	108.00	%	0.145				0.13%
Y RADIAL	5581.4	115.3	%	1.58				1.37%
Ag 328.068†	-6707.7	2.4787	ug/L	0.76434	2.4787	ppb	0.76434	30.84%
Al 396.153Radial†	36505.9	30142	ug/L	489.6	30142	ppb	489.6	1.62%
As 188.979†	-70.7	28.124	ug/L	0.7920	28.124	ppb	0.7920	2.82%
B 249.677†	1042.3	5.9908	ug/L	0.74874	5.9908	ppb	0.74874	12.50%
Ba 233.527†	49580.2	365.58	ug/L	1.024	365.58	ppb	1.024	0.28%
Be 313.107†	-9367.4	5.3968	ug/L	0.03446	5.3968	ppb	0.03446	0.64%
Ca 317.933Radial†	5088.8	9420.0	ug/L	175.97	9420.0	ppb	175.97	1.87%
Cd 226.502†	929.2	-0.4238	ug/L	0.10878	-0.4238	ppb	0.10878	25.67%
Co 228.616†	1247.1	13.872	ug/L	0.4538	13.872	ppb	0.4538	3.27%
Cr 267.716†	4572.8	49.174	ug/L	0.0631	49.174	ppb	0.0631	0.13%
Cu 324.752†	8535.1	28.957	ug/L	0.3139	28.957	ppb	0.3139	1.08%
Fe 238.204 Radial†	8338.9	96908	ug/L	1697.6	96908	ppb	1697.6	1.75%
K 766.490 Radial†	28700.3	5458.7	ug/L	97.05	5458.7	ppb	97.05	1.78%

Mg 279.077 IEC†	162.2	6735.6	ug/L	168.32	6735.6	ppb	168.32	2.50%
Mn 257.610†	2074170.5	2090.4	ug/L	3.44	2090.4	ppb	3.44	0.16%
Mo 202.031†	66.3	12.043	ug/L	0.3757	12.043	ppb	0.3757	3.12%
Na 589.592 Radial†	2389.6	736.37	ug/L	13.983	736.37	ppb	13.983	1.90%
Ni 231.604†	1531.6	34.115	ug/L	0.3064	34.115	ppb	0.3064	0.90%
P 214.914†	1418.8	661.35	ug/L	3.874	661.35	ppb	3.874	0.59%
Pb 220.353†	503.5	51.370	ug/L	2.6435	51.370	ppb	2.6435	5.15%
S 181.975 Axial†	273.5	328.42	ug/L	6.659	328.42	ppb	6.659	2.03%
Sb 206.836†	30.7	-1.0857	ug/L	0.66483	-1.0857	ppb	0.66483	61.23%
Se 196.026†	-446.7	74.805	ug/L	10.7314	74.805	ppb	10.7314	14.35%
Si 251.611†	787440.1	23439	ug/L	38.0	23439	ppb	38.0	0.16%
Sn 189.927†	-36.7	-2.8748	ug/L	0.54111	-2.8748	ppb	0.54111	18.82%
Sr 421.552†	13276.9	87.592	ug/L	1.6841	87.592	ppb	1.6841	1.92%
Ti 334.940†	2517488.0	3762.3	ug/L	2.23	3762.3	ppb	2.23	0.06%
Tl 190.801†	-158.9	-3.9695	ug/L	0.13660	-3.9695	ppb	0.13660	3.44%
U 409.014†	-5349.9	-169.18	ug/L	1.722	-169.18	ppb	1.722	1.02%
V 292.402†	16342.2	90.497	ug/L	0.5940	90.497	ppb	0.5940	0.66%
Zn 213.857†	44446.2	367.44	ug/L	1.871	367.44	ppb	1.871	0.51%
SiO2†	790278.9	50396	ug/L	423.4	50396	ppb	423.4	0.84%

Sequence No.: 80
Sample ID: 244852003|942648|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 101
Date Collected: 2/2/2010 02:11:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 244852003|942648|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Units	Sample Conc.	Units	Analysis Time
1	Sc Radial	4107.5	4107.5	99.6	%			02:13:14
1	Y RADIAL	5233.5	5233.5	108.1	%			02:13:14
1	Al 396.153Radial†	136248.3	137034.7	113150	ug/L	113150	ppb	02:12:54
1	Ca 317.933Radial†	12828.7	12871.6	23827	ug/L	23827	ppb	02:12:54
1	Fe 238.204 Radial†	11617.8	11658.5	135490	ug/L	135490	ppb	02:12:54
1	K 766.490 Radial†	99113.1	96922.6	18439	ug/L	18439	ppb	02:12:54
1	Mg 279.077 IEC†	492.4	494.6	20698	ug/L	20698	ppb	02:13:14
1	Na 589.592 Radial†	1163.8	2821.1	869.33	ug/L	869.33	ppb	02:12:54
1	Sr 421.552†	43703.7	43858.5	289.40	ug/L	289.40	ppb	02:12:54
1	Sc 361.383	838612.2	838612.2	94.139	%			02:14:17
1	Y 371.029	760242.4	760242.4	103.54	%			02:14:17
1	Ag 328.068†	-8494.8	-9648.2	2.6959	ug/L	2.6959	ppb	02:14:17
1	As 188.979†	-127.3	-106.5	43.732	ug/L	43.732	ppb	02:14:37
1	B 249.677†	984.8	1807.2	15.549	ug/L	15.549	ppb	02:14:17
1	Ba 233.527†	300030.3	318726.0	2334.4	ug/L	2334.4	ppb	02:14:17
1	Be 313.107†	-9716.9	-5918.9	11.868	ug/L	11.868	ppb	02:14:17
1	Cd 226.502†	1076.0	1347.1	-0.0622	ug/L	-0.0622	ppb	02:14:37
1	Co 228.616†	4098.4	4438.7	68.137	ug/L	68.137	ppb	02:14:37
1	Cr 267.716†	9936.5	10493.3	111.15	ug/L	111.15	ppb	02:14:37
1	Cu 324.752†	27088.0	21887.7	68.141	ug/L	68.141	ppb	02:14:17
1	Mn 257.610†	4252457.8	4516691.7	4544.3	ug/L	4544.3	ppb	02:14:12
1	Mo 202.031†	-105.4	-117.2	3.0145	ug/L	3.0145	ppb	02:14:37
1	Ni 231.604†	3664.4	3807.4	84.788	ug/L	84.788	ppb	02:14:37
1	P 214.914†	2133.6	2043.1	967.66	ug/L	967.66	ppb	02:14:37
1	Pb 220.353†	1074.8	1221.3	142.65	ug/L	142.65	ppb	02:14:37
1	S 181.975 Axial†	667.6	660.3	785.41	ug/L	785.41	ppb	02:14:37
1	Sb 206.836†	94.7	62.2	-0.3136	ug/L	-0.3136	ppb	02:14:37
1	Se 196.026†	-638.6	-652.4	93.593	ug/L	93.593	ppb	02:14:37
1	Si 251.611†	897593.0	952943.0	28365	ug/L	28365	ppb	02:14:12
1	Sn 189.927†	-91.7	-106.8	-11.353	ug/L	-11.353	ppb	02:14:37
1	Ti 334.940†	3842968.4	4084042.9	6103.8	ug/L	6103.8	ppb	02:14:12
1	Tl 190.801†	-298.5	-272.6	-5.5332	ug/L	-5.5332	ppb	02:14:37
1	U 409.014†	-10071.4	-5585.4	-180.67	ug/L	-180.67	ppb	02:14:17
1	V 292.402†	40985.3	45289.3	275.04	ug/L	275.04	ppb	02:14:17
1	Zn 213.857†	29767.0	30911.2	248.49	ug/L	248.49	ppb	02:14:37
1	SiO2†	902332.7	957951.3	61088	ug/L	61088	ppb	02:15:47
2	Sc Radial	4450.3	4450.3	108	%			02:13:39
2	Y RADIAL	5596.7	5596.7	115.6	%			02:13:39
2	Al 396.153Radial†	138032.5	128148.3	105810	ug/L	105810	ppb	02:13:19
2	Ca 317.933Radial†	12950.2	11991.7	22198	ug/L	22198	ppb	02:13:19
2	Fe 238.204 Radial†	11724.9	10859.0	126200	ug/L	126200	ppb	02:13:19
2	K 766.490 Radial†	99191.3	89327.5	16994	ug/L	16994	ppb	02:13:19
2	Mg 279.077 IEC†	487.3	451.8	18904	ug/L	18904	ppb	02:13:39
2	Na 589.592 Radial†	1138.9	2708.1	834.49	ug/L	834.49	ppb	02:13:19
2	Sr 421.552†	44016.4	40767.4	269.01	ug/L	269.01	ppb	02:13:19
2	Sc 361.383	845158.2	845158.2	94.874	%			02:14:49
2	Y 371.029	767239.3	767239.3	104.49	%			02:14:49
2	Ag 328.068†	-8505.4	-9589.5	-0.0451	ug/L	-0.0451	ppb	02:14:49
2	As 188.979†	-123.0	-100.9	43.644	ug/L	43.644	ppb	02:15:09
2	B 249.677†	953.5	1766.1	16.202	ug/L	16.202	ppb	02:14:49
2	Ba 233.527†	301248.8	317541.8	2325.5	ug/L	2325.5	ppb	02:14:49
2	Be 313.107†	-10314.6	-6468.9	11.672	ug/L	11.672	ppb	02:14:49
2	Cd 226.502†	1048.1	1308.9	0.5043	ug/L	0.5043	ppb	02:15:09
2	Co 228.616†	4099.6	4406.3	67.682	ug/L	67.682	ppb	02:15:09
2	Cr 267.716†	9864.8	10336.1	109.34	ug/L	109.34	ppb	02:15:09
2	Cu 324.752†	27104.0	21681.8	67.070	ug/L	67.070	ppb	02:14:49
2	Mn 257.610†	4271209.6	4501469.5	4528.2	ug/L	4528.2	ppb	02:14:43
2	Mo 202.031†	-98.2	-108.7	2.8337	ug/L	2.8337	ppb	02:15:09
2	Ni 231.604†	3664.6	3777.4	84.121	ug/L	84.121	ppb	02:15:09

2	P 214.914†	2124.4	2015.9	959.30 ug/L	959.30 ppb	02:15:09
2	Pb 220.353†	1072.4	1210.0	140.73 ug/L	140.73 ppb	02:15:09
2	S 181.975 Axial†	660.9	647.7	771.46 ug/L	771.46 ppb	02:15:09
2	Sb 206.836†	85.9	52.1	-3.4362 ug/L	-3.4362 ppb	02:15:09
2	Se 196.026†	-628.4	-636.4	71.261 ug/L	71.261 ppb	02:15:09
2	Si 251.611†	903662.7	951955.8	28336 ug/L	28336 ppb	02:14:43
2	Sn 189.927†	-99.2	-114.0	-12.915 ug/L	-12.915 ppb	02:15:09
2	Ti 334.940†	3869897.9	4080809.4	6098.9 ug/L	6098.9 ppb	02:14:43
2	Tl 190.801†	-289.2	-260.4	-2.2036 ug/L	-2.2036 ppb	02:15:09
2	U 409.014†	-9748.2	-5161.8	-167.10 ug/L	-167.10 ppb	02:14:49
2	V 292.402†	41278.8	45261.4	276.21 ug/L	276.21 ppb	02:14:49
2	Zn 213.857†	29643.2	30535.9	246.21 ug/L	246.21 ppb	02:15:09
2	SiO2†	906349.5	954761.2	60885 ug/L	60885 ppb	02:15:53
3	Sc Radial	4342.3	4342.3	105 %		02:14:04
3	Y RADIAL	5487.5	5487.5	113.3 %		02:14:04
3	Al 396.153Radial†	138839.0	132096.2	109070 ug/L	109070 ppb	02:13:44
3	Ca 317.933Radial†	13031.1	12367.1	22893 ug/L	22893 ppb	02:13:44
3	Fe 238.204 Radial†	11778.9	11180.6	129930 ug/L	129930 ppb	02:13:44
3	K 766.490 Radial†	100212.5	92584.1	17613 ug/L	17613 ppb	02:13:44
3	Mg 279.077 IEC†	479.9	456.0	19080 ug/L	19080 ppb	02:14:04
3	Na 589.592 Radial†	1188.3	2781.2	857.04 ug/L	857.04 ppb	02:13:44
3	Sr 421.552†	44403.4	42149.6	278.13 ug/L	278.13 ppb	02:13:44
3	Sc 361.383	843342.7	843342.7	94.670 %		02:15:20
3	Y 371.029	765633.2	765633.2	104.27 %		02:15:20
3	Ag 328.068†	-8456.6	-9557.2	1.3019 ug/L	1.3019 ppb	02:15:20
3	As 188.979†	-116.0	-93.8	47.137 ug/L	47.137 ppb	02:15:40
3	B 249.677†	1022.1	1840.8	17.156 ug/L	17.156 ppb	02:15:20
3	Ba 233.527†	300747.8	317696.2	2326.7 ug/L	2326.7 ppb	02:15:20
3	Be 313.107†	-10186.6	-6357.0	11.677 ug/L	11.677 ppb	02:15:20
3	Cd 226.502†	1066.4	1330.6	0.3409 ug/L	0.3409 ppb	02:15:40
3	Co 228.616†	4073.7	4388.2	67.323 ug/L	67.323 ppb	02:15:40
3	Cr 267.716†	9878.4	10372.7	109.80 ug/L	109.80 ppb	02:15:40
3	Cu 324.752†	27202.3	21847.1	67.730 ug/L	67.730 ppb	02:15:20
3	Mn 257.610†	4257898.5	4497100.5	4524.2 ug/L	4524.2 ppb	02:15:15
3	Mo 202.031†	-106.8	-118.1	2.5122 ug/L	2.5122 ppb	02:15:40
3	Ni 231.604†	3634.0	3753.4	83.587 ug/L	83.587 ppb	02:15:40
3	P 214.914†	2113.9	2009.6	953.73 ug/L	953.73 ppb	02:15:40
3	Pb 220.353†	1059.1	1198.4	139.83 ug/L	139.83 ppb	02:15:40
3	S 181.975 Axial†	662.9	651.4	775.28 ug/L	775.28 ppb	02:15:40
3	Sb 206.836†	86.5	52.9	-3.1370 ug/L	-3.1370 ppb	02:15:40
3	Se 196.026†	-632.0	-641.6	80.906 ug/L	80.906 ppb	02:15:40
3	Si 251.611†	899002.7	949083.8	28250 ug/L	28250 ppb	02:15:15
3	Sn 189.927†	-96.1	-110.9	-12.256 ug/L	-12.256 ppb	02:15:40
3	Ti 334.940†	3852531.5	4071246.2	6084.7 ug/L	6084.7 ppb	02:15:15
3	Tl 190.801†	-288.3	-260.1	-2.2468 ug/L	-2.2468 ppb	02:15:40
3	U 409.014†	-9904.7	-5349.3	-173.06 ug/L	-173.06 ppb	02:15:20
3	V 292.402†	41198.6	45270.4	275.72 ug/L	275.72 ppb	02:15:20
3	Zn 213.857†	29624.5	30583.3	246.26 ug/L	246.26 ppb	02:15:40
3	SiO2†	906181.7	956640.5	61005 ug/L	61005 ppb	02:15:59

Mean Data: 244852003|942648|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	842371.1	94.561	%	0.3794				0.40%
Sc Radial	4300.1	104	%	4.2				4.08%
Y 371.029	764371.6	104.10	%	0.499				0.48%
Y RADIAL	5439.2	112.3	%	3.85				3.43%
Ag 328.068†	-9598.3	1.3176	ug/L	1.37056	1.3176	ppb	1.37056	104.02%
Al 396.153Radial†	132426.4	109340	ug/L	3676.3	109340	ppb	3676.3	3.36%
As 188.979†	-100.4	44.838	ug/L	1.9919	44.838	ppb	1.9919	4.44%
B 249.677†	1804.7	16.303	ug/L	0.8082	16.303	ppb	0.8082	4.96%
Ba 233.527†	317988.0	2328.8	ug/L	4.84	2328.8	ppb	4.84	0.21%
Be 313.107†	-6248.3	11.739	ug/L	0.1114	11.739	ppb	0.1114	0.95%
Ca 317.933Radial†	12410.1	22973	ug/L	817.3	22973	ppb	817.3	3.56%
Cd 226.502†	1328.9	0.2610	ug/L	0.29159	0.2610	ppb	0.29159	111.72%
Co 228.616†	4411.1	67.714	ug/L	0.4078	67.714	ppb	0.4078	0.60%
Cr 267.716†	10400.7	110.10	ug/L	0.939	110.10	ppb	0.939	0.85%
Cu 324.752†	21805.5	67.647	ug/L	0.5406	67.647	ppb	0.5406	0.80%
Fe 238.204 Radial†	11232.7	130540	ug/L	4675.1	130540	ppb	4675.1	3.58%
K 766.490 Radial†	92944.7	17682	ug/L	725.0	17682	ppb	725.0	4.10%

Mg 279.077 IEC†	467.4	19561	ug/L	988.7	19561	ppb	988.7	5.05%
Mn 257.610†	4505087.2	4532.2	ug/L	10.66	4532.2	ppb	10.66	0.24%
Mo 202.031†	-114.7	2.7868	ug/L	0.25443	2.7868	ppb	0.25443	9.13%
Na 589.592 Radial†	2770.1	853.62	ug/L	17.670	853.62	ppb	17.670	2.07%
Ni 231.604†	3779.4	84.165	ug/L	0.6016	84.165	ppb	0.6016	0.71%
P 214.914†	2022.9	960.23	ug/L	7.009	960.23	ppb	7.009	0.73%
Pb 220.353†	1209.9	141.07	ug/L	1.442	141.07	ppb	1.442	1.02%
S 181.975 Axial†	653.1	777.38	ug/L	7.205	777.38	ppb	7.205	0.93%
Sb 206.836†	55.7	-2.2956	ug/L	1.72297	-2.2956	ppb	1.72297	75.05%
Se 196.026†	-643.5	81.920	ug/L	11.2002	81.920	ppb	11.2002	13.67%
Si 251.611†	951327.5	28317	ug/L	59.7	28317	ppb	59.7	0.21%
Sn 189.927†	-110.6	-12.175	ug/L	0.7845	-12.175	ppb	0.7845	6.44%
Sr 421.552†	42258.5	278.85	ug/L	10.218	278.85	ppb	10.218	3.66%
Ti 334.940†	4078699.5	6095.8	ug/L	9.93	6095.8	ppb	9.93	0.16%
Tl 190.801†	-264.3	-3.3278	ug/L	1.91000	-3.3278	ppb	1.91000	57.39%
U 409.014†	-5365.5	-173.61	ug/L	6.804	-173.61	ppb	6.804	3.92%
V 292.402†	45273.7	275.66	ug/L	0.588	275.66	ppb	0.588	0.21%
Zn 213.857†	30676.8	246.99	ug/L	1.303	246.99	ppb	1.303	0.53%
SiO2†	956451.0	60993	ug/L	102.3	60993	ppb	102.3	0.17%

Sequence No.: 81
Sample ID: 244852004|942648|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 102
Date Collected: 2/2/2010 02:18:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 244852004|942648|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4474.4	4474.4	108	%			02:20:24
1	Y RADIAL	5470.2	5470.2	113.0	%			02:20:24
1	Al 396.153Radial†	109475.8	101129.0	83501	ug/L	83501	ppb	02:20:04
1	Ca 317.933Radial†	11566.2	10650.9	19716	ug/L	19716	ppb	02:20:04
1	Fe 238.204 Radial†	11200.9	10317.3	119900	ug/L	119900	ppb	02:20:04
1	K 766.490 Radial†	106709.8	95764.2	18220	ug/L	18220	ppb	02:20:04
1	Mg 279.077 IEC†	445.4	410.7	17181	ug/L	17181	ppb	02:20:24
1	Na 589.592 Radial†	2360.9	3829.0	1179.9	ug/L	1179.9	ppb	02:20:04
1	Sr 421.552†	38045.0	35041.8	231.22	ug/L	231.22	ppb	02:20:04
1	Sc 361.383	847238.6	847238.6	95.107	%			02:21:27
1	Y 371.029	750320.8	750320.8	102.19	%			02:21:27
1	Ag 328.068†	-7624.5	-8641.3	2.0235	ug/L	2.0235	ppb	02:21:27
1	As 188.979†	-129.7	-107.7	36.323	ug/L	36.323	ppb	02:21:47
1	B 249.677†	994.9	1807.2	18.115	ug/L	18.115	ppb	02:21:27
1	Ba 233.527†	235676.2	247816.2	1815.6	ug/L	1815.6	ppb	02:21:27
1	Be 313.107†	-14559.9	-10905.9	9.3328	ug/L	9.3328	ppb	02:21:27
1	Cd 226.502†	986.8	1241.7	0.4618	ug/L	0.4618	ppb	02:21:47
1	Co 228.616†	3523.4	3789.8	56.953	ug/L	56.953	ppb	02:21:47
1	Cr 267.716†	10485.0	10962.6	115.64	ug/L	115.64	ppb	02:21:47
1	Cu 324.752†	35413.0	30348.0	90.817	ug/L	90.817	ppb	02:21:27
1	Mn 257.610†	3865220.6	4063539.3	4088.2	ug/L	4088.2	ppb	02:21:22
1	Mo 202.031†	-47.4	-55.1	5.8836	ug/L	5.8836	ppb	02:21:47
1	Ni 231.604†	3137.8	3214.1	71.576	ug/L	71.576	ppb	02:21:47
1	P 214.914†	4033.2	4017.4	1993.2	ug/L	1993.2	ppb	02:21:47
1	Pb 220.353†	1017.8	1149.8	130.05	ug/L	130.05	ppb	02:21:47
1	S 181.975 Axial†	892.9	890.0	1071.6	ug/L	1071.6	ppb	02:21:47
1	Sb 206.836†	92.2	58.6	0.1890	ug/L	0.1890	ppb	02:21:47
1	Se 196.026†	-585.3	-589.5	75.037	ug/L	75.037	ppb	02:21:47
1	Si 251.611†	1024027.0	1076173.5	32033	ug/L	32033	ppb	02:21:22
1	Sn 189.927†	-127.4	-143.4	-18.157	ug/L	-18.157	ppb	02:21:47
1	Ti 334.940†	3640868.1	3829980.9	5723.9	ug/L	5723.9	ppb	02:21:22
1	Tl 190.801†	-265.1	-234.2	0.0298	ug/L	0.0298	ppb	02:21:47
1	U 409.014†	-8361.8	-3678.9	-122.59	ug/L	-122.59	ppb	02:21:27
1	V 292.402†	40000.7	43810.7	267.97	ug/L	267.97	ppb	02:21:27
1	Zn 213.857†	32330.6	33284.8	270.20	ug/L	270.20	ppb	02:21:27
1	SiO2†	1034032.1	1086666.8	69296	ug/L	69296	ppb	02:22:57
2	Sc Radial	4434.0	4434.0	107	%			02:20:49
2	Y RADIAL	5445.0	5445.0	112.5	%			02:20:49
2	Al 396.153Radial†	109273.6	101860.9	84105	ug/L	84105	ppb	02:20:29
2	Ca 317.933Radial†	11547.1	10730.4	19863	ug/L	19863	ppb	02:20:29
2	Fe 238.204 Radial†	11159.1	10372.5	120540	ug/L	120540	ppb	02:20:29
2	K 766.490 Radial†	106304.4	96283.8	18319	ug/L	18319	ppb	02:20:29
2	Mg 279.077 IEC†	444.2	413.3	17290	ug/L	17290	ppb	02:20:49
2	Na 589.592 Radial†	2361.6	3849.5	1186.2	ug/L	1186.2	ppb	02:20:29
2	Sr 421.552†	37896.3	35223.2	232.42	ug/L	232.42	ppb	02:20:29
2	Sc 361.383	852136.2	852136.2	95.657	%			02:21:59
2	Y 371.029	754471.5	754471.5	102.75	%			02:21:59
2	Ag 328.068†	-7793.5	-8771.8	1.6478	ug/L	1.6478	ppb	02:21:59
2	As 188.979†	-123.5	-100.4	38.855	ug/L	38.855	ppb	02:22:19
2	B 249.677†	999.2	1805.7	17.981	ug/L	17.981	ppb	02:21:59
2	Ba 233.527†	235878.7	246603.6	1806.8	ug/L	1806.8	ppb	02:21:59
2	Be 313.107†	-14718.3	-10983.5	9.1968	ug/L	9.1968	ppb	02:21:59
2	Cd 226.502†	969.6	1217.7	0.1475	ug/L	0.1475	ppb	02:22:19
2	Co 228.616†	3503.7	3747.9	56.269	ug/L	56.269	ppb	02:22:19
2	Cr 267.716†	10443.2	10855.5	114.55	ug/L	114.55	ppb	02:22:19
2	Cu 324.752†	35399.4	30119.8	90.215	ug/L	90.215	ppb	02:21:59
2	Mn 257.610†	3852150.6	4026518.0	4051.2	ug/L	4051.2	ppb	02:21:54
2	Mo 202.031†	-49.4	-56.8	5.8159	ug/L	5.8159	ppb	02:22:19
2	Ni 231.604†	3128.1	3185.0	70.928	ug/L	70.928	ppb	02:22:19

2	P 214.914†	4051.2	4011.9	1990.1	ug/L	1990.1	ppb	02:22:19
2	Pb 220.353†	1043.0	1170.0	132.29	ug/L	132.29	ppb	02:22:19
2	S 181.975 Axial†	883.0	874.3	1052.2	ug/L	1052.2	ppb	02:22:19
2	Sb 206.836†	102.9	69.2	3.6299	ug/L	3.6299	ppb	02:22:19
2	Se 196.026†	-582.7	-583.2	80.682	ug/L	80.682	ppb	02:22:19
2	Si 251.611†	1018999.4	1064729.3	31693	ug/L	31693	ppb	02:21:54
2	Sn 189.927†	-108.0	-122.3	-14.710	ug/L	-14.710	ppb	02:22:19
2	Ti 334.940†	3630910.3	3797568.9	5675.5	ug/L	5675.5	ppb	02:21:54
2	Tl 190.801†	-254.8	-221.9	2.9363	ug/L	2.9363	ppb	02:22:19
2	U 409.014†	-8322.6	-3587.4	-119.96	ug/L	-119.96	ppb	02:21:59
2	V 292.402†	39933.5	43498.8	265.86	ug/L	265.86	ppb	02:21:59
2	Zn 213.857†	32370.4	33131.0	268.83	ug/L	268.83	ppb	02:21:59
2	SiO2†	1015010.5	1060532.8	67630	ug/L	67630	ppb	02:23:03
3	Sc Radial	4404.9	4404.9	107	%			02:21:14
3	Y RADIAL	5400.8	5400.8	111.6	%			02:21:14
3	Al 396.153Radial†	109376.6	102628.5	84739	ug/L	84739	ppb	02:20:54
3	Ca 317.933Radial†	11567.3	10820.2	20030	ug/L	20030	ppb	02:20:54
3	Fe 238.204 Radial†	11235.3	10512.4	122170	ug/L	122170	ppb	02:20:54
3	K 766.490 Radial†	106651.6	97261.9	18505	ug/L	18505	ppb	02:20:54
3	Mg 279.077 IEC†	441.6	413.7	17304	ug/L	17304	ppb	02:21:14
3	Na 589.592 Radial†	2427.1	3925.4	1209.6	ug/L	1209.6	ppb	02:20:54
3	Sr 421.552†	38048.2	35598.2	234.89	ug/L	234.89	ppb	02:20:54
3	Sc 361.383	847052.5	847052.5	95.086	%			02:22:31
3	Y 371.029	750033.4	750033.4	102.15	%			02:22:31
3	Ag 328.068†	-7924.1	-8958.2	1.3664	ug/L	1.3664	ppb	02:22:31
3	As 188.979†	-122.4	-100.0	39.680	ug/L	39.680	ppb	02:22:51
3	B 249.677†	850.7	1655.8	14.577	ug/L	14.577	ppb	02:22:31
3	Ba 233.527†	237005.3	249268.3	1826.3	ug/L	1826.3	ppb	02:22:31
3	Be 313.107†	-14578.9	-10929.2	9.2958	ug/L	9.2958	ppb	02:22:31
3	Cd 226.502†	1093.6	1354.2	1.3919	ug/L	1.3919	ppb	02:22:51
3	Co 228.616†	3585.0	3855.4	58.162	ug/L	58.162	ppb	02:22:51
3	Cr 267.716†	10669.0	11158.5	117.70	ug/L	117.70	ppb	02:22:51
3	Cu 324.752†	35622.9	30576.9	91.570	ug/L	91.570	ppb	02:22:31
3	Mn 257.610†	3853622.4	4052234.9	4077.1	ug/L	4077.1	ppb	02:22:25
3	Mo 202.031†	-41.0	-48.3	6.5105	ug/L	6.5105	ppb	02:22:51
3	Ni 231.604†	3240.4	3322.7	73.995	ug/L	73.995	ppb	02:22:51
3	P 214.914†	4102.6	4091.3	2029.9	ug/L	2029.9	ppb	02:22:51
3	Pb 220.353†	1063.7	1198.3	135.31	ug/L	135.31	ppb	02:22:51
3	S 181.975 Axial†	922.4	921.2	1109.4	ug/L	1109.4	ppb	02:22:51
3	Sb 206.836†	103.3	70.2	3.8112	ug/L	3.8112	ppb	02:22:51
3	Se 196.026†	-571.3	-574.8	90.731	ug/L	90.731	ppb	02:22:51
3	Si 251.611†	1021267.4	1073507.8	31954	ug/L	31954	ppb	02:22:25
3	Sn 189.927†	-132.9	-149.2	-19.002	ug/L	-19.002	ppb	02:22:51
3	Ti 334.940†	3631890.8	3821381.0	5711.1	ug/L	5711.1	ppb	02:22:25
3	Tl 190.801†	-260.5	-229.5	1.2087	ug/L	1.2087	ppb	02:22:51
3	U 409.014†	-8147.7	-3455.6	-116.26	ug/L	-116.26	ppb	02:22:31
3	V 292.402†	40143.6	43970.3	268.74	ug/L	268.74	ppb	02:22:31
3	Zn 213.857†	32461.8	33430.2	271.19	ug/L	271.19	ppb	02:22:31
3	SiO2†	1031937.1	1084702.5	69171	ug/L	69171	ppb	02:23:09

Mean Data: 244852004|942648|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	848809.1	95.283	%	0.3236				0.34%
Sc Radial	4437.8	108	%	0.8				0.79%
Y 371.029	751608.6	102.36	%	0.338				0.33%
Y RADIAL	5438.7	112.3	%	0.73				0.65%
Ag 328.068†	-8790.4	1.6792	ug/L	0.32971	1.6792	ppb	0.32971	19.63%
Al 396.153Radial†	101872.8	84115	ug/L	619.1	84115	ppb	619.1	0.74%
As 188.979†	-102.7	38.286	ug/L	1.7495	38.286	ppb	1.7495	4.57%
B 249.677†	1756.2	16.891	ug/L	2.0051	16.891	ppb	2.0051	11.87%
Ba 233.527†	247896.0	1816.2	ug/L	9.78	1816.2	ppb	9.78	0.54%
Be 313.107†	-10939.5	9.2752	ug/L	0.07031	9.2752	ppb	0.07031	0.76%
Ca 317.933Radial†	10733.8	19870	ug/L	156.8	19870	ppb	156.8	0.79%
Cd 226.502†	1271.2	0.6671	ug/L	0.64706	0.6671	ppb	0.64706	97.00%
Co 228.616†	3797.7	57.128	ug/L	0.9587	57.128	ppb	0.9587	1.68%
Cr 267.716†	10992.2	115.96	ug/L	1.601	115.96	ppb	1.601	1.38%
Cu 324.752†	30348.2	90.867	ug/L	0.6790	90.867	ppb	0.6790	0.75%
Fe 238.204 Radial†	10400.8	120870	ug/L	1169.0	120870	ppb	1169.0	0.97%
K 766.490 Radial†	96436.7	18348	ug/L	144.7	18348	ppb	144.7	0.79%

Mg 279.077 IEC†	412.6	17258	ug/L	67.5	17258	ppb	67.5	0.39%
Mn 257.610†	4047430.7	4072.2	ug/L	19.03	4072.2	ppb	19.03	0.47%
Mo 202.031†	-53.4	6.0700	ug/L	0.38300	6.0700	ppb	0.38300	6.31%
Na 589.592 Radial†	3868.0	1191.9	ug/L	15.64	1191.9	ppb	15.64	1.31%
Ni 231.604†	3240.6	72.166	ug/L	1.6165	72.166	ppb	1.6165	2.24%
P 214.914†	4040.2	2004.4	ug/L	22.15	2004.4	ppb	22.15	1.11%
Pb 220.353†	1172.7	132.55	ug/L	2.638	132.55	ppb	2.638	1.99%
S 181.975 Axial†	895.1	1077.7	ug/L	29.09	1077.7	ppb	29.09	2.70%
Sb 206.836†	66.0	2.5434	ug/L	2.04095	2.5434	ppb	2.04095	80.25%
Se 196.026†	-582.5	82.150	ug/L	7.9494	82.150	ppb	7.9494	9.68%
Si 251.611†	1071470.2	31893	ug/L	178.2	31893	ppb	178.2	0.56%
Sn 189.927†	-138.3	-17.290	ug/L	2.2734	-17.290	ppb	2.2734	13.15%
Sr 421.552†	35287.8	232.84	ug/L	1.872	232.84	ppb	1.872	0.80%
Ti 334.940†	3816310.3	5703.5	ug/L	25.09	5703.5	ppb	25.09	0.44%
Tl 190.801†	-228.5	1.3916	ug/L	1.46184	1.3916	ppb	1.46184	105.05%
U 409.014†	-3574.0	-119.60	ug/L	3.181	-119.60	ppb	3.181	2.66%
V 292.402†	43759.9	267.52	ug/L	1.490	267.52	ppb	1.490	0.56%
Zn 213.857†	33282.0	270.07	ug/L	1.184	270.07	ppb	1.184	0.44%
SiO2†	1077300.7	68699	ug/L	928.1	68699	ppb	928.1	1.35%

Sequence No.: 82
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 2/2/2010 02:25:21
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4271.1	4271.1	104	%			02:27:13
1	Y RADIAL	4761.0	4761.0	98.34	%			02:27:13
1	Al 396.153Radial†	6335.7	6309.8	5184.7	ug/L	5184.7	ppb	02:27:13
1	Ca 317.933Radial†	2956.8	2842.7	5262.2	ug/L	5262.2	ppb	02:27:33
1	Fe 238.204 Radial†	470.4	444.2	5178.0	ug/L	5178.0	ppb	02:27:33
1	K 766.490 Radial†	30844.9	27169.2	5165.0	ug/L	5165.0	ppb	02:27:13
1	Mg 279.077 IEC†	134.7	130.2	5485.8	ug/L	5485.8	ppb	02:27:33
1	Na 589.592 Radial†	32512.6	33056.7	10186	ug/L	10186	ppb	02:27:13
1	Sr 421.552†	80853.4	78061.0	515.37	ug/L	515.37	ppb	02:27:13
1	Sc 361.383	856265.8	856265.8	96.120	%			02:28:32
1	Y 371.029	684927.2	684927.2	93.283	%			02:28:32
1	Ag 328.068†	113878.7	117850.5	518.84	ug/L	518.84	ppb	02:28:32
1	As 188.979†	1249.1	1328.3	514.68	ug/L	514.68	ppb	02:28:52
1	B 249.677†	22565.4	24237.3	504.45	ug/L	504.45	ppb	02:28:32
1	Ba 233.527†	68183.2	70950.4	519.88	ug/L	519.88	ppb	02:28:32
1	Be 313.107†	1465181.5	1528721.1	514.11	ug/L	514.11	ppb	02:28:32
1	Cd 226.502†	48722.8	50893.4	525.42	ug/L	525.42	ppb	02:28:32
1	Co 228.616†	26904.4	28075.5	517.58	ug/L	517.58	ppb	02:28:52
1	Cr 267.716†	48408.2	50300.2	518.44	ug/L	518.44	ppb	02:28:32
1	Cu 324.752†	186292.5	186924.6	519.90	ug/L	519.90	ppb	02:28:32
1	Mn 257.610†	502160.2	521896.2	523.93	ug/L	523.93	ppb	02:28:32
1	Mo 202.031†	7502.8	7800.4	518.87	ug/L	518.87	ppb	02:28:52
1	Ni 231.604†	22298.5	23113.3	514.71	ug/L	514.71	ppb	02:28:52
1	P 214.914†	5042.8	5023.0	2506.8	ug/L	2506.8	ppb	02:28:52
1	Pb 220.353†	4576.4	4840.7	521.06	ug/L	521.06	ppb	02:28:52
1	S 181.975 Axial†	837.6	822.5	1003.8	ug/L	1003.8	ppb	02:28:52
1	Sb 206.836†	1654.5	1682.9	532.88	ug/L	532.88	ppb	02:28:52
1	Se 196.026†	872.9	934.1	536.78	ug/L	536.78	ppb	02:28:52
1	Si 251.611†	85013.8	87909.3	2610.3	ug/L	2610.3	ppb	02:28:32
1	Sn 189.927†	3114.2	3230.4	522.76	ug/L	522.76	ppb	02:28:52
1	Ti 334.940†	338303.4	353762.1	528.42	ug/L	528.42	ppb	02:28:32
1	Tl 190.801†	1728.6	1842.9	523.56	ug/L	523.56	ppb	02:28:52
1	U 409.014†	11968.3	17564.4	517.08	ug/L	517.08	ppb	02:28:32
1	V 292.402†	72654.1	77338.7	521.44	ug/L	521.44	ppb	02:28:32
1	Zn 213.857†	59850.4	61556.9	517.78	ug/L	517.78	ppb	02:28:32
1	SiO2†	84167.9	87002.8	5534.0	ug/L	5534.0	ppb	02:29:52
2	Sc Radial	4248.0	4248.0	103	%			02:27:38
2	Y RADIAL	4761.1	4761.1	98.34	%			02:27:38
2	Al 396.153Radial†	6389.7	6395.5	5255.5	ug/L	5255.5	ppb	02:27:38
2	Ca 317.933Radial†	2939.3	2841.2	5259.5	ug/L	5259.5	ppb	02:27:58
2	Fe 238.204 Radial†	464.6	441.1	5141.1	ug/L	5141.1	ppb	02:27:58
2	K 766.490 Radial†	31056.1	27536.0	5234.8	ug/L	5234.8	ppb	02:27:38
2	Mg 279.077 IEC†	131.5	127.8	5383.4	ug/L	5383.4	ppb	02:27:58
2	Na 589.592 Radial†	32820.2	33525.7	10331	ug/L	10331	ppb	02:27:38
2	Sr 421.552†	81184.9	78806.7	520.29	ug/L	520.29	ppb	02:27:38
2	Sc 361.383	852586.9	852586.9	95.707	%			02:29:00
2	Y 371.029	683312.4	683312.4	93.063	%			02:29:00
2	Ag 328.068†	113414.1	117876.2	518.95	ug/L	518.95	ppb	02:29:00
2	As 188.979†	1237.0	1321.2	511.95	ug/L	511.95	ppb	02:29:20
2	B 249.677†	22577.9	24351.6	506.84	ug/L	506.84	ppb	02:29:00
2	Ba 233.527†	67905.0	70965.8	519.99	ug/L	519.99	ppb	02:29:00
2	Be 313.107†	1460883.4	1530807.5	514.81	ug/L	514.81	ppb	02:29:00
2	Cd 226.502†	48558.8	50940.8	525.91	ug/L	525.91	ppb	02:29:00
2	Co 228.616†	26840.3	28129.2	518.58	ug/L	518.58	ppb	02:29:20
2	Cr 267.716†	48222.0	50322.9	518.68	ug/L	518.68	ppb	02:29:00
2	Cu 324.752†	185569.5	187005.5	520.13	ug/L	520.13	ppb	02:29:00
2	Mn 257.610†	500028.8	521923.5	523.95	ug/L	523.95	ppb	02:29:00
2	Mo 202.031†	7473.0	7802.9	519.04	ug/L	519.04	ppb	02:29:20
2	Ni 231.604†	22232.0	23144.0	515.39	ug/L	515.39	ppb	02:29:20

2	P 214.914†	5060.8	5064.6	2528.3 ug/L	2528.3 ppb	02:29:20
2	Pb 220.353†	4537.3	4820.4	518.90 ug/L	518.90 ppb	02:29:20
2	S 181.975 Axial†	842.8	831.7	1015.1 ug/L	1015.1 ppb	02:29:20
2	Sb 206.836†	1669.9	1706.4	540.01 ug/L	540.01 ppb	02:29:20
2	Se 196.026†	867.5	932.3	535.67 ug/L	535.67 ppb	02:29:20
2	Si 251.611†	84591.6	87849.9	2608.6 ug/L	2608.6 ppb	02:29:00
2	Sn 189.927†	3082.6	3211.4	519.69 ug/L	519.69 ppb	02:29:20
2	Ti 334.940†	336737.8	353644.9	528.26 ug/L	528.26 ppb	02:29:00
2	Tl 190.801†	1721.8	1843.5	523.72 ug/L	523.72 ppb	02:29:20
2	U 409.014†	11803.0	17445.5	513.57 ug/L	513.57 ppb	02:29:00
2	V 292.402†	72457.3	77459.2	522.24 ug/L	522.24 ppb	02:29:00
2	Zn 213.857†	59573.7	61536.5	517.60 ug/L	517.60 ppb	02:29:00
2	SiO2†	84177.2	87390.3	5558.7 ug/L	5558.7 ppb	02:29:58
3	Sc Radial	4237.2	4237.2	103 %		02:28:03
3	Y RADIAL	4699.2	4699.2	97.06 %		02:28:03
3	Al 396.153Radial†	6312.1	6335.9	5206.1 ug/L	5206.1 ppb	02:28:03
3	Ca 317.933Radial†	2959.0	2867.7	5308.5 ug/L	5308.5 ppb	02:28:23
3	Fe 238.204 Radial†	468.7	446.2	5201.0 ug/L	5201.0 ppb	02:28:23
3	K 766.490 Radial†	30813.0	27376.4	5204.4 ug/L	5204.4 ppb	02:28:03
3	Mg 279.077 IEC†	134.2	130.7	5507.9 ug/L	5507.9 ppb	02:28:23
3	Na 589.592 Radial†	32492.1	33287.9	10258 ug/L	10258 ppb	02:28:03
3	Sr 421.552†	80818.9	78652.0	519.27 ug/L	519.27 ppb	02:28:03
3	Sc 361.383	850946.6	850946.6	95.523 %		02:29:27
3	Y 371.029	680283.5	680283.5	92.651 %		02:29:27
3	Ag 328.068†	113256.3	117939.4	519.24 ug/L	519.24 ppb	02:29:27
3	As 188.979†	1258.6	1346.3	521,60 ug/L	521.60 ppb	02:29:47
3	B 249.677†	22424.9	24236.9	504.42 ug/L	504.42 ppb	02:29:27
3	Ba 233.527†	67976.3	71177.2	521.54 ug/L	521.54 ppb	02:29:27
3	Be 313.107†	1455978.5	1528615.2	514.07 ug/L	514.07 ppb	02:29:27
3	Cd 226.502†	48478.7	50954.8	526.05 ug/L	526.05 ppb	02:29:27
3	Co 228.616†	26995.8	28346.1	522.58 ug/L	522.58 ppb	02:29:47
3	Cr 267.716†	48218.1	50416.0	519.64 ug/L	519.64 ppb	02:29:27
3	Cu 324.752†	184905.3	186683.9	519.23 ug/L	519.23 ppb	02:29:27
3	Mn 257.610†	499970.0	522869.1	524.90 ug/L	524.90 ppb	02:29:27
3	Mo 202.031†	7510.6	7857.3	522.66 ug/L	522.66 ppb	02:29:47
3	Ni 231.604†	22361.3	23324.0	519.40 ug/L	519.40 ppb	02:29:47
3	P 214.914†	5084.4	5099.4	2546.6 ug/L	2546.6 ppb	02:29:47
3	Pb 220.353†	4615.1	4911.0	528.62 ug/L	528.62 ppb	02:29:47
3	S 181.975 Axial†	852.9	844.0	1030.0 ug/L	1030.0 ppb	02:29:47
3	Sb 206.836†	1669.7	1709.5	541.12 ug/L	541.12 ppb	02:29:47
3	Se 196.026†	874.8	941.8	541.12 ug/L	541.12 ppb	02:29:47
3	Si 251.611†	84484.7	87908.3	2610.2 ug/L	2610.2 ppb	02:29:27
3	Sn 189.927†	3103.7	3239.7	524.27 ug/L	524.27 ppb	02:29:47
3	Ti 334.940†	336540.8	354117.0	528.96 ug/L	528.96 ppb	02:29:27
3	Tl 190.801†	1726.8	1852.2	526.18 ug/L	526.18 ppb	02:29:47
3	U 409.014†	11785.0	17450.3	513.71 ug/L	513.71 ppb	02:29:27
3	V 292.402†	72310.2	77451.1	522.23 ug/L	522.23 ppb	02:29:27
3	Zn 213.857†	59545.9	61627.4	518.35 ug/L	518.35 ppb	02:29:27
3	SiO2†	84418.1	87812.0	5585.5 ug/L	5585.5 ppb	02:30:03

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	853266.5	95.784	%	0.3058				0.32%
Sc Radial	4252.1	103	%	0.4				0.41%
Y 371.029	682841.0	92.999	%	0.3211				0.35%
Y RADIAL	4740.4	97.91	%	0.737				0.75%
Ag 328.068†	117888.7	519.01	ug/L	0.208	519.01	ppb	0.208	0.04%
QC value within limits for Ag 328.068 Recovery = 103.80%								
Al 396.153Radial†	6347.0	5215.4	ug/L	36.29	5215.4	ppb	36.29	0.70%
QC value within limits for Al 396.153Radial Recovery = 104.31%								
As 188.979†	1331.9	516.08	ug/L	4.978	516.08	ppb	4.978	0.96%
QC value within limits for As 188.979 Recovery = 103.22%								
B 249.677†	24275.3	505.24	ug/L	1.390	505.24	ppb	1.390	0.28%
QC value within limits for B 249.677 Recovery = 101.05%								
Ba 233.527†	71031.2	520.47	ug/L	0.928	520.47	ppb	0.928	0.18%
QC value within limits for Ba 233.527 Recovery = 104.09%								
Be 313.107†	1529381.3	514.33	ug/L	0.414	514.33	ppb	0.414	0.08%
QC value within limits for Be 313.107 Recovery = 102.87%								
Ca 317.933Radial†	2850.5	5276.7	ug/L	27.56	5276.7	ppb	27.56	0.52%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.53%
Cd 226.502†            50929.7      525.80 ug/L         0.333      525.80 ppb          0.333   0.06%
   QC value within limits for Cd 226.502  Recovery = 105.16%
Co 228.616†            28183.6      519.58 ug/L         2.645      519.58 ppb          2.645   0.51%
   QC value within limits for Co 228.616  Recovery = 103.92%
Cr 267.716†            50346.4      518.92 ug/L         0.633      518.92 ppb          0.633   0.12%
   QC value within limits for Cr 267.716  Recovery = 103.78%
Cu 324.752†           186871.3      519.75 ug/L         0.464      519.75 ppb          0.464   0.09%
   QC value within limits for Cu 324.752  Recovery = 103.95%
Fe 238.204 Radial†       443.8      5173.4 ug/L         30.20      5173.4 ppb          30.20   0.58%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.47%
K 766.490 Radial†      27360.5      5201.4 ug/L         34.98      5201.4 ppb          34.98   0.67%
   QC value within limits for K 766.490 Radial  Recovery = 104.03%
Mg 279.077 IEC†          129.5      5459.1 ug/L         66.43      5459.1 ppb          66.43   1.22%
   QC value within limits for Mg 279.077 IEC  Recovery = 109.18%
Mn 257.610†           522229.6      524.26 ug/L         0.556      524.26 ppb          0.556   0.11%
   QC value within limits for Mn 257.610  Recovery = 104.85%
Mo 202.031†             7820.2      520.19 ug/L         2.139      520.19 ppb          2.139   0.41%
   QC value within limits for Mo 202.031  Recovery = 104.04%
Na 589.592 Radial†     33290.1       10258 ug/L          72.3       10258 ppb           72.3   0.70%
   QC value within limits for Na 589.592 Radial  Recovery = 102.58%
Ni 231.604†            23193.8      516.50 ug/L         2.535      516.50 ppb          2.535   0.49%
   QC value within limits for Ni 231.604  Recovery = 103.30%
P 214.914†              5062.3      2527.3 ug/L         19.92      2527.3 ppb          19.92   0.79%
   QC value within limits for P 214.914  Recovery = 101.09%
Pb 220.353†             4857.4      522.86 ug/L         5.101      522.86 ppb          5.101   0.98%
   QC value within limits for Pb 220.353  Recovery = 104.57%
S 181.975 Axial†         832.7      1016.3 ug/L         13.17      1016.3 ppb          13.17   1.30%
   QC value within limits for S 181.975 Axial  Recovery = 101.63%
Sb 206.836†             1699.6      538.01 ug/L         4.471      538.01 ppb          4.471   0.83%
   QC value within limits for Sb 206.836  Recovery = 107.60%
Se 196.026†              936.1      537.86 ug/L         2.880      537.86 ppb          2.880   0.54%
   QC value within limits for Se 196.026  Recovery = 107.57%
Si 251.611†            87889.1      2609.7 ug/L          1.00      2609.7 ppb           1.00   0.04%
   QC value within limits for Si 251.611  Recovery = 104.39%
Sn 189.927†             3227.2      522.24 ug/L         2.335      522.24 ppb          2.335   0.45%
   QC value within limits for Sn 189.927  Recovery = 104.45%
Sr 421.552†            78506.6      518.31 ug/L         2.598      518.31 ppb          2.598   0.50%
   QC value within limits for Sr 421.552  Recovery = 103.66%
Ti 334.940†           353841.3      528.55 ug/L         0.367      528.55 ppb          0.367   0.07%
   QC value within limits for Ti 334.940  Recovery = 105.71%
Tl 190.801†             1846.2      524.49 ug/L         1.466      524.49 ppb          1.466   0.28%
   QC value within limits for Tl 190.801  Recovery = 104.90%
U 409.014†             17486.8      514.79 ug/L         1.989      514.79 ppb          1.989   0.39%
   QC value within limits for U 409.014  Recovery = 102.96%
V 292.402†             77416.3      521.97 ug/L         0.460      521.97 ppb          0.460   0.09%
   QC value within limits for V 292.402  Recovery = 104.39%
Zn 213.857†            61573.6      517.91 ug/L         0.387      517.91 ppb          0.387   0.07%
   QC value within limits for Zn 213.857  Recovery = 103.58%
SiO2†                  87401.7      5559.4 ug/L         25.76      5559.4 ppb          25.76   0.46%
   QC value within limits for SiO2  Recovery = 103.96%
All analyte(s) passed QC.
```

Sequence No.: 83
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 2/2/2010 02:32:13
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4187.6	4187.6	102	%			02:34:05
1	Y RADIAL	4726.4	4726.4	97.62	%			02:34:05
1	Al 396.153Radial†	-199.3	-6.2	-5.1682	ug/L	-5.1682	ppb	02:34:05
1	Ca 317.933Radial†	28.5	14.7	27.220	ug/L	27.220	ppb	02:34:26
1	Fe 238.204 Radial†	12.0	1.7	19.573	ug/L	19.573	ppb	02:34:26
1	K 766.490 Radial†	2834.3	168.0	31.927	ug/L	31.927	ppb	02:34:05
1	Mg 279.077 IEC†	4.1	4.1	173.33	ug/L	173.33	ppb	02:34:26
1	Na 589.592 Radial†	-1407.8	265.4	81.771	ug/L	81.771	ppb	02:34:05
1	Sr 421.552†	46.2	9.1	0.0596	ug/L	0.0596	ppb	02:34:05
1	Sc 361.383	839914.0	839914.0	94.285	%			02:35:22
1	Y 371.029	683115.7	683115.7	93.036	%			02:35:22
1	Ag 328.068†	474.8	-121.0	-0.5317	ug/L	-0.5317	ppb	02:35:22
1	As 188.979†	-25.4	1.8	0.6966	ug/L	0.6966	ppb	02:35:42
1	B 249.677†	-584.3	141.4	2.9542	ug/L	2.9542	ppb	02:35:42
1	Ba 233.527†	-11.0	3.6	0.0280	ug/L	0.0280	ppb	02:35:42
1	Be 313.107†	-4096.4	58.4	0.0206	ug/L	0.0206	ppb	02:35:22
1	Cd 226.502†	-197.5	-5.3	-0.0548	ug/L	-0.0548	ppb	02:35:42
1	Co 228.616†	-90.5	-10.9	-0.1998	ug/L	-0.1998	ppb	02:35:42
1	Cr 267.716†	62.2	4.1	0.0386	ug/L	0.0386	ppb	02:35:22
1	Cu 324.752†	6980.1	516.3	1.4302	ug/L	1.4302	ppb	02:35:22
1	Mn 257.610†	614.5	119.9	0.1152	ug/L	0.1152	ppb	02:35:42
1	Mo 202.031†	14.0	9.7	0.6446	ug/L	0.6446	ppb	02:35:42
1	Ni 231.604†	72.9	-7.9	-0.1756	ug/L	-0.1756	ppb	02:35:42
1	P 214.914†	232.5	23.3	11.801	ug/L	11.801	ppb	02:35:42
1	Pb 220.353†	-72.4	2.9	0.3049	ug/L	0.3049	ppb	02:35:42
1	S 181.975 Axial†	55.9	10.4	12.669	ug/L	12.669	ppb	02:35:42
1	Sb 206.836†	48.2	12.7	3.9031	ug/L	3.9031	ppb	02:35:42
1	Se 196.026†	-33.2	-9.2	-5.0514	ug/L	-5.0514	ppb	02:35:42
1	Si 251.611†	500.8	-4.5	-0.1433	ug/L	-0.1433	ppb	02:35:42
1	Sn 189.927†	16.3	7.9	1.2788	ug/L	1.2788	ppb	02:35:42
1	Ti 334.940†	-1420.5	297.8	0.4289	ug/L	0.4289	ppb	02:35:22
1	Tl 190.801†	-43.7	-1.9	-0.5208	ug/L	-0.5208	ppb	02:35:42
1	U 409.014†	-4420.7	424.4	12.535	ug/L	12.535	ppb	02:35:22
1	V 292.402†	-1593.6	62.0	0.4456	ug/L	0.4456	ppb	02:35:22
1	Zn 213.857†	864.5	207.8	1.7605	ug/L	1.7605	ppb	02:35:42
1	SiO2†	510.3	-21.0	-1.3560	ug/L	-1.3560	ppb	02:36:38
2	Sc Radial	4404.7	4404.7	107	%			02:34:31
2	Y RADIAL	5002.3	5002.3	103.3	%			02:34:31
2	Al 396.153Radial†	-188.8	13.3	10.915	ug/L	10.915	ppb	02:34:31
2	Ca 317.933Radial†	24.8	9.9	18.375	ug/L	18.375	ppb	02:34:51
2	Fe 238.204 Radial†	11.6	0.7	8.5911	ug/L	8.5911	ppb	02:34:51
2	K 766.490 Radial†	2799.6	-2.2	-0.4671	ug/L	-0.4671	ppb	02:34:31
2	Mg 279.077 IEC†	4.4	4.1	173.82	ug/L	173.82	ppb	02:34:51
2	Na 589.592 Radial†	-1363.0	375.6	115.75	ug/L	115.75	ppb	02:34:31
2	Sr 421.552†	30.8	-7.6	-0.0504	ug/L	-0.0504	ppb	02:34:31
2	Sc 361.383	845026.0	845026.0	94.859	%			02:35:48
2	Y 371.029	686727.5	686727.5	93.528	%			02:35:48
2	Ag 328.068†	375.6	-228.5	-1.0053	ug/L	-1.0053	ppb	02:35:48
2	As 188.979†	-30.7	-3.6	-1.3872	ug/L	-1.3872	ppb	02:36:08
2	B 249.677†	-576.5	153.4	3.2059	ug/L	3.2059	ppb	02:36:08
2	Ba 233.527†	-14.2	0.4	0.0045	ug/L	0.0045	ppb	02:36:08
2	Be 313.107†	-4214.7	-40.1	-0.0128	ug/L	-0.0128	ppb	02:35:48
2	Cd 226.502†	-201.3	-8.1	-0.0824	ug/L	-0.0824	ppb	02:36:08
2	Co 228.616†	-89.5	-9.2	-0.1680	ug/L	-0.1680	ppb	02:36:08
2	Cr 267.716†	76.2	18.5	0.1860	ug/L	0.1860	ppb	02:35:48
2	Cu 324.752†	7130.4	630.0	1.7454	ug/L	1.7454	ppb	02:35:48
2	Mn 257.610†	708.2	214.8	0.2093	ug/L	0.2093	ppb	02:36:08
2	Mo 202.031†	20.0	15.9	1.0546	ug/L	1.0546	ppb	02:36:08
2	Ni 231.604†	56.2	-26.0	-0.5782	ug/L	-0.5782	ppb	02:36:08

2	P 214.914†	250.6	41.0	20.922 ug/L	20.922 ppb	02:36:08
2	Pb 220.353†	-67.3	8.6	0.9314 ug/L	0.9314 ppb	02:36:08
2	S 181.975 Axial†	48.0	1.7	2.1100 ug/L	2.1100 ppb	02:36:08
2	Sb 206.836†	53.3	17.7	5.4436 ug/L	5.4436 ppb	02:36:08
2	Se 196.026†	-27.8	-3.3	-1.8176 ug/L	-1.8176 ppb	02:36:08
2	Si 251.611†	526.0	18.8	0.5463 ug/L	0.5463 ppb	02:36:08
2	Sn 189.927†	11.8	3.0	0.4859 ug/L	0.4859 ppb	02:36:08
2	Ti 334.940†	-1518.6	203.5	0.2864 ug/L	0.2864 ppb	02:35:48
2	Tl 190.801†	-41.8	0.4	0.1260 ug/L	0.1260 ppb	02:36:08
2	U 409.014†	-4425.0	448.2	13.239 ug/L	13.239 ppb	02:35:48
2	V 292.402†	-1563.8	103.6	0.7313 ug/L	0.7313 ppb	02:35:48
2	Zn 213.857†	856.6	193.9	1.6454 ug/L	1.6454 ppb	02:36:08
2	SiO2†	523.8	-10.1	-0.6721 ug/L	-0.6721 ppb	02:36:44
3	Sc Radial	4197.4	4197.4	102 %		02:34:56
3	Y RADIAL	4759.6	4759.6	98.31 %		02:34:56
3	Al 396.153Radial†	-204.8	-11.2	-9.3101 ug/L	-9.3101 ppb	02:34:56
3	Ca 317.933Radial†	21.6	7.9	14.543 ug/L	14.543 ppb	02:35:16
3	Fe 238.204 Radial†	12.4	2.1	23.943 ug/L	23.943 ppb	02:35:16
3	K 766.490 Radial†	2859.1	185.8	35.317 ug/L	35.317 ppb	02:34:56
3	Mg 279.077 IEC†	6.1	6.0	253.53 ug/L	253.53 ppb	02:35:16
3	Na 589.592 Radial†	-1337.0	338.2	104.22 ug/L	104.22 ppb	02:34:56
3	Sr 421.552†	26.0	-10.9	-0.0719 ug/L	-0.0719 ppb	02:34:56
3	Sc 361.383	847073.8	847073.8	95.089 %		02:36:13
3	Y 371.029	687568.3	687568.3	93.643 %		02:36:13
3	Ag 328.068†	370.4	-235.0	-1.0357 ug/L	-1.0357 ppb	02:36:13
3	As 188.979†	-21.7	5.9	2.2795 ug/L	2.2795 ppb	02:36:33
3	B 249.677†	-557.2	175.1	3.6579 ug/L	3.6579 ppb	02:36:33
3	Ba 233.527†	-17.8	-3.4	-0.0251 ug/L	-0.0251 ppb	02:36:33
3	Be 313.107†	-4276.7	-94.5	-0.0313 ug/L	-0.0313 ppb	02:36:13
3	Cd 226.502†	-203.4	-9.8	-0.1001 ug/L	-0.1001 ppb	02:36:33
3	Co 228.616†	-97.5	-17.4	-0.3176 ug/L	-0.3176 ppb	02:36:33
3	Cr 267.716†	102.8	46.2	0.4694 ug/L	0.4694 ppb	02:36:13
3	Cu 324.752†	6945.7	417.6	1.1537 ug/L	1.1537 ppb	02:36:13
3	Mn 257.610†	643.5	145.0	0.1374 ug/L	0.1374 ppb	02:36:33
3	Mo 202.031†	25.3	21.4	1.4236 ug/L	1.4236 ppb	02:36:33
3	Ni 231.604†	84.0	3.2	0.0719 ug/L	0.0719 ppb	02:36:33
3	P 214.914†	262.1	52.4	26.928 ug/L	26.928 ppb	02:36:33
3	Pb 220.353†	-69.9	6.1	0.6531 ug/L	0.6531 ppb	02:36:33
3	S 181.975 Axial†	46.7	0.2	0.2294 ug/L	0.2294 ppb	02:36:33
3	Sb 206.836†	44.4	8.3	2.5520 ug/L	2.5520 ppb	02:36:33
3	Se 196.026†	-24.2	0.6	0.3964 ug/L	0.3964 ppb	02:36:33
3	Si 251.611†	488.6	-21.9	-0.6691 ug/L	-0.6691 ppb	02:36:33
3	Sn 189.927†	6.7	-2.4	-0.3890 ug/L	-0.3890 ppb	02:36:33
3	Ti 334.940†	-1605.0	116.5	0.1480 ug/L	0.1480 ppb	02:36:13
3	Tl 190.801†	-35.2	7.5	2.1123 ug/L	2.1123 ppb	02:36:33
3	U 409.014†	-4336.9	552.2	16.307 ug/L	16.307 ppb	02:36:13
3	V 292.402†	-1730.7	-67.9	-0.3995 ug/L	-0.3995 ppb	02:36:13
3	Zn 213.857†	855.8	190.8	1.6148 ug/L	1.6148 ppb	02:36:33
3	SiO2†	497.5	-39.0	-2.5278 ug/L	-2.5278 ppb	02:36:49

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	844004.6	94.744	%	0.4140				0.44%
Sc Radial	4263.2	103	%	3.0				2.88%
Y 371.029	685803.8	93.402	%	0.3222				0.34%
Y RADIAL	4829.4	99.75	%	3.111				3.12%
Ag 328.068†	-194.8	-0.8576	ug/L	0.28257	-0.8576	ppb	0.28257	32.95%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-1.4	-1.1878	ug/L	10.68385	-1.1878	ppb	10.68385	899.48%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	1.4	0.5296	ug/L	1.83902	0.5296	ppb	1.83902	347.23%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	156.6	3.2727	ug/L	0.35661	3.2727	ppb	0.35661	10.90%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	0.2	0.0025	ug/L	0.02663	0.0025	ppb	0.02663	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-25.4	-0.0078	ug/L	0.02631	-0.0078	ppb	0.02631	335.92%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	10.8	20.046	ug/L	6.5017	20.046	ppb	6.5017	32.43%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                -7.7     -0.0791 ug/L       0.02281     -0.0791 ppb        0.02281  28.83%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -12.5     -0.2285 ug/L       0.07878     -0.2285 ppb        0.07878  34.48%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                22.9      0.2313 ug/L       0.21893      0.2313 ppb        0.21893  94.65%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               521.3      1.4431 ug/L       0.29610      1.4431 ppb        0.29610  20.52%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         1.5      17.369 ug/L        7.9098      17.369 ppb         7.9098  45.54%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        117.2      22.259 ug/L       19.7544      22.259 ppb        19.7544  88.75%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            4.8     200.23 ug/L        46.163      200.23 ppb         46.163  23.06%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               159.9      0.1540 ug/L       0.04917      0.1540 ppb        0.04917  31.94%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                15.6      1.0409 ug/L       0.38969      1.0409 ppb        0.38969  37.44%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        326.4      100.58 ug/L        17.278      100.58 ppb         17.278  17.18%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               -10.2     -0.2273 ug/L       0.32816     -0.2273 ppb        0.32816 144.38%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                 38.9      19.884 ug/L        7.6170      19.884 ppb         7.6170  38.31%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                 5.9      0.6298 ug/L       0.31390      0.6298 ppb        0.31390  49.84%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           4.1      5.0028 ug/L       6.70539      5.0028 ppb        6.70539 134.03%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                12.9      3.9662 ug/L       1.44684      3.9662 ppb        1.44684  36.48%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†                -4.0     -2.1575 ug/L       2.73978     -2.1575 ppb        2.73978 126.99%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†                -2.6     -0.0887 ug/L       0.60953     -0.0887 ppb        0.60953 687.05%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                 2.8      0.4586 ug/L       0.83422      0.4586 ppb        0.83422 181.91%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                -3.1     -0.0209 ug/L       0.07053     -0.0209 ppb        0.07053 337.30%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†               205.9      0.2878 ug/L       0.14046      0.2878 ppb        0.14046  48.81%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†                 2.0      0.5725 ug/L       1.37215      0.5725 ppb        1.37215 239.67%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                474.9      14.027 ug/L        2.0054      14.027 ppb         2.0054  14.30%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                 32.6      0.2591 ug/L       0.58800      0.2591 ppb        0.58800 226.92%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               197.5      1.6736 ug/L       0.07686      1.6736 ppb        0.07686   4.59%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     -23.4     -1.5186 ug/L       0.93844     -1.5186 ppb        0.93844  61.80%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 85
Sample ID: 1202018101|942648|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 104
Date Collected: 2/2/2010 02:46:06
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202018101|942648|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4374.2	4374.2	106	%			02:47:59
1	Y RADIAL	5654.1	5654.1	116.8	%			02:47:59
1	Al 396.153Radial†	29769.9	28267.6	23340	ug/L	23340	ppb	02:47:59
1	Ca 317.933Radial†	4309.8	4051.5	7499.8	ug/L	7499.8	ppb	02:47:59
1	Fe 238.204 Radial†	7727.7	7278.2	84582	ug/L	84582	ppb	02:47:59
1	K 766.490 Radial†	29729.0	25414.6	4833.9	ug/L	4833.9	ppb	02:47:59
1	Mg 279.077 IEC†	136.4	128.7	5335.4	ug/L	5335.4	ppb	02:48:19
1	Na 589.592 Radial†	70.8	1719.0	529.71	ug/L	529.71	ppb	02:47:59
1	Sr 421.552†	9009.7	8461.0	55.809	ug/L	55.809	ppb	02:47:59
1	Sc 361.383	863488.1	863488.1	96.931	%			02:49:17
1	Y 371.029	796053.6	796053.6	108.42	%			02:49:17
1	Ag 328.068†	-5126.3	-5913.1	1.8463	ug/L	1.8463	ppb	02:49:22
1	As 188.979†	-86.9	-61.0	24.925	ug/L	24.925	ppb	02:49:42
1	B 249.677†	283.9	1054.0	8.2451	ug/L	8.2451	ppb	02:49:22
1	Ba 233.527†	35324.5	36458.1	269.22	ug/L	269.22	ppb	02:49:22
1	Be 313.107†	-9695.8	-5599.7	5.5985	ug/L	5.5985	ppb	02:49:22
1	Cd 226.502†	605.5	828.7	-0.1843	ug/L	-0.1843	ppb	02:49:42
1	Co 228.616†	958.4	1073.9	11.788	ug/L	11.788	ppb	02:49:42
1	Cr 267.716†	5101.1	5200.8	55.348	ug/L	55.348	ppb	02:49:42
1	Cu 324.752†	13715.2	7262.6	24.755	ug/L	24.755	ppb	02:49:22
1	Mn 257.610†	2249561.3	2320249.5	2336.1	ug/L	2336.1	ppb	02:49:17
1	Mo 202.031†	62.7	59.5	10.608	ug/L	10.608	ppb	02:49:42
1	Ni 231.604†	1610.1	1575.9	35.104	ug/L	35.104	ppb	02:49:42
1	P 214.914†	1961.2	1800.1	868.27	ug/L	868.27	ppb	02:49:42
1	Pb 220.353†	417.9	510.8	51.844	ug/L	51.844	ppb	02:49:42
1	S 181.975 Axial†	303.6	264.4	318.56	ug/L	318.56	ppb	02:49:42
1	Sb 206.836†	56.6	19.9	-3.0274	ug/L	-3.0274	ppb	02:49:42
1	Se 196.026†	-401.2	-388.0	66.137	ug/L	66.137	ppb	02:49:42
1	Si 251.611†	675535.9	696387.3	20729	ug/L	20729	ppb	02:49:17
1	Sn 189.927†	-13.2	-23.1	-1.1664	ug/L	-1.1664	ppb	02:49:42
1	Ti 334.940†	2134903.5	2204297.9	3294.2	ug/L	3294.2	ppb	02:49:17
1	Tl 190.801†	-167.5	-128.3	2.0287	ug/L	2.0287	ppb	02:49:42
1	U 409.014†	-9588.7	-4779.2	-150.93	ug/L	-150.93	ppb	02:49:17
1	V 292.402†	9496.2	11549.0	60.896	ug/L	60.896	ppb	02:49:22
1	Zn 213.857†	45902.8	46647.0	387.31	ug/L	387.31	ppb	02:49:22
1	SiO2†	677275.7	698155.7	44521	ug/L	44521	ppb	02:50:51
2	Sc Radial	4404.2	4404.2	107	%			02:48:24
2	Y RADIAL	5670.5	5670.5	117.1	%			02:48:24
2	Al 396.153Radial†	30024.3	28314.8	23379	ug/L	23379	ppb	02:48:24
2	Ca 317.933Radial†	4349.6	4061.1	7517.7	ug/L	7517.7	ppb	02:48:24
2	Fe 238.204 Radial†	7779.6	7277.2	84570	ug/L	84570	ppb	02:48:24
2	K 766.490 Radial†	29974.3	25453.5	4841.3	ug/L	4841.3	ppb	02:48:24
2	Mg 279.077 IEC†	133.3	124.9	5175.0	ug/L	5175.0	ppb	02:48:44
2	Na 589.592 Radial†	51.3	1700.4	523.97	ug/L	523.97	ppb	02:48:24
2	Sr 421.552†	9041.9	8433.4	55.627	ug/L	55.627	ppb	02:48:24
2	Sc 361.383	873778.2	873778.2	98.086	%			02:49:48
2	Y 371.029	803354.6	803354.6	109.41	%			02:49:48
2	Ag 328.068†	-5133.2	-5857.9	2.0776	ug/L	2.0776	ppb	02:49:53
2	As 188.979†	-103.5	-76.8	18.871	ug/L	18.871	ppb	02:50:13
2	B 249.677†	251.2	1017.2	7.4785	ug/L	7.4785	ppb	02:49:53
2	Ba 233.527†	35065.6	35765.1	264.15	ug/L	264.15	ppb	02:49:53
2	Be 313.107†	-9524.7	-5307.5	5.7022	ug/L	5.7022	ppb	02:49:53
2	Cd 226.502†	584.3	799.8	-0.4817	ug/L	-0.4817	ppb	02:50:13
2	Co 228.616†	974.7	1078.8	11.872	ug/L	11.872	ppb	02:50:13
2	Cr 267.716†	5100.5	5138.2	54.702	ug/L	54.702	ppb	02:50:13
2	Cu 324.752†	13761.6	7143.2	24.421	ug/L	24.421	ppb	02:49:53
2	Mn 257.610†	2276672.1	2320558.6	2336.4	ug/L	2336.4	ppb	02:49:48
2	Mo 202.031†	66.3	62.4	10.799	ug/L	10.799	ppb	02:50:13
2	Ni 231.604†	1579.3	1525.0	33.968	ug/L	33.968	ppb	02:50:13

2	P 214.914†	1969.0	1784.1	860.10	ug/L	860.10 ppb	02:50:13
2	Pb 220.353†	413.0	500.7	50.771	ug/L	50.771 ppb	02:50:13
2	S 181.975 Axial†	318.8	276.2	332.98	ug/L	332.98 ppb	02:50:13
2	Sb 206.836†	83.7	46.9	5.2155	ug/L	5.2155 ppb	02:50:13
2	Se 196.026†	-392.0	-373.7	74.034	ug/L	74.034 ppb	02:50:13
2	Si 251.611†	684676.5	697498.9	20762	ug/L	20762 ppb	02:49:48
2	Sn 189.927†	-4.7	-14.2	0.2745	ug/L	0.2745 ppb	02:50:13
2	Ti 334.940†	2161973.3	2205958.1	3296.7	ug/L	3296.7 ppb	02:49:48
2	Tl 190.801†	-175.2	-134.2	0.3934	ug/L	0.3934 ppb	02:50:13
2	U 409.014†	-9595.1	-4669.2	-147.68	ug/L	-147.68 ppb	02:49:48
2	V 292.402†	9471.9	11408.9	59.969	ug/L	59.969 ppb	02:49:53
2	Zn 213.857†	45615.9	45796.8	380.10	ug/L	380.10 ppb	02:49:53
2	SiO2†	680410.3	693123.0	44200	ug/L	44200 ppb	02:50:56
3	Sc Radial	4439.9	4439.9	108	%		02:48:49
3	Y RADIAL	5718.5	5718.5	118.1	%		02:48:49
3	Al 396.153Radial†	30056.5	28118.2	23216	ug/L	23216 ppb	02:48:49
3	Ca 317.933Radial†	4362.2	4040.0	7478.6	ug/L	7478.6 ppb	02:48:49
3	Fe 238.204 Radial†	7726.4	7169.1	83314	ug/L	83314 ppb	02:48:49
3	K 766.490 Radial†	29898.7	25157.1	4785.0	ug/L	4785.0 ppb	02:48:49
3	Mg 279.077 IEC†	135.3	125.7	5211.0	ug/L	5211.0 ppb	02:49:10
3	Na 589.592 Radial†	-13.2	1640.0	505.37	ug/L	505.37 ppb	02:48:49
3	Sr 421.552†	9059.0	8381.0	55.281	ug/L	55.281 ppb	02:48:49
3	Sc 361.383	864112.6	864112.6	97.001	%		02:50:19
3	Y 371.029	794251.9	794251.9	108.17	%		02:50:19
3	Ag 328.068†	-5099.0	-5881.1	1.5787	ug/L	1.5787 ppb	02:50:24
3	As 188.979†	-94.8	-69.0	21.551	ug/L	21.551 ppb	02:50:44
3	B 249.677†	296.9	1067.1	8.7255	ug/L	8.7255 ppb	02:50:24
3	Ba 233.527†	35625.2	36741.9	271.26	ug/L	271.26 ppb	02:50:24
3	Be 313.107†	-9607.7	-5501.7	5.6363	ug/L	5.6363 ppb	02:50:24
3	Cd 226.502†	600.7	823.4	-0.1092	ug/L	-0.1092 ppb	02:50:44
3	Co 228.616†	972.6	1087.8	12.058	ug/L	12.058 ppb	02:50:44
3	Cr 267.716†	5150.8	5248.2	55.812	ug/L	55.812 ppb	02:50:44
3	Cu 324.752†	13796.9	7336.6	24.894	ug/L	24.894 ppb	02:50:24
3	Mn 257.610†	2253414.7	2322544.7	2338.3	ug/L	2338.3 ppb	02:50:19
3	Mo 202.031†	59.5	56.2	10.289	ug/L	10.289 ppb	02:50:44
3	Ni 231.604†	1599.1	1563.3	34.823	ug/L	34.823 ppb	02:50:44
3	P 214.914†	1959.0	1796.3	867.25	ug/L	867.25 ppb	02:50:44
3	Pb 220.353†	415.7	508.1	51.656	ug/L	51.656 ppb	02:50:44
3	S 181.975 Axial†	313.6	274.4	330.82	ug/L	330.82 ppb	02:50:44
3	Sb 206.836†	62.1	25.6	-1.3381	ug/L	-1.3381 ppb	02:50:44
3	Se 196.026†	-405.3	-391.9	59.767	ug/L	59.767 ppb	02:50:44
3	Si 251.611†	676443.2	696819.0	20741	ug/L	20741 ppb	02:50:19
3	Sn 189.927†	-10.5	-20.2	-0.7317	ug/L	-0.7317 ppb	02:50:44
3	Ti 334.940†	2137831.9	2205725.0	3296.3	ug/L	3296.3 ppb	02:50:19
3	Tl 190.801†	-174.8	-135.8	-0.0582	ug/L	-0.0582 ppb	02:50:44
3	U 409.014†	-9613.0	-4797.1	-151.32	ug/L	-151.32 ppb	02:50:19
3	V 292.402†	9583.5	11632.0	61.623	ug/L	61.623 ppb	02:50:24
3	Zn 213.857†	46254.6	46975.3	390.22	ug/L	390.22 ppb	02:50:24
3	SiO2†	680153.6	700617.6	44678	ug/L	44678 ppb	02:51:02

Mean Data: 1202018101|942648|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	867126.3	97.340	%	0.6476				0.67%
Sc Radial	4406.1	107	%	0.8				0.75%
Y 371.029	797886.7	108.67	%	0.656				0.60%
Y RADIAL	5681.0	117.3	%	0.69				0.59%
Ag 328.068†	-5884.0	1.8342	ug/L	0.24971	1.8342	ppb	0.24971	13.61%
Al 396.153Radial†	28233.5	23312	ug/L	84.7	23312	ppb	84.7	0.36%
As 188.979†	-68.9	21.782	ug/L	3.0337	21.782	ppb	3.0337	13.93%
B 249.677†	1046.1	8.1497	ug/L	0.62894	8.1497	ppb	0.62894	7.72%
Ba 233.527†	36321.7	268.21	ug/L	3.658	268.21	ppb	3.658	1.36%
Be 313.107†	-5469.6	5.6457	ug/L	0.05247	5.6457	ppb	0.05247	0.93%
Ca 317.933Radial†	4050.8	7498.7	ug/L	19.56	7498.7	ppb	19.56	0.26%
Cd 226.502†	817.3	-0.2584	ug/L	0.19701	-0.2584	ppb	0.19701	76.24%
Co 228.616†	1080.2	11.906	ug/L	0.1383	11.906	ppb	0.1383	1.16%
Cr 267.716†	5195.7	55.288	ug/L	0.5579	55.288	ppb	0.5579	1.01%
Cu 324.752†	7247.5	24.690	ug/L	0.2433	24.690	ppb	0.2433	0.99%
Fe 238.204 Radial†	7241.5	84155	ug/L	728.7	84155	ppb	728.7	0.87%
K 766.490 Radial†	25341.8	4820.1	ug/L	30.65	4820.1	ppb	30.65	0.64%

Mg 279.077 IEC†	126.5	5240.5	ug/L	84.18	5240.5	ppb	84.18	1.61%
Mn 257.610†	2321117.6	2337.0	ug/L	1.18	2337.0	ppb	1.18	0.05%
Mo 202.031†	59.3	10.565	ug/L	0.2574	10.565	ppb	0.2574	2.44%
Na 589.592 Radial†	1686.5	519.69	ug/L	12.725	519.69	ppb	12.725	2.45%
Ni 231.604†	1554.8	34.632	ug/L	0.5915	34.632	ppb	0.5915	1.71%
P 214.914†	1793.5	865.21	ug/L	4.453	865.21	ppb	4.453	0.51%
Pb 220.353†	506.5	51.423	ug/L	0.5728	51.423	ppb	0.5728	1.11%
S 181.975 Axial†	271.6	327.46	ug/L	7.777	327.46	ppb	7.777	2.38%
Sb 206.836†	30.8	0.2833	ug/L	4.35412	0.2833	ppb	4.35412	>999.9%
Se 196.026†	-384.5	66.646	ug/L	7.1474	66.646	ppb	7.1474	10.72%
Si 251.611†	696901.7	20744	ug/L	16.7	20744	ppb	16.7	0.08%
Sn 189.927†	-19.2	-0.5412	ug/L	0.73907	-0.5412	ppb	0.73907	136.56%
Sr 421.552†	8425.2	55.572	ug/L	0.2682	55.572	ppb	0.2682	0.48%
Ti 334.940†	2205327.0	3295.7	ug/L	1.35	3295.7	ppb	1.35	0.04%
Tl 190.801†	-132.8	0.7880	ug/L	1.09796	0.7880	ppb	1.09796	139.34%
U 409.014†	-4748.5	-149.98	ug/L	1.997	-149.98	ppb	1.997	1.33%
V 292.402†	11530.0	60.829	ug/L	0.8293	60.829	ppb	0.8293	1.36%
Zn 213.857†	46473.0	385.88	ug/L	5.207	385.88	ppb	5.207	1.35%
SiO2†	697298.7	44466	ug/L	243.6	44466	ppb	243.6	0.55%

Sequence No.: 86
Sample ID: 1202018102|942648|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 105
Date Collected: 2/2/2010 02:53:14
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202018102|942648|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4280.8	4280.8	104	%			02:55:27
1	Y RADIAL	5430.0	5430.0	112.2	%			02:55:27
1	Al 396.153Radial†	57625.8	55725.6	45988	ug/L	45988	ppb	02:55:07
1	Ca 317.933Radial†	6902.9	6639.1	12290	ug/L	12290	ppb	02:55:27
1	Fe 238.204 Radial†	7952.8	7654.2	88965	ug/L	88965	ppb	02:55:07
1	K 766.490 Radial†	64926.4	59946.9	11403	ug/L	11403	ppb	02:55:07
1	Mg 279.077 IEC†	293.7	283.1	11841	ug/L	11841	ppb	02:55:27
1	Na 589.592 Radial†	17942.8	18944.2	5837.7	ug/L	5837.7	ppb	02:55:07
1	Sr 421.552†	89711.7	86421.1	570.51	ug/L	570.51	ppb	02:55:07
1	Sc 361.383	863811.1	863811.1	96.967	%			02:56:26
1	Y 371.029	787987.5	787987.5	107.32	%			02:56:26
1	Ag 328.068†	105192.8	107858.1	502.51	ug/L	502.51	ppb	02:56:26
1	As 188.979†	1139.2	1203.6	515.64	ug/L	515.64	ppb	02:56:47
1	B 249.677†	22669.3	24139.3	488.85	ug/L	488.85	ppb	02:56:26
1	Ba 233.527†	99633.0	102764.2	755.07	ug/L	755.07	ppb	02:56:26
1	Be 313.107†	1430230.6	1479362.4	505.18	ug/L	505.18	ppb	02:56:26
1	Cd 226.502†	46983.2	48656.7	493.64	ug/L	493.64	ppb	02:56:26
1	Co 228.616†	26064.6	26964.9	488.86	ug/L	488.86	ppb	02:56:47
1	Cr 267.716†	52680.5	54266.2	561.04	ug/L	561.04	ppb	02:56:26
1	Cu 324.752†	196181.9	195430.4	548.08	ug/L	548.08	ppb	02:56:26
1	Mn 257.610†	2583096.4	2663347.9	2680.5	ug/L	2680.5	ppb	02:56:26
1	Mo 202.031†	6998.0	7211.6	486.33	ug/L	486.33	ppb	02:56:47
1	Ni 231.604†	22811.6	23439.8	522.00	ug/L	522.00	ppb	02:56:47
1	P 214.914†	3159.0	3034.5	1412.1	ug/L	1412.1	ppb	02:56:47
1	Pb 220.353†	4772.0	5000.8	538.97	ug/L	538.97	ppb	02:56:47
1	S 181.975 Axial†	4193.6	4275.9	5214.8	ug/L	5214.8	ppb	02:56:47
1	Sb 206.836†	1576.4	1587.3	492.60	ug/L	492.60	ppb	02:56:47
1	Se 196.026†	466.7	507.2	579.70	ug/L	579.70	ppb	02:56:47
1	Si 251.611†	832554.0	858055.4	25535	ug/L	25535	ppb	02:56:26
1	Sn 189.927†	3011.2	3096.0	503.52	ug/L	503.52	ppb	02:56:47
1	Ti 334.940†	2522543.6	2603237.4	3890.0	ug/L	3890.0	ppb	02:56:26
1	Tl 190.801†	1494.6	1585.8	489.19	ug/L	489.19	ppb	02:56:47
1	U 409.014†	6831.2	12157.9	347.74	ug/L	347.74	ppb	02:56:26
1	V 292.402†	80927.3	85210.4	557.29	ug/L	557.29	ppb	02:56:26
1	Zn 213.857†	102279.9	104769.4	876.20	ug/L	876.20	ppb	02:56:26
1	SiO2†	821731.5	846867.9	53991	ug/L	53991	ppb	02:57:48
2	Sc Radial	4244.8	4244.8	103	%			02:55:52
2	Y RADIAL	5390.6	5390.6	111.3	%			02:55:52
2	Al 396.153Radial†	58016.5	56576.2	46691	ug/L	46691	ppb	02:55:32
2	Ca 317.933Radial†	6927.4	6719.4	12438	ug/L	12438	ppb	02:55:52
2	Fe 238.204 Radial†	7990.5	7755.8	90146	ug/L	90146	ppb	02:55:32
2	K 766.490 Radial†	65054.7	60602.3	11527	ug/L	11527	ppb	02:55:32
2	Mg 279.077 IEC†	292.5	284.3	11892	ug/L	11892	ppb	02:55:52
2	Na 589.592 Radial†	17843.2	18994.0	5853.0	ug/L	5853.0	ppb	02:55:32
2	Sr 421.552†	90086.8	87518.7	577.76	ug/L	577.76	ppb	02:55:32
2	Sc 361.383	864215.5	864215.5	97.013	%			02:56:54
2	Y 371.029	789774.1	789774.1	107.56	%			02:56:54
2	Ag 328.068†	104976.2	107584.1	501.68	ug/L	501.68	ppb	02:56:54
2	As 188.979†	1155.2	1219.6	521.91	ug/L	521.91	ppb	02:57:14
2	B 249.677†	22556.0	24011.7	485.98	ug/L	485.98	ppb	02:56:54
2	Ba 233.527†	99745.7	102832.3	755.60	ug/L	755.60	ppb	02:56:54
2	Be 313.107†	1426596.9	1474926.6	503.65	ug/L	503.65	ppb	02:56:54
2	Cd 226.502†	47074.5	48728.1	494.26	ug/L	494.26	ppb	02:56:54
2	Co 228.616†	26184.9	27076.3	490.93	ug/L	490.93	ppb	02:57:14
2	Cr 267.716†	52691.8	54252.4	560.92	ug/L	560.92	ppb	02:56:54
2	Cu 324.752†	194464.1	193565.0	542.96	ug/L	542.96	ppb	02:56:54
2	Mn 257.610†	2578741.2	2657612.0	2674.9	ug/L	2674.9	ppb	02:56:54
2	Mo 202.031†	7015.3	7226.1	487.39	ug/L	487.39	ppb	02:57:14
2	Ni 231.604†	22922.8	23543.4	524.30	ug/L	524.30	ppb	02:57:14

2	P 214.914†	3174.9	3049.4	1420.1 ug/L	1420.1 ppb	02:57:14
2	Pb 220.353†	4765.6	4992.0	538.07 ug/L	538.07 ppb	02:57:14
2	S 181.975 Axial†	4191.5	4271.7	5209.6 ug/L	5209.6 ppb	02:57:14
2	Sb 206.836†	1578.6	1588.8	493.14 ug/L	493.14 ppb	02:57:14
2	Se 196.026†	476.6	517.3	589.22 ug/L	589.22 ppb	02:57:14
2	Si 251.611†	829187.9	854183.9	25420 ug/L	25420 ppb	02:56:54
2	Sn 189.927†	3019.3	3102.8	504.67 ug/L	504.67 ppb	02:57:14
2	Ti 334.940†	2513739.2	2592944.6	3874.6 ug/L	3874.6 ppb	02:56:54
2	Tl 190.801†	1498.8	1589.4	490.04 ug/L	490.04 ppb	02:57:14
2	U 409.014†	6853.7	12177.9	348.19 ug/L	348.19 ppb	02:56:54
2	V 292.402†	80825.2	85066.1	556.19 ug/L	556.19 ppb	02:56:54
2	Zn 213.857†	102008.4	104440.2	873.28 ug/L	873.28 ppb	02:56:54
2	SiO2†	824523.3	849349.1	54149 ug/L	54149 ppb	02:57:54
3	Sc Radial	4311.9	4311.9	105 %		02:56:18
3	Y RADIAL	5471.2	5471.2	113.0 %		02:56:18
3	Al 396.153Radial†	57439.5	55146.5	45510 ug/L	45510 ppb	02:55:58
3	Ca 317.933Radial†	6939.8	6626.4	12266 ug/L	12266 ppb	02:56:18
3	Fe 238.204 Radial†	7857.3	7507.5	87261 ug/L	87261 ppb	02:55:58
3	K 766.490 Radial†	64337.3	58931.6	11209 ug/L	11209 ppb	02:55:58
3	Mg 279.077 IEC†	293.8	281.1	11760 ug/L	11760 ppb	02:56:18
3	Na 589.592 Radial†	17625.9	18516.2	5705.8 ug/L	5705.8 ppb	02:55:58
3	Sr 421.552†	89238.6	85344.3	563.41 ug/L	563.41 ppb	02:55:58
3	Sc 361.383	866474.6	866474.6	97.266 %		02:57:21
3	Y 371.029	791580.4	791580.4	107.81 %		02:57:21
3	Ag 328.068†	105335.2	107670.9	501.13 ug/L	501.13 ppb	02:57:21
3	As 188.979†	1143.2	1204.1	515.35 ug/L	515.35 ppb	02:57:41
3	B 249.677†	22764.7	24165.6	489.67 ug/L	489.67 ppb	02:57:21
3	Ba 233.527†	99870.9	102692.9	754.50 ug/L	754.50 ppb	02:57:21
3	Be 313.107†	1432755.0	1477423.7	504.50 ug/L	504.50 ppb	02:57:21
3	Cd 226.502†	46958.6	48482.4	492.02 ug/L	492.02 ppb	02:57:21
3	Co 228.616†	26220.8	27042.9	490.35 ug/L	490.35 ppb	02:57:41
3	Cr 267.716†	52696.7	54115.8	559.45 ug/L	559.45 ppb	02:57:21
3	Cu 324.752†	195878.8	194496.9	545.40 ug/L	545.40 ppb	02:57:21
3	Mn 257.610†	2583102.5	2655165.2	2672.2 ug/L	2672.2 ppb	02:57:21
3	Mo 202.031†	7039.2	7231.8	487.54 ug/L	487.54 ppb	02:57:41
3	Ni 231.604†	22971.9	23532.3	524.06 ug/L	524.06 ppb	02:57:41
3	P 214.914†	3147.0	3012.2	1402.3 ug/L	1402.3 ppb	02:57:41
3	Pb 220.353†	4773.3	4987.1	537.57 ug/L	537.57 ppb	02:57:41
3	S 181.975 Axial†	4191.2	4260.1	5195.7 ug/L	5195.7 ppb	02:57:41
3	Sb 206.836†	1591.9	1598.2	495.96 ug/L	495.96 ppb	02:57:41
3	Se 196.026†	472.4	511.6	576.46 ug/L	576.46 ppb	02:57:41
3	Si 251.611†	831989.3	854835.5	25439 ug/L	25439 ppb	02:57:21
3	Sn 189.927†	3016.7	3092.0	502.85 ug/L	502.85 ppb	02:57:41
3	Ti 334.940†	2524024.3	2596762.9	3880.3 ug/L	3880.3 ppb	02:57:21
3	Tl 190.801†	1502.3	1589.0	489.96 ug/L	489.96 ppb	02:57:41
3	U 409.014†	6837.2	12142.5	347.48 ug/L	347.48 ppb	02:57:21
3	V 292.402†	81002.8	85031.5	556.38 ug/L	556.38 ppb	02:57:21
3	Zn 213.857†	102309.0	104475.2	873.86 ug/L	873.86 ppb	02:57:21
3	SiO2†	822776.2	845336.9	53894 ug/L	53894 ppb	02:58:00

Mean Data: 1202018102|942648|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	864833.7	97.082	%	0.1611				0.17%
Sc Radial	4279.2	104	%	0.8				0.78%
Y 371.029	789780.7	107.56	%	0.245				0.23%
Y RADIAL	5430.6	112.2	%	0.83				0.74%
Ag 328.068†	107704.4	501.77	ug/L	0.692	501.77	ppb	0.692	0.14%
Al 396.153Radial†	55816.1	46063	ug/L	593.8	46063	ppb	593.8	1.29%
As 188.979†	1209.1	517.63	ug/L	3.706	517.63	ppb	3.706	0.72%
B 249.677†	24105.5	488.17	ug/L	1.937	488.17	ppb	1.937	0.40%
Ba 233.527†	102763.2	755.06	ug/L	0.553	755.06	ppb	0.553	0.07%
Be 313.107†	1477237.6	504.44	ug/L	0.763	504.44	ppb	0.763	0.15%
Ca 317.933Radial†	6661.6	12332	ug/L	93.3	12332	ppb	93.3	0.76%
Cd 226.502†	48622.4	493.31	ug/L	1.157	493.31	ppb	1.157	0.23%
Co 228.616†	27028.0	490.05	ug/L	1.068	490.05	ppb	1.068	0.22%
Cr 267.716†	54211.5	560.47	ug/L	0.881	560.47	ppb	0.881	0.16%
Cu 324.752†	194497.4	545.48	ug/L	2.564	545.48	ppb	2.564	0.47%
Fe 238.204 Radial†	7639.2	88791	ug/L	1450.6	88791	ppb	1450.6	1.63%
K 766.490 Radial†	59826.9	11380	ug/L	160.2	11380	ppb	160.2	1.41%

Mg 279.077 IEC†	282.8	11831	ug/L	66.6	11831	ppb	66.6	0.56%
Mn 257.610†	2658708.4	2675.9	ug/L	4.27	2675.9	ppb	4.27	0.16%
Mo 202.031†	7223.2	487.08	ug/L	0.659	487.08	ppb	0.659	0.14%
Na 589.592 Radial†	18818.2	5798.8	ug/L	80.94	5798.8	ppb	80.94	1.40%
Ni 231.604†	23505.2	523.45	ug/L	1.267	523.45	ppb	1.267	0.24%
P 214.914†	3032.0	1411.5	ug/L	8.93	1411.5	ppb	8.93	0.63%
Pb 220.353†	4993.3	538.20	ug/L	0.714	538.20	ppb	0.714	0.13%
S 181.975 Axial†	4269.2	5206.7	ug/L	9.90	5206.7	ppb	9.90	0.19%
Sb 206.836†	1591.4	493.90	ug/L	1.805	493.90	ppb	1.805	0.37%
Se 196.026†	512.0	581.79	ug/L	6.632	581.79	ppb	6.632	1.14%
Si 251.611†	855691.6	25465	ug/L	61.7	25465	ppb	61.7	0.24%
Sn 189.927†	3097.0	503.68	ug/L	0.921	503.68	ppb	0.921	0.18%
Sr 421.552†	86428.0	570.56	ug/L	7.178	570.56	ppb	7.178	1.26%
Ti 334.940†	2597648.3	3881.6	ug/L	7.77	3881.6	ppb	7.77	0.20%
Tl 190.801†	1588.0	489.73	ug/L	0.472	489.73	ppb	0.472	0.10%
U 409.014†	12159.4	347.80	ug/L	0.361	347.80	ppb	0.361	0.10%
V 292.402†	85102.7	556.62	ug/L	0.589	556.62	ppb	0.589	0.11%
Zn 213.857†	104561.6	874.45	ug/L	1.544	874.45	ppb	1.544	0.18%
SiO2†	847184.6	54011	ug/L	129.1	54011	ppb	129.1	0.24%

Sequence No.: 87
Sample ID: 1202018104|942648|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 106
Date Collected: 2/2/2010 03:00:11
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202018104|942648|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4495.8	4495.8	109	%			03:02:24
1	Y RADIAL	5822.1	5822.1	120.3	%			03:02:24
1	Al 396.153Radial†	65244.8	60061.6	49568	ug/L	49568	ppb	03:02:04
1	Ca 317.933Radial†	6872.8	6293.4	11650	ug/L	11650	ppb	03:02:24
1	Fe 238.204 Radial†	8181.4	7497.5	87145	ug/L	87145	ppb	03:02:04
1	K 766.490 Radial†	64606.0	56661.0	10778	ug/L	10778	ppb	03:02:04
1	Mg 279.077 IEC†	289.1	265.3	11094	ug/L	11094	ppb	03:02:24
1	Na 589.592 Radial†	16919.5	17178.4	5293.5	ug/L	5293.5	ppb	03:02:04
1	Sr 421.552†	88742.8	81397.9	537.35	ug/L	537.35	ppb	03:02:04
1	Sc 361.383	855297.1	855297.1	96.012	%			03:03:24
1	Y 371.029	800869.1	800869.1	109.07	%			03:03:24
1	Ag 328.068†	105761.6	109530.4	509.29	ug/L	509.29	ppb	03:03:24
1	As 188.979†	1157.3	1234.1	526.51	ug/L	526.51	ppb	03:03:44
1	B 249.677†	23082.2	24802.1	502.96	ug/L	502.96	ppb	03:03:24
1	Ba 233.527†	101075.5	105289.5	773.49	ug/L	773.49	ppb	03:03:24
1	Be 313.107†	1441715.4	1506006.7	514.01	ug/L	514.01	ppb	03:03:24
1	Cd 226.502†	47438.8	49613.5	503.72	ug/L	503.72	ppb	03:03:24
1	Co 228.616†	26668.1	27861.0	505.54	ug/L	505.54	ppb	03:03:44
1	Cr 267.716†	52691.7	54818.6	566.71	ug/L	566.71	ppb	03:03:24
1	Cu 324.752†	197483.2	198799.8	557.37	ug/L	557.37	ppb	03:03:24
1	Mn 257.610†	2603869.9	2711501.8	2728.7	ug/L	2728.7	ppb	03:03:24
1	Mo 202.031†	7087.5	7376.7	497.15	ug/L	497.15	ppb	03:03:44
1	Ni 231.604†	23400.5	24287.4	540.87	ug/L	540.87	ppb	03:03:44
1	P 214.914†	3083.4	2988.2	1388.7	ug/L	1388.7	ppb	03:03:44
1	Pb 220.353†	4841.1	5121.8	552.90	ug/L	552.90	ppb	03:03:44
1	S 181.975 Axial†	4311.1	4441.3	5416.2	ug/L	5416.2	ppb	03:03:44
1	Sb 206.836†	1587.0	1614.5	501.39	ug/L	501.39	ppb	03:03:44
1	Se 196.026†	472.8	518.4	580.16	ug/L	580.16	ppb	03:03:44
1	Si 251.611†	852428.7	887302.5	26405	ug/L	26405	ppb	03:03:24
1	Sn 189.927†	3058.6	3176.3	516.36	ug/L	516.36	ppb	03:03:44
1	Ti 334.940†	2467809.6	2572125.8	3843.5	ug/L	3843.5	ppb	03:03:24
1	Tl 190.801†	1534.0	1642.1	504.84	ug/L	504.84	ppb	03:03:44
1	U 409.014†	6244.6	11617.0	331.96	ug/L	331.96	ppb	03:03:24
1	V 292.402†	81358.0	86489.7	566.23	ug/L	566.23	ppb	03:03:24
1	Zn 213.857†	104502.7	108134.6	904.79	ug/L	904.79	ppb	03:03:24
1	SiO2†	843860.2	878351.5	55999	ug/L	55999	ppb	03:04:45
2	Sc Radial	4343.9	4343.9	105	%			03:02:50
2	Y RADIAL	5656.9	5656.9	116.8	%			03:02:50
2	Al 396.153Radial†	65930.6	62806.6	51835	ug/L	51835	ppb	03:02:30
2	Ca 317.933Radial†	6922.9	6561.5	12146	ug/L	12146	ppb	03:02:50
2	Fe 238.204 Radial†	8259.4	7834.1	91056	ug/L	91056	ppb	03:02:30
2	K 766.490 Radial†	65570.9	59650.6	11346	ug/L	11346	ppb	03:02:30
2	Mg 279.077 IEC†	297.7	282.8	11824	ug/L	11824	ppb	03:02:50
2	Na 589.592 Radial†	17061.7	17856.3	5502.4	ug/L	5502.4	ppb	03:02:30
2	Sr 421.552†	89810.6	85259.6	562.85	ug/L	562.85	ppb	03:02:30
2	Sc 361.383	869296.1	869296.1	97.583	%			03:03:51
2	Y 371.029	813317.6	813317.6	110.77	%			03:03:51
2	Ag 328.068†	106371.9	108381.9	505.50	ug/L	505.50	ppb	03:03:51
2	As 188.979†	1160.6	1218.1	521.01	ug/L	521.01	ppb	03:04:11
2	B 249.677†	23315.3	24653.9	499.25	ug/L	499.25	ppb	03:03:51
2	Ba 233.527†	101602.3	104134.0	765.15	ug/L	765.15	ppb	03:03:51
2	Be 313.107†	1454391.3	1494814.9	510.18	ug/L	510.18	ppb	03:03:51
2	Cd 226.502†	47725.9	49112.1	498.13	ug/L	498.13	ppb	03:03:51
2	Co 228.616†	26624.8	27369.3	496.47	ug/L	496.47	ppb	03:04:11
2	Cr 267.716†	53035.7	54287.4	561.30	ug/L	561.30	ppb	03:03:51
2	Cu 324.752†	199131.1	197176.1	553.05	ug/L	553.05	ppb	03:03:51
2	Mn 257.610†	2619456.3	2683799.9	2701.3	ug/L	2701.3	ppb	03:03:51
2	Mo 202.031†	7067.0	7236.8	488.17	ug/L	488.17	ppb	03:04:11
2	Ni 231.604†	23349.5	23842.6	530.97	ug/L	530.97	ppb	03:04:11

2	P 214.914†	3066.4	2919.1	1351.0 ug/L	1351.0 ppb	03:04:11
2	Pb 220.353†	4844.1	5043.7	544.62 ug/L	544.62 ppb	03:04:11
2	S 181.975 Axial†	4250.1	4306.5	5251.1 ug/L	5251.1 ppb	03:04:11
2	Sb 206.836†	1555.6	1555.7	483.21 ug/L	483.21 ppb	03:04:11
2	Se 196.026†	470.3	507.9	587.36 ug/L	587.36 ppb	03:04:11
2	Si 251.611†	859046.4	879786.4	26182 ug/L	26182 ppb	03:03:51
2	Sn 189.927†	3050.1	3116.2	506.80 ug/L	506.80 ppb	03:04:11
2	Ti 334.940†	2485608.2	2548972.9	3808.9 ug/L	3808.9 ppb	03:03:51
2	Tl 190.801†	1516.7	1598.7	492.21 ug/L	492.21 ppb	03:04:11
2	U 409.014†	6487.0	11760.8	335.77 ug/L	335.77 ppb	03:03:51
2	V 292.402†	81862.8	85642.5	559.95 ug/L	559.95 ppb	03:03:51
2	Zn 213.857†	105256.1	107153.8	896.16 ug/L	896.16 ppb	03:03:51
2	SiO2†	867932.1	888865.7	56669 ug/L	56669 ppb	03:04:51
3	Sc Radial	4314.1	4314.1	105 %		03:03:15
3	Y RADIAL	5616.7	5616.7	116.0 %		03:03:15
3	Al 396.153Radial†	65495.1	62821.3	51847 ug/L	51847 ppb	03:02:55
3	Ca 317.933Radial†	6882.4	6568.1	12158 ug/L	12158 ppb	03:03:15
3	Fe 238.204 Radial†	8193.3	7824.9	90949 ug/L	90949 ppb	03:02:55
3	K 766.490 Radial†	65057.9	59588.8	11335 ug/L	11335 ppb	03:02:55
3	Mg 279.077 IEC†	294.7	281.9	11789 ug/L	11789 ppb	03:03:15
3	Na 589.592 Radial†	16939.2	17850.8	5500.7 ug/L	5500.7 ppb	03:02:55
3	Sr 421.552†	89141.7	85207.3	562.50 ug/L	562.50 ppb	03:02:55
3	Sc 361.383	877447.5	877447.5	98.498 %		03:04:19
3	Y 371.029	820428.4	820428.4	111.74 %		03:04:19
3	Ag 328.068†	105542.8	106527.4	497.32 ug/L	497.32 ppb	03:04:19
3	As 188.979†	1151.9	1198.2	512.80 ug/L	512.80 ppb	03:04:39
3	B 249.677†	23020.9	24132.9	488.40 ug/L	488.40 ppb	03:04:19
3	Ba 233.527†	100840.2	102392.9	752.41 ug/L	752.41 ppb	03:04:19
3	Be 313.107†	1446420.6	1472876.8	502.67 ug/L	502.67 ppb	03:04:19
3	Cd 226.502†	47293.5	48218.7	488.91 ug/L	488.91 ppb	03:04:19
3	Co 228.616†	26344.3	26831.1	486.66 ug/L	486.66 ppb	03:04:39
3	Cr 267.716†	52746.7	53489.1	553.07 ug/L	553.07 ppb	03:04:19
3	Cu 324.752†	197780.1	193908.7	543.96 ug/L	543.96 ppb	03:04:19
3	Mn 257.610†	2598596.7	2637685.1	2655.0 ug/L	2655.0 ppb	03:04:19
3	Mo 202.031†	7044.6	7146.8	482.17 ug/L	482.17 ppb	03:04:39
3	Ni 231.604†	23119.2	23386.5	520.81 ug/L	520.81 ppb	03:04:39
3	P 214.914†	3043.3	2866.4	1325.5 ug/L	1325.5 ppb	03:04:39
3	Pb 220.353†	4804.1	4957.0	535.32 ug/L	535.32 ppb	03:04:39
3	S 181.975 Axial†	4273.5	4289.8	5230.7 ug/L	5230.7 ppb	03:04:39
3	Sb 206.836†	1545.4	1530.6	475.47 ug/L	475.47 ppb	03:04:39
3	Se 196.026†	456.2	489.2	576.60 ug/L	576.60 ppb	03:04:39
3	Si 251.611†	851597.8	864046.2	25713 ug/L	25713 ppb	03:04:19
3	Sn 189.927†	3031.9	3068.7	499.12 ug/L	499.12 ppb	03:04:39
3	Ti 334.940†	2467756.9	2507186.6	3746.5 ug/L	3746.5 ppb	03:04:19
3	Tl 190.801†	1520.5	1588.1	488.56 ug/L	488.56 ppb	03:04:39
3	U 409.014†	6351.8	11561.7	329.92 ug/L	329.92 ppb	03:04:19
3	V 292.402†	81409.1	84402.5	551.69 ug/L	551.69 ppb	03:04:19
3	Zn 213.857†	104202.4	105082.0	878.67 ug/L	878.67 ppb	03:04:19
3	SiO2†	844611.7	856927.1	54633 ug/L	54633 ppb	03:04:57

Mean Data: 1202018104|942648|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	867346.9	97.364	%	1.2576				1.29%
Sc Radial	4384.6	106	%	2.4				2.22%
Y 371.029	811538.4	110.53	%	1.348				1.22%
Y RADIAL	5698.5	117.7	%	2.25				1.91%
Ag 328.068†	108146.6	504.04	ug/L	6.116	504.04	ppb	6.116	1.21%
Al 396.153Radial†	61896.5	51083	ug/L	1312.4	51083	ppb	1312.4	2.57%
As 188.979†	1216.8	520.11	ug/L	6.898	520.11	ppb	6.898	1.33%
B 249.677†	24529.6	496.87	ug/L	7.564	496.87	ppb	7.564	1.52%
Ba 233.527†	103938.8	763.68	ug/L	10.619	763.68	ppb	10.619	1.39%
Be 313.107†	1491232.8	508.95	ug/L	5.766	508.95	ppb	5.766	1.13%
Ca 317.933Radial†	6474.3	11985	ug/L	290.1	11985	ppb	290.1	2.42%
Cd 226.502†	48981.4	496.92	ug/L	7.479	496.92	ppb	7.479	1.50%
Co 228.616†	27353.8	496.22	ug/L	9.441	496.22	ppb	9.441	1.90%
Cr 267.716†	54198.4	560.36	ug/L	6.865	560.36	ppb	6.865	1.23%
Cu 324.752†	196628.2	551.46	ug/L	6.841	551.46	ppb	6.841	1.24%
Fe 238.204 Radial†	7718.8	89717	ug/L	2227.7	89717	ppb	2227.7	2.48%
K 766.490 Radial†	58633.4	11153	ug/L	325.1	11153	ppb	325.1	2.91%

Mg 279.077 IEC†	276.7	11569	ug/L	411.9	11569	ppb	411.9	3.56%
Mn 257.610†	2677662.2	2695.0	ug/L	37.26	2695.0	ppb	37.26	1.38%
Mo 202.031†	7253.4	489.16	ug/L	7.539	489.16	ppb	7.539	1.54%
Na 589.592 Radial†	17628.5	5432.2	ug/L	120.12	5432.2	ppb	120.12	2.21%
Ni 231.604†	23838.8	530.88	ug/L	10.031	530.88	ppb	10.031	1.89%
P 214.914†	2924.6	1355.1	ug/L	31.80	1355.1	ppb	31.80	2.35%
Pb 220.353†	5040.8	544.28	ug/L	8.796	544.28	ppb	8.796	1.62%
S 181.975 Axial†	4345.8	5299.4	ug/L	101.73	5299.4	ppb	101.73	1.92%
Sb 206.836†	1566.9	486.69	ug/L	13.303	486.69	ppb	13.303	2.73%
Se 196.026†	505.2	581.37	ug/L	5.480	581.37	ppb	5.480	0.94%
Si 251.611†	877045.0	26100	ug/L	353.2	26100	ppb	353.2	1.35%
Sn 189.927†	3120.4	507.43	ug/L	8.636	507.43	ppb	8.636	1.70%
Sr 421.552†	83954.9	554.23	ug/L	14.620	554.23	ppb	14.620	2.64%
Ti 334.940†	2542761.8	3799.6	ug/L	49.17	3799.6	ppb	49.17	1.29%
Tl 190.801†	1609.7	495.21	ug/L	8.545	495.21	ppb	8.545	1.73%
U 409.014†	11646.5	332.55	ug/L	2.969	332.55	ppb	2.969	0.89%
V 292.402†	85511.6	559.29	ug/L	7.291	559.29	ppb	7.291	1.30%
Zn 213.857†	106790.2	893.21	ug/L	13.309	893.21	ppb	13.309	1.49%
SiO2†	874714.8	55767	ug/L	1037.9	55767	ppb	1037.9	1.86%

Sequence No.: 88
Sample ID: 1202018103|942648|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 107
Date Collected: 2/2/2010 03:07:08
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202018103|942648|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4326.4	4326.4	105	%			03:09:01
1	Y RADIAL	4989.4	4989.4	103.1	%			03:09:01
1	Al 396.153Radial†	4978.8	4937.8	4077.0	ug/L	4077.0	ppb	03:09:01
1	Ca 317.933Radial†	814.4	763.2	1412.9	ug/L	1412.9	ppb	03:09:21
1	Fe 238.204 Radial†	1373.2	1299.3	15100	ug/L	15100	ppb	03:09:21
1	K 766.490 Radial†	7407.3	4439.1	844.27	ug/L	844.27	ppb	03:09:01
1	Mg 279.077 IEC†	25.8	24.6	1022.9	ug/L	1022.9	ppb	03:09:21
1	Na 589.592 Radial†	-1105.8	597.8	184.22	ug/L	184.22	ppb	03:09:01
1	Sr 421.552†	1507.3	1400.9	9.2391	ug/L	9.2391	ppb	03:09:01
1	Sc 361.383	866949.7	866949.7	97.320	%			03:10:18
1	Y 371.029	715195.2	715195.2	97.405	%			03:10:18
1	Ag 328.068†	-504.5	-1142.9	-0.0700	ug/L	-0.0700	ppb	03:10:24
1	As 188.979†	-38.2	-10.5	4.3779	ug/L	4.3779	ppb	03:10:44
1	B 249.677†	-382.8	367.8	5.2292	ug/L	5.2292	ppb	03:10:24
1	Ba 233.527†	5724.3	5897.3	43.596	ug/L	43.596	ppb	03:10:24
1	Be 313.107†	-4905.5	-637.6	1.0681	ug/L	1.0681	ppb	03:10:24
1	Cd 226.502†	-59.3	143.2	-0.0770	ug/L	-0.0770	ppb	03:10:44
1	Co 228.616†	62.4	149.2	1.3672	ug/L	1.3672	ppb	03:10:44
1	Cr 267.716†	1092.7	1061.0	11.236	ug/L	11.236	ppb	03:10:24
1	Cu 324.752†	8136.2	1473.4	4.8968	ug/L	4.8968	ppb	03:10:24
1	Mn 257.610†	369171.7	378807.0	381.52	ug/L	381.52	ppb	03:10:18
1	Mo 202.031†	13.7	8.9	1.7773	ug/L	1.7773	ppb	03:10:44
1	Ni 231.604†	334.7	258.8	5.7647	ug/L	5.7647	ppb	03:10:44
1	P 214.914†	629.3	423.4	207.87	ug/L	207.87	ppb	03:10:44
1	Pb 220.353†	7.3	87.1	8.8014	ug/L	8.8014	ppb	03:10:44
1	S 181.975 Axial†	99.8	53.6	64.768	ug/L	64.768	ppb	03:10:44
1	Sb 206.836†	50.9	13.9	2.6934	ug/L	2.6934	ppb	03:10:44
1	Se 196.026†	-95.6	-72.3	10.141	ug/L	10.141	ppb	03:10:44
1	Si 251.611†	120971.6	123767.5	3684.0	ug/L	3684.0	ppb	03:10:24
1	Sn 189.927†	5.8	-3.5	-0.0978	ug/L	-0.0978	ppb	03:10:44
1	Ti 334.940†	366042.9	377928.2	564.79	ug/L	564.79	ppb	03:10:18
1	Tl 190.801†	-72.2	-29.7	-1.9170	ug/L	-1.9170	ppb	03:10:44
1	U 409.014†	-4933.3	44.0	-0.4472	ug/L	-0.4472	ppb	03:10:18
1	V 292.402†	480.3	2245.7	12.169	ug/L	12.169	ppb	03:10:24
1	Zn 213.857†	8423.1	7945.9	65.908	ug/L	65.908	ppb	03:10:24
1	SiO2†	125069.2	127951.4	8159.4	ug/L	8159.4	ppb	03:11:50
2	Sc Radial	4264.8	4264.8	103	%			03:09:27
2	Y RADIAL	4984.5	4984.5	103.0	%			03:09:27
2	Al 396.153Radial†	4961.7	4989.7	4119.8	ug/L	4119.8	ppb	03:09:27
2	Ca 317.933Radial†	814.2	774.3	1433.3	ug/L	1433.3	ppb	03:09:47
2	Fe 238.204 Radial†	1382.4	1327.1	15423	ug/L	15423	ppb	03:09:47
2	K 766.490 Radial†	7312.7	4449.5	846.26	ug/L	846.26	ppb	03:09:27
2	Mg 279.077 IEC†	25.4	24.6	1021.8	ug/L	1021.8	ppb	03:09:47
2	Na 589.592 Radial†	-1168.4	522.0	160.86	ug/L	160.86	ppb	03:09:27
2	Sr 421.552†	1516.3	1430.4	9.4334	ug/L	9.4334	ppb	03:09:27
2	Sc 361.383	864812.3	864812.3	97.080	%			03:10:49
2	Y 371.029	713669.4	713669.4	97.197	%			03:10:49
2	Ag 328.068†	-508.4	-1148.2	0.0042	ug/L	0.0042	ppb	03:10:54
2	As 188.979†	-42.1	-14.7	2.8646	ug/L	2.8646	ppb	03:11:14
2	B 249.677†	-365.9	384.2	5.5206	ug/L	5.5206	ppb	03:10:54
2	Ba 233.527†	5684.4	5870.7	43.409	ug/L	43.409	ppb	03:10:54
2	Be 313.107†	-4970.8	-717.3	1.0408	ug/L	1.0408	ppb	03:10:54
2	Cd 226.502†	-53.1	149.4	-0.0458	ug/L	-0.0458	ppb	03:11:14
2	Co 228.616†	60.1	147.0	1.3245	ug/L	1.3245	ppb	03:11:14
2	Cr 267.716†	1052.6	1022.5	10.843	ug/L	10.843	ppb	03:10:54
2	Cu 324.752†	8192.8	1552.4	5.1322	ug/L	5.1322	ppb	03:10:54
2	Mn 257.610†	368017.2	378555.3	381.30	ug/L	381.30	ppb	03:10:49
2	Mo 202.031†	29.9	25.6	2.9175	ug/L	2.9175	ppb	03:11:14
2	Ni 231.604†	354.7	280.2	6.2421	ug/L	6.2421	ppb	03:11:14

2	P 214.914†	619.0	414.3	202.87 ug/L	202.87 ppb	03:11:14
2	Pb 220.353†	9.5	89.4	9.0305 ug/L	9.0305 ppb	03:11:14
2	S 181.975 Axial†	96.0	50.0	60.311 ug/L	60.311 ppb	03:11:14
2	Sb 206.836†	57.9	21.2	4.9592 ug/L	4.9592 ppb	03:11:14
2	Se 196.026†	-92.1	-68.9	13.061 ug/L	13.061 ppb	03:11:14
2	Si 251.611†	120997.0	124100.8	3694.0 ug/L	3694.0 ppb	03:10:54
2	Sn 189.927†	6.0	-3.3	-0.0551 ug/L	-0.0551 ppb	03:11:14
2	Ti 334.940†	364982.9	377765.9	564.55 ug/L	564.55 ppb	03:10:49
2	Tl 190.801†	-57.8	-15.1	2.2013 ug/L	2.2013 ppb	03:11:14
2	U 409.014†	-4841.0	126.5	1.9540 ug/L	1.9540 ppb	03:10:49
2	V 292.402†	295.2	2056.3	10.883 ug/L	10.883 ppb	03:10:54
2	Zn 213.857†	8437.2	7981.9	66.179 ug/L	66.179 ppb	03:10:54
2	SiO2†	125302.2	128509.0	8194.9 ug/L	8194.9 ppb	03:11:55
3	Sc Radial	4384.6	4384.6	106 %		03:09:52
3	Y RADIAL	5055.9	5055.9	104.4 %		03:09:52
3	Al 396.153Radial†	5012.7	4906.6	4051.2 ug/L	4051.2 ppb	03:09:52
3	Ca 317.933Radial†	816.0	754.4	1396.6 ug/L	1396.6 ppb	03:10:12
3	Fe 238.204 Radial†	1380.0	1288.3	14972 ug/L	14972 ppb	03:10:12
3	K 766.490 Radial†	7335.8	4278.0	813.62 ug/L	813.62 ppb	03:09:52
3	Mg 279.077 IEC†	24.7	23.3	964.55 ug/L	964.55 ppb	03:10:12
3	Na 589.592 Radial†	-1138.6	580.9	179.02 ug/L	179.02 ppb	03:09:52
3	Sr 421.552†	1558.8	1430.2	9.4326 ug/L	9.4326 ppb	03:09:52
3	Sc 361.383	863329.2	863329.2	96.913 %		03:11:20
3	Y 371.029	714666.5	714666.5	97.333 %		03:11:20
3	Ag 328.068†	-542.9	-1184.7	-0.2995 ug/L	-0.2995 ppb	03:11:25
3	As 188.979†	-40.1	-12.6	3.5263 ug/L	3.5263 ppb	03:11:45
3	B 249.677†	-389.5	359.1	5.0698 ug/L	5.0698 ppb	03:11:25
3	Ba 233.527†	5742.7	5940.9	43.909 ug/L	43.909 ppb	03:11:25
3	Be 313.107†	-4979.9	-735.4	1.0298 ug/L	1.0298 ppb	03:11:25
3	Cd 226.502†	-45.5	157.1	0.0808 ug/L	0.0808 ppb	03:11:45
3	Co 228.616†	63.5	150.7	1.4023 ug/L	1.4023 ppb	03:11:45
3	Cr 267.716†	1085.8	1058.6	11.207 ug/L	11.207 ppb	03:11:25
3	Cu 324.752†	8104.6	1475.9	4.8959 ug/L	4.8959 ppb	03:11:25
3	Mn 257.610†	366008.6	377133.9	379.83 ug/L	379.83 ppb	03:11:20
3	Mo 202.031†	24.4	19.9	2.5046 ug/L	2.5046 ppb	03:11:45
3	Ni 231.604†	352.0	278.1	6.1941 ug/L	6.1941 ppb	03:11:45
3	P 214.914†	622.6	419.2	205.78 ug/L	205.78 ppb	03:11:45
3	Pb 220.353†	34.2	114.9	11.791 ug/L	11.791 ppb	03:11:45
3	S 181.975 Axial†	106.3	60.9	73.579 ug/L	73.579 ppb	03:11:45
3	Sb 206.836†	52.7	15.9	3.3382 ug/L	3.3382 ppb	03:11:45
3	Se 196.026†	-103.4	-80.7	5.0235 ug/L	5.0235 ppb	03:11:45
3	Si 251.611†	121138.8	124461.3	3704.7 ug/L	3704.7 ppb	03:11:25
3	Sn 189.927†	5.0	-4.2	-0.2224 ug/L	-0.2224 ppb	03:11:45
3	Ti 334.940†	362971.6	376336.4	562.41 ug/L	562.41 ppb	03:11:20
3	Tl 190.801†	-75.7	-33.7	-3.0663 ug/L	-3.0663 ppb	03:11:45
3	U 409.014†	-4852.8	105.7	1.3908 ug/L	1.3908 ppb	03:11:20
3	V 292.402†	333.7	2096.5	11.211 ug/L	11.211 ppb	03:11:25
3	Zn 213.857†	8456.2	8016.5	66.516 ug/L	66.516 ppb	03:11:25
3	SiO2†	123322.4	126687.9	8078.8 ug/L	8078.8 ppb	03:12:00

Mean Data: 1202018103|942648|5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	865030.4	97.104	%	0.2043				0.21%
Sc Radial	4325.3	105	%	1.5				1.38%
Y 371.029	714510.4	97.312	%	0.1055				0.11%
Y RADIAL	5009.9	103.5	%	0.82				0.80%
Ag 328.068†	-1158.6	-0.1218	ug/L	0.15836	-0.1218	ppb	0.15836	130.05%
Al 396.153Radial†	4944.7	4082.7	ug/L	34.66	4082.7	ppb	34.66	0.85%
As 188.979†	-12.6	3.5896	ug/L	0.75859	3.5896	ppb	0.75859	21.13%
B 249.677†	370.4	5.2732	ug/L	0.22858	5.2732	ppb	0.22858	4.33%
Ba 233.527†	5903.0	43.638	ug/L	0.2528	43.638	ppb	0.2528	0.58%
Be 313.107†	-696.8	1.0462	ug/L	0.01969	1.0462	ppb	0.01969	1.88%
Ca 317.933Radial†	764.0	1414.3	ug/L	18.41	1414.3	ppb	18.41	1.30%
Cd 226.502†	149.9	-0.0140	ug/L	0.08356	-0.0140	ppb	0.08356	595.34%
Co 228.616†	149.0	1.3647	ug/L	0.03896	1.3647	ppb	0.03896	2.86%
Cr 267.716†	1047.3	11.096	ug/L	0.2188	11.096	ppb	0.2188	1.97%
Cu 324.752†	1500.6	4.9750	ug/L	0.13619	4.9750	ppb	0.13619	2.74%
Fe 238.204 Radial†	1304.9	15165	ug/L	232.5	15165	ppb	232.5	1.53%
K 766.490 Radial†	4388.9	834.71	ug/L	18.297	834.71	ppb	18.297	2.19%

Mg 279.077 IEC†	24.2	1003.1	ug/L	33.36	1003.1	ppb	33.36	3.33%
Mn 257.610†	378165.4	380.88	ug/L	0.918	380.88	ppb	0.918	0.24%
Mo 202.031†	18.1	2.3998	ug/L	0.57726	2.3998	ppb	0.57726	24.05%
Na 589.592 Radial†	566.9	174.70	ug/L	12.262	174.70	ppb	12.262	7.02%
Ni 231.604†	272.4	6.0670	ug/L	0.26286	6.0670	ppb	0.26286	4.33%
P 214.914†	419.0	205.51	ug/L	2.512	205.51	ppb	2.512	1.22%
Pb 220.353†	97.2	9.8743	ug/L	1.66383	9.8743	ppb	1.66383	16.85%
S 181.975 Axial†	54.8	66.219	ug/L	6.7520	66.219	ppb	6.7520	10.20%
Sb 206.836†	17.0	3.6636	ug/L	1.16744	3.6636	ppb	1.16744	31.87%
Se 196.026†	-74.0	9.4085	ug/L	4.06842	9.4085	ppb	4.06842	43.24%
Si 251.611†	124109.9	3694.2	ug/L	10.32	3694.2	ppb	10.32	0.28%
Sn 189.927†	-3.7	-0.1251	ug/L	0.08691	-0.1251	ppb	0.08691	69.47%
Sr 421.552†	1420.5	9.3684	ug/L	0.11196	9.3684	ppb	0.11196	1.20%
Ti 334.940†	377343.5	563.92	ug/L	1.308	563.92	ppb	1.308	0.23%
Tl 190.801†	-26.2	-0.9273	ug/L	2.76973	-0.9273	ppb	2.76973	298.68%
U 409.014†	92.0	0.9659	ug/L	1.25574	0.9659	ppb	1.25574	130.01%
V 292.402†	2132.8	11.421	ug/L	0.6684	11.421	ppb	0.6684	5.85%
Zn 213.857†	7981.4	66.201	ug/L	0.3046	66.201	ppb	0.3046	0.46%
SiO2†	127716.1	8144.4	ug/L	59.50	8144.4	ppb	59.50	0.73%

Sequence No.: 92
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 2/2/2010 03:35:25
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4222.7	4222.7	102	%			03:37:18
1	Y RADIAL	4792.4	4792.4	98.99	%			03:37:18
1	Al 396.153Radial†	6295.4	6340.5	5210.2	ug/L	5210.2	ppb	03:37:18
1	Ca 317.933Radial†	2944.0	2862.9	5299.7	ug/L	5299.7	ppb	03:37:38
1	Fe 238.204 Radial†	470.3	449.4	5237.8	ug/L	5237.8	ppb	03:37:38
1	K 766.490 Radial†	30948.0	27611.3	5249.1	ug/L	5249.1	ppb	03:37:18
1	Mg 279.077 IEC†	136.4	133.3	5616.4	ug/L	5616.4	ppb	03:37:38
1	Na 589.592 Radial†	32790.0	33687.4	10381	ug/L	10381	ppb	03:37:18
1	Sr 421.552†	80875.0	78976.9	521.42	ug/L	521.42	ppb	03:37:18
1	Sc 361.383	854942.3	854942.3	95.972	%			03:38:37
1	Y 371.029	685238.8	685238.8	93.325	%			03:38:37
1	Ag 328.068†	112657.5	116761.5	514.08	ug/L	514.08	ppb	03:38:37
1	As 188.979†	1249.0	1330.2	515.41	ug/L	515.41	ppb	03:38:57
1	B 249.677†	22284.1	23980.5	499.07	ug/L	499.07	ppb	03:38:37
1	Ba 233.527†	67435.7	70281.4	514.98	ug/L	514.98	ppb	03:38:37
1	Be 313.107†	1449772.6	1515025.1	509.50	ug/L	509.50	ppb	03:38:37
1	Cd 226.502†	48223.9	50452.1	520.86	ug/L	520.86	ppb	03:38:37
1	Co 228.616†	26795.3	28005.1	516.29	ug/L	516.29	ppb	03:38:57
1	Cr 267.716†	47835.2	49781.1	513.10	ug/L	513.10	ppb	03:38:37
1	Cu 324.752†	183818.0	184646.3	513.57	ug/L	513.57	ppb	03:38:37
1	Mn 257.610†	496565.4	516875.3	518.89	ug/L	518.89	ppb	03:38:37
1	Mo 202.031†	7454.3	7761.9	516.32	ug/L	516.32	ppb	03:38:57
1	Ni 231.604†	22226.4	23074.1	513.84	ug/L	513.84	ppb	03:38:57
1	P 214.914†	5061.9	5051.0	2522.5	ug/L	2522.5	ppb	03:38:57
1	Pb 220.353†	4583.8	4855.8	522.68	ug/L	522.68	ppb	03:38:57
1	S 181.975 Axial†	841.1	827.5	1009.9	ug/L	1009.9	ppb	03:38:57
1	Sb 206.836†	1656.1	1687.1	534.08	ug/L	534.08	ppb	03:38:57
1	Se 196.026†	885.3	948.4	544.88	ug/L	544.88	ppb	03:38:57
1	Si 251.611†	83943.8	86931.3	2581.2	ug/L	2581.2	ppb	03:38:37
1	Sn 189.927†	3089.0	3209.2	519.33	ug/L	519.33	ppb	03:38:57
1	Ti 334.940†	334843.1	350701.4	523.85	ug/L	523.85	ppb	03:38:37
1	Tl 190.801†	1706.0	1822.0	517.64	ug/L	517.64	ppb	03:38:57
1	U 409.014†	11826.9	17436.4	513.30	ug/L	513.30	ppb	03:38:37
1	V 292.402†	71888.4	76657.9	516.87	ug/L	516.87	ppb	03:38:37
1	Zn 213.857†	59029.8	60798.3	511.35	ug/L	511.35	ppb	03:38:37
1	SiO2†	84106.2	87074.0	5538.6	ug/L	5538.6	ppb	03:39:57
2	Sc Radial	4303.1	4303.1	104	%			03:37:43
2	Y RADIAL	4819.0	4819.0	99.54	%			03:37:43
2	Al 396.153Radial†	6378.8	6305.7	5181.6	ug/L	5181.6	ppb	03:37:43
2	Ca 317.933Radial†	2944.5	2809.7	5201.1	ug/L	5201.1	ppb	03:38:03
2	Fe 238.204 Radial†	471.4	441.8	5149.4	ug/L	5149.4	ppb	03:38:03
2	K 766.490 Radial†	31251.5	27337.4	5197.0	ug/L	5197.0	ppb	03:37:43
2	Mg 279.077 IEC†	134.0	128.6	5417.4	ug/L	5417.4	ppb	03:38:03
2	Na 589.592 Radial†	33224.1	33505.1	10325	ug/L	10325	ppb	03:37:43
2	Sr 421.552†	81919.8	78502.3	518.28	ug/L	518.28	ppb	03:37:43
2	Sc 361.383	860195.0	860195.0	96.562	%			03:39:04
2	Y 371.029	687540.6	687540.6	93.639	%			03:39:04
2	Ag 328.068†	113417.4	116831.5	514.36	ug/L	514.36	ppb	03:39:04
2	As 188.979†	1250.0	1323.3	512.73	ug/L	512.73	ppb	03:39:24
2	B 249.677†	22662.6	24230.6	504.32	ug/L	504.32	ppb	03:39:04
2	Ba 233.527†	67967.0	70402.6	515.86	ug/L	515.86	ppb	03:39:04
2	Be 313.107†	1459267.3	1515633.4	509.71	ug/L	509.71	ppb	03:39:04
2	Cd 226.502†	48503.6	50434.8	520.68	ug/L	520.68	ppb	03:39:04
2	Co 228.616†	26907.0	27950.3	515.27	ug/L	515.27	ppb	03:39:24
2	Cr 267.716†	48149.6	49802.3	513.31	ug/L	513.31	ppb	03:39:04
2	Cu 324.752†	185235.6	184944.8	514.39	ug/L	514.39	ppb	03:39:04
2	Mn 257.610†	500050.6	517325.2	519.34	ug/L	519.34	ppb	03:39:04
2	Mo 202.031†	7459.2	7719.6	513.50	ug/L	513.50	ppb	03:39:24
2	Ni 231.604†	22208.2	22913.8	510.27	ug/L	510.27	ppb	03:39:24

2	P 214.914†	5060.3	5017.2	2504.9 ug/L	2504.9 ppb	03:39:24
2	Pb 220.353†	4593.6	4836.8	520.63 ug/L	520.63 ppb	03:39:24
2	S 181.975 Axial†	855.1	836.6	1021.0 ug/L	1021.0 ppb	03:39:24
2	Sb 206.836†	1659.5	1680.2	531.85 ug/L	531.85 ppb	03:39:24
2	Se 196.026†	888.9	946.5	543.55 ug/L	543.55 ppb	03:39:24
2	Si 251.611†	84607.3	87084.4	2585.8 ug/L	2585.8 ppb	03:39:04
2	Sn 189.927†	3088.8	3189.4	516.12 ug/L	516.12 ppb	03:39:24
2	Ti 334.940†	336965.1	350768.4	523.95 ug/L	523.95 ppb	03:39:04
2	Tl 190.801†	1722.0	1827.8	519.27 ug/L	519.27 ppb	03:39:24
2	U 409.014†	11891.4	17427.9	513.06 ug/L	513.06 ppb	03:39:04
2	V 292.402†	72403.5	76733.9	517.34 ug/L	517.34 ppb	03:39:04
2	Zn 213.857†	59521.8	60932.3	512.52 ug/L	512.52 ppb	03:39:04
2	SiO2†	84491.4	86937.9	5530.0 ug/L	5530.0 ppb	03:40:02
3	Sc Radial	4241.1	4241.1	103 %		03:38:08
3	Y RADIAL	4760.4	4760.4	98.33 %		03:38:08
3	Al 396.153Radial†	6272.0	6291.1	5169.5 ug/L	5169.5 ppb	03:38:08
3	Ca 317.933Radial†	2931.4	2838.1	5253.8 ug/L	5253.8 ppb	03:38:28
3	Fe 238.204 Radial†	463.5	440.7	5137.3 ug/L	5137.3 ppb	03:38:28
3	K 766.490 Radial†	30787.9	27324.3	5194.5 ug/L	5194.5 ppb	03:38:08
3	Mg 279.077 IEC†	131.6	128.1	5397.0 ug/L	5397.0 ppb	03:38:28
3	Na 589.592 Radial†	32594.4	33358.2	10279 ug/L	10279 ppb	03:38:08
3	Sr 421.552†	80331.1	78105.0	515.66 ug/L	515.66 ppb	03:38:08
3	Sc 361.383	853369.3	853369.3	95.795 %		03:39:32
3	Y 371.029	682735.1	682735.1	92.984 %		03:39:32
3	Ag 328.068†	112575.3	116892.0	514.62 ug/L	514.62 ppb	03:39:32
3	As 188.979†	1247.5	1331.0	515.68 ug/L	515.68 ppb	03:39:52
3	B 249.677†	22319.2	24060.0	500.75 ug/L	500.75 ppb	03:39:32
3	Ba 233.527†	67245.3	70212.1	514.47 ug/L	514.47 ppb	03:39:32
3	Be 313.107†	1443038.5	1510779.9	508.07 ug/L	508.07 ppb	03:39:32
3	Cd 226.502†	47960.1	50269.3	518.98 ug/L	518.98 ppb	03:39:32
3	Co 228.616†	26688.6	27945.2	515.19 ug/L	515.19 ppb	03:39:52
3	Cr 267.716†	47698.5	49730.3	512.57 ug/L	512.57 ppb	03:39:32
3	Cu 324.752†	183377.6	184539.6	513.27 ug/L	513.27 ppb	03:39:32
3	Mn 257.610†	494687.2	515868.5	517.88 ug/L	517.88 ppb	03:39:32
3	Mo 202.031†	7439.5	7760.8	516.24 ug/L	516.24 ppb	03:39:52
3	Ni 231.604†	22108.4	22993.6	512.04 ug/L	512.04 ppb	03:39:52
3	P 214.914†	5019.8	5016.9	2504.9 ug/L	2504.9 ppb	03:39:52
3	Pb 220.353†	4537.8	4816.6	518.47 ug/L	518.47 ppb	03:39:52
3	S 181.975 Axial†	836.5	824.3	1006.0 ug/L	1006.0 ppb	03:39:52
3	Sb 206.836†	1652.1	1686.2	533.74 ug/L	533.74 ppb	03:39:52
3	Se 196.026†	880.8	945.5	542.92 ug/L	542.92 ppb	03:39:52
3	Si 251.611†	83659.8	86796.1	2577.2 ug/L	2577.2 ppb	03:39:32
3	Sn 189.927†	3058.3	3183.1	515.11 ug/L	515.11 ppb	03:39:52
3	Ti 334.940†	333704.7	350156.2	523.04 ug/L	523.04 ppb	03:39:32
3	Tl 190.801†	1708.7	1828.1	519.35 ug/L	519.35 ppb	03:39:52
3	U 409.014†	11883.0	17517.7	515.72 ug/L	515.72 ppb	03:39:32
3	V 292.402†	71657.3	76554.6	516.19 ug/L	516.19 ppb	03:39:32
3	Zn 213.857†	58861.9	60736.4	510.85 ug/L	510.85 ppb	03:39:32
3	SiO2†	83467.9	86569.2	5506.4 ug/L	5506.4 ppb	03:40:08

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	856168.9	96.110	%	0.4012				0.42%
Sc Radial	4255.6	103	%	1.0				0.99%
Y 371.029	685171.5	93.316	%	0.3273				0.35%
Y RADIAL	4790.6	98.95	%	0.606				0.61%
Ag 328.068†	116828.3	514.35	ug/L	0.267	514.35	ppb	0.267	0.05%
QC value within limits for Ag 328.068 Recovery = 102.87%								
Al 396.153Radial†	6312.5	5187.1	ug/L	20.94	5187.1	ppb	20.94	0.40%
QC value within limits for Al 396.153Radial Recovery = 103.74%								
As 188.979†	1328.2	514.60	ug/L	1.630	514.60	ppb	1.630	0.32%
QC value within limits for As 188.979 Recovery = 102.92%								
B 249.677†	24090.4	501.38	ug/L	2.680	501.38	ppb	2.680	0.53%
QC value within limits for B 249.677 Recovery = 100.28%								
Ba 233.527†	70298.7	515.10	ug/L	0.706	515.10	ppb	0.706	0.14%
QC value within limits for Ba 233.527 Recovery = 103.02%								
Be 313.107†	1513812.8	509.09	ug/L	0.888	509.09	ppb	0.888	0.17%
QC value within limits for Be 313.107 Recovery = 101.82%								
Ca 317.933Radial†	2836.9	5251.5	ug/L	49.33	5251.5	ppb	49.33	0.94%

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   QC value within limits for Ca 317.933Radial  Recovery = 105.03%
Cd 226.502†            50385.4      520.17 ug/L         1.038      520.17 ppb          1.038   0.20%
   QC value within limits for Cd 226.502  Recovery = 104.03%
Co 228.616†            27966.8      515.58 ug/L         0.613      515.58 ppb          0.613   0.12%
   QC value within limits for Co 228.616  Recovery = 103.12%
Cr 267.716†            49771.3      512.99 ug/L         0.383      512.99 ppb          0.383   0.07%
   QC value within limits for Cr 267.716  Recovery = 102.60%
Cu 324.752†           184710.2      513.74 ug/L         0.584      513.74 ppb          0.584   0.11%
   QC value within limits for Cu 324.752  Recovery = 102.75%
Fe 238.204 Radial†       444.0      5174.9 ug/L        54.88      5174.9 ppb         54.88   1.06%
   QC value within limits for Fe 238.204 Radial  Recovery = 103.50%
K 766.490 Radial†      27424.3      5213.5 ug/L        30.81      5213.5 ppb         30.81   0.59%
   QC value within limits for K 766.490 Radial  Recovery = 104.27%
Mg 279.077 IEC†          130.0      5476.9 ug/L       121.18      5476.9 ppb        121.18   2.21%
   QC value within limits for Mg 279.077 IEC  Recovery = 109.54%
Mn 257.610†           516689.6      518.70 ug/L         0.749      518.70 ppb          0.749   0.14%
   QC value within limits for Mn 257.610  Recovery = 103.74%
Mo 202.031†             7747.4      515.35 ug/L         1.606      515.35 ppb          1.606   0.31%
   QC value within limits for Mo 202.031  Recovery = 103.07%
Na 589.592 Radial†     33516.9       10328 ug/L          50.8       10328 ppb           50.8   0.49%
   QC value within limits for Na 589.592 Radial  Recovery = 103.28%
Ni 231.604†            22993.8      512.05 ug/L         1.785      512.05 ppb          1.785   0.35%
   QC value within limits for Ni 231.604  Recovery = 102.41%
P 214.914†              5028.4      2510.8 ug/L        10.20      2510.8 ppb         10.20   0.41%
   QC value within limits for P 214.914  Recovery = 100.43%
Pb 220.353†             4836.4      520.59 ug/L         2.102      520.59 ppb          2.102   0.40%
   QC value within limits for Pb 220.353  Recovery = 104.12%
S 181.975 Axial†         829.5      1012.3 ug/L         7.78      1012.3 ppb          7.78   0.77%
   QC value within limits for S 181.975 Axial  Recovery = 101.23%
Sb 206.836†             1684.5      533.22 ug/L         1.203      533.22 ppb          1.203   0.23%
   QC value within limits for Sb 206.836  Recovery = 106.64%
Se 196.026†              946.8      543.79 ug/L         1.003      543.79 ppb          1.003   0.18%
   QC value within limits for Se 196.026  Recovery = 108.76%
Si 251.611†            86937.3      2581.4 ug/L         4.31      2581.4 ppb          4.31   0.17%
   QC value within limits for Si 251.611  Recovery = 103.26%
Sn 189.927†             3193.9      516.86 ug/L         2.205      516.86 ppb          2.205   0.43%
   QC value within limits for Sn 189.927  Recovery = 103.37%
Sr 421.552†            78528.1      518.45 ug/L         2.882      518.45 ppb          2.882   0.56%
   QC value within limits for Sr 421.552  Recovery = 103.69%
Ti 334.940†           350542.0      523.61 ug/L         0.497      523.61 ppb          0.497   0.09%
   QC value within limits for Ti 334.940  Recovery = 104.72%
Tl 190.801†             1826.0      518.75 ug/L         0.963      518.75 ppb          0.963   0.19%
   QC value within limits for Tl 190.801  Recovery = 103.75%
U 409.014†             17460.6      514.03 ug/L         1.468      514.03 ppb          1.468   0.29%
   QC value within limits for U 409.014  Recovery = 102.81%
V 292.402†             76648.8      516.80 ug/L         0.576      516.80 ppb          0.576   0.11%
   QC value within limits for V 292.402  Recovery = 103.36%
Zn 213.857†            60822.3      511.57 ug/L         0.857      511.57 ppb          0.857   0.17%
   QC value within limits for Zn 213.857  Recovery = 102.31%
SiO2†                  86860.4      5525.0 ug/L        16.66      5525.0 ppb         16.66   0.30%
   QC value within limits for SiO2  Recovery = 103.32%
All analyte(s) passed QC.
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Sequence No.: 93
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 2/2/2010 03:42:17
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4336.5	4336.5	105	%			03:44:10
1	Y RADIAL	4899.0	4899.0	101.2	%			03:44:10
1	Al 396.153Radial†	-211.1	-10.7	-8.8986	ug/L	-8.8986	ppb	03:44:10
1	Ca 317.933Radial†	29.1	14.3	26.495	ug/L	26.495	ppb	03:44:30
1	Fe 238.204 Radial†	9.0	-1.5	-17.670	ug/L	-17.670	ppb	03:44:30
1	K 766.490 Radial†	2873.0	108.9	20.677	ug/L	20.677	ppb	03:44:10
1	Mg 279.077 IEC†	4.4	4.3	179.64	ug/L	179.64	ppb	03:44:30
1	Na 589.592 Radial†	-1343.1	374.5	115.42	ug/L	115.42	ppb	03:44:10
1	Sr 421.552†	10.2	-26.7	-0.1767	ug/L	-0.1767	ppb	03:44:10
1	Sc 361.383	850463.7	850463.7	95.469	%			03:45:27
1	Y 371.029	690634.5	690634.5	94.060	%			03:45:27
1	Ag 328.068†	393.5	-212.4	-0.9520	ug/L	-0.9520	ppb	03:45:32
1	As 188.979†	-45.2	-18.6	-7.1467	ug/L	-7.1467	ppb	03:45:52
1	B 249.677†	-561.6	172.8	3.6176	ug/L	3.6176	ppb	03:45:52
1	Ba 233.527†	-18.7	-4.3	-0.0321	ug/L	-0.0321	ppb	03:45:52
1	Be 313.107†	-4141.7	64.8	0.0222	ug/L	0.0222	ppb	03:45:32
1	Cd 226.502†	-201.6	-7.0	-0.0666	ug/L	-0.0666	ppb	03:45:52
1	Co 228.616†	-104.5	-24.3	-0.4465	ug/L	-0.4465	ppb	03:45:52
1	Cr 267.716†	86.5	28.7	0.2873	ug/L	0.2873	ppb	03:45:32
1	Cu 324.752†	7003.8	449.4	1.2375	ug/L	1.2375	ppb	03:45:32
1	Mn 257.610†	665.2	164.9	0.1564	ug/L	0.1564	ppb	03:45:52
1	Mo 202.031†	18.0	13.6	0.9056	ug/L	0.9056	ppb	03:45:52
1	Ni 231.604†	91.1	10.3	0.2289	ug/L	0.2289	ppb	03:45:52
1	P 214.914†	257.3	46.3	23.803	ug/L	23.803	ppb	03:45:52
1	Pb 220.353†	-50.2	27.0	2.8986	ug/L	2.8986	ppb	03:45:52
1	S 181.975 Axial†	55.8	9.6	11.749	ug/L	11.749	ppb	03:45:52
1	Sb 206.836†	51.1	15.1	4.6606	ug/L	4.6606	ppb	03:45:52
1	Se 196.026†	-26.2	-1.5	-0.8695	ug/L	-0.8695	ppb	03:45:52
1	Si 251.611†	537.4	27.2	0.7975	ug/L	0.7975	ppb	03:45:52
1	Sn 189.927†	19.2	10.7	1.7289	ug/L	1.7289	ppb	03:45:52
1	Ti 334.940†	-1598.1	130.4	0.1746	ug/L	0.1746	ppb	03:45:32
1	Tl 190.801†	-36.0	6.7	1.8952	ug/L	1.8952	ppb	03:45:52
1	U 409.014†	-4212.3	700.9	20.706	ug/L	20.706	ppb	03:45:27
1	V 292.402†	-1673.9	-1.1	0.0508	ug/L	0.0508	ppb	03:45:32
1	Zn 213.857†	875.0	207.4	1.7582	ug/L	1.7582	ppb	03:45:52
1	SiO2†	506.1	-32.1	-2.0729	ug/L	-2.0729	ppb	03:46:58
2	Sc Radial	4402.3	4402.3	107	%			03:44:35
2	Y RADIAL	4970.4	4970.4	102.7	%			03:44:35
2	Al 396.153Radial†	-194.7	7.6	6.3010	ug/L	6.3010	ppb	03:44:35
2	Ca 317.933Radial†	28.7	13.5	25.033	ug/L	25.033	ppb	03:44:55
2	Fe 238.204 Radial†	11.6	0.7	8.3014	ug/L	8.3014	ppb	03:44:55
2	K 766.490 Radial†	2867.6	63.0	11.937	ug/L	11.937	ppb	03:44:35
2	Mg 279.077 IEC†	0.3	0.3	12.301	ug/L	12.301	ppb	03:44:55
2	Na 589.592 Radial†	-1337.4	399.0	122.95	ug/L	122.95	ppb	03:44:35
2	Sr 421.552†	38.7	-0.2	-0.0016	ug/L	-0.0016	ppb	03:44:35
2	Sc 361.383	854479.4	854479.4	95.920	%			03:45:57
2	Y 371.029	692552.1	692552.1	94.321	%			03:45:57
2	Ag 328.068†	386.5	-221.6	-0.9863	ug/L	-0.9863	ppb	03:46:02
2	As 188.979†	-30.5	-3.1	-1.1798	ug/L	-1.1798	ppb	03:46:22
2	B 249.677†	-541.2	196.9	4.1149	ug/L	4.1149	ppb	03:46:22
2	Ba 233.527†	-34.0	-20.1	-0.1461	ug/L	-0.1461	ppb	03:46:22
2	Be 313.107†	-4197.5	27.0	0.0099	ug/L	0.0099	ppb	03:46:02
2	Cd 226.502†	-197.9	-2.2	-0.0192	ug/L	-0.0192	ppb	03:46:22
2	Co 228.616†	-85.0	-3.5	-0.0650	ug/L	-0.0650	ppb	03:46:22
2	Cr 267.716†	120.0	63.2	0.6417	ug/L	0.6417	ppb	03:46:02
2	Cu 324.752†	6965.2	374.7	1.0285	ug/L	1.0285	ppb	03:46:02
2	Mn 257.610†	621.6	116.2	0.1169	ug/L	0.1169	ppb	03:46:22
2	Mo 202.031†	7.2	2.3	0.1546	ug/L	0.1546	ppb	03:46:22
2	Ni 231.604†	69.8	-12.4	-0.2770	ug/L	-0.2770	ppb	03:46:22

2	P 214.914†	248.8	36.1	18.524	ug/L	18.524 ppb	03:46:22
2	Pb 220.353†	-49.2	28.3	3.0362	ug/L	3.0362 ppb	03:46:22
2	S 181.975 Axial†	53.1	6.5	7.8853	ug/L	7.8853 ppb	03:46:22
2	Sb 206.836†	36.0	-0.8	-0.2407	ug/L	-0.2407 ppb	03:46:22
2	Se 196.026†	-27.0	-2.1	-1.1553	ug/L	-1.1553 ppb	03:46:22
2	Si 251.611†	504.7	-9.5	-0.2859	ug/L	-0.2859 ppb	03:46:22
2	Sn 189.927†	14.2	5.4	0.8746	ug/L	0.8746 ppb	03:46:22
2	Ti 334.940†	-1496.2	244.6	0.3564	ug/L	0.3564 ppb	03:46:02
2	Tl 190.801†	-59.4	-17.5	-4.9232	ug/L	-4.9232 ppb	03:46:22
2	U 409.014†	-4081.4	858.1	25.344	ug/L	25.344 ppb	03:45:57
2	V 292.402†	-1631.4	51.4	0.3910	ug/L	0.3910 ppb	03:46:02
2	Zn 213.857†	869.1	196.9	1.6702	ug/L	1.6702 ppb	03:46:22
2	SiO2†	509.3	-31.3	-2.0011	ug/L	-2.0011 ppb	03:47:03
3	Sc Radial	4389.9	4389.9	106	%		03:45:00
3	Y RADIAL	4918.4	4918.4	101.6	%		03:45:00
3	Al 396.153Radial†	-193.6	8.2	6.7482	ug/L	6.7482 ppb	03:45:00
3	Ca 317.933Radial†	25.7	10.8	20.029	ug/L	20.029 ppb	03:45:20
3	Fe 238.204 Radial†	12.6	1.7	19.884	ug/L	19.884 ppb	03:45:20
3	K 766.490 Radial†	2922.1	121.8	23.130	ug/L	23.130 ppb	03:45:00
3	Mg 279.077 IEC†	2.3	2.2	94.772	ug/L	94.772 ppb	03:45:20
3	Na 589.592 Radial†	-1337.7	395.1	121.75	ug/L	121.75 ppb	03:45:00
3	Sr 421.552†	44.5	5.4	0.0353	ug/L	0.0353 ppb	03:45:00
3	Sc 361.383	856009.4	856009.4	96.092	%		03:46:28
3	Y 371.029	693520.9	693520.9	94.453	%		03:46:28
3	Ag 328.068†	518.8	-84.6	-0.3863	ug/L	-0.3863 ppb	03:46:33
3	As 188.979†	-35.9	-8.7	-3.3165	ug/L	-3.3165 ppb	03:46:53
3	B 249.677†	-543.6	195.4	4.0826	ug/L	4.0826 ppb	03:46:53
3	Ba 233.527†	-15.9	-1.2	-0.0074	ug/L	-0.0074 ppb	03:46:53
3	Be 313.107†	-4221.8	9.5	0.0038	ug/L	0.0038 ppb	03:46:33
3	Cd 226.502†	-179.0	17.8	0.1876	ug/L	0.1876 ppb	03:46:53
3	Co 228.616†	-89.4	-7.8	-0.1455	ug/L	-0.1455 ppb	03:46:53
3	Cr 267.716†	163.1	108.0	1.1007	ug/L	1.1007 ppb	03:46:33
3	Cu 324.752†	7017.8	416.4	1.1427	ug/L	1.1427 ppb	03:46:33
3	Mn 257.610†	951.1	458.0	0.4576	ug/L	0.4576 ppb	03:46:53
3	Mo 202.031†	7.1	2.2	0.1491	ug/L	0.1491 ppb	03:46:53
3	Ni 231.604†	81.2	-0.6	-0.0143	ug/L	-0.0143 ppb	03:46:53
3	P 214.914†	250.8	37.8	19.362	ug/L	19.362 ppb	03:46:53
3	Pb 220.353†	-69.9	6.8	0.7344	ug/L	0.7344 ppb	03:46:53
3	S 181.975 Axial†	52.0	5.2	6.4121	ug/L	6.4121 ppb	03:46:53
3	Sb 206.836†	62.1	26.2	8.0269	ug/L	8.0269 ppb	03:46:53
3	Se 196.026†	-27.4	-2.5	-1.3266	ug/L	-1.3266 ppb	03:46:53
3	Si 251.611†	602.0	90.7	2.6982	ug/L	2.6982 ppb	03:46:53
3	Sn 189.927†	12.9	4.0	0.6532	ug/L	0.6532 ppb	03:46:53
3	Ti 334.940†	-1572.1	168.3	0.2330	ug/L	0.2330 ppb	03:46:33
3	Tl 190.801†	-39.2	3.7	1.0421	ug/L	1.0421 ppb	03:46:53
3	U 409.014†	-3943.8	1008.9	29.796	ug/L	29.796 ppb	03:46:28
3	V 292.402†	-1607.9	78.9	0.5824	ug/L	0.5824 ppb	03:46:33
3	Zn 213.857†	912.1	240.1	2.0336	ug/L	2.0336 ppb	03:46:53
3	SiO2†	577.9	39.2	2.4931	ug/L	2.4931 ppb	03:47:08

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	853650.9	95.827	%	0.3215				0.34%
Sc Radial	4376.2	106	%	0.8				0.80%
Y 371.029	692235.8	94.278	%	0.2001				0.21%
Y RADIAL	4929.3	101.8	%	0.76				0.75%
Ag 328.068†	-172.8	-0.7749	ug/L	0.33696	-0.7749	ppb	0.33696	43.49%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	1.7	1.3835	ug/L	8.90738	1.3835	ppb	8.90738	643.81%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-10.1	-3.8810	ug/L	3.02327	-3.8810	ppb	3.02327	77.90%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	188.4	3.9384	ug/L	0.27828	3.9384	ppb	0.27828	7.07%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-8.6	-0.0619	ug/L	0.07396	-0.0619	ppb	0.07396	119.58%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	33.8	0.0119	ug/L	0.00938	0.0119	ppb	0.00938	78.50%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	12.9	23.852	ug/L	3.3905	23.852	ppb	3.3905	14.21%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                2.8      0.0340 ug/L       0.13517      0.0340 ppb        0.13517 398.08%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -11.9     -0.2190 ug/L       0.20111     -0.2190 ppb        0.20111  91.83%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               66.6      0.6766 ug/L       0.40779      0.6766 ppb        0.40779  60.27%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              413.5      1.1362 ug/L       0.10461      1.1362 ppb        0.10461   9.21%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         0.3      3.5051 ug/L      19.23092      3.5051 ppb       19.23092 548.65%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         97.9      18.582 ug/L        5.8838      18.582 ppb         5.8838  31.66%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            2.3      95.569 ug/L       83.6703      95.569 ppb        83.6703  87.55%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              246.4      0.2436 ug/L       0.18632      0.2436 ppb        0.18632  76.47%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                6.1      0.4031 ug/L       0.43520      0.4031 ppb        0.43520 107.96%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       389.5      120.04 ug/L         4.049      120.04 ppb          4.049   3.37%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               -0.9     -0.0208 ug/L       0.25303     -0.0208 ppb        0.25303 >999.9%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                40.0      20.563 ug/L        2.8371      20.563 ppb         2.8371  13.80%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               20.7      2.2231 ug/L       1.29107      2.2231 ppb        1.29107  58.08%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†           7.1      8.6820 ug/L       2.75608      8.6820 ppb        2.75608  31.74%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               13.5      4.1489 ug/L       4.15746      4.1489 ppb        4.15746 100.21%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -2.0     -1.1171 ug/L       0.23091     -1.1171 ppb        0.23091  20.67%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               36.1      1.0699 ug/L       1.51058      1.0699 ppb        1.51058 141.18%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                6.7      1.0855 ug/L       0.56801      1.0855 ppb        0.56801  52.32%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               -7.2     -0.0477 ug/L       0.11327     -0.0477 ppb        0.11327 237.50%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              181.1      0.2546 ug/L       0.09283      0.2546 ppb        0.09283  36.45%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -2.4     -0.6620 ug/L       3.71486     -0.6620 ppb        3.71486 561.19%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               856.0      25.282 ug/L        4.5452      25.282 ppb         4.5452  17.98%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                43.1      0.3414 ug/L       0.26925      0.3414 ppb        0.26925  78.87%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              214.8      1.8207 ug/L       0.18962      1.8207 ppb        0.18962  10.41%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     -8.1     -0.5270 ug/L       2.61569     -0.5270 ppb        2.61569 496.38%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, February 09, 2010 11:04:58
Sample Description:
Method File: c:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\100125\Sample.313
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	1553.9	1553.885	29.075	1.9
	Mg	24.0	17663.7	17663.716	284.270	1.6
	Co	58.9	66421.1	66421.076	907.488	1.4
	Rh	102.9	138078.3	138078.331	1252.315	0.9
	In	114.9	180102.9	180102.873	1794.208	1.0
	Pb	208.0	66476.9	66476.926	694.901	1.0
⌈>	Ba	137.9	144033.9	144033.876	1349.029	0.9
⌊	Ba++	69.0	1901.0	0.013	0.000	1.8
⌈>	Ce	139.9	169135.3	169135.282	2242.228	1.3
⌊	CeO	155.9	4914.7	0.029	0.000	1.3
	Bkgd	220.0	1.6	1.600	0.742	46.4

Current Optimization File Data

Current Value	Description
0.93	Nebulizer Gas Flow
4.50	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	17	4.3	1371.4
Co	59	17	5.0	56445.6
In	115	17	5.5	148438.2

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	0.697
Be	9.0	9.0	2029	2045	0.715
Mg	24.0	24.0	5664	2065	0.656
Mg	25.0	24.9	5927	2080	0.719
Mg	26.0	26.0	6142	2085	0.632
Co	58.9	58.9	14170	2140	0.663
Rh	102.9	102.9	24866	2230	0.674
In	114.9	114.9	27761	2255	0.675
Ce	139.9	139.9	33840	2310	0.646
Pb	206.0	206.0	49933	2500	0.588
Pb	207.0	207.0	50101	2375	0.613
Pb	208.0	208.0	50436	2570	0.575
U	238.1	238.0	57683	2510	0.636

ICPMS#4 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, February 09, 2010 20:52:13
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\Blank.215

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		209350	
	U	238		ug/L		516	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Simple Linear	
U	238	Simple 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	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: Tuesday, February 09, 2010 20:54:25
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only no Irs.mth
Dataset File: C:\elandata\Dataset\100209\Standard 1.216

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		214623	214622.728
⌊	U	238	10.000	ug/L	1.088	155198	0.721

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear 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	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, February 09, 2010 20:56:34
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only no Irs.mth
Dataset File: C:\elandata\Dataset\100209\Standard 2.217

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		198727	198726.923
	U	238	100.028	ug/L	2.051	1474056	7.417

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear 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	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, February 09, 2010 20:58:44
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only no Irs.mth
Dataset File: C:\elandata\Dataset\100209\QC Std 1.218

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		210065	210064.972
⌊	U	238	49.845	ug/L	0.635	776838	3.696

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		100.3			
⌊	U	238	99.689				

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: QC Std 2
Sample Date/Time: Tuesday, February 09, 2010 21:00:56
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\QC Std 2.219

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		204420	204420.309
⌊	U	238	0.021	ug/L	5.620	824	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		97.6			
⌊	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: QC Std 3
Sample Date/Time: Tuesday, February 09, 2010 21:03:08
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\QC Std 3.220

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		200242	200241.832
⌊	U	238	0.207	ug/L	33.331	3489	0.015

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175			95.6		
⌊	U	238	103.465				

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: QC Std 4
Sample Date/Time: Tuesday, February 09, 2010 21:05:19
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\QC Std 4.221

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		186840	186840.126
⌊	U	238	-0.025	ug/L	4.434	119	-0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		89.2			
⌊	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: QC Std 5
Sample Date/Time: Tuesday, February 09, 2010 21:07:31
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only no irs.mth
Dataset File: C:\elandata\Dataset\100209\QC Std 5.222

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		186429	186428.749
⌊	U	238	19.181	ug/L	0.450	265593	1.422

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		89.1			
⌊	U	238	95.905				

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: QC Std 6
Sample Date/Time: Tuesday, February 09, 2010 21:09:43
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\QC Std 6.223

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		188776	188775.602
⌊	U	238	54.266	ug/L	4.622	759067	4.024

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		90.2			
⌊	U	238	108.532				

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: QC Std 7
Sample Date/Time: Tuesday, February 09, 2010 21:11:56
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\QC Std 7.224

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		185230	185230.049
⌊	U	238	0.024	ug/L	70.695	755	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		88.5			
⌊	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: 1202037284
Sample Date/Time: Tuesday, February 09, 2010 21:14:11
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 950661|2|skj
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\1202037284.225

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		205324	205324.058
⌊	U	238	-0.023	ug/L	2.165	154	-0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		98.1			
⌊	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: 1202037289
Sample Date/Time: Tuesday, February 09, 2010 21:16:28
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 950661|40|skj
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\1202037289.226

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		209227	209227.166
	U	238	0.360	ug/L	1.505	6095	0.027

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		99.9			
	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: 1202037285
Sample Date/Time: Tuesday, February 09, 2010 21:21:03
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 950661|2|skj
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\1202037285.228

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		209194	209193.966
	U	238	8.949	ug/L	0.981	139315	0.664

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		99.9			
	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: 1202037287
Sample Date/Time: Tuesday, February 09, 2010 21:23:19
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 950661|2|skj
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\1202037287.229

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		216666	216665.910
⌊	U	238	32.096	ug/L	1.037	516110	2.380

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		103.5			
⌊	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: 1202037288
Sample Date/Time: Tuesday, February 09, 2010 21:25:35
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 950661|2|skj
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\1202037288.230

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		216216	216215.504
	U	238	32.748	ug/L	0.186	525526	2.428

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		103.3			
	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: 1202037286
Sample Date/Time: Tuesday, February 09, 2010 21:27:51
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 950661|10|skj
Method File: c:\elandata\Method\u only no irs.mth
Dataset File: C:\elandata\Dataset\100209\1202037286.231

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		208548	208548.453
⌊	U	238	1.697	ug/L	1.344	26753	0.126

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		99.6			
⌊	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: QC Std 6
Sample Date/Time: Tuesday, February 09, 2010 21:30:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\QC Std 6.232

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		209522	209522.328
	U	238	49.264	ug/L	0.481	765789	3.653

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		100.1			
	U	238	98.528				

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: QC Std 7
Sample Date/Time: Tuesday, February 09, 2010 21:32:18
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only no Irs.mth
Dataset File: C:\elandata\Dataset\100209\QC Std 7.233

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		198052	198052.118
⌊	U	238	0.019	ug/L	14.595	769	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		94.6			
⌊	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: 244852001
Sample Date/Time: Tuesday, February 09, 2010 21:41:27
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 950661|2|skj
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\244852001.237

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		208546	208545.672
[	U	238	5.707	ug/L	1.099	88756	0.423

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		99.6			
[	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: 244852002
Sample Date/Time: Tuesday, February 09, 2010 21:43:44
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 950661|2|skj
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\244852002.238

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		206198	206197.989
⌊	U	238	4.049	ug/L	0.784	62418	0.300

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		98.5			
⌊	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: 244852003
Sample Date/Time: Tuesday, February 09, 2010 21:46:00
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 950661|2|skj
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\244852003.239

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		201925	201924.737
[	U	238	5.370	ug/L	1.585	80896	0.398

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		96.5			
[	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: QC Std 6
Sample Date/Time: Tuesday, February 09, 2010 21:48:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\QC Std 6.240

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		208050	208049.802
⌊	U	238	48.730	ug/L	0.377	752209	3.613

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		99.4			
⌊	U	238	97.460				

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: QC Std 7
Sample Date/Time: Tuesday, February 09, 2010 21:50:27
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\QC Std 7.241

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		198195	198194.675
⌊	U	238	0.018	ug/L	9.536	755	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear 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	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 244852004
Sample Date/Time: Tuesday, February 09, 2010 21:52:43
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 950661|2|skj
Method File: c:\elandata\Method\u only no irs.mth
Dataset File: C:\elandata\Dataset\100209\244852004.242

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		198400	198399.520
⌊	U	238	13.952	ug/L	0.882	205716	1.034

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		94.8			
⌊	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: QC Std 6
Sample Date/Time: Tuesday, February 09, 2010 22:04:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only no lrs.mth
Dataset File: C:\elandata\Dataset\100209\QC Std 6.247

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈>	Lu	175		ug/L		204137	204136.604
⌊	U	238	49.191	ug/L	0.540	745012	3.647

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Lu	175		97.5			
⌊	U	238	98.381				

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: QC Std 7
Sample Date/Time: Tuesday, February 09, 2010 22:06:24
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\u only no Irs.mth
Dataset File: C:\elandata\Dataset\100209\QC Std 7.248

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		192470	192470.162
	U	238	0.016	ug/L	9.267	700	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Lu	175		91.9			
	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: Sunday, February 07, 2010 10:49:08
Sample Description:
Method File: c:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.416
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	5210.6	5210.550	72.223	1.4
	Mg	24.0	60809.6	60809.556	527.059	0.9
	Co	58.9	109400.5	109400.522	924.040	0.8
	Rh	102.9	186396.6	186396.615	1564.265	0.8
	In	114.9	258539.8	258539.829	2000.285	0.8
	Pb	208.0	240198.7	240198.694	2632.240	1.1
[>	Ba	137.9	228475.0	228474.993	1061.131	0.5
[	Ba++	69.0	5556.6	0.024	0.000	0.9
[>	Ce	139.9	282158.2	282158.181	3673.070	1.3
[	CeO	155.9	8137.4	0.029	0.001	3.3
	Bkgd	220.0	19.8	19.800	4.396	22.2

Current Optimization File Data

Current Value	Description
0.90	Nebulizer Gas Flow
10.25	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	10.5	5965.9
Co	59	19	11.0	105652.6
In	115	19	12.0	259194.6

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	595	2060	0.623
Be	9.0	9.0	2049	2080	0.602
Mg	24.0	24.0	5687	2090	0.564
Mg	25.0	25.0	5951	2085	0.601
Mg	26.0	26.0	6162	2085	0.603
Co	58.9	59.0	14192	2115	0.601
Rh	102.9	102.9	24880	2175	0.579
In	114.9	114.9	27794	2190	0.601
Ce	139.9	139.9	33866	2210	0.603
Pb	206.0	206.0	49948	2300	0.600
Pb	207.0	207.0	50159	2245	0.611
Pb	208.0	208.0	50463	2280	0.671
U	238.1	238.0	57727	2300	0.666

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Monday, February 08, 2010 01:25:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\Blank.247

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		73	
	Be	9		ug/L		18	
	B	11		ug/L		377	
	Na	23		ug/L		13006	
	Mg	24		ug/L		3334	
	Al	27		ug/L		6001	
	P	31		ug/L		8837	
	K	39		ug/L		455837	
	Ca	43		ug/L		348	
>	Sc	45		ug/L		1527458	
	Ti	47		ug/L		352	
	V	51		ug/L		7766	
	Cr	52		ug/L		2599	
	Cr	53		ug/L		111664	
	Mn	55		ug/L		1249	
	Fe	57		ug/L		5560	
	Co	59		ug/L		116	
	Ni	60		ug/L		163	
	Cu	63		ug/L		314	
	Cu	65		ug/L		186	
	Zn	66		ug/L		465	
	Zn	67		ug/L		13404	
	Zn	68		ug/L		1428	
>	Ge	74		ug/L		405769	
	As	75		ug/L		-165	
	Se	77		ug/L		5681	
	Se	82		ug/L		22	
	Kr	83		ug/L		104	
	Sr	88		ug/L		281	
	Y	89		ug/L		56	
	Mo	98		ug/L		111	
	Ag	107		ug/L		46	
	Cd	111		ug/L		22	
	Cd	114		ug/L		51	
>	In	115		ug/L		277023	
	Sn	120		ug/L		219	
	Sb	121		ug/L		393	
	Sb	123		ug/L		291	
	Ba	135		ug/L		40	
	Ba	137		ug/L		55	
	Ho	165		ug/L		23	
>	Lu	175		ug/L		500170	
	Tl	205		ug/L		812	
	Pb	208		ug/L		606	
	Bi	209		ug/L		122	
	Th	232		ug/L		740	
	U	238		ug/L		413	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Simple Linear	
Be	9	Linear Thru Zero	1.0000
B	11	Simple Linear	
Na	23	Simple Linear	
Mg	24	Simple Linear	
Al	27	Simple Linear	
P	31	Simple Linear	
K	39	Simple Linear	
Ca	43	Simple Linear	
Sc	45	Linear Thru Zero	
Ti	47	Simple Linear	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Simple Linear	
Fe	57	Simple Linear	
Co	59	Simple Linear	
Ni	60	Simple Linear	
Cu	63	Simple Linear	
Cu	65	Simple Linear	
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Simple Linear	
Se	77	Simple Linear	
Se	82	Simple Linear	
Kr	83	Simple Linear	
Sr	88	Simple Linear	
Y	89	Simple Linear	
Mo	98	Simple Linear	
Ag	107	Simple Linear	
Cd	111	Simple Linear	
Cd	114	Simple Linear	
In	115	Simple Linear	
Sn	120	Simple Linear	
Sb	121	Simple Linear	
Sb	123	Simple Linear	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Simple Linear	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
Bi	209	Simple Linear	
Th	232	Simple Linear	
U	238	Simple Linear	

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					
	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: Monday, February 08, 2010 01:31:58
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\Standard 1.248

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	10.000	ug/L	0.676	22059	0.014
	Be	9	10.000	ug/L	1.000	4829	0.003
	B	11	20.000	ug/L	2.937	9974	0.006
	Na	23	1000.000	ug/L	1.580	3562557	2.311
	Mg	24	1000.000	ug/L	4.370	2807468	1.826
	Al	27	1000.000	ug/L	8.432	4203377	2.735
	P	31	1000.000	ug/L	1.611	247377	0.155
	K	39	1000.000	ug/L	3.122	5227445	3.104
	Ca	43	1000.000	ug/L	2.306	13132	0.008
>	Sc	45		ug/L		1535737	1535736.716
	Ti	47	10.000	ug/L	2.835	6911	0.004
	V	51	10.000	ug/L	5.250	80445	0.047
	Cr	52	10.000	ug/L	0.912	59525	0.037
	Cr	53		ug/L		119349	0.005
	Mn	55	10.000	ug/L	2.639	97481	0.063
	Fe	57	1000.000	ug/L	0.563	201437	0.128
	Co	59	10.000	ug/L	0.165	75146	0.049
	Ni	60	10.000	ug/L	2.322	16373	0.011
	Cu	63		ug/L		39457	0.025
	Cu	65	10.000	ug/L	1.805	19401	0.013
	Zn	66	10.000	ug/L	0.968	12503	0.030
	Zn	67		ug/L		15519	0.005
	Zn	68		ug/L		10127	0.021
>	Ge	74		ug/L		405790	405790.376
	As	75	10.000	ug/L	1.634	11954	0.030
	Se	77		ug/L		6812	0.003
	Se	82	10.000	ug/L	2.458	1341	0.003
	Kr	83		ug/L		85	-0.000
	Sr	88	10.000	ug/L	0.755	156230	0.556
	Y	89		ug/L		73	0.000
	Mo	98	10.000	ug/L	1.378	36730	0.131
	Ag	107	10.000	ug/L	1.531	67604	0.241
	Cd	111	10.000	ug/L	2.471	16575	0.059
	Cd	114		ug/L		40076	0.143
>	In	115		ug/L		280578	280577.919
	Sn	120	10.000	ug/L	2.807	71617	0.255
	Sb	121	10.000	ug/L	0.444	56895	0.201
	Sb	123		ug/L		44611	0.158
	Ba	135		ug/L		17318	0.034
	Ba	137	10.000	ug/L	1.743	30473	0.061
	Ho	165		ug/L		22	-0.000
>	Lu	175		ug/L		501359	501359.216
	Tl	205	10.000	ug/L	1.884	235259	0.468
	Pb	208	10.000	ug/L	1.495	384622	0.766
	Bi	209		ug/L		174	0.000
	Th	232	10.000	ug/L	1.894	469217	0.934
	U	238	10.000	ug/L	0.908	476250	0.949

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

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					
	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: Monday, February 08, 2010 01:38:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\Standard 2.249

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.014**	ug/L	1.633	216800	0.145
	Be	9	**99.999**	ug/L	2.805	46748	0.031
	B	11	**200.032**	ug/L	3.811	95127	0.063
	Na	23	**10001.506**	ug/L	11.237	35038039	23.468
	Mg	24	**9999.009**	ug/L	4.219	26989444	18.079
	Al	27	**9993.517**	ug/L	4.507	38319724	25.669
	P	31	**9997.538**	ug/L	3.118	2270499	1.515
	K	39	**10001.426**	ug/L	1.887	47461692	31.498
	Ca	43	**9997.216**	ug/L	1.136	121211	0.081
>	Sc	45		ug/L		1492718	1492717.700
	Ti	47	**99.998**	ug/L	1.088	63983	0.043
	V	51	**99.983**	ug/L	2.474	701291	0.465
	Cr	52	**99.985**	ug/L	2.155	547416	0.365
	Cr	53		ug/L		166652	0.039
	Mn	55	**99.924**	ug/L	2.071	870121	0.582
	Fe	57	**9984.853**	ug/L	1.137	1656103	1.106
	Co	59	**99.940**	ug/L	0.303	687683	0.461
	Ni	60	**99.967**	ug/L	2.071	152618	0.102
	Cu	63		ug/L		356891	0.239
	Cu	65	**99.949**	ug/L	1.463	177751	0.119
	Zn	66	**99.976**	ug/L	1.557	114488	0.290
	Zn	67		ug/L		31564	0.047
	Zn	68		ug/L		83987	0.210
>	Ge	74		ug/L		393801	393801.412
	As	75	**99.987**	ug/L	1.921	115951	0.295
	Se	77		ug/L		14315	0.022
	Se	82	**99.936**	ug/L	0.736	12050	0.031
	Kr	83		ug/L		107	0.000
	Sr	88	**99.912**	ug/L	1.387	1356704	5.105
	Y	89		ug/L		174	0.000
	Mo	98	**100.026**	ug/L	1.163	356251	1.340
	Ag	107	**99.954**	ug/L	1.581	611785	2.302
	Cd	111	**99.996**	ug/L	1.647	156178	0.588
	Cd	114		ug/L		367696	1.384
>	In	115		ug/L		265734	265733.785
	Sn	120	**99.964**	ug/L	1.466	652814	2.456
	Sb	121	**99.983**	ug/L	2.145	526507	1.980
	Sb	123		ug/L		414540	1.559
	Ba	135		ug/L		164556	0.343
	Ba	137	**99.983**	ug/L	0.915	286072	0.596
	Ho	165		ug/L		25	0.000
>	Lu	175		ug/L		479562	479562.392
	Tl	205	**99.785**	ug/L	1.239	1842466	3.841
	Pb	208	**99.862**	ug/L	1.269	3222310	6.719
	Bi	209		ug/L		387	0.001
	Th	232	**99.761**	ug/L	1.640	3608832	7.525
	U	238	**99.749**	ug/L	1.590	3630553	7.570

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

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					
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: QC Std 1
Sample Date/Time: Monday, February 08, 2010 01:44:07
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 1.250

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.137**	ug/L	1.991	113829	0.076
	Be	9	**51.548**	ug/L	0.580	24274	0.016
	B	11	**106.600**	ug/L	3.969	51226	0.034
	Na	23	**5059.871**	ug/L	9.239	17855513	11.873
	Mg	24	**5082.175**	ug/L	3.394	13813216	9.189
	Al	27	**5331.991**	ug/L	7.251	20591381	13.696
	P	31	**4791.521**	ug/L	0.121	1100233	0.726
	K	39	**4822.354**	ug/L	4.330	23273785	15.187
	Ca	43	**4990.531**	ug/L	2.266	61086	0.040
>	Sc	45		ug/L		1502822	1502822.440
	Ti	47	**50.372**	ug/L	1.216	32620	0.021
	V	51	**50.646**	ug/L	3.387	361435	0.235
	Cr	52	**50.719**	ug/L	1.324	280852	0.185
	Cr	53		ug/L		135348	0.017
	Mn	55	**53.177**	ug/L	0.372	466812	0.310
	Fe	57	**5400.185**	ug/L	2.657	904293	0.598
	Co	59	**50.897**	ug/L	0.776	352642	0.235
	Ni	60	**51.825**	ug/L	1.065	79740	0.053
	Cu	63		ug/L		184229	0.122
	Cu	65	**50.987**	ug/L	1.070	91391	0.061
	Zn	66	**51.983**	ug/L	1.454	60135	0.151
	Zn	67		ug/L		22334	0.023
	Zn	68		ug/L		44320	0.108
>	Ge	74		ug/L		396345	396344.512
	As	75	**48.504**	ug/L	0.883	56533	0.143
	Se	77		ug/L		9872	0.011
	Se	82	**49.333**	ug/L	1.182	5998	0.015
	Kr	83		ug/L		107	0.000
	Sr	88	**53.680**	ug/L	1.516	733282	2.743
	Y	89		ug/L		88	0.000
	Mo	98	**49.584**	ug/L	1.244	177681	0.664
	Ag	107	**51.845**	ug/L	1.898	319154	1.194
	Cd	111	**50.919**	ug/L	1.513	80003	0.299
	Cd	114		ug/L		190991	0.714
>	In	115		ug/L		267295	267294.859
	Sn	120	**52.371**	ug/L	1.870	344097	1.287
	Sb	121	**52.825**	ug/L	1.126	280006	1.046
	Sb	123		ug/L		218334	0.816
	Ba	135		ug/L		83781	0.169
	Ba	137	**50.142**	ug/L	1.002	148264	0.299
	Ho	165		ug/L		51	0.000
>	Lu	175		ug/L		495487	495487.307
	Tl	205	**53.162**	ug/L	2.440	1014628	2.046
	Pb	208	**53.377**	ug/L	0.275	1779945	3.591
	Bi	209		ug/L		453	0.001
	Th	232	**51.712**	ug/L	0.609	1933317	3.900
	U	238	**52.031**	ug/L	1.700	1956942	3.949

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	104.273				
	Be	9	103.096				
	B	11	106.600				
	Na	23	101.197				
	Mg	24	101.644				
	Al	27	105.584				
	P	31	95.830				
	K	39	96.447				
	Ca	43	99.811				
>	Sc	45		98.4			
	Ti	47	100.745				
	V	51	101.292				
	Cr	52	101.438				
	Cr	53					
	Mn	55	106.354				
	Fe	57	108.004				
	Co	59	101.795				
	Ni	60	103.649				
	Cu	63					
	Cu	65	101.973				
	Zn	66	103.966				
	Zn	67					
	Zn	68					
>	Ge	74		97.7			
	As	75	97.008				
	Se	77					
	Se	82	98.665				
	Kr	83					
	Sr	88	107.360				
	Y	89					
	Mo	98	99.168				
	Ag	107	103.690				
	Cd	111	101.838				
	Cd	114					
>	In	115		96.5			
	Sn	120	104.742				
	Sb	121	105.651				
	Sb	123					
	Ba	135					
	Ba	137	100.284				
	Ho	165					
>	Lu	175		99.1			
	Tl	205	106.325				
	Pb	208	106.754				
	Bi	209					
	Th	232	103.423				
	U	238	104.062				

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 2
Sample Date/Time: Monday, February 08, 2010 01:50:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 2.251

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.018**	**ug/L**	40.894	110	0.000
	Be	9	**-0.008**	**ug/L**	159.361	14	-0.000
	B	11	**4.453**	**ug/L**	20.533	2483	0.001
	Na	23	**2.933**	**ug/L**	32.912	23019	0.007
	Mg	24	**0.144**	**ug/L**	382.152	3667	0.000
	Al	27	**-0.135**	**ug/L**	327.884	5334	-0.000
	P	31	**-2.864**	**ug/L**	67.650	8016	-0.000
	K	39	**-6.629**	**ug/L**	85.859	415630	-0.021
	Ca	43	**-2.729**	**ug/L**	96.009	308	-0.000
>	Sc	45		**ug/L**		1499491	1499490.621
	Ti	47	**-0.017**	**ug/L**	199.957	334	-0.000
	V	51	**0.050**	**ug/L**	1055.717	7941	0.000
	Cr	52	**-0.096**	**ug/L**	133.843	2027	-0.000
	Cr	53		**ug/L**		104271	-0.004
	Mn	55	**-0.009**	**ug/L**	87.678	1148	-0.000
	Fe	57	**-1.813**	**ug/L**	72.378	5152	-0.000
	Co	59	**0.002**	**ug/L**	61.631	131	0.000
	Ni	60	**0.005**	**ug/L**	81.610	168	0.000
	Cu	63		**ug/L**		333	0.000
	Cu	65	**0.007**	**ug/L**	190.421	195	0.000
	Zn	66	**0.001**	**ug/L**	1299.916	457	0.000
	Zn	67		**ug/L**		12503	-0.002
	Zn	68		**ug/L**		1347	-0.000
>	Ge	74		**ug/L**		397418	397417.947
	As	75	**-0.383**	**ug/L**	68.966	-608	-0.001
	Se	77		**ug/L**		5531	-0.000
	Se	82	**0.043**	**ug/L**	62.673	27	0.000
	Kr	83		**ug/L**		93	-0.000
	Sr	88	**0.002**	**ug/L**	126.954	296	0.000
	Y	89		**ug/L**		50	-0.000
	Mo	98	**0.027**	**ug/L**	19.057	206	0.000
	Ag	107	**0.003**	**ug/L**	27.576	63	0.000
	Cd	111	**-0.000**	**ug/L**	2442.395	21	-0.000
	Cd	114		**ug/L**		56	0.000
>	In	115		**ug/L**		271642	271641.532
	Sn	120	**0.017**	**ug/L**	40.445	329	0.000
	Sb	121	**0.543**	**ug/L**	17.284	3302	0.011
	Sb	123		**ug/L**		2604	0.009
	Ba	135		**ug/L**		46	0.000
	Ba	137	**0.000**	**ug/L**	1254.203	57	0.000
	Ho	165		**ug/L**		28	0.000
>	Lu	175		**ug/L**		501405	501405.206
	Tl	205	**0.096**	**ug/L**	20.347	2674	0.004
	Pb	208	**0.003**	**ug/L**	31.988	719	0.000
	Bi	209		**ug/L**		113	-0.000
	Th	232	**0.035**	**ug/L**	42.360	2054	0.003
	U	238	**0.006**	**ug/L**	33.855	629	0.000

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	0.9997
U	238Linear Thru Zero	0.9997

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		98.2			
	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		97.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		98.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		100.2			
	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: QC Std 3
Sample Date/Time: Monday, February 08, 2010 01:56:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 3.252

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**11.445**	ug/L	2.504	24799	0.017
	Be	9	**0.569**	ug/L	2.234	283	0.000
	B	11	**17.683**	ug/L	2.964	8721	0.006
	Na	23	**295.767**	ug/L	7.469	1045349	0.694
	Mg	24	**15.419**	ug/L	8.316	44737	0.028
	Al	27	**35.726**	ug/L	9.255	142376	0.092
	P	31	**51.705**	ug/L	4.499	20273	0.008
	K	39	**328.237**	ug/L	4.490	1982241	1.034
	Ca	43	**217.463**	ug/L	4.121	2960	0.002
>	Sc	45		ug/L		1488119	1488119.134
	Ti	47	**8.959**	ug/L	2.108	6026	0.004
	V	51	**11.364**	ug/L	4.004	86171	0.053
	Cr	52	**11.292**	ug/L	0.783	63887	0.041
	Cr	53		ug/L		115490	0.005
	Mn	55	**6.029**	ug/L	2.210	53479	0.035
	Fe	57	**125.101**	ug/L	1.341	26035	0.014
	Co	59	**1.167**	ug/L	1.797	8117	0.005
	Ni	60	**2.271**	ug/L	2.130	3611	0.002
	Cu	63		ug/L		4479	0.003
	Cu	65	**1.156**	ug/L	1.894	2228	0.001
	Zn	66	**11.303**	ug/L	2.311	13331	0.033
	Zn	67		ug/L		14856	0.005
	Zn	68		ug/L		10200	0.022
>	Ge	74		ug/L		393469	393469.173
	As	75	**5.501**	ug/L	6.319	6219	0.016
	Se	77		ug/L		6315	0.002
	Se	82	**5.652**	ug/L	2.085	701	0.002
	Kr	83		ug/L		93	-0.000
	Sr	88	**11.886**	ug/L	1.490	167492	0.607
	Y	89		ug/L		54	-0.000
	Mo	98	**0.530**	ug/L	2.820	2067	0.007
	Ag	107	**1.059**	ug/L	1.405	6764	0.024
	Cd	111	**1.101**	ug/L	2.920	1803	0.006
	Cd	114		ug/L		4266	0.015
>	In	115		ug/L		275334	275334.471
	Sn	120	**5.576**	ug/L	2.217	37941	0.137
	Sb	121	**3.399**	ug/L	0.616	18927	0.067
	Sb	123		ug/L		14953	0.053
	Ba	135		ug/L		3723	0.007
	Ba	137	**2.141**	ug/L	0.570	6420	0.013
	Ho	165		ug/L		25	0.000
>	Lu	175		ug/L		498293	498292.746
	Tl	205	**1.291**	ug/L	0.697	25575	0.050
	Pb	208	**2.482**	ug/L	1.175	83808	0.167
	Bi	209		ug/L		132	0.000
	Th	232	**1.383**	ug/L	1.127	52705	0.104
	U	238	**0.291**	ug/L	0.924	11418	0.022

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	114.454				
	Be	9	113.803				
	B	11	117.889				
	Na	23	118.307				
	Mg	24	102.793				
	Al	27	119.086				
	P	31	103.411				
	K	39	109.412				
	Ca	43	108.732				
>	Sc	45		97.4			
	Ti	47	89.594				
	V	51	113.639				
	Cr	52	112.923				
	Cr	53					
	Mn	55	120.572				
	Fe	57	125.101				
	Co	59	116.695				
	Ni	60	113.540				
	Cu	63					
	Cu	65	115.580				
	Zn	66	113.029				
	Zn	67					
	Zn	68					
>	Ge	74		97.0			
	As	75	110.012				
	Se	77					
	Se	82	113.048				
	Kr	83					
	Sr	88	118.863				
	Y	89					
	Mo	98	106.036				
	Ag	107	105.939				
	Cd	111	110.076				
	Cd	114					
>	In	115		99.4			
	Sn	120	111.523				
	Sb	121	113.306				
	Sb	123					
	Ba	135					
	Ba	137	107.060				
	Ho	165					
>	Lu	175		99.6			
	Tl	205	129.131				
	Pb	208	124.099				
	Bi	209					
	Th	232	138.274				
	U	238	145.529				

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: Monday, February 08, 2010 02:02:27
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 4.253

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.102**	ug/L	2.988	267	0.000
	Be	9	**0.095**	ug/L	16.356	57	0.000
	B	11	**1.588**	ug/L	9.375	1027	0.001
	Na	23	**98123.646**	ug/L	1.249	314829600	230.245
	Mg	24	**93493.608**	ug/L	1.685	231203280	169.040
	Al	27	**90317.379**	ug/L	4.809	317256192	231.988
	P	31	**87633.643**	ug/L	1.492	18167671	13.284
	K	39	**98557.411**	ug/L	4.272	424830572	310.396
	Ca	43	**92216.908**	ug/L	2.438	1021233	0.747
>	Sc	45		ug/L		1367354	1367354.365
	Ti	47	**1691.416**	ug/L	2.285	985949	0.721
	V	51	**-0.273**	ug/L	6.678	5216	-0.001
	Cr	52	**1.629**	ug/L	3.624	10456	0.006
	Cr	53		ug/L		77970	-0.016
	Mn	55	**6.021**	ug/L	2.803	49064	0.035
	Fe	57	**93663.043**	ug/L	2.319	14184214	10.374
	Co	59	**0.306**	ug/L	5.587	2032	0.001
	Ni	60	**3.356**	ug/L	3.866	4833	0.003
	Cu	63		ug/L		8369	0.006
	Cu	65	**3.512**	ug/L	2.040	5881	0.004
	Zn	66	**4.509**	ug/L	1.006	5043	0.013
	Zn	67		ug/L		11029	-0.002
	Zn	68		ug/L		1876	0.002
>	Ge	74		ug/L		355007	355007.057
	As	75	**0.304**	ug/L	50.387	175	0.001
	Se	77		ug/L		6425	0.004
	Se	82	**-1.313**	ug/L	7.714	-123	-0.000
	Kr	83		ug/L		283	0.001
	Sr	88	**3.211**	ug/L	1.527	39859	0.164
	Y	89		ug/L		459	0.002
	Mo	98	**1887.139**	ug/L	2.004	6105958	25.288
	Ag	107	**0.120**	ug/L	1.357	706	0.003
	Cd	111	**0.588**	ug/L	32.323	853	0.003
	Cd	114		ug/L		10100	0.042
>	In	115		ug/L		241489	241488.908
	Sn	120	**0.286**	ug/L	2.030	1887	0.007
	Sb	121	**0.171**	ug/L	28.487	1161	0.003
	Sb	123		ug/L		903	0.003
	Ba	135		ug/L		1089	0.002
	Ba	137	**0.734**	ug/L	1.324	1937	0.004
	Ho	165		ug/L		9203	0.021
>	Lu	175		ug/L		431699	431699.033
	Tl	205	**0.013**	ug/L	30.726	912	0.000
	Pb	208	**0.237**	ug/L	1.884	7400	0.016
	Bi	209		ug/L		5084	0.012
	Th	232	**0.023**	ug/L	41.104	1387	0.002
	U	238	**-0.004**	ug/L	9.132	223	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

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	98.124				
	Mg	24	93.494				
	Al	27	90.317				
	P	31	87.634				
	K	39	98.557				
	Ca	43	92.217				
>	Sc	45		89.5			
	Ti	47	84.571				
	V	51					
	Cr	52	49.371				
	Cr	53					
	Mn	55	103.812				
	Fe	57	93.663				
	Co	59	130.199				
	Ni	60	101.405				
	Cu	63					
	Cu	65	105.152				
	Zn	66	119.917				
	Zn	67					
	Zn	68					
>	Ge	74		87.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88	108.478				
	Y	89					
	Mo	98	94.357				
	Ag	107					
	Cd	111	132.468				
	Cd	114					
>	In	115		87.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137	91.948				
	Ho	165					
>	Lu	175		86.3			
	Tl	205					
	Pb	208	125.286				
	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 5
Sample Date/Time: Monday, February 08, 2010 02:08:34
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 5.254

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**20.255**	ug/L	0.781	38613	0.029
	Be	9	**18.689**	ug/L	3.095	7685	0.006
	B	11	**19.157**	ug/L	0.891	8295	0.006
	Na	23	**96094.852**	ug/L	3.405	295515949	225.484
	Mg	24	**87443.210**	ug/L	4.372	207233634	158.100
	Al	27	**92023.538**	ug/L	0.207	309864570	236.370
	P	31	**88079.782**	ug/L	0.489	17509903	13.352
	K	39	**97336.623**	ug/L	2.739	402165193	306.551
	Ca	43	**92984.466**	ug/L	1.905	987525	0.753
>	Sc	45		ug/L		1310931	1310931.409
	Ti	47	**1686.870**	ug/L	2.921	942821	0.719
	V	51	**20.824**	ug/L	2.850	133545	0.097
	Cr	52	**22.027**	ug/L	2.459	107638	0.080
	Cr	53		ug/L		86812	-0.007
	Mn	55	**27.476**	ug/L	2.508	210881	0.160
	Fe	57	**94947.349**	ug/L	1.047	13790488	10.516
	Co	59	**20.505**	ug/L	1.711	123984	0.095
	Ni	60	**22.752**	ug/L	0.785	30614	0.023
	Cu	63		ug/L		67130	0.051
	Cu	65	**21.758**	ug/L	1.618	34109	0.026
	Zn	66	**22.825**	ug/L	1.909	23053	0.066
	Zn	67		ug/L		13676	0.007
	Zn	68		ug/L		15330	0.041
>	Ge	74		ug/L		342742	342741.938
	As	75	**20.542**	ug/L	1.550	20624	0.061
	Se	77		ug/L		7595	0.008
	Se	82	**18.612**	ug/L	3.359	1968	0.006
	Kr	83		ug/L		286	0.001
	Sr	88	**25.923**	ug/L	0.484	311045	1.325
	Y	89		ug/L		436	0.002
	Mo	98	**1921.587**	ug/L	0.567	6042339	25.749
	Ag	107	**19.369**	ug/L	1.615	104716	0.446
	Cd	111	**19.660**	ug/L	1.295	27134	0.116
	Cd	114		ug/L		73683	0.314
>	In	115		ug/L		234659	234658.636
	Sn	120	**21.502**	ug/L	1.418	124161	0.528
	Sb	121	**21.621**	ug/L	1.330	100821	0.428
	Sb	123		ug/L		79143	0.336
	Ba	135		ug/L		30178	0.070
	Ba	137	**20.806**	ug/L	2.095	53543	0.124
	Ho	165		ug/L		9240	0.021
>	Lu	175		ug/L		431099	431098.684
	Tl	205	**22.282**	ug/L	2.438	370310	0.858
	Pb	208	**22.132**	ug/L	0.730	642375	1.489
	Bi	209		ug/L		5590	0.013
	Th	232	**24.442**	ug/L	1.791	795214	1.844
	U	238	**25.304**	ug/L	1.450	828117	1.920

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	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	101.273				
	Be	9	93.444				
	B	11	95.785				
	Na	23	96.095				
	Mg	24	87.443				
	Al	27	92.024				
	P	31	88.080				
	K	39	97.337				
	Ca	43	92.984				
>	Sc	45		85.8			
	Ti	47	84.343				
	V	51	104.120				
	Cr	52	94.535				
	Cr	53					
	Mn	55	106.495				
	Fe	57	94.947				
	Co	59	101.335				
	Ni	60	97.605				
	Cu	63					
	Cu	65	93.221				
	Zn	66	96.064				
	Zn	67					
	Zn	68					
>	Ge	74		84.5			
	As	75	102.709				
	Se	77					
	Se	82	93.059				
	Kr	83					
	Sr	88	112.905				
	Y	89					
	Mo	98	96.079				
	Ag	107	96.844				
	Cd	111	96.166				
	Cd	114					
>	In	115		84.7			
	Sn	120	107.512				
	Sb	121	108.106				
	Sb	123					
	Ba	135					
	Ba	137	100.041				
	Ho	165					
>	Lu	175		86.2			
	Tl	205	111.411				
	Pb	208	109.623				
	Bi	209					
	Th	232	122.210				
	U	238	126.521				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	Th	232	ICSAB is out of limits
QC Std 5	U	238	ICSAB is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Monday, February 08, 2010 02:14:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 6.255

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.783**	**ug/L**	1.672	102892	0.074
	Be	9	**49.602**	**ug/L**	1.737	21678	0.016
	B	11	**95.309**	**ug/L**	2.424	42539	0.030
	Na	23	**4790.529**	**ug/L**	5.818	15687000	11.241
	Mg	24	**4755.932**	**ug/L**	4.160	11993670	8.599
	Al	27	**4825.698**	**ug/L**	3.514	17290681	12.395
	P	31	**4433.153**	**ug/L**	2.917	945276	0.672
	K	39	**4355.884**	**ug/L**	0.914	19550706	13.718
	Ca	43	**4692.765**	**ug/L**	2.121	53333	0.038
>	Sc	45		**ug/L**		1394824	1394824.119
	Ti	47	**47.923**	**ug/L**	2.622	28817	0.020
	V	51	**48.039**	**ug/L**	2.564	318544	0.223
	Cr	52	**48.474**	**ug/L**	2.965	249227	0.177
	Cr	53		**ug/L**		120873	0.014
	Mn	55	**50.972**	**ug/L**	1.951	415311	0.297
	Fe	57	**5176.426**	**ug/L**	2.103	804646	0.573
	Co	59	**49.016**	**ug/L**	1.947	315170	0.226
	Ni	60	**49.349**	**ug/L**	1.992	70472	0.050
	Cu	63		**ug/L**		164308	0.118
	Cu	65	**48.877**	**ug/L**	1.752	81310	0.058
	Zn	66	**48.800**	**ug/L**	0.723	53087	0.141
	Zn	67		**ug/L**		19703	0.020
	Zn	68		**ug/L**		38847	0.101
>	Ge	74		**ug/L**		372533	372532.948
	As	75	**46.588**	**ug/L**	1.621	51025	0.137
	Se	77		**ug/L**		8892	0.010
	Se	82	**47.762**	**ug/L**	2.006	5458	0.015
	Kr	83		**ug/L**		93	-0.000
	Sr	88	**49.985**	**ug/L**	2.498	675672	2.554
	Y	89		**ug/L**		109	0.000
	Mo	98	**46.069**	**ug/L**	1.600	163377	0.617
	Ag	107	**48.278**	**ug/L**	1.559	294121	1.112
	Cd	111	**48.185**	**ug/L**	1.895	74923	0.283
	Cd	114		**ug/L**		179789	0.680
>	In	115		**ug/L**		264501	264501.253
	Sn	120	**49.557**	**ug/L**	2.088	322228	1.218
	Sb	121	**49.313**	**ug/L**	2.185	258692	0.977
	Sb	123		**ug/L**		203802	0.770
	Ba	135		**ug/L**		79039	0.156
	Ba	137	**45.926**	**ug/L**	0.602	138552	0.274
	Ho	165		**ug/L**		53	0.000
>	Lu	175		**ug/L**		505529	505529.045
	Tl	205	**51.542**	**ug/L**	2.412	1003512	1.984
	Pb	208	**51.642**	**ug/L**	2.107	1756699	3.474
	Bi	209		**ug/L**		462	0.001
	Th	232	**50.369**	**ug/L**	1.169	1921166	3.799
	U	238	**51.400**	**ug/L**	1.163	1972357	3.901

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	101.566				
	Be	9	99.204				
	B	11	95.309				
	Na	23	95.811				
	Mg	24	95.119				
	Al	27	95.558				
	P	31	88.663				
	K	39	87.118				
	Ca	43	93.855				
>	Sc	45		91.3			
	Ti	47	95.846				
	V	51	96.079				
	Cr	52	96.948				
	Cr	53					
	Mn	55	101.943				
	Fe	57	103.529				
	Co	59	98.031				
	Ni	60	98.697				
	Cu	63					
	Cu	65	97.754				
	Zn	66	97.600				
	Zn	67					
	Zn	68					
>	Ge	74		91.8			
	As	75	93.176				
	Se	77					
	Se	82	95.523				
	Kr	83					
	Sr	88	99.969				
	Y	89					
	Mo	98	92.137				
	Ag	107	96.556				
	Cd	111	96.369				
	Cd	114					
>	In	115		95.5			
	Sn	120	99.114				
	Sb	121	98.627				
	Sb	123					
	Ba	135					
	Ba	137	91.853				
	Ho	165					
>	Lu	175		101.1			
	Tl	205	103.083				
	Pb	208	103.283				
	Bi	209					
	Th	232	100.737				
	U	238	102.801				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	P	31	CCV is out of limits (+/- 10%)
QC Std 6	K	39	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Monday, February 08, 2010 02:20:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 7.256

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.014**	ug/L	63.736	93	0.000
	Be	9	**0.012**	ug/L	197.180	21	0.000
	B	11	**2.844**	ug/L	20.237	1572	0.001
	Na	23	**2.920**	ug/L	73.996	21017	0.007
	Mg	24	**0.812**	ug/L	177.787	5001	0.001
	Al	27	**1.891**	ug/L	40.533	12005	0.005
	P	31	**-2.731**	ug/L	77.951	7345	-0.000
	K	39	**-0.427**	ug/L	1946.585	406051	-0.001
	Ca	43	**0.473**	ug/L	288.115	317	0.000
>	Sc	45		ug/L		1366986	1366986.433
	Ti	47	**0.008**	ug/L	559.917	319	0.000
	V	51	**-0.275**	ug/L	144.443	5204	-0.001
	Cr	52	**-0.551**	ug/L	6.193	-425	-0.002
	Cr	53		ug/L		95223	-0.003
	Mn	55	**-0.009**	ug/L	39.027	1045	-0.000
	Fe	57	**-1.807**	ug/L	11.105	4702	-0.000
	Co	59	**0.002**	ug/L	5.449	119	0.000
	Ni	60	**0.013**	ug/L	36.258	164	0.000
	Cu	63		ug/L		335	0.000
	Cu	65	**0.003**	ug/L	154.872	172	0.000
	Zn	66	**0.011**	ug/L	347.137	431	0.000
	Zn	67		ug/L		11021	-0.003
	Zn	68		ug/L		1168	-0.000
>	Ge	74		ug/L		365474	365474.413
	As	75	**0.025**	ug/L	183.235	-122	0.000
	Se	77		ug/L		5075	-0.000
	Se	82	**-0.059**	ug/L	401.417	13	-0.000
	Kr	83		ug/L		87	-0.000
	Sr	88	**-0.000**	ug/L	666.554	256	-0.000
	Y	89		ug/L		57	0.000
	Mo	98	**0.060**	ug/L	18.373	312	0.001
	Ag	107	**0.004**	ug/L	17.753	67	0.000
	Cd	111	**-0.001**	ug/L	489.508	19	-0.000
	Cd	114		ug/L		54	0.000
>	In	115		ug/L		257865	257864.926
	Sn	120	**0.014**	ug/L	25.566	292	0.000
	Sb	121	**0.251**	ug/L	25.895	1651	0.005
	Sb	123		ug/L		1264	0.004
	Ba	135		ug/L		37	-0.000
	Ba	137	**0.001**	ug/L	316.093	56	0.000
	Ho	165		ug/L		23	0.000
>	Lu	175		ug/L		492537	492537.005
	Tl	205	**0.130**	ug/L	28.929	3260	0.005
	Pb	208	**0.003**	ug/L	21.918	688	0.000
	Bi	209		ug/L		118	-0.000
	Th	232	**0.039**	ug/L	35.370	2181	0.003
	U	238	**0.006**	ug/L	32.200	648	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

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		89.5			
	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		90.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		93.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.5			
	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: Monday, February 08, 2010 02:26:56
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 10.257

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**998.731**	ug/L	1.289	1798612	1.450
	Be	9	**1022.266**	ug/L	2.442	396989	0.320
	B	11	**1.072**	ug/L	17.084	728	0.000
	Na	23	**54095.692**	ug/L	6.199	157414800	126.934
	Mg	24	**48845.815**	ug/L	4.343	109656413	88.315
	Al	27	**51559.113**	ug/L	6.499	164366329	132.434
	P	31	**23582.621**	ug/L	1.822	4441461	3.575
	K	39	**50549.420**	ug/L	3.852	197789336	159.200
	Ca	43	**50180.329**	ug/L	1.476	504454	0.406
>	Sc	45		ug/L		1240716	1240715.865
	Ti	47	**46.264**	ug/L	2.586	24746	0.020
	V	51	**906.860**	ug/L	3.566	5235410	4.216
	Cr	52	**920.184**	ug/L	2.563	4169366	3.360
	Cr	53		ug/L		616798	0.424
	Mn	55	**943.845**	ug/L	2.445	6820375	5.499
	Fe	57	**50866.653**	ug/L	4.365	6990534	5.634
	Co	59	**868.546**	ug/L	3.712	4964017	4.003
	Ni	60	**892.624**	ug/L	2.286	1131339	0.912
	Cu	63		ug/L		2570061	2.072
	Cu	65	**850.903**	ug/L	3.389	1255997	1.013
	Zn	66	**2031.712**	ug/L	2.571	1943502	5.885
	Zn	67		ug/L		365792	1.075
	Zn	68		ug/L		1475079	4.464
>	Ge	74		ug/L		330288	330288.155
	As	75	**892.545**	ug/L	2.356	868939	2.632
	Se	77		ug/L		41874	0.113
	Se	82	**487.991**	ug/L	1.332	49274	0.149
	Kr	83		ug/L		169	0.000
	Sr	88	**962.735**	ug/L	1.510	11507137	49.190
	Y	89		ug/L		457	0.002
	Mo	98	**993.756**	ug/L	2.138	3115156	13.316
	Ag	107	**223.951**	ug/L	0.494	1206657	5.158
	Cd	111	**886.315**	ug/L	0.710	1218621	5.209
	Cd	114		ug/L		2994556	12.801
>	In	115		ug/L		233933	233933.253
	Sn	120	**924.046**	ug/L	2.252	5311274	22.704
	Sb	121	**239.262**	ug/L	0.952	1108873	4.739
	Sb	123		ug/L		881466	3.767
	Ba	135		ug/L		1310371	2.933
	Ba	137	**917.612**	ug/L	3.067	2445330	5.474
	Ho	165		ug/L		364	0.001
>	Lu	175		ug/L		446788	446787.557
	Tl	205	**451.872**	ug/L	0.518	7771279	17.392
	Pb	208	**4682.850**	ug/L	1.717	140748577	315.055
	Bi	209		ug/L		4203	0.009
	Th	232	**2516.718**	ug/L	0.756	84808464	189.826
	U	238	**5229.802**	ug/L	1.830	177321844	396.916

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	99.873				
	Be	9	102.227				
	B	11					
	Na	23	108.191				
	Mg	24	97.692				
	Al	27	103.118				
	P	31	94.330				
	K	39	101.099				
	Ca	43	100.361				
>	Sc	45		81.2			
	Ti	47					
	V	51	90.686				
	Cr	52	92.018				
	Cr	53					
	Mn	55	94.385				
	Fe	57	101.733				
	Co	59	86.855				
	Ni	60	89.262				
	Cu	63					
	Cu	65	85.090				
	Zn	66	81.268				
	Zn	67					
	Zn	68					
>	Ge	74		81.4			
	As	75	89.254				
	Se	77					
	Se	82	97.598				
	Kr	83					
	Sr	88	96.274				
	Y	89					
	Mo	98	99.376				
	Ag	107	89.581				
	Cd	111	88.632				
	Cd	114					
>	In	115		84.4			
	Sn	120	92.405				
	Sb	121	95.705				
	Sb	123					
	Ba	135					
	Ba	137	91.761				
	Ho	165					
>	Lu	175		89.3			
	Tl	205	90.374				
	Pb	208	93.657				
	Bi	209					
	Th	232	100.669				
	U	238	104.596				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 10	Co	59	LRS is out of limits (+/- 10%)
QC Std 10	Ni	60	LRS is out of limits (+/- 10%)
QC Std 10	Cu	65	LRS is out of limits (+/- 10%)
QC Std 10	Zn	66	LRS is out of limits (+/- 10%)
QC Std 10	As	75	LRS is out of limits (+/- 10%)
QC Std 10	Ag	107	LRS is out of limits (+/- 10%)
QC Std 10	Cd	111	LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Monday, February 08, 2010 02:33:01
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 11.258

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**53.842**	ug/L	0.831	110374	0.078
	Be	9	**52.565**	ug/L	0.726	23243	0.016
	B	11	**103.264**	ug/L	2.973	46599	0.033
	Na	23	**5513.140**	ug/L	6.666	18264112	12.936
	Mg	24	**5415.435**	ug/L	2.969	13819114	9.791
	Al	27	**5289.873**	ug/L	7.989	19172019	13.587
	P	31	**4711.582**	ug/L	2.018	1015938	0.714
	K	39	**5018.937**	ug/L	12.498	22741052	15.807
	Ca	43	**5027.634**	ug/L	0.440	57787	0.041
>	Sc	45		ug/L		1411151	1411151.270
	Ti	47	**49.263**	ug/L	1.003	29962	0.021
	V	51	**50.567**	ug/L	3.121	338843	0.235
	Cr	52	**50.762**	ug/L	2.712	263911	0.185
	Cr	53		ug/L		124001	0.015
	Mn	55	**53.022**	ug/L	2.310	437050	0.309
	Fe	57	**5410.200**	ug/L	1.021	850710	0.599
	Co	59	**51.185**	ug/L	2.374	332966	0.236
	Ni	60	**51.293**	ug/L	1.807	74104	0.052
	Cu	63		ug/L		172985	0.122
	Cu	65	**50.348**	ug/L	2.004	84733	0.060
	Zn	66	**51.142**	ug/L	0.863	55853	0.148
	Zn	67		ug/L		21294	0.024
	Zn	68		ug/L		41546	0.108
>	Ge	74		ug/L		374142	374142.068
	As	75	**48.330**	ug/L	2.454	53176	0.143
	Se	77		ug/L		8700	0.009
	Se	82	**49.809**	ug/L	0.872	5716	0.015
	Kr	83		ug/L		102	0.000
	Sr	88	**53.139**	ug/L	1.986	708868	2.715
	Y	89		ug/L		81	0.000
	Mo	98	**49.161**	ug/L	1.318	172035	0.659
	Ag	107	**50.541**	ug/L	2.517	303828	1.164
	Cd	111	**50.295**	ug/L	1.129	77172	0.296
	Cd	114		ug/L		185708	0.711
>	In	115		ug/L		260989	260989.291
	Sn	120	**52.403**	ug/L	0.905	336249	1.288
	Sb	121	**53.770**	ug/L	0.128	278315	1.065
	Sb	123		ug/L		221210	0.847
	Ba	135		ug/L		81316	0.165
	Ba	137	**49.277**	ug/L	1.812	145282	0.294
	Ho	165		ug/L		51	0.000
>	Lu	175		ug/L		494098	494097.671
	Tl	205	**53.648**	ug/L	0.589	1021009	2.065
	Pb	208	**53.963**	ug/L	0.881	1794309	3.631
	Bi	209		ug/L		445	0.001
	Th	232	**52.591**	ug/L	1.420	1960453	3.967
	U	238	**53.973**	ug/L	2.033	2024108	4.096

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	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	107.684				
	Be	9	105.130				
	B	11	103.264				
	Na	23	110.263				
	Mg	24	108.309				
	Al	27	104.750				
	P	31	94.232				
	K	39	100.379				
	Ca	43	100.553				
>	Sc	45		92.4			
	Ti	47	98.526				
	V	51	101.133				
	Cr	52	101.524				
	Cr	53					
	Mn	55	106.045				
	Fe	57	108.204				
	Co	59	102.370				
	Ni	60	102.587				
	Cu	63					
	Cu	65	100.695				
	Zn	66	102.284				
	Zn	67					
	Zn	68					
>	Ge	74		92.2			
	As	75	96.661				
	Se	77					
	Se	82	99.617				
	Kr	83					
	Sr	88	106.277				
	Y	89					
	Mo	98	98.323				
	Ag	107	101.082				
	Cd	111	100.589				
	Cd	114					
>	In	115		94.2			
	Sn	120	104.806				
	Sb	121	107.540				
	Sb	123					
	Ba	135					
	Ba	137	98.554				
	Ho	165					
>	Lu	175		98.8			
	Tl	205	107.296				
	Pb	208	107.925				
	Bi	209					
	Th	232	105.181				
	U	238	107.946				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 11	Na	23	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Monday, February 08, 2010 02:39:08
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 12.259

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.068**	ug/L	3.006	214	0.000
	Be	9	**0.009**	ug/L	109.968	21	0.000
	B	11	**2.839**	ug/L	22.343	1670	0.001
	Na	23	**1.359**	ug/L	44.712	17010	0.003
	Mg	24	**1.078**	ug/L	71.128	6001	0.002
	Al	27	**1.147**	ug/L	45.111	10004	0.003
	P	31	**-4.513**	ug/L	84.778	7414	-0.001
	K	39	**-7.069**	ug/L	45.049	401572	-0.022
	Ca	43	**-1.651**	ug/L	217.327	312	-0.000
>	Sc	45		ug/L		1453993	1453992.744
	Ti	47	**-0.045**	ug/L	85.981	307	-0.000
	V	51	**-0.351**	ug/L	100.980	5020	-0.002
	Cr	52	**-0.477**	ug/L	12.019	-61	-0.002
	Cr	53		ug/L		96015	-0.007
	Mn	55	**-0.012**	ug/L	9.958	1091	-0.000
	Fe	57	**-4.329**	ug/L	15.344	4595	-0.000
	Co	59	**0.014**	ug/L	17.325	207	0.000
	Ni	60	**0.020**	ug/L	25.752	185	0.000
	Cu	63		ug/L		399	0.000
	Cu	65	**0.024**	ug/L	60.671	218	0.000
	Zn	66	**0.040**	ug/L	30.944	486	0.000
	Zn	67		ug/L		12032	-0.002
	Zn	68		ug/L		1316	-0.000
>	Ge	74		ug/L		385122	385121.608
	As	75	**-0.154**	ug/L	66.562	-332	-0.000
	Se	77		ug/L		4832	-0.001
	Se	82	**0.077**	ug/L	81.165	30	0.000
	Kr	83		ug/L		81	-0.000
	Sr	88	**0.005**	ug/L	44.229	350	0.000
	Y	89		ug/L		53	-0.000
	Mo	98	**0.095**	ug/L	8.973	454	0.001
	Ag	107	**0.005**	ug/L	40.933	74	0.000
	Cd	111	**0.014**	ug/L	32.543	43	0.000
	Cd	114		ug/L		74	0.000
>	In	115		ug/L		271512	271511.847
	Sn	120	**0.068**	ug/L	10.162	665	0.002
	Sb	121	**1.160**	ug/L	17.891	6608	0.023
	Sb	123		ug/L		5020	0.017
	Ba	135		ug/L		45	0.000
	Ba	137	**0.010**	ug/L	23.081	87	0.000
	Ho	165		ug/L		22	-0.000
>	Lu	175		ug/L		512092	512092.125
	Tl	205	**0.157**	ug/L	21.489	3921	0.006
	Pb	208	**0.041**	ug/L	19.099	2019	0.003
	Bi	209		ug/L		111	-0.000
	Th	232	**0.093**	ug/L	17.613	4337	0.007
	U	238	**0.069**	ug/L	12.247	3114	0.005

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	0.9997
U	238Linear Thru Zero	0.9997

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		95.2			
	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		94.9			
	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		102.4			
	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: 1202018068
Sample Date/Time: Monday, February 08, 2010 02:45:18
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 942638|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\1202018068.260

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.030**	ug/L	16.525	134	0.000
	Be	9	**0.006**	ug/L	227.321	20	0.000
	B	11	**0.958**	ug/L	13.002	803	0.000
	Na	23	**15.817**	ug/L	26.155	66492	0.037
	Mg	24	**2.079**	ug/L	27.397	8669	0.004
	Al	27	**4.627**	ug/L	47.162	23020	0.012
	P	31	**15.271**	ug/L	2.920	11812	0.002
	K	39	**-6.943**	ug/L	14.135	403280	-0.022
	Ca	43	**8.313**	ug/L	46.130	430	0.000
>	Sc	45		ug/L		1458299	1458299.173
	Ti	47	**0.283**	ug/L	75.831	513	0.000
	V	51	**-0.631**	ug/L	46.751	3117	-0.003
	Cr	52	**0.233**	ug/L	9.592	3721	0.001
	Cr	53		ug/L		77518	-0.020
	Mn	55	**0.830**	ug/L	1.962	8245	0.005
	Fe	57	**59.417**	ug/L	4.872	14902	0.007
	Co	59	**0.017**	ug/L	5.286	227	0.000
	Ni	60	**0.140**	ug/L	12.221	365	0.000
	Cu	63		ug/L		2768	0.002
	Cu	65	**0.670**	ug/L	1.714	1340	0.001
	Zn	66	**1.036**	ug/L	6.754	1570	0.003
	Zn	67		ug/L		9619	-0.008
	Zn	68		ug/L		1982	0.002
>	Ge	74		ug/L		378767	378766.663
	As	75	**-0.134**	ug/L	221.337	-304	-0.000
	Se	77		ug/L		3684	-0.004
	Se	82	**-0.170**	ug/L	84.961	1	-0.000
	Kr	83		ug/L		92	-0.000
	Sr	88	**0.030**	ug/L	8.588	695	0.002
	Y	89		ug/L		100	0.000
	Mo	98	**0.077**	ug/L	7.650	394	0.001
	Ag	107	**0.006**	ug/L	10.159	81	0.000
	Cd	111	**0.008**	ug/L	88.627	34	0.000
	Cd	114		ug/L		66	0.000
>	In	115		ug/L		273668	273668.427
	Sn	120	**1.573**	ug/L	2.680	10791	0.039
	Sb	121	**0.514**	ug/L	28.919	3166	0.010
	Sb	123		ug/L		2464	0.008
	Ba	135		ug/L		207	0.000
	Ba	137	**0.077**	ug/L	9.299	298	0.000
	Ho	165		ug/L		30	0.000
>	Lu	175		ug/L		523007	523007.318
	Tl	205	**0.066**	ug/L	8.480	2183	0.003
	Pb	208	**0.062**	ug/L	14.545	2809	0.004
	Bi	209		ug/L		323	0.000
	Th	232	**0.086**	ug/L	19.404	4162	0.006
	U	238	**0.028**	ug/L	16.743	1549	0.002

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	0.9997
U	238Linear Thru Zero	0.9997

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		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		93.3			
	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		104.6			
	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: 1202018069
Sample Date/Time: Monday, February 08, 2010 02:51:29
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 942638|40|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\1202018069.261

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**2.625**	ug/L	2.131	5540	0.004
	Be	9	**20.946**	ug/L	2.576	9431	0.007
	B	11	**39.180**	ug/L	2.188	18211	0.012
	Na	23	**285.440**	ug/L	5.952	973077	0.670
	Mg	24	**1004.538**	ug/L	5.152	2612833	1.816
	Al	27	**3056.203**	ug/L	7.610	11281949	7.850
	P	31	**202.634**	ug/L	1.902	52398	0.031
	K	39	**1077.797**	ug/L	3.367	5303118	3.394
	Ca	43	**2699.974**	ug/L	1.919	31718	0.022
>	Sc	45		ug/L		1435809	1435808.841
	Ti	47	**102.869**	ug/L	1.864	63283	0.044
	V	51	**32.671**	ug/L	4.291	225251	0.152
	Cr	52	**65.559**	ug/L	2.114	346035	0.239
	Cr	53		ug/L		130700	0.018
	Mn	55	**139.822**	ug/L	2.423	1170391	0.815
	Fe	57	**4432.962**	ug/L	3.419	709952	0.491
	Co	59	**26.038**	ug/L	2.049	172363	0.120
	Ni	60	**38.182**	ug/L	2.308	56152	0.039
	Cu	63		ug/L		159729	0.111
	Cu	65	**45.541**	ug/L	1.564	77990	0.054
	Zn	66	**157.632**	ug/L	4.163	172187	0.457
	Zn	67		ug/L		37274	0.066
	Zn	68		ug/L		124066	0.326
>	Ge	74		ug/L		376389	376389.069
	As	75	**26.829**	ug/L	3.137	29611	0.079
	Se	77		ug/L		11135	0.016
	Se	82	**77.716**	ug/L	4.507	8954	0.024
	Kr	83		ug/L		94	-0.000
	Sr	88	**61.674**	ug/L	2.501	845226	3.151
	Y	89		ug/L		42920	0.160
	Mo	98	**13.417**	ug/L	2.958	48315	0.180
	Ag	107	**6.522**	ug/L	2.288	40328	0.150
	Cd	111	**16.345**	ug/L	2.435	25780	0.096
	Cd	114		ug/L		62716	0.234
>	In	115		ug/L		268212	268212.469
	Sn	120	**7.810**	ug/L	2.541	51668	0.192
	Sb	121	**14.877**	ug/L	2.619	79390	0.295
	Sb	123		ug/L		62632	0.233
	Ba	135		ug/L		80398	0.155
	Ba	137	**45.470**	ug/L	1.407	140330	0.271
	Ho	165		ug/L		3550	0.007
>	Lu	175		ug/L		517141	517140.990
	Tl	205	**34.857**	ug/L	0.483	694651	1.342
	Pb	208	**24.940**	ug/L	1.748	868306	1.678
	Bi	209		ug/L		7480	0.014
	Th	232	**3.530**	ug/L	0.256	138463	0.266
	U	238	**0.679**	ug/L	3.353	27080	0.052

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

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		94.0			
	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		92.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		103.4			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	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: QC Std 8
Sample Date/Time: Monday, February 08, 2010 03:28:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 8.267

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**54.590**	**ug/L**	0.906	104793	0.079
	Be	9	**53.473**	**ug/L**	0.658	22143	0.017
	B	11	**101.005**	**ug/L**	1.489	42709	0.032
	Na	23	**4974.995**	**ug/L**	2.397	15441307	11.674
	Mg	24	**5077.789**	**ug/L**	6.868	12135223	9.181
	Al	27	**4964.722**	**ug/L**	0.459	16859098	12.752
	P	31	**4576.192**	**ug/L**	0.893	924478	0.694
	K	39	**4848.694**	**ug/L**	8.936	20594984	15.270
	Ca	43	**4869.499**	**ug/L**	0.834	52425	0.039
>	Sc	45		**ug/L**		1321592	1321592.240
	Ti	47	**47.817**	**ug/L**	2.203	27249	0.020
	V	51	**49.111**	**ug/L**	2.343	308422	0.228
	Cr	52	**50.299**	**ug/L**	3.307	245034	0.184
	Cr	53		**ug/L**		107803	0.008
	Mn	55	**52.752**	**ug/L**	1.090	407292	0.307
	Fe	57	**5382.682**	**ug/L**	0.689	792674	0.596
	Co	59	**50.899**	**ug/L**	1.314	310152	0.235
	Ni	60	**51.107**	**ug/L**	1.321	69166	0.052
	Cu	63		**ug/L**		162030	0.122
	Cu	65	**49.936**	**ug/L**	1.442	78731	0.059
	Zn	66	**51.082**	**ug/L**	1.352	52189	0.148
	Zn	67		**ug/L**		18003	0.018
	Zn	68		**ug/L**		37713	0.104
>	Ge	74		**ug/L**		349945	349944.853
	As	75	**47.757**	**ug/L**	1.593	49146	0.141
	Se	77		**ug/L**		7791	0.008
	Se	82	**48.785**	**ug/L**	0.442	5237	0.015
	Kr	83		**ug/L**		95	0.000
	Sr	88	**52.340**	**ug/L**	1.442	667967	2.674
	Y	89		**ug/L**		148	0.000
	Mo	98	**48.150**	**ug/L**	2.457	161178	0.645
	Ag	107	**50.158**	**ug/L**	0.386	288434	1.155
	Cd	111	**50.231**	**ug/L**	0.960	73719	0.295
	Cd	114		**ug/L**		174969	0.701
>	In	115		**ug/L**		249645	249645.474
	Sn	120	**51.879**	**ug/L**	1.108	318443	1.275
	Sb	121	**51.721**	**ug/L**	1.401	256094	1.024
	Sb	123		**ug/L**		201052	0.804
	Ba	135		**ug/L**		77892	0.156
	Ba	137	**46.701**	**ug/L**	3.560	138739	0.279
	Ho	165		**ug/L**		62	0.000
>	Lu	175		**ug/L**		497925	497924.726
	Tl	205	**53.149**	**ug/L**	2.747	1019139	2.046
	Pb	208	**53.428**	**ug/L**	1.401	1790184	3.595
	Bi	209		**ug/L**		512	0.001
	Th	232	**52.080**	**ug/L**	3.121	1956047	3.928
	U	238	**53.172**	**ug/L**	2.471	2009306	4.036

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	0.9997
U	238Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	109.180				
	Be	9	106.945				
	B	11	101.005				
	Na	23	99.500				
	Mg	24	101.556				
	Al	27	98.311				
	P	31	91.524				
	K	39	96.974				
	Ca	43	97.390				
>	Sc	45		86.5			
	Ti	47	95.634				
	V	51	98.222				
	Cr	52	100.597				
	Cr	53					
	Mn	55	105.503				
	Fe	57	107.654				
	Co	59	101.798				
	Ni	60	102.213				
	Cu	63					
	Cu	65	99.873				
	Zn	66	102.165				
	Zn	67					
	Zn	68					
>	Ge	74		86.2			
	As	75	95.513				
	Se	77					
	Se	82	97.571				
	Kr	83					
	Sr	88	104.680				
	Y	89					
	Mo	98	96.300				
	Ag	107	100.315				
	Cd	111	100.461				
	Cd	114					
>	In	115		90.1			
	Sn	120	103.758				
	Sb	121	103.442				
	Sb	123					
	Ba	135					
	Ba	137	93.402				
	Ho	165					
>	Lu	175		99.6			
	Tl	205	106.299				
	Pb	208	106.857				
	Bi	209					
	Th	232	104.159				
	U	238	106.345				

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: Monday, February 08, 2010 03:34:36
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 9.268

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.055**	ug/L	4.826	167	0.000
	Be	9	**0.001**	ug/L	1647.564	16	0.000
	B	11	**2.823**	ug/L	20.987	1497	0.001
	Na	23	**1.906**	ug/L	59.465	17010	0.004
	Mg	24	**0.484**	ug/L	231.387	4001	0.001
	Al	27	**0.950**	ug/L	127.301	8336	0.002
	P	31	**-1.419**	ug/L	67.277	7298	-0.000
	K	39	**-13.495**	ug/L	42.574	335233	-0.043
	Ca	43	**-0.541**	ug/L	642.190	293	-0.000
>	Sc	45		ug/L		1309993	1309993.263
	Ti	47	**-0.038**	ug/L	102.350	280	-0.000
	V	51	**-0.545**	ug/L	80.680	3348	-0.003
	Cr	52	**-0.202**	ug/L	24.451	1263	-0.001
	Cr	53		ug/L		81185	-0.011
	Mn	55	**0.013**	ug/L	27.511	1173	0.000
	Fe	57	**-3.535**	ug/L	6.771	4255	-0.000
	Co	59	**0.005**	ug/L	29.210	130	0.000
	Ni	60	**0.000**	ug/L	4151.152	140	0.000
	Cu	63		ug/L		302	0.000
	Cu	65	**-0.007**	ug/L	74.684	148	-0.000
	Zn	66	**0.031**	ug/L	44.047	430	0.000
	Zn	67		ug/L		9881	-0.005
	Zn	68		ug/L		1045	-0.001
>	Ge	74		ug/L		347647	347646.740
	As	75	**-0.178**	ug/L	74.904	-324	-0.001
	Se	77		ug/L		3991	-0.003
	Se	82	**-0.072**	ug/L	71.571	11	-0.000
	Kr	83		ug/L		78	-0.000
	Sr	88	**0.002**	ug/L	44.220	275	0.000
	Y	89		ug/L		69	0.000
	Mo	98	**0.028**	ug/L	17.196	193	0.000
	Ag	107	**0.003**	ug/L	61.802	56	0.000
	Cd	111	**0.013**	ug/L	27.621	39	0.000
	Cd	114		ug/L		50	0.000
>	In	115		ug/L		249254	249254.273
	Sn	120	**0.015**	ug/L	4.465	291	0.000
	Sb	121	**0.276**	ug/L	25.463	1715	0.005
	Sb	123		ug/L		1389	0.005
	Ba	135		ug/L		47	0.000
	Ba	137	**0.003**	ug/L	15.362	63	0.000
	Ho	165		ug/L		18	-0.000
>	Lu	175		ug/L		498437	498436.960
	Tl	205	**0.113**	ug/L	18.115	2976	0.004
	Pb	208	**0.006**	ug/L	41.124	789	0.000
	Bi	209		ug/L		123	0.000
	Th	232	**0.034**	ug/L	24.002	2009	0.003
	U	238	**0.008**	ug/L	9.729	730	0.001

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	0.9997
U	238Linear Thru Zero	0.9997

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		85.8			
	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		85.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		90.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		99.7			
	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: 244852001
Sample Date/Time: Monday, February 08, 2010 04:11:41
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 942638|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\244852001.274

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**35.303**	ug/L	1.894	67925	0.051
	Be	9	**2.218**	ug/L	1.722	935	0.001
	B	11	**7.254**	ug/L	2.283	3375	0.002
	Na	23	**325.008**	ug/L	3.709	1020911	0.763
	Mg	24	**3632.644**	ug/L	4.726	8699613	6.568
	Al	27	**21508.541**	ug/L	4.998	73138153	55.247
	P	31	**277.677**	ug/L	1.220	63389	0.042
	K	39	**3601.793**	ug/L	5.120	15412942	11.343
	Ca	43	**4280.806**	ug/L	0.717	46211	0.035
>	Sc	45		ug/L		1324034	1324033.912
	Ti	47	**723.637**	ug/L	1.528	408781	0.309
	V	51	**28.267**	ug/L	0.911	180715	0.131
	Cr	52	**15.469**	ug/L	2.108	77029	0.056
	Cr	53		ug/L		59795	-0.028
	Mn	55	**685.212**	ug/L	1.671	5286638	3.992
	Fe	57	**27345.357**	ug/L	1.290	4014726	3.029
	Co	59	**6.816**	ug/L	2.196	41693	0.031
	Ni	60	**11.975**	ug/L	1.482	16343	0.012
	Cu	63		ug/L		41997	0.032
	Cu	65	**13.142**	ug/L	0.757	20874	0.016
	Zn	66	**95.412**	ug/L	1.024	91991	0.276
	Zn	67		ug/L		21395	0.032
	Zn	68		ug/L		68624	0.204
>	Ge	74		ug/L		331454	331454.200
	As	75	**5.190**	ug/L	1.535	4938	0.015
	Se	77		ug/L		2196	-0.007
	Se	82	**-0.119**	ug/L	116.310	6	-0.000
	Kr	83		ug/L		173	0.000
	Sr	88	**44.329**	ug/L	1.291	562570	2.265
	Y	89		ug/L		589455	2.374
	Mo	98	**2.479**	ug/L	1.185	8346	0.033
	Ag	107	**0.207**	ug/L	0.811	1226	0.005
	Cd	111	**0.867**	ug/L	6.090	1285	0.005
	Cd	114		ug/L		886	0.003
>	In	115		ug/L		248283	248283.180
	Sn	120	**1.828**	ug/L	1.981	11346	0.045
	Sb	121	**0.218**	ug/L	2.520	1425	0.004
	Sb	123		ug/L		1147	0.004
	Ba	135		ug/L		280369	0.536
	Ba	137	**154.744**	ug/L	2.080	482932	0.923
	Ho	165		ug/L		51732	0.099
>	Lu	175		ug/L		523239	523239.169
	Tl	205	**0.284**	ug/L	2.003	6564	0.011
	Pb	208	**30.540**	ug/L	2.959	1075191	2.055
	Bi	209		ug/L		12636	0.024
	Th	232	**17.631**	ug/L	1.106	696471	1.330
	U	238	**9.405**	ug/L	3.118	373736	0.714

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

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		86.7			
	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		81.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		89.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		104.6			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	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: 244852002
Sample Date/Time: Monday, February 08, 2010 04:17:52
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 942638|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\244852002.275

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**38.931**	ug/L	1.389	72227	0.057
	Be	9	**2.473**	ug/L	2.439	1004	0.001
	B	11	**6.527**	ug/L	2.400	2960	0.002
	Na	23	**395.530**	ug/L	7.147	1195857	0.928
	Mg	24	**3642.028**	ug/L	6.855	8410609	6.585
	Al	27	**21824.689**	ug/L	5.634	71582023	56.059
	P	31	**311.738**	ug/L	1.106	67721	0.047
	K	39	**3381.626**	ug/L	7.857	13978195	10.650
	Ca	43	**4022.753**	ug/L	0.390	41892	0.033
>	Sc	45		ug/L		1276783	1276783.485
	Ti	47	**779.703**	ug/L	0.866	424711	0.332
	V	51	**29.637**	ug/L	0.990	182399	0.138
	Cr	52	**14.974**	ug/L	0.118	71979	0.055
	Cr	53		ug/L		57794	-0.028
	Mn	55	**855.987**	ug/L	0.686	6368371	4.987
	Fe	57	**28938.943**	ug/L	1.856	4097005	3.205
	Co	59	**7.910**	ug/L	1.779	46643	0.036
	Ni	60	**12.252**	ug/L	0.814	16120	0.013
	Cu	63		ug/L		38148	0.030
	Cu	65	**12.728**	ug/L	1.201	19499	0.015
	Zn	66	**105.045**	ug/L	1.449	99261	0.304
	Zn	67		ug/L		21787	0.034
	Zn	68		ug/L		73068	0.221
>	Ge	74		ug/L		325025	325025.005
	As	75	**5.593**	ug/L	2.374	5229	0.016
	Se	77		ug/L		2077	-0.008
	Se	82	**0.106**	ug/L	187.455	28	0.000
	Kr	83		ug/L		160	0.000
	Sr	88	**40.573**	ug/L	1.140	506961	2.073
	Y	89		ug/L		655909	2.684
	Mo	98	**3.207**	ug/L	2.815	10601	0.043
	Ag	107	**0.255**	ug/L	3.847	1474	0.006
	Cd	111	**0.969**	ug/L	3.948	1411	0.006
	Cd	114		ug/L		699	0.003
>	In	115		ug/L		244458	244457.500
	Sn	120	**4.257**	ug/L	4.013	25756	0.105
	Sb	121	**0.220**	ug/L	3.436	1410	0.004
	Sb	123		ug/L		1171	0.004
	Ba	135		ug/L		274479	0.524
	Ba	137	**152.127**	ug/L	1.938	475156	0.908
	Ho	165		ug/L		57367	0.110
>	Lu	175		ug/L		523522	523521.547
	Tl	205	**0.273**	ug/L	1.439	6358	0.011
	Pb	208	**27.207**	ug/L	1.416	958888	1.830
	Bi	209		ug/L		9601	0.018
	Th	232	**19.460**	ug/L	0.359	769199	1.468
	U	238	**4.377**	ug/L	1.382	174343	0.332

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

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		83.6			
	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		80.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		88.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		104.7			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	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: QC Std 8
Sample Date/Time: Monday, February 08, 2010 04:24:01
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 8.276

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**55.698**	**ug/L**	1.068	103878	0.081
	Be	9	**54.904**	**ug/L**	1.872	22090	0.017
	B	11	**101.806**	**ug/L**	3.764	41821	0.032
	Na	23	**5116.117**	**ug/L**	1.623	15425283	12.005
	Mg	24	**5021.923**	**ug/L**	3.152	11660431	9.080
	Al	27	**4853.676**	**ug/L**	1.148	16011128	12.467
	P	31	**4580.636**	**ug/L**	2.294	899060	0.694
	K	39	**5337.949**	**ug/L**	14.848	21987355	16.811
	Ca	43	**4932.825**	**ug/L**	2.724	51599	0.040
>	Sc	45		**ug/L**		1283934	1283934.111
	Ti	47	**48.132**	**ug/L**	3.281	26647	0.021
	V	51	**49.085**	**ug/L**	3.490	299561	0.228
	Cr	52	**50.056**	**ug/L**	2.065	236875	0.183
	Cr	53		**ug/L**		103739	0.008
	Mn	55	**53.907**	**ug/L**	0.803	404299	0.314
	Fe	57	**5474.646**	**ug/L**	1.523	783195	0.606
	Co	59	**51.557**	**ug/L**	0.715	305195	0.238
	Ni	60	**51.980**	**ug/L**	2.428	68341	0.053
	Cu	63		**ug/L**		157832	0.123
	Cu	65	**50.528**	**ug/L**	1.331	77379	0.060
	Zn	66	**50.939**	**ug/L**	1.807	50868	0.148
	Zn	67		**ug/L**		17369	0.018
	Zn	68		**ug/L**		37471	0.106
>	Ge	74		**ug/L**		342018	342017.792
	As	75	**48.148**	**ug/L**	0.850	48430	0.142
	Se	77		**ug/L**		7452	0.008
	Se	82	**50.520**	**ug/L**	1.412	5300	0.015
	Kr	83		**ug/L**		93	0.000
	Sr	88	**52.497**	**ug/L**	2.540	659722	2.682
	Y	89		**ug/L**		164	0.000
	Mo	98	**48.059**	**ug/L**	2.721	158429	0.644
	Ag	107	**50.316**	**ug/L**	2.802	284949	1.159
	Cd	111	**50.252**	**ug/L**	2.323	72636	0.295
	Cd	114		**ug/L**		172255	0.700
>	In	115		**ug/L**		245907	245907.304
	Sn	120	**51.446**	**ug/L**	2.281	310980	1.264
	Sb	121	**51.477**	**ug/L**	3.483	250993	1.020
	Sb	123		**ug/L**		199481	0.810
	Ba	135		**ug/L**		77892	0.158
	Ba	137	**46.173**	**ug/L**	1.252	135846	0.275
	Ho	165		**ug/L**		54	0.000
>	Lu	175		**ug/L**		492995	492995.208
	Tl	205	**54.099**	**ug/L**	0.763	1027330	2.082
	Pb	208	**53.780**	**ug/L**	0.982	1784355	3.618
	Bi	209		**ug/L**		491	0.001
	Th	232	**53.126**	**ug/L**	0.981	1976159	4.007
	U	238	**54.154**	**ug/L**	0.093	2026620	4.110

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	111.396				
	Be	9	109.807				
	B	11	101.806				
	Na	23	102.322				
	Mg	24	100.438				
	Al	27	96.112				
	P	31	91.613				
	K	39	106.759				
	Ca	43	98.657				
>	Sc	45		84.1			
	Ti	47	96.264				
	V	51	98.170				
	Cr	52	100.112				
	Cr	53					
	Mn	55	107.813				
	Fe	57	109.493				
	Co	59	103.114				
	Ni	60	103.961				
	Cu	63					
	Cu	65	101.056				
	Zn	66	101.879				
	Zn	67					
	Zn	68					
>	Ge	74		84.3			
	As	75	96.296				
	Se	77					
	Se	82	101.041				
	Kr	83					
	Sr	88	104.993				
	Y	89					
	Mo	98	96.118				
	Ag	107	100.633				
	Cd	111	100.504				
	Cd	114					
>	In	115		88.8			
	Sn	120	102.892				
	Sb	121	102.953				
	Sb	123					
	Ba	135					
	Ba	137	92.346				
	Ho	165					
>	Lu	175		98.6			
	Tl	205	108.197				
	Pb	208	107.561				
	Bi	209					
	Th	232	106.252				
	U	238	108.308				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Li	7	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Monday, February 08, 2010 04:30:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 9.277

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.039**	**ug/L**	5.761	135	0.000
	Be	9	**0.004**	**ug/L**	238.673	17	0.000
	B	11	**2.801**	**ug/L**	18.491	1477	0.001
	Na	23	**2.055**	**ug/L**	8.837	17344	0.005
	Mg	24	**0.354**	**ug/L**	278.234	3667	0.001
	Al	27	**0.867**	**ug/L**	35.931	8002	0.002
	P	31	**-2.389**	**ug/L**	104.338	7054	-0.000
	K	39	**1.117**	**ug/L**	1272.292	392737	0.004
	Ca	43	**-3.316**	**ug/L**	10.449	261	-0.000
>	Sc	45		**ug/L**		1300428	1300427.565
	Ti	47	**-0.030**	**ug/L**	126.631	283	-0.000
	V	51	**-0.701**	**ug/L**	22.575	2376	-0.003
	Cr	52	**-0.188**	**ug/L**	31.657	1322	-0.001
	Cr	53		**ug/L**		78842	-0.012
	Mn	55	**0.017**	**ug/L**	15.316	1188	0.000
	Fe	57	**-4.796**	**ug/L**	7.832	4043	-0.001
	Co	59	**0.003**	**ug/L**	42.767	116	0.000
	Ni	60	**0.007**	**ug/L**	163.040	148	0.000
	Cu	63		**ug/L**		300	0.000
	Cu	65	**-0.003**	**ug/L**	258.548	154	-0.000
	Zn	66	**0.007**	**ug/L**	288.622	401	0.000
	Zn	67		**ug/L**		9697	-0.005
	Zn	68		**ug/L**		1020	-0.001
>	Ge	74		**ug/L**		343880	343880.446
	As	75	**0.040**	**ug/L**	483.800	-100	0.000
	Se	77		**ug/L**		3745	-0.003
	Se	82	**0.031**	**ug/L**	685.425	22	0.000
	Kr	83		**ug/L**		75	-0.000
	Sr	88	**0.002**	**ug/L**	131.101	270	0.000
	Y	89		**ug/L**		66	0.000
	Mo	98	**0.022**	**ug/L**	34.621	170	0.000
	Ag	107	**0.003**	**ug/L**	31.679	60	0.000
	Cd	111	**0.002**	**ug/L**	334.232	22	0.000
	Cd	114		**ug/L**		48	0.000
>	In	115		**ug/L**		245359	245359.357
	Sn	120	**0.012**	**ug/L**	30.890	267	0.000
	Sb	121	**0.261**	**ug/L**	27.271	1618	0.005
	Sb	123		**ug/L**		1285	0.004
	Ba	135		**ug/L**		39	-0.000
	Ba	137	**0.001**	**ug/L**	567.042	57	0.000
	Ho	165		**ug/L**		23	0.000
>	Lu	175		**ug/L**		500969	500969.258
	Tl	205	**0.104**	**ug/L**	31.029	2814	0.004
	Pb	208	**0.005**	**ug/L**	19.906	764	0.000
	Bi	209		**ug/L**		125	0.000
	Th	232	**0.031**	**ug/L**	49.104	1898	0.002
	U	238	**0.008**	**ug/L**	5.636	702	0.001

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	0.9997
U	238Linear Thru Zero	0.9997

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		85.1			
	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		84.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		88.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		100.2			
	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: 244852003
Sample Date/Time: Monday, February 08, 2010 04:36:20
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 942638|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\244852003.278

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**86.980**	ug/L	1.702	168476	0.126
	Be	9	**5.443**	ug/L	2.373	2289	0.002
	B	11	**17.878**	ug/L	3.042	7897	0.006
	Na	23	**623.509**	ug/L	6.550	1964609	1.463
	Mg	24	**11033.997**	ug/L	1.290	26611969	19.950
	Al	27	**94955.965**	ug/L	6.986	325036847	243.902
	P	31	**480.316**	ug/L	1.775	104824	0.073
	K	39	**11974.750**	ug/L	4.502	50754952	37.713
	Ca	43	**11126.611**	ug/L	2.408	120479	0.090
>	Sc	45		ug/L		1334068	1334067.756
	Ti	47	**1757.987**	ug/L	1.253	999918	0.749
	V	51	**92.434**	ug/L	2.260	579800	0.430
	Cr	52	**46.851**	ug/L	2.639	230416	0.171
	Cr	53		ug/L		78275	-0.014
	Mn	55	**1833.466**	ug/L	1.341	14248356	10.682
	Fe	57	**57580.984**	ug/L	3.602	8506808	6.377
	Co	59	**30.090**	ug/L	2.297	185034	0.139
	Ni	60	**40.426**	ug/L	1.745	55240	0.041
	Cu	63		ug/L		92861	0.069
	Cu	65	**29.232**	ug/L	1.777	46565	0.035
	Zn	66	**128.479**	ug/L	2.306	121812	0.372
	Zn	67		ug/L		30263	0.060
	Zn	68		ug/L		99002	0.300
>	Ge	74		ug/L		326371	326370.831
	As	75	**8.977**	ug/L	2.232	8509	0.026
	Se	77		ug/L		2413	-0.007
	Se	82	**-1.975**	ug/L	7.345	-180	-0.001
	Kr	83		ug/L		380	0.001
	Sr	88	**135.727**	ug/L	1.342	1670967	6.935
	Y	89		ug/L		711081	2.952
	Mo	98	**1.457**	ug/L	3.193	4802	0.020
	Ag	107	**0.566**	ug/L	1.065	3183	0.013
	Cd	111	**1.952**	ug/L	3.294	2784	0.011
	Cd	114		ug/L		1144	0.005
>	In	115		ug/L		240929	240928.785
	Sn	120	**1.046**	ug/L	0.342	6384	0.026
	Sb	121	**0.238**	ug/L	7.228	1476	0.005
	Sb	123		ug/L		1174	0.004
	Ba	135		ug/L		1373441	2.794
	Ba	137	**868.981**	ug/L	2.873	2547886	5.184
	Ho	165		ug/L		60479	0.123
>	Lu	175		ug/L		491575	491574.754
	Tl	205	**1.232**	ug/L	3.902	24115	0.047
	Pb	208	**68.382**	ug/L	2.073	2261808	4.601
	Bi	209		ug/L		30632	0.062
	Th	232	**45.923**	ug/L	1.135	1703334	3.464
	U	238	**8.213**	ug/L	1.630	306801	0.623

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	0.9997
U	238Linear Thru Zero	0.9997

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		87.3			
	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		80.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		87.0			
	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
	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)
	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 244852004
Sample Date/Time: Monday, February 08, 2010 04:42:32
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 942638|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\244852004.279

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**80.923**	ug/L	1.027	161251	0.117
	Be	9	**5.002**	ug/L	0.623	2165	0.002
	B	11	**18.668**	ug/L	3.669	8469	0.006
	Na	23	**487.531**	ug/L	9.543	1580988	1.144
	Mg	24	**10573.003**	ug/L	6.538	26234495	19.116
	Al	27	**89694.531**	ug/L	2.606	316089094	230.388
	P	31	**837.316**	ug/L	1.471	182077	0.127
	K	39	**12996.306**	ug/L	2.807	56566588	40.930
	Ca	43	**9838.760**	ug/L	3.080	109643	0.080
>	Sc	45		ug/L		1371971	1371971.100
	Ti	47	**1697.546**	ug/L	2.021	993181	0.724
	V	51	**95.067**	ug/L	2.690	613266	0.442
	Cr	52	**44.199**	ug/L	1.332	223740	0.161
	Cr	53		ug/L		74407	-0.019
	Mn	55	**1877.115**	ug/L	1.388	15005187	10.936
	Fe	57	**55582.696**	ug/L	2.436	8450858	6.156
	Co	59	**30.600**	ug/L	1.964	193602	0.141
	Ni	60	**38.480**	ug/L	1.922	54092	0.039
	Cu	63		ug/L		129733	0.094
	Cu	65	**40.423**	ug/L	1.286	66179	0.048
	Zn	66	**141.885**	ug/L	1.550	137463	0.411
	Zn	67		ug/L		32282	0.064
	Zn	68		ug/L		111550	0.331
>	Ge	74		ug/L		333524	333523.754
	As	75	**9.146**	ug/L	2.166	8861	0.027
	Se	77		ug/L		2215	-0.007
	Se	82	**-1.482**	ug/L	18.618	-133	-0.000
	Kr	83		ug/L		333	0.001
	Sr	88	**125.664**	ug/L	1.997	1585055	6.421
	Y	89		ug/L		703137	2.849
	Mo	98	**1.928**	ug/L	2.674	6476	0.026
	Ag	107	**0.540**	ug/L	2.608	3112	0.012
	Cd	111	**2.101**	ug/L	3.323	3070	0.012
	Cd	114		ug/L		1986	0.008
>	In	115		ug/L		246881	246880.581
	Sn	120	**1.503**	ug/L	2.031	9310	0.037
	Sb	121	**0.232**	ug/L	6.965	1486	0.005
	Sb	123		ug/L		1185	0.004
	Ba	135		ug/L		1440511	2.851
	Ba	137	**899.354**	ug/L	1.356	2710861	5.365
	Ho	165		ug/L		59051	0.117
>	Lu	175		ug/L		505274	505273.839
	Tl	205	**1.139**	ug/L	0.741	22981	0.044
	Pb	208	**73.425**	ug/L	0.982	2496551	4.940
	Bi	209		ug/L		30362	0.060
	Th	232	**41.390**	ug/L	0.715	1578133	3.122
	U	238	**19.811**	ug/L	1.422	760083	1.504

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

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		89.8			
	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		82.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		89.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		101.0			
	Tl	205					
	Pb	208					
	Bi	209					
	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)
	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1202018070
Sample Date/Time: Monday, February 08, 2010 04:54:57
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 942638|2|ba|
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\1202018070.281

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**31.841**	ug/L	1.093	59539	0.046
	Be	9	**2.466**	ug/L	3.409	1009	0.001
	B	11	**5.288**	ug/L	3.408	2478	0.002
	Na	23	**230.713**	ug/L	9.504	707895	0.541
	Mg	24	**2380.628**	ug/L	0.613	5541211	4.304
	Al	27	**15886.272**	ug/L	3.120	52519419	40.805
	P	31	**323.279**	ug/L	1.940	70502	0.049
	K	39	**2661.553**	ug/L	5.986	11166211	8.382
	Ca	43	**2682.892**	ug/L	3.609	28253	0.022
>	Sc	45		ug/L		1286717	1286716.786
	Ti	47	**530.935**	ug/L	1.507	291565	0.226
	V	51	**18.005**	ug/L	1.631	114250	0.084
	Cr	52	**10.060**	ug/L	1.051	49452	0.037
	Cr	53		ug/L		53641	-0.031
	Mn	55	**578.498**	ug/L	0.546	4337791	3.370
	Fe	57	**20936.460**	ug/L	0.964	2988508	2.319
	Co	59	**3.791**	ug/L	1.208	22582	0.017
	Ni	60	**8.480**	ug/L	0.603	11286	0.009
	Cu	63		ug/L		30739	0.024
	Cu	65	**9.956**	ug/L	0.915	15404	0.012
	Zn	66	**92.278**	ug/L	1.923	87833	0.267
	Zn	67		ug/L		19779	0.027
	Zn	68		ug/L		63513	0.191
>	Ge	74		ug/L		327213	327212.686
	As	75	**3.320**	ug/L	4.111	3071	0.010
	Se	77		ug/L		1995	-0.008
	Se	82	**0.048**	ug/L	430.086	22	0.000
	Kr	83		ug/L		138	0.000
	Sr	88	**22.352**	ug/L	3.253	282890	1.142
	Y	89		ug/L		581504	2.349
	Mo	98	**1.752**	ug/L	3.780	5911	0.023
	Ag	107	**0.162**	ug/L	8.263	962	0.004
	Cd	111	**0.678**	ug/L	4.808	1005	0.004
	Cd	114		ug/L		588	0.002
>	In	115		ug/L		247613	247613.398
	Sn	120	**1.839**	ug/L	3.712	11376	0.045
	Sb	121	**0.107**	ug/L	8.736	876	0.002
	Sb	123		ug/L		690	0.002
	Ba	135		ug/L		152407	0.289
	Ba	137	**85.087**	ug/L	1.757	267641	0.508
	Ho	165		ug/L		49333	0.094
>	Lu	175		ug/L		527246	527245.563
	Tl	205	**0.160**	ug/L	4.974	4105	0.006
	Pb	208	**19.056**	ug/L	2.250	676404	1.282
	Bi	209		ug/L		6607	0.012
	Th	232	**14.892**	ug/L	3.569	592734	1.123
	U	238	**6.330**	ug/L	2.443	253681	0.480

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	0.9997
U	238Linear Thru Zero	0.9997

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		84.2			
	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		80.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		89.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		105.4			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	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: 1202018071
Sample Date/Time: Monday, February 08, 2010 05:01:07
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 942638|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\1202018071.282

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**56.701**	ug/L	0.834	105636	0.082
	Be	9	**26.836**	ug/L	1.513	10792	0.008
	B	11	**52.865**	ug/L	3.889	21840	0.017
	Na	23	**1242.348**	ug/L	4.909	3749497	2.915
	Mg	24	**3394.482**	ug/L	1.784	7873887	6.137
	Al	27	**19308.083**	ug/L	6.524	63606852	49.594
	P	31	**1088.507**	ug/L	0.648	219038	0.165
	K	39	**3711.597**	ug/L	3.391	15373593	11.689
	Ca	43	**3720.762**	ug/L	4.820	38946	0.030
>	Sc	45		ug/L		1282502	1282502.204
	Ti	47	**597.039**	ug/L	0.606	326740	0.255
	V	51	**43.006**	ug/L	2.715	262930	0.200
	Cr	52	**34.955**	ug/L	0.281	165868	0.128
	Cr	53		ug/L		67151	-0.021
	Mn	55	**568.546**	ug/L	1.361	4249196	3.312
	Fe	57	**21552.949**	ug/L	1.782	3066237	2.387
	Co	59	**27.010**	ug/L	0.732	159749	0.124
	Ni	60	**31.474**	ug/L	2.062	41384	0.032
	Cu	63		ug/L		100605	0.078
	Cu	65	**32.599**	ug/L	1.818	49923	0.039
	Zn	66	**112.642**	ug/L	1.537	106862	0.326
	Zn	67		ug/L		22887	0.037
	Zn	68		ug/L		77521	0.234
>	Ge	74		ug/L		326359	326359.345
	As	75	**37.599**	ug/L	1.724	36055	0.111
	Se	77		ug/L		2643	-0.006
	Se	82	**8.346**	ug/L	2.385	850	0.003
	Kr	83		ug/L		148	0.000
	Sr	88	**47.464**	ug/L	2.333	599634	2.425
	Y	89		ug/L		652322	2.639
	Mo	98	**23.282**	ug/L	3.648	77195	0.312
	Ag	107	**22.923**	ug/L	2.464	130523	0.528
	Cd	111	**5.377**	ug/L	2.610	7830	0.032
	Cd	114		ug/L		16513	0.067
>	In	115		ug/L		247234	247234.107
	Sn	120	**21.223**	ug/L	3.452	129052	0.521
	Sb	121	**64.479**	ug/L	3.499	315932	1.277
	Sb	123		ug/L		250591	1.013
	Ba	135		ug/L		197925	0.378
	Ba	137	**110.815**	ug/L	0.258	345804	0.661
	Ho	165		ug/L		55622	0.106
>	Lu	175		ug/L		523003	523003.373
	Tl	205	**49.236**	ug/L	1.042	991963	1.895
	Pb	208	**106.966**	ug/L	1.010	3764392	7.197
	Bi	209		ug/L		7835	0.015
	Th	232	**39.932**	ug/L	1.351	1576016	3.012
	U	238	**33.422**	ug/L	0.728	1327071	2.537

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	0.9997
U	238Linear Thru Zero	0.9997

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		84.0			
	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		80.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		89.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		104.6			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	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: 1202018073
Sample Date/Time: Monday, February 08, 2010 05:07:18
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 942638|2|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\1202018073.283

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	69.544	ug/L	0.444	128947	0.101
	Be	9	26.895	ug/L	1.450	10765	0.008
	B	11	53.680	ug/L	2.085	22069	0.017
	Na	23	1224.442	ug/L	8.009	3677392	2.873
	Mg	24	3919.498	ug/L	4.922	9047598	7.087
	Al	27	19460.253	ug/L	3.533	63801368	49.985
	P	31	1091.357	ug/L	2.140	218548	0.165
	K	39	4053.524	ug/L	2.928	16675157	12.766
	Ca	43	3665.935	ug/L	1.451	38199	0.030
>	Sc	45		ug/L		1276577	1276576.563
	Ti	47	727.669	ug/L	1.194	396295	0.310
	V	51	44.087	ug/L	1.890	268103	0.205
	Cr	52	35.281	ug/L	1.738	166600	0.129
	Cr	53		ug/L		66329	-0.021
	Mn	55	716.688	ug/L	1.323	5330992	4.175
	Fe	57	23957.610	ug/L	1.771	3391774	2.653
	Co	59	27.358	ug/L	1.722	161045	0.126
	Ni	60	32.171	ug/L	1.047	42098	0.033
	Cu	63		ug/L		100846	0.079
	Cu	65	32.637	ug/L	1.962	49742	0.039
	Zn	66	128.594	ug/L	1.858	121353	0.373
	Zn	67		ug/L		24643	0.043
	Zn	68		ug/L		88049	0.268
>	Ge	74		ug/L		324782	324782.324
	As	75	37.707	ug/L	0.215	35985	0.111
	Se	77		ug/L		2604	-0.006
	Se	82	8.631	ug/L	6.483	874	0.003
	Kr	83		ug/L		155	0.000
	Sr	88	48.146	ug/L	1.579	604705	2.460
	Y	89		ug/L		618168	2.516
	Mo	98	23.327	ug/L	2.275	76895	0.313
	Ag	107	22.899	ug/L	1.538	129621	0.527
	Cd	111	5.342	ug/L	4.471	7733	0.031
	Cd	114		ug/L		16454	0.067
>	In	115		ug/L		245724	245724.146
	Sn	120	23.180	ug/L	2.057	140120	0.570
	Sb	121	63.986	ug/L	1.557	311725	1.267
	Sb	123		ug/L		245059	0.996
	Ba	135		ug/L		208089	0.393
	Ba	137	114.737	ug/L	3.818	362001	0.684
	Ho	165		ug/L		53619	0.101
>	Lu	175		ug/L		529138	529138.376
	Tl	205	48.434	ug/L	1.940	986958	1.864
	Pb	208	106.512	ug/L	3.123	3790402	7.166
	Bi	209		ug/L		8924	0.017
	Th	232	39.439	ug/L	2.113	1574249	2.975
	U	238	33.620	ug/L	2.153	1350141	2.552

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	0.9997
U	238Linear Thru Zero	0.9997

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		83.6			
	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		80.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	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		105.8			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	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: 1202018072
Sample Date/Time: Monday, February 08, 2010 05:13:29
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 942638|10|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\1202018072.284

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.923**	ug/L	0.954	19431	0.016
	Be	9	**0.578**	ug/L	2.283	235	0.000
	B	11	**3.048**	ug/L	16.458	1482	0.001
	Na	23	**54.025**	ug/L	9.976	165290	0.127
	Mg	24	**605.394**	ug/L	8.092	1339153	1.095
	Al	27	**3714.577**	ug/L	1.865	11658825	9.541
	P	31	**87.113**	ug/L	4.449	23195	0.013
	K	39	**665.520**	ug/L	4.387	2923979	2.096
	Ca	43	**645.399**	ug/L	3.101	6666	0.005
>	Sc	45		ug/L		1221550	1221549.504
	Ti	47	**134.752**	ug/L	0.498	70460	0.057
	V	51	**3.130**	ug/L	3.739	23982	0.015
	Cr	52	**2.182**	ug/L	2.381	11809	0.008
	Cr	53		ug/L		60522	-0.024
	Mn	55	**154.593**	ug/L	0.128	1101212	0.901
	Fe	57	**5344.584**	ug/L	2.197	727457	0.592
	Co	59	**0.855**	ug/L	2.858	4910	0.004
	Ni	60	**1.979**	ug/L	2.422	2600	0.002
	Cu	63		ug/L		7172	0.006
	Cu	65	**2.346**	ug/L	1.736	3560	0.003
	Zn	66	**23.609**	ug/L	0.463	22121	0.068
	Zn	67		ug/L		10900	0.001
	Zn	68		ug/L		16344	0.048
>	Ge	74		ug/L		318134	318134.208
	As	75	**0.616**	ug/L	12.247	449	0.002
	Se	77		ug/L		2437	-0.006
	Se	82	**-0.032**	ug/L	303.813	14	-0.000
	Kr	83		ug/L		86	0.000
	Sr	88	**5.005**	ug/L	2.383	61346	0.256
	Y	89		ug/L		130447	0.546
	Mo	98	**0.440**	ug/L	5.211	1504	0.006
	Ag	107	**0.032**	ug/L	5.284	217	0.001
	Cd	111	**0.141**	ug/L	5.765	216	0.001
	Cd	114		ug/L		180	0.001
>	In	115		ug/L		238919	238918.662
	Sn	120	**0.404**	ug/L	2.823	2562	0.010
	Sb	121	**0.026**	ug/L	48.157	461	0.001
	Sb	123		ug/L		349	0.000
	Ba	135		ug/L		33794	0.067
	Ba	137	**19.779**	ug/L	2.538	59649	0.118
	Ho	165		ug/L		11040	0.022
>	Lu	175		ug/L		505090	505089.668
	Tl	205	**0.134**	ug/L	12.120	3421	0.005
	Pb	208	**4.459**	ug/L	0.869	152123	0.300
	Bi	209		ug/L		1499	0.003
	Th	232	**3.389**	ug/L	2.346	129828	0.256
	U	238	**1.393**	ug/L	2.034	53801	0.106

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	0.9997
U	238Linear Thru Zero	0.9997

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		80.0			
	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		78.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		86.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		101.0			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	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: QC Std 8
Sample Date/Time: Monday, February 08, 2010 05:19:39
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 8.285

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**57.397**	ug/L	1.141	104543	0.083
	Be	9	**55.517**	ug/L	1.051	21804	0.017
	B	11	**102.983**	ug/L	2.285	41304	0.033
	Na	23	**5237.143**	ug/L	1.328	15417271	12.289
	Mg	24	**5036.369**	ug/L	4.684	11427458	9.106
	Al	27	**4910.530**	ug/L	3.524	15822691	12.613
	P	31	**4531.320**	ug/L	2.021	868579	0.687
	K	39	**5190.733**	ug/L	8.136	20837136	16.348
	Ca	43	**4969.991**	ug/L	1.070	50740	0.040
>	Sc	45		ug/L		1253594	1253594.001
	Ti	47	**47.705**	ug/L	0.492	25784	0.020
	V	51	**49.674**	ug/L	1.623	295775	0.231
	Cr	52	**50.677**	ug/L	1.390	234053	0.185
	Cr	53		ug/L		100840	0.007
	Mn	55	**53.320**	ug/L	1.961	390303	0.311
	Fe	57	**5466.658**	ug/L	1.334	763495	0.605
	Co	59	**51.297**	ug/L	0.858	296508	0.236
	Ni	60	**51.925**	ug/L	1.511	66628	0.053
	Cu	63		ug/L		152630	0.122
	Cu	65	**50.294**	ug/L	2.035	75173	0.060
	Zn	66	**51.674**	ug/L	1.918	49838	0.150
	Zn	67		ug/L		17150	0.019
	Zn	68		ug/L		36118	0.106
>	Ge	74		ug/L		330532	330532.386
	As	75	**48.144**	ug/L	1.634	46782	0.142
	Se	77		ug/L		7199	0.008
	Se	82	**50.063**	ug/L	2.227	5075	0.015
	Kr	83		ug/L		82	-0.000
	Sr	88	**51.790**	ug/L	1.628	635622	2.646
	Y	89		ug/L		177	0.001
	Mo	98	**47.578**	ug/L	1.903	153187	0.638
	Ag	107	**49.608**	ug/L	0.734	274383	1.143
	Cd	111	**50.331**	ug/L	2.798	71045	0.296
	Cd	114		ug/L		170021	0.708
>	In	115		ug/L		240131	240131.399
	Sn	120	**52.407**	ug/L	2.075	309359	1.288
	Sb	121	**51.818**	ug/L	3.331	246768	1.026
	Sb	123		ug/L		196220	0.816
	Ba	135		ug/L		76639	0.154
	Ba	137	**45.392**	ug/L	1.699	134374	0.271
	Ho	165		ug/L		57	0.000
>	Lu	175		ug/L		496006	496006.481
	Tl	205	**52.940**	ug/L	1.255	1011443	2.038
	Pb	208	**53.586**	ug/L	1.483	1788662	3.605
	Bi	209		ug/L		474	0.001
	Th	232	**52.093**	ug/L	0.732	1949553	3.929
	U	238	**53.295**	ug/L	1.907	2006444	4.045

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	114.795				
	Be	9	111.035				
	B	11	102.983				
	Na	23	104.743				
	Mg	24	100.727				
	Al	27	97.238				
	P	31	90.626				
	K	39	103.815				
	Ca	43	99.400				
>	Sc	45		82.1			
	Ti	47	95.410				
	V	51	99.348				
	Cr	52	101.354				
	Cr	53					
	Mn	55	106.639				
	Fe	57	109.333				
	Co	59	102.595				
	Ni	60	103.850				
	Cu	63					
	Cu	65	100.589				
	Zn	66	103.348				
	Zn	67					
	Zn	68					
>	Ge	74		81.5			
	As	75	96.287				
	Se	77					
	Se	82	100.126				
	Kr	83					
	Sr	88	103.580				
	Y	89					
	Mo	98	95.156				
	Ag	107	99.215				
	Cd	111	100.662				
	Cd	114					
>	In	115		86.7			
	Sn	120	104.815				
	Sb	121	103.635				
	Sb	123					
	Ba	135					
	Ba	137	90.784				
	Ho	165					
>	Lu	175		99.2			
	Tl	205	105.880				
	Pb	208	107.172				
	Bi	209					
	Th	232	104.186				
	U	238	106.590				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Li	7	CCV is out of limits (+/- 10%)
QC Std 8	Be	9	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Monday, February 08, 2010 05:25:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 9.286

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.034**	ug/L	9.752	125	0.000
	Be	9	**0.008**	ug/L	101.563	18	0.000
	B	11	**2.906**	ug/L	16.835	1506	0.001
	Na	23	**3.878**	ug/L	57.409	22686	0.009
	Mg	24	**-0.778**	ug/L	0.747	1000	-0.001
	Al	27	**-0.018**	ug/L	7414.992	5001	-0.000
	P	31	**-2.254**	ug/L	14.151	7018	-0.000
	K	39	**-5.064**	ug/L	146.039	364276	-0.016
	Ca	43	**-2.727**	ug/L	67.910	265	-0.000
>	Sc	45		ug/L		1289097	1289097.363
	Ti	47	**-0.038**	ug/L	8.479	276	-0.000
	V	51	**-0.609**	ug/L	36.330	2896	-0.003
	Cr	52	**-0.225**	ug/L	22.675	1134	-0.001
	Cr	53		ug/L		74577	-0.015
	Mn	55	**0.006**	ug/L	53.810	1097	0.000
	Fe	57	**-6.088**	ug/L	13.951	3823	-0.001
	Co	59	**0.000**	ug/L	474.257	99	0.000
	Ni	60	**0.004**	ug/L	322.817	142	0.000
	Cu	63		ug/L		302	0.000
	Cu	65	**-0.003**	ug/L	177.834	151	-0.000
	Zn	66	**0.002**	ug/L	1554.117	391	0.000
	Zn	67		ug/L		9424	-0.005
	Zn	68		ug/L		1052	-0.000
>	Ge	74		ug/L		339603	339603.153
	As	75	**-0.195**	ug/L	115.579	-336	-0.001
	Se	77		ug/L		3650	-0.003
	Se	82	**-0.009**	ug/L	337.469	17	-0.000
	Kr	83		ug/L		82	-0.000
	Sr	88	**0.001**	ug/L	103.060	263	0.000
	Y	89		ug/L		60	0.000
	Mo	98	**0.024**	ug/L	38.697	178	0.000
	Ag	107	**0.003**	ug/L	44.853	60	0.000
	Cd	111	**0.006**	ug/L	55.808	28	0.000
	Cd	114		ug/L		43	-0.000
>	In	115		ug/L		246083	246082.657
	Sn	120	**0.015**	ug/L	26.536	286	0.000
	Sb	121	**0.269**	ug/L	22.101	1663	0.005
	Sb	123		ug/L		1283	0.004
	Ba	135		ug/L		43	0.000
	Ba	137	**0.000**	ug/L	608.244	57	0.000
	Ho	165		ug/L		22	-0.000
>	Lu	175		ug/L		511252	511252.479
	Tl	205	**0.124**	ug/L	26.249	3276	0.005
	Pb	208	**0.003**	ug/L	40.829	725	0.000
	Bi	209		ug/L		111	-0.000
	Th	232	**0.030**	ug/L	46.935	1930	0.002
	U	238	**0.007**	ug/L	24.908	681	0.001

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	0.9997
U	238Linear Thru Zero	0.9997

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		84.4			
	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		83.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	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		102.2			
	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: Blank
Sample Date/Time: Monday, February 08, 2010 06:08:31
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\lanl soil.mth
Dataset File: C:\elandata\Dataset\100207\Blank.293

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		103	
	Be	9		ug/L		23	
>	Sc	45		ug/L		1288373	
	Ni	60		ug/L		140	
>	Ge	74		ug/L		337704	
	As	75		ug/L		-195	
	Se	77		ug/L		3776	
	Se	82		ug/L		15	
	Kr	83		ug/L		78	
>	Lu	175		ug/L		502580	
	Tl	205		ug/L		896	

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear 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					
>	Sc	45					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175					
	Tl	205					

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: Monday, February 08, 2010 06:12:12
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\lani soil.mth
Dataset File: C:\elandata\Dataset\100207\Standard 1.294

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	10.000	ug/L	0.938	20383	0.016
	Be	9	10.000	ug/L	2.079	4309	0.003
>	Sc	45		ug/L		1278987	1278987.310
	Ni	60	10.000	ug/L	3.433	13624	0.011
>	Ge	74		ug/L		338297	338296.517
	As	75	10.000	ug/L	8.725	9791	0.030
	Se	77		ug/L		4688	0.003
	Se	82	10.000	ug/L	5.772	1065	0.003
	Kr	83		ug/L		83	0.000
>	Lu	175		ug/L		494390	494390.391
	Tl	205	10.000	ug/L	4.201	228807	0.461

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|>	Sc	45					
⌊	Ni	60					
⌈>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175					
⌊	Tl	205					

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: Monday, February 08, 2010 06:15:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\lani soil.mth
Dataset File: C:\elandata\Dataset\100207\Standard 2.295

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**99.996**	**ug/L**	3.828	201368	0.158
	Be	9	**99.989**	**ug/L**	2.639	42257	0.033
>	Sc	45		**ug/L**		1274421	1274421.448
	Ni	60	**99.979**	**ug/L**	3.605	131640	0.103
>	Ge	74		**ug/L**		340404	340403.587
	As	75	**99.987**	**ug/L**	1.241	99062	0.292
	Se	77		**ug/L**		11969	0.024
	Se	82	**99.989**	**ug/L**	1.952	10461	0.031
	Kr	83		**ug/L**		111	0.000
>	Lu	175		**ug/L**		469183	469182.664
	Tl	205	**99.801**	**ug/L**	0.757	1802664	3.840

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45					
	Ni	60					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175					
	Tl	205					

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: Monday, February 08, 2010 06:19:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\lanl soil.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 1.296

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.738**	**ug/L**	2.257	105464	0.082
	Be	9	**51.711**	**ug/L**	1.497	22123	0.017
>	Sc	45		**ug/L**		1289024	1289023.730
	Ni	60	**51.931**	**ug/L**	2.988	69247	0.054
>	Ge	74		**ug/L**		339888	339887.920
	As	75	**49.857**	**ug/L**	3.178	49202	0.145
	Se	77		**ug/L**		8290	0.013
	Se	82	**52.081**	**ug/L**	1.717	5447	0.016
	Kr	83		**ug/L**		95	0.000
>	Lu	175		**ug/L**		480940	480940.133
	Tl	205	**53.054**	**ug/L**	4.236	981931	2.042

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	103.476				
	Be	9	103.422				
>	Sc	45		100.1			
	Ni	60	103.861				
>	Ge	74		100.6			
	As	75	99.715				
	Se	77					
	Se	82	104.161				
	Kr	83					
>	Lu	175		95.7			
	Tl	205	106.108				

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 2
Sample Date/Time: Monday, February 08, 2010 06:23:09
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\lani soil.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 2.297

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.002**	**ug/L**	427.095	109	0.000
	Be	9	**-0.023**	**ug/L**	22.218	14	-0.000
>	Sc	45		**ug/L**		1318667	1318667.315
	Ni	60	**-0.000**	**ug/L**	1711.909	143	-0.000
>	Ge	74		**ug/L**		348481	348481.051
	As	75	**-0.056**	**ug/L**	493.545	-259	-0.000
	Se	77		**ug/L**		4197	0.001
	Se	82	**-0.102**	**ug/L**	125.610	5	-0.000
	Kr	83		**ug/L**		85	0.000
>	Lu	175		**ug/L**		488560	488559.760
	Tl	205	**0.075**	**ug/L**	8.216	2274	0.003

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45		102.4			
	Ni	60					
>	Ge	74		103.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		97.2			
	Tl	205					

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 3
Sample Date/Time: Monday, February 08, 2010 06:26:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\lanl soil.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 3.298

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.972**	**ug/L**	1.563	22472	0.017
	Be	9	**0.501**	**ug/L**	8.382	238	0.000
>	Sc	45		**ug/L**		1290317	1290316.627
	Ni	60	**2.198**	**ug/L**	4.984	3067	0.002
>	Ge	74		**ug/L**		340364	340364.451
	As	75	**5.401**	**ug/L**	5.580	5167	0.016
	Se	77		**ug/L**		4709	0.003
	Se	82	**5.422**	**ug/L**	3.997	582	0.002
	Kr	83		**ug/L**		91	0.000
>	Lu	175		**ug/L**		486503	486503.143
	Tl	205	**1.286**	**ug/L**	2.123	24932	0.049

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	109.719				
	Be	9	100.287				
>	Sc	45		100.2			
	Ni	60	109.910				
>	Ge	74		100.8			
	As	75	108.024				
	Se	77					
	Se	82	108.440				
	Kr	83					
>	Lu	175		96.8			
	Tl	205	128.564				

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 4
Sample Date/Time: Monday, February 08, 2010 06:30:29
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\lanl soil.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 4.299

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.065**	**ug/L**	9.276	233	0.000
	Be	9	**0.096**	**ug/L**	16.145	64	0.000
>	Sc	45		**ug/L**		1275682	1275681.886
	Ni	60	**3.463**	**ug/L**	3.607	4699	0.004
>	Ge	74		**ug/L**		329513	329513.125
	As	75	**-0.050**	**ug/L**	762.463	-240	-0.000
	Se	77		**ug/L**		6202	0.008
	Se	82	**-1.549**	**ug/L**	13.471	-142	-0.000
	Kr	83		**ug/L**		290	0.001
>	Lu	175		**ug/L**		418209	418209.105
	Tl	205	**0.005**	**ug/L**	29.861	831	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45			99.0		
	Ni	60	104.634				
>	Ge	74			97.6		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175			83.2		
	Tl	205					

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 5
Sample Date/Time: Monday, February 08, 2010 06:34:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\lani soil.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 5.300

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**18.914**	**ug/L**	2.749	38269	0.030
	Be	9	**17.588**	**ug/L**	2.511	7470	0.006
>	Sc	45		**ug/L**		1277179	1277178.901
	Ni	60	**21.527**	**ug/L**	3.488	28522	0.022
>	Ge	74		**ug/L**		329535	329534.749
	As	75	**19.705**	**ug/L**	3.634	18748	0.057
	Se	77		**ug/L**		7377	0.011
	Se	82	**17.814**	**ug/L**	2.856	1816	0.005
	Kr	83		**ug/L**		289	0.001
>	Lu	175		**ug/L**		422555	422554.515
	Tl	205	**21.452**	**ug/L**	1.378	349537	0.825

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7	94.571				
	Be	9	87.942				
>	Sc	45		99.1			
	Ni	60	92.351				
>	Ge	74		97.6			
	As	75	98.525				
	Se	77					
	Se	82	89.071				
	Kr	83					
>	Lu	175		84.1			
	Tl	205	107.262				

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 6
Sample Date/Time: Monday, February 08, 2010 06:37:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\anl soil.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 6.301

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**49.466**	**ug/L**	2.582	101329	0.078
	Be	9	**48.899**	**ug/L**	2.340	21017	0.016
>	Sc	45		**ug/L**		1295124	1295123.992
	Ni	60	**50.468**	**ug/L**	2.914	67612	0.052
>	Ge	74		**ug/L**		343556	343555.744
	As	75	**47.678**	**ug/L**	1.529	47571	0.139
	Se	77		**ug/L**		8618	0.014
	Se	82	**50.446**	**ug/L**	0.240	5334	0.015
	Kr	83		**ug/L**		88	0.000
>	Lu	175		**ug/L**		475036	475035.721
	Tl	205	**52.731**	**ug/L**	2.215	964527	2.029

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	98.931				
	Be	9	97.799				
>	Sc	45		100.5			
	Ni	60	100.935				
>	Ge	74		101.7			
	As	75	95.356				
	Se	77					
	Se	82	100.892				
	Kr	83					
>	Lu	175		94.5			
	Tl	205	105.462				

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: Monday, February 08, 2010 06:41:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\ani soil.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 7.302

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.002**	**ug/L**	270.506	110	0.000
	Be	9	**-0.019**	**ug/L**	50.803	16	-0.000
>	Sc	45		**ug/L**		1321534	1321533.981
	Ni	60	**0.007**	**ug/L**	195.973	152	0.000
>	Ge	74		**ug/L**		350128	350128.429
	As	75	**0.036**	**ug/L**	813.147	-167	0.000
	Se	77		**ug/L**		4893	0.003
	Se	82	**0.010**	**ug/L**	1540.662	17	0.000
	Kr	83		**ug/L**		85	0.000
>	Lu	175		**ug/L**		489198	489198.017
	Tl	205	**0.096**	**ug/L**	5.045	2679	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45		102.6			
	Ni	60					
>	Ge	74		103.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		97.3			
	Tl	205					

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: Monday, February 08, 2010 06:45:13
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\lanl soil.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 10.303

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**924.502**	**ug/L**	1.709	1749243	1.461
	Be	9	**965.161**	**ug/L**	2.445	383176	0.320
>	Sc	45		**ug/L**		1197440	1197440.237
	Ni	60	**874.970**	**ug/L**	1.463	1081886	0.903
>	Ge	74		**ug/L**		317174	317173.653
	As	75	**891.628**	**ug/L**	3.573	824070	2.600
	Se	77		**ug/L**		39655	0.114
	Se	82	**478.812**	**ug/L**	3.998	46586	0.147
	Kr	83		**ug/L**		187	0.000
>	Lu	175		**ug/L**		434937	434937.171
	Tl	205	**432.816**	**ug/L**	1.915	7244049	16.655

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	92.450				
	Be	9	96.516				
>	Sc	45		92.9			
	Ni	60	87.497				
>	Ge	74		93.9			
	As	75	89.163				
	Se	77					
	Se	82	95.762				
	Kr	83					
>	Lu	175		86.5			
	Tl	205	86.563				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 10	Ni	60	LRS is out of limits (+/- 10%)
QC Std 10	As	75	LRS is out of limits (+/- 10%)
QC Std 10	Tl	205	LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Monday, February 08, 2010 06:48:51
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\lani soil.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 11.304

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.812**	**ug/L**	2.339	104982	0.080
	Be	9	**50.665**	**ug/L**	2.844	21964	0.017
>	Sc	45		**ug/L**		1306346	1306345.653
	Ni	60	**51.421**	**ug/L**	2.773	69499	0.053
>	Ge	74		**ug/L**		343514	343513.900
	As	75	**49.822**	**ug/L**	1.627	49708	0.145
	Se	77		**ug/L**		8516	0.014
	Se	82	**51.066**	**ug/L**	2.461	5399	0.016
	Kr	83		**ug/L**		98	0.000
>	Lu	175		**ug/L**		477939	477939.207
	Tl	205	**53.433**	**ug/L**	1.916	983426	2.056

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	101.623				
	Be	9	101.331				
>	Sc	45		101.4			
	Ni	60	102.842				
>	Ge	74		101.7			
	As	75	99.645				
	Se	77					
	Se	82	102.133				
	Kr	83					
>	Lu	175		95.1			
	Tl	205	106.866				

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 12
Sample Date/Time: Monday, February 08, 2010 06:52:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\lani soil.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 12.305

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.034**	**ug/L**	15.715	175	0.000
	Be	9	**-0.018**	**ug/L**	77.744	16	-0.000
>	Sc	45		**ug/L**		1304663	1304662.903
	Ni	60	**0.008**	**ug/L**	99.139	152	0.000
>	Ge	74		**ug/L**		341792	341792.490
	As	75	**0.105**	**ug/L**	505.179	-85	0.000
	Se	77		**ug/L**		4554	0.002
	Se	82	**0.109**	**ug/L**	169.976	27	0.000
	Kr	83		**ug/L**		80	0.000
>	Lu	175		**ug/L**		471536	471536.018
	Tl	205	**0.127**	**ug/L**	10.115	3139	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45		101.3			
	Ni	60					
>	Ge	74		101.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		93.8			
	Tl	205					

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: 1202018068
Sample Date/Time: Monday, February 08, 2010 06:56:16
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 942638|2|baj
Method File: c:\elandata\Method\lanl soil.mth
Dataset File: C:\elandata\Dataset\100207\1202018068.306

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.011**	**ug/L**	7.196	132	0.000
	Be	9	**-0.011**	**ug/L**	111.086	19	-0.000
>	Sc	45		**ug/L**		1346286	1346286.066
	Ni	60	**0.129**	**ug/L**	4.588	325	0.000
>	Ge	74		**ug/L**		347915	347915.339
	As	75	**0.091**	**ug/L**	135.922	-108	0.000
	Se	77		**ug/L**		3641	-0.001
	Se	82	**-0.062**	**ug/L**	176.872	9	-0.000
	Kr	83		**ug/L**		90	0.000
>	Lu	175		**ug/L**		499678	499678.164
	Tl	205	**0.050**	**ug/L**	0.932	1858	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45		104.5			
	Ni	60					
>	Ge	74		103.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		99.4			
	Tl	205					

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: 1202018069
Sample Date/Time: Monday, February 08, 2010 07:00:00
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 942638|40|baj
Method File: c:\elandata\Method\lanl soil.mth
Dataset File: C:\elandata\Dataset\100207\1202018069.307

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**2.491**	**ug/L**	2.243	5221	0.004
	Be	9	**20.970**	**ug/L**	2.830	9062	0.007
>	Sc	45		**ug/L**		1300273	1300273.495
	Ni	60	**39.161**	**ug/L**	2.718	52704	0.040
>	Ge	74		**ug/L**		344854	344854.386
	As	75	**27.275**	**ug/L**	2.881	27231	0.080
	Se	77		**ug/L**		10661	0.020
	Se	82	**77.924**	**ug/L**	0.353	8262	0.024
	Kr	83		**ug/L**		97	0.000
>	Lu	175		**ug/L**		484008	484008.382
	Tl	205	**34.909**	**ug/L**	0.662	651018	1.343

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45		100.9			
	Ni	60					
>	Ge	74		102.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		96.3			
	Tl	205					

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: Monday, February 08, 2010 07:22:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\lanl soil.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 8.313

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**48.890**	**ug/L**	1.818	92149	0.077
	Be	9	**48.952**	**ug/L**	1.450	19358	0.016
>	Sc	45		**ug/L**		1191494	1191493.688
	Ni	60	**49.187**	**ug/L**	1.022	60646	0.051
>	Ge	74		**ug/L**		319503	319503.157
	As	75	**46.837**	**ug/L**	1.672	43443	0.137
	Se	77		**ug/L**		6851	0.010
	Se	82	**48.430**	**ug/L**	1.925	4762	0.015
	Kr	83		**ug/L**		91	0.000
>	Lu	175		**ug/L**		468041	468040.579
	Tl	205	**51.790**	**ug/L**	1.209	933567	1.993

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	97.780				
	Be	9	97.903				
>	Sc	45		92.5			
	Ni	60	98.374				
>	Ge	74		94.6			
	As	75	93.674				
	Se	77					
	Se	82	96.860				
	Kr	83					
>	Lu	175		93.1			
	Tl	205	103.579				

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: Monday, February 08, 2010 07:26:04
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\lani soil.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 9.314

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.014**	**ug/L**	18.782	121	0.000
	Be	9	**-0.023**	**ug/L**	59.225	12	-0.000
>	Sc	45		**ug/L**		1174342	1174341.883
	Ni	60	**0.004**	**ug/L**	207.006	132	0.000
>	Ge	74		**ug/L**		314457	314457.383
	As	75	**0.275**	**ug/L**	156.231	71	0.001
	Se	77		**ug/L**		3246	-0.001
	Se	82	**-0.020**	**ug/L**	653.248	12	-0.000
	Kr	83		**ug/L**		84	0.000
>	Lu	175		**ug/L**		473291	473291.182
	Tl	205	**0.123**	**ug/L**	1.396	3079	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45		91.1			
	Ni	60					
>	Ge	74		93.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		94.2			
	Tl	205					

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: 244852001
Sample Date/Time: Monday, February 08, 2010 07:48:31
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 942638|2|baj
Method File: c:\elandata\Method\lanl soil.mth
Dataset File: C:\elandata\Dataset\100207\244852001.320

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**31.702**	**ug/L**	1.542	60343	0.050
	Be	9	**2.030**	**ug/L**	3.025	831	0.001
>	Sc	45		**ug/L**		1202760	1202759.596
	Ni	60	**12.231**	**ug/L**	1.575	15320	0.013
>	Ge	74		**ug/L**		308066	308065.905
	As	75	**5.208**	**ug/L**	7.069	4504	0.015
	Se	77		**ug/L**		2214	-0.004
	Se	82	**0.058**	**ug/L**	182.894	19	0.000
	Kr	83		**ug/L**		158	0.000
>	Lu	175		**ug/L**		492192	492192.178
	Tl	205	**0.273**	**ug/L**	0.859	6052	0.011

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45		93.4			
	Ni	60					
>	Ge	74		91.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		97.9			
	Tl	205					

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: 244852002
Sample Date/Time: Monday, February 08, 2010 07:52:16
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 942638|2|baj
Method File: c:\elandata\Method\lanl soil.mth
Dataset File: C:\elandata\Dataset\100207\244852002.321

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**34.888**	**ug/L**	1.832	64924	0.055
|	Be	9	**2.306**	**ug/L**	1.536	920	0.001
|>	Sc	45		**ug/L**		1176145	1176144.884
⌊	Ni	60	**12.138**	**ug/L**	3.191	14865	0.013
⌈>	Ge	74		**ug/L**		301382	301381.970
|	As	75	**5.528**	**ug/L**	3.921	4684	0.016
|	Se	77		**ug/L**		2140	-0.004
|	Se	82	**0.123**	**ug/L**	62.554	25	0.000
⌊	Kr	83		**ug/L**		151	0.000
⌈>	Lu	175		**ug/L**		492048	492048.094
⌊	Tl	205	**0.260**	**ug/L**	3.607	5804	0.010

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45		91.3			
	Ni	60					
>	Ge	74		89.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		97.9			
	Tl	205					

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: Monday, February 08, 2010 07:55:59
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\lanl soil.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 8.322

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**50.444**	**ug/L**	2.051	91506	0.080
|	Be	9	**50.804**	**ug/L**	3.405	19338	0.017
|>	Sc	45		**ug/L**		1146832	1146831.756
⌊	Ni	60	**50.523**	**ug/L**	1.333	59948	0.052
⌈>	Ge	74		**ug/L**		309826	309825.637
|	As	75	**47.972**	**ug/L**	1.796	43152	0.140
|	Se	77		**ug/L**		6705	0.010
|	Se	82	**49.026**	**ug/L**	4.246	4672	0.015
⌊	Kr	83		**ug/L**		83	0.000
⌈>	Lu	175		**ug/L**		463250	463250.178
⌊	Tl	205	**51.580**	**ug/L**	1.020	920361	1.985

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	100.888				
	Be	9	101.608				
>	Sc	45		89.0			
	Ni	60	101.046				
>	Ge	74		91.7			
	As	75	95.944				
	Se	77					
	Se	82	98.052				
	Kr	83					
>	Lu	175		92.2			
	Tl	205	103.160				

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: Monday, February 08, 2010 07:59:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\lani soil.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 9.323

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.003**	**ug/L**	43.096	99	0.000
	Be	9	**-0.000**	**ug/L**	4975.673	21	-0.000
>	Sc	45		**ug/L**		1168930	1168930.110
	Ni	60	**0.010**	**ug/L**	85.558	139	0.000
>	Ge	74		**ug/L**		316502	316502.368
	As	75	**0.064**	**ug/L**	30.424	-124	0.000
	Se	77		**ug/L**		3148	-0.001
	Se	82	**-0.020**	**ug/L**	1116.512	13	-0.000
	Kr	83		**ug/L**		85	0.000
>	Lu	175		**ug/L**		469378	469377.679
	Tl	205	**0.115**	**ug/L**	5.060	2912	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45		90.7			
	Ni	60					
>	Ge	74		93.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		93.4			
	Tl	205					

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: 244852003
Sample Date/Time: Monday, February 08, 2010 08:03:25
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 942638|2|baj
Method File: c:\elandata\Method\lanl soil.mth
Dataset File: C:\elandata\Dataset\100207\244852003.324

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**77.552**	**ug/L**	2.947	149029	0.123
	Be	9	**5.014**	**ug/L**	2.180	2044	0.002
>	Sc	45		**ug/L**		1215512	1215512.489
	Ni	60	**40.060**	**ug/L**	2.542	50385	0.041
>	Ge	74		**ug/L**		304802	304802.208
	As	75	**9.198**	**ug/L**	3.700	7998	0.027
	Se	77		**ug/L**		2301	-0.004
	Se	82	**-1.837**	**ug/L**	20.716	-158	-0.001
	Kr	83		**ug/L**		351	0.001
>	Lu	175		**ug/L**		466604	466604.004
	Tl	205	**1.192**	**ug/L**	4.321	22229	0.046

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45		94.3			
	Ni	60					
>	Ge	74		90.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		92.8			
	Tl	205					

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: 244852004
Sample Date/Time: Monday, February 08, 2010 08:07:11
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 942638|2|baj
Method File: c:\elandata\Method\lani soil.mth
Dataset File: C:\elandata\Dataset\100207\244852004.325

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**72.853**	**ug/L**	1.518	141701	0.115
	Be	9	**4.578**	**ug/L**	4.136	1890	0.002
>	Sc	45		**ug/L**		1230082	1230082.162
	Ni	60	**38.031**	**ug/L**	1.981	48442	0.039
>	Ge	74		**ug/L**		307159	307159.009
	As	75	**9.356**	**ug/L**	3.147	8201	0.027
	Se	77		**ug/L**		2080	-0.004
	Se	82	**-1.468**	**ug/L**	17.424	-124	-0.000
	Kr	83		**ug/L**		321	0.001
>	Lu	175		**ug/L**		480087	480087.292
	Tl	205	**1.087**	**ug/L**	3.335	20923	0.042

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45		95.5			
	Ni	60					
>	Ge	74		91.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		95.5			
	Tl	205					

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: 1202018070
Sample Date/Time: Monday, February 08, 2010 08:14:43
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 942638|2|baj
Method File: c:\elandata\Method\lani soil.mth
Dataset File: C:\elandata\Dataset\100207\1202018070.327

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**28.763**	**ug/L**	5.156	53000	0.045
	Be	9	**2.226**	**ug/L**	1.842	881	0.001
>	Sc	45		**ug/L**		1164813	1164813.380
	Ni	60	**8.271**	**ug/L**	3.560	10070	0.009
>	Ge	74		**ug/L**		301009	301009.487
	As	75	**3.394**	**ug/L**	7.717	2809	0.010
	Se	77		**ug/L**		1970	-0.005
	Se	82	**-0.003**	**ug/L**	5835.441	13	-0.000
	Kr	83		**ug/L**		136	0.000
>	Lu	175		**ug/L**		498195	498195.168
	Tl	205	**0.156**	**ug/L**	2.981	3884	0.006

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45		90.4			
	Ni	60					
>	Ge	74		89.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		99.1			
	Tl	205					

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: 1202018071
Sample Date/Time: Monday, February 08, 2010 08:18:27
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 942638|2|baj
Method File: c:\elandata\Method\lanl soil.mth
Dataset File: C:\elandata\Dataset\100207\1202018071.328

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.287**	**ug/L**	2.427	94467	0.081
	Be	9	**24.327**	**ug/L**	1.924	9413	0.008
>	Sc	45		**ug/L**		1164576	1164575.991
	Ni	60	**31.110**	**ug/L**	0.632	37535	0.032
>	Ge	74		**ug/L**		300766	300765.523
	As	75	**36.694**	**ug/L**	0.972	32011	0.107
	Se	77		**ug/L**		2497	-0.003
	Se	82	**8.418**	**ug/L**	5.762	791	0.003
	Kr	83		**ug/L**		151	0.000
>	Lu	175		**ug/L**		498354	498354.242
	Tl	205	**47.797**	**ug/L**	2.663	917443	1.839

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45		90.4			
	Ni	60					
>	Ge	74		89.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		99.2			
	Tl	205					

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: 1202018073
Sample Date/Time: Monday, February 08, 2010 08:22:11
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 942638|2|baj
Method File: c:\elandata\Method\lanl soil.mth
Dataset File: C:\elandata\Dataset\100207\1202018073.329

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**63.084**	**ug/L**	1.745	115549	0.100
	Be	9	**24.547**	**ug/L**	2.136	9447	0.008
>	Sc	45		**ug/L**		1158592	1158591.656
	Ni	60	**32.576**	**ug/L**	3.645	39070	0.034
>	Ge	74		**ug/L**		297205	297205.269
	As	75	**37.856**	**ug/L**	3.012	32629	0.110
	Se	77		**ug/L**		2416	-0.003
	Se	82	**8.577**	**ug/L**	1.307	796	0.003
	Kr	83		**ug/L**		153	0.000
>	Lu	175		**ug/L**		507283	507283.005
	Tl	205	**47.945**	**ug/L**	0.743	936768	1.845

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45		89.9			
	Ni	60					
>	Ge	74		88.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		100.9			
	Tl	205					

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: 1202018072
Sample Date/Time: Monday, February 08, 2010 08:25:57
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 942638|10|baj
Method File: c:\elandata\Method\lanl soil.mth
Dataset File: C:\elandata\Dataset\100207\1202018072.330

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**9.935**	**ug/L**	4.443	17507	0.016
	Be	9	**0.523**	**ug/L**	0.490	213	0.000
>	Sc	45		**ug/L**		1110594	1110593.904
	Ni	60	**1.978**	**ug/L**	4.652	2387	0.002
>	Ge	74		**ug/L**		294346	294345.899
	As	75	**0.868**	**ug/L**	39.559	575	0.003
	Se	77		**ug/L**		2339	-0.003
	Se	82	**0.065**	**ug/L**	34.236	19	0.000
	Kr	83		**ug/L**		85	0.000
>	Lu	175		**ug/L**		485761	485760.983
	Tl	205	**0.113**	**ug/L**	2.878	2983	0.004

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear 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					
>	Sc	45		86.2			
	Ni	60					
>	Ge	74		87.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		96.7			
	Tl	205					

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: Monday, February 08, 2010 08:29:40
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\ani soil.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 8.331

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**50.930**	**ug/L**	2.399	91492	0.080
	Be	9	**49.802**	**ug/L**	1.594	18772	0.017
>	Sc	45		**ug/L**		1135707	1135706.518
	Ni	60	**49.833**	**ug/L**	1.674	58564	0.051
>	Ge	74		**ug/L**		304400	304399.741
	As	75	**45.914**	**ug/L**	2.268	40580	0.134
	Se	77		**ug/L**		6310	0.010
	Se	82	**47.854**	**ug/L**	1.759	4484	0.015
	Kr	83		**ug/L**		84	0.000
>	Lu	175		**ug/L**		480978	480977.869
	Tl	205	**51.240**	**ug/L**	2.816	948798	1.972

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ni	60Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovr	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	101.860				
	Be	9	99.604				
>	Sc	45		88.2			
	Ni	60	99.665				
>	Ge	74		90.1			
	As	75	91.828				
	Se	77					
	Se	82	95.707				
	Kr	83					
>	Lu	175		95.7			
	Tl	205	102.479				

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: Monday, February 08, 2010 08:33:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\lani soil.mth
Dataset File: C:\elandata\Dataset\100207\QC Std 9.332

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**-0.006**	**ug/L**	75.909	81	-0.000
	Be	9	**-0.014**	**ug/L**	79.678	16	-0.000
>	Sc	45		**ug/L**		1152951	1152950.905
	Ni	60	**-0.002**	**ug/L**	810.594	123	-0.000
>	Ge	74		**ug/L**		304904	304904.202
	As	75	**0.163**	**ug/L**	100.152	-31	0.000
	Se	77		**ug/L**		2993	-0.001
	Se	82	**-0.030**	**ug/L**	625.643	11	-0.000
	Kr	83		**ug/L**		75	0.000
>	Lu	175		**ug/L**		493269	493269.037
	Tl	205	**0.123**	**ug/L**	7.668	3212	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ni	60	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear 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					
>	Sc	45		89.5			
	Ni	60					
>	Ge	74		90.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		98.1			
	Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

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	StndConc µg/L	BlnkCorr 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	StndConc µg/L	BlnkCorr 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	StndConc µg/L	BlnkCorr 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	StndConc µg/L	BlnkCorr 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 Slope: 0.01041
Intercept : 0.00012

==========

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

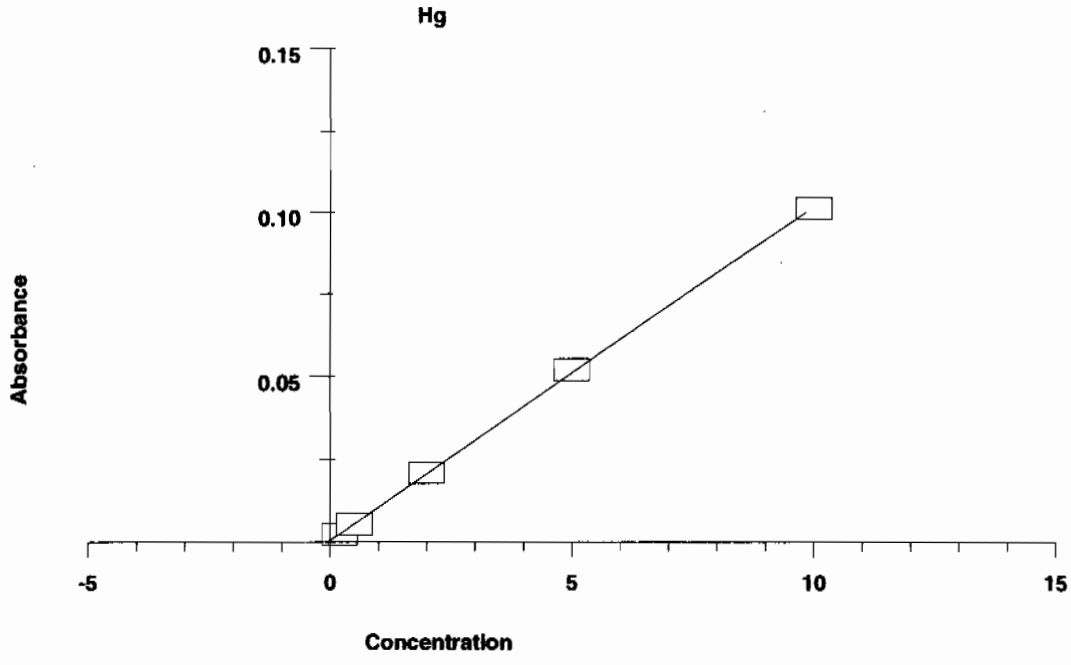
Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1004	0.1048	09:34:43	No
2			0.1017	0.1061	09:35:18	No
Mean:			0.1011			
SD :			0.0009			
%RSD:			0.9079			

[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	BlnkCorr 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	BlnkCorr 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	BlnkCorr 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	BlnkCorr 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	BlnkCorr 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	BlnkCorr 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	BlnkCorr 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	BlnkCorr 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|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.071	0.071	0.0011	0.0055	09:53:15	No
2	0.062	0.062	0.0010	0.0054	09:53:50	No
Mean:	0.066	0.066	0.0011			
SD :	0.0065	0.0065	0.0001			
%RSD:	9.9	9.9	6.0618			

Element: Hg Seq. No.: 16 AS Loc.: 16 Date: 01/28/2010
Sample ID: 244852003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.148	0.148	0.0019	0.0063	09:55:18	No
2	0.138	0.138	0.0018	0.0062	09:55:53	No
Mean:	0.143	0.143	0.0019			
SD :	0.0072	0.0072	0.0001			
%RSD:	5.0	5.0	3.8953			

Element: Hg Seq. No.: 17 AS Loc.: 17 Date: 01/28/2010
Sample ID: 244852004|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.176	0.176	0.0022	0.0066	09:57:17	No
2	0.175	0.175	0.0022	0.0065	09:57:52	No
Mean:	0.175	0.175	0.0022			
SD :	0.0007	0.0007	0.0000			
%RSD:	0.4	0.4	0.3311			

Element: Hg Seq. No.: 18 AS Loc.: 18 Date: 01/28/2010
Sample ID: 244881001|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.018	-0.018	0.0002	0.0046	09:59:12	No
2	-0.019	-0.019	0.0002	0.0046	09:59:47	No
Mean:	-0.019	-0.019	0.0002			
SD :	0.0007	0.0007	0.0000			
%RSD:	3.7	3.7	3.0792			

Element: Hg Seq. No.: 19 AS Loc.: 19 Date: 01/28/2010
Sample ID: 244881002|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.068	0.068	0.0011	0.0055	10:01:08	No
2	0.061	0.061	0.0010	0.0054	10:01:43	No
Mean:	0.064	0.064	0.0011			
SD :	0.0048	0.0048	0.0000			
%RSD:	7.5	7.5	4.5742			

Element: Hg Seq. No.: 20 AS Loc.: 20 Date: 01/28/2010
Sample ID: 244881003|i|||

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.070	0.070	0.0011	0.0055	10:03:05	No
2	0.067	0.067	0.0011	0.0055	10:03:40	No
Mean:	0.069	0.069	0.0011			
SD :	0.0019	0.0019	0.0000			

%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	StndConc µg/L	BlnkCorr 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	StndConc µg/L	BlnkCorr 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	StndConc µg/L	BlnkCorr 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	StndConc µg/L	BlnkCorr 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	StndConc µg/L	BlnkCorr 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 µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak 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 µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak 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 µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak 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 µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak 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 µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak 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	StndConc µg/L	BlnkCorr 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	StndConc µg/L	BlnkCorr 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	StndConc µg/L	BlnkCorr 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	StndConc µg/L	BlnkCorr 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	StndConc µg/L	BlnkCorr 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	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored

Miscellaneous

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 942632

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202018069	UI062540-MS	.518	g
MS	1202018071	UI091015-A	.5	mL
MS	1202018071	UI091015-B	.5	mL
MSD	1202018073	UI091015-A	.5	mL
MSD	1202018073	UI091015-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202018068		SW846 3050B	21-JAN-2010 07:45	0.519 g	50 mL	96.33911	SOIL
LCS	1202018069		SW846 3050B	21-JAN-2010 07:45	0.518 g	50 mL	96.5251	SOIL
SAMPLE	244842001		SW846 3050B	21-JAN-2010 07:45	0.513 g	50 mL	97.46589	SOIL
SAMPLE	244842002		SW846 3050B	21-JAN-2010 07:45	0.515 g	50 mL	97.08738	SOIL
SAMPLE	244842003		SW846 3050B	21-JAN-2010 07:45	0.524 g	50 mL	95.41985	SOIL
SAMPLE	244842004		SW846 3050B	21-JAN-2010 07:45	0.511 g	50 mL	97.84736	SOIL
SAMPLE	244842005		SW846 3050B	21-JAN-2010 07:45	0.514 g	50 mL	97.27626	SOIL
SAMPLE	244842006		SW846 3050B	21-JAN-2010 07:45	0.515 g	50 mL	97.08738	SOIL
SAMPLE	244847001		SW846 3050B	21-JAN-2010 07:45	0.511 g	50 mL	97.84736	SOIL
SAMPLE	244847002		SW846 3050B	21-JAN-2010 07:45	0.514 g	50 mL	97.27626	SOIL
SAMPLE	244847003		SW846 3050B	21-JAN-2010 07:45	0.522 g	50 mL	95.78544	SOIL
SAMPLE	244847004		SW846 3050B	21-JAN-2010 07:45	0.505 g	50 mL	99.0099	SOIL
SAMPLE	244852001		SW846 3050B	21-JAN-2010 07:45	0.502 g	50 mL	99.60159	SOIL
SAMPLE	244852002		SW846 3050B	21-JAN-2010 07:45	0.508 g	50 mL	98.4252	SOIL
SAMPLE	244852003		SW846 3050B	21-JAN-2010 07:45	0.518 g	50 mL	96.5251	SOIL
SAMPLE	244852004		SW846 3050B	21-JAN-2010 07:45	0.523 g	50 mL	95.60229	SOIL
SAMPLE	244881001		SW846 3050B	21-JAN-2010 07:45	0.503 g	50 mL	99.40358	SOIL
DUP	1202018070	244881001	SW846 3050B	21-JAN-2010 07:45	0.501 g	50 mL	99.8004	SOIL
MS	1202018071	244881001	SW846 3050B	21-JAN-2010 07:45	0.505 g	50 mL	99.0099	SOIL
MSD	1202018073	244881001	SW846 3050B	21-JAN-2010 07:45	0.503 g	50 mL	99.40358	SOIL
SDILT	1202018072	244881001	SW846 3050B	21-JAN-2010 07:45	0.503 g	50 mL	99.40358	SOIL
SAMPLE	244881002		SW846 3050B	21-JAN-2010 07:45	0.502 g	50 mL	99.60159	SOIL
SAMPLE	244881003		SW846 3050B	21-JAN-2010 07:45	0.503 g	50 mL	99.40358	SOIL
SAMPLE	244881004		SW846 3050B	21-JAN-2010 07:45	0.509 g	50 mL	98.23183	SOIL

Reagent/Solvent Lot ID	Amount	Description
1203655-02	1.5 mL	Hydrogen Peroxide 30%
1234886	5 mL	Nitric Acid CONC.

Comments Sample 244881001 consist of brown soil with small rocks.

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 942644

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202018100	UI062540-I	.501	g
MS	1202018102	UI091216-01	.25	mL
MS	1202018102	UI091216-06	.25	mL
MSD	1202018104	UI091216-01	.25	mL
MSD	1202018104	UI091216-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202018099		SW846 3050B	21-JAN-2010 07:45	0.512 g	50 mL	97.65625	SOIL
LCS	1202018100		SW846 3050B	21-JAN-2010 07:45	0.501 g	50 mL	99.8004	SOIL
SAMPLE	244842001		SW846 3050B	21-JAN-2010 07:45	0.502 g	50 mL	99.60159	SOIL
SAMPLE	244842002		SW846 3050B	21-JAN-2010 07:45	0.519 g	50 mL	96.33911	SOIL
SAMPLE	244842003		SW846 3050B	21-JAN-2010 07:45	0.515 g	50 mL	97.08738	SOIL
SAMPLE	244842004		SW846 3050B	21-JAN-2010 07:45	0.505 g	50 mL	99.0099	SOIL
SAMPLE	244842005		SW846 3050B	21-JAN-2010 07:45	0.511 g	50 mL	97.84736	SOIL
SAMPLE	244842006		SW846 3050B	21-JAN-2010 07:45	0.516 g	50 mL	96.89922	SOIL
SAMPLE	244847001		SW846 3050B	21-JAN-2010 07:45	0.509 g	50 mL	98.23183	SOIL
SAMPLE	244847002		SW846 3050B	21-JAN-2010 07:45	0.512 g	50 mL	97.65625	SOIL
SAMPLE	244847003		SW846 3050B	21-JAN-2010 07:45	0.517 g	50 mL	96.7118	SOIL
SAMPLE	244847004		SW846 3050B	21-JAN-2010 07:45	0.508 g	50 mL	98.4252	SOIL
SAMPLE	244852001		SW846 3050B	21-JAN-2010 07:45	0.511 g	50 mL	97.84736	SOIL
SAMPLE	244852002		SW846 3050B	21-JAN-2010 07:45	0.519 g	50 mL	96.33911	SOIL
SAMPLE	244852003		SW846 3050B	21-JAN-2010 07:45	0.517 g	50 mL	96.7118	SOIL
SAMPLE	244852004		SW846 3050B	21-JAN-2010 07:45	0.505 g	50 mL	99.0099	SOIL
SAMPLE	244881001		SW846 3050B	21-JAN-2010 07:45	0.512 g	50 mL	97.65625	SOIL
DUP	1202018101	244881001	SW846 3050B	21-JAN-2010 07:45	0.507 g	50 mL	98.61933	SOIL
MS	1202018102	244881001	SW846 3050B	21-JAN-2010 07:45	0.517 g	50 mL	96.7118	SOIL
MSD	1202018104	244881001	SW846 3050B	21-JAN-2010 07:45	0.503 g	50 mL	99.40358	SOIL
SDILT	1202018103	244881001	SW846 3050B	21-JAN-2010 07:45	0.512 g	50 mL	97.65625	SOIL
SAMPLE	244881002		SW846 3050B	21-JAN-2010 07:45	0.515 g	50 mL	97.08738	SOIL
SAMPLE	244881003		SW846 3050B	21-JAN-2010 07:45	0.524 g	50 mL	95.41985	SOIL
SAMPLE	244881004		SW846 3050B	21-JAN-2010 07:45	0.515 g	50 mL	97.08738	SOIL

Reagent/Solvent Lot ID	Amount	Description
1252838	10 mL	HYDROCHLORIC ACID
1234886	1.25 mL	Nitric Acid CONC.

Comments Sample 244881001 consist of brown soil with small rocks.

Prep LogBook

Analyst: AXG2 Verified by:_____

Batch: 950660

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202037289	UI062540-MS	.52	g
MS	1202037287	UI1207771-01	.25	mL
MS	1202037287	UI091015-A	.5	mL
MS	1202037287	UI091015-B	.5	mL
MSD	1202037288	UI1207771-01	.25	mL
MSD	1202037288	UI091015-A	.5	mL
MSD	1202037288	UI091015-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202037284		SW846 3050B	09-FEB-2010 08:00	0.522 g	50 mL	95.78544	SOIL
LCS	1202037289		SW846 3050B	09-FEB-2010 08:00	0.52 g	50 mL	96.15385	SOIL
SAMPLE	244847001		SW846 3050B	09-FEB-2010 08:00	0.52 g	50 mL	96.15385	SOIL
DUP	1202037285	244847001	SW846 3050B	09-FEB-2010 08:00	0.5 g	50 mL	100	SOIL
SDILT	1202037286	244847001	SW846 3050B	09-FEB-2010 08:00	0.52 g	50 mL	96.15385	SOIL
MS	1202037287	244847001	SW846 3050B	09-FEB-2010 08:00	0.523 g	50 mL	95.60229	SOIL
MSD	1202037288	244847001	SW846 3050B	09-FEB-2010 08:00	0.518 g	50 mL	96.5251	SOIL
SAMPLE	244847002		SW846 3050B	09-FEB-2010 08:00	0.508 g	50 mL	98.4252	SOIL
SAMPLE	244847003		SW846 3050B	09-FEB-2010 08:00	0.514 g	50 mL	97.27626	SOIL
SAMPLE	244847004		SW846 3050B	09-FEB-2010 08:00	0.51 g	50 mL	98.03922	SOIL
SAMPLE	244852001		SW846 3050B	09-FEB-2010 08:00	0.504 g	50 mL	99.20635	SOIL
SAMPLE	244852002		SW846 3050B	09-FEB-2010 08:00	0.504 g	50 mL	99.20635	SOIL
SAMPLE	244852003		SW846 3050B	09-FEB-2010 08:00	0.522 g	50 mL	95.78544	SOIL
SAMPLE	244852004		SW846 3050B	09-FEB-2010 08:00	0.506 g	50 mL	98.81423	SOIL
SAMPLE	244881001		SW846 3050B	09-FEB-2010 08:00	0.5 g	50 mL	100	SOIL
SAMPLE	244881002		SW846 3050B	09-FEB-2010 08:00	0.506 g	50 mL	98.81423	SOIL
SAMPLE	244881003		SW846 3050B	09-FEB-2010 08:00	0.501 g	50 mL	99.8004	SOIL
SAMPLE	244881004		SW846 3050B	09-FEB-2010 08:00	0.504 g	50 mL	99.20635	SOIL

Reagent/Solvent Lot ID	Amount	Description
1203655-02	1.5 mL	Hydrogen Peroxide 30%
1264396	5 mL	Nitric Acid CONC.

Comments Sample 244847001 consist of moist, gray, rocky soil.

Prep LogBook

Analyst: TXB3 Verified by:_____

Batch: 943319

Lab SOP: GL-MA-E-010 REV# 23

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202019780	UI031809A	.204	g
MS	1202019782	WHG100127-14	.3	mL
MSD	1202019784	WHG100127-14	.3	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202019779		SW846 7471A Prep	27-JAN-2010 13:25	0.549 g	30 mL	54.64481	SOIL
LCS	1202019780		SW846 7471A Prep	27-JAN-2010 13:25	0.204 g	30 mL	147.05882	SOIL
SAMPLE	244852001		SW846 7471A Prep	27-JAN-2010 13:25	0.502 g	30 mL	59.76096	SOIL
SAMPLE	244852002		SW846 7471A Prep	27-JAN-2010 13:25	0.516 g	30 mL	58.13953	SOIL
SAMPLE	244852003		SW846 7471A Prep	27-JAN-2010 13:25	0.516 g	30 mL	58.13953	SOIL
SAMPLE	244852004		SW846 7471A Prep	27-JAN-2010 13:25	0.541 g	30 mL	55.45287	SOIL
SAMPLE	244881001		SW846 7471A Prep	27-JAN-2010 13:25	0.566 g	30 mL	53.00353	SOIL
SAMPLE	244881002		SW846 7471A Prep	27-JAN-2010 13:25	0.519 g	30 mL	57.80347	SOIL
SAMPLE	244881003		SW846 7471A Prep	27-JAN-2010 13:25	0.536 g	30 mL	55.97015	SOIL
SAMPLE	244881004		SW846 7471A Prep	27-JAN-2010 13:25	0.526 g	30 mL	57.03422	SOIL
SAMPLE	244902001		SW846 7471A Prep	27-JAN-2010 13:25	0.52 g	30 mL	57.69231	SOIL
SAMPLE	244921001		SW846 7471A Prep	27-JAN-2010 13:25	0.509 g	30 mL	58.9391	SOIL
DUP	1202019781	244921001	SW846 7471A Prep	27-JAN-2010 13:25	0.526 g	30 mL	57.03422	SOIL
MS	1202019782	244921001	SW846 7471A Prep	27-JAN-2010 13:25	0.51 g	30 mL	58.82353	SOIL
MSD	1202019784	244921001	SW846 7471A Prep	27-JAN-2010 13:25	0.548 g	30 mL	54.74453	SOIL
SDILT	1202019783	244921001	SW846 7471A Prep	27-JAN-2010 13:25	0.509 g	30 mL	58.9391	SOIL
SAMPLE	244921002		SW846 7471A Prep	27-JAN-2010 13:25	0.573 g	30 mL	52.35602	SOIL
SAMPLE	244921003		SW846 7471A Prep	27-JAN-2010 13:25	0.55 g	30 mL	54.54545	SOIL
SAMPLE	244921004		SW846 7471A Prep	27-JAN-2010 13:25	0.505 g	30 mL	59.40594	SOIL
SAMPLE	244921005		SW846 7471A Prep	27-JAN-2010 13:25	0.529 g	30 mL	56.71078	SOIL
SAMPLE	244921006		SW846 7471A Prep	27-JAN-2010 13:25	0.508 g	30 mL	59.05512	SOIL
SAMPLE	244921007		SW846 7471A Prep	27-JAN-2010 13:25	0.555 g	30 mL	54.05405	SOIL
SAMPLE	244921008		SW846 7471A Prep	27-JAN-2010 13:25	0.501 g	30 mL	59.88024	SOIL
SAMPLE	244921009		SW846 7471A Prep	27-JAN-2010 13:25	0.513 g	30 mL	58.47953	SOIL
SAMPLE	244921010		SW846 7471A Prep	27-JAN-2010 13:25	0.527 g	30 mL	56.926	SOIL

Reagent/Solvent Lot ID	Amount	Description
1236355-A	1.125 mL	Hydrochloric Acid Conc.
1257474-1	.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

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

Mo.Day Yr.	Division:	Quality Criteria:	Type:
05-FEB-10	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP	SW846 3050B/6010B	Solid	LANL
Batch ID:	**Sample Numbers:**		
942648	See Below		

Potentially affected work order(s)(SDG): 244842(10-1257),244847(10-1262),244852(10-1263),244881(10-1264-1)

Application Issues:

Failed Recovery for MS/PS

Method Blank contamination

Failed Recovery for MSD/PSD

Specification and Requirements Exception Description:	DER Disposition:
1. Failed Recovery for MS/PS: QC 1202018102MS 2. Failed Recovery for MSD/PSD: QC 1202018104MSD 3. Method Blank Contamination: QC 1202018099MB	1./2. The matrix spike and matrix spike duplicate recovery failed outside of the control limits for magnesium,manganese 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. 3. The method blank failed high for iron but all samples were 10x greater than PQL/RDL therefore data was not adversely affected.

Originator's Name:
Helen Camello 10-FEB-10

Data Validator/Group Leader:
Christopher Louviere 10-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

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: 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%IN5%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 S **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: 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

Analyte	Concentration	Analyte	Concentration
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 Sta **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

Analyte	Concentration	Analyte	Concentration
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
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

Standard Logbook

Analyte	Concentration	Analyte	Concentration
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
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

Standard Logbook

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

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

Analyte	Concentration	Analyte	Concentration
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 :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI091212-60 **Opened:** 12-DEC-09 **Amount :** .5 mL
Name: ICPMS High Range Standa **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 Standa **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

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

Standard Logbook

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
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

Analyte	Concentration	Analyte	Concentration
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		

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: UI100114-48 **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

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: 02SI
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: 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

Standard Logbook

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: UI1207771-01 **Opened:** 26-OCT-09 **Lot Number :** 1013481
Name: AUPDPTSPIKE **Received:** 26-OCT-09
Type: Source Material **Expires:** 26-OCT-10
Employee: Francena Armstrong
Supplier: o2si
Description: AU,PD,PT,CS,CE SPIKE
Comments: None

Analyte	Concentration	Analyte	Concentration
Cerium	10 ug/mL	Cesium	10 ug/mL
Gold	10 ug/mL	Palladium	10 ug/mL
Platinum	10 ug/mL		

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: 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.	Aliquot	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.	Aliquot	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.	Aliquot	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.	Aliquot	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.	Aliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI100201-42 **Opened:** 01-FEB-10 **Balance Id :** 216
Name: TRACE ICP 0.1 PPM STD. **Received:** 02-NOV-09 **Pipet Id :** 3581809
Type: Working **Expires:** 02-FEB-10 **Solvent :** 3%HCL and 1%HNO3 -1263028
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.
WI100201-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100201-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100201-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100201-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100201-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI100201-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100201-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI100201-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI100201-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100201-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI100201-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100201-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI100201-43 **Opened:** 01-FEB-10 **Balance Id :** 216
Name: TRACE ICP 0.5/CCV STD. **Received:** 02-NOV-09 **Pipet Id :** 3581809
Type: Working **Expires:** 02-FEB-10 **Solvent :** 3%HCL and 1%HNO3 -1263028
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP O.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: WI100201-44 **Opened:** 01-FEB-10 **Balance Id :** 216
Name: TRACE ICP SCAL 1.0 **Received:** 02-NOV-09 **Pipet Id :** 3581809
Type: Working **Expires:** 02-FEB-10 **Solvent :** 3%HCL and 1 %HNO3-1263028
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.	Aliquot	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: WI100201-45 **Opened:** 01-FEB-10 **Balance Id :** 216
Name: TRACE ICP S-10 STD **Received:** 22-APR-09 **Pipet Id :** 3581809
Type: Working **Expires:** 02-FEB-10 **Solvent :** 3%HCL and 1%HNO3 -1263028
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	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: WI100201-46 **Opened:** 01-FEB-10 **Balance Id :** 216
Name: ICP TRACE ICV **Received:** 25-SEP-09 **Pipet Id :** 3581809
Type: Working **Expires:** 02-FEB-10 **Solvent :** 3%HCL AND 1%HNO3-1263028
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: WI100201-47 **Opened:** 01-FEB-10 **Balance Id :** 216
Name: PQL Working Standard **Received:** 30-JUN-09 **Pipet Id :** 3581809
Type: Working **Expires:** 02-FEB-10 **Solvent :** 3%HCL &1%HNO3-1263028
Employee: Helen Carnello
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: WMS100207-04 **Opened:** 07-FEB-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 07-FEB-10 **Balance Id :** 4025216
Type: Working **Expires:** 08-FEB-10 **Pipet Id :** 3541598
Employee: Elizabeth Janssen **Solvent :** 2%HNO3/1%HCl-1262930
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: WMS100207-04A **Opened:** 07-FEB-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 07-FEB-10 **Pipet Id :** 3541598
Type: Working **Expires:** 08-FEB-10 **Solvent :** 2%HNO3/1%HCl - 1262930
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.
WMS100207-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100207-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100207-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100207-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100207-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100207-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100207-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100207-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100207-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100207-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100207-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS100207-05 **Opened:** 07-FEB-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 07-FEB-10 **Pipet Id :** 3541598
Type: Working **Expires:** 08-FEB-10 **Solvent :** 2%HNO3/1%HCl - 1262930
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: WMS100207-06 **Opened:** 07-FEB-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 07-FEB-10 **Pipet Id :** 3820544
Type: Working **Expires:** 08-FEB-10 **Solvent :** 2%HNO3/1%HCl - 1262930
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.	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: WMS100207-07 **Opened:** 07-FEB-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 07-FEB-10 **Lot Number :** 1010773
Type: Working **Expires:** 08-FEB-10 **Pipet Id :** 3541598
Employee: Elizabeth Janssen **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.	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: WMS100207-08 **Opened:** 07-FEB-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 07-FEB-10 **Pipet Id :** 1758088
Type: Working **Expires:** 08-FEB-10 **Solvent :** 2%HNO3/1%HCl - 1262930
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
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: WMS100207-70 **Opened:** 07-FEB-10 **Balance Id :** 40245216
Name: ICPMS LINEAR RANGE ST **Received:** 07-FEB-10 **Pipet Id :** 1758088
Type: Working **Expires:** 08-FEB-10 **Solvent :** 2%HNO3/1%HCl - 1262930
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: WMS100209-04 **Opened:** 09-FEB-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 09-FEB-10 **Balance Id :** 4025216
Type: Working **Expires:** 10-FEB-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl-1266278
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: WMS100209-04A **Opened:** 09-FEB-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 09-FEB-10 **Pipet Id :** 3541598
Type: Working **Expires:** 10-FEB-10 **Solvent :** 2%HNO3/1%HCl - 1266278
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100209-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100209-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100209-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100209-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100209-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100209-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100209-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100209-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100209-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100209-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100209-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Serial ID: WMS100209-05 **Opened:** 09-FEB-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 09-FEB-10 **Pipet Id :** 3541598
Type: Working **Expires:** 10-FEB-10 **Solvent :** 2%HNO3/1%HCl - 1266278
Employee: Paul Boyd
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: WMS100209-06 **Opened:** 09-FEB-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 09-FEB-10 **Pipet Id :** 3820544
Type: Working **Expires:** 10-FEB-10 **Solvent :** 2%HNO3/1%HCl - 1266278
Employee: Paul Boyd
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: WMS100209-07 **Opened:** 09-FEB-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 09-FEB-10 **Lot Number :** 1010773
Type: Working **Expires:** 10-FEB-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl - 1266278
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: WMS100209-08 **Opened:** 09-FEB-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 09-FEB-10 **Pipet Id :** 1758088
Type: Working **Expires:** 10-FEB-10 **Solvent :** 2%HNO3/1%HCl - 1266278
Employee: Paul Boyd
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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

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: Hydroxlyamine Hydrochloride
Comments: None

Standard Logbook

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
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

Standard Logbook

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: 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: 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

Serial ID: 1263028 **Opened:** 01-FEB-10 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 15-JAN-10 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 07-FEB-10 **Solvent :** 3%HCL+1%HNO3
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1264396 **Opened:** 03-FEB-10 **Lot Number :** H51025 L
Name: I-HNO3 **Received:** 02-FEB-10
Type: Reagent/Solvent **Expires:** 03-FEB-11
Employee: Bryan Davis
Supplier: BAKER

Standard Logbook

Description: Nitric Acid CONC.
Comments: None

Serial ID: 1266278 **Opened:** 08-FEB-10 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 08-FEB-10
Type: Reagent/Solvent **Expires:** 15-FEB-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.
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

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1263

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	942457	**Method:**	SW846 9012A
Prep Batch :	942455	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
244852001	RE12-10-7856
244852002	RE12-10-7857
244852003	RE12-10-7855
244852004	RE12-10-7854
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)

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 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: 244847001 (RE12-10-7272) and 244847002 (RE12-10-7273).

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 values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1202017528 (RE12-10-7272).

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 sample in this sample group was diluted due to high concentration: 1202017534 (LCS).

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: Tom Lewis, Jr. **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: 10-1263 GEL Work Order: 244852

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 _____

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 1, 2010

Client SDG: 10-1263

Client Sample ID:	RE12-10-7856	Project:	LANL01004
Sample ID:	244852001	Client ID:	LANL010
Matrix:	R		
Collect Date:	11-JAN-10 12:00		
Receive Date:	15-JAN-10		
Collector:	Client		
Moisture:	9.44%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total "Dry Weight Corrected"										
Cyanide, Total	U	ND	70.8	260	ug/kg	1	AXC2 01/18/10	1600	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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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 1, 2010

Client SDG: 10-1263

Client Sample ID: RE12-10-7857
Sample ID: 244852002
Matrix: R
Collect Date: 11-JAN-10 12:00
Receive Date: 15-JAN-10
Collector: Client
Moisture: 6.28%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total "Dry Weight Corrected"										
Cyanide, Total	U	ND	71.1	262	ug/kg	1	AXC2 01/18/10	1604	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	

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 1, 2010

Client SDG: 10-1263

Client Sample ID:	RE12-10-7855	Project:	LANL01004
Sample ID:	244852003	Client ID:	LANL010
Matrix:	R		
Collect Date:	11-JAN-10 12:00		
Receive Date:	15-JAN-10		
Collector:	Client		
Moisture:	7.46%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total "Dry Weight Corrected"										
Cyanide, Total	U	ND	72.0	265	ug/kg	1	AXC2 01/18/10	1605	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	

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 1, 2010

Client SDG: 10-1263

Client Sample ID:	RE12-10-7854	Project:	LANL01004
Sample ID:	244852004	Client ID:	LANL010
Matrix:	R		
Collect Date:	11-JAN-10 12:00		
Receive Date:	15-JAN-10		
Collector:	Client		
Moisture:	13.8%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis											
SW9012A Cyanide, Total "Dry Weight Corrected"											
Cyanide, Total	U	ND	70.5	259	ug/kg	1	AXC2	01/18/10	1606	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	

Quality Control Summary

GEL LABORATORIES LLC

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QC Summary

Report Date: February 1, 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: 244852

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Flow Injection Analysis										
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

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.
- 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

QC Summary

Workorder: 244852

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

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: 01-FEB-2010 14:48

GEL Laboratories LLC
Contract: LANL01004
SDG #: 10-1263

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

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

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

Prep LogBook

Reagent/Solvent Lot ID	Amount	Description
091211-C	25 mL	0.25N Sodium Hydroxide Solution
WCN100118-07	.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

Comments

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 Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
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								

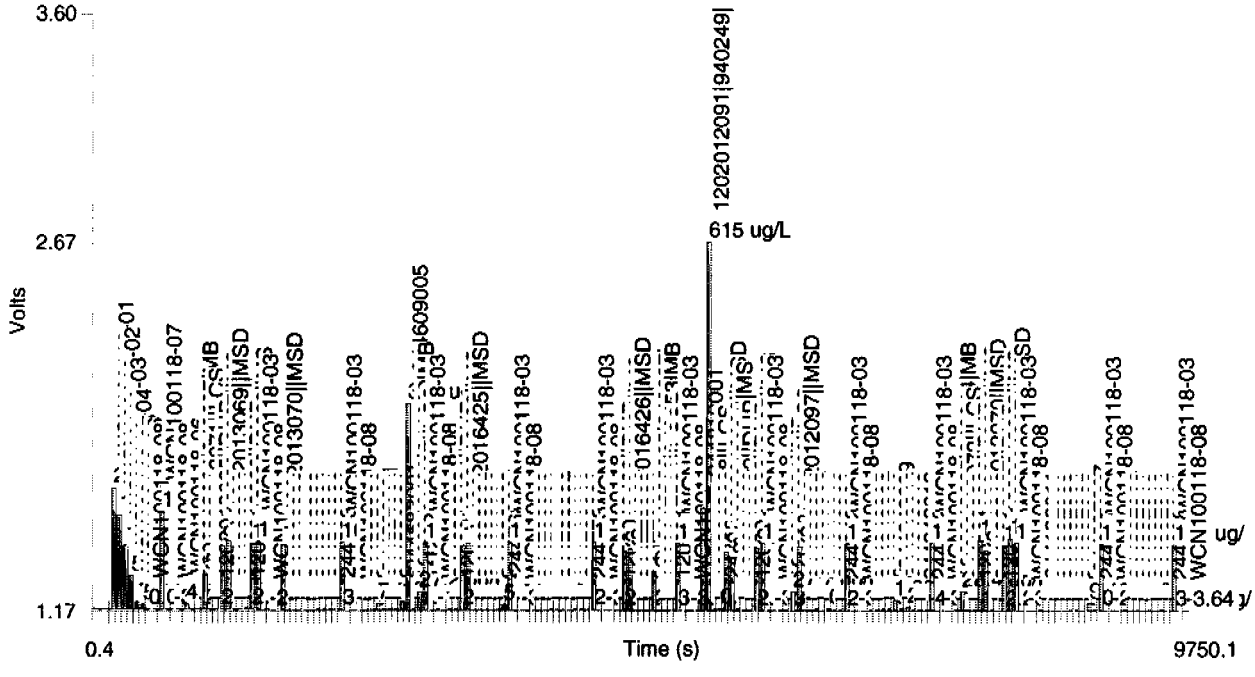
Author: axc2 Date : 1/19/2010

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
Callibration 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

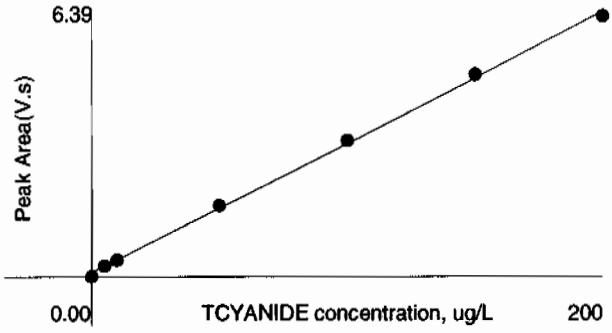


Author: axc2 Date : 1/19/2010

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



Area = 0.0320 * Conc + 0.115
Conc = 31.2 * Area - 3.50
Correlation Coefficient (r) = 0.99944

No Weighting

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 Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
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

Author: axc2

Date : 1/18/2010

Callibration 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

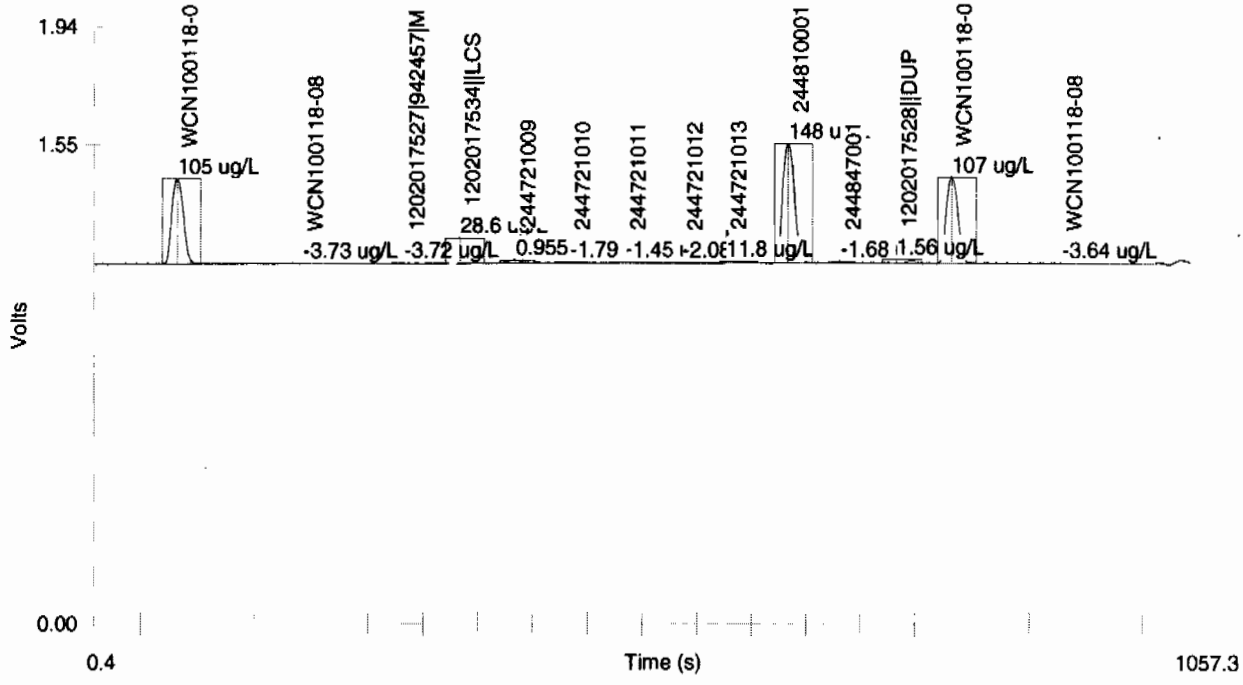


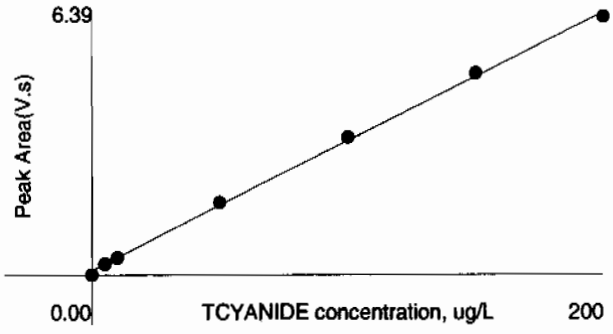
Table 1: TCYANIDE

	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

Author: axc2

Date : 1/18/2010

Figure 1: TCYANIDE



Area = 0.0320 * Conc + 0.115
Conc = 31.2 * Area - 3.50
Correlation Coefficient (r) = 0.99944

No Weighting

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 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
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
	TCYANIDE
Concentration Units	ug/L
Callibration 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

Author: axc2 Date : 1/18/2010

Channel 1: Current View

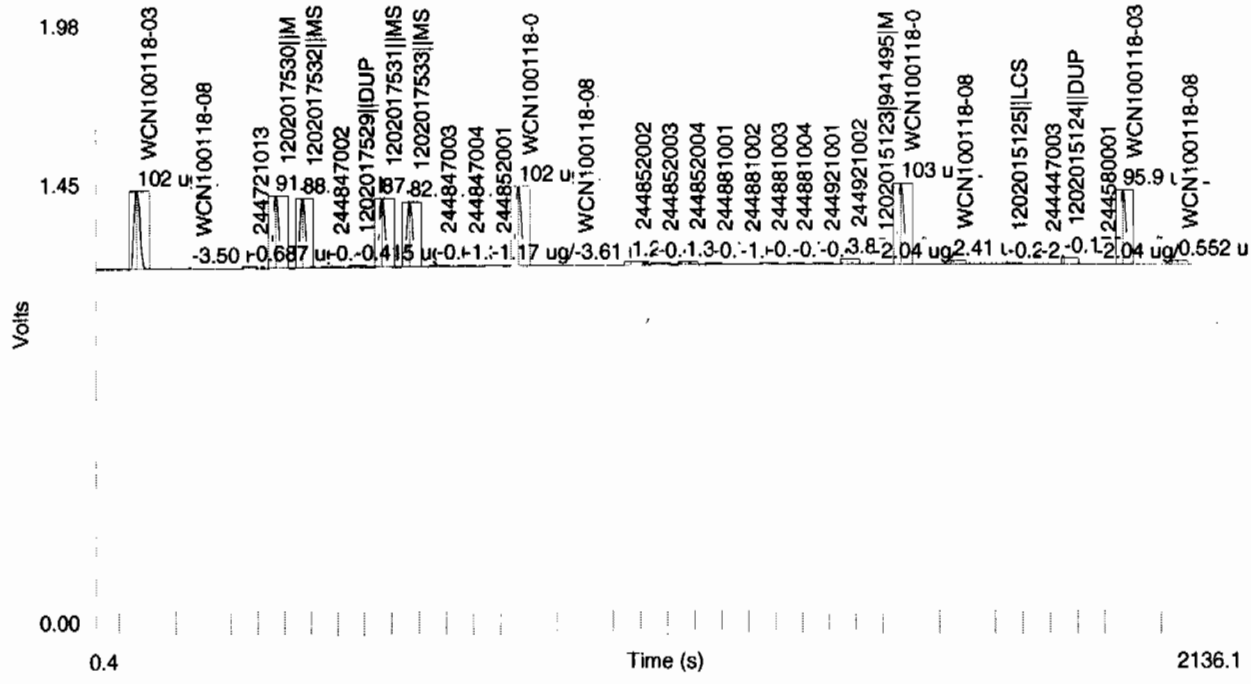
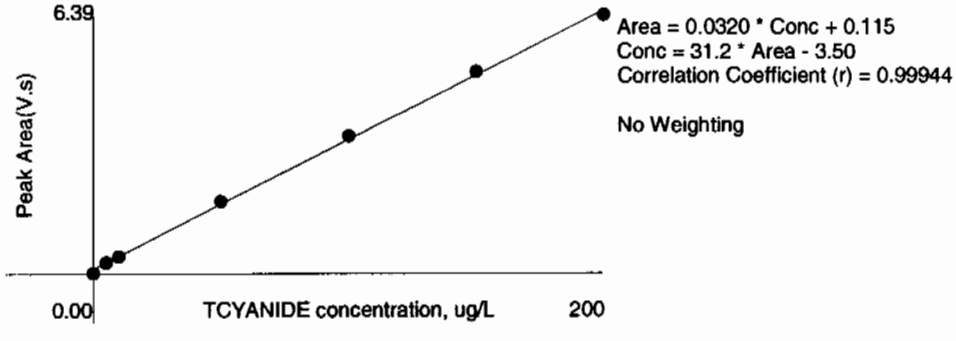


Table 1: TCYANIDE

	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



RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1263
Work Order 244852

Method/Analysis Information

Procedure:	**Dry Weight-Percent Moisture**
Analytical Method:	Dry Soil Prep
Analytical Batch Number:	942703

Sample ID	Client ID
244852001	RE12-10-7856
244852002	RE12-10-7857
244852003	RE12-10-7855
244852004	RE12-10-7854
1202018243	244852001(RE12-10-7856) Sample Duplicate (DUP)

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-OA-E-020 REV# 9.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Designated QC
The following sample was used for QC: 244852001 (RE12-10-7856). The QC was from LANL work order 244852.

QC Information
All of the QC samples met the required acceptance limits.

CSU
Not Applicable. The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any 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 sample set.

Blank Decision Level
Not Applicable. The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**AM241**
Analytical Method:	DOE EML HASL-300, Am-05-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	942753
Prep Batch Number:	942703

Sample ID	Client ID
244852001	RE12-10-7856
244852002	RE12-10-7857
244852003	RE12-10-7855
244852004	RE12-10-7854
1202018341	Method Blank (MB)
1202018342	244902001(RE46-10-10099) Sample Duplicate (DUP)
1202018343	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-RAD-A-011 REV# 18.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1202018341 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 244902001 (RE46-10-10099). The QC was from LANL work order 244902.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

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

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOPU**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	942754
Prep Batch Number:	942703

Sample ID	Client ID
244852001	RE12-10-7856
244852002	RE12-10-7857
244852003	RE12-10-7855
244852004	RE12-10-7854
1202018344	Method Blank (MB)
1202018345	244902001(RE46-10-10099) Sample Duplicate (DUP)
1202018346	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-RAD-A-011 REV# 18.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1202018344 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 244902001 (RE46-10-10099). The QC was from LANL work order 244902.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

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

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOU**
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	942756
Prep Batch Number:	942703

Sample ID	Client ID
244852001	RE12-10-7856
244852002	RE12-10-7857
244852003	RE12-10-7855
244852004	RE12-10-7854
1202018347	Method Blank (MB)
1202018348	244902001(RE46-10-10099) Sample Duplicate (DUP)
1202018349	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-RAD-A-011 REV# 18.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

Aliquot for sample 1202018347 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 244902001 (RE46-10-10099). The QC was from LANL work order 244902.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

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

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GAMMA SPEC**
Analytical Method:	DOE HASL 300, 4.5.2.3/Ga-01-R
Prep Method:	Dry Soil Prep
Analytical Batch Number:	942718
Prep Batch Number:	942703

Sample ID	Client ID
244852001	RE12-10-7856
244852002	RE12-10-7857
244852003	RE12-10-7855
244852004	RE12-10-7854
1202018262	Method Blank (MB)
1202018263	244852003(RE12-10-7855) Sample Duplicate (DUP)
1202018264	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-RAD-A-013 REV# 18.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in January 2009, February 2009, March 2009, October 2009 and January 2010.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 244852003 (RE12-10-7855). The QC was from LANL work order 244852.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The Method Blank, 1202018262 (MB), results for Co-60, Ra-223, Sr-85 and Th-231 are greater than 1.65 times the CSU, but less than the MDC.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any 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 sample set.

Blank Decision Level
The Method Blank, 1202018262 (MB), results for Co-60, Ra-223, Sr-85, Th-231 and Th-234 are greater than the decision level, but less than the MDC.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to interference.	Bismuth-211	244852001	RE12-10-7856
			244852002	RE12-10-7857
			244852003	RE12-10-7855
			244852004	RE12-10-7854
			1202018263	RE12-10-7855(244852003DUP)
		Cadmium-109	244852001	RE12-10-7856
			244852002	RE12-10-7857
			244852003	RE12-10-7855
			244852004	RE12-10-7854
			1202018263	RE12-10-7855(244852003DUP)
		Radium-224	244852001	RE12-10-7856
			244852002	RE12-10-7857
			244852003	RE12-10-7855
			244852004	RE12-10-7854
			1202018263	RE12-10-7855(244852003DUP)
UI	Data rejected due to low abundance.	Cesium-134	244852001	RE12-10-7856
			244852002	RE12-10-7857
			244852004	RE12-10-7854
		Strontium-85	1202018263	RE12-10-7855(244852003DUP)

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: 1/28/10

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: 10-1263 GEL Work Order: 244852

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 _____

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

Report Date: January 29, 2010

Client Sample ID:	RE12-10-7856	Project:	LANL01004
Sample ID:	244852001	Client ID:	LANL010
Matrix:	R		
Collect Date:	11-JAN-10		
Receive Date:	15-JAN-10		
Collector:	Client		
Moisture:	9.44%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
AM241 "Dry Weight Corrected"												
Americium-241	U	0.00181	0.0205	+/-0.00533	0.050	pCi/g		KXM4	01/26/10	1417	942753	2
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.00123	0.0203	+/-0.00442	0.050	pCi/g		KXM4	01/23/10	1208	942754	3
Plutonium-239/240	U	0.00613	0.0232	+/-0.00408	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		1.03	0.120	+/-0.0969	0.100	pCi/g		KXM4	01/26/10	2026	942756	4
Uranium-235/236		0.0764	0.0743	+/-0.0198	0.100	pCi/g						
Uranium-238		1.25	0.0694	+/-0.112	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0683	0.246	+/-0.0744	0.200	pCi/g		MXR1	01/26/10	1206	942718	5
Bismuth-211	UI	3.36	0.300	+/-0.222		pCi/g						
Bismuth-214		1.00	0.110	+/-0.0828	0.200	pCi/g						
Cadmium-109	UI	3.69	1.13	+/-0.528		pCi/g						
Cerium-139	U	-0.0178	0.0446	+/-0.0137	0.050	pCi/g						
Cesium-134	UI	0.102	0.0932	+/-0.0246	0.100	pCi/g						
Cesium-137		0.150	0.0603	+/-0.0362	0.100	pCi/g						
Cobalt-60	U	0.00582	0.0644	+/-0.0193	0.100	pCi/g						
Europium-152	U	-0.0792	0.144	+/-0.0449	0.200	pCi/g						
Lanthanum-140	U	-0.102	0.117	+/-0.0427		pCi/g						
Lead-212		1.49	0.0814	+/-0.0737	0.100	pCi/g						
Lead-214		1.17	0.105	+/-0.083	0.100	pCi/g						
Mercury-203	U	0.0151	0.0616	+/-0.0197	0.100	pCi/g						
Potassium-40		30.9	0.505	+/-1.41	1.00	pCi/g						
Radium-223	U	-0.582	0.943	+/-0.343		pCi/g						
Radium-224	UI	4.38	0.926	+/-0.674		pCi/g						
Radium-226		1.00	0.110	+/-0.0828		pCi/g						
Radium-228		1.57	0.191	+/-0.155	0.500	pCi/g						
Ruthenium-106	U	-0.292	0.430	+/-0.140	0.800	pCi/g						

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

Report Date: January 29, 2010

Client Sample ID: RE12-10-7856
Sample ID: 244852001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Sodium-22	U	-0.0356	0.0713	+/-0.0234	0.080	pCi/g						
Strontium-85	U	0.0272	0.0589	+/-0.0192		pCi/g						
Thallium-208		0.496	0.0544	+/-0.0427	0.080	pCi/g						
Thorium-227	U	-0.415	0.532	+/-0.168		pCi/g						
Thorium-231	U	-0.582	0.943	+/-0.343		pCi/g						
Thorium-234	U	1.09	2.02	+/-0.899	2.00	pCi/g						
Tin-113	U	0.00657	0.0665	+/-0.0196	0.100	pCi/g						
Uranium-235	U	-0.0954	0.321	+/-0.0981	0.500	pCi/g						
Yttrium-88	U	-0.0119	0.0441	+/-0.0146	0.100	pCi/g						

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	91.6	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	83.5	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	89.8	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-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.
- 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

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

Report Date: January 29, 2010

Client Sample ID: RE12-10-7856
Sample ID: 244852001
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

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
The above sample is reported on a dry weight basis.

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

Report Date: January 29, 2010

Client Sample ID:	RE12-10-7857	Project:	LANL01004
Sample ID:	244852002	Client ID:	LANL010
Matrix:	R		
Collect Date:	11-JAN-10		
Receive Date:	15-JAN-10		
Collector:	Client		
Moisture:	6.28%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
AM241 "Dry Weight Corrected"												
Americium-241	U	-0.00745	0.0239	+/-0.00575	0.050	pCi/g		KXM4	01/26/10	1417	942753	2
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	-0.0052	0.0215	+/-0.00636	0.050	pCi/g		KXM4	01/23/10	1208	942754	3
Plutonium-239/240	U	0.0104	0.0245	+/-0.00453	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.608	0.110	+/-0.0638	0.100	pCi/g		KXM4	01/26/10	2026	942756	4
Uranium-235/236	U	0.0352	0.0685	+/-0.0127	0.100	pCi/g						
Uranium-238		0.747	0.064	+/-0.0738	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0231	0.315	+/-0.0955	0.200	pCi/g		MXR1	01/26/10	1300	942718	5
Bismuth-211	UI	3.82	0.333	+/-0.336		pCi/g						
Bismuth-214		1.12	0.120	+/-0.0959	0.200	pCi/g						
Cadmium-109	UI	3.82	1.17	+/-0.498		pCi/g						
Cerium-139	U	-0.0155	0.0478	+/-0.0145	0.050	pCi/g						
Cesium-134	UI	0.127	0.100	+/-0.0262	0.100	pCi/g						
Cesium-137		0.0779	0.0669	+/-0.0235	0.100	pCi/g						
Cobalt-60	U	0.0188	0.0802	+/-0.0234	0.100	pCi/g						
Europium-152	U	0.00631	0.167	+/-0.0503	0.200	pCi/g						
Lanthanum-140	U	-0.0146	0.140	+/-0.0437		pCi/g						
Lead-212		1.54	0.0981	+/-0.113	0.100	pCi/g						
Lead-214		1.33	0.116	+/-0.122	0.100	pCi/g						
Mercury-203	U	0.0405	0.0749	+/-0.0232	0.100	pCi/g						
Potassium-40		31.7	0.476	+/-1.77	1.00	pCi/g						
Radium-223	U	-0.912	1.14	+/-0.367		pCi/g						
Radium-224	UI	4.37	1.12	+/-0.707		pCi/g						
Radium-226		1.12	0.120	+/-0.0959		pCi/g						
Radium-228		1.76	0.214	+/-0.176	0.500	pCi/g						
Ruthenium-106	U	0.00439	0.587	+/-0.172	0.800	pCi/g						
Sodium-22	U	-0.0397	0.0761	+/-0.0251	0.080	pCi/g						

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Certificate of Analysis

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

Report Date: January 29, 2010

Client Sample ID: RE12-10-7857
Sample ID: 244852002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.00234	0.0671	+/-0.0233		pCi/g						
Thallium-208		0.571	0.0519	+/-0.0477	0.080	pCi/g						
Thorium-227	U	0.00988	0.667	+/-0.190		pCi/g						
Thorium-231	U	-0.912	1.14	+/-0.367		pCi/g						
Thorium-234	U	0.212	2.39	+/-1.09	2.00	pCi/g						
Tin-113	U	-0.0286	0.0758	+/-0.0235	0.100	pCi/g						
Uranium-235		0.393	0.358	+/-0.177	0.500	pCi/g						
Yttrium-88	U	0.0146	0.0619	+/-0.0174	0.100	pCi/g						

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	79.4	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	85.7	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	95.4	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-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.
- 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

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 29, 2010

Client Sample ID: RE12-10-7857 Project: LANL01004
Sample ID: 244852002 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

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
The above sample is reported on a dry weight basis.

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

Report Date: January 29, 2010

Client Sample ID: RE12-10-7855
Sample ID: 244852003
Matrix: R
Collect Date: 11-JAN-10
Receive Date: 15-JAN-10
Collector: Client
Moisture: 7.46%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
AM241 "Dry Weight Corrected"												
Americium-241	U	0.000627	0.0208	+/-0.00122	0.050	pCi/g		KXM4	01/26/10	1417	942753	2
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.0193	0.0199	+/-0.00689	0.050	pCi/g		KXM4	01/23/10	1208	942754	3
Plutonium-239/240	U	0.00121	0.0228	+/-0.00209	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		1.10	0.111	+/-0.0998	0.100	pCi/g		KXM4	01/26/10	2026	942756	4
Uranium-235/236	U	0.0662	0.0687	+/-0.0177	0.100	pCi/g						
Uranium-238		1.20	0.0642	+/-0.107	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	-0.00952	0.104	+/-0.0325	0.200	pCi/g		MXR1	01/26/10	1310	942718	5
Bismuth-211	UI	4.28	0.352	+/-0.328		pCi/g						
Bismuth-214		1.32	0.135	+/-0.111	0.200	pCi/g						
Cadmium-109	UI	4.12	0.979	+/-0.460		pCi/g						
Cerium-139	U	-0.0129	0.0478	+/-0.0145	0.050	pCi/g						
Cesium-134	U	0.0778	0.111	+/-0.0297	0.100	pCi/g						
Cesium-137	U	-0.0221	0.0755	+/-0.0245	0.100	pCi/g						
Cobalt-60	U	-0.0545	0.0687	+/-0.0244	0.100	pCi/g						
Europium-152	U	-0.0536	0.169	+/-0.0511	0.200	pCi/g						
Lanthanum-140	U	-0.113	0.136	+/-0.0526		pCi/g						
Lead-212		1.55	0.0919	+/-0.0975	0.100	pCi/g						
Lead-214		1.49	0.123	+/-0.121	0.100	pCi/g						
Mercury-203	U	-0.0251	0.0673	+/-0.0201	0.100	pCi/g						
Potassium-40		20.1	0.652	+/-1.30	1.00	pCi/g						
Radium-223	U	-0.104	1.22	+/-0.357		pCi/g						
Radium-224	UI	4.73	1.05	+/-0.676		pCi/g						
Radium-226		1.32	0.135	+/-0.111		pCi/g						
Radium-228		1.76	0.273	+/-0.199	0.500	pCi/g						
Ruthenium-106	U	-0.232	0.605	+/-0.197	0.800	pCi/g						
Sodium-22	U	-0.023	0.0808	+/-0.0267	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 29, 2010

Client Sample ID: RE12-10-7855
Sample ID: 244852003
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.0258	0.0693	+/-0.0198		pCi/g						
Thallium-208		0.518	0.0624	+/-0.0573	0.080	pCi/g						
Thorium-227	U	-0.095	0.624	+/-0.195		pCi/g						
Thorium-231	U	-0.104	1.22	+/-0.357		pCi/g						
Thorium-234		2.17	1.01	+/-0.587	2.00	pCi/g						
Tin-113	U	0.0201	0.0831	+/-0.0237	0.100	pCi/g						
Uranium-235	U	0.0706	0.365	+/-0.107	0.500	pCi/g						
Yttrium-88	U	-0.0199	0.0465	+/-0.0175	0.100	pCi/g						

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	87.4	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	92.3	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	98.6	(50%-105%)

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

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- < Result is less than value reported
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- 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.
- 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

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Report Date: January 29, 2010

Client Sample ID: RE12-10-7855
Sample ID: 244852003
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

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
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 29, 2010

Client Sample ID: RE12-10-7854
Sample ID: 244852004
Matrix: R
Collect Date: 11-JAN-10
Receive Date: 15-JAN-10
Collector: Client
Moisture: 13.8%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
AM241 "Dry Weight Corrected"												
Americium-241	U	0.00916	0.0233	+/-0.00492	0.050	pCi/g		KXM4	01/26/10	1417	942753	2
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	-0.00116	0.0192	+/-0.00164	0.050	pCi/g		KXM4	01/23/10	1208	942754	3
Plutonium-239/240	U	0.0186	0.0219	+/-0.00474	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		1.66	0.127	+/-0.145	0.100	pCi/g		KXM4	01/26/10	2026	942756	4
Uranium-235/236		0.0911	0.0787	+/-0.0224	0.100	pCi/g						
Uranium-238		1.89	0.0736	+/-0.161	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.144	0.381	+/-0.105	0.200	pCi/g		MXR1	01/26/10	1320	942718	5
Bismuth-211	UI	3.48	0.322	+/-0.231		pCi/g						
Bismuth-214		1.05	0.0985	+/-0.0825	0.200	pCi/g						
Cadmium-109	UI	3.70	1.24	+/-0.576		pCi/g						
Cerium-139	U	0.000768	0.0455	+/-0.0136	0.050	pCi/g						
Cesium-134	UI	0.196	0.0915	+/-0.0382	0.100	pCi/g						
Cesium-137		0.304	0.057	+/-0.0315	0.100	pCi/g						
Cobalt-60	U	-0.00316	0.0551	+/-0.0168	0.100	pCi/g						
Europium-152	U	-0.0108	0.145	+/-0.0488	0.200	pCi/g						
Lanthanum-140	U	-0.0157	0.132	+/-0.0468		pCi/g						
Lead-212		1.54	0.0845	+/-0.078	0.100	pCi/g						
Lead-214		1.21	0.108	+/-0.0865	0.100	pCi/g						
Mercury-203	U	0.0235	0.0663	+/-0.0186	0.100	pCi/g						
Potassium-40		20.2	0.526	+/-1.17	1.00	pCi/g						
Radium-223	U	0.0741	1.01	+/-0.333		pCi/g						
Radium-224	UI	3.96	0.961	+/-0.442		pCi/g						
Radium-226		1.05	0.0985	+/-0.0825		pCi/g						
Radium-228		1.24	0.187	+/-0.163	0.500	pCi/g						
Ruthenium-106	U	0.119	0.472	+/-0.133	0.800	pCi/g						
Sodium-22	U	0.00962	0.0673	+/-0.0196	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 29, 2010

Client Sample ID: RE12-10-7854
Sample ID: 244852004
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.0274	0.0575	+/-0.0187		pCi/g						
Thallium-208		0.470	0.0545	+/-0.0411	0.080	pCi/g						
Thorium-227	U	0.0399	0.592	+/-0.169		pCi/g						
Thorium-231	U	0.0741	1.01	+/-0.333		pCi/g						
Thorium-234	U	1.42	3.06	+/-0.860	2.00	pCi/g						
Tin-113	U	-0.0104	0.0675	+/-0.0204	0.100	pCi/g						
Uranium-235	U	0.139	0.341	+/-0.100	0.500	pCi/g						
Yttrium-88	U	-0.0293	0.0411	+/-0.0162	0.100	pCi/g						

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	82.8	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	92.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	87.8	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
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- 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

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 29, 2010

Client Sample ID: RE12-10-7854
Sample ID: 244852004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

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
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

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QC Summary

Report Date: January 29, 2010
Page 1 of 6

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 244852

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 942753										
QC1202018342 244902001 DUP										
Americium-241	U	0.000803	U	0.00437	pCi/g	0.400		(0-1)	KXM4	01/26/1014:17
	TPU:	+/-0.00212		+/-0.00234						
	Yield:	84.9		85.2						
QC1202018343 LCS										
Americium-241	33.2			29.8	pCi/g		89.8	(75%-125%)		
	TPU:			+/-2.09						
	Yield:			98.6						
QC1202018341 MB										
Americium-241			U	-0.00228	pCi/g					
	TPU:			+/-0.00543						
	Yield:			62.8						
Batch 942754										
QC1202018345 244902001 DUP										
Plutonium-238	U	-0.00893	U	0.00115	pCi/g	0.619		(0-1)	KXM4	01/23/1012:08
	TPU:	+/-0.00557		+/-0.00258						
	Yield:	77.9		95.1						
Plutonium-239/240	U	-0.00298	U	0.00692	pCi/g	0.849		(0-1)		
	TPU:	+/-0.00298		+/-0.00284						
	Yield:	77.9		95.1						
QC1202018346 LCS										
Plutonium-238				6.71	pCi/g			(75%-125%)		
	TPU:			+/-0.498						
	Yield:			98.0						
Plutonium-239/240	41.8			38.7	pCi/g		92.6	(75%-125%)		
	TPU:			+/-2.40						
	Yield:			98.0						
QC1202018344 MB										
Plutonium-238			U	-0.00432	pCi/g					
	TPU:			+/-0.00288						
	Yield:			97.2						
Plutonium-239/240			U	3.44E-10	pCi/g					
	TPU:			+/-0.00353						
	Yield:			97.2						
Batch 942756										
QC1202018348 244902001 DUP										
Uranium-233/234		0.593		0.631	pCi/g	0.148		(0-1)	KXM4	01/26/1020:27
	TPU:	+/-0.0645		+/-0.0649						
	Yield:	89.4		98.6						
Uranium-235/236	U	0.0297	U	0.0472	pCi/g	0.292		(0-1)		
	TPU:	+/-0.0142		+/-0.0158						
	Yield:	89.4		98.6						
Uranium-238		0.501		0.576	pCi/g	0.319		(0-1)		
	TPU:	+/-0.0578		+/-0.0606						

QC Summary

Workorder: 244852

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 942756										
	Yield:	89.4		98.6						
QC1202018349 LCS										
Uranium-233/234				6.12	pCi/g			(75%-125%)		01/26/1020:27
	TPU:			+/-0.581						
	Yield:			101						
Uranium-235/236			U	0.286	pCi/g			(75%-125%)		
	TPU:			+/-0.0824						
	Yield:			101						
Uranium-238	5.75			5.66	pCi/g		98.4	(75%-125%)		
	TPU:			+/-0.546						
	Yield:			101						
QC1202018347 MB										
Uranium-233/234			U	0.0052	pCi/g					01/26/1020:27
	TPU:			+/-0.00402						
	Yield:			98.3						
Uranium-235/236			U	0.00673	pCi/g					
	TPU:			+/-0.00504						
	Yield:			98.3						
Uranium-238			U	0.00544	pCi/g					
	TPU:			+/-0.00407						
	Yield:			98.3						
Rad Gamma Spec										
Batch 942718										
QC1202018263 244852003 DUP										
Americium-241	U	-0.00952	U	0.0593	pCi/g	0.327		(0-1)	MXR1	01/26/1014:10
	TPU:	+/-0.0325		+/-0.0726						
Bismuth-211	UI	4.28	UI	3.85	pCi/g	0.362		(0-1)		
	TPU:	+/-0.328		+/-0.261						
Bismuth-214		1.32		1.11	pCi/g	0.506		(0-1)		
	TPU:	+/-0.111		+/-0.0941						
Cadmium-109	UI	4.12	UI	4.57	pCi/g	0.213		(0-1)		
	TPU:	+/-0.460		+/-0.594						
Cerium-139	U	-0.0129	U	-0.0214	pCi/g	0.152		(0-1)		
	TPU:	+/-0.0145		+/-0.0136						
Cesium-134	U	0.0778	U	0.0861	pCi/g	0.0775		(0-1)		
	TPU:	+/-0.0297		+/-0.0241						
Cesium-137	U	-0.0221	U	-0.0164	pCi/g	0.0662		(0-1)		
	TPU:	+/-0.0245		+/-0.0186						
Cobalt-60	U	-0.0545	U	-0.0254	pCi/g	0.333		(0-1)		
	TPU:	+/-0.0244		+/-0.0193						
Europium-152	U	-0.0536	U	-0.119	pCi/g	0.319		(0-1)		
	TPU:	+/-0.0511		+/-0.0521						
Lanthanum-140	U	-0.113	U	-0.114	pCi/g	0.00565		(0-1)		
	TPU:	+/-0.0526		+/-0.0449						
Lead-212		1.55		1.63	pCi/g	0.212		(0-1)		
	TPU:	+/-0.0975		+/-0.0795						
Lead-214		1.49		1.34	pCi/g	0.342		(0-1)		
	TPU:	+/-0.121		+/-0.0972						
Mercury-203	U	-0.0251	U	-0.00476	pCi/g	0.251		(0-1)		
	TPU:	+/-0.0201		+/-0.0204						

QC Summary

Workorder: 244852

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 942718										
Potassium-40		20.1		18.7	pCi/g	0.329		(0-1)		
	TPU:	+/-1.30		+/-0.964						
Radium-223	U	-0.104	U	-0.302	pCi/g	0.139		(0-1)		
	TPU:	+/-0.357		+/-0.358						
Radium-224	UI	4.73	UI	4.53	pCi/g	0.080		(0-1)		
	TPU:	+/-0.676		+/-0.544						
Radium-226		1.32		1.11	pCi/g	0.506		(0-1)		
	TPU:	+/-0.111		+/-0.0941						
Radium-228		1.76		1.71	pCi/g	0.0655		(0-1)		
	TPU:	+/-0.199		+/-0.167						
Ruthenium-106	U	-0.232	U	-0.156	pCi/g	0.106		(0-1)		
	TPU:	+/-0.197		+/-0.157						
Sodium-22	U	-0.023	U	-0.00972	pCi/g	0.143		(0-1)		
	TPU:	+/-0.0267		+/-0.0196						
Strontium-85	U	0.0258	UI	0.0791	pCi/g	0.705		(0-1)		
	TPU:	+/-0.0198		+/-0.018						
Thallium-208		0.518		0.502	pCi/g	0.0767		(0-1)		
	TPU:	+/-0.0573		+/-0.0464						
Thorium-227	U	-0.095	U	-0.0626	pCi/g	0.0443		(0-1)		
	TPU:	+/-0.195		+/-0.171						
Thorium-231	U	-0.104	U	-0.302	pCi/g	0.139		(0-1)		
	TPU:	+/-0.357		+/-0.358						
Thorium-234		2.17	U	1.02	pCi/g	0.433		(0-1)		
	TPU:	+/-0.587		+/-0.744						
Tin-113	U	0.0201	U	-0.0154	pCi/g	0.391		(0-1)		
	TPU:	+/-0.0237		+/-0.0218						
Uranium-235	U	0.0706	U	0.152	pCi/g	0.178		(0-1)		
	TPU:	+/-0.107		+/-0.122						
Yttrium-88	U	-0.0199	U	-0.0174	pCi/g	0.0342		(0-1)		
	TPU:	+/-0.0175		+/-0.0194						
QC1202018264 LCS										
Americium-241	16.3			15.0	pCi/g		92.3	(75%-125%)		01/26/1014:19
	TPU:			+/-0.662						
Bismuth-211				2.55	pCi/g					
	TPU:			+/-0.354						
Bismuth-214				0.967	pCi/g					
	TPU:			+/-0.117						
Cadmium-109				36.8	pCi/g					
	TPU:			+/-2.19						
Cerium-139			U	0.0388	pCi/g					
	TPU:			+/-0.0246						
Cesium-134			U	0.0258	pCi/g					
	TPU:			+/-0.0504						
Cesium-137	5.70			5.96	pCi/g		105	(75%-125%)		
	TPU:			+/-0.226						
Cobalt-60	6.60			6.75	pCi/g		102	(75%-125%)		
	TPU:			+/-0.293						
Europium-152			U	-0.167	pCi/g					
	TPU:			+/-0.114						
Lanthanum-140			U	0.013	pCi/g					
	TPU:			+/-0.0427						

QC Summary

Workorder: 244852

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 942718										
Lead-212				1.54	pCi/g					
	TPU:			+/-0.100						
Lead-214				0.887	pCi/g					
	TPU:			+/-0.125						
Mercury-203			U	-0.0108	pCi/g					
	TPU:			+/-0.0325						
Potassium-40			U	1.21	pCi/g					
	TPU:			+/-0.324						
Radium-223			U	-1.55	pCi/g					
	TPU:			+/-0.653						
Radium-224				2.87	pCi/g					
	TPU:			+/-0.795						
Radium-226				0.967	pCi/g					
	TPU:			+/-0.117						
Radium-228				1.33	pCi/g					
	TPU:			+/-0.324						
Ruthenium-106			U	-0.527	pCi/g					
	TPU:			+/-0.299						
Sodium-22			U	-0.0154	pCi/g					
	TPU:			+/-0.0247						
Strontium-85			U	0.0809	pCi/g					
	TPU:			+/-0.0384						
Thallium-208				0.458	pCi/g					
	TPU:			+/-0.053						
Thorium-227			U	0.0102	pCi/g					
	TPU:			+/-0.338						
Thorium-231			U	-1.55	pCi/g					
	TPU:			+/-0.653						
Thorium-234			U	-0.381	pCi/g					
	TPU:			+/-1.08						
Tin-113			U	-0.0387	pCi/g					
	TPU:			+/-0.0409						
Uranium-235			U	-0.0496	pCi/g					
	TPU:			+/-0.173						
Yttrium-88			U	-0.00326	pCi/g					
	TPU:			+/-0.0247						
QC1202018262 MB										
Americium-241			U	-0.00946	pCi/g					01/26/1014:07
	TPU:			+/-0.00765						
Bismuth-211			U	-0.0412	pCi/g					
	TPU:			+/-0.0428						
Bismuth-214			U	-0.0266	pCi/g					
	TPU:			+/-0.0154						
Cadmium-109			U	-0.145	pCi/g					
	TPU:			+/-0.0821						
Cerium-139			U	-0.00168	pCi/g					
	TPU:			+/-0.00434						
Cesium-134			U	0.0101	pCi/g					
	TPU:			+/-0.00774						
Cesium-137			U	0.00455	pCi/g					
	TPU:			+/-0.0115						

QC Summary

Workorder: 244852

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 942718										
Cobalt-60			U	0.0191	pCi/g					
	TPU:			+/-0.00976						
Europium-152			U	0.003	pCi/g					
	TPU:			+/-0.0163						
Lanthanum-140			U	0.00823	pCi/g					
	TPU:			+/-0.0132						
Lead-212			U	-0.0159	pCi/g					
	TPU:			+/-0.0118						
Lead-214			U	-0.00689	pCi/g					
	TPU:			+/-0.0145						
Mercury-203			U	0.00937	pCi/g					
	TPU:			+/-0.00628						
Potassium-40			U	0.0281	pCi/g					
	TPU:			+/-0.0942						
Radium-223			U	0.260	pCi/g					
	TPU:			+/-0.120						
Radium-224			U	-0.291	pCi/g					
	TPU:			+/-0.125						
Radium-226			U	-0.0266	pCi/g					
	TPU:			+/-0.0154						
Radium-228			U	0.00734	pCi/g					
	TPU:			+/-0.0317						
Ruthenium-106			U	-0.0325	pCi/g					
	TPU:			+/-0.0635						
Sodium-22			U	0.0117	pCi/g					
	TPU:			+/-0.00869						
Strontium-85			U	0.0245	pCi/g					
	TPU:			+/-0.00749						
Thallium-208			U	-0.00236	pCi/g					
	TPU:			+/-0.00878						
Thorium-227			U	-0.0657	pCi/g					
	TPU:			+/-0.0612						
Thorium-231			U	0.260	pCi/g					
	TPU:			+/-0.120						
Thorium-234			U	0.148	pCi/g					
	TPU:			+/-0.115						
Tin-113			U	0.00259	pCi/g					
	TPU:			+/-0.00786						
Uranium-235			U	0.026	pCi/g					
	TPU:			+/-0.0313						
Yttrium-88			U	0.00729	pCi/g					
	TPU:			+/-0.00931						

Notes:
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

QC Summary

Workorder: 244852

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time

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.
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.
Ul	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.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence 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.
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.

RAW DATA

Radiochemistry Batch Checklist, Rev10

Batch# 942753 Product: Am Date: 1/27/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		Case narrative
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By: [illegible] 1/27/10

Secondary Review Performed By: [illegible] 1/28/10

1/27 2/6
LANL

Am/Cm Que Sheet

18-JAN-10

Batch #: 942753 Analyst: KXM4 First Client Due Date: 06-FEB-10 Internal Due Date27-JAN-10 Comments:

Tracer(s): Am243/Cm244 Tracer Code: 445-96-2-55 Expiration Date: 5-11-10 Vol: 0.1ml

LCS Isotope(s): Am243/Cm244 LCS Code(s): SRM0244-B / NA Expiration Date: 4-30-20 / NA Vol(s): 0.1g / NA

Spike Isotope(s): Am241/Cm244 Spike Code(s): NA / NA Expiration Date: NA / NA Vol(s): NA / NA

Prep Date: 1-20-10 Initials: KM Pipet ID: 2971058 Balance ID: 50410272 Witness: NDA 1/20/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g) 1/0	Am/Cm Det #
244852001-1	RE12-10-7856	SAMPLE		.05 pCi/g	SOIL	LANL010	11-JAN-10	1	1	1.259	71
244852002-1	RE12-10-7857	SAMPLE		.05 pCi/g	SOIL	LANL010	11-JAN-10	2	2	1.252	72
244852003-1	RE12-10-7855	SAMPLE		.05 pCi/g	SOIL	LANL010	11-JAN-10	3	3	1.258	73
244852004-1	RE12-10-7854	SAMPLE		.05 pCi/g	SOIL	LANL010	11-JAN-10	4	4	1.252	74
244881001-1	RE12-10-8096	SAMPLE		.05 pCi/g	SOIL	LANL010	11-JAN-10	5	5	1.257	75
244881002-1	RE12-10-8094	SAMPLE		.05 pCi/g	SOIL	LANL010	11-JAN-10	6	6	1.251	76
244881003-1	RE12-10-8097	SAMPLE		.05 pCi/g	SOIL	LANL010	11-JAN-10	7	7	1.251	77
244881004-1	RE12-10-8095	SAMPLE		.05 pCi/g	SOIL	LANL010	11-JAN-10	8	8	1.252	~~78~~ 87 1/28/10
244902001-1	RE46-10-10099	SAMPLE		.05 pCi/g	SOIL	LANL010	14-JAN-10	9	9	1.252	79
244905001-1	RE16-10-1374	SAMPLE		.05 pCi/g	SOIL	LANL010	08-JAN-10	10	10	1.252	80
244905002-1	RE16-10-1376	SAMPLE		.05 pCi/g	SOIL	LANL010	08-JAN-10	11	11	1.255	81
244905003-1	RE16-10-1378	SAMPLE		.05 pCi/g	SOIL	LANL010	08-JAN-10	12	12	1.258	82
244905004-1	RE16-10-1380	SAMPLE		.05 pCi/g	SOIL	LANL010	08-JAN-10	13	13	1.251	41
244905005-1	RE16-10-1382	SAMPLE		.05 pCi/g	SOIL	LANL010	08-JAN-10	14	14	1.254	42
244905006-1	RE16-10-1396	SAMPLE		.05 pCi/g	SOIL	LANL010	08-JAN-10	15	15	1.252	43
1202818341-1	MB for batch 942753	MB		.05 pCi/g	SOIL	QC ACCOUNT		16 1/27/10	16	~~1.259~~	97
1202818342-1	RE46-10-10099(244902001DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	14-JAN-10	17	17	1.259	99
1202818343-1	LCS for batch 942753	LCS		.05 pCi/g	SOIL	QC ACCOUNT		18	18	0.102	100

Choose SOP Used: GL-RAD-A-011 / GL-RAD-A-036

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Data Reviewed By: [signature] 1/27/10

GEL Laboratories LLC, Radiochemistry Division

Blank Correction Report

Batch ID 942753

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202018342	DUP	Americium-241	1.26 g	0.00437	0.00234	0.021	-.00180952	pCi/g	NO
1202018343	LCS	Americium-241	0.102 g	29.8	2.09	0.226	-.02235294	pCi/g	NO
1202018341	MB	Americium-241	1.00 g	-0.00228	0.00543	0.0352	-.00228	pCi/g	NO
244852001	RE12-10-7856	Americium-241	1.26 g	0.00181	0.00533	0.0205	-.00180952	pCi/g	NO
244852002	RE12-10-7857	Americium-241	1.25 g	-0.00745	0.00575	0.0239	-.001824	pCi/g	NO
244852003	RE12-10-7855	Americium-241	1.26 g	0.000627	0.00122	0.0208	-.00180952	pCi/g	NO
244852004	RE12-10-7854	Americium-241	1.25 g	0.00916	0.00492	0.0233	-.001824	pCi/g	NO
244881001	RE12-10-8096	Americium-241	1.26 g	0.00321	0.00285	0.0427	-.00180952	pCi/g	NO
244881002	RE12-10-8094	Americium-241	1.25 g	0.000758	0.00129	0.0219	-.001824	pCi/g	NO
244881003	RE12-10-8097	Americium-241	1.25 g	0.00786	0.00514	0.0235	-.001824	pCi/g	NO
244881004	RE12-10-8095	Americium-241	1.25 g	-0.00435	0.00253	0.0215	-.001824	pCi/g	NO
244902001	RE46-10-10099	Americium-241	1.25 g	0.000803	0.00212	0.0223	-.001824	pCi/g	NO
244905001	RE16-10-1374	Americium-241	1.25 g	0.0179	0.00514	0.021	-.001824	pCi/g	NO
244905002	RE16-10-1376	Americium-241	1.26 g	0.00699	0.00391	0.0214	-.00180952	pCi/g	NO
244905003	RE16-10-1378	Americium-241	1.26 g	0.0129	0.00439	0.0208	-.00180952	pCi/g	NO
244905004	RE16-10-1380	Americium-241	1.25 g	-0.00182	0.00206	0.0202	-.001824	pCi/g	NO
244905005	RE16-10-1382	Americium-241	1.25 g	0.00909	0.00449	0.0232	-.001824	pCi/g	NO
244905006	RE16-10-1396	Americium-241	1.25 g	0.0073	0.00362	0.0221	-.001824	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942753
SAMPLE DATE : 14-JAN-2010 00:00:00

SAMPLE ID : S0244902001_AM
SAMPLE QTY: 1.252 G

DETECTOR NUMBER :79466
AVERAGE %EFFICIENCY :32.2835
% YIELD : 84.939

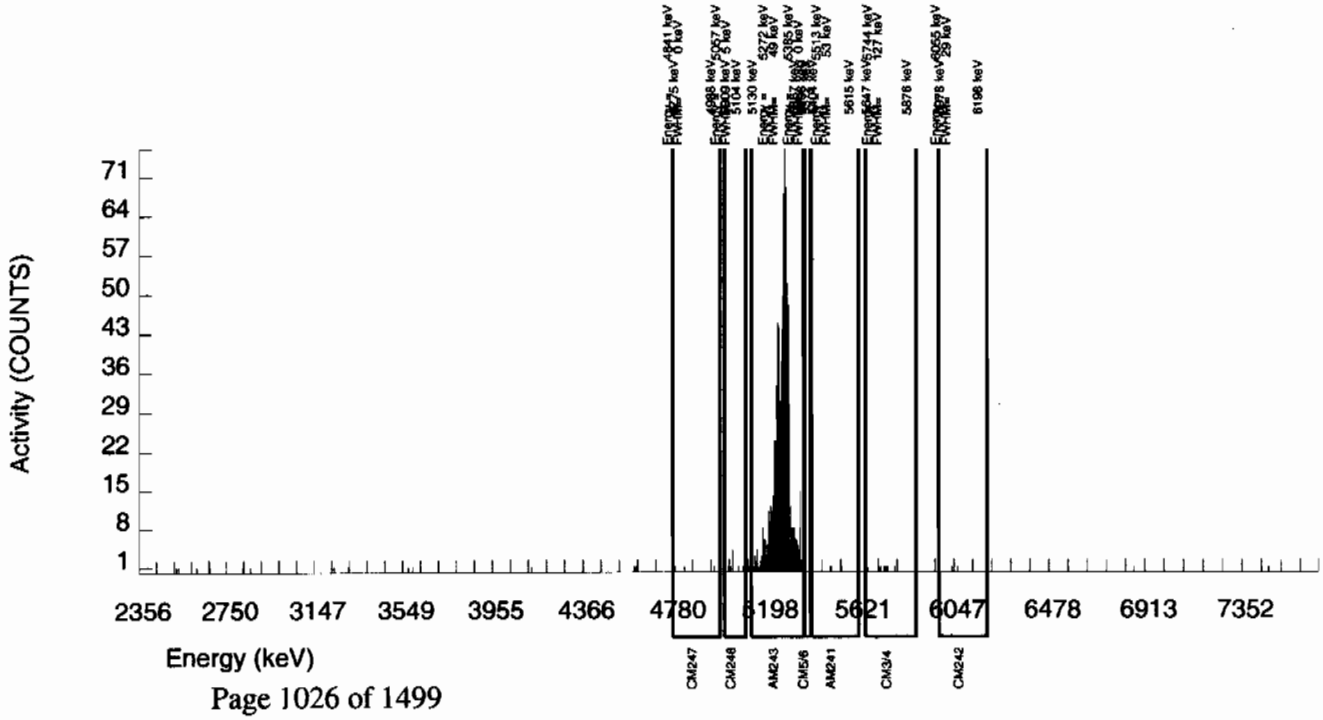
COUNT DATE:26-JAN-2010 14:17:43
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 445-96-2-SS	LIB FILE : ENV_ALPHA_AM.N
ISOTOPE : AM-241	ISOTOPE : AM-241	ISOTOPE : AM243	BKG FILE : B079.CNF;1012
PCI/G : 3.316E+01	PCI/G : 3.316E+01	NOMINAL : 2.91658 dpm	BKG DATE : 25-JAN-2010
		RESULTS : 2.47731 dpm	EFF FILE : W079.CNF;266
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	8.000	7.000	1.000	5.2338	100.0000	9.20E-03	3.98E-03	1.60E-02	3.55E-02	3.94E-03
CM-5/6	5386.000	0.000	0.000	0.000	19.8463	86.09000	0.00E+00	1.53E-03	7.04E-02	1.45E-01	1.52E-03
AM-241	5479.150	3.000	0.611	1.000	3.0704	99.94000	8.03E-04	2.12E-03	9.38E-03	2.23E-02	2.12E-03
CM-242	6102.000	2.000	2.000	0.000	4.3186	100.0000	2.77E-03	1.97E-03	1.32E-02	2.99E-02	1.96E-03
AM243	5270.000	800.000	798.000	2.000	1.4142	99.78000	1.05E+00	7.38E-02	4.33E-03	1.22E-02	3.72E-02
CM-247	4946.000	4.000	3.000	1.000	15.3366	79.30000	4.96E-03	3.71E-03	5.90E-02	1.23E-01	3.70E-03
CM-248	5078.600	8.000	8.000	0.000	22.1555	91.00000	1.15E-02	4.14E-03	7.43E-02	1.53E-01	4.08E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942753
SAMPLE DATE : 11-JAN-2010 00:00:00

SAMPLE ID : S0244852001_AM
SAMPLE QTY: 1.259 G

DETECTOR NUMBER :64259
AVERAGE %EFFICIENCY :32.3636
% YIELD : 91.630

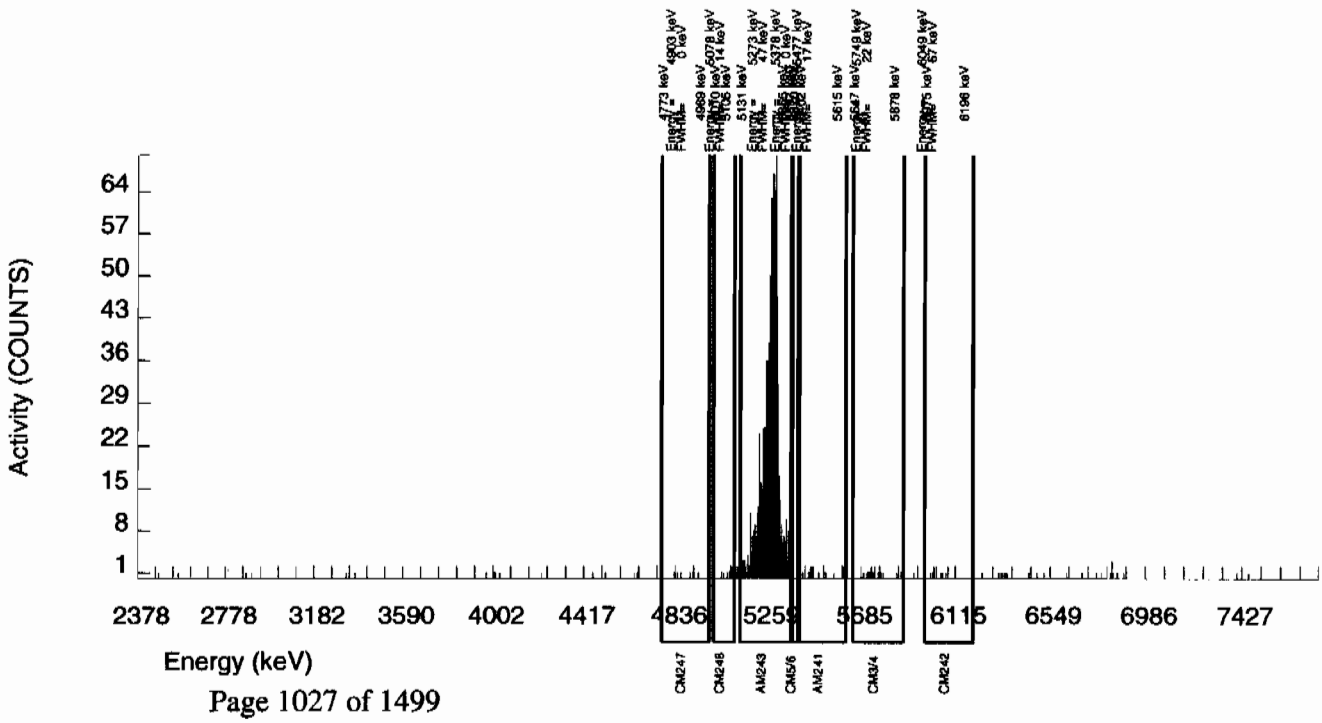
COUNT DATE:26-JAN-2010 14:17:42
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 445-96-2-SS	LIB FILE : ENV_ALPHA_AM.N
ISOTOPE : AM-241	ISOTOPE : AM-241	ISOTOPE : AM243	BKG FILE : B071.CNF;1095
PCI/G : 3.316E+01	PCI/G : 3.316E+01	NOMINAL : 2.91658 dpm	BKG DATE : 25-JAN-2010
		RESULTS : 2.67246 dpm	EFF FILE : W071.CNF;284
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	18.000	15.000	3.000	5.2338	100.0000	1.81E-02	5.64E-03	1.47E-02	3.26E-02	5.54E-03
CM-5/6	5386.000	6.000	5.000	1.000	19.8463	86.09000	7.01E-03	3.73E-03	6.47E-02	1.33E-01	3.71E-03
AM-241	5479.150	12.000	1.498	9.000	3.0704	99.94000	1.81E-03	5.33E-03	8.62E-03	2.05E-02	5.33E-03
CM-242	6102.000	9.000	8.000	1.000	4.3186	100.0000	1.03E-02	4.13E-03	1.21E-02	2.75E-02	4.08E-03
AM243	5270.000	865.000	863.000	2.000	1.4142	99.78000	1.04E+00	7.19E-02	3.98E-03	1.12E-02	3.56E-02
CM-247	4946.000	7.000	6.000	1.000	15.3366	79.30000	9.13E-03	4.34E-03	5.43E-02	1.13E-01	4.30E-03
CM-248	5078.600	10.000	9.000	1.000	22.1555	91.00000	1.19E-02	4.45E-03	6.83E-02	1.40E-01	4.40E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942753
SAMPLE DATE : 11-JAN-2010 00:00:00

SAMPLE ID : S0244852002_AM
SAMPLE QTY: 1.252 G

DETECTOR NUMBER :45-149AA3
AVERAGE %EFFICIENCY :32.2361
% YIELD : 79.414

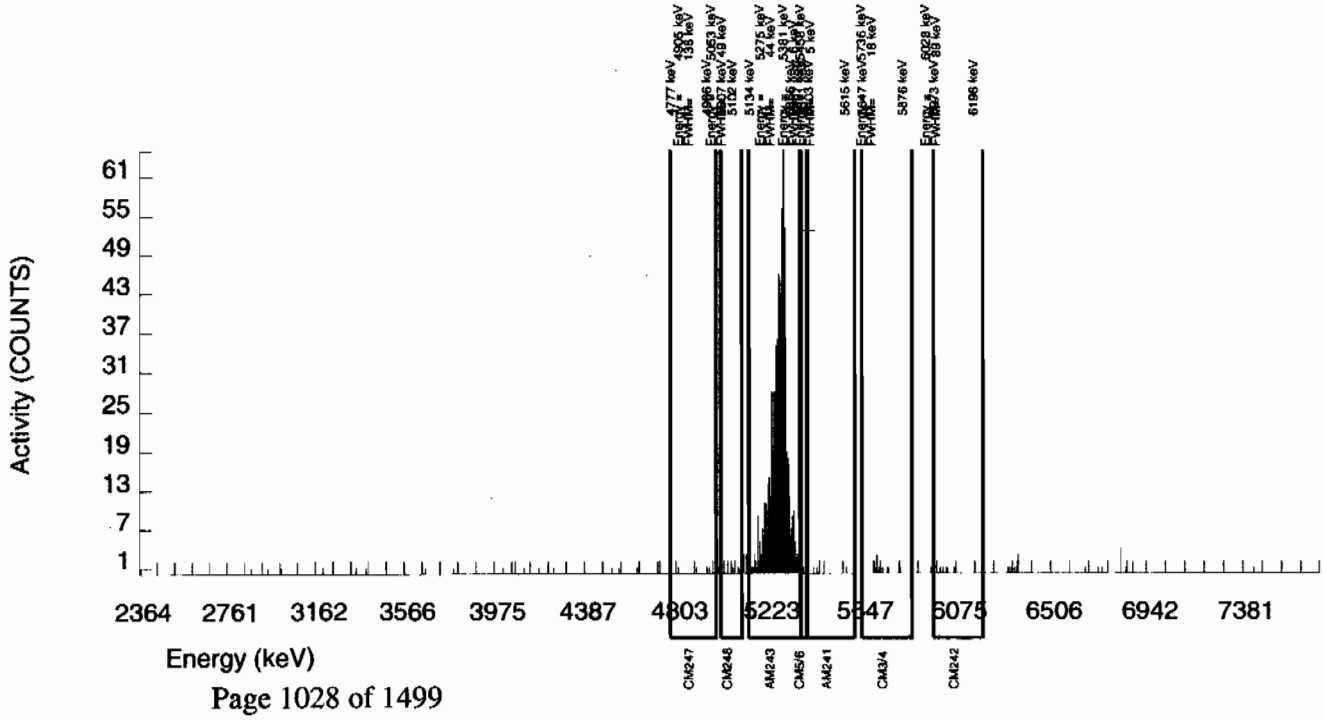
COUNT DATE:26-JAN-2010 14:17:42
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 445-96-2-SS	LIB FILE : ENV_ALPHA_AM.N
ISOTOPE : AM-241	ISOTOPE : AM-241	ISOTOPE : AM243	BKG FILE : B072.CNF;1093
PCI/G : 3.316E+01	PCI/G : 3.316E+01	NOMINAL : 2.91658 dpm	BKG DATE : 25-JAN-2010
		RESULTS : 2.31617 dpm	EFF FILE : W072.CNF;275
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	13.000	-5.000	18.000	5.2338	100.0000	-7.04E-03	7.84E-03	1.71E-02	3.80E-02	7.84E-03
CM-5/6	5386.000	5.000	3.000	2.000	19.8463	86.09000	4.90E-03	4.33E-03	7.54E-02	1.55E-01	4.32E-03
AM-241	5479.150	7.000	-5.297	11.000	3.0704	99.94000	-7.45E-03	5.75E-03	1.00E-02	2.39E-02	5.75E-03
CM-242	6102.000	6.000	4.000	2.000	4.3186	100.0000	6.02E-03	4.27E-03	1.41E-02	3.20E-02	4.25E-03
AM243	5270.000	748.000	745.000	3.000	1.7321	99.78000	1.05E+00	7.52E-02	5.68E-03	1.52E-02	3.86E-02
CM-247	4946.000	5.000	2.000	3.000	15.3366	79.30000	3.54E-03	5.02E-03	6.32E-02	1.31E-01	5.01E-03
CM-248	5078.600	11.000	10.000	1.000	22.1555	91.00000	1.54E-02	5.43E-03	7.96E-02	1.63E-01	5.35E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942753
SAMPLE DATE : 11-JAN-2010 00:00:00

SAMPLE ID : S0244852003_AM
SAMPLE QTY: 1.258 G

DETECTOR NUMBER :78775
AVERAGE %EFFICIENCY :33.5654
% YIELD : 87.428

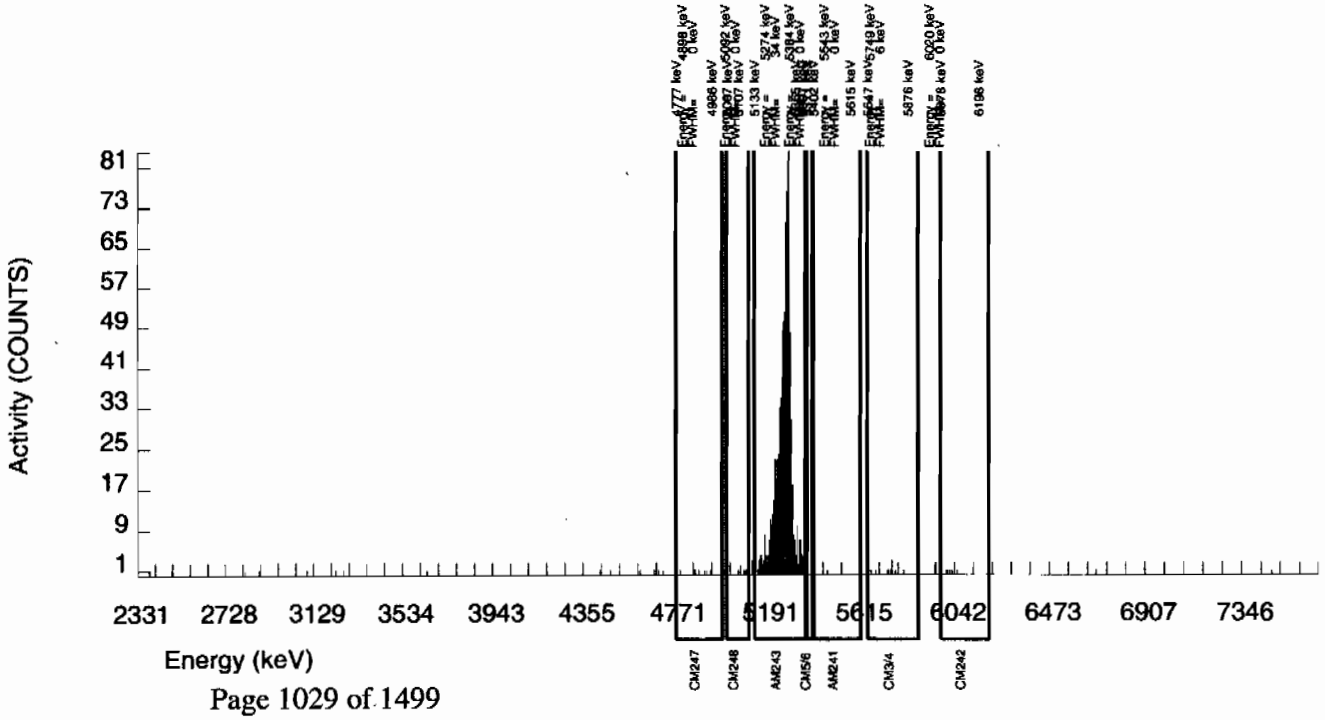
COUNT DATE:26-JAN-2010 14:17:42
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 445-96-2-SS	LIB FILE : ENV_ALPHA_AM.N
ISOTOPE : AM-241	ISOTOPE : AM-241	ISOTOPE : AM243	BKG FILE : B073.CNF;1095
PCI/G : 3.316E+01	PCI/G : 3.316E+01	NOMINAL : 2.91658 dpm	BKG DATE : 25-JAN-2010
		RESULTS : 2.54990 dpm	EFF FILE : W073.CNF;283
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	10.000	9.000	1.000	5.2338	100.0000	1.10E-02	4.11E-03	1.49E-02	3.30E-02	4.05E-03
CM-5/6	5386.000	0.000	0.000	0.000	19.8463	86.09000	0.00E+00	1.42E-03	6.54E-02	1.35E-01	1.42E-03
AM-241	5479.150	2.000	0.514	0.000	3.0704	99.94000	6.27E-04	1.22E-03	8.72E-03	2.08E-02	1.22E-03
CM-242	6102.000	6.000	5.000	1.000	4.3186	100.0000	6.53E-03	3.48E-03	1.23E-02	2.78E-02	3.45E-03
AM243	5270.000	857.000	854.000	3.000	1.7321	99.78000	1.04E+00	7.22E-02	4.93E-03	1.32E-02	3.59E-02
CM-247	4946.000	8.000	7.000	1.000	15.3366	79.30000	1.08E-02	4.66E-03	5.49E-02	1.14E-01	4.62E-03
CM-248	5078.600	9.000	7.000	2.000	22.1555	91.00000	9.39E-03	4.48E-03	6.91E-02	1.42E-01	4.45E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942753
SAMPLE DATE : 11-JAN-2010 00:00:00

SAMPLE ID : S0244852004_AM
SAMPLE QTY: 1.252 G

DETECTOR NUMBER :78266
AVERAGE %EFFICIENCY :31.6797
% YIELD : 82.761

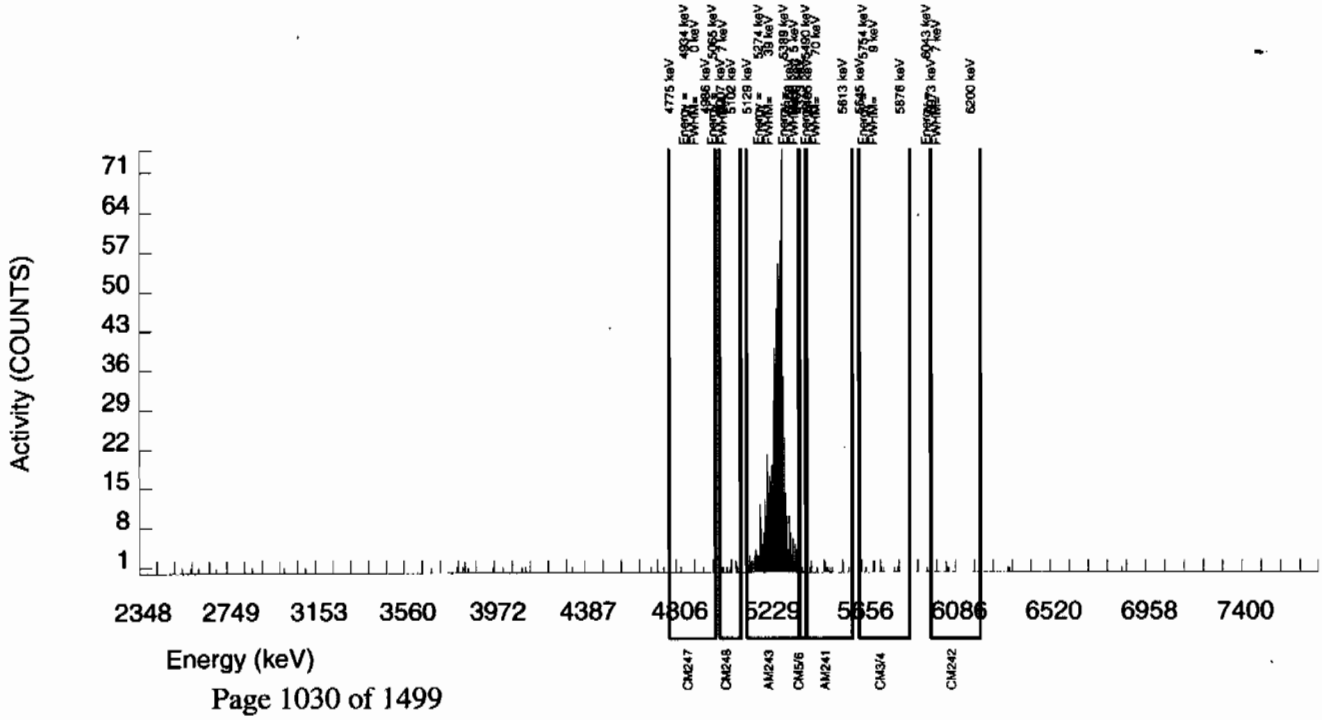
COUNT DATE:26-JAN-2010 14:17:42
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 445-96-2-SS	LIB FILE : ENV_ALPHA_AM.N
ISOTOPE : AM-241	ISOTOPE : AM-241	ISOTOPE : AM243	BKG FILE : B074.CNF;1117
PCI/G : 3.316E+01	PCI/G : 3.316E+01	NOMINAL : 2.91658 dpm	BKG DATE : 25-JAN-2010
		RESULTS : 2.41380 dpm	EFF FILE : W074.CNF;330
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	10.000	8.000	2.000	5.2338	100.0000	1.10E-02	4.81E-03	1.67E-02	3.71E-02	4.76E-03
CM-5/6	5386.000	1.000	-1.000	2.000	19.8463	86.09000	-1.59E-03	2.76E-03	7.36E-02	1.52E-01	2.76E-03
AM-241	5479.150	11.000	6.672	3.000	3.0704	99.94000	9.16E-03	4.92E-03	9.81E-03	2.33E-02	4.89E-03
CM-242	6102.000	5.000	1.000	4.000	4.3186	100.0000	1.47E-03	4.41E-03	1.38E-02	3.13E-02	4.41E-03
AM243	5270.000	763.000	763.000	0.000	0.0000	99.78000	1.05E+00	7.46E-02	0.00E+00	3.73E-03	3.80E-02
CM-247	4946.000	4.000	1.000	3.000	15.3366	79.30000	1.73E-03	4.58E-03	6.17E-02	1.28E-01	4.58E-03
CM-248	5078.600	8.000	8.000	0.000	22.1555	91.00000	1.21E-02	4.33E-03	7.77E-02	1.60E-01	4.27E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942753
SAMPLE DATE : 20-JAN-2010 00:00:00

SAMPLE ID : S1202018341_AM
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :67599
AVERAGE %EFFICIENCY :34.6778
% YIELD : 62.824

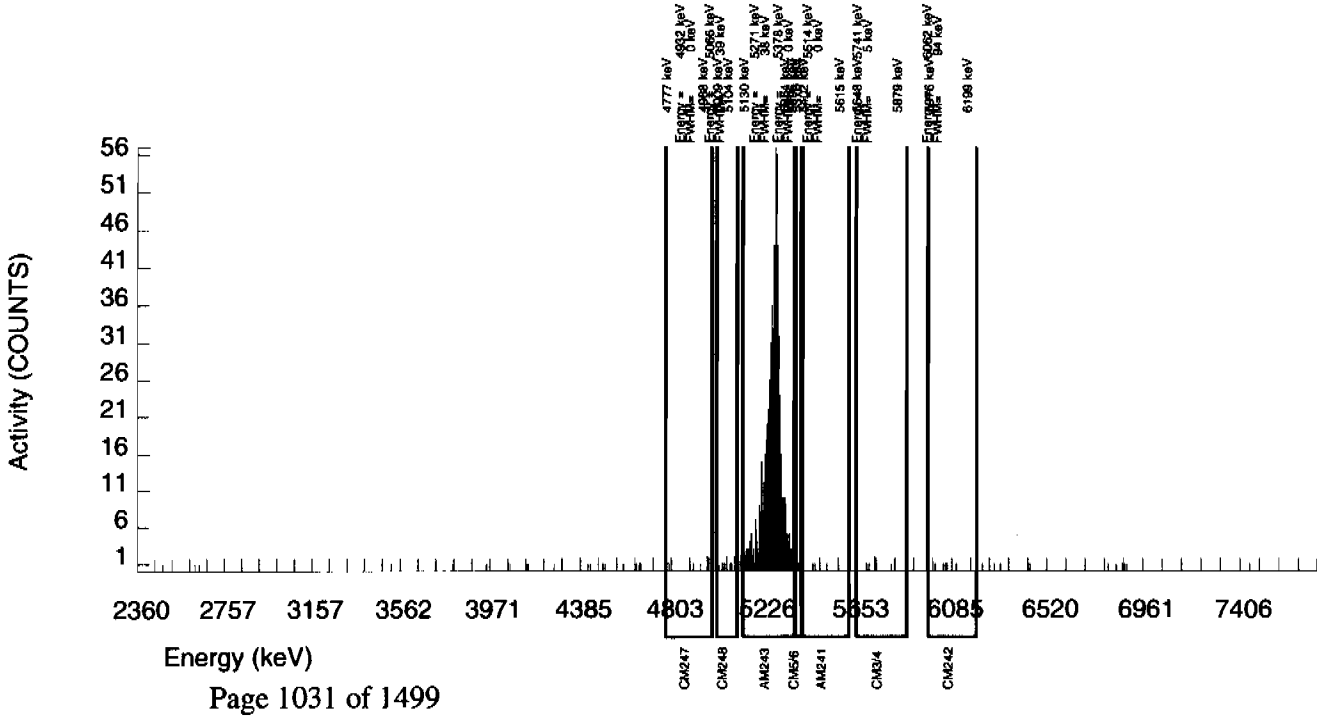
COUNT DATE:26-JAN-2010 14:17:46
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 445-96-2-SS	LIB FILE : ENV_ALPHA_AM.N
ISOTOPE : AM-241	ISOTOPE : AM-241	ISOTOPE : AM243	BKG FILE : B097.CNF;669
PCI/G : 3.316E+01	PCI/G : 3.316E+01	NOMINAL : 2.91657 dpm	BKG DATE : 25-JAN-2010
		RESULTS : 1.83229 dpm	EFF FILE : W097.CNF;191
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	5.000	1.000	4.000	5.2338	100.0000	2.07E-03	6.21E-03	2.52E-02	5.60E-02	6.21E-03
CM-5/6	5386.000	8.000	8.000	0.000	19.8463	86.09000	1.92E-02	6.90E-03	1.11E-01	2.28E-01	6.79E-03
AM-241	5479.150	4.000	-1.103	4.000	3.0704	99.94000	-2.28E-03	5.43E-03	1.48E-02	3.52E-02	5.43E-03
CM-242	6102.000	5.000	3.000	2.000	4.3186	100.0000	6.39E-03	5.65E-03	2.08E-02	4.71E-02	5.63E-03
AM243	5270.000	635.000	634.000	1.000	1.0000	99.78000	1.31E+00	9.83E-02	4.82E-03	1.53E-02	5.23E-02
CM-247	4946.000	8.000	4.000	4.000	15.3366	79.30000	1.04E-02	9.06E-03	9.30E-02	1.93E-01	9.03E-03
CM-248	5078.600	9.000	9.000	0.000	22.1555	91.00000	2.04E-02	6.94E-03	1.17E-01	2.40E-01	6.82E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942753
SAMPLE DATE : 14-JAN-2010 00:00:00

SAMPLE ID : S1202018342_AM
SAMPLE QTY: 1.259 G

DETECTOR NUMBER :70317
AVERAGE %EFFICIENCY :33.9756
% YIELD : 85.159

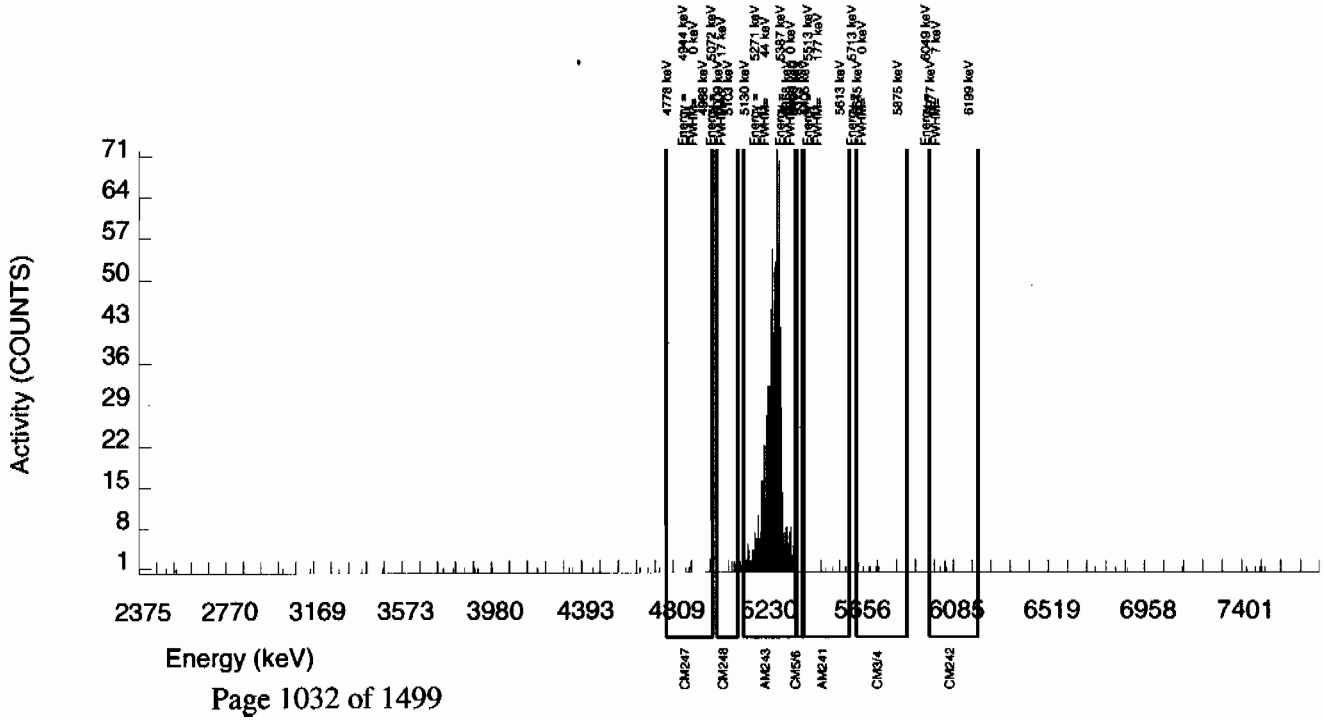
COUNT DATE:26-JAN-2010 14:17:46
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 445-96-2-SS	LIB FILE : ENV_ALPHA_AM.N
ISOTOPE : AM-241	ISOTOPE : AM-241	ISOTOPE : AM243	BKG FILE : B099.CNF;672
PCI/G : 3.316E+01	PCI/G : 3.316E+01	NOMINAL : 2.91658 dpm	BKG DATE : 25-JAN-2010
		RESULTS : 2.48372 dpm	EFF FILE : W099.CNF;191
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	7.000	6.000	1.000	5.2338	100.0000	7.43E-03	3.53E-03	1.51E-02	3.35E-02	3.50E-03
CM-5/6	5386.000	2.000	2.000	0.000	19.8463	86.09000	2.87E-03	2.04E-03	6.63E-02	1.37E-01	2.03E-03
AM-241	5479.150	5.000	3.535	0.000	3.0704	99.94000	4.37E-03	2.34E-03	8.84E-03	2.10E-02	2.33E-03
CM-242	6102.000	4.000	4.000	0.000	4.3186	100.0000	5.23E-03	2.63E-03	1.24E-02	2.82E-02	2.61E-03
AM243	5270.000	846.000	842.000	4.000	2.0000	99.78000	1.04E+00	7.25E-02	5.77E-03	1.49E-02	3.61E-02
CM-247	4946.000	5.000	4.000	1.000	15.3366	79.30000	6.24E-03	3.84E-03	5.56E-02	1.15E-01	3.82E-03
CM-248	5078.600	9.000	8.000	1.000	22.1555	91.00000	1.09E-02	4.35E-03	7.00E-02	1.44E-01	4.30E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942753
SAMPLE DATE : 20-JAN-2010 00:00:00

SAMPLE ID : S1202018343_AM
SAMPLE QTY: 0.102 G

DETECTOR NUMBER :79456
AVERAGE %EFFICIENCY :33.7658
% YIELD : 98.612

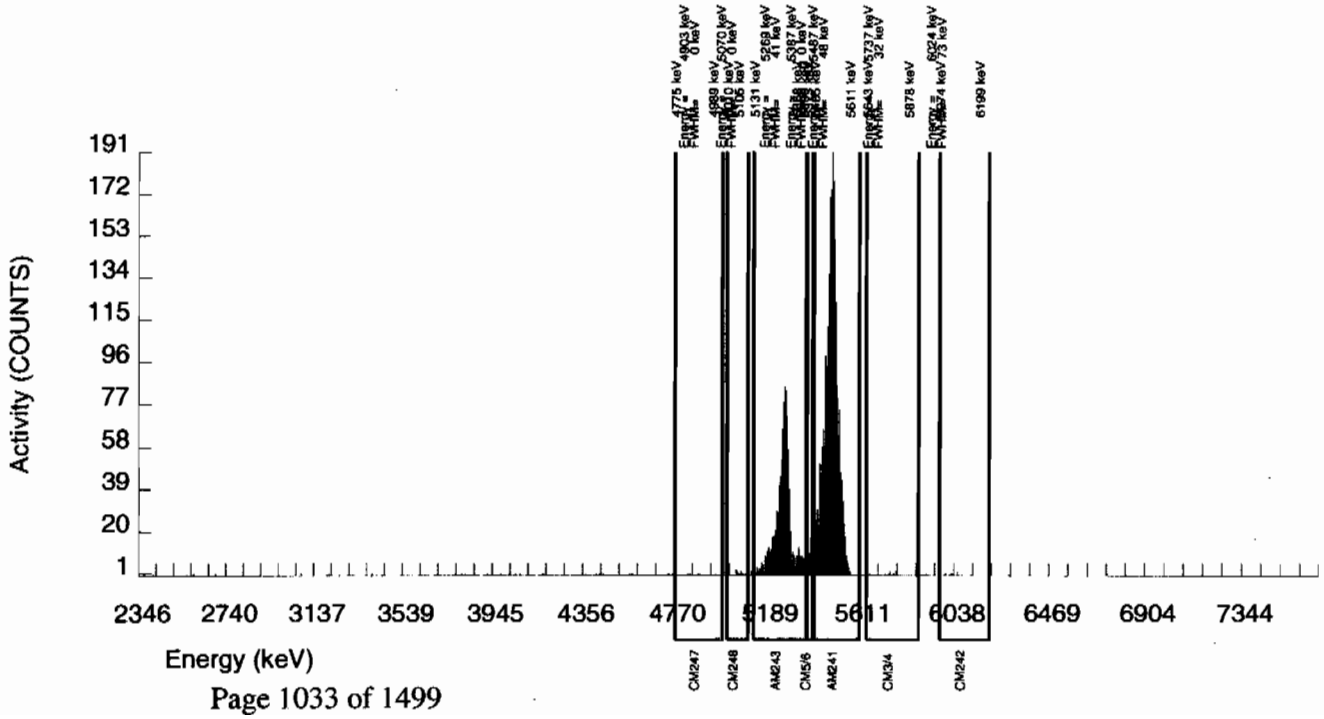
COUNT DATE:26-JAN-2010 14:17:46
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 445-96-2-SS	LIB FILE : ENV_ALPHA_AM.N
ISOTOPE : AM-241	ISOTOPE : AM-241	ISOTOPE : AM243	BKG FILE : B100.CNF;673
PCI/G : 3.316E+01	PCI/G : 3.316E+01	NOMINAL : 2.91657 dpm	BKG DATE : 25-JAN-2010
		RESULTS : 2.87610 dpm	EFF FILE : W100.CNF;199
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	9.000	9.000	0.000	5.2338	100.0000	1.19E-01	4.06E-02	1.61E-01	3.59E-01	3.98E-02
CM-5/6	5386.000	71.000	71.000	0.000	19.8463	86.09000	1.09E+00	1.49E-01	7.11E-01	1.46E+00	1.30E-01
AM-241	5479.150	2246.000	2244.314	0.000	3.0704	99.94000	2.98E+01	2.09E+00	9.48E-02	2.26E-01	6.29E-01
CM-242	6102.000	7.000	7.000	0.000	4.3186	100.0000	9.56E-02	3.67E-02	1.33E-01	3.02E-01	3.61E-02
AM243	5270.000	970.000	969.000	1.000	1.0000	99.78000	1.29E+01	9.55E-01	3.09E-02	9.79E-02	4.14E-01
CM-247	4946.000	6.000	4.000	2.000	15.3366	79.30000	6.69E-02	4.75E-02	5.97E-01	1.24E+00	4.73E-02
CM-248	5078.600	16.000	16.000	0.000	22.1555	91.00000	2.33E-01	6.03E-02	7.51E-01	1.54E+00	5.83E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Radiochemistry Batch Checklist, Rev10

Batch# 942754 Product: PU Date: 1/25/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By: [illegible] 1/25/10

Secondary Review Performed By: Denise Green 1/26/10

1/27 2/6

LANL

Plutonium Que Sheet

18-JAN-10

Batch #: 942754 **Analyst:** KXM4 **First Client Due Date:** 06-FEB-10 **Internal Due Date:** 27-JAN-10

Tracer Isotope(s): Pu-242/Pu-238 **Tracer Code:** 1374A **Expiration Date:** 12-8-10 **Vol:** 0.1ml

LCS Isotope(s): Pu-239/Pu-238 **LCS Code:** SPM 0744B **Expiration Date:** 4-30-20 **Vol:** 0.1g

Spike Isotope(s): Pu-239/Pu-238 **Spike Code:** NA **Expiration Date:** NA **Vol:** NA

Prep Date: 1-20-10 **Initials:** KM **Pipet ID:** 2971058 **Balance ID:** 50410272 **Witness:** MDA 1/20/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	Pu Det #
244852001-1	RE12-10-7856	SAMPLE		.05 pCi/g	SOIL	LANL010	11-JAN-10	1	1	1.259	70
244852002-1	RE12-10-7857	SAMPLE		.05 pCi/g	SOIL	LANL010	11-JAN-10	2	2	1.252	71
244852003-1	RE12-10-7855	SAMPLE		.05 pCi/g	SOIL	LANL010	11-JAN-10	3	3	1.258	72
244852004-1	RE12-10-7854	SAMPLE		.05 pCi/g	SOIL	LANL010	11-JAN-10	4	4	1.252	73
244881001-1	RE12-10-8096	SAMPLE		.05 pCi/g	SOIL	LANL010	11-JAN-10	5	5	1.257	74
244881002-1	RE12-10-8094	SAMPLE		.05 pCi/g	SOIL	LANL010	11-JAN-10	6	6	1.251	75
244881003-1	RE12-10-8097	SAMPLE		.05 pCi/g	SOIL	LANL010	11-JAN-10	7	7	1.251	76
244881004-1	RE12-10-8095	SAMPLE		.05 pCi/g	SOIL	LANL010	11-JAN-10	8	8	1.252	77
244902001-1	RE46-10-10099	SAMPLE		.05 pCi/g	SOIL	LANL010	14-JAN-10	9	9	1.252	78
244905001-1	RE16-10-1374	SAMPLE		.05 pCi/g	SOIL	LANL010	08-JAN-10	10	10	1.252	79
244905002-1	RE16-10-1376	SAMPLE		.05 pCi/g	SOIL	LANL010	08-JAN-10	11	11	1.255	80
244905003-1	RE16-10-1378	SAMPLE		.05 pCi/g	SOIL	LANL010	08-JAN-10	12	12	1.258	81
244905004-1	RE16-10-1380	SAMPLE		.05 pCi/g	SOIL	LANL010	08-JAN-10	13	13	1.251	82
244905005-1	RE16-10-1382	SAMPLE		.05 pCi/g	SOIL	LANL010	08-JAN-10	14	14	1.254	83
244905006-1	RE16-10-1396	SAMPLE		.05 pCi/g	SOIL	LANL010	08-JAN-10	15	15	1.252	84
1202018344-1	MB for batch 942754	MB		.05 pCi/g	SOIL	QC ACCOUNT		16 1/25/10	16	~~1.254~~	40
1202018345-1	RE46-10-10099(244902001DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	14-JAN-10	17	17	1.259	41
1202018346-1	LCS for batch 942754	LCS		.05 pCi/g	SOIL	QC ACCOUNT		18	18	0.102	42

Choose SOP Used: GL-RAD-A-011, GL-RAD-A-036, GL-RAD-A-045, GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Data Reviewed By: [signature] 1/25/10 [signature] 1/26/10

GEL Laboratories LLC, , Radiochemistry Division

Blank Correction Report

Batch ID 942754

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202018345	DUP	Plutonium-238	1.26 g	0.00115	0.00258	0.019	-.00342857	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00692	0.00284	0.0218	.000000000	pCi/g	NO
1202018346	LCS	Plutonium-238	0.102 g	6.71	0.498	0.223	-.04235294	pCi/g	NO
		Plutonium-239/240	0.102 g	38.7	2.40	0.255	.000000003	pCi/g	NO
1202018344	MB	Plutonium-238	1.00 g	-0.00432	0.00288	0.0238	-.00432	pCi/g	NO
		Plutonium-239/240	1.00 g	3.44E-10	0.00353	0.0272	.000000000	pCi/g	YES
244852001	RE12-10-7856	Plutonium-238	1.26 g	0.00123	0.00442	0.0203	-.00342857	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00613	0.00408	0.0232	.000000000	pCi/g	NO
244852002	RE12-10-7857	Plutonium-238	1.25 g	-0.0052	0.00636	0.0215	-.003456	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0104	0.00453	0.0245	.000000000	pCi/g	NO
244852003	RE12-10-7855	Plutonium-238	1.26 g	0.0193	0.00689	0.0199	-.00342857	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00121	0.00209	0.0228	.000000000	pCi/g	NO
244852004	RE12-10-7854	Plutonium-238	1.25 g	-0.00116	0.00164	0.0192	-.003456	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0186	0.00474	0.0219	.000000000	pCi/g	NO
244881001	RE12-10-8096	Plutonium-238	1.26 g	0.00524	0.00371	0.0216	-.00342857	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0144	0.0044	0.0247	.000000000	pCi/g	NO
244881002	RE12-10-8094	Plutonium-238	1.25 g	0.00	0.00124	0.0204	-.003456	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00123	0.00214	0.0233	.000000000	pCi/g	NO
244881003	RE12-10-8097	Plutonium-238	1.25 g	0.00429	0.00249	0.0236	-.003456	pCi/g	NO
		Plutonium-239/240	1.25 g	0.020	0.00615	0.027	.000000000	pCi/g	NO
244881004	RE12-10-8095	Plutonium-238	1.25 g	-0.00135	0.00449	0.0224	-.003456	pCi/g	NO
		Plutonium-239/240	1.25 g	8.07E-11	0.00192	0.0256	.000000000	pCi/g	YES
244902001	RE46-10-10099	Plutonium-238	1.25 g	-0.00893	0.00557	0.0246	-.003456	pCi/g	NO
		Plutonium-239/240	1.25 g	-0.00298	0.00298	0.0281	.000000000	pCi/g	YES
244905001	RE16-10-1374	Plutonium-238	1.25 g	0.00593	0.00267	0.0196	-.003456	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0332	0.00691	0.0224	.000000000	pCi/g	NO
244905002	RE16-10-1376	Plutonium-238	1.26 g	0.00142	0.00318	0.0234	-.00342857	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0114	0.00406	0.0268	.000000000	pCi/g	NO
244905003	RE16-10-1378	Plutonium-238	1.26 g	-0.00249	0.00249	0.0205	-.00342857	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0597	0.00914	0.0235	.000000000	pCi/g	NO
244905004	RE16-10-1380	Plutonium-238	1.25 g	7.52E-11	0.00178	0.0208	-.003456	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00504	0.00357	0.0238	.000000000	pCi/g	NO
244905005	RE16-10-1382	Plutonium-238	1.25 g	-0.00442	0.00469	0.0182	-.003456	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0508	0.00806	0.0209	.000000000	pCi/g	NO
244905006	RE16-10-1396	Plutonium-238	1.25 g	-0.00121	0.0021	0.020	-.003456	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0218	0.00604	0.0229	.000000000	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942754
SAMPLE DATE : 11-JAN-2010 00:00:00

SAMPLE ID : S0244852001_PU
SAMPLE QTY: 1.259 G

DETECTOR NUMBER :46-089B2
AVERAGE %EFFICIENCY :34.9911
% YIELD : 83.488

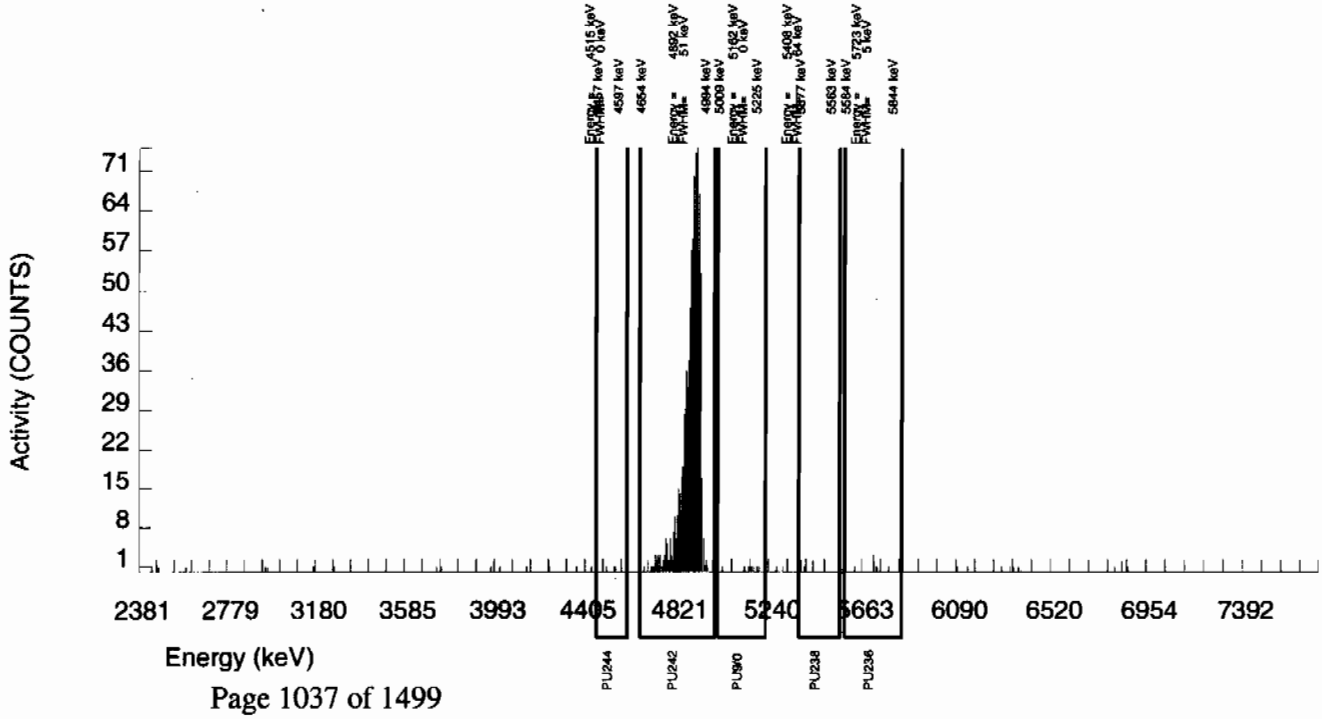
COUNT DATE:23-JAN-2010 12:08:58
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1374-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B070.CNF;1100
PCI/G : 4.178E+01	PCI/G : 4.178E+01	NOMINAL : 3.38543 dpm	BKG DATE : 17-JAN-2010
		RESULTS : 2.82643 dpm	EFF FILE : W070.CNF;290
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	8.000	5.000	3.000	3.4797	99.90000	6.13E-03	4.08E-03	9.92E-03	2.32E-02	4.07E-03
PU-236	5749.000	7.000	2.000	5.000	2.1286	100.0000	2.47E-03	4.28E-03	6.06E-03	1.54E-02	4.28E-03
PU-238	5499.000	7.000	1.000	6.000	2.9680	99.90000	1.23E-03	4.42E-03	8.46E-03	2.03E-02	4.42E-03
PU242	4890.000	993.000	989.000	4.000	2.0000	100.0000	1.21E+00	7.28E-02	5.70E-03	1.47E-02	3.87E-02
PU-244	4589.000	4.000	4.000	0.000	5.2050	99.90000	4.90E-03	2.46E-03	1.48E-02	3.30E-02	2.45E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942754
SAMPLE DATE : 11-JAN-2010 00:00:00

SAMPLE ID : S0244852002_PU
SAMPLE QTY: 1.252 G

DETECTOR NUMBER :64259
AVERAGE %EFFICIENCY :32.3636
% YIELD : 85.703

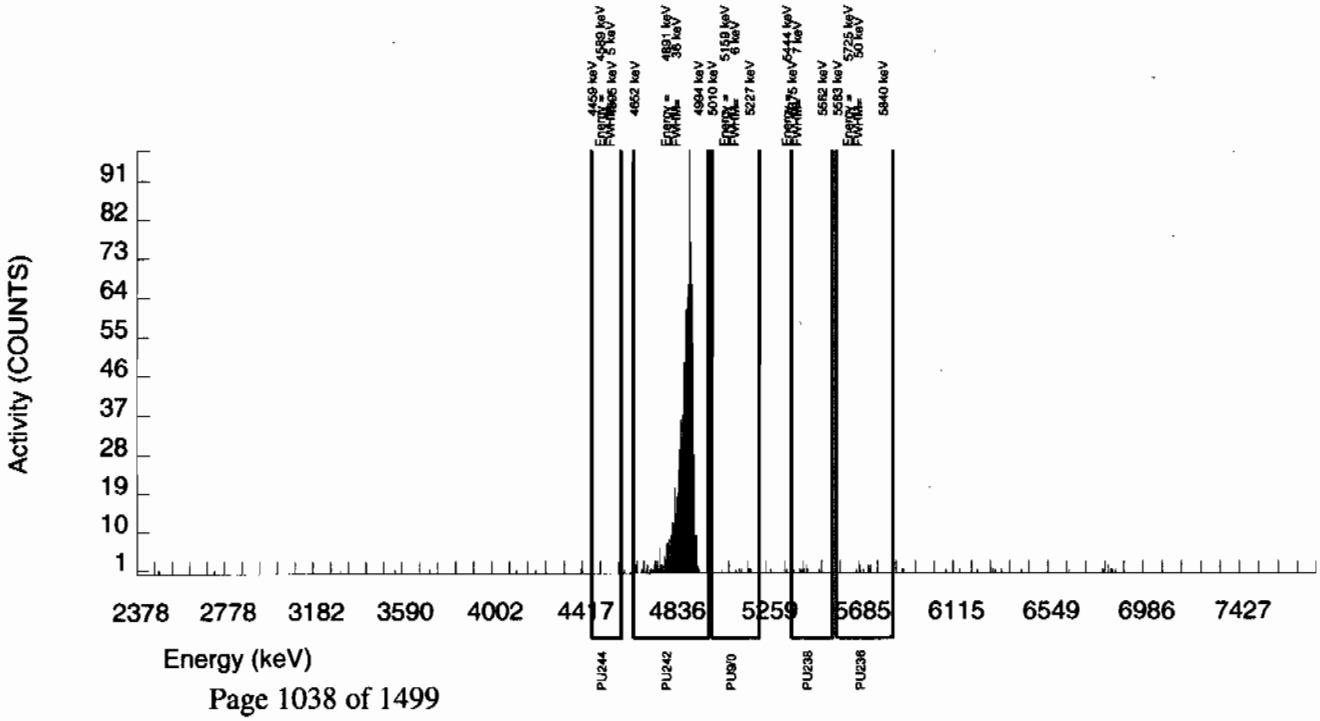
COUNT DATE:23-JAN-2010 12:08:59
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1374-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B071.CNF;1093
PCI/G : 4.178E+01	PCI/G : 4.178E+01	NOMINAL : 3.38543 dpm	BKG DATE : 17-JAN-2010
		RESULTS : 2.90140 dpm	EFF FILE : W071.CNF;284
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	10.000	8.000	2.000	3.4797	99.90000	1.04E-02	4.53E-03	1.05E-02	2.45E-02	4.50E-03
PU-236	5749.000	10.000	1.000	9.000	2.1286	100.0000	1.31E-03	5.70E-03	6.42E-03	1.64E-02	5.70E-03
PU-238	5499.000	10.000	-4.000	14.000	2.9680	99.90000	-5.20E-03	6.36E-03	8.97E-03	2.14E-02	6.36E-03
PU242	4890.000	941.000	939.000	2.000	1.4142	100.0000	1.22E+00	7.42E-02	4.27E-03	1.21E-02	3.98E-02
PU-244	4589.000	1.000	0.000	1.000	5.2050	99.90000	-1.55E-10	1.84E-03	1.57E-02	3.50E-02	1.84E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942754
SAMPLE DATE : 11-JAN-2010 00:00:00

SAMPLE ID : S0244852003_PU
SAMPLE QTY: 1.258 G

DETECTOR NUMBER :45-149AA3
AVERAGE %EFFICIENCY :32.2361
% YIELD : 92.273

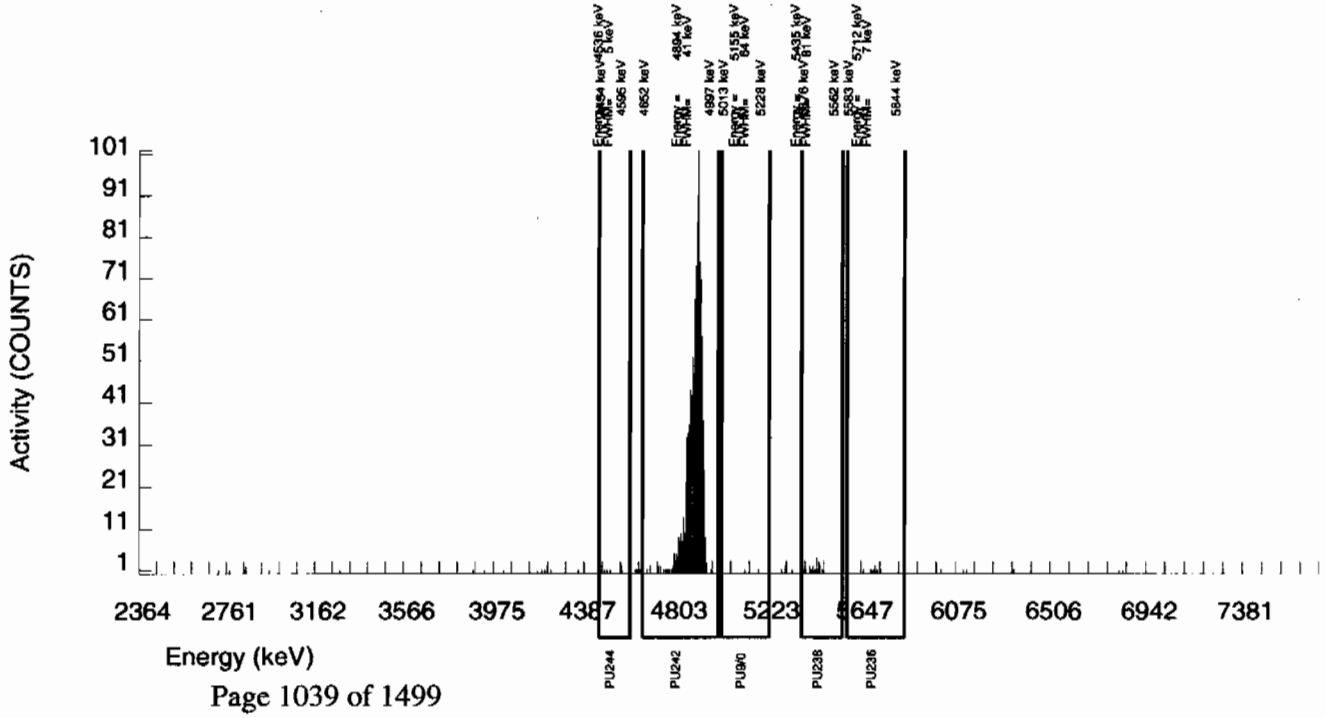
COUNT DATE:23-JAN-2010 12:08:59
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1374-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B072.CNF;1091
PCI/G : 4.178E+01	PCI/G : 4.178E+01	NOMINAL : 3.38543 dpm	BKG DATE : 17-JAN-2010
		RESULTS : 3.12383 dpm	EFF FILE : W072.CNF;275
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2.000	1.000	1.000	3.4797	99.90000	1.20E-03	2.09E-03	9.75E-03	2.28E-02	2.09E-03
PU-236	5749.000	9.000	-8.000	17.000	2.1286	100.0000	-9.71E-03	6.19E-03	5.96E-03	1.52E-02	6.19E-03
PU-238	5499.000	24.000	16.000	8.000	2.9680	99.90000	1.93E-02	6.89E-03	8.32E-03	1.99E-02	6.82E-03
PU242	4890.000	1012.000	1007.000	5.000	2.2361	100.0000	1.21E+00	7.26E-02	6.26E-03	1.58E-02	3.84E-02
PU-244	4589.000	6.000	5.000	1.000	5.2050	99.90000	6.02E-03	3.20E-03	1.46E-02	3.24E-02	3.19E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 06-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942754
SAMPLE DATE : 11-JAN-2010 00:00:00

SAMPLE ID : S0244852004_PU
SAMPLE QTY: 1.252 G

DETECTOR NUMBER :78775
AVERAGE %EFFICIENCY :33.5654
% YIELD : 92.402

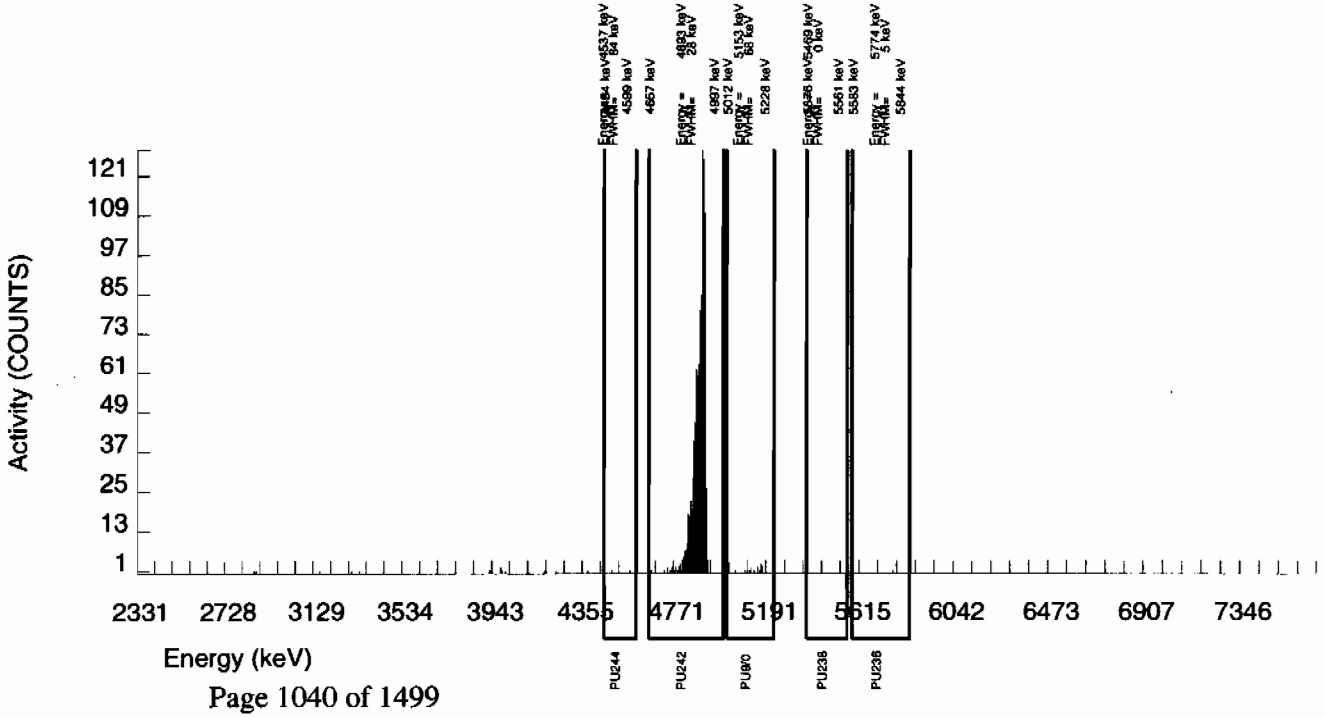
COUNT DATE:23-JAN-2010 12:08:59
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1374-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B073.CNF;1093
PCI/G : 4.178E+01	PCI/G : 4.178E+01	NOMINAL : 3.38543 dpm	BKG DATE : 17-JAN-2010
		RESULTS : 3.12822 dpm	EFF FILE : W073.CNF;283
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	16.000	16.000	0.000	3.4797	99.90000	1.86E-02	4.74E-03	9.40E-03	2.19E-02	4.64E-03
PU-236	5749.000	1.000	1.000	0.000	2.1286	100.0000	1.17E-03	1.17E-03	5.74E-03	1.46E-02	1.17E-03
PU-238	5499.000	0.000	-1.000	1.000	2.9680	99.90000	-1.16E-03	1.64E-03	8.02E-03	1.92E-02	1.64E-03
PU242	4890.000	1051.000	1050.000	1.000	1.0000	100.0000	1.22E+00	7.19E-02	2.70E-03	8.54E-03	3.76E-02
PU-244	4589.000	2.000	2.000	0.000	5.2050	99.90000	2.32E-03	1.65E-03	1.41E-02	3.13E-02	1.64E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942754
SAMPLE DATE : 14-JAN-2010 00:00:00

SAMPLE ID : S0244902001_PU
SAMPLE QTY: 1.252 G

DETECTOR NUMBER :67577
AVERAGE %EFFICIENCY :31.0633
% YIELD : 77.879

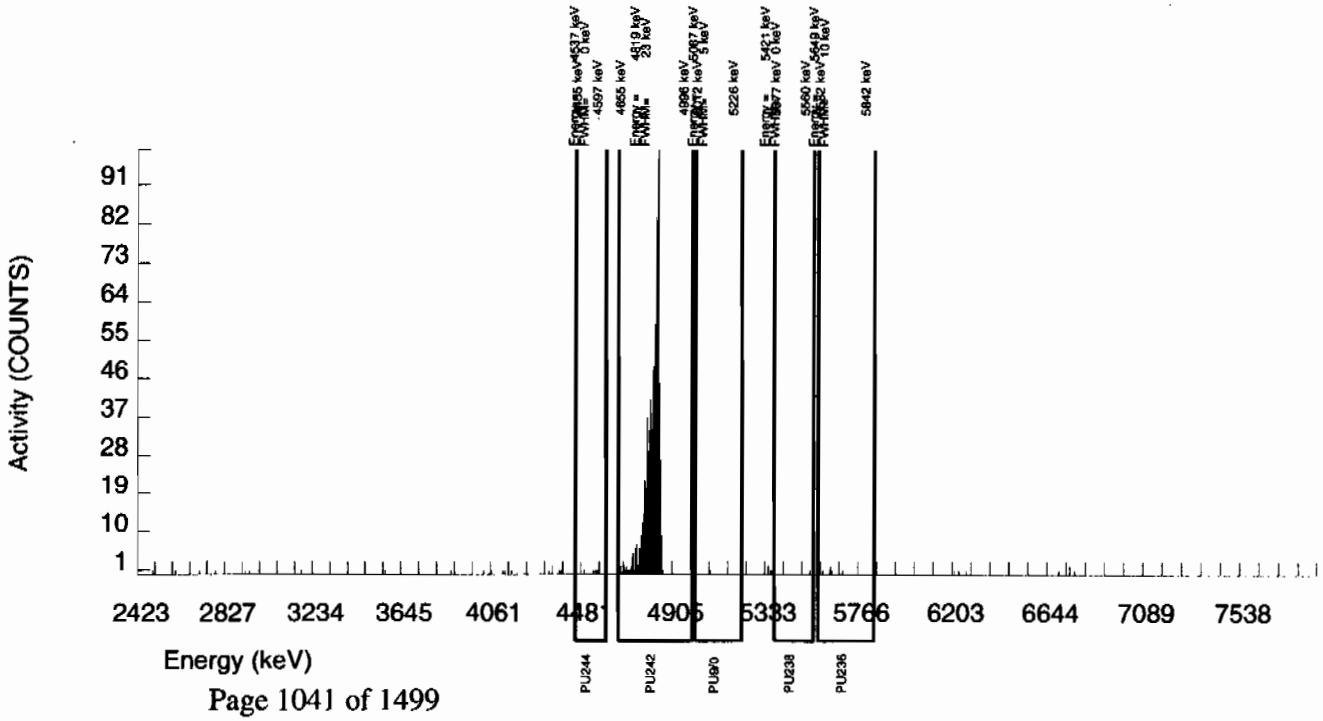
COUNT DATE:23-JAN-2010 12:09:01
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1374-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B078.CNF;1008
PCI/G : 4.178E+01	PCI/G : 4.178E+01	NOMINAL : 3.38543 dpm	BKG DATE : 17-JAN-2010
		RESULTS : 2.63655 dpm	EFF FILE : W078.CNF;251
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	1.000	-2.000	3.000	3.4797	99.90000	-2.98E-03	2.98E-03	1.21E-02	2.81E-02	2.98E-03
PU-236	5749.000	6.000	-1.000	7.000	2.1286	100.0000	-1.50E-03	5.40E-03	7.36E-03	1.88E-02	5.40E-03
PU-238	5499.000	4.000	-6.000	10.000	2.9680	99.90000	-8.93E-03	5.57E-03	1.03E-02	2.46E-02	5.57E-03
PU242	4890.000	822.000	819.000	3.000	1.7321	100.0000	1.22E+00	7.74E-02	5.99E-03	1.60E-02	4.27E-02
PU-244	4589.000	6.000	6.000	0.000	5.2050	99.90000	8.93E-03	3.68E-03	1.80E-02	4.01E-02	3.65E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942754
SAMPLE DATE : 20-JAN-2010 00:00:00

SAMPLE ID : S1202018344_PU
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :78773
AVERAGE %EFFICIENCY :32.1969
% YIELD : 97.156

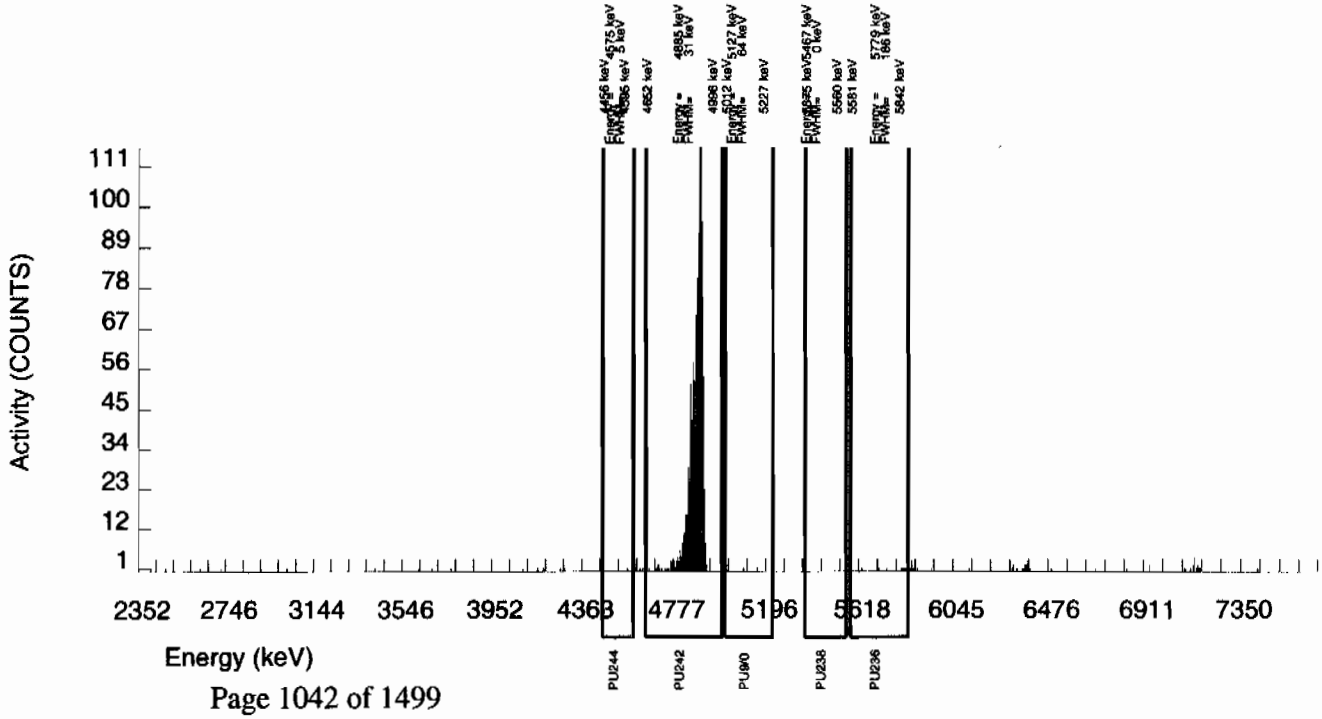
COUNT DATE:23-JAN-2010 12:08:56
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1374-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B040.CNF;1108
PCI/G : 4.178E+01	PCI/G : 4.178E+01	NOMINAL : 3.38543 dpm	BKG DATE : 17-JAN-2010
		RESULTS : 3.28914 dpm	EFF FILE : W040.CNF;315
			CAL DATE : 4-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	3.000	0.000	3.000	3.4797	99.90000	3.44E-10	3.53E-03	1.17E-02	2.72E-02	3.53E-03
PU-236	5749.000	8.000	1.000	7.000	2.1286	100.0000	1.44E-03	5.59E-03	7.13E-03	1.82E-02	5.59E-03
PU-238	5499.000	0.000	-3.000	3.000	2.9680	99.90000	-4.32E-03	2.88E-03	9.95E-03	2.38E-02	2.88E-03
PU242	4890.000	1060.000	1059.000	1.000	1.0000	100.0000	1.52E+00	9.00E-02	3.35E-03	1.06E-02	4.69E-02
PU-244	4589.000	1.000	1.000	0.000	5.2050	99.90000	1.44E-03	1.44E-03	1.75E-02	3.88E-02	1.44E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942754
SAMPLE DATE : 14-JAN-2010 00:00:00

SAMPLE ID : S1202018345_PU
SAMPLE QTY: 1.259 G

DETECTOR NUMBER :78205
AVERAGE %EFFICIENCY :32.6825
% YIELD : 95.079

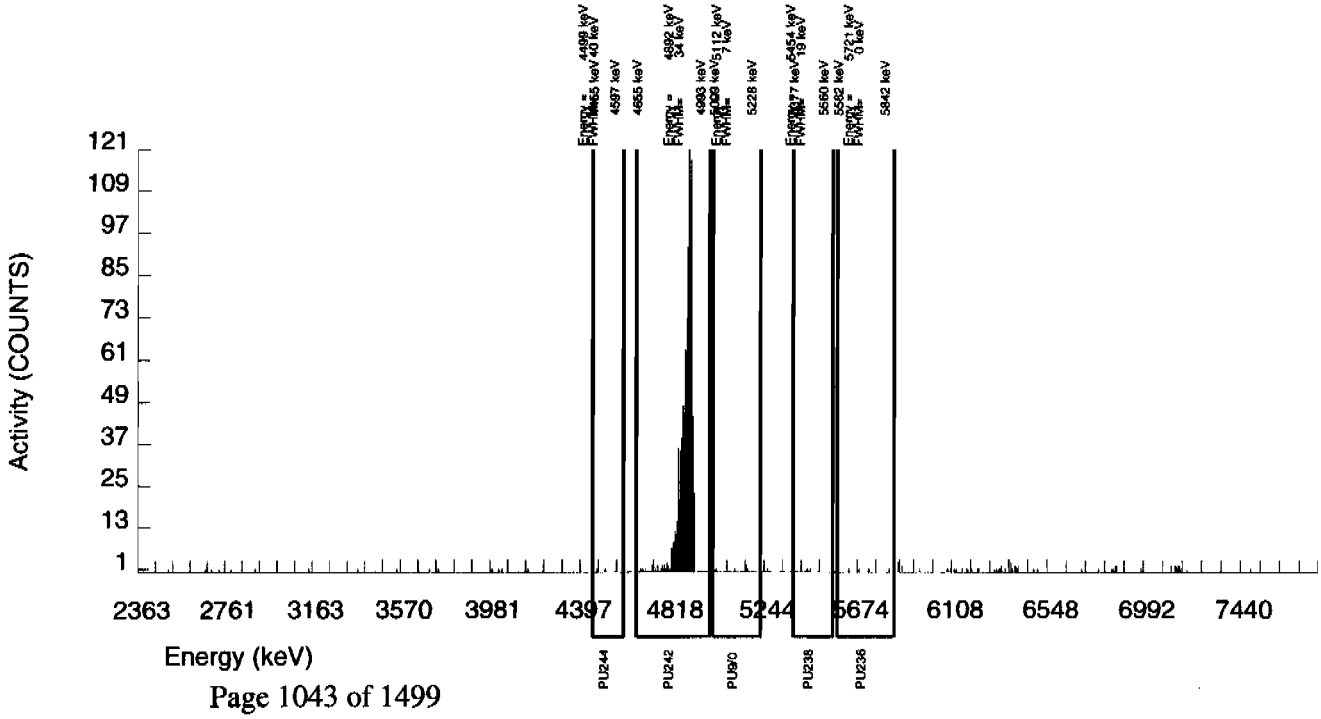
COUNT DATE:23-JAN-2010 12:08:56
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1374-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B041.CNF;1101
PCI/G : 4.178E+01	PCI/G : 4.178E+01	NOMINAL : 3.38543 dpm	BKG DATE : 17-JAN-2010
		RESULTS : 3.21885 dpm	EFF FILE : W041.CNF;319
			CAL DATE : 4-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	6.000	6.000	0.000	3.4797	99.90000	6.92E-03	2.84E-03	9.33E-03	2.18E-02	2.82E-03
PU-236	5749.000	6.000	-2.000	8.000	2.1286	100.0000	-2.32E-03	4.34E-03	5.70E-03	1.45E-02	4.34E-03
PU-238	5499.000	3.000	1.000	2.000	2.9680	99.90000	1.15E-03	2.58E-03	7.96E-03	1.90E-02	2.58E-03
PU242	4890.000	1054.000	1052.000	2.000	1.4142	100.0000	1.21E+00	7.16E-02	3.79E-03	1.07E-02	3.74E-02
PU-244	4589.000	2.000	2.000	0.000	5.2050	99.90000	2.31E-03	1.63E-03	1.40E-02	3.10E-02	1.63E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942754
SAMPLE DATE : 20-JAN-2010 00:00:00

SAMPLE ID : S1202018346_PU
SAMPLE QTY: 0.102 G

DETECTOR NUMBER :78793
AVERAGE %EFFICIENCY :33.4897
% YIELD : 97.992

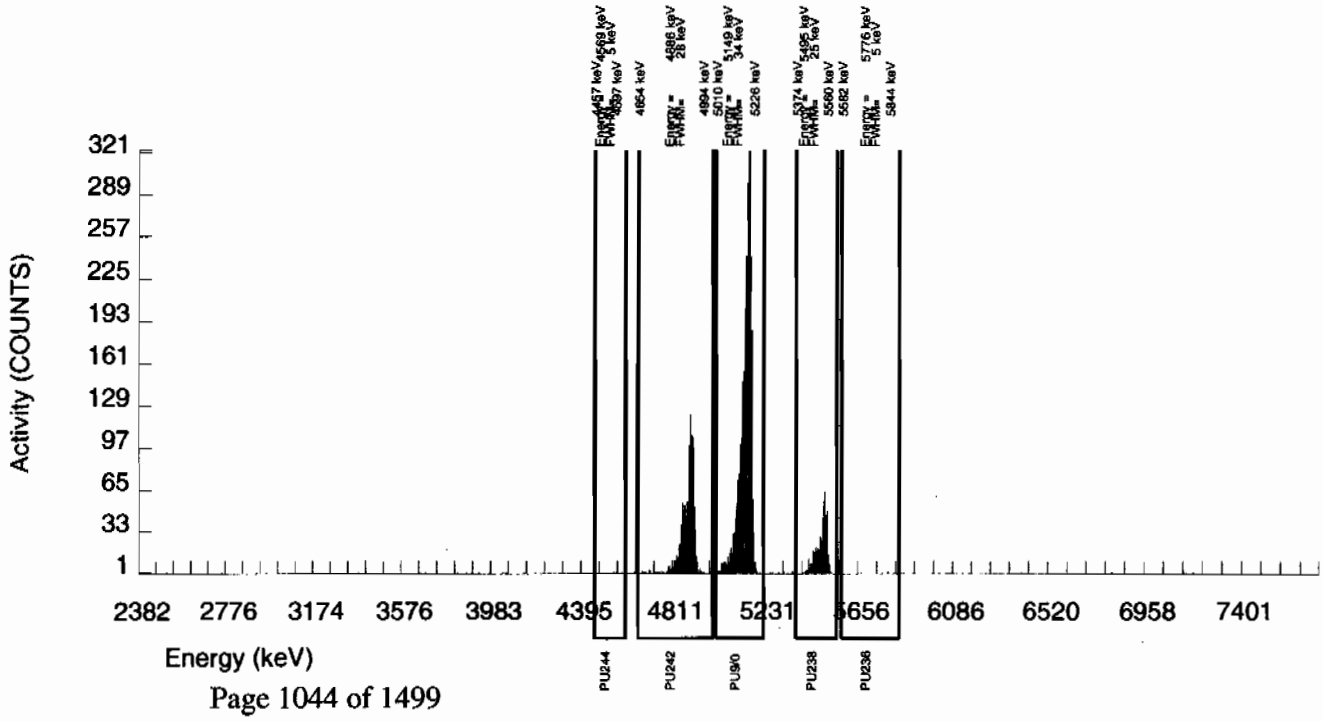
COUNT DATE:23-JAN-2010 12:08:56
ELAPSED LIVE TIME(SEC): 59999.99
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1374-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B042.CNF;1100
PCI/G : 4.178E+01	PCI/G : 4.178E+01	NOMINAL : 3.38543 dpm	BKG DATE : 17-JAN-2010
		RESULTS : 3.31744 dpm	EFF FILE : W042.CNF;292
			CAL DATE : 4-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	2875.000	2871.000	4.000	3.4797	99.90000	3.87E+01	2.39E+00	1.09E-01	2.55E-01	7.23E-01
PU-236	5749.000	5.000	-5.000	10.000	2.1286	100.0000	-6.75E-02	5.23E-02	6.66E-02	1.70E-01	5.23E-02
PU-238	5499.000	499.000	498.000	1.000	2.9680	99.90000	6.71E+00	4.98E-01	9.30E-02	2.23E-01	3.01E-01
PU242	4890.000	1115.000	1111.000	4.000	2.0000	100.0000	1.50E+01	9.91E-01	6.26E-02	1.62E-01	4.50E-01
PU-244	4589.000	5.000	5.000	0.000	5.2050	99.90000	6.74E-02	3.04E-02	1.63E-01	3.63E-01	3.01E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Radiochemistry Batch Checklist, Rev10

Batch# 942756 Product: U Date: 1/28/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	X		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	X		
Instrument source check is within limits. Instrument bkg check is within limits.	X		
Method RDL/ LLD has been met.	X		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	X		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	X		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	X		
Sample was run within hold time.	X		
Sample was correctly preserved if required.	X		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	X		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	X		
Aux data is correct.			N/A
Client Special requirements page has been checked.	X		
Raw Data and/ or spectrum are included and properly statused.	X		
QC data entered into QC database and batch is in REVW	X		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	X		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	X		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By: [signature] 1/22/10

Secondary Review Performed By: [signature] 1/28/10

1/27 216

LAM

Uranium Que Sheet

18-JAN-10

Batch #: 942756 Analyst: KXM4 First Client Due Date:06-FEB-10 Internal Due Date:27-JAN-10

Tracer Isotope: U-232/U-236 Tracer Code: 1283-G-H Expiration Date: 12-9-10 Vol: 0.1ml
LCS Isotope: U-238 LCS Code: SRM0244-A Expiration Date: 10-31-10 Vol: 0.1g
Spike Isotope: U-238 Spike Code: NA Expiration Date: NA Vol: NA
Prep Date: 1-20-10 Initials: KM Pipet ID: 2971058 Balance ID: 5044272 Witness: MDA 1/20/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/ml)	U Det #
244852001-1	RE12-10-7856	SAMPLE		.1 pCi/g	SOIL	LANL010	11-JAN-10	1	1	0.503	124
244852002-1	RE12-10-7857	SAMPLE		.1 pCi/g	SOIL	LANL010	11-JAN-10	2	2	0.513	125
244852003-1	RE12-10-7855	SAMPLE		.1 pCi/g	SOIL	LANL010	11-JAN-10	3	3	0.510	126
244852004-1	RE12-10-7854	SAMPLE		.1 pCi/g	SOIL	LANL010	11-JAN-10	4	4	0.515	127
244881001-1	RE12-10-8096	SAMPLE		.1 pCi/g	SOIL	LANL010	11-JAN-10	5	5	0.507	128
244881002-1	RE12-10-8094	SAMPLE		.1 pCi/g	SOIL	LANL010	11-JAN-10	6	6	0.517	129
244881003-1	RE12-10-8097	SAMPLE		.1 pCi/g	SOIL	LANL010	11-JAN-10	7	7	0.516	130
244881004-1	RE12-10-8095	SAMPLE		.1 pCi/g	SOIL	LANL010	11-JAN-10	8	8	0.508	131
244902001-1	RE46-10-10099	SAMPLE		.1 pCi/g	SOIL	LANL010	14-JAN-10	9	9	0.505	132
244905001-1	RE16-10-1374	SAMPLE		.1 pCi/g	SOIL	LANL010	08-JAN-10	10	10	0.504	133
244905002-1	RE16-10-1376	SAMPLE		.1 pCi/g	SOIL	LANL010	08-JAN-10	11	11	0.510	134
244905003-1	RE16-10-1378	SAMPLE		.1 pCi/g	SOIL	LANL010	08-JAN-10	12	12	0.523	137
244905004-1	RE16-10-1380	SAMPLE		.1 pCi/g	SOIL	LANL010	08-JAN-10	13	13	0.507	138
244905005-1	RE16-10-1382	SAMPLE		.1 pCi/g	SOIL	LANL010	08-JAN-10	14	14	0.502	139
244905006-1	RE16-10-1396	SAMPLE		.1 pCi/g	SOIL	LANL010	08-JAN-10	15	15	0.507	140
1202018347-1	MB for batch 942756	MB		.1 pCi/g	SOIL	QC ACCOUNT		16	16	0.523 1.0	141
1202018348-1	RE46-10-10099(244902001DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	14-JAN-10	17	17	0.507	142
1202018349-1	LCS for batch 942756	LCS		.1 pCi/g	SOIL	QC ACCOUNT		18	18	0.104	143

Choose SOP used: GL-RAD-A-011 Solid Sample Dissolution by: LEACH or DIGESTION (Circle One) Data Reviewed By: [signature] 1/23/10

Blank Correction Report

Batch ID 942756

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202018348	DUP	Uranium-233/234	0.507 g	0.631	0.0649	0.108	.010256410	pCi/g	NO
		Uranium-235/236	0.507 g	0.0472	0.0158	0.0668	.013274162	pCi/g	YES
		Uranium-238	0.507 g	0.576	0.0606	0.0624	.010729783	pCi/g	NO
1202018349	LCS	Uranium-233/234	0.104 g	6.12	0.581	0.551	.05	pCi/g	NO
		Uranium-235/236	0.104 g	0.286	0.0824	0.342	.064711538	pCi/g	YES
		Uranium-238	0.104 g	5.66	0.546	0.320	.052307692	pCi/g	NO
1202018347	MB	Uranium-233/234	1.00 g	0.0052	0.00402	0.0562	.0052	pCi/g	YES
		Uranium-235/236	1.00 g	0.00673	0.00504	0.0349	.00673	pCi/g	YES
		Uranium-238	1.00 g	0.00544	0.00407	0.0326	.00544	pCi/g	YES
244852001	RE12-10-7856	Uranium-233/234	0.503 g	1.03	0.0969	0.120	.010337972	pCi/g	NO
		Uranium-235/236	0.503 g	0.0764	0.0198	0.0743	.013379722	pCi/g	NO
		Uranium-238	0.503 g	1.25	0.112	0.0694	.010815109	pCi/g	NO
244852002	RE12-10-7857	Uranium-233/234	0.513 g	0.608	0.0638	0.110	.010136452	pCi/g	NO
		Uranium-235/236	0.513 g	0.0352	0.0127	0.0685	.013118908	pCi/g	YES
		Uranium-238	0.513 g	0.747	0.0738	0.064	.010604288	pCi/g	NO
244852003	RE12-10-7855	Uranium-233/234	0.510 g	1.10	0.0998	0.111	.010196078	pCi/g	NO
		Uranium-235/236	0.510 g	0.0662	0.0177	0.0687	.013196078	pCi/g	NO
		Uranium-238	0.510 g	1.20	0.107	0.0642	.010666667	pCi/g	NO
244852004	RE12-10-7854	Uranium-233/234	0.515 g	1.66	0.145	0.127	.010097087	pCi/g	NO
		Uranium-235/236	0.515 g	0.0911	0.0224	0.0787	.013067961	pCi/g	NO
		Uranium-238	0.515 g	1.89	0.161	0.0736	.010563107	pCi/g	NO
244881001	RE12-10-8096	Uranium-233/234	0.507 g	1.15	0.105	0.116	.010256410	pCi/g	NO
		Uranium-235/236	0.507 g	0.0832	0.0205	0.0719	.013274162	pCi/g	NO
		Uranium-238	0.507 g	1.43	0.125	0.0672	.010729783	pCi/g	NO
244881002	RE12-10-8094	Uranium-233/234	0.517 g	0.637	0.0637	0.101	.010058027	pCi/g	NO
		Uranium-235/236	0.517 g	0.0241	0.0115	0.0626	.013017408	pCi/g	YES
		Uranium-238	0.517 g	0.683	0.0671	0.0585	.010522244	pCi/g	NO
244881003	RE12-10-8097	Uranium-233/234	0.516 g	1.34	0.120	0.120	.010077519	pCi/g	NO
		Uranium-235/236	0.516 g	0.0769	0.020	0.0748	.013042636	pCi/g	NO
		Uranium-238	0.516 g	1.57	0.136	0.0699	.010542636	pCi/g	NO
244881004	RE12-10-8095	Uranium-233/234	0.508 g	1.06	0.098	0.114	.010236220	pCi/g	NO
		Uranium-235/236	0.508 g	0.0726	0.0189	0.0707	.013248031	pCi/g	NO
		Uranium-238	0.508 g	1.22	0.109	0.066	.010708661	pCi/g	NO
244902001	RE46-10-10099	Uranium-233/234	0.505 g	0.593	0.0645	0.124	.010297030	pCi/g	NO
		Uranium-235/236	0.505 g	0.0297	0.0142	0.0771	.013326733	pCi/g	YES
		Uranium-238	0.505 g	0.501	0.0578	0.072	.010772277	pCi/g	NO
244905001	RE16-10-1374	Uranium-233/234	0.504 g	0.998	0.0993	0.144	.010317460	pCi/g	NO
		Uranium-235/236	0.504 g	0.0576	0.022	0.0897	.013353175	pCi/g	YES
		Uranium-238	0.504 g	1.19	0.114	0.0836	.010793651	pCi/g	NO
244905002	RE16-10-1376	Uranium-233/234	0.510 g	1.10	0.103	0.124	.010196078	pCi/g	NO
		Uranium-235/236	0.510 g	0.0692	0.0216	0.077	.013196078	pCi/g	NO

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
244905002	RE16-10-1376	Uranium-238	0.510 g	1.04	0.0997	0.0719	.010666667	pCi/g	NO
244905003	RE16-10-1378	Uranium-233/234	0.523 g	1.08	0.101	0.124	.009942639	pCi/g	NO
		Uranium-235/236	0.523 g	0.0642	0.0184	0.0768	.012868069	pCi/g	YES
		Uranium-238	0.523 g	1.33	0.119	0.0718	.010401530	pCi/g	NO
244905004	RE16-10-1380	Uranium-233/234	0.507 g	0.951	0.0914	0.120	.010256410	pCi/g	NO
		Uranium-235/236	0.507 g	0.0384	0.0138	0.0747	.013274162	pCi/g	YES
		Uranium-238	0.507 g	1.15	0.106	0.0698	.010729783	pCi/g	NO
244905005	RE16-10-1382	Uranium-233/234	0.507 g	1.14	0.109	0.129	.010256410	pCi/g	NO
		Uranium-235/236	0.507 g	0.0619	0.0184	0.0803	.013274162	pCi/g	YES
		Uranium-238	0.507 g	1.30	0.120	0.075	.010729783	pCi/g	NO
244905006	RE16-10-1396	Uranium-233/234	0.507 g	0.941	0.0912	0.125	.010256410	pCi/g	NO
		Uranium-235/236	0.507 g	0.0799	0.0208	0.0777	.013274162	pCi/g	NO
		Uranium-238	0.507 g	1.08	0.102	0.0726	.010729783	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942756
SAMPLE DATE : 11-JAN-2010 00:00:00

SAMPLE ID : S0244852001_UU
SAMPLE QTY: 0.503 G

DETECTOR NUMBER :45-142V2
AVERAGE %EFFICIENCY :25.8260
% YIELD : 89.793

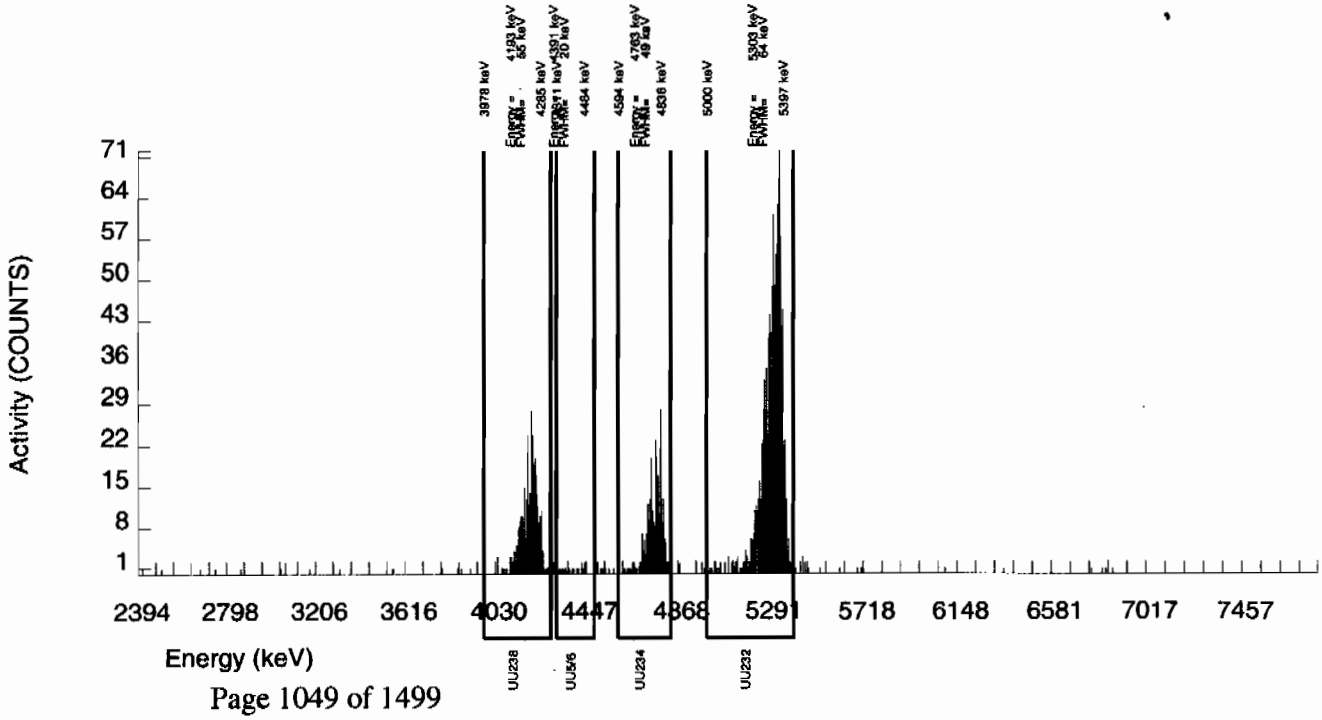
COUNT DATE:26-JAN-2010 20:26:16
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-H	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B124.CNF;436
PCI/G : 5.750E+00	PCI/G : 5.750E+00	NOMINAL : 4.50829 dpm	BKG DATE : 24-JAN-2010
		RESULTS : 4.04811 dpm	EFF FILE : W124.CNF;112
			CAL DATE : 18-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	270.000	266.943	2.000	6.0782	100.0000	1.03E+00	9.69E-02	5.46E-02	1.20E-01	6.36E-02
U232	5302.100	1053.000	1045.000	8.000	2.8284	100.0000	4.04E+00	3.13E-01	2.54E-02	6.13E-02	1.26E-01
U-235	4391.000	16.000	16.000	0.000	2.7628	80.90000	7.64E-02	1.98E-02	3.07E-02	7.43E-02	1.91E-02
U-238	4184.730	323.000	323.000	0.000	3.2810	100.0000	1.25E+00	1.12E-01	2.95E-02	6.94E-02	6.94E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942756
SAMPLE DATE : 11-JAN-2010 00:00:00

SAMPLE ID : S0244852002_UU
SAMPLE QTY: 0.513 G

DETECTOR NUMBER :75547
AVERAGE %EFFICIENCY :25.8749
% YIELD : 95.369

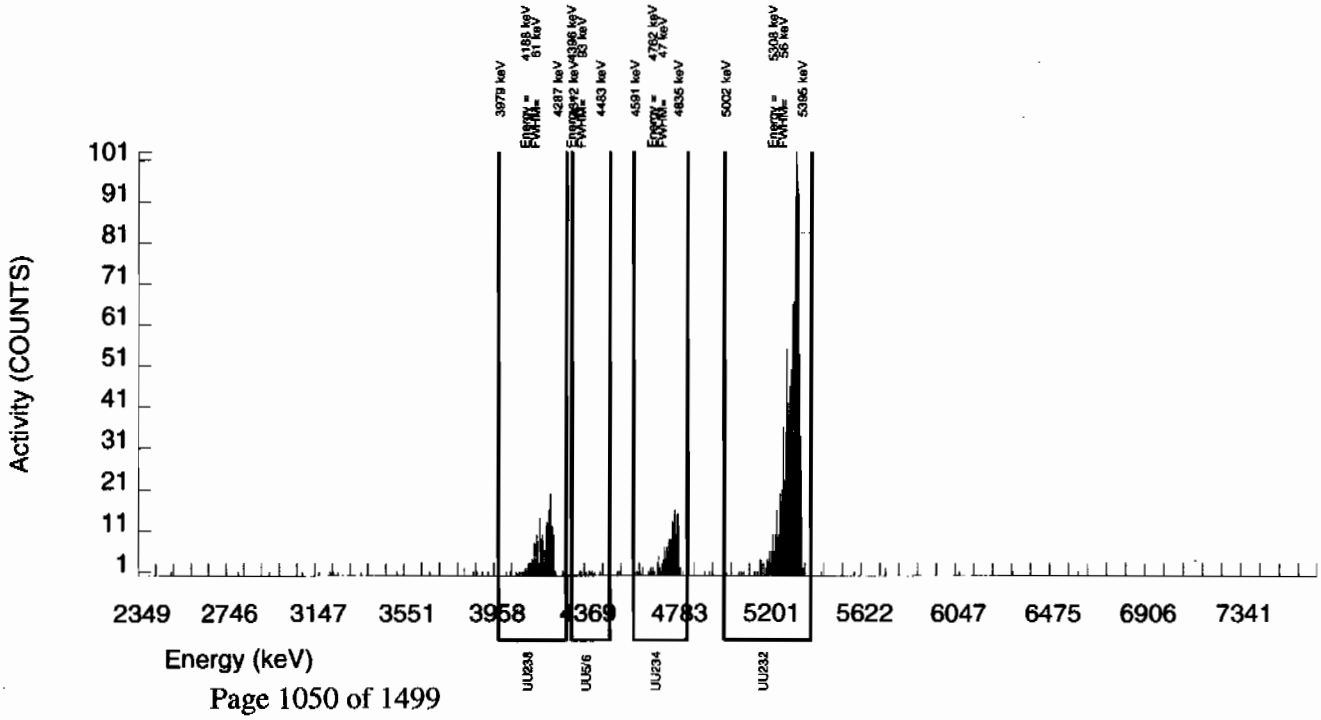
COUNT DATE:26-JAN-2010 20:26:20
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-H	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B125.CNF;446
PCI/G : 5.750E+00	PCI/G : 5.750E+00	NOMINAL : 4.50829 dpm	BKG DATE : 24-JAN-2010
		RESULTS : 4.29952 dpm	EFF FILE : W125.CNF;130
			CAL DATE : 18-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	175.000	170.875	3.000	6.0782	100.0000	6.08E-01	6.38E-02	5.03E-02	1.10E-01	4.73E-02
U232	5302.100	1113.000	1112.000	1.000	1.0000	100.0000	3.96E+00	3.03E-01	8.28E-03	2.62E-02	1.19E-01
U-235	4391.000	8.000	8.000	0.000	2.7628	80.90000	3.52E-02	1.27E-02	2.83E-02	6.85E-02	1.24E-02
U-238	4184.730	211.000	210.000	1.000	3.2810	100.0000	7.47E-01	7.38E-02	2.72E-02	6.40E-02	5.18E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942756
SAMPLE DATE : 11-JAN-2010 00:00:00

SAMPLE ID : S0244852003_UU
SAMPLE QTY: 0.510 G

DETECTOR NUMBER :75548
AVERAGE %EFFICIENCY :25.0717
% YIELD : 98.601

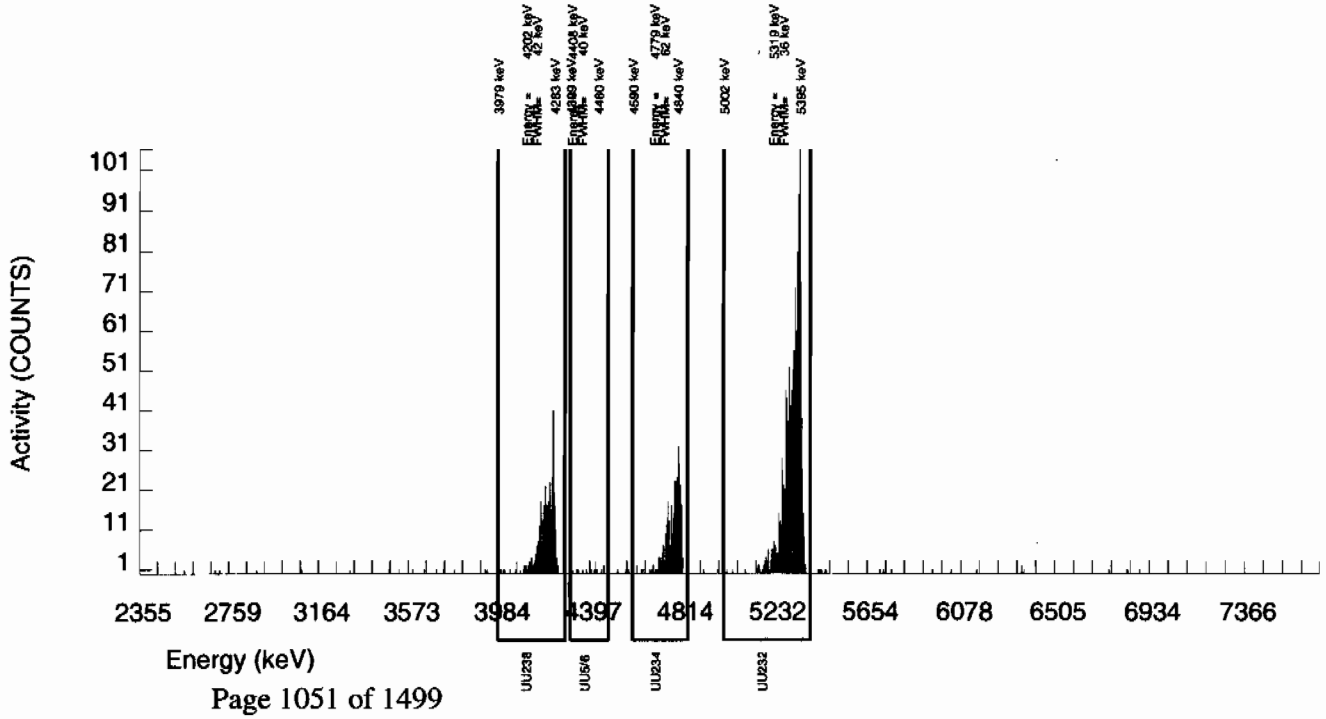
COUNT DATE:26-JAN-2010 20:26:22
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-H	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B126.CNF;445
PCI/G : 5.750E+00	PCI/G : 5.750E+00	NOMINAL : 4.50829 dpm	BKG DATE : 24-JAN-2010
		RESULTS : 4.44524 dpm	EFF FILE : W126.CNF;132
			CAL DATE : 18-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	310.000	307.873	1.000	6.0782	100.0000	1.10E+00	9.98E-02	5.05E-02	1.11E-01	6.29E-02
U232	5302.100	1116.000	1114.000	2.000	1.4142	100.0000	3.98E+00	3.05E-01	1.18E-02	3.32E-02	1.20E-01
U-235	4391.000	15.000	15.000	0.000	2.7628	80.90000	6.62E-02	1.77E-02	2.84E-02	6.87E-02	1.71E-02
U-238	4184.730	337.000	336.000	1.000	3.2810	100.0000	1.20E+00	1.07E-01	2.73E-02	6.42E-02	6.57E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942756
SAMPLE DATE : 11-JAN-2010 00:00:00

SAMPLE ID : S0244852004_UU
SAMPLE QTY: 0.515 G

DETECTOR NUMBER :78770
AVERAGE %EFFICIENCY :24.3481
% YIELD : 87.769

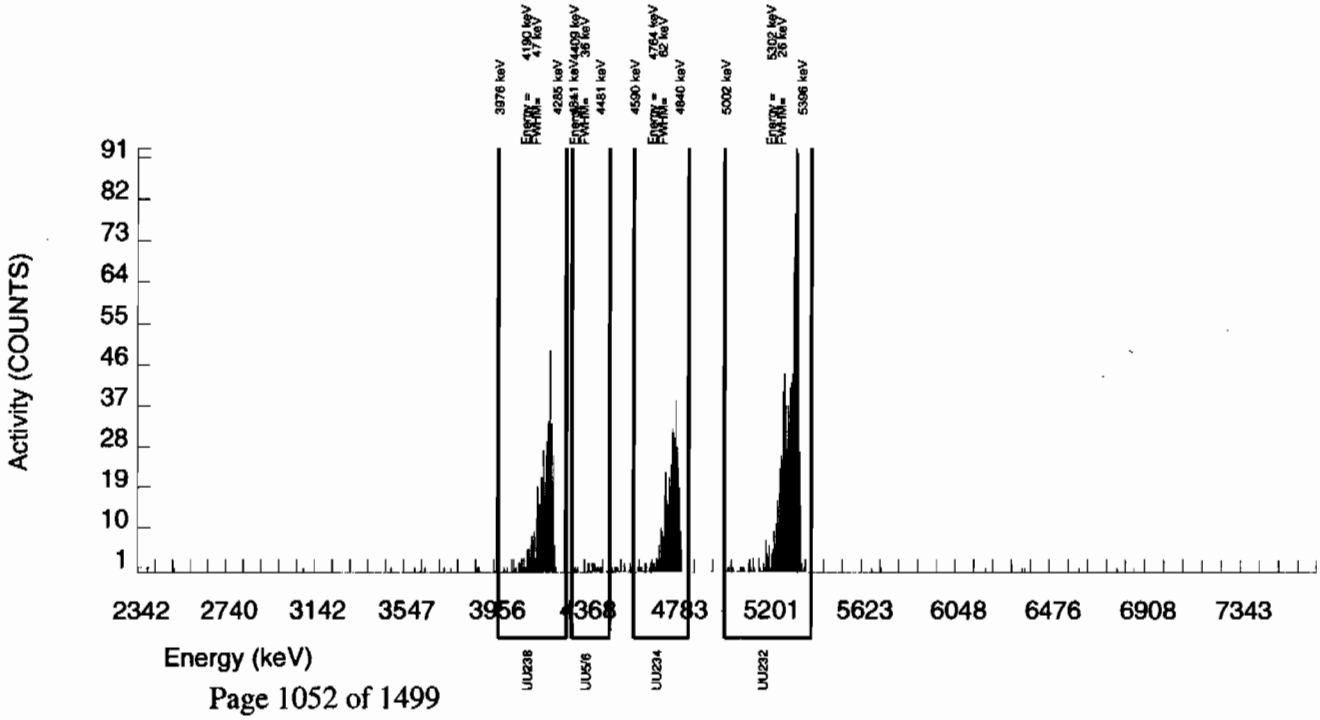
COUNT DATE:26-JAN-2010 20:26:25
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-H	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B127.CNF;449
PCI/G : 5.750E+00	PCI/G : 5.750E+00	NOMINAL : 4.50829 dpm	BKG DATE : 24-JAN-2010
		RESULTS : 3.95689 dpm	EFF FILE : W127.CNF;123
			CAL DATE : 18-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	408.000	406.026	1.000	6.0782	100.0000	1.66E+00	1.45E-01	5.79E-02	1.27E-01	8.27E-02
U232	5302.100	964.000	963.000	1.000	1.0000	100.0000	3.94E+00	3.09E-01	9.52E-03	3.01E-02	1.27E-01
U-235	4391.000	18.000	18.000	0.000	2.7628	80.90000	9.11E-02	2.24E-02	3.25E-02	7.87E-02	2.15E-02
U-238	4184.730	461.000	461.000	0.000	3.2810	100.0000	1.89E+00	1.61E-01	3.12E-02	7.36E-02	8.79E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942756
SAMPLE DATE : 14-JAN-2010 00:00:00

SAMPLE ID : S0244902001_UU
SAMPLE QTY: 0.505 G

DETECTOR NUMBER :67579
AVERAGE %EFFICIENCY :24.9091
% YIELD : 89.356

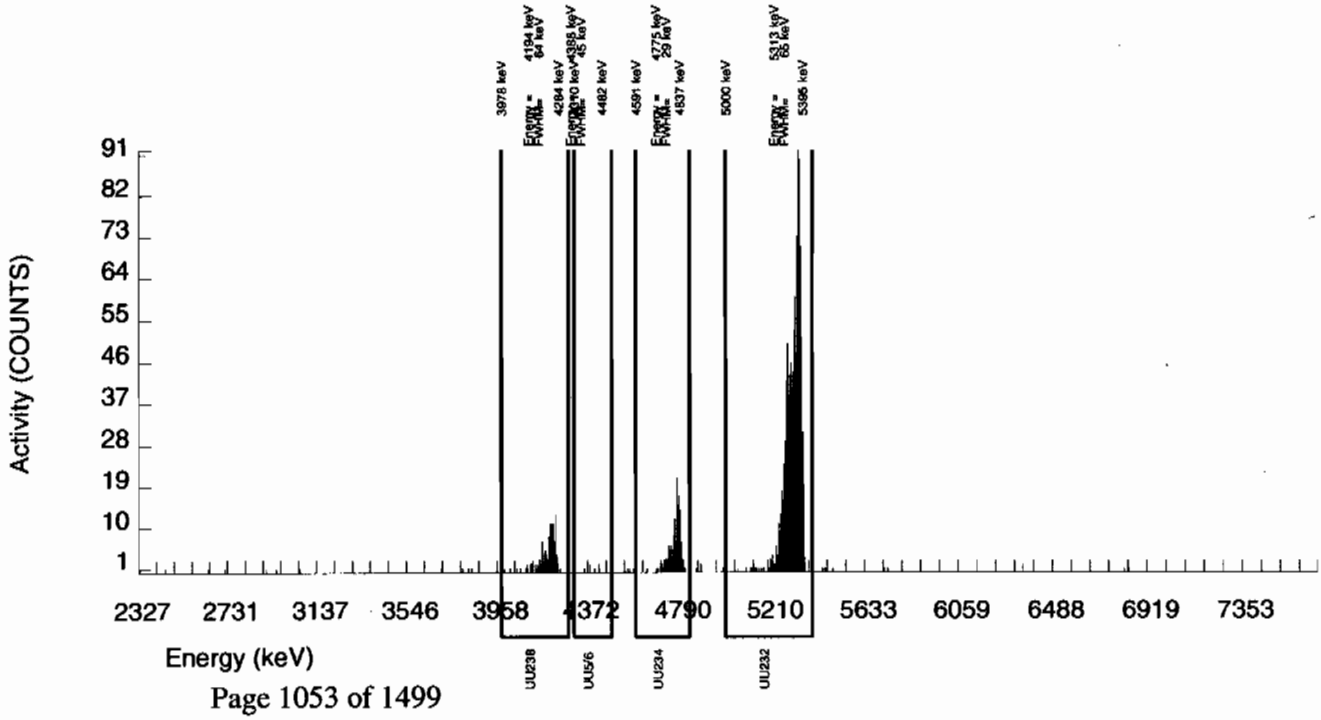
COUNT DATE:26-JAN-2010 20:26:37
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-H	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B132.CNF;436
PCI/G : 5.750E+00	PCI/G : 5.750E+00	NOMINAL : 4.50791 dpm	BKG DATE : 24-JAN-2010
		RESULTS : 4.02811 dpm	EFF FILE : W132.CNF;130
			CAL DATE : 18-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	149.000	147.985	0.000	6.0782	100.0000	5.93E-01	6.45E-02	5.67E-02	1.24E-01	4.88E-02
U232	5302.100	1003.000	1003.000	0.000	0.0000	100.0000	4.02E+00	3.13E-01	0.00E+00	1.09E-02	1.27E-01
U-235	4391.000	7.000	6.000	1.000	2.7628	80.90000	2.97E-02	1.42E-02	3.18E-02	7.71E-02	1.40E-02
U-238	4184.730	127.000	125.000	2.000	3.2810	100.0000	5.01E-01	5.78E-02	3.06E-02	7.20E-02	4.55E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942756
SAMPLE DATE : 20-JAN-2010 00:00:00

SAMPLE ID : S1202018347_UU
SAMPLE QTY: 1.000 G

DETECTOR NUMBER :76232
AVERAGE %EFFICIENCY :25.2508
% YIELD : 98.341

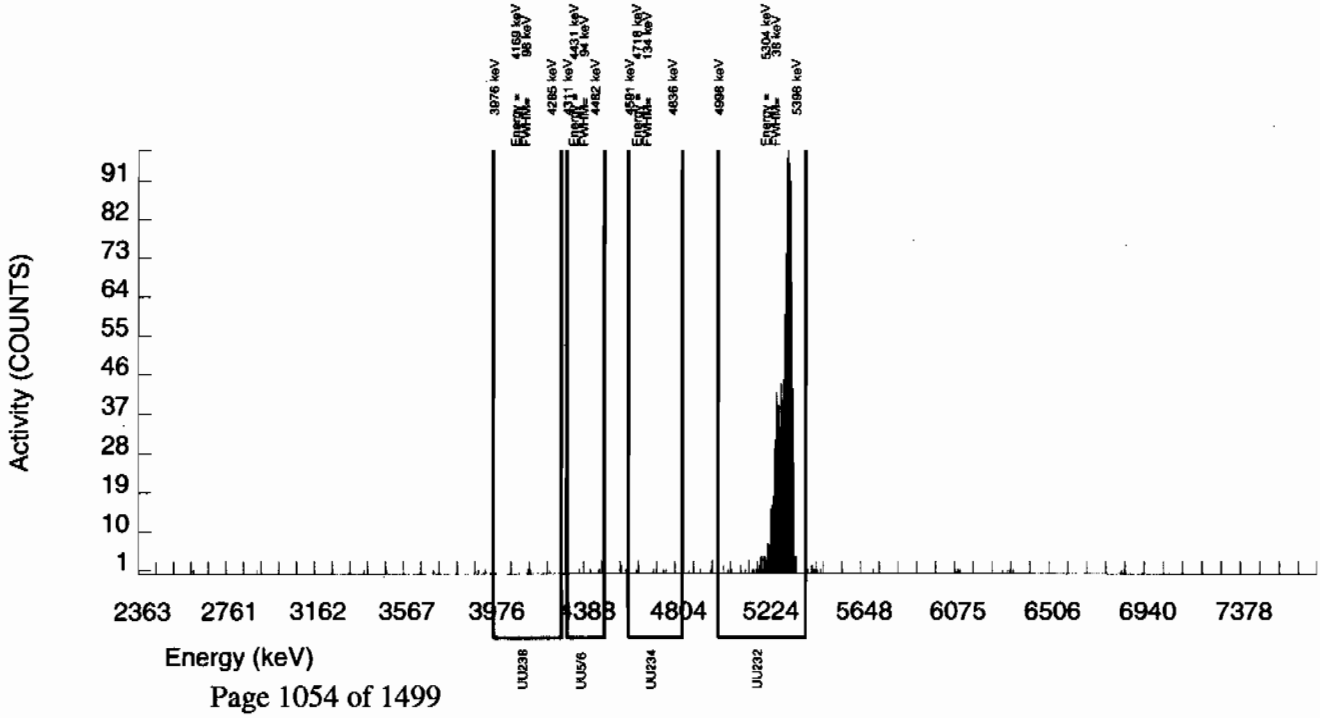
COUNT DATE:26-JAN-2010 20:27:00
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-H	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B141.CNF;394
PCI/G : 5.750E+00	PCI/G : 5.750E+00	NOMINAL : 4.50717 dpm	BKG DATE : 25-JAN-2010
		RESULTS : 4.43241 dpm	EFF FILE : W141.CNF;105
			CAL DATE : 18-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	5.000	2.868	1.000	6.0782	100.0000	5.20E-03	4.02E-03	2.57E-02	5.62E-02	4.00E-03
U232	5302.100	1123.000	1119.000	4.000	2.0000	100.0000	2.03E+00	1.58E-01	8.44E-03	2.18E-02	6.09E-02
U-235	4391.000	4.000	3.000	1.000	2.7628	80.90000	6.73E-03	5.04E-03	1.44E-02	3.49E-02	5.01E-03
U-238	4184.730	4.000	3.000	1.000	3.2810	100.0000	5.44E-03	4.07E-03	1.38E-02	3.26E-02	4.06E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942756
SAMPLE DATE : 14-JAN-2010 00:00:00

SAMPLE ID : S1202018348_UU
SAMPLE QTY: 0.507 G

DETECTOR NUMBER :64261
AVERAGE %EFFICIENCY :25.9552
% YIELD : 98.580

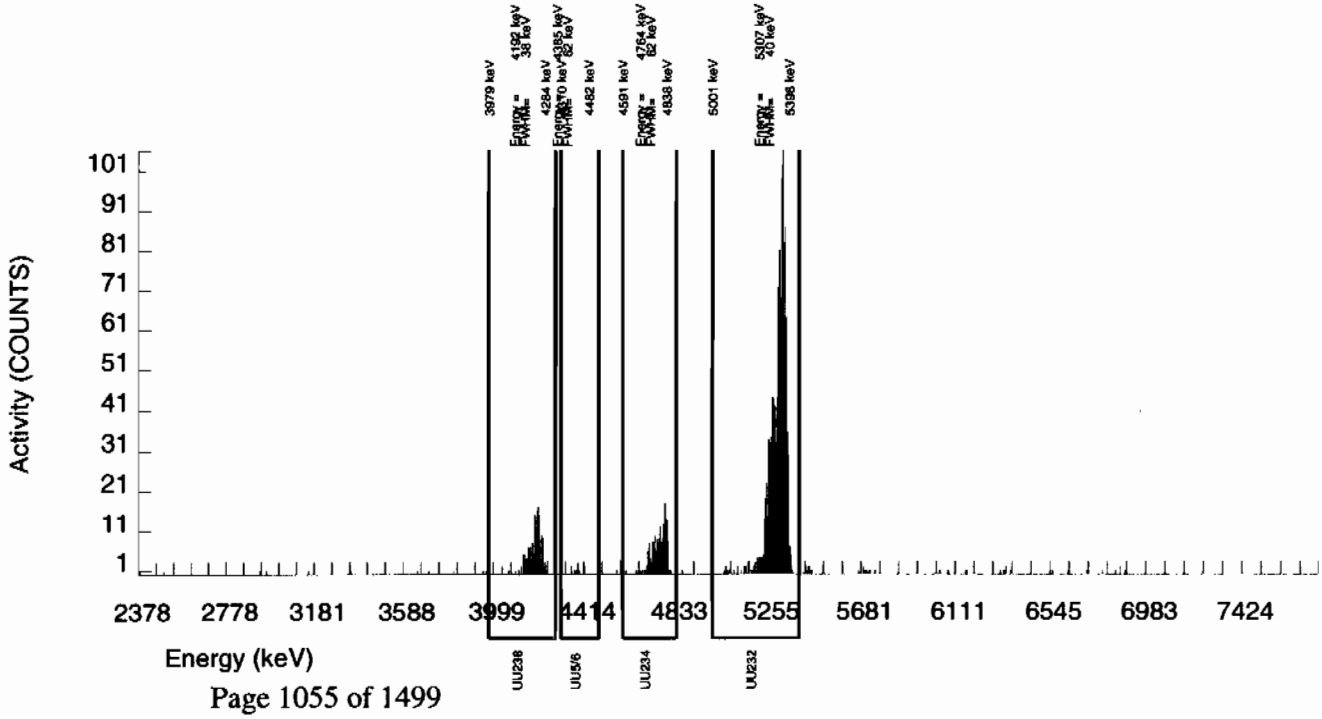
COUNT DATE:26-JAN-2010 20:27:03
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-H	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B142.CNF;388
PCI/G : 5.750E+00	PCI/G : 5.750E+00	NOMINAL : 4.50791 dpm	BKG DATE : 25-JAN-2010
		RESULTS : 4.44388 dpm	EFF FILE : W142.CNF;109
			CAL DATE : 18-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	185.000	181.834	2.000	6.0782	100.0000	6.31E-01	6.49E-02	4.91E-02	1.08E-01	4.73E-02
U232	5302.100	1165.000	1153.000	12.000	3.4641	100.0000	4.01E+00	3.06E-01	2.80E-02	6.54E-02	1.19E-01
U-235	4391.000	12.000	11.000	1.000	2.7628	80.90000	4.72E-02	1.58E-02	2.76E-02	6.68E-02	1.55E-02
U-238	4184.730	167.000	166.000	1.000	3.2810	100.0000	5.76E-01	6.06E-02	2.65E-02	6.24E-02	4.50E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 942756
SAMPLE DATE : 20-JAN-2010 00:00:00

SAMPLE ID : S1202018349_UU
SAMPLE QTY: 0.104 G

DETECTOR NUMBER :65882
AVERAGE %EFFICIENCY :24.2167
% YIELD : 100.525

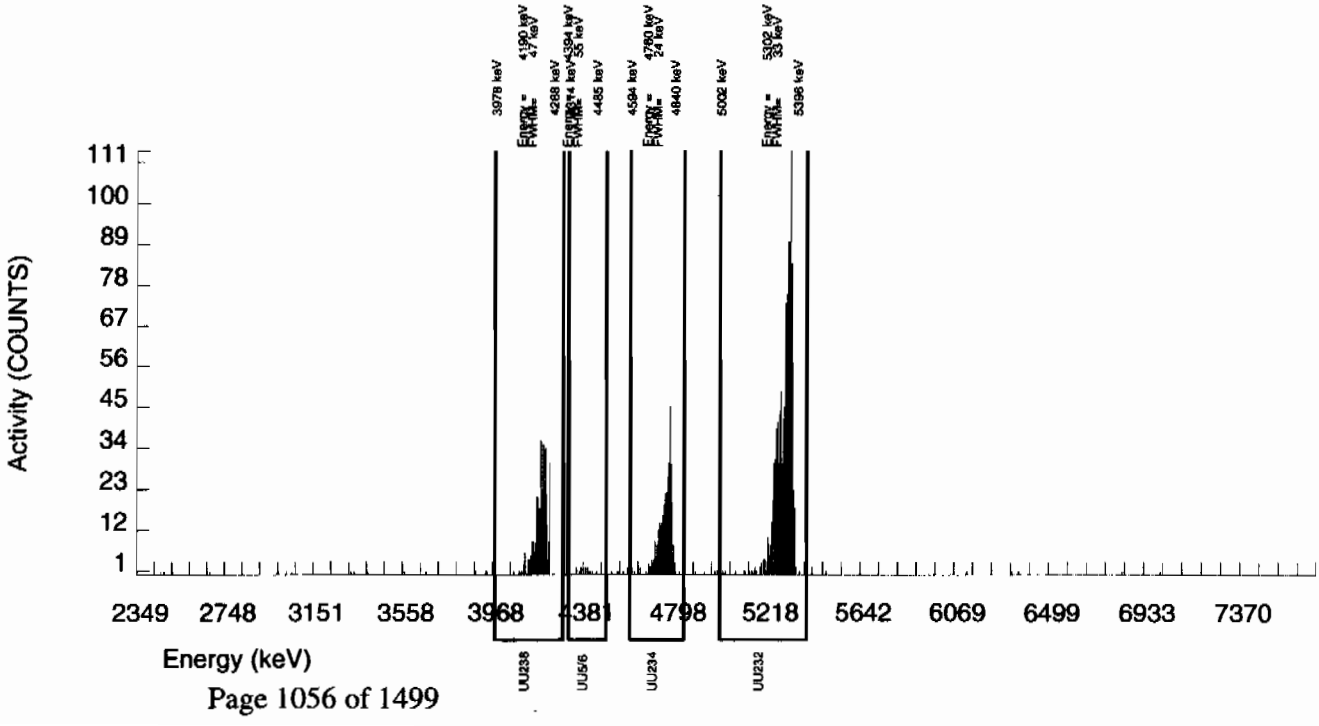
COUNT DATE:26-JAN-2010 20:27:06
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :KXM4

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-H	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B143.CNF;390
PCI/G : 5.750E+00	PCI/G : 5.750E+00	NOMINAL : 4.50717 dpm	BKG DATE : 24-JAN-2010
		RESULTS : 4.53083 dpm	EFF FILE : W143.CNF;112
			CAL DATE : 18-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	346.000	343.890	1.000	6.0782	100.0000	6.12E+00	5.81E-01	2.52E-01	5.51E-01	3.31E-01
U232	5302.100	1097.000	1097.000	0.000	0.0000	100.0000	1.95E+01	1.63E+00	0.00E+00	4.82E-02	5.89E-01
U-235	4391.000	13.000	13.000	0.000	2.7628	80.90000	2.86E-01	8.24E-02	1.41E-01	3.42E-01	7.93E-02
U-238	4184.730	321.000	318.000	3.000	3.2810	100.0000	5.66E+00	5.46E-01	1.36E-01	3.20E-01	3.20E-01

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Radiochemistry Batch Checklist, Rev10

Batch# 942718 Product: Gamma Solid LANL Date: 01/28/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			N/A
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.	✓		
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By: [illegible] 1/28/10

Secondary Review Performed By: [illegible] 1/29/10

2/6

Gamma Spec Que Sheet 1.G. - 1/26/10

01/19/2010

Batch #:942718 **Analyst:** MXR1 **First Client DueDate**02/06/2010 **Internal Due Date:** 01/27/2010

Gamma Spike Isotope: Mixed Gamma **Spike Code:** n/a **Expiration Date:** n/a **Vol:** n/a **Nominal Concentration:** n/a

Gamma LCS Isotope: Mixed Gamma **LCS Code:** 1032-A **Expiration Date:** 12/2/10 **Vol:** 1.0mL **Nominal Concentration:** Cs137-5.703, Co60-6.601, Am241-16.30

Initials: MS **Prep Date:** 1/19/10 **Library:** SOLID **Witness:** n/a

Sample ID	Client Description / Container ID	Type	Hazard Code	Client	Matrix	Collect Date		Geometry	Wet/Dry Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)
244852001-1	RE12-10-7856	SAMPLE		LANL010	SOIL	11-JAN-10 12:00:00	RF	CAN	134.03	12	1/19/10
244852002-1	RE12-10-7857	SAMPLE		LANL010	SOIL	11-JAN-10 12:00:00	RF		137.49	2	
244852003-1	RE12-10-7855	SAMPLE		LANL010	SOIL	11-JAN-10 12:00:00	RF		130.76	17	
244852004-1	RE12-10-7854	SAMPLE		LANL010	SOIL	11-JAN-10 12:00:00	RF		137.82	10	
244881001-1	RE12-10-8096	SAMPLE		LANL010	SOIL	11-JAN-10 12:00:00	RF		158.67	18 ~~13~~	RF 1/26/10
244881002-1	RE12-10-8094	SAMPLE		LANL010	SOIL	11-JAN-10 12:00:00	RF		151.22	16	
244881003-1	RE12-10-8097	SAMPLE		LANL010	SOIL	11-JAN-10 12:00:00	RF		141.41	20	
244881004-1	RE12-10-8095	SAMPLE		LANL010	SOIL	11-JAN-10 12:00:00	RF		128.09	23	
244902001-1	RE46-10-10099	SAMPLE		LANL010	SOIL	14-JAN-10 12:00:00	RF		181.11	19	
244905001-1	RE16-10-1374	SAMPLE		LANL010	SOIL	08-JAN-10 12:00:00	RF		138.06	4	
244905002-1	RE16-10-1376	SAMPLE		LANL010	SOIL	08-JAN-10 12:00:00	RF		137.59	6	
244905003-1	RE16-10-1378	SAMPLE		LANL010	SOIL	08-JAN-10 12:00:00	RF		137.05	7	
244905004-1	RE16-10-1380	SAMPLE		LANL010	SOIL	08-JAN-10 12:00:00	RF		148.11	11	
244905005-1	RE16-10-1382	SAMPLE		LANL010	SOIL	08-JAN-10 12:00:00	RF		140.37	15	
244905006-1	RE16-10-1396	SAMPLE		LANL010	SOIL	08-JAN-10 12:00:00	RF		147.85	22	
1202018262-1	MB	MB		QC ACCOUNT	SOIL	1/19/10	RF		181.11	25	
1202018263-1	DUP RE12-10-7855(244852003)	DUP		QC ACCOUNT	SOIL	11-JAN-10 12:00:00	RF		130.81	12	
1202018264-1	LCS	LCS		QC ACCOUNT	SOIL	1/19/10	RF		151.73	14	

GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: 1/28/10

1/29/10 **Page** 1 **of** 1

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Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	YIELD	Parmname	Result	MDA	RDL
942718	244852001	SAMPLE	26-JAN-10		Americium-241	0.06828	0.2461	0.200
					Thorium-234	1.094	2.02	2.00
942718	244852002	SAMPLE	26-JAN-10		Americium-241	0.02313	0.3148	0.200
					Thorium-234	0.2124	2.388	2.00
942718	244852003	SAMPLE	26-JAN-10		Cesium-134	0.07776	0.1109	0.100
					Sodium-22	-0.02298	0.08076	0.080
942718	244852004	SAMPLE	26-JAN-10		Americium-241	0.1439	0.3811	0.200
					Thorium-234	1.424	3.055	2.00
942718	244881001	SAMPLE	26-JAN-10		Americium-241	0.01962	0.2565	0.200
942718	244881002	SAMPLE	26-JAN-10					
942718	244881003	SAMPLE	26-JAN-10					
942718	244881004	SAMPLE	26-JAN-10		Americium-241	0.185	0.3568	0.200
					Cerium-139	0.01325	0.05544	0.050
942718	244902001	SAMPLE	26-JAN-10					
942718	244905001	SAMPLE	26-JAN-10		Americium-241	-0.00527	0.3213	0.200
					Thorium-234	0.2476	2.585	2.00
942718	244905002	SAMPLE	26-JAN-10		Americium-241	-0.2386	0.3249	0.200
					Cerium-139	0.01554	0.05921	0.050
					Thorium-234	0.1677	2.758	2.00
942718	244905003	SAMPLE	26-JAN-10					
942718	244905004	SAMPLE	26-JAN-10					
942718	244905005	SAMPLE	26-JAN-10		Americium-241	-0.3635	0.4629	0.200
					Cerium-139	-0.01075	0.05813	0.050
					Thorium-234	2.696	3.793	2.00
942718	244905006	SAMPLE	26-JAN-10					
942718	1202018262	MB	26-JAN-10					
942718	1202018263	DUP	26-JAN-10		Americium-241	0.05926	0.2384	0.200
					Thorium-234	1.018	2.07	2.00
942718	1202018264	LCS	26-JAN-10		Cerium-139	0.03881	0.08646	0.050
					Cesium-134	0.02579	0.1684	0.100
					Europium-152	-0.1668	0.3266	0.200
					Mercury-203	-0.01082	0.1132	0.100
					Potassium-40	1.207	1.211	1.00
					Ruthenium-106	-0.5267	0.9333	0.800
					Thorium-234	-0.3806	3.349	2.00
					Tin-113	-0.03868	0.1371	0.100
					Uranium-235	-0.04962	0.589	0.500

GEL QUALS

Batch ID: 942718

Report run on: January 28, 2010 12:17 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
244852001-1 26-JAN-2010 12:06	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.364			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.693			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1015		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.382			
244852002-1 26-JAN-2010 13:00	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.817			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.82			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1265		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.368			
244852003-1 26-JAN-2010 13:10	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.277			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.117			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.725			
244852004-1 26-JAN-2010 13:20	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.475			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.695			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1962		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.96			
244881002-1 26-JAN-2010 13:20	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.785			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.495			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1372		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.705			

GEL QUALS

Batch ID: 942718

Report run on: January 28, 2010 12:17 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
244881003-1 26-JAN-2010 13:21	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.861			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.626			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1016		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.893			
244881004-1 26-JAN-2010 13:21	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.843			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.038			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1155		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.149			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08181			
244881001-1 26-JAN-2010 13:24	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.06			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.789			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.08078		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		2.989			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08433			
244902001-1 26-JAN-2010 13:25	Bismuth-211	UI	UI	UI	Data rejected due to interference.		1.709			
	~~Bismuth-214~~	~~UI~~	~~UI~~	~~UI~~	~~Data rejected due to interference.~~		~~.5795~~		~~.2~~	~~.2~~
	Radium-224	UI	UI	UI	Data rejected due to interference.		1.816			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.05842			
244905001-1 26-JAN-2010 14:04	Bismuth-211	UI	UI	UI	Data rejected due to interference.		2.765			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		1.996			

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GEL QUALS

Batch ID: 942718

Report run on: January 28, 2010 12:17 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
244905001-1 26-JAN-2010 14:04	Radium-224	UI	UI	UI	Data rejected due to interference.		3.193			
244905002-1 26-JAN-2010 14:05	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.266			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.654			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.547			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.0806			
244905003-1 26-JAN-2010 14:05	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.863			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.404			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.801			
244905004-1 26-JAN-2010 14:06	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.561			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.06			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.08883		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.311			
244905005-1 26-JAN-2010 14:06	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.296			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.392			
244905006-1 26-JAN-2010 14:07	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.108			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.262			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.185			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1046			
1202018263-1 DUP	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.85			

GEL QUALS

Batch ID: 942718

Report run on: January 28, 2010 12:17 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
1202018263-1 DUP 26-JAN-2010 14:10	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.566			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.53			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.07906			

Gamma Review Report based on Result > MDA for Batch:942718

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244852001	11-JAN-10 12:00	26-JAN-10 12:06	15	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.565	0.1551	pCi/g	0.1909	N	911	3	1.388	IDENTIFIED	8.25		
Americium-243	int nr	0.3757	0.03969	pCi/g	0.08603	N	74.63	1	1.223	IDENTIFIED	10		
Annihilation Rad.		0.1442	0.03253	pCi/g	0.04399	N	510.8	1	2.036	IDENTIFIED	22.36		
Barium-137m		0.1421	0.03427	pCi/g	0.05699	N	662.1	2	1.472	IDENTIFIED	23.91		
Bismuth-211	int	3.364	0.2217	pCi/g	0.2997	Y	351.8	4	1.288	IDENTIFIED	5.792	ui	
Bismuth-212	la nr	1.592	0.2406	pCi/g	0.6985	N	0	8	0	FAIL_ABUND	0		
Bismuth-214 ✔		1.003	0.08275	pCi/g	0.1095	0.200	609.3	4	1.416	IDENTIFIED	7.149		
Cadmium-109	int	3.693	0.5283	pCi/g	1.134	Y	87.05	3	1.296	IDENTIFIED	13.79	ui	
Cerium-143		503.8	90.21	pCi/g	0	N	0	8	0	SHORT_HLIF	0		
Cesium-134	la	0.1015	0.02464	pCi/g	0.09323	0.100	0	8	0	NOT_IDENTI	0	UI	Data rejected due to low abundance.
Cesium-137 ✔		0.1502	0.03623	pCi/g	0.06025	0.100	662.1	2	1.472	IDENTIFIED	23.91		
Gross Gamma		8.955	1.364	pCi/g	2.748	N		0					
Iodine-123	HE	1.76E+06	2.36E+06	pCi/g	0	N	0	8	0	SHORT_HLIF	0		
Lead-212 ✔		1.493	0.07374	pCi/g	0.0814	0.100	238.5	4	1.123	IDENTIFIED	3.436		
Lead-214 ✔		1.17	0.08295	pCi/g	0.1045	0.100	351.8	4	1.288	IDENTIFIED	5.792		
Lutetium-177	HE	2.729	0.673	pCi/g	1.849	N	0	8	0	FAIL_ABUND	0		
Neptunium-237	int nr	1.066	0.188	pCi/g	0.3327	N	87.05	3	1.296	IDENTIFIED	13.79		
Polonium-212	nr	1.493	0.07374	pCi/g	0.0814	N	238.5	4	1.123	IDENTIFIED	3.436		
Polonium-214	nr	1.17	0.08295	pCi/g	0.1045	N	351.8	4	1.288	IDENTIFIED	5.792		
Polonium-216	nr	1.493	0.07374	pCi/g	0.0814	N	238.5	4	1.123	IDENTIFIED	3.436		
Polonium-218	nr	1.17	0.08295	pCi/g	0.1045	N	351.8	4	1.288	IDENTIFIED	5.792		
Potassium-40 ✔		30.85	1.413	pCi/g	0.5052	1.00	1461	1	2.261	IDENTIFIED	2.874		
Radium-224	int	4.382	0.6739	pCi/g	0.9263	Y	241.6	1	2.118	IDENTIFIED	15.13	ui	
Radium-226 ✔		1.003	0.08275	pCi/g	0.1095	Y	609.3	4	1.416	IDENTIFIED	7.149		
Radium-228 ✔		1.565	0.1551	pCi/g	0.1909	0.500	911	3	1.388	IDENTIFIED	8.25		
Technetium-99m		1.65E+15	0	pCi/g	0	N	0	8	0	SHORT_HLIF	0		
Thallium-208 ✔		0.4958	0.04271	pCi/g	0.05443	0.080	582.9	1	1.613	IDENTIFIED	7.836		
Thorium-228	nr	1.515	0.07485	pCi/g	0.08262	N	238.5	4	1.123	IDENTIFIED	3.436		
Thorium-230	nr	1.003	0.08275	pCi/g	0.1095	N	609.3	4	1.416	IDENTIFIED	7.149		
Thorium-232	nr	1.565	0.1551	pCi/g	0.1909	N	911	3	1.388	IDENTIFIED	8.25		
Tin-126	int nr	0.363	0.05193	pCi/g	0.112	N	87.05	3	1.296	IDENTIFIED	13.79		
Titanium-44	la nr	0.3099	0.02485	pCi/g	0.06958	N	0	8	0	FAIL_ABUND	0		
Total Uranium		3.2095	2.67E-06	ug/g	3.0072	N		0					
Uranium-234	nr	1.003	0.08275	pCi/g	0.1095	N	609.3	4	1.416	IDENTIFIED	7.149		
Zirconium-97		2.07E+06	8.55E+05	pCi/g	0	N	0	8	0	SHORT_HLIF	0		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244852002	11-JAN-10 12:00	26-JAN-10 13:00	15	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.763	0.1758	pCi/g	0.2135	N	910.6	3	1.973	IDENTIFIED	7.781		
Americium-243	int nr	0.286	0.03923	pCi/g	0.09632	N	74.58	1	0.9199	IDENTIFIED	13		
Annihilation Rad.	HE	0.1052	0.03385	pCi/g	0.05286	N	510.3	1	1.252	IDENTIFIED	31.8		
Barium-137m	HE	0.07369	0.02226	pCi/g	0.06324	N	661.4	2	1.071	IDENTIFIED	29.9		
Bismuth-211	int	3.817	0.3359	pCi/g	0.3325	Y	351.6	4	1.262	IDENTIFIED	6.651	ui	
Bismuth-214		1.124	0.09588	pCi/g	0.1199	0.200	609	4	1.337	IDENTIFIED	6.693		
Cadmium-109	int	3.82	0.4979	pCi/g	1.17	Y	87.07	3	1.352	IDENTIFIED	12.05	VI	
Cerium-143		788.5	126.7	pCi/g	0	N	0	4	0	SHORT_HLIF	0		
Cesium-134	la	0.1265	0.02616	pCi/g	0.1002	0.100	0	4	0	NOT_IDENTI	0	UI	Data rejected due to low abundance.
Cesium-137		0.07789	0.02353	pCi/g	0.06685	0.100	661.4	2	1.071	IDENTIFIED	29.9		
Gross Gamma		8.797	2.001	pCi/g	2.783	N		0					
Lead-212		1.542	0.1134	pCi/g	0.09809	0.100	238.4	4	1.096	IDENTIFIED	3.805		
Lead-214		1.328	0.1219	pCi/g	0.1159	0.100	351.6	4	1.262	IDENTIFIED	6.651		
Lutetium-177	HE	3.385	0.7925	pCi/g	2.102	N	0	4	0	FAIL_ABUND	0		
Neptunium-237	int nr	1.103	0.1833	pCi/g	0.352	N	87.07	3	1.352	IDENTIFIED	12.05		
Polonium-212	nr	1.542	0.1134	pCi/g	0.09809	N	238.4	4	1.096	IDENTIFIED	3.805		
Polonium-214	nr	1.328	0.1219	pCi/g	0.1159	N	351.6	4	1.262	IDENTIFIED	6.651		
Polonium-216	nr	1.542	0.1134	pCi/g	0.09809	N	238.4	4	1.096	IDENTIFIED	3.805		
Polonium-218	nr	1.328	0.1219	pCi/g	0.1159	N	351.6	4	1.262	IDENTIFIED	6.651		
Potassium-40		31.66	1.774	pCi/g	0.4758	1.00	1460	1	2.194	IDENTIFIED	2.971		
Radium-224	int	4.368	0.7066	pCi/g	1.117	Y	241.4	1	1.723	IDENTIFIED	15.06	ui	
Radium-226		1.124	0.09588	pCi/g	0.1199	Y	609	4	1.337	IDENTIFIED	6.693		
Radium-228		1.763	0.1758	pCi/g	0.2135	0.500	910.6	3	1.973	IDENTIFIED	7.781		
Thallium-208		0.5713	0.04768	pCi/g	0.05187	0.080	582.8	1	1.286	IDENTIFIED	6.675		
Thorium-228	nr	1.565	0.1151	pCi/g	0.09957	N	238.4	4	1.096	IDENTIFIED	3.805		
Thorium-230	nr	1.124	0.09588	pCi/g	0.1199	N	609	4	1.337	IDENTIFIED	6.693		
Thorium-232	nr	1.763	0.1758	pCi/g	0.2135	N	910.6	3	1.973	IDENTIFIED	7.781		
Tin-126	int nr	0.3755	0.04894	pCi/g	0.1157	N	87.07	3	1.352	IDENTIFIED	12.05		
Uranium-234	nr	1.124	0.09588	pCi/g	0.1199	N	609	4	1.337	IDENTIFIED	6.693		
Uranium-235		0.3926	0.1767	pCi/g	0.3576	0.500	143.6	1	1.45	IDENTIFIED	44.13		
Zirconium-97		2.85E+06	1.08E+06	pCi/g	0	N	0	4	0	SHORT_HLIF	0		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244852003	11-JAN-10 12:00	26-JAN-10 13:10	15	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.758	0.1989	pCi/g	0.2734	N	910.7	3	1.443	IDENTIFIED	9.791		
Americium-243	int nr	0.3856	0.03139	pCi/g	0.05712	N	74.86	1	0.9696	IDENTIFIED	6.514		
Annihilation Rad.	HE	0.1441	0.04646	pCi/g	0.05201	N	510.6	1	2.232	IDENTIFIED	31.92		
Bismuth-210	HE	0.9714	0.4724	pCi/g	0.8431	N	46.86	3	0.9153	IDENTIFIED	48.33		
Bismuth-211	int	4.277	0.3284	pCi/g	0.3519	Y	351.8	4	1.212	IDENTIFIED	6.102	ui	
Bismuth-212	HE	1.481	0.3482	pCi/g	0.9055	N	0	7	0	FAIL_ABUND	0		
Bismuth-214		1.319	0.1114	pCi/g	0.1349	0.200	608.9	4	1.298	IDENTIFIED	6.749		
Cadmium-109	int	4.117	0.4598	pCi/g	0.9794	Y	87.32	3	1.104	IDENTIFIED	10.05	ui	
Cerium-143		647.9	109.7	pCi/g	0	N	0	7	0	SHORT_HLIF	0		

Gross Gamma		8.852	1.419	pCi/g	4.019	N		0					
Iodine-135	HE	3.23E+15	2.58E+15	pCi/g	0	N	0	7	0	SHORT_HLIF	0		
Lead-210	HE	0.9714	0.4724	pCi/g	0.8431	N	46.86	3	0.9153	IDENTIFIED	48.33		
Lead-212 ✔		1.553	0.09754	pCi/g	0.09189	0.100	238.5	4	1.016	IDENTIFIED	3.746		
Lead-214 ✔		1.488	0.1207	pCi/g	0.1227	0.100	351.8	4	1.212	IDENTIFIED	6.102		
Neptunium-237	int nr	1.188	0.1807	pCi/g	0.2815	N	87.32	3	1.104	IDENTIFIED	10.05		
Polonium-210	HE	0.9714	0.472	pCi/g	0.8431	N	46.86	3	0.9153	IDENTIFIED	48.33		
Polonium-212	nr	1.553	0.09754	pCi/g	0.09189	N	238.5	4	1.016	IDENTIFIED	3.746		
Polonium-214	nr	1.488	0.1207	pCi/g	0.1227	N	351.8	4	1.212	IDENTIFIED	6.102		
Polonium-216	nr	1.553	0.09754	pCi/g	0.09189	N	238.5	4	1.016	IDENTIFIED	3.746		
Polonium-218	nr	1.488	0.1207	pCi/g	0.1227	N	351.8	4	1.212	IDENTIFIED	6.102		
Potassium-40	✔	20.14	1.303	pCi/g	0.6515	1.00	1460	1	2.046	IDENTIFIED	4.707		
Radium-224	int	4.725	0.6756	pCi/g	1.046	Y	241.6	1	1.823	IDENTIFIED	13.56	ui	
Radium-226 ✔		1.319	0.1114	pCi/g	0.1349	Y	608.9	4	1.298	IDENTIFIED	6.749		
Radium-228 ✔		1.758	0.1989	pCi/g	0.2734	0.500	910.7	3	1.443	IDENTIFIED	9.791		
Sodium-24	HE	1.39E+05	4.68E+05	pCi/g	0	N	0	7	0	SHORT_HLIF	0		
Thallium-200	HE	290.5	230	pCi/g	0	N	0	7	0	SHORT_HLIF	0		
Thallium-208 ✔		0.5177	0.05726	pCi/g	0.06243	0.080	582.9	1	1.48	IDENTIFIED	9.998		
Thorium-228	nr	1.577	0.09902	pCi/g	0.09328	N	238.5	4	1.016	IDENTIFIED	3.746		
Thorium-230	nr	1.319	0.1114	pCi/g	0.1349	N	608.9	4	1.298	IDENTIFIED	6.749		
Thorium-232	nr	1.758	0.1989	pCi/g	0.2734	N	910.7	3	1.443	IDENTIFIED	9.791		
Thorium-234 ✔		2.172	0.5873	pCi/g	1.009	2.00	63.33	2	0.7832	IDENTIFIED	25.37		
Tin-126	int nr	0.4047	0.0452	pCi/g	0.09614	N	87.32	3	1.104	IDENTIFIED	10.05		
Titanium-44	la nr	0.4027	0.02701	pCi/g	0.06256	N	0	7	0	FAIL_ABUND	0		
Total Uranium		6.4955	1.75E-06	ug/g	1.5041	N		0					
Uranium-234	nr	1.319	0.1114	pCi/g	0.1349	N	608.9	4	1.298	IDENTIFIED	6.749		
Uranium-238	HE	2.172	0.5873	pCi/g	1.009	N	63.33	2	0.7832	IDENTIFIED	25.37		
Zirconium-97		3.53E+06	1.13E+06	pCi/g	0	N	0	7	0	SHORT_HLIF	0		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244852004	11-JAN-10 12:00	26-JAN-10 13:20	15.1	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	nr	1.239	0.1626	pCi/g	0.1871	N	911.9	3	1.727	IDENTIFIED	11.58		
Americium-243	int nr	0.2689	0.04069	pCi/g	0.1039	N	74.73	1	0.9899	IDENTIFIED	14.11		
Annihilation Rad.	HE	0.07789	0.02855	pCi/g	0.04217	N	511.1	1	1.506	IDENTIFIED	36.51		
Barium-137m		0.2877	0.02974	pCi/g	0.05391	N	662.1	2	1.31	IDENTIFIED	10.04		
Bismuth-211	int	3.475	0.2314	pCi/g	0.3219	Y	352.1	4	1.279	IDENTIFIED	5.572	ui	
Bismuth-212	la nr	1.442	0.2019	pCi/g	0.6416	N	0	9	0	FAIL_ABUND	0		
Bismuth-214 ✔		1.048	0.08253	pCi/g	0.09852	0.200	609.8	4	1.316	IDENTIFIED	6.901		
Cadmium-109	int	3.695	0.5757	pCi/g	1.235	Y	87.15	3	1.333	IDENTIFIED	14.52	ui	
Cerium-143		513.3	93.11	pCi/g	0	N	0	9	0	SHORT_HLIF	0		
Cesium-134	la	0.1962	0.03823	pCi/g	0.09152	0.100	0	9	0	FAIL_ABUND	0	UI	Data rejected due to low abundance.
Cesium-137 ✔		0.3042	0.03145	pCi/g	0.05698	0.100	662.1	2	1.31	IDENTIFIED	10.04		
Gross Gamma		8.197	1.177	pCi/g	3.147	N		0					
Iodine-133	HE	647.8	2707	pCi/g	0	N	0	9	0	SHORT_HLIF	0		
Iodine-135	HE	2.25E+15	2.09E+15	pCi/g	0	N	0	9	0	SHORT_HLIF	0		

Lead-212 ✔		1.541	0.07799	pCi/g	0.08447	0.100	238.7	4	1.143	IDENTIFIED	3.349	☐		
Lead-214 ✔		1.209	0.08646	pCi/g	0.1081	0.100	352.1	4	1.279	IDENTIFIED	5.572	☐		
Lutetium-177	HE	2.549	0.7003	pCi/g	1.93	N	0	9	0	FAIL_ABUND	0	☐		
Neptunium-237	int nr	1.067	0.1993	pCi/g	0.3655	N	87.15	3	1.333	IDENTIFIED	14.52	☐		
Polonium-212	nr	1.541	0.07799	pCi/g	0.08447	N	238.7	4	1.143	IDENTIFIED	3.349	☐		
Polonium-214	nr	1.209	0.08646	pCi/g	0.1081	N	352.1	4	1.279	IDENTIFIED	5.572	☐		
Polonium-216	nr	1.541	0.07799	pCi/g	0.08447	N	238.7	4	1.143	IDENTIFIED	3.349	☐		
Polonium-218	nr	1.209	0.08646	pCi/g	0.1081	N	352.1	4	1.279	IDENTIFIED	5.572	☐		
Potassium-40 ✔		20.23	1.168	pCi/g	0.5259	1.00	1462	1	2.162	IDENTIFIED	3.849	☐		
Radium-224	int	3.96	0.4423	pCi/g	0.9609	Y	241.6	1	1.621	IDENTIFIED	10.74	☐	ui	
Radium-226 ✔		1.048	0.08253	pCi/g	0.09852	Y	609.8	4	1.316	IDENTIFIED	6.901	☐		
Radium-228 ✔		1.239	0.1626	pCi/g	0.1871	0.500	911.9	3	1.727	IDENTIFIED	11.58	☐		
Technetium-99m		5.21E+15	0	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐		
Thallium-208 ✔		0.4699	0.04112	pCi/g	0.05453	0.080	583.6	1	1.419	IDENTIFIED	8.081	☐		
Thorium-228	nr	1.565	0.07917	pCi/g	0.08574	N	238.7	4	1.143	IDENTIFIED	3.349	☐		
Thorium-230	nr	1.047	0.08253	pCi/g	0.09852	N	609.8	4	1.316	IDENTIFIED	6.901	☐		
Thorium-232	nr	1.239	0.1626	pCi/g	0.1871	N	911.9	3	1.727	IDENTIFIED	11.58	☐		
Tin-126	int nr	0.3632	0.05659	pCi/g	0.1223	N	87.15	3	1.333	IDENTIFIED	14.52	☐		
Titanium-44	la nr	0.3613	0.03479	pCi/g	0.07685	N	0	9	0	FAIL_ABUND	0	☐		
Uranium-234	nr	1.047	0.08253	pCi/g	0.09852	N	609.8	4	1.316	IDENTIFIED	6.901	☐		
Zirconium-97	HE	4.60E+05	8.41E+05	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244881001	11-JAN-10 12:00	26-JAN-10 13:24	15.1	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual		Qual Comment
Actinium-228	nr	1.267	0.132	pCi/g	0.1523	N	911.1	3	1.816	IDENTIFIED	8.035	☐		
Americium-243	int nr	0.2543	0.03047	pCi/g	0.07972	N	74.99	1	1.077	IDENTIFIED	11.23	☐		
Annihilation Rad.		0.09189	0.02355	pCi/g	0.03204	N	510.9	1	2.227	IDENTIFIED	25.42	☐		
Barium-137m		0.2312	0.02278	pCi/g	0.04337	N	661.5	2	1.562	IDENTIFIED	9.083	☐		
Bismuth-211	int	3.06	0.1775	pCi/g	0.2407	Y	352	4	1.473	IDENTIFIED	4.832	☐	ui	
Bismuth-212	HE	0.7273	0.179	pCi/g	0.446	N	0	12	0	FAIL_ABUND	0	☐		
Bismuth-214 ✔		0.8809	0.0653	pCi/g	0.07882	0.200	609.1	4	1.541	IDENTIFIED	5.916	☐		
Cadmium-109	int	2.789	0.4006	pCi/g	1.015	Y	87.6	3	1.188	IDENTIFIED	13.6	☐	ui	
Cerium-143		448.3	75.13	pCi/g	0	N	0	12	0	SHORT_HLIF	0	☐		
Cesium-134	la	0.08078	0.02481	pCi/g	0.0597	0.100	0	12	0	FAIL_ABUND	0	☑	UI	Data rejected due to low abundance.
Cesium-137 ✔		0.2444	0.02409	pCi/g	0.04585	0.100	661.5	2	1.562	IDENTIFIED	9.083	☐		
Gross Gamma		8.235	1.044	pCi/g	1.828	N		0				☐		
Iodine-123	HE	3.16E+06	1.83E+06	pCi/g	0	N	0	12	0	SHORT_HLIF	0	☐		
Krypton-85	la nr	16.46	2.952	pCi/g	10.2	N	0	12	0	NOT_IDENTI	0	☐		
Lead-212 ✔		1.299	0.06039	pCi/g	0.06323	0.100	238.8	4	1.218	IDENTIFIED	2.973	☐		
Lead-214 ✔		1.064	0.0677	pCi/g	0.07882	0.100	352	4	1.473	IDENTIFIED	4.832	☐		
Lutetium-177	HE	2.039	0.5063	pCi/g	1.478	N	0	12	0	FAIL_ABUND	0	☐		
Neptunium-237	int nr	0.8052	0.1424	pCi/g	0.2995	N	87.6	3	1.188	IDENTIFIED	13.6	☐		
Niobium-95	HE	0.0566	0.01676	pCi/g	0.05534	N	0	12	0	NOT_IDENTI	0	☐		
Niobium-97		1.34E+05	36890	pCi/g	0	N	0	12	0	SHORT_HLIF	0	☐		
Polonium-212	nr	1.299	0.06039	pCi/g	0.06323	N	238.8	4	1.218	IDENTIFIED	2.973	☐		

Polonium-214	nr	1.064	0.0677	pCi/g	0.07882	N	352	4	1.473	IDENTIFIED	4.832	☐		
Polonium-216	nr	1.299	0.06039	pCi/g	0.06323	N	238.8	4	1.218	IDENTIFIED	2.973	☐		
Polonium-218	nr	1.064	0.0677	pCi/g	0.07882	N	352	4	1.473	IDENTIFIED	4.832	☐		
Potassium-40	✔	31.1	1.338	pCi/g	0.3668	1.00	1460	1	2.314	IDENTIFIED	2.023	☐		
Radium-224	int	2.989	0.3931	pCi/g	0.7185	Y	241.7	1	1.607	IDENTIFIED	12.85	☐	ui	
Radium-226	✔	0.8809	0.0653	pCi/g	0.07882	Y	609.1	4	1.541	IDENTIFIED	5.916	☐		
Radium-228	✔	1.267	0.132	pCi/g	0.1523	0.500	911.1	3	1.816	IDENTIFIED	8.035	☐		
Sodium-24	HE	2.94E+05	2.29E+05	pCi/g	0	N	0	12	0	SHORT_HLIF	0	☐		
Strontium-85	la	0.08433	0.01512	pCi/g	0.05228	Y	0	12	0	NOT_IDENTI	0	☑	UI	Data rejected due to low abundance.
Thallium-208	✔	0.3509	0.02808	pCi/g	0.04097	0.080	583	1	1.645	IDENTIFIED	6.977	☐		
Thorium-228	nr	1.319	0.0613	pCi/g	0.06418	N	238.8	4	1.218	IDENTIFIED	2.973	☐		
Thorium-230	nr	0.8809	0.06529	pCi/g	0.07882	N	609.1	4	1.541	IDENTIFIED	5.916	☐		
Thorium-232	nr	1.267	0.132	pCi/g	0.1523	N	911.1	3	1.816	IDENTIFIED	8.035	☐		
Thorium-234	✔	2.025	0.9131	pCi/g	2.005	2.00	63.46	2	0.8172	IDENTIFIED	44.23	☐		
Tin-126	int nr	0.2742	0.03937	pCi/g	0.1004	N	87.6	3	1.188	IDENTIFIED	13.6	☐		
Titanium-44	la nr	0.2631	0.02216	pCi/g	0.06853	N	0	12	0	FAIL_ABUND	0	☐		
Total Uranium		6.0809	2.72E-06	ug/g	2.9852	N		0				☐		
Uranium-234	nr	0.8809	0.06529	pCi/g	0.07882	N	609.1	4	1.541	IDENTIFIED	5.916	☐		
Uranium-238	HE	2.025	0.9131	pCi/g	2.005	N	63.46	2	0.8172	IDENTIFIED	44.23	☐		
Zirconium-97		2.28E+06	7.05E+05	pCi/g	0	N	0	12	0	SHORT_HLIF	0	☐		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244881002	11-JAN-10 12:00	26-JAN-10 13:20	15.1	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual		Qual Comment
Actinium-228	nr	1.361	0.1362	pCi/g	0.1678	N	911.5	3	1.107	IDENTIFIED	8.049	☐		
Americium-243	int nr	0.2859	0.02916	pCi/g	0.06748	N	74.92	1	1.013	IDENTIFIED	9.319	☐		
Annihilation Rad.		0.116	0.02526	pCi/g	0.03945	N	511.2	1	1.792	IDENTIFIED	21.26	☐		
Bismuth-211	int	2.785	0.2489	pCi/g	0.2781	Y	351.9	4	1.217	IDENTIFIED	7.081	☑	ui	
Bismuth-212	HE	1.002	0.2525	pCi/g	0.5553	N	0	9	0	FAIL_ABUND	0	☐		
Bismuth-214	✔	0.8785	0.07754	pCi/g	0.09493	0.200	609.6	4	1.355	IDENTIFIED	7.069	☐		
Cadmium-109	int	3.495	0.4537	pCi/g	0.8769	Y	87.22	3	1.342	IDENTIFIED	12.07	☐	ui	
Cerium-143		275	64.17	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐		
Cesium-134	la	0.1372	0.0356	pCi/g	0.07549	0.100	0	9	0	FAIL_ABUND	0	☑	UI	Data rejected due to low abundance.
Gross Gamma		8.522	1.091	pCi/g	2.259	N		0				☐		
Iodine-133	HE	1583	2278	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐		
Iodine-135	HE	1.18E+15	2.33E+15	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐		
Lead-212	✔	1.316	0.09021	pCi/g	0.07773	0.100	238.6	4	0.9603	IDENTIFIED	3.453	☐		
Lead-214	✔	0.9687	0.09021	pCi/g	0.09695	0.100	351.9	4	1.217	IDENTIFIED	7.081	☐		
Lutetium-177	HE	2.389	0.5852	pCi/g	1.689	N	0.	9	0	FAIL_ABUND	0	☐		
Neptunium-237	int nr	1.009	0.1673	pCi/g	0.2572	N	87.22	3	1.342	IDENTIFIED	12.07	☐		
Polonium-212	nr	1.316	0.09021	pCi/g	0.07773	N	238.6	4	0.9603	IDENTIFIED	3.453	☐		
Polonium-214	nr	0.9687	0.09021	pCi/g	0.09695	N	351.9	4	1.217	IDENTIFIED	7.081	☐		
Polonium-216	nr	1.316	0.09021	pCi/g	0.07773	N	238.6	4	0.9603	IDENTIFIED	3.453	☐		
Polonium-218	nr	0.9687	0.09021	pCi/g	0.09695	N	351.9	4	1.217	IDENTIFIED	7.081	☐		
Potassium-40	✔	32.76	1.671	pCi/g	0.4245	1.00	1461	1	2.124	IDENTIFIED	2.592	☐		
Radium-224	int	3.705	0.4875	pCi/g	0.8846	Y	241.5	1	1.529	IDENTIFIED	11.95	☐	ui	

Radium-226 ✔		0.8785	0.07754	pCi/g	0.09493	Y	609.6	4	1.355	IDENTIFIED	7.069	☐	
Radium-228 ✔		1.361	0.1362	pCi/g	0.1678	0.500	911.5	3	1.107	IDENTIFIED	8.049	☐	
Thallium-200	HE	86.31	160.7	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐	
Thallium-208 ✔		0.4425	0.03972	pCi/g	0.04804	0.080	583.3	1	1.113	IDENTIFIED	7.487	☐	
Thorium-228	nr	1.336	0.09158	pCi/g	0.07891	N	238.6	4	0.9603	IDENTIFIED	3.453	☐	
Thorium-230	nr	0.8785	0.07754	pCi/g	0.09493	N	609.6	4	1.355	IDENTIFIED	7.069	☐	
Thorium-232	nr	1.361	0.1362	pCi/g	0.1678	N	911.5	3	1.107	IDENTIFIED	8.049	☐	
Tin-126	int nr	0.3436	0.0446	pCi/g	0.08659	N	87.22	3	1.342	IDENTIFIED	12.07	☐	
Titanium-44	la nr	0.2999	0.02253	pCi/g	0.06077	N	0	9	0	FAIL_ABUND	0	☐	
Uranium-234	nr	0.8785	0.07754	pCi/g	0.09493	N	609.6	4	1.355	IDENTIFIED	7.069	☐	
Zirconium-97	HE	1.36E+06	7.22E+05	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244881003	11-JAN-10 12:00	26-JAN-10 13:21	15.1	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	nr	1.885	0.1904	pCi/g	0.2019	N	911	3	1.429	IDENTIFIED	8.037	☐	
Americium-243	int nr	0.4012	0.03666	pCi/g	0.08029	N	74.96	1	1.158	IDENTIFIED	8.197	☐	
Annihilation Rad.		0.1922	0.033	pCi/g	0.04271	N	510.7	1	1.471	IDENTIFIED	16.52	☐	
Barium-137m		0.3132	0.04148	pCi/g	0.05326	N	661.9	2	1.529	IDENTIFIED	12.26	☐	
Bismuth-211	int	4.861	0.3361	pCi/g	0.2959	Y	351.7	4	1.252	IDENTIFIED	4.99	☐	ui
Bismuth-212	HE	1.087	0.2633	pCi/g	0.6225	N	0	8	0	FAIL_ABUND	0	☐	
Bismuth-214 ✔		1.204	0.1016	pCi/g	0.1095	0.200	609.2	4	1.345	IDENTIFIED	6.339	☐	
Cadmium-109	int	3.626	0.4661	pCi/g	1.077	Y	87.3	3	1.12	IDENTIFIED	11.97	☐	ui
Cerium-143		742.6	117.5	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Cesium-134	la	0.1016	0.02802	pCi/g	0.08665	0.100	0	8	0	FAIL_ABUND	0	☑	UI Data rejected due to low abundance.
Cesium-137 ✔		0.3311	0.04386	pCi/g	0.0563	0.100	661.9	2	1.529	IDENTIFIED	12.26	☐	
Gross Gamma		11.68	1.603	pCi/g	4.371	N		0				☐	
Lead-212 ✔		2.023	0.1215	pCi/g	0.08729	0.100	238.5	4	1.111	IDENTIFIED	2.798	☐	
Lead-214 ✔		1.691	0.125	pCi/g	0.1031	0.100	351.7	4	1.252	IDENTIFIED	4.99	☐	
Lutetium-177	HE	2.3	0.5882	pCi/g	1.911	N	0	8	0	FAIL_ABUND	0	☐	
Neptunium-237	int nr	1.047	0.1725	pCi/g	0.3139	N	87.3	3	1.12	IDENTIFIED	11.97	☐	
Niobium-97	HE	10810	45930	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Polonium-212	nr	2.023	0.1215	pCi/g	0.08729	N	238.5	4	1.111	IDENTIFIED	2.798	☐	
Polonium-214	nr	1.691	0.125	pCi/g	0.1031	N	351.7	4	1.252	IDENTIFIED	4.99	☐	
Polonium-216	nr	2.023	0.1215	pCi/g	0.08729	N	238.5	4	1.111	IDENTIFIED	2.798	☐	
Polonium-218	nr	1.691	0.125	pCi/g	0.1031	N	351.7	4	1.252	IDENTIFIED	4.99	☐	
Potassium-40 ✔		34.19	1.721	pCi/g	0.531	1.00	1460	1	1.885	IDENTIFIED	2.514	☐	
Radium-224	int	4.893	0.5681	pCi/g	0.9929	Y	241.5	1	1.556	IDENTIFIED	10.56	☐	ui
Radium-226 ✔		1.204	0.1016	pCi/g	0.1095	Y	609.2	4	1.345	IDENTIFIED	6.339	☐	
Radium-228 ✔		1.885	0.1904	pCi/g	0.2019	0.500	911	3	1.429	IDENTIFIED	8.037	☐	
Sodium-24	HE	3.06E+05	2.68E+05	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Thallium-208 ✔		0.6045	0.05182	pCi/g	0.05391	0.080	583.2	1	1.376	IDENTIFIED	6.86	☐	
Thorium-228	nr	2.053	0.1234	pCi/g	0.0886	N	238.5	4	1.111	IDENTIFIED	2.798	☐	
Thorium-230	nr	1.204	0.1016	pCi/g	0.1095	N	609.2	4	1.345	IDENTIFIED	6.339	☐	
Thorium-232	nr	1.885	0.1904	pCi/g	0.2019	N	911	3	1.429	IDENTIFIED	8.037	☐	
Thorium-234 ✔		2.089	0.9405	pCi/g	1.678	2.00	62.94	2	1.033	IDENTIFIED	44.17	☐	

Tin-126	int nr	0.3564	0.04582	pCi/g	0.1061	N	87.3	3	1.12	IDENTIFIED	11.97	☐	
Titanium-44	la nr	0.3986	0.02719	pCi/g	0.07677	N	0	8	0	FAIL_ABUND	0	☐	
Total Uranium		6.2878	2.80E-06	ug/g	2.4986	N		0				☐	
Uranium-234	nr	1.204	0.1016	pCi/g	0.1095	N	609.2	4	1.345	IDENTIFIED	6.339	☐	
Uranium-238	HE	2.089	0.9405	pCi/g	1.678	N	62.94	2	1.033	IDENTIFIED	44.17	☐	
Zirconium-97		3.11E+06	9.36E+05	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244881004	11-JAN-10 12:00	26-JAN-10 13:21	15.1	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual		Qual Comment
Actinium-228	nr	1.677	0.1701	pCi/g	0.2274	N	910.4	3	1.947	IDENTIFIED	8.344	☐		
Americium-243	int nr	0.4744	0.04774	pCi/g	0.1065	N	74.63	1	1.385	IDENTIFIED	9.029	☐		
Annihilation Rad.		0.1462	0.03741	pCi/g	0.05242	N	510.3	1	1.93	IDENTIFIED	25.42	☐		
Bismuth-211	int	3.843	0.2802	pCi/g	0.4022	Y	351.6	4	1.215	IDENTIFIED	6.522	☐	ui	
Bismuth-212	nr	0.8854	0.2292	pCi/g	0.3649	N	726.9	1	1.803	IDENTIFIED	25.58	☐		
Bismuth-214		1.121	0.09802	pCi/g	0.1283	0.200	608.7	4	1.621	IDENTIFIED	7.896	☐		
Cadmium-109	int	3.038	0.5496	pCi/g	1.414	Y	87.06	3	1.096	IDENTIFIED	17.43	☐	ui	
Cerium-143		1063	151.2	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐		
Cesium-134	la	0.1155	0.04267	pCi/g	0.09385	0.100	0	8	0	FAIL_ABUND	0	☑	UI	Data rejected due to low abundance.
Gross Gamma		8.719	1.83	pCi/g	3.524	N		0				☐		
Iodine-123	HE	3.54E+06	3.17E+06	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐		
Krypton-85	HE	15.97	4.05	pCi/g	13.96	N	0	8	0	NOT_IDENTI	0	☐		
Lead-212		1.692	0.08471	pCi/g	0.0907	0.100	238.3	4	1.324	IDENTIFIED	3.487	☐		
Lead-214		1.337	0.1035	pCi/g	0.1313	0.100	351.6	4	1.215	IDENTIFIED	6.522	☐		
Neptunium-237	int nr	0.877	0.1826	pCi/g	0.4168	N	87.06	3	1.096	IDENTIFIED	17.43	☐		
Niobium-95m	la nr	0.7049	0.08881	pCi/g	0.3004	N	0	8	0	NOT_IDENTI	0	☐		
Polonium-212	nr	1.692	0.08471	pCi/g	0.0907	N	238.3	4	1.324	IDENTIFIED	3.487	☐		
Polonium-214	nr	1.337	0.1035	pCi/g	0.1313	N	351.6	4	1.215	IDENTIFIED	6.522	☐		
Polonium-216	nr	1.692	0.08471	pCi/g	0.0907	N	238.3	4	1.324	IDENTIFIED	3.487	☐		
Polonium-218	nr	1.337	0.1035	pCi/g	0.1313	N	351.6	4	1.215	IDENTIFIED	6.522	☐		
Potassium-40		21.23	1.216	pCi/g	0.5311	1.00	1460	1	2.485	IDENTIFIED	4.338	☐		
Radium-224	int	4.149	0.597	pCi/g	1.032	Y	241.5	1	1.774	IDENTIFIED	14.11	☐	ui	
Radium-226		1.121	0.09802	pCi/g	0.1283	Y	608.7	4	1.621	IDENTIFIED	7.896	☐		
Radium-228		1.677	0.1701	pCi/g	0.2274	0.500	910.4	3	1.947	IDENTIFIED	8.344	☐		
Strontium-85	la	0.08181	0.02075	pCi/g	0.07151	Y	0	8	0	NOT_IDENTI	0	☑	UI	Data rejected due to low abundance.
Thallium-208		0.5333	0.04925	pCi/g	0.0627	0.080	582.5	1	1.477	IDENTIFIED	8.644	☐		
Thorium-228	nr	1.717	0.08599	pCi/g	0.09207	N	238.3	4	1.324	IDENTIFIED	3.487	☐		
Thorium-230	nr	1.121	0.09802	pCi/g	0.1283	N	608.7	4	1.621	IDENTIFIED	7.896	☐		
Thorium-232	nr	1.677	0.1701	pCi/g	0.2274	N	910.4	3	1.947	IDENTIFIED	8.344	☐		
Thorium-234		3.88	1.333	pCi/g	2.722	2.00	63.08	2	0.9035	IDENTIFIED	33.17	☐		
Tin-126	int nr	0.2987	0.05403	pCi/g	0.1398	N	87.06	3	1.096	IDENTIFIED	17.43	☐		
Titanium-44	la nr	0.3975	0.03095	pCi/g	0.09486	N	0	8	0	FAIL_ABUND	0	☐		
Total Uranium		11.537	3.97E-06	ug/g	4.052	N		0				☐		
Uranium-234	nr	1.121	0.09802	pCi/g	0.1283	N	608.7	4	1.621	IDENTIFIED	7.896	☐		
Uranium-238	HE	3.88	1.333	pCi/g	2.722	N	63.08	2	0.9035	IDENTIFIED	33.17	☐		
Zirconium-97		5.97E+06	1.15E+06	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244902001	14-JAN-10 12:00	26-JAN-10 13:25	12.1	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	0.7314	0.09308	pCi/g	0.1356	N	911.9	3	1.991	IDENTIFIED	11.4		
Americium-243	int nr	0.1758	0.02468	pCi/g	0.06386	N	74.91	1	1.32	IDENTIFIED	13.47		
Annihilation Rad.		0.07887	0.02367	pCi/g	0.03121	N	511.2	1	1.793	IDENTIFIED	29.86		
Bismuth-211	int	1.709	0.1451	pCi/g	0.2333	Y	351.8	4	1.294	IDENTIFIED	7.867	ui	
Bismuth-212	HE	0.4939	0.172	pCi/g	0.4239	N	0	10	0	FAIL_ABUND	0		
Bismuth-214		0.5796	0.05239	pCi/g	0.07725	0.200	609.4	4	1.666	IDENTIFIED	8.138		
Cerium-143		84.79	15.09	pCi/g	0	N	0	10	0	SHORT_HLIF	0		
Gross Gamma		4.606	1.051	pCi/g	1.921	N		0					
Iodine-123	HE	25180	41410	pCi/g	0	N	0	10	0	SHORT_HLIF	0		
Iodine-133	HE	22.26	159.1	pCi/g	0	N	0	10	0	SHORT_HLIF	0		
Krypton-85	HE	11.77	2.705	pCi/g	9.79	N	0	10	0	NOT_IDENTI	0		
Lead-212		0.6852	0.0424	pCi/g	0.06068	0.100	238.6	4	1.425	IDENTIFIED	5.027		
Lead-214		0.5946	0.05281	pCi/g	0.07825	0.100	351.8	4	1.294	IDENTIFIED	7.867		
Polonium-212	nr	0.6852	0.0424	pCi/g	0.06068	N	238.6	4	1.425	IDENTIFIED	5.027		
Polonium-214	nr	0.5946	0.05281	pCi/g	0.07825	N	351.8	4	1.294	IDENTIFIED	7.867		
Polonium-216	nr	0.6852	0.0424	pCi/g	0.06068	N	238.6	4	1.425	IDENTIFIED	5.027		
Polonium-218	nr	0.5946	0.05281	pCi/g	0.07825	N	351.8	4	1.294	IDENTIFIED	7.867		
Potassium-40		18.09	0.9004	pCi/g	0.3313	1.00	1462	1	2.055	IDENTIFIED	3.304		
Radium-224	int	1.816	0.3435	pCi/g	0.6899	Y	241.6	1	1.635	IDENTIFIED	18.7	ui	
Radium-226		0.5796	0.05239	pCi/g	0.07725	Y	609.4	4	1.666	IDENTIFIED	8.138		
Radium-228		0.7314	0.09308	pCi/g	0.1356	0.500	911.9	3	1.991	IDENTIFIED	11.4		
Sodium-24	HE	6519	9400	pCi/g	0	N	0	10	0	SHORT_HLIF	0		
Strontium-85	la	0.05842	0.01343	pCi/g	0.04861	Y	0	10	0	NOT_IDENTI	0	UI	Data rejected due to low abundance.
Thallium-200	HE	41.84	21.97	pCi/g	0	N	0	10	0	SHORT_HLIF	0		
Thallium-208		0.196	0.02249	pCi/g	0.04117	0.080	583.3	1	1.438	IDENTIFIED	10.96		
Thorium-228	nr	0.6934	0.04291	pCi/g	0.06141	N	238.6	4	1.425	IDENTIFIED	5.027		
Thorium-230	nr	0.5796	0.05239	pCi/g	0.07725	N	609.4	4	1.666	IDENTIFIED	8.138		
Thorium-232	nr	0.7314	0.09308	pCi/g	0.1356	N	911.9	3	1.991	IDENTIFIED	11.4		
Titanium-44	la nr	0.1669	0.01845	pCi/g	0.05462	N	0	10	0	FAIL_ABUND	0		
Uranium-234	nr	0.5796	0.05239	pCi/g	0.07725	N	609.4	4	1.666	IDENTIFIED	8.138		
Zirconium-97		1.03E+05	33120	pCi/g	0	N	0	10	0	SHORT_HLIF	0		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244905001	08-JAN-10 12:00	26-JAN-10 14:04	18.1	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.04	0.1239	pCi/g	0.1533	N	911	3	1.431	IDENTIFIED	10.58		
Americium-243	int nr	0.2495	0.03891	pCi/g	0.08797	N	74.79	1	1.11	IDENTIFIED	14.5		
Annihilation Rad.		0.1048	0.02641	pCi/g	0.04217	N	511	1	2.08	IDENTIFIED	25.05		
Barium-137m		0.8552	0.04921	pCi/g	0.04911	N	661.5	2	1.43	IDENTIFIED	5.212		
Bismuth-211	int	2.765	0.2213	pCi/g	0.2929	Y	351.9	4	1.258	IDENTIFIED	7.26	ui	
Bismuth-212	HE	0.476	0.1991	pCi/g	0.3663	N	727.2	1	1.57	IDENTIFIED	41.65		

Bismuth-214 ✔		0.8954	0.07547	pCi/g	0.09992	0.200	609.3	4	1.377	IDENTIFIED	7.585	☐	
Cadmium-109	int	1.996	0.4277	pCi/g	1.323	Y	87.27	3	1.139	IDENTIFIED	20.58	☐	ui
Cerium-143		1602	349.2	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Cesium-137 ✔		0.904	0.05207	pCi/g	0.05191	0.100	661.5	2	1.43	IDENTIFIED	5.212	☐	
Gross Gamma		6.609	1.014	pCi/g	1.984	N		0				☐	
Iodine-133	HE	55360	28130	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Iodine-135		3.56E+18	0	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Lead-212 ✔		0.9805	0.06016	pCi/g	0.07709	0.100	238.6	4	1.083	IDENTIFIED	4.639	☐	
Lead-214 ✔		0.9617	0.08097	pCi/g	0.1021	0.100	351.9	4	1.258	IDENTIFIED	7.26	☐	
Neptunium-237	HE	0.5734	0.1364	pCi/g	0.3535	N	87.27	3	1.139	IDENTIFIED	20.58	☐	
Niobium-97	HE	1.23E+06	8.72E+05	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Polonium-212	nr	0.9805	0.06016	pCi/g	0.07709	N	238.6	4	1.083	IDENTIFIED	4.639	☐	
Polonium-214	nr	0.9617	0.08097	pCi/g	0.1021	N	351.9	4	1.258	IDENTIFIED	7.26	☐	
Polonium-216	nr	0.9805	0.06016	pCi/g	0.07709	N	238.6	4	1.083	IDENTIFIED	4.639	☐	
Polonium-218	nr	0.9617	0.08097	pCi/g	0.1021	N	351.9	4	1.258	IDENTIFIED	7.26	☐	
Potassium-40 ✔		19.1	0.9758	pCi/g	0.5122	1.00	1461	1	1.992	IDENTIFIED	3.67	☐	
Radium-224	int	3.193	0.4557	pCi/g	0.8774	Y	241.6	1	1.442	IDENTIFIED	13.88	☐	ui
Radium-226 ✔		0.8954	0.07547	pCi/g	0.09992	Y	609.3	4	1.377	IDENTIFIED	7.585	☐	
Radium-228 ✔		1.04	0.1239	pCi/g	0.1533	0.500	911	3	1.431	IDENTIFIED	10.58	☐	
Sodium-24	HE	7.45E+06	7.31E+06	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Thallium-200	HE	2173	1265	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Thallium-208 ✔		0.3076	0.03528	pCi/g	0.05188	0.080	583.2	1	1.334	IDENTIFIED	11.03	☐	
Thorium-228	nr	0.9983	0.06125	pCi/g	0.07849	N	238.6	4	1.083	IDENTIFIED	4.639	☐	
Thorium-230	nr	0.8954	0.07547	pCi/g	0.09992	N	609.3	4	1.377	IDENTIFIED	7.585	☐	
Thorium-232	nr	1.04	0.1239	pCi/g	0.1533	N	911	3	1.431	IDENTIFIED	10.58	☐	
Tin-126	HE	0.1953	0.04185	pCi/g	0.1301	N	87.27	3	1.139	IDENTIFIED	20.58	☐	
Titanium-44	la nr	0.2511	0.02811	pCi/g	0.07095	N	0	8	0	FAIL_ABUND	0	☐	
Uranium-234	nr	0.8954	0.07547	pCi/g	0.09992	N	609.3	4	1.377	IDENTIFIED	7.585	☐	
Zirconium-97	HE	1.86E+07	1.61E+07	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244905002	08-JAN-10 12:00	26-JAN-10 14:05	18.1	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.174	0.1749	pCi/g	0.2038	N	911.1	3	2.237	IDENTIFIED	14	☐	
Americium-243	int nr	0.3327	0.04082	pCi/g	0.1044	N	74.56	1	1.192	IDENTIFIED	11.41	☐	
Annihilation Rad.	HE	0.1165	0.0389	pCi/g	0.05219	N	510.7	1	1.679	IDENTIFIED	33.29	☐	
Barium-137m		0.3766	0.04964	pCi/g	0.06939	N	661.7	2	1.396	IDENTIFIED	12.95	☐	
Bismuth-211	int	3.266	0.2488	pCi/g	0.3873	Y	351.6	4	0.9826	IDENTIFIED	6.902	☐	ui
Bismuth-212	HE	0.726	0.1837	pCi/g	0.6402	N	0	10	0	FAIL_ABUND	0	☐	
Bismuth-214 ✔		1.213	0.09048	pCi/g	0.1018	0.200	609	4	1.452	IDENTIFIED	6.48	☐	
Cadmium-109	int	2.654	0.4192	pCi/g	1.584	Y	86.96	3	1.168	IDENTIFIED	15.02	☐	ui
Cerium-143		5003	715.7	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	
Cesium-137 ✔		0.3981	0.05248	pCi/g	0.07335	0.100	661.7	2	1.396	IDENTIFIED	12.95	☐	
Gross Gamma		7.682	1.195	pCi/g	3.818	N		0				☐	
Iodine-135		7.07E+18	0	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	
Krypton-85	HE	15.24	4.27	pCi/g	14.5	N	0	10	0	NOT_IDENTI	0	☐	

Lead-212 ✓		1.289	0.07158	pCi/g	0.1003	0.100	238.4	4	1.185	IDENTIFIED	4.156	☐	
Lead-214 ✓		1.136	0.09149	pCi/g	0.1222	0.100	351.6	4	0.9826	IDENTIFIED	6.902	☐	
Neptunium-237	int nr	0.7626	0.1439	pCi/g	0.4513	N	86.96	3	1.168	IDENTIFIED	15.02	☐	
Niobium-95m	la nr	0.5218	0.08688	pCi/g	0.29	N	0	10	0	NOT_IDENTI	0	☐	
Niobium-97	HE	1.83E+06	1.30E+06	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	
Polonium-212	nr	1.289	0.07158	pCi/g	0.1003	N	238.4	4	1.185	IDENTIFIED	4.156	☐	
Polonium-214	nr	1.136	0.09149	pCi/g	0.1222	N	351.6	4	0.9826	IDENTIFIED	6.902	☐	
Polonium-216	nr	1.289	0.07158	pCi/g	0.1003	N	238.4	4	1.185	IDENTIFIED	4.156	☐	
Polonium-218	nr	1.136	0.09149	pCi/g	0.1222	N	351.6	4	0.9826	IDENTIFIED	6.902	☐	
Potassium-40 ✓		20.83	1.053	pCi/g	0.4762	1.00	1460	1	2.225	IDENTIFIED	3.824	☐	
Promethium-149	HE	190.1	122.6	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	
Radium-224	int	3.547	0.6884	pCi/g	1.141	Y	241.4	1	1.774	IDENTIFIED	19.18	☐	ui
Radium-226 ✓		1.213	0.09048	pCi/g	0.1018	Y	609	4	1.452	IDENTIFIED	6.48	☐	
Radium-228 ✓		1.174	0.1749	pCi/g	0.2038	0.500	911.1	3	2.237	IDENTIFIED	14	☐	
Strontium-85	la	0.0806	0.02259	pCi/g	0.07668	Y	0	10	0	NOT_IDENTI	0	☑	UI Data rejected due to low abundance.
Thallium-208 ✓		0.4557	0.04154	pCi/g	0.06497	0.080	582.9	1	1.308	IDENTIFIED	8.55	☐	
Thorium-228	nr	1.312	0.07288	pCi/g	0.1021	N	238.4	4	1.185	IDENTIFIED	4.156	☐	
Thorium-230	nr	1.213	0.09048	pCi/g	0.1018	N	609	4	1.452	IDENTIFIED	6.48	☐	
Thorium-232	nr	1.174	0.1749	pCi/g	0.2038	N	911.1	3	2.237	IDENTIFIED	14	☐	
Tin-126	int nr	0.2597	0.04102	pCi/g	0.1558	N	86.96	3	1.168	IDENTIFIED	15.02	☐	
Titanium-44	la nr	0.2428	0.02645	pCi/g	0.08798	N	0	10	0	NOT_IDENTI	0	☐	
Uranium-234	nr	1.213	0.09048	pCi/g	0.1018	N	609	4	1.452	IDENTIFIED	6.48	☐	
Zirconium-97		9.94E+07	2.17E+07	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244905003	08-JAN-10 12:00	26-JAN-10 14:05	18.1	SAMPLE	LOAD	1	LANL	LANL01004,GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	nr	1.185	0.1525	pCi/g	0.1808	N	911.3	3	1.454	IDENTIFIED	11.47	☐	
Americium-243	int nr	0.3231	0.03199	pCi/g	0.07001	N	74.75	1	1.217	IDENTIFIED	9.047	☐	
Annihilation Rad.	HE	0.06141	0.03154	pCi/g	0.0443	N	511.1	1	1.677	IDENTIFIED	51.17	☐	
Barium-137m		0.5546	0.04917	pCi/g	0.06059	N	661.9	2	1.434	IDENTIFIED	7.683	☐	
Bismuth-210	HE	3.527	1.264	pCi/g	2.681	N	46.65	3	1.313	IDENTIFIED	35.52	☐	
Bismuth-211	int	3.863	0.2872	pCi/g	0.323	Y	352	4	1.298	IDENTIFIED	5.931	☐	ui
Bismuth-212	la nr	1.046	0.177	pCi/g	0.6077	N	0	11	0	FAIL_ABUND	0	☐	
Bismuth-214 ✓		1.173	0.09866	pCi/g	0.1058	0.200	609.5	4	1.473	IDENTIFIED	6.631	☐	
Cadmium-109	int	3.404	0.431	pCi/g	0.9645	Y	87.28	3	1.222	IDENTIFIED	11.77	☐	ui
Cadmium-115	HE	6.414	12.45	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐	
Cerium-143		1994	408.9	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐	
Cesium-137 ✓		0.5862	0.052	pCi/g	0.06405	0.100	661.9	2	1.434	IDENTIFIED	7.683	☐	
Gross Gamma		7.816	1.233	pCi/g	2.92	N		0				☐	
Iodine-123	HE	1.92E+07	1.16E+08	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐	
Iodine-133	HE	6629	28430	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐	
Lead-210	HE	3.527	1.264	pCi/g	2.681	N	46.65	3	1.313	IDENTIFIED	35.52	☐	
Lead-212 ✓		1.302	0.08028	pCi/g	0.08638	0.100	238.7	4	1.115	IDENTIFIED	3.894	☐	
Lead-214 ✓		1.344	0.1059	pCi/g	0.1126	0.100	352	4	1.298	IDENTIFIED	5.931	☐	
Lutetium-177	HE	2.911	0.8633	pCi/g	2.443	N	0	11	0	FAIL_ABUND	0	☐	

Neptunium-237	int nr	0.9783	0.1598	pCi/g	0.2794	N	87.28	3	1.222	IDENTIFIED	11.77	☐		
Niobium-97	HE	3.89E+05	9.85E+05	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐		
Polonium-210	HE	3.527	1.262	pCi/g	2.681	N	46.65	3	1.313	IDENTIFIED	35.52	☐		
Polonium-212	nr	1.302	0.08028	pCi/g	0.08638	N	238.7	4	1.115	IDENTIFIED	3.894	☐		
Polonium-214	nr	1.344	0.1059	pCi/g	0.1126	N	352	4	1.298	IDENTIFIED	5.931	☐		
Polonium-216	nr	1.302	0.08028	pCi/g	0.08638	N	238.7	4	1.115	IDENTIFIED	3.894	☐		
Polonium-218	nr	1.344	0.1059	pCi/g	0.1126	N	352	4	1.298	IDENTIFIED	5.931	☐		
Potassium-40	✔	19.02	1.096	pCi/g	0.5573	1.00	1461	1	1.884	IDENTIFIED	3.847	☐		
Radium-224	int	3.801	0.4936	pCi/g	0.9831	Y	241.8	1	1.512	IDENTIFIED	12.28	☐	ui	
Radium-226	✔	1.173	0.09866	pCi/g	0.1058	Y	609.5	4	1.473	IDENTIFIED	6.631	☐		
Radium-228	✔	1.185	0.1525	pCi/g	0.1808	0.500	911.3	3	1.454	IDENTIFIED	11.47	☐		
Sodium-24	HE	1.46E+07	8.08E+06	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐		
Thallium-200	HE	1143	1472	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐		
Thallium-208	✔	0.4045	0.04035	pCi/g	0.05177	0.080	583.3	1	1.5	IDENTIFIED	8.753	☐		
Thorium-228	nr	1.325	0.08174	pCi/g	0.08795	N	238.7	4	1.115	IDENTIFIED	3.894	☐		
Thorium-230	nr	1.173	0.09866	pCi/g	0.1057	N	609.5	4	1.473	IDENTIFIED	6.631	☐		
Thorium-232	nr	1.185	0.1525	pCi/g	0.1808	N	911.3	3	1.454	IDENTIFIED	11.47	☐		
Tin-126	int nr	0.3331	0.04217	pCi/g	0.0946	N	87.28	3	1.222	IDENTIFIED	11.77	☐		
Titanium-44	la nr	0.3061	0.0226	pCi/g	0.06454	N	0	11	0	FAIL_ABUND	0	☐		
Total Uranium		2.9773	1.88E-06	ug/g	2.1519	N		0				☐		
Uranium-234	nr	1.173	0.09866	pCi/g	0.1057	N	609.5	4	1.473	IDENTIFIED	6.631	☐		
Zirconium-97	HE	4.58E+05	1.85E+07	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244905004	08-JAN-10 12:00	26-JAN-10 14:06	18.1	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual		Qual Comment
Actinium-228	nr	1.183	0.157	pCi/g	0.1672	N	911.6	3	1.422	IDENTIFIED	11.79	☐		
Americium-243	int nr	0.2895	0.02781	pCi/g	0.06082	N	74.89	1	0.9549	IDENTIFIED	8.707	☐		
Annihilation Rad.		0.113	0.029	pCi/g	0.03808	N	511.1	1	1.696	IDENTIFIED	25.11	☐		
Barium-137m		0.1044	0.02255	pCi/g	0.04427	N	661.8	2	0.8885	IDENTIFIED	21.08	☐		
Bismuth-211	int	3.561	0.3044	pCi/g	0.2646	Y	351.9	4	1.108	IDENTIFIED	5.46	☐	ui	
Bismuth-212	la nr	1.206	0.2135	pCi/g	0.5754	N	0	11	0	FAIL_ABUND	0	☐		
Bismuth-214	✔	1.086	0.09756	pCi/g	0.08334	0.200	609.4	4	1.401	IDENTIFIED	6.983	☐		
Cadmium-109	int	3.06	0.4014	pCi/g	0.8297	Y	87.13	3	1.134	IDENTIFIED	12.25	☐	ui	
Cadmium-115	HE	11.36	9.734	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐		
Cerium-143		1181	293.4	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐		
Cesium-134	la	0.08883	0.02394	pCi/g	0.07076	0.100	0	11	0	FAIL_ABUND	0	☑	UI	Data rejected due to low abundance.
Cesium-137	✔	0.1103	0.02384	pCi/g	0.04679	0.100	661.8	2	0.8885	IDENTIFIED	21.08	☐		
Gross Gamma		7.864	1.09	pCi/g	2.761	N		0				☐		
Iodine-123	HE	8.49E+07	8.81E+07	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐		
Iodine-133	HE	9255	24200	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐		
Lead-212	✔	1.341	0.104	pCi/g	0.07231	0.100	238.6	4	0.9978	IDENTIFIED	3.329	☐		
Lead-214	✔	1.239	0.1107	pCi/g	0.09225	0.100	351.9	4	1.108	IDENTIFIED	5.46	☐		
Lutetium-177	HE	2.817	0.795	pCi/g	2.163	N	0	11	0	FAIL_ABUND	0	☐		
Neptunium-237	int nr	0.8792	0.1467	pCi/g	0.2412	N	87.13	3	1.134	IDENTIFIED	12.25	☐		
Polonium-212	nr	1.341	0.104	pCi/g	0.07231	N	238.6	4	0.9978	IDENTIFIED	3.329	☐		

Polonium-214	nr	1.239	0.1107	pCi/g	0.09225	N	351.9	4	1.108	IDENTIFIED	5.46		
Polonium-216	nr	1.341	0.104	pCi/g	0.07231	N	238.6	4	0.9978	IDENTIFIED	3.329		
Polonium-218	nr	1.239	0.1107	pCi/g	0.09225	N	351.9	4	1.108	IDENTIFIED	5.46		
Potassium-40		20.46	1.101	pCi/g	0.4557	1.00	1461	1	1.798	IDENTIFIED	3.205		
Promethium-149	HE	37.06	86.6	pCi/g	0	N	0	11	0	SHORT_HLIF	0		
Radium-224	int	4.311	0.512	pCi/g	0.823	Y	241.6	1	1.567	IDENTIFIED	9.799		ui
Radium-226		1.086	0.09756	pCi/g	0.08334	Y	609.4	4	1.401	IDENTIFIED	6.983		
Radium-228		1.183	0.157	pCi/g	0.1672	0.500	911.6	3	1.422	IDENTIFIED	11.79		
Thallium-200	HE	701.6	1183	pCi/g	0	N	0	11	0	SHORT_HLIF	0		
Thallium-208		0.3893	0.03768	pCi/g	0.04626	0.080	583.5	1	1.339	IDENTIFIED	8.034		
Thorium-228	nr	1.365	0.1059	pCi/g	0.07362	N	238.6	4	0.9978	IDENTIFIED	3.329		
Thorium-230	nr	1.086	0.09756	pCi/g	0.08334	N	609.4	4	1.401	IDENTIFIED	6.983		
Thorium-232	nr	1.183	0.157	pCi/g	0.1672	N	911.6	3	1.422	IDENTIFIED	11.79		
Thorium-234		2.064	0.7185	pCi/g	1.354	2.00	63.01	2	1.15	IDENTIFIED	33.71		
Tin-126	int nr	0.2994	0.03928	pCi/g	0.08146	N	87.13	3	1.134	IDENTIFIED	12.25		
Titanium-44	la nr	0.3117	0.02084	pCi/g	0.05106	N	0	11	0	FAIL_ABUND	0		
Total Uranium		6.2088	2.14E-06	ug/g	2.016	N		0					
Uranium-234	nr	1.086	0.09756	pCi/g	0.08334	N	609.4	4	1.401	IDENTIFIED	6.983		
Uranium-238	HE	2.064	0.7185	pCi/g	1.354	N	63.01	2	1.15	IDENTIFIED	33.71		
Zirconium-97	HE	2.51E+07	1.31E+07	pCi/g	0	N	0	11	0	SHORT_HLIF	0		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244905005	08-JAN-10 12:00	26-JAN-10 14:06	18.1	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.091	0.1245	pCi/g	0.2178	N	910.5	3	1.129	IDENTIFIED	9.968		
Americium-243	int nr	0.2926	0.04835	pCi/g	0.1252	N	74.14	1	1.156	IDENTIFIED	15.56		
Barium-137m		0.9465	0.06045	pCi/g	0.05574	N	660.9	2	1.771	IDENTIFIED	5.87		
Bismuth-211	int	3.296	0.2484	pCi/g	0.3878	Y	351.3	4	1.44	IDENTIFIED	6.708		ui
Bismuth-212	HE	0.8129	0.2197	pCi/g	0.6532	N	0	9	0	FAIL_ABUND	0		
Bismuth-214		1.039	0.08622	pCi/g	0.124	0.200	608.7	4	1.662	IDENTIFIED	7.422		
Cerium-143		4309	700.9	pCi/g	0	N	0	9	0	SHORT_HLIF	0		
Cesium-135	HE	0.3965	0.1021	pCi/g	0.3428	N	0	9	0	NOT_IDENTI	0		
Cesium-137		1.001	0.06396	pCi/g	0.05892	0.100	660.9	2	1.771	IDENTIFIED	5.87		
Gross Gamma		7.389	1.269	pCi/g	3.141	N		0					
Iodine-123	HE	4.11E+06	1.41E+08	pCi/g	0	N	0	9	0	SHORT_HLIF	0		
Lead-212		1.15	0.07278	pCi/g	0.1056	0.100	238	4	1.381	IDENTIFIED	4.79		
Lead-214		1.146	0.09142	pCi/g	0.1308	0.100	351.3	4	1.44	IDENTIFIED	6.708		
Niobium-95m	la nr	1.167	0.107	pCi/g	0.3674	N	0	9	0	NOT_IDENTI	0		
Niobium-97		1.80E+07	1.56E+06	pCi/g	0	N	0	9	0	SHORT_HLIF	0		
Polonium-212	nr	1.15	0.07278	pCi/g	0.1056	N	238	4	1.381	IDENTIFIED	4.79		
Polonium-214	nr	1.146	0.09142	pCi/g	0.1308	N	351.3	4	1.44	IDENTIFIED	6.708		
Polonium-216	nr	1.15	0.07278	pCi/g	0.1056	N	238	4	1.381	IDENTIFIED	4.79		
Polonium-218	nr	1.146	0.09142	pCi/g	0.1308	N	351.3	4	1.44	IDENTIFIED	6.708		
Potassium-40		18.3	1.002	pCi/g	0.5573	1.00	1460	1	2.097	IDENTIFIED	3.921		
Radium-224	int	3.392	0.6143	pCi/g	1.201	Y	241.1	1	1.711	IDENTIFIED	17.77		ui
Radium-226		1.039	0.08622	pCi/g	0.124	Y	608.7	4	1.662	IDENTIFIED	7.422		

Radium-228 ✔		1.091	0.1245	pCi/g	0.2178	0.500	910.5	3	1.129	IDENTIFIED	9.968	☐	
Silver-110m	la nr	0.284	0.02827	pCi/g	0.1094	N	0	9	0	NOT_IDENTI	0	☐	
Thallium-208 ✔		0.3931	0.04083	pCi/g	0.06196	0.080	582.5	1	1.575	IDENTIFIED	9.888	☐	
Thorium-228	nr	1.171	0.0741	pCi/g	0.1075	N	238	4	1.381	IDENTIFIED	4.79	☐	
Thorium-230	nr	1.039	0.08622	pCi/g	0.124	N	608.7	4	1.662	IDENTIFIED	7.422	☐	
Thorium-232	nr	1.091	0.1245	pCi/g	0.2178	N	910.5	3	1.129	IDENTIFIED	9.968	☐	
Titanium-44	la nr	0.2	0.02761	pCi/g	0.0914	N	0	9	0	NOT_IDENTI	0	☐	
Total Uranium		7.9926	3.15E-06	ug/g	5.6456	N		0				☐	
Uranium-234	nr	1.039	0.08622	pCi/g	0.124	N	608.7	4	1.662	IDENTIFIED	7.422	☐	
Zirconium-97		1.12E+08	2.30E+07	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
244905006	08-JAN-10 12:00	26-JAN-10 14:07	18.1	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual		Qual Comment
Actinium-228	nr	1.243	0.1353	pCi/g	0.1596	N	911.2	3	1.781	IDENTIFIED	8.632	☐		
Americium-243	int nr	0.2639	0.02983	pCi/g	0.07286	N	74.8	1	1.136	IDENTIFIED	10.54	☐		
Annihilation Rad.		0.104	0.02623	pCi/g	0.03539	N	510.8	1	2.082	IDENTIFIED	24.71	☐		
Barium-137m		0.6307	0.049	pCi/g	0.04421	N	661.7	2	1.97	IDENTIFIED	5.707	☐		
Bismuth-211	int	3.108	0.2484	pCi/g	0.2728	Y	351.9	4	1.292	IDENTIFIED	5.483	☐	ui	
Bismuth-212	la nr	1.015	0.1805	pCi/g	0.5152	N	0	13	0	FAIL_ABUND	0	☐		
Bismuth-214 ✔		0.9775	0.07909	pCi/g	0.09085	0.200	609.2	4	1.692	IDENTIFIED	5.628	☐		
Cadmium-109	int	3.262	0.4291	pCi/g	0.9591	Y	87.32	3	1.401	IDENTIFIED	12.28	☐	ui	
Cadmium-115	HE	3.454	10	pCi/g	0	N	0	13	0	SHORT_HLIF	0	☐		
Cerium-143		3279	523.7	pCi/g	0	N	0	13	0	SHORT_HLIF	0	☐		
Cesium-137 ✔		0.6667	0.05183	pCi/g	0.04674	0.100	661.7	2	1.97	IDENTIFIED	5.707	☐		
Gross Gamma		7.871	1.094	pCi/g	2.097	N		0				☐		
Iodine-123	HE	5.84E+06	9.89E+07	pCi/g	0	N	0	13	0	SHORT_HLIF	0	☐		
Iodine-133	HE	16810	23880	pCi/g	0	N	0	13	0	SHORT_HLIF	0	☐		
Krypton-85	la nr	19.78	3.627	pCi/g	11.8	N	0	13	0	NOT_IDENTI	0	☐		
Lead-212 ✔		1.252	0.0922	pCi/g	0.07715	0.100	238.7	4	1.25	IDENTIFIED	3.258	☐		
Lead-214 ✔		1.081	0.09089	pCi/g	0.09505	0.100	351.9	4	1.292	IDENTIFIED	5.483	☐		
Neptunium-237	int nr	0.9374	0.1567	pCi/g	0.2796	N	87.32	3	1.401	IDENTIFIED	12.28	☐		
Niobium-95	HE	0.07985	0.01944	pCi/g	0.06322	N	0	13	0	NOT_IDENTI	0	☐		
Niobium-97		5.61E+06	1.01E+06	pCi/g	0	N	0	13	0	SHORT_HLIF	0	☐		
Polonium-212	nr	1.252	0.0922	pCi/g	0.07715	N	238.7	4	1.25	IDENTIFIED	3.258	☐		
Polonium-214	nr	1.081	0.09089	pCi/g	0.09505	N	351.9	4	1.292	IDENTIFIED	5.483	☐		
Polonium-216	nr	1.252	0.0922	pCi/g	0.07715	N	238.7	4	1.25	IDENTIFIED	3.258	☐		
Polonium-218	nr	1.081	0.09089	pCi/g	0.09505	N	351.9	4	1.292	IDENTIFIED	5.483	☐		
Potassium-40 ✔		21.45	1.138	pCi/g	0.3527	1.00	1461	1	2.587	IDENTIFIED	2.671	☐		
Radium-224	int	4.185	0.5531	pCi/g	0.8769	Y	241.7	1	1.886	IDENTIFIED	11.63	☐	ui	
Radium-226 ✔		0.9775	0.07909	pCi/g	0.09085	Y	609.2	4	1.692	IDENTIFIED	5.628	☐		
Radium-228 ✔		1.243	0.1353	pCi/g	0.1596	0.500	911.2	3	1.781	IDENTIFIED	8.632	☐		
Silver-110m	HE	0.0839	0.01866	pCi/g	0.06074	N	0	13	0	NOT_IDENTI	0	☐		
Strontium-85	la	0.1046	0.01919	pCi/g	0.06244	Y	0	13	0	NOT_IDENTI	0	☑	UI	Data rejected due to low abundance.
Thallium-200	HE	241.6	1210	pCi/g	0	N	0	13	0	SHORT_HLIF	0	☐		
Thallium-208 ✔		0.3871	0.03557	pCi/g	0.04208	0.080	583	1	1.598	IDENTIFIED	7.42	☐		

Thorium-228	nr	1.274	0.09387	pCi/g	0.07856	N	238.7	4	1.25	IDENTIFIED	3.258		
Thorium-230	nr	0.9774	0.07909	pCi/g	0.09085	N	609.2	4	1.692	IDENTIFIED	5.628		
Thorium-232	nr	1.243	0.1353	pCi/g	0.1596	N	911.2	3	1.781	IDENTIFIED	8.632		
Thorium-234	✓	1.992	0.7291	pCi/g	1.516	2.00	62.98	2	0.8021	IDENTIFIED	35.55		
Tin-126	int nr	0.3192	0.04199	pCi/g	0.09424	N	87.32	3	1.401	IDENTIFIED	12.28		
Titanium-44	la nr	0.2889	0.02183	pCi/g	0.06106	N	0	13	0	FAIL_ABUND	0		
Total Uranium		5.9768	2.17E-06	ug/g	2.2575	N		0					
Uranium-234	nr	0.9774	0.07909	pCi/g	0.09085	N	609.2	4	1.692	IDENTIFIED	5.628		
Uranium-238	HE	1.992	0.7291	pCi/g	1.516	N	62.98	2	0.8021	IDENTIFIED	35.55		
Zirconium-97		8.16E+07	1.62E+07	pCi/g	0	N	0	13	0	SHORT_HLIF	0		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202018262		26-JAN-10 14:07	0	MB	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Iodine-133	HE	1.579	3.055	pCi/g	0	N	0	4	0	SHORT_HLIF	0		
Sodium-24	HE	58.69	37.06	pCi/g	0	N	0	4	0	SHORT_HLIF	0		
Technetium-99m	HE	2.14E+06	5.43E+06	pCi/g	0	N	0	4	0	SHORT_HLIF	0		
Total Uranium		0.45163	3.41E-07	ug/g	0.33559	N		0					
Zirconium-97		691.9	250.3	pCi/g	0	N	0	4	0	SHORT_HLIF	0		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202018263	11-JAN-10 12:00	26-JAN-10 14:10	15.1	DUP	LOAD	1		LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	nr	1.71	0.1674	pCi/g	0.1862	N	910.7	3	1.487	IDENTIFIED	8.106		
Americium-243	int nr	0.4688	0.04305	pCi/g	0.08938	N	74.67	1	1.153	IDENTIFIED	8.531		
Annihilation Rad.		0.1526	0.03402	pCi/g	0.04067	N	510.9	1	1.972	IDENTIFIED	22.08		
Bismuth-211	int	3.85	0.2607	pCi/g	0.3306	Y	351.8	4	1.201	IDENTIFIED	5.999	ui	
Bismuth-212	la nr	1.479	0.2857	pCi/g	0.7116	N	0	10	0	FAIL_ABUND	0		
Bismuth-214	✓	1.111	0.09412	pCi/g	0.09958	0.200	609.2	4	1.381	IDENTIFIED	7.403		
Cadmium-109	int	4.566	0.594	pCi/g	1.107	Y	87.11	3	1.431	IDENTIFIED	12.44	ui	
Cerium-143		668.4	107.4	pCi/g	0	N	0	10	0	SHORT_HLIF	0		
Gross Gamma		8.488	1.376	pCi/g	3.451	N		0					
Krypton-85	HE	15.42	3.507	pCi/g	13.11	N	0	10	0	NOT_IDENTI	0		
Lead-212	✓	1.628	0.07954	pCi/g	0.0829	0.100	238.5	4	1.108	IDENTIFIED	3.355		
Lead-214	✓	1.339	0.0972	pCi/g	0.1153	0.100	351.8	4	1.201	IDENTIFIED	5.999		
Lutetium-177	HE	2.896	1.014	pCi/g	2.045	N	0	10	0	FAIL_ABUND	0		
Neptunium-237	int nr	1.318	0.2188	pCi/g	0.3247	N	87.11	3	1.431	IDENTIFIED	12.44		
Niobium-97	HE	17950	44430	pCi/g	0	N	0	10	0	SHORT_HLIF	0		
Polonium-212	nr	1.628	0.07954	pCi/g	0.0829	N	238.5	4	1.108	IDENTIFIED	3.355		
Polonium-214	nr	1.339	0.0972	pCi/g	0.1153	N	351.8	4	1.201	IDENTIFIED	5.999		
Polonium-216	nr	1.628	0.07954	pCi/g	0.0829	N	238.5	4	1.108	IDENTIFIED	3.355		
Polonium-218	nr	1.339	0.0972	pCi/g	0.1153	N	351.8	4	1.201	IDENTIFIED	5.999		
Potassium-40	✓	18.65	0.9635	pCi/g	0.5327	1.00	1460	1	1.864	IDENTIFIED	3.74		
Radium-224	int	4.53	0.5438	pCi/g	0.9435	Y	241.5	1	1.59	IDENTIFIED	11.68	ui	
Radium-226	✓	1.111	0.09412	pCi/g	0.09958	Y	609.2	4	1.381	IDENTIFIED	7.403		

* Radium-228 ✓		1.71	0.1674	pCi/g	0.1862	0.500	910.7	3	1.487	IDENTIFIED	8.106	☐	
Strontium-85	la	0.07906	0.01797	pCi/g	0.06719	Y	0	10	0	NOT_IDENTI	0	☑	UI Data rejected due to low abundance.
Technetium-99m		1.30E+16	0	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	
Thallium-200	HE	167.8	210.9	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	
* Thallium-208 ✓		0.5018	0.04635	pCi/g	0.05209	0.080	583	1	1.564	IDENTIFIED	8.515	☐	
Thorium-228	nr	1.653	0.08075	pCi/g	0.08416	N	238.5	4	1.108	IDENTIFIED	3.355	☐	
Thorium-230	nr	1.111	0.09412	pCi/g	0.09957	N	609.2	4	1.381	IDENTIFIED	7.403	☐	
Thorium-232	nr	1.71	0.1674	pCi/g	0.1862	N	910.7	3	1.487	IDENTIFIED	8.106	☐	
Tin-126	int nr	0.4489	0.05839	pCi/g	0.1093	N	87.11	3	1.431	IDENTIFIED	12.44	☐	
Titanium-44	la nr	0.4053	0.02808	pCi/g	0.07316	N	0	10	0	FAIL_ABUND	0	☐	
Total Uranium		3.1	2.22E-06	ug/g	3.0825	N		0				☐	
Uranium-234	nr	1.111	0.09412	pCi/g	0.09957	N	609.2	4	1.381	IDENTIFIED	7.403	☐	
Zirconium-97		3.20E+06	8.89E+05	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202018264		26-JAN-10 14:19	0	LCS	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228		1.334	0.3238	pCi/g	0.5363	N	912.1	3	1.444	IDENTIFIED	23.56	☐	
Americium-241 ✓		15.04	0.662	pCi/g	0.4982	0.200	59.58	1	1.314	IDENTIFIED	2.366	☐	
Americium-243		0.2786	0.06023	pCi/g	0.1536	N	74.68	1	1.536	IDENTIFIED	21.29	☐	
Annihilation Rad.	HE	0.1123	0.04857	pCi/g	0.09954	N	511	1	1.639	IDENTIFIED	43.15	☐	
Barium-137m		5.64	0.2129	pCi/g	0.1214	N	661.9	2	1.564	IDENTIFIED	2.324	☐	
Bismuth-211		2.551	0.3537	pCi/g	0.712	Y	352.1	4	1.419	IDENTIFIED	13.5	☐	
Bismuth-214		0.9674	0.1173	pCi/g	0.2287	0.200	609.3	4	1.258	IDENTIFIED	11.46	☐	
Cadmium-109		36.8	2.187	pCi/g	2.41	Y	88.18	2	1.273	IDENTIFIED	4.033	☐	
Cerium-143		19.69	3.767	pCi/g	11.24	N	0	9	0	FAIL_ABUND	0	☐	
Cesium-137 ✓		5.962	0.2256	pCi/g	0.1283	0.100	661.9	2	1.564	IDENTIFIED	2.324	☐	
Cobalt-57		0.2538	0.04153	pCi/g	0.07144	N	121.8	1	1.173	IDENTIFIED	15.97	☐	
Cobalt-60 ✓		6.747	0.2931	pCi/g	0.09287	0.100	1333	1	1.97	IDENTIFIED	2.486	☐	
Gross Gamma		30	3.131	pCi/g	6.514	N		0				☐	
Iodine-123	HE	181.4	340.5	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐	
Iodine-133	HE	15.32	14.04	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐	
Lead-212		1.54	0.09997	pCi/g	0.1699	0.100	238.6	4	1.575	IDENTIFIED	5.372	☐	
Lead-214		0.8872	0.1252	pCi/g	0.2302	0.100	352.1	4	1.419	IDENTIFIED	13.5	☐	
Neptunium-237		8.613	1.015	pCi/g	1.321	N	0	9	0	NOT_IDENTI	0	☐	
Niobium-95m	HE	0.5102	0.1156	pCi/g	0.3893	N	0	9	0	NOT_IDENTI	0	☐	
Niobium-97		407.8	73.98	pCi/g	0	N	0	9	0	SHORT_HLIF	0	☐	
Polonium-212		1.54	0.09997	pCi/g	0.1699	N	238.6	4	1.575	IDENTIFIED	5.372	☐	
Polonium-214		0.8872	0.1252	pCi/g	0.2302	N	352.1	4	1.419	IDENTIFIED	13.5	☐	
Polonium-216		1.54	0.09997	pCi/g	0.1699	N	238.6	4	1.575	IDENTIFIED	5.372	☐	
Polonium-218		0.8872	0.1252	pCi/g	0.2302	N	352.1	4	1.419	IDENTIFIED	13.5	☐	
Radium-224		2.872	0.7952	pCi/g	1.932	Y	241.5	1	1.537	IDENTIFIED	27.54	☐	
Radium-226		0.9674	0.1173	pCi/g	0.2287	Y	609.3	4	1.258	IDENTIFIED	11.46	☐	
Radium-228		1.334	0.3238	pCi/g	0.5363	0.500	912.1	3	1.444	IDENTIFIED	23.56	☐	
Silver-110m	HE	0.1367	0.04046	pCi/g	0.1329	N	0	9	0	NOT_IDENTI	0	☐	
Thallium-208		0.4576	0.05299	pCi/g	0.1252	0.080	583.4	1	1.544	IDENTIFIED	11.06	☐	

Thorium-228		1.552	0.1007	pCi/g	0.1712	N	238.6	4	1.575	IDENTIFIED	5.372	
Thorium-230		0.9674	0.1173	pCi/g	0.2287	N	609.3	4	1.258	IDENTIFIED	11.46	
Thorium-232		1.334	0.3238	pCi/g	0.5363	N	912.1	3	1.444	IDENTIFIED	23.56	
Tin-126		3.658	0.2174	pCi/g	0.2404	N	88.18	2	1.273	IDENTIFIED	4.033	
Titanium-44		0.299	0.0387	pCi/g	0.1205	N	0	9	0	FAIL_ABUND	0	
Uranium-234		0.9674	0.1173	pCi/g	0.2287	N	609.3	4	1.258	IDENTIFIED	11.46	
Zirconium-97	HE	1187	1145	pCi/g	0	N	0	9	0	SHORT_HLIF	0	

*** = Number of isotopes identified with a keyline at this energy.

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertainty	Units	DL	RDL
942718	244905006	SAMPLE	26-JAN-10	Lead-212	1.252	0.0922	pCi/g	0.0386	0.100
				Lead-214	1.081	0.09089	pCi/g	0.04755	0.100
				Niobium-97	5.61E+06	1.01E+06	pCi/g	0	N
				Potassium-40	21.45	1.138	pCi/g	0.1765	1.00
				Radium-224	4.198	0.5531	pCi/g	0.4387	Y
				Radium-226	0.9775	0.07909	pCi/g	0.04545	Y
				Radium-228	1.243	0.1353	pCi/g	0.07982	0.500
				Strontium-85	0.1046	0.01919	pCi/g	0.03124	Y
				Thallium-200	241.6	1210	pCi/g	0	N
				Thallium-208	0.3871	0.03557	pCi/g	0.02105	0.080
				Thorium-234	1.992	0.7291	pCi/g	0.7584	2.00
				Yttrium-91	13.28	6.933	pCi/g	12.35	N
				Zirconium-97	8.16E+07	1.62E+07	pCi/g	0	N
942718	1202018262	MB	26-JAN-10	Cobalt-60	0.01913	0.00976	pCi/g	0.01893	0.100
				Krypton-85	5.167	1.581	pCi/g	3.144	N
				Radium-223	0.2601	0.1202	pCi/g	0.2353	Y
				Sodium-24	58.69	37.06	pCi/g	0	N
				Strontium-85	0.02448	0.00749	pCi/g	0.0149	Y
				Technetium-99m	2.14E+06	5.43E+06	pCi/g	0	N
				Thorium-231	0.2601	0.1202	pCi/g	0.2353	Y
				Thorium-234	0.1478	0.1145	pCi/g	0.1124	2.00
				Zirconium-97	691.9	250.3	pCi/g	0	N
942718	1202018263	DUP	26-JAN-10	Bismuth-211	3.85	0.2607	pCi/g	0.1654	Y
				Bismuth-214	1.111	0.09412	pCi/g	0.04982	0.200
				Cadmium-109	4.566	0.594	pCi/g	0.5536	Y
				Cerium-143	668.4	107.4	pCi/g	0	N
				Cesium-134	0.08611	0.02411	pCi/g	0.04513	0.100
				Gross Gamma	8.488	1.376	pCi/g	1.668	N
				Krypton-85	15.49	3.507	pCi/g	6.558	N
				Lead-212	1.628	0.07954	pCi/g	0.04148	0.100
				Lead-214	1.339	0.0972	pCi/g	0.05767	0.100
				Niobium-97	17950	44430	pCi/g	0	N
				Potassium-40	18.65	0.9635	pCi/g	0.2665	1.00
				Radium-224	4.53	0.5438	pCi/g	0.472	Y
				Radium-226	1.111	0.09412	pCi/g	0.04982	Y
				Radium-228	1.71	0.1674	pCi/g	0.09315	0.500
				Strontium-85	0.07906	0.01797	pCi/g	0.03361	Y

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 14:06:52.53

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852001.CNF;1
Sample date       : 11-JAN-2010 12:00:00 Acquisition date : 26-JAN-2010 12:06:21
Sample ID         : G244852001           Sample quantity  : 1.34030E+02 GRAM
Detector name     : GAM12                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.52  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 942718               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.24*	47	459	0.86	125.95	123	8	6.59E-03	81.7	
2	3	74.63*	405	405	1.22	148.75	143	14	5.63E-02	10.0	5.99E+00
3	3	77.00	520	346	0.97	153.49	143	14	7.22E-02	7.2	
4	5	84.15*	134	349	1.51	167.80	164	28	1.86E-02	24.7	1.71E+00
5	5	87.05	270	373	1.30	173.59	164	28	3.76E-02	13.8	
6	5	89.85	209	395	1.43	179.21	164	28	2.91E-02	19.1	
7	5	92.73*	268	369	1.54	184.98	164	28	3.73E-02	15.9	
8	0	128.93	79	245	0.88	257.41	255	6	1.09E-02	33.4	
9	0	185.60*	221	426	1.25	370.80	364	13	3.07E-02	21.1	
10	0	209.39	124	245	1.48	418.41	413	9	1.72E-02	24.5	
11	6	238.51*	1192	156	1.12	476.68	469	21	1.66E-01	3.4	1.24E+00
12	6	241.62	307	236	2.12	482.88	469	21	4.27E-02	15.1	
13	0	270.12	109	213	1.36	539.92	534	11	1.51E-02	27.8	
14	0	277.33	55	118	1.46	554.34	551	7	7.70E-03	35.2	
15	0	295.16*	292	201	0.98	590.03	586	9	4.06E-02	10.6	
16	0	328.31	56	151	1.41	656.34	652	9	7.79E-03	41.7	
17	0	338.11*	247	120	1.45	675.96	671	9	3.43E-02	10.5	
18	0	351.77*	585	132	1.29	703.28	698	12	8.12E-02	5.8	
19	0	463.17	61	125	1.27	926.16	920	11	8.49E-03	37.8	
20	0	510.79*	144	112	2.04	1021.43	1014	18	2.00E-02	22.4	
21	0	582.91*	373	93	1.61	1165.73	1157	15	5.19E-02	7.8	
22	0	609.29*	400	86	1.42	1218.49	1212	14	5.56E-02	7.1	
23	0	662.12*	103	109	1.47	1324.18	1317	14	1.43E-02	23.9	
24	0	726.83	139	60	1.58	1453.63	1446	14	1.94E-02	14.5	
25	0	769.25	96	75	7.83	1538.50	1529	20	1.34E-02	24.3	
26	0	911.01*	264	44	1.39	1822.05	1816	14	3.67E-02	8.2	
27	0	969.43	134	99	1.57	1938.92	1931	13	1.86E-02	17.7	
28	0	1120.72	66	70	1.64	2241.50	2235	12	9.20E-03	28.3	
29	0	1239.06	48	86	1.30	2478.18	2470	16	6.72E-03	45.5	
30	0	1460.70*	1337	22	2.26	2921.42	2912	18	1.86E-01	2.9	
31	0	1764.45*	55	13	1.95	3528.78	3522	13	7.60E-03	19.8	
32	0	1847.87	23	0	2.44	3695.57	3689	12	3.19E-03	20.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 26-JAN-2010 14:06:57

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 11-JAN-2010 12:00:00 Acquisition date : 26-JAN-2010 12:06:21
Sample ID : G244852001 Sample quantity : 134.03 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA12 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.52 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.085E+01	2.826E+00	5.042E-01	3.595E-02	61.188
CD-109	+	88.03	*	3.693E+00	1.057E+00	1.077E+00	8.239E-02	3.430
SN-126	+	64.28		4.329E-01	7.103E-01	7.489E-01	1.052E-01	0.578
	+	86.94		1.509E+00	7.478E-01	4.451E-01	1.832E-01	3.391
	+	87.57	*	3.630E-01	1.039E-01	1.063E-01	8.105E-03	3.414
BA-137M	+	661.65	*	1.421E-01	6.854E-02	5.606E-02	3.634E-03	2.534
CS-137	+	661.65	*	1.502E-01	7.246E-02	5.927E-02	3.855E-03	2.534
TL-208	+	277.35		5.066E-01	3.609E-01	5.621E-01	5.887E-02	0.901
	+	510.84		6.675E-01	3.063E-01	1.994E-01	2.058E-02	3.348
	+	583.14	*	4.958E-01	8.541E-02	5.342E-02	3.821E-03	9.282
		860.37		4.954E-01	3.398E-01	6.062E-01	5.297E-02	0.817
BI-211		72.87		5.275E+00	3.196E+00	5.128E+00	3.440E-01	1.029
	+	351.07	*	3.364E+00	4.434E-01	2.915E-01	1.832E-02	11.544
PB-212	+	74.81		2.317E+00	5.354E-01	5.011E-01	5.792E-02	4.625
	+	77.11		1.679E+00	2.694E-01	2.844E-01	1.968E-02	5.906
	+	87.30		1.679E+00	5.089E-01	4.932E-01	6.195E-02	3.404
	+	238.63	*	1.493E+00	1.475E-01	7.864E-02	5.584E-03	18.980
		300.09		1.491E+00	7.817E-01	1.286E+00	1.050E-01	1.159
PO-212	+	74.81		2.317E+00	5.354E-01	5.011E-01	5.792E-02	4.625
	+	77.11		1.679E+00	2.694E-01	2.844E-01	1.968E-02	5.906
	+	87.30		1.679E+00	5.089E-01	4.932E-01	6.195E-02	3.404
		115.19		5.908E-01	3.271E+00	5.415E+00	3.434E-01	0.109
	+	238.63	*	1.493E+00	1.475E-01	7.864E-02	5.584E-03	18.980
		300.09		1.491E+00	7.817E-01	1.286E+00	1.050E-01	1.159
BI-214	+	609.31	*	1.003E+00	1.655E-01	1.076E-01	8.855E-03	9.326
	+	1120.29		8.642E-01	4.956E-01	4.742E-01	4.307E-02	1.822
	+	1764.49		9.796E-01	3.917E-01	3.168E-01	1.877E-02	3.092
PB-214	+	74.81		3.993E+00	8.941E-01	8.634E-01	8.682E-02	4.625
	+	77.11		2.879E+00	5.112E-01	4.875E-01	5.018E-02	5.906
	+	87.30		2.876E+00	8.522E-01	8.450E-01	9.147E-02	3.404
	+	241.98		2.311E+00	7.225E-01	4.736E-01	3.727E-02	4.879
	+	295.21		9.904E-01	2.268E-01	2.097E-01	1.770E-02	4.722
	+	351.92	*	1.170E+00	1.659E-01	1.016E-01	8.300E-03	11.518
PO-214	+	74.81		3.993E+00	8.941E-01	8.634E-01	8.682E-02	4.625

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		2.879E+00	5.112E-01	4.875E-01	5.018E-02	5.906
	+	87.30		2.876E+00	8.522E-01	8.450E-01	9.147E-02	3.404
	+	241.98		2.311E+00	7.225E-01	4.736E-01	3.727E-02	4.879
	+	295.21		9.904E-01	2.268E-01	2.097E-01	1.770E-02	4.722
	+	351.92	*	1.170E+00	1.659E-01	1.016E-01	8.300E-03	11.518
PO-216	+	74.81		2.317E+00	5.354E-01	5.011E-01	5.792E-02	4.625
	+	77.11		1.679E+00	2.694E-01	2.844E-01	1.968E-02	5.906
	+	87.30		1.679E+00	5.089E-01	4.932E-01	6.195E-02	3.404
	+	238.63	*	1.493E+00	1.475E-01	7.864E-02	5.584E-03	18.980
		300.09		1.491E+00	7.817E-01	1.286E+00	1.050E-01	1.159
PO-218	+	74.81		3.993E+00	8.941E-01	8.634E-01	8.682E-02	4.625
	+	77.11		2.879E+00	5.112E-01	4.875E-01	5.018E-02	5.906
	+	87.30		2.876E+00	8.522E-01	8.450E-01	9.147E-02	3.404
	+	241.98		2.311E+00	7.225E-01	4.736E-01	3.727E-02	4.879
	+	295.21		9.904E-01	2.268E-01	2.097E-01	1.770E-02	4.722
	+	351.92	*	1.170E+00	1.659E-01	1.016E-01	8.300E-03	11.518
RA-224	+	240.98	*	4.382E+00	1.348E+00	8.950E-01	4.937E-02	4.896
RA-226	+	609.31	*	1.003E+00	1.655E-01	1.076E-01	8.855E-03	9.326
	+	1120.29		8.642E-01	4.956E-01	4.742E-01	4.307E-02	1.822
	+	1764.49		9.796E-01	3.917E-01	3.168E-01	1.877E-02	3.092
AC-228	+	338.32		1.563E+00	7.169E-01	3.693E-01	1.505E-01	4.232
	+	911.07	*	1.565E+00	3.101E-01	1.889E-01	2.074E-02	8.284
	+	969.11		1.398E+00	5.902E-01	3.928E-01	9.056E-02	3.559
RA-228	+	338.32		1.563E+00	7.169E-01	3.693E-01	1.505E-01	4.232
	+	911.07	*	1.565E+00	3.101E-01	1.889E-01	2.074E-02	8.284
	+	969.11		1.398E+00	5.902E-01	3.928E-01	9.056E-02	3.559
TH-228	+	74.81		2.352E+00	4.977E-01	5.086E-01	3.506E-02	4.625
	+	77.11		1.705E+00	2.734E-01	2.886E-01	1.998E-02	5.906
	+	87.30		1.704E+00	4.876E-01	5.007E-01	3.805E-02	3.404
	+	238.63	*	1.515E+00	1.497E-01	7.982E-02	5.668E-03	18.980
		300.09		1.513E+00	1.187E+00	1.306E+00	7.694E-01	1.159
TH-230	+	609.31	*	1.003E+00	1.655E-01	1.076E-01	8.855E-03	9.326
	+	1120.29		8.642E-01	4.956E-01	4.742E-01	4.307E-02	1.822
	+	1764.49		9.796E-01	3.917E-01	3.168E-01	1.877E-02	3.092
TH-232	+	338.32		1.563E+00	3.409E-01	3.693E-01	2.092E-02	4.232
	+	911.07	*	1.565E+00	3.101E-01	1.889E-01	2.074E-02	8.284
	+	969.11		1.398E+00	5.902E-01	3.928E-01	9.056E-02	3.559
TH-234	+	63.29	*	1.094E+00	1.798E+00	1.908E+00	3.248E-01	0.573
	+	92.38		2.324E+00	8.438E-01	6.965E-01	1.218E-01	3.336
U-234	+	609.31	*	1.003E+00	1.655E-01	1.076E-01	8.855E-03	9.326
	+	1120.29		8.642E-01	4.956E-01	4.742E-01	4.307E-02	1.822
	+	1764.49		9.796E-01	3.917E-01	3.168E-01	1.877E-02	3.092
NP-237	+	86.50	*	1.066E+00	3.760E-01	3.159E-01	6.940E-02	3.375
		95.87		-2.364E-03	8.661E-01	1.287E+00	3.105E-01	-0.002
U-238	+	63.29	*	1.094E+00	1.798E+00	1.908E+00	3.248E-01	0.573
	+	92.38		2.324E+00	7.586E-01	6.965E-01	5.071E-02	3.336
AM-243	+	74.67	*	3.757E-01	7.938E-02	8.148E-02	5.536E-03	4.611
	+	86.72		3.998E+01	1.144E+01	1.182E+01	8.929E-01	3.383
		117.66		-1.901E+00	3.426E+00	5.476E+00	3.450E-01	-0.347

Sample ID : G244852001 Acquisition date : 26-JAN-2010 12:06:21

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		142.18		-8.177E+00	1.595E+01	2.528E+01	1.431E+00	-0.323
ANH-511	+	511.00	*	1.442E-01	6.506E-02	4.307E-02	2.625E-03	3.347

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	9.338E-02	2.957E-01	4.880E-01	3.358E-02	0.191
NA-22		1274.54	*	-3.564E-02	4.678E-02	7.099E-02	4.572E-03	-0.502
NA-24		1368.53	*	-2.631E-01	4.678E-02	Half-Life too short		
AL-26		1129.67		-1.089E+00	1.802E+00	2.806E+00	1.710E-01	-0.388
		1808.65	*	3.152E-03	2.719E-02	4.605E-02	2.642E-03	0.068
TI-44		67.85		-3.654E-02	4.704E-02	6.821E-02	4.440E-03	-0.536
	+	78.38	*	3.099E-01	4.971E-02	6.596E-02	4.613E-03	4.698
SC-46		889.25	*	-2.513E-02	3.981E-02	6.032E-02	5.000E-03	-0.417
	+	1120.51		1.478E-01	8.420E-02	1.192E-01	7.409E-03	1.240
V-48		944.10		-4.650E-01	8.999E-01	1.371E+00	1.101E-01	-0.339
		983.50	*	1.546E-03	7.028E-02	1.131E-01	8.714E-03	0.014
		1312.09		-4.275E-02	7.743E-02	1.184E-01	8.038E-03	-0.361
CR-51		320.08	*	2.019E-01	3.283E-01	5.637E-01	3.584E-02	0.358
MN-52		744.21		-1.246E-01	2.156E-01	3.351E-01	2.393E-02	-0.372
		848.13		3.569E+00	6.292E+00	1.079E+01	8.593E-01	0.331
		935.52		3.622E-01	2.658E-01	4.776E-01	3.867E-02	0.758
		1246.25		4.341E+00	9.621E+00	1.430E+01	8.814E-01	0.303
		1333.61		8.244E-01	4.962E+00	8.283E+00	5.784E-01	0.100
		1434.06	*	3.807E-03	2.340E-01	3.814E-01	2.620E-02	0.010
MN-54		834.83	*	2.022E-02	3.990E-02	6.758E-02	5.313E-03	0.299
CO-56		846.75	*	-2.841E-03	3.899E-02	6.164E-02	4.903E-03	-0.046
		977.42		-1.263E+00	2.979E+00	4.569E+00	3.544E-01	-0.277
		1037.82		1.507E-02	3.126E-01	5.252E-01	4.057E-02	0.029
		1175.09		-1.178E+00	2.348E+00	3.716E+00	2.049E-01	-0.317
	+	1238.25		1.772E-01	1.618E-01	1.772E-01	1.141E-02	1.000
		1360.21		3.322E-01	9.691E-01	1.653E+00	1.151E-01	0.201
		1771.40		4.978E-02	2.276E-01	3.437E-01	2.027E-02	0.145
CO-57		122.06	*	-1.410E-02	2.286E-02	3.633E-02	2.272E-03	-0.388
		136.48		3.018E-02	1.979E-01	3.242E-01	2.181E-02	0.093
CO-58		810.76	*	7.200E-03	3.988E-02	6.616E-02	5.091E-03	0.109
FE-59		142.65		-7.909E-01	2.511E+00	3.972E+00	2.244E-01	-0.199
		192.34		2.639E-01	8.361E-01	1.354E+00	1.564E-01	0.195
		1099.22	*	2.203E-03	8.679E-02	1.449E-01	1.070E-02	0.015
		1291.56		1.572E-02	1.256E-01	2.089E-01	1.682E-02	0.075
CO-60		1173.22		2.910E-03	4.763E-02	7.928E-02	4.358E-03	0.037
		1332.49	*	5.815E-03	3.849E-02	6.416E-02	4.481E-03	0.091
ZN-65		1115.52	*	-4.244E-02	1.119E-01	1.528E-01	9.612E-03	-0.278
GE-68		1077.35	*	-2.544E-01	1.254E+00	2.053E+00	1.384E-01	-0.124
AS-73		53.44	*	2.526E-01	7.260E-01	1.252E+00	8.084E-02	0.202
AS-74		595.88	*	-3.183E-02	8.874E-02	1.446E-01	9.205E-03	-0.220
		634.78		-1.994E-01	3.377E-01	5.352E-01	3.449E-02	-0.372
SE-75		66.05		-8.459E-01	4.755E+00	7.114E+00	6.211E-01	-0.119

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		96.73		-8.789E-01	7.483E-01	1.022E+00	1.294E-01	-0.860
		121.11		4.752E-02	1.219E-01	2.032E-01	1.935E-02	0.234
		136.00		1.592E-02	3.626E-02	6.016E-02	3.552E-03	0.265
		198.60		-2.592E-01	1.670E+00	2.615E+00	1.757E-01	-0.099
		264.65	*	-4.384E-02	4.367E-02	5.952E-02	3.374E-03	-0.737
		279.53		2.109E-02	1.044E-01	1.562E-01	9.570E-03	0.135
		303.91		-3.228E+00	1.938E+00	2.874E+00	2.721E-01	-1.123
		400.65		-1.681E-01	2.440E-01	3.786E-01	3.383E-02	-0.444
BR-77	+	87.88		7.723E+02	2.209E+02	3.028E+02	2.315E+01	2.550
		200.40		-5.243E+01	1.458E+02	2.273E+02	1.205E+01	-0.231
	+	239.00		2.319E+02	2.042E+01	3.416E+01	1.881E+00	6.790
		249.79		1.852E+00	5.820E+01	9.821E+01	5.454E+00	0.019
		281.68		-2.358E+01	8.875E+01	1.280E+02	7.235E+00	-0.184
		297.23		6.556E+01	6.161E+01	9.595E+01	5.446E+00	0.683
		303.76		-3.075E+02	1.617E+02	2.384E+02	1.355E+01	-1.290
		439.47		1.524E+02	1.230E+02	2.174E+02	1.252E+01	0.701
		484.57		-3.608E+01	2.100E+02	3.330E+02	1.992E+01	-0.108
		520.65	*	-4.218E+00	9.804E+00	1.510E+01	9.259E-01	-0.279
		574.64		-3.513E+01	1.940E+02	2.910E+02	1.837E+01	-0.121
		578.91		1.026E+01	8.675E+01	1.282E+02	8.108E+00	0.080
		585.48		7.935E+02	2.232E+02	4.006E+02	2.539E+01	1.981
		755.35		1.961E+01	1.564E+02	2.597E+02	1.878E+01	0.076
		817.79		3.455E+01	1.180E+02	1.981E+02	1.531E+01	0.174
SR-82		698.33		4.472E+00	3.212E+01	5.368E+01	3.637E+00	0.083
		776.49	*	2.462E-01	3.771E-01	5.822E-01	4.308E-02	0.423
		1395.20		-3.739E-01	9.550E+00	1.548E+01	1.072E+00	-0.024
RB-83		520.41	*	-1.653E-02	6.649E-02	1.041E-01	6.381E-03	-0.159
		529.64		-4.713E-02	1.033E-01	1.585E-01	9.772E-03	-0.297
		552.65		5.069E-02	1.797E-01	3.087E-01	1.928E-02	0.164
RB-84		881.50	*	-5.380E-03	7.019E-02	1.129E-01	9.293E-03	-0.048
KR-85		513.99	*	5.317E+00	7.508E+00	1.125E+01	6.873E-01	0.472
SR-85		513.99	*	2.723E-02	3.845E-02	5.764E-02	3.520E-03	0.472
RB-86		1076.63	*	-2.161E-01	8.194E-01	1.335E+00	9.011E-02	-0.162
Y-88		898.02		-1.865E-02	4.376E-02	6.793E-02	5.706E-03	-0.275
		1836.01	*	-1.189E-02	2.917E-02	4.421E-02	2.489E-03	-0.269
ZR-88		392.90	*	-2.205E-02	2.843E-02	4.388E-02	2.407E-03	-0.502
Y-91		1204.90	*	2.044E+00	2.100E+01	3.495E+01	2.020E+00	0.058
NB-94		702.63	*	9.528E-03	3.299E-02	5.570E-02	3.794E-03	0.171
		871.10		-2.403E-02	3.535E-02	5.349E-02	4.358E-03	-0.449
NB-95		765.79	*	1.603E-02	4.636E-02	6.851E-02	5.011E-03	0.234
NB-95M		235.69	*	7.355E-02	1.205E-01	1.864E-01	1.359E-02	0.395
ZR-95		724.18		8.037E-02	1.114E-01	1.708E-01	1.347E-02	0.471
		756.15	*	2.357E-02	6.994E-02	1.181E-01	9.751E-03	0.200
NB-97		657.90	*	-2.069E-02	6.994E-02	Half-Life too short		
		1024.50		-5.863E+00	6.994E-02	Half-Life too short		
ZR-97		254.15		-7.470E-02	6.994E-02	Half-Life too short		
		355.39		2.609E-01	6.994E-02	Half-Life too short		
		507.63	*	2.067E+00	6.994E-02	Half-Life too short		
		602.52		-4.942E+00	6.994E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1021.30		5.982E-01	6.994E-02	Half-Life too short		
		1147.95		-3.851E+00	6.994E-02	Half-Life too short		
		1362.66		-1.830E+00	6.994E-02	Half-Life too short		
		1750.46		-3.329E-01	6.994E-02	Half-Life too short		
MO-99		140.51		1.508E+00	2.348E+01	3.825E+01	1.030E+01	0.039
		181.06		8.515E-01	1.624E+01	2.320E+01	3.932E+00	0.037
		366.43		3.848E+01	7.524E+01	1.276E+02	7.137E+00	0.301
		739.58	*	6.822E+00	1.075E+01	1.858E+01	2.672E+00	0.367
		778.00		-2.623E+01	3.429E+01	4.600E+01	3.410E+00	-0.570
TC-99M		140.51	*	1.652E+09	3.429E+01	Half-Life too short		
RH-101		127.23		1.327E-02	3.293E-02	4.916E-02	2.984E-03	0.270
		198.01	*	2.770E-03	3.049E-02	4.835E-02	2.558E-03	0.057
		325.23		3.436E-02	2.127E-01	3.138E-01	1.783E-02	0.109
RH-102		418.52		-5.954E-02	2.611E-01	4.173E-01	2.354E-02	-0.143
		475.06	*	-2.514E-02	2.872E-02	4.215E-02	2.503E-03	-0.596
		631.29		2.992E-03	5.162E-02	8.640E-02	5.563E-03	0.035
		697.49		-3.905E-03	7.443E-02	1.225E-01	8.296E-03	-0.032
		766.84		1.060E-01	1.087E-01	1.909E-01	1.398E-02	0.555
		1046.59		-4.431E-04	1.229E-01	2.055E-01	1.456E-02	-0.002
		1112.84		-8.511E-02	2.674E-01	3.993E-01	2.520E-02	-0.213
RU-103		497.08	*	4.229E-03	3.551E-02	5.758E-02	7.345E-03	0.073
	+	610.33		1.081E+01	2.292E+00	2.644E+00	4.139E-01	4.088
RH-106	+	511.85		7.200E-01	3.249E-01	4.153E-01	2.532E-02	1.734
		621.84	*	-2.923E-01	2.809E-01	4.221E-01	5.089E-02	-0.693
		1050.47		1.500E+00	2.392E+00	4.206E+00	2.963E-01	0.357
RU-106	+	511.85		7.200E-01	3.249E-01	4.153E-01	2.532E-02	1.734
		621.84	*	-2.923E-01	2.793E-01	4.221E-01	2.710E-02	-0.693
		1050.47		1.500E+00	2.392E+00	4.206E+00	2.963E-01	0.357
AG-108M		433.93	*	-7.279E-03	2.975E-02	4.734E-02	2.950E-03	-0.154
		614.37		-5.633E-04	4.153E-02	6.021E-02	4.127E-03	-0.009
		722.95		-2.006E-03	4.671E-02	6.639E-02	4.904E-03	-0.030
AG-110M		657.75	*	-9.711E-03	3.404E-02	4.725E-02	3.220E-03	-0.206
		677.61		4.435E-02	2.902E-01	4.868E-01	3.371E-02	0.091
		706.67		6.813E-02	2.107E-01	3.563E-01	2.544E-02	0.191
		763.93		6.654E-02	1.750E-01	2.602E-01	1.974E-02	0.256
		884.67		-2.245E-02	4.961E-02	7.670E-02	6.551E-03	-0.293
		937.48		-5.334E-02	1.155E-01	1.776E-01	1.494E-02	-0.300
		1384.27		7.647E-03	1.668E-01	2.737E-01	1.981E-02	0.028
IN-111		171.28		-4.185E-01	8.848E-01	1.386E+00	7.129E-02	-0.302
		245.39	*	-1.529E-01	9.286E-01	1.365E+00	7.555E-02	-0.112
IN-113M		391.69	*	6.570E-03	3.920E-02	6.482E-02	3.816E-03	0.101
SN-113		391.69	*	6.570E-03	3.920E-02	6.482E-02	3.816E-03	0.101
IN-114M		190.27	*	3.251E-02	1.826E-01	2.621E-01	1.375E-02	0.124
CD-115		260.90		8.608E+01	1.076E+02	1.882E+02	1.053E+01	0.457
		492.35		2.758E+00	3.133E+01	5.070E+01	3.051E+00	0.054
		527.90	*	2.776E+00	1.067E+01	1.738E+01	1.071E+00	0.160
SN-117M		156.02		-8.692E-01	2.103E+00	3.330E+00	1.778E-01	-0.261
		158.56	*	4.187E-03	5.196E-02	8.412E-02	4.443E-03	0.050
SB-122		563.90	*	4.699E-01	1.795E+00	3.075E+00	1.931E-01	0.153

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		692.80		-5.209E+00	4.142E+01	6.783E+01	4.566E+00	-0.077
I-123		159.00	*	1.760E+00	4.142E+01	Half-Life too short		
		528.96		-7.242E+01	4.142E+01	Half-Life too short		
TE-123M		159.00	*	1.002E-02	2.688E-02	4.408E-02	2.362E-03	0.227
I-124		602.71	*	-7.046E-01	7.750E-01	1.023E+00	6.530E-02	-0.689
		722.78		-5.723E-01	4.763E+00	6.708E+00	4.677E-01	-0.085
		1325.50		9.157E+00	3.393E+01	5.730E+01	3.963E+00	0.160
		1376.25		4.423E+01	2.977E+01	5.646E+01	3.922E+00	0.783
		1509.49		6.714E+00	1.461E+01	2.524E+01	1.699E+00	0.266
		1691.02		-5.368E-01	3.128E+00	5.024E+00	3.119E-01	-0.107
SB-124		602.71		-4.167E-02	4.583E-02	6.052E-02	3.863E-03	-0.689
		645.85		5.827E-02	4.922E-01	8.261E-01	5.896E-02	0.071
		709.31		-8.552E-01	2.779E+00	4.475E+00	3.072E-01	-0.191
		713.82		8.160E-01	1.622E+00	2.779E+00	3.022E-01	0.294
		722.78		-4.906E-02	4.083E-01	5.751E-01	4.141E-02	-0.085
	+	968.20		1.437E+01	5.206E+00	7.416E+00	5.811E-01	1.938
		1045.16		-8.660E-02	2.596E+00	4.329E+00	3.074E-01	-0.020
		1325.50		8.385E-01	3.106E+00	5.247E+00	3.629E-01	0.160
		1368.21		-3.288E-01	1.676E+00	2.663E+00	3.323E-01	-0.123
		1436.60		-1.675E+00	3.625E+00	5.478E+00	3.761E-01	-0.306
		1691.02	*	-1.085E-02	6.325E-02	1.016E-01	6.779E-03	-0.107
SB-125		427.89	*	1.142E-02	8.553E-02	1.402E-01	8.335E-03	0.081
	+	463.38		5.523E-01	4.193E-01	5.255E-01	3.591E-02	1.051
		600.56		2.181E-01	1.759E-01	3.172E-01	2.288E-02	0.687
		635.90		-1.996E-01	2.582E-01	4.022E-01	2.957E-02	-0.496
TE-125M		109.28	*	-5.726E+00	8.712E+00	1.361E+01	1.173E+00	-0.421
I-126		388.63		9.978E-02	1.858E-01	3.147E-01	1.729E-02	0.317
		666.33	*	2.751E-01	1.867E-01	3.117E-01	2.032E-02	0.882
		753.82		3.064E-01	1.423E+00	2.380E+00	1.718E-01	0.129
SB-126		223.80		-2.966E-01	3.598E+00	6.080E+00	3.303E-01	-0.049
	+	278.60		3.328E+00	2.353E+00	3.758E+00	2.121E-01	0.886
	+	296.50		9.798E+00	2.159E+00	3.265E+00	1.853E-01	3.001
		414.70		6.930E-02	6.881E-02	1.196E-01	6.720E-03	0.579
		415.30		5.257E+00	5.760E+00	9.952E+00	5.595E-01	0.528
		555.20		5.414E-01	3.706E+00	6.301E+00	3.940E-01	0.086
		573.80		4.043E-02	9.147E-01	1.502E+00	9.472E-02	0.027
		593.00		-4.375E-01	8.657E-01	1.392E+00	8.854E-02	-0.314
		656.30		-1.591E+00	3.333E+00	4.508E+00	2.920E-01	-0.353
		666.33		1.149E-01	7.799E-02	1.302E-01	8.491E-03	0.882
		675.00		8.511E-01	1.853E+00	3.184E+00	2.098E-01	0.267
		695.00		4.362E-02	7.439E-02	1.285E-01	8.675E-03	0.339
		697.00		-1.779E-02	2.571E-01	4.228E-01	2.861E-02	-0.042
		720.50	*	4.476E-02	1.538E-01	2.275E-01	1.582E-02	0.197
		856.80		-4.203E-01	5.218E-01	7.880E-01	6.331E-02	-0.533
		989.30		-2.861E-01	1.279E+00	2.004E+00	1.533E-01	-0.143
		1034.80		-2.728E+00	8.870E+00	1.443E+01	1.040E+00	-0.189
		1213.00		-3.060E+00	5.094E+00	7.995E+00	4.681E-01	-0.383
SB-127		61.10		2.662E+01	5.289E+01	8.252E+01	7.801E+00	0.323
		252.40		4.719E+00	4.353E+00	6.920E+00	2.872E+00	0.682

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		290.80		-1.112E+01	2.153E+01	3.033E+01	2.741E+00	-0.367
		411.60		-4.457E+00	1.149E+01	1.819E+01	2.595E+00	-0.245
		444.90		6.566E+00	8.567E+00	1.464E+01	1.574E+00	0.448
		473.00		-1.186E+00	1.623E+00	2.456E+00	2.753E-01	-0.483
		543.00		-4.724E+00	1.437E+01	2.359E+01	3.082E+00	-0.200
		603.60		-1.250E+01	1.327E+01	1.737E+01	1.920E+00	-0.720
		685.20	*	7.614E-01	1.356E+00	2.338E+00	2.326E-01	0.326
		698.50		9.775E-01	1.398E+01	2.324E+01	3.455E+00	0.042
		722.20		2.818E+00	3.135E+01	4.527E+01	4.482E+00	0.062
		783.80		2.164E+00	3.430E+00	5.903E+00	6.852E-01	0.367
XE-127		57.60		-1.127E+00	5.355E+00	9.012E+00	5.695E-01	-0.125
		145.22		4.484E-01	6.298E-01	1.041E+00	5.818E-02	0.431
		172.10		1.212E-02	1.059E-01	1.710E-01	8.802E-03	0.071
		202.84	*	-2.941E-04	4.318E-02	6.856E-02	3.646E-03	-0.004
		374.96		-1.825E-01	1.794E-01	2.727E-01	1.515E-02	-0.669
I-131		80.18		2.970E+00	5.436E+00	6.756E+00	4.843E-01	0.440
		284.30		-7.657E-03	1.391E+00	2.323E+00	1.468E-01	-0.003
		364.48	*	8.281E-03	1.089E-01	1.798E-01	1.132E-02	0.046
		636.97		-7.326E-01	1.455E+00	2.322E+00	1.644E-01	-0.315
		722.89		-5.642E-01	7.774E+00	1.101E+01	7.752E-01	-0.051
TE-132		49.72		-9.701E-01	1.603E+01	2.728E+01	2.525E+00	-0.036
		111.76		1.540E+01	2.676E+01	4.502E+01	4.127E+00	0.342
		116.30		9.877E+00	2.432E+01	4.062E+01	3.698E+00	0.243
		228.16	*	-2.568E-01	6.150E-01	1.021E+00	1.450E-01	-0.252
BA-133		53.15		9.565E-01	3.134E+00	5.398E+00	3.490E-01	0.177
		79.62		1.520E+00	1.499E+00	1.913E+00	2.755E-01	0.795
		81.00		4.358E-02	1.005E-01	1.413E-01	2.138E-02	0.308
	+	276.40		5.006E-01	3.587E-01	5.840E-01	7.529E-02	0.857
		302.84		-2.578E-01	1.366E-01	1.976E-01	2.292E-02	-1.305
		356.01	*	1.462E-02	4.167E-02	6.232E-02	7.149E-03	0.235
		383.85		-8.957E-02	2.716E-01	4.340E-01	4.654E-02	-0.206
I-133	+	510.53		1.341E+00	2.716E-01	Half-Life too short		
		529.87	*	-2.561E-03	2.716E-01	Half-Life too short		
		706.58		1.258E-01	2.716E-01	Half-Life too short		
		856.28		-4.593E-01	2.716E-01	Half-Life too short		
		875.33		8.227E-03	2.716E-01	Half-Life too short		
		1236.41		2.029E-01	2.716E-01	Half-Life too short		
		1298.22		-1.835E-02	2.716E-01	Half-Life too short		
CS-134		475.35		-5.202E-01	1.796E+00	2.770E+00	1.645E-01	-0.188
		563.23		-1.316E-01	3.249E-01	5.292E-01	3.382E-02	-0.249
		569.32		2.996E-02	1.795E-01	3.030E-01	1.956E-02	0.099
		604.70		-8.371E-03	3.616E-02	5.130E-02	3.291E-03	-0.163
		795.84	*	1.015E-01	4.928E-02	9.202E-02	7.016E-03	1.103
		801.93		-2.416E-01	3.980E-01	6.134E-01	4.696E-02	-0.394
		1038.57		9.353E-01	3.841E+00	6.566E+00	4.708E-01	0.142
		1167.94		-1.309E+00	2.444E+00	3.844E+00	2.142E-01	-0.341
		1365.15		5.909E-01	1.180E+00	2.052E+00	1.526E-01	0.288
CS-135		268.24	*	2.237E-01	1.557E-01	2.516E-01	1.892E-02	0.889
I-135		288.45		-9.926E+08	1.557E-01	Half-Life too short		

---- Non-Identified Nuclides ----

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		417.63		-1.934E+10	1.557E-01	Half-Life too short		
		546.56		4.582E+08	1.557E-01	Half-Life too short		
		836.80		1.704E+10	1.557E-01	Half-Life too short		
		1038.76		3.498E+09	1.557E-01	Half-Life too short		
		1124.00		-2.086E+09	1.557E-01	Half-Life too short		
		1131.51		2.327E+07	1.557E-01	Half-Life too short		
		1260.41	*	-2.141E+09	1.557E-01	Half-Life too short		
		1457.56		5.153E+11	1.557E-01	Half-Life too short		
		1678.03		2.061E+09	1.557E-01	Half-Life too short		
		1706.46		-1.298E+10	1.557E-01	Half-Life too short		
		1791.20		7.376E+09	1.557E-01	Half-Life too short		
CS-136		66.91		-1.401E-02	7.586E-01	1.143E+00	1.641E-01	-0.012
	+	86.29		4.710E+00	1.420E+00	1.892E+00	2.298E-01	2.489
		153.22		8.473E-01	6.037E-01	1.033E+00	7.132E-02	0.821
		163.89		-2.690E-02	9.908E-01	1.593E+00	1.076E-01	-0.017
		176.55		-1.189E-01	3.306E-01	5.199E-01	3.100E-02	-0.229
		273.65		2.852E-01	5.572E-01	6.390E-01	4.133E-02	0.446
		340.57		2.686E-01	1.281E-01	2.136E-01	1.289E-02	1.258
		818.51		-1.044E-02	6.738E-02	1.082E-01	8.374E-03	-0.097
		1048.07	*	4.114E-02	1.146E-01	1.972E-01	1.482E-02	0.209
		1235.34		4.297E-01	7.488E-01	1.123E+00	1.139E-01	0.383
CE-139		165.85	*	-1.783E-02	2.747E-02	4.276E-02	2.191E-03	-0.417
BA-140		162.64		2.406E-01	7.196E-01	1.152E+00	6.902E-02	0.209
		304.84		7.618E-02	1.103E+00	1.841E+00	5.020E-01	0.041
		423.70		4.297E-01	1.764E+00	2.908E+00	9.236E-01	0.148
		537.32	*	1.715E-01	2.380E-01	4.109E-01	1.339E-01	0.417
LA-140	+	328.77		4.362E-01	3.648E-01	5.004E-01	3.196E-02	0.872
		432.53		1.911E-01	1.820E+00	2.977E+00	1.886E-01	0.064
		487.03		2.571E-02	1.282E-01	2.094E-01	1.411E-02	0.123
		751.79		-1.285E-01	1.629E+00	2.658E+00	2.202E-01	-0.048
		815.85		-5.405E-02	3.160E-01	5.074E-01	4.469E-02	-0.107
		867.82		-1.722E-01	1.445E+00	2.319E+00	1.995E-01	-0.074
		919.63		2.687E+00	3.064E+00	5.204E+00	5.370E-01	0.516
		925.24		-4.999E-01	1.193E+00	1.847E+00	1.614E-01	-0.271
		1596.49	*	-1.017E-01	8.545E-02	1.171E-01	7.625E-03	-0.869
CE-141		145.44	*	3.894E-02	5.594E-02	9.352E-02	5.444E-03	0.416
CE-143		57.37		-1.332E-04	5.594E-02	Half-Life too short		
		231.56		4.338E-05	5.594E-02	Half-Life too short		
		293.26	*	5.038E-04	5.594E-02	Half-Life too short		
	+	350.59		2.520E-02	5.594E-02	Half-Life too short		
		490.36		8.973E-04	5.594E-02	Half-Life too short		
		664.57		2.239E-03	5.594E-02	Half-Life too short		
		721.93		1.264E-04	5.594E-02	Half-Life too short		
CE-144		80.11		1.445E+00	2.529E+00	3.148E+00	2.234E-01	0.459
		133.54	*	-1.045E-01	1.940E-01	3.076E-01	4.380E-02	-0.340
PM-144		476.78		1.476E-02	6.520E-02	1.050E-01	7.417E-03	0.141
		618.01		-3.160E-03	2.879E-02	4.762E-02	3.205E-03	-0.066
		696.49	*	-1.951E-03	3.306E-02	5.440E-02	3.680E-03	-0.036
		778.57		-1.859E+00	2.278E+00	3.184E+00	2.363E-01	-0.584

---- Non-Identified Nuclides ----

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PR-144		696.49	*	-1.322E-01	2.240E+00	3.686E+00	2.492E-01	-0.036
		1489.15		-9.880E+00	1.047E+01	1.385E+01	9.376E-01	-0.714
PM-146		453.90	*	-1.450E-02	4.485E-02	7.081E-02	6.122E-03	-0.205
		633.02		4.651E-02	1.318E+00	2.201E+00	8.128E-01	0.021
		735.90		-9.990E-02	1.554E-01	2.378E-01	6.701E-02	-0.420
		747.13		-4.710E-02	8.292E-02	1.285E-01	1.696E-02	-0.366
ND-147	+	91.11		9.309E-01	3.641E-01	4.684E-01	3.840E-02	1.988
		319.41		9.304E-01	2.892E+00	4.887E+00	2.779E-01	0.190
		439.89		4.852E+00	5.145E+00	8.923E+00	5.143E-01	0.544
		531.02	*	-2.108E-01	5.415E-01	8.341E-01	1.142E-01	-0.253
PM-149		285.90	*	3.073E+01	8.257E+01	1.404E+02	1.982E+01	0.219
EU-152		121.78		9.381E-03	6.471E-02	1.067E-01	8.486E-03	0.088
		244.69		-1.289E-02	2.996E-01	4.446E-01	2.459E-02	-0.029
		344.27	*	-7.922E-02	8.969E-02	1.395E-01	8.940E-03	-0.568
		443.98		-3.488E-01	8.660E-01	1.357E+00	7.846E-02	-0.257
		778.89		-1.902E-01	2.539E-01	3.726E-01	2.764E-02	-0.510
		867.32		-4.624E-01	8.642E-01	1.331E+00	1.080E-01	-0.347
		964.01		3.041E-01	3.957E-01	5.919E-01	4.659E-02	0.514
		1085.78		1.094E-01	4.104E-01	6.999E-01	4.649E-02	0.156
		1112.02		-2.104E-02	3.589E-01	5.666E-01	3.582E-02	-0.037
		1407.95		3.045E-01	1.899E-01	3.651E-01	2.522E-02	0.834
GD-153		69.67		1.055E+00	1.593E+00	2.484E+00	1.633E-01	0.425
	+	83.37		3.275E+01	1.633E+01	2.336E+01	1.708E+00	1.402
		97.43	*	-9.130E-02	7.952E-02	1.091E-01	7.589E-03	-0.837
		103.18		-3.050E-02	9.224E-02	1.501E-01	1.003E-02	-0.203
EU-154		123.07		-7.718E-03	4.688E-02	7.615E-02	7.358E-03	-0.101
		247.94		-1.558E-01	3.426E-01	5.209E-01	4.891E-02	-0.299
		591.81		-2.015E-01	5.673E-01	9.229E-01	9.334E-02	-0.218
		723.30		1.622E-02	1.991E-01	2.870E-01	2.316E-02	0.057
		756.87		4.279E-01	7.445E-01	1.280E+00	1.412E-01	0.334
		873.19		8.613E-02	3.034E-01	5.052E-01	6.026E-02	0.170
		996.32		-1.470E-02	3.727E-01	6.211E-01	1.074E-01	-0.024
		1004.76		-1.657E-02	2.134E-01	3.557E-01	3.856E-02	-0.047
		1274.45	*	-9.956E-02	1.309E-01	1.983E-01	1.932E-02	-0.502
EU-155		48.70		-1.608E+00	2.033E+00	3.352E+00	2.190E-01	-0.480
		60.01		3.521E-01	4.814E+00	7.366E+00	4.629E-01	0.048
	+	86.54		4.372E-01	1.252E-01	1.763E-01	1.347E-02	2.480
		105.31	*	2.591E-02	9.638E-02	1.609E-01	1.084E-02	0.161
TB-160	+	86.79		1.167E+00	3.338E-01	4.682E-01	3.540E-02	2.492
		197.04		2.548E-01	5.151E-01	8.336E-01	4.405E-02	0.306
		215.65		-7.409E-01	6.745E-01	9.970E-01	5.374E-02	-0.743
		298.57		1.916E-01	1.142E-01	1.864E-01	1.058E-02	1.028
		879.36	*	3.049E-02	1.424E-01	2.356E-01	1.934E-02	0.129
		962.29		6.096E-01	6.894E-01	1.047E+00	8.257E-02	0.582
		966.15		7.547E-01	3.109E-01	5.154E-01	4.048E-02	1.464
		1177.93		4.145E-02	3.779E-01	6.312E-01	3.496E-02	0.066
		1271.85		-1.634E-01	7.791E-01	1.256E+00	8.038E-02	-0.130
HO-166M		80.57		1.052E-01	3.225E-01	3.944E-01	2.811E-02	0.267
	+	184.41		1.465E-01	6.238E-02	6.572E-02	3.426E-03	2.229

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		280.46		-3.131E-02	8.321E-02	1.189E-01	6.718E-03	-0.263
		410.95		-6.208E-02	2.425E-01	3.883E-01	2.173E-02	-0.160
		711.68	*	9.996E-04	6.124E-02	1.012E-01	6.966E-03	0.010
		752.31		2.311E-02	2.621E-01	4.340E-01	3.128E-02	0.053
		810.29		1.483E-02	6.091E-02	1.015E-01	7.786E-03	0.146
TM-171		51.35		-6.712E+00	2.660E+01	4.488E+01	2.925E+00	-0.150
		52.39		2.037E+00	1.369E+01	2.346E+01	1.522E+00	0.087
		59.40		1.260E+01	2.567E+01	4.012E+01	2.516E+00	0.314
		66.72	*	-7.997E+00	2.804E+01	4.172E+01	2.700E+00	-0.192
LU-176	+	88.36		8.611E-01	2.463E-01	3.274E-01	2.495E-02	2.630
		201.83		7.057E-03	2.607E-02	4.199E-02	2.230E-03	0.168
		306.84	*	4.532E-03	2.257E-02	3.795E-02	2.157E-03	0.119
		401.10		-5.649E+00	6.436E+00	9.858E+00	5.458E-01	-0.573
LU-177		112.95		4.545E-01	1.489E+00	2.480E+00	1.584E-01	0.183
	+	208.36	*	2.729E+00	1.346E+00	1.782E+00	9.532E-02	1.531
LU-177M		52.97		3.622E-01	1.414E+00	2.432E+00	1.574E-01	0.149
		54.07		3.351E-01	7.469E-01	1.292E+00	8.317E-02	0.259
		61.30		6.714E-01	1.391E+00	2.169E+00	1.370E-01	0.310
		121.62		6.512E-02	3.325E-01	5.495E-01	3.431E-02	0.119
		147.16		-7.064E-02	5.886E-01	9.483E-01	5.255E-02	-0.074
		171.86		1.999E-02	4.262E-01	6.857E-01	3.529E-02	0.029
		218.09		2.816E-01	7.771E-01	1.253E+00	6.767E-02	0.225
	+	268.79		2.083E+00	1.162E+00	1.359E+00	7.635E-02	1.533
		319.02		1.510E-01	2.260E-01	3.895E-01	2.214E-02	0.388
		367.43		-1.801E-01	8.298E-01	1.343E+00	7.500E-02	-0.134
		413.65	*	2.287E-02	1.689E-01	2.774E-01	1.557E-02	0.082
HF-181		56.28		-4.899E-01	8.286E-01	1.373E+00	8.735E-02	-0.357
		57.53		-8.677E-02	4.512E-01	7.599E-01	4.804E-02	-0.114
		65.20		-1.468E-01	9.282E-01	1.391E+00	8.939E-02	-0.106
		133.02		-4.635E-03	6.842E-02	9.916E-02	5.849E-03	-0.047
		136.25		9.647E-02	4.285E-01	7.043E-01	4.093E-02	0.137
		345.85		2.306E-02	1.894E-01	2.919E-01	1.649E-02	0.079
		482.03	*	2.294E-02	3.932E-02	6.617E-02	3.951E-03	0.347
W-181		56.28		-1.916E-01	3.248E-01	5.383E-01	3.424E-02	-0.356
		57.53		-3.394E-02	1.770E-01	2.980E-01	1.884E-02	-0.114
		65.20	*	-5.714E-02	3.612E-01	5.413E-01	3.478E-02	-0.106
TA-182		67.75		-8.561E-02	1.123E-01	1.629E-01	1.060E-02	-0.525
		100.10		1.287E-01	1.574E-01	2.690E-01	1.834E-02	0.479
		152.43		1.275E-01	3.067E-01	5.053E-01	2.739E-02	0.252
		222.10		-9.903E-02	3.152E-01	5.275E-01	2.861E-02	-0.188
		1001.68		3.442E-01	2.117E+00	3.535E+00	2.664E-01	0.097
	+	1121.28		4.083E-01	2.326E-01	3.328E-01	2.065E-02	1.227
		1189.05		-2.113E-01	3.357E-01	5.257E-01	2.964E-02	-0.402
		1221.42	*	-1.034E-01	2.063E-01	3.259E-01	1.933E-02	-0.317
		1230.97		2.546E-01	6.071E-01	8.997E-01	5.416E-02	0.283
RE-183		57.98		-3.128E-02	1.754E-01	2.954E-01	1.864E-02	-0.106
		59.32		7.010E-02	1.048E-01	1.652E-01	1.036E-02	0.424
		67.20		-3.235E-02	1.961E-01	2.933E-01	1.903E-02	-0.110
		162.32	*	3.280E-02	1.060E-01	1.696E-01	8.817E-03	0.193

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	208.81		2.479E+00	1.223E+00	1.659E+00	8.879E-02	1.494
		291.72		-3.071E-01	9.624E-01	1.379E+00	7.816E-02	-0.223
RE-184		57.98		-1.153E-01	6.467E-01	1.089E+00	6.872E-02	-0.106
		59.32		2.583E-01	3.861E-01	6.085E-01	3.818E-02	0.424
		67.20		-1.193E-01	7.227E-01	1.081E+00	7.014E-02	-0.110
		161.27		6.870E-02	3.483E-01	5.549E-01	2.898E-02	0.124
		216.55		-1.060E-01	2.411E-01	3.717E-01	2.005E-02	-0.285
		252.85	*	2.285E-01	2.122E-01	3.749E-01	2.086E-02	0.610
		318.01		-1.223E-01	3.957E-01	6.438E-01	3.660E-02	-0.190
		792.07		-7.474E-01	1.073E+00	1.655E+00	1.245E-01	-0.451
		903.28		-1.199E-01	1.074E+00	1.614E+00	1.344E-01	-0.074
		920.93		-6.248E-02	5.011E-01	8.001E-01	6.563E-02	-0.078
OS-185		59.72		8.878E-02	2.829E-01	4.383E-01	2.751E-02	0.203
		61.14		7.626E-02	1.532E-01	2.392E-01	1.510E-02	0.319
		69.30		7.067E-03	2.906E-01	4.402E-01	2.888E-02	0.016
		592.07		-6.967E-01	2.309E+00	3.774E+00	2.399E-01	-0.185
		646.12	*	-7.150E-03	4.271E-02	7.013E-02	4.532E-03	-0.102
		717.42		2.378E-01	8.758E-01	1.476E+00	1.023E-01	0.161
		874.81		-6.480E-02	5.847E-01	9.382E-01	7.670E-02	-0.069
		880.27		1.607E-01	7.935E-01	1.311E+00	1.078E-01	0.123
RE-188		155.03	*	2.226E-02	1.654E-01	2.687E-01	1.440E-02	0.083
		477.96		7.702E-01	2.843E+00	4.676E+00	2.783E-01	0.165
		633.10		5.344E-03	2.653E+00	4.420E+00	2.847E-01	0.001
W-188	+	63.58		4.391E+01	7.184E+01	8.460E+01	5.397E+00	0.519
		227.08		7.425E+00	1.144E+01	1.992E+01	1.086E+00	0.373
		290.67	*	-7.264E+00	7.783E+00	1.061E+01	6.013E-01	-0.685
IR-192	+	295.96		7.544E-01	1.664E-01	2.597E-01	1.498E-02	2.905
		308.46		2.970E-02	8.987E-02	1.520E-01	8.745E-03	0.195
		316.51	*	-3.259E-02	3.165E-02	4.918E-02	2.810E-03	-0.663
		468.07		-2.901E-02	7.715E-02	1.044E-01	7.078E-03	-0.278
		604.41		-2.287E-01	4.985E-01	6.893E-01	8.037E-02	-0.332
		612.46		9.625E-01	7.801E-01	1.261E+00	1.014E-01	0.763
AU-195		65.12		-2.579E-02	1.684E-01	2.525E-01	1.622E-02	-0.102
		66.83		-2.387E-02	9.273E-02	1.382E-01	8.946E-03	-0.173
	+	75.70		1.215E+00	2.568E-01	4.200E-01	2.876E-02	2.893
		98.88	*	1.052E-01	2.105E-01	3.374E-01	2.320E-02	0.312
	+	129.76		4.338E+00	2.907E+00	4.740E+00	2.840E-01	0.915
TL-200		367.94	*	-2.635E-04	2.907E+00	Half-Life too short		
		579.30		2.033E-03	2.907E+00	Half-Life too short		
		828.27		2.406E-03	2.907E+00	Half-Life too short		
		1205.75		2.938E-04	2.907E+00	Half-Life too short		
TL-201		68.90		-1.646E+00	4.303E+00	6.814E+00	4.461E-01	-0.242
		70.82		1.060E+00	2.562E+00	3.947E+00	2.613E-01	0.268
		80.30		2.927E+00	5.821E+00	7.211E+00	5.127E-01	0.406
		135.34		7.560E+00	2.327E+01	3.842E+01	2.242E+00	0.197
		167.43	*	-1.783E-02	6.095E+00	9.798E+00	5.022E-01	-0.002
TL-202		68.90		-1.509E-01	3.945E-01	6.248E-01	4.090E-02	-0.242
		70.82		9.689E-02	2.343E-01	3.609E-01	2.389E-02	0.268
		80.30		2.677E-01	5.324E-01	6.595E-01	4.689E-02	0.406

---- Non-Identified Nuclides ----

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		439.56	*	7.411E-02	6.099E-02	1.077E-01	6.201E-03	0.688
HG-203		70.83		4.343E-01	1.022E+00	1.573E+00	1.956E-01	0.276
		72.87		1.048E+00	6.431E-01	1.018E+00	1.226E-01	1.029
		82.60		8.609E-02	1.072E+00	1.614E+00	2.087E-01	0.053
		279.20	*	1.510E-02	3.936E-02	5.965E-02	3.587E-03	0.253
BI-207		72.80		2.693E-01	1.851E-01	2.954E-01	1.981E-02	0.912
	+	74.97		6.744E-01	1.425E-01	2.139E-01	1.456E-02	3.153
	+	84.90		4.237E-01	2.113E-01	3.098E-01	2.299E-02	1.368
		569.67		2.738E-04	2.796E-02	4.665E-02	2.937E-03	0.006
		1063.62	*	4.148E-02	5.644E-02	9.975E-02	6.881E-03	0.416
		1770.23		1.719E-01	4.305E-01	6.847E-01	4.041E-02	0.251
TL-207		81.07		9.666E-02	2.214E-01	3.118E-01	2.232E-02	0.310
	+	83.78		2.794E-01	1.393E-01	2.019E-01	1.482E-02	1.384
		94.90		2.821E-01	2.063E-01	3.287E-01	2.336E-02	0.858
		122.32		-1.159E+00	1.574E+00	2.484E+00	1.759E-01	-0.467
		144.24		-3.885E-02	6.318E-01	1.011E+00	7.156E-02	-0.038
		154.21		2.573E-01	3.692E-01	6.146E-01	4.099E-02	0.419
	+	269.46		4.880E-01	2.723E-01	3.300E-01	1.944E-02	1.479
		323.87	*	-5.824E-01	6.859E-01	9.161E-01	1.509E-01	-0.636
	+	338.28		6.526E+00	1.535E+00	2.333E+00	2.440E-01	2.797
		445.03		1.942E+00	2.043E+00	3.532E+00	3.625E-01	0.550
PO-209		260.50		8.804E+00	8.196E+00	1.451E+01	8.116E-01	0.607
		262.80		-1.130E+01	2.279E+01	3.724E+01	2.085E+00	-0.304
		896.60	*	4.203E+00	7.745E+00	1.315E+01	1.098E+00	0.320
BI-210		46.50	*	-6.875E-01	2.992E+00	4.996E+00	3.764E-01	-0.138
PB-210		46.50	*	-6.875E-01	2.992E+00	4.996E+00	3.764E-01	-0.138
PO-210		46.50	*	-6.875E-01	2.992E+00	4.996E+00	3.204E-01	-0.138
PB-211		404.84	*	2.862E-01	9.417E-01	1.537E+00	9.579E-01	0.186
		427.08		6.972E-02	1.904E+00	3.099E+00	1.915E+00	0.023
		831.96		-2.739E-01	1.313E+00	2.083E+00	1.303E+00	-0.131
BI-212	+	727.18	*	1.592E+00	4.811E-01	6.883E-01	5.959E-02	2.313
		785.46		1.333E+00	1.828E+00	3.161E+00	2.361E-01	0.422
		1620.62		1.074E+00	1.143E+00	2.174E+00	1.400E-01	0.494
PO-215		81.07		9.666E-02	2.214E-01	3.118E-01	2.232E-02	0.310
	+	83.78		2.794E-01	1.393E-01	2.019E-01	1.482E-02	1.384
		94.90		2.821E-01	2.063E-01	3.287E-01	2.336E-02	0.858
		122.32		-1.159E+00	1.574E+00	2.484E+00	1.759E-01	-0.467
		144.24		-3.885E-02	6.318E-01	1.011E+00	7.156E-02	-0.038
		154.21		2.573E-01	3.692E-01	6.146E-01	4.099E-02	0.419
	+	269.46		4.880E-01	2.723E-01	3.300E-01	1.944E-02	1.479
		323.87	*	-5.824E-01	6.859E-01	9.161E-01	1.509E-01	-0.636
	+	338.28		6.526E+00	1.535E+00	2.333E+00	2.440E-01	2.797
		445.03		1.942E+00	2.043E+00	3.532E+00	3.625E-01	0.550
RN-219	+	271.23		6.261E-01	3.510E-01	4.036E-01	3.221E-02	1.551
		401.81	*	-2.663E-01	3.980E-01	6.172E-01	8.331E-02	-0.431
RN-220		549.76	*	-7.101E+00	2.317E+01	3.808E+01	2.374E+00	-0.186
RA-223		81.07		9.666E-02	2.214E-01	3.118E-01	2.232E-02	0.310
	+	83.78		2.794E-01	1.393E-01	2.019E-01	1.482E-02	1.384
		94.90		2.821E-01	2.063E-01	3.287E-01	2.336E-02	0.858

---- Non-Identified Nuclides ----

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		122.32		-1.159E+00	1.574E+00	2.484E+00	1.759E-01	-0.467
		144.24		-3.885E-02	6.318E-01	1.011E+00	7.156E-02	-0.038
		154.21		2.573E-01	3.692E-01	6.146E-01	4.099E-02	0.419
	+	269.46		4.880E-01	2.723E-01	3.300E-01	1.944E-02	1.479
		323.87	*	-5.824E-01	6.859E-01	9.161E-01	1.509E-01	-0.636
	+	338.28		6.526E+00	1.535E+00	2.333E+00	2.440E-01	2.797
		445.03		1.942E+00	2.043E+00	3.532E+00	3.625E-01	0.550
AC-227		79.80		1.977E+00	1.926E+00	2.431E+00	5.090E-01	0.813
		236.00		4.392E-01	2.424E-01	3.915E-01	4.026E-02	1.122
		256.20	*	-4.153E-01	3.333E-01	5.148E-01	7.140E-02	-0.807
		286.10		1.261E+00	1.411E+00	2.454E+00	2.819E-01	0.514
		299.80		3.000E+00	1.515E+00	2.412E+00	3.918E-01	1.244
		304.40		-1.103E+00	1.656E+00	2.629E+00	4.537E-01	-0.420
		334.20		2.994E-01	2.573E+00	3.516E+00	6.432E-01	0.085
TH-227		79.80		1.977E+00	1.928E+00	2.431E+00	5.159E-01	0.813
	+	94.00		8.980E+00	3.438E+00	3.399E+00	7.220E-01	2.642
		236.00		4.392E-01	2.413E-01	3.915E-01	3.470E-02	1.122
		256.20	*	-4.153E-01	3.356E-01	5.148E-01	8.662E-02	-0.807
		286.10		1.261E+00	1.888E+00	2.454E+00	2.457E+00	0.514
		299.80		3.000E+00	1.515E+00	2.412E+00	3.918E-01	1.244
		304.40		-1.103E+00	1.656E+00	2.629E+00	4.537E-01	-0.420
		334.20		2.994E-01	2.573E+00	3.516E+00	6.432E-01	0.085
TH-229	+	85.43		4.183E-01	2.086E-01	3.131E-01	2.336E-02	1.336
	+	88.47		3.720E-01	1.449E-01	1.875E-01	1.427E-02	1.984
		100.00		1.237E-01	1.639E-01	2.795E-01	1.907E-02	0.443
		193.63	*	-4.426E-01	4.668E-01	7.053E-01	3.713E-02	-0.628
		210.97		9.958E-01	7.885E-01	1.200E+00	6.436E-02	0.830
PA-231		283.67	*	-5.750E-02	1.403E+00	2.340E+00	3.211E-01	-0.025
		301.29		3.618E-01	5.405E-01	9.009E-01	9.357E-02	0.402
TH-231		81.07		9.666E-02	2.214E-01	3.118E-01	2.232E-02	0.310
	+	83.78		2.794E-01	1.393E-01	2.019E-01	1.482E-02	1.384
		94.90		2.821E-01	2.063E-01	3.287E-01	2.336E-02	0.858
		122.32		-1.159E+00	1.574E+00	2.484E+00	1.759E-01	-0.467
		144.24		-3.885E-02	6.318E-01	1.011E+00	7.156E-02	-0.038
		154.21		2.573E-01	3.692E-01	6.146E-01	4.099E-02	0.419
	+	269.46		4.880E-01	2.723E-01	3.300E-01	1.944E-02	1.479
		323.87	*	-5.824E-01	6.859E-01	9.161E-01	1.509E-01	-0.636
	+	338.28		6.526E+00	1.535E+00	2.333E+00	2.440E-01	2.797
		445.03		1.942E+00	2.043E+00	3.532E+00	3.625E-01	0.550
U-231	+	84.21		1.181E+01	5.889E+00	8.560E+00	6.310E-01	1.380
	+	92.29		8.705E+00	2.842E+00	3.810E+00	2.776E-01	2.285
		95.87	*	-2.630E-03	9.634E-01	1.431E+00	1.008E-01	-0.002
		108.00		-4.618E-01	1.814E+00	2.956E+00	1.926E-01	-0.156
PA-233	+	75.28		1.968E+01	4.851E+00	6.466E+00	9.322E-01	3.043
	+	86.59		7.107E+00	2.719E+00	2.868E+00	7.599E-01	2.478
		300.12		7.625E-01	4.115E-01	6.634E-01	8.881E-02	1.149
		311.98	*	2.994E-02	5.933E-02	1.013E-01	6.128E-03	0.296
		340.50		1.462E+00	7.114E-01	1.067E+00	2.447E-01	1.370
		398.62		1.100E+00	1.955E+00	3.278E+00	8.456E-01	0.335

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		415.76		1.177E+00	1.537E+00	2.604E+00	5.347E-01	0.452
PA-234	+	63.00		1.275E+00	2.092E+00	2.504E+00	3.598E-01	0.509
		94.67		3.243E-01	1.560E-01	2.509E-01	2.863E-02	1.292
		98.44		1.581E-02	9.145E-02	1.355E-01	7.528E-02	0.117
		99.86		4.614E-01	4.122E-01	7.124E-01	4.864E-02	0.648
		111.00		8.519E-02	1.759E-01	2.887E-01	3.072E-02	0.295
		131.20		3.690E-02	1.094E-01	1.624E-01	9.662E-03	0.227
		152.70		2.889E-01	3.000E-01	5.006E-01	7.845E-02	0.577
	+	186.00		5.274E+00	2.747E+00	2.556E+00	7.782E-01	2.064
		226.40		2.563E-01	3.629E-01	6.318E-01	7.194E-02	0.406
		227.20		1.392E-01	3.915E-01	6.735E-01	3.671E-02	0.207
		248.90		-1.327E-01	7.291E-01	1.217E+00	2.606E-01	-0.109
	+	293.70		4.754E+00	1.267E+00	1.554E+00	2.493E-01	3.058
		369.80		-1.879E-01	7.648E-01	1.232E+00	2.559E-01	-0.152
		568.70		2.168E-01	9.046E-01	1.535E+00	9.659E-02	0.141
		569.50		3.069E-02	2.476E-01	4.165E-01	2.622E-02	0.074
		574.00		1.026E-01	1.326E+00	2.182E+00	1.377E-01	0.047
		699.00		-2.333E-01	6.726E-01	1.078E+00	1.975E-01	-0.216
		706.10		6.192E-01	1.072E+00	1.789E+00	7.923E-01	0.346
		733.00		5.431E-02	4.236E-01	6.133E-01	1.327E-01	0.089
		742.81		9.948E-01	1.434E+00	2.231E+00	1.496E+00	0.446
		796.30		1.909E+00	1.060E+00	1.757E+00	4.697E-01	1.086
		805.60		-5.472E-02	9.866E-01	1.603E+00	4.872E-01	-0.034
		819.60		-5.113E-01	1.134E+00	1.736E+00	6.568E-01	-0.295
		826.30		-5.477E-01	8.265E-01	1.198E+00	5.343E-01	-0.457
		831.60		-1.179E-01	6.673E-01	1.070E+00	3.169E-01	-0.110
		876.40		4.317E-01	9.482E-01	1.426E+00	1.465E+00	0.303
		880.51		1.255E-01	2.805E-01	4.741E-01	3.897E-02	0.265
		883.24		1.019E-01	2.899E-01	4.729E-01	3.177E-01	0.216
		899.00		-8.546E-02	8.796E-01	1.409E+00	6.154E-01	-0.061
		925.00		-5.881E-01	1.253E+00	1.929E+00	1.576E-01	-0.305
		926.50		-9.882E-02	1.853E-01	2.806E-01	7.050E-02	-0.352
		946.00	*	-5.209E-02	3.102E-01	4.912E-01	9.084E-02	-0.106
		949.00		1.649E-02	4.986E-01	8.055E-01	6.438E-02	0.020
		980.50		-1.383E-01	7.219E-01	1.136E+00	8.778E-02	-0.122
		1394.10		8.671E-02	1.007E+00	1.661E+00	1.078E+00	0.052
PA-234M		766.42		1.197E+01	1.381E+01	1.956E+01	9.884E+00	0.612
		1001.03	*	-7.457E-01	4.803E+00	7.808E+00	7.067E-01	-0.095
U-235	+	89.95		3.734E+00	1.827E+00	1.748E+00	5.340E-01	2.137
	+	93.35		2.794E+00	1.178E+00	1.184E+00	3.269E-01	2.361
		105.00		1.184E-01	9.452E-01	1.568E+00	4.597E-01	0.076
		143.76	*	-9.540E-02	1.963E-01	3.069E-01	4.985E-02	-0.311
		163.35		-1.840E-01	4.610E-01	7.115E-01	1.266E-01	-0.259
	+	185.71		1.953E-01	8.317E-02	9.469E-02	4.943E-03	2.063
		205.31		-2.565E-01	5.389E-01	7.326E-01	1.307E-01	-0.350
NP-236		94.67		2.480E-01	1.164E-01	1.906E-01	1.357E-02	1.301
		98.44		1.190E-02	6.882E-02	1.024E-01	7.068E-03	0.116
		111.00		6.444E-02	1.329E-01	2.184E-01	1.405E-02	0.295
		160.31	*	-4.577E-02	7.738E-02	1.213E-01	6.361E-03	-0.377

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		1.620E-01	1.415E-01	2.419E-01	1.656E-02	0.669
		117.00	*	-5.504E-02	1.727E-01	2.793E-01	1.762E-02	-0.197
	+	209.75		1.958E+00	9.658E-01	1.316E+00	7.048E-02	1.488
		228.18		-1.001E-01	2.063E-01	3.419E-01	1.865E-02	-0.293
	+	277.60		2.443E-01	1.727E-01	2.765E-01	1.560E-02	0.884
		334.30		1.627E-01	1.457E+00	1.991E+00	1.129E-01	0.082
AM-241		59.54	*	6.828E-02	1.489E-01	2.322E-01	1.650E-02	0.294
CM-243		99.55		1.667E-01	1.456E-01	2.490E-01	1.704E-02	0.669
		103.76	*	-3.378E-03	8.498E-02	1.401E-01	9.332E-03	-0.024
		117.00		-5.663E-02	1.776E-01	2.873E-01	1.813E-02	-0.197
	+	209.75		1.930E+00	9.521E-01	1.297E+00	6.948E-02	1.488
		228.18		-1.011E-01	2.084E-01	3.455E-01	1.885E-02	-0.293
	+	277.60		2.463E-01	1.741E-01	2.787E-01	1.573E-02	0.884
AM-246		798.80		-1.975E-01	1.550E-01	2.257E-01	1.710E-02	-0.875
		1036.00		-4.007E-03	3.001E-01	5.015E-01	3.610E-02	-0.008
		1062.04		5.038E-02	2.435E-01	4.137E-01	2.861E-02	0.122
		1078.86	*	-4.917E-02	1.378E-01	2.219E-01	1.492E-02	-0.222
CM-247	+	278.00		1.013E+00	7.163E-01	1.151E+00	6.493E-02	0.881
		287.40		1.148E-01	1.152E+00	1.934E+00	1.095E-01	0.059
		402.60	*	-1.599E-02	3.577E-02	5.658E-02	3.138E-03	-0.283
CF-249		252.85		8.580E-01	7.967E-01	1.407E+00	7.832E-02	0.610
		333.44		9.893E-02	2.084E-01	2.686E-01	1.523E-02	0.368
		387.95	*	4.093E-02	3.665E-02	6.421E-02	3.530E-03	0.637
CF-251		176.60	*	-4.285E-02	1.146E-01	1.801E-01	9.312E-03	-0.238
		227.00		2.202E-01	3.435E-01	5.980E-01	3.259E-02	0.368
		285.00		5.193E-01	1.639E+00	2.783E+00	1.575E-01	0.187

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852001      *
* Acquisition date : 26-JAN-2010 12:06:21 Detector SN#     :               *
* Detector ID        : GAM12               Sensitivity     : 5.000         *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:01.52     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 11-JAN-2010 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G244852001           Analyst initials: MXR1          *
* Batch Number       : 942718               Sample Quantity : 1.3403E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.085E+01	2.769E+00	5.052E-01	0.000E+00
CD-109	3.693E+00	1.035E+00	1.134E+00	0.000E+00
SN-126	3.630E-01	1.018E-01	1.120E-01	0.000E+00
BA-137M	1.421E-01	6.717E-02	5.699E-02	0.000E+00
CS-137	1.502E-01	7.101E-02	6.025E-02	0.000E+00
TL-208	4.958E-01	8.371E-02	5.443E-02	0.000E+00
BI-211	3.364E+00	4.345E-01	2.997E-01	0.000E+00
PB-212	1.493E+00	1.445E-01	8.140E-02	0.000E+00
PO-212	1.493E+00	1.445E-01	8.140E-02	0.000E+00
BI-214	1.003E+00	1.622E-01	1.095E-01	0.000E+00
PB-214	1.170E+00	1.626E-01	1.045E-01	0.000E+00
PO-214	1.170E+00	1.626E-01	1.045E-01	0.000E+00
PO-216	1.493E+00	1.445E-01	8.140E-02	0.000E+00
PO-218	1.170E+00	1.626E-01	1.045E-01	0.000E+00
RA-224	4.382E+00	1.321E+00	9.263E-01	0.000E+00
RA-226	1.003E+00	1.622E-01	1.095E-01	0.000E+00
AC-228	1.565E+00	3.039E-01	1.909E-01	0.000E+00
RA-228	1.565E+00	3.039E-01	1.909E-01	0.000E+00
TH-228	1.515E+00	1.467E-01	8.262E-02	0.000E+00
TH-230	1.003E+00	1.622E-01	1.095E-01	0.000E+00
TH-232	1.565E+00	3.039E-01	1.909E-01	0.000E+00
TH-234	1.094E+00	1.762E+00	2.020E+00	0.000E+00
U-234	1.003E+00	1.622E-01	1.095E-01	0.000E+00
NP-237	1.066E+00	3.685E-01	3.327E-01	0.000E+00
U-238	1.094E+00	1.762E+00	2.020E+00	0.000E+00
AM-243	3.757E-01	7.780E-02	8.603E-02	0.000E+00
ANH-511	1.442E-01	6.376E-02	4.399E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	9.338E-02	2.898E-01	4.990E-01	0.000E+00	NOT IDENT.
NA-22	-3.564E-02	4.584E-02	7.131E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	6.428E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	3.152E-03	2.664E-02	4.595E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.871E-02	6.958E-02	0.000E+00	FAIL ABUN
SC-46	-2.513E-02	3.901E-02	6.100E-02	0.000E+00	FAIL ABUN
V-48	1.546E-03	6.887E-02	1.142E-01	0.000E+00	NOT IDENT.
CR-51	2.019E-01	3.217E-01	5.805E-01	0.000E+00	NOT IDENT.
MN-52	3.807E-03	2.293E-01	3.822E-01	0.000E+00	NOT IDENT.
MN-54	2.022E-02	3.910E-02	6.841E-02	0.000E+00	NOT IDENT.
CO-56	-2.841E-03	3.821E-02	6.238E-02	0.000E+00	FAIL ABUN
CO-57	-1.410E-02	2.240E-02	3.805E-02	0.000E+00	NOT IDENT.
CO-58	7.200E-03	3.909E-02	6.701E-02	0.000E+00	NOT IDENT.
FE-59	2.203E-03	8.506E-02	1.459E-01	0.000E+00	NOT IDENT.
CO-60	5.815E-03	3.772E-02	6.439E-02	0.000E+00	NOT IDENT.
ZN-65	-4.244E-02	1.096E-01	1.539E-01	0.000E+00	NOT IDENT.
GE-68	-2.544E-01	1.229E+00	2.068E+00	0.000E+00	NOT IDENT.
AS-73	2.526E-01	7.114E-01	1.329E+00	0.000E+00	NOT IDENT.
AS-74	-3.183E-02	8.696E-02	1.473E-01	0.000E+00	NOT IDENT.
SE-75	-4.384E-02	4.279E-02	6.149E-02	0.000E+00	NOT IDENT.
BR-77	-4.218E+00	9.608E+00	1.541E+01	0.000E+00	FAIL ABUN
SR-82	2.462E-01	3.696E-01	5.901E-01	0.000E+00	NOT IDENT.
RB-83	-1.653E-02	6.516E-02	1.062E-01	0.000E+00	NOT IDENT.
RB-84	-5.380E-03	6.879E-02	1.142E-01	0.000E+00	NOT IDENT.
KR-85	5.317E+00	7.358E+00	1.149E+01	0.000E+00	NOT IDENT.
SR-85	2.723E-02	3.768E-02	5.886E-02	0.000E+00	NOT IDENT.
RB-86	-2.161E-01	8.030E-01	1.345E+00	0.000E+00	NOT IDENT.
Y-88	-1.189E-02	2.858E-02	4.410E-02	0.000E+00	NOT IDENT.
ZR-88	-2.205E-02	2.786E-02	4.502E-02	0.000E+00	NOT IDENT.
Y-91	2.044E+00	2.058E+01	3.514E+01	0.000E+00	NOT IDENT.
NB-94	9.528E-03	3.233E-02	5.656E-02	0.000E+00	NOT IDENT.
NB-95	1.603E-02	4.543E-02	6.946E-02	0.000E+00	NOT IDENT.
NB-95M	7.355E-02	1.181E-01	1.930E-01	0.000E+00	NOT IDENT.
ZR-95	2.357E-02	6.854E-02	1.197E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.356E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.676E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	6.822E+00	1.054E+01	1.885E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.521E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.770E-03	2.988E-02	5.021E-02	0.000E+00	NOT IDENT.
RH-102	-2.514E-02	2.814E-02	4.311E-02	0.000E+00	NOT IDENT.
RU-103	4.229E-03	3.480E-02	5.884E-02	0.000E+00	FAIL ABUN
RH-106	-2.923E-01	2.753E-01	4.296E-01	0.000E+00	FAIL ABUN
RU-106	-2.923E-01	2.737E-01	4.296E-01	0.000E+00	FAIL ABUN
AG-108M	-7.279E-03	2.916E-02	4.849E-02	0.000E+00	NOT IDENT.
AG-110M	-9.711E-03	3.336E-02	4.803E-02	0.000E+00	NOT IDENT.
IN-111	-1.529E-01	9.100E-01	1.412E+00	0.000E+00	NOT IDENT.
IN-113M	6.570E-03	3.842E-02	6.652E-02	0.000E+00	NOT IDENT.
SN-113	6.570E-03	3.842E-02	6.652E-02	0.000E+00	NOT IDENT.
IN-114M	3.251E-02	1.789E-01	2.724E-01	0.000E+00	NOT IDENT.
CD-115	2.776E+00	1.045E+01	1.774E+01	0.000E+00	NOT IDENT.
SN-117M	4.187E-03	5.092E-02	8.769E-02	0.000E+00	NOT IDENT.
SB-122	4.699E-01	1.759E+00	3.135E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.627E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.002E-02	2.634E-02	4.595E-02	0.000E+00	NOT IDENT.
I-124	-7.046E-01	7.595E-01	1.042E+00	0.000E+00	NOT IDENT.
SB-124	-1.085E-02	6.198E-02	1.015E-01	0.000E+00	FAIL ABUN
SB-125	1.142E-02	8.382E-02	1.437E-01	0.000E+00	FAIL ABUN
TE-125M	-5.726E+00	8.537E+00	1.427E+01	0.000E+00	NOT IDENT.
I-126	2.751E-01	1.829E-01	3.169E-01	0.000E+00	NOT IDENT.
SB-126	4.476E-02	1.507E-01	2.309E-01	0.000E+00	FAIL ABUN
SB-127	7.614E-01	1.329E+00	2.375E+00	0.000E+00	NOT IDENT.
XE-127	-2.941E-04	4.232E-02	7.116E-02	0.000E+00	NOT IDENT.
I-131	8.281E-03	1.068E-01	1.848E-01	0.000E+00	NOT IDENT.
TE-132	-2.568E-01	6.027E-01	1.058E+00	0.000E+00	NOT IDENT.
BA-133	1.462E-02	4.084E-02	6.405E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	5.304E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	4.829E-02	9.323E-02	0.000E+00	NOT IDENT.
CS-135	2.237E-01	1.526E-01	2.599E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.661E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.114E-02	1.123E-01	1.988E-01	0.000E+00	FAIL ABUN
CE-139	-1.783E-02	2.692E-02	4.455E-02	0.000E+00	NOT IDENT.
BA-140	1.715E-01	2.332E-01	4.192E-01	0.000E+00	NOT IDENT.
LA-140	-1.017E-01	8.374E-02	1.171E-01	0.000E+00	FAIL ABUN
CE-141	3.894E-02	5.483E-02	9.763E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.768E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.045E-01	1.901E-01	3.217E-01	0.000E+00	NOT IDENT.
PM-144	-1.951E-03	3.240E-02	5.525E-02	0.000E+00	NOT IDENT.
PR-144	-1.322E-01	2.195E+00	3.744E+00	0.000E+00	NOT IDENT.

PM-146	-1.450E-02	4.395E-02	7.247E-02	0.000E+00	NOT IDENT.
ND-147	-2.108E-01	5.307E-01	8.513E-01	0.000E+00	FAIL ABUN
PM-149	3.073E+01	8.092E+01	1.448E+02	0.000E+00	NOT IDENT.
EU-152	-7.922E-02	8.790E-02	1.435E-01	0.000E+00	NOT IDENT.
GD-153	-9.130E-02	7.793E-02	1.147E-01	0.000E+00	FAIL ABUN
EU-154	-9.956E-02	1.283E-01	1.992E-01	0.000E+00	NOT IDENT.
EU-155	2.591E-02	9.446E-02	1.689E-01	0.000E+00	FAIL ABUN
TB-160	3.049E-02	1.396E-01	2.382E-01	0.000E+00	FAIL ABUN
HO-166M	9.996E-04	6.002E-02	1.028E-01	0.000E+00	FAIL ABUN
TM-171	-7.997E+00	2.748E+01	4.413E+01	0.000E+00	NOT IDENT.
LU-176	4.532E-03	2.212E-02	3.911E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.319E+00	1.849E+00	0.000E+00	FAIL ABUN
LU-177M	2.287E-02	1.655E-01	2.844E-01	0.000E+00	FAIL ABUN
HF-181	2.294E-02	3.854E-02	6.765E-02	0.000E+00	NOT IDENT.
W-181	-5.714E-02	3.540E-01	5.729E-01	0.000E+00	NOT IDENT.
TA-182	-1.034E-01	2.021E-01	3.276E-01	0.000E+00	FAIL ABUN
RE-183	3.280E-02	1.039E-01	1.767E-01	0.000E+00	FAIL ABUN
RE-184	2.285E-01	2.080E-01	3.876E-01	0.000E+00	NOT IDENT.
OS-185	-7.150E-03	4.186E-02	7.132E-02	0.000E+00	NOT IDENT.
RE-188	2.226E-02	1.620E-01	2.802E-01	0.000E+00	NOT IDENT.
W-188	-7.264E+00	7.627E+00	1.094E+01	0.000E+00	FAIL ABUN
IR-192	-3.259E-02	3.102E-02	5.065E-02	0.000E+00	FAIL ABUN
AU-195	1.052E-01	2.063E-01	3.545E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	3.887E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.783E-02	5.973E+00	1.020E+01	0.000E+00	NOT IDENT.
TL-202	7.411E-02	5.977E-02	1.103E-01	0.000E+00	NOT IDENT.
HG-203	1.510E-02	3.857E-02	6.157E-02	0.000E+00	NOT IDENT.
BI-207	4.148E-02	5.531E-02	1.005E-01	0.000E+00	FAIL ABUN
TL-207	-5.824E-01	6.722E-01	9.432E-01	0.000E+00	FAIL ABUN
PO-209	4.203E+00	7.590E+00	1.330E+01	0.000E+00	NOT IDENT.
BI-210	-6.875E-01	2.933E+00	5.317E+00	0.000E+00	NOT IDENT.
PB-210	-6.875E-01	2.933E+00	5.317E+00	0.000E+00	NOT IDENT.
PO-210	-6.875E-01	2.932E+00	5.317E+00	0.000E+00	NOT IDENT.
PB-211	2.862E-01	9.229E-01	1.576E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.715E-01	6.985E-01	0.000E+00	FAIL ABUN
PO-215	-5.824E-01	6.722E-01	9.432E-01	0.000E+00	FAIL ABUN
RN-219	-2.663E-01	3.901E-01	6.331E-01	0.000E+00	FAIL ABUN
RN-220	-7.101E+00	2.270E+01	3.884E+01	0.000E+00	NOT IDENT.
RA-223	-5.824E-01	6.722E-01	9.432E-01	0.000E+00	FAIL ABUN
AC-227	-4.153E-01	3.266E-01	5.322E-01	0.000E+00	NOT IDENT.
TH-227	-4.153E-01	3.289E-01	5.322E-01	0.000E+00	FAIL ABUN
TH-229	-4.426E-01	4.575E-01	7.327E-01	0.000E+00	FAIL ABUN
PA-231	-5.750E-02	1.375E+00	2.415E+00	0.000E+00	NOT IDENT.
TH-231	-5.824E-01	6.722E-01	9.432E-01	0.000E+00	FAIL ABUN
U-231	-2.630E-03	9.441E-01	1.505E+00	0.000E+00	FAIL ABUN
PA-233	2.994E-02	5.814E-02	1.043E-01	0.000E+00	FAIL ABUN
PA-234	-5.209E-02	3.040E-01	4.961E-01	0.000E+00	FAIL ABUN
PA-234M	-7.457E-01	4.707E+00	7.878E+00	0.000E+00	NOT IDENT.
U-235	-9.540E-02	1.923E-01	3.205E-01	0.000E+00	FAIL ABUN
NP-236	-4.577E-02	7.584E-02	1.264E-01	0.000E+00	NOT IDENT.
NP-239	-5.504E-02	1.692E-01	2.927E-01	0.000E+00	FAIL ABUN
AM-241	6.828E-02	1.459E-01	2.461E-01	0.000E+00	NOT IDENT.
CM-243	-3.378E-03	8.328E-02	1.471E-01	0.000E+00	FAIL ABUN
AM-246	-4.917E-02	1.350E-01	2.235E-01	0.000E+00	NOT IDENT.
CM-247	-1.599E-02	3.506E-02	5.803E-02	0.000E+00	FAIL ABUN
CF-249	4.093E-02	3.591E-02	6.590E-02	0.000E+00	NOT IDENT.
CF-251	-4.285E-02	1.123E-01	1.874E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 14:06:54.39

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852001.CNF;1
Sample date       : 11-JAN-2010 12:00:00 Acquisition date : 26-JAN-2010 12:06:21
Sample ID         : G244852001           Sample quantity  : 1.34030E+02 GRAM
Detector name     : GAM12                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.52  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 942718               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1337	10.67*	1.137E+00	3.085E+01	3.085E+01	9.16
CD-109	88.03	270	3.72*	5.640E+00	3.611E+00	3.693E+00	28.61
SN-126	64.28	47	9.60	3.199E+00	4.329E-01	4.329E-01	164.09
	86.94	270	8.90	5.640E+00	1.509E+00	1.509E+00	49.54
	87.57	270	37.00*	5.640E+00	3.630E-01	3.630E-01	28.61
BA-137M	661.65	103	89.98*	2.251E+00	1.419E-01	1.421E-01	48.25
CS-137	661.65	103	85.12*	2.251E+00	1.500E-01	1.502E-01	48.25
TL-208	277.35	55	6.80	4.505E+00	5.066E-01	5.066E-01	71.25
	510.84	144	21.60	2.794E+00	6.675E-01	6.675E-01	45.89
	583.14	373	84.20*	2.505E+00	4.958E-01	4.958E-01	17.23
	860.37	------	12.46	1.795E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	4.387E+00	------ Line Not Found		------
	351.07	585	12.94*	3.762E+00	3.364E+00	3.364E+00	13.18
PB-212	74.81	405	10.70	4.576E+00	2.317E+00	2.317E+00	23.10
	77.11	520	18.00	4.816E+00	1.679E+00	1.679E+00	16.04
	87.30	270	8.00	5.640E+00	1.679E+00	1.679E+00	30.31
	238.63	1192	44.60*	5.016E+00	1.493E+00	1.493E+00	9.88
	300.09	------	3.41	4.248E+00	------ Line Not Found		------
PO-212	74.81	405	10.70	4.576E+00	2.317E+00	2.317E+00	23.10
	77.11	520	18.00	4.816E+00	1.679E+00	1.679E+00	16.04
	87.30	270	8.00	5.640E+00	1.679E+00	1.679E+00	30.31
	115.19	------	0.60	6.604E+00	------ Line Not Found		------
	238.63	1192	44.60*	5.016E+00	1.493E+00	1.493E+00	9.88
	300.09	------	3.41	4.248E+00	------ Line Not Found		------
BI-214	609.31	400	46.30*	2.414E+00	1.003E+00	1.003E+00	16.50
	1120.29	66	15.10	1.422E+00	8.642E-01	8.642E-01	57.35
	1764.49	55	15.80	9.901E-01	9.796E-01	9.796E-01	39.99
PB-214	74.81	405	6.21	4.576E+00	3.993E+00	3.993E+00	22.39
	77.11	520	10.50	4.816E+00	2.879E+00	2.879E+00	17.76
	87.30	270	4.67	5.640E+00	2.876E+00	2.876E+00	29.63
	241.98	307	7.49	4.971E+00	2.311E+00	2.311E+00	31.26
	295.21	292	19.20	4.301E+00	9.904E-01	9.904E-01	22.90

Sample ID : G244852001 Acquisition date : 26-JAN-2010 12:06:21

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	351.92	585	37.20*	3.762E+00	1.170E+00	1.170E+00	14.18
PO-214	74.81	405	6.21	4.576E+00	3.993E+00	3.993E+00	22.39
	77.11	520	10.50	4.816E+00	2.879E+00	2.879E+00	17.76
	87.30	270	4.67	5.640E+00	2.876E+00	2.876E+00	29.63
	241.98	307	7.49	4.971E+00	2.311E+00	2.311E+00	31.26
	295.21	292	19.20	4.301E+00	9.904E-01	9.904E-01	22.90
	351.92	585	37.20*	3.762E+00	1.170E+00	1.170E+00	14.18
PO-216	74.81	405	10.70	4.576E+00	2.317E+00	2.317E+00	23.10
	77.11	520	18.00	4.816E+00	1.679E+00	1.679E+00	16.04
	87.30	270	8.00	5.640E+00	1.679E+00	1.679E+00	30.31
	238.63	1192	44.60*	5.016E+00	1.493E+00	1.493E+00	9.88
	300.09	------	3.41	4.248E+00	------ Line Not Found		------
PO-218	74.81	405	6.21	4.576E+00	3.993E+00	3.993E+00	22.39
	77.11	520	10.50	4.816E+00	2.879E+00	2.879E+00	17.76
	87.30	270	4.67	5.640E+00	2.876E+00	2.876E+00	29.63
	241.98	307	7.49	4.971E+00	2.311E+00	2.311E+00	31.26
	295.21	292	19.20	4.301E+00	9.904E-01	9.904E-01	22.90
	351.92	585	37.20*	3.762E+00	1.170E+00	1.170E+00	14.18
RA-224	240.98	307	3.95*	4.971E+00	4.382E+00	4.382E+00	30.76
RA-226	609.31	400	46.30*	2.414E+00	1.003E+00	1.003E+00	16.50
	1120.29	66	15.10	1.422E+00	8.642E-01	8.642E-01	57.35
	1764.49	55	15.80	9.901E-01	9.796E-01	9.796E-01	39.99
AC-228	338.32	247	11.40	3.879E+00	1.563E+00	1.563E+00	45.87
	911.07	264	27.70*	1.707E+00	1.565E+00	1.565E+00	19.82
	969.11	134	16.60	1.616E+00	1.398E+00	1.398E+00	42.22
RA-228	338.32	247	11.40	3.879E+00	1.563E+00	1.563E+00	45.87
	911.07	264	27.70*	1.707E+00	1.565E+00	1.565E+00	19.82
	969.11	134	16.60	1.616E+00	1.398E+00	1.398E+00	42.22
TH-228	74.81	405	10.70	4.576E+00	2.317E+00	2.352E+00	21.16
	77.11	520	18.00	4.816E+00	1.679E+00	1.705E+00	16.04
	87.30	270	8.00	5.640E+00	1.679E+00	1.704E+00	28.61
	238.63	1192	44.60*	5.016E+00	1.493E+00	1.515E+00	9.88
	300.09	------	3.41	4.248E+00	------ Line Not Found		------
TH-230	609.31	400	46.30*	2.414E+00	1.003E+00	1.003E+00	16.50
	1120.29	66	15.10	1.422E+00	8.642E-01	8.642E-01	57.35
	1764.49	55	15.80	9.901E-01	9.796E-01	9.796E-01	39.99
TH-232	338.32	247	11.40	3.879E+00	1.563E+00	1.563E+00	21.82
	911.07	264	27.70*	1.707E+00	1.565E+00	1.565E+00	19.82
	969.11	134	16.60	1.616E+00	1.398E+00	1.398E+00	42.22
TH-234	63.29	47	3.80*	3.199E+00	1.094E+00	1.094E+00	164.37
	92.38	268	5.41	5.975E+00	2.324E+00	2.324E+00	36.31
U-234	609.31	400	46.30*	2.414E+00	1.003E+00	1.003E+00	16.50
	1120.29	66	15.10	1.422E+00	8.642E-01	8.642E-01	57.35
	1764.49	55	15.80	9.901E-01	9.796E-01	9.796E-01	39.99
NP-237	86.50	270	12.60*	5.640E+00	1.066E+00	1.066E+00	35.27
	95.87	------	2.60	6.124E+00	------ Line Not Found		------
U-238	63.29	47	3.80*	3.199E+00	1.094E+00	1.094E+00	164.37
	92.38	268	5.41	5.975E+00	2.324E+00	2.324E+00	32.65
AM-243	74.67	405	66.00*	4.576E+00	3.757E-01	3.757E-01	21.13

Sample ID : G244852001 Acquisition date : 26-JAN-2010 12:06:21

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	86.72	270	0.34	5.640E+00	3.998E+01	3.998E+01	28.61
	117.66	------	0.55	6.624E+00	------	Line Not Found	------
	142.18	------	0.13	6.534E+00	------	Line Not Found	------
ANH-511	511.00	144	100.00*	2.794E+00	1.442E-01	1.442E-01	45.13

Flag: "*" = Keyline

Sample ID : G244852001 Acquisition date : 26-JAN-2010 12:06:21

Total number of lines in spectrum 32
Number of unidentified lines 2
Number of lines tentatively identified by NID 30 93.75%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.085E+01	3.085E+01	0.283E+01	9.16	
CD-109	464.00D	1.02	3.611E+00	3.693E+00	1.057E+00	28.61	
SN-126	1.00E+05Y	1.00	3.630E-01	3.630E-01	1.039E-01	28.61	
BA-137M	30.17Y	1.00	1.419E-01	1.421E-01	0.685E-01	48.25	
CS-137	30.17Y	1.00	1.500E-01	1.502E-01	0.725E-01	48.25	
TL-208	1.41E+10Y	1.00	4.958E-01	4.958E-01	0.854E-01	17.23	
BI-211	7.04E+08Y	1.00	3.364E+00	3.364E+00	0.443E+00	13.18	
PB-212	1.41E+10Y	1.00	1.493E+00	1.493E+00	0.147E+00	9.88	
PO-212	1.41E+10Y	1.00	1.493E+00	1.493E+00	0.147E+00	9.88	
BI-214	1600.00Y	1.00	1.003E+00	1.003E+00	0.165E+00	16.50	
PB-214	1600.00Y	1.00	1.170E+00	1.170E+00	0.166E+00	14.18	
PO-214	1600.00Y	1.00	1.170E+00	1.170E+00	0.166E+00	14.18	
PO-216	1.41E+10Y	1.00	1.493E+00	1.493E+00	0.147E+00	9.88	
PO-218	1600.00Y	1.00	1.170E+00	1.170E+00	0.166E+00	14.18	
RA-224	1.41E+10Y	1.00	4.382E+00	4.382E+00	1.348E+00	30.76	
RA-226	1600.00Y	1.00	1.003E+00	1.003E+00	0.165E+00	16.50	
AC-228	1.41E+10Y	1.00	1.565E+00	1.565E+00	0.310E+00	19.82	
RA-228	1.41E+10Y	1.00	1.565E+00	1.565E+00	0.310E+00	19.82	
TH-228	1.91Y	1.02	1.493E+00	1.515E+00	0.150E+00	9.88	
TH-230	4.47E+09Y	1.00	1.003E+00	1.003E+00	0.165E+00	16.50	
TH-232	1.41E+10Y	1.00	1.565E+00	1.565E+00	0.310E+00	19.82	
TH-234	4.47E+09Y	1.00	1.094E+00	1.094E+00	1.798E+00	164.37	
U-234	4.47E+09Y	1.00	1.003E+00	1.003E+00	0.165E+00	16.50	
NP-237	2.14E+06Y	1.00	1.066E+00	1.066E+00	0.376E+00	35.27	
U-238	4.47E+09Y	1.00	1.094E+00	1.094E+00	1.798E+00	164.37	
AM-243	7380.00Y	1.00	3.757E-01	3.757E-01	0.794E-01	21.13	
ANH-511	1.00E+09Y	1.00	1.442E-01	1.442E-01	0.651E-01	45.13	
	Total Activity :		6.532E+01	6.543E+01			

Grand Total Activity : 6.532E+01 6.543E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G244852001 Acquisition date : 26-JAN-2010 12:06:21

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
5	84.15	134	349	1.51	167.80	164	28	1.86E-02	49.3	5.43E+00	T
5	89.85	209	395	1.43	179.21	164	28	2.91E-02	38.2	5.82E+00	T
0	128.93	79	245	0.88	257.41	255	6	1.09E-02	66.7	6.64E+00	T
0	185.60	221	426	1.25	370.80	364	13	3.07E-02	42.3	5.86E+00	T
0	209.39	124	245	1.48	418.41	413	9	1.72E-02	49.0	5.46E+00	T
0	270.12	109	213	1.36	539.92	534	11	1.51E-02	55.5	4.59E+00	T
0	328.31	56	151	1.41	656.34	652	9	7.79E-03	83.4	3.97E+00	T
0	463.17	61	125	1.27	926.16	920	11	8.49E-03	75.6	3.03E+00	T
0	726.83	139	60	1.58	1453.63	1446	14	1.94E-02	29.0	2.08E+00	T
0	769.25	96	75	7.83	1538.50	1529	20	1.34E-02	48.5	1.98E+00	
0	1239.06	48	86	1.30	2478.18	2470	16	6.72E-03	91.1	1.30E+00	T
0	1847.87	23	0	2.44	3695.57	3689	12	3.19E-03	41.7	9.62E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 14:07:02.40

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
*                                                                           *
*                                DETECTOR DATA                              *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852001.CNF;1 *
* Acquisition date  : 26-JAN-2010 12:06:21  Detector SN#     :             *
* Detector ID       : GAM12                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 02:00:01.52          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                                SAMPLE DATA                                *
*                                                                           *
* Sample date       : 11-JAN-2010 12:00:00  Nuclide Library : SOLID        *
* Sample ID         : G244852001            Analyst initials: MXR1         *
* Batch Number      : 942718                Sample Quantity : 1.34030E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24.5MS Isotope      :                *
* MSD ID           :                      MSD Isotope      :               *
* LCS ID           : 1032-A               LCS Isotope      :               *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.085E+01	2.826E+00	5.042E-01	3.595E-02	61.188
CD-109	3.693E+00	1.057E+00	1.077E+00	8.239E-02	3.430
SN-126	3.630E-01	1.039E-01	1.063E-01	8.105E-03	3.414
BA-137M	1.421E-01	6.854E-02	5.606E-02	3.634E-03	2.534
CS-137	1.502E-01	7.246E-02	5.927E-02	3.855E-03	2.534
TL-208	4.958E-01	8.541E-02	5.342E-02	3.821E-03	9.282
BI-211	3.364E+00	4.434E-01	2.915E-01	1.832E-02	11.544
PB-212	1.493E+00	1.475E-01	7.864E-02	5.584E-03	18.980
PO-212	1.493E+00	1.475E-01	7.864E-02	5.584E-03	18.980
BI-214	1.003E+00	1.655E-01	1.076E-01	8.855E-03	9.326
PB-214	1.170E+00	1.659E-01	1.016E-01	8.300E-03	11.518
PO-214	1.170E+00	1.659E-01	1.016E-01	8.300E-03	11.518
PO-216	1.493E+00	1.475E-01	7.864E-02	5.584E-03	18.980
PO-218	1.170E+00	1.659E-01	1.016E-01	8.300E-03	11.518
RA-224	4.382E+00	1.348E+00	8.950E-01	4.937E-02	4.896
RA-226	1.003E+00	1.655E-01	1.076E-01	8.855E-03	9.326
AC-228	1.565E+00	3.101E-01	1.889E-01	2.074E-02	8.284
RA-228	1.565E+00	3.101E-01	1.889E-01	2.074E-02	8.284

Sample ID : G244852001 Acquisition date : 26-JAN-2010 12:06:21

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.515E+00	1.497E-01	7.982E-02	5.668E-03	18.980
TH-230	1.003E+00	1.655E-01	1.076E-01	8.855E-03	9.326
TH-232	1.565E+00	3.101E-01	1.889E-01	2.074E-02	8.284
TH-234	1.094E+00	1.798E+00	1.908E+00	3.248E-01	0.573
U-234	1.003E+00	1.655E-01	1.076E-01	8.855E-03	9.326
NP-237	1.066E+00	3.760E-01	3.159E-01	6.940E-02	3.375
U-238	1.094E+00	1.798E+00	1.908E+00	3.248E-01	0.573
AM-243	3.757E-01	7.938E-02	8.148E-02	5.536E-03	4.611
ANH-511	1.442E-01	6.506E-02	4.307E-02	2.625E-03	3.347

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	9.338E-02		2.957E-01	4.880E-01	3.358E-02	0.191
NA-22	-3.564E-02		4.678E-02	7.099E-02	4.572E-03	-0.502
NA-24	-2.631E-01		3.279E-01	Half-Life too short		
AL-26	3.152E-03		2.719E-02	4.605E-02	2.642E-03	0.068
TI-44	3.099E-01	+	4.971E-02	6.596E-02	4.613E-03	4.698
SC-46	-2.513E-02		3.981E-02	6.032E-02	5.000E-03	-0.417
V-48	1.546E-03		7.028E-02	1.131E-01	8.714E-03	0.014
CR-51	2.019E-01		3.283E-01	5.637E-01	3.584E-02	0.358
MN-52	3.807E-03		2.340E-01	3.814E-01	2.620E-02	0.010
MN-54	2.022E-02		3.990E-02	6.758E-02	5.313E-03	0.299
CO-56	-2.841E-03		3.899E-02	6.164E-02	4.903E-03	-0.046
CO-57	-1.410E-02		2.286E-02	3.633E-02	2.272E-03	-0.388
CO-58	7.200E-03		3.988E-02	6.616E-02	5.091E-03	0.109
FE-59	2.203E-03		8.679E-02	1.449E-01	1.070E-02	0.015
CO-60	5.815E-03		3.849E-02	6.416E-02	4.481E-03	0.091
ZN-65	-4.244E-02		1.119E-01	1.528E-01	9.612E-03	-0.278
GE-68	-2.544E-01		1.254E+00	2.053E+00	1.384E-01	-0.124
AS-73	2.526E-01		7.260E-01	1.252E+00	8.084E-02	0.202
AS-74	-3.183E-02		8.874E-02	1.446E-01	9.205E-03	-0.220
SE-75	-4.384E-02		4.367E-02	5.952E-02	3.374E-03	-0.737
BR-77	-4.218E+00		9.804E+00	1.510E+01	9.259E-01	-0.279
SR-82	2.462E-01		3.771E-01	5.822E-01	4.308E-02	0.423
RB-83	-1.653E-02		6.649E-02	1.041E-01	6.381E-03	-0.159
RB-84	-5.380E-03		7.019E-02	1.129E-01	9.293E-03	-0.048
KR-85	5.317E+00		7.508E+00	1.125E+01	6.873E-01	0.472
SR-85	2.723E-02		3.845E-02	5.764E-02	3.520E-03	0.472
RB-86	-2.161E-01		8.194E-01	1.335E+00	9.011E-02	-0.162
Y-88	-1.189E-02		2.917E-02	4.421E-02	2.489E-03	-0.269
ZR-88	-2.205E-02		2.843E-02	4.388E-02	2.407E-03	-0.502
Y-91	2.044E+00		2.100E+01	3.495E+01	2.020E+00	0.058
NB-94	9.528E-03		3.299E-02	5.570E-02	3.794E-03	0.171
NB-95	1.603E-02		4.636E-02	6.851E-02	5.011E-03	0.234
NB-95M	7.355E-02		1.205E-01	1.864E-01	1.359E-02	0.395
ZR-95	2.357E-02		6.994E-02	1.181E-01	9.751E-03	0.200

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	-2.069E-02		4.263E-02	Half-Life too short		
ZR-97	2.067E+00		8.550E-01	Half-Life too short		
MO-99	6.822E+00		1.075E+01	1.858E+01	2.672E+00	0.367
TC-99M	1.652E+09		1.286E+10	Half-Life too short		
RH-101	2.770E-03		3.049E-02	4.835E-02	2.558E-03	0.057
RH-102	-2.514E-02		2.872E-02	4.215E-02	2.503E-03	-0.596
RU-103	4.229E-03		3.551E-02	5.758E-02	7.345E-03	0.073
RH-106	-2.923E-01		2.809E-01	4.221E-01	5.089E-02	-0.693
RU-106	-2.923E-01		2.793E-01	4.221E-01	2.710E-02	-0.693
AG-108M	-7.279E-03		2.975E-02	4.734E-02	2.950E-03	-0.154
AG-110M	-9.711E-03		3.404E-02	4.725E-02	3.220E-03	-0.206
IN-111	-1.529E-01		9.286E-01	1.365E+00	7.555E-02	-0.112
IN-113M	6.570E-03		3.920E-02	6.482E-02	3.816E-03	0.101
SN-113	6.570E-03		3.920E-02	6.482E-02	3.816E-03	0.101
IN-114M	3.251E-02		1.826E-01	2.621E-01	1.375E-02	0.124
CD-115	2.776E+00		1.067E+01	1.738E+01	1.071E+00	0.160
SN-117M	4.187E-03		5.196E-02	8.412E-02	4.443E-03	0.050
SB-122	4.699E-01		1.795E+00	3.075E+00	1.931E-01	0.153
I-123	1.760E+00		2.361E+00	Half-Life too short		
TE-123M	1.002E-02		2.688E-02	4.408E-02	2.362E-03	0.227
I-124	-7.046E-01		7.750E-01	1.023E+00	6.530E-02	-0.689
SB-124	-1.085E-02		6.325E-02	1.016E-01	6.779E-03	-0.107
SB-125	1.142E-02		8.553E-02	1.402E-01	8.335E-03	0.081
TE-125M	-5.726E+00		8.712E+00	1.361E+01	1.173E+00	-0.421
I-126	2.751E-01		1.867E-01	3.117E-01	2.032E-02	0.882
SB-126	4.476E-02		1.538E-01	2.275E-01	1.582E-02	0.197
SB-127	7.614E-01		1.356E+00	2.338E+00	2.326E-01	0.326
XE-127	-2.941E-04		4.318E-02	6.856E-02	3.646E-03	-0.004
I-131	8.281E-03		1.089E-01	1.798E-01	1.132E-02	0.046
TE-132	-2.568E-01		6.150E-01	1.021E+00	1.450E-01	-0.252
BA-133	1.462E-02		4.167E-02	6.232E-02	7.149E-03	0.235
I-133	-2.561E-03		2.706E-03	Half-Life too short		
CS-134	1.015E-01		4.928E-02	9.202E-02	7.016E-03	1.103
CS-135	2.237E-01		1.557E-01	2.516E-01	1.892E-02	0.889
I-135	-2.141E+09		2.378E+09	Half-Life too short		
CS-136	4.114E-02		1.146E-01	1.972E-01	1.482E-02	0.209
CE-139	-1.783E-02		2.747E-02	4.276E-02	2.191E-03	-0.417
BA-140	1.715E-01		2.380E-01	4.109E-01	1.339E-01	0.417
LA-140	-1.017E-01		8.545E-02	1.171E-01	7.625E-03	-0.869
CE-141	3.894E-02		5.594E-02	9.352E-02	5.444E-03	0.416
CE-143	5.038E-04		9.021E-05	Half-Life too short		
CE-144	-1.045E-01		1.940E-01	3.076E-01	4.380E-02	-0.340
PM-144	-1.951E-03		3.306E-02	5.440E-02	3.680E-03	-0.036
PR-144	-1.322E-01		2.240E+00	3.686E+00	2.492E-01	-0.036
PM-146	-1.450E-02		4.485E-02	7.081E-02	6.122E-03	-0.205
ND-147	-2.108E-01		5.415E-01	8.341E-01	1.142E-01	-0.253
PM-149	3.073E+01		8.257E+01	1.404E+02	1.982E+01	0.219
EU-152	-7.922E-02		8.969E-02	1.395E-01	8.940E-03	-0.568

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-9.130E-02		7.952E-02	1.091E-01	7.589E-03	-0.837
EU-154	-9.956E-02		1.309E-01	1.983E-01	1.932E-02	-0.502
EU-155	2.591E-02		9.638E-02	1.609E-01	1.084E-02	0.161
TB-160	3.049E-02		1.424E-01	2.356E-01	1.934E-02	0.129
HO-166M	9.996E-04		6.124E-02	1.012E-01	6.966E-03	0.010
TM-171	-7.997E+00		2.804E+01	4.172E+01	2.700E+00	-0.192
LU-176	4.532E-03		2.257E-02	3.795E-02	2.157E-03	0.119
LU-177	2.729E+00	+	1.346E+00	1.782E+00	9.532E-02	1.531
LU-177M	2.287E-02		1.689E-01	2.774E-01	1.557E-02	0.082
HF-181	2.294E-02		3.932E-02	6.617E-02	3.951E-03	0.347
W-181	-5.714E-02		3.612E-01	5.413E-01	3.478E-02	-0.106
TA-182	-1.034E-01		2.063E-01	3.259E-01	1.933E-02	-0.317
RE-183	3.280E-02		1.060E-01	1.696E-01	8.817E-03	0.193
RE-184	2.285E-01		2.122E-01	3.749E-01	2.086E-02	0.610
OS-185	-7.150E-03		4.271E-02	7.013E-02	4.532E-03	-0.102
RE-188	2.226E-02		1.654E-01	2.687E-01	1.440E-02	0.083
W-188	-7.264E+00		7.783E+00	1.061E+01	6.013E-01	-0.685
IR-192	-3.259E-02		3.165E-02	4.918E-02	2.810E-03	-0.663
AU-195	1.052E-01		2.105E-01	3.374E-01	2.320E-02	0.312
TL-200	-2.635E-04		1.983E-04	Half-Life too short		
TL-201	-1.783E-02		6.095E+00	9.798E+00	5.022E-01	-0.002
TL-202	7.411E-02		6.099E-02	1.077E-01	6.201E-03	0.688
HG-203	1.510E-02		3.936E-02	5.965E-02	3.587E-03	0.253
BI-207	4.148E-02		5.644E-02	9.975E-02	6.881E-03	0.416
TL-207	-5.824E-01		6.859E-01	9.161E-01	1.509E-01	-0.636
PO-209	4.203E+00		7.745E+00	1.315E+01	1.098E+00	0.320
BI-210	-6.875E-01		2.992E+00	4.996E+00	3.764E-01	-0.138
PB-210	-6.875E-01		2.992E+00	4.996E+00	3.764E-01	-0.138
PO-210	-6.875E-01		2.992E+00	4.996E+00	3.204E-01	-0.138
PB-211	2.862E-01		9.417E-01	1.537E+00	9.579E-01	0.186
BI-212	1.592E+00	+	4.811E-01	6.883E-01	5.959E-02	2.313
PO-215	-5.824E-01		6.859E-01	9.161E-01	1.509E-01	-0.636
RN-219	-2.663E-01		3.980E-01	6.172E-01	8.331E-02	-0.431
RN-220	-7.101E+00		2.317E+01	3.808E+01	2.374E+00	-0.186
RA-223	-5.824E-01		6.859E-01	9.161E-01	1.509E-01	-0.636
AC-227	-4.153E-01		3.333E-01	5.148E-01	7.140E-02	-0.807
TH-227	-4.153E-01		3.356E-01	5.148E-01	8.662E-02	-0.807
TH-229	-4.426E-01		4.668E-01	7.053E-01	3.713E-02	-0.628
PA-231	-5.750E-02		1.403E+00	2.340E+00	3.211E-01	-0.025
TH-231	-5.824E-01		6.859E-01	9.161E-01	1.509E-01	-0.636
U-231	-2.630E-03		9.634E-01	1.431E+00	1.008E-01	-0.002
PA-233	2.994E-02		5.933E-02	1.013E-01	6.128E-03	0.296
PA-234	-5.209E-02		3.102E-01	4.912E-01	9.084E-02	-0.106
PA-234M	-7.457E-01		4.803E+00	7.808E+00	7.067E-01	-0.095
U-235	-9.540E-02		1.963E-01	3.069E-01	4.985E-02	-0.311
NP-236	-4.577E-02		7.738E-02	1.213E-01	6.361E-03	-0.377
NP-239	-5.504E-02		1.727E-01	2.793E-01	1.762E-02	-0.197
AM-241	6.828E-02		1.489E-01	2.322E-01	1.650E-02	0.294

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-3.378E-03		8.498E-02	1.401E-01	9.332E-03	-0.024
AM-246	-4.917E-02		1.378E-01	2.219E-01	1.492E-02	-0.222
CM-247	-1.599E-02		3.577E-02	5.658E-02	3.138E-03	-0.283
CF-249	4.093E-02		3.665E-02	6.421E-02	3.530E-03	0.637
CF-251	-4.285E-02		1.146E-01	1.801E-01	9.312E-03	-0.238

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G244852001           *
* Acquisition date  : 26-JAN-2010 12:06:21 Detector SN#     :               *
* Detector ID       : GAM12                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.52      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 11-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G244852001           Analyst initials: MXR1           *
* Batch Number      : 942718               Sample Quantity : 1.3403E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.085E+01	2.769E+00	2.528E-01	1.413E+00
CD-109	3.693E+00	1.035E+00	5.672E-01	5.283E-01
SN-126	3.630E-01	1.018E-01	5.602E-02	5.193E-02
BA-137M	1.421E-01	6.717E-02	2.851E-02	3.427E-02
CS-137	1.502E-01	7.101E-02	3.014E-02	3.623E-02
TL-208	4.958E-01	8.371E-02	2.723E-02	4.271E-02
BI-211	3.364E+00	4.345E-01	1.499E-01	2.217E-01
PB-212	1.493E+00	1.445E-01	4.072E-02	7.374E-02
PO-212	1.493E+00	1.445E-01	4.072E-02	7.374E-02
BI-214	1.003E+00	1.622E-01	5.478E-02	8.275E-02
PB-214	1.170E+00	1.626E-01	5.226E-02	8.295E-02
PO-214	1.170E+00	1.626E-01	5.226E-02	8.295E-02
PO-216	1.493E+00	1.445E-01	4.072E-02	7.374E-02
PO-218	1.170E+00	1.626E-01	5.226E-02	8.295E-02
RA-224	4.382E+00	1.321E+00	4.634E-01	6.739E-01
RA-226	1.003E+00	1.622E-01	5.478E-02	8.275E-02
AC-228	1.565E+00	3.039E-01	9.551E-02	1.551E-01
RA-228	1.565E+00	3.039E-01	9.551E-02	1.551E-01
TH-228	1.515E+00	1.467E-01	4.134E-02	7.485E-02
TH-230	1.003E+00	1.622E-01	5.478E-02	8.275E-02
TH-232	1.565E+00	3.039E-01	9.551E-02	1.551E-01
TH-234	1.094E+00	1.762E+00	1.011E+00	8.988E-01
U-234	1.003E+00	1.622E-01	5.478E-02	8.275E-02
NP-237	1.066E+00	3.685E-01	1.665E-01	1.880E-01
U-238	1.094E+00	1.762E+00	1.011E+00	8.988E-01
AM-243	3.757E-01	7.780E-02	4.304E-02	3.969E-02
ANH-511	1.442E-01	6.376E-02	2.201E-02	3.253E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	9.338E-02	2.898E-01	2.496E-01	1.478E-01	NOT IDENT.
NA-22	-3.564E-02	4.584E-02	3.568E-02	2.339E-02	NOT IDENT.
NA-24	-2.631E+05	6.428E+05	0.000E+00	3.279E+05	SHORT HLIF
AL-26	3.152E-03	2.664E-02	2.299E-02	1.359E-02	NOT IDENT.
TI-44	3.099E-01	4.871E-02	3.481E-02	2.485E-02	FAIL ABUN
SC-46	-2.513E-02	3.901E-02	3.052E-02	1.990E-02	FAIL ABUN
V-48	1.546E-03	6.887E-02	5.711E-02	3.514E-02	NOT IDENT.
CR-51	2.019E-01	3.217E-01	2.904E-01	1.642E-01	NOT IDENT.
MN-52	3.807E-03	2.293E-01	1.912E-01	1.170E-01	NOT IDENT.
MN-54	2.022E-02	3.910E-02	3.423E-02	1.995E-02	NOT IDENT.
CO-56	-2.841E-03	3.821E-02	3.121E-02	1.950E-02	FAIL ABUN
CO-57	-1.410E-02	2.240E-02	1.903E-02	1.143E-02	NOT IDENT.
CO-58	7.200E-03	3.909E-02	3.352E-02	1.994E-02	NOT IDENT.
FE-59	2.203E-03	8.506E-02	7.300E-02	4.340E-02	NOT IDENT.
CO-60	5.815E-03	3.772E-02	3.222E-02	1.925E-02	NOT IDENT.
ZN-65	-4.244E-02	1.096E-01	7.698E-02	5.594E-02	NOT IDENT.
GE-68	-2.544E-01	1.229E+00	1.035E+00	6.271E-01	NOT IDENT.
AS-73	2.526E-01	7.114E-01	6.651E-01	3.630E-01	NOT IDENT.
AS-74	-3.183E-02	8.696E-02	7.368E-02	4.437E-02	NOT IDENT.
SE-75	-4.384E-02	4.279E-02	3.077E-02	2.183E-02	NOT IDENT.
BR-77	-4.218E+00	9.608E+00	7.712E+00	4.902E+00	FAIL ABUN
SR-82	2.462E-01	3.696E-01	2.952E-01	1.886E-01	NOT IDENT.
RB-83	-1.653E-02	6.516E-02	5.315E-02	3.325E-02	NOT IDENT.
RB-84	-5.380E-03	6.879E-02	5.715E-02	3.510E-02	NOT IDENT.
KR-85	5.317E+00	7.358E+00	5.750E+00	3.754E+00	NOT IDENT.
SR-85	2.723E-02	3.768E-02	2.945E-02	1.922E-02	NOT IDENT.
RB-86	-2.161E-01	8.030E-01	6.729E-01	4.097E-01	NOT IDENT.
Y-88	-1.189E-02	2.858E-02	2.206E-02	1.458E-02	NOT IDENT.
ZR-88	-2.205E-02	2.786E-02	2.252E-02	1.421E-02	NOT IDENT.
Y-91	2.044E+00	2.058E+01	1.758E+01	1.050E+01	NOT IDENT.
NB-94	9.528E-03	3.233E-02	2.830E-02	1.649E-02	NOT IDENT.
NB-95	1.603E-02	4.543E-02	3.475E-02	2.318E-02	NOT IDENT.
NB-95M	7.355E-02	1.181E-01	9.654E-02	6.025E-02	NOT IDENT.
ZR-95	2.357E-02	6.854E-02	5.990E-02	3.497E-02	NOT IDENT.
NB-97	-2.069E+04	8.356E+04	0.000E+00	4.263E+04	SHORT HLIF
ZR-97	2.067E+06	1.676E+06	0.000E+00	8.550E+05	SHORT HLIF
MO-99	6.822E+00	1.054E+01	9.433E+00	5.377E+00	NOT IDENT.
TC-99M	1.652E+15	2.521E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.770E-03	2.988E-02	2.512E-02	1.525E-02	NOT IDENT.
RH-102	-2.514E-02	2.814E-02	2.157E-02	1.436E-02	NOT IDENT.
RU-103	4.229E-03	3.480E-02	2.944E-02	1.776E-02	FAIL ABUN
RH-106	-2.923E-01	2.753E-01	2.149E-01	1.405E-01	FAIL ABUN
RU-106	-2.923E-01	2.737E-01	2.149E-01	1.397E-01	FAIL ABUN
AG-108M	-7.279E-03	2.916E-02	2.426E-02	1.488E-02	NOT IDENT.
AG-110M	-9.711E-03	3.336E-02	2.403E-02	1.702E-02	NOT IDENT.
IN-111	-1.529E-01	9.100E-01	7.065E-01	4.643E-01	NOT IDENT.
IN-113M	6.570E-03	3.842E-02	3.328E-02	1.960E-02	NOT IDENT.
SN-113	6.570E-03	3.842E-02	3.328E-02	1.960E-02	NOT IDENT.
IN-114M	3.251E-02	1.789E-01	1.363E-01	9.129E-02	NOT IDENT.
CD-115	2.776E+00	1.045E+01	8.877E+00	5.333E+00	NOT IDENT.
SN-117M	4.187E-03	5.092E-02	4.387E-02	2.598E-02	NOT IDENT.
SB-122	4.699E-01	1.759E+00	1.568E+00	8.975E-01	NOT IDENT.
I-123	1.760E+06	4.627E+06	0.000E+00	2.361E+06	SHORT HLIF
TE-123M	1.002E-02	2.634E-02	2.299E-02	1.344E-02	NOT IDENT.
I-124	-7.046E-01	7.595E-01	5.213E-01	3.875E-01	NOT IDENT.
SB-124	-1.085E-02	6.198E-02	5.079E-02	3.162E-02	FAIL ABUN
SB-125	1.142E-02	8.382E-02	7.187E-02	4.276E-02	FAIL ABUN
TE-125M	-5.726E+00	8.537E+00	7.141E+00	4.356E+00	NOT IDENT.
I-126	2.751E-01	1.829E-01	1.585E-01	9.334E-02	NOT IDENT.
SB-126	4.476E-02	1.507E-01	1.155E-01	7.689E-02	FAIL ABUN
SB-127	7.614E-01	1.329E+00	1.188E+00	6.782E-01	NOT IDENT.
XE-127	-2.941E-04	4.232E-02	3.560E-02	2.159E-02	NOT IDENT.
I-131	8.281E-03	1.068E-01	9.243E-02	5.447E-02	NOT IDENT.
TE-132	-2.568E-01	6.027E-01	5.291E-01	3.075E-01	NOT IDENT.
BA-133	1.462E-02	4.084E-02	3.205E-02	2.084E-02	FAIL ABUN
I-133	-2.561E+03	5.304E+03	0.000E+00	2.706E+03	SHORT HLIF
CS-134	1.015E-01	4.829E-02	4.664E-02	2.464E-02	NOT IDENT.
CS-135	2.237E-01	1.526E-01	1.300E-01	7.786E-02	NOT IDENT.
I-135	-2.141E+15	4.661E+15	0.000E+00	2.378E+15	SHORT HLIF
CS-136	4.114E-02	1.123E-01	9.947E-02	5.731E-02	FAIL ABUN
CE-139	-1.783E-02	2.692E-02	2.229E-02	1.374E-02	NOT IDENT.
BA-140	1.715E-01	2.332E-01	2.097E-01	1.190E-01	NOT IDENT.
LA-140	-1.017E-01	8.374E-02	5.859E-02	4.273E-02	FAIL ABUN
CE-141	3.894E-02	5.483E-02	4.884E-02	2.797E-02	NOT IDENT.
CE-143	5.038E+02	1.768E+02	0.000E+00	9.021E+01	SHORT HLIF
CE-144	-1.045E-01	1.901E-01	1.609E-01	9.700E-02	NOT IDENT.
PM-144	-1.951E-03	3.240E-02	2.764E-02	1.653E-02	NOT IDENT.
PR-144	-1.322E-01	2.195E+00	1.873E+00	1.120E+00	NOT IDENT.

PM-146	-1.450E-02	4.395E-02	3.626E-02	2.242E-02	NOT IDENT.
ND-147	-2.108E-01	5.307E-01	4.259E-01	2.707E-01	FAIL ABUN
PM-149	3.073E+01	8.092E+01	7.246E+01	4.128E+01	NOT IDENT.
EU-152	-7.922E-02	8.790E-02	7.178E-02	4.485E-02	NOT IDENT.
GD-153	-9.130E-02	7.793E-02	5.739E-02	3.976E-02	FAIL ABUN
EU-154	-9.956E-02	1.283E-01	9.966E-02	6.543E-02	NOT IDENT.
EU-155	2.591E-02	9.446E-02	8.450E-02	4.819E-02	FAIL ABUN
TB-160	3.049E-02	1.396E-01	1.192E-01	7.120E-02	FAIL ABUN
HO-166M	9.996E-04	6.002E-02	5.141E-02	3.062E-02	FAIL ABUN
TM-171	-7.997E+00	2.748E+01	2.208E+01	1.402E+01	NOT IDENT.
LU-176	4.532E-03	2.212E-02	1.957E-02	1.129E-02	FAIL ABUN
LU-177	2.729E+00	1.319E+00	9.250E-01	6.730E-01	FAIL ABUN
LU-177M	2.287E-02	1.655E-01	1.423E-01	8.445E-02	FAIL ABUN
HF-181	2.294E-02	3.854E-02	3.384E-02	1.966E-02	NOT IDENT.
W-181	-5.714E-02	3.540E-01	2.866E-01	1.806E-01	NOT IDENT.
TA-182	-1.034E-01	2.021E-01	1.639E-01	1.031E-01	FAIL ABUN
RE-183	3.280E-02	1.039E-01	8.841E-02	5.300E-02	FAIL ABUN
RE-184	2.285E-01	2.080E-01	1.939E-01	1.061E-01	NOT IDENT.
OS-185	-7.150E-03	4.186E-02	3.568E-02	2.136E-02	NOT IDENT.
RE-188	2.226E-02	1.620E-01	1.402E-01	8.268E-02	NOT IDENT.
W-188	-7.264E+00	7.627E+00	5.475E+00	3.891E+00	FAIL ABUN
IR-192	-3.259E-02	3.102E-02	2.534E-02	1.583E-02	FAIL ABUN
AU-195	1.052E-01	2.063E-01	1.774E-01	1.053E-01	FAIL ABUN
TL-200	-2.635E+02	3.887E+02	0.000E+00	1.983E+02	SHORT HLIF
TL-201	-1.783E-02	5.973E+00	5.105E+00	3.048E+00	NOT IDENT.
TL-202	7.411E-02	5.977E-02	5.517E-02	3.050E-02	NOT IDENT.
HG-203	1.510E-02	3.857E-02	3.081E-02	1.968E-02	NOT IDENT.
BI-207	4.148E-02	5.531E-02	5.029E-02	2.822E-02	FAIL ABUN
TL-207	-5.824E-01	6.722E-01	4.719E-01	3.430E-01	FAIL ABUN
PO-209	4.203E+00	7.590E+00	6.652E+00	3.872E+00	NOT IDENT.
BI-210	-6.875E-01	2.933E+00	2.660E+00	1.496E+00	NOT IDENT.
PB-210	-6.875E-01	2.933E+00	2.660E+00	1.496E+00	NOT IDENT.
PO-210	-6.875E-01	2.932E+00	2.660E+00	1.496E+00	NOT IDENT.
PB-211	2.862E-01	9.229E-01	7.887E-01	4.709E-01	NOT IDENT.
BI-212	1.592E+00	4.715E-01	3.495E-01	2.406E-01	FAIL ABUN
PO-215	-5.824E-01	6.722E-01	4.719E-01	3.430E-01	FAIL ABUN
RN-219	-2.663E-01	3.901E-01	3.167E-01	1.990E-01	FAIL ABUN
RN-220	-7.101E+00	2.270E+01	1.943E+01	1.158E+01	NOT IDENT.
RA-223	-5.824E-01	6.722E-01	4.719E-01	3.430E-01	FAIL ABUN
AC-227	-4.153E-01	3.266E-01	2.663E-01	1.666E-01	NOT IDENT.
TH-227	-4.153E-01	3.289E-01	2.663E-01	1.678E-01	FAIL ABUN
TH-229	-4.426E-01	4.575E-01	3.666E-01	2.334E-01	FAIL ABUN
PA-231	-5.750E-02	1.375E+00	1.208E+00	7.017E-01	NOT IDENT.
TH-231	-5.824E-01	6.722E-01	4.719E-01	3.430E-01	FAIL ABUN
U-231	-2.630E-03	9.441E-01	7.529E-01	4.817E-01	FAIL ABUN
PA-233	2.994E-02	5.814E-02	5.220E-02	2.967E-02	FAIL ABUN
PA-234	-5.209E-02	3.040E-01	2.482E-01	1.551E-01	FAIL ABUN
PA-234M	-7.457E-01	4.707E+00	3.941E+00	2.402E+00	NOT IDENT.
U-235	-9.540E-02	1.923E-01	1.603E-01	9.813E-02	FAIL ABUN
NP-236	-4.577E-02	7.584E-02	6.325E-02	3.869E-02	NOT IDENT.
NP-239	-5.504E-02	1.692E-01	1.464E-01	8.633E-02	FAIL ABUN
AM-241	6.828E-02	1.459E-01	1.231E-01	7.443E-02	NOT IDENT.
CM-243	-3.378E-03	8.328E-02	7.361E-02	4.249E-02	FAIL ABUN
AM-246	-4.917E-02	1.350E-01	1.118E-01	6.888E-02	NOT IDENT.
CM-247	-1.599E-02	3.506E-02	2.903E-02	1.789E-02	FAIL ABUN
CF-249	4.093E-02	3.591E-02	3.297E-02	1.832E-02	NOT IDENT.
CF-251	-4.285E-02	1.123E-01	9.375E-02	5.731E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	230.3073
46.50	230.3073
46.50	230.3073
48.70	250.8087
49.72	239.6794
51.35	253.8712
52.39	245.2246
52.97	245.6782
53.15	245.8183
53.44	246.0436
54.07	244.7957
56.28	279.6826
56.28	279.6851
57.37	0.0000
57.53	282.4993
57.53	282.5009
57.60	282.5591
57.98	282.8809
57.98	282.8809
59.32	265.9257
59.32	265.9257
59.40	273.9277
59.54	274.0406
59.72	279.4834
60.01	292.9778
61.10	277.9469
61.14	277.9792
61.30	278.1067
63.00	318.2350
63.29	318.4947
63.29	318.4947
63.58	318.7548
64.28	339.5089
65.12	334.9205
65.20	330.9585
65.20	330.9585
66.05	333.0803
66.72	339.0909
66.83	339.1943
66.91	325.7523
67.20	332.7715
67.20	332.7715
67.75	369.8409
67.85	369.9430
68.90	355.4908
68.90	355.4908
69.30	345.5293
69.67	318.6347
70.82	338.7162
70.82	338.7162
70.83	338.7257
72.80	376.1459
72.87	376.2148
72.87	376.2148
74.67	357.7052
74.81	357.8318
74.81	357.8318
74.81	357.8318
74.81	357.8318
74.81	357.8318
74.81	357.8318
74.81	357.8318
74.97	357.9753
75.28	358.2532
75.70	358.6292
77.11	359.8836
77.11	359.8836

77.11	359.8836
77.11	359.8836
77.11	359.8836
77.11	359.8836
77.11	359.8836
78.38	366.1076
79.62	287.6223
79.80	287.7465
79.80	287.7465
80.11	321.5108
80.18	321.5634
80.30	321.6564
80.30	321.6564
80.57	324.6623
81.00	315.6561
81.07	315.7094
81.07	315.7094
81.07	315.7094
81.07	315.7094
82.60	344.5051
83.37	352.1671
83.78	291.4055
83.78	291.4055
83.78	291.4055
83.78	291.4055
84.21	291.6956
84.90	292.1608
85.43	292.5171
86.29	293.0910
86.50	293.2314
86.54	293.2582
86.59	293.2913
86.72	293.3780
86.79	293.4237
86.94	293.5246
87.30	293.7627
87.30	293.7627
87.30	293.7627
87.30	293.7627
87.30	293.7627
87.30	293.7627
87.30	293.7627
87.57	293.9425
87.88	294.1475
88.03	294.2468
88.36	294.4644
88.47	294.5369
89.95	295.5066
91.11	296.2634
92.29	297.0266
92.38	297.0849
92.38	297.0849
93.35	297.7077
94.00	298.1240
94.67	226.8003
94.67	226.8027
94.90	226.9141
94.90	226.9141
94.90	226.9141
94.90	226.9141
95.87	247.6572
95.87	247.6572
96.73	288.7346
97.43	294.9689
98.44	254.8176
98.44	254.8189
98.88	246.0151
99.55	232.5390
99.55	232.5390
99.86	232.6873
100.00	245.4144
100.10	242.5448
103.18	259.7461
103.76	252.1974
105.00	258.7234
105.31	255.9296
108.00	272.1256
109.28	284.7053

111.00	263.7492
111.00	263.7492
111.76	265.1273
112.95	272.7167
115.19	264.8325
116.30	247.2838
117.00	262.6992
117.00	262.6992
117.66	263.0178
121.11	234.2428
121.62	231.4117
121.78	231.4778
122.06	260.0352
122.32	260.1550
122.32	260.1550
122.32	260.1550
122.32	260.1550
123.07	253.3782
127.23	264.4543
129.76	268.6943
131.20	266.2567
133.02	273.2839
133.54	290.0973
135.34	266.0261
136.00	252.7913
136.25	265.3864
136.48	272.7728
140.51	269.3266
140.51	0.0000
142.18	275.3020
142.65	261.8370
143.76	266.5143
144.24	254.0645
144.24	254.0645
144.24	254.0645
144.24	254.0645
145.22	223.8374
145.44	236.5895
147.16	258.4086
152.43	245.5612
152.70	234.9809
153.22	227.6819
154.21	249.4326
154.21	249.4326
154.21	249.4326
154.21	249.4326
155.03	280.8243
156.02	272.6526
158.56	263.9836
159.00	0.0000
159.00	253.3713
160.31	289.5073
161.27	254.2152
162.32	243.7683
162.64	241.7126
163.35	264.7454
163.89	254.0927
165.85	259.1625
167.43	228.0962
171.28	237.0125
171.86	215.2403
172.10	215.3121
176.55	233.2110
176.60	233.2271
181.06	216.8419
184.41	223.3927
185.71	223.7732
186.00	223.8586
190.27	216.0996
192.34	203.1317
193.63	244.1580
197.04	198.6676
198.01	210.2742
198.60	217.2532
200.40	232.5609
201.83	213.5575
202.84	225.2582
205.31	227.0845

208.36	232.5289
208.81	232.6543
209.75	205.8205
209.75	205.8205
210.97	204.3880
215.65	219.4560
216.55	208.0631
218.09	192.1341
222.10	231.6324
223.80	218.0161
226.40	200.1456
227.00	199.3984
227.08	199.4173
227.20	210.9156
228.16	227.9290
228.18	230.5853
228.18	230.5853
231.56	0.0000
235.69	208.1035
236.00	213.8782
236.00	213.8782
238.63	182.3194
238.63	182.3194
238.63	182.3194
238.63	182.3194
239.00	182.3910
240.98	182.7832
241.98	182.9793
241.98	182.9793
241.98	182.9793
244.69	159.7617
245.39	154.1194
247.94	182.9399
248.90	180.7159
249.79	182.6942
252.40	159.6128
252.85	161.5026
252.85	161.5026
254.15	0.0000
256.20	185.7341
256.20	185.7341
260.50	135.3422
260.90	140.8855
262.80	162.2401
264.65	176.3174
268.24	144.5093
268.79	157.6824
269.46	157.7867
269.46	157.7867
269.46	157.7867
269.46	157.7867
271.23	180.4325
273.65	137.1285
276.40	160.5340
277.35	174.8185
277.60	177.6490
277.60	177.6490
278.00	154.8295
278.60	147.4704
279.20	146.0669
279.53	146.1124
280.46	158.1822
281.68	165.8361
283.67	163.7180
284.30	170.3695
285.00	162.9896
285.90	160.3151
286.10	144.4055
286.10	144.4055
287.40	166.1752
288.45	0.0000
290.67	186.8386
290.80	171.7932
291.72	170.4325
293.26	0.0000
293.70	169.2332
295.21	176.8476
295.21	176.8476

295.21	176.8476
295.96	196.8440
296.50	219.6630
297.23	213.7479
298.57	136.6018
299.80	126.1191
299.80	126.1191
300.09	127.6734
300.09	127.6734
300.09	127.6734
300.09	127.6734
300.12	127.6755
301.29	156.5056
302.84	198.0818
303.76	195.3875
303.91	184.9270
304.40	153.5391
304.40	153.5391
304.84	137.3818
306.84	141.4509
308.46	145.4850
311.98	136.3383
316.51	157.1253
318.01	134.1663
319.02	115.9296
319.41	122.7328
320.08	119.9036
323.87	152.1153
323.87	152.1153
323.87	152.1153
323.87	152.1153
325.23	121.2142
328.77	144.9606
333.44	135.6219
334.20	142.8856
334.20	142.8856
334.30	142.8967
338.28	157.1191
338.28	157.1191
338.28	157.1191
338.28	157.1191
338.32	157.1265
338.32	157.1265
338.32	157.1265
340.50	111.7609
340.57	111.7661
344.27	146.0556
345.85	127.7980
350.59	0.0000
351.07	119.0790
351.92	119.1614
351.92	119.1614
351.92	119.1614
355.39	0.0000
356.01	92.4531
364.48	123.3641
366.43	106.4755
367.43	117.6159
367.94	0.0000
369.80	112.7964
374.96	126.3905
383.85	112.9935
387.95	94.9626
388.63	103.1838
391.69	99.3223
391.69	99.3223
392.90	122.9828
398.62	101.8868
400.65	127.8050
401.10	133.0017
401.81	129.9760
402.60	127.9847
404.84	123.0238
410.95	131.8699
411.60	124.6600
413.65	113.3975
414.70	89.5352
415.30	91.6564

415.76	91.6873
417.63	0.0000
418.52	102.3036
423.70	98.4837
427.08	98.7146
427.89	97.7198
432.53	87.4909
433.93	96.0141
439.47	70.9585
439.56	70.9626
439.89	75.2165
443.98	94.5448
444.90	76.5330
445.03	74.4135
445.03	74.4135
445.03	74.4135
445.03	74.4135
453.90	118.6946
463.38	89.5197
468.07	113.9644
473.00	108.2611
475.06	101.8988
475.35	85.6541
476.78	83.5620
477.59	81.4327
477.96	82.5382
482.03	77.3052
484.57	90.5153
487.03	83.0085
490.36	0.0000
492.35	75.6119
497.08	71.4359
507.63	0.0000
510.53	0.0000
510.84	85.3314
511.00	85.3396
511.85	85.3831
511.85	85.3831
513.99	85.2697
513.99	85.2697
520.41	86.9312
520.65	90.2895
527.90	88.4338
528.96	0.0000
529.64	90.7641
529.87	0.0000
531.02	87.4739
537.32	69.3338
543.00	79.4965
546.56	0.0000
549.76	78.8947
552.65	74.4807
555.20	80.9539
563.23	84.9715
563.90	74.9491
568.70	69.6487
569.32	71.5063
569.50	71.5140
569.67	73.3535
573.80	70.4562
574.00	70.4637
574.64	74.8662
578.91	79.8662
579.30	0.0000
583.14	74.8162
585.48	86.3151
591.81	79.8020
592.07	78.8865
593.00	85.4234
595.88	92.0632
600.56	76.4426
602.52	0.0000
602.71	116.6595
602.71	116.6595
603.60	115.1583
604.41	98.0812
604.70	91.8682
609.31	85.2214

609.31	85.2214
609.31	85.2214
609.31	85.2214
610.33	85.2658
612.46	78.1698
614.37	82.9419
618.01	72.4356
621.84	77.2894
621.84	77.2894
631.29	72.9263
633.02	73.9362
633.10	73.9400
634.78	81.5929
635.90	83.5377
636.97	79.7815
645.85	76.3203
646.12	83.0090
656.30	67.1238
657.75	62.3737
657.90	0.0000
661.65	75.9507
661.65	75.9507
664.57	0.0000
666.33	52.9966
666.33	52.9966
675.00	63.8618
677.61	67.8159
685.20	72.9218
692.80	80.0121
695.00	69.3498
696.49	77.2179
696.49	77.2179
697.00	78.2129
697.49	79.2084
698.33	73.3704
698.50	73.3759
699.00	78.2871
702.63	76.4575
706.10	72.6522
706.58	0.0000
706.67	78.5645
709.31	83.5743
711.68	78.7441
713.82	68.9678
717.42	69.0823
720.50	64.2367
721.93	0.0000
722.20	69.2310
722.78	77.4938
722.78	77.4938
722.89	77.4976
722.95	77.4995
723.30	79.1602
724.18	80.8412
727.18	66.4128
733.00	69.5676
735.90	83.5878
739.58	56.8135
742.81	52.9017
744.21	65.9178
747.13	64.0031
751.79	66.1370
752.31	64.1484
753.82	65.1936
755.35	66.2401
756.15	65.2587
756.87	59.2535
763.93	62.1213
765.79	68.8922
766.42	63.8683
766.84	70.6050
776.49	45.5757
778.00	68.0461
778.57	68.4245
778.89	67.5895
783.80	59.9406
785.46	68.1156
792.07	93.7924

795.84	53.0956
796.30	51.0632
798.80	101.2115
801.93	64.4904
805.60	64.5888
810.29	64.7134
810.76	63.6983
815.85	61.7725
817.79	48.4263
818.51	52.5626
819.60	54.6485
826.30	64.1025
828.27	0.0000
831.60	76.6720
831.96	78.7554
834.83	72.6216
836.80	0.0000
846.75	55.2463
848.13	47.9754
856.28	0.0000
856.80	88.9532
860.37	63.9264
867.32	69.3532
867.82	65.1621
871.10	68.4023
873.19	55.8195
874.81	57.9622
875.33	0.0000
876.40	51.6701
879.36	57.0072
880.27	57.0270
880.51	51.7515
881.50	58.1112
883.24	50.7481
884.67	61.3545
889.25	64.6412
896.60	55.2563
898.02	68.0453
899.00	63.8159
903.28	61.2552
911.07	47.0100
911.07	47.0100
911.07	47.0100
919.63	53.5901
920.93	68.6281
925.00	66.5834
925.24	65.5154
926.50	65.5452
935.52	48.5123
937.48	65.8088
944.10	60.5596
946.00	59.5184
949.00	68.2495
962.29	76.1934
964.01	87.1309
966.15	89.0139
968.20	110.1655
969.11	65.4668
969.11	65.4668
969.11	65.4668
977.42	57.9985
980.50	52.5832
983.50	51.5416
989.30	56.0415
996.32	57.8295
1001.03	60.6813
1001.68	57.0162
1004.76	59.8386
1021.30	0.0000
1024.50	0.0000
1034.80	59.5208
1036.00	55.8228
1037.82	55.8569
1038.57	52.1445
1038.76	0.0000
1045.16	62.5262
1046.59	64.4208
1048.07	59.7839

1050.47	53.2867
1050.47	53.2867
1062.04	60.9957
1063.62	56.3330
1076.63	63.1724
1077.35	58.4706
1078.86	55.6678
1085.78	55.7926
1099.22	51.2842
1112.02	69.8015
1112.84	76.3053
1115.52	76.9127
1120.29	61.1849
1120.29	61.1849
1120.29	61.1849
1120.29	61.1849
1120.51	60.2340
1121.28	44.2649
1124.00	0.0000
1129.67	68.0763
1131.51	0.0000
1147.95	0.0000
1167.94	63.0560
1173.22	67.0431
1175.09	71.9434
1177.93	65.1925
1189.05	81.0277
1204.90	78.4668
1205.75	0.0000
1213.00	85.5344
1221.42	78.8444
1230.97	77.9330
1235.34	83.1216
1236.41	0.0000
1238.25	88.1417
1246.25	73.1714
1260.41	0.0000
1271.85	59.9902
1274.45	63.0359
1274.54	63.0385
1291.56	45.2399
1298.22	0.0000
1312.09	42.4631
1325.50	34.5008
1325.50	34.5008
1332.49	33.5492
1333.61	34.5755
1360.21	27.6526
1362.66	0.0000
1365.15	24.6123
1368.21	29.7647
1368.53	0.0000
1376.25	22.6275
1384.27	32.9818
1394.10	20.6665
1395.20	22.7394
1407.95	19.7035
1434.06	27.1426
1436.60	28.2041
1457.56	0.0000
1460.81	22.0698
1489.15	23.2837
1509.49	20.2084
1596.49	32.5696
1620.62	12.1644
1678.03	0.0000
1691.02	12.3571
1691.02	12.3571
1706.46	0.0000
1750.46	0.0000
1764.49	14.4852
1764.49	14.4852
1764.49	14.4852
1764.49	14.4852
1770.23	8.4598
1771.40	10.1543
1791.20	0.0000
1808.65	10.7207

1836.01	10.7813

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G244852001

Total Uranium Activity	3.2095E+00	ug/g
Total Uranium Counting Unc.	5.2418E+00	ug/g
Total Uranium Tpu	2.6744E-06	ug/g
Total Uranium Mda	3.0072E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 942718                    SAMPLE ID   : G244852001      *
*   ANALYST       : MXR1                      DETECTOR    : GAM12           *
*   SAMPLE DATE   : 11-JAN-2010 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 26-JAN-2010 12:06:21.13    SAMPLE ALQT:  134.030 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.955E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.364E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.748E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.328E+00
```

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:04:57.58

```
*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852002.CNF;1
Sample date       : 11-JAN-2010 12:00:00 Acquisition date : 26-JAN-2010 13:00:37
Sample ID         : G244852002           Sample quantity  : 1.37490E+02 GRAM
Detector name     : GAM02                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.88  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 942718                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	62.86*	7	433	1.15	124.92	121	8	1.03E-03	514.6	
2	2	74.58*	280	422	0.92	148.36	144	20	3.89E-02	13.0	1.85E+00
3	2	76.83	505	372	0.95	152.88	144	20	7.01E-02	7.6	
4	0	83.86*	68	359	0.93	166.95	165	6	9.51E-03	46.8	
5	4	87.07	266	342	1.35	173.36	170	21	3.70E-02	12.1	6.47E+00
6	4	92.57*	213	399	1.37	184.36	170	21	2.96E-02	20.1	
7	0	143.65*	91	408	1.45	286.57	282	10	1.26E-02	44.1	
8	0	185.56*	202	376	1.21	370.45	366	10	2.80E-02	20.5	
9	0	209.02	140	272	1.24	417.39	413	9	1.95E-02	22.7	
10	4	238.36*	1123	234	1.10	476.08	471	17	1.56E-01	3.8	1.05E+00
11	4	241.43	279	292	1.72	482.24	471	17	3.88E-02	15.1	
12	0	270.24	110	219	1.43	539.90	536	10	1.53E-02	27.0	
13	0	277.17	58	175	1.45	553.75	550	8	8.06E-03	41.5	
14	0	294.91*	353	206	1.44	589.25	585	10	4.90E-02	9.5	
15	0	300.11	51	208	0.96	599.66	596	10	7.15E-03	54.8	
16	0	338.03*	186	209	1.08	675.54	670	11	2.59E-02	16.9	
17	0	351.58*	606	232	1.26	702.66	697	13	8.42E-02	6.7	
18	0	409.42	48	123	1.18	818.39	814	10	6.70E-03	45.3	
19	0	462.83	56	112	1.79	925.29	922	10	7.83E-03	37.3	
20	0	510.26*	98	144	1.25	1020.20	1014	13	1.36E-02	31.8	
21	0	582.76*	404	72	1.29	1165.29	1158	13	5.61E-02	6.7	
22	0	608.96*	422	91	1.34	1217.72	1212	11	5.86E-02	6.7	
23	0	661.36	50	54	1.07	1322.58	1317	9	6.98E-03	29.9	
24	0	727.62	40	79	1.22	1455.19	1448	10	5.49E-03	45.2	
25	0	835.29	24	25	1.45	1670.66	1667	7	3.26E-03	40.6	
26	0	910.59*	281	38	1.97	1821.36	1814	15	3.90E-02	7.8	
27	0	969.42	91	125	1.47	1939.10	1931	13	1.26E-02	27.6	
28	0	1120.00*	105	68	1.69	2240.47	2231	17	1.45E-02	20.8	
29	0	1460.17*	1272	21	2.19	2921.33	2911	21	1.77E-01	3.0	
30	0	1588.72	20	26	1.86	3178.65	3169	13	2.78E-03	57.1	
31	0	1763.90*	64	9	2.33	3529.31	3523	12	8.84E-03	16.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 26-JAN-2010 15:05:00

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852002.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 11-JAN-2010 12:00:00 Acquisition date : 26-JAN-2010 13:00:37
Sample ID : G244852002 Sample quantity : 137.49 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA2 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.88 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.166E+01	3.549E+00	4.744E-01	4.510E-02	66.731
MN-54	+	834.83	*	3.913E-02	3.198E-02	6.671E-02	6.553E-03	0.587
CD-109	+	88.03	*	3.820E+00	9.958E-01	1.106E+00	1.110E-01	3.455
SN-126	+	64.28		8.408E-02	8.654E-01	8.605E-01	1.276E-01	0.098
	+	86.94		1.561E+00	7.512E-01	4.557E-01	1.898E-01	3.426
	+	87.57	*	3.755E-01	9.789E-02	1.093E-01	1.092E-02	3.436
BA-137M	+	661.65	*	7.369E-02	4.451E-02	6.206E-02	5.347E-03	1.187
CS-137	+	661.65	*	7.789E-02	4.706E-02	6.561E-02	5.663E-03	1.187
TL-208	+	277.35		5.839E-01	4.928E-01	6.206E-01	9.433E-02	0.941
	+	510.84		4.869E-01	3.161E-01	2.389E-01	3.094E-02	2.038
	+	583.14	*	5.713E-01	9.536E-02	5.078E-02	5.087E-03	11.251
		860.37		7.134E-01	3.485E-01	6.410E-01	6.757E-02	1.113
BI-211		72.87		4.750E+00	3.475E+00	5.495E+00	4.730E-01	0.864
	+	351.07	*	3.817E+00	6.717E-01	3.223E-01	3.719E-02	11.841
PB-212	+	74.81		1.764E+00	5.112E-01	5.576E-01	7.141E-02	3.164
	+	77.11		1.778E+00	3.140E-01	3.128E-01	2.797E-02	5.685
	+	87.30		1.737E+00	4.849E-01	5.071E-01	7.159E-02	3.424
	+	238.63	*	1.542E+00	2.267E-01	9.441E-02	1.188E-02	16.334
	+	300.09		1.094E+00	1.209E+00	1.180E+00	1.594E-01	0.928
PO-212	+	74.81		1.764E+00	5.112E-01	5.576E-01	7.141E-02	3.164
	+	77.11		1.778E+00	3.140E-01	3.128E-01	2.797E-02	5.685
	+	87.30		1.737E+00	4.849E-01	5.071E-01	7.159E-02	3.424
		115.19		-9.357E-01	3.496E+00	5.710E+00	4.801E-01	-0.164
	+	238.63	*	1.542E+00	2.267E-01	9.441E-02	1.188E-02	16.334
	+	300.09		1.094E+00	1.209E+00	1.180E+00	1.594E-01	0.928
BI-214	+	609.31	*	1.124E+00	1.918E-01	1.174E-01	1.241E-02	9.572
	+	1120.29		1.459E+00	6.284E-01	5.656E-01	6.158E-02	2.580
	+	1764.49		1.221E+00	4.252E-01	2.841E-01	2.408E-02	4.296
PB-214	+	74.81		3.040E+00	8.637E-01	9.608E-01	1.102E-01	3.164
	+	77.11		3.048E+00	5.862E-01	5.362E-01	6.299E-02	5.685
	+	87.30		2.975E+00	8.088E-01	8.688E-01	1.094E-01	3.424
	+	241.98		2.304E+00	7.564E-01	5.689E-01	7.443E-02	4.049
	+	295.21		1.314E+00	3.072E-01	2.065E-01	2.838E-02	6.363
	+	351.92	*	1.328E+00	2.437E-01	1.124E-01	1.421E-02	11.816

Sample ID : G244852002 Acquisition date : 26-JAN-2010 13:00:37

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		3.040E+00	8.637E-01	9.608E-01	1.102E-01	3.164
	+	77.11		3.048E+00	5.862E-01	5.362E-01	6.299E-02	5.685
	+	87.30		2.975E+00	8.088E-01	8.688E-01	1.094E-01	3.424
	+	241.98		2.304E+00	7.564E-01	5.689E-01	7.443E-02	4.049
	+	295.21		1.314E+00	3.072E-01	2.065E-01	2.838E-02	6.363
	+	351.92	*	1.328E+00	2.437E-01	1.124E-01	1.421E-02	11.816
PO-216	+	74.81		1.764E+00	5.112E-01	5.576E-01	7.141E-02	3.164
	+	77.11		1.778E+00	3.140E-01	3.128E-01	2.797E-02	5.685
	+	87.30		1.737E+00	4.849E-01	5.071E-01	7.159E-02	3.424
	+	238.63	*	1.542E+00	2.267E-01	9.441E-02	1.188E-02	16.334
	+	300.09		1.094E+00	1.209E+00	1.180E+00	1.594E-01	0.928
PO-218	+	74.81		3.040E+00	8.637E-01	9.608E-01	1.102E-01	3.164
	+	77.11		3.048E+00	5.862E-01	5.362E-01	6.299E-02	5.685
	+	87.30		2.975E+00	8.088E-01	8.688E-01	1.094E-01	3.424
	+	241.98		2.304E+00	7.564E-01	5.689E-01	7.443E-02	4.049
	+	295.21		1.314E+00	3.072E-01	2.065E-01	2.838E-02	6.363
	+	351.92	*	1.328E+00	2.437E-01	1.124E-01	1.421E-02	11.816
RA-224	+	240.98	*	4.368E+00	1.413E+00	1.075E+00	1.269E-01	4.063
RA-226	+	609.31	*	1.124E+00	1.918E-01	1.174E-01	1.241E-02	9.572
	+	1120.29		1.459E+00	6.284E-01	5.656E-01	6.158E-02	2.580
	+	1764.49		1.221E+00	4.252E-01	2.841E-01	2.408E-02	4.296
AC-228	+	338.32		1.292E+00	6.964E-01	3.921E-01	1.645E-01	3.296
	+	911.07	*	1.763E+00	3.516E-01	2.109E-01	2.629E-02	8.360
	+	969.11		1.007E+00	6.056E-01	3.737E-01	8.904E-02	2.695
RA-228	+	338.32		1.292E+00	6.964E-01	3.921E-01	1.645E-01	3.296
	+	911.07	*	1.763E+00	3.516E-01	2.109E-01	2.629E-02	8.360
	+	969.11		1.007E+00	6.056E-01	3.737E-01	8.904E-02	2.695
TH-228	+	74.81		1.791E+00	4.917E-01	5.660E-01	4.996E-02	3.164
	+	77.11		1.805E+00	3.187E-01	3.175E-01	2.839E-02	5.685
	+	87.30		1.763E+00	4.596E-01	5.148E-01	5.129E-02	3.424
	+	238.63	*	1.565E+00	2.301E-01	9.583E-02	1.206E-02	16.334
	+	300.09		1.111E+00	1.388E+00	1.198E+00	7.174E-01	0.928
TH-230	+	609.31	*	1.124E+00	1.918E-01	1.174E-01	1.241E-02	9.572
	+	1120.29		1.459E+00	6.284E-01	5.656E-01	6.158E-02	2.580
	+	1764.49		1.221E+00	4.252E-01	2.841E-01	2.408E-02	4.296
TH-232	+	338.32		1.292E+00	4.615E-01	3.921E-01	4.508E-02	3.296
	+	911.07	*	1.763E+00	3.516E-01	2.109E-01	2.629E-02	8.360
	+	969.11		1.007E+00	6.056E-01	3.737E-01	8.904E-02	2.695
TH-234	+	63.29	*	2.124E-01	2.186E+00	2.243E+00	3.961E-01	0.095
	+	92.38		1.927E+00	8.515E-01	7.103E-01	1.316E-01	2.713
U-234	+	609.31	*	1.124E+00	1.918E-01	1.174E-01	1.241E-02	9.572
	+	1120.29		1.459E+00	6.284E-01	5.656E-01	6.158E-02	2.580
	+	1764.49		1.221E+00	4.252E-01	2.841E-01	2.408E-02	4.296
U-235		89.95		3.210E+00	1.478E+00	1.848E+00	5.767E-01	1.737
	+	93.35		2.317E+00	1.138E+00	8.468E-01	2.395E-01	2.736
		105.00		1.755E+00	1.179E+00	1.864E+00	5.566E-01	0.942
	+	143.76	*	3.926E-01	3.535E-01	3.409E-01	6.054E-02	1.152
		163.35		-1.538E-02	4.827E-01	7.533E-01	1.492E-01	-0.020
	+	185.71		1.929E-01	8.167E-02	7.129E-02	7.608E-03	2.706

Sample ID : G244852002 Acquisition date : 26-JAN-2010 13:00:37

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		205.31		4.602E-01	5.905E-01	8.695E-01	1.767E-01	0.529
NP-237	+	86.50	*	1.103E+00	3.666E-01	3.325E-01	7.605E-02	3.316
		95.87		-2.698E-01	9.555E-01	1.404E+00	3.488E-01	-0.192
U-238	+	63.29	*	2.124E-01	2.186E+00	2.243E+00	3.961E-01	0.095
	+	92.38		1.927E+00	7.944E-01	7.103E-01	6.763E-02	2.713
AM-243	+	74.67	*	2.860E-01	7.846E-02	9.075E-02	7.935E-03	3.152
	+	86.72		4.135E+01	1.078E+01	1.211E+01	1.198E+00	3.416
		117.66		-1.559E+00	3.725E+00	6.033E+00	5.055E-01	-0.258
	+	142.18		3.298E+01	2.926E+01	2.859E+01	2.587E+00	1.153
ANH-511	+	511.00	*	1.052E-01	6.771E-02	5.162E-02	5.117E-03	2.037

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	2.038E-01	3.418E-01	5.747E-01	6.095E-02	0.355
NA-22		1274.54	*	-3.972E-02	5.010E-02	7.569E-02	6.711E-03	-0.525
NA-24		1368.53	*	-2.934E-01	5.010E-02	Half-Life too short		
AL-26		1129.67		-1.203E+00	1.963E+00	2.997E+00	2.560E-01	-0.402
		1808.65	*	7.666E-03	2.607E-02	4.595E-02	3.803E-03	0.167
TI-44		67.85		-2.170E-02	4.567E-02	7.606E-02	6.275E-03	-0.285
		78.38	*	6.335E-02	3.954E-02	6.327E-02	5.727E-03	1.001
SC-46		889.25	*	9.321E-05	3.894E-02	6.318E-02	6.423E-03	0.001
	+	1120.51		2.496E-01	1.062E-01	1.369E-01	1.183E-02	1.823
V-48		944.10		-3.661E-01	9.922E-01	1.542E+00	1.543E-01	-0.237
		983.50	*	-2.286E-02	7.848E-02	1.224E-01	1.197E-02	-0.187
		1312.09		5.190E-02	8.567E-02	1.496E-01	1.370E-02	0.347
CR-51		320.08	*	1.102E-01	3.914E-01	6.606E-01	8.060E-02	0.167
MN-52		744.21		-1.798E-01	2.551E-01	3.942E-01	3.632E-02	-0.456
		848.13		6.416E-01	7.299E+00	1.198E+01	1.188E+00	0.054
		935.52		2.471E-01	2.817E-01	4.891E-01	4.916E-02	0.505
		1246.25		-3.537E-01	7.801E+00	1.280E+01	1.105E+00	-0.028
		1333.61		4.276E+00	5.685E+00	1.005E+01	9.362E-01	0.426
		1434.06	*	1.585E-01	2.242E-01	4.027E-01	3.746E-02	0.394
CO-56		846.75	*	9.062E-03	4.306E-02	7.145E-02	7.074E-03	0.127
		977.42		2.257E+00	3.275E+00	5.605E+00	5.503E-01	0.403
		1037.82		-2.123E-01	3.487E-01	5.519E-01	5.418E-02	-0.385
		1175.09		1.473E+00	2.620E+00	4.530E+00	3.655E-01	0.325
		1238.25		2.146E-01	1.037E-01	1.933E-01	1.705E-02	1.111
		1360.21		1.028E-01	1.027E+00	1.702E+00	1.587E-01	0.060
		1771.40		-4.915E-01	2.888E-01	3.280E-01	2.770E-02	-1.498
CO-57		122.06	*	-1.373E-02	2.447E-02	3.925E-02	3.281E-03	-0.350
		136.48		3.368E-02	2.064E-01	3.399E-01	3.209E-02	0.099
CO-58		810.76	*	-1.168E-02	4.236E-02	6.754E-02	6.541E-03	-0.173
FE-59	+	142.65		5.059E+00	4.489E+00	4.833E+00	4.383E-01	1.047
		192.34		4.791E-01	9.639E-01	1.577E+00	2.354E-01	0.304
		1099.22	*	2.204E-02	1.001E-01	1.700E-01	1.621E-02	0.130
		1291.56		1.166E-02	1.284E-01	2.130E-01	2.154E-02	0.055
CO-60		1173.22		2.448E-02	5.205E-02	8.945E-02	7.204E-03	0.274

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1332.49	*	1.878E-02	4.678E-02	7.980E-02	7.435E-03	0.235
ZN-65		1115.52	*	2.745E-02	1.136E-01	1.676E-01	1.458E-02	0.164
GE-68		1077.35	*	1.468E+00	1.426E+00	2.570E+00	2.328E-01	0.571
AS-73		53.44	*	9.821E-01	1.074E+00	1.896E+00	1.570E-01	0.518
AS-74		595.88	*	-4.384E-02	9.966E-02	1.619E-01	1.512E-02	-0.271
		634.78		-1.588E-01	3.725E-01	6.008E-01	5.371E-02	-0.264
SE-75		66.05		2.640E+00	5.266E+00	8.236E+00	8.258E-01	0.321
		96.73		3.944E-01	7.927E-01	1.197E+00	1.671E-01	0.330
		121.11		-7.282E-03	1.326E-01	2.179E-01	2.401E-02	-0.033
		136.00		1.376E-02	3.871E-02	6.426E-02	5.687E-03	0.214
		198.60		-1.284E-02	1.940E+00	3.076E+00	3.601E-01	-0.004
		264.65	*	2.730E-02	4.557E-02	7.650E-02	9.350E-03	0.357
		279.53		7.471E-02	1.226E-01	1.886E-01	2.381E-02	0.396
		303.91		-1.704E-01	2.328E+00	3.400E+00	4.861E-01	-0.050
		400.65		2.681E-02	2.577E-01	4.246E-01	5.197E-02	0.063
BR-77	+	87.88		8.076E+02	2.105E+02	3.187E+02	3.197E+01	2.534
		200.40		1.575E+02	1.697E+02	2.814E+02	3.092E+01	0.560
	+	239.00		2.423E+02	3.393E+01	3.781E+01	4.449E+00	6.408
		249.79		2.825E+01	6.574E+01	1.132E+02	1.354E+01	0.250
		281.68		2.142E+01	9.865E+01	1.481E+02	1.834E+01	0.145
		297.23		6.125E+01	8.937E+01	1.026E+02	1.253E+01	0.597
		303.76		-3.081E+01	1.933E+02	2.803E+02	3.399E+01	-0.110
		439.47		-4.307E+01	1.512E+02	2.406E+02	2.424E+01	-0.179
		484.57		3.486E+00	2.407E+02	3.884E+02	3.887E+01	0.009
		520.65	*	-4.918E+00	1.126E+01	1.741E+01	1.718E+00	-0.282
		574.64		2.067E+02	2.122E+02	3.632E+02	3.458E+01	0.569
		578.91		5.312E+01	9.245E+01	1.432E+02	1.358E+01	0.371
		585.48		3.828E+02	2.140E+02	3.552E+02	3.349E+01	1.078
		755.35		-8.381E+01	1.793E+02	2.823E+02	2.623E+01	-0.297
		817.79		2.256E+01	1.306E+02	2.169E+02	2.107E+01	0.104
SR-82		698.33		2.940E+01	3.512E+01	6.165E+01	5.477E+00	0.477
		776.49	*	-4.393E-01	4.011E-01	5.898E-01	5.565E-02	-0.745
		1395.20		-6.023E+00	1.194E+01	1.812E+01	1.689E+00	-0.332
RB-83		520.41	*	-9.824E-03	7.410E-02	1.175E-01	1.160E-02	-0.084
		529.64		-3.382E-02	1.132E-01	1.767E-01	1.735E-02	-0.191
		552.65		9.605E-04	1.974E-01	3.331E-01	3.225E-02	0.003
RB-84		881.50	*	7.569E-02	7.107E-02	1.266E-01	1.281E-02	0.598
KR-85		513.99	*	4.563E-01	9.099E+00	1.279E+01	1.267E+00	0.036
SR-85		513.99	*	2.338E-03	4.661E-02	6.555E-02	6.489E-03	0.036
RB-86		1076.63	*	1.063E+00	9.084E-01	1.651E+00	1.496E-01	0.644
Y-88		898.02		-6.094E-02	4.452E-02	6.107E-02	6.263E-03	-0.998
		1836.01	*	1.458E-02	3.480E-02	6.196E-02	5.054E-03	0.235
ZR-88		392.90	*	-8.916E-03	3.138E-02	5.042E-02	5.045E-03	-0.177
Y-91		1204.90	*	6.922E+00	2.299E+01	3.886E+01	3.227E+00	0.178
NB-94		702.63	*	-1.365E-03	3.470E-02	5.726E-02	5.105E-03	-0.024
		871.10		2.012E-03	3.713E-02	6.064E-02	6.097E-03	0.033
NB-95		765.79	*	1.653E-02	5.039E-02	8.447E-02	7.909E-03	0.196
NB-95M		235.69	*	1.459E-01	1.403E-01	2.208E-01	2.794E-02	0.661
ZR-95		724.18		8.273E-02	1.119E-01	1.725E-01	1.688E-02	0.480

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		756.15	*	-4.658E-03	7.749E-02	1.268E-01	1.282E-02	-0.037
NB-97		657.90	*	-1.526E-02	7.749E-02	Half-Life too short		
		1024.50		5.038E+00	7.749E-02	Half-Life too short		
ZR-97		254.15		-1.248E+00	7.749E-02	Half-Life too short		
		355.39		-2.781E+00	7.749E-02	Half-Life too short		
		507.63	*	2.845E+00	7.749E-02	Half-Life too short		
		602.52		-1.364E+00	7.749E-02	Half-Life too short		
		1021.30		1.009E+00	7.749E-02	Half-Life too short		
		1147.95		4.894E-01	7.749E-02	Half-Life too short		
		1362.66		3.461E+00	7.749E-02	Half-Life too short		
		1750.46		-1.589E-01	7.749E-02	Half-Life too short		
MO-99		140.51		-3.689E+00	2.835E+01	4.101E+01	1.140E+01	-0.090
		181.06		8.078E+00	1.911E+01	2.798E+01	5.397E+00	0.289
		366.43		5.237E+00	8.050E+01	1.332E+02	1.437E+01	0.039
		739.58	*	-1.944E+00	1.232E+01	2.003E+01	3.106E+00	-0.097
		778.00		-1.501E+01	3.453E+01	5.441E+01	5.140E+00	-0.276
TC-99M		140.51	*	-4.443E+09	3.453E+01	Half-Life too short		
RH-101		127.23		1.135E-02	3.142E-02	5.235E-02	4.442E-03	0.217
		198.01	*	9.217E-03	3.468E-02	5.567E-02	6.089E-03	0.166
		325.23		-1.313E-01	2.357E-01	3.789E-01	4.458E-02	-0.347
RH-102		418.52		1.458E-01	2.887E-01	4.868E-01	4.897E-02	0.300
		475.06	*	5.513E-03	3.168E-02	5.180E-02	5.197E-03	0.106
		631.29		3.593E-02	5.663E-02	9.884E-02	8.875E-03	0.364
		697.49		1.859E-02	8.028E-02	1.353E-01	1.201E-02	0.137
		766.84		4.052E-02	1.307E-01	2.187E-01	2.049E-02	0.185
		1046.59		-5.492E-05	1.208E-01	2.022E-01	1.885E-02	0.000
		1112.84		1.691E-01	2.748E-01	4.242E-01	3.698E-02	0.399
RU-103		497.08	*	1.308E-02	4.161E-02	6.855E-02	1.030E-02	0.191
	+	610.33		1.212E+01	2.623E+00	2.956E+00	5.022E-01	4.102
RH-106		511.85		2.140E-01	2.608E-01	4.390E-01	4.350E-02	0.487
		621.84	*	4.394E-03	3.438E-01	5.752E-01	7.857E-02	0.008
		1050.47		-5.014E-01	2.523E+00	4.147E+00	3.853E-01	-0.121
RU-106		511.85		2.140E-01	2.608E-01	4.390E-01	4.350E-02	0.487
		621.84	*	4.394E-03	3.438E-01	5.752E-01	5.223E-02	0.008
		1050.47		-5.014E-01	2.523E+00	4.147E+00	3.853E-01	-0.121
AG-108M		433.93	*	1.601E-02	3.352E-02	5.631E-02	5.837E-03	0.284
		614.37		-1.120E-02	4.719E-02	6.700E-02	6.351E-03	-0.167
		722.95		-7.025E-03	4.885E-02	6.874E-02	6.450E-03	-0.102
AG-110M		657.75	*	-5.890E-03	4.074E-02	5.790E-02	5.165E-03	-0.102
		677.61		6.708E-02	3.099E-01	5.233E-01	4.696E-02	0.128
		706.67		-2.873E-02	2.194E-01	3.592E-01	3.295E-02	-0.080
		763.93		1.083E-01	1.963E-01	3.347E-01	3.204E-02	0.324
		884.67		-5.927E-02	4.930E-02	6.857E-02	7.114E-03	-0.864
		937.48		-1.130E-01	1.302E-01	1.923E-01	1.982E-02	-0.588
		1384.27		-2.159E-02	1.814E-01	2.917E-01	2.786E-02	-0.074
IN-111		171.28		5.109E-01	1.021E+00	1.682E+00	1.744E-01	0.304
		245.39	*	-5.439E-01	1.200E+00	1.739E+00	2.066E-01	-0.313
IN-113M		391.69	*	-2.862E-02	4.692E-02	7.368E-02	7.540E-03	-0.388
SN-113		391.69	*	-2.862E-02	4.692E-02	7.368E-02	7.540E-03	-0.388

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IN-114M		190.27	*	-1.114E-01	2.090E-01	2.871E-01	3.092E-02	-0.388
CD-115		260.90		-1.317E+02	1.258E+02	1.990E+02	2.416E+01	-0.662
		492.35		1.809E+01	3.575E+01	5.982E+01	5.972E+00	0.302
		527.90	*	-6.275E+00	1.187E+01	1.818E+01	1.787E+00	-0.345
SN-117M		156.02		-2.781E+00	2.283E+00	3.472E+00	3.374E-01	-0.801
		158.56	*	5.449E-03	5.552E-02	9.040E-02	8.906E-03	0.060
SB-122		563.90	*	1.902E+00	2.042E+00	3.644E+00	3.498E-01	0.522
		692.80		-2.187E+01	4.445E+01	7.071E+01	6.254E+00	-0.309
I-123		159.00	*	-6.074E-02	4.445E+01	Half-Life too short		
		528.96		-6.510E+01	4.445E+01	Half-Life too short		
TE-123M		159.00	*	-3.298E-04	2.923E-02	4.735E-02	4.697E-03	-0.007
I-124		602.71	*	-3.452E-01	7.606E-01	1.055E+00	9.783E-02	-0.327
		722.78		-4.353E-01	5.060E+00	7.170E+00	6.497E-01	-0.061
		1325.50		2.629E+01	3.861E+01	6.781E+01	6.281E+00	0.388
		1376.25		6.097E+01	3.406E+01	6.542E+01	6.100E+00	0.932
		1509.49		1.014E+01	1.440E+01	2.589E+01	2.387E+00	0.392
		1691.02		1.874E+00	3.870E+00	6.963E+00	6.099E-01	0.269
SB-124		602.71		-2.030E-02	4.472E-02	6.203E-02	5.753E-03	-0.327
		645.85		6.902E-03	4.923E-01	8.213E-01	7.653E-02	0.008
		709.31		6.266E-01	2.889E+00	4.858E+00	4.355E-01	0.129
		713.82		-9.028E-01	1.767E+00	2.796E+00	3.442E-01	-0.323
		722.78		-3.710E-02	4.312E-01	6.111E-01	5.645E-02	-0.061
	+	968.20		1.036E+01	5.810E+00	7.524E+00	7.430E-01	1.377
		1045.16		-2.629E-01	2.594E+00	4.301E+00	4.015E-01	-0.061
		1325.50		2.393E+00	3.515E+00	6.173E+00	5.717E-01	0.388
		1368.21		-1.812E-01	1.760E+00	2.835E+00	3.951E-01	-0.064
		1436.60		1.419E-02	3.661E+00	5.958E+00	5.542E-01	0.002
		1691.02	*	3.767E-02	7.780E-02	1.400E-01	1.273E-02	0.269
SB-125		427.89	*	7.015E-02	1.003E-01	1.704E-01	1.740E-02	0.412
	+	463.38		5.496E-01	4.143E-01	5.671E-01	6.034E-02	0.969
		600.56		1.364E-02	1.811E-01	3.051E-01	3.017E-02	0.045
		635.90		1.340E-02	2.837E-01	4.750E-01	4.561E-02	0.028
TE-125M		109.28	*	7.179E+00	9.154E+00	1.558E+01	1.598E+00	0.461
I-126		388.63		7.507E-02	2.253E-01	3.766E-01	3.806E-02	0.199
		666.33	*	8.456E-02	1.969E-01	3.103E-01	2.684E-02	0.273
		753.82		1.027E+00	1.625E+00	2.792E+00	2.591E-01	0.368
SB-126		223.80		3.271E+00	4.427E+00	7.249E+00	8.319E-01	0.451
	+	278.60		3.844E+00	3.227E+00	4.551E+00	5.640E-01	0.845
		296.50		8.145E+00	2.731E+00	3.541E+00	4.328E-01	2.300
		414.70		9.213E-03	8.763E-02	1.265E-01	1.272E-02	0.073
		415.30		1.824E+00	6.941E+00	1.070E+01	1.076E+00	0.170
		555.20		-2.875E+00	3.978E+00	6.334E+00	6.121E-01	-0.454
		573.80		-2.170E-01	1.055E+00	1.748E+00	1.665E-01	-0.124
		593.00		-1.845E-01	1.011E+00	1.675E+00	1.568E-01	-0.110
		656.30		-5.020E-01	3.867E+00	5.507E+00	4.782E-01	-0.091
		666.33		3.533E-02	8.228E-02	1.296E-01	1.121E-02	0.273
		675.00		-4.913E-02	2.074E+00	3.408E+00	2.970E-01	-0.014
		695.00		3.703E-02	7.986E-02	1.369E-01	1.213E-02	0.271
		697.00		1.519E-02	2.794E-01	4.646E-01	4.124E-02	0.033

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		720.50	*	-7.195E-02	1.803E-01	2.463E-01	2.228E-02	-0.292
		856.80		-8.721E-01	5.634E-01	7.820E-01	7.792E-02	-1.115
		989.30		3.085E-01	1.289E+00	2.124E+00	2.070E-01	0.145
		1034.80		-2.377E+00	9.412E+00	1.540E+01	1.450E+00	-0.154
		1213.00		2.247E+00	5.356E+00	9.138E+00	7.647E-01	0.246
SB-127		61.10		1.320E+00	6.691E+01	1.028E+02	1.072E+01	0.013
		252.40		-9.527E-01	4.335E+00	7.215E+00	3.091E+00	-0.132
		290.80		2.530E+00	2.171E+01	3.231E+01	4.578E+00	0.078
		411.60		4.585E+00	1.414E+01	2.080E+01	3.440E+00	0.220
		444.90		1.739E+00	1.009E+01	1.657E+01	2.246E+00	0.105
		473.00		-3.512E-01	1.851E+00	2.948E+00	4.079E-01	-0.119
		543.00		4.404E+00	1.733E+01	2.823E+01	4.256E+00	0.156
		603.60		-8.959E+00	1.340E+01	1.809E+01	2.341E+00	-0.495
		685.20	*	-1.329E-01	1.333E+00	2.192E+00	2.518E-01	-0.061
		698.50		9.916E+00	1.554E+01	2.684E+01	4.281E+00	0.369
		722.20		-1.799E+01	3.630E+01	4.895E+01	5.619E+00	-0.368
		783.80		-6.305E-01	3.838E+00	6.208E+00	8.078E-01	-0.102
XE-127		57.60		4.707E+00	7.079E+00	1.237E+01	9.516E-01	0.381
		145.22		8.140E-01	7.841E-01	1.201E+00	1.103E-01	0.678
		172.10		3.236E-02	1.246E-01	2.033E-01	2.111E-02	0.159
		202.84	*	-3.486E-03	5.045E-02	8.021E-02	8.857E-03	-0.043
		374.96		-3.175E-02	2.081E-01	3.388E-01	3.570E-02	-0.094
I-131		80.18		-1.165E+00	4.844E+00	7.241E+00	6.711E-01	-0.161
		284.30		5.463E-01	1.476E+00	2.519E+00	3.193E-01	0.217
		364.48	*	-7.071E-02	1.125E-01	1.769E-01	1.984E-02	-0.400
		636.97		-8.677E-01	1.622E+00	2.591E+00	2.430E-01	-0.335
		722.89		-1.037E+00	8.184E+00	1.154E+01	1.052E+00	-0.090
TE-132		49.72		-2.502E+01	2.942E+01	4.334E+01	4.751E+00	-0.577
		111.76		-1.488E+01	2.933E+01	4.667E+01	5.002E+00	-0.319
		116.30		-2.690E+01	2.669E+01	4.192E+01	4.467E+00	-0.642
		228.16	*	-5.802E-01	7.429E-01	1.115E+00	1.950E-01	-0.520
BA-133		53.15		4.665E+00	4.660E+00	8.253E+00	6.868E-01	0.565
		79.62		-9.455E-01	1.361E+00	1.978E+00	3.074E-01	-0.478
		81.00		1.780E-02	1.259E-01	1.531E-01	2.488E-02	0.116
	+	276.40		5.770E-01	4.889E-01	6.793E-01	1.151E-01	0.849
		302.84		-1.374E-01	1.626E-01	2.208E-01	3.489E-02	-0.622
		356.01	*	-4.929E-02	5.304E-02	6.998E-02	1.044E-02	-0.704
		383.85		-2.379E-01	3.189E-01	4.952E-01	6.823E-02	-0.480
I-133	+	510.53		1.008E+00	3.189E-01	Half-Life too short		
		529.87	*	-1.416E-03	3.189E-01	Half-Life too short		
		706.58		-4.473E-02	3.189E-01	Half-Life too short		
		856.28		-1.077E+00	3.189E-01	Half-Life too short		
		875.33		2.034E-03	3.189E-01	Half-Life too short		
		1236.41		6.388E-01	3.189E-01	Half-Life too short		
		1298.22		1.647E-02	3.189E-01	Half-Life too short		
CS-134		475.35		-9.740E-01	2.132E+00	3.324E+00	3.335E-01	-0.293
		563.23		1.423E-01	3.669E-01	6.339E-01	6.136E-02	0.225
		569.32		-2.052E-01	2.000E-01	3.051E-01	2.949E-02	-0.673
		604.70		1.088E-03	3.581E-02	5.236E-02	4.856E-03	0.021

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		795.84	*	1.265E-01	5.232E-02	9.874E-02	9.502E-03	1.281
		801.93		-1.720E-01	4.602E-01	7.254E-01	7.001E-02	-0.237
		1038.57		-2.990E-01	4.058E+00	6.749E+00	6.336E-01	-0.044
		1167.94		-4.988E-01	2.920E+00	4.771E+00	3.872E-01	-0.105
		1365.15		4.384E-01	1.311E+00	2.233E+00	2.163E-01	0.196
CS-135		268.24	*	1.875E-01	1.885E-01	2.948E-01	3.900E-02	0.636
I-135		288.45		3.920E+09	1.885E-01	Half-Life too short		
		417.63		-4.600E+09	1.885E-01	Half-Life too short		
		546.56		3.991E+09	1.885E-01	Half-Life too short		
		836.80		9.083E+09	1.885E-01	Half-Life too short		
		1038.76		-8.528E+08	1.885E-01	Half-Life too short		
		1124.00		3.306E+10	1.885E-01	Half-Life too short		
		1131.51		-1.498E+09	1.885E-01	Half-Life too short		
		1260.41	*	-1.212E+09	1.885E-01	Half-Life too short		
		1457.56		8.452E+11	1.885E-01	Half-Life too short		
		1678.03		-4.217E+09	1.885E-01	Half-Life too short		
		1706.46		5.273E+08	1.885E-01	Half-Life too short		
		1791.20		-1.600E+09	1.885E-01	Half-Life too short		
CS-136		66.91		2.306E-01	8.432E-01	1.304E+00	1.982E-01	0.177
	+	86.29		4.881E+00	1.355E+00	1.972E+00	2.703E-01	2.475
		153.22		4.990E-01	6.644E-01	1.111E+00	1.166E-01	0.449
		163.89		-3.630E-01	1.047E+00	1.664E+00	1.837E-01	-0.218
		176.55		1.581E-01	3.768E-01	6.180E-01	6.730E-02	0.256
		273.65		-1.377E-01	6.719E-01	7.046E-01	8.969E-02	-0.195
		340.57		6.836E-02	1.433E-01	2.158E-01	2.511E-02	0.317
		818.51		3.087E-02	7.316E-02	1.243E-01	1.209E-02	0.248
		1048.07	*	-1.790E-02	1.172E-01	1.935E-01	1.868E-02	-0.092
		1235.34		1.425E-02	6.989E-01	1.155E+00	1.362E-01	0.012
CE-139		165.85	*	-1.552E-02	2.906E-02	4.568E-02	4.686E-03	-0.340
BA-140		162.64		-4.710E-02	7.843E-01	1.225E+00	1.287E-01	-0.038
		304.84		1.537E-01	1.414E+00	2.093E+00	6.130E-01	0.073
		423.70		-1.111E+00	2.012E+00	3.097E+00	1.017E+00	-0.359
		537.32	*	5.269E-03	2.821E-01	4.517E-01	1.511E-01	0.012
LA-140		328.77		4.645E-01	3.107E-01	5.474E-01	6.600E-02	0.849
		432.53		-6.537E-01	2.165E+00	3.444E+00	3.593E-01	-0.190
		487.03		4.871E-02	1.472E-01	2.430E-01	2.542E-02	0.200
		751.79		9.574E-01	1.901E+00	3.248E+00	3.289E-01	0.295
		815.85		-1.087E-01	3.349E-01	5.303E-01	5.617E-02	-0.205
		867.82		6.263E-01	1.365E+00	2.318E+00	2.418E-01	0.270
		919.63		2.182E+00	3.000E+00	5.169E+00	6.152E-01	0.422
		925.24		-1.637E-01	1.170E+00	1.864E+00	1.970E-01	-0.088
		1596.49	*	-1.459E-02	8.731E-02	1.397E-01	1.264E-02	-0.104
CE-141		145.44	*	6.477E-02	7.077E-02	1.078E-01	1.007E-02	0.601
CE-143		57.37		-2.689E-05	7.077E-02	Half-Life too short		
		231.56		9.470E-04	7.077E-02	Half-Life too short		
		293.26	*	7.885E-04	7.077E-02	Half-Life too short		
	+	350.59		2.914E-02	7.077E-02	Half-Life too short		
		490.36		-2.131E-03	7.077E-02	Half-Life too short		
		664.57		1.015E-03	7.077E-02	Half-Life too short		

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		721.93		-6.379E-04	7.077E-02	Half-Life too short		
CE-144		80.11		-6.413E-01	2.241E+00	3.343E+00	3.079E-01	-0.192
		133.54	*	-3.370E-03	2.028E-01	3.320E-01	5.182E-02	-0.010
PM-144		476.78		-5.681E-03	7.317E-02	1.174E-01	1.260E-02	-0.048
		618.01		-6.225E-03	3.507E-02	5.790E-02	5.412E-03	-0.108
		696.49	*	6.552E-03	3.641E-02	6.111E-02	5.423E-03	0.107
		778.57		1.688E-01	2.363E+00	3.901E+00	3.688E-01	0.043
PR-144		696.49	*	4.440E-01	2.467E+00	4.141E+00	3.674E-01	0.107
		1489.15		-3.402E+00	1.178E+01	1.814E+01	1.678E+00	-0.188
PM-146		453.90	*	-2.232E-02	4.510E-02	7.022E-02	8.368E-03	-0.318
		633.02		5.895E-02	1.487E+00	2.489E+00	9.320E-01	0.024
		735.90		1.151E-02	1.631E-01	2.704E-01	7.778E-02	0.043
		747.13		-3.747E-02	9.889E-02	1.574E-01	2.271E-02	-0.238
ND-147	+	91.11		9.650E-01	3.993E-01	5.242E-01	5.398E-02	1.841
		319.41		-4.457E-01	3.537E+00	5.842E+00	6.939E-01	-0.076
		439.89		-5.881E-01	6.073E+00	9.796E+00	9.869E-01	-0.060
		531.02	*	-1.540E-01	6.303E-01	9.885E-01	1.549E-01	-0.156
PM-149		285.90	*	-2.367E+00	8.776E+01	1.469E+02	2.626E+01	-0.016
EU-152		121.78		-3.813E-02	7.110E-02	1.142E-01	1.107E-02	-0.334
		244.69		1.234E-01	3.665E-01	5.594E-01	6.639E-02	0.221
		344.27	*	6.313E-03	1.006E-01	1.616E-01	1.900E-02	0.039
		443.98		2.661E-01	1.012E+00	1.672E+00	1.685E-01	0.159
		778.89		1.101E-01	2.725E-01	4.624E-01	4.371E-02	0.238
		867.32		1.438E-01	8.268E-01	1.367E+00	1.372E-01	0.105
		964.01		1.464E-02	4.191E-01	5.837E-01	5.778E-02	0.025
		1085.78		2.935E-01	3.921E-01	6.993E-01	6.281E-02	0.420
		1112.02		2.618E-01	4.018E-01	6.213E-01	5.422E-02	0.421
		1407.95		1.435E-01	1.937E-01	3.448E-01	3.212E-02	0.416
GD-153		69.67		-2.964E-02	1.695E+00	2.743E+00	2.298E-01	-0.011
	+	83.37		1.781E+01	1.676E+01	2.461E+01	2.346E+00	0.724
		97.43	*	1.262E-02	8.448E-02	1.255E-01	1.140E-02	0.101
		103.18		-3.128E-02	1.055E-01	1.733E-01	1.517E-02	-0.181
EU-154		123.07		-2.366E-02	4.941E-02	7.947E-02	8.884E-03	-0.298
		247.94		1.388E-01	3.726E-01	6.402E-01	9.043E-02	0.217
		591.81		1.730E-01	6.592E-01	1.126E+00	1.377E-01	0.154
		723.30		-5.521E-02	2.047E-01	2.836E-01	2.817E-02	-0.195
		756.87		-6.032E-01	8.579E-01	1.324E+00	1.652E-01	-0.456
		873.19		2.863E-01	3.230E-01	5.638E-01	7.500E-02	0.508
		996.32		-4.166E-01	4.287E-01	6.099E-01	1.117E-01	-0.683
		1004.76		-3.264E-01	2.427E-01	3.542E-01	4.397E-02	-0.922
		1274.45	*	-1.085E-01	1.404E-01	2.122E-01	2.439E-02	-0.511
EU-155		48.70		-2.497E+00	3.813E+00	5.701E+00	5.047E-01	-0.438
		60.01		2.802E+00	5.954E+00	9.357E+00	7.060E-01	0.299
	+	86.54		4.522E-01	1.180E-01	1.825E-01	1.817E-02	2.477
		105.31	*	9.279E-02	1.108E-01	1.892E-01	1.659E-02	0.490
TB-160	+	86.79		1.207E+00	3.147E-01	4.895E-01	4.848E-02	2.466
		197.04		-5.769E-01	6.008E-01	9.027E-01	9.855E-02	-0.639
		215.65		3.290E-01	7.742E-01	1.256E+00	1.420E-01	0.262
		298.57		2.921E-02	1.917E-01	2.083E-01	2.541E-02	0.140

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		879.36	*	1.656E-01	1.487E-01	2.647E-01	2.675E-02	0.625
		962.29		9.966E-01	6.792E-01	1.093E+00	1.083E-01	0.911
		966.15		7.264E-01	3.436E-01	5.532E-01	5.469E-02	1.313
		1177.93		1.303E-02	4.012E-01	6.664E-01	5.392E-02	0.020
		1271.85		7.571E-02	7.854E-01	1.304E+00	1.153E-01	0.058
HO-166M		80.57		-7.636E-02	2.865E-01	4.276E-01	3.957E-02	-0.179
	+	184.41		1.447E-01	6.125E-02	7.527E-02	8.012E-03	1.923
		280.46		-8.664E-03	9.649E-02	1.418E-01	1.757E-02	-0.061
		410.95		1.639E-01	3.076E-01	4.593E-01	4.616E-02	0.357
		711.68	*	-1.558E-02	6.523E-02	1.058E-01	9.501E-03	-0.147
		752.31		6.762E-02	3.060E-01	5.122E-01	4.748E-02	0.132
		810.29		-1.902E-02	6.466E-02	1.029E-01	9.948E-03	-0.185
TM-171		51.35		7.323E+00	4.045E+01	6.987E+01	5.998E+00	0.105
		52.39		1.959E+01	2.114E+01	3.737E+01	3.152E+00	0.524
		59.40		1.775E+00	3.297E+01	5.081E+01	3.803E+00	0.035
		66.72	*	3.660E+00	3.122E+01	4.797E+01	3.919E+00	0.076
LU-176	+	88.36		8.906E-01	2.322E-01	3.366E-01	3.364E-02	2.646
		201.83		-3.655E-02	3.185E-02	4.763E-02	5.249E-03	-0.767
		306.84	*	1.603E-02	2.614E-02	4.359E-02	5.266E-03	0.368
		401.10		2.519E-02	6.724E+00	1.100E+01	1.104E+00	0.002
LU-177		112.95		1.099E-01	1.634E+00	2.665E+00	2.251E-01	0.041
	+	208.36	*	3.385E+00	1.585E+00	2.018E+00	2.252E-01	1.678
LU-177M		52.97		2.085E+00	2.116E+00	3.747E+00	3.128E-01	0.557
		54.07		3.618E-03	1.105E+00	1.892E+00	1.548E-01	0.002
		61.30		3.154E-01	1.756E+00	2.718E+00	2.094E-01	0.116
		121.62		-2.266E-01	3.665E-01	5.865E-01	4.897E-02	-0.386
		147.16		-1.705E-01	7.211E-01	1.034E+00	9.585E-02	-0.165
		171.86		2.798E-01	4.973E-01	8.214E-01	8.525E-02	0.341
		218.09		-2.093E-02	8.832E-01	1.400E+00	1.591E-01	-0.015
	+	268.79		2.323E+00	1.286E+00	1.536E+00	1.883E-01	1.512
		319.02		8.978E-03	2.744E-01	4.573E-01	5.433E-02	0.020
		367.43		1.052E-01	8.828E-01	1.465E+00	1.576E-01	0.072
		413.65	*	8.929E-03	2.047E-01	2.938E-01	2.954E-02	0.030
HF-181		56.28		-3.688E-01	1.150E+00	1.941E+00	1.527E-01	-0.190
		57.53		3.700E-01	5.953E-01	1.039E+00	8.002E-02	0.356
		65.20		3.114E-01	1.030E+00	1.599E+00	1.288E-01	0.195
		133.02		-1.781E-02	6.460E-02	1.045E-01	9.074E-03	-0.170
		136.25		1.088E-01	4.531E-01	7.487E-01	6.590E-02	0.145
		345.85		5.564E-03	2.172E-01	3.162E-01	3.580E-02	0.018
		482.03	*	-2.121E-02	4.524E-02	7.023E-02	7.033E-03	-0.302
W-181		56.28		-1.445E-01	4.504E-01	7.604E-01	5.981E-02	-0.190
		57.53		1.447E-01	2.334E-01	4.073E-01	3.137E-02	0.355
		65.20	*	1.211E-01	4.007E-01	6.218E-01	5.010E-02	0.195
TA-182		67.75		-3.305E-02	1.085E-01	1.818E-01	1.499E-02	-0.182
		100.10		-9.390E-02	1.686E-01	2.739E-01	2.441E-02	-0.343
		152.43		2.499E-01	3.418E-01	5.715E-01	5.448E-02	0.437
		222.10		-1.448E-01	3.739E-01	5.802E-01	6.639E-02	-0.250
		1001.68		2.701E+00	2.453E+00	4.271E+00	4.126E-01	0.632
	+	1121.28		6.896E-01	2.934E-01	3.748E-01	3.235E-02	1.840

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1189.05		-1.806E-01	3.332E-01	5.242E-01	4.287E-02	-0.345
		1221.42	*	5.817E-02	2.345E-01	3.944E-01	3.327E-02	0.147
		1230.97		-1.744E-01	5.498E-01	8.840E-01	7.524E-02	-0.197
RE-183		57.98		2.017E-01	2.407E-01	4.064E-01	3.107E-02	0.496
		59.32		-3.234E-02	1.375E-01	2.089E-01	1.565E-02	-0.155
		67.20		1.250E-02	2.044E-01	3.324E-01	2.727E-02	0.038
		162.32	*	3.014E-02	1.153E-01	1.827E-01	1.837E-02	0.165
	+	208.81		3.065E+00	1.435E+00	1.861E+00	2.079E-01	1.647
		291.72		-1.877E-01	9.756E-01	1.416E+00	1.738E-01	-0.133
RE-184		57.98		7.434E-01	8.875E-01	1.498E+00	1.146E-01	0.496
		59.32		-1.191E-01	5.065E-01	7.694E-01	5.765E-02	-0.155
		67.20		4.605E-02	7.532E-01	1.225E+00	1.005E-01	0.038
		161.27		2.224E-01	3.750E-01	6.027E-01	6.027E-02	0.369
		216.55		-3.038E-02	2.815E-01	4.444E-01	5.035E-02	-0.068
		252.85	*	-1.920E-02	2.320E-01	3.904E-01	4.687E-02	-0.049
		318.01		-1.000E-01	4.767E-01	7.839E-01	9.328E-02	-0.128
		792.07		3.561E-02	1.118E+00	1.836E+00	1.752E-01	0.019
		903.28		2.291E+00	1.124E+00	1.971E+00	2.010E-01	1.163
		920.93		5.548E-03	4.877E-01	7.895E-01	7.991E-02	0.007
OS-185		59.72		5.887E-02	3.616E-01	5.601E-01	4.204E-02	0.105
		61.14		1.001E-02	1.929E-01	2.968E-01	2.281E-02	0.034
		69.30		-1.889E-01	2.930E-01	4.843E-01	4.045E-02	-0.390
		592.07		4.310E-01	2.709E+00	4.594E+00	4.305E-01	0.094
		646.12	*	8.466E-03	4.173E-02	7.067E-02	6.225E-03	0.120
		717.42		3.157E-01	9.657E-01	1.635E+00	1.475E-01	0.193
		874.81		8.371E-02	6.693E-01	1.099E+00	1.108E-01	0.076
		880.27		1.020E+00	8.318E-01	1.492E+00	1.509E-01	0.684
RE-188		155.03	*	-1.411E-03	1.691E-01	2.743E-01	2.651E-02	-0.005
		477.96		2.401E+00	3.220E+00	5.471E+00	5.485E-01	0.439
		633.10		-3.115E-02	2.991E+00	4.988E+00	4.469E-01	-0.006
W-188	+	63.58		8.531E+00	8.780E+01	9.776E+01	7.748E+00	0.087
		227.08		-4.121E+00	1.401E+01	2.182E+01	2.518E+00	-0.189
		290.67	*	8.540E-01	7.654E+00	1.139E+01	1.399E+00	0.075
IR-192	+	295.96		1.001E+00	2.258E-01	2.988E-01	3.666E-02	3.352
		308.46		-3.363E-02	1.017E-01	1.664E-01	2.012E-02	-0.202
		316.51	*	6.469E-03	3.560E-02	5.984E-02	7.145E-03	0.108
		468.07		1.449E-02	8.255E-02	1.186E-01	1.255E-02	0.122
		604.41		-1.039E-01	4.994E-01	7.113E-01	9.566E-02	-0.146
		612.46		4.465E-01	8.126E-01	1.246E+00	1.294E-01	0.358
AU-195		65.12		5.222E-02	1.857E-01	2.879E-01	2.318E-02	0.181
		66.83		6.976E-03	1.029E-01	1.577E-01	1.289E-02	0.044
	+	75.70		9.253E-01	2.538E-01	4.512E-01	3.983E-02	2.051
		98.88	*	1.388E-01	2.164E-01	3.617E-01	3.251E-02	0.384
		129.76		2.529E+00	2.892E+00	4.896E+00	4.194E-01	0.517
TL-200		367.94	*	-9.261E-05	2.892E+00	Half-Life too short		
		579.30		1.539E-03	2.892E+00	Half-Life too short		
		828.27		-2.846E-03	2.892E+00	Half-Life too short		
		1205.75		9.860E-04	2.892E+00	Half-Life too short		
TL-201		68.90		-4.261E+00	4.648E+00	7.594E+00	6.321E-01	-0.561

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		70.82		1.727E+00	2.866E+00	4.481E+00	3.790E-01	0.385
		80.30		-9.546E-01	5.229E+00	7.838E+00	7.233E-01	-0.122
		135.34		-8.005E-01	2.456E+01	4.015E+01	3.519E+00	-0.020
		167.43	*	-1.368E-01	6.939E+00	1.097E+01	1.128E+00	-0.012
TL-202		68.90		-3.882E-01	4.234E-01	6.918E-01	5.758E-02	-0.561
		70.82		1.569E-01	2.604E-01	4.071E-01	3.443E-02	0.385
		80.30		-8.675E-02	4.752E-01	7.123E-01	6.573E-02	-0.122
		439.56	*	-1.342E-02	7.392E-02	1.185E-01	1.194E-02	-0.113
HG-203		70.83		6.896E-01	1.134E+00	1.770E+00	2.391E-01	0.390
		72.87		9.437E-01	6.968E-01	1.092E+00	1.440E-01	0.864
	+	82.60		1.323E+00	1.253E+00	1.770E+00	2.528E-01	0.747
		279.20	*	4.051E-02	4.635E-02	7.229E-02	9.089E-03	0.560
BI-207		72.80		2.260E-01	2.009E-01	3.154E-01	2.713E-02	0.717
	+	74.97		5.134E-01	1.408E-01	2.271E-01	1.992E-02	2.260
	+	84.90		2.304E-01	2.168E-01	3.135E-01	3.039E-02	0.735
		569.67		-3.778E-02	3.160E-02	4.749E-02	4.539E-03	-0.796
		1063.62	*	6.052E-03	5.826E-02	9.822E-02	9.017E-03	0.062
		1770.23		-2.670E+00	8.112E-01	6.382E-01	5.393E-02	-4.184
TL-207		81.07		3.334E-02	2.775E-01	3.369E-01	3.133E-02	0.099
	+	83.78		1.519E-01	1.429E-01	2.114E-01	2.024E-02	0.719
		94.90		8.120E-02	2.399E-01	3.567E-01	3.312E-02	0.228
		122.32		-7.908E-01	1.670E+00	2.689E+00	2.422E-01	-0.294
	+	144.24		1.272E+00	1.130E+00	1.259E+00	1.273E-01	1.011
		154.21		1.211E-01	3.988E-01	6.559E-01	6.821E-02	0.185
	+	269.46		5.440E-01	3.013E-01	3.740E-01	4.635E-02	1.454
		323.87	*	-9.122E-01	7.343E-01	1.101E+00	2.140E-01	-0.829
	+	338.28		5.396E+00	1.985E+00	2.488E+00	3.601E-01	2.169
		445.03		3.031E-01	2.374E+00	3.889E+00	5.119E-01	0.078
PO-209		260.50		-3.506E+00	9.421E+00	1.557E+01	1.889E+00	-0.225
		262.80		-2.550E+01	2.692E+01	4.289E+01	5.218E+00	-0.594
		896.60	*	-6.895E+00	7.747E+00	1.133E+01	1.157E+00	-0.609
BI-210		46.50	*	1.015E+00	6.167E+00	9.481E+00	9.084E-01	0.107
PB-210		46.50	*	1.015E+00	6.167E+00	9.481E+00	9.084E-01	0.107
PO-210		46.50	*	1.015E+00	6.167E+00	9.481E+00	8.275E-01	0.107
PB-211		404.84	*	9.348E-02	1.050E+00	1.515E+00	9.526E-01	0.062
		427.08		3.486E+00	3.075E+00	3.914E+00	2.441E+00	0.891
		831.96		1.011E+00	1.414E+00	1.984E+00	1.247E+00	0.509
BI-212	+	727.18	*	4.784E-01	4.352E-01	6.226E-01	6.486E-02	0.768
		785.46		-1.257E+00	1.903E+00	2.939E+00	2.791E-01	-0.428
		1620.62		1.302E+00	1.462E+00	2.712E+00	2.435E-01	0.480
PO-215		81.07		3.334E-02	2.775E-01	3.369E-01	3.133E-02	0.099
	+	83.78		1.519E-01	1.429E-01	2.114E-01	2.024E-02	0.719
		94.90		8.120E-02	2.399E-01	3.567E-01	3.312E-02	0.228
		122.32		-7.908E-01	1.670E+00	2.689E+00	2.422E-01	-0.294
	+	144.24		1.272E+00	1.130E+00	1.259E+00	1.273E-01	1.011
		154.21		1.211E-01	3.988E-01	6.559E-01	6.821E-02	0.185
	+	269.46		5.440E-01	3.013E-01	3.740E-01	4.635E-02	1.454
		323.87	*	-9.122E-01	7.343E-01	1.101E+00	2.140E-01	-0.829
	+	338.28		5.396E+00	1.985E+00	2.488E+00	3.601E-01	2.169

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		3.031E-01	2.374E+00	3.889E+00	5.119E-01	0.078
RN-219	+	271.23		6.979E-01	3.884E-01	4.712E-01	6.377E-02	1.481
		401.81	*	1.038E-01	4.083E-01	6.790E-01	1.078E-01	0.153
RN-220		549.76	*	8.757E+00	2.742E+01	4.490E+01	4.355E+00	0.195
RA-223		81.07		3.334E-02	2.775E-01	3.369E-01	3.133E-02	0.099
	+	83.78		1.519E-01	1.429E-01	2.114E-01	2.024E-02	0.719
		94.90		8.120E-02	2.399E-01	3.567E-01	3.312E-02	0.228
		122.32		-7.908E-01	1.670E+00	2.689E+00	2.422E-01	-0.294
	+	144.24		1.272E+00	1.130E+00	1.259E+00	1.273E-01	1.011
		154.21		1.211E-01	3.988E-01	6.559E-01	6.821E-02	0.185
	+	269.46		5.440E-01	3.013E-01	3.740E-01	4.635E-02	1.454
		323.87	*	-9.122E-01	7.343E-01	1.101E+00	2.140E-01	-0.829
	+	338.28		5.396E+00	1.985E+00	2.488E+00	3.601E-01	2.169
		445.03		3.031E-01	2.374E+00	3.889E+00	5.119E-01	0.078
AC-227		79.80		-8.952E-01	1.735E+00	2.544E+00	5.530E-01	-0.352
		236.00		8.572E-01	3.056E-01	4.818E-01	7.027E-02	1.779
		256.20	*	9.884E-03	3.804E-01	6.430E-01	1.126E-01	0.015
		286.10		-2.156E-01	1.496E+00	2.487E+00	3.950E-01	-0.087
	+	299.80		2.028E+00	2.259E+00	2.686E+00	5.235E-01	0.755
		304.40		-1.361E-01	2.090E+00	3.054E+00	6.203E-01	-0.045
		334.20		3.008E-01	2.585E+00	3.802E+00	7.944E-01	0.079
TH-227		79.80		-8.952E-01	1.736E+00	2.544E+00	5.600E-01	-0.352
	+	94.00		7.447E+00	3.412E+00	3.633E+00	8.023E-01	2.050
		236.00		8.572E-01	3.023E-01	4.818E-01	6.562E-02	1.779
		256.20	*	9.884E-03	3.804E-01	6.430E-01	1.282E-01	0.015
		286.10		-2.156E-01	1.511E+00	2.487E+00	2.506E+00	-0.087
	+	299.80		2.028E+00	2.259E+00	2.686E+00	5.235E-01	0.755
		304.40		-1.361E-01	2.090E+00	3.054E+00	6.203E-01	-0.045
		334.20		3.008E-01	2.585E+00	3.802E+00	7.944E-01	0.079
TH-229		85.43		5.203E-01	2.356E-01	3.206E-01	3.127E-02	1.623
	+	88.47		5.127E-01	1.336E-01	1.912E-01	1.908E-02	2.682
		100.00		-6.807E-02	1.736E-01	2.841E-01	2.534E-02	-0.240
		193.63	*	1.960E-01	5.279E-01	8.592E-01	9.316E-02	0.228
		210.97		8.620E-01	9.005E-01	1.343E+00	1.506E-01	0.642
PA-231		283.67	*	-4.083E-01	1.532E+00	2.530E+00	4.448E-01	-0.161
	+	301.29		8.113E-01	8.978E-01	1.031E+00	1.541E-01	0.787
TH-231		81.07		3.334E-02	2.775E-01	3.369E-01	3.133E-02	0.099
	+	83.78		1.519E-01	1.429E-01	2.114E-01	2.024E-02	0.719
		94.90		8.120E-02	2.399E-01	3.567E-01	3.312E-02	0.228
		122.32		-7.908E-01	1.670E+00	2.689E+00	2.422E-01	-0.294
	+	144.24		1.272E+00	1.130E+00	1.259E+00	1.273E-01	1.011
		154.21		1.211E-01	3.988E-01	6.559E-01	6.821E-02	0.185
	+	269.46		5.440E-01	3.013E-01	3.740E-01	4.635E-02	1.454
		323.87	*	-9.122E-01	7.343E-01	1.101E+00	2.140E-01	-0.829
	+	338.28		5.396E+00	1.985E+00	2.488E+00	3.601E-01	2.169
		445.03		3.031E-01	2.374E+00	3.889E+00	5.119E-01	0.078
U-231	+	84.21		6.462E+00	6.079E+00	8.851E+00	8.514E-01	0.730
	+	92.29		7.264E+00	2.994E+00	4.345E+00	4.141E-01	1.672
		95.87	*	-3.019E-01	1.067E+00	1.571E+00	1.447E-01	-0.192

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		108.00		-1.542E+00	2.052E+00	3.294E+00	2.823E-01	-0.468
PA-233	+	75.28		1.498E+01	4.529E+00	6.844E+00	1.057E+00	2.189
	+	86.59		7.351E+00	2.675E+00	2.970E+00	8.093E-01	2.475
	+	300.12		5.654E-01	6.276E-01	7.393E-01	1.270E-01	0.765
		311.98	*	-3.872E-02	6.598E-02	1.060E-01	1.291E-02	-0.365
		340.50		6.079E-01	6.986E-01	1.061E+00	2.652E-01	0.573
		398.62		7.038E-01	2.093E+00	3.489E+00	9.462E-01	0.202
		415.76		4.529E-01	1.752E+00	2.809E+00	6.227E-01	0.161
PA-234	+	63.00		2.476E-01	2.548E+00	2.960E+00	4.469E-01	0.084
		94.67		1.952E-01	1.729E-01	2.646E-01	3.411E-02	0.737
		98.44		4.776E-02	9.629E-02	1.480E-01	8.265E-02	0.323
		99.86		-1.698E-01	4.397E-01	7.198E-01	6.427E-02	-0.236
		111.00		-1.514E-01	1.897E-01	2.975E-01	3.569E-02	-0.509
		131.20		-6.199E-02	1.073E-01	1.716E-01	1.478E-02	-0.361
		152.70		3.508E-01	3.334E-01	5.567E-01	9.761E-02	0.630
	+	186.00		5.210E+00	2.703E+00	2.915E+00	9.282E-01	1.787
		226.40		2.271E-01	4.434E-01	7.181E-01	1.096E-01	0.316
		227.20		-1.917E-01	4.715E-01	7.295E-01	8.420E-02	-0.263
		248.90		3.452E-01	8.432E-01	1.446E+00	3.454E-01	0.239
	+	293.70		6.308E+00	1.707E+00	1.812E+00	3.511E-01	3.481
		369.80		-1.243E-02	8.691E-01	1.429E+00	3.241E-01	-0.009
		568.70		-1.018E+00	1.010E+00	1.542E+00	1.475E-01	-0.660
		569.50		-2.840E-01	2.768E-01	4.222E-01	4.036E-02	-0.673
		574.00		-3.837E-01	1.517E+00	2.503E+00	2.384E-01	-0.153
		699.00		7.082E-02	7.423E-01	1.238E+00	2.377E-01	0.057
		706.10		1.210E-01	1.098E+00	1.830E+00	8.170E-01	0.066
		733.00		-3.967E-02	4.310E-01	6.645E-01	1.489E-01	-0.060
		742.81		-2.677E-02	1.453E+00	2.389E+00	1.608E+00	-0.011
		796.30		1.405E+00	1.068E+00	1.807E+00	4.946E-01	0.777
		805.60		5.216E-01	1.132E+00	1.904E+00	5.891E-01	0.274
		819.60		2.182E-01	1.231E+00	2.041E+00	7.814E-01	0.107
		826.30		-2.230E-01	8.258E-01	1.302E+00	5.857E-01	-0.171
		831.60		2.958E-01	6.632E-01	9.874E-01	2.983E-01	0.300
		876.40		-6.837E-01	1.193E+00	1.462E+00	1.505E+00	-0.468
		880.51		4.376E-01	2.945E-01	5.388E-01	5.449E-02	0.812
		883.24		-2.230E-01	3.362E-01	4.510E-01	3.041E-01	-0.494
		899.00		-1.258E+00	1.067E+00	1.269E+00	5.589E-01	-0.992
		925.00		-8.595E-02	1.229E+00	1.972E+00	1.992E-01	-0.044
		926.50		-5.493E-02	1.793E-01	2.794E-01	7.215E-02	-0.197
		946.00	*	-4.111E-02	3.324E-01	5.296E-01	1.029E-01	-0.078
		949.00		2.245E-01	4.988E-01	8.376E-01	8.361E-02	0.268
		980.50		9.406E-02	8.193E-01	1.332E+00	1.305E-01	0.071
		1394.10		1.597E-01	1.220E+00	2.019E+00	1.316E+00	0.079
PA-234M		766.42		4.379E+00	1.386E+01	2.292E+01	1.166E+01	0.191
		1001.03	*	3.878E+00	5.707E+00	9.627E+00	1.048E+00	0.403
NP-236		94.67		1.495E-01	1.305E-01	2.009E-01	1.870E-02	0.744
		98.44		3.611E-02	7.002E-02	1.119E-01	1.009E-02	0.323
		111.00		-1.145E-01	1.431E-01	2.251E-01	1.910E-02	-0.509
		160.31	*	1.422E-02	8.193E-02	1.337E-01	1.330E-02	0.106

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		-1.300E-02	1.491E-01	2.422E-01	2.167E-02	-0.054
		117.00	*	-1.137E-01	1.848E-01	2.965E-01	2.486E-02	-0.383
	+	209.75		2.420E+00	1.133E+00	1.486E+00	1.663E-01	1.628
		228.18		-1.935E-01	2.456E-01	3.705E-01	4.283E-02	-0.522
	+	277.60		2.816E-01	2.364E-01	3.404E-01	4.215E-02	0.827
		334.30		1.628E-01	1.464E+00	2.153E+00	2.494E-01	0.076
AM-241		59.54	*	2.313E-02	1.911E-01	2.954E-01	2.420E-02	0.078
CM-243		99.55		-1.338E-02	1.535E-01	2.492E-01	2.230E-02	-0.054
		103.76	*	1.063E-01	9.752E-02	1.680E-01	1.466E-02	0.633
		117.00		-1.170E-01	1.901E-01	3.050E-01	2.558E-02	-0.383
	+	209.75		2.385E+00	1.117E+00	1.465E+00	1.639E-01	1.628
		228.18		-1.955E-01	2.481E-01	3.744E-01	4.328E-02	-0.522
	+	277.60		2.839E-01	2.383E-01	3.432E-01	4.249E-02	0.827
AM-246		798.80		-3.097E-01	1.672E-01	2.270E-01	2.176E-02	-1.365
		1036.00		-1.918E-01	3.327E-01	5.281E-01	4.968E-02	-0.363
		1062.04		8.887E-02	2.526E-01	4.346E-01	3.996E-02	0.204
		1078.86	*	1.241E-01	1.587E-01	2.817E-01	2.548E-02	0.441
CM-247	+	278.00		1.168E+00	9.802E-01	1.419E+00	1.757E-01	0.823
		287.40		1.176E-01	1.182E+00	1.991E+00	2.454E-01	0.059
		402.60	*	-1.013E-02	3.719E-02	5.967E-02	5.986E-03	-0.170
CF-249		252.85		-7.207E-02	8.707E-01	1.465E+00	1.759E-01	-0.049
		333.44		9.593E-03	1.928E-01	2.821E-01	3.273E-02	0.034
		387.95	*	4.252E-02	4.442E-02	7.662E-02	7.759E-03	0.555
CF-251		176.60	*	5.416E-02	1.304E-01	2.139E-01	2.241E-02	0.253
		227.00		-9.138E-02	4.220E-01	6.602E-01	7.618E-02	-0.138
		285.00		1.297E-01	1.715E+00	2.886E+00	3.564E-01	0.045

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852002      *
* Acquisition date : 26-JAN-2010 13:00:37 Detector SN#     :               *
* Detector ID        : GAM02               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:02.88     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 11-JAN-2010 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G244852002           Analyst initials: MXR1          *
* Batch Number       : 942718               Sample Quantity : 1.3749E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 29-OCT-2009 10:28:07 MS Isotope      :                 *
* MSD DPM          :     0.000            MSD Isotope     :                 *
* LCS DPM          :     0.000            LCS Isotope     :                 *
* LCSD DPM         :     0.000            LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.166E+01	3.478E+00	4.758E-01	0.000E+00
MN-54	3.913E-02	3.134E-02	6.766E-02	0.000E+00
CD-109	3.820E+00	9.759E-01	1.170E+00	0.000E+00
SN-126	3.755E-01	9.593E-02	1.157E-01	0.000E+00
BA-137M	7.369E-02	4.362E-02	6.324E-02	0.000E+00
CS-137	7.789E-02	4.612E-02	6.685E-02	0.000E+00
TL-208	5.713E-01	9.346E-02	5.187E-02	0.000E+00
BI-211	3.817E+00	6.583E-01	3.325E-01	0.000E+00
PB-212	1.542E+00	2.222E-01	9.809E-02	0.000E+00
PO-212	1.542E+00	2.222E-01	9.809E-02	0.000E+00
BI-214	1.124E+00	1.879E-01	1.199E-01	0.000E+00
PB-214	1.328E+00	2.389E-01	1.159E-01	0.000E+00
PO-214	1.328E+00	2.389E-01	1.159E-01	0.000E+00
PO-216	1.542E+00	2.222E-01	9.809E-02	0.000E+00
PO-218	1.328E+00	2.389E-01	1.159E-01	0.000E+00
RA-224	4.368E+00	1.385E+00	1.117E+00	0.000E+00
RA-226	1.124E+00	1.879E-01	1.199E-01	0.000E+00
AC-228	1.763E+00	3.446E-01	2.135E-01	0.000E+00
RA-228	1.763E+00	3.446E-01	2.135E-01	0.000E+00
TH-228	1.565E+00	2.255E-01	9.957E-02	0.000E+00
TH-230	1.124E+00	1.879E-01	1.199E-01	0.000E+00
TH-232	1.763E+00	3.446E-01	2.135E-01	0.000E+00
TH-234	2.124E-01	2.143E+00	2.388E+00	0.000E+00
U-234	1.124E+00	1.879E-01	1.199E-01	0.000E+00
U-235	3.926E-01	3.464E-01	3.576E-01	0.000E+00
NP-237	1.103E+00	3.593E-01	3.520E-01	0.000E+00
U-238	2.124E-01	2.143E+00	2.388E+00	0.000E+00
AM-243	2.860E-01	7.689E-02	9.632E-02	0.000E+00
ANH-511	1.052E-01	6.635E-02	5.286E-02	0.000E+00

---- Non-Identified Nuclides ----

Key-Line Activity	K.L. Act error	MDA

Nuclide	(pCi/GRAM	) Ided	(pCi/GRAM	)	
BE-7	2.038E-01	3.350E-01	5.893E-01	0.000E+00	NOT IDENT.
NA-22	-3.972E-02	4.909E-02	7.613E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	6.920E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	7.666E-03	2.554E-02	4.588E-02	0.000E+00	NOT IDENT.
TI-44	6.335E-02	3.875E-02	6.710E-02	0.000E+00	NOT IDENT.
SC-46	9.321E-05	3.816E-02	6.400E-02	0.000E+00	FAIL ABUN
V-48	-2.286E-02	7.691E-02	1.237E-01	0.000E+00	NOT IDENT.
CR-51	1.102E-01	3.836E-01	6.826E-01	0.000E+00	NOT IDENT.
MN-52	1.585E-01	2.197E-01	4.040E-01	0.000E+00	NOT IDENT.
CO-56	9.062E-03	4.220E-02	7.244E-02	0.000E+00	NOT IDENT.
CO-57	-1.373E-02	2.398E-02	4.129E-02	0.000E+00	NOT IDENT.
CO-58	-1.168E-02	4.151E-02	6.854E-02	0.000E+00	NOT IDENT.
FE-59	2.204E-02	9.813E-02	1.715E-01	0.000E+00	FAIL ABUN
CO-60	1.878E-02	4.584E-02	8.019E-02	0.000E+00	NOT IDENT.
ZN-65	2.745E-02	1.114E-01	1.691E-01	0.000E+00	NOT IDENT.
GE-68	1.468E+00	1.398E+00	2.593E+00	0.000E+00	NOT IDENT.
AS-73	9.821E-01	1.052E+00	2.025E+00	0.000E+00	NOT IDENT.
AS-74	-4.384E-02	9.767E-02	1.653E-01	0.000E+00	NOT IDENT.
SE-75	2.730E-02	4.466E-02	7.932E-02	0.000E+00	NOT IDENT.
BR-77	-4.918E+00	1.104E+01	1.782E+01	0.000E+00	FAIL ABUN
SR-82	-4.393E-01	3.931E-01	5.990E-01	0.000E+00	NOT IDENT.
RB-83	-9.824E-03	7.262E-02	1.203E-01	0.000E+00	NOT IDENT.
RB-84	7.569E-02	6.965E-02	1.283E-01	0.000E+00	NOT IDENT.
KR-85	4.563E-01	8.917E+00	1.310E+01	0.000E+00	NOT IDENT.
SR-85	2.338E-03	4.568E-02	6.712E-02	0.000E+00	NOT IDENT.
RB-86	1.063E+00	8.903E-01	1.666E+00	0.000E+00	NOT IDENT.
Y-88	1.458E-02	3.411E-02	6.186E-02	0.000E+00	NOT IDENT.
ZR-88	-8.916E-03	3.075E-02	5.189E-02	0.000E+00	NOT IDENT.
Y-91	6.922E+00	2.253E+01	3.912E+01	0.000E+00	NOT IDENT.
NB-94	-1.365E-03	3.401E-02	5.827E-02	0.000E+00	NOT IDENT.
NB-95	1.653E-02	4.938E-02	8.582E-02	0.000E+00	NOT IDENT.
NB-95M	1.459E-01	1.375E-01	2.295E-01	0.000E+00	NOT IDENT.
ZR-95	-4.658E-03	7.594E-02	1.289E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.034E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.123E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.944E+00	1.207E+01	2.036E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	3.346E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	9.217E-03	3.399E-02	5.805E-02	0.000E+00	NOT IDENT.
RH-102	5.513E-03	3.105E-02	5.312E-02	0.000E+00	NOT IDENT.
RU-103	1.308E-02	4.078E-02	7.024E-02	0.000E+00	FAIL ABUN
RH-106	4.394E-03	3.370E-01	5.868E-01	0.000E+00	NOT IDENT.
RU-106	4.394E-03	3.370E-01	5.868E-01	0.000E+00	NOT IDENT.
AG-108M	1.601E-02	3.285E-02	5.784E-02	0.000E+00	NOT IDENT.
AG-110M	-5.890E-03	3.992E-02	5.900E-02	0.000E+00	NOT IDENT.
IN-111	-5.439E-01	1.176E+00	1.806E+00	0.000E+00	NOT IDENT.
IN-113M	-2.862E-02	4.599E-02	7.584E-02	0.000E+00	NOT IDENT.
SN-113	-2.862E-02	4.599E-02	7.584E-02	0.000E+00	NOT IDENT.
IN-114M	-1.114E-01	2.048E-01	2.995E-01	0.000E+00	NOT IDENT.
CD-115	-6.275E+00	1.163E+01	1.860E+01	0.000E+00	NOT IDENT.
SN-117M	5.449E-03	5.441E-02	9.464E-02	0.000E+00	NOT IDENT.
SB-122	1.902E+00	2.001E+00	3.724E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	5.276E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-3.298E-04	2.864E-02	4.957E-02	0.000E+00	NOT IDENT.
I-124	-3.452E-01	7.454E-01	1.077E+00	0.000E+00	NOT IDENT.
SB-124	3.767E-02	7.625E-02	1.400E-01	0.000E+00	FAIL ABUN
SB-125	7.015E-02	9.829E-02	1.751E-01	0.000E+00	FAIL ABUN
TE-125M	7.179E+00	8.971E+00	1.642E+01	0.000E+00	NOT IDENT.
I-126	8.456E-02	1.930E-01	3.161E-01	0.000E+00	NOT IDENT.
SB-126	-7.195E-02	1.767E-01	2.505E-01	0.000E+00	FAIL ABUN
SB-127	-1.329E-01	1.306E+00	2.231E+00	0.000E+00	NOT IDENT.
XE-127	-3.486E-03	4.944E-02	8.359E-02	0.000E+00	NOT IDENT.
I-131	-7.071E-02	1.102E-01	1.823E-01	0.000E+00	NOT IDENT.
TE-132	-5.802E-01	7.280E-01	1.160E+00	0.000E+00	NOT IDENT.
BA-133	-4.929E-02	5.198E-02	7.217E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	6.017E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.127E-02	1.002E-01	0.000E+00	NOT IDENT.
CS-135	1.875E-01	1.847E-01	3.056E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	5.110E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.790E-02	1.149E-01	1.954E-01	0.000E+00	FAIL ABUN
CE-139	-1.552E-02	2.847E-02	4.779E-02	0.000E+00	NOT IDENT.
BA-140	5.269E-03	2.765E-01	4.621E-01	0.000E+00	NOT IDENT.
LA-140	-1.459E-02	8.556E-02	1.399E-01	0.000E+00	NOT IDENT.
CE-141	6.477E-02	6.935E-02	1.131E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.484E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-3.370E-03	1.988E-01	3.487E-01	0.000E+00	NOT IDENT.
PM-144	6.552E-03	3.568E-02	6.220E-02	0.000E+00	NOT IDENT.

PR-144	4.440E-01	2.418E+00	4.215E+00	0.000E+00	NOT IDENT.
PM-146	-2.232E-02	4.419E-02	7.207E-02	0.000E+00	NOT IDENT.
ND-147	-1.540E-01	6.177E-01	1.012E+00	0.000E+00	FAIL ABUN
PM-149	-2.367E+00	8.600E+01	1.521E+02	0.000E+00	NOT IDENT.
EU-152	6.313E-03	9.862E-02	1.667E-01	0.000E+00	NOT IDENT.
GD-153	1.262E-02	8.279E-02	1.326E-01	0.000E+00	FAIL ABUN
EU-154	-1.085E-01	1.376E-01	2.135E-01	0.000E+00	NOT IDENT.
EU-155	9.279E-02	1.086E-01	1.996E-01	0.000E+00	FAIL ABUN
TB-160	1.656E-01	1.457E-01	2.682E-01	0.000E+00	FAIL ABUN
HO-166M	-1.558E-02	6.392E-02	1.076E-01	0.000E+00	FAIL ABUN
TM-171	3.660E+00	3.060E+01	5.102E+01	0.000E+00	NOT IDENT.
LU-176	1.603E-02	2.562E-02	4.508E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.553E+00	2.102E+00	0.000E+00	FAIL ABUN
LU-177M	8.929E-03	2.006E-01	3.021E-01	0.000E+00	FAIL ABUN
HF-181	-2.121E-02	4.433E-02	7.200E-02	0.000E+00	NOT IDENT.
W-181	1.211E-01	3.927E-01	6.617E-01	0.000E+00	NOT IDENT.
TA-182	5.817E-02	2.298E-01	3.970E-01	0.000E+00	FAIL ABUN
RE-183	3.014E-02	1.130E-01	1.912E-01	0.000E+00	FAIL ABUN
RE-184	-1.920E-02	2.273E-01	4.051E-01	0.000E+00	NOT IDENT.
OS-185	8.466E-03	4.090E-02	7.204E-02	0.000E+00	NOT IDENT.
RE-188	-1.411E-03	1.657E-01	2.873E-01	0.000E+00	NOT IDENT.
W-188	8.540E-01	7.501E+00	1.179E+01	0.000E+00	FAIL ABUN
IR-192	6.469E-03	3.489E-02	6.184E-02	0.000E+00	FAIL ABUN
AU-195	1.388E-01	2.121E-01	3.820E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.176E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.368E-01	6.800E+00	1.147E+01	0.000E+00	NOT IDENT.
TL-202	-1.342E-02	7.245E-02	1.217E-01	0.000E+00	NOT IDENT.
HG-203	4.051E-02	4.542E-02	7.489E-02	0.000E+00	FAIL ABUN
BI-207	6.052E-03	5.709E-02	9.915E-02	0.000E+00	FAIL ABUN
TL-207	-9.122E-01	7.196E-01	1.137E+00	0.000E+00	FAIL ABUN
PO-209	-6.895E+00	7.592E+00	1.148E+01	0.000E+00	NOT IDENT.
BI-210	1.015E+00	6.044E+00	1.015E+01	0.000E+00	NOT IDENT.
PB-210	1.015E+00	6.044E+00	1.015E+01	0.000E+00	NOT IDENT.
PO-210	1.015E+00	6.044E+00	1.015E+01	0.000E+00	NOT IDENT.
PB-211	9.348E-02	1.029E+00	1.558E+00	0.000E+00	NOT IDENT.
BI-212	4.784E-01	4.265E-01	6.332E-01	0.000E+00	FAIL ABUN
PO-215	-9.122E-01	7.196E-01	1.137E+00	0.000E+00	FAIL ABUN
RN-219	1.038E-01	4.001E-01	6.986E-01	0.000E+00	FAIL ABUN
RN-220	8.757E+00	2.687E+01	4.591E+01	0.000E+00	NOT IDENT.
RA-223	-9.122E-01	7.196E-01	1.137E+00	0.000E+00	FAIL ABUN
AC-227	9.884E-03	3.728E-01	6.671E-01	0.000E+00	FAIL ABUN
TH-227	9.884E-03	3.728E-01	6.671E-01	0.000E+00	FAIL ABUN
TH-229	1.960E-01	5.173E-01	8.962E-01	0.000E+00	FAIL ABUN
PA-231	-4.083E-01	1.501E+00	2.620E+00	0.000E+00	FAIL ABUN
TH-231	-9.122E-01	7.196E-01	1.137E+00	0.000E+00	FAIL ABUN
U-231	-3.019E-01	1.046E+00	1.660E+00	0.000E+00	FAIL ABUN
PA-233	-3.872E-02	6.466E-02	1.096E-01	0.000E+00	FAIL ABUN
PA-234	-4.111E-02	3.258E-01	5.358E-01	0.000E+00	FAIL ABUN
PA-234M	3.878E+00	5.592E+00	9.730E+00	0.000E+00	NOT IDENT.
NP-236	1.422E-02	8.029E-02	1.400E-01	0.000E+00	NOT IDENT.
NP-239	-1.137E-01	1.811E-01	3.121E-01	0.000E+00	FAIL ABUN
AM-241	2.313E-02	1.872E-01	3.148E-01	0.000E+00	NOT IDENT.
CM-243	1.063E-01	9.557E-02	1.772E-01	0.000E+00	FAIL ABUN
AM-246	1.241E-01	1.556E-01	2.843E-01	0.000E+00	NOT IDENT.
CM-247	-1.013E-02	3.645E-02	6.138E-02	0.000E+00	FAIL ABUN
CF-249	4.252E-02	4.353E-02	7.887E-02	0.000E+00	NOT IDENT.
CF-251	5.416E-02	1.278E-01	2.235E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:04:58.62

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852002.CNF;1
Sample date       : 11-JAN-2010 12:00:00 Acquisition date : 26-JAN-2010 13:00:37
Sample ID         : G244852002           Sample quantity  : 1.37490E+02 GRAM
Detector name     : GAM02                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:02.88  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 942718               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1272	10.67*	1.028E+00	3.166E+01	3.166E+01	11.21
MN-54	834.83	24	99.97*	1.696E+00	3.785E-02	3.913E-02	81.72
CD-109	88.03	266	3.72*	5.235E+00	3.735E+00	3.820E+00	26.07
SN-126	64.28	7	9.60	2.518E+00	8.408E-02	8.408E-02	1029.32
	86.94	266	8.90	5.235E+00	1.561E+00	1.561E+00	48.12
	87.57	266	37.00*	5.235E+00	3.755E-01	3.755E-01	26.07
BA-137M	661.65	50	89.98*	2.070E+00	7.362E-02	7.369E-02	60.41
CS-137	661.65	50	85.12*	2.070E+00	7.782E-02	7.789E-02	60.41
TL-208	277.35	58	6.80	3.993E+00	5.839E-01	5.839E-01	84.40
	510.84	98	21.60	2.541E+00	4.869E-01	4.869E-01	64.91
	583.14	404	84.20*	2.292E+00	5.713E-01	5.713E-01	16.69
	860.37	------	12.46	1.652E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	3.848E+00	------ Line Not Found		------
	351.07	606	12.94*	3.352E+00	3.817E+00	3.817E+00	17.60
PB-212	74.81	280	10.70	4.051E+00	1.764E+00	1.764E+00	28.98
	77.11	505	18.00	4.304E+00	1.778E+00	1.778E+00	17.66
	87.30	266	8.00	5.235E+00	1.737E+00	1.737E+00	27.92
	238.63	1123	44.60*	4.458E+00	1.542E+00	1.542E+00	14.70
	300.09	51	3.41	3.766E+00	1.094E+00	1.094E+00	110.48
PO-212	74.81	280	10.70	4.051E+00	1.764E+00	1.764E+00	28.98
	77.11	505	18.00	4.304E+00	1.778E+00	1.778E+00	17.66
	87.30	266	8.00	5.235E+00	1.737E+00	1.737E+00	27.92
	115.19	------	0.60	6.220E+00	------ Line Not Found		------
	238.63	1123	44.60*	4.458E+00	1.542E+00	1.542E+00	14.70
	300.09	51	3.41	3.766E+00	1.094E+00	1.094E+00	110.48
BI-214	609.31	422	46.30*	2.214E+00	1.124E+00	1.124E+00	17.06
	1120.29	105	15.10	1.298E+00	1.459E+00	1.459E+00	43.06
	1764.49	64	15.80	9.005E-01	1.221E+00	1.221E+00	34.83
PB-214	74.81	280	6.21	4.051E+00	3.040E+00	3.040E+00	28.42
	77.11	505	10.50	4.304E+00	3.048E+00	3.048E+00	19.23
	87.30	266	4.67	5.235E+00	2.975E+00	2.975E+00	27.18
	241.98	279	7.49	4.417E+00	2.304E+00	2.304E+00	32.83

Sample ID : G244852002 Acquisition date : 26-JAN-2010 13:00:37

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	295.21	353	19.20	3.815E+00	1.314E+00	1.314E+00	23.38
	351.92	606	37.20*	3.352E+00	1.328E+00	1.328E+00	18.36
PO-214	74.81	280	6.21	4.051E+00	3.040E+00	3.040E+00	28.42
	77.11	505	10.50	4.304E+00	3.048E+00	3.048E+00	19.23
	87.30	266	4.67	5.235E+00	2.975E+00	2.975E+00	27.18
	241.98	279	7.49	4.417E+00	2.304E+00	2.304E+00	32.83
	295.21	353	19.20	3.815E+00	1.314E+00	1.314E+00	23.38
	351.92	606	37.20*	3.352E+00	1.328E+00	1.328E+00	18.36
PO-216	74.81	280	10.70	4.051E+00	1.764E+00	1.764E+00	28.98
	77.11	505	18.00	4.304E+00	1.778E+00	1.778E+00	17.66
	87.30	266	8.00	5.235E+00	1.737E+00	1.737E+00	27.92
	238.63	1123	44.60*	4.458E+00	1.542E+00	1.542E+00	14.70
	300.09	51	3.41	3.766E+00	1.094E+00	1.094E+00	110.48
PO-218	74.81	280	6.21	4.051E+00	3.040E+00	3.040E+00	28.42
	77.11	505	10.50	4.304E+00	3.048E+00	3.048E+00	19.23
	87.30	266	4.67	5.235E+00	2.975E+00	2.975E+00	27.18
	241.98	279	7.49	4.417E+00	2.304E+00	2.304E+00	32.83
	295.21	353	19.20	3.815E+00	1.314E+00	1.314E+00	23.38
	351.92	606	37.20*	3.352E+00	1.328E+00	1.328E+00	18.36
RA-224	240.98	279	3.95*	4.417E+00	4.368E+00	4.368E+00	32.35
RA-226	609.31	422	46.30*	2.214E+00	1.124E+00	1.124E+00	17.06
	1120.29	105	15.10	1.298E+00	1.459E+00	1.459E+00	43.06
	1764.49	64	15.80	9.005E-01	1.221E+00	1.221E+00	34.83
AC-228	338.32	186	11.40	3.450E+00	1.292E+00	1.292E+00	53.89
	911.07	281	27.70*	1.570E+00	1.763E+00	1.763E+00	19.94
	969.11	91	16.60	1.483E+00	1.007E+00	1.007E+00	60.13
RA-228	338.32	186	11.40	3.450E+00	1.292E+00	1.292E+00	53.89
	911.07	281	27.70*	1.570E+00	1.763E+00	1.763E+00	19.94
	969.11	91	16.60	1.483E+00	1.007E+00	1.007E+00	60.13
TH-228	74.81	280	10.70	4.051E+00	1.764E+00	1.791E+00	27.46
	77.11	505	18.00	4.304E+00	1.778E+00	1.805E+00	17.66
	87.30	266	8.00	5.235E+00	1.737E+00	1.763E+00	26.07
	238.63	1123	44.60*	4.458E+00	1.542E+00	1.565E+00	14.70
	300.09	51	3.41	3.766E+00	1.094E+00	1.111E+00	124.95
TH-230	609.31	422	46.30*	2.214E+00	1.124E+00	1.124E+00	17.06
	1120.29	105	15.10	1.298E+00	1.459E+00	1.459E+00	43.06
	1764.49	64	15.80	9.005E-01	1.221E+00	1.221E+00	34.83
TH-232	338.32	186	11.40	3.450E+00	1.292E+00	1.292E+00	35.72
	911.07	281	27.70*	1.570E+00	1.763E+00	1.763E+00	19.94
	969.11	91	16.60	1.483E+00	1.007E+00	1.007E+00	60.13
TH-234	63.29	7	3.80*	2.518E+00	2.124E-01	2.124E-01	1029.37
	92.38	213	5.41	5.588E+00	1.927E+00	1.927E+00	44.18
U-234	609.31	422	46.30*	2.214E+00	1.124E+00	1.124E+00	17.06
	1120.29	105	15.10	1.298E+00	1.459E+00	1.459E+00	43.06
	1764.49	64	15.80	9.005E-01	1.221E+00	1.221E+00	34.83
U-235	89.95	------	2.70	5.432E+00	------ Line Not Found		------
	93.35	213	4.50	5.588E+00	2.317E+00	2.317E+00	49.10
	105.00	------	2.10	6.070E+00	------ Line Not Found		------
	143.76	91	10.50*	6.032E+00	3.926E-01	3.926E-01	90.03

Sample ID : G244852002 Acquisition date : 26-JAN-2010 13:00:37

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	163.35	------	4.70	5.697E+00	------ Line Not Found		------
	185.71	202	54.00	5.291E+00	1.929E-01	1.929E-01	42.33
	205.31	------	4.70	4.952E+00	------ Line Not Found		------
NP-237	86.50	266	12.60*	5.235E+00	1.103E+00	1.103E+00	33.25
	95.87	------	2.60	5.755E+00	------ Line Not Found		------
U-238	63.29	7	3.80*	2.518E+00	2.124E-01	2.124E-01	1029.37
	92.38	213	5.41	5.588E+00	1.927E+00	1.927E+00	41.22
AM-243	74.67	280	66.00*	4.051E+00	2.860E-01	2.860E-01	27.43
	86.72	266	0.34	5.235E+00	4.135E+01	4.135E+01	26.07
	117.66	------	0.55	6.232E+00	------ Line Not Found		------
	142.18	91	0.13	6.032E+00	3.298E+01	3.298E+01	88.73
ANH-511	511.00	98	100.00*	2.541E+00	1.052E-01	1.052E-01	64.38

Flag: "*" = Keyline

Sample ID : G244852002 Acquisition date : 26-JAN-2010 13:00:37

Total number of lines in spectrum 31
Number of unidentified lines 2
Number of lines tentatively identified by NID 29 93.55%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.166E+01	3.166E+01	0.355E+01	11.21	
MN-54	312.70D	1.03	3.785E-02	3.913E-02	3.198E-02	81.72	
CD-109	464.00D	1.02	3.735E+00	3.820E+00	0.996E+00	26.07	
SN-126	1.00E+05Y	1.00	3.755E-01	3.755E-01	0.979E-01	26.07	
BA-137M	30.17Y	1.00	7.362E-02	7.369E-02	4.451E-02	60.41	
CS-137	30.17Y	1.00	7.782E-02	7.789E-02	4.706E-02	60.41	
TL-208	1.41E+10Y	1.00	5.713E-01	5.713E-01	0.954E-01	16.69	
BI-211	7.04E+08Y	1.00	3.817E+00	3.817E+00	0.672E+00	17.60	
PB-212	1.41E+10Y	1.00	1.542E+00	1.542E+00	0.227E+00	14.70	
PO-212	1.41E+10Y	1.00	1.542E+00	1.542E+00	0.227E+00	14.70	
BI-214	1600.00Y	1.00	1.124E+00	1.124E+00	0.192E+00	17.06	
PB-214	1600.00Y	1.00	1.328E+00	1.328E+00	0.244E+00	18.36	
PO-214	1600.00Y	1.00	1.328E+00	1.328E+00	0.244E+00	18.36	
PO-216	1.41E+10Y	1.00	1.542E+00	1.542E+00	0.227E+00	14.70	
PO-218	1600.00Y	1.00	1.328E+00	1.328E+00	0.244E+00	18.36	
RA-224	1.41E+10Y	1.00	4.368E+00	4.368E+00	1.413E+00	32.35	
RA-226	1600.00Y	1.00	1.124E+00	1.124E+00	0.192E+00	17.06	
AC-228	1.41E+10Y	1.00	1.763E+00	1.763E+00	0.352E+00	19.94	
RA-228	1.41E+10Y	1.00	1.763E+00	1.763E+00	0.352E+00	19.94	
TH-228	1.91Y	1.02	1.542E+00	1.565E+00	0.230E+00	14.70	
TH-230	4.47E+09Y	1.00	1.124E+00	1.124E+00	0.192E+00	17.06	
TH-232	1.41E+10Y	1.00	1.763E+00	1.763E+00	0.352E+00	19.94	
TH-234	4.47E+09Y	1.00	2.124E-01	2.124E-01	21.86E-01	1029.37	
U-234	4.47E+09Y	1.00	1.124E+00	1.124E+00	0.192E+00	17.06	
U-235	7.04E+08Y	1.00	3.926E-01	3.926E-01	3.535E-01	90.03	
NP-237	2.14E+06Y	1.00	1.103E+00	1.103E+00	0.367E+00	33.25	
U-238	4.47E+09Y	1.00	2.124E-01	2.124E-01	21.86E-01	1029.37	
AM-243	7380.00Y	1.00	2.860E-01	2.860E-01	0.785E-01	27.43	
ANH-511	1.00E+09Y	1.00	1.052E-01	1.052E-01	0.677E-01	64.38	
	Total Activity :		6.696E+01	6.707E+01			

Grand Total Activity : 6.696E+01 6.707E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G244852002 Acquisition date : 26-JAN-2010 13:00:37

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	83.86	68	359	0.93	166.95	165	6	9.51E-03	93.6	4.98E+00	T
0	209.02	140	272	1.24	417.39	413	9	1.95E-02	45.5	4.89E+00	T
0	270.24	110	219	1.43	539.90	536	10	1.53E-02	54.0	4.07E+00	T
0	409.42	48	123	1.18	818.39	814	10	6.70E-03	90.6	3.00E+00	
0	462.83	56	112	1.79	925.29	922	10	7.83E-03	74.6	2.74E+00	T
0	727.62	40	79	1.22	1455.19	1448	10	5.49E-03	90.4	1.91E+00	T
0	1588.72	20	26	1.86	3178.65	3169	13	2.78E-03	****	9.64E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:05:04.52

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*******************************************************************************
*                              GEL Laboratories LLC                           *
*                                2040 Savage Road                             *
*                              Charleston, SC 29414                           *
*******************************************************************************
*                                                                             *
*                                DETECTOR DATA                                *
*                                                                             *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852002.CNF;1    *
* Acquisition date : 26-JAN-2010 13:00:37  Detector SN#     :                 *
* Detector ID      : GAM02                 Sensitivity      : 5.00000         *
* Geometry         : CAN                   Energy tolerance: 1.50000          *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000         *
* Elapsed real time: 0 02:00:02.88         Half life ratio : 8.00000          *
*******************************************************************************
*                                                                             *
*                                 SAMPLE DATA                                 *
*                                                                             *
* Sample date      : 11-JAN-2010 12:00:00  Nuclide Library : SOLID            *
* Sample ID        : G244852002            Analyst initials: MXR1             *
* Batch Number     : 942718                Sample Quantity : 1.37490E+02 GRAM *
*******************************************************************************
*                                                                             *
*                                   QC DATA                                   *
*                                                                             *
* CALIB. DATE/TIME : 29-OCT-2009 10:28:07.3MS Isotope      :                  *
* MSD ID           :                       MSD Isotope     :                  *
* LCS ID           : 1032-A                LCS Isotope     :                  *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.166E+01	3.549E+00	4.744E-01	4.510E-02	66.731
MN-54	3.913E-02	3.198E-02	6.671E-02	6.553E-03	0.587
CD-109	3.820E+00	9.958E-01	1.106E+00	1.110E-01	3.455
SN-126	3.755E-01	9.789E-02	1.093E-01	1.092E-02	3.436
BA-137M	7.369E-02	4.451E-02	6.206E-02	5.347E-03	1.187
CS-137	7.789E-02	4.706E-02	6.561E-02	5.663E-03	1.187
TL-208	5.713E-01	9.536E-02	5.078E-02	5.087E-03	11.251
BI-211	3.817E+00	6.717E-01	3.223E-01	3.719E-02	11.841
PB-212	1.542E+00	2.267E-01	9.441E-02	1.188E-02	16.334
PO-212	1.542E+00	2.267E-01	9.441E-02	1.188E-02	16.334
BI-214	1.124E+00	1.918E-01	1.174E-01	1.241E-02	9.572
PB-214	1.328E+00	2.437E-01	1.124E-01	1.421E-02	11.816
PO-214	1.328E+00	2.437E-01	1.124E-01	1.421E-02	11.816
PO-216	1.542E+00	2.267E-01	9.441E-02	1.188E-02	16.334
PO-218	1.328E+00	2.437E-01	1.124E-01	1.421E-02	11.816
RA-224	4.368E+00	1.413E+00	1.075E+00	1.269E-01	4.063
RA-226	1.124E+00	1.918E-01	1.174E-01	1.241E-02	9.572
AC-228	1.763E+00	3.516E-01	2.109E-01	2.629E-02	8.360

Sample ID : G244852002 Acquisition date : 26-JAN-2010 13:00:37

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.763E+00	3.516E-01	2.109E-01	2.629E-02	8.360
TH-228	1.565E+00	2.301E-01	9.583E-02	1.206E-02	16.334
TH-230	1.124E+00	1.918E-01	1.174E-01	1.241E-02	9.572
TH-232	1.763E+00	3.516E-01	2.109E-01	2.629E-02	8.360
TH-234	2.124E-01	2.186E+00	2.243E+00	3.961E-01	0.095
U-234	1.124E+00	1.918E-01	1.174E-01	1.241E-02	9.572
U-235	3.926E-01	3.535E-01	3.409E-01	6.054E-02	1.152
NP-237	1.103E+00	3.666E-01	3.325E-01	7.605E-02	3.316
U-238	2.124E-01	2.186E+00	2.243E+00	3.961E-01	0.095
AM-243	2.860E-01	7.846E-02	9.075E-02	7.935E-03	3.152
ANH-511	1.052E-01	6.771E-02	5.162E-02	5.117E-03	2.037

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.038E-01		3.418E-01	5.747E-01	6.095E-02	0.355
NA-22	-3.972E-02		5.010E-02	7.569E-02	6.711E-03	-0.525
NA-24	-2.934E-01		3.531E-01	Half-Life too short		
AL-26	7.666E-03		2.607E-02	4.595E-02	3.803E-03	0.167
TI-44	6.335E-02		3.954E-02	6.327E-02	5.727E-03	1.001
SC-46	9.321E-05		3.894E-02	6.318E-02	6.423E-03	0.001
V-48	-2.286E-02		7.848E-02	1.224E-01	1.197E-02	-0.187
CR-51	1.102E-01		3.914E-01	6.606E-01	8.060E-02	0.167
MN-52	1.585E-01		2.242E-01	4.027E-01	3.746E-02	0.394
CO-56	9.062E-03		4.306E-02	7.145E-02	7.074E-03	0.127
CO-57	-1.373E-02		2.447E-02	3.925E-02	3.281E-03	-0.350
CO-58	-1.168E-02		4.236E-02	6.754E-02	6.541E-03	-0.173
FE-59	2.204E-02		1.001E-01	1.700E-01	1.621E-02	0.130
CO-60	1.878E-02		4.678E-02	7.980E-02	7.435E-03	0.235
ZN-65	2.745E-02		1.136E-01	1.676E-01	1.458E-02	0.164
GE-68	1.468E+00		1.426E+00	2.570E+00	2.328E-01	0.571
AS-73	9.821E-01		1.074E+00	1.896E+00	1.570E-01	0.518
AS-74	-4.384E-02		9.966E-02	1.619E-01	1.512E-02	-0.271
SE-75	2.730E-02		4.557E-02	7.650E-02	9.350E-03	0.357
BR-77	-4.918E+00		1.126E+01	1.741E+01	1.718E+00	-0.282
SR-82	-4.393E-01		4.011E-01	5.898E-01	5.565E-02	-0.745
RB-83	-9.824E-03		7.410E-02	1.175E-01	1.160E-02	-0.084
RB-84	7.569E-02		7.107E-02	1.266E-01	1.281E-02	0.598
KR-85	4.563E-01		9.099E+00	1.279E+01	1.267E+00	0.036
SR-85	2.338E-03		4.661E-02	6.555E-02	6.489E-03	0.036
RB-86	1.063E+00		9.084E-01	1.651E+00	1.496E-01	0.644
Y-88	1.458E-02		3.480E-02	6.196E-02	5.054E-03	0.235
ZR-88	-8.916E-03		3.138E-02	5.042E-02	5.045E-03	-0.177
Y-91	6.922E+00		2.299E+01	3.886E+01	3.227E+00	0.178
NB-94	-1.365E-03		3.470E-02	5.726E-02	5.105E-03	-0.024
NB-95	1.653E-02		5.039E-02	8.447E-02	7.909E-03	0.196
NB-95M	1.459E-01		1.403E-01	2.208E-01	2.794E-02	0.661

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	-4.658E-03		7.749E-02	1.268E-01	1.282E-02	-0.037
NB-97	-1.526E-02		5.277E-02	Half-Life too short		
ZR-97	2.845E+00		1.083E+00	Half-Life too short		
MO-99	-1.944E+00		1.232E+01	2.003E+01	3.106E+00	-0.097
TC-99M	-4.443E+09		1.707E+10	Half-Life too short		
RH-101	9.217E-03		3.468E-02	5.567E-02	6.089E-03	0.166
RH-102	5.513E-03		3.168E-02	5.180E-02	5.197E-03	0.106
RU-103	1.308E-02		4.161E-02	6.855E-02	1.030E-02	0.191
RH-106	4.394E-03		3.438E-01	5.752E-01	7.857E-02	0.008
RU-106	4.394E-03		3.438E-01	5.752E-01	5.223E-02	0.008
AG-108M	1.601E-02		3.352E-02	5.631E-02	5.837E-03	0.284
AG-110M	-5.890E-03		4.074E-02	5.790E-02	5.165E-03	-0.102
IN-111	-5.439E-01		1.200E+00	1.739E+00	2.066E-01	-0.313
IN-113M	-2.862E-02		4.692E-02	7.368E-02	7.540E-03	-0.388
SN-113	-2.862E-02		4.692E-02	7.368E-02	7.540E-03	-0.388
IN-114M	-1.114E-01		2.090E-01	2.871E-01	3.092E-02	-0.388
CD-115	-6.275E+00		1.187E+01	1.818E+01	1.787E+00	-0.345
SN-117M	5.449E-03		5.552E-02	9.040E-02	8.906E-03	0.060
SB-122	1.902E+00		2.042E+00	3.644E+00	3.498E-01	0.522
I-123	-6.074E-02		2.692E+00	Half-Life too short		
TE-123M	-3.298E-04		2.923E-02	4.735E-02	4.697E-03	-0.007
I-124	-3.452E-01		7.606E-01	1.055E+00	9.783E-02	-0.327
SB-124	3.767E-02		7.780E-02	1.400E-01	1.273E-02	0.269
SB-125	7.015E-02		1.003E-01	1.704E-01	1.740E-02	0.412
TE-125M	7.179E+00		9.154E+00	1.558E+01	1.598E+00	0.461
I-126	8.456E-02		1.969E-01	3.103E-01	2.684E-02	0.273
SB-126	-7.195E-02		1.803E-01	2.463E-01	2.228E-02	-0.292
SB-127	-1.329E-01		1.333E+00	2.192E+00	2.518E-01	-0.061
XE-127	-3.486E-03		5.045E-02	8.021E-02	8.857E-03	-0.043
I-131	-7.071E-02		1.125E-01	1.769E-01	1.984E-02	-0.400
TE-132	-5.802E-01		7.429E-01	1.115E+00	1.950E-01	-0.520
BA-133	-4.929E-02		5.304E-02	6.998E-02	1.044E-02	-0.704
I-133	-1.416E-03		3.070E-03	Half-Life too short		
CS-134	1.265E-01		5.232E-02	9.874E-02	9.502E-03	1.281
CS-135	1.875E-01		1.885E-01	2.948E-01	3.900E-02	0.636
I-135	-1.212E+09		2.607E+09	Half-Life too short		
CS-136	-1.790E-02		1.172E-01	1.935E-01	1.868E-02	-0.092
CE-139	-1.552E-02		2.906E-02	4.568E-02	4.686E-03	-0.340
BA-140	5.269E-03		2.821E-01	4.517E-01	1.511E-01	0.012
LA-140	-1.459E-02		8.731E-02	1.397E-01	1.264E-02	-0.104
CE-141	6.477E-02		7.077E-02	1.078E-01	1.007E-02	0.601
CE-143	7.885E-04		1.267E-04	Half-Life too short		
CE-144	-3.370E-03		2.028E-01	3.320E-01	5.182E-02	-0.010
PM-144	6.552E-03		3.641E-02	6.111E-02	5.423E-03	0.107
PR-144	4.440E-01		2.467E+00	4.141E+00	3.674E-01	0.107
PM-146	-2.232E-02		4.510E-02	7.022E-02	8.368E-03	-0.318
ND-147	-1.540E-01		6.303E-01	9.885E-01	1.549E-01	-0.156
PM-149	-2.367E+00		8.776E+01	1.469E+02	2.626E+01	-0.016

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	6.313E-03		1.006E-01	1.616E-01	1.900E-02	0.039
GD-153	1.262E-02		8.448E-02	1.255E-01	1.140E-02	0.101
EU-154	-1.085E-01		1.404E-01	2.122E-01	2.439E-02	-0.511
EU-155	9.279E-02		1.108E-01	1.892E-01	1.659E-02	0.490
TB-160	1.656E-01		1.487E-01	2.647E-01	2.675E-02	0.625
HO-166M	-1.558E-02		6.523E-02	1.058E-01	9.501E-03	-0.147
TM-171	3.660E+00		3.122E+01	4.797E+01	3.919E+00	0.076
LU-176	1.603E-02		2.614E-02	4.359E-02	5.266E-03	0.368
LU-177	3.385E+00	+	1.585E+00	2.018E+00	2.252E-01	1.678
LU-177M	8.929E-03		2.047E-01	2.938E-01	2.954E-02	0.030
HF-181	-2.121E-02		4.524E-02	7.023E-02	7.033E-03	-0.302
W-181	1.211E-01		4.007E-01	6.218E-01	5.010E-02	0.195
TA-182	5.817E-02		2.345E-01	3.944E-01	3.327E-02	0.147
RE-183	3.014E-02		1.153E-01	1.827E-01	1.837E-02	0.165
RE-184	-1.920E-02		2.320E-01	3.904E-01	4.687E-02	-0.049
OS-185	8.466E-03		4.173E-02	7.067E-02	6.225E-03	0.120
RE-188	-1.411E-03		1.691E-01	2.743E-01	2.651E-02	-0.005
W-188	8.540E-01		7.654E+00	1.139E+01	1.399E+00	0.075
IR-192	6.469E-03		3.560E-02	5.984E-02	7.145E-03	0.108
AU-195	1.388E-01		2.164E-01	3.617E-01	3.251E-02	0.384
TL-200	-9.261E-05		2.131E-04	Half-Life too short		
TL-201	-1.368E-01		6.939E+00	1.097E+01	1.128E+00	-0.012
TL-202	-1.342E-02		7.392E-02	1.185E-01	1.194E-02	-0.113
HG-203	4.051E-02		4.635E-02	7.229E-02	9.089E-03	0.560
BI-207	6.052E-03		5.826E-02	9.822E-02	9.017E-03	0.062
TL-207	-9.122E-01		7.343E-01	1.101E+00	2.140E-01	-0.829
PO-209	-6.895E+00		7.747E+00	1.133E+01	1.157E+00	-0.609
BI-210	1.015E+00		6.167E+00	9.481E+00	9.084E-01	0.107
PB-210	1.015E+00		6.167E+00	9.481E+00	9.084E-01	0.107
PO-210	1.015E+00		6.167E+00	9.481E+00	8.275E-01	0.107
PB-211	9.348E-02		1.050E+00	1.515E+00	9.526E-01	0.062
BI-212	4.784E-01	+	4.352E-01	6.226E-01	6.486E-02	0.768
PO-215	-9.122E-01		7.343E-01	1.101E+00	2.140E-01	-0.829
RN-219	1.038E-01		4.083E-01	6.790E-01	1.078E-01	0.153
RN-220	8.757E+00		2.742E+01	4.490E+01	4.355E+00	0.195
RA-223	-9.122E-01		7.343E-01	1.101E+00	2.140E-01	-0.829
AC-227	9.884E-03		3.804E-01	6.430E-01	1.126E-01	0.015
TH-227	9.884E-03		3.804E-01	6.430E-01	1.282E-01	0.015
TH-229	1.960E-01		5.279E-01	8.592E-01	9.316E-02	0.228
PA-231	-4.083E-01		1.532E+00	2.530E+00	4.448E-01	-0.161
TH-231	-9.122E-01		7.343E-01	1.101E+00	2.140E-01	-0.829
U-231	-3.019E-01		1.067E+00	1.571E+00	1.447E-01	-0.192
PA-233	-3.872E-02		6.598E-02	1.060E-01	1.291E-02	-0.365
PA-234	-4.111E-02		3.324E-01	5.296E-01	1.029E-01	-0.078
PA-234M	3.878E+00		5.707E+00	9.627E+00	1.048E+00	0.403
NP-236	1.422E-02		8.193E-02	1.337E-01	1.330E-02	0.106
NP-239	-1.137E-01		1.848E-01	2.965E-01	2.486E-02	-0.383
AM-241	2.313E-02		1.911E-01	2.954E-01	2.420E-02	0.078

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.063E-01		9.752E-02	1.680E-01	1.466E-02	0.633
AM-246	1.241E-01		1.587E-01	2.817E-01	2.548E-02	0.441
CM-247	-1.013E-02		3.719E-02	5.967E-02	5.986E-03	-0.170
CF-249	4.252E-02		4.442E-02	7.662E-02	7.759E-03	0.555
CF-251	5.416E-02		1.304E-01	2.139E-01	2.241E-02	0.253

VAX/VMS Nuclide Identification Report Generated

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G244852002           *
* Acquisition date  : 26-JAN-2010 13:00:37 Detector SN#     :               *
* Detector ID       : GAM02                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:02.88      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 11-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G244852002           Analyst initials: MXR1           *
* Batch Number      : 942718               Sample Quantity : 1.3749E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 29-OCT-2009 10:28:07 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.166E+01	3.478E+00	2.380E-01	1.774E+00
MN-54	3.913E-02	3.134E-02	3.385E-02	1.599E-02
CD-109	3.820E+00	9.759E-01	5.853E-01	4.979E-01
SN-126	3.755E-01	9.593E-02	5.787E-02	4.894E-02
BA-137M	7.369E-02	4.362E-02	3.164E-02	2.226E-02
CS-137	7.789E-02	4.612E-02	3.344E-02	2.353E-02
TL-208	5.713E-01	9.346E-02	2.595E-02	4.768E-02
BI-211	3.817E+00	6.583E-01	1.663E-01	3.359E-01
PB-212	1.542E+00	2.222E-01	4.907E-02	1.134E-01
PO-212	1.542E+00	2.222E-01	4.907E-02	1.134E-01
BI-214	1.124E+00	1.879E-01	5.996E-02	9.588E-02
PB-214	1.328E+00	2.389E-01	5.798E-02	1.219E-01
PO-214	1.328E+00	2.389E-01	5.798E-02	1.219E-01
PO-216	1.542E+00	2.222E-01	4.907E-02	1.134E-01
PO-218	1.328E+00	2.389E-01	5.798E-02	1.219E-01
RA-224	4.368E+00	1.385E+00	5.587E-01	7.066E-01
RA-226	1.124E+00	1.879E-01	5.996E-02	9.588E-02
AC-228	1.763E+00	3.446E-01	1.068E-01	1.758E-01
RA-228	1.763E+00	3.446E-01	1.068E-01	1.758E-01
TH-228	1.565E+00	2.255E-01	4.982E-02	1.151E-01
TH-230	1.124E+00	1.879E-01	5.996E-02	9.588E-02
TH-232	1.763E+00	3.446E-01	1.068E-01	1.758E-01
TH-234	2.124E-01	2.143E+00	1.195E+00	1.093E+00
U-234	1.124E+00	1.879E-01	5.996E-02	9.588E-02
U-235	3.926E-01	3.464E-01	1.789E-01	1.767E-01
NP-237	1.103E+00	3.593E-01	1.761E-01	1.833E-01
U-238	2.124E-01	2.143E+00	1.195E+00	1.093E+00
AM-243	2.860E-01	7.689E-02	4.819E-02	3.923E-02
ANH-511	1.052E-01	6.635E-02	2.645E-02	3.385E-02

---- Non-Identified Nuclides ----

Key-Line Activity	K.L Act error	DLC	TPU

Nuclide	(pCi/GRAM)		(pCi/GRAM)		
BE-7	2.038E-01	3.350E-01	2.948E-01	1.709E-01	NOT IDENT.
NA-22	-3.972E-02	4.909E-02	3.809E-02	2.505E-02	NOT IDENT.
NA-24	-2.934E+05	6.920E+05	0.000E+00	3.531E+05	SHORT HLIF
AL-26	7.666E-03	2.554E-02	2.296E-02	1.303E-02	NOT IDENT.
TI-44	6.335E-02	3.875E-02	3.357E-02	1.977E-02	NOT IDENT.
SC-46	9.321E-05	3.816E-02	3.202E-02	1.947E-02	FAIL ABUN
V-48	-2.286E-02	7.691E-02	6.189E-02	3.924E-02	NOT IDENT.
CR-51	1.102E-01	3.836E-01	3.415E-01	1.957E-01	NOT IDENT.
MN-52	1.585E-01	2.197E-01	2.021E-01	1.121E-01	NOT IDENT.
CO-56	9.062E-03	4.220E-02	3.624E-02	2.153E-02	NOT IDENT.
CO-57	-1.373E-02	2.398E-02	2.066E-02	1.224E-02	NOT IDENT.
CO-58	-1.168E-02	4.151E-02	3.429E-02	2.118E-02	NOT IDENT.
FE-59	2.204E-02	9.813E-02	8.580E-02	5.007E-02	FAIL ABUN
CO-60	1.878E-02	4.584E-02	4.012E-02	2.339E-02	NOT IDENT.
ZN-65	2.745E-02	1.114E-01	8.458E-02	5.682E-02	NOT IDENT.
GE-68	1.468E+00	1.398E+00	1.297E+00	7.131E-01	NOT IDENT.
AS-73	9.821E-01	1.052E+00	1.013E+00	5.368E-01	NOT IDENT.
AS-74	-4.384E-02	9.767E-02	8.271E-02	4.983E-02	NOT IDENT.
SE-75	2.730E-02	4.466E-02	3.969E-02	2.279E-02	NOT IDENT.
BR-77	-4.918E+00	1.104E+01	8.916E+00	5.631E+00	FAIL ABUN
SR-82	-4.393E-01	3.931E-01	2.997E-01	2.006E-01	NOT IDENT.
RB-83	-9.824E-03	7.262E-02	6.017E-02	3.705E-02	NOT IDENT.
RB-84	7.569E-02	6.965E-02	6.418E-02	3.554E-02	NOT IDENT.
KR-85	4.563E-01	8.917E+00	6.554E+00	4.549E+00	NOT IDENT.
SR-85	2.338E-03	4.568E-02	3.358E-02	2.331E-02	NOT IDENT.
RB-86	1.063E+00	8.903E-01	8.333E-01	4.542E-01	NOT IDENT.
Y-88	1.458E-02	3.411E-02	3.095E-02	1.740E-02	NOT IDENT.
ZR-88	-8.916E-03	3.075E-02	2.596E-02	1.569E-02	NOT IDENT.
Y-91	6.922E+00	2.253E+01	1.957E+01	1.150E+01	NOT IDENT.
NB-94	-1.365E-03	3.401E-02	2.915E-02	1.735E-02	NOT IDENT.
NB-95	1.653E-02	4.938E-02	4.294E-02	2.520E-02	NOT IDENT.
NB-95M	1.459E-01	1.375E-01	1.148E-01	7.014E-02	NOT IDENT.
ZR-95	-4.658E-03	7.594E-02	6.449E-02	3.874E-02	NOT IDENT.
NB-97	-1.526E+04	1.034E+05	0.000E+00	5.277E+04	SHORT HLIF
ZR-97	2.845E+06	2.123E+06	0.000E+00	1.083E+06	SHORT HLIF
MO-99	-1.944E+00	1.207E+01	1.019E+01	6.158E+00	NOT IDENT.
TC-99M	-4.443E+15	3.346E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	9.217E-03	3.399E-02	2.904E-02	1.734E-02	NOT IDENT.
RH-102	5.513E-03	3.105E-02	2.658E-02	1.584E-02	NOT IDENT.
RU-103	1.308E-02	4.078E-02	3.514E-02	2.081E-02	FAIL ABUN
RH-106	4.394E-03	3.370E-01	2.935E-01	1.719E-01	NOT IDENT.
RU-106	4.394E-03	3.370E-01	2.935E-01	1.719E-01	NOT IDENT.
AG-108M	1.601E-02	3.285E-02	2.894E-02	1.676E-02	NOT IDENT.
AG-110M	-5.890E-03	3.992E-02	2.952E-02	2.037E-02	NOT IDENT.
IN-111	-5.439E-01	1.176E+00	9.036E-01	6.000E-01	NOT IDENT.
IN-113M	-2.862E-02	4.599E-02	3.794E-02	2.346E-02	NOT IDENT.
SN-113	-2.862E-02	4.599E-02	3.794E-02	2.346E-02	NOT IDENT.
IN-114M	-1.114E-01	2.048E-01	1.499E-01	1.045E-01	NOT IDENT.
CD-115	-6.275E+00	1.163E+01	9.306E+00	5.933E+00	NOT IDENT.
SN-117M	5.449E-03	5.441E-02	4.735E-02	2.776E-02	NOT IDENT.
SB-122	1.902E+00	2.001E+00	1.863E+00	1.021E+00	NOT IDENT.
I-123	-6.074E+04	5.276E+06	0.000E+00	2.692E+06	SHORT HLIF
TE-123M	-3.298E-04	2.864E-02	2.480E-02	1.461E-02	NOT IDENT.
I-124	-3.452E-01	7.454E-01	5.387E-01	3.803E-01	NOT IDENT.
SB-124	3.767E-02	7.625E-02	7.004E-02	3.890E-02	FAIL ABUN
SB-125	7.015E-02	9.829E-02	8.759E-02	5.015E-02	FAIL ABUN
TE-125M	7.179E+00	8.971E+00	8.217E+00	4.577E+00	NOT IDENT.
I-126	8.456E-02	1.930E-01	1.582E-01	9.847E-02	NOT IDENT.
SB-126	-7.195E-02	1.767E-01	1.253E-01	9.015E-02	FAIL ABUN
SB-127	-1.329E-01	1.306E+00	1.116E+00	6.664E-01	NOT IDENT.
XE-127	-3.486E-03	4.944E-02	4.182E-02	2.522E-02	NOT IDENT.
I-131	-7.071E-02	1.102E-01	9.121E-02	5.623E-02	NOT IDENT.
TE-132	-5.802E-01	7.280E-01	5.801E-01	3.714E-01	NOT IDENT.
BA-133	-4.929E-02	5.198E-02	3.610E-02	2.652E-02	FAIL ABUN
I-133	-1.416E+03	6.017E+03	0.000E+00	3.070E+03	SHORT HLIF
CS-134	1.265E-01	5.127E-02	5.015E-02	2.616E-02	NOT IDENT.
CS-135	1.875E-01	1.847E-01	1.529E-01	9.423E-02	NOT IDENT.
I-135	-1.212E+15	5.110E+15	0.000E+00	2.607E+15	SHORT HLIF
CS-136	-1.790E-02	1.149E-01	9.776E-02	5.862E-02	FAIL ABUN
CE-139	-1.552E-02	2.847E-02	2.391E-02	1.453E-02	NOT IDENT.
BA-140	5.269E-03	2.765E-01	2.312E-01	1.411E-01	NOT IDENT.
LA-140	-1.459E-02	8.556E-02	6.998E-02	4.365E-02	NOT IDENT.
CE-141	6.477E-02	6.935E-02	5.657E-02	3.538E-02	NOT IDENT.
CE-143	7.885E+02	2.484E+02	0.000E+00	1.267E+02	SHORT HLIF
CE-144	-3.370E-03	1.988E-01	1.744E-01	1.014E-01	NOT IDENT.
PM-144	6.552E-03	3.568E-02	3.112E-02	1.821E-02	NOT IDENT.

PR-144	4.440E-01	2.418E+00	2.109E+00	1.234E+00	NOT IDENT.
PM-146	-2.232E-02	4.419E-02	3.606E-02	2.255E-02	NOT IDENT.
ND-147	-1.540E-01	6.177E-01	5.061E-01	3.152E-01	FAIL ABUN
PM-149	-2.367E+00	8.600E+01	7.608E+01	4.388E+01	NOT IDENT.
EU-152	6.313E-03	9.862E-02	8.342E-02	5.032E-02	NOT IDENT.
GD-153	1.262E-02	8.279E-02	6.631E-02	4.224E-02	FAIL ABUN
EU-154	-1.085E-01	1.376E-01	1.068E-01	7.018E-02	NOT IDENT.
EU-155	9.279E-02	1.086E-01	9.987E-02	5.542E-02	FAIL ABUN
TB-160	1.656E-01	1.457E-01	1.342E-01	7.434E-02	FAIL ABUN
HO-166M	-1.558E-02	6.392E-02	5.385E-02	3.261E-02	FAIL ABUN
TM-171	3.660E+00	3.060E+01	2.553E+01	1.561E+01	NOT IDENT.
LU-176	1.603E-02	2.562E-02	2.255E-02	1.307E-02	FAIL ABUN
LU-177	3.385E+00	1.553E+00	1.051E+00	7.925E-01	FAIL ABUN
LU-177M	8.929E-03	2.006E-01	1.511E-01	1.024E-01	FAIL ABUN
HF-181	-2.121E-02	4.433E-02	3.602E-02	2.262E-02	NOT IDENT.
W-181	1.211E-01	3.927E-01	3.310E-01	2.003E-01	NOT IDENT.
TA-182	5.817E-02	2.298E-01	1.986E-01	1.172E-01	FAIL ABUN
RE-183	3.014E-02	1.130E-01	9.565E-02	5.763E-02	FAIL ABUN
RE-184	-1.920E-02	2.273E-01	2.027E-01	1.160E-01	NOT IDENT.
OS-185	8.466E-03	4.090E-02	3.604E-02	2.087E-02	NOT IDENT.
RE-188	-1.411E-03	1.657E-01	1.437E-01	8.453E-02	NOT IDENT.
W-188	8.540E-01	7.501E+00	5.897E+00	3.827E+00	FAIL ABUN
IR-192	6.469E-03	3.489E-02	3.094E-02	1.780E-02	FAIL ABUN
AU-195	1.388E-01	2.121E-01	1.911E-01	1.082E-01	FAIL ABUN
TL-200	-9.261E+01	4.176E+02	0.000E+00	2.131E+02	SHORT HLIF
TL-201	-1.368E-01	6.800E+00	5.738E+00	3.469E+00	NOT IDENT.
TL-202	-1.342E-02	7.245E-02	6.091E-02	3.696E-02	NOT IDENT.
HG-203	4.051E-02	4.542E-02	3.747E-02	2.317E-02	FAIL ABUN
BI-207	6.052E-03	5.709E-02	4.960E-02	2.913E-02	FAIL ABUN
TL-207	-9.122E-01	7.196E-01	5.688E-01	3.672E-01	FAIL ABUN
PO-209	-6.895E+00	7.592E+00	5.742E+00	3.873E+00	NOT IDENT.
BI-210	1.015E+00	6.044E+00	5.077E+00	3.084E+00	NOT IDENT.
PB-210	1.015E+00	6.044E+00	5.077E+00	3.084E+00	NOT IDENT.
PO-210	1.015E+00	6.044E+00	5.077E+00	3.084E+00	NOT IDENT.
PB-211	9.348E-02	1.029E+00	7.796E-01	5.252E-01	NOT IDENT.
BI-212	4.784E-01	4.265E-01	3.168E-01	2.176E-01	FAIL ABUN
PO-215	-9.122E-01	7.196E-01	5.688E-01	3.672E-01	FAIL ABUN
RN-219	1.038E-01	4.001E-01	3.495E-01	2.041E-01	FAIL ABUN
RN-220	8.757E+00	2.687E+01	2.297E+01	1.371E+01	NOT IDENT.
RA-223	-9.122E-01	7.196E-01	5.688E-01	3.672E-01	FAIL ABUN
AC-227	9.884E-03	3.728E-01	3.338E-01	1.902E-01	FAIL ABUN
TH-227	9.884E-03	3.728E-01	3.338E-01	1.902E-01	FAIL ABUN
TH-229	1.960E-01	5.173E-01	4.483E-01	2.639E-01	FAIL ABUN
PA-231	-4.083E-01	1.501E+00	1.311E+00	7.660E-01	FAIL ABUN
TH-231	-9.122E-01	7.196E-01	5.688E-01	3.672E-01	FAIL ABUN
U-231	-3.019E-01	1.046E+00	8.307E-01	5.336E-01	FAIL ABUN
PA-233	-3.872E-02	6.466E-02	5.482E-02	3.299E-02	FAIL ABUN
PA-234	-4.111E-02	3.258E-01	2.681E-01	1.662E-01	FAIL ABUN
PA-234M	3.878E+00	5.592E+00	4.868E+00	2.853E+00	NOT IDENT.
NP-236	1.422E-02	8.029E-02	7.003E-02	4.096E-02	NOT IDENT.
NP-239	-1.137E-01	1.811E-01	1.562E-01	9.238E-02	FAIL ABUN
AM-241	2.313E-02	1.872E-01	1.575E-01	9.553E-02	NOT IDENT.
CM-243	1.063E-01	9.557E-02	8.867E-02	4.876E-02	FAIL ABUN
AM-246	1.241E-01	1.556E-01	1.422E-01	7.937E-02	NOT IDENT.
CM-247	-1.013E-02	3.645E-02	3.071E-02	1.860E-02	FAIL ABUN
CF-249	4.252E-02	4.353E-02	3.946E-02	2.221E-02	NOT IDENT.
CF-251	5.416E-02	1.278E-01	1.118E-01	6.522E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	250.4426
46.50	250.4426
46.50	250.4426
48.70	261.1197
49.72	270.7856
51.35	245.9503
52.39	249.3316
52.97	242.2441
53.15	242.3884
53.44	246.8335
54.07	280.2677
56.28	289.9249
56.28	289.9275
57.37	0.0000
57.53	263.7607
57.53	263.7623
57.60	263.8188
57.98	261.5680
57.98	261.5680
59.32	303.8578
59.32	303.8578
59.40	289.7661
59.54	288.6022
59.72	288.7611
60.01	273.5336
61.10	297.7408
61.14	297.7768
61.30	297.9198
63.00	299.4315
63.29	299.6873
63.29	299.6873
63.58	324.7204
64.28	312.3177
65.12	294.7392
65.20	294.8074
65.20	294.8074
66.05	295.5271
66.72	315.8276
66.83	315.9283
66.91	304.1498
67.20	313.0972
67.20	313.0972
67.75	326.4271
67.85	334.4405
68.90	358.3702
68.90	358.3702
69.30	355.2321
69.67	336.4913
70.82	327.4338
70.82	327.4338
70.83	327.4432
72.80	355.9500
72.87	356.0149
72.87	356.0149
74.67	367.1291
74.81	367.2624
74.81	367.2624
74.81	367.2624
74.81	367.2624
74.81	367.2624
74.81	367.2624
74.81	367.2624
74.97	367.4165
75.28	367.7144
75.70	368.1164
77.11	369.4598
77.11	369.4598

77.11	369.4598
77.11	369.4598
77.11	369.4598
77.11	369.4598
77.11	369.4598
78.38	370.6574
79.62	371.8196
79.80	371.9862
79.80	371.9862
80.11	372.2758
80.18	372.3403
80.30	372.4528
80.30	372.4528
80.57	372.7027
81.00	341.6672
81.07	341.7263
81.07	341.7263
81.07	341.7263
81.07	341.7263
82.60	290.8773
83.37	291.4207
83.78	305.4736
83.78	305.4736
83.78	305.4736
83.78	305.4736
84.21	319.5646
84.90	292.5012
85.43	292.8732
86.29	293.4716
86.50	293.6188
86.54	278.4100
86.59	278.4422
86.72	278.5280
86.79	278.5725
86.94	278.6722
87.30	281.6851
87.30	281.6851
87.30	281.6851
87.30	281.6851
87.30	281.6851
87.30	281.6851
87.30	281.6851
87.57	281.8632
87.88	282.0677
88.03	282.1668
88.36	282.3836
88.47	282.4564
89.95	283.4259
91.11	284.1802
92.29	284.9437
92.38	285.0010
92.38	285.0010
93.35	285.6236
94.00	286.0403
94.67	268.1181
94.67	268.1210
94.90	288.0252
94.90	288.0252
94.90	288.0252
94.90	288.0252
95.87	288.6431
95.87	288.6431
96.73	259.4199
97.43	283.9500
98.44	269.7741
98.44	269.7741
98.88	261.1051
99.55	272.8914
99.55	272.8914
99.86	288.2960
100.00	288.3823
100.10	297.0148
103.18	320.0273
103.76	283.0024
105.00	268.3400
105.31	305.0832
108.00	336.7604
109.28	280.3877

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111.00	320.2900
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112.95	292.2051
115.19	296.4241
116.30	307.8770
117.00	289.5752
117.00	289.5752
117.66	288.9524
121.11	270.9810
121.62	282.1669
121.78	277.2815
122.06	277.4248
122.32	268.6047
122.32	268.6047
122.32	268.6047
122.32	268.6047
123.07	269.9731
127.23	281.0553
129.76	290.3906
131.20	319.4331
133.02	286.9843
133.54	282.1684
135.34	276.9362
136.00	267.0586
136.25	272.2705
136.48	272.3778
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140.51	0.0000
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142.65	290.6719
143.76	289.1402
144.24	289.3652
144.24	289.3652
144.24	289.3652
144.24	289.3652
145.22	270.1625
145.44	270.2607
147.16	281.9177
152.43	265.9683
152.70	256.6538
153.22	264.2021
154.21	270.9100
154.21	270.9100
154.21	270.9100
154.21	270.9100
155.03	265.9995
156.02	301.1577
158.56	267.4485
159.00	0.0000
159.00	276.0912
160.31	271.3412
161.27	248.3822
162.32	254.0907
162.64	260.5941
163.35	245.9639
163.89	256.8200
165.85	253.2928
167.43	237.8126
171.28	248.8424
171.86	244.7390
172.10	257.7643
176.55	245.2931
176.60	245.3092
181.06	247.3865
184.41	268.2800
185.71	257.2110
186.00	257.3134
190.27	257.1350
192.34	227.3447
193.63	238.8393
197.04	267.8027
198.01	233.5049
198.60	252.6890
200.40	231.9822
201.83	300.8921
202.84	263.0572
205.31	214.8260

208.36	237.7197
208.81	237.8543
209.75	229.6252
209.75	229.6252
210.97	231.6748
215.65	212.4457
216.55	232.1147
218.09	217.6542
222.10	238.2656
223.80	220.2900
226.40	223.2760
227.00	238.4830
227.08	238.5060
227.20	238.5374
228.16	241.1221
228.18	241.1284
228.18	241.1284
231.56	0.0000
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236.00	221.7767
238.63	218.2109
238.63	218.2109
238.63	218.2109
238.63	218.2109
239.00	218.2999
240.98	218.7842
241.98	219.0264
241.98	219.0264
241.98	219.0264
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245.39	215.5980
247.94	192.0190
248.90	187.7706
249.79	181.7155
252.40	190.2670
252.85	184.1037
252.85	184.1037
254.15	0.0000
256.20	181.1761
256.20	181.1761
260.50	177.4942
260.90	190.1885
262.80	194.1778
264.65	163.3976
268.24	186.0094
268.79	206.4686
269.46	202.2457
269.46	202.2457
269.46	202.2457
269.46	202.2457
271.23	169.4480
273.65	175.3447
276.40	170.3335
277.35	175.9951
277.60	181.9070
277.60	181.9070
278.00	171.7066
278.60	155.6564
279.20	158.6883
279.53	160.2108
280.46	172.1265
281.68	159.0785
283.67	166.0309
284.30	151.3677
285.00	152.3939
285.90	154.3761
286.10	154.4067
286.10	154.4067
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288.45	0.0000
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290.80	135.2359
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293.26	0.0000
293.70	138.5918
295.21	141.7764
295.21	141.7764

295.21	141.7764
295.96	190.4158
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297.23	201.8573
298.57	202.1144
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299.80	161.1293
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300.09	142.4327
300.09	142.4327
300.09	142.4327
300.12	142.4351
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302.84	166.8496
303.76	148.9399
303.91	148.9592
304.40	149.0269
304.40	149.0269
304.84	144.5695
306.84	140.0973
308.46	167.1529
311.98	159.1637
316.51	144.5990
318.01	160.0353
319.02	155.4116
319.41	161.1890
320.08	148.8779
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323.87	189.6010
323.87	189.6010
323.87	189.6010
325.23	173.5292
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333.44	142.1395
334.20	139.1396
334.20	139.1396
334.30	139.1528
338.28	147.3868
338.28	147.3868
338.28	147.3868
338.28	147.3868
338.32	147.3915
338.32	147.3915
338.32	147.3915
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340.57	144.5655
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345.85	128.0369
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351.07	121.5384
351.92	121.6235
351.92	121.6235
351.92	121.6235
355.39	0.0000
356.01	155.8887
364.48	119.9051
366.43	107.1909
367.43	107.2766
367.94	0.0000
369.80	119.4214
374.96	128.9035
383.85	136.8446
387.95	122.1373
388.63	132.3003
391.69	132.6091
391.69	132.6091
392.90	119.5593
398.62	103.7945
400.65	110.0682
401.10	111.1239
401.81	104.0435
402.60	115.3312
404.84	106.3217
410.95	126.5189
411.60	111.7850
413.65	110.3046
414.70	108.7421
415.30	107.1405

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427.89	106.0342
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433.93	93.9578
439.47	115.2821
439.56	112.1454
439.89	105.8808
443.98	100.9248
444.90	99.9358
445.03	99.9445
445.03	99.9445
445.03	99.9445
445.03	99.9445
453.90	105.8426
463.38	106.5170
468.07	105.9934
473.00	112.5550
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475.35	115.9481
476.78	104.2362
477.59	90.3138
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511.00	106.5126
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511.85	101.9545
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513.99	119.6881
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529.87	0.0000
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546.56	0.0000
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555.20	92.8861
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563.90	74.3165
568.70	90.8740
569.32	91.8148
569.50	91.8247
569.67	96.3808
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574.00	90.2336
574.64	68.3826
578.91	73.1152
579.30	0.0000
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591.81	86.5208
592.07	89.2964
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602.71	94.1310
603.60	100.3512
604.41	84.9506
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609.31	89.8179

609.31	89.8179
609.31	89.8179
609.31	89.8179
610.33	99.1641
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614.37	97.8223
618.01	96.1438
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621.84	87.9185
631.29	70.4938
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661.65	82.7205
664.57	0.0000
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666.33	69.7017
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677.61	68.3011
685.20	69.5197
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695.00	72.7570
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696.49	80.5744
697.00	80.5947
697.49	78.6705
698.33	68.9858
698.50	71.9061
699.00	79.6998
702.63	79.8359
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722.78	76.9870
722.89	76.9908
722.95	76.9927
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724.18	72.1195
727.18	59.0889
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739.58	76.2593
742.81	72.4047
744.21	82.3739
747.13	78.5082
751.79	72.6970
752.31	76.6973
753.82	67.7792
755.35	80.7904
756.15	76.8289
756.87	86.8343
763.93	91.1111
765.79	83.1682
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766.84	89.2216
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778.57	64.4891
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783.80	76.7552
785.46	82.8728
792.07	82.0956

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810.29	71.4954
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817.79	53.2784
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836.80	0.0000
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881.50	40.9976
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884.67	61.0473
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911.07	52.1008
911.07	52.1008
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920.93	56.5635
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925.24	53.4485
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937.48	78.3930
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969.11	52.5070
969.11	52.5070
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1021.30	0.0000
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1038.76	0.0000
1045.16	55.7788
1046.59	54.8756
1048.07	60.4879

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1050.47	61.4668
1062.04	56.0962
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1077.35	51.6833
1078.86	51.7080
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1112.02	55.3923
1112.84	52.1473
1115.52	63.6090
1120.29	76.2272
1120.29	76.2272
1120.29	76.2272
1120.29	76.2272
1120.51	76.2337
1121.28	66.9939
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1147.95	0.0000
1167.94	73.5044
1173.22	64.9063
1175.09	64.9417
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1205.75	0.0000
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1271.85	49.8698
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1274.54	62.8846
1291.56	41.1235
1298.22	0.0000
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1325.50	34.4261
1332.49	40.5794
1333.61	33.4888
1360.21	28.6209
1362.66	0.0000
1365.15	27.6350
1368.21	27.6581
1368.53	0.0000
1376.25	22.5846
1384.27	34.9781
1394.10	25.7863
1395.20	34.0474
1407.95	23.8095
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1436.60	21.9015
1457.56	0.0000
1460.81	16.7904
1489.15	21.1377
1509.49	14.8710
1596.49	22.0264
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1678.03	0.0000
1691.02	12.3503
1691.02	12.3503
1706.46	0.0000
1750.46	0.0000
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1764.49	10.1367
1764.49	10.1367
1764.49	10.1367
1770.23	69.5943
1771.40	31.9054
1791.20	0.0000
1808.65	7.7960

1836.01	10.7809

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G244852002

Total Uranium Activity	8.1356E-01	ug/g
Total Uranium Counting Unc.	6.3765E+00	ug/g
Total Uranium Tpu	3.2533E-06	ug/g
Total Uranium Mda	3.5556E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                           *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 942718                    SAMPLE ID  : G244852002       *
*   ANALYST       : MXR1                      DETECTOR   : GAM02            *
*   SAMPLE DATE   : 11-JAN-2010 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 26-JAN-2010 13:00:37.01    SAMPLE ALQT:  137.490 GRAM    *
*                                                                           *
*****************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.797E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 2.001E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 2.783E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.345E+00
```

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:10:59.71

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852003.CNF;1
Sample date       : 11-JAN-2010 12:00:00 Acquisition date : 26-JAN-2010 13:10:09
Sample ID         : G244852003           Sample quantity  : 1.30760E+02 GRAM
Detector name     : GAM17                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:09.46  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 942718               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.86*	87	438	0.92	93.36	89	10	1.20E-02	48.3	
2	0	53.34*	59	372	0.94	106.31	103	8	8.26E-03	58.3	
3	0	63.33*	195	615	0.78	126.30	121	10	2.71E-02	25.4	
4	2	74.86*	602	376	0.97	149.36	144	17	8.37E-02	6.5	3.47E+00
5	2	77.12*	928	303	0.98	153.90	144	17	1.29E-01	4.6	
6	3	84.29*	126	318	1.21	168.22	165	27	1.75E-02	25.5	2.41E+00
7	3	87.32*	348	310	1.10	174.30	165	27	4.84E-02	10.0	
8	3	89.93	250	303	1.20	179.51	165	27	3.47E-02	13.2	
9	3	92.70*	273	296	1.21	185.06	165	27	3.80E-02	13.3	
10	0	128.81	94	359	0.91	257.31	252	10	1.31E-02	38.9	
11	0	185.68*	197	289	1.14	371.09	367	11	2.74E-02	18.6	
12	0	209.41	72	223	0.93	418.58	414	9	9.98E-03	39.5	
13	5	238.51*	971	115	1.02	476.80	470	19	1.35E-01	3.7	2.58E+00
14	5	241.63	259	197	1.82	483.03	470	19	3.60E-02	13.6	
15	0	270.67	99	183	1.81	541.13	536	11	1.38E-02	28.5	
16	1	295.05*	335	89	1.23	589.93	584	20	4.66E-02	7.3	1.72E+00
17	1	299.68	63	110	1.31	599.19	584	20	8.77E-03	30.2	
18	0	338.05*	192	140	1.13	675.97	670	11	2.67E-02	14.2	
19	0	351.84*	561	134	1.21	703.54	698	13	7.79E-02	6.1	
20	0	409.39	35	79	1.24	818.70	814	8	4.85E-03	47.4	
21	0	462.07	93	82	1.18	924.11	918	13	1.29E-02	22.5	
22	0	510.55*	103	134	2.23	1021.13	1013	20	1.44E-02	31.9	
23	0	582.89*	275	97	1.48	1165.88	1160	14	3.82E-02	10.0	
24	0	608.86*	370	57	1.30	1217.85	1212	12	5.13E-02	6.7	
25	0	726.94	89	73	1.23	1454.15	1447	14	1.24E-02	23.0	
26	0	860.06	53	43	1.46	1720.56	1715	15	7.38E-03	29.8	
27	0	910.66*	200	38	1.44	1821.82	1816	14	2.78E-02	9.8	
28	0	934.21	27	46	1.58	1868.95	1861	15	3.77E-03	59.0	
29	3	963.66	40	30	2.21	1927.89	1919	24	5.52E-03	36.2	1.75E+00
30	3	968.07*	113	33	1.87	1936.72	1919	24	1.57E-02	14.1	
31	0	1119.56	90	32	1.51	2239.92	2235	14	1.25E-02	16.4	
32	0	1376.18	32	10	0.78	2753.58	2745	14	4.44E-03	27.7	
33	0	1459.63*	583	29	2.05	2920.63	2910	19	8.09E-02	4.7	
34	0	1763.44	62	12	2.36	3528.82	3520	16	8.63E-03	17.8	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 26-JAN-2010 15:11:02

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852003.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 11-JAN-2010 12:00:00 Acquisition date : 26-JAN-2010 13:10:09
Sample ID : G244852003 Sample quantity : 130.76 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA17 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:09.46 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.014E+01	2.606E+00	6.509E-01	5.779E-02	30.945
AS-73	+	53.44	*	2.868E-01	3.355E-01	3.423E-01	3.425E-02	0.838
CD-109	+	88.03	*	4.117E+00	9.196E-01	9.347E-01	9.124E-02	4.405
SN-126	+	64.28		8.599E-01	4.575E-01	3.847E-01	6.141E-02	2.235
	+	86.94		1.683E+00	7.775E-01	3.807E-01	1.584E-01	4.420
	+	87.57	*	4.047E-01	9.040E-02	9.175E-02	8.953E-03	4.411
TL-208		277.35		3.123E-01	3.754E-01	6.622E-01	8.431E-02	0.472
	+	510.84		6.673E-01	4.338E-01	2.363E-01	2.886E-02	2.824
	+	583.14	*	5.177E-01	1.145E-01	6.142E-02	5.810E-03	8.428
	+	860.37		9.817E-01	5.923E-01	5.199E-01	4.891E-02	1.888
BI-210	+	46.50	*	9.714E-01	9.448E-01	7.967E-01	8.643E-02	1.219
PB-210	+	46.50	*	9.714E-01	9.448E-01	7.967E-01	8.643E-02	1.219
PO-210	+	46.50	*	9.714E-01	9.440E-01	7.967E-01	8.049E-02	1.219
BI-211		72.87		2.894E+00	2.067E+00	3.300E+00	3.226E-01	0.877
	+	351.07	*	4.277E+00	6.568E-01	3.434E-01	3.204E-02	12.456
PB-212	+	74.81		2.378E+00	4.465E-01	3.355E-01	4.533E-02	7.090
	+	77.11		2.182E+00	2.927E-01	2.003E-01	1.953E-02	10.895
	+	87.30		1.872E+00	4.581E-01	4.240E-01	5.924E-02	4.415
	+	238.63	*	1.553E+00	1.951E-01	8.910E-02	8.982E-03	17.434
	+	300.09		1.589E+00	9.760E-01	1.190E+00	1.296E-01	1.335
PO-212	+	74.81		2.378E+00	4.465E-01	3.355E-01	4.533E-02	7.090
	+	77.11		2.182E+00	2.927E-01	2.003E-01	1.953E-02	10.895
	+	87.30		1.872E+00	4.581E-01	4.240E-01	5.924E-02	4.415
		115.19		-1.336E+00	3.342E+00	5.435E+00	6.119E-01	-0.246
	+	238.63	*	1.553E+00	1.951E-01	8.910E-02	8.982E-03	17.434
	+	300.09		1.589E+00	9.760E-01	1.190E+00	1.296E-01	1.335
BI-214	+	609.31	*	1.319E+00	2.229E-01	1.328E-01	1.351E-02	9.928
	+	1120.29		1.757E+00	6.068E-01	5.159E-01	5.515E-02	3.405
	+	1764.49		1.680E+00	6.142E-01	2.353E-01	1.990E-02	7.138
PB-214	+	74.81		4.098E+00	7.330E-01	5.780E-01	7.083E-02	7.090
	+	77.11		3.741E+00	5.771E-01	3.434E-01	4.249E-02	10.895
	+	87.30		3.207E+00	7.577E-01	7.263E-01	9.032E-02	4.415
	+	241.98		2.492E+00	7.261E-01	5.371E-01	5.718E-02	4.639
	+	295.21		1.480E+00	2.722E-01	2.060E-01	2.288E-02	7.186

Sample ID : G244852003 Acquisition date : 26-JAN-2010 13:10:09

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	351.92	*	1.488E+00	2.413E-01	1.197E-01	1.279E-02	12.425
PO-214	+	74.81		4.098E+00	7.330E-01	5.780E-01	7.083E-02	7.090
	+	77.11		3.741E+00	5.771E-01	3.434E-01	4.249E-02	10.895
	+	87.30		3.207E+00	7.577E-01	7.263E-01	9.032E-02	4.415
	+	241.98		2.492E+00	7.261E-01	5.371E-01	5.718E-02	4.639
	+	295.21		1.480E+00	2.722E-01	2.060E-01	2.288E-02	7.186
	+	351.92	*	1.488E+00	2.413E-01	1.197E-01	1.279E-02	12.425
PO-216	+	74.81		2.378E+00	4.465E-01	3.355E-01	4.533E-02	7.090
	+	77.11		2.182E+00	2.927E-01	2.003E-01	1.953E-02	10.895
	+	87.30		1.872E+00	4.581E-01	4.240E-01	5.924E-02	4.415
	+	238.63	*	1.553E+00	1.951E-01	8.910E-02	8.982E-03	17.434
	+	300.09		1.589E+00	9.760E-01	1.190E+00	1.296E-01	1.335
PO-218	+	74.81		4.098E+00	7.330E-01	5.780E-01	7.083E-02	7.090
	+	77.11		3.741E+00	5.771E-01	3.434E-01	4.249E-02	10.895
	+	87.30		3.207E+00	7.577E-01	7.263E-01	9.032E-02	4.415
	+	241.98		2.492E+00	7.261E-01	5.371E-01	5.718E-02	4.639
	+	295.21		1.480E+00	2.722E-01	2.060E-01	2.288E-02	7.186
	+	351.92	*	1.488E+00	2.413E-01	1.197E-01	1.279E-02	12.425
RA-224	+	240.98	*	4.725E+00	1.351E+00	1.015E+00	9.177E-02	4.656
RA-226	+	609.31	*	1.319E+00	2.229E-01	1.328E-01	1.351E-02	9.928
	+	1120.29		1.757E+00	6.068E-01	5.159E-01	5.515E-02	3.405
	+	1764.49		1.680E+00	6.142E-01	2.353E-01	1.990E-02	7.138
AC-228	+	338.32		1.607E+00	8.063E-01	3.988E-01	1.649E-01	4.030
	+	911.07	*	1.758E+00	3.978E-01	2.710E-01	3.074E-02	6.485
	+	969.11		1.746E+00	6.386E-01	3.950E-01	9.236E-02	4.421
RA-228	+	338.32		1.607E+00	8.063E-01	3.988E-01	1.649E-01	4.030
	+	911.07	*	1.758E+00	3.978E-01	2.710E-01	3.074E-02	6.485
	+	969.11		1.746E+00	6.386E-01	3.950E-01	9.236E-02	4.421
TH-228	+	74.81		2.414E+00	3.940E-01	3.405E-01	3.346E-02	7.090
	+	77.11		2.215E+00	2.971E-01	2.033E-01	1.982E-02	10.895
	+	87.30		1.900E+00	4.244E-01	4.304E-01	4.199E-02	4.415
	+	238.63	*	1.577E+00	1.980E-01	9.044E-02	9.118E-03	17.434
	+	300.09		1.613E+00	1.367E+00	1.208E+00	7.170E-01	1.335
TH-230	+	609.31	*	1.319E+00	2.229E-01	1.328E-01	1.351E-02	9.928
	+	1120.29		1.757E+00	6.068E-01	5.159E-01	5.515E-02	3.405
	+	1764.49		1.680E+00	6.142E-01	2.353E-01	1.990E-02	7.138
TH-232	+	338.32		1.607E+00	4.792E-01	3.988E-01	3.593E-02	4.030
	+	911.07	*	1.758E+00	3.978E-01	2.710E-01	3.074E-02	6.485
	+	969.11		1.746E+00	6.386E-01	3.950E-01	9.236E-02	4.421
TH-234	+	63.29	*	2.172E+00	1.175E+00	9.580E-01	1.788E-01	2.268
	+	92.38		2.200E+00	7.151E-01	6.372E-01	1.196E-01	3.452
U-234	+	609.31	*	1.319E+00	2.229E-01	1.328E-01	1.351E-02	9.928
	+	1120.29		1.757E+00	6.068E-01	5.159E-01	5.515E-02	3.405
	+	1764.49		1.680E+00	6.142E-01	2.353E-01	1.990E-02	7.138
NP-237	+	86.50	*	1.188E+00	3.614E-01	2.685E-01	6.129E-02	4.426
		95.87		-1.550E-01	8.345E-01	1.237E+00	3.119E-01	-0.125
U-238	+	63.29	*	2.172E+00	1.175E+00	9.580E-01	1.788E-01	2.268
	+	92.38		2.200E+00	6.237E-01	6.372E-01	6.351E-02	3.452
AM-243	+	74.67	*	3.856E-01	6.277E-02	5.437E-02	5.308E-03	7.092

Sample ID : G244852003 Acquisition date : 26-JAN-2010 13:10:09

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	86.72		4.457E+01	9.955E+00	1.008E+01	9.829E-01	4.423
		117.66		-8.923E-01	3.514E+00	5.749E+00	6.564E-01	-0.155
		142.18		-6.046E+00	1.775E+01	2.823E+01	2.911E+00	-0.214
ANH-511	+	511.00	*	1.441E-01	9.292E-02	5.106E-02	4.560E-03	2.823

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.029E-02	3.486E-01	5.759E-01	5.480E-02	0.053
NA-22		1274.54	*	-2.298E-02	5.338E-02	8.050E-02	6.782E-03	-0.285
NA-24		1368.53	*	1.394E-01	5.338E-02	Half-Life too short		
AL-26		1129.67		5.513E-01	1.973E+00	3.313E+00	2.769E-01	0.166
		1808.65	*	-8.474E-03	3.800E-02	5.864E-02	4.915E-03	-0.145
TI-44		67.85		2.878E-03	2.555E-02	4.160E-02	4.097E-03	0.069
	+	78.38	*	4.027E-01	5.401E-02	5.960E-02	5.807E-03	6.757
SC-46		889.25	*	1.206E-02	4.620E-02	7.868E-02	6.888E-03	0.153
	+	1120.51		3.005E-01	1.019E-01	1.658E-01	1.391E-02	1.813
V-48		944.10		-9.400E-01	1.088E+00	1.602E+00	1.402E-01	-0.587
		983.50	*	4.625E-02	7.766E-02	1.369E-01	1.194E-02	0.338
		1312.09		-6.204E-02	9.516E-02	1.453E-01	1.233E-02	-0.427
CR-51		320.08	*	-3.052E-01	4.029E-01	6.440E-01	6.150E-02	-0.474
MN-52		744.21		-1.287E-01	2.696E-01	4.299E-01	3.737E-02	-0.299
		848.13		4.024E-01	8.823E+00	1.472E+01	1.294E+00	0.027
	+	935.52		4.635E-01	5.484E-01	5.197E-01	4.548E-02	0.892
		1246.25		4.299E-01	9.527E+00	1.541E+01	1.288E+00	0.028
		1333.61		-1.097E-01	5.836E+00	9.752E+00	8.313E-01	-0.011
		1434.06	*	1.841E-01	2.250E-01	4.307E-01	3.713E-02	0.427
MN-54		834.83	*	5.515E-02	4.574E-02	8.409E-02	7.394E-03	0.656
CO-56		846.75	*	1.059E-02	4.929E-02	8.363E-02	7.352E-03	0.127
		977.42		-1.218E+00	3.394E+00	5.057E+00	4.414E-01	-0.241
		1037.82		1.081E-01	3.479E-01	5.912E-01	5.376E-02	0.183
		1175.09		-1.584E+00	2.593E+00	3.852E+00	3.149E-01	-0.411
		1238.25		8.832E-02	1.120E-01	1.945E-01	1.671E-02	0.454
		1360.21		1.554E-01	1.191E+00	2.029E+00	1.736E-01	0.077
		1771.40		-1.527E-01	2.515E-01	3.406E-01	2.876E-02	-0.448
CO-57		122.06	*	-1.198E-02	2.373E-02	3.821E-02	4.477E-03	-0.313
		136.48		2.726E-02	2.008E-01	3.323E-01	3.741E-02	0.082
CO-58		810.76	*	-2.474E-02	4.556E-02	7.138E-02	6.286E-03	-0.347
FE-59		142.65		-9.321E-01	2.753E+00	4.378E+00	4.500E-01	-0.213
		192.34		-4.321E-01	9.830E-01	1.546E+00	2.076E-01	-0.280
		1099.22	*	-6.137E-02	1.125E-01	1.705E-01	1.565E-02	-0.360
		1291.56		5.652E-02	1.467E-01	2.481E-01	2.390E-02	0.228
CO-60		1173.22		5.897E-03	4.989E-02	8.197E-02	6.696E-03	0.072
		1332.49	*	-5.452E-02	4.889E-02	6.856E-02	5.843E-03	-0.795
ZN-65		1115.52	*	1.657E-02	1.136E-01	1.636E-01	1.378E-02	0.101
GE-68		1077.35	*	2.142E-01	1.494E+00	2.478E+00	2.115E-01	0.086
AS-74		595.88	*	-3.301E-02	1.178E-01	1.767E-01	1.556E-02	-0.187
		634.78		-6.913E-02	4.209E-01	6.639E-01	5.718E-02	-0.104

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SE-75		66.05		-1.127E+00	2.643E+00	3.945E+00	4.537E-01	-0.286
		96.73		-6.074E-02	6.951E-01	1.037E+00	1.521E-01	-0.059
		121.11		3.640E-03	1.228E-01	2.033E-01	2.782E-02	0.018
		136.00		1.363E-02	3.739E-02	6.253E-02	6.762E-03	0.218
		198.60		2.214E-01	1.872E+00	2.985E+00	2.876E-01	0.074
		264.65	*	7.223E-03	4.924E-02	7.494E-02	6.885E-03	0.096
		279.53		-9.241E-02	1.059E-01	1.696E-01	1.608E-02	-0.545
		303.91		-2.031E+00	2.443E+00	3.355E+00	3.991E-01	-0.605
		400.65		2.058E-01	2.938E-01	5.093E-01	5.607E-02	0.404
BR-77	+	87.88		8.722E+02	1.948E+02	2.819E+02	2.752E+01	3.094
		200.40		5.130E+01	1.622E+02	2.658E+02	2.317E+01	0.193
	+	239.00		2.445E+02	2.869E+01	4.024E+01	3.635E+00	6.076
		249.79		-1.377E+01	6.269E+01	9.798E+01	8.907E+00	-0.141
		281.68		-1.400E+00	8.172E+01	1.384E+02	1.271E+01	-0.010
		297.23		1.480E+02	5.749E+01	1.069E+02	9.817E+00	1.384
		303.76		-1.679E+02	2.038E+02	2.807E+02	2.574E+01	-0.598
		439.47		1.065E+02	1.503E+02	2.616E+02	2.280E+01	0.407
		484.57		4.106E+01	2.396E+02	3.985E+02	3.540E+01	0.103
		520.65	*	3.613E+00	1.177E+01	1.971E+01	1.761E+00	0.183
		574.64		5.310E+01	2.405E+02	3.970E+02	3.525E+01	0.134
		578.91		-4.296E+01	1.118E+02	1.496E+02	1.326E+01	-0.287
		585.48		3.790E+02	2.411E+02	3.954E+02	3.498E+01	0.959
		755.35		2.439E+01	1.955E+02	3.313E+02	2.888E+01	0.074
		817.79		1.558E+01	1.515E+02	2.551E+02	2.242E+01	0.061
SR-82		698.33		-2.290E+01	4.373E+01	7.051E+01	6.038E+00	-0.325
		776.49	*	-4.992E-01	4.837E-01	7.256E-01	6.350E-02	-0.688
		1395.20		4.295E+00	1.349E+01	2.354E+01	2.023E+00	0.182
RB-83		520.41	*	1.766E-02	7.874E-02	1.309E-01	1.170E-02	0.135
		529.64		2.118E-02	1.215E-01	2.008E-01	1.795E-02	0.106
		552.65		-3.858E-02	2.226E-01	3.549E-01	3.167E-02	-0.109
RB-84		881.50	*	-2.984E-02	8.237E-02	1.307E-01	1.145E-02	-0.228
KR-85		513.99	*	5.033E+00	7.728E+00	1.327E+01	1.186E+00	0.379
SR-85		513.99	*	2.578E-02	3.959E-02	6.801E-02	6.076E-03	0.379
RB-86		1076.63	*	-1.809E-01	9.641E-01	1.535E+00	1.310E-01	-0.118
Y-88		898.02		6.878E-03	4.737E-02	7.966E-02	6.997E-03	0.086
		1836.01	*	-1.987E-02	3.496E-02	4.662E-02	3.887E-03	-0.426
ZR-88		392.90	*	-1.186E-02	3.362E-02	5.437E-02	4.581E-03	-0.218
Y-91		1204.90	*	1.195E+01	2.399E+01	4.079E+01	3.367E+00	0.293
NB-94		702.63	*	-4.533E-04	4.104E-02	6.907E-02	5.925E-03	-0.007
		871.10		-8.814E-03	3.803E-02	6.128E-02	5.377E-03	-0.144
NB-95		765.79	*	2.101E-02	4.735E-02	8.249E-02	7.205E-03	0.255
NB-95M		235.69	*	4.742E-02	1.392E-01	2.026E-01	2.069E-02	0.234
ZR-95		724.18		1.713E-01	1.239E-01	2.100E-01	1.971E-02	0.816
		756.15	*	-6.266E-05	8.425E-02	1.412E-01	1.353E-02	0.000
NB-97		657.90	*	-7.437E-02	8.425E-02	Half-Life too short		
		1024.50		-1.288E+00	8.425E-02	Half-Life too short		
ZR-97		254.15		4.212E-01	8.425E-02	Half-Life too short		
		355.39		-1.760E-01	8.425E-02	Half-Life too short		
		507.63	*	3.529E+00	8.425E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		602.52		-1.392E+00	8.425E-02	Half-Life too short		
		1021.30		2.319E+00	8.425E-02	Half-Life too short		
		1147.95		3.621E+00	8.425E-02	Half-Life too short		
		1362.66		3.605E+00	8.425E-02	Half-Life too short		
		1750.46		5.918E+00	8.425E-02	Half-Life too short		
MO-99		140.51		-6.442E+00	2.591E+01	4.108E+01	1.163E+01	-0.157
		181.06		6.395E+00	1.957E+01	2.885E+01	5.262E+00	0.222
		366.43		7.560E+01	8.728E+01	1.541E+02	1.349E+01	0.491
		739.58	*	-7.650E-01	1.392E+01	2.324E+01	3.537E+00	-0.033
		778.00		-3.305E+01	4.094E+01	6.280E+01	5.498E+00	-0.526
TC-99M		140.51	*	-7.889E+09	4.094E+01	Half-Life too short		
RH-101		127.23		1.938E-02	3.367E-02	5.139E-02	5.845E-03	0.377
		198.01	*	-1.444E-02	3.474E-02	5.374E-02	4.673E-03	-0.269
		325.23		-1.327E-01	2.424E-01	3.935E-01	3.577E-02	-0.337
RH-102		418.52		-3.080E-01	3.156E-01	4.794E-01	4.122E-02	-0.642
		475.06	*	-1.200E-03	3.096E-02	5.060E-02	4.482E-03	-0.024
		631.29		-3.367E-03	6.713E-02	1.073E-01	9.261E-03	-0.031
		697.49		3.255E-02	9.781E-02	1.691E-01	1.448E-02	0.192
		766.84		5.670E-02	1.346E-01	2.331E-01	2.036E-02	0.243
		1046.59		4.769E-02	1.313E-01	2.242E-01	1.932E-02	0.213
		1112.84		-9.839E-02	3.191E-01	4.480E-01	3.772E-02	-0.220
RU-103		497.08	*	-6.860E-03	4.844E-02	7.822E-02	1.122E-02	-0.088
	+	610.33		1.422E+01	3.060E+00	3.532E+00	5.917E-01	4.026
RH-106	+	511.85		7.199E-01	4.641E-01	4.805E-01	4.292E-02	1.498
		621.84	*	-2.317E-01	3.951E-01	5.957E-01	7.983E-02	-0.389
		1050.47		1.900E+00	2.718E+00	4.803E+00	4.133E-01	0.396
RU-106	+	511.85		7.199E-01	4.641E-01	4.805E-01	4.292E-02	1.498
		621.84	*	-2.317E-01	3.944E-01	5.957E-01	5.175E-02	-0.389
		1050.47		1.900E+00	2.718E+00	4.803E+00	4.133E-01	0.396
AG-108M		433.93	*	-2.800E-02	3.521E-02	5.401E-02	4.875E-03	-0.518
		614.37		-1.862E-02	5.334E-02	7.134E-02	6.464E-03	-0.261
		722.95		5.485E-03	5.396E-02	8.007E-02	7.187E-03	0.068
AG-110M		657.75	*	-2.276E-02	4.087E-02	6.133E-02	5.345E-03	-0.371
		677.61		8.642E-02	3.897E-01	6.364E-01	5.559E-02	0.136
		706.67		-2.798E-02	2.541E-01	4.238E-01	3.742E-02	-0.066
		763.93		-2.426E-01	1.955E-01	2.855E-01	2.561E-02	-0.850
		884.67		7.754E-03	6.033E-02	1.013E-01	9.149E-03	0.077
		937.48		-6.049E-02	1.395E-01	1.828E-01	1.656E-02	-0.331
		1384.27		1.512E-01	2.044E-01	3.691E-01	3.258E-02	0.410
IN-111		171.28		-4.675E-01	9.717E-01	1.536E+00	1.289E-01	-0.304
		245.39	*	8.284E-01	1.057E+00	1.605E+00	1.456E-01	0.516
IN-113M		391.69	*	2.014E-02	4.744E-02	8.121E-02	7.056E-03	0.248
SN-113		391.69	*	2.014E-02	4.744E-02	8.121E-02	7.056E-03	0.248
IN-114M		190.27	*	1.086E-01	2.111E-01	3.147E-01	2.710E-02	0.345
CD-115		260.90		-7.040E+01	1.296E+02	1.969E+02	1.800E+01	-0.357
		492.35		-1.731E+01	3.963E+01	6.220E+01	5.537E+00	-0.278
		527.90	*	1.544E+01	1.184E+01	2.141E+01	1.914E+00	0.721
SN-117M		156.02		-7.385E-01	2.226E+00	3.573E+00	3.289E-01	-0.207
		158.56	*	1.605E-03	5.287E-02	8.640E-02	7.766E-03	0.019

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-122		563.90	*	9.995E-01	2.344E+00	3.945E+00	3.513E-01	0.253
		692.80		-2.874E+01	5.603E+01	9.050E+01	7.733E+00	-0.318
I-123		159.00	*	-3.248E+00	5.603E+01	Half-Life too short		
		528.96		2.902E+02	5.603E+01	Half-Life too short		
TE-123M		159.00	*	-1.749E-02	2.791E-02	4.395E-02	3.956E-03	-0.398
I-124		602.71	*	-1.041E-01	8.624E-01	1.194E+00	1.048E-01	-0.087
		722.78		5.114E-01	5.568E+00	8.252E+00	7.129E-01	0.062
		1325.50		1.577E+01	4.338E+01	7.595E+01	6.464E+00	0.208
	+	1376.25		8.474E+01	4.756E+01	7.618E+01	6.532E+00	1.112
		1509.49		6.520E+00	1.591E+01	2.838E+01	2.454E+00	0.230
		1691.02		3.271E-01	4.341E+00	7.252E+00	6.203E-01	0.045
SB-124		602.71		-6.117E-03	5.066E-02	7.011E-02	6.157E-03	-0.087
		645.85		6.482E-02	6.235E-01	1.010E+00	9.152E-02	0.064
		709.31		1.351E-01	3.364E+00	5.682E+00	4.886E-01	0.024
		713.82		-1.223E+00	1.830E+00	2.866E+00	3.448E-01	-0.427
		722.78		4.354E-02	4.741E-01	7.026E-01	6.200E-02	0.062
	+	968.20		1.797E+01	5.289E+00	9.228E+00	8.062E-01	1.947
		1045.16		-1.125E+00	2.920E+00	4.535E+00	3.908E-01	-0.248
		1325.50		1.434E+00	3.945E+00	6.906E+00	5.878E-01	0.208
		1368.21		3.304E-01	2.390E+00	3.549E+00	4.770E-01	0.093
		1436.60		-1.683E+00	3.955E+00	6.048E+00	5.216E-01	-0.278
		1691.02	*	6.570E-03	8.719E-02	1.456E-01	1.296E-02	0.045
SB-125		427.89	*	-4.073E-03	9.722E-02	1.600E-01	1.411E-02	-0.025
	+	463.38		1.153E+00	5.305E-01	6.462E-01	6.126E-02	1.785
		600.56		-2.401E-03	2.092E-01	3.369E-01	3.172E-02	-0.007
		635.90		-4.060E-03	3.197E-01	5.125E-01	4.767E-02	-0.008
TE-125M		109.28	*	5.111E+00	8.176E+00	1.393E+01	1.711E+00	0.367
I-126		388.63		-5.524E-02	2.251E-01	3.676E-01	3.111E-02	-0.150
		666.33	*	1.427E-01	2.188E-01	3.721E-01	3.142E-02	0.384
		753.82		1.676E+00	1.783E+00	3.229E+00	2.813E-01	0.519
SB-126		223.80		5.152E+00	4.168E+00	7.114E+00	6.350E-01	0.724
		278.60		4.533E-01	2.506E+00	4.293E+00	3.941E-01	0.106
	+	296.50		1.468E+01	2.539E+00	3.842E+00	3.528E-01	3.821
		414.70		7.580E-02	8.691E-02	1.483E-01	1.271E-02	0.511
		415.30		1.935E+00	7.012E+00	1.184E+01	1.015E+00	0.163
		555.20		3.460E+00	4.662E+00	8.056E+00	7.186E-01	0.430
		573.80		2.106E-01	1.242E+00	2.040E+00	1.812E-01	0.103
		593.00		-1.332E-01	1.105E+00	1.761E+00	1.554E-01	-0.076
		656.30		3.846E-01	3.731E+00	6.042E+00	5.114E-01	0.064
		666.33		5.963E-02	9.143E-02	1.555E-01	1.313E-02	0.384
		675.00		-2.003E+00	2.441E+00	3.537E+00	2.999E-01	-0.566
		695.00		4.014E-02	9.969E-02	1.732E-01	1.482E-02	0.232
		697.00		2.163E-01	3.416E-01	6.033E-01	5.164E-02	0.359
		720.50	*	1.021E-01	1.778E-01	2.807E-01	2.423E-02	0.364
		856.80		2.104E-01	6.273E-01	9.494E-01	8.341E-02	0.222
		989.30		-9.602E-01	1.589E+00	2.418E+00	2.107E-01	-0.397
		1034.80		-1.061E+01	1.052E+01	1.484E+01	1.282E+00	-0.715
		1213.00		4.558E-01	5.628E+00	9.166E+00	7.584E-01	0.050
SB-127		61.10		1.567E+01	2.560E+01	4.024E+01	4.932E+00	0.389

---- Non-Identified Nuclides ----

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		252.40		-1.043E-01	4.184E+00	6.632E+00	2.794E+00	-0.016
		290.80		-4.308E+00	2.178E+01	3.195E+01	3.701E+00	-0.135
		411.60		3.614E+00	1.483E+01	2.211E+01	3.465E+00	0.163
		444.90		-2.104E+00	1.025E+01	1.658E+01	2.089E+00	-0.127
		473.00		-1.473E-01	1.674E+00	2.723E+00	3.541E-01	-0.054
		543.00		2.086E+00	1.929E+01	3.164E+01	4.609E+00	0.066
		603.60		-1.658E+00	1.444E+01	1.998E+01	2.518E+00	-0.083
		685.20	*	-1.448E+00	1.793E+00	2.611E+00	2.947E-01	-0.554
		698.50		-8.156E+00	1.922E+01	3.120E+01	4.921E+00	-0.261
		722.20		1.468E+01	3.633E+01	5.611E+01	6.258E+00	0.262
		783.80		3.322E+00	4.407E+00	7.828E+00	9.783E-01	0.424
XE-127		57.60		-4.646E-01	2.347E+00	3.573E+00	3.589E-01	-0.130
		145.22		1.843E-01	6.939E-01	1.151E+00	1.161E-01	0.160
		172.10		-5.365E-02	1.204E-01	1.907E-01	1.603E-02	-0.281
		202.84	*	-7.136E-03	4.628E-02	7.380E-02	6.452E-03	-0.097
		374.96		1.244E-01	2.002E-01	3.484E-01	3.013E-02	0.357
I-131		80.18		4.601E+00	3.786E+00	4.989E+00	4.883E-01	0.922
		284.30		-4.001E-01	1.374E+00	2.284E+00	2.194E-01	-0.175
		364.48	*	-8.559E-02	1.246E-01	1.974E-01	1.823E-02	-0.434
		636.97		-5.257E-01	1.826E+00	2.839E+00	2.579E-01	-0.185
		722.89		9.184E-01	9.035E+00	1.341E+01	1.166E+00	0.068
TE-132		49.72		-5.628E-01	4.599E+00	5.633E+00	6.752E-01	-0.100
		111.76		-3.671E+00	2.635E+01	4.347E+01	5.585E+00	-0.084
		116.30		1.249E+01	2.512E+01	4.247E+01	5.563E+00	0.294
		228.16	*	-3.107E-01	6.991E-01	1.083E+00	1.721E-01	-0.287
BA-133	+	53.15		1.215E+00	1.421E+00	1.662E+00	1.662E-01	0.731
		79.62		7.300E-01	9.460E-01	1.366E+00	2.170E-01	0.534
		81.00		8.925E-02	8.019E-02	1.042E-01	1.720E-02	0.857
		276.40		4.425E-01	4.052E-01	6.772E-01	1.001E-01	0.653
		302.84		-8.634E-02	1.594E-01	2.252E-01	3.074E-02	-0.383
		356.01	*	-1.819E-02	4.998E-02	7.076E-02	9.454E-03	-0.257
		383.85		1.944E-02	3.237E-01	5.408E-01	6.783E-02	0.036
I-133	+	510.53		1.389E+00	3.237E-01	Half-Life too short		
		529.87	*	-1.374E-03	3.237E-01	Half-Life too short		
		706.58		-5.236E-02	3.237E-01	Half-Life too short		
		856.28		1.577E-01	3.237E-01	Half-Life too short		
		875.33		-2.218E-02	3.237E-01	Half-Life too short		
		1236.41		6.123E-02	3.237E-01	Half-Life too short		
		1298.22		-9.453E-02	3.237E-01	Half-Life too short		
CS-134		475.35		2.543E-01	2.005E+00	3.325E+00	2.946E-01	0.076
		563.23		3.472E-01	4.134E-01	7.195E-01	6.465E-02	0.483
		569.32		1.059E-01	2.371E-01	3.988E-01	3.592E-02	0.266
		604.70		6.394E-03	4.048E-02	5.824E-02	5.122E-03	0.110
		795.84	*	7.776E-02	5.947E-02	1.096E-01	9.688E-03	0.709
		801.93		-2.423E-01	4.547E-01	7.284E-01	6.430E-02	-0.333
		1038.57		4.396E+00	4.300E+00	7.899E+00	6.820E-01	0.557
		1167.94		-2.436E-01	3.068E+00	4.919E+00	4.030E-01	-0.050
		1365.15		-6.447E-01	1.563E+00	2.456E+00	2.200E-01	-0.262
CS-135		268.24	*	7.241E-02	2.008E-01	2.903E-01	3.029E-02	0.249

Sample ID : G244852003 Acquisition date : 26-JAN-2010 13:10:09

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-135		288.45		1.678E+10	2.008E-01	Half-Life too short		
		417.63		9.861E+08	2.008E-01	Half-Life too short		
		546.56		3.510E+09	2.008E-01	Half-Life too short		
		836.80		1.117E+10	2.008E-01	Half-Life too short		
		1038.76		1.996E+10	2.008E-01	Half-Life too short		
		1124.00		2.184E+10	2.008E-01	Half-Life too short		
		1131.51		-7.196E+08	2.008E-01	Half-Life too short		
		1260.41	*	3.229E+09	2.008E-01	Half-Life too short		
		1457.56		6.346E+11	2.008E-01	Half-Life too short		
		1678.03		-1.792E+09	2.008E-01	Half-Life too short		
		1706.46		-7.827E+09	2.008E-01	Half-Life too short		
		1791.20		-5.511E+09	2.008E-01	Half-Life too short		
CS-136		66.91		-1.293E-04	4.400E-01	6.702E-01	1.083E-01	0.000
	+	86.29		5.263E+00	1.278E+00	1.614E+00	2.200E-01	3.262
		153.22		-6.669E-03	6.586E-01	1.076E+00	1.116E-01	-0.006
		163.89		-6.435E-01	1.071E+00	1.664E+00	1.591E-01	-0.387
		176.55		-8.045E-02	3.888E-01	6.239E-01	5.594E-02	-0.129
		273.65		-1.197E-01	5.468E-01	7.514E-01	7.294E-02	-0.159
		340.57		8.916E-02	1.478E-01	2.292E-01	2.117E-02	0.389
		818.51		-3.013E-02	8.963E-02	1.439E-01	1.266E-02	-0.209
		1048.07	*	-3.133E-02	1.295E-01	2.051E-01	1.842E-02	-0.153
		1235.34		4.832E-01	7.192E-01	1.237E+00	1.440E-01	0.391
BA-137M		661.65	*	-2.087E-02	4.626E-02	7.039E-02	5.930E-03	-0.297
CS-137		661.65	*	-2.206E-02	4.890E-02	7.441E-02	6.281E-03	-0.297
CE-139		165.85	*	-1.285E-02	2.903E-02	4.609E-02	3.843E-03	-0.279
BA-140		162.64		3.939E-01	7.387E-01	1.220E+00	1.114E-01	0.323
		304.84		-5.928E-01	1.403E+00	2.113E+00	5.960E-01	-0.281
		423.70		-1.081E-01	1.933E+00	3.180E+00	1.031E+00	-0.034
		537.32	*	4.813E-03	2.858E-01	4.653E-01	1.546E-01	0.010
LA-140		328.77		3.025E-01	3.090E-01	5.470E-01	5.214E-02	0.553
		432.53		1.610E+00	2.153E+00	3.763E+00	3.423E-01	0.428
		487.03		-1.631E-02	1.543E-01	2.503E-01	2.354E-02	-0.065
		751.79		1.207E+00	2.165E+00	3.801E+00	3.657E-01	0.318
		815.85		1.455E-01	3.707E-01	6.428E-01	6.277E-02	0.226
		867.82		7.590E-01	1.668E+00	2.588E+00	2.388E-01	0.293
		919.63		-3.212E-01	3.498E+00	5.716E+00	6.147E-01	-0.056
		925.24		4.543E-01	1.443E+00	2.402E+00	2.231E-01	0.189
		1596.49	*	-1.131E-01	1.051E-01	1.357E-01	1.171E-02	-0.833
CE-141		145.44	*	-8.365E-03	6.320E-02	1.029E-01	1.050E-02	-0.081
CE-143		57.37		-9.793E-05	6.320E-02	Half-Life too short		
		231.56		-4.781E-04	6.320E-02	Half-Life too short		
		293.26	*	6.479E-04	6.320E-02	Half-Life too short		
	+	350.59		3.276E-02	6.320E-02	Half-Life too short		
		490.36		-2.365E-04	6.320E-02	Half-Life too short		
		664.57		7.792E-05	6.320E-02	Half-Life too short		
		721.93		7.528E-04	6.320E-02	Half-Life too short		
CE-144		80.11		2.132E+00	1.751E+00	2.308E+00	2.248E-01	0.924
		133.54	*	-7.681E-02	2.062E-01	3.163E-01	5.366E-02	-0.243
PM-144		476.78		4.763E-02	7.225E-02	1.250E-01	1.206E-02	0.381

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		618.01		1.783E-02	3.640E-02	6.143E-02	5.495E-03	0.290
		696.49	*	4.822E-02	4.420E-02	8.040E-02	6.883E-03	0.600
		778.57		-2.283E+00	2.750E+00	4.198E+00	3.677E-01	-0.544
PR-144		696.49	*	3.268E+00	2.995E+00	5.448E+00	4.662E-01	0.600
		1489.15		-1.516E+01	1.329E+01	1.655E+01	1.431E+00	-0.916
PM-146		453.90	*	1.436E-02	5.196E-02	8.723E-02	9.468E-03	0.165
		633.02		8.387E-01	1.687E+00	2.798E+00	1.046E+00	0.300
		735.90		3.152E-02	1.801E-01	3.069E-01	8.784E-02	0.103
		747.13		-1.046E-01	1.028E-01	1.517E-01	2.137E-02	-0.690
ND-147	+	91.11		1.001E+00	2.839E-01	4.237E-01	4.462E-02	2.361
		319.41		-2.037E-01	3.461E+00	5.803E+00	5.292E-01	-0.035
		439.89		3.113E+00	6.236E+00	1.069E+01	9.320E-01	0.291
		531.02	*	-2.706E-01	6.467E-01	1.009E+00	1.527E-01	-0.268
PM-149		285.90	*	-2.433E+01	8.356E+01	1.387E+02	2.201E+01	-0.175
EU-152		121.78		-1.862E-02	6.745E-02	1.100E-01	1.395E-02	-0.169
		244.69		1.943E-01	3.330E-01	4.969E-01	4.504E-02	0.391
		344.27	*	-5.362E-02	1.022E-01	1.649E-01	1.559E-02	-0.325
		443.98		-8.109E-01	1.009E+00	1.540E+00	1.345E-01	-0.527
		778.89		-1.281E-01	3.092E-01	4.949E-01	4.332E-02	-0.259
		867.32		1.233E-03	1.025E+00	1.475E+00	1.295E-01	0.001
	+	964.01		7.084E-01	5.168E-01	7.163E-01	6.260E-02	0.989
		1085.78		-3.036E-01	4.642E-01	6.886E-01	5.860E-02	-0.441
		1112.02		1.991E-02	4.146E-01	6.595E-01	5.555E-02	0.030
		1407.95		1.133E-01	2.078E-01	3.749E-01	3.225E-02	0.302
GD-153		69.67		-2.180E-01	1.026E+00	1.548E+00	1.520E-01	-0.141
	+	83.37		2.559E+01	1.328E+01	1.820E+01	1.773E+00	1.406
		97.43	*	1.453E-02	7.292E-02	1.105E-01	1.130E-02	0.132
		103.18		2.025E-02	8.736E-02	1.471E-01	1.549E-02	0.138
EU-154		123.07		1.785E-02	4.932E-02	7.923E-02	1.094E-02	0.225
		247.94		-2.359E-01	3.506E-01	5.275E-01	6.239E-02	-0.447
		591.81		3.259E-02	7.155E-01	1.160E+00	1.371E-01	0.028
		723.30		2.291E-02	2.256E-01	3.348E-01	3.196E-02	0.068
		756.87		-5.873E-01	9.294E-01	1.457E+00	1.755E-01	-0.403
		873.19		-1.660E-01	3.413E-01	5.319E-01	6.570E-02	-0.312
		996.32		-5.922E-01	4.844E-01	6.603E-01	1.176E-01	-0.897
		1004.76		2.346E-02	2.582E-01	4.277E-01	5.001E-02	0.055
		1274.45	*	-7.797E-02	1.502E-01	2.232E-01	2.490E-02	-0.349
EU-155		48.70		3.543E-01	4.665E-01	6.957E-01	6.989E-02	0.509
		60.01		-4.960E-01	2.168E+00	3.291E+00	3.310E-01	-0.151
	+	86.54		4.874E-01	1.090E-01	1.570E-01	1.543E-02	3.105
		105.31	*	-9.850E-04	9.249E-02	1.539E-01	1.654E-02	-0.006
TB-160	+	86.79		1.301E+00	2.906E-01	4.206E-01	4.102E-02	3.094
		197.04		-4.816E-01	5.946E-01	8.974E-01	7.793E-02	-0.537
		215.65		-4.804E-01	7.595E-01	1.169E+00	1.036E-01	-0.411
	+	298.57		2.310E-01	1.413E-01	2.106E-01	1.933E-02	1.097
		879.36	*	3.624E-02	1.624E-01	2.758E-01	2.418E-02	0.131
	+	962.29		1.307E+00	9.535E-01	1.330E+00	1.163E-01	0.983
		966.15		1.158E+00	3.462E-01	6.707E-01	5.861E-02	1.727
		1177.93		-1.113E-02	4.127E-01	6.653E-01	5.443E-02	-0.017

---- Non-Identified Nuclides ----

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		1271.85		-4.744E-01	8.409E-01	1.237E+00	1.040E-01	-0.383
HO-166M		80.57		3.091E-01	2.206E-01	2.946E-01	2.869E-02	1.049
	+	184.41		1.633E-01	6.237E-02	6.764E-02	5.783E-03	2.413
		280.46		-5.554E-02	8.277E-02	1.344E-01	1.234E-02	-0.413
		410.95		1.834E-01	3.098E-01	4.766E-01	4.075E-02	0.385
		711.68	*	5.637E-02	6.770E-02	1.224E-01	1.053E-02	0.461
		752.31		2.292E-01	3.338E-01	5.932E-01	5.166E-02	0.386
		810.29		-1.932E-02	6.662E-02	1.075E-01	9.441E-03	-0.180
TM-171		51.35		1.090E+00	8.285E+00	1.037E+01	1.038E+00	0.105
	+	52.39		5.062E+00	5.921E+00	6.555E+00	6.559E-01	0.772
		59.40		-1.457E+00	1.112E+01	1.696E+01	1.709E+00	-0.086
		66.72	*	-1.491E+00	1.582E+01	2.399E+01	2.368E+00	-0.062
LU-176	+	88.36		9.599E-01	2.144E-01	3.091E-01	3.022E-02	3.106
		201.83		-1.526E-02	2.926E-02	4.565E-02	3.986E-03	-0.334
		306.84	*	2.677E-02	2.561E-02	4.570E-02	4.187E-03	0.586
		401.10		2.138E+00	7.882E+00	1.331E+01	1.129E+00	0.161
LU-177		112.95		6.854E-01	1.470E+00	2.486E+00	2.764E-01	0.276
	+	208.36	*	2.011E+00	1.600E+00	1.972E+00	1.734E-01	1.020
LU-177M	+	52.97		5.428E-01	6.350E-01	7.357E-01	7.360E-02	0.738
	+	54.07		3.076E-01	3.598E-01	4.244E-01	4.247E-02	0.725
		61.30		5.655E-01	6.745E-01	1.070E+00	1.071E-01	0.529
		121.62		-1.038E-01	3.452E-01	5.620E-01	6.564E-02	-0.185
		147.16		-2.484E-01	6.586E-01	1.059E+00	1.051E-01	-0.235
		171.86		-3.839E-01	4.938E-01	7.669E-01	6.445E-02	-0.501
		218.09		3.045E-02	8.402E-01	1.349E+00	1.198E-01	0.023
		268.79		1.170E+00	1.026E+00	1.565E+00	1.434E-01	0.748
		319.02		6.399E-02	2.730E-01	4.661E-01	4.251E-02	0.137
		367.43		9.727E-01	9.697E-01	1.723E+00	1.506E-01	0.564
		413.65	*	3.024E-02	2.223E-01	3.278E-01	2.809E-02	0.092
HF-181		56.28		-2.345E-01	3.319E-01	4.911E-01	4.923E-02	-0.478
		57.53		-4.193E-02	1.968E-01	2.993E-01	3.006E-02	-0.140
		65.20		-1.087E-01	5.090E-01	7.686E-01	7.612E-02	-0.141
		133.02		-9.617E-03	7.046E-02	1.029E-01	1.129E-02	-0.093
		136.25		1.536E-01	4.358E-01	7.284E-01	7.829E-02	0.211
		345.85		-1.613E-01	2.196E-01	3.196E-01	2.861E-02	-0.505
		482.03	*	-8.089E-03	4.484E-02	7.223E-02	6.412E-03	-0.112
W-181		56.28		-9.138E-02	1.300E-01	1.925E-01	1.930E-02	-0.475
		57.53		-1.647E-02	7.713E-02	1.173E-01	1.178E-02	-0.140
		65.20	*	-4.228E-02	1.980E-01	2.989E-01	2.961E-02	-0.141
TA-182		67.75		3.500E-03	6.495E-02	9.935E-02	9.786E-03	0.035
		100.10		-5.935E-02	1.495E-01	2.449E-01	2.538E-02	-0.242
		152.43		1.201E-02	3.345E-01	5.479E-01	5.208E-02	0.022
		222.10		-3.097E-01	3.729E-01	5.657E-01	5.042E-02	-0.548
		1001.68		1.639E+00	2.507E+00	4.395E+00	3.823E-01	0.373
		1121.28		6.295E-01	2.486E-01	4.424E-01	3.711E-02	1.423
		1189.05		1.572E-03	3.451E-01	5.581E-01	4.583E-02	0.003
		1221.42	*	-7.788E-02	2.408E-01	3.735E-01	3.098E-02	-0.209
		1230.97		-2.757E-01	5.849E-01	8.904E-01	7.407E-02	-0.310
RE-183		57.98		2.954E-02	7.763E-02	1.214E-01	1.220E-02	0.243

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		59.32		-5.565E-03	4.555E-02	6.951E-02	7.003E-03	-0.080
		67.20		-1.109E-02	1.163E-01	1.763E-01	1.739E-02	-0.063
		162.32	*	2.228E-02	1.107E-01	1.799E-01	1.558E-02	0.124
	+	208.81		1.820E+00	1.448E+00	1.775E+00	1.562E-01	1.025
		291.72		-2.762E-01	9.640E-01	1.402E+00	1.288E-01	-0.197
RE-184		57.98		1.089E-01	2.862E-01	4.474E-01	4.496E-02	0.243
		59.32		-2.050E-02	1.678E-01	2.560E-01	2.580E-02	-0.080
		67.20		-4.088E-02	4.285E-01	6.498E-01	6.407E-02	-0.063
		161.27		-8.485E-02	3.454E-01	5.556E-01	4.862E-02	-0.153
		216.55		-5.627E-02	2.669E-01	4.222E-01	3.744E-02	-0.133
		252.85	*	5.954E-03	2.275E-01	3.620E-01	3.296E-02	0.016
		318.01		2.886E-01	4.804E-01	8.369E-01	7.636E-02	0.345
		792.07		-4.561E-02	1.272E+00	2.117E+00	1.857E-01	-0.022
		903.28		-6.715E-01	1.279E+00	1.853E+00	1.621E-01	-0.362
		920.93		-4.116E-01	5.994E-01	9.146E-01	8.004E-02	-0.450
OS-185		59.72		-1.382E-02	1.243E-01	1.897E-01	1.911E-02	-0.073
		61.14		4.672E-02	7.381E-02	1.162E-01	1.164E-02	0.402
		69.30		6.018E-02	1.703E-01	2.794E-01	2.745E-02	0.215
		592.07		-3.997E-01	3.010E+00	4.795E+00	4.231E-01	-0.083
		646.12	*	-8.850E-04	5.248E-02	8.398E-02	7.171E-03	-0.011
		717.42		-2.961E-01	9.880E-01	1.612E+00	1.390E-01	-0.184
		874.81		-3.368E-01	6.685E-01	1.040E+00	9.124E-02	-0.324
		880.27		5.727E-01	8.664E-01	1.542E+00	1.351E-01	0.371
RE-188		155.03	*	-9.064E-04	1.676E-01	2.738E-01	2.543E-02	-0.003
		477.96		2.111E+00	3.244E+00	5.617E+00	4.981E-01	0.376
		633.10		1.719E+00	3.355E+00	5.660E+00	4.881E-01	0.304
W-188	+	63.58		8.725E+01	4.512E+01	4.874E+01	4.847E+00	1.790
		227.08		-1.900E+01	1.359E+01	1.964E+01	1.758E+00	-0.968
		290.67	*	-1.190E+00	7.648E+00	1.127E+01	1.035E+00	-0.106
IR-192	+	295.96		1.128E+00	1.954E-01	3.241E-01	2.995E-02	3.480
		308.46		-1.863E-02	1.006E-01	1.678E-01	1.543E-02	-0.111
		316.51	*	2.272E-02	3.616E-02	6.314E-02	5.777E-03	0.360
		468.07		-1.899E-02	7.724E-02	1.076E-01	1.016E-02	-0.177
		604.41		8.567E-02	5.470E-01	7.868E-01	1.032E-01	0.109
		612.46		2.167E-02	9.266E-01	1.306E+00	1.306E-01	0.017
AU-195		65.12		-9.701E-03	9.180E-02	1.393E-01	1.380E-02	-0.070
		66.83		-3.616E-03	5.280E-02	8.017E-02	7.911E-03	-0.045
	+	75.70		1.248E+00	2.031E-01	3.408E-01	3.325E-02	3.661
		98.88	*	1.913E-01	1.886E-01	3.266E-01	3.364E-02	0.586
	+	129.76		5.997E+00	4.719E+00	5.097E+00	5.710E-01	1.176
TL-200		367.94	*	2.905E-04	4.719E+00	Half-Life too short		
		579.30		-1.350E-03	4.719E+00	Half-Life too short		
		828.27		-7.789E-04	4.719E+00	Half-Life too short		
		1205.75		8.515E-04	4.719E+00	Half-Life too short		
TL-201		68.90		1.338E+00	2.551E+00	4.391E+00	4.317E-01	0.305
		70.82		3.260E-02	1.673E+00	2.551E+00	2.500E-01	0.013
		80.30		4.938E+00	4.092E+00	5.389E+00	5.249E-01	0.916
		135.34		1.220E+01	2.378E+01	4.003E+01	4.329E+00	0.305
		167.43	*	3.473E+00	6.642E+00	1.110E+01	9.268E-01	0.313

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TL-202		68.90		1.217E-01	2.321E-01	3.996E-01	3.928E-02	0.305
		70.82		2.958E-03	1.518E-01	2.314E-01	2.268E-02	0.013
		80.30		4.483E-01	3.715E-01	4.892E-01	4.765E-02	0.916
		439.56	*	5.126E-02	7.386E-02	1.284E-01	1.119E-02	0.399
HG-203		70.83		8.194E-03	6.599E-01	1.006E+00	1.446E-01	0.008
		72.87		5.751E-01	4.147E-01	6.556E-01	9.169E-02	0.877
		82.60		1.040E+00	9.609E-01	1.246E+00	1.803E-01	0.835
		279.20	*	-2.507E-02	4.011E-02	6.542E-02	6.156E-03	-0.383
BI-207		72.80		1.519E-01	1.197E-01	1.905E-01	1.863E-02	0.797
	+	74.97		6.922E-01	1.127E-01	1.666E-01	1.626E-02	4.155
	+	84.90		3.310E-01	1.718E-01	2.423E-01	2.362E-02	1.366
		569.67		3.232E-02	3.570E-02	6.236E-02	5.545E-03	0.518
		1063.62	*	2.317E-02	6.594E-02	1.119E-01	9.591E-03	0.207
		1770.23		-9.025E-01	6.550E-01	7.165E-01	6.052E-02	-1.260
TL-207		81.07		1.408E-01	1.785E-01	2.288E-01	2.228E-02	0.615
	+	83.78		2.183E-01	1.133E-01	1.588E-01	1.548E-02	1.374
		94.90		2.667E-01	2.014E-01	3.208E-01	3.237E-02	0.831
		122.32		-7.878E-01	1.645E+00	2.652E+00	3.227E-01	-0.297
		144.24		4.131E-01	6.927E-01	1.149E+00	1.268E-01	0.360
		154.21		9.699E-02	3.911E-01	6.468E-01	6.568E-02	0.150
	+	269.46		5.750E-01	3.316E-01	3.823E-01	3.568E-02	1.504
		323.87	*	-1.037E-01	7.138E-01	1.189E+00	2.134E-01	-0.087
	+	338.28		6.710E+00	2.086E+00	2.776E+00	3.494E-01	2.418
		445.03		-4.691E-01	2.419E+00	3.918E+00	4.770E-01	-0.120
PO-209		260.50		-1.129E+00	9.565E+00	1.502E+01	1.373E+00	-0.075
		262.80		-1.140E+01	2.777E+01	4.265E+01	3.900E+00	-0.267
		896.60	*	-4.091E+00	8.937E+00	1.400E+01	1.224E+00	-0.292
PB-211		404.84	*	-7.298E-01	1.356E+00	1.758E+00	1.101E+00	-0.415
		427.08		4.916E-01	2.178E+00	3.628E+00	2.255E+00	0.136
		831.96		-2.560E-01	1.511E+00	2.457E+00	1.540E+00	-0.104
BI-212	+	727.18	*	1.481E+00	6.964E-01	8.941E-01	8.972E-02	1.656
		785.46		-2.221E-01	2.196E+00	3.634E+00	3.185E-01	-0.061
		1620.62		9.713E-01	1.607E+00	2.919E+00	2.515E-01	0.333
PO-215		81.07		1.408E-01	1.785E-01	2.288E-01	2.228E-02	0.615
	+	83.78		2.183E-01	1.133E-01	1.588E-01	1.548E-02	1.374
		94.90		2.667E-01	2.014E-01	3.208E-01	3.237E-02	0.831
		122.32		-7.878E-01	1.645E+00	2.652E+00	3.227E-01	-0.297
		144.24		4.131E-01	6.927E-01	1.149E+00	1.268E-01	0.360
		154.21		9.699E-02	3.911E-01	6.468E-01	6.568E-02	0.150
	+	269.46		5.750E-01	3.316E-01	3.823E-01	3.568E-02	1.504
		323.87	*	-1.037E-01	7.138E-01	1.189E+00	2.134E-01	-0.087
	+	338.28		6.710E+00	2.086E+00	2.776E+00	3.494E-01	2.418
		445.03		-4.691E-01	2.419E+00	3.918E+00	4.770E-01	-0.120
RN-219	+	271.23		7.377E-01	4.274E-01	4.939E-01	5.322E-02	1.494
		401.81	*	7.714E-02	4.775E-01	8.006E-01	1.197E-01	0.096
RN-220		549.76	*	-1.888E+01	2.961E+01	4.491E+01	4.009E+00	-0.420
RA-223		81.07		1.408E-01	1.785E-01	2.288E-01	2.228E-02	0.615
	+	83.78		2.183E-01	1.133E-01	1.588E-01	1.548E-02	1.374
		94.90		2.667E-01	2.014E-01	3.208E-01	3.237E-02	0.831

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		122.32		-7.878E-01	1.645E+00	2.652E+00	3.227E-01	-0.297
		144.24		4.131E-01	6.927E-01	1.149E+00	1.268E-01	0.360
		154.21		9.699E-02	3.911E-01	6.468E-01	6.568E-02	0.150
	+	269.46		5.750E-01	3.316E-01	3.823E-01	3.568E-02	1.504
		323.87	*	-1.037E-01	7.138E-01	1.189E+00	2.134E-01	-0.087
	+	338.28		6.710E+00	2.086E+00	2.776E+00	3.494E-01	2.418
		445.03		-4.691E-01	2.419E+00	3.918E+00	4.770E-01	-0.120
AC-227		79.80		1.014E+00	1.218E+00	1.749E+00	3.843E-01	0.580
		236.00		2.253E-01	2.651E-01	3.982E-01	4.987E-02	0.566
		256.20	*	-9.497E-02	3.889E-01	6.058E-01	9.471E-02	-0.157
		286.10		-4.571E-01	1.434E+00	2.377E+00	3.227E-01	-0.192
	+	299.80		2.944E+00	1.855E+00	2.571E+00	4.569E-01	1.145
		304.40		-1.966E+00	2.244E+00	3.042E+00	5.688E-01	-0.646
		334.20		5.344E-01	2.577E+00	3.882E+00	7.608E-01	0.138
TH-227		79.80		1.014E+00	1.218E+00	1.749E+00	3.890E-01	0.580
	+	94.00		8.500E+00	2.949E+00	3.287E+00	7.356E-01	2.586
		236.00		2.253E-01	2.649E-01	3.982E-01	4.534E-02	0.566
		256.20	*	-9.497E-02	3.890E-01	6.058E-01	1.109E-01	-0.157
		286.10		-4.571E-01	1.504E+00	2.377E+00	2.387E+00	-0.192
	+	299.80		2.944E+00	1.855E+00	2.571E+00	4.569E-01	1.145
		304.40		-1.966E+00	2.244E+00	3.042E+00	5.688E-01	-0.646
		334.20		5.344E-01	2.577E+00	3.882E+00	7.608E-01	0.138
TH-229	+	85.43		3.268E-01	1.695E-01	2.410E-01	2.350E-02	1.356
	+	88.47		5.526E-01	1.234E-01	1.763E-01	1.725E-02	3.134
		100.00		-6.450E-02	1.559E-01	2.552E-01	2.644E-02	-0.253
		193.63	*	-3.454E-01	5.195E-01	8.054E-01	6.965E-02	-0.429
		210.97		5.807E-02	8.519E-01	1.224E+00	1.080E-01	0.047
PA-231		283.67	*	-2.230E-01	1.419E+00	2.379E+00	3.691E-01	-0.094
		301.29		6.282E-01	6.335E-01	1.014E+00	1.281E-01	0.620
TH-231		81.07		1.408E-01	1.785E-01	2.288E-01	2.228E-02	0.615
	+	83.78		2.183E-01	1.133E-01	1.588E-01	1.548E-02	1.374
		94.90		2.667E-01	2.014E-01	3.208E-01	3.237E-02	0.831
		122.32		-7.878E-01	1.645E+00	2.652E+00	3.227E-01	-0.297
		144.24		4.131E-01	6.927E-01	1.149E+00	1.268E-01	0.360
		154.21		9.699E-02	3.911E-01	6.468E-01	6.568E-02	0.150
	+	269.46		5.750E-01	3.316E-01	3.823E-01	3.568E-02	1.504
		323.87	*	-1.037E-01	7.138E-01	1.189E+00	2.134E-01	-0.087
	+	338.28		6.710E+00	2.086E+00	2.776E+00	3.494E-01	2.418
		445.03		-4.691E-01	2.419E+00	3.918E+00	4.770E-01	-0.120
U-231	+	84.21		9.294E+00	4.822E+00	6.847E+00	6.672E-01	1.357
	+	92.29		8.300E+00	2.354E+00	3.496E+00	3.483E-01	2.374
		95.87	*	-1.736E-01	9.342E-01	1.387E+00	1.406E-01	-0.125
		108.00		6.622E-01	1.778E+00	3.004E+00	3.249E-01	0.220
PA-233	+	75.28		2.020E+01	4.170E+00	5.088E+00	8.148E-01	3.970
	+	86.59		7.923E+00	2.680E+00	2.556E+00	6.954E-01	3.100
	+	300.12		8.208E-01	5.117E-01	7.199E-01	1.094E-01	1.140
		311.98	*	2.701E-02	6.640E-02	1.146E-01	1.075E-02	0.236
		340.50		5.681E-01	7.389E-01	1.143E+00	2.740E-01	0.497
		398.62		-1.312E+00	2.407E+00	3.796E+00	1.009E+00	-0.346

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		415.76		1.747E-01	1.859E+00	3.097E+00	6.671E-01	0.056
PA-234	+	63.00		2.532E+00	1.349E+00	1.400E+00	2.279E-01	1.809
		94.67		2.986E-01	1.519E-01	2.425E-01	3.264E-02	1.231
		98.44		1.075E-01	9.930E-02	1.340E-01	7.516E-02	0.802
		99.86		-1.555E-01	3.946E-01	6.465E-01	6.693E-02	-0.241
		111.00		-9.737E-02	1.666E-01	2.684E-01	3.727E-02	-0.363
		131.20		7.127E-02	1.121E-01	1.715E-01	1.904E-02	0.416
		152.70		-1.646E-02	3.234E-01	5.273E-01	9.227E-02	-0.031
	+	186.00		5.877E+00	2.855E+00	2.883E+00	8.995E-01	2.038
		226.40		-1.906E-02	4.128E-01	6.582E-01	8.831E-02	-0.029
		227.20		-4.849E-01	4.490E-01	6.652E-01	5.955E-02	-0.729
		248.90		-1.368E-01	7.617E-01	1.193E+00	2.696E-01	-0.115
	+	293.70		7.105E+00	1.627E+00	1.855E+00	3.263E-01	3.830
		369.80		-4.495E-01	9.133E-01	1.460E+00	3.184E-01	-0.308
		568.70		4.134E-01	1.170E+00	1.955E+00	1.739E-01	0.211
		569.50		2.218E-01	3.215E-01	5.520E-01	4.908E-02	0.402
		574.00		3.038E-01	1.776E+00	2.918E+00	2.591E-01	0.104
		699.00		-2.083E-01	9.009E-01	1.488E+00	2.836E-01	-0.140
		706.10		-4.171E-01	1.304E+00	2.114E+00	9.426E-01	-0.197
		733.00		-3.755E-01	5.263E-01	6.836E-01	1.519E-01	-0.549
		742.81		8.647E-01	1.685E+00	2.791E+00	1.876E+00	0.310
		796.30		8.512E-01	1.185E+00	2.062E+00	5.588E-01	0.413
		805.60		2.527E-01	1.135E+00	1.932E+00	5.931E-01	0.131
		819.60		-2.053E-01	1.431E+00	2.343E+00	8.918E-01	-0.088
		826.30		-2.314E-01	9.677E-01	1.560E+00	6.984E-01	-0.148
		831.60		-3.193E-01	7.717E-01	1.220E+00	3.648E-01	-0.262
		876.40		4.840E-01	1.075E+00	1.670E+00	1.717E+00	0.290
		880.51		1.538E-01	3.201E-01	5.587E-01	4.897E-02	0.275
		883.24		-2.303E-01	3.770E-01	5.252E-01	3.531E-01	-0.438
		899.00		2.909E-01	9.952E-01	1.686E+00	7.374E-01	0.173
		925.00		4.245E-01	1.466E+00	2.494E+00	2.183E-01	0.170
		926.50		-2.984E-02	2.437E-01	3.586E-01	9.081E-02	-0.083
		946.00	*	8.844E-02	3.695E-01	6.241E-01	1.175E-01	0.142
		949.00		2.520E-01	5.451E-01	9.425E-01	8.245E-02	0.267
		980.50		-8.679E-01	8.084E-01	1.122E+00	9.787E-02	-0.774
		1394.10		-2.553E-01	1.420E+00	2.288E+00	1.489E+00	-0.112
PA-234M		766.42		7.391E+00	1.414E+01	2.388E+01	1.212E+01	0.309
		1001.03	*	1.830E+00	6.016E+00	1.012E+01	1.015E+00	0.181
U-235	+	89.95		4.002E+00	1.636E+00	1.615E+00	5.043E-01	2.478
	+	93.35		2.644E+00	1.029E+00	1.141E+00	3.249E-01	2.318
		105.00		9.645E-02	9.108E-01	1.523E+00	4.643E-01	0.063
		143.76	*	7.057E-02	2.143E-01	3.512E-01	6.439E-02	0.201
		163.35		1.665E-01	4.614E-01	7.542E-01	1.437E-01	0.221
	+	185.71		2.177E-01	8.316E-02	1.062E-01	9.094E-03	2.050
		205.31		2.061E-02	5.766E-01	8.280E-01	1.585E-01	0.025
NP-236		94.67		2.286E-01	1.135E-01	1.842E-01	1.857E-02	1.241
		98.44		8.126E-02	6.023E-02	1.013E-01	1.041E-02	0.802
		111.00		-7.365E-02	1.259E-01	2.030E-01	2.233E-02	-0.363
		160.31	*	-1.269E-02	7.761E-02	1.255E-01	1.108E-02	-0.101

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		1.536E-02	1.308E-01	2.194E-01	2.267E-02	0.070
		117.00	*	-3.353E-02	1.777E-01	2.917E-01	3.318E-02	-0.115
	+	209.75		1.437E+00	1.143E+00	1.424E+00	1.254E-01	1.009
		228.18		-1.054E-01	2.315E-01	3.590E-01	3.216E-02	-0.294
		277.60		1.170E-01	1.813E-01	3.179E-01	2.918E-02	0.368
		334.30		2.936E-01	1.459E+00	2.198E+00	1.986E-01	0.134
AM-241		59.54	*	-9.515E-03	6.495E-02	9.899E-02	1.051E-02	-0.096
CM-243		99.55		1.581E-02	1.346E-01	2.257E-01	2.333E-02	0.070
		103.76	*	3.692E-02	8.127E-02	1.380E-01	1.459E-02	0.268
		117.00		-3.450E-02	1.828E-01	3.001E-01	3.414E-02	-0.115
	+	209.75		1.416E+00	1.127E+00	1.403E+00	1.236E-01	1.009
		228.18		-1.065E-01	2.339E-01	3.627E-01	3.250E-02	-0.294
		277.60		1.180E-01	1.828E-01	3.205E-01	2.942E-02	0.368
AM-246		798.80		-2.380E-01	1.762E-01	2.523E-01	2.214E-02	-0.943
		1036.00		-2.495E-01	3.641E-01	5.426E-01	4.687E-02	-0.460
		1062.04		-4.555E-02	2.869E-01	4.592E-01	3.939E-02	-0.099
		1078.86	*	3.804E-02	1.673E-01	2.802E-01	2.391E-02	0.136
CM-247		278.00		3.039E-01	7.556E-01	1.309E+00	1.202E-01	0.232
		287.40		2.931E-01	1.149E+00	1.977E+00	1.816E-01	0.148
		402.60	*	1.692E-02	4.232E-02	7.208E-02	6.123E-03	0.235
CF-249		252.85		2.235E-02	8.540E-01	1.359E+00	1.237E-01	0.016
		333.44		1.425E-01	1.834E-01	2.905E-01	2.627E-02	0.491
		387.95	*	-1.552E-02	4.491E-02	7.281E-02	6.169E-03	-0.213
CF-251		176.60	*	-3.013E-02	1.345E-01	2.156E-01	1.824E-02	-0.140
		227.00		-3.780E-01	3.956E-01	5.916E-01	5.295E-02	-0.639
		285.00		-9.865E-01	1.642E+00	2.670E+00	2.452E-01	-0.370

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852003      *
* Acquisition date : 26-JAN-2010 13:10:09 Detector SN#     :               *
* Detector ID        : GAM17                Sensitivity      : 5.000       *
* Geometry           : CAN                  Energy tolerance: 1.500        *
* Elapsed live time:     0 02:00:00.00      Abundance limit : 75.000       *
* Elapsed real time:     0 02:00:09.46      Half life ratio :  8.000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 11-JAN-2010 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G244852003           Analyst initials: MXR1         *
* Batch Number       : 942718               Sample Quantity : 1.3076E+02 GRAM *
* Recovery           :     1.00000          Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME :   6-JAN-2010 11:41:36 MS Isotope       :               *
* MSD DPM          :     0.000             MSD Isotope      :               *
* LCS DPM          :     0.000             LCS Isotope      :               *
* LCSD DPM         :     0.000             LCSD Isotope     :               *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.014E+01	2.554E+00	6.515E-01	0.000E+00
AS-73	2.868E-01	3.288E-01	3.615E-01	0.000E+00
CD-109	4.117E+00	9.012E-01	9.794E-01	0.000E+00
SN-126	4.047E-01	8.859E-02	9.614E-02	0.000E+00
TL-208	5.177E-01	1.122E-01	6.243E-02	0.000E+00
BI-210	9.714E-01	9.259E-01	8.431E-01	0.000E+00
PB-210	9.714E-01	9.259E-01	8.431E-01	0.000E+00
PO-210	9.714E-01	9.251E-01	8.431E-01	0.000E+00
BI-211	4.277E+00	6.437E-01	3.519E-01	0.000E+00
PB-212	1.553E+00	1.912E-01	9.189E-02	0.000E+00
PO-212	1.553E+00	1.912E-01	9.189E-02	0.000E+00
BI-214	1.319E+00	2.184E-01	1.349E-01	0.000E+00
PB-214	1.488E+00	2.365E-01	1.227E-01	0.000E+00
PO-214	1.488E+00	2.365E-01	1.227E-01	0.000E+00
PO-216	1.553E+00	1.912E-01	9.189E-02	0.000E+00
PO-218	1.488E+00	2.365E-01	1.227E-01	0.000E+00
RA-224	4.725E+00	1.324E+00	1.046E+00	0.000E+00
RA-226	1.319E+00	2.184E-01	1.349E-01	0.000E+00
AC-228	1.758E+00	3.898E-01	2.734E-01	0.000E+00
RA-228	1.758E+00	3.898E-01	2.734E-01	0.000E+00
TH-228	1.577E+00	1.941E-01	9.328E-02	0.000E+00
TH-230	1.319E+00	2.184E-01	1.349E-01	0.000E+00
TH-232	1.758E+00	3.898E-01	2.734E-01	0.000E+00
TH-234	2.172E+00	1.151E+00	1.009E+00	0.000E+00
U-234	1.319E+00	2.184E-01	1.349E-01	0.000E+00
NP-237	1.188E+00	3.542E-01	2.815E-01	0.000E+00
U-238	2.172E+00	1.151E+00	1.009E+00	0.000E+00
AM-243	3.856E-01	6.152E-02	5.712E-02	0.000E+00
ANH-511	1.441E-01	9.106E-02	5.201E-02	0.000E+00

---- Non-Identified Nuclides ----

Key-Line Activity	K.L. Act error	MDA

Nuclide	(pCi/GRAM	) Ided	(pCi/GRAM	)	
BE-7	3.029E-02	3.417E-01	5.873E-01	0.000E+00	NOT IDENT.
NA-22	-2.298E-02	5.231E-02	8.076E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	9.178E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-8.474E-03	3.724E-02	5.848E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.293E-02	6.256E-02	0.000E+00	FAIL ABUN
SC-46	1.206E-02	4.528E-02	7.942E-02	0.000E+00	FAIL ABUN
V-48	4.625E-02	7.611E-02	1.379E-01	0.000E+00	NOT IDENT.
CR-51	-3.052E-01	3.948E-01	6.611E-01	0.000E+00	NOT IDENT.
MN-52	1.841E-01	2.205E-01	4.312E-01	0.000E+00	FAIL ABUN
MN-54	5.515E-02	4.483E-02	8.497E-02	0.000E+00	NOT IDENT.
CO-56	1.059E-02	4.830E-02	8.448E-02	0.000E+00	NOT IDENT.
CO-57	-1.198E-02	2.326E-02	3.984E-02	0.000E+00	NOT IDENT.
CO-58	-2.474E-02	4.465E-02	7.216E-02	0.000E+00	NOT IDENT.
FE-59	-6.137E-02	1.103E-01	1.715E-01	0.000E+00	NOT IDENT.
CO-60	-5.452E-02	4.791E-02	6.873E-02	0.000E+00	NOT IDENT.
ZN-65	1.657E-02	1.113E-01	1.645E-01	0.000E+00	NOT IDENT.
GE-68	2.142E-01	1.464E+00	2.493E+00	0.000E+00	NOT IDENT.
AS-74	-3.301E-02	1.154E-01	1.795E-01	0.000E+00	NOT IDENT.
SE-75	7.223E-03	4.825E-02	7.716E-02	0.000E+00	NOT IDENT.
BR-77	3.613E+00	1.154E+01	2.007E+01	0.000E+00	FAIL ABUN
SR-82	-4.992E-01	4.741E-01	7.341E-01	0.000E+00	NOT IDENT.
RB-83	1.766E-02	7.717E-02	1.333E-01	0.000E+00	NOT IDENT.
RB-84	-2.984E-02	8.072E-02	1.319E-01	0.000E+00	NOT IDENT.
KR-85	5.033E+00	7.573E+00	1.352E+01	0.000E+00	NOT IDENT.
SR-85	2.578E-02	3.880E-02	6.928E-02	0.000E+00	NOT IDENT.
RB-86	-1.809E-01	9.448E-01	1.544E+00	0.000E+00	NOT IDENT.
Y-88	-1.987E-02	3.426E-02	4.647E-02	0.000E+00	NOT IDENT.
ZR-88	-1.186E-02	3.294E-02	5.562E-02	0.000E+00	NOT IDENT.
Y-91	1.195E+01	2.351E+01	4.097E+01	0.000E+00	NOT IDENT.
NB-94	-4.533E-04	4.022E-02	6.999E-02	0.000E+00	NOT IDENT.
NB-95	2.101E-02	4.640E-02	8.347E-02	0.000E+00	NOT IDENT.
NB-95M	4.742E-02	1.364E-01	2.090E-01	0.000E+00	NOT IDENT.
ZR-95	-6.266E-05	8.257E-02	1.429E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.065E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.223E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-7.650E-01	1.364E+01	2.353E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	3.111E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.444E-02	3.405E-02	5.560E-02	0.000E+00	NOT IDENT.
RH-102	-1.200E-03	3.034E-02	5.161E-02	0.000E+00	NOT IDENT.
RU-103	-6.860E-03	4.747E-02	7.972E-02	0.000E+00	FAIL ABUN
RH-106	-2.317E-01	3.872E-01	6.048E-01	0.000E+00	FAIL ABUN
RU-106	-2.317E-01	3.865E-01	6.048E-01	0.000E+00	FAIL ABUN
AG-108M	-2.800E-02	3.450E-02	5.517E-02	0.000E+00	NOT IDENT.
AG-110M	-2.276E-02	4.005E-02	6.222E-02	0.000E+00	NOT IDENT.
IN-111	8.284E-01	1.036E+00	1.655E+00	0.000E+00	NOT IDENT.
IN-113M	2.014E-02	4.649E-02	8.309E-02	0.000E+00	NOT IDENT.
SN-113	2.014E-02	4.649E-02	8.309E-02	0.000E+00	NOT IDENT.
IN-114M	1.086E-01	2.069E-01	3.258E-01	0.000E+00	NOT IDENT.
CD-115	1.544E+01	1.160E+01	2.180E+01	0.000E+00	NOT IDENT.
SN-117M	1.605E-03	5.181E-02	8.969E-02	0.000E+00	NOT IDENT.
SB-122	9.995E-01	2.297E+00	4.012E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	5.080E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.749E-02	2.735E-02	4.562E-02	0.000E+00	NOT IDENT.
I-124	-1.041E-01	8.452E-01	1.213E+00	0.000E+00	FAIL ABUN
SB-124	6.570E-03	8.544E-02	1.454E-01	0.000E+00	FAIL ABUN
SB-125	-4.073E-03	9.528E-02	1.635E-01	0.000E+00	FAIL ABUN
TE-125M	5.111E+00	8.012E+00	1.454E+01	0.000E+00	NOT IDENT.
I-126	1.427E-01	2.144E-01	3.774E-01	0.000E+00	NOT IDENT.
SB-126	1.021E-01	1.742E-01	2.843E-01	0.000E+00	FAIL ABUN
SB-127	-1.448E+00	1.757E+00	2.647E+00	0.000E+00	NOT IDENT.
XE-127	-7.136E-03	4.536E-02	7.632E-02	0.000E+00	NOT IDENT.
I-131	-8.559E-02	1.222E-01	2.022E-01	0.000E+00	NOT IDENT.
TE-132	-3.107E-01	6.851E-01	1.118E+00	0.000E+00	NOT IDENT.
BA-133	-1.819E-02	4.898E-02	7.251E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	6.617E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	7.776E-02	5.828E-02	1.109E-01	0.000E+00	NOT IDENT.
CS-135	7.241E-02	1.968E-01	2.988E-01	0.000E+00	NOT IDENT.
I-135'	0.000E+00	5.054E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-3.133E-02	1.269E-01	2.065E-01	0.000E+00	FAIL ABUN
BA-137M	-2.087E-02	4.533E-02	7.140E-02	0.000E+00	NOT IDENT.
CS-137	-2.206E-02	4.792E-02	7.548E-02	0.000E+00	NOT IDENT.
CE-139	-1.285E-02	2.845E-02	4.782E-02	0.000E+00	NOT IDENT.
BA-140	4.813E-03	2.801E-01	4.737E-01	0.000E+00	NOT IDENT.
LA-140	-1.131E-01	1.030E-01	1.356E-01	0.000E+00	NOT IDENT.
CE-141	-8.365E-03	6.194E-02	1.070E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.150E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-7.681E-02	2.021E-01	3.293E-01	0.000E+00	NOT IDENT.
PM-144	4.822E-02	4.331E-02	8.149E-02	0.000E+00	NOT IDENT.
PR-144	3.268E+00	2.935E+00	5.522E+00	0.000E+00	NOT IDENT.
PM-146	1.436E-02	5.092E-02	8.904E-02	0.000E+00	NOT IDENT.
ND-147	-2.706E-01	6.338E-01	1.027E+00	0.000E+00	FAIL ABUN
PM-149	-2.433E+01	8.189E+01	1.427E+02	0.000E+00	NOT IDENT.
EU-152	-5.362E-02	1.001E-01	1.690E-01	0.000E+00	FAIL ABUN
GD-153	1.453E-02	7.146E-02	1.156E-01	0.000E+00	FAIL ABUN
EU-154	-7.797E-02	1.472E-01	2.240E-01	0.000E+00	NOT IDENT.
EU-155	-9.850E-04	9.064E-02	1.608E-01	0.000E+00	FAIL ABUN
TB-160	3.624E-02	1.592E-01	2.784E-01	0.000E+00	FAIL ABUN
HO-166M	5.637E-02	6.635E-02	1.240E-01	0.000E+00	FAIL ABUN
TM-171	-1.491E+00	1.550E+01	2.525E+01	0.000E+00	FAIL ABUN
LU-176	2.677E-02	2.509E-02	4.695E-02	0.000E+00	FAIL ABUN
LU-177	2.011E+00	1.568E+00	2.038E+00	0.000E+00	FAIL ABUN
LU-177M	3.024E-02	2.178E-01	3.351E-01	0.000E+00	FAIL ABUN
HF-181	-8.089E-03	4.395E-02	7.365E-02	0.000E+00	NOT IDENT.
W-181	-4.228E-02	1.940E-01	3.147E-01	0.000E+00	NOT IDENT.
TA-182	-7.788E-02	2.360E-01	3.750E-01	0.000E+00	NOT IDENT.
RE-183	2.228E-02	1.084E-01	1.867E-01	0.000E+00	FAIL ABUN
RE-184	5.954E-03	2.230E-01	3.730E-01	0.000E+00	NOT IDENT.
OS-185	-8.850E-04	5.143E-02	8.522E-02	0.000E+00	NOT IDENT.
RE-188	-9.064E-04	1.643E-01	2.843E-01	0.000E+00	NOT IDENT.
W-188	-1.190E+00	7.495E+00	1.158E+01	0.000E+00	FAIL ABUN
IR-192	2.272E-02	3.544E-02	6.483E-02	0.000E+00	FAIL ABUN
AU-195	1.913E-01	1.848E-01	3.416E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.509E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.473E+00	6.509E+00	1.151E+01	0.000E+00	NOT IDENT.
TL-202	5.126E-02	7.238E-02	1.311E-01	0.000E+00	NOT IDENT.
HG-203	-2.507E-02	3.930E-02	6.730E-02	0.000E+00	NOT IDENT.
BI-207	2.317E-02	6.462E-02	1.126E-01	0.000E+00	FAIL ABUN
TL-207	-1.037E-01	6.995E-01	1.220E+00	0.000E+00	FAIL ABUN
PO-209	-4.091E+00	8.758E+00	1.413E+01	0.000E+00	NOT IDENT.
PB-211	-7.298E-01	1.329E+00	1.798E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.825E-01	9.055E-01	0.000E+00	FAIL ABUN
PO-215	-1.037E-01	6.995E-01	1.220E+00	0.000E+00	FAIL ABUN
RN-219	7.714E-02	4.680E-01	8.188E-01	0.000E+00	FAIL ABUN
RN-220	-1.888E+01	2.902E+01	4.569E+01	0.000E+00	NOT IDENT.
RA-223	-1.037E-01	6.995E-01	1.220E+00	0.000E+00	FAIL ABUN
AC-227	-9.497E-02	3.811E-01	6.241E-01	0.000E+00	FAIL ABUN
TH-227	-9.497E-02	3.812E-01	6.241E-01	0.000E+00	FAIL ABUN
TH-229	-3.454E-01	5.091E-01	8.335E-01	0.000E+00	FAIL ABUN
PA-231	-2.230E-01	1.390E+00	2.447E+00	0.000E+00	NOT IDENT.
TH-231	-1.037E-01	6.995E-01	1.220E+00	0.000E+00	FAIL ABUN
U-231	-1.736E-01	9.155E-01	1.451E+00	0.000E+00	FAIL ABUN
PA-233	2.701E-02	6.507E-02	1.177E-01	0.000E+00	FAIL ABUN
PA-234	8.844E-02	3.621E-01	6.293E-01	0.000E+00	FAIL ABUN
PA-234M	1.830E+00	5.895E+00	1.019E+01	0.000E+00	NOT IDENT.
U-235	7.057E-02	2.100E-01	3.652E-01	0.000E+00	FAIL ABUN
NP-236	-1.269E-02	7.606E-02	1.302E-01	0.000E+00	NOT IDENT.
NP-239	-3.353E-02	1.741E-01	3.043E-01	0.000E+00	FAIL ABUN
AM-241	-9.515E-03	6.365E-02	1.044E-01	0.000E+00	NOT IDENT.
CM-243	3.692E-02	7.965E-02	1.442E-01	0.000E+00	FAIL ABUN
AM-246	3.804E-02	1.639E-01	2.819E-01	0.000E+00	NOT IDENT.
CM-247	1.692E-02	4.147E-02	7.372E-02	0.000E+00	NOT IDENT.
CF-249	-1.552E-02	4.401E-02	7.451E-02	0.000E+00	NOT IDENT.
CF-251	-3.013E-02	1.318E-01	2.234E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:11:00.73

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*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
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Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852003.CNF;1
Sample date       : 11-JAN-2010 12:00:00 Acquisition date : 26-JAN-2010 13:10:09
Sample ID         : G244852003           Sample quantity  : 1.30760E+02 GRAM
Detector name     : GAM17                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:09.46  0.1%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 942718               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	583	10.67*	7.783E-01	2.014E+01	2.014E+01	12.94
AS-73	53.44	59	10.30*	6.587E+00	2.518E-01	2.868E-01	116.98
CD-109	88.03	348	3.72*	6.674E+00	4.026E+00	4.117E+00	22.34
SN-126	64.28	195	9.60	6.777E+00	8.599E-01	8.599E-01	53.20
	86.94	348	8.90	6.674E+00	1.683E+00	1.683E+00	46.21
	87.57	348	37.00*	6.674E+00	4.047E-01	4.047E-01	22.34
TL-208	277.35	------	6.80	3.568E+00	------ Line Not Found		------
	510.84	103	21.60	2.058E+00	6.673E-01	6.673E-01	65.00
	583.14	275	84.20*	1.812E+00	5.177E-01	5.177E-01	22.12
	860.37	53	12.46	1.247E+00	9.817E-01	9.817E-01	60.33
BI-210	46.50	87	4.05*	6.330E+00	9.702E-01	9.714E-01	97.26
PB-210	46.50	87	4.05*	6.330E+00	9.702E-01	9.714E-01	97.26
PO-210	46.50	87	4.05*	6.330E+00	9.702E-01	9.714E-01	97.18
BI-211	72.87	------	1.27	6.803E+00	------ Line Not Found		------
	351.07	561	12.94*	2.908E+00	4.277E+00	4.277E+00	15.36
PB-212	74.81	602	10.70	6.795E+00	2.378E+00	2.378E+00	18.77
	77.11	928	18.00	6.782E+00	2.182E+00	2.182E+00	13.41
	87.30	348	8.00	6.674E+00	1.872E+00	1.872E+00	24.47
	238.63	971	44.60*	4.023E+00	1.553E+00	1.553E+00	12.56
	300.09	63	3.41	3.344E+00	1.589E+00	1.589E+00	61.43
PO-212	74.81	602	10.70	6.795E+00	2.378E+00	2.378E+00	18.77
	77.11	928	18.00	6.782E+00	2.182E+00	2.182E+00	13.41
	87.30	348	8.00	6.674E+00	1.872E+00	1.872E+00	24.47
	115.19	------	0.60	6.177E+00	------ Line Not Found		------
	238.63	971	44.60*	4.023E+00	1.553E+00	1.553E+00	12.56
	300.09	63	3.41	3.344E+00	1.589E+00	1.589E+00	61.43
BI-214	609.31	370	46.30*	1.737E+00	1.319E+00	1.319E+00	16.90
	1120.29	90	15.10	9.775E-01	1.757E+00	1.757E+00	34.54
	1764.49	62	15.80	6.717E-01	1.680E+00	1.680E+00	36.56
PB-214	74.81	602	6.21	6.795E+00	4.098E+00	4.098E+00	17.89
	77.11	928	10.50	6.782E+00	3.741E+00	3.741E+00	15.42
	87.30	348	4.67	6.674E+00	3.207E+00	3.207E+00	23.63

Sample ID : G244852003 Acquisition date : 26-JAN-2010 13:10:09

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	241.98	259	7.49	3.983E+00	2.492E+00	2.492E+00	29.14
	295.21	335	19.20	3.389E+00	1.480E+00	1.480E+00	18.39
	351.92	561	37.20*	2.908E+00	1.488E+00	1.488E+00	16.22
PO-214	74.81	602	6.21	6.795E+00	4.098E+00	4.098E+00	17.89
	77.11	928	10.50	6.782E+00	3.741E+00	3.741E+00	15.42
	87.30	348	4.67	6.674E+00	3.207E+00	3.207E+00	23.63
	241.98	259	7.49	3.983E+00	2.492E+00	2.492E+00	29.14
	295.21	335	19.20	3.389E+00	1.480E+00	1.480E+00	18.39
	351.92	561	37.20*	2.908E+00	1.488E+00	1.488E+00	16.22
PO-216	74.81	602	10.70	6.795E+00	2.378E+00	2.378E+00	18.77
	77.11	928	18.00	6.782E+00	2.182E+00	2.182E+00	13.41
	87.30	348	8.00	6.674E+00	1.872E+00	1.872E+00	24.47
	238.63	971	44.60*	4.023E+00	1.553E+00	1.553E+00	12.56
	300.09	63	3.41	3.344E+00	1.589E+00	1.589E+00	61.43
PO-218	74.81	602	6.21	6.795E+00	4.098E+00	4.098E+00	17.89
	77.11	928	10.50	6.782E+00	3.741E+00	3.741E+00	15.42
	87.30	348	4.67	6.674E+00	3.207E+00	3.207E+00	23.63
	241.98	259	7.49	3.983E+00	2.492E+00	2.492E+00	29.14
	295.21	335	19.20	3.389E+00	1.480E+00	1.480E+00	18.39
	351.92	561	37.20*	2.908E+00	1.488E+00	1.488E+00	16.22
RA-224	240.98	259	3.95*	3.983E+00	4.725E+00	4.725E+00	28.60
RA-226	609.31	370	46.30*	1.737E+00	1.319E+00	1.319E+00	16.90
	1120.29	90	15.10	9.775E-01	1.757E+00	1.757E+00	34.54
	1764.49	62	15.80	6.717E-01	1.680E+00	1.680E+00	36.56
AC-228	338.32	192	11.40	3.013E+00	1.607E+00	1.607E+00	50.18
	911.07	200	27.70*	1.182E+00	1.758E+00	1.758E+00	22.63
	969.11	113	16.60	1.116E+00	1.746E+00	1.746E+00	36.57
RA-228	338.32	192	11.40	3.013E+00	1.607E+00	1.607E+00	50.18
	911.07	200	27.70*	1.182E+00	1.758E+00	1.758E+00	22.63
	969.11	113	16.60	1.116E+00	1.746E+00	1.746E+00	36.57
TH-228	74.81	602	10.70	6.795E+00	2.378E+00	2.414E+00	16.32
	77.11	928	18.00	6.782E+00	2.182E+00	2.215E+00	13.41
	87.30	348	8.00	6.674E+00	1.872E+00	1.900E+00	22.34
	238.63	971	44.60*	4.023E+00	1.553E+00	1.577E+00	12.56
	300.09	63	3.41	3.344E+00	1.589E+00	1.613E+00	84.73
TH-230	609.31	370	46.30*	1.737E+00	1.319E+00	1.319E+00	16.90
	1120.29	90	15.10	9.775E-01	1.757E+00	1.757E+00	34.54
	1764.49	62	15.80	6.717E-01	1.680E+00	1.680E+00	36.56
TH-232	338.32	192	11.40	3.013E+00	1.607E+00	1.607E+00	29.82
	911.07	200	27.70*	1.182E+00	1.758E+00	1.758E+00	22.63
	969.11	113	16.60	1.116E+00	1.746E+00	1.746E+00	36.57
TH-234	63.29	195	3.80*	6.777E+00	2.172E+00	2.172E+00	54.07
	92.38	273	5.41	6.595E+00	2.200E+00	2.200E+00	32.51
U-234	609.31	370	46.30*	1.737E+00	1.319E+00	1.319E+00	16.90
	1120.29	90	15.10	9.775E-01	1.757E+00	1.757E+00	34.54
	1764.49	62	15.80	6.717E-01	1.680E+00	1.680E+00	36.56
NP-237	86.50	348	12.60*	6.674E+00	1.188E+00	1.188E+00	30.41
	95.87	------	2.60	6.543E+00	------ Line Not Found		------
U-238	63.29	195	3.80*	6.777E+00	2.172E+00	2.172E+00	54.07

Sample ID : G244852003 Acquisition date : 26-JAN-2010 13:10:09

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	92.38	273	5.41	6.595E+00	2.200E+00	2.200E+00	28.36
AM-243	74.67	602	66.00*	6.795E+00	3.856E-01	3.856E-01	16.28
	86.72	348	0.34	6.674E+00	4.457E+01	4.457E+01	22.34
	117.66	------	0.55	6.127E+00	------	Line Not Found	------
	142.18	------	0.13	5.624E+00	------	Line Not Found	------
ANH-511	511.00	103	100.00*	2.058E+00	1.441E-01	1.441E-01	64.47

Flag: "*" = Keyline

Sample ID : G244852003 Acquisition date : 26-JAN-2010 13:10:09

Total number of lines in spectrum 34
Number of unidentified lines 1
Number of lines tentatively identified by NID 33 97.06%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.014E+01	2.014E+01	0.261E+01	12.94	
AS-73	80.30D	1.14	2.518E-01	2.868E-01	3.355E-01	116.98	
CD-109	464.00D	1.02	4.026E+00	4.117E+00	0.920E+00	22.34	
SN-126	1.00E+05Y	1.00	4.047E-01	4.047E-01	0.904E-01	22.34	
TL-208	1.41E+10Y	1.00	5.177E-01	5.177E-01	1.145E-01	22.12	
BI-210	22.26Y	1.00	9.702E-01	9.714E-01	9.448E-01	97.26	
PB-210	22.26Y	1.00	9.702E-01	9.714E-01	9.448E-01	97.26	
PO-210	22.26Y	1.00	9.702E-01	9.714E-01	9.440E-01	97.18	
BI-211	7.04E+08Y	1.00	4.277E+00	4.277E+00	0.657E+00	15.36	
PB-212	1.41E+10Y	1.00	1.553E+00	1.553E+00	0.195E+00	12.56	
PO-212	1.41E+10Y	1.00	1.553E+00	1.553E+00	0.195E+00	12.56	
BI-214	1600.00Y	1.00	1.319E+00	1.319E+00	0.223E+00	16.90	
PB-214	1600.00Y	1.00	1.488E+00	1.488E+00	0.241E+00	16.22	
PO-214	1600.00Y	1.00	1.488E+00	1.488E+00	0.241E+00	16.22	
PO-216	1.41E+10Y	1.00	1.553E+00	1.553E+00	0.195E+00	12.56	
PO-218	1600.00Y	1.00	1.488E+00	1.488E+00	0.241E+00	16.22	
RA-224	1.41E+10Y	1.00	4.725E+00	4.725E+00	1.351E+00	28.60	
RA-226	1600.00Y	1.00	1.319E+00	1.319E+00	0.223E+00	16.90	
AC-228	1.41E+10Y	1.00	1.758E+00	1.758E+00	0.398E+00	22.63	
RA-228	1.41E+10Y	1.00	1.758E+00	1.758E+00	0.398E+00	22.63	
TH-228	1.91Y	1.02	1.553E+00	1.577E+00	0.198E+00	12.56	
TH-230	4.47E+09Y	1.00	1.319E+00	1.319E+00	0.223E+00	16.90	
TH-232	1.41E+10Y	1.00	1.758E+00	1.758E+00	0.398E+00	22.63	
TH-234	4.47E+09Y	1.00	2.172E+00	2.172E+00	1.175E+00	54.07	
U-234	4.47E+09Y	1.00	1.319E+00	1.319E+00	0.223E+00	16.90	
NP-237	2.14E+06Y	1.00	1.188E+00	1.188E+00	0.361E+00	30.41	
U-238	4.47E+09Y	1.00	2.172E+00	2.172E+00	1.175E+00	54.07	
AM-243	7380.00Y	1.00	3.856E-01	3.856E-01	0.628E-01	16.28	
ANH-511	1.00E+09Y	1.00	1.441E-01	1.441E-01	0.929E-01	64.47	
	Total Activity :		6.454E+01	6.469E+01			

Grand Total Activity : 6.454E+01 6.469E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G244852003 Acquisition date : 26-JAN-2010 13:10:09

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	84.29	126	318	1.21	168.22	165	27	1.75E-02	51.0	6.71E+00	T
3	89.93	250	303	1.20	179.51	165	27	3.47E-02	26.4	6.64E+00	T
0	128.81	94	359	0.91	257.31	252	10	1.31E-02	77.9	5.90E+00	T
0	185.68	197	289	1.14	371.09	367	11	2.74E-02	37.2	4.81E+00	T
0	209.41	72	223	0.93	418.58	414	9	9.98E-03	79.1	4.43E+00	T
0	270.67	99	183	1.81	541.13	536	11	1.38E-02	56.9	3.64E+00	T
0	409.39	35	79	1.24	818.70	814	8	4.85E-03	94.7	2.53E+00	
0	462.07	93	82	1.18	924.11	918	13	1.29E-02	45.0	2.26E+00	T
0	726.94	89	73	1.23	1454.15	1447	14	1.24E-02	45.9	1.46E+00	T
0	934.21	27	46	1.58	1868.95	1861	15	3.77E-03	****	1.15E+00	T
3	963.66	40	30	2.21	1927.89	1919	24	5.52E-03	72.4	1.12E+00	T
0	1376.18	32	10	0.78	2753.58	2745	14	4.44E-03	55.5	8.17E-01	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:11:06.14

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*******************************************************************************
*                              GEL Laboratories LLC                           *
*                                2040 Savage Road                             *
*                              Charleston, SC 29414                           *
*******************************************************************************
*                                                                             *
*                                DETECTOR DATA                                *
*                                                                             *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852003.CNF;1   *
* Acquisition date  : 26-JAN-2010 13:10:09  Detector SN#     :               *
* Detector ID       : GAM17                 Sensitivity      : 5.00000       *
* Geometry          : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:09.46          Half life ratio : 8.00000        *
*******************************************************************************
*                                                                             *
*                                 SAMPLE DATA                                 *
*                                                                             *
* Sample date       : 11-JAN-2010 12:00:00  Nuclide Library : SOLID           *
* Sample ID         : G244852003            Analyst initials: MXR1            *
* Batch Number      : 942718                Sample Quantity : 1.30760E+02 GRAM *
*******************************************************************************
*                                                                             *
*                                   QC DATA                                   *
*                                                                             *
* CALIB. DATE/TIME : 6-JAN-2010 11:41:36.18MS Isotope      :                  *
* MSD ID           :                       MSD Isotope     :                 *
* LCS ID           : 1032-A                LCS Isotope     :                 *
*******************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.014E+01	2.606E+00	6.509E-01	5.779E-02	30.945
AS-73	2.868E-01	3.355E-01	3.423E-01	3.425E-02	0.838
CD-109	4.117E+00	9.196E-01	9.347E-01	9.124E-02	4.405
SN-126	4.047E-01	9.040E-02	9.175E-02	8.953E-03	4.411
TL-208	5.177E-01	1.145E-01	6.142E-02	5.810E-03	8.428
BI-210	9.714E-01	9.448E-01	7.967E-01	8.643E-02	1.219
PB-210	9.714E-01	9.448E-01	7.967E-01	8.643E-02	1.219
PO-210	9.714E-01	9.440E-01	7.967E-01	8.049E-02	1.219
BI-211	4.277E+00	6.568E-01	3.434E-01	3.204E-02	12.456
PB-212	1.553E+00	1.951E-01	8.910E-02	8.982E-03	17.434
PO-212	1.553E+00	1.951E-01	8.910E-02	8.982E-03	17.434
BI-214	1.319E+00	2.229E-01	1.328E-01	1.351E-02	9.928
PB-214	1.488E+00	2.413E-01	1.197E-01	1.279E-02	12.425
PO-214	1.488E+00	2.413E-01	1.197E-01	1.279E-02	12.425
PO-216	1.553E+00	1.951E-01	8.910E-02	8.982E-03	17.434
PO-218	1.488E+00	2.413E-01	1.197E-01	1.279E-02	12.425
RA-224	4.725E+00	1.351E+00	1.015E+00	9.177E-02	4.656
RA-226	1.319E+00	2.229E-01	1.328E-01	1.351E-02	9.928

Sample ID : G244852003 Acquisition date : 26-JAN-2010 13:10:09

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-228	1.758E+00	3.978E-01	2.710E-01	3.074E-02	6.485
RA-228	1.758E+00	3.978E-01	2.710E-01	3.074E-02	6.485
TH-228	1.577E+00	1.980E-01	9.044E-02	9.118E-03	17.434
TH-230	1.319E+00	2.229E-01	1.328E-01	1.351E-02	9.928
TH-232	1.758E+00	3.978E-01	2.710E-01	3.074E-02	6.485
TH-234	2.172E+00	1.175E+00	9.580E-01	1.788E-01	2.268
U-234	1.319E+00	2.229E-01	1.328E-01	1.351E-02	9.928
NP-237	1.188E+00	3.614E-01	2.685E-01	6.129E-02	4.426
U-238	2.172E+00	1.175E+00	9.580E-01	1.788E-01	2.268
AM-243	3.856E-01	6.277E-02	5.437E-02	5.308E-03	7.092
ANH-511	1.441E-01	9.292E-02	5.106E-02	4.560E-03	2.823

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.029E-02		3.486E-01	5.759E-01	5.480E-02	0.053
NA-22	-2.298E-02		5.338E-02	8.050E-02	6.782E-03	-0.285
NA-24	1.394E-01		4.682E-01	Half-Life too short		
AL-26	-8.474E-03		3.800E-02	5.864E-02	4.915E-03	-0.145
TI-44	4.027E-01	+	5.401E-02	5.960E-02	5.807E-03	6.757
SC-46	1.206E-02		4.620E-02	7.868E-02	6.888E-03	0.153
V-48	4.625E-02		7.766E-02	1.369E-01	1.194E-02	0.338
CR-51	-3.052E-01		4.029E-01	6.440E-01	6.150E-02	-0.474
MN-52	1.841E-01		2.250E-01	4.307E-01	3.713E-02	0.427
MN-54	5.515E-02		4.574E-02	8.409E-02	7.394E-03	0.656
CO-56	1.059E-02		4.929E-02	8.363E-02	7.352E-03	0.127
CO-57	-1.198E-02		2.373E-02	3.821E-02	4.477E-03	-0.313
CO-58	-2.474E-02		4.556E-02	7.138E-02	6.286E-03	-0.347
FE-59	-6.137E-02		1.125E-01	1.705E-01	1.565E-02	-0.360
CO-60	-5.452E-02		4.889E-02	6.856E-02	5.843E-03	-0.795
ZN-65	1.657E-02		1.136E-01	1.636E-01	1.378E-02	0.101
GE-68	2.142E-01		1.494E+00	2.478E+00	2.115E-01	0.086
AS-74	-3.301E-02		1.178E-01	1.767E-01	1.556E-02	-0.187
SE-75	7.223E-03		4.924E-02	7.494E-02	6.885E-03	0.096
BR-77	3.613E+00		1.177E+01	1.971E+01	1.761E+00	0.183
SR-82	-4.992E-01		4.837E-01	7.256E-01	6.350E-02	-0.688
RB-83	1.766E-02		7.874E-02	1.309E-01	1.170E-02	0.135
RB-84	-2.984E-02		8.237E-02	1.307E-01	1.145E-02	-0.228
KR-85	5.033E+00		7.728E+00	1.327E+01	1.186E+00	0.379
SR-85	2.578E-02		3.959E-02	6.801E-02	6.076E-03	0.379
RB-86	-1.809E-01		9.641E-01	1.535E+00	1.310E-01	-0.118
Y-88	-1.987E-02		3.496E-02	4.662E-02	3.887E-03	-0.426
ZR-88	-1.186E-02		3.362E-02	5.437E-02	4.581E-03	-0.218
Y-91	1.195E+01		2.399E+01	4.079E+01	3.367E+00	0.293
NB-94	-4.533E-04		4.104E-02	6.907E-02	5.925E-03	-0.007
NB-95	2.101E-02		4.735E-02	8.249E-02	7.205E-03	0.255
NB-95M	4.742E-02		1.392E-01	2.026E-01	2.069E-02	0.234

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	-6.266E-05		8.425E-02	1.412E-01	1.353E-02	0.000
NB-97	-7.437E-02		5.432E-02	Half-Life too short		
ZR-97	3.529E+00		1.134E+00	Half-Life too short		
MO-99	-7.650E-01		1.392E+01	2.324E+01	3.537E+00	-0.033
TC-99M	-7.889E+09		1.587E+10	Half-Life too short		
RH-101	-1.444E-02		3.474E-02	5.374E-02	4.673E-03	-0.269
RH-102	-1.200E-03		3.096E-02	5.060E-02	4.482E-03	-0.024
RU-103	-6.860E-03		4.844E-02	7.822E-02	1.122E-02	-0.088
RH-106	-2.317E-01		3.951E-01	5.957E-01	7.983E-02	-0.389
RU-106	-2.317E-01		3.944E-01	5.957E-01	5.175E-02	-0.389
AG-108M	-2.800E-02		3.521E-02	5.401E-02	4.875E-03	-0.518
AG-110M	-2.276E-02		4.087E-02	6.133E-02	5.345E-03	-0.371
IN-111	8.284E-01		1.057E+00	1.605E+00	1.456E-01	0.516
IN-113M	2.014E-02		4.744E-02	8.121E-02	7.056E-03	0.248
SN-113	2.014E-02		4.744E-02	8.121E-02	7.056E-03	0.248
IN-114M	1.086E-01		2.111E-01	3.147E-01	2.710E-02	0.345
CD-115	1.544E+01		1.184E+01	2.141E+01	1.914E+00	0.721
SN-117M	1.605E-03		5.287E-02	8.640E-02	7.766E-03	0.019
SB-122	9.995E-01		2.344E+00	3.945E+00	3.513E-01	0.253
I-123	-3.248E+00		2.592E+00	Half-Life too short		
TE-123M	-1.749E-02		2.791E-02	4.395E-02	3.956E-03	-0.398
I-124	-1.041E-01		8.624E-01	1.194E+00	1.048E-01	-0.087
SB-124	6.570E-03		8.719E-02	1.456E-01	1.296E-02	0.045
SB-125	-4.073E-03		9.722E-02	1.600E-01	1.411E-02	-0.025
TE-125M	5.111E+00		8.176E+00	1.393E+01	1.711E+00	0.367
I-126	1.427E-01		2.188E-01	3.721E-01	3.142E-02	0.384
SB-126	1.021E-01		1.778E-01	2.807E-01	2.423E-02	0.364
SB-127	-1.448E+00		1.793E+00	2.611E+00	2.947E-01	-0.554
XE-127	-7.136E-03		4.628E-02	7.380E-02	6.452E-03	-0.097
I-131	-8.559E-02		1.246E-01	1.974E-01	1.823E-02	-0.434
TE-132	-3.107E-01		6.991E-01	1.083E+00	1.721E-01	-0.287
BA-133	-1.819E-02		4.998E-02	7.076E-02	9.454E-03	-0.257
I-133	-1.374E-03		3.376E-03	Half-Life too short		
CS-134	7.776E-02		5.947E-02	1.096E-01	9.688E-03	0.709
CS-135	7.241E-02		2.008E-01	2.903E-01	3.029E-02	0.249
I-135	3.229E+09		2.579E+09	Half-Life too short		
CS-136	-3.133E-02		1.295E-01	2.051E-01	1.842E-02	-0.153
BA-137M	-2.087E-02		4.626E-02	7.039E-02	5.930E-03	-0.297
CS-137	-2.206E-02		4.890E-02	7.441E-02	6.281E-03	-0.297
CE-139	-1.285E-02		2.903E-02	4.609E-02	3.843E-03	-0.279
BA-140	4.813E-03		2.858E-01	4.653E-01	1.546E-01	0.010
LA-140	-1.131E-01		1.051E-01	1.357E-01	1.171E-02	-0.833
CE-141	-8.365E-03		6.320E-02	1.029E-01	1.050E-02	-0.081
CE-143	6.479E-04		1.097E-04	Half-Life too short		
CE-144	-7.681E-02		2.062E-01	3.163E-01	5.366E-02	-0.243
PM-144	4.822E-02		4.420E-02	8.040E-02	6.883E-03	0.600
PR-144	3.268E+00		2.995E+00	5.448E+00	4.662E-01	0.600
PM-146	1.436E-02		5.196E-02	8.723E-02	9.468E-03	0.165

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	-2.706E-01		6.467E-01	1.009E+00	1.527E-01	-0.268
PM-149	-2.433E+01		8.356E+01	1.387E+02	2.201E+01	-0.175
EU-152	-5.362E-02		1.022E-01	1.649E-01	1.559E-02	-0.325
GD-153	1.453E-02		7.292E-02	1.105E-01	1.130E-02	0.132
EU-154	-7.797E-02		1.502E-01	2.232E-01	2.490E-02	-0.349
EU-155	-9.850E-04		9.249E-02	1.539E-01	1.654E-02	-0.006
TB-160	3.624E-02		1.624E-01	2.758E-01	2.418E-02	0.131
HO-166M	5.637E-02		6.770E-02	1.224E-01	1.053E-02	0.461
TM-171	-1.491E+00		1.582E+01	2.399E+01	2.368E+00	-0.062
LU-176	2.677E-02		2.561E-02	4.570E-02	4.187E-03	0.586
LU-177	2.011E+00	+	1.600E+00	1.972E+00	1.734E-01	1.020
LU-177M	3.024E-02		2.223E-01	3.278E-01	2.809E-02	0.092
HF-181	-8.089E-03		4.484E-02	7.223E-02	6.412E-03	-0.112
W-181	-4.228E-02		1.980E-01	2.989E-01	2.961E-02	-0.141
TA-182	-7.788E-02		2.408E-01	3.735E-01	3.098E-02	-0.209
RE-183	2.228E-02		1.107E-01	1.799E-01	1.558E-02	0.124
RE-184	5.954E-03		2.275E-01	3.620E-01	3.296E-02	0.016
OS-185	-8.850E-04		5.248E-02	8.398E-02	7.171E-03	-0.011
RE-188	-9.064E-04		1.676E-01	2.738E-01	2.543E-02	-0.003
W-188	-1.190E+00		7.648E+00	1.127E+01	1.035E+00	-0.106
IR-192	2.272E-02		3.616E-02	6.314E-02	5.777E-03	0.360
AU-195	1.913E-01		1.886E-01	3.266E-01	3.364E-02	0.586
TL-200	2.905E-04		2.300E-04	Half-Life too short		
TL-201	3.473E+00		6.642E+00	1.110E+01	9.268E-01	0.313
TL-202	5.126E-02		7.386E-02	1.284E-01	1.119E-02	0.399
HG-203	-2.507E-02		4.011E-02	6.542E-02	6.156E-03	-0.383
BI-207	2.317E-02		6.594E-02	1.119E-01	9.591E-03	0.207
TL-207	-1.037E-01		7.138E-01	1.189E+00	2.134E-01	-0.087
PO-209	-4.091E+00		8.937E+00	1.400E+01	1.224E+00	-0.292
PB-211	-7.298E-01		1.356E+00	1.758E+00	1.101E+00	-0.415
BI-212	1.481E+00	+	6.964E-01	8.941E-01	8.972E-02	1.656
PO-215	-1.037E-01		7.138E-01	1.189E+00	2.134E-01	-0.087
RN-219	7.714E-02		4.775E-01	8.006E-01	1.197E-01	0.096
RN-220	-1.888E+01		2.961E+01	4.491E+01	4.009E+00	-0.420
RA-223	-1.037E-01		7.138E-01	1.189E+00	2.134E-01	-0.087
AC-227	-9.497E-02		3.889E-01	6.058E-01	9.471E-02	-0.157
TH-227	-9.497E-02		3.890E-01	6.058E-01	1.109E-01	-0.157
TH-229	-3.454E-01		5.195E-01	8.054E-01	6.965E-02	-0.429
PA-231	-2.230E-01		1.419E+00	2.379E+00	3.691E-01	-0.094
TH-231	-1.037E-01		7.138E-01	1.189E+00	2.134E-01	-0.087
U-231	-1.736E-01		9.342E-01	1.387E+00	1.406E-01	-0.125
PA-233	2.701E-02		6.640E-02	1.146E-01	1.075E-02	0.236
PA-234	8.844E-02		3.695E-01	6.241E-01	1.175E-01	0.142
PA-234M	1.830E+00		6.016E+00	1.012E+01	1.015E+00	0.181
U-235	7.057E-02		2.143E-01	3.512E-01	6.439E-02	0.201
NP-236	-1.269E-02		7.761E-02	1.255E-01	1.108E-02	-0.101
NP-239	-3.353E-02		1.777E-01	2.917E-01	3.318E-02	-0.115
AM-241	-9.515E-03		6.495E-02	9.899E-02	1.051E-02	-0.096

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	3.692E-02		8.127E-02	1.380E-01	1.459E-02	0.268
AM-246	3.804E-02		1.673E-01	2.802E-01	2.391E-02	0.136
CM-247	1.692E-02		4.232E-02	7.208E-02	6.123E-03	0.235
CF-249	-1.552E-02		4.491E-02	7.281E-02	6.169E-03	-0.213
CF-251	-3.013E-02		1.345E-01	2.156E-01	1.824E-02	-0.140

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G244852003           *
* Acquisition date  : 26-JAN-2010 13:10:09 Detector SN#     :               *
* Detector ID       : GAM17                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:09.46      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 11-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G244852003           Analyst initials: MXR1           *
* Batch Number      : 942718               Sample Quantity : 1.3076E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  6-JAN-2010 11:41:36 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.014E+01	2.554E+00	3.259E-01	1.303E+00
AS-73	2.868E-01	3.288E-01	1.809E-01	1.677E-01
CD-109	4.117E+00	9.012E-01	4.900E-01	4.598E-01
SN-126	4.047E-01	8.859E-02	4.810E-02	4.520E-02
TL-208	5.177E-01	1.122E-01	3.124E-02	5.726E-02
BI-210	9.714E-01	9.259E-01	4.218E-01	4.724E-01
PB-210	9.714E-01	9.259E-01	4.218E-01	4.724E-01
PO-210	9.714E-01	9.251E-01	4.218E-01	4.720E-01
BI-211	4.277E+00	6.437E-01	1.761E-01	3.284E-01
PB-212	1.553E+00	1.912E-01	4.597E-02	9.754E-02
PO-212	1.553E+00	1.912E-01	4.597E-02	9.754E-02
BI-214	1.319E+00	2.184E-01	6.750E-02	1.114E-01
PB-214	1.488E+00	2.365E-01	6.140E-02	1.207E-01
PO-214	1.488E+00	2.365E-01	6.140E-02	1.207E-01
PO-216	1.553E+00	1.912E-01	4.597E-02	9.754E-02
PO-218	1.488E+00	2.365E-01	6.140E-02	1.207E-01
RA-224	4.725E+00	1.324E+00	5.236E-01	6.756E-01
RA-226	1.319E+00	2.184E-01	6.750E-02	1.114E-01
AC-228	1.758E+00	3.898E-01	1.368E-01	1.989E-01
RA-228	1.758E+00	3.898E-01	1.368E-01	1.989E-01
TH-228	1.577E+00	1.941E-01	4.667E-02	9.902E-02
TH-230	1.319E+00	2.184E-01	6.750E-02	1.114E-01
TH-232	1.758E+00	3.898E-01	1.368E-01	1.989E-01
TH-234	2.172E+00	1.151E+00	5.048E-01	5.873E-01
U-234	1.319E+00	2.184E-01	6.750E-02	1.114E-01
NP-237	1.188E+00	3.542E-01	1.408E-01	1.807E-01
U-238	2.172E+00	1.151E+00	5.048E-01	5.873E-01
AM-243	3.856E-01	6.152E-02	2.858E-02	3.139E-02
ANH-511	1.441E-01	9.106E-02	2.602E-02	4.646E-02

---- Non-Identified Nuclides ----

Key-Line Activity	K.L Act error	DLC	TPU

Nuclide	(pCi/GRAM)		(pCi/GRAM)		
BE-7	3.029E-02	3.417E-01	2.938E-01	1.743E-01	NOT IDENT.
NA-22	-2.298E-02	5.231E-02	4.040E-02	2.669E-02	NOT IDENT.
NA-24	1.394E+05	9.178E+05	0.000E+00	4.682E+05	SHORT HLIF
AL-26	-8.474E-03	3.724E-02	2.926E-02	1.900E-02	NOT IDENT.
TI-44	4.027E-01	5.293E-02	3.130E-02	2.701E-02	FAIL ABUN
SC-46	1.206E-02	4.528E-02	3.973E-02	2.310E-02	FAIL ABUN
V-48	4.625E-02	7.611E-02	6.900E-02	3.883E-02	NOT IDENT.
CR-51	-3.052E-01	3.948E-01	3.307E-01	2.014E-01	NOT IDENT.
MN-52	1.841E-01	2.205E-01	2.157E-01	1.125E-01	FAIL ABUN
MN-54	5.515E-02	4.483E-02	4.251E-02	2.287E-02	NOT IDENT.
CO-56	1.059E-02	4.830E-02	4.227E-02	2.465E-02	NOT IDENT.
CO-57	-1.198E-02	2.326E-02	1.993E-02	1.187E-02	NOT IDENT.
CO-58	-2.474E-02	4.465E-02	3.610E-02	2.278E-02	NOT IDENT.
FE-59	-6.137E-02	1.103E-01	8.579E-02	5.627E-02	NOT IDENT.
CO-60	-5.452E-02	4.791E-02	3.438E-02	2.444E-02	NOT IDENT.
ZN-65	1.657E-02	1.113E-01	8.231E-02	5.679E-02	NOT IDENT.
GE-68	2.142E-01	1.464E+00	1.247E+00	7.471E-01	NOT IDENT.
AS-74	-3.301E-02	1.154E-01	8.982E-02	5.888E-02	NOT IDENT.
SE-75	7.223E-03	4.825E-02	3.860E-02	2.462E-02	NOT IDENT.
BR-77	3.613E+00	1.154E+01	1.004E+01	5.887E+00	FAIL ABUN
SR-82	-4.992E-01	4.741E-01	3.673E-01	2.419E-01	NOT IDENT.
RB-83	1.766E-02	7.717E-02	6.669E-02	3.937E-02	NOT IDENT.
RB-84	-2.984E-02	8.072E-02	6.599E-02	4.119E-02	NOT IDENT.
KR-85	5.033E+00	7.573E+00	6.765E+00	3.864E+00	NOT IDENT.
SR-85	2.578E-02	3.880E-02	3.466E-02	1.980E-02	NOT IDENT.
RB-86	-1.809E-01	9.448E-01	7.726E-01	4.820E-01	NOT IDENT.
Y-88	-1.987E-02	3.426E-02	2.325E-02	1.748E-02	NOT IDENT.
ZR-88	-1.186E-02	3.294E-02	2.783E-02	1.681E-02	NOT IDENT.
Y-91	1.195E+01	2.351E+01	2.050E+01	1.199E+01	NOT IDENT.
NB-94	-4.533E-04	4.022E-02	3.502E-02	2.052E-02	NOT IDENT.
NB-95	2.101E-02	4.640E-02	4.176E-02	2.367E-02	NOT IDENT.
NB-95M	4.742E-02	1.364E-01	1.046E-01	6.959E-02	NOT IDENT.
ZR-95	-6.266E-05	8.257E-02	7.148E-02	4.213E-02	NOT IDENT.
NB-97	-7.437E+04	1.065E+05	0.000E+00	5.432E+04	SHORT HLIF
ZR-97	3.529E+06	2.223E+06	0.000E+00	1.134E+06	SHORT HLIF
MO-99	-7.650E-01	1.364E+01	1.177E+01	6.959E+00	NOT IDENT.
TC-99M	-7.889E+15	3.111E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.444E-02	3.405E-02	2.782E-02	1.737E-02	NOT IDENT.
RH-102	-1.200E-03	3.034E-02	2.582E-02	1.548E-02	NOT IDENT.
RU-103	-6.860E-03	4.747E-02	3.988E-02	2.422E-02	FAIL ABUN
RH-106	-2.317E-01	3.872E-01	3.026E-01	1.975E-01	FAIL ABUN
RU-106	-2.317E-01	3.865E-01	3.026E-01	1.972E-01	FAIL ABUN
AG-108M	-2.800E-02	3.450E-02	2.760E-02	1.760E-02	NOT IDENT.
AG-110M	-2.276E-02	4.005E-02	3.113E-02	2.043E-02	NOT IDENT.
IN-111	8.284E-01	1.036E+00	8.279E-01	5.286E-01	NOT IDENT.
IN-113M	2.014E-02	4.649E-02	4.157E-02	2.372E-02	NOT IDENT.
SN-113	2.014E-02	4.649E-02	4.157E-02	2.372E-02	NOT IDENT.
IN-114M	1.086E-01	2.069E-01	1.630E-01	1.056E-01	NOT IDENT.
CD-115	1.544E+01	1.160E+01	1.090E+01	5.918E+00	NOT IDENT.
SN-117M	1.605E-03	5.181E-02	4.487E-02	2.643E-02	NOT IDENT.
SB-122	9.995E-01	2.297E+00	2.007E+00	1.172E+00	NOT IDENT.
I-123	-3.248E+06	5.080E+06	0.000E+00	2.592E+06	SHORT HLIF
TE-123M	-1.749E-02	2.735E-02	2.283E-02	1.395E-02	NOT IDENT.
I-124	-1.041E-01	8.452E-01	6.067E-01	4.312E-01	FAIL ABUN
SB-124	6.570E-03	8.544E-02	7.274E-02	4.359E-02	FAIL ABUN
SB-125	-4.073E-03	9.528E-02	8.180E-02	4.861E-02	FAIL ABUN
TE-125M	5.111E+00	8.012E+00	7.276E+00	4.088E+00	NOT IDENT.
I-126	1.427E-01	2.144E-01	1.888E-01	1.094E-01	NOT IDENT.
SB-126	1.021E-01	1.742E-01	1.423E-01	8.888E-02	FAIL ABUN
SB-127	-1.448E+00	1.757E+00	1.324E+00	8.964E-01	NOT IDENT.
XE-127	-7.136E-03	4.536E-02	3.818E-02	2.314E-02	NOT IDENT.
I-131	-8.559E-02	1.222E-01	1.012E-01	6.232E-02	NOT IDENT.
TE-132	-3.107E-01	6.851E-01	5.593E-01	3.496E-01	NOT IDENT.
BA-133	-1.819E-02	4.898E-02	3.628E-02	2.499E-02	FAIL ABUN
I-133	-1.374E+03	6.617E+03	0.000E+00	3.376E+03	SHORT HLIF
CS-134	7.776E-02	5.828E-02	5.547E-02	2.974E-02	NOT IDENT.
CS-135	7.241E-02	1.968E-01	1.495E-01	1.004E-01	NOT IDENT.
I-135	3.229E+15	5.054E+15	0.000E+00	2.579E+15	SHORT HLIF
CS-136	-3.133E-02	1.269E-01	1.033E-01	6.474E-02	FAIL ABUN
BA-137M	-2.087E-02	4.533E-02	3.572E-02	2.313E-02	NOT IDENT.
CS-137	-2.206E-02	4.792E-02	3.776E-02	2.445E-02	NOT IDENT.
CE-139	-1.285E-02	2.845E-02	2.392E-02	1.452E-02	NOT IDENT.
BA-140	4.813E-03	2.801E-01	2.370E-01	1.429E-01	NOT IDENT.
LA-140	-1.131E-01	1.030E-01	6.786E-02	5.256E-02	NOT IDENT.
CE-141	-8.365E-03	6.194E-02	5.354E-02	3.160E-02	NOT IDENT.
CE-143	6.479E+02	2.150E+02	0.000E+00	1.097E+02	SHORT HLIF

CE-144	-7.681E-02	2.021E-01	1.647E-01	1.031E-01	NOT IDENT.
PM-144	4.822E-02	4.331E-02	4.077E-02	2.210E-02	NOT IDENT.
PR-144	3.268E+00	2.935E+00	2.762E+00	1.497E+00	NOT IDENT.
PM-146	1.436E-02	5.092E-02	4.454E-02	2.598E-02	NOT IDENT.
ND-147	-2.706E-01	6.338E-01	5.137E-01	3.234E-01	FAIL ABUN
PM-149	-2.433E+01	8.189E+01	7.138E+01	4.178E+01	NOT IDENT.
EU-152	-5.362E-02	1.001E-01	8.456E-02	5.108E-02	FAIL ABUN
GD-153	1.453E-02	7.146E-02	5.784E-02	3.646E-02	FAIL ABUN
EU-154	-7.797E-02	1.472E-01	1.120E-01	7.510E-02	NOT IDENT.
EU-155	-9.850E-04	9.064E-02	8.046E-02	4.625E-02	FAIL ABUN
TB-160	3.624E-02	1.592E-01	1.393E-01	8.122E-02	FAIL ABUN
HO-166M	5.637E-02	6.635E-02	6.203E-02	3.385E-02	FAIL ABUN
TM-171	-1.491E+00	1.550E+01	1.263E+01	7.910E+00	FAIL ABUN
LU-176	2.677E-02	2.509E-02	2.349E-02	1.280E-02	FAIL ABUN
LU-177	2.011E+00	1.568E+00	1.020E+00	8.000E-01	FAIL ABUN
LU-177M	3.024E-02	2.178E-01	1.677E-01	1.111E-01	FAIL ABUN
HF-181	-8.089E-03	4.395E-02	3.685E-02	2.242E-02	NOT IDENT.
W-181	-4.228E-02	1.940E-01	1.574E-01	9.899E-02	NOT IDENT.
TA-182	-7.788E-02	2.360E-01	1.876E-01	1.204E-01	NOT IDENT.
RE-183	2.228E-02	1.084E-01	9.341E-02	5.533E-02	FAIL ABUN
RE-184	5.954E-03	2.230E-01	1.866E-01	1.138E-01	NOT IDENT.
OS-185	-8.850E-04	5.143E-02	4.264E-02	2.624E-02	NOT IDENT.
RE-188	-9.064E-04	1.643E-01	1.422E-01	8.381E-02	NOT IDENT.
W-188	-1.190E+00	7.495E+00	5.795E+00	3.824E+00	FAIL ABUN
IR-192	2.272E-02	3.544E-02	3.243E-02	1.808E-02	FAIL ABUN
AU-195	1.913E-01	1.848E-01	1.709E-01	9.429E-02	FAIL ABUN
TL-200	2.905E+02	4.509E+02	0.000E+00	2.300E+02	SHORT HLIF
TL-201	3.473E+00	6.509E+00	5.760E+00	3.321E+00	NOT IDENT.
TL-202	5.126E-02	7.238E-02	6.561E-02	3.693E-02	NOT IDENT.
HG-203	-2.507E-02	3.930E-02	3.367E-02	2.005E-02	NOT IDENT.
BI-207	2.317E-02	6.462E-02	5.633E-02	3.297E-02	FAIL ABUN
TL-207	-1.037E-01	6.995E-01	6.106E-01	3.569E-01	FAIL ABUN
PO-209	-4.091E+00	8.758E+00	7.067E+00	4.469E+00	NOT IDENT.
PB-211	-7.298E-01	1.329E+00	8.994E-01	6.782E-01	NOT IDENT.
BI-212	1.481E+00	6.825E-01	4.530E-01	3.482E-01	FAIL ABUN
PO-215	-1.037E-01	6.995E-01	6.106E-01	3.569E-01	FAIL ABUN
RN-219	7.714E-02	4.680E-01	4.097E-01	2.388E-01	FAIL ABUN
RN-220	-1.888E+01	2.902E+01	2.286E+01	1.481E+01	NOT IDENT.
RA-223	-1.037E-01	6.995E-01	6.106E-01	3.569E-01	FAIL ABUN
AC-227	-9.497E-02	3.811E-01	3.122E-01	1.945E-01	FAIL ABUN
TH-227	-9.497E-02	3.812E-01	3.122E-01	1.945E-01	FAIL ABUN
TH-229	-3.454E-01	5.091E-01	4.170E-01	2.597E-01	FAIL ABUN
PA-231	-2.230E-01	1.390E+00	1.224E+00	7.094E-01	NOT IDENT.
TH-231	-1.037E-01	6.995E-01	6.106E-01	3.569E-01	FAIL ABUN
U-231	-1.736E-01	9.155E-01	7.259E-01	4.671E-01	FAIL ABUN
PA-233	2.701E-02	6.507E-02	5.890E-02	3.320E-02	FAIL ABUN
PA-234	8.844E-02	3.621E-01	3.148E-01	1.847E-01	FAIL ABUN
PA-234M	1.830E+00	5.895E+00	5.098E+00	3.008E+00	NOT IDENT.
U-235	7.057E-02	2.100E-01	1.827E-01	1.071E-01	FAIL ABUN
NP-236	-1.269E-02	7.606E-02	6.515E-02	3.881E-02	NOT IDENT.
NP-239	-3.353E-02	1.741E-01	1.522E-01	8.883E-02	FAIL ABUN
AM-241	-9.515E-03	6.365E-02	5.221E-02	3.248E-02	NOT IDENT.
CM-243	3.692E-02	7.965E-02	7.216E-02	4.064E-02	FAIL ABUN
AM-246	3.804E-02	1.639E-01	1.411E-01	8.363E-02	NOT IDENT.
CM-247	1.692E-02	4.147E-02	3.688E-02	2.116E-02	NOT IDENT.
CF-249	-1.552E-02	4.401E-02	3.727E-02	2.245E-02	NOT IDENT.
CF-251	-3.013E-02	1.318E-01	1.118E-01	6.723E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	232.1977
46.50	232.1977
46.50	232.1977
48.70	197.7032
49.72	214.2561
51.35	202.5977
52.39	205.7327
52.97	233.2027
53.15	233.3188
53.44	233.5069
54.07	233.9125
56.28	308.0493
56.28	308.0511
57.37	0.0000
57.53	320.6660
57.53	320.6678
57.60	320.7249
57.98	301.7058
57.98	301.7058
59.32	328.6369
59.32	328.6369
59.40	328.7047
59.54	328.8239
59.72	328.9760
60.01	348.6634
61.10	330.1378
61.14	330.1707
61.30	323.8024
63.00	341.2928
63.29	341.5381
63.29	341.5381
63.58	341.7833
64.28	352.4160
65.12	368.8934
65.20	368.9647
65.20	368.9647
66.05	363.1449
66.72	353.1854
66.83	357.2340
66.91	357.3023
67.20	374.7022
67.20	374.7022
67.75	379.1530
67.85	373.1665
68.90	362.0782
68.90	362.0782
69.30	370.1969
69.67	390.1592
70.82	377.8895
70.82	377.8895
70.83	377.8982
72.80	368.9062
72.87	368.9630
72.87	368.9630
74.67	333.7664
74.81	333.8689
74.81	333.8689
74.81	333.8689
74.81	333.8689
74.81	333.8689
74.81	333.8689
74.81	333.8689
74.97	333.9884
75.28	334.2160
75.70	334.5272
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77.11	335.5592

77.11	335.5592
77.11	335.5592
77.11	335.5592
77.11	335.5592
77.11	335.5592
78.38	336.4813
79.62	265.9201
79.80	266.0218
79.80	266.0218
80.11	247.1827
80.18	247.2202
80.30	247.2827
80.30	247.2827
80.57	231.1093
81.00	231.3194
81.07	247.6840
81.07	247.6840
81.07	247.6840
81.07	247.6840
82.60	248.4768
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83.78	306.5645
83.78	306.5645
83.78	306.5645
83.78	306.5645
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84.90	286.2337
85.43	286.5425
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86.50	287.1634
86.54	287.1857
86.59	287.2160
86.72	287.2908
86.79	287.3290
86.94	287.4166
87.30	287.6251
87.30	287.6251
87.30	287.6251
87.30	287.6251
87.30	287.6251
87.30	287.6251
87.30	287.6251
87.57	287.7795
87.88	287.9579
88.03	288.0438
88.36	288.2317
88.47	288.2953
89.95	289.1375
91.11	289.7918
92.29	290.4541
92.38	290.5050
92.38	290.5050
93.35	291.0463
94.00	291.4061
94.67	243.3002
94.67	243.3029
94.90	243.4091
94.90	243.4091
94.90	243.4091
94.90	243.4091
95.87	257.8684
95.87	257.8684
96.73	255.4779
97.43	251.5931
98.44	212.9157
98.44	212.9157
98.88	222.6721
99.55	239.8783
99.55	239.8783
99.86	253.1918
100.00	253.2561
100.10	250.4790
103.18	215.8907
103.76	212.3219
105.00	228.9382
105.31	229.0633
108.00	222.5012
109.28	214.3795

111.00	245.7253
111.00	245.7253
111.76	236.4307
112.95	223.4225
115.19	246.4904
116.30	214.0162
117.00	229.7746
117.00	229.7746
117.66	224.1995
121.11	198.1234
121.62	210.0069
121.78	210.0604
122.06	222.8604
122.32	222.9520
122.32	222.9520
122.32	222.9520
122.32	222.9520
123.07	192.6720
127.23	209.8918
129.76	204.7722
131.20	205.2207
133.02	219.2035
133.54	220.8663
135.34	196.5190
136.00	198.7085
136.25	198.7814
136.48	206.8421
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140.51	0.0000
142.18	227.7036
142.65	231.8881
143.76	216.0986
144.24	208.1605
144.24	208.1605
144.24	208.1605
144.24	208.1605
145.22	221.6043
145.44	231.7931
147.16	234.3814
152.43	210.5389
152.70	213.6837
153.22	215.8809
154.21	201.8276
154.21	201.8276
154.21	201.8276
154.21	201.8276
155.03	202.0500
156.02	209.5076
158.56	187.5468
159.00	0.0000
159.00	205.1843
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161.27	193.3859
162.32	177.0830
162.64	161.6161
163.35	160.7283
163.89	189.8953
165.85	193.4965
167.43	168.8687
171.28	188.5474
171.86	208.5994
172.10	196.0795
176.55	210.8683
176.60	210.8826
181.06	198.7743
184.41	185.2042
185.71	198.2816
186.00	198.3497
190.27	183.2670
192.34	196.5988
193.63	193.6633
197.04	192.2557
198.01	182.7361
198.60	167.7085
200.40	170.2175
201.83	187.8637
202.84	169.5935
205.31	170.0561

208.36	165.7016
208.81	157.5762
209.75	161.0235
209.75	161.0235
210.97	171.1074
215.65	171.9644
216.55	159.9921
218.09	148.0947
222.10	187.5617
223.80	135.6366
226.40	154.9511
227.00	170.6620
227.08	187.4089
227.20	175.1605
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228.18	159.6996
228.18	159.6996
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236.00	157.0212
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238.63	143.3233
238.63	143.3233
238.63	143.3233
239.00	143.3750
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241.98	143.7935
241.98	143.7935
241.98	143.7935
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247.94	124.1263
248.90	107.1432
249.79	115.2196
252.40	113.2180
252.85	113.2663
252.85	113.2663
254.15	0.0000
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256.20	126.2476
260.50	115.2303
260.90	125.6476
262.80	128.1766
264.65	124.9233
268.24	147.9614
268.79	139.3262
269.46	130.6961
269.46	130.6961
269.46	130.6961
269.46	130.6961
271.23	125.6682
273.65	143.4324
276.40	118.0655
277.35	118.4566
277.60	122.8717
277.60	122.8717
278.00	128.1822
278.60	133.5195
279.20	134.4703
279.53	134.5077
280.46	129.3383
281.68	105.6958
283.67	104.1125
284.30	105.0529
285.00	112.1831
285.90	106.0822
286.10	106.9846
286.10	106.9846
287.40	98.2530
288.45	0.0000
290.67	103.6757
290.80	103.6864
291.72	105.1898
293.26	0.0000
293.70	100.5613
295.21	100.6889
295.21	100.6889

295.21	100.6889
295.96	100.7527
296.50	100.7975
297.23	100.8596
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299.80	101.0751
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300.09	103.0693
300.09	103.0693
300.12	103.0711
301.29	101.7383
302.84	116.2160
303.76	129.2278
303.91	129.2432
304.40	133.6058
304.40	133.6058
304.84	120.9588
306.84	95.3670
308.46	117.1123
311.98	102.9924
316.51	99.7412
318.01	104.3995
319.02	107.2094
319.41	109.9683
320.08	128.2115
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323.87	121.3004
323.87	121.3004
323.87	121.3004
325.23	132.3864
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334.20	97.0841
334.20	97.0841
334.30	97.0922
338.28	105.1338
338.28	105.1338
338.28	105.1338
338.28	105.1338
338.32	105.1372
338.32	105.1372
338.32	105.1372
340.50	106.4197
340.57	106.4250
344.27	108.3896
345.85	112.5373
350.59	0.0000
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351.92	94.1003
351.92	94.1003
351.92	94.1003
355.39	0.0000
356.01	94.1955
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366.43	75.3235
367.43	76.3194
367.94	0.0000
369.80	96.2678
374.96	71.9910
383.85	87.6875
387.95	101.3159
388.63	96.5816
391.69	79.5349
391.69	79.5349
392.90	93.9865
398.62	103.0130
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401.10	98.3627
401.81	96.4798
402.60	90.7383
404.84	114.4615
410.95	83.8622
411.60	82.3441
413.65	85.5669
414.70	75.6166
415.30	83.7114

415.76	85.6837
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423.70	69.4854
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427.89	72.6145
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433.93	81.7576
439.47	62.2723
439.56	62.2752
439.89	65.2548
443.98	76.3232
444.90	70.4161
445.03	70.4215
445.03	70.4215
445.03	70.4215
445.03	70.4215
453.90	80.7763
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468.07	62.7580
473.00	57.4940
475.06	62.6121
475.35	59.5933
476.78	55.5992
477.59	63.7162
477.96	53.6138
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484.57	58.8974
487.03	68.1328
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510.53	0.0000
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511.00	61.8434
511.85	61.8727
511.85	61.8727
513.99	61.9450
513.99	61.9450
520.41	60.0922
520.65	60.0992
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529.64	60.3931
529.87	0.0000
531.02	66.6895
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543.00	61.8719
546.56	0.0000
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552.65	57.9692
555.20	52.7695
563.23	50.8682
563.90	56.1863
568.70	58.4492
569.32	60.5938
569.50	55.2833
569.67	51.0352
573.80	61.7967
574.00	60.7365
574.64	58.6255
578.91	64.9470
579.30	0.0000
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592.07	60.2109
593.00	60.2383
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600.56	61.5418
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602.71	60.5254
602.71	60.5254
603.60	57.0910
604.41	50.1907
604.70	50.1978
609.31	63.9713

609.31	63.9713
609.31	63.9713
609.31	63.9713
610.33	60.7476
612.46	60.8108
614.37	66.0825
618.01	46.8174
621.84	65.4456
621.84	65.4456
631.29	56.9718
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633.10	48.2485
634.78	53.7732
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636.97	54.9271
645.85	55.1529
646.12	55.1590
656.30	45.4406
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657.90	0.0000
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661.65	58.8826
664.57	0.0000
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666.33	48.9871
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677.61	53.7085
685.20	69.6062
692.80	75.6943
695.00	63.1401
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696.49	54.1538
697.00	59.5837
697.49	63.2068
698.33	74.9736
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699.00	68.6690
702.63	61.5370
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713.82	53.6488
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722.78	50.2009
722.89	50.2036
722.95	50.2036
723.30	50.2117
724.18	41.0977
727.18	46.6359
733.00	59.5823
735.90	49.5584
739.58	52.3910
742.81	41.4163
744.21	49.7285
747.13	52.5538
751.79	49.8828
752.31	44.3496
753.82	41.6030
755.35	49.0289
756.15	49.0457
756.87	56.4652
763.93	65.9090
765.79	44.5910
766.42	52.0365
766.84	57.6209
776.49	65.3071
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778.57	56.0229
778.89	49.4934
783.80	44.9109
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792.07	58.1977

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798.80	66.8208
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805.60	38.6877
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810.76	46.3287
815.85	35.9979
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880.51	31.0461
881.50	40.7624
883.24	44.6726
884.67	38.8652
889.25	35.0358
896.60	42.9333
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899.00	35.1571
903.28	45.2349
911.07	44.1321
911.07	44.1321
911.07	44.1321
919.63	42.2956
920.93	52.1551
925.00	37.4471
925.24	37.2308
926.50	42.2555
935.52	28.0221
937.48	34.6385
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949.00	34.7736
962.29	43.9098
964.01	43.9355
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968.20	43.9957
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969.11	30.0066
969.11	30.0066
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983.50	25.1239
989.30	44.3019
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1001.68	34.3710
1004.76	36.4289
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1037.82	27.6091
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1038.76	0.0000
1045.16	36.8965
1046.59	28.7096
1048.07	36.9299

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1050.47	27.7185
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1076.63	37.2551
1077.35	33.1234
1078.86	31.0664
1085.78	37.3588
1099.22	41.6758
1112.02	40.6738
1112.84	44.8347
1115.52	31.4092
1120.29	32.5016
1120.29	32.5016
1120.29	32.5016
1120.29	32.5016
1120.51	32.5031
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1129.67	31.5396
1131.51	0.0000
1147.95	0.0000
1167.94	39.3288
1173.22	30.8720
1175.09	39.4083
1177.93	34.1109
1189.05	33.1479
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1205.75	0.0000
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1230.97	48.6760
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1236.41	0.0000
1238.25	42.2697
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1260.41	0.0000
1271.85	32.8081
1274.45	35.0187
1274.54	33.9259
1291.56	24.1839
1298.22	0.0000
1312.09	31.3119
1325.50	24.9510
1325.50	24.9510
1332.49	34.2524
1333.61	23.1506
1360.21	20.5095
1362.66	0.0000
1365.15	26.1349
1368.21	19.2154
1368.53	0.0000
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1384.27	17.3924
1394.10	20.6814
1395.20	18.8070
1407.95	15.0918
1434.06	7.5938
1436.60	16.1464
1457.56	0.0000
1460.81	16.3756
1489.15	19.2318
1509.49	10.6267
1596.49	21.6706
1620.62	11.8823
1678.03	0.0000
1691.02	9.0454
1691.02	9.0454
1706.46	0.0000
1750.46	0.0000
1764.49	3.4979
1764.49	3.4979
1764.49	3.4979
1764.49	3.4979
1770.23	20.4281
1771.40	10.2165
1791.20	0.0000
1808.65	10.2917

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G244852003

Total Uranium Activity	6.4955E+00	ug/g
Total Uranium Counting Unc.	3.4258E+00	ug/g
Total Uranium Tpu	1.7479E-06	ug/g
Total Uranium Mda	1.5041E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 942718                    SAMPLE ID   : G244852003      *
*   ANALYST       : MXR1                      DETECTOR    : GAM17           *
*   SAMPLE DATE   : 11-JAN-2010 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 26-JAN-2010 13:10:09.53    SAMPLE ALQT:  130.760 GRAM    *
*                                                                           *
*****************************************************************************


        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.852E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.419E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 4.019E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.947E+00
```

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:20:45.23

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852004.CNF;1
Sample date       : 11-JAN-2010 12:00:00 Acquisition date : 26-JAN-2010 13:20:20
Sample ID         : G244852004           Sample quantity  : 1.37820E+02 GRAM
Detector name     : GAM10                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.03  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 942718               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	2	74.73*	253	400	0.99	149.59	145	14	3.51E-02	14.1	2.82E+00
2	2	76.95	539	401	1.19	154.04	145	14	7.48E-02	7.9	
3	3	87.15*	260	369	1.33	174.41	165	26	3.61E-02	14.5	5.64E+00
4	3	89.61	168	376	1.27	179.33	165	26	2.34E-02	21.5	
5	3	92.50*	292	382	1.30	185.10	165	26	4.06E-02	13.5	
6	0	129.03	100	380	1.49	258.10	254	10	1.39E-02	37.6	
7	0	186.00*	237	366	1.44	371.94	367	10	3.29E-02	17.0	
8	0	209.39	121	295	1.41	418.70	413	9	1.67E-02	27.3	
9	4	238.65*	1291	191	1.14	477.17	471	16	1.79E-01	3.3	2.30E+00
10	4	241.63	291	175	1.62	483.13	471	16	4.04E-02	10.7	
11	0	270.24	115	220	1.24	540.30	536	9	1.60E-02	24.9	
12	0	295.15*	390	236	1.17	590.09	583	12	5.42E-02	9.4	
13	0	299.98	42	187	1.15	599.73	596	8	5.79E-03	58.8	
14	0	328.54	93	176	0.66	656.82	652	11	1.30E-02	29.7	
15	0	338.43	335	186	1.19	676.58	670	14	4.65E-02	10.2	
16	0	352.06*	641	154	1.28	703.82	699	11	8.91E-02	5.6	
17	0	462.75	63	113	1.34	925.06	920	11	8.71E-03	35.2	
18	0	511.10*	84	128	1.51	1021.71	1015	16	1.16E-02	36.5	
19	0	583.59*	381	120	1.42	1166.62	1159	14	5.30E-02	8.1	
20	0	609.81*	450	114	1.32	1219.04	1212	13	6.25E-02	6.9	
21	0	662.08	224	75	1.31	1323.53	1319	11	3.10E-02	10.0	
22	0	727.68	135	45	1.58	1454.70	1448	13	1.87E-02	13.4	
23	0	795.24	108	58	1.59	1589.78	1581	18	1.51E-02	19.1	
24	0	861.78	38	63	1.20	1722.81	1716	11	5.33E-03	43.8	
25	0	911.88*	219	72	1.73	1823.01	1814	19	3.04E-02	11.6	
26	4	965.08	72	31	2.56	1929.38	1923	23	1.00E-02	20.2	5.16E-01
27	4	969.56*	191	26	1.96	1938.34	1923	23	2.65E-02	9.5	
28	0	1121.35*	91	42	1.01	2241.91	2235	13	1.26E-02	19.1	
29	0	1239.53	61	49	0.97	2478.27	2473	14	8.47E-03	27.5	
30	0	1461.90*	877	42	2.16	2923.11	2916	17	1.22E-01	3.8	
31	0	1590.26	15	21	1.04	3179.93	3173	11	2.04E-03	67.0	
32	0	1731.84	10	10	0.80	3463.22	3458	9	1.42E-03	69.2	
33	0	1766.11*	81	16	1.52	3531.79	3523	15	1.12E-02	16.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 26-JAN-2010 15:20:48

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852004.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 11-JAN-2010 12:00:00 Acquisition date : 26-JAN-2010 13:20:20
Sample ID : G244852004 Sample quantity : 137.82 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA10 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.03 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.023E+01	2.337E+00	5.243E-01	4.516E-02	38.595
CD-109	+	88.03	*	3.695E+00	1.151E+00	1.166E+00	1.322E-01	3.168
SN-126		64.28		8.620E-01	6.316E-01	1.072E+00	1.834E-01	0.804
	+	86.94		1.510E+00	7.710E-01	4.850E-01	2.037E-01	3.114
	+	87.57	*	3.632E-01	1.132E-01	1.155E-01	1.307E-02	3.146
BA-137M	+	661.65	*	2.877E-01	5.948E-02	5.290E-02	2.610E-03	5.440
CS-137	+	661.65	*	3.042E-01	6.290E-02	5.592E-02	2.775E-03	5.440
TL-208		277.35		8.721E-02	3.582E-01	5.969E-01	6.510E-02	0.146
	+	510.84		3.606E-01	2.661E-01	1.906E-01	2.003E-02	1.892
	+	583.14	*	4.699E-01	8.223E-02	5.338E-02	3.587E-03	8.803
	+	860.37		4.566E-01	4.023E-01	3.993E-01	3.900E-02	1.143
BI-211		72.87		4.197E+00	3.968E+00	6.124E+00	6.735E-01	0.685
	+	351.07	*	3.475E+00	4.628E-01	3.119E-01	2.274E-02	11.139
PB-212	+	74.81		1.659E+00	5.253E-01	6.004E-01	8.644E-02	2.762
	+	77.11		1.958E+00	3.770E-01	3.327E-01	3.638E-02	5.885
	+	87.30		1.680E+00	5.497E-01	5.364E-01	8.093E-02	3.132
	+	238.63	*	1.541E+00	1.560E-01	8.127E-02	6.165E-03	18.967
	+	300.09		7.641E-01	9.006E-01	1.064E+00	9.351E-02	0.718
PO-212	+	74.81		1.659E+00	5.253E-01	6.004E-01	8.644E-02	2.762
	+	77.11		1.958E+00	3.770E-01	3.327E-01	3.638E-02	5.885
	+	87.30		1.680E+00	5.497E-01	5.364E-01	8.093E-02	3.132
		115.19		2.145E+00	3.243E+00	5.415E+00	3.874E-01	0.396
	+	238.63	*	1.541E+00	1.560E-01	8.127E-02	6.165E-03	18.967
	+	300.09		7.641E-01	9.006E-01	1.064E+00	9.351E-02	0.718
BI-214	+	609.31	*	1.048E+00	1.651E-01	9.651E-02	7.344E-03	10.853
	+	1120.29		1.157E+00	4.562E-01	3.585E-01	3.504E-02	3.227
		1764.49		1.394E+00	4.247E-01	8.492E-01	5.671E-02	1.641
PB-214	+	74.81		2.858E+00	8.904E-01	1.035E+00	1.368E-01	2.762
	+	77.11		3.357E+00	6.951E-01	5.704E-01	7.601E-02	5.885
	+	87.30		2.878E+00	9.237E-01	9.189E-01	1.257E-01	3.132
	+	241.98		2.088E+00	4.810E-01	4.376E-01	3.641E-02	4.772
	+	295.21		1.255E+00	2.629E-01	1.927E-01	1.740E-02	6.512
	+	351.92	*	1.209E+00	1.729E-01	1.047E-01	9.393E-03	11.541
PO-214	+	74.81		2.858E+00	8.904E-01	1.035E+00	1.368E-01	2.762

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		3.357E+00	6.951E-01	5.704E-01	7.601E-02	5.885
	+	87.30		2.878E+00	9.237E-01	9.189E-01	1.257E-01	3.132
	+	241.98		2.088E+00	4.810E-01	4.376E-01	3.641E-02	4.772
	+	295.21		1.255E+00	2.629E-01	1.927E-01	1.740E-02	6.512
	+	351.92	*	1.209E+00	1.729E-01	1.047E-01	9.393E-03	11.541
PO-216	+	74.81		1.659E+00	5.253E-01	6.004E-01	8.644E-02	2.762
	+	77.11		1.958E+00	3.770E-01	3.327E-01	3.638E-02	5.885
	+	87.30		1.680E+00	5.497E-01	5.364E-01	8.093E-02	3.132
	+	238.63	*	1.541E+00	1.560E-01	8.127E-02	6.165E-03	18.967
	+	300.09		7.641E-01	9.006E-01	1.064E+00	9.351E-02	0.718
PO-218	+	74.81		2.858E+00	8.904E-01	1.035E+00	1.368E-01	2.762
	+	77.11		3.357E+00	6.951E-01	5.704E-01	7.601E-02	5.885
	+	87.30		2.878E+00	9.237E-01	9.189E-01	1.257E-01	3.132
	+	241.98		2.088E+00	4.810E-01	4.376E-01	3.641E-02	4.772
	+	295.21		1.255E+00	2.629E-01	1.927E-01	1.740E-02	6.512
	+	351.92	*	1.209E+00	1.729E-01	1.047E-01	9.393E-03	11.541
RA-224	+	240.98	*	3.960E+00	8.846E-01	9.247E-01	5.676E-02	4.282
RA-226	+	609.31	*	1.048E+00	1.651E-01	9.651E-02	7.344E-03	10.853
	+	1120.29		1.157E+00	4.562E-01	3.585E-01	3.504E-02	3.227
		1764.49		1.394E+00	4.247E-01	8.492E-01	5.671E-02	1.641
AC-228	+	338.32		2.001E+00	9.149E-01	3.129E-01	1.280E-01	6.396
	+	911.07	*	1.239E+00	3.252E-01	1.848E-01	2.280E-02	6.707
	+	969.11		1.917E+00	5.826E-01	3.169E-01	7.493E-02	6.049
RA-228	+	338.32		2.001E+00	9.149E-01	3.129E-01	1.280E-01	6.396
	+	911.07	*	1.239E+00	3.252E-01	1.848E-01	2.280E-02	6.707
	+	969.11		1.917E+00	5.826E-01	3.169E-01	7.493E-02	6.049
TH-228	+	74.81		1.684E+00	5.099E-01	6.095E-01	6.709E-02	2.762
	+	77.11		1.988E+00	3.827E-01	3.377E-01	3.693E-02	5.885
	+	87.30		1.705E+00	5.313E-01	5.445E-01	6.152E-02	3.132
	+	238.63	*	1.565E+00	1.583E-01	8.250E-02	6.258E-03	18.967
	+	300.09		7.757E-01	1.020E+00	1.080E+00	6.375E-01	0.718
TH-230	+	609.31	*	1.047E+00	1.651E-01	9.651E-02	7.344E-03	10.853
	+	1120.29		1.157E+00	4.562E-01	3.585E-01	3.504E-02	3.227
		1764.49		1.394E+00	4.247E-01	8.492E-01	5.671E-02	1.641
TH-232	+	338.32		2.001E+00	4.302E-01	3.129E-01	2.097E-02	6.396
	+	911.07	*	1.239E+00	3.252E-01	1.848E-01	2.280E-02	6.707
	+	969.11		1.917E+00	5.826E-01	3.169E-01	7.493E-02	6.049
U-234	+	609.31	*	1.047E+00	1.651E-01	9.651E-02	7.344E-03	10.853
	+	1120.29		1.157E+00	4.562E-01	3.585E-01	3.504E-02	3.227
		1764.49		1.394E+00	4.247E-01	8.492E-01	5.671E-02	1.641
NP-237	+	86.50	*	1.067E+00	3.986E-01	3.451E-01	8.110E-02	3.091
		95.87		-4.975E-01	9.887E-01	1.395E+00	3.486E-01	-0.357
AM-243	+	74.67	*	2.689E-01	8.138E-02	9.779E-02	1.071E-02	2.750
	+	86.72		4.000E+01	1.246E+01	1.289E+01	1.452E+00	3.102
		117.66		-3.310E+00	3.561E+00	5.529E+00	3.836E-01	-0.599
		142.18		6.680E+00	1.630E+01	2.668E+01	1.593E+00	0.250
ANH-511	+	511.00	*	7.789E-02	5.710E-02	4.117E-02	2.638E-03	1.892

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	6.181E-02	2.891E-01	4.743E-01	3.527E-02	0.130

Sample ID : G244852004 Acquisition date : 26-JAN-2010 13:20:20

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22		1274.54	*	9.620E-03	3.919E-02	6.688E-02	5.180E-03	0.144
NA-24		1368.53	*	-1.079E-01	3.919E-02	Half-Life too short		
AL-26		1129.67		1.336E+00	1.437E+00	2.584E+00	1.812E-01	0.517
		1808.65	*	1.027E-02	2.170E-02	3.941E-02	2.499E-03	0.261
TI-44		67.85		-1.726E-02	5.195E-02	8.509E-02	9.605E-03	-0.203
	+	78.38	*	3.613E-01	6.957E-02	7.242E-02	7.925E-03	4.989
SC-46		889.25	*	-2.240E-02	3.413E-02	5.173E-02	5.119E-03	-0.433
	+	1120.51		1.980E-01	7.695E-02	1.196E-01	8.594E-03	1.655
V-48		944.10		-5.521E-01	8.594E-01	1.276E+00	1.237E-01	-0.433
		983.50	*	-4.678E-02	6.393E-02	9.495E-02	8.780E-03	-0.493
		1312.09		-1.470E-02	6.798E-02	1.097E-01	9.161E-03	-0.134
CR-51		320.08	*	3.344E-02	3.221E-01	5.367E-01	3.877E-02	0.062
MN-52		744.21		-3.720E-02	2.007E-01	3.268E-01	2.132E-02	-0.114
		848.13		8.911E-01	6.003E+00	9.987E+00	8.852E-01	0.089
		935.52		2.399E-01	2.569E-01	4.502E-01	4.402E-02	0.533
		1246.25		7.798E-01	7.639E+00	1.112E+01	8.102E-01	0.070
		1333.61		1.692E+00	4.262E+00	7.423E+00	6.450E-01	0.228
		1434.06	*	-8.387E-02	2.269E-01	3.542E-01	2.993E-02	-0.237
MN-54		834.83	*	4.608E-02	3.379E-02	6.148E-02	5.252E-03	0.749
CO-56		846.75	*	1.484E-02	3.526E-02	6.010E-02	5.307E-03	0.247
		977.42		1.691E-01	2.959E+00	4.552E+00	4.243E-01	0.037
		1037.82		-1.284E-01	2.807E-01	4.293E-01	3.861E-02	-0.299
		1175.09		1.447E+00	2.026E+00	3.606E+00	2.234E-01	0.401
	+	1238.25		2.209E-01	1.226E-01	1.664E-01	1.241E-02	1.328
		1360.21		1.053E-01	8.350E-01	1.407E+00	1.215E-01	0.075
		1771.40		8.284E-02	1.816E-01	2.948E-01	1.954E-02	0.281
CO-57		122.06	*	-3.148E-03	2.267E-02	3.650E-02	2.407E-03	-0.086
		136.48		-1.634E-02	1.884E-01	3.024E-01	2.115E-02	-0.054
CO-58		810.76	*	-1.807E-02	3.449E-02	5.386E-02	4.310E-03	-0.336
FE-59		142.65		1.511E+00	2.589E+00	4.204E+00	2.505E-01	0.359
		192.34		-1.589E-01	8.971E-01	1.391E+00	1.635E-01	-0.114
		1099.22	*	-1.532E-02	8.218E-02	1.293E-01	1.079E-02	-0.118
		1291.56		4.182E-02	1.098E-01	1.900E-01	1.758E-02	0.220
CO-60		1173.22		-1.950E-02	4.115E-02	6.582E-02	4.059E-03	-0.296
		1332.49	*	-3.157E-03	3.351E-02	5.486E-02	4.767E-03	-0.058
ZN-65		1115.52	*	-6.266E-02	9.308E-02	1.143E-01	8.327E-03	-0.548
GE-68		1077.35	*	-2.390E-03	1.081E+00	1.741E+00	1.379E-01	-0.001
AS-73		53.44	*	-6.910E-01	1.407E+00	2.302E+00	3.046E-01	-0.300
AS-74		595.88	*	-4.682E-03	8.261E-02	1.384E-01	7.906E-03	-0.034
		634.78		2.254E-01	3.016E-01	5.342E-01	2.820E-02	0.422
SE-75		66.05		-7.450E+00	5.887E+00	9.125E+00	1.175E+00	-0.816
		96.73		-4.799E-01	8.103E-01	1.142E+00	1.616E-01	-0.420
		121.11		3.926E-02	1.204E-01	1.979E-01	1.939E-02	0.198
		136.00		2.781E-02	3.466E-02	5.786E-02	3.593E-03	0.481
		198.60		-1.147E+00	1.681E+00	2.538E+00	1.798E-01	-0.452
		264.65	*	-2.271E-02	4.042E-02	6.047E-02	3.857E-03	-0.376
		279.53		2.872E-02	1.003E-01	1.697E-01	1.162E-02	0.169
		303.91		-5.765E-01	2.088E+00	2.983E+00	2.991E-01	-0.193
		400.65		-1.296E-02	2.351E-01	3.827E-01	3.737E-02	-0.034

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BR-77	+	87.88		7.843E+02	2.444E+02	3.271E+02	3.709E+01	2.398
		200.40		5.791E+01	1.412E+02	2.279E+02	1.314E+01	0.254
	+	239.00		2.432E+02	2.206E+01	3.432E+01	2.101E+00	7.085
		249.79		3.440E+01	5.538E+01	9.577E+01	5.948E+00	0.359
		281.68		-3.821E+01	8.100E+01	1.319E+02	8.490E+00	-0.290
		297.23		1.829E+02	7.348E+01	9.859E+01	6.437E+00	1.855
		303.76		-8.370E+01	1.798E+02	2.532E+02	1.661E+01	-0.331
		439.47		2.384E+01	1.286E+02	2.116E+02	1.423E+01	0.113
		484.57		-1.185E+02	2.007E+02	3.082E+02	2.020E+01	-0.385
		520.65	*	-1.425E+01	8.915E+00	1.213E+01	7.698E-01	-1.174
		574.64		-1.932E+00	1.867E+02	3.146E+02	1.862E+01	-0.006
		578.91		-1.763E+01	8.727E+01	1.256E+02	7.384E+00	-0.140
		585.48		1.346E+03	2.555E+02	4.721E+02	2.746E+01	2.851
		755.35		-6.961E+01	1.465E+02	2.324E+02	1.570E+01	-0.300
		817.79		-8.779E+01	1.096E+02	1.647E+02	1.340E+01	-0.533
SR-82		698.33		-2.086E+00	2.908E+01	4.810E+01	2.699E+00	-0.043
		776.49	*	-1.914E-01	3.410E-01	5.344E-01	3.853E-02	-0.358
		1395.20		-8.418E+00	9.837E+00	1.411E+01	1.207E+00	-0.597
RB-83		520.41	*	-9.360E-02	6.012E-02	8.229E-02	5.222E-03	-1.137
		529.64		4.314E-02	9.611E-02	1.596E-01	1.003E-02	0.270
		552.65		-2.451E-02	1.809E-01	2.859E-01	1.747E-02	-0.086
RB-84		881.50	*	7.348E-02	6.259E-02	1.132E-01	1.098E-02	0.649
KR-85		513.99	*	5.343E+00	7.292E+00	1.096E+01	7.002E-01	0.487
SR-85		513.99	*	2.738E-02	3.736E-02	5.617E-02	3.588E-03	0.487
RB-86		1076.63	*	-4.006E-01	6.867E-01	1.027E+00	8.145E-02	-0.390
Y-88		898.02		-4.111E-03	4.050E-02	6.544E-02	6.648E-03	-0.063
		1836.01	*	-2.931E-02	3.244E-02	4.120E-02	2.528E-03	-0.711
ZR-88		392.90	*	-4.330E-03	2.826E-02	4.577E-02	3.111E-03	-0.095
Y-91		1204.90	*	2.964E+00	1.733E+01	2.939E+01	1.952E+00	0.101
NB-94		702.63	*	7.783E-03	2.635E-02	4.495E-02	2.559E-03	0.173
		871.10		-2.712E-03	3.065E-02	4.975E-02	4.693E-03	-0.055
NB-95		765.79	*	1.017E-02	4.105E-02	6.908E-02	4.821E-03	0.147
NB-95M		235.69	*	7.918E-02	1.190E-01	1.836E-01	1.424E-02	0.431
ZR-95		724.18		9.903E-02	8.212E-02	1.355E-01	9.658E-03	0.731
		756.15	*	1.545E-02	6.316E-02	1.067E-01	8.378E-03	0.145
NB-97		657.90	*	-8.394E-03	6.316E-02	Half-Life too short		
		1024.50		-9.960E+00	6.316E-02	Half-Life too short		
ZR-97		254.15		4.103E+00	6.316E-02	Half-Life too short		
		355.39		2.723E-01	6.316E-02	Half-Life too short		
		507.63	*	4.596E-01	6.316E-02	Half-Life too short		
		602.52		-7.850E-01	6.316E-02	Half-Life too short		
		1021.30		-1.198E+00	6.316E-02	Half-Life too short		
		1147.95		1.355E+00	6.316E-02	Half-Life too short		
		1362.66		-1.789E+00	6.316E-02	Half-Life too short		
		1750.46		1.498E-01	6.316E-02	Half-Life too short		
MO-99		140.51		4.178E+00	2.405E+01	3.828E+01	1.033E+01	0.109
		181.06		1.619E+00	1.653E+01	2.349E+01	4.009E+00	0.069
		366.43		2.306E+01	7.551E+01	1.264E+02	8.558E+00	0.182
		739.58	*	4.281E-01	9.878E+00	1.643E+01	2.310E+00	0.026

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		778.00		-4.156E+01	3.188E+01	4.637E+01	3.359E+00	-0.896
TC-99M		140.51	*	5.208E+09	3.188E+01	Half-Life too short		
RH-101		127.23		5.095E-03	3.144E-02	4.577E-02	2.925E-03	0.111
		198.01	*	-1.912E-02	3.064E-02	4.644E-02	2.668E-03	-0.412
		325.23		-5.446E-02	2.278E-01	3.249E-01	2.163E-02	-0.168
RH-102		418.52		3.600E-02	2.487E-01	4.094E-01	2.771E-02	0.088
		475.06	*	-1.047E-02	2.578E-02	4.031E-02	2.659E-03	-0.260
		631.29		4.092E-03	4.724E-02	7.968E-02	4.239E-03	0.051
		697.49		-9.414E-03	6.626E-02	1.090E-01	6.097E-03	-0.086
		766.84		5.024E-02	1.043E-01	1.783E-01	1.248E-02	0.282
		1046.59		4.691E-02	9.703E-02	1.652E-01	1.388E-02	0.284
		1112.84		8.849E-03	1.984E-01	3.116E-01	2.281E-02	0.028
RU-103		497.08	*	-3.019E-02	3.562E-02	5.290E-02	6.863E-03	-0.571
	+	610.33		1.130E+01	2.331E+00	2.740E+00	4.201E-01	4.123
RH-106	+	511.85		3.890E-01	2.852E-01	3.596E-01	2.302E-02	1.082
		621.84	*	1.192E-01	2.669E-01	4.627E-01	5.348E-02	0.258
		1050.47		1.060E+00	2.016E+00	3.441E+00	2.870E-01	0.308
RU-106	+	511.85		3.890E-01	2.852E-01	3.596E-01	2.302E-02	1.082
		621.84	*	1.192E-01	2.666E-01	4.627E-01	2.513E-02	0.258
		1050.47		1.060E+00	2.016E+00	3.441E+00	2.870E-01	0.308
AG-108M		433.93	*	-1.829E-02	2.978E-02	4.621E-02	3.314E-03	-0.396
		614.37		1.101E-02	3.613E-02	5.456E-02	3.291E-03	0.202
		722.95		2.466E-02	3.844E-02	5.970E-02	3.917E-03	0.413
AG-110M		657.75	*	-4.721E-03	3.411E-02	4.876E-02	2.642E-03	-0.097
		677.61		3.129E-02	2.625E-01	4.419E-01	2.481E-02	0.071
		706.67		-4.688E-02	1.714E-01	2.782E-01	1.703E-02	-0.168
		763.93		1.624E-02	1.577E-01	2.628E-01	1.903E-02	0.062
		884.67		-1.610E-02	4.324E-02	6.789E-02	6.805E-03	-0.237
		937.48		1.326E-01	1.094E-01	1.961E-01	1.967E-02	0.676
		1384.27		-2.819E-01	1.625E-01	2.000E-01	1.766E-02	-1.410
IN-111		171.28		-4.052E-01	9.116E-01	1.421E+00	7.814E-02	-0.285
		245.39	*	-5.214E-01	9.838E-01	1.403E+00	8.662E-02	-0.372
IN-113M		391.69	*	-1.036E-02	4.074E-02	6.554E-02	4.674E-03	-0.158
SN-113		391.69	*	-1.036E-02	4.074E-02	6.554E-02	4.674E-03	-0.158
IN-114M		190.27	*	7.103E-03	1.867E-01	2.634E-01	1.494E-02	0.027
CD-115		260.90		1.520E+01	1.104E+02	1.862E+02	1.172E+01	0.082
		492.35		1.319E+01	3.207E+01	5.331E+01	3.472E+00	0.248
		527.90	*	4.815E+00	9.790E+00	1.631E+01	1.027E+00	0.295
SN-117M		156.02		-4.315E-02	2.060E+00	3.296E+00	1.866E-01	-0.013
		158.56	*	-6.720E-03	4.968E-02	7.897E-02	4.429E-03	-0.085
SB-122		563.90	*	7.807E-01	1.787E+00	2.958E+00	1.779E-01	0.264
		692.80		2.354E+01	3.758E+01	6.557E+01	3.610E+00	0.359
I-123		159.00	*	-5.285E-01	3.758E+01	Half-Life too short		
		528.96		1.949E+02	3.758E+01	Half-Life too short		
TE-123M		159.00	*	-2.820E-03	2.571E-02	4.091E-02	2.323E-03	-0.069
I-124		602.71	*	-1.382E-01	5.884E-01	8.799E-01	4.964E-02	-0.157
		722.78		2.335E+00	3.956E+00	6.114E+00	3.722E-01	0.382
		1325.50		4.989E+00	2.684E+01	4.567E+01	3.915E+00	0.109
		1376.25		3.185E+01	2.846E+01	5.287E+01	4.550E+00	0.602

---- Non-Identified Nuclides ----

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		1509.49		1.918E+01	1.602E+01	3.009E+01	2.460E+00	0.637
		1691.02		1.941E+00	2.692E+00	5.117E+00	3.680E-01	0.379
SB-124		602.71		-8.111E-03	3.452E-02	5.163E-02	2.914E-03	-0.157
		645.85		-1.775E-01	4.582E-01	7.436E-01	4.437E-02	-0.239
		709.31		2.076E-01	2.381E+00	3.986E+00	2.321E-01	0.052
		713.82		4.710E-01	1.490E+00	2.537E+00	2.606E-01	0.186
		722.78		1.986E-01	3.365E-01	5.200E-01	3.301E-02	0.382
	+	968.20		1.972E+01	4.198E+00	7.431E+00	7.005E-01	2.654
		1045.16		-1.302E+00	2.196E+00	3.296E+00	2.776E-01	-0.395
		1325.50		4.532E-01	2.438E+00	4.148E+00	3.556E-01	0.109
		1368.21		-2.736E-01	1.725E+00	2.796E+00	3.768E-01	-0.098
		1436.60		1.532E+00	3.564E+00	6.215E+00	5.247E-01	0.246
		1691.02	*	3.893E-02	5.402E-02	1.026E-01	7.799E-03	0.379
SB-125		427.89	*	-1.515E-02	7.789E-02	1.249E-01	8.694E-03	-0.121
	+	463.38		5.263E-01	3.724E-01	4.764E-01	3.573E-02	1.105
		600.56		4.761E-03	1.533E-01	2.583E-01	1.703E-02	0.018
		635.90		-1.895E-02	2.383E-01	3.967E-01	2.515E-02	-0.048
TE-125M		109.28	*	-1.472E+00	8.361E+00	1.344E+01	1.290E+00	-0.110
I-126		388.63		3.057E-02	1.823E-01	3.017E-01	2.050E-02	0.101
		666.33	*	1.060E-01	1.732E-01	2.687E-01	1.348E-02	0.394
		753.82		4.924E-01	1.308E+00	2.232E+00	1.501E-01	0.221
SB-126		223.80		1.698E-01	3.580E+00	6.059E+00	3.628E-01	0.028
		278.60		2.961E+00	2.273E+00	4.009E+00	2.574E-01	0.739
	+	296.50		1.245E+01	2.489E+00	3.258E+00	2.126E-01	3.822
		414.70		-6.533E-02	6.324E-02	9.481E-02	6.424E-03	-0.689
		415.30		-3.296E+00	5.117E+00	7.923E+00	5.367E-01	-0.416
		555.20		-2.102E+00	3.685E+00	5.599E+00	3.409E-01	-0.375
		573.80		-2.262E-01	9.309E-01	1.543E+00	9.144E-02	-0.147
		593.00		-7.421E-01	8.383E-01	1.317E+00	7.563E-02	-0.563
		656.30		9.734E-02	3.203E+00	4.671E+00	2.338E-01	0.021
		666.33		4.428E-02	7.236E-02	1.123E-01	5.632E-03	0.394
		675.00		1.401E-02	1.702E+00	2.840E+00	1.469E-01	0.005
		695.00		5.879E-02	6.853E-02	1.214E-01	6.732E-03	0.484
		697.00		-2.505E-02	2.319E-01	3.826E-01	2.137E-02	-0.065
		720.50	*	-8.626E-02	1.381E-01	1.938E-01	1.171E-02	-0.445
		856.80		-2.367E-01	5.064E-01	6.730E-01	6.108E-02	-0.352
		989.30		4.437E-01	1.182E+00	1.988E+00	1.824E-01	0.223
		1034.80		3.963E+00	7.548E+00	1.297E+01	1.112E+00	0.305
		1213.00		-1.766E+00	3.984E+00	6.364E+00	4.306E-01	-0.278
SB-127		61.10		-1.060E+02	7.748E+01	1.200E+02	1.684E+01	-0.883
		252.40		-4.004E+00	4.134E+00	6.016E+00	2.503E+00	-0.666
		290.80		-5.057E+00	2.183E+01	3.145E+01	3.017E+00	-0.161
		411.60		9.586E+00	1.071E+01	1.834E+01	2.711E+00	0.523
		444.90		-1.134E+00	8.484E+00	1.363E+01	1.538E+00	-0.083
		473.00		-8.363E-01	1.474E+00	2.271E+00	2.633E-01	-0.368
		543.00		-7.211E+00	1.504E+01	2.305E+01	3.012E+00	-0.313
		603.60		-9.876E+00	1.124E+01	1.481E+01	1.578E+00	-0.667
		685.20	*	5.652E-01	1.145E+00	1.982E+00	1.813E-01	0.285
		698.50		5.861E+00	1.240E+01	2.138E+01	3.076E+00	0.274

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		722.20		1.972E+00	2.746E+01	3.993E+01	3.719E+00	0.049
		783.80		2.589E-01	3.236E+00	5.376E+00	6.218E-01	0.048
XE-127		57.60		-5.216E+00	8.923E+00	1.451E+01	1.845E+00	-0.360
		145.22		1.773E-01	6.446E-01	1.048E+00	6.181E-02	0.169
		172.10		7.851E-03	1.105E-01	1.766E-01	9.728E-03	0.044
		202.84	*	-2.811E-02	4.061E-02	6.451E-02	3.735E-03	-0.436
		374.96		-1.463E-01	1.765E-01	2.732E-01	1.853E-02	-0.536
I-131		80.18		2.616E+00	5.890E+00	7.126E+00	7.851E-01	0.367
		284.30		-7.629E-01	1.364E+00	2.207E+00	1.554E-01	-0.346
		364.48	*	9.650E-02	9.982E-02	1.737E-01	1.277E-02	0.556
		636.97		-1.062E+00	1.402E+00	2.208E+00	1.327E-01	-0.481
		722.89		4.008E+00	6.429E+00	9.968E+00	6.147E-01	0.402
TE-132		49.72		4.515E+00	3.677E+01	6.197E+01	8.840E+00	0.073
		111.76		-5.389E+00	2.745E+01	4.427E+01	4.407E+00	-0.122
		116.30		1.364E+01	2.474E+01	4.109E+01	3.962E+00	0.332
		228.16	*	-1.382E-01	5.760E-01	9.607E-01	1.388E-01	-0.144
BA-133		53.15		-3.974E+00	6.170E+00	1.002E+01	1.327E+00	-0.397
		79.62		9.079E-01	1.481E+00	2.064E+00	3.439E-01	0.440
		81.00		1.338E-01	1.204E-01	1.513E-01	2.614E-02	0.885
		276.40		6.217E-02	3.563E-01	5.920E-01	7.842E-02	0.105
		302.84		7.509E-02	1.395E-01	2.118E-01	2.552E-02	0.355
		356.01	*	-1.897E-02	4.461E-02	6.197E-02	7.476E-03	-0.306
		383.85		-2.260E-03	2.772E-01	4.538E-01	5.188E-02	-0.005
I-133	+	510.53		7.546E-01	2.772E-01	Half-Life too short		
		529.87	*	6.478E-04	2.772E-01	Half-Life too short		
		706.58		-9.603E-02	2.772E-01	Half-Life too short		
		856.28		-1.272E-01	2.772E-01	Half-Life too short		
		875.33		-6.147E-02	2.772E-01	Half-Life too short		
		1236.41		1.027E+00	2.772E-01	Half-Life too short		
		1298.22		-4.806E-02	2.772E-01	Half-Life too short		
CS-134		475.35		-7.544E-01	1.690E+00	2.634E+00	1.737E-01	-0.286
		563.23		3.436E-02	3.365E-01	5.416E-01	3.324E-02	0.063
		569.32		3.406E-02	1.777E-01	2.880E-01	1.767E-02	0.118
		604.70		-3.004E-02	3.294E-02	4.337E-02	2.452E-03	-0.693
	+	795.84	*	1.962E-01	7.645E-02	9.014E-02	6.949E-03	2.177
		801.93		-4.001E-01	4.315E-01	5.365E-01	4.201E-02	-0.746
		1038.57		7.038E-01	3.444E+00	5.688E+00	4.845E-01	0.124
		1167.94		-1.031E+00	2.235E+00	3.593E+00	2.254E-01	-0.287
		1365.15		1.046E+00	1.201E+00	2.188E+00	1.974E-01	0.478
CS-135		268.24	*	2.074E-01	1.548E-01	2.471E-01	1.997E-02	0.839
I-135		288.45		9.392E+09	1.548E-01	Half-Life too short		
		417.63		1.023E+10	1.548E-01	Half-Life too short		
		546.56		5.038E+08	1.548E-01	Half-Life too short		
		836.80		5.277E+09	1.548E-01	Half-Life too short		
		1038.76		1.967E+09	1.548E-01	Half-Life too short		
		1124.00		6.683E+10	1.548E-01	Half-Life too short		
		1131.51		-5.386E+09	1.548E-01	Half-Life too short		
		1260.41	*	2.246E+09	1.548E-01	Half-Life too short		
		1457.56		5.854E+10	1.548E-01	Half-Life too short		

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		1678.03		-5.468E+09	1.548E-01	Half-Life too short		
		1706.46		1.691E+10	1.548E-01	Half-Life too short		
		1791.20		3.363E+08	1.548E-01	Half-Life too short		
CS-136		66.91		-9.040E-01	9.076E-01	1.417E+00	2.427E-01	-0.638
	+	86.29		4.725E+00	1.540E+00	1.990E+00	2.933E-01	2.374
		153.22		2.401E-01	5.840E-01	9.534E-01	6.826E-02	0.252
		163.89		-2.922E-01	9.815E-01	1.525E+00	1.069E-01	-0.192
		176.55		1.376E-02	3.351E-01	5.342E-01	3.361E-02	0.026
		273.65		-3.400E-01	4.810E-01	6.740E-01	4.809E-02	-0.504
		340.57		3.457E-01	1.327E-01	2.236E-01	1.572E-02	1.546
		818.51		-7.030E-03	6.052E-02	9.836E-02	8.032E-03	-0.071
		1048.07	*	-2.406E-02	9.685E-02	1.519E-01	1.330E-02	-0.158
		1235.34		6.792E-01	5.568E-01	9.194E-01	9.931E-02	0.739
CE-139		165.85	*	7.679E-04	2.718E-02	4.344E-02	2.373E-03	0.018
BA-140		162.64		-2.954E-01	6.886E-01	1.063E+00	6.676E-02	-0.278
		304.84		-1.296E+00	1.271E+00	1.740E+00	4.780E-01	-0.745
		423.70		1.948E-01	1.649E+00	2.704E+00	8.647E-01	0.072
		537.32	*	1.541E-01	2.338E-01	3.863E-01	1.259E-01	0.399
LA-140	+	328.77		6.887E-01	4.116E-01	4.996E-01	3.639E-02	1.379
		432.53		-5.112E-01	1.816E+00	2.890E+00	2.101E-01	-0.177
		487.03		-1.621E-02	1.234E-01	1.969E-01	1.423E-02	-0.082
		751.79		-3.174E-01	1.525E+00	2.478E+00	1.942E-01	-0.128
		815.85		-1.931E-02	2.572E-01	4.199E-01	3.841E-02	-0.046
		867.82		-2.822E-01	1.311E+00	1.972E+00	1.927E-01	-0.143
		919.63		-1.960E+00	2.890E+00	3.626E+00	4.254E-01	-0.541
		925.24		8.906E-01	1.008E+00	1.782E+00	1.845E-01	0.500
		1596.49	*	-1.566E-02	9.354E-02	1.317E-01	1.022E-02	-0.119
CE-141		145.44	*	-1.780E-02	5.906E-02	9.364E-02	5.731E-03	-0.190
CE-143		57.37		-9.191E-04	5.906E-02	Half-Life too short		
		231.56		-1.767E-03	5.906E-02	Half-Life too short		
		293.26	*	5.133E-04	5.906E-02	Half-Life too short		
	+	350.59		2.671E-02	5.906E-02	Half-Life too short		
		490.36		1.114E-03	5.906E-02	Half-Life too short		
		664.57		4.404E-03	5.906E-02	Half-Life too short		
		721.93		1.188E-04	5.906E-02	Half-Life too short		
CE-144		80.11		1.261E+00	2.729E+00	3.306E+00	3.628E-01	0.381
		133.54	*	-3.973E-02	2.040E-01	2.897E-01	4.162E-02	-0.137
PM-144		476.78		1.875E-02	5.928E-02	9.806E-02	7.466E-03	0.191
		618.01		-1.032E-02	2.769E-02	4.512E-02	2.636E-03	-0.229
		696.49	*	-9.915E-03	2.993E-02	4.847E-02	2.704E-03	-0.205
		778.57		-1.353E+00	2.055E+00	3.187E+00	2.313E-01	-0.424
PR-144		696.49	*	-6.718E-01	2.028E+00	3.284E+00	1.831E-01	-0.205
		1489.15		-9.307E+00	1.031E+01	1.408E+01	1.163E+00	-0.661
PM-146		453.90	*	-1.645E-02	3.942E-02	6.185E-02	5.713E-03	-0.266
		633.02		6.040E-01	1.225E+00	2.095E+00	7.699E-01	0.288
		735.90		5.591E-02	1.285E-01	2.194E-01	6.144E-02	0.255
		747.13		-2.540E-02	7.992E-02	1.285E-01	1.656E-02	-0.198
ND-147	+	91.11		1.293E+00	3.766E-01	4.979E-01	5.551E-02	2.597
		319.41		-1.171E+00	2.947E+00	4.768E+00	3.165E-01	-0.246

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		439.89		-5.479E-02	5.347E+00	8.676E+00	5.835E-01	-0.006
		531.02	*	-2.434E-02	5.287E-01	8.444E-01	1.159E-01	-0.029
PM-149		285.90	*	-1.471E+01	8.140E+01	1.344E+02	1.943E+01	-0.109
EU-152		121.78		-3.355E-03	6.578E-02	1.064E-01	8.765E-03	-0.032
		244.69		-6.993E-02	3.001E-01	4.375E-01	2.699E-02	-0.160
		344.27	*	-1.079E-02	9.766E-02	1.400E-01	1.032E-02	-0.077
		443.98		-6.690E-01	8.506E-01	1.296E+00	8.698E-02	-0.516
		778.89		-1.859E-01	2.384E-01	3.651E-01	2.652E-02	-0.509
		867.32		-2.090E-01	8.167E-01	1.173E+00	1.095E-01	-0.178
	+	964.01		8.329E-01	3.459E-01	5.287E-01	5.009E-02	1.575
		1085.78		3.897E-02	3.647E-01	5.938E-01	4.622E-02	0.066
		1112.02		1.071E-01	2.836E-01	4.740E-01	3.477E-02	0.226
		1407.95		1.773E-01	1.711E-01	3.179E-01	2.711E-02	0.558
GD-153		69.67		2.396E-01	1.944E+00	3.091E+00	3.448E-01	0.078
		83.37		1.427E+01	1.663E+01	2.529E+01	2.803E+00	0.564
		97.43	*	-3.058E-02	8.316E-02	1.190E-01	1.108E-02	-0.257
		103.18		-5.884E-02	1.005E-01	1.598E-01	1.351E-02	-0.368
EU-154		123.07		-2.947E-02	4.681E-02	7.347E-02	7.261E-03	-0.401
		247.94		2.573E-01	3.049E-01	5.316E-01	5.203E-02	0.484
		591.81		-3.053E-01	5.546E-01	8.944E-01	8.718E-02	-0.341
		723.30		1.634E-01	1.551E-01	2.521E-01	1.847E-02	0.648
		756.87		3.385E-01	6.728E-01	1.160E+00	1.245E-01	0.292
		873.19		1.700E-01	2.590E-01	4.503E-01	5.794E-02	0.378
		996.32		-6.383E-02	3.276E-01	5.193E-01	9.345E-02	-0.123
		1004.76		-6.456E-02	1.983E-01	3.099E-01	3.691E-02	-0.208
		1274.45	*	4.613E-02	1.078E-01	1.874E-01	1.996E-02	0.246
EU-155		48.70		-3.918E+00	5.017E+00	8.115E+00	9.748E-01	-0.483
		60.01		-2.530E-01	6.760E+00	1.125E+01	1.386E+00	-0.022
	+	86.54		4.375E-01	1.364E-01	1.824E-01	2.064E-02	2.399
		105.31	*	1.354E-01	1.023E-01	1.740E-01	1.443E-02	0.779
TB-160	+	86.79		1.168E+00	3.639E-01	4.839E-01	5.452E-02	2.414
		197.04		-7.440E-02	5.279E-01	8.216E-01	4.712E-02	-0.091
		215.65		5.874E-01	6.497E-01	1.139E+00	6.735E-02	0.516
	+	298.57		1.111E-01	1.308E-01	1.759E-01	1.150E-02	0.632
		879.36	*	4.729E-02	1.266E-01	2.145E-01	2.068E-02	0.220
		962.29		-6.809E-03	5.493E-01	7.695E-01	7.305E-02	-0.009
	+	966.15		5.716E-01	2.374E-01	4.192E-01	3.962E-02	1.363
		1177.93		2.266E-01	3.040E-01	5.446E-01	3.396E-02	0.416
		1271.85		2.982E-01	6.239E-01	1.091E+00	8.389E-02	0.273
HO-166M		80.57		2.416E-01	3.440E-01	4.241E-01	4.658E-02	0.570
		184.41		8.406E-02	3.898E-02	6.196E-02	3.480E-03	1.357
		280.46		-5.922E-02	8.030E-02	1.291E-01	8.300E-03	-0.459
		410.95		3.004E-01	2.145E-01	3.800E-01	2.577E-02	0.791
		711.68	*	-7.387E-03	5.497E-02	9.037E-02	5.303E-03	-0.082
		752.31		-6.138E-02	2.476E-01	4.010E-01	2.684E-02	-0.153
		810.29		-2.951E-02	5.310E-02	8.274E-02	6.592E-03	-0.357
TM-171		51.35		1.033E+01	5.575E+01	9.408E+01	1.237E+01	0.110
		52.39		-8.714E+00	2.754E+01	4.547E+01	6.023E+00	-0.192
		59.40		2.321E+01	3.614E+01	6.158E+01	7.650E+00	0.377

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		66.72	*	-2.683E+01	3.280E+01	5.215E+01	5.941E+00	-0.514
LU-176	+	88.36		8.615E-01	2.684E-01	3.572E-01	4.017E-02	2.412
		201.83		-9.910E-03	2.397E-02	3.997E-02	2.311E-03	-0.248
		306.84	*	-1.123E-03	2.156E-02	3.569E-02	2.348E-03	-0.031
		401.10		-3.441E+00	6.232E+00	9.810E+00	6.662E-01	-0.351
LU-177		112.95		4.109E-01	1.465E+00	2.411E+00	1.775E-01	0.170
	+	208.36	*	2.549E+00	1.401E+00	1.852E+00	1.082E-01	1.377
LU-177M		52.97		-1.471E+00	2.786E+00	4.551E+00	6.030E-01	-0.323
		54.07		2.797E-01	1.396E+00	2.354E+00	3.104E-01	0.119
		61.30		-2.456E+00	2.013E+00	3.112E+00	3.764E-01	-0.789
		121.62		-1.846E-02	3.373E-01	5.452E-01	3.607E-02	-0.034
		147.16		1.328E-02	5.913E-01	9.506E-01	5.564E-02	0.014
		171.86		-1.094E-01	4.495E-01	7.077E-01	3.896E-02	-0.155
		218.09		-2.136E-01	7.597E-01	1.269E+00	7.534E-02	-0.168
	+	268.79		2.100E+00	1.056E+00	1.359E+00	8.634E-02	1.545
		319.02		-8.251E-02	2.296E-01	3.723E-01	2.469E-02	-0.222
		367.43		-2.342E-01	8.241E-01	1.329E+00	9.001E-02	-0.176
		413.65	*	-2.857E-01	1.572E-01	2.203E-01	1.493E-02	-1.297
HF-181		56.28		-4.233E-02	1.445E+00	2.411E+00	3.115E-01	-0.018
		57.53		-4.468E-01	7.524E-01	1.223E+00	1.556E-01	-0.365
		65.20		-9.595E-01	1.156E+00	1.841E+00	2.127E-01	-0.521
		133.02		-4.610E-02	6.684E-02	9.199E-02	5.713E-03	-0.501
		136.25		1.528E-01	4.072E-01	6.675E-01	4.085E-02	0.229
		345.85		3.620E-02	1.848E-01	2.861E-01	1.924E-02	0.126
		482.03	*	-4.582E-04	3.756E-02	6.055E-02	3.975E-03	-0.008
W-181		56.28		-1.708E-02	5.660E-01	9.444E-01	1.220E-01	-0.018
		57.53		-1.752E-01	2.950E-01	4.794E-01	6.100E-02	-0.365
		65.20	*	-3.731E-01	4.497E-01	7.160E-01	8.273E-02	-0.521
TA-182		67.75		-4.175E-02	1.242E-01	2.033E-01	2.297E-02	-0.205
		100.10		1.910E-01	1.654E-01	2.819E-01	2.505E-02	0.678
		152.43		1.037E-01	2.951E-01	4.808E-01	2.759E-02	0.216
		222.10		1.103E-01	3.071E-01	5.266E-01	3.145E-02	0.209
		1001.68		1.627E+00	1.800E+00	3.174E+00	2.863E-01	0.513
	+	1121.28		5.469E-01	2.125E-01	3.326E-01	2.384E-02	1.644
		1189.05		1.079E-01	2.526E-01	4.408E-01	2.822E-02	0.245
		1221.42	*	1.417E-01	1.821E-01	3.235E-01	2.231E-02	0.438
		1230.97		-2.226E-01	4.297E-01	6.651E-01	4.685E-02	-0.335
RE-183		57.98		-1.396E-01	2.894E-01	4.729E-01	5.983E-02	-0.295
		59.32		9.169E-02	1.487E-01	2.532E-01	3.149E-02	0.362
		67.20		-2.287E-01	2.296E-01	3.616E-01	4.103E-02	-0.632
		162.32	*	-1.483E-02	9.976E-02	1.562E-01	8.637E-03	-0.095
	+	208.81		2.305E+00	1.266E+00	1.680E+00	9.825E-02	1.372
		291.72		-2.827E-02	9.722E-01	1.421E+00	9.235E-02	-0.020
RE-184		57.98		-5.144E-01	1.067E+00	1.743E+00	2.205E-01	-0.295
		59.32		3.377E-01	5.478E-01	9.327E-01	1.160E-01	0.362
		67.20		-8.426E-01	8.461E-01	1.332E+00	1.512E-01	-0.632
		161.27		4.237E-02	3.148E-01	5.064E-01	2.812E-02	0.084
		216.55		9.996E-02	2.348E-01	4.041E-01	2.393E-02	0.247
		252.85	*	-1.090E-01	2.020E-01	3.297E-01	2.056E-02	-0.331

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		318.01		-1.019E-01	3.980E-01	6.496E-01	4.306E-02	-0.157
		792.07		-6.534E-02	1.063E+00	1.507E+00	1.139E-01	-0.043
		903.28		3.077E-01	1.027E+00	1.575E+00	1.588E-01	0.195
		920.93		-2.079E-01	4.337E-01	6.256E-01	6.205E-02	-0.332
OS-185		59.72		2.923E-01	3.950E-01	6.747E-01	8.344E-02	0.433
		61.14		-3.091E-01	2.213E-01	3.439E-01	4.170E-02	-0.899
		69.30		-2.453E-01	3.527E-01	5.402E-01	6.038E-02	-0.454
		592.07		-1.246E+00	2.261E+00	3.650E+00	2.099E-01	-0.341
		646.12	*	-1.005E-02	3.871E-02	6.346E-02	3.260E-03	-0.158
		717.42		1.941E-01	7.997E-01	1.354E+00	8.100E-02	0.143
		874.81		-1.231E-01	5.142E-01	8.207E-01	7.818E-02	-0.150
		880.27		5.865E-01	6.982E-01	1.231E+00	1.190E-01	0.476
RE-188		155.03	*	3.112E-02	1.555E-01	2.513E-01	1.428E-02	0.124
		477.96		1.849E+00	2.721E+00	4.617E+00	3.039E-01	0.400
		633.10		1.220E+00	2.434E+00	4.232E+00	2.242E-01	0.288
W-188		63.58		6.262E+01	6.762E+01	1.140E+02	1.340E+01	0.550
		227.08		-2.430E+00	1.117E+01	1.867E+01	1.123E+00	-0.130
		290.67	*	-2.277E+00	7.646E+00	1.096E+01	7.117E-01	-0.208
IR-192	+	295.96		9.565E-01	1.914E-01	2.590E-01	1.710E-02	3.694
		308.46		3.730E-02	8.435E-02	1.434E-01	9.528E-03	0.260
		316.51	*	1.229E-02	3.043E-02	5.157E-02	3.428E-03	0.238
		468.07		1.838E-02	6.623E-02	9.631E-02	7.141E-03	0.191
		604.41		-3.885E-01	4.478E-01	5.910E-01	6.655E-02	-0.657
		612.46		2.470E+00	8.523E-01	1.495E+00	1.102E-01	1.652
AU-195		65.12		-1.701E-01	2.088E-01	3.327E-01	3.848E-02	-0.511
		66.83		-1.068E-01	1.087E-01	1.714E-01	1.951E-02	-0.623
	+	75.70		8.699E-01	2.633E-01	4.829E-01	5.282E-02	1.802
		98.88	*	1.336E-01	2.126E-01	3.562E-01	3.232E-02	0.375
	+	129.76		5.283E+00	3.991E+00	4.582E+00	2.891E-01	1.153
TL-200		367.94	*	-2.287E-05	3.991E+00	Half-Life too short		
		579.30		7.460E-05	3.991E+00	Half-Life too short		
		828.27		2.059E-03	3.991E+00	Half-Life too short		
		1205.75		-2.351E-04	3.991E+00	Half-Life too short		
TL-201		68.90		-3.870E+00	5.315E+00	8.550E+00	9.581E-01	-0.453
		70.82		2.832E+00	3.297E+00	5.070E+00	5.620E-01	0.558
		80.30		4.078E+00	6.277E+00	7.711E+00	8.465E-01	0.529
		135.34		1.630E+01	2.184E+01	3.640E+01	2.237E+00	0.448
		167.43	*	3.461E+00	6.188E+00	1.013E+01	5.542E-01	0.342
TL-202		68.90		-3.517E-01	4.831E-01	7.770E-01	8.708E-02	-0.453
		70.82		2.566E-01	2.988E-01	4.595E-01	5.094E-02	0.558
		80.30		3.697E-01	5.691E-01	6.991E-01	7.674E-02	0.529
		439.56	*	1.491E-02	6.309E-02	1.041E-01	7.001E-03	0.143
HG-203		70.83		1.119E+00	1.303E+00	1.997E+00	3.052E-01	0.561
		72.87		8.339E-01	7.929E-01	1.217E+00	1.809E-01	0.685
		82.60		6.412E-01	1.193E+00	1.793E+00	2.758E-01	0.358
		279.20	*	2.354E-02	3.725E-02	6.400E-02	4.319E-03	0.368
BI-207		72.80		1.945E-01	2.298E-01	3.526E-01	3.879E-02	0.552
	+	74.97		4.827E-01	1.461E-01	2.414E-01	2.643E-02	1.999
		84.90		3.693E-01	1.903E-01	3.240E-01	3.616E-02	1.140

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		569.67		6.038E-03	2.777E-02	4.510E-02	2.689E-03	0.134
		1063.62	*	8.057E-04	4.462E-02	7.208E-02	5.868E-03	0.011
		1770.23		7.569E-01	4.789E-01	9.309E-01	6.176E-02	0.813
TL-207		81.07		2.885E-01	2.622E-01	3.327E-01	3.659E-02	0.867
		83.78		2.544E-01	1.284E-01	2.190E-01	2.431E-02	1.162
		94.90		3.154E-01	2.302E-01	3.587E-01	3.503E-02	0.879
		122.32		-5.639E-01	1.582E+00	2.520E+00	1.860E-01	-0.224
		144.24		6.133E-01	6.458E-01	1.062E+00	7.786E-02	0.577
		154.21		-1.526E-02	3.592E-01	5.743E-01	3.980E-02	-0.027
	+	269.46		4.917E-01	2.474E-01	3.377E-01	2.228E-02	1.456
		323.87	*	7.411E-02	6.654E-01	9.759E-01	1.643E-01	0.076
	+	338.28		8.356E+00	1.941E+00	2.322E+00	2.567E-01	3.599
		445.03		-1.189E-01	2.009E+00	3.245E+00	3.507E-01	-0.037
PO-209		260.50		4.303E+00	8.258E+00	1.419E+01	8.931E-01	0.303
		262.80		-9.687E+00	2.278E+01	3.730E+01	2.353E+00	-0.260
		896.60	*	2.460E-01	7.341E+00	1.203E+01	1.214E+00	0.020
BI-210		46.50	*	2.034E+00	8.026E+00	1.362E+01	1.336E+00	0.149
PB-210		46.50	*	2.034E+00	8.026E+00	1.362E+01	1.336E+00	0.149
PO-210		46.50	*	2.034E+00	8.026E+00	1.362E+01	1.223E+00	0.149
PB-211		404.84	*	2.655E-01	8.523E-01	1.393E+00	8.699E-01	0.191
		427.08		-9.865E-01	1.894E+00	2.799E+00	1.733E+00	-0.352
		831.96		-1.154E+00	1.328E+00	1.652E+00	1.035E+00	-0.699
BI-212	+	727.18	*	1.442E+00	4.039E-01	6.308E-01	5.046E-02	2.286
		785.46		4.931E-01	1.571E+00	2.661E+00	1.971E-01	0.185
		1620.62		7.850E-01	9.657E-01	1.818E+00	1.386E-01	0.432
PO-215		81.07		2.885E-01	2.622E-01	3.327E-01	3.659E-02	0.867
		83.78		2.544E-01	1.284E-01	2.190E-01	2.431E-02	1.162
		94.90		3.154E-01	2.302E-01	3.587E-01	3.503E-02	0.879
		122.32		-5.639E-01	1.582E+00	2.520E+00	1.860E-01	-0.224
		144.24		6.133E-01	6.458E-01	1.062E+00	7.786E-02	0.577
		154.21		-1.526E-02	3.592E-01	5.743E-01	3.980E-02	-0.027
	+	269.46		4.917E-01	2.474E-01	3.377E-01	2.228E-02	1.456
		323.87	*	7.411E-02	6.654E-01	9.759E-01	1.643E-01	0.076
	+	338.28		8.356E+00	1.941E+00	2.322E+00	2.567E-01	3.599
		445.03		-1.189E-01	2.009E+00	3.245E+00	3.507E-01	-0.037
RN-219	+	271.23		6.309E-01	3.192E-01	4.437E-01	3.781E-02	1.422
		401.81	*	-2.115E-01	3.866E-01	6.073E-01	8.537E-02	-0.348
RN-220		549.76	*	3.443E-01	2.419E+01	3.872E+01	2.375E+00	0.009
RA-223		81.07		2.885E-01	2.622E-01	3.327E-01	3.659E-02	0.867
		83.78		2.544E-01	1.284E-01	2.190E-01	2.431E-02	1.162
		94.90		3.154E-01	2.302E-01	3.587E-01	3.503E-02	0.879
		122.32		-5.639E-01	1.582E+00	2.520E+00	1.860E-01	-0.224
		144.24		6.133E-01	6.458E-01	1.062E+00	7.786E-02	0.577
		154.21		-1.526E-02	3.592E-01	5.743E-01	3.980E-02	-0.027
	+	269.46		4.917E-01	2.474E-01	3.377E-01	2.228E-02	1.456
		323.87	*	7.411E-02	6.654E-01	9.759E-01	1.643E-01	0.076
	+	338.28		8.356E+00	1.941E+00	2.322E+00	2.567E-01	3.599
		445.03		-1.189E-01	2.009E+00	3.245E+00	3.507E-01	-0.037
AC-227		79.80		1.259E+00	2.144E+00	2.604E+00	5.871E-01	0.484

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		236.00		2.291E-01	2.244E-01	3.513E-01	3.730E-02	0.652
		256.20	*	3.986E-02	3.379E-01	5.699E-01	8.069E-02	0.070
		286.10		1.699E-01	1.379E+00	2.313E+00	2.755E-01	0.073
	+	299.80		1.416E+00	1.681E+00	2.348E+00	3.889E-01	0.603
		304.40		-9.134E-01	1.869E+00	2.615E+00	4.594E-01	-0.349
		334.20		3.068E+00	2.677E+00	3.258E+00	6.071E-01	0.942
TH-227		79.80		1.259E+00	2.144E+00	2.604E+00	5.940E-01	0.484
		94.00		5.001E+00	2.375E+00	3.491E+00	7.797E-01	1.432
		236.00		2.291E-01	2.241E-01	3.513E-01	3.249E-02	0.652
		256.20	*	3.986E-02	3.380E-01	5.699E-01	9.724E-02	0.070
		286.10		1.699E-01	1.390E+00	2.313E+00	2.318E+00	0.073
	+	299.80		1.416E+00	1.681E+00	2.348E+00	3.889E-01	0.603
		304.40		-9.134E-01	1.869E+00	2.615E+00	4.594E-01	-0.349
		334.20		3.068E+00	2.677E+00	3.258E+00	6.071E-01	0.942
TH-229		85.43		4.513E-01	1.915E-01	3.266E-01	3.653E-02	1.382
	+	88.47		3.087E-01	1.372E-01	2.040E-01	2.289E-02	1.513
		100.00		2.058E-01	1.721E-01	2.938E-01	2.615E-02	0.701
		193.63	*	-2.916E-01	4.885E-01	7.409E-01	4.225E-02	-0.394
		210.97		5.409E-01	7.397E-01	1.152E+00	6.757E-02	0.470
PA-231		283.67	*	-2.677E-01	1.390E+00	2.295E+00	3.229E-01	-0.117
	+	301.29		5.664E-01	6.686E-01	9.765E-01	1.063E-01	0.580
TH-231		81.07		2.885E-01	2.622E-01	3.327E-01	3.659E-02	0.867
		83.78		2.544E-01	1.284E-01	2.190E-01	2.431E-02	1.162
		94.90		3.154E-01	2.302E-01	3.587E-01	3.503E-02	0.879
		122.32		-5.639E-01	1.582E+00	2.520E+00	1.860E-01	-0.224
		144.24		6.133E-01	6.458E-01	1.062E+00	7.786E-02	0.577
		154.21		-1.526E-02	3.592E-01	5.743E-01	3.980E-02	-0.027
	+	269.46		4.917E-01	2.474E-01	3.377E-01	2.228E-02	1.456
		323.87	*	7.411E-02	6.654E-01	9.759E-01	1.643E-01	0.076
	+	338.28		8.356E+00	1.941E+00	2.322E+00	2.567E-01	3.599
		445.03		-1.189E-01	2.009E+00	3.245E+00	3.507E-01	-0.037
U-231		84.21		1.100E+01	5.445E+00	9.282E+00	1.032E+00	1.186
	+	92.29		9.748E+00	2.818E+00	3.961E+00	4.078E-01	2.461
		95.87	*	-5.581E-01	1.102E+00	1.565E+00	1.500E-01	-0.357
		108.00		-2.447E+00	1.887E+00	2.867E+00	2.257E-01	-0.853
PA-233	+	75.28		1.408E+01	4.623E+00	7.333E+00	1.229E+00	1.921
	+	86.59		7.111E+00	2.858E+00	2.958E+00	8.218E-01	2.404
	+	300.12		3.948E-01	4.672E-01	6.573E-01	9.054E-02	0.601
		311.98	*	8.796E-03	5.664E-02	9.477E-02	6.558E-03	0.093
		340.50		1.892E+00	7.800E-01	1.119E+00	2.598E-01	1.691
		398.62		-7.446E-01	2.108E+00	3.223E+00	8.410E-01	-0.231
		415.76		-3.434E-01	1.362E+00	2.174E+00	4.540E-01	-0.158
PA-234		63.00		1.347E+00	2.015E+00	3.363E+00	5.885E-01	0.400
		94.67		3.233E-01	1.697E-01	2.652E-01	3.515E-02	1.219
		98.44		6.096E-03	8.709E-02	1.428E-01	7.976E-02	0.043
		99.86		5.466E-01	4.373E-01	7.475E-01	6.670E-02	0.731
		111.00		7.615E-02	1.661E-01	2.753E-01	3.125E-02	0.277
		131.20		-2.217E-02	1.067E-01	1.516E-01	9.498E-03	-0.146
		152.70		1.551E-01	2.864E-01	4.691E-01	7.403E-02	0.331

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	186.00		5.405E+00	2.468E+00	2.481E+00	7.572E-01	2.179
		226.40		5.113E-02	3.512E-01	5.965E-01	6.959E-02	0.086
		227.20		-8.057E-02	3.753E-01	6.273E-01	3.775E-02	-0.128
		248.90		4.647E-01	6.993E-01	1.201E+00	2.594E-01	0.387
	+	293.70		6.025E+00	1.506E+00	1.526E+00	2.495E-01	3.948
		369.80		-5.920E-01	7.785E-01	1.199E+00	2.531E-01	-0.494
		568.70		2.043E-01	8.720E-01	1.419E+00	8.475E-02	0.144
		569.50		5.045E-02	2.462E-01	3.994E-01	2.382E-02	0.126
		574.00		-2.442E-01	1.348E+00	2.244E+00	1.329E-01	-0.109
		699.00		-8.330E-02	5.915E-01	9.722E-01	1.743E-01	-0.086
		706.10		-1.867E-01	8.449E-01	1.371E+00	6.049E-01	-0.136
		733.00		-2.192E-01	3.787E-01	5.003E-01	1.071E-01	-0.438
		742.81		-1.307E-01	1.176E+00	1.923E+00	1.288E+00	-0.068
	+	796.30		3.814E+00	1.778E+00	1.727E+00	4.621E-01	2.208
		805.60		1.093E+00	9.942E-01	1.692E+00	5.150E-01	0.646
		819.60		3.647E-01	9.722E-01	1.647E+00	6.245E-01	0.221
		826.30		-6.107E-02	6.598E-01	1.073E+00	4.796E-01	-0.057
		831.60		-5.122E-01	5.858E-01	8.497E-01	2.532E-01	-0.603
		876.40		-8.617E-01	1.175E+00	1.117E+00	1.149E+00	-0.772
		880.51		2.003E-01	2.513E-01	4.417E-01	4.272E-02	0.453
		883.24		9.917E-02	2.649E-01	4.354E-01	2.933E-01	0.228
		899.00		-2.583E-01	8.302E-01	1.302E+00	5.733E-01	-0.198
		925.00		1.044E+00	1.040E+00	1.859E+00	1.837E-01	0.561
		926.50		-4.378E-02	1.595E-01	2.518E-01	6.480E-02	-0.174
		946.00	*	1.834E-01	2.742E-01	4.723E-01	9.101E-02	0.388
		949.00		4.365E-03	4.339E-01	6.935E-01	6.684E-02	0.006
		980.50		-1.677E-01	6.773E-01	1.070E+00	9.930E-02	-0.157
		1394.10		-2.409E-01	9.962E-01	1.563E+00	1.017E+00	-0.154
PA-234M		766.42		4.912E+00	1.115E+01	1.856E+01	9.369E+00	0.265
		1001.03	*	4.091E+00	3.997E+00	7.126E+00	7.354E-01	0.574
TH-234		63.29	*	1.424E+00	1.720E+00	2.869E+00	5.654E-01	0.497
	+	92.38		2.580E+00	8.512E-01	1.049E+00	1.986E-01	2.460
U-235	+	89.95		3.099E+00	1.655E+00	1.803E+00	5.688E-01	1.719
	+	93.35		3.102E+00	1.220E+00	1.228E+00	3.502E-01	2.525
		105.00		1.891E+00	1.136E+00	1.729E+00	5.140E-01	1.094
		143.76	*	1.391E-01	2.007E-01	3.254E-01	5.321E-02	0.428
		163.35		-3.115E-01	4.422E-01	6.682E-01	1.195E-01	-0.466
	+	185.71		2.002E-01	6.890E-02	9.150E-02	5.150E-03	2.188
		205.31		2.641E-02	4.940E-01	7.428E-01	1.336E-01	0.036
NP-236		94.67		2.470E-01	1.270E-01	2.014E-01	1.975E-02	1.227
		98.44		4.579E-03	6.578E-02	1.079E-01	9.869E-03	0.042
		111.00		5.760E-02	1.255E-01	2.082E-01	1.573E-02	0.277
		160.31	*	-3.139E-02	7.143E-02	1.117E-01	6.227E-03	-0.281
U-238		63.29	*	1.424E+00	1.720E+00	2.869E+00	5.654E-01	0.497
	+	92.38		2.580E+00	7.458E-01	1.049E+00	1.078E-01	2.460
NP-239		99.55		1.857E-01	1.468E-01	2.510E-01	2.251E-02	0.740
		117.00	*	-9.173E-02	1.723E-01	2.729E-01	1.909E-02	-0.336
	+	209.75		1.820E+00	9.997E-01	1.323E+00	7.750E-02	1.375
		228.18		-4.443E-02	1.909E-01	3.186E-01	1.920E-02	-0.139

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		277.60		6.580E-02	1.729E-01	2.899E-01	1.859E-02	0.227
		334.30		1.805E+00	1.490E+00	1.859E+00	1.244E-01	0.971
AM-241		59.54	*	1.439E-01	2.096E-01	3.574E-01	4.590E-02	0.403
CM-243		99.55		1.911E-01	1.510E-01	2.582E-01	2.316E-02	0.740
		103.76	*	6.107E-02	9.088E-02	1.523E-01	1.276E-02	0.401
		117.00		-9.438E-02	1.773E-01	2.807E-01	1.964E-02	-0.336
	+	209.75		1.794E+00	9.855E-01	1.304E+00	7.640E-02	1.375
		228.18		-4.489E-02	1.928E-01	3.219E-01	1.940E-02	-0.139
		277.60		6.633E-02	1.743E-01	2.923E-01	1.874E-02	0.227
AM-246		798.80		-1.125E-01	1.344E-01	1.682E-01	1.296E-02	-0.669
		1036.00		6.455E-02	2.714E-01	4.519E-01	3.865E-02	0.143
		1062.04		-2.214E-01	2.099E-01	2.952E-01	2.410E-02	-0.750
		1078.86	*	7.933E-02	1.242E-01	2.142E-01	1.691E-02	0.370
CM-247		278.00		6.059E-01	7.166E-01	1.225E+00	7.858E-02	0.495
		287.40		8.398E-02	1.126E+00	1.884E+00	1.219E-01	0.045
		402.60	*	-1.896E-02	3.419E-02	5.377E-02	3.651E-03	-0.353
CF-249		252.85		-4.091E-01	7.583E-01	1.238E+00	7.716E-02	-0.331
		333.44		1.446E-01	1.977E-01	2.316E-01	1.549E-02	0.624
		387.95	*	1.339E-02	3.561E-02	5.969E-02	4.056E-03	0.224
CF-251		176.60	*	-2.001E-03	1.162E-01	1.847E-01	1.024E-02	-0.011
		227.00		-2.873E-02	3.341E-01	5.617E-01	3.379E-02	-0.051
		285.00		-3.700E-01	1.605E+00	2.644E+00	1.708E-01	-0.140

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852004      *
* Acquisition date : 26-JAN-2010 13:20:20 Detector SN#     :                *
* Detector ID        : GAM10               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000        *
* Elapsed real time:    0 02:00:01.03      Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 11-JAN-2010 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G244852004           Analyst initials: MXR1          *
* Batch Number       : 942718               Sample Quantity : 1.3782E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000     *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.023E+01	2.290E+00	5.259E-01	0.000E+00
CD-109	3.695E+00	1.128E+00	1.235E+00	0.000E+00
SN-126	3.632E-01	1.109E-01	1.223E-01	0.000E+00
BA-137M	2.877E-01	5.829E-02	5.391E-02	0.000E+00
CS-137	3.042E-01	6.164E-02	5.698E-02	0.000E+00
TL-208	4.699E-01	8.059E-02	5.453E-02	0.000E+00
BI-211	3.475E+00	4.536E-01	3.219E-01	0.000E+00
PB-212	1.541E+00	1.529E-01	8.447E-02	0.000E+00
PO-212	1.541E+00	1.529E-01	8.447E-02	0.000E+00
BI-214	1.048E+00	1.618E-01	9.852E-02	0.000E+00
PB-214	1.209E+00	1.695E-01	1.081E-01	0.000E+00
PO-214	1.209E+00	1.695E-01	1.081E-01	0.000E+00
PO-216	1.541E+00	1.529E-01	8.447E-02	0.000E+00
PO-218	1.209E+00	1.695E-01	1.081E-01	0.000E+00
RA-224	3.960E+00	8.669E-01	9.609E-01	0.000E+00
RA-226	1.048E+00	1.618E-01	9.852E-02	0.000E+00
AC-228	1.239E+00	3.187E-01	1.871E-01	0.000E+00
RA-228	1.239E+00	3.187E-01	1.871E-01	0.000E+00
TH-228	1.565E+00	1.552E-01	8.574E-02	0.000E+00
TH-230	1.047E+00	1.618E-01	9.852E-02	0.000E+00
TH-232	1.239E+00	3.187E-01	1.871E-01	0.000E+00
U-234	1.047E+00	1.618E-01	9.852E-02	0.000E+00
NP-237	1.067E+00	3.906E-01	3.655E-01	0.000E+00
AM-243	2.689E-01	7.975E-02	1.039E-01	0.000E+00
ANH-511	7.789E-02	5.596E-02	4.217E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
BE-7	6.181E-02		2.833E-01	4.865E-01	0.000E+00	NOT IDENT.
NA-22	9.620E-03		3.840E-02	6.727E-02	0.000E+00	NOT IDENT.

NA-24	0.000E+00	6.664E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.027E-02	2.127E-02	3.936E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.818E-02	7.685E-02	0.000E+00	FAIL ABUN
SC-46	-2.240E-02	3.344E-02	5.241E-02	0.000E+00	FAIL ABUN
V-48	-4.678E-02	6.265E-02	9.601E-02	0.000E+00	NOT IDENT.
CR-51	3.344E-02	3.157E-01	5.547E-01	0.000E+00	NOT IDENT.
MN-52	-8.387E-02	2.223E-01	3.554E-01	0.000E+00	NOT IDENT.
MN-54	4.608E-02	3.311E-02	6.237E-02	0.000E+00	NOT IDENT.
CO-56	1.484E-02	3.456E-02	6.095E-02	0.000E+00	FAIL ABUN
CO-57	-3.148E-03	2.222E-02	3.841E-02	0.000E+00	NOT IDENT.
CO-58	-1.807E-02	3.380E-02	5.467E-02	0.000E+00	NOT IDENT.
FE-59	-1.532E-02	8.053E-02	1.305E-01	0.000E+00	NOT IDENT.
CO-60	-3.157E-03	3.284E-02	5.513E-02	0.000E+00	NOT IDENT.
ZN-65	-6.266E-02	9.121E-02	1.153E-01	0.000E+00	NOT IDENT.
GE-68	-2.390E-03	1.060E+00	1.757E+00	0.000E+00	NOT IDENT.
AS-73	-6.910E-01	1.378E+00	2.459E+00	0.000E+00	NOT IDENT.
AS-74	-4.682E-03	8.096E-02	1.413E-01	0.000E+00	NOT IDENT.
SE-75	-2.271E-02	3.961E-02	6.273E-02	0.000E+00	NOT IDENT.
BR-77	-1.425E+01	8.737E+00	1.242E+01	0.000E+00	FAIL ABUN
SR-82	-1.914E-01	3.341E-01	5.429E-01	0.000E+00	NOT IDENT.
RB-83	-9.360E-02	5.892E-02	8.426E-02	0.000E+00	NOT IDENT.
RB-84	7.348E-02	6.134E-02	1.147E-01	0.000E+00	NOT IDENT.
KR-85	5.343E+00	7.146E+00	1.123E+01	0.000E+00	NOT IDENT.
SR-85	2.738E-02	3.662E-02	5.752E-02	0.000E+00	NOT IDENT.
RB-86	-4.006E-01	6.729E-01	1.036E+00	0.000E+00	NOT IDENT.
Y-88	-2.931E-02	3.179E-02	4.114E-02	0.000E+00	NOT IDENT.
ZR-88	-4.330E-03	2.770E-02	4.712E-02	0.000E+00	NOT IDENT.
Y-91	2.964E+00	1.698E+01	2.960E+01	0.000E+00	NOT IDENT.
NB-94	7.783E-03	2.582E-02	4.575E-02	0.000E+00	NOT IDENT.
NB-95	1.017E-02	4.023E-02	7.020E-02	0.000E+00	NOT IDENT.
NB-95M	7.918E-02	1.166E-01	1.909E-01	0.000E+00	NOT IDENT.
ZR-95	1.545E-02	6.190E-02	1.084E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.808E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.649E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	4.281E-01	9.681E+00	1.671E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	2.939E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.912E-02	3.003E-02	4.844E-02	0.000E+00	NOT IDENT.
RH-102	-1.047E-02	2.527E-02	4.134E-02	0.000E+00	NOT IDENT.
RU-103	-3.019E-02	3.491E-02	5.421E-02	0.000E+00	FAIL ABUN
RH-106	1.192E-01	2.616E-01	4.721E-01	0.000E+00	FAIL ABUN
RU-106	1.192E-01	2.613E-01	4.721E-01	0.000E+00	FAIL ABUN
AG-108M	-1.829E-02	2.919E-02	4.749E-02	0.000E+00	NOT IDENT.
AG-110M	-4.721E-03	3.343E-02	4.970E-02	0.000E+00	NOT IDENT.
IN-111	-5.214E-01	9.641E-01	1.457E+00	0.000E+00	NOT IDENT.
IN-113M	-1.036E-02	3.992E-02	6.748E-02	0.000E+00	NOT IDENT.
SN-113	-1.036E-02	3.992E-02	6.748E-02	0.000E+00	NOT IDENT.
IN-114M	7.103E-03	1.829E-01	2.749E-01	0.000E+00	NOT IDENT.
CD-115	4.815E+00	9.594E+00	1.669E+01	0.000E+00	NOT IDENT.
SN-117M	-6.720E-03	4.869E-02	8.271E-02	0.000E+00	NOT IDENT.
SB-122	7.807E-01	1.751E+00	3.024E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.721E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-2.820E-03	2.519E-02	4.284E-02	0.000E+00	NOT IDENT.
I-124	-1.382E-01	5.766E-01	8.984E-01	0.000E+00	NOT IDENT.
SB-124	3.893E-02	5.294E-02	1.027E-01	0.000E+00	FAIL ABUN
SB-125	-1.515E-02	7.634E-02	1.283E-01	0.000E+00	FAIL ABUN
TE-125M	-1.472E+00	8.193E+00	1.417E+01	0.000E+00	NOT IDENT.
I-126	1.060E-01	1.697E-01	2.738E-01	0.000E+00	NOT IDENT.
SB-126	-8.626E-02	1.353E-01	1.972E-01	0.000E+00	FAIL ABUN
SB-127	5.652E-01	1.122E+00	2.019E+00	0.000E+00	NOT IDENT.
XE-127	-2.811E-02	3.980E-02	6.725E-02	0.000E+00	NOT IDENT.
I-131	9.650E-02	9.783E-02	1.791E-01	0.000E+00	NOT IDENT.
TE-132	-1.382E-01	5.645E-01	9.994E-01	0.000E+00	NOT IDENT.
BA-133	-1.897E-02	4.372E-02	6.392E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	5.305E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	7.492E-02	9.152E-02	0.000E+00	FAIL ABUN
CS-135	2.074E-01	1.517E-01	2.563E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.098E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-2.406E-02	9.492E-02	1.534E-01	0.000E+00	FAIL ABUN
CE-139	7.679E-04	2.663E-02	4.546E-02	0.000E+00	NOT IDENT.
BA-140	1.541E-01	2.292E-01	3.953E-01	0.000E+00	NOT IDENT.
LA-140	-1.566E-02	9.167E-02	1.319E-01	0.000E+00	FAIL ABUN
CE-141	-1.780E-02	5.788E-02	9.824E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.825E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-3.973E-02	1.999E-01	3.044E-01	0.000E+00	NOT IDENT.
PM-144	-9.915E-03	2.933E-02	4.934E-02	0.000E+00	NOT IDENT.
PR-144	-6.718E-01	1.987E+00	3.343E+00	0.000E+00	NOT IDENT.
PM-146	-1.645E-02	3.863E-02	6.350E-02	0.000E+00	NOT IDENT.
ND-147	-2.434E-02	5.181E-01	8.642E-01	0.000E+00	FAIL ABUN

PM-149	-1.471E+01	7.977E+01	1.392E+02	0.000E+00	NOT IDENT.
EU-152	-1.079E-02	9.571E-02	1.445E-01	0.000E+00	FAIL ABUN
GD-153	-3.058E-02	8.150E-02	1.258E-01	0.000E+00	NOT IDENT.
EU-154	4.613E-02	1.057E-01	1.885E-01	0.000E+00	NOT IDENT.
EU-155	1.354E-01	1.002E-01	1.836E-01	0.000E+00	FAIL ABUN
TB-160	4.729E-02	1.241E-01	2.174E-01	0.000E+00	FAIL ABUN
HO-166M	-7.387E-03	5.387E-02	9.196E-02	0.000E+00	NOT IDENT.
TM-171	-2.683E+01	3.214E+01	5.549E+01	0.000E+00	NOT IDENT.
LU-176	-1.123E-03	2.113E-02	3.692E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.373E+00	1.930E+00	0.000E+00	FAIL ABUN
LU-177M	-2.857E-01	1.541E-01	2.266E-01	0.000E+00	FAIL ABUN
HF-181	-4.582E-04	3.680E-02	6.209E-02	0.000E+00	NOT IDENT.
W-181	-3.731E-01	4.407E-01	7.622E-01	0.000E+00	NOT IDENT.
TA-182	1.417E-01	1.784E-01	3.257E-01	0.000E+00	FAIL ABUN
RE-183	-1.483E-02	9.776E-02	1.635E-01	0.000E+00	FAIL ABUN
RE-184	-1.090E-01	1.980E-01	3.424E-01	0.000E+00	NOT IDENT.
OS-185	-1.005E-02	3.794E-02	6.471E-02	0.000E+00	NOT IDENT.
RE-188	3.112E-02	1.524E-01	2.633E-01	0.000E+00	NOT IDENT.
W-188	-2.277E+00	7.494E+00	1.135E+01	0.000E+00	NOT IDENT.
IR-192	1.229E-02	2.982E-02	5.331E-02	0.000E+00	FAIL ABUN
AU-195	1.336E-01	2.084E-01	3.763E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	3.862E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	3.461E+00	6.064E+00	1.060E+01	0.000E+00	NOT IDENT.
TL-202	1.491E-02	6.182E-02	1.070E-01	0.000E+00	NOT IDENT.
HG-203	2.354E-02	3.650E-02	6.632E-02	0.000E+00	NOT IDENT.
BI-207	8.057E-04	4.373E-02	7.277E-02	0.000E+00	FAIL ABUN
TL-207	7.411E-02	6.521E-01	1.008E+00	0.000E+00	FAIL ABUN
PO-209	2.460E-01	7.194E+00	1.219E+01	0.000E+00	NOT IDENT.
BI-210	2.034E+00	7.866E+00	1.459E+01	0.000E+00	NOT IDENT.
PB-210	2.034E+00	7.866E+00	1.459E+01	0.000E+00	NOT IDENT.
PO-210	2.034E+00	7.865E+00	1.459E+01	0.000E+00	NOT IDENT.
PB-211	2.655E-01	8.353E-01	1.433E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.958E-01	6.416E-01	0.000E+00	FAIL ABUN
PO-215	7.411E-02	6.521E-01	1.008E+00	0.000E+00	FAIL ABUN
RN-219	-2.115E-01	3.789E-01	6.250E-01	0.000E+00	FAIL ABUN
RN-220	3.443E-01	2.370E+01	3.961E+01	0.000E+00	NOT IDENT.
RA-223	7.411E-02	6.521E-01	1.008E+00	0.000E+00	FAIL ABUN
AC-227	3.986E-02	3.312E-01	5.915E-01	0.000E+00	FAIL ABUN
TH-227	3.986E-02	3.312E-01	5.915E-01	0.000E+00	FAIL ABUN
TH-229	-2.916E-01	4.788E-01	7.731E-01	0.000E+00	FAIL ABUN
PA-231	-2.677E-01	1.363E+00	2.378E+00	0.000E+00	FAIL ABUN
TH-231	7.411E-02	6.521E-01	1.008E+00	0.000E+00	FAIL ABUN
U-231	-5.581E-01	1.080E+00	1.654E+00	0.000E+00	FAIL ABUN
PA-233	8.796E-03	5.551E-02	9.800E-02	0.000E+00	FAIL ABUN
PA-234	1.834E-01	2.687E-01	4.780E-01	0.000E+00	FAIL ABUN
PA-234M	4.091E+00	3.917E+00	7.202E+00	0.000E+00	NOT IDENT.
TH-234	1.424E+00	1.686E+00	3.055E+00	0.000E+00	FAIL ABUN
U-235	1.391E-01	1.967E-01	3.414E-01	0.000E+00	FAIL ABUN
NP-236	-3.139E-02	7.000E-02	1.170E-01	0.000E+00	NOT IDENT.
U-238	1.424E+00	1.686E+00	3.055E+00	0.000E+00	FAIL ABUN
NP-239	-9.173E-02	1.689E-01	2.874E-01	0.000E+00	FAIL ABUN
AM-241	1.439E-01	2.054E-01	3.811E-01	0.000E+00	NOT IDENT.
CM-243	6.107E-02	8.906E-02	1.607E-01	0.000E+00	FAIL ABUN
AM-246	7.933E-02	1.217E-01	2.161E-01	0.000E+00	NOT IDENT.
CM-247	-1.896E-02	3.350E-02	5.533E-02	0.000E+00	NOT IDENT.
CF-249	1.339E-02	3.490E-02	6.147E-02	0.000E+00	NOT IDENT.
CF-251	-2.001E-03	1.138E-01	1.930E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:20:46.27

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
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Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852004.CNF;1
Sample date       : 11-JAN-2010 12:00:00 Acquisition date : 26-JAN-2010 13:20:20
Sample ID         : G244852004           Sample quantity  : 1.37820E+02 GRAM
Detector name     : GAM10                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.03  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 942718               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	877	10.67*	1.106E+00	2.023E+01	2.023E+01	11.55
CD-109	88.03	260	3.72*	5.267E+00	3.613E+00	3.695E+00	31.16
SN-126	64.28	------	9.60	2.419E+00	------ Line Not Found		------
	86.94	260	8.90	5.267E+00	1.510E+00	1.510E+00	51.06
	87.57	260	37.00*	5.267E+00	3.632E-01	3.632E-01	31.16
BA-137M	661.65	224	89.98*	2.353E+00	2.875E-01	2.877E-01	20.67
CS-137	661.65	224	85.12*	2.353E+00	3.039E-01	3.042E-01	20.68
TL-208	277.35	------	6.80	4.610E+00	------ Line Not Found		------
	510.84	84	21.60	2.928E+00	3.606E-01	3.606E-01	73.78
	583.14	381	84.20*	2.626E+00	4.699E-01	4.699E-01	17.50
	860.37	38	12.46	1.838E+00	4.566E-01	4.566E-01	88.11
BI-211	72.87	------	1.27	3.633E+00	------ Line Not Found		------
	351.07	641	12.94*	3.886E+00	3.475E+00	3.475E+00	13.32
PB-212	74.81	253	10.70	3.880E+00	1.659E+00	1.659E+00	31.67
	77.11	539	18.00	4.164E+00	1.958E+00	1.958E+00	19.25
	87.30	260	8.00	5.267E+00	1.680E+00	1.680E+00	32.72
	238.63	1291	44.60*	5.113E+00	1.541E+00	1.541E+00	10.12
	300.09	42	3.41	4.361E+00	7.641E-01	7.641E-01	117.86
PO-212	74.81	253	10.70	3.880E+00	1.659E+00	1.659E+00	31.67
	77.11	539	18.00	4.164E+00	1.958E+00	1.958E+00	19.25
	87.30	260	8.00	5.267E+00	1.680E+00	1.680E+00	32.72
	115.19	------	0.60	6.657E+00	------ Line Not Found		------
	238.63	1291	44.60*	5.113E+00	1.541E+00	1.541E+00	10.12
	300.09	42	3.41	4.361E+00	7.641E-01	7.641E-01	117.86
BI-214	609.31	450	46.30*	2.529E+00	1.047E+00	1.048E+00	15.76
	1120.29	91	15.10	1.414E+00	1.157E+00	1.157E+00	39.43
	1764.49	------	15.80	9.764E-01	------ Line Not Found		------
PB-214	74.81	253	6.21	3.880E+00	2.858E+00	2.858E+00	31.16
	77.11	539	10.50	4.164E+00	3.357E+00	3.357E+00	20.71
	87.30	260	4.67	5.267E+00	2.878E+00	2.878E+00	32.10
	241.98	291	7.49	5.071E+00	2.088E+00	2.088E+00	23.03
	295.21	390	19.20	4.411E+00	1.255E+00	1.255E+00	20.94

Sample ID : G244852004 Acquisition date : 26-JAN-2010 13:20:20

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	351.92	641	37.20*	3.886E+00	1.209E+00	1.209E+00	14.30
PO-214	74.81	253	6.21	3.880E+00	2.858E+00	2.858E+00	31.16
	77.11	539	10.50	4.164E+00	3.357E+00	3.357E+00	20.71
	87.30	260	4.67	5.267E+00	2.878E+00	2.878E+00	32.10
	241.98	291	7.49	5.071E+00	2.088E+00	2.088E+00	23.03
	295.21	390	19.20	4.411E+00	1.255E+00	1.255E+00	20.94
	351.92	641	37.20*	3.886E+00	1.209E+00	1.209E+00	14.30
PO-216	74.81	253	10.70	3.880E+00	1.659E+00	1.659E+00	31.67
	77.11	539	18.00	4.164E+00	1.958E+00	1.958E+00	19.25
	87.30	260	8.00	5.267E+00	1.680E+00	1.680E+00	32.72
	238.63	1291	44.60*	5.113E+00	1.541E+00	1.541E+00	10.12
	300.09	42	3.41	4.361E+00	7.641E-01	7.641E-01	117.86
PO-218	74.81	253	6.21	3.880E+00	2.858E+00	2.858E+00	31.16
	77.11	539	10.50	4.164E+00	3.357E+00	3.357E+00	20.71
	87.30	260	4.67	5.267E+00	2.878E+00	2.878E+00	32.10
	241.98	291	7.49	5.071E+00	2.088E+00	2.088E+00	23.03
	295.21	390	19.20	4.411E+00	1.255E+00	1.255E+00	20.94
	351.92	641	37.20*	3.886E+00	1.209E+00	1.209E+00	14.30
RA-224	240.98	291	3.95*	5.071E+00	3.960E+00	3.960E+00	22.34
RA-226	609.31	450	46.30*	2.529E+00	1.047E+00	1.048E+00	15.76
	1120.29	91	15.10	1.414E+00	1.157E+00	1.157E+00	39.43
	1764.49	------	15.80	9.764E-01	------	Line Not Found	------
AC-228	338.32	335	11.40	3.999E+00	2.001E+00	2.001E+00	45.72
	911.07	219	27.70*	1.738E+00	1.239E+00	1.239E+00	26.24
	969.11	191	16.60	1.635E+00	1.917E+00	1.917E+00	30.39
RA-228	338.32	335	11.40	3.999E+00	2.001E+00	2.001E+00	45.72
	911.07	219	27.70*	1.738E+00	1.239E+00	1.239E+00	26.24
	969.11	191	16.60	1.635E+00	1.917E+00	1.917E+00	30.39
TH-228	74.81	253	10.70	3.880E+00	1.659E+00	1.684E+00	30.28
	77.11	539	18.00	4.164E+00	1.958E+00	1.988E+00	19.25
	87.30	260	8.00	5.267E+00	1.680E+00	1.705E+00	31.16
	238.63	1291	44.60*	5.113E+00	1.541E+00	1.565E+00	10.12
	300.09	42	3.41	4.361E+00	7.641E-01	7.757E-01	131.52
TH-230	609.31	450	46.30*	2.529E+00	1.047E+00	1.047E+00	15.76
	1120.29	91	15.10	1.414E+00	1.157E+00	1.157E+00	39.43
	1764.49	------	15.80	9.764E-01	------	Line Not Found	------
TH-232	338.32	335	11.40	3.999E+00	2.001E+00	2.001E+00	21.50
	911.07	219	27.70*	1.738E+00	1.239E+00	1.239E+00	26.24
	969.11	191	16.60	1.635E+00	1.917E+00	1.917E+00	30.39
U-234	609.31	450	46.30*	2.529E+00	1.047E+00	1.047E+00	15.76
	1120.29	91	15.10	1.414E+00	1.157E+00	1.157E+00	39.43
	1764.49	------	15.80	9.764E-01	------	Line Not Found	------
NP-237	86.50	260	12.60*	5.267E+00	1.067E+00	1.067E+00	37.37
	95.87	------	2.60	5.933E+00	------	Line Not Found	------
AM-243	74.67	253	66.00*	3.880E+00	2.689E-01	2.689E-01	30.26
	86.72	260	0.34	5.267E+00	4.000E+01	4.000E+01	31.16
	117.66	------	0.55	6.694E+00	------	Line Not Found	------
	142.18	------	0.13	6.676E+00	------	Line Not Found	------
ANH-511	511.00	84	100.00*	2.928E+00	7.789E-02	7.789E-02	73.31

Flag: "*" = Keyline

Sample ID : G244852004 Acquisition date : 26-JAN-2010 13:20:20

Total number of lines in spectrum 33
Number of unidentified lines 3
Number of lines tentatively identified by NID 30 90.91%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.023E+01	2.023E+01	0.234E+01	11.55	
CD-109	464.00D	1.02	3.613E+00	3.695E+00	1.151E+00	31.16	
SN-126	1.00E+05Y	1.00	3.632E-01	3.632E-01	1.132E-01	31.16	
BA-137M	30.17Y	1.00	2.875E-01	2.877E-01	0.595E-01	20.67	
CS-137	30.17Y	1.00	3.039E-01	3.042E-01	0.629E-01	20.68	
TL-208	1.41E+10Y	1.00	4.699E-01	4.699E-01	0.822E-01	17.50	
BI-211	7.04E+08Y	1.00	3.475E+00	3.475E+00	0.463E+00	13.32	
PB-212	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.156E+00	10.12	
PO-212	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.156E+00	10.12	
BI-214	1600.00Y	1.00	1.047E+00	1.048E+00	0.165E+00	15.76	
PB-214	1600.00Y	1.00	1.209E+00	1.209E+00	0.173E+00	14.30	
PO-214	1600.00Y	1.00	1.209E+00	1.209E+00	0.173E+00	14.30	
PO-216	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.156E+00	10.12	
PO-218	1600.00Y	1.00	1.209E+00	1.209E+00	0.173E+00	14.30	
RA-224	1.41E+10Y	1.00	3.960E+00	3.960E+00	0.885E+00	22.34	
RA-226	1600.00Y	1.00	1.047E+00	1.048E+00	0.165E+00	15.76	
AC-228	1.41E+10Y	1.00	1.239E+00	1.239E+00	0.325E+00	26.24	
RA-228	1.41E+10Y	1.00	1.239E+00	1.239E+00	0.325E+00	26.24	
TH-228	1.91Y	1.02	1.541E+00	1.565E+00	0.158E+00	10.12	
TH-230	4.47E+09Y	1.00	1.047E+00	1.047E+00	0.165E+00	15.76	
TH-232	1.41E+10Y	1.00	1.239E+00	1.239E+00	0.325E+00	26.24	
U-234	4.47E+09Y	1.00	1.047E+00	1.047E+00	0.165E+00	15.76	
NP-237	2.14E+06Y	1.00	1.067E+00	1.067E+00	0.399E+00	37.37	
AM-243	7380.00Y	1.00	2.689E-01	2.689E-01	0.814E-01	30.26	
ANH-511	1.00E+09Y	1.00	7.789E-02	7.789E-02	5.710E-02	73.31	
			---	---			
	Total Activity :		5.182E+01	5.193E+01			

Grand Total Activity : 5.182E+01 5.193E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G244852004 Acquisition date : 26-JAN-2010 13:20:20

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	89.61	168	376	1.27	179.33	165	26	2.34E-02	43.1	5.48E+00	T
3	92.50	292	382	1.30	185.10	165	26	4.06E-02	27.0	5.70E+00	T
0	129.03	100	380	1.49	258.10	254	10	1.39E-02	75.3	6.76E+00	T
0	186.00	237	366	1.44	371.94	367	10	3.29E-02	34.0	5.98E+00	T
0	209.39	121	295	1.41	418.70	413	9	1.67E-02	54.6	5.57E+00	T
0	270.24	115	220	1.24	540.30	536	9	1.60E-02	49.9	4.69E+00	T
0	328.54	93	176	0.66	656.82	652	11	1.30E-02	59.3	4.09E+00	T
0	462.75	63	113	1.34	925.06	920	11	8.71E-03	70.3	3.17E+00	T
0	727.68	135	45	1.58	1454.70	1448	13	1.87E-02	26.8	2.16E+00	T
0	795.24	108	58	1.59	1589.78	1581	18	1.51E-02	38.2	1.99E+00	T
4	965.08	72	31	2.56	1929.38	1923	23	1.00E-02	40.4	1.64E+00	T
0	1239.53	61	49	0.97	2478.27	2473	14	8.47E-03	55.0	1.28E+00	T
0	1590.26	15	21	1.04	3179.93	3173	11	2.04E-03	****	1.04E+00	
0	1731.84	10	10	0.80	3463.22	3458	9	1.42E-03	****	9.86E-01	
0	1766.11	81	16	1.52	3531.79	3523	15	1.12E-02	32.3	9.76E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:20:52.43

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*******************************************************************************
*                            GEL Laboratories LLC                             *
*                              2040 Savage Road                               *
*                            Charleston, SC 29414                             *
*******************************************************************************
*                                                                             *
*                              DETECTOR DATA                                  *
*                                                                             *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G244852004.CNF;1   *
* Acquisition date  : 26-JAN-2010 13:20:20  Detector SN#     :               *
* Detector ID       : GAM10                 Sensitivity      : 5.00000        *
* Geometry          : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:01.03          Half life ratio : 8.00000        *
*******************************************************************************
*                                                                             *
*                               SAMPLE DATA                                   *
*                                                                             *
* Sample date       : 11-JAN-2010 12:00:00  Nuclide Library : SOLID          *
* Sample ID         : G244852004            Analyst initials: MXR1           *
* Batch Number      : 942718                Sample Quantity : 1.37820E+02 GRAM *
*******************************************************************************
*                                                                             *
*                                 QC DATA                                     *
*                                                                             *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08.8MS Isotope       :                *
* MSD ID           :                       MSD Isotope      :                *
* LCS ID           : 1032-A                LCS Isotope      :                *
*******************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.023E+01	2.337E+00	5.243E-01	4.516E-02	38.595
CD-109	3.695E+00	1.151E+00	1.166E+00	1.322E-01	3.168
SN-126	3.632E-01	1.132E-01	1.155E-01	1.307E-02	3.146
BA-137M	2.877E-01	5.948E-02	5.290E-02	2.610E-03	5.440
CS-137	3.042E-01	6.290E-02	5.592E-02	2.775E-03	5.440
TL-208	4.699E-01	8.223E-02	5.338E-02	3.587E-03	8.803
BI-211	3.475E+00	4.628E-01	3.119E-01	2.274E-02	11.139
PB-212	1.541E+00	1.560E-01	8.127E-02	6.165E-03	18.967
PO-212	1.541E+00	1.560E-01	8.127E-02	6.165E-03	18.967
BI-214	1.048E+00	1.651E-01	9.651E-02	7.344E-03	10.853
PB-214	1.209E+00	1.729E-01	1.047E-01	9.393E-03	11.541
PO-214	1.209E+00	1.729E-01	1.047E-01	9.393E-03	11.541
PO-216	1.541E+00	1.560E-01	8.127E-02	6.165E-03	18.967
PO-218	1.209E+00	1.729E-01	1.047E-01	9.393E-03	11.541
RA-224	3.960E+00	8.846E-01	9.247E-01	5.676E-02	4.282
RA-226	1.048E+00	1.651E-01	9.651E-02	7.344E-03	10.853
AC-228	1.239E+00	3.252E-01	1.848E-01	2.280E-02	6.707
RA-228	1.239E+00	3.252E-01	1.848E-01	2.280E-02	6.707

Sample ID : G244852004 Acquisition date : 26-JAN-2010 13:20:20

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.565E+00	1.583E-01	8.250E-02	6.258E-03	18.967
TH-230	1.047E+00	1.651E-01	9.651E-02	7.344E-03	10.853
TH-232	1.239E+00	3.252E-01	1.848E-01	2.280E-02	6.707
U-234	1.047E+00	1.651E-01	9.651E-02	7.344E-03	10.853
NP-237	1.067E+00	3.986E-01	3.451E-01	8.110E-02	3.091
AM-243	2.689E-01	8.138E-02	9.779E-02	1.071E-02	2.750
ANH-511	7.789E-02	5.710E-02	4.117E-02	2.638E-03	1.892

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	6.181E-02		2.891E-01	4.743E-01	3.527E-02	0.130
NA-22	9.620E-03		3.919E-02	6.688E-02	5.180E-03	0.144
NA-24	-1.079E-01		3.400E-01	Half-Life too short		
AL-26	1.027E-02		2.170E-02	3.941E-02	2.499E-03	0.261
TI-44	3.613E-01	+	6.957E-02	7.242E-02	7.925E-03	4.989
SC-46	-2.240E-02		3.413E-02	5.173E-02	5.119E-03	-0.433
V-48	-4.678E-02		6.393E-02	9.495E-02	8.780E-03	-0.493
CR-51	3.344E-02		3.221E-01	5.367E-01	3.877E-02	0.062
MN-52	-8.387E-02		2.269E-01	3.542E-01	2.993E-02	-0.237
MN-54	4.608E-02		3.379E-02	6.148E-02	5.252E-03	0.749
CO-56	1.484E-02		3.526E-02	6.010E-02	5.307E-03	0.247
CO-57	-3.148E-03		2.267E-02	3.650E-02	2.407E-03	-0.086
CO-58	-1.807E-02		3.449E-02	5.386E-02	4.310E-03	-0.336
FE-59	-1.532E-02		8.218E-02	1.293E-01	1.079E-02	-0.118
CO-60	-3.157E-03		3.351E-02	5.486E-02	4.767E-03	-0.058
ZN-65	-6.266E-02		9.308E-02	1.143E-01	8.327E-03	-0.548
GE-68	-2.390E-03		1.081E+00	1.741E+00	1.379E-01	-0.001
AS-73	-6.910E-01		1.407E+00	2.302E+00	3.046E-01	-0.300
AS-74	-4.682E-03		8.261E-02	1.384E-01	7.906E-03	-0.034
SE-75	-2.271E-02		4.042E-02	6.047E-02	3.857E-03	-0.376
BR-77	-1.425E+01		8.915E+00	1.213E+01	7.698E-01	-1.174
SR-82	-1.914E-01		3.410E-01	5.344E-01	3.853E-02	-0.358
RB-83	-9.360E-02		6.012E-02	8.229E-02	5.222E-03	-1.137
RB-84	7.348E-02		6.259E-02	1.132E-01	1.098E-02	0.649
KR-85	5.343E+00		7.292E+00	1.096E+01	7.002E-01	0.487
SR-85	2.738E-02		3.736E-02	5.617E-02	3.588E-03	0.487
RB-86	-4.006E-01		6.867E-01	1.027E+00	8.145E-02	-0.390
Y-88	-2.931E-02		3.244E-02	4.120E-02	2.528E-03	-0.711
ZR-88	-4.330E-03		2.826E-02	4.577E-02	3.111E-03	-0.095
Y-91	2.964E+00		1.733E+01	2.939E+01	1.952E+00	0.101
NB-94	7.783E-03		2.635E-02	4.495E-02	2.559E-03	0.173
NB-95	1.017E-02		4.105E-02	6.908E-02	4.821E-03	0.147
NB-95M	7.918E-02		1.190E-01	1.836E-01	1.424E-02	0.431
ZR-95	1.545E-02		6.316E-02	1.067E-01	8.378E-03	0.145
NB-97	-8.394E-03		4.494E-02	Half-Life too short		
ZR-97	4.596E-01		8.411E-01	Half-Life too short		

Sample ID : G244852004 Acquisition date : 26-JAN-2010 13:20:20

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	4.281E-01		9.878E+00	1.643E+01	2.310E+00	0.026
TC-99M	5.208E+09		1.499E+10	Half-Life too short		
RH-101	-1.912E-02		3.064E-02	4.644E-02	2.668E-03	-0.412
RH-102	-1.047E-02		2.578E-02	4.031E-02	2.659E-03	-0.260
RU-103	-3.019E-02		3.562E-02	5.290E-02	6.863E-03	-0.571
RH-106	1.192E-01		2.669E-01	4.627E-01	5.348E-02	0.258
RU-106	1.192E-01		2.666E-01	4.627E-01	2.513E-02	0.258
AG-108M	-1.829E-02		2.978E-02	4.621E-02	3.314E-03	-0.396
AG-110M	-4.721E-03		3.411E-02	4.876E-02	2.642E-03	-0.097
IN-111	-5.214E-01		9.838E-01	1.403E+00	8.662E-02	-0.372
IN-113M	-1.036E-02		4.074E-02	6.554E-02	4.674E-03	-0.158
SN-113	-1.036E-02		4.074E-02	6.554E-02	4.674E-03	-0.158
IN-114M	7.103E-03		1.867E-01	2.634E-01	1.494E-02	0.027
CD-115	4.815E+00		9.790E+00	1.631E+01	1.027E+00	0.295
SN-117M	-6.720E-03		4.968E-02	7.897E-02	4.429E-03	-0.085
SB-122	7.807E-01		1.787E+00	2.958E+00	1.779E-01	0.264
I-123	-5.285E-01		2.409E+00	Half-Life too short		
TE-123M	-2.820E-03		2.571E-02	4.091E-02	2.323E-03	-0.069
I-124	-1.382E-01		5.884E-01	8.799E-01	4.964E-02	-0.157
SB-124	3.893E-02		5.402E-02	1.026E-01	7.799E-03	0.379
SB-125	-1.515E-02		7.789E-02	1.249E-01	8.694E-03	-0.121
TE-125M	-1.472E+00		8.361E+00	1.344E+01	1.290E+00	-0.110
I-126	1.060E-01		1.732E-01	2.687E-01	1.348E-02	0.394
SB-126	-8.626E-02		1.381E-01	1.938E-01	1.171E-02	-0.445
SB-127	5.652E-01		1.145E+00	1.982E+00	1.813E-01	0.285
XE-127	-2.811E-02		4.061E-02	6.451E-02	3.735E-03	-0.436
I-131	9.650E-02		9.982E-02	1.737E-01	1.277E-02	0.556
TE-132	-1.382E-01		5.760E-01	9.607E-01	1.388E-01	-0.144
BA-133	-1.897E-02		4.461E-02	6.197E-02	7.476E-03	-0.306
I-133	6.478E-04		2.707E-03	Half-Life too short		
CS-134	1.962E-01	+	7.645E-02	9.014E-02	6.949E-03	2.177
CS-135	2.074E-01		1.548E-01	2.471E-01	1.997E-02	0.839
I-135	2.246E+09		2.091E+09	Half-Life too short		
CS-136	-2.406E-02		9.685E-02	1.519E-01	1.330E-02	-0.158
CE-139	7.679E-04		2.718E-02	4.344E-02	2.373E-03	0.018
BA-140	1.541E-01		2.338E-01	3.863E-01	1.259E-01	0.399
LA-140	-1.566E-02		9.354E-02	1.317E-01	1.022E-02	-0.119
CE-141	-1.780E-02		5.906E-02	9.364E-02	5.731E-03	-0.190
CE-143	5.133E-04		9.311E-05	Half-Life too short		
CE-144	-3.973E-02		2.040E-01	2.897E-01	4.162E-02	-0.137
PM-144	-9.915E-03		2.993E-02	4.847E-02	2.704E-03	-0.205
PR-144	-6.718E-01		2.028E+00	3.284E+00	1.831E-01	-0.205
PM-146	-1.645E-02		3.942E-02	6.185E-02	5.713E-03	-0.266
ND-147	-2.434E-02		5.287E-01	8.444E-01	1.159E-01	-0.029
PM-149	-1.471E+01		8.140E+01	1.344E+02	1.943E+01	-0.109
EU-152	-1.079E-02		9.766E-02	1.400E-01	1.032E-02	-0.077
GD-153	-3.058E-02		8.316E-02	1.190E-01	1.108E-02	-0.257
EU-154	4.613E-02		1.078E-01	1.874E-01	1.996E-02	0.246

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	1.354E-01		1.023E-01	1.740E-01	1.443E-02	0.779
TB-160	4.729E-02		1.266E-01	2.145E-01	2.068E-02	0.220
HO-166M	-7.387E-03		5.497E-02	9.037E-02	5.303E-03	-0.082
TM-171	-2.683E+01		3.280E+01	5.215E+01	5.941E+00	-0.514
LU-176	-1.123E-03		2.156E-02	3.569E-02	2.348E-03	-0.031
LU-177	2.549E+00	+	1.401E+00	1.852E+00	1.082E-01	1.377
LU-177M	-2.857E-01		1.572E-01	2.203E-01	1.493E-02	-1.297
HF-181	-4.582E-04		3.756E-02	6.055E-02	3.975E-03	-0.008
W-181	-3.731E-01		4.497E-01	7.160E-01	8.273E-02	-0.521
TA-182	1.417E-01		1.821E-01	3.235E-01	2.231E-02	0.438
RE-183	-1.483E-02		9.976E-02	1.562E-01	8.637E-03	-0.095
RE-184	-1.090E-01		2.020E-01	3.297E-01	2.056E-02	-0.331
OS-185	-1.005E-02		3.871E-02	6.346E-02	3.260E-03	-0.158
RE-188	3.112E-02		1.555E-01	2.513E-01	1.428E-02	0.124
W-188	-2.277E+00		7.646E+00	1.096E+01	7.117E-01	-0.208
IR-192	1.229E-02		3.043E-02	5.157E-02	3.428E-03	0.238
AU-195	1.336E-01		2.126E-01	3.562E-01	3.232E-02	0.375
TL-200	-2.287E-05		1.971E-04	Half-Life too short		
TL-201	3.461E+00		6.188E+00	1.013E+01	5.542E-01	0.342
TL-202	1.491E-02		6.309E-02	1.041E-01	7.001E-03	0.143
HG-203	2.354E-02		3.725E-02	6.400E-02	4.319E-03	0.368
BI-207	8.057E-04		4.462E-02	7.208E-02	5.868E-03	0.011
TL-207	7.411E-02		6.654E-01	9.759E-01	1.643E-01	0.076
PO-209	2.460E-01		7.341E+00	1.203E+01	1.214E+00	0.020
BI-210	2.034E+00		8.026E+00	1.362E+01	1.336E+00	0.149
PB-210	2.034E+00		8.026E+00	1.362E+01	1.336E+00	0.149
PO-210	2.034E+00		8.026E+00	1.362E+01	1.223E+00	0.149
PB-211	2.655E-01		8.523E-01	1.393E+00	8.699E-01	0.191
BI-212	1.442E+00	+	4.039E-01	6.308E-01	5.046E-02	2.286
PO-215	7.411E-02		6.654E-01	9.759E-01	1.643E-01	0.076
RN-219	-2.115E-01		3.866E-01	6.073E-01	8.537E-02	-0.348
RN-220	3.443E-01		2.419E+01	3.872E+01	2.375E+00	0.009
RA-223	7.411E-02		6.654E-01	9.759E-01	1.643E-01	0.076
AC-227	3.986E-02		3.379E-01	5.699E-01	8.069E-02	0.070
TH-227	3.986E-02		3.380E-01	5.699E-01	9.724E-02	0.070
TH-229	-2.916E-01		4.885E-01	7.409E-01	4.225E-02	-0.394
PA-231	-2.677E-01		1.390E+00	2.295E+00	3.229E-01	-0.117
TH-231	7.411E-02		6.654E-01	9.759E-01	1.643E-01	0.076
U-231	-5.581E-01		1.102E+00	1.565E+00	1.500E-01	-0.357
PA-233	8.796E-03		5.664E-02	9.477E-02	6.558E-03	0.093
PA-234	1.834E-01		2.742E-01	4.723E-01	9.101E-02	0.388
PA-234M	4.091E+00		3.997E+00	7.126E+00	7.354E-01	0.574
TH-234	1.424E+00		1.720E+00	2.869E+00	5.654E-01	0.497
U-235	1.391E-01		2.007E-01	3.254E-01	5.321E-02	0.428
NP-236	-3.139E-02		7.143E-02	1.117E-01	6.227E-03	-0.281
U-238	1.424E+00		1.720E+00	2.869E+00	5.654E-01	0.497
NP-239	-9.173E-02		1.723E-01	2.729E-01	1.909E-02	-0.336
AM-241	1.439E-01		2.096E-01	3.574E-01	4.590E-02	0.403

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	6.107E-02		9.088E-02	1.523E-01	1.276E-02	0.401
AM-246	7.933E-02		1.242E-01	2.142E-01	1.691E-02	0.370
CM-247	-1.896E-02		3.419E-02	5.377E-02	3.651E-03	-0.353
CF-249	1.339E-02		3.561E-02	5.969E-02	4.056E-03	0.224
CF-251	-2.001E-03		1.162E-01	1.847E-01	1.024E-02	-0.011

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G244852004           *
* Acquisition date  : 26-JAN-2010 13:20:20 Detector SN#     :               *
* Detector ID       : GAM10                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:01.03      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 11-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G244852004           Analyst initials: MXR1           *
* Batch Number      : 942718               Sample Quantity : 1.3782E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 16-MAR-2009 13:18:08 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.023E+01	2.290E+00	2.631E-01	1.168E+00
CD-109	3.695E+00	1.128E+00	6.178E-01	5.757E-01
SN-126	3.632E-01	1.109E-01	6.117E-02	5.659E-02
BA-137M	2.877E-01	5.829E-02	2.697E-02	2.974E-02
CS-137	3.042E-01	6.164E-02	2.851E-02	3.145E-02
TL-208	4.699E-01	8.059E-02	2.728E-02	4.112E-02
BI-211	3.475E+00	4.536E-01	1.610E-01	2.314E-01
PB-212	1.541E+00	1.529E-01	4.226E-02	7.799E-02
PO-212	1.541E+00	1.529E-01	4.226E-02	7.799E-02
BI-214	1.048E+00	1.618E-01	4.929E-02	8.253E-02
PB-214	1.209E+00	1.695E-01	5.406E-02	8.646E-02
PO-214	1.209E+00	1.695E-01	5.406E-02	8.646E-02
PO-216	1.541E+00	1.529E-01	4.226E-02	7.799E-02
PO-218	1.209E+00	1.695E-01	5.406E-02	8.646E-02
RA-224	3.960E+00	8.669E-01	4.807E-01	4.423E-01
RA-226	1.048E+00	1.618E-01	4.929E-02	8.253E-02
AC-228	1.239E+00	3.187E-01	9.361E-02	1.626E-01
RA-228	1.239E+00	3.187E-01	9.361E-02	1.626E-01
TH-228	1.565E+00	1.552E-01	4.290E-02	7.917E-02
TH-230	1.047E+00	1.618E-01	4.929E-02	8.253E-02
TH-232	1.239E+00	3.187E-01	9.361E-02	1.626E-01
U-234	1.047E+00	1.618E-01	4.929E-02	8.253E-02
NP-237	1.067E+00	3.906E-01	1.829E-01	1.993E-01
AM-243	2.689E-01	7.975E-02	5.196E-02	4.069E-02
ANH-511	7.789E-02	5.596E-02	2.110E-02	2.855E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	6.181E-02	2.833E-01	2.434E-01	1.445E-01	NOT IDENT.
NA-22	9.620E-03	3.840E-02	3.366E-02	1.959E-02	NOT IDENT.

NA-24	-1.079E+05	6.664E+05	0.000E+00	3.400E+05	SHORT HLIF
AL-26	1.027E-02	2.127E-02	1.969E-02	1.085E-02	NOT IDENT.
TI-44	3.613E-01	6.818E-02	3.845E-02	3.479E-02	FAIL ABUN
SC-46	-2.240E-02	3.344E-02	2.622E-02	1.706E-02	FAIL ABUN
V-48	-4.678E-02	6.265E-02	4.803E-02	3.196E-02	NOT IDENT.
CR-51	3.344E-02	3.157E-01	2.775E-01	1.610E-01	NOT IDENT.
MN-52	-8.387E-02	2.223E-01	1.778E-01	1.134E-01	NOT IDENT.
MN-54	4.608E-02	3.311E-02	3.120E-02	1.689E-02	NOT IDENT.
CO-56	1.484E-02	3.456E-02	3.049E-02	1.763E-02	FAIL ABUN
CO-57	-3.148E-03	2.222E-02	1.922E-02	1.133E-02	NOT IDENT.
CO-58	-1.807E-02	3.380E-02	2.735E-02	1.725E-02	NOT IDENT.
FE-59	-1.532E-02	8.053E-02	6.527E-02	4.109E-02	NOT IDENT.
CO-60	-3.157E-03	3.284E-02	2.758E-02	1.676E-02	NOT IDENT.
ZN-65	-6.266E-02	9.121E-02	5.769E-02	4.654E-02	NOT IDENT.
GE-68	-2.390E-03	1.060E+00	8.790E-01	5.406E-01	NOT IDENT.
AS-73	-6.910E-01	1.378E+00	1.230E+00	7.033E-01	NOT IDENT.
AS-74	-4.682E-03	8.096E-02	7.071E-02	4.131E-02	NOT IDENT.
SE-75	-2.271E-02	3.961E-02	3.138E-02	2.021E-02	NOT IDENT.
BR-77	-1.425E+01	8.737E+00	6.215E+00	4.457E+00	FAIL ABUN
SR-82	-1.914E-01	3.341E-01	2.716E-01	1.705E-01	NOT IDENT.
RB-83	-9.360E-02	5.892E-02	4.215E-02	3.006E-02	NOT IDENT.
RB-84	7.348E-02	6.134E-02	5.740E-02	3.130E-02	NOT IDENT.
KR-85	5.343E+00	7.146E+00	5.617E+00	3.646E+00	NOT IDENT.
SR-85	2.738E-02	3.662E-02	2.878E-02	1.868E-02	NOT IDENT.
RB-86	-4.006E-01	6.729E-01	5.184E-01	3.433E-01	NOT IDENT.
Y-88	-2.931E-02	3.179E-02	2.058E-02	1.622E-02	NOT IDENT.
ZR-88	-4.330E-03	2.770E-02	2.358E-02	1.413E-02	NOT IDENT.
Y-91	2.964E+00	1.698E+01	1.481E+01	8.664E+00	NOT IDENT.
NB-94	7.783E-03	2.582E-02	2.289E-02	1.317E-02	NOT IDENT.
NB-95	1.017E-02	4.023E-02	3.512E-02	2.052E-02	NOT IDENT.
NB-95M	7.918E-02	1.166E-01	9.551E-02	5.951E-02	NOT IDENT.
ZR-95	1.545E-02	6.190E-02	5.424E-02	3.158E-02	NOT IDENT.
NB-97	-8.394E+03	8.808E+04	0.000E+00	4.494E+04	SHORT HLIF
ZR-97	4.596E+05	1.649E+06	0.000E+00	8.411E+05	SHORT HLIF
MO-99	4.281E-01	9.681E+00	8.360E+00	4.939E+00	NOT IDENT.
TC-99M	5.208E+15	2.939E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.912E-02	3.003E-02	2.423E-02	1.532E-02	NOT IDENT.
RH-102	-1.047E-02	2.527E-02	2.068E-02	1.289E-02	NOT IDENT.
RU-103	-3.019E-02	3.491E-02	2.712E-02	1.781E-02	FAIL ABUN
RH-106	1.192E-01	2.616E-01	2.362E-01	1.335E-01	FAIL ABUN
RU-106	1.192E-01	2.613E-01	2.362E-01	1.333E-01	FAIL ABUN
AG-108M	-1.829E-02	2.919E-02	2.376E-02	1.489E-02	NOT IDENT.
AG-110M	-4.721E-03	3.343E-02	2.486E-02	1.706E-02	NOT IDENT.
IN-111	-5.214E-01	9.641E-01	7.290E-01	4.919E-01	NOT IDENT.
IN-113M	-1.036E-02	3.992E-02	3.376E-02	2.037E-02	NOT IDENT.
SN-113	-1.036E-02	3.992E-02	3.376E-02	2.037E-02	NOT IDENT.
IN-114M	7.103E-03	1.829E-01	1.375E-01	9.334E-02	NOT IDENT.
CD-115	4.815E+00	9.594E+00	8.351E+00	4.895E+00	NOT IDENT.
SN-117M	-6.720E-03	4.869E-02	4.138E-02	2.484E-02	NOT IDENT.
SB-122	7.807E-01	1.751E+00	1.513E+00	8.936E-01	NOT IDENT.
I-123	-5.285E+05	4.721E+06	0.000E+00	2.409E+06	SHORT HLIF
TE-123M	-2.820E-03	2.519E-02	2.143E-02	1.285E-02	NOT IDENT.
I-124	-1.382E-01	5.766E-01	4.495E-01	2.942E-01	NOT IDENT.
SB-124	3.893E-02	5.294E-02	5.136E-02	2.701E-02	FAIL ABUN
SB-125	-1.515E-02	7.634E-02	6.420E-02	3.895E-02	FAIL ABUN
TE-125M	-1.472E+00	8.193E+00	7.090E+00	4.180E+00	NOT IDENT.
I-126	1.060E-01	1.697E-01	1.370E-01	8.659E-02	NOT IDENT.
SB-126	-8.626E-02	1.353E-01	9.864E-02	6.905E-02	FAIL ABUN
SB-127	5.652E-01	1.122E+00	1.010E+00	5.723E-01	NOT IDENT.
XE-127	-2.811E-02	3.980E-02	3.365E-02	2.030E-02	NOT IDENT.
I-131	9.650E-02	9.783E-02	8.960E-02	4.991E-02	NOT IDENT.
TE-132	-1.382E-01	5.645E-01	5.000E-01	2.880E-01	NOT IDENT.
BA-133	-1.897E-02	4.372E-02	3.198E-02	2.230E-02	NOT IDENT.
I-133	6.478E+02	5.305E+03	0.000E+00	2.707E+03	SHORT HLIF
CS-134	1.962E-01	7.492E-02	4.579E-02	3.823E-02	FAIL ABUN
CS-135	2.074E-01	1.517E-01	1.282E-01	7.738E-02	NOT IDENT.
I-135	2.246E+15	4.098E+15	0.000E+00	2.091E+15	SHORT HLIF
CS-136	-2.406E-02	9.492E-02	7.674E-02	4.843E-02	FAIL ABUN
CE-139	7.679E-04	2.663E-02	2.274E-02	1.359E-02	NOT IDENT.
BA-140	1.541E-01	2.292E-01	1.977E-01	1.169E-01	NOT IDENT.
LA-140	-1.566E-02	9.167E-02	6.597E-02	4.677E-02	FAIL ABUN
CE-141	-1.780E-02	5.788E-02	4.915E-02	2.953E-02	NOT IDENT.
CE-143	5.133E+02	1.825E+02	0.000E+00	9.311E+01	SHORT HLIF
CE-144	-3.973E-02	1.999E-01	1.523E-01	1.020E-01	NOT IDENT.
PM-144	-9.915E-03	2.933E-02	2.469E-02	1.496E-02	NOT IDENT.
PR-144	-6.718E-01	1.987E+00	1.673E+00	1.014E+00	NOT IDENT.
PM-146	-1.645E-02	3.863E-02	3.177E-02	1.971E-02	NOT IDENT.
ND-147	-2.434E-02	5.181E-01	4.324E-01	2.643E-01	FAIL ABUN

PM-149	-1.471E+01	7.977E+01	6.964E+01	4.070E+01	NOT IDENT.
EU-152	-1.079E-02	9.571E-02	7.231E-02	4.883E-02	FAIL ABUN
GD-153	-3.058E-02	8.150E-02	6.294E-02	4.158E-02	NOT IDENT.
EU-154	4.613E-02	1.057E-01	9.431E-02	5.392E-02	NOT IDENT.
EU-155	1.354E-01	1.002E-01	9.186E-02	5.113E-02	FAIL ABUN
TB-160	4.729E-02	1.241E-01	1.087E-01	6.329E-02	FAIL ABUN
HO-166M	-7.387E-03	5.387E-02	4.601E-02	2.749E-02	NOT IDENT.
TM-171	-2.683E+01	3.214E+01	2.776E+01	1.640E+01	NOT IDENT.
LU-176	-1.123E-03	2.113E-02	1.847E-02	1.078E-02	FAIL ABUN
LU-177	2.549E+00	1.373E+00	9.654E-01	7.003E-01	FAIL ABUN
LU-177M	-2.857E-01	1.541E-01	1.134E-01	7.860E-02	FAIL ABUN
HF-181	-4.582E-04	3.680E-02	3.107E-02	1.878E-02	NOT IDENT.
W-181	-3.731E-01	4.407E-01	3.813E-01	2.248E-01	NOT IDENT.
TA-182	1.417E-01	1.784E-01	1.629E-01	9.103E-02	FAIL ABUN
RE-183	-1.483E-02	9.776E-02	8.179E-02	4.988E-02	FAIL ABUN
RE-184	-1.090E-01	1.980E-01	1.713E-01	1.010E-01	NOT IDENT.
OS-185	-1.005E-02	3.794E-02	3.237E-02	1.936E-02	NOT IDENT.
RE-188	3.112E-02	1.524E-01	1.317E-01	7.774E-02	NOT IDENT.
W-188	-2.277E+00	7.494E+00	5.679E+00	3.823E+00	NOT IDENT.
IR-192	1.229E-02	2.982E-02	2.667E-02	1.521E-02	FAIL ABUN
AU-195	1.336E-01	2.084E-01	1.883E-01	1.063E-01	FAIL ABUN
TL-200	-2.287E+01	3.862E+02	0.000E+00	1.971E+02	SHORT HLIF
TL-201	3.461E+00	6.064E+00	5.304E+00	3.094E+00	NOT IDENT.
TL-202	1.491E-02	6.182E-02	5.352E-02	3.154E-02	NOT IDENT.
HG-203	2.354E-02	3.650E-02	3.318E-02	1.862E-02	NOT IDENT.
BI-207	8.057E-04	4.373E-02	3.641E-02	2.231E-02	FAIL ABUN
TL-207	7.411E-02	6.521E-01	5.045E-01	3.327E-01	FAIL ABUN
PO-209	2.460E-01	7.194E+00	6.097E+00	3.671E+00	NOT IDENT.
BI-210	2.034E+00	7.866E+00	7.299E+00	4.013E+00	NOT IDENT.
PB-210	2.034E+00	7.866E+00	7.299E+00	4.013E+00	NOT IDENT.
PO-210	2.034E+00	7.865E+00	7.299E+00	4.013E+00	NOT IDENT.
PB-211	2.655E-01	8.353E-01	7.172E-01	4.262E-01	NOT IDENT.
BI-212	1.442E+00	3.958E-01	3.210E-01	2.019E-01	FAIL ABUN
PO-215	7.411E-02	6.521E-01	5.045E-01	3.327E-01	FAIL ABUN
RN-219	-2.115E-01	3.789E-01	3.127E-01	1.933E-01	FAIL ABUN
RN-220	3.443E-01	2.370E+01	1.981E+01	1.209E+01	NOT IDENT.
RA-223	7.411E-02	6.521E-01	5.045E-01	3.327E-01	FAIL ABUN
AC-227	3.986E-02	3.312E-01	2.959E-01	1.690E-01	FAIL ABUN
TH-227	3.986E-02	3.312E-01	2.959E-01	1.690E-01	FAIL ABUN
TH-229	-2.916E-01	4.788E-01	3.868E-01	2.443E-01	FAIL ABUN
PA-231	-2.677E-01	1.363E+00	1.190E+00	6.952E-01	FAIL ABUN
TH-231	7.411E-02	6.521E-01	5.045E-01	3.327E-01	FAIL ABUN
U-231	-5.581E-01	1.080E+00	8.277E-01	5.508E-01	FAIL ABUN
PA-233	8.796E-03	5.551E-02	4.903E-02	2.832E-02	FAIL ABUN
PA-234	1.834E-01	2.687E-01	2.391E-01	1.371E-01	FAIL ABUN
PA-234M	4.091E+00	3.917E+00	3.603E+00	1.998E+00	NOT IDENT.
TH-234	1.424E+00	1.686E+00	1.529E+00	8.601E-01	FAIL ABUN
U-235	1.391E-01	1.967E-01	1.708E-01	1.003E-01	FAIL ABUN
NP-236	-3.139E-02	7.000E-02	5.854E-02	3.571E-02	NOT IDENT.
U-238	1.424E+00	1.686E+00	1.529E+00	8.601E-01	FAIL ABUN
NP-239	-9.173E-02	1.689E-01	1.438E-01	8.617E-02	FAIL ABUN
AM-241	1.439E-01	2.054E-01	1.907E-01	1.048E-01	NOT IDENT.
CM-243	6.107E-02	8.906E-02	8.042E-02	4.544E-02	FAIL ABUN
AM-246	7.933E-02	1.217E-01	1.081E-01	6.211E-02	NOT IDENT.
CM-247	-1.896E-02	3.350E-02	2.768E-02	1.709E-02	NOT IDENT.
CF-249	1.339E-02	3.490E-02	3.075E-02	1.781E-02	NOT IDENT.
CF-251	-2.001E-03	1.138E-01	9.656E-02	5.808E-02	NOT IDENT.

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	268.5602
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46.50	268.5602
48.70	290.3883
49.72	258.9275
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52.97	288.0659
53.15	295.6350
53.44	291.2000
54.07	270.2303
56.28	290.4500
56.28	290.4524
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57.53	312.0107
57.53	312.0120
57.60	312.0631
57.98	312.3484
57.98	312.3484
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59.32	282.2006
59.40	282.2538
59.54	282.3473
59.72	280.5781
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61.10	377.2081
61.14	377.2425
61.30	347.0399
63.00	316.9837
63.29	317.1925
63.29	317.1925
63.58	317.4008
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65.20	367.3442
65.20	367.3442
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66.72	347.4617
66.83	354.2669
66.91	354.3288
67.20	353.5932
67.20	353.5932
67.75	344.3962
67.85	344.4709
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68.90	374.1837
69.30	383.3854
69.67	360.5068
70.82	350.0542
70.82	350.0542
70.83	350.0616
72.80	406.9311
72.87	406.9907
72.87	406.9907
74.67	389.4638
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74.81	389.5754
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74.81	389.5754
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77.11	391.3836

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77.11	391.3836
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80.30	290.2048
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81.07	258.0157
81.07	258.0157
81.07	258.0157
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83.78	317.9834
83.78	317.9834
83.78	317.9834
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84.90	318.6540
85.43	318.9697
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86.50	319.6045
86.54	319.6273
86.59	319.6566
86.72	319.7347
86.79	319.7737
86.94	319.8633
87.30	320.0765
87.30	320.0765
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87.30	320.0765
87.30	320.0765
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87.30	320.0765
87.57	320.2344
87.88	320.4167
88.03	320.5045
88.36	320.6982
88.47	320.7617
89.95	321.6243
91.11	322.2949
92.29	322.9720
92.38	323.0241
92.38	323.0241
93.35	323.5775
94.00	283.9597
94.67	261.4854
94.67	261.4880
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94.90	270.7183
94.90	270.7183
94.90	270.7183
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95.87	316.8766
96.73	317.3479
97.43	308.5620
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98.44	299.9127
98.88	281.7612
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99.55	258.5732
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100.10	256.7692
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103.76	273.7686
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108.00	309.8509
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111.76	304.3969
112.95	273.6283
115.19	261.9972
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117.00	280.5830
117.00	280.5830
117.66	307.1608
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121.62	259.2458
121.78	259.3069
122.06	261.5305
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143.76	281.5314
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144.24	272.9721
144.24	272.9721
145.22	291.9090
145.44	311.6782
147.16	279.4925
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152.70	246.1543
153.22	255.1518
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154.21	274.2672
154.21	274.2672
154.21	274.2672
155.03	267.9075
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171.86	266.6067
172.10	255.3811
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176.60	252.1596
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241.98	171.8692
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300.09	156.0007
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338.28	126.8643
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351.92	142.9805
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367.43	132.4572
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391.69	129.4785
392.90	128.5571
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511.85	90.6806
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602.71	79.6264
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609.31	79.7380
609.31	79.7380
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666.33	62.6530
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695.00	64.6780
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696.49	77.0884
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792.07	72.4435

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798.80	62.7210
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898.02	57.4260
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903.28	54.2986
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911.07	49.4367
911.07	49.4367
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926.50	52.7942
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946.00	42.7127
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969.11	46.1764
969.11	46.1764
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1048.07	47.3043

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1120.29	36.5902
1120.29	36.5902
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1147.95	0.0000
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1175.09	44.5762
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1298.22	0.0000
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1325.50	22.2008
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1333.61	24.1791
1360.21	22.3879
1362.66	0.0000
1365.15	23.3887
1368.21	32.1836
1368.53	0.0000
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1394.10	22.5686
1395.20	30.4261
1407.95	19.6883
1434.06	28.7203
1436.60	21.8004
1457.56	0.0000
1460.81	23.9141
1489.15	23.0627
1509.49	19.1376
1596.49	23.0905
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1678.03	0.0000
1691.02	5.2313
1691.02	5.2313
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1750.46	0.0000
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1764.49	14.5569
1764.49	14.5569
1764.49	14.5569
1770.23	5.4649
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TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G244852004

Total Uranium Activity	4.3021E+00	ug/g
Total Uranium Counting Unc.	5.0159E+00	ug/g
Total Uranium Tpu	2.5591E-06	ug/g
Total Uranium Mda	4.5484E+00	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 942718                    SAMPLE ID  : G244852004       *
*   ANALYST       : MXR1                      DETECTOR   : GAM10            *
*   SAMPLE DATE   : 11-JAN-2010 12:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 26-JAN-2010 13:20:20.33    SAMPLE ALQT:  137.820 GRAM    *
*                                                                           *
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        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.197E+00
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.177E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 3.147E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 1.523E+00
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VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 16:12:00.99

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202018262.CNF;1
Sample date       : 19-JAN-2010 00:00:00 Acquisition date : 26-JAN-2010 14:07:42
Sample ID         : G1202018262          Sample quantity  : 1.81110E+02 GRAM
Detector name     : GAM25                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:00.94  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 942718               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.80*	11	83	0.99	93.15	89	10	1.50E-03	199.8	
2	0	63.18*	26	84	0.65	125.91	122	8	3.68E-03	76.9	
3	0	93.04*	36	94	1.11	185.63	181	11	4.97E-03	70.4	
4	0	185.24*	27	75	0.96	370.02	364	12	3.71E-03	78.8	
5	0	511.06*	16	57	2.42	1021.63	1013	21	2.17E-03	155.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 26-JAN-2010 16:12:04

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202018262.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 19-JAN-2010 00:00:00 Acquisition date : 26-JAN-2010 14:07:42
Sample ID : G1202018262 Sample quantity : 181.11 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA25 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:00.94 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BI-210	+	46.50	*	6.023E-02	2.408E-01	1.465E-01	1.511E-02	0.411
PB-210	+	46.50	*	6.023E-02	2.408E-01	1.465E-01	1.511E-02	0.411
PO-210	+	46.50	*	6.023E-02	2.408E-01	1.465E-01	1.395E-02	0.411
TH-234	+	63.29	*	1.478E-01	2.289E-01	1.979E-01	3.685E-02	0.747
	+	92.38		1.486E-01	2.111E-01	1.554E-01	3.002E-02	0.956
U-238	+	63.29	*	1.478E-01	2.289E-01	1.979E-01	3.685E-02	0.747
	+	92.38		1.486E-01	2.097E-01	1.554E-01	1.705E-02	0.956
ANH-511	+	511.00	*	1.156E-02	3.593E-02	1.733E-02	1.784E-03	0.667

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.024E-01	1.169E-01	2.105E-01	2.228E-02	0.486
NA-22		1274.54	*	1.169E-02	1.739E-02	3.203E-02	2.626E-03	0.365
NA-24		1368.53	*	5.869E-05	1.739E-02	Half-Life too short		
AL-26		1129.67		-1.104E-01	5.651E-01	9.021E-01	7.702E-02	-0.122
		1808.65	*	8.052E-03	1.526E-02	2.876E-02	2.357E-03	0.280
K-40		1460.81	*	2.808E-02	1.884E-01	3.523E-01	3.000E-02	0.080
TI-44		67.85		-4.985E-04	5.276E-03	8.265E-03	8.225E-04	-0.060
		78.38	*	-4.632E-03	5.421E-03	7.639E-03	7.866E-04	-0.606
SC-46		889.25	*	5.220E-03	1.184E-02	2.108E-02	2.019E-03	0.248
		1120.51		6.268E-03	2.215E-02	3.455E-02	2.970E-03	0.181
V-48		944.10		-3.661E-02	2.475E-01	3.884E-01	3.644E-02	-0.094
		983.50	*	7.040E-03	2.261E-02	3.835E-02	3.554E-03	0.184
		1312.09		2.296E-03	1.896E-02	3.204E-02	2.611E-03	0.072
CR-51		320.08	*	-1.792E-01	1.172E-01	1.636E-01	1.817E-02	-1.095
MN-52		744.21		1.385E-02	3.706E-02	6.473E-02	6.994E-03	0.214
		848.13		1.883E-01	1.068E+00	1.797E+00	1.801E-01	0.105
		935.52		-1.387E-03	3.356E-02	5.384E-02	5.062E-03	-0.026
		1246.25		-2.997E-01	8.615E-01	1.301E+00	1.068E-01	-0.230
		1333.61		4.750E-01	1.060E+00	1.731E+00	1.406E-01	0.274
		1434.06	*	2.912E-02	4.141E-02	7.770E-02	6.404E-03	0.375
MN-54		834.83	*	2.095E-03	1.369E-02	2.299E-02	2.333E-03	0.091

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-56		846.75	*	5.427E-04	1.478E-02	2.431E-02	2.440E-03	0.022
		977.42		8.138E-02	1.238E+00	2.017E+00	1.873E-01	0.040
		1037.82		-6.655E-02	1.177E-01	1.776E-01	1.685E-02	-0.375
		1175.09		-4.741E-01	6.822E-01	9.530E-01	7.844E-02	-0.498
		1238.25		-6.256E-03	2.486E-02	3.880E-02	3.290E-03	-0.161
		1360.21		-5.134E-02	3.446E-01	5.404E-01	4.410E-02	-0.095
		1771.40		-2.795E-02	1.127E-01	1.735E-01	1.429E-02	-0.161
CO-57		122.06	*	-4.188E-04	6.260E-03	1.050E-02	1.354E-03	-0.040
		136.48		2.298E-02	5.350E-02	9.282E-02	1.138E-02	0.248
CO-58		810.76	*	5.975E-03	1.553E-02	2.696E-02	2.797E-03	0.222
FE-59		142.65		-1.875E-01	7.342E-01	1.161E+00	1.307E-01	-0.161
		192.34		5.118E-02	2.538E-01	4.225E-01	5.920E-02	0.121
		1099.22	*	-1.918E-02	3.092E-02	4.545E-02	4.281E-03	-0.422
		1291.56		2.202E-02	3.629E-02	6.770E-02	6.359E-03	0.325
CO-60		1173.22		-7.177E-03	1.575E-02	2.371E-02	1.952E-03	-0.303
		1332.49	*	1.913E-02	1.952E-02	3.708E-02	3.012E-03	0.516
ZN-65		1115.52	*	-2.735E-02	3.246E-02	4.529E-02	3.912E-03	-0.604
GE-68		1077.35	*	3.963E-01	4.778E-01	9.043E-01	8.005E-02	0.438
AS-73		53.44	*	2.850E-02	4.398E-02	7.541E-02	7.238E-03	0.378
AS-74		595.88	*	-5.435E-03	2.865E-02	4.440E-02	4.812E-03	-0.122
		634.78		4.189E-02	1.102E-01	1.937E-01	2.131E-02	0.216
SE-75		66.05		-2.444E-04	5.559E-01	7.872E-01	9.074E-02	0.000
		96.73		-8.719E-02	1.695E-01	2.300E-01	3.544E-02	-0.379
		121.11		-1.268E-03	3.301E-02	5.554E-02	8.163E-03	-0.023
		136.00		6.887E-03	9.829E-03	1.740E-02	2.064E-03	0.396
		198.60		2.527E-01	6.366E-01	1.015E+00	1.066E-01	0.249
		264.65	*	4.048E-03	1.540E-02	2.520E-02	2.761E-03	0.161
		279.53		3.070E-03	3.757E-02	6.008E-02	6.854E-03	0.051
		303.91		2.910E-01	7.158E-01	1.254E+00	1.670E-01	0.232
		400.65		-2.755E-03	7.989E-02	1.316E-01	1.522E-02	-0.021
BR-77		87.88		-3.697E+00	3.981E+00	5.539E+00	5.948E-01	-0.667
		200.40		-4.496E+00	6.258E+00	9.512E+00	9.214E-01	-0.473
		239.00		-1.241E-01	4.153E-01	6.718E-01	7.035E-02	-0.185
		249.79		1.728E+00	2.395E+00	4.130E+00	4.407E-01	0.418
		281.68		-2.995E-01	3.498E+00	5.484E+00	6.111E-01	-0.055
		297.23		3.274E-02	1.989E+00	3.376E+00	3.720E-01	0.010
		303.76		4.100E+00	6.893E+00	1.228E+01	1.345E+00	0.334
		439.47		-7.533E-01	5.974E+00	9.644E+00	9.289E-01	-0.078
		484.57		5.100E+00	9.071E+00	1.593E+01	1.604E+00	0.320
		520.65	*	-2.373E-02	4.390E-01	7.039E-01	7.298E-02	-0.034
		574.64		-5.085E+00	1.130E+01	1.702E+01	1.826E+00	-0.299
		578.91		-8.960E-01	4.503E+00	7.022E+00	7.547E-01	-0.128
		585.48		-1.750E+00	7.910E+00	1.225E+01	1.321E+00	-0.143
		755.35		7.854E-01	6.792E+00	1.144E+01	1.229E+00	0.069
		817.79		-1.914E+00	5.348E+00	8.151E+00	8.395E-01	-0.235
SR-82		698.33		5.541E-01	1.166E+01	1.952E+01	2.146E+00	0.028
		776.49	*	3.080E-02	1.188E-01	2.038E-01	2.163E-02	0.151
		1395.20		3.783E+00	3.389E+00	6.953E+00	5.703E-01	0.544
RB-83		520.41	*	-3.036E-03	2.430E-02	3.853E-02	3.994E-03	-0.079

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		529.64		3.004E-03	4.265E-02	6.949E-02	7.252E-03	0.043
		552.65		2.675E-02	6.637E-02	1.136E-01	1.204E-02	0.235
RB-84		881.50	*	3.548E-03	2.251E-02	3.774E-02	3.648E-03	0.094
KR-85		513.99	*	5.167E+00	3.162E+00	5.943E+00	6.131E-01	0.869
SR-85		513.99	*	2.448E-02	1.498E-02	2.815E-02	2.904E-03	0.869
RB-86		1076.63	*	8.592E-02	2.417E-01	4.271E-01	3.783E-02	0.201
Y-88		898.02		1.352E-02	1.641E-02	3.020E-02	2.873E-03	0.448
		1836.01	*	7.291E-03	1.862E-02	3.359E-02	2.745E-03	0.217
ZR-88		392.90	*	5.239E-03	1.083E-02	1.891E-02	1.721E-03	0.277
Y-91		1204.90	*	5.246E-01	5.433E+00	9.159E+00	7.537E-01	0.057
NB-94		702.63	*	-1.126E-02	1.366E-02	1.988E-02	2.184E-03	-0.566
		871.10		-2.958E-03	1.233E-02	1.911E-02	1.869E-03	-0.155
NB-95		765.79	*	5.699E-03	1.461E-02	2.550E-02	2.724E-03	0.223
NB-95M		235.69	*	-6.442E-02	4.260E-02	5.776E-02	6.620E-03	-1.115
ZR-95		724.18		-1.072E-02	3.359E-02	5.307E-02	6.102E-03	-0.202
		756.15	*	9.731E-03	2.462E-02	4.319E-02	4.946E-03	0.225
NB-97		657.90	*	-6.643E-05	2.462E-02	Half-Life too short		
		1024.50		-2.100E-03	2.462E-02	Half-Life too short		
ZR-97		254.15		-5.804E-05	2.462E-02	Half-Life too short		
		355.39		-2.219E-04	2.462E-02	Half-Life too short		
		507.63	*	6.919E-04	2.462E-02	Half-Life too short		
		602.52		1.759E-04	2.462E-02	Half-Life too short		
		1021.30		-1.384E-03	2.462E-02	Half-Life too short		
		1147.95		-1.522E-04	2.462E-02	Half-Life too short		
		1362.66		-9.530E-04	2.462E-02	Half-Life too short		
		1750.46		7.764E-06	2.462E-02	Half-Life too short		
MO-99		140.51		2.395E-01	1.215E+00	1.947E+00	5.587E-01	0.123
		181.06		-2.565E-01	8.079E-01	1.133E+00	2.108E-01	-0.226
		366.43		-1.002E+00	5.073E+00	8.281E+00	8.115E-01	-0.121
		739.58	*	2.539E-01	6.702E-01	1.173E+00	1.939E-01	0.216
		778.00		1.486E-01	1.915E+00	3.196E+00	3.389E-01	0.046
TC-99M		140.51	*	2.142E+00	1.915E+00	Half-Life too short		
RH-101		127.23		-2.209E-03	8.262E-03	1.358E-02	1.699E-03	-0.163
		198.01	*	9.784E-03	1.177E-02	1.937E-02	1.867E-03	0.505
		325.23		-1.372E-02	8.652E-02	1.316E-01	1.402E-02	-0.104
RH-102		418.52		-1.110E-01	1.158E-01	1.680E-01	1.579E-02	-0.661
		475.06	*	-3.291E-03	1.218E-02	1.917E-02	1.914E-03	-0.172
		631.29		-7.372E-03	2.259E-02	3.628E-02	3.985E-03	-0.203
		697.49		2.685E-02	3.192E-02	5.855E-02	6.439E-03	0.459
		766.84		2.087E-02	4.245E-02	7.480E-02	7.984E-03	0.279
		1046.59		-1.994E-02	4.311E-02	6.599E-02	5.945E-03	-0.302
		1112.84		1.529E-02	7.359E-02	1.276E-01	1.103E-02	0.120
RU-103		497.08	*	1.185E-02	1.571E-02	2.763E-02	4.189E-03	0.429
		610.33		-3.257E-02	2.716E-01	4.536E-01	8.152E-02	-0.072
RH-106	+	511.85		5.692E-02	1.769E-01	2.118E-01	2.182E-02	0.269
		621.84	*	-3.250E-02	1.271E-01	2.063E-01	3.088E-02	-0.158
		1050.47		-3.445E-01	8.116E-01	1.245E+00	1.120E-01	-0.277
RU-106	+	511.85		5.692E-02	1.769E-01	2.118E-01	2.182E-02	0.269
		621.84	*	-3.250E-02	1.271E-01	2.063E-01	2.259E-02	-0.158

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1050.47		-3.445E-01	8.116E-01	1.245E+00	1.120E-01	-0.277
AG-108M		433.93	*	5.501E-03	1.248E-02	2.159E-02	2.134E-03	0.255
		614.37		2.290E-03	1.510E-02	2.590E-02	2.898E-03	0.088
		722.95		-6.342E-03	1.662E-02	2.601E-02	2.906E-03	-0.244
CD-109		88.03	*	-1.449E-01	1.643E-01	2.300E-01	2.471E-02	-0.630
AG-110M		657.75	*	-3.914E-02	1.736E-02	1.952E-02	2.200E-03	-2.005
		677.61		-3.036E-02	1.312E-01	2.106E-01	2.367E-02	-0.144
		706.67		2.735E-02	8.158E-02	1.418E-01	1.582E-02	0.193
		763.93		-7.825E-03	5.924E-02	9.568E-02	1.042E-02	-0.082
		884.67		5.266E-04	1.647E-02	2.699E-02	2.666E-03	0.020
		937.48		-8.290E-03	3.885E-02	6.002E-02	5.812E-03	-0.138
		1384.27		2.673E-02	6.046E-02	1.091E-01	9.216E-03	0.245
IN-111		171.28		-5.752E-03	4.639E-02	7.556E-02	6.827E-03	-0.076
		245.39	*	1.571E-02	5.630E-02	9.284E-02	9.831E-03	0.169
IN-113M		391.69	*	2.594E-03	1.571E-02	2.654E-02	2.479E-03	0.098
SN-113		391.69	*	2.594E-03	1.571E-02	2.654E-02	2.479E-03	0.098
IN-114M		190.27	*	-4.768E-02	5.823E-02	7.512E-02	7.110E-03	-0.635
CD-115		260.90		-3.840E+00	4.850E+00	7.056E+00	7.666E-01	-0.544
		492.35		-4.895E-02	1.559E+00	2.524E+00	2.559E-01	-0.019
		527.90	*	-1.567E-01	4.550E-01	6.999E-01	7.294E-02	-0.224
SN-117M		156.02		-1.346E-01	4.411E-01	7.116E-01	7.096E-02	-0.189
		158.56	*	-1.627E-03	1.081E-02	1.768E-02	1.716E-03	-0.092
SB-122		563.90	*	1.303E-02	1.172E-01	1.912E-01	2.038E-02	0.068
		692.80		-1.820E-01	2.739E+00	4.522E+00	4.980E-01	-0.040
I-123		159.00	*	-1.120E-05	2.739E+00	Half-Life too short		
		528.96		2.902E-03	2.739E+00	Half-Life too short		
TE-123M		159.00	*	-7.349E-04	7.991E-03	1.313E-02	1.275E-03	-0.056
I-124		602.71	*	1.780E-02	7.491E-02	1.299E-01	1.412E-02	0.137
		722.78		-3.238E-01	5.099E-01	7.656E-01	8.350E-02	-0.423
		1325.50		-9.721E-01	4.643E+00	7.292E+00	5.930E-01	-0.133
		1376.25		-1.999E-01	2.922E+00	4.676E+00	3.825E-01	-0.043
		1509.49		1.152E+00	2.120E+00	3.838E+00	3.183E-01	0.300
		1691.02		-3.213E-01	3.948E-01	4.172E-01	3.459E-02	-0.770
SB-124		602.71		3.306E-03	1.391E-02	2.413E-02	2.623E-03	0.137
		645.85		8.499E-03	1.837E-01	3.098E-01	3.544E-02	0.027
		709.31		-5.267E-02	9.897E-01	1.632E+00	1.788E-01	-0.032
		713.82		1.483E-01	6.095E-01	1.047E+00	1.444E-01	0.142
		722.78		-8.718E-02	1.373E-01	2.061E-01	2.278E-02	-0.423
		968.20		-2.882E-02	9.363E-01	1.502E+00	1.400E-01	-0.019
		1045.16		1.406E-01	7.866E-01	1.363E+00	1.229E-01	0.103
		1325.50		-2.795E-01	1.335E+00	2.097E+00	1.705E-01	-0.133
		1368.21		6.076E-01	6.992E-01	1.341E+00	1.769E-01	0.453
		1436.60		2.751E-01	1.614E+00	2.722E+00	2.244E-01	0.101
		1691.02	*	-2.040E-02	2.507E-02	2.649E-02	2.290E-03	-0.770
SB-125		427.89	*	1.552E-02	3.094E-02	5.430E-02	5.245E-03	0.286
		463.38		4.202E-02	1.124E-01	1.915E-01	2.005E-02	0.219
		600.56		-1.208E-01	8.905E-02	1.091E-01	1.241E-02	-1.106
		635.90		-3.674E-02	1.147E-01	1.844E-01	2.131E-02	-0.199
TE-125M		109.28	*	2.599E+00	1.862E+00	3.476E+00	4.613E-01	0.748

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-126		388.63		-1.570E-02	4.843E-02	7.712E-02	7.080E-03	-0.204
		666.33	*	-9.812E-02	6.716E-02	9.317E-02	1.031E-02	-1.053
		753.82		-2.137E-01	3.786E-01	5.654E-01	6.080E-02	-0.378
SB-126		223.80		1.971E-02	7.992E-01	1.294E+00	1.317E-01	0.015
		278.60		4.678E-01	5.722E-01	9.836E-01	1.097E-01	0.476
		296.50		5.979E-02	3.412E-01	5.579E-01	6.151E-02	0.107
		414.70		-1.404E-03	1.985E-02	3.248E-02	3.040E-03	-0.043
		415.30		3.502E-01	1.625E+00	2.746E+00	2.572E-01	0.128
		555.20		-1.005E-01	9.599E-01	1.516E+00	1.608E-01	-0.066
		573.80		-1.172E-01	3.492E-01	5.363E-01	5.749E-02	-0.219
		593.00		-1.132E-01	2.504E-01	3.704E-01	4.009E-02	-0.306
		656.30		-1.603E+00	9.657E-01	1.203E+00	1.331E-01	-1.332
		666.33		-4.030E-02	2.758E-02	3.827E-02	4.236E-03	-1.053
		675.00		-2.029E-01	5.946E-01	9.425E-01	1.042E-01	-0.215
		695.00		-1.137E-03	2.247E-02	3.718E-02	4.092E-03	-0.031
		697.00		4.120E-02	7.596E-02	1.348E-01	1.482E-02	0.306
		720.50	*	7.242E-03	3.872E-02	6.593E-02	7.197E-03	0.110
		856.80		-1.468E-02	1.150E-01	1.834E-01	1.821E-02	-0.080
		989.30		-2.312E-01	3.329E-01	4.561E-01	4.217E-02	-0.507
		1034.80		-3.101E-01	2.335E+00	3.829E+00	3.470E-01	-0.081
		1213.00		2.977E-01	1.119E+00	1.933E+00	1.591E-01	0.154
SN-126	+	64.28		5.849E-02	9.045E-02	1.200E-01	1.913E-02	0.487
		86.94		-6.008E-02	7.172E-02	9.444E-02	3.951E-02	-0.636
		87.57	*	-2.086E-02	1.662E-02	2.222E-02	2.383E-03	-0.939
SB-127		61.10		3.619E-01	1.334E+00	2.026E+00	2.122E-01	0.179
		252.40		6.182E-03	3.623E-01	5.803E-01	2.441E-01	0.011
		290.80		1.013E+00	1.950E+00	3.454E+00	4.019E-01	0.293
		411.60		-4.716E-01	1.222E+00	1.923E+00	2.868E-01	-0.245
		444.90		3.796E-02	9.781E-01	1.612E+00	1.901E-01	0.024
		473.00		-1.267E-02	1.906E-01	3.084E-01	3.814E-02	-0.041
		543.00		7.010E-01	1.672E+00	2.854E+00	4.098E-01	0.246
		603.60		5.483E-01	1.144E+00	2.038E+00	2.600E-01	0.269
		685.20	*	6.183E-02	1.473E-01	2.589E-01	3.057E-02	0.239
		698.50		-2.016E-01	1.669E+00	2.734E+00	4.402E-01	-0.074
		722.20		-1.719E+00	3.124E+00	4.757E+00	5.460E-01	-0.361
		783.80		-7.203E-02	3.633E-01	5.789E-01	7.182E-02	-0.124
XE-127		57.60		-4.213E-02	4.061E-01	6.419E-01	6.258E-02	-0.066
		145.22		-2.530E-02	1.668E-01	2.745E-01	3.025E-02	-0.092
		172.10		1.608E-02	3.066E-02	5.286E-02	4.785E-03	0.304
		202.84	*	4.105E-03	1.255E-02	2.104E-02	2.050E-03	0.195
		374.96		-2.800E-02	7.319E-02	1.048E-01	1.003E-02	-0.267
I-131		80.18		-1.594E-01	3.467E-01	5.133E-01	5.330E-02	-0.311
		284.30		1.999E-01	2.808E-01	4.788E-01	5.481E-02	0.417
		364.48	*	1.397E-03	2.111E-02	3.548E-02	3.629E-03	0.039
		636.97		-2.960E-01	3.660E-01	5.485E-01	6.229E-02	-0.540
		722.89		-8.796E-01	1.507E+00	2.284E+00	2.494E-01	-0.385
TE-132		49.72		-6.361E-02	1.428E-01	1.953E-01	1.971E-02	-0.326
		111.76		-9.953E-01	1.586E+00	2.384E+00	3.007E-01	-0.418
		116.30		1.463E-02	1.367E+00	2.316E+00	2.991E-01	0.006

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		228.16	*	-2.691E-02	3.987E-02	5.858E-02	9.177E-03	-0.459
BA-133		53.15		2.424E-02	2.064E-01	3.355E-01	3.217E-02	0.072
		79.62		-3.911E-01	2.178E-01	2.590E-01	4.213E-02	-1.510
		81.00		-1.830E-03	1.552E-02	2.396E-02	4.053E-03	-0.076
		276.40		-8.264E-02	1.380E-01	2.035E-01	3.269E-02	-0.406
		302.84		3.157E-02	5.239E-02	9.299E-02	1.387E-02	0.340
		356.01	*	4.626E-03	1.510E-02	2.606E-02	3.695E-03	0.178
		383.85		1.237E-02	1.134E-01	1.905E-01	2.495E-02	0.065
I-133	+	510.53		2.854E-04	1.134E-01	Half-Life too short		
		529.87	*	1.579E-06	1.134E-01	Half-Life too short		
		706.58		1.644E-04	1.134E-01	Half-Life too short		
		856.28		-4.453E-05	1.134E-01	Half-Life too short		
		875.33		2.949E-05	1.134E-01	Half-Life too short		
		1236.41		-2.413E-04	1.134E-01	Half-Life too short		
		1298.22		8.497E-05	1.134E-01	Half-Life too short		
CS-134		475.35		-3.794E-01	8.466E-01	1.304E+00	1.303E-01	-0.291
		563.23		2.844E-02	1.387E-01	2.295E-01	2.461E-02	0.124
		569.32		-2.322E-02	9.349E-02	1.435E-01	1.548E-02	-0.162
		604.70		2.582E-04	1.294E-02	2.187E-02	2.383E-03	0.012
		795.84	*	1.006E-02	1.549E-02	2.831E-02	2.981E-03	0.355
		801.93		-7.438E-02	1.677E-01	2.513E-01	2.630E-02	-0.296
		1038.57		-3.822E-01	1.509E+00	2.418E+00	2.188E-01	-0.158
		1167.94		9.620E-01	9.485E-01	1.826E+00	1.511E-01	0.527
		1365.15		1.887E-01	5.479E-01	9.594E-01	8.231E-02	0.197
CS-135		268.24	*	-2.460E-02	5.333E-02	8.012E-02	9.671E-03	-0.307
I-135		288.45		-3.953E+01	5.333E-02	Half-Life too short		
		417.63		1.107E+01	5.333E-02	Half-Life too short		
		546.56		-7.391E+00	5.333E-02	Half-Life too short		
		836.80		-3.387E+01	5.333E-02	Half-Life too short		
		1038.76		-9.354E+00	5.333E-02	Half-Life too short		
		1124.00		-2.098E+01	5.333E-02	Half-Life too short		
		1131.51		-2.415E+00	5.333E-02	Half-Life too short		
		1260.41	*	-4.948E+00	5.333E-02	Half-Life too short		
		1457.56		6.133E+00	5.333E-02	Half-Life too short		
		1678.03		1.031E+01	5.333E-02	Half-Life too short		
		1706.46		-2.000E+01	5.333E-02	Half-Life too short		
		1791.20		2.778E+01	5.333E-02	Half-Life too short		
CS-136		66.91		1.845E-02	6.099E-02	9.222E-02	1.494E-02	0.200
		86.29		-1.693E-02	1.356E-01	2.061E-01	2.946E-02	-0.082
		153.22		-3.082E-02	1.280E-01	2.082E-01	2.314E-02	-0.148
		163.89		-1.641E-01	2.473E-01	3.743E-01	3.786E-02	-0.438
		176.55		-4.073E-02	7.411E-02	1.153E-01	1.109E-02	-0.353
		273.65		-1.101E-02	1.051E-01	1.649E-01	1.899E-02	-0.067
		340.57		-1.037E-02	2.900E-02	4.680E-02	4.953E-03	-0.222
		818.51		1.784E-03	1.828E-02	3.052E-02	3.142E-03	0.058
		1048.07	*	-1.788E-02	2.645E-02	3.831E-02	3.582E-03	-0.467
		1235.34		-1.969E-02	1.149E-01	1.824E-01	2.108E-02	-0.108
BA-137M		661.65	*	4.299E-03	2.176E-02	3.937E-02	4.362E-03	0.109
CS-137		661.65	*	4.545E-03	2.300E-02	4.162E-02	4.616E-03	0.109

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-139		165.85	*	-1.682E-03	8.679E-03	1.409E-02	1.257E-03	-0.119
BA-140		162.64		9.362E-02	1.670E-01	2.796E-01	2.724E-02	0.335
		304.84		-1.804E-01	3.103E-01	4.886E-01	1.408E-01	-0.369
		423.70		9.512E-02	4.767E-01	8.024E-01	2.620E-01	0.119
		537.32	*	-7.398E-02	7.709E-02	9.478E-02	3.192E-02	-0.781
LA-140		328.77		-1.466E-02	6.336E-02	1.039E-01	1.142E-02	-0.141
		432.53		-1.619E-01	5.046E-01	7.935E-01	7.886E-02	-0.204
		487.03		-1.381E-02	3.717E-02	5.736E-02	6.052E-03	-0.241
		751.79		-8.491E-02	4.197E-01	6.699E-01	7.714E-02	-0.127
		815.85		-5.827E-02	8.233E-02	1.165E-01	1.300E-02	-0.500
		867.82		-1.309E-02	3.542E-01	5.737E-01	5.863E-02	-0.023
		919.63		-2.977E-01	6.073E-01	8.664E-01	9.806E-02	-0.344
		925.24		-5.841E-02	2.615E-01	4.027E-01	3.995E-02	-0.145
		1596.49	*	8.225E-03	2.648E-02	4.722E-02	3.926E-03	0.174
CE-141		145.44	*	-8.338E-03	1.503E-02	2.382E-02	2.649E-03	-0.350
CE-143		57.37		7.419E-01	1.783E+00	2.970E+00	3.207E-01	0.250
		231.56		1.372E+01	1.823E+01	3.079E+01	9.876E+00	0.446
		293.26	*	-6.828E-01	1.009E+00	1.584E+00	3.566E-01	-0.431
		350.59		-3.019E+00	1.503E+01	2.284E+01	7.188E+00	-0.132
		490.36		1.483E+01	2.848E+01	4.854E+01	1.554E+01	0.306
		664.57		-2.216E+01	1.762E+01	2.289E+01	7.559E+00	-0.968
		721.93		-5.355E+00	1.276E+01	1.972E+01	5.899E+00	-0.271
CE-144		80.11		-1.474E-01	2.986E-01	4.401E-01	4.564E-02	-0.335
		133.54	*	-6.551E-03	4.827E-02	7.988E-02	1.412E-02	-0.082
PM-144		476.78		2.782E-02	2.766E-02	5.022E-02	5.374E-03	0.554
		618.01		3.090E-03	1.209E-02	2.103E-02	2.339E-03	0.147
		696.49	*	1.501E-02	1.468E-02	2.732E-02	3.006E-03	0.549
		778.57		-3.524E-01	9.194E-01	1.420E+00	1.506E-01	-0.248
PR-144		696.49	*	1.013E+00	9.909E-01	1.844E+00	2.029E-01	0.549
		1489.15		-2.618E+00	6.104E+00	8.865E+00	7.342E-01	-0.295
PM-146		453.90	*	1.595E-03	1.690E-02	2.799E-02	3.268E-03	0.057
		633.02		6.086E-02	5.600E-01	9.530E-01	3.620E-01	0.064
		735.90		-3.078E-03	5.708E-02	9.372E-02	2.751E-02	-0.033
		747.13		3.016E-02	3.552E-02	6.571E-02	1.016E-02	0.459
ND-147		91.11		3.765E-02	3.999E-02	6.215E-02	7.133E-03	0.606
		319.41		-7.407E-01	7.814E-01	1.187E+00	1.275E-01	-0.624
		439.89		1.604E-01	1.334E+00	2.224E+00	2.143E-01	0.072
		531.02	*	1.578E-02	1.539E-01	2.517E-01	4.045E-02	0.063
PM-149		285.90	*	-1.484E+00	3.377E+00	5.065E+00	8.629E-01	-0.293
EU-152		121.78		1.307E-03	1.799E-02	3.055E-02	4.210E-03	0.043
		244.69		-8.573E-03	1.133E-01	1.801E-01	1.905E-02	-0.048
		344.27	*	3.004E-03	3.249E-02	5.500E-02	5.907E-03	0.055
		443.98		-6.806E-02	3.661E-01	5.858E-01	5.670E-02	-0.116
		778.89		-4.124E-02	1.076E-01	1.662E-01	1.761E-02	-0.248
		867.32		1.212E-01	3.090E-01	5.399E-01	5.303E-02	0.224
		964.01		-5.538E-03	1.135E-01	1.817E-01	1.695E-02	-0.030
		1085.78		-1.290E-02	1.630E-01	2.686E-01	2.365E-02	-0.048
		1112.02		2.231E-02	1.047E-01	1.818E-01	1.573E-02	0.123
		1407.95		5.915E-03	7.361E-02	1.222E-01	1.004E-02	0.048

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153		69.67		7.147E-02	1.908E-01	3.125E-01	3.125E-02	0.229
		83.37		-2.399E+00	2.927E+00	4.078E+00	4.289E-01	-0.588
		97.43	*	8.253E-03	1.882E-02	2.875E-02	3.238E-03	0.287
		103.18		-1.731E-03	2.234E-02	3.785E-02	4.394E-03	-0.046
EU-154		123.07		3.650E-03	1.247E-02	2.155E-02	3.192E-03	0.169
		247.94		-4.094E-02	1.248E-01	1.924E-01	2.513E-02	-0.213
		591.81		4.456E-02	2.408E-01	3.959E-01	5.295E-02	0.113
		723.30		-2.512E-02	6.816E-02	1.068E-01	1.242E-02	-0.235
		756.87		5.606E-02	2.881E-01	4.909E-01	6.665E-02	0.114
		873.19		-9.857E-03	1.107E-01	1.773E-01	2.317E-02	-0.056
		996.32		-2.066E-02	1.584E-01	2.487E-01	4.493E-02	-0.083
		1004.76		-4.512E-02	9.519E-02	1.396E-01	1.685E-02	-0.323
		1274.45	*	3.748E-02	4.795E-02	8.981E-02	9.867E-03	0.417
EU-155		48.70		7.755E-02	7.620E-02	1.325E-01	1.261E-02	0.585
		60.01		-2.474E-01	4.892E-01	6.590E-01	6.484E-02	-0.375
		86.54		-3.014E-03	1.852E-02	2.804E-02	3.012E-03	-0.107
		105.31	*	6.259E-03	2.317E-02	4.033E-02	4.768E-03	0.155
TB-160		86.79		-3.834E-02	4.886E-02	6.932E-02	7.405E-03	-0.553
		197.04		6.672E-02	1.857E-01	2.945E-01	2.831E-02	0.227
		215.65		3.947E-02	2.323E-01	3.822E-01	3.826E-02	0.103
		298.57		-2.391E-02	3.761E-02	5.995E-02	6.596E-03	-0.399
		879.36	*	-2.776E-03	5.041E-02	8.125E-02	7.873E-03	-0.034
		962.29		1.102E-01	1.865E-01	3.309E-01	3.088E-02	0.333
		966.15		2.726E-02	7.158E-02	1.228E-01	1.145E-02	0.222
		1177.93		-7.603E-02	1.041E-01	1.424E-01	1.172E-02	-0.534
		1271.85		1.812E-02	2.631E-01	4.384E-01	3.591E-02	0.041
HO-166M		80.57		-3.735E-03	4.020E-02	6.223E-02	6.467E-03	-0.060
	+	184.41		1.194E-02	1.885E-02	2.123E-02	1.982E-03	0.562
		280.46		-1.157E-02	3.178E-02	4.827E-02	5.383E-03	-0.240
		410.95		2.209E-02	9.134E-02	1.550E-01	1.444E-02	0.143
		711.68	*	-1.338E-02	2.570E-02	3.947E-02	4.321E-03	-0.339
		752.31		-3.872E-02	1.008E-01	1.554E-01	1.672E-02	-0.249
		810.29		1.453E-02	2.470E-02	4.412E-02	4.572E-03	0.329
TM-171		51.35		-4.052E-01	1.502E+00	2.140E+00	2.043E-01	-0.189
		52.39		3.971E-01	8.081E-01	1.368E+00	1.309E-01	0.290
		59.40		-1.550E+00	2.600E+00	3.465E+00	3.407E-01	-0.447
		66.72	*	1.399E+00	3.240E+00	4.978E+00	4.941E-01	0.281
LU-176		88.36		-1.588E-02	4.030E-02	5.517E-02	5.938E-03	-0.288
		201.83		8.872E-04	9.199E-03	1.511E-02	1.468E-03	0.059
		306.84	*	-3.863E-03	8.836E-03	1.428E-02	1.558E-03	-0.270
		401.10		2.280E-02	2.195E+00	3.636E+00	3.345E-01	0.006
LU-177		112.95		-2.410E-01	2.034E-01	2.878E-01	3.525E-02	-0.837
		208.36	*	2.115E-02	1.517E-01	2.496E-01	2.460E-02	0.085
LU-177M		52.97		2.028E-02	8.838E-02	1.454E-01	1.394E-02	0.139
		54.07		2.503E-02	5.085E-02	8.567E-02	8.239E-03	0.292
		61.30		1.173E-02	1.341E-01	1.990E-01	1.959E-02	0.059
		121.62		6.612E-03	9.007E-02	1.530E-01	1.967E-02	0.043
		147.16		3.902E-03	1.736E-01	2.898E-01	3.141E-02	0.013
		171.86		3.093E-02	1.387E-01	2.332E-01	2.110E-02	0.133

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		218.09		1.727E-01	2.858E-01	4.869E-01	4.898E-02	0.355
		268.79		-1.013E-01	2.648E-01	4.023E-01	4.423E-02	-0.252
		319.02		-4.987E-02	9.245E-02	1.473E-01	1.583E-02	-0.339
		367.43		9.686E-02	3.464E-01	5.936E-01	5.802E-02	0.163
		413.65	*	5.507E-03	6.462E-02	1.077E-01	1.007E-02	0.051
HF-181		56.28		-1.864E-02	6.005E-02	9.288E-02	9.003E-03	-0.201
		57.53		1.046E-02	3.357E-02	5.538E-02	5.397E-03	0.189
		65.20		-2.662E-02	1.021E-01	1.405E-01	1.390E-02	-0.190
		133.02		-3.053E-03	1.400E-02	2.299E-02	2.773E-03	-0.133
		136.25		3.941E-02	1.084E-01	1.870E-01	2.206E-02	0.211
		345.85		8.846E-03	5.662E-02	9.649E-02	9.913E-03	0.092
		482.03	*	-4.949E-03	1.414E-02	2.183E-02	2.194E-03	-0.227
W-181		56.28		-7.882E-03	2.547E-02	3.940E-02	3.819E-03	-0.200
		57.53		4.457E-03	1.424E-02	2.350E-02	2.291E-03	0.190
		65.20	*	-1.121E-02	4.300E-02	5.913E-02	5.852E-03	-0.190
TA-182		67.75		-2.156E-03	1.214E-02	1.886E-02	1.876E-03	-0.114
		100.10		-2.977E-02	3.710E-02	5.897E-02	6.734E-03	-0.505
		152.43		2.280E-02	9.348E-02	1.585E-01	1.638E-02	0.144
		222.10		5.327E-03	1.072E-01	1.740E-01	1.765E-02	0.031
		1001.68		5.136E-02	8.850E-01	1.347E+00	1.239E-01	0.038
		1121.28		3.176E-02	6.196E-02	9.987E-02	8.581E-03	0.318
		1189.05		-5.940E-02	9.611E-02	1.374E-01	1.131E-02	-0.432
		1221.42	*	-7.650E-02	6.602E-02	7.604E-02	6.254E-03	-1.006
		1230.97		2.719E-02	1.358E-01	2.334E-01	1.919E-02	0.116
RE-183		57.98		-1.282E-02	1.618E-02	2.255E-02	2.202E-03	-0.569
		59.32		-5.376E-03	9.892E-03	1.327E-02	1.304E-03	-0.405
		67.20		7.337E-04	2.046E-02	3.250E-02	3.230E-03	0.023
		162.32	*	2.982E-02	3.329E-02	5.705E-02	5.310E-03	0.523
		208.81		6.823E-02	2.633E-01	4.385E-01	4.327E-02	0.156
		291.72		-6.085E-02	3.122E-01	5.208E-01	5.764E-02	-0.117
RE-184		57.98		-4.935E-02	6.230E-02	8.681E-02	8.477E-03	-0.569
		59.32		-2.068E-02	3.805E-02	5.104E-02	5.017E-03	-0.405
		67.20		2.823E-03	7.874E-02	1.251E-01	1.243E-02	0.023
		161.27		3.232E-04	1.102E-01	1.825E-01	1.719E-02	0.002
		216.55		5.267E-02	8.620E-02	1.472E-01	1.476E-02	0.358
		252.85	*	-6.291E-03	7.120E-02	1.126E-01	1.207E-02	-0.056
		318.01		4.712E-02	1.621E-01	2.806E-01	3.021E-02	0.168
		792.07		-1.717E-01	3.387E-01	5.043E-01	5.297E-02	-0.341
		903.28		-1.006E-01	3.833E-01	5.921E-01	5.603E-02	-0.170
		920.93		-7.163E-02	1.363E-01	1.907E-01	1.799E-02	-0.376
OS-185		59.72		-1.575E-02	2.745E-02	3.664E-02	3.604E-03	-0.430
		61.14		1.050E-03	1.431E-02	2.120E-02	2.087E-03	0.050
		69.30		-1.736E-02	3.428E-02	5.131E-02	5.125E-03	-0.338
		592.07		1.372E-01	9.260E-01	1.514E+00	1.638E-01	0.091
		646.12	*	7.467E-04	1.612E-02	2.719E-02	3.000E-03	0.027
		717.42		3.303E-01	3.557E-01	6.602E-01	7.214E-02	0.500
		874.81		6.420E-02	1.987E-01	3.440E-01	3.350E-02	0.187
		880.27		1.730E-01	2.607E-01	4.778E-01	4.625E-02	0.362
RE-188		155.03	*	6.877E-03	4.452E-02	7.490E-02	7.545E-03	0.092

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		477.96		6.303E-01	1.134E+00	1.977E+00	1.979E-01	0.319
		633.10		1.144E-01	1.052E+00	1.791E+00	1.969E-01	0.064
W-188	+	63.58		5.509E+00	8.491E+00	1.278E+01	1.261E+00	0.431
		227.08		-1.395E+00	3.325E+00	5.082E+00	5.204E-01	-0.274
		290.67	*	1.771E+00	2.402E+00	4.327E+00	4.793E-01	0.409
IR-192		295.96		2.143E-02	3.665E-02	6.188E-02	6.855E-03	0.346
		308.46		-4.098E-03	3.225E-02	5.384E-02	5.883E-03	-0.076
		316.51	*	7.428E-03	1.239E-02	2.197E-02	2.373E-03	0.338
		468.07		-1.928E-03	2.586E-02	4.182E-02	4.375E-03	-0.046
		604.41		1.632E-02	1.660E-01	2.832E-01	4.137E-02	0.058
		612.46		-5.681E-02	2.518E-01	4.116E-01	4.918E-02	-0.138
AU-195		65.12		-4.411E-03	2.022E-02	2.797E-02	2.767E-03	-0.158
		66.83		3.476E-03	1.058E-02	1.605E-02	1.594E-03	0.216
		75.70		-9.940E-03	3.039E-02	4.643E-02	4.733E-03	-0.214
		98.88	*	1.171E-02	5.255E-02	8.437E-02	9.573E-03	0.139
		129.76		3.943E-01	7.182E-01	1.258E+00	1.550E-01	0.313
TL-200		367.94	*	6.266E-01	1.500E+00	2.604E+00	2.542E-01	0.241
		579.30		-8.432E+00	1.373E+01	2.016E+01	2.167E+00	-0.418
		828.27		-7.836E+00	1.614E+01	2.411E+01	2.461E+00	-0.325
		1205.75		1.102E+00	6.544E+00	1.118E+01	9.202E-01	0.098
TL-201		68.90		-5.424E-02	1.048E-01	1.568E-01	1.564E-02	-0.346
		70.82		1.961E-02	5.922E-02	9.650E-02	9.679E-03	0.203
		80.30		-3.826E-02	1.309E-01	1.980E-01	2.055E-02	-0.193
		135.34		-1.671E-01	1.177E+00	1.947E+00	2.312E-01	-0.086
		167.43	*	1.893E-01	3.438E-01	5.968E-01	5.338E-02	0.317
TL-202		68.90		-1.768E-02	3.416E-02	5.110E-02	5.098E-03	-0.346
		70.82		6.372E-03	1.925E-02	3.136E-02	3.146E-03	0.203
		80.30		-1.244E-02	4.256E-02	6.436E-02	6.680E-03	-0.193
		439.56	*	1.281E-03	1.655E-02	2.744E-02	2.643E-03	0.047
HG-203		70.83		3.733E-02	1.143E-01	1.861E-01	2.706E-02	0.201
		72.87		-1.202E-01	8.155E-02	1.075E-01	1.528E-02	-1.118
		82.60		1.192E-01	1.658E-01	2.756E-01	4.130E-02	0.432
		279.20	*	9.371E-03	1.257E-02	2.152E-02	2.442E-03	0.436
BI-207		72.80		-4.036E-02	2.637E-02	3.495E-02	3.527E-03	-1.155
		74.97		-8.672E-04	1.709E-02	2.674E-02	2.718E-03	-0.032
		84.90		-1.760E-02	3.753E-02	5.408E-02	5.727E-03	-0.325
		569.67		-1.313E-03	1.493E-02	2.343E-02	2.507E-03	-0.056
		1063.62	*	-4.135E-04	1.821E-02	3.033E-02	2.707E-03	-0.014
		1770.23		5.917E-02	2.370E-01	4.169E-01	3.433E-02	0.142
TL-207		81.07		-2.629E-03	3.444E-02	5.342E-02	5.563E-03	-0.049
		83.78		-9.763E-03	2.423E-02	3.512E-02	3.700E-03	-0.278
		94.90		1.026E-02	4.611E-02	7.301E-02	8.115E-03	0.141
		122.32		6.527E-02	4.474E-01	7.639E-01	1.017E-01	0.085
		144.24		7.735E-02	1.995E-01	3.314E-01	3.950E-02	0.233
		154.21		3.295E-02	1.128E-01	1.919E-01	2.091E-02	0.172
		269.46		-1.450E-02	6.056E-02	9.348E-02	1.042E-02	-0.155
		323.87	*	2.601E-01	2.403E-01	4.373E-01	8.217E-02	0.595
		338.28		1.789E-01	3.779E-01	6.598E-01	8.997E-02	0.271
		445.03		-1.083E-02	8.921E-01	1.460E+00	1.880E-01	-0.007

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TL-208		277.35		-1.517E-02	1.357E-01	2.126E-01	3.020E-02	-0.071
	+	510.84		5.351E-02	1.664E-01	2.082E-01	2.757E-02	0.257
		583.14	*	-2.357E-03	1.755E-02	2.750E-02	3.101E-03	-0.086
		860.37		-1.707E-02	1.127E-01	1.791E-01	1.873E-02	-0.095
PO-209		260.50		-1.224E+00	3.531E+00	5.414E+00	5.878E-01	-0.226
		262.80		5.622E+00	1.002E+01	1.686E+01	1.837E+00	0.334
		896.60	*	4.170E+00	3.013E+00	5.959E+00	5.655E-01	0.700
BI-211		72.87		-6.762E-01	4.536E-01	6.047E-01	6.104E-02	-1.118
		351.07	*	-4.115E-02	8.562E-02	1.266E-01	1.334E-02	-0.325
PB-211		404.84	*	-3.218E-02	3.282E-01	5.349E-01	3.357E-01	-0.060
		427.08		2.329E-01	7.435E-01	1.250E+00	7.782E-01	0.186
		831.96		3.853E-01	5.207E-01	8.570E-01	5.390E-01	0.450
BI-212		727.18	*	-1.806E-02	1.308E-01	1.978E-01	2.377E-02	-0.091
		785.46		2.220E-01	6.757E-01	1.169E+00	1.234E-01	0.190
		1620.62		5.670E-02	5.849E-01	9.977E-01	8.293E-02	0.057
PB-212		74.81		-4.020E-04	5.889E-02	9.248E-02	1.277E-02	-0.004
		77.11		-3.316E-02	3.412E-02	4.833E-02	4.952E-03	-0.686
		87.30		-1.008E-01	7.715E-02	1.013E-01	1.485E-02	-0.995
		238.63	*	-1.586E-02	2.349E-02	3.672E-02	4.181E-03	-0.432
		300.09		-4.285E-02	2.785E-01	4.653E-01	5.795E-02	-0.092
PO-212		74.81		-4.020E-04	5.889E-02	9.248E-02	1.277E-02	-0.004
		77.11		-3.316E-02	3.412E-02	4.833E-02	4.952E-03	-0.686
		87.30		-1.008E-01	7.715E-02	1.013E-01	1.485E-02	-0.995
		115.19		-7.317E-02	8.751E-01	1.472E+00	1.825E-01	-0.050
		238.63	*	-1.586E-02	2.349E-02	3.672E-02	4.181E-03	-0.432
		300.09		-4.285E-02	2.785E-01	4.653E-01	5.795E-02	-0.092
BI-214		609.31	*	-2.656E-02	3.078E-02	4.666E-02	5.631E-03	-0.569
		1120.29		3.464E-02	1.370E-01	2.126E-01	2.307E-02	0.163
		1764.49		2.933E-02	1.198E-01	2.186E-01	1.801E-02	0.134
PB-214		74.81		-6.926E-04	1.015E-01	1.593E-01	2.004E-02	-0.004
		77.11		-5.684E-02	5.866E-02	8.285E-02	1.058E-02	-0.686
		87.30		-1.727E-01	1.317E-01	1.736E-01	2.291E-02	-0.995
		241.98		-3.364E-02	1.277E-01	1.999E-01	2.384E-02	-0.168
		295.21		-1.709E-03	5.206E-02	8.362E-02	1.061E-02	-0.020
		351.92	*	-6.894E-03	2.905E-02	4.394E-02	5.159E-03	-0.157
PO-214		74.81		-6.926E-04	1.015E-01	1.593E-01	2.004E-02	-0.004
		77.11		-5.684E-02	5.866E-02	8.285E-02	1.058E-02	-0.686
		87.30		-1.727E-01	1.317E-01	1.736E-01	2.291E-02	-0.995
		241.98		-3.364E-02	1.277E-01	1.999E-01	2.384E-02	-0.168
		295.21		-1.709E-03	5.206E-02	8.362E-02	1.061E-02	-0.020
		351.92	*	-6.894E-03	2.905E-02	4.394E-02	5.159E-03	-0.157
PO-215		81.07		-2.629E-03	3.444E-02	5.342E-02	5.563E-03	-0.049
		83.78		-9.763E-03	2.423E-02	3.512E-02	3.700E-03	-0.278
		94.90		1.026E-02	4.611E-02	7.301E-02	8.115E-03	0.141
		122.32		6.527E-02	4.474E-01	7.639E-01	1.017E-01	0.085
		144.24		7.735E-02	1.995E-01	3.314E-01	3.950E-02	0.233
		154.21		3.295E-02	1.128E-01	1.919E-01	2.091E-02	0.172
		269.46		-1.450E-02	6.056E-02	9.348E-02	1.042E-02	-0.155
		323.87	*	2.601E-01	2.403E-01	4.373E-01	8.217E-02	0.595

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		338.28		1.789E-01	3.779E-01	6.598E-01	8.997E-02	0.271
		445.03		-1.083E-02	8.921E-01	1.460E+00	1.880E-01	-0.007
PO-216		74.81		-4.020E-04	5.889E-02	9.248E-02	1.277E-02	-0.004
		77.11		-3.316E-02	3.412E-02	4.833E-02	4.952E-03	-0.686
		87.30		-1.008E-01	7.715E-02	1.013E-01	1.485E-02	-0.995
		238.63	*	-1.586E-02	2.349E-02	3.672E-02	4.181E-03	-0.432
		300.09		-4.285E-02	2.785E-01	4.653E-01	5.795E-02	-0.092
PO-218		74.81		-6.926E-04	1.015E-01	1.593E-01	2.004E-02	-0.004
		77.11		-5.684E-02	5.866E-02	8.285E-02	1.058E-02	-0.686
		87.30		-1.727E-01	1.317E-01	1.736E-01	2.291E-02	-0.995
		241.98		-3.364E-02	1.277E-01	1.999E-01	2.384E-02	-0.168
		295.21		-1.709E-03	5.206E-02	8.362E-02	1.061E-02	-0.020
		351.92	*	-6.894E-03	2.905E-02	4.394E-02	5.159E-03	-0.157
RN-219		271.23		2.305E-02	8.051E-02	1.320E-01	1.637E-02	0.175
		401.81	*	1.467E-01	1.377E-01	2.547E-01	3.915E-02	0.576
RN-220		549.76	*	-3.046E+00	1.017E+01	1.558E+01	1.648E+00	-0.195
RA-223		81.07		-2.629E-03	3.444E-02	5.342E-02	5.563E-03	-0.049
		83.78		-9.763E-03	2.423E-02	3.512E-02	3.700E-03	-0.278
		94.90		1.026E-02	4.611E-02	7.301E-02	8.115E-03	0.141
		122.32		6.527E-02	4.474E-01	7.639E-01	1.017E-01	0.085
		144.24		7.735E-02	1.995E-01	3.314E-01	3.950E-02	0.233
		154.21		3.295E-02	1.128E-01	1.919E-01	2.091E-02	0.172
		269.46		-1.450E-02	6.056E-02	9.348E-02	1.042E-02	-0.155
		323.87	*	2.601E-01	2.403E-01	4.373E-01	8.217E-02	0.595
		338.28		1.789E-01	3.779E-01	6.598E-01	8.997E-02	0.271
		445.03		-1.083E-02	8.921E-01	1.460E+00	1.880E-01	-0.007
RA-224		240.98	*	-2.908E-01	2.504E-01	3.557E-01	3.737E-02	-0.818
RA-226		609.31	*	-2.656E-02	3.078E-02	4.666E-02	5.631E-03	-0.569
		1120.29		3.464E-02	1.370E-01	2.126E-01	2.307E-02	0.163
		1764.49		2.933E-02	1.198E-01	2.186E-01	1.801E-02	0.134
AC-227		79.80		-1.493E-01	2.331E-01	3.336E-01	7.424E-02	-0.448
		236.00		-1.251E-01	8.610E-02	1.170E-01	1.588E-02	-1.069
		256.20	*	-6.570E-02	1.223E-01	1.814E-01	3.022E-02	-0.362
		286.10		-2.073E-01	6.036E-01	9.173E-01	1.371E-01	-0.226
		299.80		-1.822E-01	5.064E-01	8.281E-01	1.554E-01	-0.220
		304.40		1.599E-01	6.771E-01	1.169E+00	2.294E-01	0.137
		334.20		1.221E-01	8.535E-01	1.452E+00	2.950E-01	0.084
TH-227		79.80		-1.493E-01	2.331E-01	3.336E-01	7.513E-02	-0.448
	+	94.00		5.742E-01	8.186E-01	8.323E-01	1.902E-01	0.690
		236.00		-1.251E-01	8.585E-02	1.170E-01	1.465E-02	-1.069
		256.20	*	-6.570E-02	1.224E-01	1.814E-01	3.481E-02	-0.362
		286.10		-2.073E-01	6.379E-01	9.173E-01	9.229E-01	-0.226
		299.80		-1.822E-01	5.064E-01	8.281E-01	1.554E-01	-0.220
		304.40		1.599E-01	6.771E-01	1.169E+00	2.294E-01	0.137
		334.20		1.221E-01	8.535E-01	1.452E+00	2.950E-01	0.084
AC-228		338.32		4.176E-02	9.187E-02	1.577E-01	6.572E-02	0.265
		911.07	*	7.339E-03	6.349E-02	1.000E-01	1.190E-02	0.073
		969.11		-6.028E-02	1.092E-01	1.591E-01	3.756E-02	-0.379
RA-228		338.32		4.176E-02	9.187E-02	1.577E-01	6.572E-02	0.265

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		911.07	*	7.339E-03	6.349E-02	1.000E-01	1.190E-02	0.073
		969.11		-6.028E-02	1.092E-01	1.591E-01	3.756E-02	-0.379
TH-228		74.81		-4.050E-04	5.934E-02	9.318E-02	9.526E-03	-0.004
		77.11		-3.341E-02	3.438E-02	4.869E-02	4.990E-03	-0.686
		87.30		-1.016E-01	7.707E-02	1.021E-01	1.094E-02	-0.995
		238.63	*	-1.599E-02	2.367E-02	3.700E-02	4.213E-03	-0.432
		300.09		-4.318E-02	2.817E-01	4.688E-01	2.797E-01	-0.092
TH-229		85.43		-2.835E-02	3.748E-02	5.232E-02	5.555E-03	-0.542
		88.47		-8.603E-03	2.325E-02	3.192E-02	3.438E-03	-0.269
		100.00		-3.115E-02	4.036E-02	6.436E-02	7.346E-03	-0.484
		193.63	*	1.190E-01	1.538E-01	2.687E-01	2.563E-02	0.443
		210.97		1.324E-02	2.031E-01	3.319E-01	3.290E-02	0.040
TH-230		609.31	*	-2.656E-02	3.078E-02	4.666E-02	5.631E-03	-0.569
		1120.29		3.464E-02	1.370E-01	2.126E-01	2.307E-02	0.163
		1764.49		2.933E-02	1.198E-01	2.186E-01	1.801E-02	0.134
PA-231		283.67	*	1.046E-01	5.535E-01	8.947E-01	1.498E-01	0.117
		301.29		1.474E-01	2.042E-01	3.655E-01	5.118E-02	0.403
TH-231		81.07		-2.629E-03	3.444E-02	5.342E-02	5.563E-03	-0.049
		83.78		-9.763E-03	2.423E-02	3.512E-02	3.700E-03	-0.278
		94.90		1.026E-02	4.611E-02	7.301E-02	8.115E-03	0.141
		122.32		6.527E-02	4.474E-01	7.639E-01	1.017E-01	0.085
		144.24		7.735E-02	1.995E-01	3.314E-01	3.950E-02	0.233
		154.21		3.295E-02	1.128E-01	1.919E-01	2.091E-02	0.172
		269.46		-1.450E-02	6.056E-02	9.348E-02	1.042E-02	-0.155
		323.87	*	2.601E-01	2.403E-01	4.373E-01	8.217E-02	0.595
		338.28		1.789E-01	3.779E-01	6.598E-01	8.997E-02	0.271
		445.03		-1.083E-02	8.921E-01	1.460E+00	1.880E-01	-0.007
U-231		84.21		-1.417E-01	3.069E-01	4.428E-01	4.674E-02	-0.320
	+	92.29		1.637E-01	2.311E-01	3.036E-01	3.331E-02	0.539
		95.87	*	-4.714E-02	6.724E-02	9.541E-02	1.066E-02	-0.494
		108.00		-5.344E-02	1.321E-01	2.166E-01	2.581E-02	-0.247
TH-232		338.32		4.176E-02	9.031E-02	1.577E-01	1.644E-02	0.265
		911.07	*	7.339E-03	6.349E-02	1.000E-01	1.190E-02	0.073
		969.11		-6.028E-02	1.092E-01	1.591E-01	3.756E-02	-0.379
PA-233		75.28		-7.986E-02	4.960E-01	7.685E-01	1.251E-01	-0.104
		86.59		-5.141E-02	3.022E-01	4.565E-01	1.258E-01	-0.113
		300.12		-1.917E-02	1.442E-01	2.413E-01	3.948E-02	-0.079
		311.98	*	-8.452E-03	2.501E-02	4.091E-02	4.518E-03	-0.207
		340.50		-6.350E-02	2.108E-01	3.415E-01	8.376E-02	-0.186
		398.62		-5.771E-01	7.095E-01	1.013E+00	2.716E-01	-0.570
		415.76		1.779E-01	6.609E-01	1.121E+00	2.451E-01	0.159
PA-234	+	63.00		1.722E-01	2.664E-01	3.999E-01	6.488E-02	0.431
		94.67		2.526E-03	3.181E-02	5.485E-02	7.811E-03	0.046
		98.44		1.233E-02	2.346E-02	3.597E-02	2.024E-02	0.343
		99.86		-7.484E-02	1.024E-01	1.640E-01	1.870E-02	-0.456
		111.00		-2.182E-02	4.357E-02	7.065E-02	1.045E-02	-0.309
		131.20		-2.285E-02	3.143E-02	4.370E-02	5.335E-03	-0.523
		152.70		1.429E-02	9.419E-02	1.585E-01	2.846E-02	0.090
	+	186.00		4.297E-01	6.907E-01	7.803E-01	2.452E-01	0.551

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		226.40		-3.584E-02	1.124E-01	1.740E-01	2.489E-02	-0.206
		227.20		-7.383E-02	1.220E-01	1.817E-01	1.861E-02	-0.406
		248.90		-1.347E-01	2.790E-01	4.191E-01	9.753E-02	-0.321
		293.70		-7.255E-02	2.325E-01	3.829E-01	7.134E-02	-0.189
		369.80		9.899E-02	3.386E-01	5.797E-01	1.289E-01	0.171
		568.70		-2.854E-01	4.730E-01	6.878E-01	7.353E-02	-0.415
		569.50		-2.171E-02	1.314E-01	2.041E-01	2.183E-02	-0.106
		574.00		-3.548E-01	7.538E-01	1.136E+00	1.217E-01	-0.312
		699.00		1.402E-02	3.014E-01	5.046E-01	1.022E-01	0.028
		706.10		2.744E-01	4.284E-01	7.444E-01	3.358E-01	0.369
		733.00		1.550E-02	1.454E-01	2.448E-01	5.670E-02	0.063
		742.81		-2.101E-01	5.691E-01	8.578E-01	5.793E-01	-0.245
		796.30		2.316E-01	2.840E-01	5.265E-01	1.458E-01	0.440
		805.60		-1.215E-02	4.215E-01	6.891E-01	2.150E-01	-0.018
		819.60		-6.068E-02	4.647E-01	7.427E-01	2.855E-01	-0.082
		826.30		-4.543E-02	3.183E-01	5.071E-01	2.286E-01	-0.090
		831.60		1.995E-01	2.461E-01	4.436E-01	1.345E-01	0.450
		876.40		1.219E-02	3.300E-01	5.408E-01	5.565E-01	0.023
		880.51		6.693E-02	9.569E-02	1.772E-01	1.714E-02	0.378
		883.24		-3.063E-03	9.611E-02	1.553E-01	1.046E-01	-0.020
		899.00		-1.316E-01	3.838E-01	5.813E-01	2.551E-01	-0.226
		925.00		-6.158E-02	3.958E-01	6.187E-01	5.831E-02	-0.100
		926.50		1.013E-02	6.288E-02	1.052E-01	2.688E-02	0.096
		946.00	*	3.739E-02	1.168E-01	1.999E-01	3.823E-02	0.187
		949.00		9.551E-02	1.603E-01	2.892E-01	2.710E-02	0.330
		980.50		-4.590E-02	3.380E-01	5.319E-01	4.934E-02	-0.086
		1394.10		4.223E-01	5.353E-01	9.108E-01	5.923E-01	0.464
PA-234M		766.42		6.719E-01	4.457E+00	7.493E+00	3.831E+00	0.090
		1001.03	*	-1.347E-01	2.062E+00	3.056E+00	3.201E-01	-0.044
U-234		609.31	*	-2.656E-02	3.078E-02	4.666E-02	5.631E-03	-0.569
		1120.29		3.464E-02	1.370E-01	2.126E-01	2.307E-02	0.163
		1764.49		2.933E-02	1.198E-01	2.186E-01	1.801E-02	0.134
U-235		89.95		4.818E-02	2.228E-01	3.252E-01	1.026E-01	0.148
	+	93.35		1.786E-01	2.566E-01	3.211E-01	9.266E-02	0.556
		105.00		1.571E-01	2.295E-01	4.043E-01	1.249E-01	0.389
		143.76	*	2.596E-02	6.252E-02	1.040E-01	1.963E-02	0.250
		163.35		-2.841E-02	1.621E-01	2.564E-01	4.961E-02	-0.111
	+	185.71		1.592E-02	2.513E-02	2.902E-02	2.717E-03	0.548
		205.31		-1.717E-02	1.584E-01	2.548E-01	5.003E-02	-0.067
NP-236		94.67		2.264E-03	2.416E-02	4.170E-02	4.630E-03	0.054
		98.44		9.323E-03	1.698E-02	2.719E-02	3.078E-03	0.343
		111.00		-1.650E-02	3.293E-02	5.344E-02	6.475E-03	-0.309
		160.31	*	2.599E-04	2.422E-02	4.014E-02	3.823E-03	0.006
NP-237		86.50	*	-7.097E-03	4.533E-02	6.862E-02	1.594E-02	-0.103
		95.87		-1.441E-01	2.082E-01	2.917E-01	7.478E-02	-0.494
NP-239		99.55		2.060E-03	3.302E-02	5.670E-02	6.457E-03	0.036
		117.00	*	-8.206E-03	4.688E-02	7.811E-02	9.786E-03	-0.105
		209.75		5.335E-02	2.288E-01	3.798E-01	3.755E-02	0.140
		228.18		-4.282E-02	6.456E-02	9.537E-02	9.788E-03	-0.449

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		277.60		1.996E-03	6.639E-02	1.056E-01	1.176E-02	0.019
		334.30		5.912E-02	4.825E-01	8.196E-01	8.604E-02	0.072
AM-241		59.54	*	-9.462E-03	1.529E-02	2.030E-02	2.109E-03	-0.466
AM-243		74.67	*	4.930E-03	9.145E-03	1.499E-02	1.522E-03	0.329
		86.72		-6.357E-01	1.729E+00	2.563E+00	2.737E-01	-0.248
		117.66		-6.793E-02	8.941E-01	1.502E+00	1.888E-01	-0.045
		142.18		-3.296E+00	5.343E+00	8.166E+00	9.221E-01	-0.404
CM-243		99.55		2.119E-03	3.396E-02	5.832E-02	6.641E-03	0.036
		103.76	*	1.223E-02	2.052E-02	3.663E-02	4.266E-03	0.334
		117.00		-8.438E-03	4.820E-02	8.032E-02	1.006E-02	-0.105
		209.75		5.256E-02	2.255E-01	3.742E-01	3.700E-02	0.140
		228.18		-4.325E-02	6.521E-02	9.632E-02	9.885E-03	-0.449
		277.60		2.012E-03	6.690E-02	1.064E-01	1.185E-02	0.019
AM-246		798.80		-4.953E-02	5.259E-02	7.089E-02	7.410E-03	-0.699
		1036.00		-2.047E-02	1.262E-01	2.061E-01	1.867E-02	-0.099
		1062.04		-5.619E-02	8.376E-02	1.214E-01	1.084E-02	-0.463
		1078.86	*	6.228E-02	5.348E-02	1.061E-01	9.384E-03	0.587
CM-247		278.00		2.211E-01	2.574E-01	4.450E-01	4.958E-02	0.497
		287.40		-7.594E-02	4.665E-01	7.237E-01	8.036E-02	-0.105
		402.60	*	8.121E-03	1.301E-02	2.308E-02	2.128E-03	0.352
CF-249		252.85		-2.434E-02	2.755E-01	4.357E-01	4.672E-02	-0.056
		333.44		6.066E-03	6.284E-02	1.065E-01	1.120E-02	0.057
		387.95	*	5.827E-03	1.358E-02	2.369E-02	2.180E-03	0.246
CF-251		176.60	*	-2.071E-02	3.801E-02	5.918E-02	5.419E-03	-0.350
		227.00		-4.219E-02	1.079E-01	1.655E-01	1.695E-02	-0.255
		285.00		1.453E-01	6.382E-01	1.036E+00	1.152E-01	0.140

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202018262    *
* Acquisition date : 26-JAN-2010 14:07:42 Detector SN#     :               *
* Detector ID        : GAM25               Sensitivity      : 5.000        *
* Geometry           : CAN                 Energy tolerance: 1.500         *
* Elapsed live time:     0 02:00:00.00     Abundance limit : 75.000        *
* Elapsed real time:     0 02:00:00.94     Half life ratio :  8.000        *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date        : 19-JAN-2010 00:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1202018262          Analyst initials: MXR1         *
* Batch Number       : 942718               Sample Quantity : 1.8111E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  7-OCT-2009 09:38:43 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
BI-210	6.023E-02	2.360E-01	1.680E-01	0.000E+00
PB-210	6.023E-02	2.360E-01	1.680E-01	0.000E+00
PO-210	6.023E-02	2.360E-01	1.680E-01	0.000E+00
TH-234	1.478E-01	2.244E-01	2.248E-01	0.000E+00
U-238	1.478E-01	2.244E-01	2.248E-01	0.000E+00
ANH-511	1.156E-02	3.521E-02	1.833E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	1.024E-01	1.146E-01	2.232E-01	0.000E+00	NOT IDENT.
NA-22	1.169E-02	1.704E-02	3.273E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	7.263E+01	0.000E+00	0.000E+00	SHORT HLIF
AL-26	8.052E-03	1.495E-02	2.898E-02	0.000E+00	NOT IDENT.
K-40	2.808E-02	1.846E-01	3.581E-01	0.000E+00	NOT IDENT.
TI-44	-4.632E-03	5.313E-03	8.617E-03	0.000E+00	NOT IDENT.
SC-46	5.220E-03	1.160E-02	2.184E-02	0.000E+00	NOT IDENT.
V-48	7.040E-03	2.216E-02	3.959E-02	0.000E+00	NOT IDENT.
CR-51	-1.792E-01	1.149E-01	1.760E-01	0.000E+00	NOT IDENT.
MN-52	2.912E-02	4.058E-02	7.903E-02	0.000E+00	NOT IDENT.
MN-54	2.095E-03	1.342E-02	2.388E-02	0.000E+00	NOT IDENT.
CO-56	5.427E-04	1.449E-02	2.524E-02	0.000E+00	NOT IDENT.
CO-57	-4.188E-04	6.134E-03	1.167E-02	0.000E+00	NOT IDENT.
CO-58	5.975E-03	1.522E-02	2.803E-02	0.000E+00	NOT IDENT.
FE-59	-1.918E-02	3.030E-02	4.671E-02	0.000E+00	NOT IDENT.
CO-60	1.913E-02	1.913E-02	3.783E-02	0.000E+00	NOT IDENT.
ZN-65	-2.735E-02	3.181E-02	4.652E-02	0.000E+00	NOT IDENT.
GE-68	3.963E-01	4.682E-01	9.301E-01	0.000E+00	NOT IDENT.
AS-73	2.850E-02	4.310E-02	8.610E-02	0.000E+00	NOT IDENT.
AS-74	-5.435E-03	2.807E-02	4.671E-02	0.000E+00	NOT IDENT.
SE-75	4.048E-03	1.509E-02	2.729E-02	0.000E+00	NOT IDENT.

BR-77	-2.373E-02	4.302E-01	7.441E-01	0.000E+00	NOT IDENT.
SR-82	3.080E-02	1.164E-01	2.123E-01	0.000E+00	NOT IDENT.
RB-83	-3.036E-03	2.382E-02	4.073E-02	0.000E+00	NOT IDENT.
RB-84	3.548E-03	2.206E-02	3.912E-02	0.000E+00	NOT IDENT.
KR-85	5.167E+00	3.099E+00	6.285E+00	0.000E+00	NOT IDENT.
SR-85	2.448E-02	1.468E-02	2.977E-02	0.000E+00	NOT IDENT.
RB-86	8.592E-02	2.369E-01	4.393E-01	0.000E+00	NOT IDENT.
Y-88	7.291E-03	1.825E-02	3.383E-02	0.000E+00	NOT IDENT.
ZR-88	5.239E-03	1.062E-02	2.019E-02	0.000E+00	NOT IDENT.
Y-91	5.246E-01	5.324E+00	9.380E+00	0.000E+00	NOT IDENT.
NB-94	-1.126E-02	1.338E-02	2.079E-02	0.000E+00	NOT IDENT.
NB-95	5.699E-03	1.431E-02	2.658E-02	0.000E+00	NOT IDENT.
NB-95M	-6.442E-02	4.175E-02	6.280E-02	0.000E+00	NOT IDENT.
ZR-95	9.731E-03	2.413E-02	4.503E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.969E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	4.905E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	2.539E-01	6.568E-01	1.223E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.064E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	9.784E-03	1.154E-02	2.119E-02	0.000E+00	NOT IDENT.
RH-102	-3.291E-03	1.194E-02	2.034E-02	0.000E+00	NOT IDENT.
RU-103	1.185E-02	1.539E-02	2.926E-02	0.000E+00	NOT IDENT.
RH-106	-3.250E-02	1.246E-01	2.167E-01	0.000E+00	FAIL ABUN
RU-106	-3.250E-02	1.245E-01	2.167E-01	0.000E+00	FAIL ABUN
AG-108M	5.501E-03	1.223E-02	2.298E-02	0.000E+00	NOT IDENT.
CD-109	-1.449E-01	1.610E-01	2.584E-01	0.000E+00	NOT IDENT.
AG-110M	-3.914E-02	1.701E-02	2.046E-02	0.000E+00	NOT IDENT.
IN-111	1.571E-02	5.517E-02	1.008E-01	0.000E+00	NOT IDENT.
IN-113M	2.594E-03	1.540E-02	2.835E-02	0.000E+00	NOT IDENT.
SN-113	2.594E-03	1.540E-02	2.835E-02	0.000E+00	NOT IDENT.
IN-114M	-4.768E-02	5.707E-02	8.228E-02	0.000E+00	NOT IDENT.
CD-115	-1.567E-01	4.459E-01	7.395E-01	0.000E+00	NOT IDENT.
SN-117M	-1.627E-03	1.060E-02	1.948E-02	0.000E+00	NOT IDENT.
SB-122	1.303E-02	1.148E-01	2.015E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.193E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-7.349E-04	7.832E-03	1.447E-02	0.000E+00	NOT IDENT.
I-124	1.780E-02	7.341E-02	1.366E-01	0.000E+00	NOT IDENT.
SB-124	-2.040E-02	2.457E-02	2.677E-02	0.000E+00	NOT IDENT.
SB-125	1.552E-02	3.033E-02	5.781E-02	0.000E+00	NOT IDENT.
TE-125M	2.599E+00	1.825E+00	3.879E+00	0.000E+00	NOT IDENT.
I-126	-9.812E-02	6.581E-02	9.760E-02	0.000E+00	NOT IDENT.
SB-126	7.242E-03	3.795E-02	6.887E-02	0.000E+00	NOT IDENT.
SN-126	-2.086E-02	1.628E-02	2.498E-02	0.000E+00	FAIL ABUN
SB-127	6.183E-02	1.443E-01	2.709E-01	0.000E+00	NOT IDENT.
XE-127	4.105E-03	1.230E-02	2.300E-02	0.000E+00	NOT IDENT.
I-131	1.397E-03	2.069E-02	3.800E-02	0.000E+00	NOT IDENT.
TE-132	-2.691E-02	3.907E-02	6.376E-02	0.000E+00	NOT IDENT.
BA-133	4.626E-03	1.480E-02	2.793E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	5.987E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.006E-02	1.518E-02	2.946E-02	0.000E+00	NOT IDENT.
CS-135	-2.460E-02	5.227E-02	8.673E-02	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.152E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.788E-02	2.592E-02	3.945E-02	0.000E+00	NOT IDENT.
BA-137M	4.299E-03	2.132E-02	4.126E-02	0.000E+00	NOT IDENT.
CS-137	4.545E-03	2.254E-02	4.361E-02	0.000E+00	NOT IDENT.
CE-139	-1.682E-03	8.506E-03	1.551E-02	0.000E+00	NOT IDENT.
BA-140	-7.398E-02	7.555E-02	1.001E-01	0.000E+00	NOT IDENT.
LA-140	8.225E-03	2.595E-02	4.782E-02	0.000E+00	NOT IDENT.
CE-141	-8.338E-03	1.473E-02	2.633E-02	0.000E+00	NOT IDENT.
CE-143	-6.828E-01	9.887E-01	1.710E+00	0.000E+00	NOT IDENT.
CE-144	-6.551E-03	4.730E-02	8.855E-02	0.000E+00	NOT IDENT.
PM-144	1.501E-02	1.439E-02	2.858E-02	0.000E+00	NOT IDENT.
PR-144	1.013E+00	9.710E-01	1.929E+00	0.000E+00	NOT IDENT.
PM-146	1.595E-03	1.656E-02	2.974E-02	0.000E+00	NOT IDENT.
ND-147	1.578E-02	1.508E-01	2.659E-01	0.000E+00	NOT IDENT.
PM-149	-1.484E+00	3.310E+00	5.471E+00	0.000E+00	NOT IDENT.
EU-152	3.004E-03	3.184E-02	5.901E-02	0.000E+00	NOT IDENT.
GD-153	8.253E-03	1.844E-02	3.221E-02	0.000E+00	NOT IDENT.
EU-154	3.748E-02	4.699E-02	9.177E-02	0.000E+00	NOT IDENT.
EU-155	6.259E-03	2.271E-02	4.506E-02	0.000E+00	NOT IDENT.
TB-160	-2.776E-03	4.940E-02	8.423E-02	0.000E+00	NOT IDENT.
HO-166M	-1.338E-02	2.518E-02	4.124E-02	0.000E+00	FAIL ABUN
TM-171	1.399E+00	3.176E+00	5.644E+00	0.000E+00	NOT IDENT.
LU-176	-3.863E-03	8.659E-03	1.539E-02	0.000E+00	NOT IDENT.
LU-177	2.115E-02	1.487E-01	2.725E-01	0.000E+00	NOT IDENT.
LU-177M	5.507E-03	6.333E-02	1.148E-01	0.000E+00	NOT IDENT.
HF-181	-4.949E-03	1.385E-02	2.314E-02	0.000E+00	NOT IDENT.
W-181	-1.121E-02	4.214E-02	6.709E-02	0.000E+00	NOT IDENT.
TA-182	-7.650E-02	6.469E-02	7.783E-02	0.000E+00	NOT IDENT.

RE-183	2.982E-02	3.262E-02	6.283E-02	0.000E+00	NOT IDENT.
RE-184	-6.291E-03	6.978E-02	1.221E-01	0.000E+00	NOT IDENT.
OS-185	7.467E-04	1.580E-02	2.851E-02	0.000E+00	NOT IDENT.
RE-188	6.877E-03	4.363E-02	8.262E-02	0.000E+00	NOT IDENT.
W-188	1.771E+00	2.354E+00	4.670E+00	0.000E+00	FAIL ABUN
IR-192	7.428E-03	1.214E-02	2.365E-02	0.000E+00	NOT IDENT.
AU-195	1.171E-02	5.150E-02	9.445E-02	0.000E+00	NOT IDENT.
TL-200	6.266E-01	1.470E+00	2.787E+00	0.000E+00	NOT IDENT.
TL-201	1.893E-01	3.370E-01	6.565E-01	0.000E+00	NOT IDENT.
TL-202	1.281E-03	1.622E-02	2.918E-02	0.000E+00	NOT IDENT.
HG-203	9.371E-03	1.231E-02	2.326E-02	0.000E+00	NOT IDENT.
BI-207	-4.135E-04	1.784E-02	3.121E-02	0.000E+00	NOT IDENT.
TL-207	2.601E-01	2.355E-01	4.702E-01	0.000E+00	NOT IDENT.
TL-208	-2.357E-03	1.720E-02	2.895E-02	0.000E+00	FAIL ABUN
PO-209	4.170E+00	2.952E+00	6.173E+00	0.000E+00	NOT IDENT.
BI-211	-4.115E-02	8.391E-02	1.357E-01	0.000E+00	NOT IDENT.
PB-211	-3.218E-02	3.216E-01	5.706E-01	0.000E+00	NOT IDENT.
BI-212	-1.806E-02	1.282E-01	2.065E-01	0.000E+00	NOT IDENT.
PB-212	-1.586E-02	2.302E-02	3.991E-02	0.000E+00	NOT IDENT.
PO-212	-1.586E-02	2.302E-02	3.991E-02	0.000E+00	NOT IDENT.
BI-214	-2.656E-02	3.016E-02	4.904E-02	0.000E+00	NOT IDENT.
PB-214	-6.894E-03	2.847E-02	4.711E-02	0.000E+00	NOT IDENT.
PO-214	-6.894E-03	2.847E-02	4.711E-02	0.000E+00	NOT IDENT.
PO-215	2.601E-01	2.355E-01	4.702E-01	0.000E+00	NOT IDENT.
PO-216	-1.586E-02	2.302E-02	3.991E-02	0.000E+00	NOT IDENT.
PO-218	-6.894E-03	2.847E-02	4.711E-02	0.000E+00	NOT IDENT.
RN-219	1.467E-01	1.349E-01	2.718E-01	0.000E+00	NOT IDENT.
RN-220	-3.046E+00	9.969E+00	1.644E+01	0.000E+00	NOT IDENT.
RA-223	2.601E-01	2.355E-01	4.702E-01	0.000E+00	NOT IDENT.
RA-224	-2.908E-01	2.454E-01	3.864E-01	0.000E+00	NOT IDENT.
RA-226	-2.656E-02	3.016E-02	4.904E-02	0.000E+00	NOT IDENT.
AC-227	-6.570E-02	1.198E-01	1.967E-01	0.000E+00	NOT IDENT.
TH-227	-6.570E-02	1.200E-01	1.967E-01	0.000E+00	FAIL ABUN
AC-228	7.339E-03	6.222E-02	1.036E-01	0.000E+00	NOT IDENT.
RA-228	7.339E-03	6.222E-02	1.036E-01	0.000E+00	NOT IDENT.
TH-228	-1.599E-02	2.320E-02	4.022E-02	0.000E+00	NOT IDENT.
TH-229	1.190E-01	1.507E-01	2.941E-01	0.000E+00	NOT IDENT.
TH-230	-2.656E-02	3.016E-02	4.904E-02	0.000E+00	NOT IDENT.
PA-231	1.046E-01	5.424E-01	9.666E-01	0.000E+00	NOT IDENT.
TH-231	2.601E-01	2.355E-01	4.702E-01	0.000E+00	NOT IDENT.
U-231	-4.714E-02	6.589E-02	1.069E-01	0.000E+00	FAIL ABUN
TH-232	7.339E-03	6.222E-02	1.036E-01	0.000E+00	NOT IDENT.
PA-233	-8.452E-03	2.451E-02	4.405E-02	0.000E+00	NOT IDENT.
PA-234	3.739E-02	1.145E-01	2.067E-01	0.000E+00	FAIL ABUN
PA-234M	-1.347E-01	2.021E+00	3.153E+00	0.000E+00	NOT IDENT.
U-234	-2.656E-02	3.016E-02	4.904E-02	0.000E+00	NOT IDENT.
U-235	2.596E-02	6.127E-02	1.150E-01	0.000E+00	FAIL ABUN
NP-236	2.599E-04	2.373E-02	4.423E-02	0.000E+00	NOT IDENT.
NP-237	-7.097E-03	4.443E-02	7.716E-02	0.000E+00	NOT IDENT.
NP-239	-8.206E-03	4.594E-02	8.697E-02	0.000E+00	NOT IDENT.
AM-241	-9.462E-03	1.499E-02	2.310E-02	0.000E+00	NOT IDENT.
AM-243	4.930E-03	8.962E-03	1.693E-02	0.000E+00	NOT IDENT.
CM-243	1.223E-02	2.011E-02	4.094E-02	0.000E+00	NOT IDENT.
AM-246	6.228E-02	5.241E-02	1.091E-01	0.000E+00	NOT IDENT.
CM-247	8.121E-03	1.275E-02	2.463E-02	0.000E+00	NOT IDENT.
CF-249	5.827E-03	1.331E-02	2.531E-02	0.000E+00	NOT IDENT.
CF-251	-2.071E-02	3.725E-02	6.499E-02	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 16:12:02.24

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*****************************************************************************
*                              GEL Laboratories LLC                          *
*                                2040 Savage Road                            *
*                              Charleston, SC 29414                          *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202018262.CNF;1
Sample date       : 19-JAN-2010 00:00:00 Acquisition date : 26-JAN-2010 14:07:42
Sample ID         : G1202018262          Sample quantity  : 1.81110E+02 GRAM
Detector name     : GAM25                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:00.94  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 942718                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
BI-210	46.50	11	4.05*	9.210E+00	6.019E-02	6.023E-02	399.79
PB-210	46.50	11	4.05*	9.210E+00	6.019E-02	6.023E-02	399.79
PO-210	46.50	11	4.05*	9.210E+00	6.019E-02	6.023E-02	399.77
TH-234	63.29	26	3.80*	9.778E+00	1.478E-01	1.478E-01	154.93
	92.38	36	5.41	9.232E+00	1.486E-01	1.486E-01	142.05
U-238	63.29	26	3.80*	9.778E+00	1.478E-01	1.478E-01	154.93
	92.38	36	5.41	9.232E+00	1.486E-01	1.486E-01	141.16
ANH-511	511.00	16	100.00*	2.807E+00	1.156E-02	1.156E-02	310.83

Flag: "*" = Keyline

Sample ID : G1202018262 Acquisition date : 26-JAN-2010 14:07:42

Total number of lines in spectrum	5	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	5	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
BI-210	22.26Y	1.00	6.019E-02	6.023E-02	24.08E-02	399.79	
PB-210	22.26Y	1.00	6.019E-02	6.023E-02	24.08E-02	399.79	
PO-210	22.26Y	1.00	6.019E-02	6.023E-02	24.08E-02	399.77	
TH-234	4.47E+09Y	1.00	1.478E-01	1.478E-01	2.289E-01	154.93	
U-238	4.47E+09Y	1.00	1.478E-01	1.478E-01	2.289E-01	154.93	
ANH-511	1.00E+09Y	1.00	1.156E-02	1.156E-02	3.593E-02	310.83	
			---	---			
	Total Activity :		4.877E-01	4.878E-01			
	Grand Total Activity :		4.877E-01	4.878E-01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1202018262
Acquisition date : 26-JAN-2010 14:07:42

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	185.24	27	75	0.96	370.02	364	12	3.71E-03	****	6.43E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 16:12:07.66

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*******************************************************************************
*                              GEL Laboratories LLC                           *
*                                2040 Savage Road                             *
*                              Charleston, SC 29414                           *
*******************************************************************************
*                                                                             *
*                                DETECTOR DATA                                *
*                                                                             *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202018262.CNF;1  *
* Acquisition date  : 26-JAN-2010 14:07:42  Detector SN#     :                *
* Detector ID       : GAM25                 Sensitivity     : 5.00000        *
* Geometry          : CAN                   Energy tolerance: 1.50000        *
* Elapsed live time: 0 02:00:00.00          Abundance limit : 75.00000       *
* Elapsed real time: 0 02:00:00.94          Half life ratio : 8.00000        *
*******************************************************************************
*                                                                             *
*                                SAMPLE DATA                                  *
*                                                                             *
* Sample date       : 19-JAN-2010 00:00:00  Nuclide Library : SOLID          *
* Sample ID         : G1202018262           Analyst initials: MXR1           *
* Batch Number      : 942718                Sample Quantity : 1.81110E+02 GRAM *
*******************************************************************************
*                                                                             *
*                                  QC DATA                                    *
*                                                                             *
* CALIB. DATE/TIME : 7-OCT-2009 09:38:43.34MS Isotope      :                 *
* MSD ID           :                       MSD Isotope     :                 *
* LCS ID           : 1032-A                LCS Isotope     :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BI-210	6.023E-02	2.408E-01	1.465E-01	1.511E-02	0.411
PB-210	6.023E-02	2.408E-01	1.465E-01	1.511E-02	0.411
PO-210	6.023E-02	2.408E-01	1.465E-01	1.395E-02	0.411
TH-234	1.478E-01	2.289E-01	1.979E-01	3.685E-02	0.747
U-238	1.478E-01	2.289E-01	1.979E-01	3.685E-02	0.747
ANH-511	1.156E-02	3.593E-02	1.733E-02	1.784E-03	0.667

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.024E-01		1.169E-01	2.105E-01	2.228E-02	0.486
NA-22	1.169E-02		1.739E-02	3.203E-02	2.626E-03	0.365
NA-24	5.869E-05		3.706E-05	Half-Life too short		
AL-26	8.052E-03		1.526E-02	2.876E-02	2.357E-03	0.280
K-40	2.808E-02		1.884E-01	3.523E-01	3.000E-02	0.080
TI-44	-4.632E-03		5.421E-03	7.639E-03	7.866E-04	-0.606

Sample ID : G1202018262 Acquisition date : 26-JAN-2010 14:07:42

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SC-46	5.220E-03		1.184E-02	2.108E-02	2.019E-03	0.248
V-48	7.040E-03		2.261E-02	3.835E-02	3.554E-03	0.184
CR-51	-1.792E-01		1.172E-01	1.636E-01	1.817E-02	-1.095
MN-52	2.912E-02		4.141E-02	7.770E-02	6.404E-03	0.375
MN-54	2.095E-03		1.369E-02	2.299E-02	2.333E-03	0.091
CO-56	5.427E-04		1.478E-02	2.431E-02	2.440E-03	0.022
CO-57	-4.188E-04		6.260E-03	1.050E-02	1.354E-03	-0.040
CO-58	5.975E-03		1.553E-02	2.696E-02	2.797E-03	0.222
FE-59	-1.918E-02		3.092E-02	4.545E-02	4.281E-03	-0.422
CO-60	1.913E-02		1.952E-02	3.708E-02	3.012E-03	0.516
ZN-65	-2.735E-02		3.246E-02	4.529E-02	3.912E-03	-0.604
GE-68	3.963E-01		4.778E-01	9.043E-01	8.005E-02	0.438
AS-73	2.850E-02		4.398E-02	7.541E-02	7.238E-03	0.378
AS-74	-5.435E-03		2.865E-02	4.440E-02	4.812E-03	-0.122
SE-75	4.048E-03		1.540E-02	2.520E-02	2.761E-03	0.161
BR-77	-2.373E-02		4.390E-01	7.039E-01	7.298E-02	-0.034
SR-82	3.080E-02		1.188E-01	2.038E-01	2.163E-02	0.151
RB-83	-3.036E-03		2.430E-02	3.853E-02	3.994E-03	-0.079
RB-84	3.548E-03		2.251E-02	3.774E-02	3.648E-03	0.094
KR-85	5.167E+00		3.162E+00	5.943E+00	6.131E-01	0.869
SR-85	2.448E-02		1.498E-02	2.815E-02	2.904E-03	0.869
RB-86	8.592E-02		2.417E-01	4.271E-01	3.783E-02	0.201
Y-88	7.291E-03		1.862E-02	3.359E-02	2.745E-03	0.217
ZR-88	5.239E-03		1.083E-02	1.891E-02	1.721E-03	0.277
Y-91	5.246E-01		5.433E+00	9.159E+00	7.537E-01	0.057
NB-94	-1.126E-02		1.366E-02	1.988E-02	2.184E-03	-0.566
NB-95	5.699E-03		1.461E-02	2.550E-02	2.724E-03	0.223
NB-95M	-6.442E-02		4.260E-02	5.776E-02	6.620E-03	-1.115
ZR-95	9.731E-03		2.462E-02	4.319E-02	4.946E-03	0.225
NB-97	-6.643E-05		1.515E-05	Half-Life too short		
ZR-97	6.919E-04		2.503E-04	Half-Life too short		
MO-99	2.539E-01		6.702E-01	1.173E+00	1.939E-01	0.216
TC-99M	2.142E+00		5.429E+00	Half-Life too short		
RH-101	9.784E-03		1.177E-02	1.937E-02	1.867E-03	0.505
RH-102	-3.291E-03		1.218E-02	1.917E-02	1.914E-03	-0.172
RU-103	1.185E-02		1.571E-02	2.763E-02	4.189E-03	0.429
RH-106	-3.250E-02		1.271E-01	2.063E-01	3.088E-02	-0.158
RU-106	-3.250E-02		1.271E-01	2.063E-01	2.259E-02	-0.158
AG-108M	5.501E-03		1.248E-02	2.159E-02	2.134E-03	0.255
CD-109	-1.449E-01		1.643E-01	2.300E-01	2.471E-02	-0.630
AG-110M	-3.914E-02		1.736E-02	1.952E-02	2.200E-03	-2.005
IN-111	1.571E-02		5.630E-02	9.284E-02	9.831E-03	0.169
IN-113M	2.594E-03		1.571E-02	2.654E-02	2.479E-03	0.098
SN-113	2.594E-03		1.571E-02	2.654E-02	2.479E-03	0.098
IN-114M	-4.768E-02		5.823E-02	7.512E-02	7.110E-03	-0.635
CD-115	-1.567E-01		4.550E-01	6.999E-01	7.294E-02	-0.224
SN-117M	-1.627E-03		1.081E-02	1.768E-02	1.716E-03	-0.092
SB-122	1.303E-02		1.172E-01	1.912E-01	2.038E-02	0.068

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-123	-1.120E-05		6.087E-05	Half-Life too short		
TE-123M	-7.349E-04		7.991E-03	1.313E-02	1.275E-03	-0.056
I-124	1.780E-02		7.491E-02	1.299E-01	1.412E-02	0.137
SB-124	-2.040E-02		2.507E-02	2.649E-02	2.290E-03	-0.770
SB-125	1.552E-02		3.094E-02	5.430E-02	5.245E-03	0.286
TE-125M	2.599E+00		1.862E+00	3.476E+00	4.613E-01	0.748
I-126	-9.812E-02		6.716E-02	9.317E-02	1.031E-02	-1.053
SB-126	7.242E-03		3.872E-02	6.593E-02	7.197E-03	0.110
SN-126	-2.086E-02		1.662E-02	2.222E-02	2.383E-03	-0.939
SB-127	6.183E-02		1.473E-01	2.589E-01	3.057E-02	0.239
XE-127	4.105E-03		1.255E-02	2.104E-02	2.050E-03	0.195
I-131	1.397E-03		2.111E-02	3.548E-02	3.629E-03	0.039
TE-132	-2.691E-02		3.987E-02	5.858E-02	9.177E-03	-0.459
BA-133	4.626E-03		1.510E-02	2.606E-02	3.695E-03	0.178
I-133	1.579E-06		3.055E-06	Half-Life too short		
CS-134	1.006E-02		1.549E-02	2.831E-02	2.981E-03	0.355
CS-135	-2.460E-02		5.333E-02	8.012E-02	9.671E-03	-0.307
I-135	-4.948E+00		5.878E+00	Half-Life too short		
CS-136	-1.788E-02		2.645E-02	3.831E-02	3.582E-03	-0.467
BA-137M	4.299E-03		2.176E-02	3.937E-02	4.362E-03	0.109
CS-137	4.545E-03		2.300E-02	4.162E-02	4.616E-03	0.109
CE-139	-1.682E-03		8.679E-03	1.409E-02	1.257E-03	-0.119
BA-140	-7.398E-02		7.709E-02	9.478E-02	3.192E-02	-0.781
LA-140	8.225E-03		2.648E-02	4.722E-02	3.926E-03	0.174
CE-141	-8.338E-03		1.503E-02	2.382E-02	2.649E-03	-0.350
CE-143	-6.828E-01		1.009E+00	1.584E+00	3.566E-01	-0.431
CE-144	-6.551E-03		4.827E-02	7.988E-02	1.412E-02	-0.082
PM-144	1.501E-02		1.468E-02	2.732E-02	3.006E-03	0.549
PR-144	1.013E+00		9.909E-01	1.844E+00	2.029E-01	0.549
PM-146	1.595E-03		1.690E-02	2.799E-02	3.268E-03	0.057
ND-147	1.578E-02		1.539E-01	2.517E-01	4.045E-02	0.063
PM-149	-1.484E+00		3.377E+00	5.065E+00	8.629E-01	-0.293
EU-152	3.004E-03		3.249E-02	5.500E-02	5.907E-03	0.055
GD-153	8.253E-03		1.882E-02	2.875E-02	3.238E-03	0.287
EU-154	3.748E-02		4.795E-02	8.981E-02	9.867E-03	0.417
EU-155	6.259E-03		2.317E-02	4.033E-02	4.768E-03	0.155
TB-160	-2.776E-03		5.041E-02	8.125E-02	7.873E-03	-0.034
HO-166M	-1.338E-02		2.570E-02	3.947E-02	4.321E-03	-0.339
TM-171	1.399E+00		3.240E+00	4.978E+00	4.941E-01	0.281
LU-176	-3.863E-03		8.836E-03	1.428E-02	1.558E-03	-0.270
LU-177	2.115E-02		1.517E-01	2.496E-01	2.460E-02	0.085
LU-177M	5.507E-03		6.462E-02	1.077E-01	1.007E-02	0.051
HF-181	-4.949E-03		1.414E-02	2.183E-02	2.194E-03	-0.227
W-181	-1.121E-02		4.300E-02	5.913E-02	5.852E-03	-0.190
TA-182	-7.650E-02		6.602E-02	7.604E-02	6.254E-03	-1.006
RE-183	2.982E-02		3.329E-02	5.705E-02	5.310E-03	0.523
RE-184	-6.291E-03		7.120E-02	1.126E-01	1.207E-02	-0.056
OS-185	7.467E-04		1.612E-02	2.719E-02	3.000E-03	0.027

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-188	6.877E-03		4.452E-02	7.490E-02	7.545E-03	0.092
W-188	1.771E+00		2.402E+00	4.327E+00	4.793E-01	0.409
IR-192	7.428E-03		1.239E-02	2.197E-02	2.373E-03	0.338
AU-195	1.171E-02		5.255E-02	8.437E-02	9.573E-03	0.139
TL-200	6.266E-01		1.500E+00	2.604E+00	2.542E-01	0.241
TL-201	1.893E-01		3.438E-01	5.968E-01	5.338E-02	0.317
TL-202	1.281E-03		1.655E-02	2.744E-02	2.643E-03	0.047
HG-203	9.371E-03		1.257E-02	2.152E-02	2.442E-03	0.436
BI-207	-4.135E-04		1.821E-02	3.033E-02	2.707E-03	-0.014
TL-207	2.601E-01		2.403E-01	4.373E-01	8.217E-02	0.595
TL-208	-2.357E-03		1.755E-02	2.750E-02	3.101E-03	-0.086
PO-209	4.170E+00		3.013E+00	5.959E+00	5.655E-01	0.700
BI-211	-4.115E-02		8.562E-02	1.266E-01	1.334E-02	-0.325
PB-211	-3.218E-02		3.282E-01	5.349E-01	3.357E-01	-0.060
BI-212	-1.806E-02		1.308E-01	1.978E-01	2.377E-02	-0.091
PB-212	-1.586E-02		2.349E-02	3.672E-02	4.181E-03	-0.432
PO-212	-1.586E-02		2.349E-02	3.672E-02	4.181E-03	-0.432
BI-214	-2.656E-02		3.078E-02	4.666E-02	5.631E-03	-0.569
PB-214	-6.894E-03		2.905E-02	4.394E-02	5.159E-03	-0.157
PO-214	-6.894E-03		2.905E-02	4.394E-02	5.159E-03	-0.157
PO-215	2.601E-01		2.403E-01	4.373E-01	8.217E-02	0.595
PO-216	-1.586E-02		2.349E-02	3.672E-02	4.181E-03	-0.432
PO-218	-6.894E-03		2.905E-02	4.394E-02	5.159E-03	-0.157
RN-219	1.467E-01		1.377E-01	2.547E-01	3.915E-02	0.576
RN-220	-3.046E+00		1.017E+01	1.558E+01	1.648E+00	-0.195
RA-223	2.601E-01		2.403E-01	4.373E-01	8.217E-02	0.595
RA-224	-2.908E-01		2.504E-01	3.557E-01	3.737E-02	-0.818
RA-226	-2.656E-02		3.078E-02	4.666E-02	5.631E-03	-0.569
AC-227	-6.570E-02		1.223E-01	1.814E-01	3.022E-02	-0.362
TH-227	-6.570E-02		1.224E-01	1.814E-01	3.481E-02	-0.362
AC-228	7.339E-03		6.349E-02	1.000E-01	1.190E-02	0.073
RA-228	7.339E-03		6.349E-02	1.000E-01	1.190E-02	0.073
TH-228	-1.599E-02		2.367E-02	3.700E-02	4.213E-03	-0.432
TH-229	1.190E-01		1.538E-01	2.687E-01	2.563E-02	0.443
TH-230	-2.656E-02		3.078E-02	4.666E-02	5.631E-03	-0.569
PA-231	1.046E-01		5.535E-01	8.947E-01	1.498E-01	0.117
TH-231	2.601E-01		2.403E-01	4.373E-01	8.217E-02	0.595
U-231	-4.714E-02		6.724E-02	9.541E-02	1.066E-02	-0.494
TH-232	7.339E-03		6.349E-02	1.000E-01	1.190E-02	0.073
PA-233	-8.452E-03		2.501E-02	4.091E-02	4.518E-03	-0.207
PA-234	3.739E-02		1.168E-01	1.999E-01	3.823E-02	0.187
PA-234M	-1.347E-01		2.062E+00	3.056E+00	3.201E-01	-0.044
U-234	-2.656E-02		3.078E-02	4.666E-02	5.631E-03	-0.569
U-235	2.596E-02		6.252E-02	1.040E-01	1.963E-02	0.250
NP-236	2.599E-04		2.422E-02	4.014E-02	3.823E-03	0.006
NP-237	-7.097E-03		4.533E-02	6.862E-02	1.594E-02	-0.103
NP-239	-8.206E-03		4.688E-02	7.811E-02	9.786E-03	-0.105
AM-241	-9.462E-03		1.529E-02	2.030E-02	2.109E-03	-0.466

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-243	4.930E-03		9.145E-03	1.499E-02	1.522E-03	0.329
CM-243	1.223E-02		2.052E-02	3.663E-02	4.266E-03	0.334
AM-246	6.228E-02		5.348E-02	1.061E-01	9.384E-03	0.587
CM-247	8.121E-03		1.301E-02	2.308E-02	2.128E-03	0.352
CF-249	5.827E-03		1.358E-02	2.369E-02	2.180E-03	0.246
CF-251	-2.071E-02		3.801E-02	5.918E-02	5.419E-03	-0.350

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202018262          *
* Acquisition date  : 26-JAN-2010 14:07:42 Detector SN#     :               *
* Detector ID       : GAM25                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 02:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 02:00:00.94      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 19-JAN-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1202018262          Analyst initials: MXR1           *
* Batch Number      : 942718               Sample Quantity : 1.8111E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME :  7-OCT-2009 09:38:43 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
BI-210	6.023E-02	2.360E-01	8.406E-02	1.204E-01
PB-210	6.023E-02	2.360E-01	8.406E-02	1.204E-01
PO-210	6.023E-02	2.360E-01	8.406E-02	1.204E-01
TH-234	1.478E-01	2.244E-01	1.124E-01	1.145E-01
U-238	1.478E-01	2.244E-01	1.124E-01	1.145E-01
ANH-511	1.156E-02	3.521E-02	9.170E-03	1.796E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	1.024E-01	1.146E-01	1.117E-01	5.847E-02 NOT IDENT.
NA-22	1.169E-02	1.704E-02	1.637E-02	8.693E-03 NOT IDENT.
NA-24	5.869E+01	7.263E+01	0.000E+00	3.706E+01 SHORT HLIF
AL-26	8.052E-03	1.495E-02	1.450E-02	7.629E-03 NOT IDENT.
K-40	2.808E-02	1.846E-01	1.791E-01	9.420E-02 NOT IDENT.
TI-44	-4.632E-03	5.313E-03	4.311E-03	2.711E-03 NOT IDENT.
SC-46	5.220E-03	1.160E-02	1.093E-02	5.919E-03 NOT IDENT.
V-48	7.040E-03	2.216E-02	1.981E-02	1.131E-02 NOT IDENT.
CR-51	-1.792E-01	1.149E-01	8.805E-02	5.862E-02 NOT IDENT.
MN-52	2.912E-02	4.058E-02	3.954E-02	2.071E-02 NOT IDENT.
MN-54	2.095E-03	1.342E-02	1.195E-02	6.845E-03 NOT IDENT.
CO-56	5.427E-04	1.449E-02	1.263E-02	7.391E-03 NOT IDENT.
CO-57	-4.188E-04	6.134E-03	5.840E-03	3.130E-03 NOT IDENT.
CO-58	5.975E-03	1.522E-02	1.402E-02	7.763E-03 NOT IDENT.
FE-59	-1.918E-02	3.030E-02	2.337E-02	1.546E-02 NOT IDENT.
CO-60	1.913E-02	1.913E-02	1.893E-02	9.759E-03 NOT IDENT.
ZN-65	-2.735E-02	3.181E-02	2.327E-02	1.623E-02 NOT IDENT.
GE-68	3.963E-01	4.682E-01	4.653E-01	2.389E-01 NOT IDENT.
AS-73	2.850E-02	4.310E-02	4.308E-02	2.199E-02 NOT IDENT.
AS-74	-5.435E-03	2.807E-02	2.337E-02	1.432E-02 NOT IDENT.
SE-75	4.048E-03	1.509E-02	1.365E-02	7.699E-03 NOT IDENT.

BR-77	-2.373E-02	4.302E-01	3.722E-01	2.195E-01	NOT IDENT.
SR-82	3.080E-02	1.164E-01	1.062E-01	5.938E-02	NOT IDENT.
RB-83	-3.036E-03	2.382E-02	2.038E-02	1.215E-02	NOT IDENT.
RB-84	3.548E-03	2.206E-02	1.957E-02	1.125E-02	NOT IDENT.
KR-85	5.167E+00	3.099E+00	3.144E+00	1.581E+00	NOT IDENT.
SR-85	2.448E-02	1.468E-02	1.490E-02	7.490E-03	NOT IDENT.
RB-86	8.592E-02	2.369E-01	2.198E-01	1.208E-01	NOT IDENT.
Y-88	7.291E-03	1.825E-02	1.693E-02	9.311E-03	NOT IDENT.
ZR-88	5.239E-03	1.062E-02	1.010E-02	5.416E-03	NOT IDENT.
Y-91	5.246E-01	5.324E+00	4.693E+00	2.716E+00	NOT IDENT.
NB-94	-1.126E-02	1.338E-02	1.040E-02	6.829E-03	NOT IDENT.
NB-95	5.699E-03	1.431E-02	1.330E-02	7.303E-03	NOT IDENT.
NB-95M	-6.442E-02	4.175E-02	3.142E-02	2.130E-02	NOT IDENT.
ZR-95	9.731E-03	2.413E-02	2.253E-02	1.231E-02	NOT IDENT.
NB-97	-6.643E+01	2.969E+01	0.000E+00	1.515E+01	SHORT HLIF
ZR-97	6.919E+02	4.905E+02	0.000E+00	2.503E+02	SHORT HLIF
MO-99	2.539E-01	6.568E-01	6.121E-01	3.351E-01	NOT IDENT.
TC-99M	2.142E+06	1.064E+07	0.000E+00	5.429E+06	SHORT HLIF
RH-101	9.784E-03	1.154E-02	1.060E-02	5.886E-03	NOT IDENT.
RH-102	-3.291E-03	1.194E-02	1.017E-02	6.092E-03	NOT IDENT.
RU-103	1.185E-02	1.539E-02	1.464E-02	7.854E-03	NOT IDENT.
RH-106	-3.250E-02	1.246E-01	1.084E-01	6.355E-02	FAIL ABUN
RU-106	-3.250E-02	1.245E-01	1.084E-01	6.353E-02	FAIL ABUN
AG-108M	5.501E-03	1.223E-02	1.150E-02	6.239E-03	NOT IDENT.
CD-109	-1.449E-01	1.610E-01	1.293E-01	8.214E-02	NOT IDENT.
AG-110M	-3.914E-02	1.701E-02	1.024E-02	8.678E-03	NOT IDENT.
IN-111	1.571E-02	5.517E-02	5.043E-02	2.815E-02	NOT IDENT.
IN-113M	2.594E-03	1.540E-02	1.418E-02	7.857E-03	NOT IDENT.
SN-113	2.594E-03	1.540E-02	1.418E-02	7.857E-03	NOT IDENT.
IN-114M	-4.768E-02	5.707E-02	4.117E-02	2.912E-02	NOT IDENT.
CD-115	-1.567E-01	4.459E-01	3.700E-01	2.275E-01	NOT IDENT.
SN-117M	-1.627E-03	1.060E-02	9.747E-03	5.406E-03	NOT IDENT.
SB-122	1.303E-02	1.148E-01	1.008E-01	5.859E-02	NOT IDENT.
I-123	-1.120E+01	1.193E+02	0.000E+00	6.087E+01	SHORT HLIF
TE-123M	-7.349E-04	7.832E-03	7.242E-03	3.996E-03	NOT IDENT.
I-124	1.780E-02	7.341E-02	6.835E-02	3.746E-02	NOT IDENT.
SB-124	-2.040E-02	2.457E-02	1.339E-02	1.254E-02	NOT IDENT.
SB-125	1.552E-02	3.033E-02	2.892E-02	1.547E-02	NOT IDENT.
TE-125M	2.599E+00	1.825E+00	1.941E+00	9.312E-01	NOT IDENT.
I-126	-9.812E-02	6.581E-02	4.883E-02	3.358E-02	NOT IDENT.
SB-126	7.242E-03	3.795E-02	3.445E-02	1.936E-02	NOT IDENT.
SN-126	-2.086E-02	1.628E-02	1.250E-02	8.308E-03	FAIL ABUN
SB-127	6.183E-02	1.443E-01	1.355E-01	7.364E-02	NOT IDENT.
XE-127	4.105E-03	1.230E-02	1.151E-02	6.274E-03	NOT IDENT.
I-131	1.397E-03	2.069E-02	1.901E-02	1.056E-02	NOT IDENT.
TE-132	-2.691E-02	3.907E-02	3.190E-02	1.993E-02	NOT IDENT.
BA-133	4.626E-03	1.480E-02	1.397E-02	7.551E-03	NOT IDENT.
I-133	1.579E+00	5.987E+00	0.000E+00	3.055E+00	SHORT HLIF
CS-134	1.006E-02	1.518E-02	1.474E-02	7.744E-03	NOT IDENT.
CS-135	-2.460E-02	5.227E-02	4.339E-02	2.667E-02	NOT IDENT.
I-135	-4.948E+06	1.152E+07	0.000E+00	5.878E+06	SHORT HLIF
CS-136	-1.788E-02	2.592E-02	1.974E-02	1.322E-02	NOT IDENT.
BA-137M	4.299E-03	2.132E-02	2.064E-02	1.088E-02	NOT IDENT.
CS-137	4.545E-03	2.254E-02	2.182E-02	1.150E-02	NOT IDENT.
CE-139	-1.682E-03	8.506E-03	7.758E-03	4.340E-03	NOT IDENT.
BA-140	-7.398E-02	7.555E-02	5.007E-02	3.854E-02	NOT IDENT.
LA-140	8.225E-03	2.595E-02	2.392E-02	1.324E-02	NOT IDENT.
CE-141	-8.338E-03	1.473E-02	1.317E-02	7.517E-03	NOT IDENT.
CE-143	-6.828E-01	9.887E-01	8.553E-01	5.045E-01	NOT IDENT.
CE-144	-6.551E-03	4.730E-02	4.430E-02	2.413E-02	NOT IDENT.
PM-144	1.501E-02	1.439E-02	1.430E-02	7.340E-03	NOT IDENT.
PR-144	1.013E+00	9.710E-01	9.649E-01	4.954E-01	NOT IDENT.
PM-146	1.595E-03	1.656E-02	1.488E-02	8.449E-03	NOT IDENT.
ND-147	1.578E-02	1.508E-01	1.330E-01	7.696E-02	NOT IDENT.
PM-149	-1.484E+00	3.310E+00	2.737E+00	1.689E+00	NOT IDENT.
EU-152	3.004E-03	3.184E-02	2.952E-02	1.625E-02	NOT IDENT.
GD-153	8.253E-03	1.844E-02	1.611E-02	9.408E-03	NOT IDENT.
EU-154	3.748E-02	4.699E-02	4.591E-02	2.397E-02	NOT IDENT.
EU-155	6.259E-03	2.271E-02	2.255E-02	1.159E-02	NOT IDENT.
TB-160	-2.776E-03	4.940E-02	4.214E-02	2.520E-02	NOT IDENT.
HO-166M	-1.338E-02	2.518E-02	2.063E-02	1.285E-02	FAIL ABUN
TM-171	1.399E+00	3.176E+00	2.824E+00	1.620E+00	NOT IDENT.
LU-176	-3.863E-03	8.659E-03	7.698E-03	4.418E-03	NOT IDENT.
LU-177	2.115E-02	1.487E-01	1.364E-01	7.584E-02	NOT IDENT.
LU-177M	5.507E-03	6.333E-02	5.743E-02	3.231E-02	NOT IDENT.
HF-181	-4.949E-03	1.385E-02	1.158E-02	7.068E-03	NOT IDENT.
W-181	-1.121E-02	4.214E-02	3.357E-02	2.150E-02	NOT IDENT.
TA-182	-7.650E-02	6.469E-02	3.894E-02	3.301E-02	NOT IDENT.

RE-183	2.982E-02	3.262E-02	3.143E-02	1.664E-02	NOT IDENT.
RE-184	-6.291E-03	6.978E-02	6.110E-02	3.560E-02	NOT IDENT.
OS-185	7.467E-04	1.580E-02	1.426E-02	8.060E-03	NOT IDENT.
RE-188	6.877E-03	4.363E-02	4.133E-02	2.226E-02	NOT IDENT.
W-188	1.771E+00	2.354E+00	2.337E+00	1.201E+00	FAIL ABUN
IR-192	7.428E-03	1.214E-02	1.183E-02	6.193E-03	NOT IDENT.
AU-195	1.171E-02	5.150E-02	4.725E-02	2.628E-02	NOT IDENT.
TL-200	6.266E-01	1.470E+00	1.394E+00	7.500E-01	NOT IDENT.
TL-201	1.893E-01	3.370E-01	3.285E-01	1.719E-01	NOT IDENT.
TL-202	1.281E-03	1.622E-02	1.460E-02	8.273E-03	NOT IDENT.
HG-203	9.371E-03	1.231E-02	1.164E-02	6.283E-03	NOT IDENT.
BI-207	-4.135E-04	1.784E-02	1.561E-02	9.103E-03	NOT IDENT.
TL-207	2.601E-01	2.355E-01	2.353E-01	1.202E-01	NOT IDENT.
TL-208	-2.357E-03	1.720E-02	1.449E-02	8.776E-03	FAIL ABUN
PO-209	4.170E+00	2.952E+00	3.088E+00	1.506E+00	NOT IDENT.
BI-211	-4.115E-02	8.391E-02	6.790E-02	4.281E-02	NOT IDENT.
PB-211	-3.218E-02	3.216E-01	2.855E-01	1.641E-01	NOT IDENT.
BI-212	-1.806E-02	1.282E-01	1.033E-01	6.542E-02	NOT IDENT.
PB-212	-1.586E-02	2.302E-02	1.997E-02	1.175E-02	NOT IDENT.
PO-212	-1.586E-02	2.302E-02	1.997E-02	1.175E-02	NOT IDENT.
BI-214	-2.656E-02	3.016E-02	2.453E-02	1.539E-02	NOT IDENT.
PB-214	-6.894E-03	2.847E-02	2.357E-02	1.452E-02	NOT IDENT.
PO-214	-6.894E-03	2.847E-02	2.357E-02	1.452E-02	NOT IDENT.
PO-215	2.601E-01	2.355E-01	2.353E-01	1.202E-01	NOT IDENT.
PO-216	-1.586E-02	2.302E-02	1.997E-02	1.175E-02	NOT IDENT.
PO-218	-6.894E-03	2.847E-02	2.357E-02	1.452E-02	NOT IDENT.
RN-219	1.467E-01	1.349E-01	1.360E-01	6.883E-02	NOT IDENT.
RN-220	-3.046E+00	9.969E+00	8.225E+00	5.086E+00	NOT IDENT.
RA-223	2.601E-01	2.355E-01	2.353E-01	1.202E-01	NOT IDENT.
RA-224	-2.908E-01	2.454E-01	1.933E-01	1.252E-01	NOT IDENT.
RA-226	-2.656E-02	3.016E-02	2.453E-02	1.539E-02	NOT IDENT.
AC-227	-6.570E-02	1.198E-01	9.840E-02	6.113E-02	NOT IDENT.
TH-227	-6.570E-02	1.200E-01	9.840E-02	6.121E-02	FAIL ABUN
AC-228	7.339E-03	6.222E-02	5.181E-02	3.174E-02	NOT IDENT.
RA-228	7.339E-03	6.222E-02	5.181E-02	3.174E-02	NOT IDENT.
TH-228	-1.599E-02	2.320E-02	2.012E-02	1.183E-02	NOT IDENT.
TH-229	1.190E-01	1.507E-01	1.471E-01	7.691E-02	NOT IDENT.
TH-230	-2.656E-02	3.016E-02	2.453E-02	1.539E-02	NOT IDENT.
PA-231	1.046E-01	5.424E-01	4.836E-01	2.768E-01	NOT IDENT.
TH-231	2.601E-01	2.355E-01	2.353E-01	1.202E-01	NOT IDENT.
U-231	-4.714E-02	6.589E-02	5.349E-02	3.362E-02	FAIL ABUN
TH-232	7.339E-03	6.222E-02	5.181E-02	3.174E-02	NOT IDENT.
PA-233	-8.452E-03	2.451E-02	2.204E-02	1.251E-02	NOT IDENT.
PA-234	3.739E-02	1.145E-01	1.034E-01	5.840E-02	FAIL ABUN
PA-234M	-1.347E-01	2.021E+00	1.577E+00	1.031E+00	NOT IDENT.
U-234	-2.656E-02	3.016E-02	2.453E-02	1.539E-02	NOT IDENT.
U-235	2.596E-02	6.127E-02	5.751E-02	3.126E-02	FAIL ABUN
NP-236	2.599E-04	2.373E-02	2.213E-02	1.211E-02	NOT IDENT.
NP-237	-7.097E-03	4.443E-02	3.860E-02	2.267E-02	NOT IDENT.
NP-239	-8.206E-03	4.594E-02	4.351E-02	2.344E-02	NOT IDENT.
AM-241	-9.462E-03	1.499E-02	1.156E-02	7.647E-03	NOT IDENT.
AM-243	4.930E-03	8.962E-03	8.470E-03	4.572E-03	NOT IDENT.
CM-243	1.223E-02	2.011E-02	2.048E-02	1.026E-02	NOT IDENT.
AM-246	6.228E-02	5.241E-02	5.460E-02	2.674E-02	NOT IDENT.
CM-247	8.121E-03	1.275E-02	1.232E-02	6.503E-03	NOT IDENT.
CF-249	5.827E-03	1.331E-02	1.266E-02	6.792E-03	NOT IDENT.
CF-251	-2.071E-02	3.725E-02	3.251E-02	1.900E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                   GAMMA SPECTROSCOPY BACKGROUND REPORT                    *
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ENERGY	MDA COUNTS
46.50	31.9611
46.50	31.9611
46.50	31.9611
48.70	18.6515
49.72	31.7069
51.35	42.0924
52.39	39.3636
52.97	46.0365
53.15	48.2652
53.44	39.5376
54.07	45.1469
56.28	56.6657
56.28	56.6665
57.37	47.9858
57.53	48.0163
57.53	48.0166
57.60	55.8483
57.98	54.8132
57.98	54.8132
59.32	52.4765
59.32	52.4765
59.40	53.9927
59.54	54.0218
59.72	52.5577
60.01	51.1129
61.10	48.3063
61.14	52.8430
61.30	52.8751
63.00	58.1532
63.29	58.2156
63.29	58.2156
63.58	58.2776
64.28	58.0452
65.12	64.3511
65.20	64.3698
65.20	64.3698
66.05	55.3429
66.72	52.3925
66.83	53.9551
66.91	53.9701
67.20	59.0423
67.20	59.0423
67.75	63.7960
67.85	61.4980
68.90	71.0399
68.90	71.0399
69.30	69.9724
69.67	54.8820
70.82	56.2698
70.82	56.2698
70.83	56.2716
72.80	100.3091
72.87	100.3325
72.87	100.3325
74.67	66.4944
74.81	81.9680
74.81	81.9680
74.81	81.9680
74.81	81.9680
74.81	81.9680
74.81	81.9680
74.81	81.9680
74.97	82.0107
75.28	82.0933
75.70	88.1624
77.11	88.5621
77.11	88.5621

77.11	88.5621
77.11	88.5621
77.11	88.5621
77.11	88.5621
77.11	88.5621
78.38	61.2819
79.62	89.2644
79.80	57.9338
79.80	57.9338
80.11	57.9895
80.18	58.0020
80.30	56.8147
80.30	56.8147
80.57	56.8621
81.00	64.2060
81.07	64.2197
81.07	64.2197
81.07	64.2197
81.07	64.2197
82.60	57.2160
83.37	82.9720
83.78	68.4145
83.78	68.4145
83.78	68.4145
83.78	68.4145
84.21	72.1723
84.90	72.3208
85.43	77.3451
86.29	60.3094
86.50	60.3464
86.54	60.3535
86.59	60.3625
86.72	65.3147
86.79	76.4210
86.94	76.4551
87.30	83.9417
87.30	83.9417
87.30	83.9417
87.30	83.9417
87.30	83.9417
87.30	83.9417
87.30	83.9417
87.57	84.0075
87.88	76.6637
88.03	76.6968
88.36	66.0384
88.47	66.0596
89.95	66.3395
91.11	78.2047
92.29	65.1077
92.38	65.1242
92.38	65.1242
93.35	65.2991
94.00	65.4162
94.67	65.5356
94.67	65.5364
94.90	55.4888
94.90	55.4888
94.90	55.4888
94.90	55.4888
95.87	68.2795
95.87	68.2795
96.73	50.6952
97.43	45.7108
98.44	47.8709
98.44	47.8709
98.88	52.6852
99.55	59.5887
99.55	59.5887
99.86	72.4165
100.00	72.4429
100.10	72.4628
103.18	59.2927
103.76	48.1931
105.00	46.6180
105.31	52.7024
108.00	61.7548
109.28	37.5187

111.00	66.5905
111.00	66.5905
111.76	53.5456
112.95	62.5013
115.19	62.8339
116.30	60.3356
117.00	61.3226
117.00	61.3226
117.66	54.2959
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122.32	57.5739
122.32	57.5739
122.32	57.5739
123.07	49.5606
127.23	65.4772
129.76	55.7777
131.20	60.5356
133.02	52.4819
133.54	50.6959
135.34	57.3631
136.00	49.1031
136.25	55.6171
136.48	51.9338
140.51	55.1673
140.51	0.0000
142.18	74.1155
142.65	70.4292
143.76	57.4084
144.24	55.5790
144.24	55.5790
144.24	55.5790
144.24	55.5790
145.22	65.1248
145.44	70.8183
147.16	60.6348
152.43	62.2070
152.70	63.1963
153.22	67.0919
154.21	58.5744
154.21	58.5744
154.21	58.5744
154.21	58.5744
155.03	57.7026
156.02	64.5532
158.56	61.9525
159.00	0.0000
159.00	62.9707
160.31	66.0348
161.27	72.9591
162.32	49.7061
162.64	57.5362
163.35	71.2794
163.89	77.2127
165.85	65.7125
167.43	45.2419
171.28	57.4271
171.86	55.5021
172.10	51.5588
176.55	63.9388
176.60	63.9440
181.06	55.8647
184.41	45.5447
185.71	45.6409
186.00	45.6619
190.27	58.2350
192.34	53.3002
193.63	47.2456
197.04	54.7236
198.01	49.6353
198.60	60.0296
200.40	78.8760
201.83	60.3258
202.84	53.1260
205.31	57.5048

208.36	55.6644
208.81	49.3958
209.75	51.5685
209.75	51.5685
210.97	42.1720
215.65	58.3799
216.55	53.1413
218.09	56.4532
222.10	53.5596
223.80	46.1704
226.40	42.0262
227.00	43.1396
227.08	43.1445
227.20	45.3090
228.16	46.4486
228.18	46.4499
228.18	46.4499
231.56	40.1530
235.69	93.8473
236.00	93.8858
236.00	93.8858
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238.63	65.7306
238.63	65.7306
238.63	65.7306
239.00	59.1861
240.98	89.0107
241.98	73.7222
241.98	73.7222
241.98	73.7222
244.69	55.2104
245.39	47.5238
247.94	53.2241
248.90	52.1789
249.79	36.6779
252.40	42.3747
252.85	41.2832
252.85	41.2832
254.15	0.0000
256.20	45.9382
256.20	45.9382
260.50	56.3212
260.90	66.4914
262.80	48.5727
264.65	48.6821
268.24	51.1670
268.79	52.3387
269.46	45.5485
269.46	45.5485
269.46	45.5485
269.46	45.5485
271.23	43.3623
273.65	50.3531
276.40	60.8489
277.35	52.8702
277.60	52.8861
277.60	52.8861
278.00	37.9575
278.60	40.2865
279.20	38.0106
279.53	48.3959
280.46	55.3691
281.68	45.0509
283.67	43.9955
284.30	38.2341
285.00	44.0627
285.90	56.8756
286.10	56.8885
286.10	56.8885
287.40	51.1597
288.45	0.0000
290.67	42.8877
290.80	46.3952
291.72	56.0820
293.26	57.9343
293.70	57.9625
295.21	49.2632
295.21	49.2632

295.21	49.2632
295.96	40.4999
296.50	46.6904
297.23	49.3734
298.57	61.8076
299.80	56.5859
299.80	56.5859
300.09	56.6035
300.09	56.6035
300.09	56.6035
300.09	56.6035
300.12	56.6055
301.29	45.1651
302.84	45.2413
303.76	39.9586
303.91	44.4054
304.40	47.0948
304.40	47.0948
304.84	55.1185
306.84	49.8912
308.46	47.3010
311.98	56.4362
316.51	44.1042
318.01	44.1737
319.02	51.4397
319.41	57.7803
320.08	63.2410
323.87	33.5583
323.87	33.5583
323.87	33.5583
323.87	33.5583
325.23	41.7794
328.77	40.1066
333.44	46.7067
334.20	46.7425
334.20	46.7425
334.30	46.7471
338.28	46.9324
338.28	46.9324
338.28	46.9324
338.28	46.9324
338.32	46.9339
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340.50	46.1128
340.57	46.1159
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350.59	35.3913
351.07	40.0665
351.92	34.5040
351.92	34.5040
351.92	34.5040
355.39	0.0000
356.01	33.7022
364.48	33.0277
366.43	45.3772
367.43	39.7416
367.94	38.8135
369.80	39.8281
374.96	37.1582
383.85	36.4959
387.95	26.9896
388.63	35.6862
391.69	33.8480
391.69	33.8480
392.90	31.9476
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401.10	27.2997
401.81	19.5117
402.60	26.3585
404.84	32.2779
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411.60	41.3162
413.65	34.4889
414.70	39.4507
415.30	35.5232

415.76	35.5369
417.63	0.0000
418.52	46.5016
423.70	30.8023
427.08	25.9056
427.89	21.9345
432.53	32.0249
433.93	28.0530
439.47	31.1963
439.56	28.1794
439.89	28.1867
443.98	32.3179
444.90	31.3306
445.03	32.3447
445.03	32.3447
445.03	32.3447
445.03	32.3447
453.90	30.5333
463.38	32.8057
468.07	36.0088
473.00	38.2071
475.06	36.1974
475.35	42.4120
476.78	24.8529
477.59	23.8314
477.96	25.9109
482.03	29.1074
484.57	19.7880
487.03	33.3872
490.36	30.3302
492.35	36.6582
497.08	28.3752
507.63	0.0000
510.53	0.0000
510.84	25.4687
511.00	25.4716
511.85	25.4866
511.85	25.4866
513.99	25.5247
513.99	25.5247
520.41	24.5702
520.65	24.5737
527.90	34.3594
528.96	0.0000
529.64	30.1003
529.87	0.0000
531.02	31.2037
537.32	31.3364
543.00	21.6931
546.56	0.0000
549.76	26.1482
552.65	17.4648
555.20	21.8677
563.23	23.0803
563.90	24.1901
568.70	35.2930
569.32	33.1000
569.50	33.1046
569.67	33.1082
573.80	44.2590
574.00	44.2651
574.64	40.9622
578.91	37.7416
579.30	42.1922
583.14	26.7114
585.48	32.3232
591.81	21.2608
592.07	21.2637
593.00	27.9945
595.88	28.0441
600.56	41.6239
602.52	0.0000
602.71	26.1333
602.71	26.1333
603.60	23.4425
604.41	27.9643
604.70	27.9696
609.31	28.9516

609.31	28.9516
609.31	28.9516
609.31	28.9516
610.33	18.1060
612.46	29.0063
614.37	25.4099
618.01	21.8268
621.84	27.3450
621.84	27.3450
631.29	28.4139
633.02	23.8545
633.10	23.8558
634.78	22.9608
635.90	29.4086
636.97	36.7832
645.85	23.1073
646.12	23.1110
656.30	40.9095
657.75	56.7616
657.90	0.0000
661.65	25.1793
661.65	25.1793
664.57	60.7153
666.33	60.7740
666.33	60.7740
675.00	28.1843
677.61	24.4613
685.20	21.7287
692.80	28.4583
695.00	29.4409
696.49	19.9597
696.49	19.9597
697.00	23.7683
697.49	19.9705
698.33	26.6396
698.50	28.5447
699.00	26.6492
702.63	30.5148
706.10	18.1511
706.58	0.0000
706.67	21.0235
709.31	22.0100
711.68	28.7439
713.82	21.1025
717.42	17.2982
720.50	22.1386
721.93	26.9719
722.20	27.9387
722.78	28.9109
722.78	28.9109
722.89	28.9124
722.95	26.0218
723.30	25.0625
724.18	25.0739
727.18	21.2497
733.00	19.3755
735.90	19.4038
739.58	16.5244
742.81	23.3666
744.21	17.5373
747.13	13.6603
751.79	18.5821
752.31	19.5649
753.82	22.5171
755.35	16.6555
756.15	15.6820
756.87	16.6684
763.93	19.6782
765.79	17.7267
766.42	21.6724
766.84	19.7065
776.49	16.8294
778.00	16.8419
778.57	22.7922
778.89	22.7962
783.80	20.8631
785.46	16.9025
792.07	18.9513

795.84	10.9914
796.30	7.9955
798.80	23.0140
801.93	15.0315
805.60	21.0805
810.29	16.0969
810.76	18.1129
815.85	20.1733
817.79	16.1531
818.51	14.1388
819.60	16.1668
826.30	17.2303
828.27	20.2891
831.60	12.1922
831.96	12.1942
834.83	16.2801
836.80	0.0000
846.75	17.3914
848.13	16.3785
856.28	0.0000
856.80	16.4422
860.37	18.5269
867.32	12.3891
867.82	15.4900
871.10	14.4782
873.19	14.4912
874.81	11.3940
875.33	0.0000
876.40	15.5482
879.36	15.5684
880.27	9.3448
880.51	8.3072
881.50	13.5050
883.24	11.4359
884.67	11.4431
889.25	8.3387
896.60	8.3650
898.02	12.5552
899.00	23.0275
903.28	17.8263
911.07	15.7811
911.07	15.7811
911.07	15.7811
919.63	12.6705
920.93	11.6209
925.00	11.6408
925.24	12.7002
926.50	11.6480
935.52	11.6915
937.48	13.8284
944.10	14.9324
946.00	12.8092
949.00	9.6187
962.29	13.9687
964.01	19.3544
966.15	16.1426
968.20	19.3869
969.11	19.3939
969.11	19.3939
969.11	19.3939
977.42	18.3771
980.50	20.5642
983.50	16.2543
989.30	18.4634
996.32	18.5141
1001.03	16.3660
1001.68	16.3700
1004.76	21.8530
1021.30	0.0000
1024.50	0.0000
1034.80	16.5784
1036.00	18.4294
1037.82	19.3636
1038.57	16.6018
1038.76	0.0000
1045.16	11.0952
1046.59	16.6523
1048.07	16.6611

1050.47	14.8229
1050.47	14.8229
1062.04	16.7476
1063.62	12.1023
1076.63	14.0314
1077.35	10.2924
1078.86	7.4893
1085.78	16.8933
1099.22	17.9176
1112.02	10.4208
1112.84	10.4240
1115.52	19.9191
1120.29	13.3016
1120.29	13.3016
1120.29	13.3016
1120.29	13.3016
1120.51	13.3027
1121.28	11.4053
1124.00	0.0000
1129.67	12.3922
1131.51	0.0000
1147.95	0.0000
1167.94	9.6582
1173.22	15.4811
1175.09	14.5227
1177.93	13.5671
1189.05	14.5905
1204.90	10.7561
1205.75	10.7587
1213.00	13.7260
1221.42	17.6960
1230.97	9.8617
1235.34	11.8506
1236.41	0.0000
1238.25	12.8503
1246.25	10.9011
1260.41	0.0000
1271.85	12.9878
1274.45	8.9989
1274.54	9.9988
1291.56	6.0313
1298.22	0.0000
1312.09	7.0809
1325.50	15.2350
1325.50	15.2350
1332.49	10.1782
1333.61	10.1815
1360.21	8.2100
1362.66	0.0000
1365.15	9.2498
1368.21	6.1719
1368.53	0.0000
1376.25	7.2176
1384.27	6.2009
1394.10	4.1458
1395.20	3.1104
1407.95	8.3245
1434.06	6.2898
1436.60	9.4413
1457.56	0.0000
1460.81	6.3369
1489.15	12.7725
1509.49	7.4916
1596.49	7.5078
1620.62	7.5539
1678.03	0.0000
1691.02	5.7648
1691.02	5.7648
1706.46	0.0000
1750.46	0.0000
1764.49	2.9331
1764.49	2.9331
1764.49	2.9331
1764.49	2.9331
1770.23	5.8740
1771.40	7.8343
1791.20	0.0000
1808.65	3.9508

1836.01	5.9630

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202018262

Total Uranium Activity	4.5163E-01	ug/g
Total Uranium Counting Unc.	6.6808E-01	ug/g
Total Uranium Tpu	3.4086E-07	ug/g
Total Uranium Mda	3.3559E-01	ug/g

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*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 942718                    SAMPLE ID   : G1202018262     *
*   ANALYST       : MXR1                      DETECTOR    : GAM25           *
*   SAMPLE DATE   : 19-JAN-2010 00:00:00.00   COUNT TIME :    0 02:00:00.00 *
*   ANALYSIS DATE: 26-JAN-2010 14:07:42.98    SAMPLE ALQT:  181.110 GRAM    *
*                                                                           *
*****************************************************************************


         GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 3.624E-02
         GROSS GAMMA ERROR   (pCi/GRAM  )  : 3.861E-02
         GROSS GAMMA MDA     (pCi/GRAM  )  : 4.786E-02
         GROSS GAMMA DLC     (pCi/GRAM  )  : 2.161E-02
```

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 16:13:23.39

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202018263.CNF;1
Sample date       : 11-JAN-2010 12:00:00 Acquisition date : 26-JAN-2010 14:10:01
Sample ID         : G1202018263          Sample quantity  : 1.30810E+02 GRAM
Detector name     : GAM12                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.45  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 942718                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.25*	43	341	0.85	125.98	123	6	6.00E-03	72.6	
2	3	74.67*	494	469	1.15	148.83	143	16	6.86E-02	8.5	1.31E+00
3	3	76.99	663	343	0.95	153.48	143	16	9.21E-02	6.0	
4	7	84.04*	150	305	1.37	167.58	164	29	2.08E-02	19.7	1.35E+00
5	7	87.11	327	423	1.43	173.72	164	29	4.54E-02	12.4	
6	7	89.78	180	261	0.99	179.06	164	29	2.50E-02	16.2	
7	7	92.65*	310	433	1.76	184.81	164	29	4.30E-02	15.6	
8	0	142.95*	36	273	1.15	285.45	283	7	5.03E-03	79.7	
9	0	185.87*	155	318	0.99	371.34	367	9	2.15E-02	23.6	
10	0	208.49	127	437	1.21	416.60	410	13	1.77E-02	34.9	
11	3	238.47*	1270	181	1.11	476.58	471	17	1.76E-01	3.4	1.42E+00
12	3	241.47	310	195	1.59	482.60	471	17	4.31E-02	11.7	
13	0	270.25	134	174	1.44	540.19	535	10	1.85E-02	20.4	
14	0	277.46	66	162	1.08	554.61	550	9	9.15E-03	37.1	
15	0	295.01*	340	195	1.09	589.72	585	10	4.72E-02	9.5	
16	0	299.74	67	165	1.31	599.18	595	9	9.32E-03	36.7	
17	0	327.77	84	189	1.48	655.27	649	12	1.17E-02	34.4	
18	0	337.92*	242	149	1.09	675.57	672	10	3.37E-02	11.5	
19	0	351.76*	653	202	1.20	703.27	697	13	9.07E-02	6.0	
20	0	462.77	74	101	1.16	925.37	920	11	1.03E-02	28.8	
21	0	510.94*	149	129	1.97	1021.75	1015	18	2.06E-02	22.1	
22	0	583.04*	369	109	1.56	1165.98	1158	17	5.12E-02	8.5	
23	0	609.20*	433	117	1.38	1218.32	1211	15	6.01E-02	7.4	
24	0	726.99	126	88	1.44	1453.95	1446	16	1.76E-02	18.8	
25	0	770.45	63	124	4.52	1540.89	1528	24	8.70E-03	50.0	
26	0	860.45*	63	51	1.34	1720.92	1714	15	8.70E-03	28.6	
27	0	910.67*	282	44	1.49	1821.38	1813	16	3.91E-02	8.1	
28	1	964.30	50	74	2.00	1928.64	1923	23	6.88E-03	34.1	1.89E+00
29	1	968.66	147	38	1.80	1937.36	1923	23	2.04E-02	12.4	
30	0	1120.13*	113	45	2.16	2240.32	2234	15	1.57E-02	16.5	
31	0	1377.22	32	30	1.03	2754.48	2744	17	4.47E-03	42.6	
32	0	1401.75	18	4	0.99	2803.53	2800	8	2.50E-03	30.4	
33	0	1460.22*	789	11	1.86	2920.45	2911	17	1.10E-01	3.7	
34	0	1587.67	18	19	1.16	3175.31	3169	11	2.51E-03	52.5	
35	0	1729.92*	17	10	1.68	3459.74	3456	12	2.41E-03	48.4	
36	0	1763.89*	96	9	2.15	3527.66	3521	17	1.33E-02	12.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 26-JAN-2010 16:13:26

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202018263.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 11-JAN-2010 12:00:00 Acquisition date : 26-JAN-2010 14:10:01
Sample ID : G1202018263 Sample quantity : 130.81 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA12 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.45 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	1.865E+01	1.927E+00	5.322E-01	3.795E-02	35.037
CD-109	+	88.03	*	4.566E+00	1.188E+00	1.056E+00	8.081E-02	4.324
SN-126	+	64.28		4.031E-01	5.881E-01	7.474E-01	1.049E-01	0.539
	+	86.94		1.866E+00	8.974E-01	4.365E-01	1.796E-01	4.275
	+	87.57	*	4.489E-01	1.168E-01	1.043E-01	7.948E-03	4.304
TL-208	+	277.35		6.172E-01	4.627E-01	5.023E-01	5.261E-02	1.229
	+	510.84		7.067E-01	3.205E-01	1.848E-01	1.907E-02	3.825
	+	583.14	*	5.018E-01	9.270E-02	5.124E-02	3.666E-03	9.793
	+	860.37		8.038E-01	4.649E-01	4.362E-01	3.812E-02	1.842
BI-211		72.87		1.971E+00	3.440E+00	5.310E+00	3.562E-01	0.371
	+	351.07	*	3.850E+00	5.215E-01	3.226E-01	2.028E-02	11.936
PB-212	+	74.81		2.892E+00	5.959E-01	5.232E-01	6.048E-02	5.527
	+	77.11		2.196E+00	3.043E-01	2.969E-01	2.055E-02	7.397
	+	87.30		2.076E+00	5.786E-01	4.837E-01	6.076E-02	4.292
	+	238.63	*	1.628E+00	1.591E-01	8.037E-02	5.707E-03	20.261
	+	300.09		1.329E+00	9.809E-01	1.083E+00	8.844E-02	1.226
PO-212	+	74.81		2.892E+00	5.959E-01	5.232E-01	6.048E-02	5.527
	+	77.11		2.196E+00	3.043E-01	2.969E-01	2.055E-02	7.397
	+	87.30		2.076E+00	5.786E-01	4.837E-01	6.076E-02	4.292
		115.19		1.425E+00	3.164E+00	5.301E+00	3.363E-01	0.269
	+	238.63	*	1.628E+00	1.591E-01	8.037E-02	5.707E-03	20.261
	+	300.09		1.329E+00	9.809E-01	1.083E+00	8.844E-02	1.226
BI-214	+	609.31	*	1.111E+00	1.882E-01	9.803E-02	8.070E-03	11.335
	+	1120.29		1.509E+00	5.152E-01	4.545E-01	4.128E-02	3.321
	+	1764.49		1.761E+00	4.582E-01	2.780E-01	1.647E-02	6.333
PB-214	+	74.81		4.983E+00	9.867E-01	9.015E-01	9.066E-02	5.527
	+	77.11		3.765E+00	5.953E-01	5.090E-01	5.240E-02	7.397
	+	87.30		3.556E+00	9.650E-01	8.287E-01	8.970E-02	4.292
	+	241.98		2.389E+00	5.890E-01	4.841E-01	3.809E-02	4.935
	+	295.21		1.180E+00	2.452E-01	2.046E-01	1.727E-02	5.764
	+	351.92	*	1.339E+00	1.944E-01	1.125E-01	9.186E-03	11.910
PO-214	+	74.81		4.983E+00	9.867E-01	9.015E-01	9.066E-02	5.527
	+	77.11		3.765E+00	5.953E-01	5.090E-01	5.240E-02	7.397
	+	87.30		3.556E+00	9.650E-01	8.287E-01	8.970E-02	4.292

Sample ID : G1202018263 Acquisition date : 26-JAN-2010 14:10:01

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		2.389E+00	5.890E-01	4.841E-01	3.809E-02	4.935
	+	295.21		1.180E+00	2.452E-01	2.046E-01	1.727E-02	5.764
	+	351.92	*	1.339E+00	1.944E-01	1.125E-01	9.186E-03	11.910
PO-216	+	74.81		2.892E+00	5.959E-01	5.232E-01	6.048E-02	5.527
	+	77.11		2.196E+00	3.043E-01	2.969E-01	2.055E-02	7.397
	+	87.30		2.076E+00	5.786E-01	4.837E-01	6.076E-02	4.292
	+	238.63	*	1.628E+00	1.591E-01	8.037E-02	5.707E-03	20.261
	+	300.09		1.329E+00	9.809E-01	1.083E+00	8.844E-02	1.226
PO-218	+	74.81		4.983E+00	9.867E-01	9.015E-01	9.066E-02	5.527
	+	77.11		3.765E+00	5.953E-01	5.090E-01	5.240E-02	7.397
	+	87.30		3.556E+00	9.650E-01	8.287E-01	8.970E-02	4.292
	+	241.98		2.389E+00	5.890E-01	4.841E-01	3.809E-02	4.935
	+	295.21		1.180E+00	2.452E-01	2.046E-01	1.727E-02	5.764
	+	351.92	*	1.339E+00	1.944E-01	1.125E-01	9.186E-03	11.910
RA-224	+	240.98	*	4.530E+00	1.088E+00	9.148E-01	5.046E-02	4.952
RA-226	+	609.31	*	1.111E+00	1.882E-01	9.803E-02	8.070E-03	11.335
	+	1120.29		1.509E+00	5.152E-01	4.545E-01	4.128E-02	3.321
	+	1764.49		1.761E+00	4.582E-01	2.780E-01	1.647E-02	6.333
AC-228	+	338.32		1.573E+00	7.364E-01	3.318E-01	1.352E-01	4.741
	+	911.07	*	1.710E+00	3.348E-01	1.845E-01	2.026E-02	9.267
	+	969.11		1.568E+00	5.316E-01	3.244E-01	7.481E-02	4.833
RA-228	+	338.32		1.573E+00	7.364E-01	3.318E-01	1.352E-01	4.741
	+	911.07	*	1.710E+00	3.348E-01	1.845E-01	2.026E-02	9.267
	+	969.11		1.568E+00	5.316E-01	3.244E-01	7.481E-02	4.833
TH-228	+	74.81		2.936E+00	5.401E-01	5.311E-01	3.661E-02	5.527
	+	77.11		2.229E+00	3.089E-01	3.014E-01	2.087E-02	7.397
	+	87.30		2.107E+00	5.483E-01	4.910E-01	3.732E-02	4.292
	+	238.63	*	1.653E+00	1.615E-01	8.159E-02	5.794E-03	20.261
	+	300.09		1.349E+00	1.269E+00	1.100E+00	6.480E-01	1.226
TH-230	+	609.31	*	1.111E+00	1.882E-01	9.803E-02	8.070E-03	11.335
	+	1120.29		1.509E+00	5.152E-01	4.545E-01	4.128E-02	3.321
	+	1764.49		1.760E+00	4.581E-01	2.780E-01	1.647E-02	6.333
TH-232	+	338.32		1.573E+00	3.736E-01	3.318E-01	1.879E-02	4.741
	+	911.07	*	1.710E+00	3.348E-01	1.845E-01	2.026E-02	9.267
	+	969.11		1.568E+00	5.316E-01	3.244E-01	7.481E-02	4.833
TH-234	+	63.29	*	1.018E+00	1.489E+00	1.966E+00	3.347E-01	0.518
	+	92.38		2.750E+00	9.850E-01	6.831E-01	1.194E-01	4.027
U-234	+	609.31	*	1.111E+00	1.882E-01	9.803E-02	8.070E-03	11.335
	+	1120.29		1.509E+00	5.152E-01	4.545E-01	4.128E-02	3.321
	+	1764.49		1.760E+00	4.581E-01	2.780E-01	1.647E-02	6.333
U-235	+	89.95		3.295E+00	1.469E+00	1.397E+00	4.268E-01	2.359
	+	93.35		3.307E+00	1.380E+00	8.153E-01	2.252E-01	4.056
		105.00		7.218E-01	9.772E-01	1.626E+00	4.769E-01	0.444
	+	143.76	*	1.518E-01	2.432E-01	3.252E-01	5.282E-02	0.467
		163.35		2.209E-01	4.410E-01	7.080E-01	1.260E-01	0.312
	+	185.71		1.404E-01	6.676E-02	6.763E-02	3.530E-03	2.076
		205.31		2.381E-01	5.301E-01	7.696E-01	1.373E-01	0.309
NP-237	+	86.50	*	1.318E+00	4.377E-01	3.098E-01	6.806E-02	4.255
		95.87		-4.878E-01	9.065E-01	1.293E+00	3.119E-01	-0.377

Sample ID : G1202018263 Acquisition date : 26-JAN-2010 14:10:01

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
U-238	+	63.29	*	1.018E+00	1.489E+00	1.966E+00	3.347E-01	0.518
	+	92.38		2.750E+00	8.826E-01	6.831E-01	4.973E-02	4.027
AM-243	+	74.67	*	4.688E-01	8.610E-02	8.508E-02	5.781E-03	5.510
	+	86.72		4.943E+01	1.286E+01	1.159E+01	8.756E-01	4.265
		117.66		-4.486E-01	3.469E+00	5.659E+00	3.565E-01	-0.079
	+	142.18		1.275E+01	2.033E+01	2.444E+01	1.383E+00	0.522
ANH-511	+	511.00	*	1.526E-01	6.805E-02	3.992E-02	2.433E-03	3.824

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.286E-01	3.194E-01	4.842E-01	3.332E-02	-0.472
NA-22		1274.54	*	-9.715E-03	3.920E-02	6.255E-02	4.028E-03	-0.155
NA-24		1368.53	*	-9.366E-02	3.920E-02	Half-Life too short		
AL-26		1129.67		-2.433E-01	1.663E+00	2.636E+00	1.606E-01	-0.092
		1808.65	*	-1.536E-02	3.204E-02	4.822E-02	2.767E-03	-0.318
TI-44		67.85		-6.789E-02	4.356E-02	6.831E-02	4.447E-03	-0.994
	+	78.38	*	4.053E-01	5.615E-02	6.969E-02	4.875E-03	5.815
SC-46		889.25	*	-1.998E-02	3.982E-02	6.116E-02	5.069E-03	-0.327
	+	1120.51		2.583E-01	8.650E-02	1.324E-01	8.227E-03	1.951
V-48		944.10		-4.873E-01	8.687E-01	1.311E+00	1.053E-01	-0.372
		983.50	*	-1.310E-02	7.086E-02	1.115E-01	8.589E-03	-0.118
		1312.09		8.018E-02	7.579E-02	1.391E-01	9.438E-03	0.576
CR-51		320.08	*	4.479E-01	3.418E-01	6.074E-01	3.862E-02	0.737
MN-52		744.21		-8.057E-02	2.330E-01	3.713E-01	2.652E-02	-0.217
		848.13		-3.222E+00	6.673E+00	1.032E+01	8.224E-01	-0.312
		935.52		1.928E-01	2.601E-01	4.485E-01	3.631E-02	0.430
		1246.25		-6.181E+00	6.960E+00	1.040E+01	6.409E-01	-0.594
		1333.61		-2.685E+00	5.015E+00	7.648E+00	5.341E-01	-0.351
		1434.06	*	9.887E-02	2.458E-01	4.212E-01	2.893E-02	0.235
MN-54		834.83	*	-1.863E-02	4.127E-02	6.467E-02	5.084E-03	-0.288
CO-56		846.75	*	-7.968E-03	3.953E-02	6.163E-02	4.902E-03	-0.129
		977.42		-1.152E-01	2.873E+00	4.317E+00	3.349E-01	-0.027
		1037.82		-3.602E-02	3.018E-01	4.992E-01	3.856E-02	-0.072
		1175.09		-3.333E+00	2.182E+00	3.035E+00	1.673E-01	-1.098
		1238.25		2.169E-01	9.717E-02	1.840E-01	1.184E-02	1.179
		1360.21		2.929E-01	1.021E+00	1.728E+00	1.203E-01	0.170
		1771.40		3.504E-02	2.479E-01	3.655E-01	2.155E-02	0.096
CO-57		122.06	*	-1.333E-03	2.303E-02	3.761E-02	2.352E-03	-0.035
		136.48		2.090E-02	1.856E-01	3.037E-01	2.043E-02	0.069
CO-58		810.76	*	-3.559E-02	4.110E-02	6.159E-02	4.739E-03	-0.578
FE-59	+	142.65		1.957E+00	3.121E+00	4.394E+00	2.482E-01	0.445
		192.34		2.068E-03	8.834E-01	1.408E+00	1.627E-01	0.001
		1099.22	*	2.021E-02	8.839E-02	1.503E-01	1.110E-02	0.134
		1291.56		2.816E-03	1.109E-01	1.826E-01	1.471E-02	0.015
CO-60		1173.22		-4.918E-02	4.337E-02	6.348E-02	3.489E-03	-0.775
		1332.49	*	-2.537E-02	3.861E-02	5.776E-02	4.034E-03	-0.439
ZN-65		1115.52	*	-2.770E-03	9.222E-02	1.315E-01	8.269E-03	-0.021

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GE-68		1077.35	*	6.803E-01	1.201E+00	2.108E+00	1.421E-01	0.323
AS-73		53.44	*	1.028E-02	7.118E-01	1.212E+00	7.825E-02	0.008
AS-74		595.88	*	-6.416E-02	8.631E-02	1.359E-01	8.651E-03	-0.472
		634.78		6.423E-03	3.378E-01	5.635E-01	3.631E-02	0.011
SE-75		66.05		8.904E-01	4.732E+00	7.206E+00	6.291E-01	0.124
		96.73		-8.158E-01	7.544E-01	1.037E+00	1.314E-01	-0.786
		121.11		7.097E-02	1.216E-01	2.044E-01	1.946E-02	0.347
		136.00		5.982E-03	3.496E-02	5.736E-02	3.387E-03	0.104
		198.60		-9.467E-01	1.805E+00	2.775E+00	1.865E-01	-0.341
		264.65	*	1.925E-02	4.361E-02	6.663E-02	3.777E-03	0.289
		279.53		-6.274E-02	1.064E-01	1.493E-01	9.152E-03	-0.420
		303.91		2.420E+00	1.970E+00	3.159E+00	2.991E-01	0.766
		400.65		7.894E-02	2.507E-01	4.173E-01	3.729E-02	0.189
BR-77	+	87.88		9.790E+02	2.547E+02	3.253E+02	2.487E+01	3.009
		200.40		1.646E+01	1.567E+02	2.504E+02	1.328E+01	0.066
	+	239.00		2.595E+02	2.252E+01	3.713E+01	2.045E+00	6.989
		249.79		3.656E+01	5.503E+01	9.591E+01	5.326E+00	0.381
		281.68		-2.674E+01	9.052E+01	1.302E+02	7.357E+00	-0.205
		297.23		1.151E+02	7.613E+01	9.546E+01	5.418E+00	1.205
		303.76		1.878E+02	1.669E+02	2.666E+02	1.515E+01	0.705
		439.47		-5.143E+01	1.280E+02	2.006E+02	1.155E+01	-0.256
		484.57		-2.534E+01	2.174E+02	3.463E+02	2.072E+01	-0.073
		520.65	*	4.390E-01	9.255E+00	1.486E+01	9.114E-01	0.030
		574.64		-4.123E+01	2.033E+02	3.165E+02	1.997E+01	-0.130
		578.91		-1.215E+01	9.212E+01	1.326E+02	8.383E+00	-0.092
		585.48		8.229E+02	2.133E+02	3.952E+02	2.506E+01	2.082
		755.35		1.033E+02	1.593E+02	2.761E+02	1.997E+01	0.374
		817.79		4.273E+01	1.221E+02	2.062E+02	1.593E+01	0.207
SR-82		698.33		-8.784E+00	3.382E+01	5.474E+01	3.709E+00	-0.160
		776.49	*	-2.195E-01	4.159E-01	5.461E-01	4.041E-02	-0.402
		1395.20		9.272E+00	1.164E+01	1.936E+01	1.340E+00	0.479
RB-83		520.41	*	-2.657E-03	6.559E-02	1.007E-01	6.176E-03	-0.026
		529.64		-2.538E-02	9.975E-02	1.556E-01	9.595E-03	-0.163
		552.65		1.111E-01	1.739E-01	3.069E-01	1.916E-02	0.362
RB-84		881.50	*	-1.082E-02	6.527E-02	1.039E-01	8.549E-03	-0.104
KR-85		513.99	*	1.542E+01	7.013E+00	1.287E+01	7.858E-01	1.199
SR-85		513.99	*	7.906E-02	3.595E-02	6.596E-02	4.028E-03	1.199
RB-86		1076.63	*	1.665E-01	7.623E-01	1.298E+00	8.761E-02	0.128
Y-88		898.02		1.573E-02	4.336E-02	7.257E-02	6.096E-03	0.217
		1836.01	*	-1.735E-02	3.877E-02	5.944E-02	3.346E-03	-0.292
ZR-88		392.90	*	-2.852E-02	2.983E-02	4.546E-02	2.494E-03	-0.627
Y-91		1204.90	*	-1.892E+01	1.785E+01	2.632E+01	1.522E+00	-0.719
NB-94		702.63	*	1.732E-02	3.317E-02	5.699E-02	3.881E-03	0.304
		871.10		-1.315E-02	3.301E-02	5.130E-02	4.179E-03	-0.256
NB-95		765.79	*	4.926E-02	4.890E-02	7.704E-02	5.635E-03	0.639
NB-95M		235.69	*	5.818E-02	1.212E-01	1.862E-01	1.358E-02	0.313
ZR-95		724.18		1.680E-01	1.030E-01	1.723E-01	1.359E-02	0.975
		756.15	*	1.723E-02	6.899E-02	1.158E-01	9.561E-03	0.149
NB-97		657.90	*	1.795E-02	6.899E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1024.50		2.088E+00	6.899E-02	Half-Life too short		
ZR-97		254.15		-1.415E+00	6.899E-02	Half-Life too short		
		355.39		3.158E+00	6.899E-02	Half-Life too short		
		507.63	*	3.202E+00	6.899E-02	Half-Life too short		
		602.52		2.406E-01	6.899E-02	Half-Life too short		
		1021.30		1.165E+00	6.899E-02	Half-Life too short		
		1147.95		-6.485E+00	6.899E-02	Half-Life too short		
		1362.66		6.540E+00	6.899E-02	Half-Life too short		
		1750.46		-3.478E-01	6.899E-02	Half-Life too short		
MO-99		140.51		9.557E+00	2.545E+01	3.759E+01	1.012E+01	0.254
		181.06		1.085E+01	1.764E+01	2.598E+01	4.403E+00	0.418
		366.43		-9.350E+00	8.165E+01	1.331E+02	7.442E+00	-0.070
		739.58	*	-5.836E+00	1.114E+01	1.741E+01	2.503E+00	-0.335
		778.00		-1.386E+01	3.767E+01	5.072E+01	3.759E+00	-0.273
TC-99M		140.51	*	1.299E+10	3.767E+01	Half-Life too short		
RH-101		127.23		-2.061E-02	2.920E-02	4.613E-02	2.799E-03	-0.447
		198.01	*	9.050E-04	3.236E-02	5.118E-02	2.707E-03	0.018
		325.23		-1.803E-01	2.455E-01	3.358E-01	1.908E-02	-0.537
RH-102		418.52		1.483E-01	2.611E-01	4.422E-01	2.494E-02	0.335
		475.06	*	1.963E-02	2.933E-02	4.878E-02	2.897E-03	0.402
		631.29		5.543E-03	4.960E-02	8.341E-02	5.370E-03	0.066
		697.49		1.138E-02	7.366E-02	1.233E-01	8.346E-03	0.092
		766.84		1.599E-01	1.082E-01	1.965E-01	1.439E-02	0.814
		1046.59		5.453E-02	1.109E-01	1.937E-01	1.373E-02	0.281
		1112.84		4.597E-02	2.150E-01	3.302E-01	2.084E-02	0.139
RU-103		497.08	*	-1.778E-02	3.851E-02	5.924E-02	7.556E-03	-0.300
	+	610.33		1.199E+01	2.584E+00	2.865E+00	4.484E-01	4.186
RH-106	+	511.85		7.624E-01	3.399E-01	4.294E-01	2.619E-02	1.776
		621.84	*	-1.564E-01	3.141E-01	5.027E-01	6.060E-02	-0.311
		1050.47		-2.578E-01	2.063E+00	3.403E+00	2.397E-01	-0.076
RU-106	+	511.85		7.624E-01	3.399E-01	4.294E-01	2.619E-02	1.776
		621.84	*	-1.564E-01	3.137E-01	5.027E-01	3.228E-02	-0.311
		1050.47		-2.578E-01	2.063E+00	3.403E+00	2.397E-01	-0.076
AG-108M		433.93	*	1.084E-02	2.808E-02	4.697E-02	2.927E-03	0.231
		614.37		-3.045E-02	4.093E-02	5.417E-02	3.714E-03	-0.562
		722.95		1.423E-02	4.481E-02	6.646E-02	4.909E-03	0.214
AG-110M		657.75	*	4.113E-03	3.295E-02	5.528E-02	3.767E-03	0.074
		677.61		1.610E-02	2.990E-01	4.976E-01	3.445E-02	0.032
		706.67		-6.846E-02	2.166E-01	3.489E-01	2.491E-02	-0.196
		763.93		6.922E-02	1.701E-01	2.542E-01	1.929E-02	0.272
		884.67		2.106E-02	4.564E-02	7.755E-02	6.624E-03	0.272
		937.48		-9.394E-02	1.150E-01	1.693E-01	1.424E-02	-0.555
		1384.27		8.322E-02	1.697E-01	2.610E-01	1.889E-02	0.319
IN-111		171.28		-1.169E-01	9.705E-01	1.549E+00	7.968E-02	-0.076
		245.39	*	-2.371E-01	9.584E-01	1.399E+00	7.745E-02	-0.169
IN-113M		391.69	*	-1.540E-02	4.357E-02	6.951E-02	4.092E-03	-0.222
SN-113		391.69	*	-1.540E-02	4.357E-02	6.951E-02	4.092E-03	-0.222
IN-114M		190.27	*	9.672E-03	1.906E-01	2.712E-01	1.423E-02	0.036
CD-115		260.90		2.865E+01	1.142E+02	1.944E+02	1.088E+01	0.147

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		492.35		-4.186E-01	3.271E+01	5.247E+01	3.157E+00	-0.008
		527.90	*	4.104E+00	1.009E+01	1.669E+01	1.028E+00	0.246
SN-117M		156.02		-1.093E+00	2.093E+00	3.294E+00	1.759E-01	-0.332
		158.56	*	2.985E-02	4.838E-02	8.040E-02	4.247E-03	0.371
SB-122		563.90	*	2.077E-01	1.922E+00	3.256E+00	2.044E-01	0.064
		692.80		-2.325E+01	4.196E+01	6.616E+01	4.454E+00	-0.351
I-123		159.00	*	-2.029E-01	4.196E+01	Half-Life too short		
		528.96		-8.670E+01	4.196E+01	Half-Life too short		
TE-123M		159.00	*	-1.037E-03	2.606E-02	4.195E-02	2.247E-03	-0.025
I-124		602.71	*	-2.768E-01	7.139E-01	9.939E-01	6.343E-02	-0.278
		722.78		1.073E+00	4.629E+00	6.799E+00	4.740E-01	0.158
		1325.50		-5.397E+00	3.449E+01	5.541E+01	3.833E+00	-0.097
	+	1376.25		5.883E+01	5.030E+01	6.227E+01	4.325E+00	0.945
		1509.49		1.134E+01	1.646E+01	2.909E+01	1.958E+00	0.390
		1691.02		1.906E+00	3.236E+00	5.989E+00	3.718E-01	0.318
SB-124		602.71		-1.615E-02	4.166E-02	5.801E-02	3.703E-03	-0.278
		645.85		3.414E-01	4.877E-01	8.545E-01	6.099E-02	0.400
		709.31		2.088E+00	2.753E+00	4.811E+00	3.302E-01	0.434
		713.82		-2.241E-01	1.606E+00	2.619E+00	2.848E-01	-0.086
		722.78		9.076E-02	3.916E-01	5.752E-01	4.142E-02	0.158
	+	968.20		1.614E+01	4.205E+00	7.163E+00	5.613E-01	2.253
		1045.16		-1.242E-01	2.473E+00	4.116E+00	2.922E-01	-0.030
		1325.50		-4.877E-01	3.116E+00	5.007E+00	3.463E-01	-0.097
		1368.21		-9.103E-03	2.061E+00	2.882E+00	3.596E-01	-0.003
		1436.60		2.930E+00	3.672E+00	6.630E+00	4.552E-01	0.442
		1691.02	*	3.803E-02	6.458E-02	1.195E-01	7.975E-03	0.318
SB-125		427.89	*	6.035E-02	8.601E-02	1.467E-01	8.720E-03	0.411
	+	463.38		6.844E-01	3.975E-01	5.217E-01	3.565E-02	1.312
		600.56		7.200E-02	1.723E-01	2.899E-01	2.091E-02	0.248
		635.90		9.950E-02	2.573E-01	4.416E-01	3.246E-02	0.225
TE-125M		109.28	*	3.914E+00	8.766E+00	1.437E+01	1.239E+00	0.272
I-126		388.63		1.608E-01	1.986E-01	3.413E-01	1.875E-02	0.471
		666.33	*	1.071E-01	1.699E-01	2.957E-01	1.928E-02	0.362
		753.82		1.128E+00	1.450E+00	2.534E+00	1.829E-01	0.445
SB-126		223.80		3.827E+00	3.628E+00	6.427E+00	3.492E-01	0.596
	+	278.60		4.074E+00	3.033E+00	3.922E+00	2.214E-01	1.039
	+	296.50		1.173E+01	2.325E+00	3.332E+00	1.891E-01	3.519
		414.70		-2.864E-02	6.882E-02	1.085E-01	6.096E-03	-0.264
		415.30		-2.405E+00	5.586E+00	8.787E+00	4.940E-01	-0.274
		555.20		-8.307E-01	3.704E+00	6.127E+00	3.831E-01	-0.136
		573.80		-3.904E-02	9.595E-01	1.605E+00	1.013E-01	-0.024
		593.00		1.123E-01	8.463E-01	1.432E+00	9.103E-02	0.078
		656.30		-1.256E+00	3.198E+00	5.139E+00	3.328E-01	-0.244
		666.33		4.477E-02	7.098E-02	1.236E-01	8.057E-03	0.362
		675.00		4.187E-01	1.840E+00	3.108E+00	2.048E-01	0.135
		695.00		-2.415E-02	7.532E-02	1.213E-01	8.185E-03	-0.199
		697.00		-1.146E-02	2.585E-01	4.259E-01	2.881E-02	-0.027
		720.50	*	-2.036E-01	1.726E-01	2.101E-01	1.461E-02	-0.969
		856.80		1.354E-01	5.487E-01	7.951E-01	6.387E-02	0.170

---- Non-Identified Nuclides ----

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		989.30		5.424E-01	1.232E+00	2.070E+00	1.584E-01	0.262
		1034.80		-1.516E-01	8.205E+00	1.371E+01	9.883E-01	-0.011
		1213.00		2.322E+00	4.660E+00	8.023E+00	4.698E-01	0.289
SB-127		61.10		5.009E+01	5.388E+01	8.567E+01	8.123E+00	0.585
		252.40		-2.143E+00	3.809E+00	6.042E+00	2.508E+00	-0.355
		290.80		-8.072E+00	2.225E+01	3.175E+01	2.879E+00	-0.254
		411.60		2.573E+00	1.194E+01	1.970E+01	2.815E+00	0.131
		444.90		4.761E+00	9.016E+00	1.516E+01	1.634E+00	0.314
		473.00		5.154E-01	1.648E+00	2.717E+00	3.052E-01	0.190
		543.00		-2.180E+00	1.552E+01	2.588E+01	3.387E+00	-0.084
		603.60		-6.702E+00	1.288E+01	1.767E+01	1.957E+00	-0.379
		685.20	*	-4.451E-01	1.371E+00	2.209E+00	2.204E-01	-0.201
		698.50		-4.101E+00	1.499E+01	2.423E+01	3.607E+00	-0.169
		722.20		1.611E+00	3.094E+01	4.450E+01	4.419E+00	0.036
		783.80		5.882E+00	3.944E+00	7.089E+00	8.245E-01	0.830
XE-127		57.60		-1.285E+00	5.131E+00	8.615E+00	5.444E-01	-0.149
		145.22		-2.649E-01	7.538E-01	1.065E+00	5.948E-02	-0.249
		172.10		1.231E-01	1.137E-01	1.917E-01	9.866E-03	0.642
		202.84	*	2.046E-03	5.011E-02	7.090E-02	3.770E-03	0.029
		374.96		9.187E-02	1.783E-01	3.025E-01	1.681E-02	0.304
I-131		80.18		1.355E+00	5.241E+00	6.387E+00	4.579E-01	0.212
		284.30		2.601E-01	1.370E+00	2.312E+00	1.461E-01	0.112
		364.48	*	3.876E-02	1.098E-01	1.845E-01	1.161E-02	0.210
		636.97		8.267E-01	1.439E+00	2.506E+00	1.774E-01	0.330
		722.89		2.155E+00	7.512E+00	1.110E+01	7.816E-01	0.194
TE-132		49.72		-7.236E+00	1.638E+01	2.741E+01	2.544E+00	-0.264
		111.76		-8.759E+00	2.624E+01	4.251E+01	3.909E+00	-0.206
		116.30		1.262E+01	2.464E+01	4.134E+01	3.774E+00	0.305
		228.16	*	-5.405E-01	6.198E-01	9.996E-01	1.422E-01	-0.541
BA-133		53.15		1.367E+00	3.044E+00	5.276E+00	3.411E-01	0.259
		79.62		-3.626E-01	1.533E+00	1.794E+00	2.583E-01	-0.202
		81.00		6.749E-03	1.138E-01	1.364E-01	2.064E-02	0.049
	+	276.40		6.099E-01	4.595E-01	6.005E-01	7.743E-02	1.016
		302.84		6.443E-02	1.407E-01	2.133E-01	2.474E-02	0.302
		356.01	*	1.241E-02	4.254E-02	6.329E-02	7.261E-03	0.196
		383.85		-5.346E-02	2.742E-01	4.425E-01	4.745E-02	-0.121
I-133	+	510.53		1.520E+00	2.742E-01	Half-Life too short		
		529.87	*	-1.829E-03	2.742E-01	Half-Life too short		
		706.58		-1.354E-01	2.742E-01	Half-Life too short		
		856.28		6.662E-02	2.742E-01	Half-Life too short		
		875.33		-9.065E-02	2.742E-01	Half-Life too short		
		1236.41		1.142E+00	2.742E-01	Half-Life too short		
		1298.22		-2.695E-01	2.742E-01	Half-Life too short		
CS-134		475.35		1.431E+00	1.917E+00	3.206E+00	1.904E-01	0.446
		563.23		6.752E-02	3.470E-01	5.911E-01	3.777E-02	0.114
		569.32		1.662E-02	1.870E-01	3.138E-01	2.025E-02	0.053
		604.70		-1.301E-02	3.644E-02	5.095E-02	3.268E-03	-0.255
		795.84	*	8.611E-02	4.821E-02	8.920E-02	6.801E-03	0.965
		801.93		-2.054E-01	3.891E-01	6.031E-01	4.618E-02	-0.341

---- Non-Identified Nuclides ----

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		1038.57		9.212E-01	3.726E+00	6.378E+00	4.574E-01	0.144
		1167.94		1.465E+00	2.362E+00	4.139E+00	2.306E-01	0.354
		1365.15		1.994E-01	1.262E+00	2.104E+00	1.565E-01	0.095
CS-135		268.24	*	1.368E-01	1.565E-01	2.452E-01	1.844E-02	0.558
I-135		288.45		2.046E+10	1.565E-01	Half-Life too short		
		417.63		-4.748E+09	1.565E-01	Half-Life too short		
		546.56		5.395E+09	1.565E-01	Half-Life too short		
		836.80		2.216E+10	1.565E-01	Half-Life too short		
		1038.76		4.915E+09	1.565E-01	Half-Life too short		
		1124.00		2.423E+10	1.565E-01	Half-Life too short		
		1131.51		-3.375E+09	1.565E-01	Half-Life too short		
		1260.41	*	-5.968E+08	1.565E-01	Half-Life too short		
		1457.56		5.368E+11	1.565E-01	Half-Life too short		
		1678.03		-2.745E+08	1.565E-01	Half-Life too short		
		1706.46		-3.902E+09	1.565E-01	Half-Life too short		
		1791.20		6.452E+09	1.565E-01	Half-Life too short		
CS-136		66.91		-2.063E-01	7.457E-01	1.179E+00	1.691E-01	-0.175
	+	86.29		5.849E+00	1.621E+00	1.939E+00	2.354E-01	3.017
		153.22		7.220E-01	6.088E-01	1.034E+00	7.144E-02	0.698
		163.89		4.551E-01	9.516E-01	1.568E+00	1.059E-01	0.290
		176.55		-1.170E-01	3.438E-01	5.414E-01	3.229E-02	-0.216
		273.65		2.776E-01	5.500E-01	6.320E-01	4.088E-02	0.439
		340.57		7.099E-02	1.337E-01	2.018E-01	1.218E-02	0.352
		818.51		1.908E-02	6.807E-02	1.142E-01	8.840E-03	0.167
		1048.07	*	8.044E-02	1.004E-01	1.803E-01	1.355E-02	0.446
		1235.34		7.753E-01	6.254E-01	1.119E+00	1.135E-01	0.693
BA-137M		661.65	*	-1.548E-02	3.525E-02	5.581E-02	3.618E-03	-0.277
CS-137		661.65	*	-1.636E-02	3.727E-02	5.899E-02	3.837E-03	-0.277
CE-139		165.85	*	-2.141E-02	2.720E-02	4.197E-02	2.150E-03	-0.510
BA-140		162.64		3.058E-01	7.024E-01	1.128E+00	6.759E-02	0.271
		304.84		2.698E-01	1.173E+00	1.837E+00	5.009E-01	0.147
		423.70		-1.311E+00	1.911E+00	2.877E+00	9.137E-01	-0.456
		537.32	*	-1.141E-02	2.523E-01	4.241E-01	1.382E-01	-0.027
LA-140	+	328.77		6.731E-01	4.657E-01	5.290E-01	3.379E-02	1.272
		432.53		-9.251E-01	1.813E+00	2.816E+00	1.784E-01	-0.329
		487.03		2.632E-02	1.268E-01	2.073E-01	1.397E-02	0.127
		751.79		-6.800E-01	1.769E+00	2.811E+00	2.329E-01	-0.242
		815.85		-8.550E-02	3.141E-01	4.987E-01	4.392E-02	-0.171
		867.82		6.552E-01	1.486E+00	2.218E+00	1.908E-01	0.295
		919.63		2.261E+00	2.730E+00	4.763E+00	4.915E-01	0.475
		925.24		-2.558E-01	1.140E+00	1.796E+00	1.570E-01	-0.142
		1596.49	*	-1.142E-01	8.974E-02	1.169E-01	7.611E-03	-0.977
CE-141		145.44	*	1.736E-03	6.558E-02	9.500E-02	5.531E-03	0.018
CE-143		57.37		-2.231E-04	6.558E-02	Half-Life too short		
		231.56		1.381E-03	6.558E-02	Half-Life too short		
		293.26	*	6.684E-04	6.558E-02	Half-Life too short		
	+	350.59		3.011E-02	6.558E-02	Half-Life too short		
		490.36		-8.905E-04	6.558E-02	Half-Life too short		
		664.57		-4.291E-04	6.558E-02	Half-Life too short		

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		721.93		-7.534E-05	6.558E-02	Half-Life too short		
CE-144		80.11		6.249E-01	2.418E+00	2.947E+00	2.092E-01	0.212
		133.54	*	-1.255E-01	1.849E-01	2.900E-01	4.129E-02	-0.433
PM-144		476.78		-1.760E-02	6.831E-02	1.059E-01	7.483E-03	-0.166
		618.01		2.338E-02	2.966E-02	5.246E-02	3.531E-03	0.446
		696.49	*	1.366E-02	3.231E-02	5.525E-02	3.738E-03	0.247
		778.57		-1.693E+00	2.739E+00	3.570E+00	2.649E-01	-0.474
PR-144		696.49	*	9.258E-01	2.190E+00	3.744E+00	2.532E-01	0.247
		1489.15		-2.514E-01	1.223E+01	1.976E+01	1.338E+00	-0.013
PM-146		453.90	*	2.373E-02	4.040E-02	6.819E-02	5.895E-03	0.348
		633.02		-2.867E-01	1.300E+00	2.118E+00	7.823E-01	-0.135
		735.90		3.173E-02	1.366E-01	2.291E-01	6.456E-02	0.138
		747.13		3.836E-02	9.121E-02	1.551E-01	2.046E-02	0.247
ND-147	+	91.11		8.259E-01	2.769E-01	4.833E-01	3.963E-02	1.709
		319.41		-5.551E-03	3.074E+00	5.096E+00	2.898E-01	-0.001
		439.89		-1.296E+00	5.337E+00	8.480E+00	4.888E-01	-0.153
		531.02	*	-8.564E-02	5.325E-01	8.376E-01	1.146E-01	-0.102
PM-149		285.90	*	-2.422E+01	8.466E+01	1.391E+02	1.964E+01	-0.174
EU-152		121.78		7.747E-03	6.707E-02	1.104E-01	8.783E-03	0.070
		244.69		-6.179E-03	2.887E-01	4.291E-01	2.374E-02	-0.014
		344.27	*	-1.194E-01	1.042E-01	1.451E-01	9.301E-03	-0.823
		443.98		2.231E-01	8.610E-01	1.423E+00	8.227E-02	0.157
		778.89		-1.830E-01	3.208E-01	4.217E-01	3.129E-02	-0.434
		867.32		-1.012E-01	9.244E-01	1.275E+00	1.035E-01	-0.079
	+	964.01		6.096E-01	4.189E-01	6.198E-01	4.879E-02	0.984
		1085.78		-3.945E-01	3.969E-01	5.952E-01	3.954E-02	-0.663
		1112.02		9.296E-02	2.910E-01	4.673E-01	2.955E-02	0.199
		1407.95		1.565E-01	1.793E-01	3.036E-01	2.097E-02	0.515
GD-153		69.67		1.692E+00	1.701E+00	2.685E+00	1.766E-01	0.630
	+	83.37		3.767E+01	1.508E+01	2.404E+01	1.758E+00	1.567
		97.43	*	-5.387E-02	7.881E-02	1.114E-01	7.747E-03	-0.484
		103.18		-1.392E-01	9.400E-02	1.440E-01	9.622E-03	-0.966
EU-154		123.07		1.013E-03	4.665E-02	7.643E-02	7.385E-03	0.013
		247.94		-1.105E-01	3.026E-01	4.997E-01	4.692E-02	-0.221
		591.81		1.146E-01	5.888E-01	9.761E-01	9.872E-02	0.117
		723.30		1.283E-01	1.859E-01	2.870E-01	2.317E-02	0.447
		756.87		-6.866E-02	7.461E-01	1.215E+00	1.340E-01	-0.057
		873.19		-3.908E-02	2.780E-01	4.441E-01	5.297E-02	-0.088
		996.32		-9.917E-02	3.714E-01	6.054E-01	1.047E-01	-0.164
		1004.76		-1.315E-01	2.008E-01	3.146E-01	3.410E-02	-0.418
		1274.45	*	-2.485E-02	1.098E-01	1.756E-01	1.711E-02	-0.141
EU-155		48.70		1.266E+00	2.043E+00	3.575E+00	2.336E-01	0.354
		60.01		4.206E+00	4.622E+00	7.374E+00	4.633E-01	0.570
	+	86.54		5.406E-01	1.408E-01	1.817E-01	1.388E-02	2.976
		105.31	*	6.487E-02	9.755E-02	1.655E-01	1.115E-02	0.392
TB-160	+	86.79		1.444E+00	3.756E-01	4.857E-01	3.672E-02	2.973
		197.04		-9.492E-02	5.570E-01	8.725E-01	4.611E-02	-0.109
		215.65		3.589E-01	7.082E-01	1.150E+00	6.199E-02	0.312
	+	298.57		1.933E-01	1.422E-01	1.878E-01	1.066E-02	1.029

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		879.36	*	-2.556E-02	1.296E-01	2.055E-01	1.688E-02	-0.124
		962.29		1.429E+00	6.442E-01	1.106E+00	8.725E-02	1.291
		966.15		1.263E+00	2.793E-01	5.448E-01	4.278E-02	2.318
		1177.93		1.737E-01	3.582E-01	6.186E-01	3.426E-02	0.281
		1271.85		-2.696E-01	6.599E-01	1.033E+00	6.616E-02	-0.261
HO-166M		80.57		9.427E-02	3.098E-01	3.789E-01	2.700E-02	0.249
	+	184.41		1.053E-01	5.007E-02	6.405E-02	3.339E-03	1.644
		280.46		-8.682E-02	8.424E-02	1.135E-01	6.411E-03	-0.765
		410.95		2.971E-01	2.420E-01	4.240E-01	2.373E-02	0.701
		711.68	*	-2.963E-02	6.229E-02	9.880E-02	6.800E-03	-0.300
		752.31		-1.575E-01	2.816E-01	4.400E-01	3.171E-02	-0.358
		810.29		-3.261E-03	5.780E-02	9.388E-02	7.198E-03	-0.035
TM-171		51.35		-2.185E+01	2.620E+01	4.300E+01	2.803E+00	-0.508
		52.39		4.560E+00	1.353E+01	2.336E+01	1.516E+00	0.195
		59.40		7.054E+00	2.487E+01	3.851E+01	2.415E+00	0.183
		66.72	*	-1.706E+01	2.917E+01	4.275E+01	2.767E+00	-0.399
LU-176	+	88.36		1.065E+00	2.770E-01	3.461E-01	2.637E-02	3.076
		201.83		-5.262E-03	2.866E-02	4.281E-02	2.274E-03	-0.123
		306.84	*	-1.649E-02	2.161E-02	3.419E-02	1.943E-03	-0.482
		401.10		1.922E+00	6.542E+00	1.088E+01	6.023E-01	0.177
LU-177		112.95		-5.732E-01	1.452E+00	2.344E+00	1.498E-01	-0.245
	+	208.36	*	2.896E+00	2.029E+00	1.978E+00	1.058E-01	1.464
LU-177M		52.97		6.066E-01	1.377E+00	2.386E+00	1.544E-01	0.254
		54.07		4.723E-02	7.409E-01	1.264E+00	8.131E-02	0.037
		61.30		1.513E+00	1.404E+00	2.250E+00	1.422E-01	0.672
		121.62		6.732E-02	3.452E-01	5.704E-01	3.562E-02	0.118
		147.16		2.361E-01	6.815E-01	1.005E+00	5.571E-02	0.235
		171.86		4.816E-01	4.576E-01	7.705E-01	3.966E-02	0.625
		218.09		1.343E-01	7.866E-01	1.255E+00	6.780E-02	0.107
	+	268.79		2.621E+00	1.082E+00	1.376E+00	7.733E-02	1.905
		319.02		-1.697E-01	2.435E-01	3.866E-01	2.198E-02	-0.439
		367.43		2.542E-01	8.534E-01	1.428E+00	7.979E-02	0.178
		413.65	*	-1.123E-01	1.666E-01	2.578E-01	1.447E-02	-0.436
HF-181		56.28		1.362E-01	8.190E-01	1.400E+00	8.906E-02	0.097
		57.53		-1.082E-01	4.318E-01	7.251E-01	4.584E-02	-0.149
		65.20		-2.409E-01	9.474E-01	1.413E+00	9.078E-02	-0.171
		133.02		-4.991E-02	5.901E-02	9.217E-02	5.436E-03	-0.541
		136.25		9.173E-02	4.051E-01	6.663E-01	3.872E-02	0.138
		345.85		-6.783E-03	2.084E-01	3.008E-01	1.699E-02	-0.023
		482.03	*	1.607E-02	4.003E-02	6.648E-02	3.969E-03	0.242
W-181		56.28		5.328E-02	3.207E-01	5.483E-01	3.487E-02	0.097
		57.53		-4.241E-02	1.692E-01	2.841E-01	1.796E-02	-0.149
		65.20	*	-9.366E-02	3.683E-01	5.493E-01	3.529E-02	-0.171
TA-182		67.75		-1.656E-01	1.039E-01	1.626E-01	1.058E-02	-1.019
		100.10		1.934E-01	1.589E-01	2.757E-01	1.879E-02	0.701
		152.43		1.076E-01	3.074E-01	5.052E-01	2.738E-02	0.213
		222.10		-8.260E-02	3.125E-01	5.239E-01	2.842E-02	-0.158
		1001.68		6.021E-01	1.991E+00	3.357E+00	2.531E-01	0.179
	+	1121.28		7.135E-01	2.389E-01	3.539E-01	2.195E-02	2.016

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1189.05		-5.868E-03	2.990E-01	4.935E-01	2.783E-02	-0.012
		1221.42	*	-4.834E-02	1.955E-01	3.154E-01	1.871E-02	-0.153
		1230.97		-5.827E-01	4.683E-01	6.799E-01	4.093E-02	-0.857
RE-183		57.98		-1.951E-01	1.727E-01	2.787E-01	1.758E-02	-0.700
		59.32		-2.046E-02	1.042E-01	1.573E-01	9.868E-03	-0.130
		67.20		-1.950E-01	1.955E-01	2.995E-01	1.943E-02	-0.651
		162.32	*	3.651E-02	1.022E-01	1.635E-01	8.501E-03	0.223
	+	208.81		2.610E+00	1.828E+00	1.801E+00	9.636E-02	1.450
		291.72		-5.963E-01	9.550E-01	1.332E+00	7.553E-02	-0.448
RE-184		57.98		-7.189E-01	6.365E-01	1.027E+00	6.479E-02	-0.700
		59.32		-7.533E-02	3.838E-01	5.792E-01	3.634E-02	-0.130
		67.20		-7.186E-01	7.204E-01	1.103E+00	7.158E-02	-0.651
		161.27		-4.343E-02	3.358E-01	5.254E-01	2.743E-02	-0.083
		216.55		1.017E-01	2.522E-01	4.073E-01	2.197E-02	0.250
		252.85	*	-1.640E-01	2.025E-01	3.258E-01	1.813E-02	-0.503
		318.01		-5.069E-01	4.232E-01	6.494E-01	3.692E-02	-0.780
		792.07		9.037E-02	1.016E+00	1.674E+00	1.259E-01	0.054
		903.28		3.365E-02	1.075E+00	1.508E+00	1.255E-01	0.022
		920.93		-1.817E-01	4.555E-01	7.046E-01	5.779E-02	-0.258
OS-185		59.72		2.072E-01	2.743E-01	4.346E-01	2.728E-02	0.477
		61.14		1.441E-01	1.537E-01	2.449E-01	1.546E-02	0.588
		69.30		1.516E-01	3.048E-01	4.716E-01	3.094E-02	0.322
		592.07		3.816E-01	2.446E+00	4.042E+00	2.569E-01	0.094
		646.12	*	2.416E-02	4.216E-02	7.317E-02	4.728E-03	0.330
		717.42		9.526E-01	8.669E-01	1.554E+00	1.077E-01	0.613
		874.81		-3.572E-01	5.609E-01	8.460E-01	6.916E-02	-0.422
		880.27		-1.165E-01	7.170E-01	1.142E+00	9.383E-02	-0.102
RE-188		155.03	*	1.141E-01	1.597E-01	2.663E-01	1.428E-02	0.429
		477.96		-2.986E+00	3.076E+00	4.559E+00	2.713E-01	-0.655
		633.10		-5.248E-01	2.622E+00	4.296E+00	2.767E-01	-0.122
W-188	+	63.58		4.092E+01	5.948E+01	8.690E+01	5.543E+00	0.471
		227.08		-8.165E+00	1.148E+01	1.880E+01	1.025E+00	-0.434
		290.67	*	-3.894E+00	7.792E+00	1.100E+01	6.237E-01	-0.354
IR-192	+	295.96		8.992E-01	1.785E-01	2.748E-01	1.585E-02	3.272
		308.46		-4.255E-02	8.311E-02	1.336E-01	7.686E-03	-0.318
		316.51	*	-1.225E-02	3.144E-02	5.091E-02	2.909E-03	-0.241
		468.07		3.924E-02	6.941E-02	1.038E-01	7.034E-03	0.378
		604.41		-2.648E-01	4.963E-01	6.789E-01	7.916E-02	-0.390
		612.46		4.981E-01	7.144E-01	1.114E+00	8.964E-02	0.447
AU-195		65.12		-2.387E-02	1.703E-01	2.555E-01	1.641E-02	-0.093
		66.83		-5.191E-02	9.653E-02	1.418E-01	9.184E-03	-0.366
	+	75.70		1.517E+00	2.786E-01	4.629E-01	3.170E-02	3.277
		98.88	*	1.674E-01	2.281E-01	3.497E-01	2.405E-02	0.479
		129.76		4.886E+00	2.594E+00	4.552E+00	2.727E-01	1.073
TL-200		367.94	*	1.678E-04	2.594E+00	Half-Life too short		
		579.30		1.497E-03	2.594E+00	Half-Life too short		
		828.27		2.288E-04	2.594E+00	Half-Life too short		
		1205.75		-1.729E-03	2.594E+00	Half-Life too short		
TL-201		68.90		-8.643E-01	4.637E+00	7.408E+00	4.849E-01	-0.117

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		70.82		4.193E+00	2.811E+00	4.507E+00	2.984E-01	0.930
		80.30		1.471E+00	5.688E+00	6.932E+00	4.929E-01	0.212
		135.34		6.633E+00	2.218E+01	3.662E+01	2.137E+00	0.181
		167.43	*	4.782E-01	6.284E+00	1.014E+01	5.199E-01	0.047
TL-202		68.90		-7.809E-02	4.190E-01	6.693E-01	4.381E-02	-0.117
		70.82		3.778E-01	2.532E-01	4.061E-01	2.688E-02	0.930
		80.30		1.326E-01	5.126E-01	6.247E-01	4.442E-02	0.212
		439.56	*	-2.295E-02	6.250E-02	9.824E-02	5.658E-03	-0.234
HG-203		70.83		1.642E+00	1.112E+00	1.762E+00	2.191E-01	0.932
		72.87		3.919E-01	6.851E-01	1.056E+00	1.271E-01	0.371
	+	82.60		2.799E+00	1.160E+00	1.698E+00	2.196E-01	1.649
		279.20	*	-4.755E-03	4.071E-02	5.944E-02	3.575E-03	-0.080
BI-207		72.80		6.397E-02	1.993E-01	3.047E-01	2.043E-02	0.210
	+	74.97		8.416E-01	1.546E-01	2.323E-01	1.582E-02	3.622
	+	84.90		4.872E-01	1.951E-01	3.098E-01	2.299E-02	1.572
		569.67		-2.399E-04	2.941E-02	4.902E-02	3.086E-03	-0.005
		1063.62	*	1.318E-02	4.806E-02	8.242E-02	5.686E-03	0.160
		1770.23		-3.370E-02	5.075E-01	7.054E-01	4.163E-02	-0.048
TL-207		81.07		1.072E-02	2.510E-01	3.004E-01	2.150E-02	0.036
	+	83.78		3.212E-01	1.286E-01	2.073E-01	1.521E-02	1.550
		94.90		1.312E-01	2.011E-01	3.421E-01	2.430E-02	0.383
		122.32		-2.802E-01	1.584E+00	2.572E+00	1.821E-01	-0.109
	+	144.24		4.918E-01	7.848E-01	1.095E+00	7.753E-02	0.449
		154.21		4.026E-01	3.639E-01	6.166E-01	4.113E-02	0.653
	+	269.46		6.137E-01	2.536E-01	3.403E-01	2.005E-02	1.804
		323.87	*	-3.021E-01	7.169E-01	1.005E+00	1.656E-01	-0.301
	+	338.28		6.568E+00	1.664E+00	2.447E+00	2.559E-01	2.684
		445.03		8.261E-01	2.125E+00	3.540E+00	3.633E-01	0.233
PO-209		260.50		3.382E+00	8.623E+00	1.478E+01	8.265E-01	0.229
		262.80		-1.242E+01	2.386E+01	3.894E+01	2.181E+00	-0.319
		896.60	*	2.494E-01	7.701E+00	1.251E+01	1.044E+00	0.020
BI-210		46.50	*	-2.084E+00	3.005E+00	4.908E+00	3.698E-01	-0.425
PB-210		46.50	*	-2.084E+00	3.005E+00	4.908E+00	3.698E-01	-0.425
PO-210		46.50	*	-2.084E+00	3.004E+00	4.908E+00	3.148E-01	-0.425
PB-211		404.84	*	-8.688E-01	1.078E+00	1.425E+00	8.883E-01	-0.609
		427.08		1.670E+00	2.214E+00	3.374E+00	2.085E+00	0.495
		831.96		5.005E-01	1.297E+00	2.121E+00	1.327E+00	0.236
BI-212	+	727.18	*	1.479E+00	5.714E-01	7.026E-01	6.083E-02	2.105
		785.46		2.522E+00	1.898E+00	3.409E+00	2.547E-01	0.740
		1620.62		1.330E+00	1.240E+00	2.378E+00	1.531E-01	0.560
PO-215		81.07		1.072E-02	2.510E-01	3.004E-01	2.150E-02	0.036
	+	83.78		3.212E-01	1.286E-01	2.073E-01	1.521E-02	1.550
		94.90		1.312E-01	2.011E-01	3.421E-01	2.430E-02	0.383
		122.32		-2.802E-01	1.584E+00	2.572E+00	1.821E-01	-0.109
	+	144.24		4.918E-01	7.848E-01	1.095E+00	7.753E-02	0.449
		154.21		4.026E-01	3.639E-01	6.166E-01	4.113E-02	0.653
	+	269.46		6.137E-01	2.536E-01	3.403E-01	2.005E-02	1.804
		323.87	*	-3.021E-01	7.169E-01	1.005E+00	1.656E-01	-0.301
	+	338.28		6.568E+00	1.664E+00	2.447E+00	2.559E-01	2.684

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		8.261E-01	2.125E+00	3.540E+00	3.633E-01	0.233
RN-219	+	271.23		7.874E-01	3.281E-01	4.363E-01	3.482E-02	1.805
		401.81	*	1.241E-01	4.004E-01	6.661E-01	8.990E-02	0.186
RN-220		549.76	*	-2.643E+01	2.333E+01	3.558E+01	2.218E+00	-0.743
RA-223		81.07		1.072E-02	2.510E-01	3.004E-01	2.150E-02	0.036
	+	83.78		3.212E-01	1.286E-01	2.073E-01	1.521E-02	1.550
		94.90		1.312E-01	2.011E-01	3.421E-01	2.430E-02	0.383
		122.32		-2.802E-01	1.584E+00	2.572E+00	1.821E-01	-0.109
	+	144.24		4.918E-01	7.848E-01	1.095E+00	7.753E-02	0.449
		154.21		4.026E-01	3.639E-01	6.166E-01	4.113E-02	0.653
	+	269.46		6.137E-01	2.536E-01	3.403E-01	2.005E-02	1.804
		323.87	*	-3.021E-01	7.169E-01	1.005E+00	1.656E-01	-0.301
	+	338.28		6.568E+00	1.664E+00	2.447E+00	2.559E-01	2.684
		445.03		8.261E-01	2.125E+00	3.540E+00	3.633E-01	0.233
AC-227		79.80		-4.188E-01	1.946E+00	2.279E+00	4.771E-01	-0.184
		236.00		4.991E-01	2.499E-01	4.057E-01	4.173E-02	1.230
		256.20	*	-6.257E-02	3.419E-01	5.696E-01	7.900E-02	-0.110
		286.10		3.755E-02	1.400E+00	2.342E+00	2.691E-01	0.016
	+	299.80		2.462E+00	1.850E+00	2.404E+00	3.904E-01	1.024
		304.40		2.397E+00	1.772E+00	2.817E+00	4.862E-01	0.851
		334.20		4.333E-01	2.300E+00	3.171E+00	5.801E-01	0.137
TH-227		79.80		-4.188E-01	1.946E+00	2.279E+00	4.836E-01	-0.184
	+	94.00		1.063E+01	4.019E+00	3.465E+00	7.360E-01	3.068
		236.00		4.991E-01	2.485E-01	4.057E-01	3.596E-02	1.230
		256.20	*	-6.257E-02	3.420E-01	5.696E-01	9.584E-02	-0.110
		286.10		3.755E-02	1.401E+00	2.342E+00	2.346E+00	0.016
	+	299.80		2.462E+00	1.850E+00	2.404E+00	3.904E-01	1.024
		304.40		2.397E+00	1.772E+00	2.817E+00	4.862E-01	0.851
		334.20		4.333E-01	2.300E+00	3.171E+00	5.801E-01	0.137
TH-229	+	85.43		4.809E-01	1.925E-01	3.071E-01	2.291E-02	1.566
	+	88.47		3.283E-01	1.094E-01	1.986E-01	1.511E-02	1.653
		100.00		1.920E-01	1.664E-01	2.880E-01	1.964E-02	0.667
		193.63	*	2.223E-02	4.778E-01	7.629E-01	4.017E-02	0.029
		210.97		9.729E-01	8.389E-01	1.266E+00	6.790E-02	0.768
PA-231		283.67	*	1.096E+00	1.377E+00	2.387E+00	3.276E-01	0.459
		301.29		6.158E-01	6.000E-01	9.387E-01	9.750E-02	0.656
TH-231		81.07		1.072E-02	2.510E-01	3.004E-01	2.150E-02	0.036
	+	83.78		3.212E-01	1.286E-01	2.073E-01	1.521E-02	1.550
		94.90		1.312E-01	2.011E-01	3.421E-01	2.430E-02	0.383
		122.32		-2.802E-01	1.584E+00	2.572E+00	1.821E-01	-0.109
	+	144.24		4.918E-01	7.848E-01	1.095E+00	7.753E-02	0.449
		154.21		4.026E-01	3.639E-01	6.166E-01	4.113E-02	0.653
	+	269.46		6.137E-01	2.536E-01	3.403E-01	2.005E-02	1.804
		323.87	*	-3.021E-01	7.169E-01	1.005E+00	1.656E-01	-0.301
	+	338.28		6.568E+00	1.664E+00	2.447E+00	2.559E-01	2.684
		445.03		8.261E-01	2.125E+00	3.540E+00	3.633E-01	0.233
U-231	+	84.21		1.377E+01	5.514E+00	8.884E+00	6.549E-01	1.550
	+	92.29		1.045E+01	3.353E+00	3.898E+00	2.840E-01	2.681
		95.87	*	-5.504E-01	1.015E+00	1.458E+00	1.027E-01	-0.377

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		108.00		-6.705E-01	1.915E+00	3.109E+00	2.026E-01	-0.216
PA-233	+	75.28		2.456E+01	5.483E+00	7.078E+00	1.020E+00	3.470
	+	86.59		8.787E+00	3.195E+00	2.961E+00	7.844E-01	2.968
	+	300.12		6.864E-01	5.120E-01	6.726E-01	9.003E-02	1.021
		311.98	*	-4.171E-03	5.803E-02	9.596E-02	5.806E-03	-0.043
		340.50		4.604E-01	6.634E-01	1.001E+00	2.295E-01	0.460
		398.62		2.424E-01	2.105E+00	3.459E+00	8.924E-01	0.070
		415.76		-1.087E+00	1.523E+00	2.316E+00	4.756E-01	-0.470
PA-234	+	63.00		1.187E+00	1.732E+00	2.557E+00	3.674E-01	0.464
		94.67		2.071E-01	1.501E-01	2.591E-01	2.956E-02	0.800
		98.44		3.042E-02	9.409E-02	1.390E-01	7.721E-02	0.219
		99.86		7.232E-01	4.177E-01	7.369E-01	5.031E-02	0.981
		111.00		6.063E-04	1.720E-01	2.764E-01	2.941E-02	0.002
		131.20		-7.304E-02	9.878E-02	1.556E-01	9.257E-03	-0.469
		152.70		7.577E-02	3.021E-01	4.937E-01	7.737E-02	0.153
	+	186.00		3.791E+00	2.131E+00	2.517E+00	7.664E-01	1.506
		226.40		9.070E-02	3.644E-01	6.242E-01	7.108E-02	0.145
		227.20		-3.619E-01	3.878E-01	6.281E-01	3.423E-02	-0.576
		248.90		4.732E-01	6.871E-01	1.188E+00	2.544E-01	0.398
	+	293.70		5.662E+00	1.407E+00	1.636E+00	2.623E-01	3.461
		369.80		2.054E-01	7.854E-01	1.310E+00	2.719E-01	0.157
		568.70		4.128E-01	9.319E-01	1.604E+00	1.009E-01	0.257
		569.50		3.035E-02	2.593E-01	4.361E-01	2.745E-02	0.070
		574.00		-1.240E-01	1.374E+00	2.291E+00	1.445E-01	-0.054
		699.00		-3.006E-01	7.117E-01	1.133E+00	2.076E-01	-0.265
		706.10		-2.897E-01	1.087E+00	1.745E+00	7.729E-01	-0.166
		733.00		-1.203E-01	3.947E-01	5.385E-01	1.165E-01	-0.223
		742.81		-2.087E-01	1.293E+00	2.082E+00	1.396E+00	-0.100
		796.30		1.624E+00	9.914E-01	1.675E+00	4.477E-01	0.970
		805.60		5.734E-01	1.008E+00	1.706E+00	5.184E-01	0.336
		819.60		-1.365E-01	1.173E+00	1.889E+00	7.146E-01	-0.072
		826.30		5.837E-02	8.155E-01	1.338E+00	5.965E-01	0.044
		831.60		1.798E-01	6.615E-01	1.100E+00	3.258E-01	0.164
		876.40		3.947E-01	8.469E-01	1.276E+00	1.311E+00	0.309
		880.51		-3.148E-02	2.604E-01	4.166E-01	3.425E-02	-0.076
		883.24		-4.591E-02	2.788E-01	4.413E-01	2.964E-01	-0.104
		899.00		-1.219E-01	8.758E-01	1.396E+00	6.094E-01	-0.087
		925.00		-3.545E-01	1.190E+00	1.860E+00	1.521E-01	-0.191
		926.50		8.445E-02	1.733E-01	2.917E-01	7.328E-02	0.290
		946.00	*	-3.609E-01	3.053E-01	4.144E-01	7.663E-02	-0.871
		949.00		5.581E-01	4.011E-01	7.391E-01	5.908E-02	0.755
		980.50		4.025E-02	6.918E-01	1.118E+00	8.646E-02	0.036
		1394.10		9.758E-01	1.352E+00	2.121E+00	1.376E+00	0.460
PA-234M		766.42		1.793E+01	1.456E+01	2.092E+01	1.057E+01	0.857
		1001.03	*	4.141E-01	4.644E+00	7.695E+00	6.964E-01	0.054
NP-236		94.67		1.590E-01	1.131E-01	1.967E-01	1.401E-02	0.808
		98.44		2.295E-02	6.999E-02	1.051E-01	7.249E-03	0.218
		111.00		4.586E-04	1.301E-01	2.091E-01	1.345E-02	0.002
		160.31	*	-4.955E-02	7.287E-02	1.134E-01	5.947E-03	-0.437

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		2.630E-01	1.441E-01	2.520E-01	1.724E-02	1.044
		117.00	*	6.400E-02	1.699E-01	2.836E-01	1.790E-02	0.226
	+	209.75		2.060E+00	1.443E+00	1.401E+00	7.506E-02	1.470
		228.18		-2.049E-01	2.039E-01	3.289E-01	1.794E-02	-0.623
	+	277.60		2.977E-01	2.216E-01	2.943E-01	1.660E-02	1.011
		334.30		1.733E-01	1.299E+00	1.781E+00	1.010E-01	0.097
AM-241		59.54	*	5.926E-02	1.452E-01	2.262E-01	1.607E-02	0.262
CM-243		99.55		2.707E-01	1.483E-01	2.593E-01	1.774E-02	1.044
		103.76	*	-4.142E-02	8.609E-02	1.391E-01	9.261E-03	-0.298
		117.00		6.585E-02	1.748E-01	2.918E-01	1.841E-02	0.226
	+	209.75		2.031E+00	1.422E+00	1.381E+00	7.399E-02	1.470
		228.18		-2.070E-01	2.060E-01	3.323E-01	1.813E-02	-0.623
	+	277.60		3.001E-01	2.234E-01	2.967E-01	1.674E-02	1.011
AM-246		798.80		-3.255E-01	1.514E-01	1.954E-01	1.480E-02	-1.666
		1036.00		-1.172E-01	2.828E-01	4.535E-01	3.264E-02	-0.259
		1062.04		1.129E-01	2.072E-01	3.645E-01	2.521E-02	0.310
		1078.86	*	4.178E-03	1.427E-01	2.386E-01	1.605E-02	0.018
CM-247	+	278.00		1.234E+00	9.189E-01	1.214E+00	6.852E-02	1.017
		287.40		1.441E-01	1.121E+00	1.885E+00	1.067E-01	0.076
		402.60	*	-1.534E-02	3.625E-02	5.741E-02	3.184E-03	-0.267
CF-249		252.85		-6.156E-01	7.599E-01	1.223E+00	6.805E-02	-0.503
		333.44		1.961E-01	1.799E-01	2.506E-01	1.421E-02	0.783
		387.95	*	2.174E-02	3.920E-02	6.635E-02	3.647E-03	0.328
CF-251		176.60	*	-3.879E-02	1.188E-01	1.872E-01	9.680E-03	-0.207
		227.00		-2.119E-01	3.461E-01	5.699E-01	3.105E-02	-0.372
		285.00		-7.981E-01	1.590E+00	2.581E+00	1.461E-01	-0.309

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202018263    *
* Acquisition date : 26-JAN-2010 14:10:01 Detector SN#     :               *
* Detector ID        : GAM12                Sensitivity      : 5.000       *
* Geometry           : CAN                  Energy tolerance: 1.500        *
* Elapsed live time:     0 02:00:00.00      Abundance limit : 75.000       *
* Elapsed real time:     0 02:00:01.45      Half life ratio :  8.000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 11-JAN-2010 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1202018263          Analyst initials: MXR1         *
* Batch Number       : 942718               Sample Quantity : 1.3081E+02 GRAM *
* Recovery           :     1.00000          Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :    0.00000                                             *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24 MS Isotope       :               *
* MSD DPM            :     0.000            MSD Isotope      :             *
* LCS DPM            :     0.000            LCS Isotope      :             *
* LCSD DPM           :     0.000            LCSD Isotope     :             *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	1.865E+01	1.888E+00	5.327E-01	0.000E+00
CD-109	4.566E+00	1.164E+00	1.107E+00	0.000E+00
SN-126	4.489E-01	1.144E-01	1.093E-01	0.000E+00
TL-208	5.018E-01	9.084E-02	5.209E-02	0.000E+00
BI-211	3.850E+00	5.110E-01	3.306E-01	0.000E+00
PB-212	1.628E+00	1.559E-01	8.290E-02	0.000E+00
PO-212	1.628E+00	1.559E-01	8.290E-02	0.000E+00
BI-214	1.111E+00	1.845E-01	9.958E-02	0.000E+00
PB-214	1.339E+00	1.905E-01	1.153E-01	0.000E+00
PO-214	1.339E+00	1.905E-01	1.153E-01	0.000E+00
PO-216	1.628E+00	1.559E-01	8.290E-02	0.000E+00
PO-218	1.339E+00	1.905E-01	1.153E-01	0.000E+00
RA-224	4.530E+00	1.066E+00	9.435E-01	0.000E+00
RA-226	1.111E+00	1.845E-01	9.958E-02	0.000E+00
AC-228	1.710E+00	3.281E-01	1.862E-01	0.000E+00
RA-228	1.710E+00	3.281E-01	1.862E-01	0.000E+00
TH-228	1.653E+00	1.583E-01	8.416E-02	0.000E+00
TH-230	1.111E+00	1.845E-01	9.957E-02	0.000E+00
TH-232	1.710E+00	3.281E-01	1.862E-01	0.000E+00
TH-234	1.018E+00	1.459E+00	2.070E+00	0.000E+00
U-234	1.111E+00	1.845E-01	9.957E-02	0.000E+00
U-235	1.518E-01	2.383E-01	3.382E-01	0.000E+00
NP-237	1.318E+00	4.289E-01	3.247E-01	0.000E+00
U-238	1.018E+00	1.459E+00	2.070E+00	0.000E+00
AM-243	4.688E-01	8.438E-02	8.938E-02	0.000E+00
ANH-511	1.526E-01	6.669E-02	4.067E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
BE-7	-2.286E-01		3.130E-01	4.939E-01	0.000E+00	NOT IDENT.

NA-22	-9.715E-03	3.842E-02	6.275E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	8.391E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.536E-02	3.140E-02	4.809E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.503E-02	7.316E-02	0.000E+00	FAIL ABUN
SC-46	-1.998E-02	3.903E-02	6.173E-02	0.000E+00	FAIL ABUN
V-48	-1.310E-02	6.944E-02	1.123E-01	0.000E+00	NOT IDENT.
CR-51	4.479E-01	3.350E-01	6.236E-01	0.000E+00	NOT IDENT.
MN-52	9.887E-02	2.409E-01	4.217E-01	0.000E+00	NOT IDENT.
MN-54	-1.863E-02	4.044E-02	6.535E-02	0.000E+00	NOT IDENT.
CO-56	-7.968E-03	3.874E-02	6.226E-02	0.000E+00	NOT IDENT.
CO-57	-1.333E-03	2.257E-02	3.921E-02	0.000E+00	NOT IDENT.
CO-58	-3.559E-02	4.028E-02	6.227E-02	0.000E+00	NOT IDENT.
FE-59	2.021E-02	8.662E-02	1.512E-01	0.000E+00	FAIL ABUN
CO-60	-2.537E-02	3.784E-02	5.791E-02	0.000E+00	NOT IDENT.
ZN-65	-2.770E-03	9.038E-02	1.322E-01	0.000E+00	NOT IDENT.
GE-68	6.803E-01	1.177E+00	2.121E+00	0.000E+00	NOT IDENT.
AS-73	1.028E-02	6.975E-01	1.280E+00	0.000E+00	NOT IDENT.
AS-74	-6.416E-02	8.458E-02	1.381E-01	0.000E+00	NOT IDENT.
SE-75	1.925E-02	4.274E-02	6.861E-02	0.000E+00	NOT IDENT.
BR-77	4.390E-01	9.070E+00	1.514E+01	0.000E+00	FAIL ABUN
SR-82	-2.195E-01	4.076E-01	5.525E-01	0.000E+00	NOT IDENT.
RB-83	-2.657E-03	6.428E-02	1.026E-01	0.000E+00	NOT IDENT.
RB-84	-1.082E-02	6.397E-02	1.049E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	6.873E+00	1.311E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.523E-02	6.719E-02	0.000E+00	NOT IDENT.
RB-86	1.665E-01	7.471E-01	1.306E+00	0.000E+00	NOT IDENT.
Y-88	-1.735E-02	3.799E-02	5.926E-02	0.000E+00	NOT IDENT.
ZR-88	-2.852E-02	2.923E-02	4.651E-02	0.000E+00	NOT IDENT.
Y-91	-1.892E+01	1.750E+01	2.643E+01	0.000E+00	NOT IDENT.
NB-94	1.732E-02	3.250E-02	5.775E-02	0.000E+00	NOT IDENT.
NB-95	4.926E-02	4.792E-02	7.796E-02	0.000E+00	NOT IDENT.
NB-95M	5.818E-02	1.187E-01	1.921E-01	0.000E+00	NOT IDENT.
ZR-95	1.723E-02	6.761E-02	1.172E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.709E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.743E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-5.836E+00	1.092E+01	1.763E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	3.392E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	9.050E-04	3.171E-02	5.295E-02	0.000E+00	NOT IDENT.
RH-102	1.963E-02	2.874E-02	4.975E-02	0.000E+00	NOT IDENT.
RU-103	-1.778E-02	3.774E-02	6.038E-02	0.000E+00	FAIL ABUN
RH-106	-1.564E-01	3.078E-01	5.104E-01	0.000E+00	FAIL ABUN
RU-106	-1.564E-01	3.074E-01	5.104E-01	0.000E+00	FAIL ABUN
AG-108M	1.084E-02	2.752E-02	4.797E-02	0.000E+00	NOT IDENT.
AG-110M	4.113E-03	3.229E-02	5.608E-02	0.000E+00	NOT IDENT.
IN-111	-2.371E-01	9.392E-01	1.443E+00	0.000E+00	NOT IDENT.
IN-113M	-1.540E-02	4.269E-02	7.112E-02	0.000E+00	NOT IDENT.
SN-113	-1.540E-02	4.269E-02	7.112E-02	0.000E+00	NOT IDENT.
IN-114M	9.672E-03	1.868E-01	2.808E-01	0.000E+00	NOT IDENT.
CD-115	4.104E+00	9.889E+00	1.699E+01	0.000E+00	NOT IDENT.
SN-117M	2.985E-02	4.741E-02	8.347E-02	0.000E+00	NOT IDENT.
SB-122	2.077E-01	1.884E+00	3.311E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.999E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.037E-03	2.554E-02	4.355E-02	0.000E+00	NOT IDENT.
I-124	-2.768E-01	6.996E-01	1.010E+00	0.000E+00	FAIL ABUN
SB-124	3.803E-02	6.329E-02	1.193E-01	0.000E+00	FAIL ABUN
SB-125	6.035E-02	8.429E-02	1.499E-01	0.000E+00	FAIL ABUN
TE-125M	3.914E+00	8.591E+00	1.501E+01	0.000E+00	NOT IDENT.
I-126	1.071E-01	1.665E-01	2.999E-01	0.000E+00	NOT IDENT.
SB-126	-2.036E-01	1.691E-01	2.128E-01	0.000E+00	FAIL ABUN
SB-127	-4.451E-01	1.343E+00	2.239E+00	0.000E+00	NOT IDENT.
XE-127	2.046E-03	4.910E-02	7.332E-02	0.000E+00	NOT IDENT.
I-131	3.876E-02	1.076E-01	1.890E-01	0.000E+00	NOT IDENT.
TE-132	-5.405E-01	6.074E-01	1.032E+00	0.000E+00	NOT IDENT.
BA-133	1.241E-02	4.168E-02	6.486E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	5.453E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	8.611E-02	4.725E-02	9.020E-02	0.000E+00	NOT IDENT.
CS-135	1.368E-01	1.534E-01	2.524E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	4.999E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	8.044E-02	9.837E-02	1.815E-01	0.000E+00	FAIL ABUN
BA-137M	-1.548E-02	3.455E-02	5.661E-02	0.000E+00	NOT IDENT.
CS-137	-1.636E-02	3.652E-02	5.984E-02	0.000E+00	NOT IDENT.
CE-139	-2.141E-02	2.665E-02	4.354E-02	0.000E+00	NOT IDENT.
BA-140	-1.141E-02	2.472E-01	4.317E-01	0.000E+00	NOT IDENT.
LA-140	-1.142E-01	8.795E-02	1.168E-01	0.000E+00	FAIL ABUN
CE-141	1.736E-03	6.427E-02	9.877E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.105E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.255E-01	1.812E-01	3.019E-01	0.000E+00	NOT IDENT.
PM-144	1.366E-02	3.167E-02	5.600E-02	0.000E+00	NOT IDENT.

PR-144	9.258E-01	2.146E+00	3.795E+00	0.000E+00	NOT IDENT.
PM-146	2.373E-02	3.959E-02	6.960E-02	0.000E+00	NOT IDENT.
ND-147	-8.564E-02	5.219E-01	8.528E-01	0.000E+00	FAIL ABUN
PM-149	-2.422E+01	8.297E+01	1.431E+02	0.000E+00	NOT IDENT.
EU-152	-1.194E-01	1.021E-01	1.488E-01	0.000E+00	FAIL ABUN
GD-153	-5.387E-02	7.723E-02	1.166E-01	0.000E+00	FAIL ABUN
EU-154	-2.485E-02	1.076E-01	1.762E-01	0.000E+00	NOT IDENT.
EU-155	6.487E-02	9.560E-02	1.729E-01	0.000E+00	FAIL ABUN
TB-160	-2.556E-02	1.270E-01	2.075E-01	0.000E+00	FAIL ABUN
HO-166M	-2.963E-02	6.104E-02	1.001E-01	0.000E+00	FAIL ABUN
TM-171	-1.706E+01	2.859E+01	4.499E+01	0.000E+00	NOT IDENT.
LU-176	-1.649E-02	2.118E-02	3.512E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.988E+00	2.045E+00	0.000E+00	FAIL ABUN
LU-177M	-1.123E-01	1.633E-01	2.635E-01	0.000E+00	FAIL ABUN
HF-181	1.607E-02	3.923E-02	6.779E-02	0.000E+00	NOT IDENT.
W-181	-9.366E-02	3.609E-01	5.783E-01	0.000E+00	NOT IDENT.
TA-182	-4.834E-02	1.916E-01	3.167E-01	0.000E+00	FAIL ABUN
RE-183	3.651E-02	1.001E-01	1.697E-01	0.000E+00	FAIL ABUN
RE-184	-1.640E-01	1.985E-01	3.358E-01	0.000E+00	NOT IDENT.
OS-185	2.416E-02	4.132E-02	7.425E-02	0.000E+00	NOT IDENT.
RE-188	1.141E-01	1.565E-01	2.766E-01	0.000E+00	NOT IDENT.
W-188	-3.894E+00	7.637E+00	1.131E+01	0.000E+00	FAIL ABUN
IR-192	-1.225E-02	3.081E-02	5.227E-02	0.000E+00	FAIL ABUN
AU-195	1.674E-01	2.236E-01	3.658E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.134E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	4.782E-01	6.159E+00	1.052E+01	0.000E+00	NOT IDENT.
TL-202	-2.295E-02	6.125E-02	1.003E-01	0.000E+00	NOT IDENT.
HG-203	-4.755E-03	3.990E-02	6.116E-02	0.000E+00	FAIL ABUN
BI-207	1.318E-02	4.710E-02	8.294E-02	0.000E+00	FAIL ABUN
TL-207	-3.021E-01	7.025E-01	1.031E+00	0.000E+00	FAIL ABUN
PO-209	2.494E-01	7.546E+00	1.262E+01	0.000E+00	NOT IDENT.
BI-210	-2.084E+00	2.945E+00	5.195E+00	0.000E+00	NOT IDENT.
PB-210	-2.084E+00	2.945E+00	5.195E+00	0.000E+00	NOT IDENT.
PO-210	-2.084E+00	2.944E+00	5.195E+00	0.000E+00	NOT IDENT.
PB-211	-8.688E-01	1.057E+00	1.458E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.600E-01	7.116E-01	0.000E+00	FAIL ABUN
PO-215	-3.021E-01	7.025E-01	1.031E+00	0.000E+00	FAIL ABUN
RN-219	1.241E-01	3.924E-01	6.812E-01	0.000E+00	FAIL ABUN
RN-220	-2.643E+01	2.286E+01	3.620E+01	0.000E+00	NOT IDENT.
RA-223	-3.021E-01	7.025E-01	1.031E+00	0.000E+00	FAIL ABUN
AC-227	-6.257E-02	3.351E-01	5.869E-01	0.000E+00	FAIL ABUN
TH-227	-6.257E-02	3.352E-01	5.869E-01	0.000E+00	FAIL ABUN
TH-229	2.223E-02	4.682E-01	7.896E-01	0.000E+00	FAIL ABUN
PA-231	1.096E+00	1.350E+00	2.456E+00	0.000E+00	NOT IDENT.
TH-231	-3.021E-01	7.025E-01	1.031E+00	0.000E+00	FAIL ABUN
U-231	-5.504E-01	9.945E-01	1.526E+00	0.000E+00	FAIL ABUN
PA-233	-4.171E-03	5.687E-02	9.855E-02	0.000E+00	FAIL ABUN
PA-234	-3.609E-01	2.992E-01	4.178E-01	0.000E+00	FAIL ABUN
PA-234M	4.141E-01	4.551E+00	7.751E+00	0.000E+00	NOT IDENT.
NP-236	-4.955E-02	7.142E-02	1.177E-01	0.000E+00	NOT IDENT.
NP-239	6.400E-02	1.665E-01	2.959E-01	0.000E+00	FAIL ABUN
AM-241	5.926E-02	1.423E-01	2.384E-01	0.000E+00	NOT IDENT.
CM-243	-4.142E-02	8.437E-02	1.453E-01	0.000E+00	FAIL ABUN
AM-246	4.178E-03	1.398E-01	2.401E-01	0.000E+00	NOT IDENT.
CM-247	-1.534E-02	3.552E-02	5.872E-02	0.000E+00	FAIL ABUN
CF-249	2.174E-02	3.842E-02	6.790E-02	0.000E+00	NOT IDENT.
CF-251	-3.879E-02	1.164E-01	1.940E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 16:13:24.43

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202018263.CNF;1
Sample date       : 11-JAN-2010 12:00:00 Acquisition date : 26-JAN-2010 14:10:01
Sample ID         : G1202018263          Sample quantity  : 1.30810E+02 GRAM
Detector name     : GAM12                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:01.45  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 942718               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	789	10.67*	1.138E+00	1.865E+01	1.865E+01	10.33
CD-109	88.03	327	3.72*	5.644E+00	4.464E+00	4.566E+00	26.02
SN-126	64.28	43	9.60	3.201E+00	4.031E-01	4.031E-01	145.88
	86.94	327	8.90	5.644E+00	1.866E+00	1.866E+00	48.09
	87.57	327	37.00*	5.644E+00	4.489E-01	4.489E-01	26.02
TL-208	277.35	66	6.80	4.503E+00	6.172E-01	6.172E-01	74.97
	510.84	149	21.60	2.793E+00	7.067E-01	7.067E-01	45.35
	583.14	369	84.20*	2.505E+00	5.018E-01	5.018E-01	18.47
	860.37	63	12.46	1.795E+00	8.038E-01	8.038E-01	57.84
BI-211	72.87	------	1.27	4.387E+00	------ Line Not Found		------
	351.07	653	12.94*	3.762E+00	3.850E+00	3.850E+00	13.54
PB-212	74.81	494	10.70	4.580E+00	2.892E+00	2.892E+00	20.61
	77.11	663	18.00	4.816E+00	2.196E+00	2.196E+00	13.86
	87.30	327	8.00	5.644E+00	2.076E+00	2.076E+00	27.87
	238.63	1270	44.60*	5.016E+00	1.628E+00	1.628E+00	9.77
	300.09	67	3.41	4.252E+00	1.329E+00	1.329E+00	73.83
PO-212	74.81	494	10.70	4.580E+00	2.892E+00	2.892E+00	20.61
	77.11	663	18.00	4.816E+00	2.196E+00	2.196E+00	13.86
	87.30	327	8.00	5.644E+00	2.076E+00	2.076E+00	27.87
	115.19	------	0.60	6.604E+00	------ Line Not Found		------
	238.63	1270	44.60*	5.016E+00	1.628E+00	1.628E+00	9.77
	300.09	67	3.41	4.252E+00	1.329E+00	1.329E+00	73.83
BI-214	609.31	433	46.30*	2.415E+00	1.111E+00	1.111E+00	16.94
	1120.29	113	15.10	1.423E+00	1.509E+00	1.509E+00	34.13
	1764.49	96	15.80	9.903E-01	1.760E+00	1.761E+00	26.02
PB-214	74.81	494	6.21	4.580E+00	4.983E+00	4.983E+00	19.80
	77.11	663	10.50	4.816E+00	3.765E+00	3.765E+00	15.81
	87.30	327	4.67	5.644E+00	3.556E+00	3.556E+00	27.14
	241.98	310	7.49	4.973E+00	2.389E+00	2.389E+00	24.65
	295.21	340	19.20	4.303E+00	1.180E+00	1.180E+00	20.79
	351.92	653	37.20*	3.762E+00	1.339E+00	1.339E+00	14.51
PO-214	74.81	494	6.21	4.580E+00	4.983E+00	4.983E+00	19.80

Sample ID : G1202018263 Acquisition date : 26-JAN-2010 14:10:01

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	663	10.50	4.816E+00	3.765E+00	3.765E+00	15.81
	87.30	327	4.67	5.644E+00	3.556E+00	3.556E+00	27.14
	241.98	310	7.49	4.973E+00	2.389E+00	2.389E+00	24.65
	295.21	340	19.20	4.303E+00	1.180E+00	1.180E+00	20.79
	351.92	653	37.20*	3.762E+00	1.339E+00	1.339E+00	14.51
PO-216	74.81	494	10.70	4.580E+00	2.892E+00	2.892E+00	20.61
	77.11	663	18.00	4.816E+00	2.196E+00	2.196E+00	13.86
	87.30	327	8.00	5.644E+00	2.076E+00	2.076E+00	27.87
	238.63	1270	44.60*	5.016E+00	1.628E+00	1.628E+00	9.77
	300.09	67	3.41	4.252E+00	1.329E+00	1.329E+00	73.83
PO-218	74.81	494	6.21	4.580E+00	4.983E+00	4.983E+00	19.80
	77.11	663	10.50	4.816E+00	3.765E+00	3.765E+00	15.81
	87.30	327	4.67	5.644E+00	3.556E+00	3.556E+00	27.14
	241.98	310	7.49	4.973E+00	2.389E+00	2.389E+00	24.65
	295.21	340	19.20	4.303E+00	1.180E+00	1.180E+00	20.79
	351.92	653	37.20*	3.762E+00	1.339E+00	1.339E+00	14.51
RA-224	240.98	310	3.95*	4.973E+00	4.530E+00	4.530E+00	24.01
RA-226	609.31	433	46.30*	2.415E+00	1.111E+00	1.111E+00	16.94
	1120.29	113	15.10	1.423E+00	1.509E+00	1.509E+00	34.13
	1764.49	96	15.80	9.903E-01	1.760E+00	1.761E+00	26.02
AC-228	338.32	242	11.40	3.881E+00	1.573E+00	1.573E+00	46.82
	911.07	282	27.70*	1.707E+00	1.710E+00	1.710E+00	19.58
	969.11	147	16.60	1.617E+00	1.568E+00	1.568E+00	33.90
RA-228	338.32	242	11.40	3.881E+00	1.573E+00	1.573E+00	46.82
	911.07	282	27.70*	1.707E+00	1.710E+00	1.710E+00	19.58
	969.11	147	16.60	1.617E+00	1.568E+00	1.568E+00	33.90
TH-228	74.81	494	10.70	4.580E+00	2.892E+00	2.936E+00	18.40
	77.11	663	18.00	4.816E+00	2.196E+00	2.229E+00	13.86
	87.30	327	8.00	5.644E+00	2.076E+00	2.107E+00	26.02
	238.63	1270	44.60*	5.016E+00	1.628E+00	1.653E+00	9.77
	300.09	67	3.41	4.252E+00	1.329E+00	1.349E+00	94.11
TH-230	609.31	433	46.30*	2.415E+00	1.111E+00	1.111E+00	16.94
	1120.29	113	15.10	1.423E+00	1.509E+00	1.509E+00	34.13
	1764.49	96	15.80	9.903E-01	1.760E+00	1.760E+00	26.02
TH-232	338.32	242	11.40	3.881E+00	1.573E+00	1.573E+00	23.76
	911.07	282	27.70*	1.707E+00	1.710E+00	1.710E+00	19.58
	969.11	147	16.60	1.617E+00	1.568E+00	1.568E+00	33.90
TH-234	63.29	43	3.80*	3.201E+00	1.018E+00	1.018E+00	146.20
	92.38	310	5.41	5.971E+00	2.750E+00	2.750E+00	35.81
U-234	609.31	433	46.30*	2.415E+00	1.111E+00	1.111E+00	16.94
	1120.29	113	15.10	1.423E+00	1.509E+00	1.509E+00	34.13
	1764.49	96	15.80	9.903E-01	1.760E+00	1.760E+00	26.02
U-235	89.95	180	2.70	5.812E+00	3.295E+00	3.295E+00	44.60
	93.35	310	4.50	5.971E+00	3.307E+00	3.307E+00	41.72
	105.00	------	2.10	6.433E+00	------ Line Not Found		------
	143.76	36	10.50*	6.525E+00	1.518E-01	1.518E-01	160.23
	163.35	------	4.70	6.238E+00	------ Line Not Found		------
	185.71	155	54.00	5.859E+00	1.404E-01	1.404E-01	47.55
	205.31	------	4.70	5.531E+00	------ Line Not Found		------

Sample ID : G1202018263 Acquisition date : 26-JAN-2010 14:10:01

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
NP-237	86.50	327	12.60*	5.644E+00	1.318E+00	1.318E+00	33.21
	95.87	------	2.60	6.124E+00	------ Line Not Found		------
U-238	63.29	43	3.80*	3.201E+00	1.018E+00	1.018E+00	146.20
	92.38	310	5.41	5.971E+00	2.750E+00	2.750E+00	32.09
AM-243	74.67	494	66.00*	4.580E+00	4.688E-01	4.688E-01	18.37
	86.72	327	0.34	5.644E+00	4.943E+01	4.943E+01	26.02
	117.66	------	0.55	6.624E+00	------ Line Not Found		------
	142.18	36	0.13	6.525E+00	1.275E+01	1.275E+01	159.50
ANH-511	511.00	149	100.00*	2.793E+00	1.526E-01	1.526E-01	44.58

Flag: "*" = Keyline

Sample ID : G1202018263 Acquisition date : 26-JAN-2010 14:10:01

Total number of lines in spectrum 36
Number of unidentified lines 4
Number of lines tentatively identified by NID 32 88.89%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.865E+01	1.865E+01	0.193E+01	10.33	
CD-109	464.00D	1.02	4.464E+00	4.566E+00	1.188E+00	26.02	
SN-126	1.00E+05Y	1.00	4.489E-01	4.489E-01	1.168E-01	26.02	
TL-208	1.41E+10Y	1.00	5.018E-01	5.018E-01	0.927E-01	18.47	
BI-211	7.04E+08Y	1.00	3.850E+00	3.850E+00	0.521E+00	13.54	
PB-212	1.41E+10Y	1.00	1.628E+00	1.628E+00	0.159E+00	9.77	
PO-212	1.41E+10Y	1.00	1.628E+00	1.628E+00	0.159E+00	9.77	
BI-214	1600.00Y	1.00	1.111E+00	1.111E+00	0.188E+00	16.94	
PB-214	1600.00Y	1.00	1.339E+00	1.339E+00	0.194E+00	14.51	
PO-214	1600.00Y	1.00	1.339E+00	1.339E+00	0.194E+00	14.51	
PO-216	1.41E+10Y	1.00	1.628E+00	1.628E+00	0.159E+00	9.77	
PO-218	1600.00Y	1.00	1.339E+00	1.339E+00	0.194E+00	14.51	
RA-224	1.41E+10Y	1.00	4.530E+00	4.530E+00	1.088E+00	24.01	
RA-226	1600.00Y	1.00	1.111E+00	1.111E+00	0.188E+00	16.94	
AC-228	1.41E+10Y	1.00	1.710E+00	1.710E+00	0.335E+00	19.58	
RA-228	1.41E+10Y	1.00	1.710E+00	1.710E+00	0.335E+00	19.58	
TH-228	1.91Y	1.02	1.628E+00	1.653E+00	0.161E+00	9.77	
TH-230	4.47E+09Y	1.00	1.111E+00	1.111E+00	0.188E+00	16.94	
TH-232	1.41E+10Y	1.00	1.710E+00	1.710E+00	0.335E+00	19.58	
TH-234	4.47E+09Y	1.00	1.018E+00	1.018E+00	1.489E+00	146.20	
U-234	4.47E+09Y	1.00	1.111E+00	1.111E+00	0.188E+00	16.94	
U-235	7.04E+08Y	1.00	1.518E-01	1.518E-01	2.432E-01	160.23	
NP-237	2.14E+06Y	1.00	1.318E+00	1.318E+00	0.438E+00	33.21	
U-238	4.47E+09Y	1.00	1.018E+00	1.018E+00	1.489E+00	146.20	
AM-243	7380.00Y	1.00	4.688E-01	4.688E-01	0.861E-01	18.37	
ANH-511	1.00E+09Y	1.00	1.526E-01	1.526E-01	0.680E-01	44.58	
	Total Activity :		5.668E+01	5.680E+01			

Grand Total Activity : 5.668E+01 5.680E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1202018263 Acquisition date : 26-JAN-2010 14:10:01

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
7	84.04	150	305	1.37	167.58	164	29	2.08E-02	39.4	5.43E+00	T
0	208.49	127	437	1.21	416.60	410	13	1.77E-02	69.8	5.48E+00	T
0	270.25	134	174	1.44	540.19	535	10	1.85E-02	40.9	4.59E+00	T
0	327.77	84	189	1.48	655.27	649	12	1.17E-02	68.9	3.97E+00	T
0	462.77	74	101	1.16	925.37	920	11	1.03E-02	57.7	3.03E+00	T
0	726.99	126	88	1.44	1453.95	1446	16	1.76E-02	37.7	2.08E+00	T
0	770.45	63	124	4.52	1540.89	1528	24	8.70E-03	99.9	1.98E+00	
1	964.30	50	74	2.00	1928.64	1923	23	6.88E-03	68.3	1.62E+00	T
0	1377.22	32	30	1.03	2754.48	2744	17	4.47E-03	85.2	1.19E+00	T
0	1401.75	18	4	0.99	2803.53	2800	8	2.50E-03	60.9	1.18E+00	
0	1587.67	18	19	1.16	3175.31	3169	11	2.51E-03	****	1.07E+00	
0	1729.92	17	10	1.68	3459.74	3456	12	2.41E-03	96.8	1.00E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 16:13:29.99

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202018263.CNF;1 *
* Acquisition date : 26-JAN-2010 14:10:01  Detector SN#     :              *
* Detector ID      : GAM12                 Sensitivity      : 5.00000      *
* Geometry         : CAN                   Energy tolerance: 1.50000       *
* Elapsed live time: 0 02:00:00.00         Abundance limit : 75.00000      *
* Elapsed real time: 0 02:00:01.45         Half life ratio : 8.00000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 11-JAN-2010 12:00:00  Nuclide Library : SOLID          *
* Sample ID        : G1202018263           Analyst initials: MXR1           *
* Batch Number     : 942718                Sample Quantity : 1.30810E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24.5MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	1.865E+01	1.927E+00	5.322E-01	3.795E-02	35.037
CD-109	4.566E+00	1.188E+00	1.056E+00	8.081E-02	4.324
SN-126	4.489E-01	1.168E-01	1.043E-01	7.948E-03	4.304
TL-208	5.018E-01	9.270E-02	5.124E-02	3.666E-03	9.793
BI-211	3.850E+00	5.215E-01	3.226E-01	2.028E-02	11.936
PB-212	1.628E+00	1.591E-01	8.037E-02	5.707E-03	20.261
PO-212	1.628E+00	1.591E-01	8.037E-02	5.707E-03	20.261
BI-214	1.111E+00	1.882E-01	9.803E-02	8.070E-03	11.335
PB-214	1.339E+00	1.944E-01	1.125E-01	9.186E-03	11.910
PO-214	1.339E+00	1.944E-01	1.125E-01	9.186E-03	11.910
PO-216	1.628E+00	1.591E-01	8.037E-02	5.707E-03	20.261
PO-218	1.339E+00	1.944E-01	1.125E-01	9.186E-03	11.910
RA-224	4.530E+00	1.088E+00	9.148E-01	5.046E-02	4.952
RA-226	1.111E+00	1.882E-01	9.803E-02	8.070E-03	11.335
AC-228	1.710E+00	3.348E-01	1.845E-01	2.026E-02	9.267
RA-228	1.710E+00	3.348E-01	1.845E-01	2.026E-02	9.267
TH-228	1.653E+00	1.615E-01	8.159E-02	5.794E-03	20.261
TH-230	1.111E+00	1.882E-01	9.803E-02	8.070E-03	11.335

Sample ID : G1202018263 Acquisition date : 26-JAN-2010 14:10:01

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.710E+00	3.348E-01	1.845E-01	2.026E-02	9.267
TH-234	1.018E+00	1.489E+00	1.966E+00	3.347E-01	0.518
U-234	1.111E+00	1.882E-01	9.803E-02	8.070E-03	11.335
U-235	1.518E-01	2.432E-01	3.252E-01	5.282E-02	0.467
NP-237	1.318E+00	4.377E-01	3.098E-01	6.806E-02	4.255
U-238	1.018E+00	1.489E+00	1.966E+00	3.347E-01	0.518
AM-243	4.688E-01	8.610E-02	8.508E-02	5.781E-03	5.510
ANH-511	1.526E-01	6.805E-02	3.992E-02	2.433E-03	3.824

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.286E-01		3.194E-01	4.842E-01	3.332E-02	-0.472
NA-22	-9.715E-03		3.920E-02	6.255E-02	4.028E-03	-0.155
NA-24	-9.366E-02		4.281E-01	Half-Life too short		
AL-26	-1.536E-02		3.204E-02	4.822E-02	2.767E-03	-0.318
TI-44	4.053E-01	+	5.615E-02	6.969E-02	4.875E-03	5.815
SC-46	-1.998E-02		3.982E-02	6.116E-02	5.069E-03	-0.327
V-48	-1.310E-02		7.086E-02	1.115E-01	8.589E-03	-0.118
CR-51	4.479E-01		3.418E-01	6.074E-01	3.862E-02	0.737
MN-52	9.887E-02		2.458E-01	4.212E-01	2.893E-02	0.235
MN-54	-1.863E-02		4.127E-02	6.467E-02	5.084E-03	-0.288
CO-56	-7.968E-03		3.953E-02	6.163E-02	4.902E-03	-0.129
CO-57	-1.333E-03		2.303E-02	3.761E-02	2.352E-03	-0.035
CO-58	-3.559E-02		4.110E-02	6.159E-02	4.739E-03	-0.578
FE-59	2.021E-02		8.839E-02	1.503E-01	1.110E-02	0.134
CO-60	-2.537E-02		3.861E-02	5.776E-02	4.034E-03	-0.439
ZN-65	-2.770E-03		9.222E-02	1.315E-01	8.269E-03	-0.021
GE-68	6.803E-01		1.201E+00	2.108E+00	1.421E-01	0.323
AS-73	1.028E-02		7.118E-01	1.212E+00	7.825E-02	0.008
AS-74	-6.416E-02		8.631E-02	1.359E-01	8.651E-03	-0.472
SE-75	1.925E-02		4.361E-02	6.663E-02	3.777E-03	0.289
BR-77	4.390E-01		9.255E+00	1.486E+01	9.114E-01	0.030
SR-82	-2.195E-01		4.159E-01	5.461E-01	4.041E-02	-0.402
RB-83	-2.657E-03		6.559E-02	1.007E-01	6.176E-03	-0.026
RB-84	-1.082E-02		6.527E-02	1.039E-01	8.549E-03	-0.104
KR-85	1.542E+01		7.013E+00	1.287E+01	7.858E-01	1.199
SR-85	7.906E-02		3.595E-02	6.596E-02	4.028E-03	1.199
RB-86	1.665E-01		7.623E-01	1.298E+00	8.761E-02	0.128
Y-88	-1.735E-02		3.877E-02	5.944E-02	3.346E-03	-0.292
ZR-88	-2.852E-02		2.983E-02	4.546E-02	2.494E-03	-0.627
Y-91	-1.892E+01		1.785E+01	2.632E+01	1.522E+00	-0.719
NB-94	1.732E-02		3.317E-02	5.699E-02	3.881E-03	0.304
NB-95	4.926E-02		4.890E-02	7.704E-02	5.635E-03	0.639
NB-95M	5.818E-02		1.212E-01	1.862E-01	1.358E-02	0.313
ZR-95	1.723E-02		6.899E-02	1.158E-01	9.561E-03	0.149
NB-97	1.795E-02		4.443E-02	Half-Life too short		

Sample ID : G1202018263 Acquisition date : 26-JAN-2010 14:10:01

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	3.202E+00		8.893E-01	Half-Life too short		
MO-99	-5.836E+00		1.114E+01	1.741E+01	2.503E+00	-0.335
TC-99M	1.299E+10		1.731E+10	Half-Life too short		
RH-101	9.050E-04		3.236E-02	5.118E-02	2.707E-03	0.018
RH-102	1.963E-02		2.933E-02	4.878E-02	2.897E-03	0.402
RU-103	-1.778E-02		3.851E-02	5.924E-02	7.556E-03	-0.300
RH-106	-1.564E-01		3.141E-01	5.027E-01	6.060E-02	-0.311
RU-106	-1.564E-01		3.137E-01	5.027E-01	3.228E-02	-0.311
AG-108M	1.084E-02		2.808E-02	4.697E-02	2.927E-03	0.231
AG-110M	4.113E-03		3.295E-02	5.528E-02	3.767E-03	0.074
IN-111	-2.371E-01		9.584E-01	1.399E+00	7.745E-02	-0.169
IN-113M	-1.540E-02		4.357E-02	6.951E-02	4.092E-03	-0.222
SN-113	-1.540E-02		4.357E-02	6.951E-02	4.092E-03	-0.222
IN-114M	9.672E-03		1.906E-01	2.712E-01	1.423E-02	0.036
CD-115	4.104E+00		1.009E+01	1.669E+01	1.028E+00	0.246
SN-117M	2.985E-02		4.838E-02	8.040E-02	4.247E-03	0.371
SB-122	2.077E-01		1.922E+00	3.256E+00	2.044E-01	0.064
I-123	-2.029E-01		2.550E+00	Half-Life too short		
TE-123M	-1.037E-03		2.606E-02	4.195E-02	2.247E-03	-0.025
I-124	-2.768E-01		7.139E-01	9.939E-01	6.343E-02	-0.278
SB-124	3.803E-02		6.458E-02	1.195E-01	7.975E-03	0.318
SB-125	6.035E-02		8.601E-02	1.467E-01	8.720E-03	0.411
TE-125M	3.914E+00		8.766E+00	1.437E+01	1.239E+00	0.272
I-126	1.071E-01		1.699E-01	2.957E-01	1.928E-02	0.362
SB-126	-2.036E-01		1.726E-01	2.101E-01	1.461E-02	-0.969
SB-127	-4.451E-01		1.371E+00	2.209E+00	2.204E-01	-0.201
XE-127	2.046E-03		5.011E-02	7.090E-02	3.770E-03	0.029
I-131	3.876E-02		1.098E-01	1.845E-01	1.161E-02	0.210
TE-132	-5.405E-01		6.198E-01	9.996E-01	1.422E-01	-0.541
BA-133	1.241E-02		4.254E-02	6.329E-02	7.261E-03	0.196
I-133	-1.829E-03		2.782E-03	Half-Life too short		
CS-134	8.611E-02		4.821E-02	8.920E-02	6.801E-03	0.965
CS-135	1.368E-01		1.565E-01	2.452E-01	1.844E-02	0.558
I-135	-5.968E+08		2.550E+09	Half-Life too short		
CS-136	8.044E-02		1.004E-01	1.803E-01	1.355E-02	0.446
BA-137M	-1.548E-02		3.525E-02	5.581E-02	3.618E-03	-0.277
CS-137	-1.636E-02		3.727E-02	5.899E-02	3.837E-03	-0.277
CE-139	-2.141E-02		2.720E-02	4.197E-02	2.150E-03	-0.510
BA-140	-1.141E-02		2.523E-01	4.241E-01	1.382E-01	-0.027
LA-140	-1.142E-01		8.974E-02	1.169E-01	7.611E-03	-0.977
CE-141	1.736E-03		6.558E-02	9.500E-02	5.531E-03	0.018
CE-143	6.684E-04		1.074E-04	Half-Life too short		
CE-144	-1.255E-01		1.849E-01	2.900E-01	4.129E-02	-0.433
PM-144	1.366E-02		3.231E-02	5.525E-02	3.738E-03	0.247
PR-144	9.258E-01		2.190E+00	3.744E+00	2.532E-01	0.247
PM-146	2.373E-02		4.040E-02	6.819E-02	5.895E-03	0.348
ND-147	-8.564E-02		5.325E-01	8.376E-01	1.146E-01	-0.102
PM-149	-2.422E+01		8.466E+01	1.391E+02	1.964E+01	-0.174

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-1.194E-01		1.042E-01	1.451E-01	9.301E-03	-0.823
GD-153	-5.387E-02		7.881E-02	1.114E-01	7.747E-03	-0.484
EU-154	-2.485E-02		1.098E-01	1.756E-01	1.711E-02	-0.141
EU-155	6.487E-02		9.755E-02	1.655E-01	1.115E-02	0.392
TB-160	-2.556E-02		1.296E-01	2.055E-01	1.688E-02	-0.124
HO-166M	-2.963E-02		6.229E-02	9.880E-02	6.800E-03	-0.300
TM-171	-1.706E+01		2.917E+01	4.275E+01	2.767E+00	-0.399
LU-176	-1.649E-02		2.161E-02	3.419E-02	1.943E-03	-0.482
LU-177	2.896E+00	+	2.029E+00	1.978E+00	1.058E-01	1.464
LU-177M	-1.123E-01		1.666E-01	2.578E-01	1.447E-02	-0.436
HF-181	1.607E-02		4.003E-02	6.648E-02	3.969E-03	0.242
W-181	-9.366E-02		3.683E-01	5.493E-01	3.529E-02	-0.171
TA-182	-4.834E-02		1.955E-01	3.154E-01	1.871E-02	-0.153
RE-183	3.651E-02		1.022E-01	1.635E-01	8.501E-03	0.223
RE-184	-1.640E-01		2.025E-01	3.258E-01	1.813E-02	-0.503
OS-185	2.416E-02		4.216E-02	7.317E-02	4.728E-03	0.330
RE-188	1.141E-01		1.597E-01	2.663E-01	1.428E-02	0.429
W-188	-3.894E+00		7.792E+00	1.100E+01	6.237E-01	-0.354
IR-192	-1.225E-02		3.144E-02	5.091E-02	2.909E-03	-0.241
AU-195	1.674E-01		2.281E-01	3.497E-01	2.405E-02	0.479
TL-200	1.678E-04		2.109E-04	Half-Life too short		
TL-201	4.782E-01		6.284E+00	1.014E+01	5.199E-01	0.047
TL-202	-2.295E-02		6.250E-02	9.824E-02	5.658E-03	-0.234
HG-203	-4.755E-03		4.071E-02	5.944E-02	3.575E-03	-0.080
BI-207	1.318E-02		4.806E-02	8.242E-02	5.686E-03	0.160
TL-207	-3.021E-01		7.169E-01	1.005E+00	1.656E-01	-0.301
PO-209	2.494E-01		7.701E+00	1.251E+01	1.044E+00	0.020
BI-210	-2.084E+00		3.005E+00	4.908E+00	3.698E-01	-0.425
PB-210	-2.084E+00		3.005E+00	4.908E+00	3.698E-01	-0.425
PO-210	-2.084E+00		3.004E+00	4.908E+00	3.148E-01	-0.425
PB-211	-8.688E-01		1.078E+00	1.425E+00	8.883E-01	-0.609
BI-212	1.479E+00	+	5.714E-01	7.026E-01	6.083E-02	2.105
PO-215	-3.021E-01		7.169E-01	1.005E+00	1.656E-01	-0.301
RN-219	1.241E-01		4.004E-01	6.661E-01	8.990E-02	0.186
RN-220	-2.643E+01		2.333E+01	3.558E+01	2.218E+00	-0.743
RA-223	-3.021E-01		7.169E-01	1.005E+00	1.656E-01	-0.301
AC-227	-6.257E-02		3.419E-01	5.696E-01	7.900E-02	-0.110
TH-227	-6.257E-02		3.420E-01	5.696E-01	9.584E-02	-0.110
TH-229	2.223E-02		4.778E-01	7.629E-01	4.017E-02	0.029
PA-231	1.096E+00		1.377E+00	2.387E+00	3.276E-01	0.459
TH-231	-3.021E-01		7.169E-01	1.005E+00	1.656E-01	-0.301
U-231	-5.504E-01		1.015E+00	1.458E+00	1.027E-01	-0.377
PA-233	-4.171E-03		5.803E-02	9.596E-02	5.806E-03	-0.043
PA-234	-3.609E-01		3.053E-01	4.144E-01	7.663E-02	-0.871
PA-234M	4.141E-01		4.644E+00	7.695E+00	6.964E-01	0.054
NP-236	-4.955E-02		7.287E-02	1.134E-01	5.947E-03	-0.437
NP-239	6.400E-02		1.699E-01	2.836E-01	1.790E-02	0.226
AM-241	5.926E-02		1.452E-01	2.262E-01	1.607E-02	0.262

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-4.142E-02		8.609E-02	1.391E-01	9.261E-03	-0.298
AM-246	4.178E-03		1.427E-01	2.386E-01	1.605E-02	0.018
CM-247	-1.534E-02		3.625E-02	5.741E-02	3.184E-03	-0.267
CF-249	2.174E-02		3.920E-02	6.635E-02	3.647E-03	0.328
CF-251	-3.879E-02		1.188E-01	1.872E-01	9.680E-03	-0.207

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration    : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202018263           *
* Acquisition date : 26-JAN-2010 14:10:01 Detector SN#    :                 *
* Detector ID      : GAM12                Sensitivity     : 5.000           *
* Geometry         : CAN                  Energy tolerance: 1.500           *
* Elapsed live time:    0 02:00:00.00     Abundance limit : 75.000          *
* Elapsed real time:    0 02:00:01.45     Half life ratio : 8.000           *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date      : 11-JAN-2010 12:00:00 Nuclide Library : SOLID           *
* Sample ID        : G1202018263          Analyst initials: MXR1            *
* Batch Number     : 942718               Sample Quantity : 1.3081E+02 GRAM *
* Recovery         :    1.00000           Carrier Weight :    0.00000       *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
*                                                                           *
* CALIB. DATE/TIME : 10-FEB-2009 09:20:24 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	1.865E+01	1.888E+00	2.665E-01	9.635E-01
CD-109	4.566E+00	1.164E+00	5.536E-01	5.940E-01
SN-126	4.489E-01	1.144E-01	5.468E-02	5.839E-02
TL-208	5.018E-01	9.084E-02	2.606E-02	4.635E-02
BI-211	3.850E+00	5.110E-01	1.654E-01	2.607E-01
PB-212	1.628E+00	1.559E-01	4.148E-02	7.954E-02
PO-212	1.628E+00	1.559E-01	4.148E-02	7.954E-02
BI-214	1.111E+00	1.845E-01	4.982E-02	9.412E-02
PB-214	1.339E+00	1.905E-01	5.767E-02	9.720E-02
PO-214	1.339E+00	1.905E-01	5.767E-02	9.720E-02
PO-216	1.628E+00	1.559E-01	4.148E-02	7.954E-02
PO-218	1.339E+00	1.905E-01	5.767E-02	9.720E-02
RA-224	4.530E+00	1.066E+00	4.720E-01	5.438E-01
RA-226	1.111E+00	1.845E-01	4.982E-02	9.412E-02
AC-228	1.710E+00	3.281E-01	9.315E-02	1.674E-01
RA-228	1.710E+00	3.281E-01	9.315E-02	1.674E-01
TH-228	1.653E+00	1.583E-01	4.210E-02	8.075E-02
TH-230	1.111E+00	1.845E-01	4.982E-02	9.412E-02
TH-232	1.710E+00	3.281E-01	9.315E-02	1.674E-01
TH-234	1.018E+00	1.459E+00	1.036E+00	7.444E-01
U-234	1.111E+00	1.845E-01	4.982E-02	9.412E-02
U-235	1.518E-01	2.383E-01	1.692E-01	1.216E-01
NP-237	1.318E+00	4.289E-01	1.625E-01	2.188E-01
U-238	1.018E+00	1.459E+00	1.036E+00	7.444E-01
AM-243	4.688E-01	8.438E-02	4.472E-02	4.305E-02
ANH-511	1.526E-01	6.669E-02	2.035E-02	3.402E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-2.286E-01	3.130E-01	2.471E-01	1.597E-01	NOT IDENT.

NA-22	-9.715E-03	3.842E-02	3.139E-02	1.960E-02	NOT IDENT.
NA-24	-9.366E+04	8.391E+05	0.000E+00	4.281E+05	SHORT HLIF
AL-26	-1.536E-02	3.140E-02	2.406E-02	1.602E-02	NOT IDENT.
TI-44	4.053E-01	5.503E-02	3.660E-02	2.808E-02	FAIL ABUN
SC-46	-1.998E-02	3.903E-02	3.088E-02	1.991E-02	FAIL ABUN
V-48	-1.310E-02	6.944E-02	5.620E-02	3.543E-02	NOT IDENT.
CR-51	4.479E-01	3.350E-01	3.120E-01	1.709E-01	NOT IDENT.
MN-52	9.887E-02	2.409E-01	2.110E-01	1.229E-01	NOT IDENT.
MN-54	-1.863E-02	4.044E-02	3.269E-02	2.063E-02	NOT IDENT.
CO-56	-7.968E-03	3.874E-02	3.115E-02	1.976E-02	NOT IDENT.
CO-57	-1.333E-03	2.257E-02	1.962E-02	1.151E-02	NOT IDENT.
CO-58	-3.559E-02	4.028E-02	3.115E-02	2.055E-02	NOT IDENT.
FE-59	2.021E-02	8.662E-02	7.565E-02	4.419E-02	FAIL ABUN
CO-60	-2.537E-02	3.784E-02	2.897E-02	1.931E-02	NOT IDENT.
ZN-65	-2.770E-03	9.038E-02	6.614E-02	4.611E-02	NOT IDENT.
GE-68	6.803E-01	1.177E+00	1.061E+00	6.005E-01	NOT IDENT.
AS-73	1.028E-02	6.975E-01	6.404E-01	3.559E-01	NOT IDENT.
AS-74	-6.416E-02	8.458E-02	6.909E-02	4.316E-02	NOT IDENT.
SE-75	1.925E-02	4.274E-02	3.433E-02	2.181E-02	NOT IDENT.
BR-77	4.390E-01	9.070E+00	7.572E+00	4.628E+00	FAIL ABUN
SR-82	-2.195E-01	4.076E-01	2.764E-01	2.080E-01	NOT IDENT.
RB-83	-2.657E-03	6.428E-02	5.132E-02	3.279E-02	NOT IDENT.
RB-84	-1.082E-02	6.397E-02	5.248E-02	3.264E-02	NOT IDENT.
KR-85	1.542E+01	6.873E+00	6.558E+00	3.507E+00	NOT IDENT.
SR-85	7.906E-02	3.523E-02	3.361E-02	1.797E-02	NOT IDENT.
RB-86	1.665E-01	7.471E-01	6.533E-01	3.812E-01	NOT IDENT.
Y-88	-1.735E-02	3.799E-02	2.965E-02	1.938E-02	NOT IDENT.
ZR-88	-2.852E-02	2.923E-02	2.327E-02	1.492E-02	NOT IDENT.
Y-91	-1.892E+01	1.750E+01	1.322E+01	8.926E+00	NOT IDENT.
NB-94	1.732E-02	3.250E-02	2.889E-02	1.658E-02	NOT IDENT.
NB-95	4.926E-02	4.792E-02	3.900E-02	2.445E-02	NOT IDENT.
NB-95M	5.818E-02	1.187E-01	9.609E-02	6.058E-02	NOT IDENT.
ZR-95	1.723E-02	6.761E-02	5.862E-02	3.450E-02	NOT IDENT.
NB-97	1.795E+04	8.709E+04	0.000E+00	4.443E+04	SHORT HLIF
ZR-97	3.202E+06	1.743E+06	0.000E+00	8.893E+05	SHORT HLIF
MO-99	-5.836E+00	1.092E+01	8.819E+00	5.572E+00	NOT IDENT.
TC-99M	1.299E+16	3.392E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	9.050E-04	3.171E-02	2.649E-02	1.618E-02	NOT IDENT.
RH-102	1.963E-02	2.874E-02	2.489E-02	1.466E-02	NOT IDENT.
RU-103	-1.778E-02	3.774E-02	3.021E-02	1.925E-02	FAIL ABUN
RH-106	-1.564E-01	3.078E-01	2.554E-01	1.570E-01	FAIL ABUN
RU-106	-1.564E-01	3.074E-01	2.554E-01	1.568E-01	FAIL ABUN
AG-108M	1.084E-02	2.752E-02	2.400E-02	1.404E-02	NOT IDENT.
AG-110M	4.113E-03	3.229E-02	2.806E-02	1.647E-02	NOT IDENT.
IN-111	-2.371E-01	9.392E-01	7.217E-01	4.792E-01	NOT IDENT.
IN-113M	-1.540E-02	4.269E-02	3.558E-02	2.178E-02	NOT IDENT.
SN-113	-1.540E-02	4.269E-02	3.558E-02	2.178E-02	NOT IDENT.
IN-114M	9.672E-03	1.868E-01	1.405E-01	9.531E-02	NOT IDENT.
CD-115	4.104E+00	9.889E+00	8.499E+00	5.045E+00	NOT IDENT.
SN-117M	2.985E-02	4.741E-02	4.176E-02	2.419E-02	NOT IDENT.
SB-122	2.077E-01	1.884E+00	1.657E+00	9.611E-01	NOT IDENT.
I-123	-2.029E+05	4.999E+06	0.000E+00	2.550E+06	SHORT HLIF
TE-123M	-1.037E-03	2.554E-02	2.179E-02	1.303E-02	NOT IDENT.
I-124	-2.768E-01	6.996E-01	5.052E-01	3.569E-01	FAIL ABUN
SB-124	3.803E-02	6.329E-02	5.970E-02	3.229E-02	FAIL ABUN
SB-125	6.035E-02	8.429E-02	7.498E-02	4.301E-02	FAIL ABUN
TE-125M	3.914E+00	8.591E+00	7.510E+00	4.383E+00	NOT IDENT.
I-126	1.071E-01	1.665E-01	1.501E-01	8.493E-02	NOT IDENT.
SB-126	-2.036E-01	1.691E-01	1.065E-01	8.628E-02	FAIL ABUN
SB-127	-4.451E-01	1.343E+00	1.120E+00	6.854E-01	NOT IDENT.
XE-127	2.046E-03	4.910E-02	3.668E-02	2.505E-02	NOT IDENT.
I-131	3.876E-02	1.076E-01	9.455E-02	5.491E-02	NOT IDENT.
TE-132	-5.405E-01	6.074E-01	5.162E-01	3.099E-01	NOT IDENT.
BA-133	1.241E-02	4.168E-02	3.245E-02	2.127E-02	FAIL ABUN
I-133	-1.829E+03	5.453E+03	0.000E+00	2.782E+03	SHORT HLIF
CS-134	8.611E-02	4.725E-02	4.513E-02	2.411E-02	NOT IDENT.
CS-135	1.368E-01	1.534E-01	1.263E-01	7.825E-02	NOT IDENT.
I-135	-5.968E+14	4.999E+15	0.000E+00	2.550E+15	SHORT HLIF
CS-136	8.044E-02	9.837E-02	9.081E-02	5.019E-02	FAIL ABUN
BA-137M	-1.548E-02	3.455E-02	2.832E-02	1.763E-02	NOT IDENT.
CS-137	-1.636E-02	3.652E-02	2.994E-02	1.863E-02	NOT IDENT.
CE-139	-2.141E-02	2.665E-02	2.178E-02	1.360E-02	NOT IDENT.
BA-140	-1.141E-02	2.472E-01	2.160E-01	1.261E-01	NOT IDENT.
LA-140	-1.142E-01	8.795E-02	5.843E-02	4.487E-02	FAIL ABUN
CE-141	1.736E-03	6.427E-02	4.941E-02	3.279E-02	NOT IDENT.
CE-143	6.684E+02	2.105E+02	0.000E+00	1.074E+02	SHORT HLIF
CE-144	-1.255E-01	1.812E-01	1.511E-01	9.243E-02	NOT IDENT.
PM-144	1.366E-02	3.167E-02	2.802E-02	1.616E-02	NOT IDENT.

PR-144	9.258E-01	2.146E+00	1.899E+00	1.095E+00	NOT IDENT.
PM-146	2.373E-02	3.959E-02	3.482E-02	2.020E-02	NOT IDENT.
ND-147	-8.564E-02	5.219E-01	4.267E-01	2.663E-01	FAIL ABUN
PM-149	-2.422E+01	8.297E+01	7.158E+01	4.233E+01	NOT IDENT.
EU-152	-1.194E-01	1.021E-01	7.445E-02	5.212E-02	FAIL ABUN
GD-153	-5.387E-02	7.723E-02	5.831E-02	3.940E-02	FAIL ABUN
EU-154	-2.485E-02	1.076E-01	8.814E-02	5.489E-02	NOT IDENT.
EU-155	6.487E-02	9.560E-02	8.650E-02	4.877E-02	FAIL ABUN
TB-160	-2.556E-02	1.270E-01	1.038E-01	6.478E-02	FAIL ABUN
HO-166M	-2.963E-02	6.104E-02	5.008E-02	3.114E-02	FAIL ABUN
TM-171	-1.706E+01	2.859E+01	2.251E+01	1.458E+01	NOT IDENT.
LU-176	-1.649E-02	2.118E-02	1.757E-02	1.081E-02	FAIL ABUN
LU-177	2.896E+00	1.988E+00	1.023E+00	1.014E+00	FAIL ABUN
LU-177M	-1.123E-01	1.633E-01	1.318E-01	8.331E-02	FAIL ABUN
HF-181	1.607E-02	3.923E-02	3.391E-02	2.002E-02	NOT IDENT.
W-181	-9.366E-02	3.609E-01	2.893E-01	1.841E-01	NOT IDENT.
TA-182	-4.834E-02	1.916E-01	1.584E-01	9.777E-02	FAIL ABUN
RE-183	3.651E-02	1.001E-01	8.491E-02	5.108E-02	FAIL ABUN
RE-184	-1.640E-01	1.985E-01	1.680E-01	1.013E-01	NOT IDENT.
OS-185	2.416E-02	4.132E-02	3.715E-02	2.108E-02	NOT IDENT.
RE-188	1.141E-01	1.565E-01	1.384E-01	7.986E-02	NOT IDENT.
W-188	-3.894E+00	7.637E+00	5.661E+00	3.896E+00	FAIL ABUN
IR-192	-1.225E-02	3.081E-02	2.615E-02	1.572E-02	FAIL ABUN
AU-195	1.674E-01	2.236E-01	1.830E-01	1.141E-01	FAIL ABUN
TL-200	1.678E+02	4.134E+02	0.000E+00	2.109E+02	SHORT HLIF
TL-201	4.782E-01	6.159E+00	5.264E+00	3.142E+00	NOT IDENT.
TL-202	-2.295E-02	6.125E-02	5.019E-02	3.125E-02	NOT IDENT.
HG-203	-4.755E-03	3.990E-02	3.060E-02	2.036E-02	FAIL ABUN
BI-207	1.318E-02	4.710E-02	4.150E-02	2.403E-02	FAIL ABUN
TL-207	-3.021E-01	7.025E-01	5.160E-01	3.584E-01	FAIL ABUN
PO-209	2.494E-01	7.546E+00	6.314E+00	3.850E+00	NOT IDENT.
BI-210	-2.084E+00	2.945E+00	2.599E+00	1.503E+00	NOT IDENT.
PB-210	-2.084E+00	2.945E+00	2.599E+00	1.503E+00	NOT IDENT.
PO-210	-2.084E+00	2.944E+00	2.599E+00	1.502E+00	NOT IDENT.
PB-211	-8.688E-01	1.057E+00	7.293E-01	5.392E-01	NOT IDENT.
BI-212	1.479E+00	5.600E-01	3.560E-01	2.857E-01	FAIL ABUN
PO-215	-3.021E-01	7.025E-01	5.160E-01	3.584E-01	FAIL ABUN
RN-219	1.241E-01	3.924E-01	3.408E-01	2.002E-01	FAIL ABUN
RN-220	-2.643E+01	2.286E+01	1.811E+01	1.167E+01	NOT IDENT.
RA-223	-3.021E-01	7.025E-01	5.160E-01	3.584E-01	FAIL ABUN
AC-227	-6.257E-02	3.351E-01	2.936E-01	1.710E-01	FAIL ABUN
TH-227	-6.257E-02	3.352E-01	2.936E-01	1.710E-01	FAIL ABUN
TH-229	2.223E-02	4.682E-01	3.950E-01	2.389E-01	FAIL ABUN
PA-231	1.096E+00	1.350E+00	1.229E+00	6.887E-01	NOT IDENT.
TH-231	-3.021E-01	7.025E-01	5.160E-01	3.584E-01	FAIL ABUN
U-231	-5.504E-01	9.945E-01	7.636E-01	5.074E-01	FAIL ABUN
PA-233	-4.171E-03	5.687E-02	4.930E-02	2.902E-02	FAIL ABUN
PA-234	-3.609E-01	2.992E-01	2.090E-01	1.527E-01	FAIL ABUN
PA-234M	4.141E-01	4.551E+00	3.878E+00	2.322E+00	NOT IDENT.
NP-236	-4.955E-02	7.142E-02	5.890E-02	3.644E-02	NOT IDENT.
NP-239	6.400E-02	1.665E-01	1.480E-01	8.495E-02	FAIL ABUN
AM-241	5.926E-02	1.423E-01	1.193E-01	7.259E-02	NOT IDENT.
CM-243	-4.142E-02	8.437E-02	7.271E-02	4.305E-02	FAIL ABUN
AM-246	4.178E-03	1.398E-01	1.201E-01	7.134E-02	NOT IDENT.
CM-247	-1.534E-02	3.552E-02	2.938E-02	1.812E-02	FAIL ABUN
CF-249	2.174E-02	3.842E-02	3.397E-02	1.960E-02	NOT IDENT.
CF-251	-3.879E-02	1.164E-01	9.707E-02	5.940E-02	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                          CHARLESTON ,SC 29417                             *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	230.3073
46.50	230.3073
46.50	230.3073
48.70	210.7135
49.72	237.9674
51.35	246.9866
52.39	223.6379
52.97	217.1311
53.15	217.2549
53.44	232.1820
54.07	237.8512
56.28	242.9743
56.28	242.9764
57.37	0.0000
57.53	247.4062
57.53	247.4076
57.60	247.4586
57.98	282.0024
57.98	282.0024
59.32	268.5717
59.32	268.5717
59.40	248.7846
59.54	248.8871
59.72	239.7464
60.01	238.6244
61.10	255.3387
61.14	255.3684
61.30	255.4856
63.00	323.5835
63.29	322.0633
63.29	322.0633
63.58	325.4513
64.28	322.0638
65.12	325.5051
65.20	329.6132
65.20	329.6132
66.05	304.7617
66.72	356.6534
66.83	356.7621
66.91	340.6207
67.20	375.5178
67.20	375.5178
67.75	391.9682
67.85	392.0764
68.90	372.8848
68.90	372.8848
69.30	349.6104
69.67	337.6983
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74.81	371.6299
74.97	371.7789
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75.70	372.4581
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77.11	373.7608

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83.78	266.9650
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83.78	266.9650
84.21	267.2308
84.90	267.6569
85.43	267.9834
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86.50	268.6378
86.54	268.6623
86.59	268.6926
86.72	268.7721
86.79	268.8140
86.94	268.9064
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87.57	269.2892
87.88	269.4770
88.03	269.5680
88.36	269.7673
88.47	269.8338
89.95	270.7222
91.11	271.4155
92.29	272.1147
92.38	272.1681
92.38	272.1681
93.35	272.7387
94.00	273.1200
94.67	273.5086
94.67	273.5115
94.90	273.6458
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94.90	273.6458
94.90	273.6458
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98.44	247.5384
98.88	239.0194
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99.55	211.1337
99.86	211.2684
100.00	230.8064
100.10	225.0114
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103.76	256.1227
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105.31	240.1801
108.00	283.0107
109.28	248.0011

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111.00	249.8153
111.76	254.1634
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116.30	230.1951
117.00	227.4714
117.00	227.4714
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121.78	237.5694
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122.32	239.8303
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122.32	239.8303
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136.48	229.0458
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140.51	0.0000
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142.65	250.7957
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144.24	286.2179
144.24	286.2179
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145.44	261.4103
147.16	252.5838
152.43	235.9523
152.70	247.7980
153.22	223.4062
154.21	220.5284
154.21	220.5284
154.21	220.5284
154.21	220.5284
155.03	235.8067
156.02	257.6245
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161.27	229.3345
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162.64	212.4470
163.35	208.3242
163.89	210.6581
165.85	245.0066
167.43	220.4567
171.28	252.3744
171.86	214.1422
172.10	214.2136
176.55	237.6320
176.60	237.6484
181.06	220.1779
184.41	234.5624
185.71	257.3392
186.00	257.4374
190.27	226.2293
192.34	222.3164
193.63	223.8115
197.04	238.4012
198.01	228.4600
198.60	251.3767
200.40	233.7009
201.83	231.6014
202.84	226.4017
205.31	192.6777

208.36	232.5289
208.81	232.6543
209.75	219.6571
209.75	219.6571
210.97	223.4411
215.65	198.5555
216.55	199.9265
218.09	190.9697
222.10	215.8393
223.80	184.6104
226.40	202.7907
227.00	218.8088
227.08	218.8297
227.20	223.2705
228.16	219.9780
228.18	225.2845
228.18	225.2845
231.56	0.0000
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236.00	211.0265
236.00	211.0265
238.63	181.4257
238.63	181.4257
238.63	181.4257
238.63	181.4257
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241.98	182.0824
241.98	182.0824
241.98	182.0824
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245.39	151.2387
247.94	157.0636
248.90	134.6334
249.79	136.5684
252.40	164.1472
252.85	173.2978
252.85	173.2978
254.15	0.0000
256.20	171.1667
256.20	171.1667
260.50	156.3751
260.90	153.6932
262.80	169.5730
264.65	145.4618
268.24	148.9331
268.79	159.3422
269.46	155.0186
269.46	155.0186
269.46	155.0186
269.46	155.0186
271.23	155.2903
273.65	126.0100
276.40	153.1019
277.35	132.9737
277.60	117.5646
277.60	117.5646
278.00	117.6109
278.60	134.0640
279.20	156.5002
279.53	156.5490
280.46	164.1514
281.68	156.8719
283.67	133.7810
284.30	151.6476
285.00	160.1794
285.90	164.0652
286.10	151.9071
286.10	151.9071
287.40	149.2760
288.45	0.0000
290.67	171.7709
290.80	167.2723
291.72	164.3995
293.26	0.0000
293.70	148.0791
295.21	160.3923
295.21	160.3923

295.21	160.3923
295.96	151.4185
296.50	151.4917
297.23	151.5942
298.57	151.7798
299.80	132.1971
299.80	132.1971
300.09	138.3129
300.09	138.3129
300.09	138.3129
300.09	138.3129
300.12	138.3151
301.29	146.0719
302.84	126.4676
303.76	105.2233
303.91	102.1864
304.40	96.1288
304.40	96.1288
304.84	123.3892
306.84	138.5837
308.46	131.1279
311.98	133.4579
316.51	137.8461
318.01	160.2274
319.02	151.6745
319.41	136.2624
320.08	111.2009
323.87	153.6675
323.87	153.6675
323.87	153.6675
323.87	153.6675
325.23	167.8351
328.77	129.3734
333.44	88.6759
334.20	107.6535
334.20	107.6535
334.30	107.6619
338.28	120.7853
338.28	120.7853
338.28	120.7853
338.28	120.7853
338.32	120.7910
338.32	120.7910
338.32	120.7910
340.50	141.6687
340.57	141.6753
344.27	163.1612
345.85	134.3855
350.59	0.0000
351.07	138.9255
351.92	139.0216
351.92	139.0216
351.92	139.0216
355.39	0.0000
356.01	92.4531
364.48	113.3345
366.43	124.5563
367.43	110.5791
367.94	0.0000
369.80	105.7466
374.96	97.0679
383.85	107.9037
387.95	113.3424
388.63	107.2703
391.69	124.9208
391.69	124.9208
392.90	131.1816
398.62	122.4700
400.65	113.3754
401.10	113.4123
401.81	111.4080
402.60	124.8883
404.84	138.5310
410.95	101.7578
411.60	115.3105
413.65	116.5186
414.70	104.1107
415.30	98.9472

415.76	106.2739
417.63	0.0000
418.52	86.6449
423.70	118.3900
427.08	88.2131
427.89	86.1616
432.53	89.5992
433.93	73.8570
439.47	91.0811
439.56	91.0863
439.89	92.1667
443.98	80.7349
444.90	81.8477
445.03	85.0439
445.03	85.0439
445.03	85.0439
445.03	85.0439
453.90	80.1991
463.38	98.1274
468.07	77.7030
473.00	89.8567
475.06	80.2182
475.35	79.1487
476.78	94.4142
477.59	104.2339
477.96	108.6029
482.03	78.3940
484.57	87.2437
487.03	76.4552
490.36	0.0000
492.35	75.6119
497.08	86.8221
507.63	0.0000
510.53	0.0000
510.84	69.8166
511.00	69.8233
511.85	69.8589
511.85	69.8589
513.99	69.9478
513.99	69.9478
520.41	72.6018
520.65	67.9958
527.90	69.4037
528.96	0.0000
529.64	78.4381
529.87	0.0000
531.02	77.3807
537.32	89.1435
543.00	83.1100
546.56	0.0000
549.76	86.1494
552.65	61.7645
555.20	80.9539
563.23	84.0578
563.90	80.4332
568.70	67.8159
569.32	75.1733
569.50	75.1813
569.67	77.9381
573.80	78.1145
574.00	78.1228
574.64	80.4483
578.91	84.4739
579.30	0.0000
583.14	65.5797
585.48	61.6536
591.81	71.1413
592.07	74.2461
593.00	69.6387
595.88	87.4136
600.56	76.6497
602.52	0.0000
602.71	87.1058
602.71	87.1058
603.60	96.4840
604.41	93.4106
604.70	90.3111
609.31	67.4279

609.31	67.4279
609.31	67.4279
609.31	67.4279
610.33	67.4631
612.46	67.2260
614.37	84.5068
618.01	62.0877
621.84	84.8298
621.84	84.8298
631.29	63.4553
633.02	71.0925
633.10	71.0962
634.78	70.2079
635.90	65.5012
636.97	60.7859
645.85	63.9183
646.12	67.7429
656.30	76.7129
657.75	69.0908
657.90	0.0000
661.65	78.8349
661.65	78.8349
664.57	0.0000
666.33	63.5959
666.33	63.5959
675.00	61.9266
677.61	69.7535
685.20	79.7278
692.80	80.0121
695.00	78.1406
696.49	64.5111
696.49	64.5111
697.00	74.3022
697.49	71.3853
698.33	82.1748
698.50	82.1810
699.00	84.1586
702.63	70.5762
706.10	86.3973
706.58	0.0000
706.67	87.4030
709.31	64.8930
711.68	83.6656
713.82	71.9235
717.42	54.2789
720.50	92.2373
721.93	0.0000
722.20	62.6375
722.78	64.3033
722.78	64.3033
722.89	64.3065
722.95	64.3081
723.30	59.3701
724.18	54.4441
727.18	55.5092
733.00	61.2858
735.90	54.7301
739.58	68.7743
742.81	61.8850
744.21	68.9141
747.13	62.0030
751.79	77.1598
752.31	78.1809
753.82	57.1698
755.35	56.2037
756.15	61.2427
756.87	64.2750
763.93	55.4055
765.79	65.5316
766.42	59.4984
766.84	59.5099
776.49	64.1436
778.00	64.1853
778.57	76.0272
778.89	77.7279
783.80	60.9565
785.46	62.0157
792.07	71.3638

795.84	51.0535
796.30	45.9569
798.80	102.2339
801.93	57.3248
805.60	55.3619
810.29	58.5502
810.76	76.0271
815.85	58.6838
817.79	46.3656
818.51	46.3788
819.60	53.6174
826.30	56.8651
828.27	0.0000
831.60	66.3109
831.96	63.2115
834.83	86.1085
836.80	0.0000
846.75	55.2463
848.13	61.5337
856.28	0.0000
856.80	59.3022
860.37	53.4467
867.32	52.5403
867.82	43.7917
871.10	54.7219
873.19	48.4471
874.81	55.8544
875.33	0.0000
876.40	37.9617
879.36	48.5617
880.27	47.5225
880.51	47.5269
881.50	48.6021
883.24	51.8053
884.67	41.2556
889.25	60.4025
896.60	57.3816
898.02	55.2868
899.00	60.6251
903.28	47.9388
911.07	42.7363
911.07	42.7363
911.07	42.7363
919.63	41.8003
920.93	56.8327
925.00	55.8441
925.24	54.7752
926.50	45.1295
935.52	49.5904
937.48	65.8088
944.10	54.0710
946.00	62.7649
949.00	29.2498
962.29	47.1673
964.01	42.4763
966.15	42.5087
968.20	42.5391
969.11	42.5534
969.11	42.5534
969.11	42.5534
977.42	42.4046
980.50	43.8193
983.50	51.5416
989.30	42.8553
996.32	56.9115
1001.03	50.5677
1001.68	45.0612
1004.76	56.1562
1021.30	0.0000
1024.50	0.0000
1034.80	45.5706
1036.00	51.1709
1037.82	51.2022
1038.57	46.5576
1038.76	0.0000
1045.16	54.1272
1046.59	44.8145
1048.07	38.2990

1050.47	43.9382
1050.47	43.9382
1062.04	38.4742
1063.62	42.2498
1076.63	47.1436
1077.35	43.3814
1078.86	52.8372
1085.78	62.4121
1099.22	48.4351
1112.02	38.1429
1112.84	40.0603
1115.52	47.4568
1120.29	53.5368
1120.29	53.5368
1120.29	53.5368
1120.29	53.5368
1120.51	53.5413
1121.28	53.5550
1124.00	0.0000
1129.67	48.1154
1131.51	0.0000
1147.95	0.0000
1167.94	44.6243
1173.22	65.0998
1175.09	69.9990
1177.93	51.5702
1189.05	55.6455
1204.90	65.7159
1205.75	0.0000
1213.00	56.0398
1221.42	65.0466
1230.97	77.0859
1235.34	63.3307
1236.41	0.0000
1238.25	53.4792
1246.25	60.5507
1260.41	0.0000
1271.85	42.9930
1274.45	39.0222
1274.54	39.0238
1291.56	34.1812
1298.22	0.0000
1312.09	25.2757
1325.50	36.5303
1325.50	36.5303
1332.49	38.6324
1333.61	38.6432
1360.21	29.7009
1362.66	0.0000
1365.15	29.7399
1368.21	29.9113
1368.53	0.0000
1376.25	26.7416
1384.27	21.2026
1394.10	21.4180
1395.20	20.1554
1407.95	17.1110
1434.06	25.0547
1436.60	18.8027
1457.56	0.0000
1460.81	23.4210
1489.15	23.2837
1509.49	22.3356
1596.49	33.0706
1620.62	13.1001
1678.03	0.0000
1691.02	8.5549
1691.02	8.5549
1706.46	0.0000
1750.46	0.0000
1764.49	10.6225
1764.49	10.6225
1764.49	10.6225
1764.49	10.6225
1770.23	13.5356
1771.40	11.8467
1791.20	0.0000
1808.65	17.5430

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202018263

Total Uranium Activity	3.1000E+00	ug/g
Total Uranium Counting Unc.	4.3422E+00	ug/g
Total Uranium Tpu	2.2154E-06	ug/g
Total Uranium Mda	3.0825E+00	ug/g

```
*******************************************************************************
*                                                                             *
*                          GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                              *
*                             CHARLESTON ,SC 29417                            *
*                              GROSS GAMMA REPORT                             *
*                                                                             *
*                                                                             *
*******************************************************************************
*                                                                             *
*   BATCH ID      : 942718                    SAMPLE ID  : G1202018263        *
*   ANALYST       : MXR1                      DETECTOR   : GAM12              *
*   SAMPLE DATE   : 11-JAN-2010 12:00:00.00   COUNT TIME :    0 02:00:00.00   *
*   ANALYSIS DATE: 26-JAN-2010 14:10:01.09    SAMPLE ALQT:  130.810 GRAM      *
*                                                                             *
*******************************************************************************
```

```
GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 8.488E+00
GROSS GAMMA ERROR   (pCi/GRAM  )  : 1.376E+00
GROSS GAMMA MDA     (pCi/GRAM  )  : 3.451E+00
GROSS GAMMA DLC     (pCi/GRAM  )  : 1.668E+00
```

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:19:48.07

```
*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202018264.CNF;1
Sample date       : 19-JAN-2010 00:00:00 Acquisition date : 26-JAN-2010 14:19:20
Sample ID         : G1202018264          Sample quantity  : 1.51730E+02 GRAM
Detector name     : GAM14                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.68  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID         : 942718                Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.58	4416	1452	1.31	118.71	111	14	1.23E+00	2.4	
2	1	74.68	226	650	1.54	148.90	144	15	6.26E-02	21.3	1.94E+00
3	1	77.21*	372	532	1.31	153.94	144	15	1.03E-01	12.4	
4	0	88.18*	1942	913	1.27	175.86	169	14	5.40E-01	4.0	
5	0	92.61*	85	423	2.12	184.71	183	10	2.37E-02	47.7	
6	0	121.82	330	543	1.17	243.08	236	14	9.16E-02	16.0	
7	0	185.57*	83	440	1.39	370.46	366	12	2.31E-02	52.0	
8	0	208.84	97	360	1.50	416.95	414	11	2.70E-02	39.0	
9	3	238.55*	773	294	1.58	476.33	468	19	2.15E-01	5.4	2.76E+00
10	3	241.50	127	300	1.54	482.23	468	19	3.52E-02	27.5	
11	0	295.20	267	271	1.29	589.53	584	13	7.43E-02	14.1	
12	0	338.21	88	229	1.32	675.49	671	10	2.46E-02	33.7	
13	0	352.07	279	280	1.42	703.19	697	12	7.74E-02	13.5	
14	0	510.99*	70	176	1.64	1020.83	1015	13	1.95E-02	43.1	
15	0	583.38*	215	95	1.54	1165.55	1161	10	5.96E-02	11.1	
16	0	609.32	240	131	1.26	1217.41	1212	12	6.68E-02	11.5	
17	0	661.87	2530	195	1.56	1322.48	1316	15	7.03E-01	2.3	
18	0	729.09	42	124	1.45	1456.87	1446	14	1.17E-02	58.5	
19	0	912.08*	138	189	1.44	1822.82	1816	15	3.82E-02	23.6	
20	0	969.99*	120	118	2.23	1938.63	1931	14	3.34E-02	21.6	
21	0	1173.86	2038	58	1.82	2346.43	2338	18	5.66E-01	2.4	
22	0	1333.27	1776	32	1.97	2665.37	2656	18	4.93E-01	2.5	
23	0	1462.51*	24	21	2.21	2924.00	2915	14	6.55E-03	46.9	
24	0	1510.80	22	8	1.06	3020.64	3014	11	6.01E-03	33.6	
25	0	1765.17	45	4	1.52	3529.82	3522	17	1.26E-02	18.1	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 26-JAN-2010 15:19:51

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202018264.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 19-JAN-2010 00:00:00 Acquisition date : 26-JAN-2010 14:19:20
Sample ID : G1202018264 Sample quantity : 151.73 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA14 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.68 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	2.538E-01	8.306E-02	6.665E-02	4.742E-03	3.808
		136.48		2.683E-01	3.544E-01	5.849E-01	4.293E-02	0.459
CO-60	+	1173.22		6.924E+00	5.047E-01	1.211E-01	6.668E-03	57.197
	+	1332.49	*	6.747E+00	5.863E-01	9.196E-02	6.554E-03	73.367
CD-109	+	88.03	*	3.680E+01	4.374E+00	2.231E+00	1.951E-01	16.492
SN-126		64.28		-3.195E-01	8.358E-01	1.180E+00	1.682E-01	-0.271
	+	86.94		1.521E+01	6.411E+00	9.296E-01	3.845E-01	16.359
	+	87.57	*	3.658E+00	4.348E-01	2.225E-01	1.936E-02	16.437
BA-137M	+	661.65	*	5.640E+00	4.257E-01	1.180E-01	7.017E-03	47.790
CS-137	+	661.65	*	5.962E+00	4.511E-01	1.247E-01	7.448E-03	47.790
TL-208		277.35		4.269E-01	6.618E-01	1.130E+00	1.195E-01	0.378
	+	510.84		5.199E-01	4.518E-01	4.451E-01	4.538E-02	1.168
	+	583.14	*	4.576E-01	1.060E-01	1.214E-01	8.300E-03	3.771
		860.37		6.828E-01	6.027E-01	1.074E+00	1.010E-01	0.636
BI-211		72.87		1.323E+01	5.532E+00	8.478E+00	6.248E-01	1.560
	+	351.07	*	2.551E+00	7.074E-01	6.814E-01	4.317E-02	3.743
PB-212	+	74.81		1.719E+00	7.602E-01	8.718E-01	1.046E-01	1.971
	+	77.11		1.621E+00	4.196E-01	5.004E-01	3.853E-02	3.239
	+	87.30		1.692E+01	2.628E+00	1.031E+00	1.365E-01	16.404
	+	238.63	*	1.540E+00	1.999E-01	1.611E-01	1.173E-02	9.562
		300.09		8.149E-01	1.515E+00	2.262E+00	1.871E-01	0.360
PO-212	+	74.81		1.719E+00	7.602E-01	8.718E-01	1.046E-01	1.971
	+	77.11		1.621E+00	4.196E-01	5.004E-01	3.853E-02	3.239
	+	87.30		1.692E+01	2.628E+00	1.031E+00	1.365E-01	16.404
		115.19		1.231E-01	6.540E+00	9.213E+00	6.704E-01	0.013
	+	238.63	*	1.540E+00	1.999E-01	1.611E-01	1.173E-02	9.562
		300.09		8.149E-01	1.515E+00	2.262E+00	1.871E-01	0.360
BI-214	+	609.31	*	9.674E-01	2.345E-01	2.220E-01	1.757E-02	4.358
		1120.29		1.015E+00	6.044E-01	1.100E+00	1.019E-01	0.922
	+	1764.49		1.339E+00	4.911E-01	4.918E-01	2.950E-02	2.722
PB-214	+	74.81		2.961E+00	1.299E+00	1.502E+00	1.585E-01	1.971
	+	77.11		2.778E+00	7.498E-01	8.578E-01	9.292E-02	3.239
	+	87.30		2.898E+01	4.106E+00	1.767E+00	2.050E-01	16.404
	+	241.98		1.515E+00	8.430E-01	9.553E-01	7.674E-02	1.585

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	295.21		1.443E+00	4.257E-01	3.898E-01	3.332E-02	3.703
	+	351.92	*	8.872E-01	2.504E-01	2.203E-01	1.808E-02	4.027
PO-214	+	74.81		2.961E+00	1.299E+00	1.502E+00	1.585E-01	1.971
	+	77.11		2.778E+00	7.498E-01	8.578E-01	9.292E-02	3.239
	+	87.30		2.898E+01	4.106E+00	1.767E+00	2.050E-01	16.404
	+	241.98		1.515E+00	8.430E-01	9.553E-01	7.674E-02	1.585
	+	295.21		1.443E+00	4.257E-01	3.898E-01	3.332E-02	3.703
	+	351.92	*	8.872E-01	2.504E-01	2.203E-01	1.808E-02	4.027
PO-216	+	74.81		1.719E+00	7.602E-01	8.718E-01	1.046E-01	1.971
	+	77.11		1.621E+00	4.196E-01	5.004E-01	3.853E-02	3.239
	+	87.30		1.692E+01	2.628E+00	1.031E+00	1.365E-01	16.404
	+	238.63	*	1.540E+00	1.999E-01	1.611E-01	1.173E-02	9.562
		300.09		8.149E-01	1.515E+00	2.262E+00	1.871E-01	0.360
PO-218	+	74.81		2.961E+00	1.299E+00	1.502E+00	1.585E-01	1.971
	+	77.11		2.778E+00	7.498E-01	8.578E-01	9.292E-02	3.239
	+	87.30		2.898E+01	4.106E+00	1.767E+00	2.050E-01	16.404
	+	241.98		1.515E+00	8.430E-01	9.553E-01	7.674E-02	1.585
	+	295.21		1.443E+00	4.257E-01	3.898E-01	3.332E-02	3.703
	+	351.92	*	8.872E-01	2.504E-01	2.203E-01	1.808E-02	4.027
RA-224	+	240.98	*	2.872E+00	1.590E+00	1.832E+00	1.053E-01	1.567
RA-226	+	609.31	*	9.674E-01	2.345E-01	2.220E-01	1.757E-02	4.358
		1120.29		1.015E+00	6.044E-01	1.100E+00	1.019E-01	0.922
	+	1764.49		1.339E+00	4.911E-01	4.918E-01	2.950E-02	2.722
AC-228	+	338.32		8.910E-01	7.011E-01	7.239E-01	2.951E-01	1.231
	+	911.07	*	1.334E+00	6.477E-01	5.258E-01	6.175E-02	2.537
	+	969.11		2.062E+00	1.011E+00	9.635E-01	2.250E-01	2.140
RA-228	+	338.32		8.910E-01	7.011E-01	7.239E-01	2.951E-01	1.231
	+	911.07	*	1.334E+00	6.477E-01	5.258E-01	6.175E-02	2.537
	+	969.11		2.062E+00	1.011E+00	9.635E-01	2.250E-01	2.140
TH-228	+	74.81		1.732E+00	7.489E-01	8.784E-01	6.675E-02	1.971
	+	77.11		1.633E+00	4.228E-01	5.042E-01	3.882E-02	3.239
	+	87.30		1.705E+01	2.026E+00	1.039E+00	9.012E-02	16.404
	+	238.63	*	1.552E+00	2.015E-01	1.623E-01	1.182E-02	9.562
		300.09		8.211E-01	1.600E+00	2.279E+00	1.343E+00	0.360
TH-230	+	609.31	*	9.674E-01	2.345E-01	2.220E-01	1.757E-02	4.358
		1120.29		1.015E+00	6.044E-01	1.100E+00	1.019E-01	0.922
	+	1764.49		1.339E+00	4.911E-01	4.918E-01	2.950E-02	2.722
TH-232	+	338.32		8.910E-01	6.019E-01	7.239E-01	4.159E-02	1.231
	+	911.07	*	1.334E+00	6.477E-01	5.258E-01	6.175E-02	2.537
	+	969.11		2.062E+00	1.011E+00	9.635E-01	2.250E-01	2.140
U-234	+	609.31	*	9.674E-01	2.345E-01	2.220E-01	1.757E-02	4.358
		1120.29		1.015E+00	6.044E-01	1.100E+00	1.019E-01	0.922
	+	1764.49		1.339E+00	4.911E-01	4.918E-01	2.950E-02	2.722
AM-241	+	59.54	*	1.504E+01	1.324E+00	4.571E-01	3.394E-02	32.900
AM-243	+	74.67	*	2.786E-01	1.205E-01	1.417E-01	1.063E-02	1.967
	+	86.72		4.028E+02	4.788E+01	2.466E+01	2.124E+00	16.332
		117.66		8.766E+00	6.888E+00	1.035E+01	7.459E-01	0.847
		142.18		1.315E+01	2.854E+01	4.663E+01	2.932E+00	0.282
ANH-511	+	511.00	*	1.123E-01	9.714E-02	9.616E-02	5.649E-03	1.168

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-9.398E-02	6.411E-01	1.043E+00	7.029E-02	-0.090
NA-22		1274.54	*	-1.541E-02	4.947E-02	7.757E-02	5.067E-03	-0.199
NA-24		1368.53	*	-4.669E-05	4.947E-02	Half-Life too short		
AL-26		1129.67		-7.366E-01	3.036E+00	4.921E+00	3.108E-01	-0.150
		1808.65	*	-2.272E-03	4.899E-02	7.970E-02	4.620E-03	-0.029
K-40		1460.81	*	1.207E+00	6.476E-01	1.202E+00	8.727E-02	1.004
TI-44		67.85		-4.273E-02	6.875E-02	1.096E-01	7.714E-03	-0.390
	+	78.38	*	2.990E-01	7.740E-02	1.113E-01	8.690E-03	2.686
SC-46		889.25	*	7.722E-02	8.908E-02	1.559E-01	1.441E-02	0.495
		1120.51		1.866E-01	9.515E-02	1.769E-01	1.146E-02	1.055
V-48		944.10		-1.514E+00	1.643E+00	2.584E+00	2.309E-01	-0.586
		983.50	*	5.451E-02	1.181E-01	2.024E-01	1.719E-02	0.269
		1312.09		4.796E-02	7.171E-02	1.289E-01	8.911E-03	0.372
CR-51		320.08	*	1.311E-01	5.760E-01	9.664E-01	6.245E-02	0.136
MN-52		744.21		1.718E-01	1.838E-01	3.156E-01	2.227E-02	0.544
		848.13		2.550E+00	6.146E+00	1.054E+01	9.059E-01	0.242
		935.52		-2.924E-02	2.578E-01	4.277E-01	3.860E-02	-0.068
		1246.25		-2.915E+00	3.433E+00	5.005E+00	3.118E-01	-0.583
	+	1333.61		3.412E+02	2.965E+01	3.783E+01	2.696E+00	9.019
		1434.06	*	-3.229E-02	1.169E-01	1.815E-01	1.272E-02	-0.178
MN-54		834.83	*	-4.293E-02	8.110E-02	1.317E-01	1.105E-02	-0.326
CO-56		846.75	*	2.952E-02	8.284E-02	1.418E-01	1.215E-02	0.208
		977.42		-5.828E-01	7.071E+00	1.086E+01	9.299E-01	-0.054
		1037.82		3.725E-01	6.660E-01	1.148E+00	9.508E-02	0.325
	+	1175.09		3.239E+02	2.360E+01	3.319E+01	1.834E+00	9.758
		1238.25		8.528E-02	9.520E-02	1.724E-01	1.120E-02	0.495
		1360.21		9.159E-01	1.015E+00	1.927E+00	1.369E-01	0.475
		1771.40		7.467E-02	2.727E-01	4.193E-01	2.502E-02	0.178
CO-58		810.76	*	4.431E-02	7.675E-02	1.282E-01	1.032E-02	0.346
FE-59		142.65		7.155E-01	3.886E+00	6.279E+00	3.937E-01	0.114
		192.34		1.791E+00	1.636E+00	2.515E+00	2.936E-01	0.712
		1099.22	*	-5.802E-02	1.809E-01	2.931E-01	2.257E-02	-0.198
		1291.56		5.630E-03	1.252E-01	2.074E-01	1.688E-02	0.027
ZN-65		1115.52	*	-2.913E-01	1.844E-01	2.684E-01	1.764E-02	-1.086
GE-68		1077.35	*	2.069E+00	2.730E+00	4.752E+00	3.416E-01	0.435
AS-73		53.44	*	-1.481E-01	1.785E+00	2.549E+00	1.661E-01	-0.058
AS-74		595.88	*	1.435E-01	1.369E-01	2.363E-01	1.413E-02	0.607
		634.78		7.614E-03	5.271E-01	8.556E-01	5.110E-02	0.009
SE-75		66.05		-2.373E+00	7.278E+00	1.083E+01	9.846E-01	-0.219
		96.73		-6.329E-01	1.303E+00	1.790E+00	2.378E-01	-0.354
	+	121.11		1.332E+00	4.462E-01	4.786E-01	4.843E-02	2.783
		136.00		7.407E-02	6.487E-02	1.085E-01	7.164E-03	0.683
		198.60		-1.870E+00	2.935E+00	4.790E+00	3.316E-01	-0.390
		264.65	*	3.000E-03	7.646E-02	1.279E-01	7.509E-03	0.023
		279.53		-8.020E-02	1.859E-01	3.043E-01	1.916E-02	-0.264
		303.91		-1.223E+00	3.656E+00	5.990E+00	5.725E-01	-0.204
		400.65		4.638E-01	5.046E-01	8.648E-01	7.702E-02	0.536
BR-77	+	87.88		8.916E+02	1.060E+02	1.062E+02	9.274E+00	8.397
		200.40		3.684E+01	3.021E+01	5.291E+01	2.942E+00	0.696

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	239.00		2.743E+01	3.341E+00	5.456E+00	3.132E-01	5.027
		249.79		-1.643E-01	1.339E+01	2.238E+01	1.293E+00	-0.007
		281.68		-1.058E+01	1.818E+01	2.955E+01	1.723E+00	-0.358
		297.23		2.685E+01	1.309E+01	2.086E+01	1.217E+00	1.287
		303.76		9.082E-01	3.559E+01	5.928E+01	3.454E+00	0.015
		439.47		-1.306E+01	3.270E+01	5.264E+01	2.977E+00	-0.248
		484.57		-2.097E+01	5.155E+01	8.250E+01	4.791E+00	-0.254
		520.65	*	-5.841E-02	2.337E+00	3.814E+00	2.248E-01	-0.015
		574.64		-1.166E+02	5.010E+01	6.898E+01	4.118E+00	-1.691
		578.91		1.680E+01	2.075E+01	3.126E+01	1.867E+00	0.537
		585.48		1.583E+02	4.765E+01	8.126E+01	4.857E+00	1.948
		755.35		-5.536E+00	3.463E+01	5.503E+01	3.970E+00	-0.101
		817.79		-1.720E+01	2.816E+01	4.514E+01	3.669E+00	-0.381
SR-82		698.33		1.362E+01	5.405E+01	8.878E+01	5.707E+00	0.153
		776.49	*	-2.924E-01	6.531E-01	1.015E+00	7.635E-02	-0.288
		1395.20		-2.057E+00	1.018E+01	1.601E+01	1.131E+00	-0.128
RB-83		520.41	*	-6.885E-03	1.310E-01	2.133E-01	1.257E-02	-0.032
		529.64		1.261E-01	1.934E-01	3.280E-01	1.939E-02	0.385
		552.65		8.147E-02	3.897E-01	6.431E-01	3.825E-02	0.127
RB-84		881.50	*	7.457E-02	1.443E-01	2.485E-01	2.265E-02	0.300
KR-85		513.99	*	1.708E+01	1.622E+01	2.471E+01	1.453E+00	0.692
SR-85		513.99	*	8.092E-02	7.683E-02	1.170E-01	6.883E-03	0.692
RB-86		1076.63	*	8.625E-01	1.353E+00	2.336E+00	1.682E-01	0.369
Y-88		898.02		4.815E-02	9.706E-02	1.667E-01	1.570E-02	0.289
		1836.01	*	-3.257E-03	4.943E-02	7.862E-02	4.465E-03	-0.041
ZR-88		392.90	*	2.494E-02	5.637E-02	9.501E-02	5.173E-03	0.263
Y-91		1204.90	*	-1.958E+01	2.325E+01	3.469E+01	2.018E+00	-0.564
NB-94		702.63	*	4.771E-03	6.467E-02	1.050E-01	6.807E-03	0.045
		871.10		5.427E-02	7.582E-02	1.323E-01	1.184E-02	0.410
NB-95		765.79	*	-2.484E-02	7.491E-02	1.175E-01	8.656E-03	-0.211
NB-95M		235.69	*	5.102E-01	2.311E-01	3.689E-01	2.757E-02	1.383
ZR-95		724.18		-6.357E-02	1.888E-01	2.530E-01	1.949E-02	-0.251
		756.15	*	-1.198E-03	1.246E-01	2.004E-01	1.653E-02	-0.006
NB-97		657.90	*	4.078E-04	1.246E-01	Half-Life too short		
		1024.50		-7.845E-03	1.246E-01	Half-Life too short		
ZR-97		254.15		3.683E-03	1.246E-01	Half-Life too short		
		355.39		9.798E-04	1.246E-01	Half-Life too short		
		507.63	*	1.187E-03	1.246E-01	Half-Life too short		
		602.52		-2.498E-03	1.246E-01	Half-Life too short		
		1021.30		1.289E-02	1.246E-01	Half-Life too short		
		1147.95		2.231E-03	1.246E-01	Half-Life too short		
		1362.66		-2.815E-03	1.246E-01	Half-Life too short		
		1750.46		-8.821E-04	1.246E-01	Half-Life too short		
MO-99		140.51		-8.203E+00	6.975E+00	1.005E+01	2.722E+00	-0.816
		181.06		1.401E+00	4.523E+00	6.751E+00	1.149E+00	0.207
		366.43		1.232E+01	2.464E+01	4.171E+01	2.341E+00	0.295
		739.58	*	-1.219E+00	3.572E+00	5.606E+00	8.029E-01	-0.217
		778.00		-6.587E+00	1.094E+01	1.680E+01	1.267E+00	-0.392
TC-99M		140.51	*	-7.116E+01	1.094E+01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-101		127.23		-4.080E-02	6.178E-02	8.346E-02	5.742E-03	-0.489
		198.01	*	-6.772E-02	5.620E-02	8.966E-02	4.974E-03	-0.755
		325.23		-3.440E-01	4.184E-01	6.685E-01	3.869E-02	-0.515
RH-102		418.52		2.630E-01	5.972E-01	1.004E+00	5.588E-02	0.262
		475.06	*	3.551E-02	6.656E-02	1.119E-01	6.465E-03	0.317
		631.29		-1.879E-02	1.083E-01	1.735E-01	1.037E-02	-0.108
		697.49		7.409E-02	1.452E-01	2.428E-01	1.558E-02	0.305
		766.84		1.401E-01	2.014E-01	3.397E-01	2.507E-02	0.412
		1046.59		-2.417E-02	2.552E-01	4.212E-01	3.223E-02	-0.057
		1112.84		-1.512E-01	4.413E-01	7.118E-01	4.703E-02	-0.212
RU-103		497.08	*	1.555E-02	7.199E-02	1.192E-01	1.510E-02	0.130
	+	610.33		9.146E+00	2.530E+00	3.313E+00	5.132E-01	2.760
RH-106	+	511.85		5.530E-01	4.784E-01	6.182E-01	3.633E-02	0.895
		621.84	*	-5.267E-01	5.993E-01	9.061E-01	1.072E-01	-0.581
		1050.47		-3.412E+00	5.144E+00	8.144E+00	6.186E-01	-0.419
RU-106	+	511.85		5.530E-01	4.784E-01	6.182E-01	3.633E-02	0.895
		621.84	*	-5.267E-01	5.969E-01	9.061E-01	5.418E-02	-0.581
		1050.47		-3.412E+00	5.144E+00	8.144E+00	6.186E-01	-0.419
AG-108M		433.93	*	4.529E-02	6.798E-02	1.154E-01	7.090E-03	0.392
		614.37		7.276E-02	8.459E-02	1.277E-01	8.250E-03	0.570
		722.95		-2.415E-02	9.124E-02	1.233E-01	8.859E-03	-0.196
AG-110M		657.75	*	1.367E-01	8.092E-02	1.293E-01	8.165E-03	1.058
		677.61		-1.219E-01	5.734E-01	9.126E-01	5.922E-02	-0.134
		706.67		-1.192E-02	4.013E-01	6.464E-01	4.428E-02	-0.018
		763.93		3.140E-02	3.030E-01	4.913E-01	3.745E-02	0.064
		884.67		-4.502E-02	1.191E-01	1.948E-01	1.837E-02	-0.231
		937.48		1.051E-01	2.830E-01	4.816E-01	4.481E-02	0.218
		1384.27		-1.011E-01	2.102E-01	3.170E-01	2.337E-02	-0.319
IN-111		171.28		2.297E-02	2.718E-01	4.356E-01	2.349E-02	0.053
		245.39	*	-5.260E-02	3.448E-01	4.977E-01	2.868E-02	-0.106
IN-113M		391.69	*	-3.868E-02	8.171E-02	1.316E-01	7.698E-03	-0.294
SN-113		391.69	*	-3.868E-02	8.171E-02	1.316E-01	7.698E-03	-0.294
IN-114M		190.27	*	-1.451E-01	3.352E-01	4.815E-01	2.650E-02	-0.301
CD-115		260.90		-1.253E+01	2.221E+01	3.620E+01	2.101E+00	-0.346
		492.35		4.225E+00	7.208E+00	1.217E+01	7.094E-01	0.347
		527.90	*	6.831E-01	2.034E+00	3.389E+00	2.003E-01	0.202
SN-117M		156.02		2.080E-01	2.588E+00	4.156E+00	2.392E-01	0.050
		158.56	*	4.564E-03	6.329E-02	1.016E-01	5.745E-03	0.045
SB-122		563.90	*	-4.121E-01	6.086E-01	9.499E-01	5.662E-02	-0.434
		692.80		-2.842E+00	1.193E+01	1.894E+01	1.203E+00	-0.150
I-123		159.00	*	1.814E-04	1.193E+01	Half-Life too short		
		528.96		4.533E-02	1.193E+01	Half-Life too short		
TE-123M		159.00	*	1.210E-02	4.541E-02	7.346E-02	4.201E-03	0.165
I-124		602.71	*	-1.111E-01	4.155E-01	5.981E-01	3.578E-02	-0.186
		722.78		-6.418E-01	2.734E+00	3.706E+00	2.505E-01	-0.173
		1325.50		8.312E+00	1.590E+01	2.469E+01	1.741E+00	0.337
		1376.25		7.179E-01	1.121E+01	1.856E+01	1.316E+00	0.039
	+	1509.49		1.103E+01	7.439E+00	1.340E+01	9.193E-01	0.823
		1691.02		8.438E-01	1.588E+00	2.849E+00	1.795E-01	0.296

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-124		602.71		-2.068E-02	7.731E-02	1.113E-01	6.660E-03	-0.186
		645.85		-2.722E-01	9.045E-01	1.435E+00	9.596E-02	-0.190
		709.31		2.464E+00	5.040E+00	8.404E+00	5.526E-01	0.293
		713.82		3.570E-01	3.080E+00	5.009E+00	5.364E-01	0.071
		722.78		-1.731E-01	7.375E-01	9.997E-01	6.994E-02	-0.173
		968.20		1.073E+01	7.091E+00	1.118E+01	9.699E-01	0.960
		1045.16		2.143E+00	5.034E+00	8.598E+00	6.598E-01	0.249
		1325.50		2.395E+00	4.580E+00	7.114E+00	5.017E-01	0.337
		1368.21		-3.698E-02	2.086E+00	3.411E+00	4.283E-01	-0.011
		1436.60		-3.443E+00	4.394E+00	6.083E+00	4.261E-01	-0.566
		1691.02	*	5.368E-02	1.011E-01	1.813E-01	1.225E-02	0.296
SB-125		427.89	*	-8.432E-02	1.949E-01	3.137E-01	1.839E-02	-0.269
		463.38		-7.144E-02	6.341E-01	1.035E+00	6.949E-02	-0.069
		600.56		-8.348E-03	3.570E-01	5.793E-01	3.977E-02	-0.014
		635.90		-7.584E-02	5.263E-01	8.448E-01	5.862E-02	-0.090
TE-125M		109.28	*	5.476E+00	1.387E+01	2.270E+01	2.127E+00	0.241
I-126		388.63		-7.794E-02	2.648E-01	4.308E-01	2.353E-02	-0.181
		666.33	*	8.777E-02	2.769E-01	3.981E-01	2.391E-02	0.220
		753.82		5.677E-02	1.827E+00	2.949E+00	2.121E-01	0.019
SB-126		223.80		-2.662E+00	4.651E+00	7.631E+00	4.334E-01	-0.349
		278.60		4.146E-01	2.846E+00	4.776E+00	2.784E-01	0.087
	+	296.50		9.426E+00	2.717E+00	3.401E+00	1.984E-01	2.772
		414.70		3.523E-02	1.016E-01	1.701E-01	9.438E-03	0.207
		415.30		2.303E+00	8.460E+00	1.412E+01	7.838E-01	0.163
		555.20		3.808E+00	5.287E+00	8.981E+00	5.345E-01	0.424
		573.80		-3.339E+00	1.498E+00	2.086E+00	1.245E-01	-1.600
		593.00		-8.602E-01	1.273E+00	1.981E+00	1.185E-01	-0.434
		656.30		-5.680E-01	5.122E+00	7.078E+00	4.214E-01	-0.080
		666.33		3.605E-02	1.137E-01	1.635E-01	9.821E-03	0.220
		675.00		-1.960E+00	2.540E+00	3.872E+00	2.369E-01	-0.506
		695.00		-3.104E-02	9.907E-02	1.565E-01	9.988E-03	-0.198
		697.00		5.166E-02	3.355E-01	5.477E-01	3.511E-02	0.094
		720.50	*	-9.462E-02	2.225E-01	2.958E-01	1.990E-02	-0.320
		856.80		-8.485E-01	6.656E-01	1.017E+00	8.876E-02	-0.834
		989.30		4.234E-01	1.898E+00	3.206E+00	2.700E-01	0.132
		1034.80		7.581E-01	1.344E+01	2.242E+01	1.753E+00	0.034
		1213.00		-3.128E+00	4.240E+00	6.428E+00	3.791E-01	-0.487
SB-127		61.10		1.206E+03	1.025E+02	9.775E+01	7.412E+00	12.340
		252.40		-4.231E-02	2.028E+00	3.389E+00	1.392E+00	-0.012
		290.80		-1.061E+01	1.151E+01	1.565E+01	1.070E+00	-0.678
		411.60		-3.568E+00	6.264E+00	1.000E+01	1.289E+00	-0.357
		444.90		-5.410E-01	5.540E+00	9.060E+00	7.971E-01	-0.060
		473.00		2.432E-01	1.037E+00	1.719E+00	1.603E-01	0.141
		543.00		3.430E+00	8.208E+00	1.372E+01	1.568E+00	0.250
		603.60		7.957E-01	6.629E+00	9.401E+00	8.427E-01	0.085
		685.20	*	-2.593E-02	6.907E-01	1.114E+00	8.393E-02	-0.023
		698.50		1.674E+00	7.619E+00	1.248E+01	1.674E+00	0.134
		722.20		-4.868E+00	1.724E+01	2.327E+01	1.776E+00	-0.209
		783.80		9.850E-01	1.848E+00	3.080E+00	3.087E-01	0.320

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
XE-127		57.60		2.903E+02	2.438E+01	3.135E+01	2.065E+00	9.257
		145.22		2.696E-01	9.851E-01	1.597E+00	9.853E-02	0.169
		172.10		9.500E-02	1.751E-01	2.859E-01	1.543E-02	0.332
		202.84	*	-3.351E-06	7.130E-02	1.134E-01	6.319E-03	0.000
		374.96		5.063E-03	3.331E-01	5.510E-01	3.063E-02	0.009
I-131		80.18		-1.852E+00	4.535E+00	6.326E+00	5.050E-01	-0.293
		284.30		7.340E-01	1.431E+00	2.435E+00	1.564E-01	0.301
		364.48	*	-2.253E-02	1.171E-01	1.920E-01	1.202E-02	-0.117
		636.97		-5.045E-01	1.581E+00	2.506E+00	1.652E-01	-0.201
		722.89		-2.039E+00	8.027E+00	1.086E+01	7.360E-01	-0.188
TE-132		49.72		3.222E+00	6.932E+00	1.146E+01	8.304E-01	0.281
		111.76		-4.001E+00	9.736E+00	1.542E+01	1.248E+00	-0.259
		116.30		2.508E+00	1.019E+01	1.453E+01	1.158E+00	0.173
		228.16	*	1.697E-01	2.479E-01	4.214E-01	5.536E-02	0.403
BA-133		53.15		-1.590E+00	8.169E+00	1.162E+01	7.570E-01	-0.137
		79.62		2.240E+00	2.493E+00	3.635E+00	5.393E-01	0.616
		81.00		-7.023E-02	2.197E-01	2.566E-01	3.995E-02	-0.274
		276.40		5.045E-01	6.533E-01	1.119E+00	1.452E-01	0.451
		302.84		3.534E-02	2.717E-01	4.295E-01	5.013E-02	0.082
		356.01	*	-6.386E-03	8.979E-02	1.283E-01	1.475E-02	-0.050
		383.85		5.711E-02	6.191E-01	1.027E+00	1.100E-01	0.056
I-133	+	510.53		2.745E-03	6.191E-01	Half-Life too short		
		529.87	*	1.532E-05	6.191E-01	Half-Life too short		
		706.58		4.645E-04	6.191E-01	Half-Life too short		
		856.28		-2.767E-03	6.191E-01	Half-Life too short		
		875.33		-3.888E-04	6.191E-01	Half-Life too short		
		1236.41		1.232E-03	6.191E-01	Half-Life too short		
		1298.22		6.332E-04	6.191E-01	Half-Life too short		
CS-134		475.35		1.927E+00	4.344E+00	7.270E+00	4.202E-01	0.265
		563.23		1.292E-01	6.850E-01	1.129E+00	6.863E-02	0.114
		569.32		9.544E-01	4.384E-01	7.907E-01	4.850E-02	1.207
		604.70		4.862E-02	7.122E-02	1.060E-01	6.376E-03	0.459
		795.84	*	2.579E-02	1.007E-01	1.645E-01	1.295E-02	0.157
		801.93		-3.754E-01	8.314E-01	1.289E+00	1.024E-01	-0.291
		1038.57		4.956E+00	8.886E+00	1.531E+01	1.189E+00	0.324
		1167.94		8.968E-01	4.871E+00	7.083E+00	3.973E-01	0.127
		1365.15		1.195E+00	1.489E+00	2.757E+00	2.088E-01	0.433
CS-135		268.24	*	-3.632E-02	2.763E-01	4.588E-01	3.519E-02	-0.079
I-135		288.45		-7.455E+01	2.763E-01	Half-Life too short		
		417.63		2.012E+02	2.763E-01	Half-Life too short		
		546.56		3.032E+01	2.763E-01	Half-Life too short		
		836.80		1.291E+02	2.763E-01	Half-Life too short		
		1038.76		1.319E+02	2.763E-01	Half-Life too short		
		1124.00		-4.525E+02	2.763E-01	Half-Life too short		
		1131.51		2.332E+01	2.763E-01	Half-Life too short		
		1260.41	*	-2.068E+01	2.763E-01	Half-Life too short		
		1457.56		-6.922E+01	2.763E-01	Half-Life too short		
		1678.03		5.526E+01	2.763E-01	Half-Life too short		
		1706.46		3.053E+01	2.763E-01	Half-Life too short		

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		1791.20		5.496E+00	2.763E-01	Half-Life too short		
CS-136		66.91		-3.648E-01	7.766E-01	1.243E+00	1.812E-01	-0.294
		86.29		2.243E+01	3.430E+00	3.488E+00	4.468E-01	6.430
		153.22		-3.831E-02	7.312E-01	1.168E+00	8.492E-02	-0.033
		163.89		5.278E-01	1.205E+00	1.962E+00	1.366E-01	0.269
		176.55		1.313E-01	4.092E-01	6.621E-01	4.089E-02	0.198
		273.65		-2.822E-01	5.304E-01	8.649E-01	5.734E-02	-0.326
		340.57		2.225E-01	1.856E-01	2.854E-01	1.741E-02	0.780
		818.51		-1.619E-02	9.440E-02	1.565E-01	1.274E-02	-0.103
		1048.07	*	-5.548E-02	1.618E-01	2.622E-01	2.108E-02	-0.212
		1235.34		-2.546E-01	4.723E-01	7.355E-01	7.482E-02	-0.346
CE-139		165.85	*	3.881E-02	4.928E-02	8.125E-02	4.362E-03	0.478
BA-140		162.64		-6.406E-01	8.673E-01	1.343E+00	8.397E-02	-0.477
		304.84		-9.996E-01	1.553E+00	2.468E+00	6.736E-01	-0.405
		423.70		-2.484E+00	2.796E+00	4.215E+00	1.338E+00	-0.589
		537.32	*	-4.403E-02	3.229E-01	5.218E-01	1.698E-01	-0.084
LA-140		328.77		3.930E-01	3.696E-01	6.395E-01	4.142E-02	0.615
		432.53		2.863E-01	2.943E+00	4.864E+00	3.040E-01	0.059
		487.03		-7.153E-02	1.879E-01	3.012E-01	1.981E-02	-0.237
		751.79		-4.392E-02	2.114E+00	3.397E+00	2.803E-01	-0.013
		815.85		-5.149E-01	4.224E-01	6.433E-01	5.886E-02	-0.800
		867.82		1.416E-01	2.042E+00	3.435E+00	3.210E-01	0.041
		919.63		1.274E+00	4.936E+00	7.275E+00	8.081E-01	0.175
		925.24		-6.164E-01	1.799E+00	2.940E+00	2.834E-01	-0.210
		1596.49	*	1.299E-02	8.538E-02	1.424E-01	9.440E-03	0.091
CE-141		145.44	*	4.185E-02	8.674E-02	1.418E-01	9.047E-03	0.295
CE-143		57.37		8.289E+02	9.696E+01	1.265E+02	1.019E+01	6.555
		231.56		-1.362E+02	1.251E+02	1.608E+02	4.967E+01	-0.847
		293.26	*	1.969E+01	7.533E+00	1.071E+01	2.190E+00	1.839
	+	350.59		4.517E+02	1.834E+02	1.686E+02	5.111E+01	2.679
		490.36		1.586E+02	1.406E+02	2.298E+02	7.103E+01	0.690
		664.57		2.228E+03	7.202E+02	3.077E+02	9.751E+01	7.241
		721.93		1.333E+00	6.818E+01	9.497E+01	2.721E+01	0.014
CE-144		80.11		-1.482E+00	3.929E+00	5.488E+00	4.369E-01	-0.270
		133.54	*	-3.219E-01	3.551E-01	5.452E-01	7.937E-02	-0.590
PM-144		476.78		-4.428E-03	1.512E-01	2.475E-01	1.714E-02	-0.018
		618.01		1.864E-02	6.077E-02	1.006E-01	6.357E-03	0.185
		696.49	*	-7.682E-05	6.566E-02	1.061E-01	6.792E-03	-0.001
		778.57		-4.836E+00	4.855E+00	7.214E+00	5.446E-01	-0.670
PR-144		696.49	*	-5.185E-03	4.432E+00	7.158E+00	4.583E-01	-0.001
		1489.15		9.965E+00	1.490E+01	2.728E+01	1.884E+00	0.365
PM-146		453.90	*	-4.574E-02	1.022E-01	1.643E-01	1.406E-02	-0.278
		633.02		1.541E+00	2.713E+00	4.473E+00	1.648E+00	0.345
		735.90		1.725E-03	2.862E-01	4.615E-01	1.299E-01	0.004
		747.13		-8.656E-02	1.802E-01	2.791E-01	3.672E-02	-0.310
ND-147	+	91.11		3.334E-01	3.195E-01	4.592E-01	4.220E-02	0.726
		319.41		-7.821E-01	3.936E+00	6.481E+00	3.760E-01	-0.121
		439.89		-2.845E+00	7.490E+00	1.207E+01	6.827E-01	-0.236
		531.02	*	4.335E-02	6.831E-01	1.120E+00	1.520E-01	0.039

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PM-149		285.90	*	1.455E+01	1.590E+01	2.728E+01	3.865E+00	0.533
EU-152	+	121.78		7.503E-01	2.483E-01	2.692E-01	2.329E-02	2.787
		244.69		4.200E-02	6.742E-01	9.851E-01	5.674E-02	0.043
		344.27	*	-1.668E-01	2.281E-01	3.124E-01	2.021E-02	-0.534
		443.98		-5.203E-01	2.059E+00	3.341E+00	1.895E-01	-0.156
		778.89		-1.958E-01	5.498E-01	8.604E-01	6.499E-02	-0.228
		867.32		1.984E-01	1.827E+00	3.081E+00	2.740E-01	0.064
		964.01		3.327E-01	7.979E-01	1.183E+00	1.031E-01	0.281
		1085.78		-5.017E-01	8.475E-01	1.343E+00	9.474E-02	-0.374
		1112.02		2.116E-01	6.282E-01	1.066E+00	7.060E-02	0.198
		1407.95		4.793E-02	2.529E-01	4.260E-01	3.002E-02	0.113
GD-153		69.67		6.798E-01	2.707E+00	3.897E+00	2.786E-01	0.174
		83.37		-1.499E+00	3.052E+01	4.010E+01	3.316E+00	-0.037
		97.43	*	-6.336E-02	1.385E-01	1.907E-01	1.530E-02	-0.332
		103.18		-4.450E-02	1.652E-01	2.641E-01	2.038E-02	-0.168
EU-154	+	123.07		5.264E-01	1.766E-01	1.862E-01	1.905E-02	2.828
		247.94		-2.559E-01	6.993E-01	1.086E+00	1.034E-01	-0.236
		591.81		-1.663E-01	1.255E+00	2.024E+00	2.000E-01	-0.082
		723.30		-1.759E-01	3.895E-01	5.156E-01	4.069E-02	-0.341
		756.87		6.231E-02	1.474E+00	2.381E+00	2.624E-01	0.026
		873.19		-4.911E-01	6.823E-01	1.086E+00	1.358E-01	-0.452
		996.32		-3.410E-01	8.389E-01	1.356E+00	2.390E-01	-0.251
		1004.76		4.686E-02	4.838E-01	8.101E-01	9.196E-02	0.058
		1274.45	*	-5.246E-02	1.374E-01	2.127E-01	2.086E-02	-0.247
EU-155		48.70		1.663E+00	4.116E+00	6.799E+00	4.357E-01	0.245
	+	60.01		4.878E+02	3.973E+01	3.583E+01	2.382E+00	13.612
		86.54		3.580E+00	4.084E-01	5.026E-01	4.362E-02	7.122
		105.31	*	-7.851E-02	1.743E-01	2.764E-01	2.139E-02	-0.284
TB-160	+	86.79		1.095E+01	1.301E+00	1.293E+00	1.114E-01	8.465
		197.04		-9.016E-01	8.827E-01	1.428E+00	7.917E-02	-0.631
		215.65		3.305E-01	1.347E+00	1.996E+00	1.126E-01	0.166
		298.57		6.120E-02	2.102E-01	3.094E-01	1.804E-02	0.198
		879.36	*	1.273E-01	3.088E-01	5.290E-01	4.804E-02	0.241
		962.29		-4.133E-01	1.401E+00	1.974E+00	1.725E-01	-0.209
		966.15		5.443E-01	5.111E-01	7.912E-01	6.880E-02	0.688
		1177.93		4.062E+00	9.390E-01	1.753E+00	9.736E-02	2.317
		1271.85		-5.582E-01	7.724E-01	1.130E+00	7.334E-02	-0.494
HO-166M		80.57		-3.752E-01	5.539E-01	7.060E-01	5.650E-02	-0.531
	+	184.41		8.746E-02	9.100E-02	9.994E-02	5.466E-03	0.875
		280.46		-1.232E-01	1.535E-01	2.468E-01	1.439E-02	-0.499
		410.95		1.099E-01	4.735E-01	7.892E-01	4.366E-02	0.139
		711.68	*	-3.173E-02	1.253E-01	1.987E-01	1.313E-02	-0.160
		752.31		2.605E-01	4.983E-01	8.349E-01	5.988E-02	0.312
		810.29		1.043E-01	1.254E-01	2.128E-01	1.706E-02	0.490
TM-171		51.35		4.159E+01	5.734E+01	9.522E+01	6.174E+00	0.437
		52.39		-4.793E+00	3.289E+01	4.953E+01	3.221E+00	-0.097
	+	59.40		2.554E+03	2.080E+02	1.950E+02	1.292E+01	13.095
		66.72	*	-8.754E+00	4.126E+01	6.671E+01	4.651E+00	-0.131
LU-176	+	88.36		8.676E+00	1.031E+00	1.032E+00	8.991E-02	8.407

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		201.83		2.195E-02	4.773E-02	8.159E-02	4.543E-03	0.269
		306.84	*	-3.385E-02	4.610E-02	7.407E-02	4.314E-03	-0.457
		401.10		8.335E+00	1.372E+01	2.325E+01	1.275E+00	0.359
LU-177		112.95		-1.393E+00	1.212E+00	1.854E+00	1.362E-01	-0.751
	+	208.36	*	1.578E+00	1.233E+00	1.506E+00	8.437E-02	1.048
LU-177M		52.97		-2.080E-01	3.544E+00	5.064E+00	3.298E-01	-0.041
		54.07		1.613E+00	1.889E+00	2.771E+00	1.809E-01	0.582
		61.30		1.037E+02	8.176E+00	9.014E+00	6.042E-01	11.506
	+	121.62		3.729E+00	1.220E+00	1.342E+00	9.545E-02	2.778
		147.16		-1.020E-01	1.032E+00	1.648E+00	1.005E-01	-0.062
		171.86		4.056E-01	7.873E-01	1.285E+00	6.932E-02	0.316
		218.09		7.647E-02	1.411E+00	2.374E+00	1.342E-01	0.032
		268.79		-1.326E-01	1.350E+00	2.245E+00	1.306E-01	-0.059
		319.02		4.318E-02	4.662E-01	7.776E-01	4.512E-02	0.056
		367.43		6.684E-01	1.688E+00	2.845E+00	1.595E-01	0.235
		413.65	*	-1.531E-01	3.473E-01	5.596E-01	3.103E-02	-0.274
HF-181		56.28		3.971E+00	2.074E+00	3.106E+00	2.038E-01	1.278
		57.53		2.281E+01	1.964E+00	2.604E+00	1.715E-01	8.757
		65.20		-1.245E-01	1.380E+00	1.963E+00	1.353E-01	-0.063
		133.02		-1.011E-01	1.016E-01	1.565E-01	1.040E-02	-0.646
		136.25		7.856E-01	6.993E-01	1.169E+00	7.616E-02	0.672
		345.85		-1.451E-01	3.945E-01	5.538E-01	3.165E-02	-0.262
		482.03	*	-1.426E-02	7.675E-02	1.245E-01	7.218E-03	-0.115
W-181		56.28		1.689E+00	8.797E-01	1.318E+00	8.647E-02	1.282
		57.53		9.654E+00	8.318E-01	1.104E+00	7.271E-02	8.742
		65.20	*	-5.240E-02	5.812E-01	8.267E-01	5.696E-02	-0.063
TA-182		67.75		-9.837E-02	1.567E-01	2.499E-01	1.757E-02	-0.394
		100.10		9.803E-03	2.930E-01	4.382E-01	3.448E-02	0.022
		152.43		-8.468E-03	5.354E-01	8.569E-01	5.051E-02	-0.010
		222.10		-1.583E-01	5.652E-01	9.381E-01	5.321E-02	-0.169
		1001.68		3.928E+00	4.364E+00	7.671E+00	6.340E-01	0.512
		1121.28		5.572E-01	2.646E-01	4.962E-01	3.206E-02	1.123
		1189.05		-1.288E-01	4.474E-01	7.178E-01	4.064E-02	-0.179
		1221.42	*	9.811E-03	2.385E-01	3.951E-01	2.363E-02	0.025
		1230.97		-4.476E-02	5.223E-01	8.592E-01	5.221E-02	-0.052
RE-183		57.98		1.464E+01	1.135E+00	1.269E+00	8.364E-02	11.539
	+	59.32		9.784E+00	7.970E-01	7.509E-01	4.973E-02	13.030
		67.20		-1.147E-01	2.726E-01	4.376E-01	3.063E-02	-0.262
		162.32	*	-7.284E-02	1.759E-01	2.764E-01	1.522E-02	-0.264
	+	208.81		2.869E+00	2.241E+00	2.739E+00	1.535E-01	1.048
		291.72		1.101E-02	1.769E+00	2.561E+00	1.494E-01	0.004
RE-184		57.98		5.635E+01	4.367E+00	4.883E+00	3.220E-01	11.539
	+	59.32		3.763E+01	3.066E+00	2.888E+00	1.913E-01	13.030
		67.20		-4.416E-01	1.049E+00	1.684E+00	1.179E-01	-0.262
		161.27		-3.113E-01	5.816E-01	9.086E-01	5.042E-02	-0.343
		216.55		3.486E-01	4.608E-01	7.548E-01	4.261E-02	0.462
		252.85	*	3.614E-02	4.077E-01	6.843E-01	3.958E-02	0.053
		318.01		8.089E-02	8.122E-01	1.355E+00	7.867E-02	0.060
		792.07		1.450E+00	2.070E+00	3.476E+00	2.692E-01	0.417

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		903.28		-8.664E-01	2.448E+00	3.815E+00	3.561E-01	-0.227
		920.93		1.837E-01	1.068E+00	1.725E+00	1.582E-01	0.107
OS-185	+	59.72		2.720E+01	2.216E+00	2.035E+00	1.351E-01	13.365
		61.14		1.232E+01	9.541E-01	1.012E+00	6.775E-02	12.178
		69.30		-2.179E-01	4.786E-01	6.676E-01	4.758E-02	-0.326
		592.07		-1.497E+00	4.916E+00	7.839E+00	4.688E-01	-0.191
		646.12	*	-2.314E-02	8.017E-02	1.273E-01	7.591E-03	-0.182
		717.42		3.147E-01	1.701E+00	2.780E+00	1.858E-01	0.113
		874.81		-8.420E-01	1.291E+00	2.071E+00	1.866E-01	-0.406
		880.27		1.578E+00	1.734E+00	3.046E+00	2.771E-01	0.518
RE-188		155.03	*	-4.947E-02	2.673E-01	4.246E-01	2.460E-02	-0.117
		477.96		-1.748E+00	6.259E+00	1.011E+01	5.852E-01	-0.173
		633.10		2.791E+00	4.981E+00	8.384E+00	5.008E-01	0.333
W-188		63.58		-3.845E+01	8.024E+01	1.129E+02	7.689E+00	-0.340
		227.08		2.332E+01	2.089E+01	3.614E+01	2.058E+00	0.645
		290.67	*	-1.441E+01	1.432E+01	1.937E+01	1.130E+00	-0.744
IR-192	+	295.96		1.025E+00	2.958E-01	3.768E-01	2.232E-02	2.721
		308.46		-9.621E-02	1.640E-01	2.652E-01	1.562E-02	-0.363
		316.51	*	-3.114E-02	6.086E-02	9.875E-02	5.764E-03	-0.315
		468.07		-7.714E-02	1.457E-01	2.330E-01	1.549E-02	-0.331
		604.41		6.981E-01	8.919E-01	1.336E+00	1.529E-01	0.522
		612.46		2.083E+00	1.622E+00	2.491E+00	1.921E-01	0.837
AU-195		65.12		-1.834E-02	2.733E-01	3.891E-01	2.679E-02	-0.047
		66.83		-2.924E-02	1.336E-01	2.159E-01	1.507E-02	-0.135
	+	75.70		8.763E-01	3.788E-01	5.934E-01	4.501E-02	1.477
		98.88	*	2.496E-01	3.917E-01	5.715E-01	4.535E-02	0.437
		129.76		1.864E+00	4.537E+00	7.409E+00	5.020E-01	0.252
TL-200		367.94	*	4.311E+00	7.118E+00	1.211E+01	6.786E-01	0.356
		579.30		6.374E+01	6.199E+01	9.496E+01	5.672E+00	0.671
		828.27		6.773E+01	8.456E+01	1.486E+02	1.232E+01	0.456
		1205.75		-1.097E+01	2.738E+01	4.318E+01	2.516E+00	-0.254
TL-201		68.90		-8.683E-01	1.467E+00	2.033E+00	1.444E-01	-0.427
		70.82		-3.913E-01	8.427E-01	1.175E+00	8.491E-02	-0.333
		80.30		-7.838E-01	1.699E+00	2.364E+00	1.886E-01	-0.332
		135.34		8.612E+00	7.736E+00	1.293E+01	8.475E-01	0.666
		167.43	*	8.737E-01	2.167E+00	3.520E+00	1.891E-01	0.248
TL-202		68.90		-2.836E-01	4.791E-01	6.641E-01	4.717E-02	-0.427
		70.82		-1.274E-01	2.745E-01	3.827E-01	2.766E-02	-0.333
		80.30		-2.554E-01	5.535E-01	7.701E-01	6.144E-02	-0.332
		439.56	*	-3.675E-02	9.314E-02	1.500E-01	8.480E-03	-0.245
HG-203		70.83		-7.537E-01	1.632E+00	2.273E+00	2.903E-01	-0.332
		72.87		2.352E+00	1.011E+00	1.507E+00	1.872E-01	1.560
		82.60		7.544E-01	2.624E+00	2.726E+00	3.675E-01	0.277
		279.20	*	-1.082E-02	6.505E-02	1.077E-01	6.664E-03	-0.100
BI-207		72.80		7.324E-01	3.214E-01	4.914E-01	3.619E-02	1.490
	+	74.97		4.999E-01	2.161E-01	3.215E-01	2.420E-02	1.555
		84.90		3.849E-01	3.740E-01	5.487E-01	4.621E-02	0.702
		569.67		1.551E-01	6.850E-02	1.240E-01	7.401E-03	1.250
		1063.62	*	2.467E-02	1.099E-01	1.855E-01	1.373E-02	0.133

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1770.23		1.778E-01	6.608E-01	1.002E+00	5.987E-02	0.177
TL-207		81.07		-1.412E-01	4.853E-01	5.684E-01	4.575E-02	-0.248
		83.78		4.002E-02	2.450E-01	3.491E-01	2.901E-02	0.115
		94.90		2.979E-01	3.878E-01	5.691E-01	4.657E-02	0.523
	+	122.32		1.789E+01	5.883E+00	6.380E+00	5.007E-01	2.804
		144.24		-1.337E-01	1.124E+00	1.793E+00	1.357E-01	-0.075
		154.21		7.045E-02	6.562E-01	1.055E+00	7.424E-02	0.067
		269.46		4.477E-02	3.233E-01	5.427E-01	3.300E-02	0.082
		323.87	*	-1.549E+00	1.307E+00	2.015E+00	3.327E-01	-0.769
	+	338.28		3.721E+00	2.535E+00	3.443E+00	3.616E-01	1.081
		445.03		-3.630E-01	5.023E+00	8.224E+00	8.389E-01	-0.044
PO-209		260.50		-1.084E+01	1.712E+01	2.782E+01	1.615E+00	-0.390
		262.80		3.407E+01	4.803E+01	8.248E+01	4.790E+00	0.413
		896.60	*	-1.084E+00	1.831E+01	3.051E+01	2.856E+00	-0.036
BI-210		46.50	*	-4.538E+00	5.280E+00	8.494E+00	6.298E-01	-0.534
PB-210		46.50	*	-4.538E+00	5.280E+00	8.494E+00	6.298E-01	-0.534
PO-210		46.50	*	-4.538E+00	5.277E+00	8.494E+00	5.329E-01	-0.534
PB-211		404.84	*	-8.993E-01	1.967E+00	3.036E+00	1.892E+00	-0.296
		427.08		-3.373E-03	4.343E+00	7.147E+00	4.416E+00	0.000
		831.96		1.130E-01	2.587E+00	4.351E+00	2.725E+00	0.026
BI-212		727.18	*	7.327E-01	5.887E-01	1.021E+00	8.687E-02	0.718
		785.46		-2.671E+00	3.603E+00	5.462E+00	4.178E-01	-0.489
		1620.62		4.220E-01	1.773E+00	3.009E+00	1.971E-01	0.140
PO-215		81.07		-1.412E-01	4.853E-01	5.684E-01	4.575E-02	-0.248
		83.78		4.002E-02	2.450E-01	3.491E-01	2.901E-02	0.115
		94.90		2.979E-01	3.878E-01	5.691E-01	4.657E-02	0.523
	+	122.32		1.789E+01	5.883E+00	6.380E+00	5.007E-01	2.804
		144.24		-1.337E-01	1.124E+00	1.793E+00	1.357E-01	-0.075
		154.21		7.045E-02	6.562E-01	1.055E+00	7.424E-02	0.067
		269.46		4.477E-02	3.233E-01	5.427E-01	3.300E-02	0.082
		323.87	*	-1.549E+00	1.307E+00	2.015E+00	3.327E-01	-0.769
	+	338.28		3.721E+00	2.535E+00	3.443E+00	3.616E-01	1.081
		445.03		-3.630E-01	5.023E+00	8.224E+00	8.389E-01	-0.044
RN-219		271.23		8.091E-03	4.140E-01	6.916E-01	5.616E-02	0.012
		401.81	*	6.498E-01	8.426E-01	1.432E+00	1.930E-01	0.454
RN-220		549.76	*	2.508E-01	5.279E+01	8.610E+01	5.118E+00	0.003
RA-223		81.07		-1.412E-01	4.853E-01	5.684E-01	4.575E-02	-0.248
		83.78		4.002E-02	2.450E-01	3.491E-01	2.901E-02	0.115
		94.90		2.979E-01	3.878E-01	5.691E-01	4.657E-02	0.523
	+	122.32		1.789E+01	5.883E+00	6.380E+00	5.007E-01	2.804
		144.24		-1.337E-01	1.124E+00	1.793E+00	1.357E-01	-0.075
		154.21		7.045E-02	6.562E-01	1.055E+00	7.424E-02	0.067
		269.46		4.477E-02	3.233E-01	5.427E-01	3.300E-02	0.082
		323.87	*	-1.549E+00	1.307E+00	2.015E+00	3.327E-01	-0.769
	+	338.28		3.721E+00	2.535E+00	3.443E+00	3.616E-01	1.081
		445.03		-3.630E-01	5.023E+00	8.224E+00	8.389E-01	-0.044
AC-227		79.80		1.583E+00	3.126E+00	4.504E+00	9.566E-01	0.351
		236.00		1.897E+00	5.275E-01	8.363E-01	8.709E-02	2.269
		256.20	*	1.022E-02	6.759E-01	1.131E+00	1.578E-01	0.009

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		286.10		2.291E+00	2.817E+00	4.833E+00	5.596E-01	0.474
		299.80		1.050E+00	2.845E+00	4.201E+00	6.846E-01	0.250
		304.40		-1.040E+00	3.359E+00	5.502E+00	9.522E-01	-0.189
		334.20		1.875E-01	4.871E+00	7.031E+00	1.288E+00	0.027
TH-227		79.80		1.583E+00	3.127E+00	4.504E+00	9.691E-01	0.351
	+	94.00		4.123E+00	4.033E+00	4.892E+00	1.058E+00	0.843
		236.00		1.897E+00	5.181E-01	8.363E-01	7.537E-02	2.269
		256.20	*	1.022E-02	6.759E-01	1.131E+00	1.910E-01	0.009
		286.10		2.291E+00	3.623E+00	4.833E+00	4.842E+00	0.474
		299.80		1.050E+00	2.845E+00	4.201E+00	6.846E-01	0.250
		304.40		-1.040E+00	3.359E+00	5.502E+00	9.522E-01	-0.189
		334.20		1.875E-01	4.871E+00	7.031E+00	1.288E+00	0.027
TH-229		85.43		1.527E+00	4.071E-01	6.228E-01	5.279E-02	2.452
	+	88.47		4.994E+00	5.936E-01	5.934E-01	5.164E-02	8.417
		100.00		3.044E-02	3.190E-01	4.784E-01	3.767E-02	0.064
		193.63	*	4.761E-01	9.013E-01	1.508E+00	8.326E-02	0.316
		210.97		1.895E+00	1.475E+00	2.293E+00	1.288E-01	0.826
PA-231		283.67	*	1.329E+00	2.795E+00	4.742E+00	6.541E-01	0.280
		301.29		1.052E+00	1.126E+00	1.716E+00	1.796E-01	0.613
TH-231		81.07		-1.412E-01	4.853E-01	5.684E-01	4.575E-02	-0.248
		83.78		4.002E-02	2.450E-01	3.491E-01	2.901E-02	0.115
		94.90		2.979E-01	3.878E-01	5.691E-01	4.657E-02	0.523
	+	122.32		1.789E+01	5.883E+00	6.380E+00	5.007E-01	2.804
		144.24		-1.337E-01	1.124E+00	1.793E+00	1.357E-01	-0.075
		154.21		7.045E-02	6.562E-01	1.055E+00	7.424E-02	0.067
		269.46		4.477E-02	3.233E-01	5.427E-01	3.300E-02	0.082
		323.87	*	-1.549E+00	1.307E+00	2.015E+00	3.327E-01	-0.769
	+	338.28		3.721E+00	2.535E+00	3.443E+00	3.616E-01	1.081
		445.03		-3.630E-01	5.023E+00	8.224E+00	8.389E-01	-0.044
U-231		84.21		7.321E-01	3.041E+00	4.345E+00	3.629E-01	0.168
	+	92.29		1.173E+00	1.123E+00	1.508E+00	1.263E-01	0.778
		95.87	*	7.619E-02	5.280E-01	7.522E-01	6.107E-02	0.101
		108.00		5.240E-01	9.549E-01	1.573E+00	1.182E-01	0.333
PA-233	+	75.28		1.459E+01	6.576E+00	9.655E+00	1.427E+00	1.512
		86.59		5.952E+01	1.654E+01	8.248E+00	2.212E+00	7.216
		300.12		4.239E-01	7.840E-01	1.169E+00	1.573E-01	0.363
		311.98	*	6.909E-02	1.194E-01	2.035E-01	1.256E-02	0.340
		340.50		1.713E+00	1.396E+00	2.074E+00	4.759E-01	0.826
		398.62		-4.804E-01	4.312E+00	7.071E+00	1.823E+00	-0.068
		415.76		6.929E-01	3.414E+00	5.673E+00	1.164E+00	0.122
PA-234		63.00		3.243E-01	2.557E+00	3.696E+00	5.380E-01	0.088
		94.67		1.835E-01	2.830E-01	4.121E-01	4.992E-02	0.445
		98.44		5.282E-02	1.681E-01	2.378E-01	1.324E-01	0.222
		99.86		1.608E-01	8.088E-01	1.219E+00	9.605E-02	0.132
		111.00		-5.524E-03	3.010E-01	4.852E-01	5.461E-02	-0.011
		131.20		4.703E-02	1.762E-01	2.862E-01	1.922E-02	0.164
		152.70		1.321E-02	5.404E-01	8.663E-01	1.372E-01	0.015
	+	186.00		3.148E+00	3.409E+00	3.693E+00	1.126E+00	0.853
		226.40		8.048E-01	7.186E-01	1.235E+00	1.421E-01	0.651

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		227.20		8.458E-01	7.608E-01	1.316E+00	7.492E-02	0.643
		248.90		1.730E-01	1.510E+00	2.537E+00	5.450E-01	0.068
	+	293.70		6.927E+00	2.251E+00	2.509E+00	4.038E-01	2.761
		369.80		2.381E-01	1.627E+00	2.708E+00	5.623E-01	0.088
		568.70		3.733E+00	2.233E+00	3.950E+00	2.356E-01	0.945
		569.50		1.388E+00	6.087E-01	1.103E+00	6.580E-02	1.258
		574.00		-7.346E+00	3.257E+00	4.521E+00	2.699E-01	-1.625
		699.00		5.017E-01	1.378E+00	2.277E+00	4.144E-01	0.220
		706.10		1.083E+00	2.061E+00	3.358E+00	1.486E+00	0.322
		733.00		-1.917E-01	8.291E-01	1.121E+00	2.420E-01	-0.171
		742.81		1.747E+00	2.986E+00	4.626E+00	3.101E+00	0.378
		796.30		9.740E-01	1.975E+00	3.249E+00	8.708E-01	0.300
		805.60		-5.804E-01	2.064E+00	3.229E+00	9.838E-01	-0.180
		819.60		1.226E+00	2.409E+00	4.111E+00	1.559E+00	0.298
		826.30		-3.304E-01	1.716E+00	2.834E+00	1.266E+00	-0.117
		831.60		-2.349E-01	1.357E+00	2.250E+00	6.697E-01	-0.104
		876.40		-4.669E-01	1.992E+00	3.189E+00	3.279E+00	-0.146
		880.51		6.543E-01	6.665E-01	1.174E+00	1.069E-01	0.557
		883.24		-3.819E-01	7.448E-01	1.132E+00	7.620E-01	-0.337
		899.00		2.721E+00	2.370E+00	3.676E+00	1.612E+00	0.740
		925.00		-1.134E+00	2.812E+00	4.578E+00	4.180E-01	-0.248
		926.50		-4.286E-02	4.279E-01	7.101E-01	1.807E-01	-0.060
		946.00	*	-1.151E-01	7.549E-01	1.248E+00	2.359E-01	-0.092
		949.00		-8.466E-01	1.191E+00	1.904E+00	1.692E-01	-0.445
		980.50		7.467E-01	1.718E+00	2.938E+00	2.506E-01	0.254
		1394.10		-2.573E-01	1.318E+00	2.058E+00	1.336E+00	-0.125
PA-234M		766.42		2.293E+00	2.186E+01	3.538E+01	1.788E+01	0.065
		1001.03	*	7.833E+00	1.031E+01	1.797E+01	1.738E+00	0.436
TH-234		63.29	*	-3.806E-01	2.157E+00	3.077E+00	5.289E-01	-0.124
	+	92.38		1.067E+00	1.036E+00	1.361E+00	2.445E-01	0.784
U-235		89.95		3.603E+01	1.151E+01	5.045E+00	1.556E+00	7.141
	+	93.35		1.283E+00	1.275E+00	1.546E+00	4.317E-01	0.830
		105.00		-4.894E-01	1.722E+00	2.740E+00	8.103E-01	-0.179
		143.76	*	-4.962E-02	3.461E-01	5.516E-01	9.080E-02	-0.090
		163.35		-4.152E-02	7.980E-01	1.273E+00	2.276E-01	-0.033
	+	185.71		1.166E-01	1.213E-01	1.362E-01	7.460E-03	0.856
		205.31		-6.633E-01	9.850E-01	1.379E+00	2.471E-01	-0.481
NP-236		94.67		1.400E-01	2.143E-01	3.127E-01	2.563E-02	0.448
		98.44		3.989E-02	1.251E-01	1.797E-01	1.431E-02	0.222
		111.00		-4.179E-03	2.277E-01	3.670E-01	2.718E-02	-0.011
		160.31	*	-3.788E-02	1.356E-01	2.144E-01	1.198E-02	-0.177
NP-237		86.50	*	8.613E+00	2.031E+00	1.222E+00	2.732E-01	7.047
		95.87		2.334E-01	1.618E+00	2.304E+00	5.637E-01	0.101
U-238		63.29	*	-3.806E-01	2.157E+00	3.077E+00	5.289E-01	-0.124
	+	92.38		1.067E+00	1.022E+00	1.361E+00	1.139E-01	0.784
NP-239		99.55		9.389E-02	2.846E-01	4.089E-01	3.230E-02	0.230
		117.00	*	2.140E-01	3.497E-01	5.085E-01	3.675E-02	0.421
	+	209.75		2.439E+00	1.905E+00	2.339E+00	1.313E-01	1.043
		228.18		2.752E-01	4.019E-01	6.854E-01	3.906E-02	0.402

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		277.60		2.727E-01	3.152E-01	5.438E-01	3.170E-02	0.502
		334.30		1.654E-02	2.756E+00	3.970E+00	2.287E-01	0.004
CM-243		99.55		9.656E-02	2.927E-01	4.206E-01	3.322E-02	0.230
		103.76	*	-6.671E-02	1.581E-01	2.511E-01	1.930E-02	-0.266
		117.00		2.201E-01	3.596E-01	5.228E-01	3.778E-02	0.421
	+	209.75		2.403E+00	1.877E+00	2.305E+00	1.293E-01	1.043
		228.18		2.779E-01	4.059E-01	6.922E-01	3.945E-02	0.402
		277.60		2.748E-01	3.176E-01	5.480E-01	3.194E-02	0.502
AM-246		798.80		-1.284E-01	3.010E-01	4.684E-01	3.675E-02	-0.274
		1036.00		2.956E-02	6.862E-01	1.145E+00	8.939E-02	0.026
		1062.04		-2.571E-01	4.831E-01	7.701E-01	5.717E-02	-0.334
		1078.86	*	3.562E-01	3.173E-01	5.639E-01	4.040E-02	0.632
CM-247		278.00		8.883E-01	1.297E+00	2.223E+00	1.296E-01	0.400
		287.40		6.362E-01	2.321E+00	3.813E+00	2.225E-01	0.167
		402.60	*	4.913E-02	7.460E-02	1.268E-01	6.963E-03	0.388
CF-249		252.85		1.399E-01	1.578E+00	2.648E+00	1.532E-01	0.053
		333.44		-1.926E-01	3.794E-01	5.286E-01	3.046E-02	-0.364
		387.95	*	-6.945E-02	7.920E-02	1.250E-01	6.832E-03	-0.556
CF-251		176.60	*	6.820E-02	2.099E-01	3.398E-01	1.843E-02	0.201
		227.00		7.569E-01	6.761E-01	1.170E+00	6.659E-02	0.647
		285.00		3.546E+00	3.184E+00	5.543E+00	3.234E-01	0.640

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration      : DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202018264    *
* Acquisition date : 26-JAN-2010 14:19:20 Detector SN#     :               *
* Detector ID        : GAM14                Sensitivity      : 5.000       *
* Geometry           : CAN                  Energy tolerance: 1.500        *
* Elapsed live time:     0 01:00:00.00      Abundance limit : 75.000       *
* Elapsed real time:     0 01:00:01.68      Half life ratio :  8.000       *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date        : 19-JAN-2010 00:00:00 Nuclide Library : SOLID        *
* Sample ID          : G1202018264          Analyst initials: MXR1         *
* Batch Number       : 942718               Sample Quantity : 1.5173E+02 GRAM *
* Recovery           :    1.00000           Carrier Weight :    0.00000    *
*****************************************************************************
*                                                                           *
*                                 QC DATA                                   *
* Standard Weight  :   0.00000                                              *
* CALIB. DATE/TIME :  6-MAR-2009 11:43:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope      :                *
* LCS DPM          :    0.000             LCS Isotope      :                *
* LCSD DPM         :    0.000             LCSD Isotope     :                *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
CO-57	2.538E-01	8.140E-02	7.144E-02	0.000E+00
CO-60	6.747E+00	5.746E-01	9.287E-02	0.000E+00
CD-109	3.680E+01	4.286E+00	2.410E+00	0.000E+00
SN-126	3.658E+00	4.261E-01	2.404E-01	0.000E+00
BA-137M	5.640E+00	4.172E-01	1.214E-01	0.000E+00
CS-137	5.962E+00	4.421E-01	1.283E-01	0.000E+00
TL-208	4.576E-01	1.039E-01	1.252E-01	0.000E+00
BI-211	2.551E+00	6.932E-01	7.120E-01	0.000E+00
PB-212	1.540E+00	1.959E-01	1.699E-01	0.000E+00
PO-212	1.540E+00	1.959E-01	1.699E-01	0.000E+00
BI-214	9.674E-01	2.298E-01	2.287E-01	0.000E+00
PB-214	8.872E-01	2.454E-01	2.302E-01	0.000E+00
PO-214	8.872E-01	2.454E-01	2.302E-01	0.000E+00
PO-216	1.540E+00	1.959E-01	1.699E-01	0.000E+00
PO-218	8.872E-01	2.454E-01	2.302E-01	0.000E+00
RA-224	2.872E+00	1.559E+00	1.932E+00	0.000E+00
RA-226	9.674E-01	2.298E-01	2.287E-01	0.000E+00
AC-228	1.334E+00	6.347E-01	5.363E-01	0.000E+00
RA-228	1.334E+00	6.347E-01	5.363E-01	0.000E+00
TH-228	1.552E+00	1.974E-01	1.712E-01	0.000E+00
TH-230	9.674E-01	2.298E-01	2.287E-01	0.000E+00
TH-232	1.334E+00	6.347E-01	5.363E-01	0.000E+00
U-234	9.674E-01	2.298E-01	2.287E-01	0.000E+00
AM-241	1.504E+01	1.298E+00	4.982E-01	0.000E+00
AM-243	2.786E-01	1.181E-01	1.536E-01	0.000E+00
ANH-511	1.123E-01	9.520E-02	9.954E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)		
BE-7	-9.398E-02		6.283E-01	1.082E+00	0.000E+00	NOT IDENT.

NA-22	-1.541E-02	4.848E-02	7.842E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.242E+02	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-2.272E-03	4.801E-02	7.983E-02	0.000E+00	NOT IDENT.
K-40	1.207E+00	6.346E-01	1.211E+00	0.000E+00	NOT IDENT.
TI-44	0.000E+00	7.585E-02	1.205E-01	0.000E+00	FAIL ABUN
SC-46	7.722E-02	8.730E-02	1.592E-01	0.000E+00	NOT IDENT.
V-48	5.451E-02	1.158E-01	2.060E-01	0.000E+00	NOT IDENT.
CR-51	1.311E-01	5.645E-01	1.012E+00	0.000E+00	NOT IDENT.
MN-52	-3.229E-02	1.146E-01	1.829E-01	0.000E+00	FAIL ABUN
MN-54	-4.293E-02	7.948E-02	1.347E-01	0.000E+00	NOT IDENT.
CO-56	2.952E-02	8.118E-02	1.449E-01	0.000E+00	FAIL ABUN
CO-58	4.431E-02	7.521E-02	1.312E-01	0.000E+00	NOT IDENT.
FE-59	-5.802E-02	1.773E-01	2.975E-01	0.000E+00	NOT IDENT.
ZN-65	-2.913E-01	1.807E-01	2.723E-01	0.000E+00	NOT IDENT.
GE-68	2.069E+00	2.675E+00	4.826E+00	0.000E+00	NOT IDENT.
AS-73	-1.481E-01	1.750E+00	2.785E+00	0.000E+00	NOT IDENT.
AS-74	1.435E-01	1.342E-01	2.437E-01	0.000E+00	NOT IDENT.
SE-75	3.000E-03	7.493E-02	1.346E-01	0.000E+00	FAIL ABUN
BR-77	-5.841E-02	2.291E+00	3.946E+00	0.000E+00	FAIL ABUN
SR-82	-2.924E-01	6.400E-01	1.040E+00	0.000E+00	NOT IDENT.
RB-83	-6.885E-03	1.283E-01	2.207E-01	0.000E+00	NOT IDENT.
RB-84	7.457E-02	1.414E-01	2.536E-01	0.000E+00	NOT IDENT.
KR-85	1.708E+01	1.590E+01	2.557E+01	0.000E+00	NOT IDENT.
SR-85	8.092E-02	7.529E-02	1.211E-01	0.000E+00	NOT IDENT.
RB-86	8.625E-01	1.326E+00	2.373E+00	0.000E+00	NOT IDENT.
Y-88	-3.257E-03	4.844E-02	7.872E-02	0.000E+00	NOT IDENT.
ZR-88	2.494E-02	5.524E-02	9.900E-02	0.000E+00	NOT IDENT.
Y-91	-1.958E+01	2.279E+01	3.512E+01	0.000E+00	NOT IDENT.
NB-94	4.771E-03	6.337E-02	1.078E-01	0.000E+00	NOT IDENT.
NB-95	-2.484E-02	7.341E-02	1.204E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	2.265E-01	3.893E-01	0.000E+00	NOT IDENT.
ZR-95	-1.198E-03	1.221E-01	2.054E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.450E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.244E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.219E+00	3.501E+00	5.749E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	5.722E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-6.772E-02	5.508E-02	9.500E-02	0.000E+00	NOT IDENT.
RH-102	3.551E-02	6.523E-02	1.160E-01	0.000E+00	NOT IDENT.
RU-103	1.555E-02	7.055E-02	1.235E-01	0.000E+00	FAIL ABUN
RH-106	-5.267E-01	5.874E-01	9.333E-01	0.000E+00	FAIL ABUN
RU-106	-5.267E-01	5.850E-01	9.333E-01	0.000E+00	FAIL ABUN
AG-108M	4.529E-02	6.662E-02	1.200E-01	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	7.930E-02	1.329E-01	0.000E+00	NOT IDENT.
IN-111	-5.260E-02	3.379E-01	5.247E-01	0.000E+00	NOT IDENT.
IN-113M	-3.868E-02	8.007E-02	1.371E-01	0.000E+00	NOT IDENT.
SN-113	-3.868E-02	8.007E-02	1.371E-01	0.000E+00	NOT IDENT.
IN-114M	-1.451E-01	3.285E-01	5.107E-01	0.000E+00	NOT IDENT.
CD-115	6.831E-01	1.993E+00	3.505E+00	0.000E+00	NOT IDENT.
SN-117M	4.564E-03	6.202E-02	1.082E-01	0.000E+00	NOT IDENT.
SB-122	-4.121E-01	5.964E-01	9.808E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	6.673E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.210E-02	4.450E-02	7.825E-02	0.000E+00	NOT IDENT.
I-124	-1.111E-01	4.072E-01	6.166E-01	0.000E+00	FAIL ABUN
SB-124	5.368E-02	9.903E-02	1.819E-01	0.000E+00	NOT IDENT.
SB-125	-8.432E-02	1.910E-01	3.262E-01	0.000E+00	NOT IDENT.
TE-125M	5.476E+00	1.359E+01	2.440E+01	0.000E+00	NOT IDENT.
I-126	8.777E-02	2.713E-01	4.094E-01	0.000E+00	NOT IDENT.
SB-126	-9.462E-02	2.180E-01	3.035E-01	0.000E+00	FAIL ABUN
SB-127	-2.593E-02	6.769E-01	1.144E+00	0.000E+00	NOT IDENT.
XE-127	-3.351E-06	6.988E-02	1.200E-01	0.000E+00	NOT IDENT.
I-131	-2.253E-02	1.148E-01	2.004E-01	0.000E+00	NOT IDENT.
TE-132	1.697E-01	2.429E-01	4.450E-01	0.000E+00	NOT IDENT.
BA-133	-6.386E-03	8.799E-02	1.340E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.753E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	2.579E-02	9.871E-02	1.684E-01	0.000E+00	NOT IDENT.
CS-135	-3.632E-02	2.708E-01	4.826E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	3.310E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-5.548E-02	1.585E-01	2.665E-01	0.000E+00	NOT IDENT.
CE-139	3.881E-02	4.830E-02	8.646E-02	0.000E+00	NOT IDENT.
BA-140	-4.403E-02	3.164E-01	5.395E-01	0.000E+00	NOT IDENT.
LA-140	1.299E-02	8.367E-02	1.431E-01	0.000E+00	NOT IDENT.
CE-141	4.185E-02	8.501E-02	1.514E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	7.383E+00	1.124E+01	0.000E+00	FAIL ABUN
CE-144	-3.219E-01	3.480E-01	5.832E-01	0.000E+00	NOT IDENT.
PM-144	-7.682E-05	6.435E-02	1.089E-01	0.000E+00	NOT IDENT.
PR-144	-5.185E-03	4.343E+00	7.352E+00	0.000E+00	NOT IDENT.
PM-146	-4.574E-02	1.002E-01	1.705E-01	0.000E+00	NOT IDENT.
ND-147	4.335E-02	6.695E-01	1.158E+00	0.000E+00	FAIL ABUN

PM-149	1.455E+01	1.558E+01	2.865E+01	0.000E+00	NOT IDENT.
EU-152	-1.668E-01	2.235E-01	3.266E-01	0.000E+00	FAIL ABUN
GD-153	-6.336E-02	1.357E-01	2.055E-01	0.000E+00	NOT IDENT.
EU-154	-5.246E-02	1.347E-01	2.151E-01	0.000E+00	FAIL ABUN
EU-155	-7.851E-02	1.708E-01	2.973E-01	0.000E+00	FAIL ABUN
TB-160	1.273E-01	3.026E-01	5.400E-01	0.000E+00	FAIL ABUN
HO-166M	-3.173E-02	1.228E-01	2.040E-01	0.000E+00	FAIL ABUN
TM-171	-8.754E+00	4.043E+01	7.251E+01	0.000E+00	FAIL ABUN
LU-176	-3.385E-02	4.518E-02	7.765E-02	0.000E+00	FAIL ABUN
LU-177	1.578E+00	1.208E+00	1.593E+00	0.000E+00	FAIL ABUN
LU-177M	-1.531E-01	3.403E-01	5.823E-01	0.000E+00	FAIL ABUN
HF-181	-1.426E-02	7.521E-02	1.290E-01	0.000E+00	NOT IDENT.
W-181	-5.240E-02	5.696E-01	8.991E-01	0.000E+00	NOT IDENT.
TA-182	9.811E-03	2.337E-01	3.999E-01	0.000E+00	NOT IDENT.
RE-183	-7.284E-02	1.724E-01	2.943E-01	0.000E+00	FAIL ABUN
RE-184	3.614E-02	3.996E-01	7.208E-01	0.000E+00	FAIL ABUN
OS-185	-2.314E-02	7.856E-02	1.310E-01	0.000E+00	FAIL ABUN
RE-188	-4.947E-02	2.619E-01	4.525E-01	0.000E+00	NOT IDENT.
W-188	-1.441E+01	1.403E+01	2.033E+01	0.000E+00	NOT IDENT.
IR-192	-3.114E-02	5.965E-02	1.035E-01	0.000E+00	FAIL ABUN
AU-195	2.496E-01	3.839E-01	6.156E-01	0.000E+00	FAIL ABUN
TL-200	4.311E+00	6.976E+00	1.264E+01	0.000E+00	NOT IDENT.
TL-201	8.737E-01	2.124E+00	3.745E+00	0.000E+00	NOT IDENT.
TL-202	-3.675E-02	9.128E-02	1.558E-01	0.000E+00	NOT IDENT.
HG-203	-1.082E-02	6.374E-02	1.132E-01	0.000E+00	NOT IDENT.
BI-207	2.467E-02	1.077E-01	1.885E-01	0.000E+00	FAIL ABUN
TL-207	-1.549E+00	1.281E+00	2.109E+00	0.000E+00	FAIL ABUN
PO-209	-1.084E+00	1.794E+01	3.114E+01	0.000E+00	NOT IDENT.
BI-210	-4.538E+00	5.174E+00	9.309E+00	0.000E+00	NOT IDENT.
PB-210	-4.538E+00	5.174E+00	9.309E+00	0.000E+00	NOT IDENT.
PO-210	-4.538E+00	5.171E+00	9.309E+00	0.000E+00	NOT IDENT.
PB-211	-8.993E-01	1.927E+00	3.162E+00	0.000E+00	NOT IDENT.
BI-212	7.327E-01	5.769E-01	1.048E+00	0.000E+00	NOT IDENT.
PO-215	-1.549E+00	1.281E+00	2.109E+00	0.000E+00	FAIL ABUN
RN-219	6.498E-01	8.258E-01	1.492E+00	0.000E+00	NOT IDENT.
RN-220	2.508E-01	5.173E+01	8.897E+01	0.000E+00	NOT IDENT.
RA-223	-1.549E+00	1.281E+00	2.109E+00	0.000E+00	FAIL ABUN
AC-227	1.022E-02	6.624E-01	1.191E+00	0.000E+00	NOT IDENT.
TH-227	1.022E-02	6.624E-01	1.191E+00	0.000E+00	FAIL ABUN
TH-229	4.761E-01	8.833E-01	1.598E+00	0.000E+00	FAIL ABUN
PA-231	1.329E+00	2.739E+00	4.981E+00	0.000E+00	NOT IDENT.
TH-231	-1.549E+00	1.281E+00	2.109E+00	0.000E+00	FAIL ABUN
U-231	7.619E-02	5.175E-01	8.109E-01	0.000E+00	FAIL ABUN
PA-233	6.909E-02	1.170E-01	2.133E-01	0.000E+00	FAIL ABUN
PA-234	-1.151E-01	7.398E-01	1.272E+00	0.000E+00	FAIL ABUN
PA-234M	7.833E+00	1.010E+01	1.829E+01	0.000E+00	NOT IDENT.
TH-234	-3.806E-01	2.114E+00	3.349E+00	0.000E+00	FAIL ABUN
U-235	-4.962E-02	3.392E-01	5.890E-01	0.000E+00	FAIL ABUN
NP-236	-3.788E-02	1.329E-01	2.283E-01	0.000E+00	NOT IDENT.
NP-237	0.000E+00	1.990E+00	1.321E+00	0.000E+00	NOT IDENT.
U-238	-3.806E-01	2.114E+00	3.349E+00	0.000E+00	FAIL ABUN
NP-239	2.140E-01	3.427E-01	5.456E-01	0.000E+00	FAIL ABUN
CM-243	-6.671E-02	1.549E-01	2.701E-01	0.000E+00	FAIL ABUN
AM-246	3.562E-01	3.110E-01	5.726E-01	0.000E+00	NOT IDENT.
CM-247	4.913E-02	7.311E-02	1.320E-01	0.000E+00	NOT IDENT.
CF-249	-6.945E-02	7.762E-02	1.303E-01	0.000E+00	NOT IDENT.
CF-251	6.820E-02	2.057E-01	3.610E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:19:49.03

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*****************************************************************************
*                              GEL Laboratories LLC                         *
*                                2040 Savage Road                           *
*                              Charleston, SC 29414                         *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202018264.CNF;1
Sample date       : 19-JAN-2010 00:00:00 Acquisition date : 26-JAN-2010 14:19:20
Sample ID         : G1202018264          Sample quantity  : 1.51730E+02 GRAM
Detector name     : GAM14                Detector geometry: CAN
Elapsed live time: 0 01:00:00.00         Elapsed real time: 0 01:00:01.68  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit  : 75.00000              Sensitivity      : 5.00000
Batch ID          : 942718               Detector SN#     :
Matrix Spike ID  :                       LCS ID           : 1032-A
*****************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	330	85.51*	7.664E+00	2.489E-01	2.538E-01	32.72
	136.48	------	10.60	7.493E+00	------ Line Not Found		------
CO-60	1173.22	2038	100.00	1.461E+00	6.905E+00	6.924E+00	7.29
	1332.49	1776	100.00*	1.306E+00	6.729E+00	6.747E+00	8.69
CD-109	88.03	1942	3.72*	7.101E+00	3.638E+01	3.680E+01	11.89
SN-126	64.28	------	9.60	4.774E+00	------ Line Not Found		------
	86.94	1942	8.90	7.101E+00	1.521E+01	1.521E+01	42.16
	87.57	1942	37.00*	7.101E+00	3.658E+00	3.658E+00	11.89
BA-137M	661.65	2530	89.98*	2.468E+00	5.637E+00	5.640E+00	7.55
CS-137	661.65	2530	85.12*	2.468E+00	5.959E+00	5.962E+00	7.57
TL-208	277.35	------	6.80	5.002E+00	------ Line Not Found		------
	510.84	70	21.60	3.088E+00	5.199E-01	5.199E-01	86.90
	583.14	215	84.20*	2.757E+00	4.576E-01	4.576E-01	23.16
	860.37	------	12.46	1.944E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	5.875E+00	------ Line Not Found		------
	351.07	279	12.94*	4.176E+00	2.551E+00	2.551E+00	27.73
PB-212	74.81	226	10.70	6.068E+00	1.719E+00	1.719E+00	44.23
	77.11	372	18.00	6.314E+00	1.621E+00	1.621E+00	25.89
	87.30	1942	8.00	7.101E+00	1.692E+01	1.692E+01	15.53
	238.63	773	44.60*	5.568E+00	1.540E+00	1.540E+00	12.98
	300.09	------	3.41	4.718E+00	------ Line Not Found		------
PO-212	74.81	226	10.70	6.068E+00	1.719E+00	1.719E+00	44.23
	77.11	372	18.00	6.314E+00	1.621E+00	1.621E+00	25.89
	87.30	1942	8.00	7.101E+00	1.692E+01	1.692E+01	15.53
	115.19	------	0.60	7.689E+00	------ Line Not Found		------
	238.63	773	44.60*	5.568E+00	1.540E+00	1.540E+00	12.98
	300.09	------	3.41	4.718E+00	------ Line Not Found		------
BI-214	609.31	240	46.30*	2.655E+00	9.673E-01	9.674E-01	24.24
	1120.29	------	15.10	1.524E+00	------ Line Not Found		------
	1764.49	45	15.80	1.059E+00	1.339E+00	1.339E+00	36.68
PB-214	74.81	226	6.21	6.068E+00	2.961E+00	2.961E+00	43.86
	77.11	372	10.50	6.314E+00	2.778E+00	2.778E+00	26.99

Sample ID : G1202018264 Acquisition date : 26-JAN-2010 14:19:20

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	1942	4.67	7.101E+00	2.898E+01	2.898E+01	14.17
	241.98	127	7.49	5.521E+00	1.515E+00	1.515E+00	55.66
	295.21	267	19.20	4.776E+00	1.443E+00	1.443E+00	29.49
	351.92	279	37.20*	4.176E+00	8.872E-01	8.872E-01	28.22
PO-214	74.81	226	6.21	6.068E+00	2.961E+00	2.961E+00	43.86
	77.11	372	10.50	6.314E+00	2.778E+00	2.778E+00	26.99
	87.30	1942	4.67	7.101E+00	2.898E+01	2.898E+01	14.17
	241.98	127	7.49	5.521E+00	1.515E+00	1.515E+00	55.66
	295.21	267	19.20	4.776E+00	1.443E+00	1.443E+00	29.49
	351.92	279	37.20*	4.176E+00	8.872E-01	8.872E-01	28.22
PO-216	74.81	226	10.70	6.068E+00	1.719E+00	1.719E+00	44.23
	77.11	372	18.00	6.314E+00	1.621E+00	1.621E+00	25.89
	87.30	1942	8.00	7.101E+00	1.692E+01	1.692E+01	15.53
	238.63	773	44.60*	5.568E+00	1.540E+00	1.540E+00	12.98
	300.09	------	3.41	4.718E+00	------	Line Not Found	------
PO-218	74.81	226	6.21	6.068E+00	2.961E+00	2.961E+00	43.86
	77.11	372	10.50	6.314E+00	2.778E+00	2.778E+00	26.99
	87.30	1942	4.67	7.101E+00	2.898E+01	2.898E+01	14.17
	241.98	127	7.49	5.521E+00	1.515E+00	1.515E+00	55.66
	295.21	267	19.20	4.776E+00	1.443E+00	1.443E+00	29.49
	351.92	279	37.20*	4.176E+00	8.872E-01	8.872E-01	28.22
RA-224	240.98	127	3.95*	5.521E+00	2.872E+00	2.872E+00	55.38
RA-226	609.31	240	46.30*	2.655E+00	9.673E-01	9.674E-01	24.24
	1120.29	------	15.10	1.524E+00	------	Line Not Found	------
	1764.49	45	15.80	1.059E+00	1.339E+00	1.339E+00	36.68
AC-228	338.32	88	11.40	4.308E+00	8.910E-01	8.910E-01	78.69
	911.07	138	27.70*	1.842E+00	1.334E+00	1.334E+00	48.55
	969.11	120	16.60	1.740E+00	2.062E+00	2.062E+00	49.04
RA-228	338.32	88	11.40	4.308E+00	8.910E-01	8.910E-01	78.69
	911.07	138	27.70*	1.842E+00	1.334E+00	1.334E+00	48.55
	969.11	120	16.60	1.740E+00	2.062E+00	2.062E+00	49.04
TH-228	74.81	226	10.70	6.068E+00	1.719E+00	1.732E+00	43.25
	77.11	372	18.00	6.314E+00	1.621E+00	1.633E+00	25.89
	87.30	1942	8.00	7.101E+00	1.692E+01	1.705E+01	11.89
	238.63	773	44.60*	5.568E+00	1.540E+00	1.552E+00	12.98
	300.09	------	3.41	4.718E+00	------	Line Not Found	------
TH-230	609.31	240	46.30*	2.655E+00	9.674E-01	9.674E-01	24.24
	1120.29	------	15.10	1.524E+00	------	Line Not Found	------
	1764.49	45	15.80	1.059E+00	1.339E+00	1.339E+00	36.68
TH-232	338.32	88	11.40	4.308E+00	8.910E-01	8.910E-01	67.56
	911.07	138	27.70*	1.842E+00	1.334E+00	1.334E+00	48.55
	969.11	120	16.60	1.740E+00	2.062E+00	2.062E+00	49.04
U-234	609.31	240	46.30*	2.655E+00	9.674E-01	9.674E-01	24.24
	1120.29	------	15.10	1.524E+00	------	Line Not Found	------
	1764.49	45	15.80	1.059E+00	1.339E+00	1.339E+00	36.68
AM-241	59.54	4416	35.90*	4.047E+00	1.504E+01	1.504E+01	8.80
AM-243	74.67	226	66.00*	6.068E+00	2.786E-01	2.786E-01	43.23
	86.72	1942	0.34	7.101E+00	4.028E+02	4.028E+02	11.89
	117.66	------	0.55	7.685E+00	------	Line Not Found	------

Sample ID : G1202018264 Acquisition date : 26-JAN-2010 14:19:20

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	142.18	------	0.13	7.399E+00	------	Line Not Found	------
ANH-511	511.00	70	100.00*	3.088E+00	1.123E-01	1.123E-01	86.50

Flag: "*" = Keyline

Sample ID : G1202018264 Acquisition date : 26-JAN-2010 14:19:20

Total number of lines in spectrum 25
Number of unidentified lines 2
Number of lines tentatively identified by NID 23 92.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.02	2.489E-01	2.538E-01	0.831E-01	32.72	
CO-60	5.27Y	1.00	6.729E+00	6.747E+00	0.586E+00	8.69	
CD-109	464.00D	1.01	3.638E+01	3.680E+01	0.437E+01	11.89	
SN-126	1.00E+05Y	1.00	3.658E+00	3.658E+00	0.435E+00	11.89	
BA-137M	30.17Y	1.00	5.637E+00	5.640E+00	0.426E+00	7.55	
CS-137	30.17Y	1.00	5.959E+00	5.962E+00	0.451E+00	7.57	
TL-208	1.41E+10Y	1.00	4.576E-01	4.576E-01	1.060E-01	23.16	
BI-211	7.04E+08Y	1.00	2.551E+00	2.551E+00	0.707E+00	27.73	
PB-212	1.41E+10Y	1.00	1.540E+00	1.540E+00	0.200E+00	12.98	
PO-212	1.41E+10Y	1.00	1.540E+00	1.540E+00	0.200E+00	12.98	
BI-214	1600.00Y	1.00	9.673E-01	9.674E-01	2.345E-01	24.24	
PB-214	1600.00Y	1.00	8.872E-01	8.872E-01	2.504E-01	28.22	
PO-214	1600.00Y	1.00	8.872E-01	8.872E-01	2.504E-01	28.22	
PO-216	1.41E+10Y	1.00	1.540E+00	1.540E+00	0.200E+00	12.98	
PO-218	1600.00Y	1.00	8.872E-01	8.872E-01	2.504E-01	28.22	
RA-224	1.41E+10Y	1.00	2.872E+00	2.872E+00	1.590E+00	55.38	
RA-226	1600.00Y	1.00	9.673E-01	9.674E-01	2.345E-01	24.24	
AC-228	1.41E+10Y	1.00	1.334E+00	1.334E+00	0.648E+00	48.55	
RA-228	1.41E+10Y	1.00	1.334E+00	1.334E+00	0.648E+00	48.55	
TH-228	1.91Y	1.01	1.540E+00	1.552E+00	0.201E+00	12.98	
TH-230	4.47E+09Y	1.00	9.674E-01	9.674E-01	2.345E-01	24.24	
TH-232	1.41E+10Y	1.00	1.334E+00	1.334E+00	0.648E+00	48.55	
U-234	4.47E+09Y	1.00	9.674E-01	9.674E-01	2.345E-01	24.24	
AM-241	432.20Y	1.00	1.504E+01	1.504E+01	0.132E+01	8.80	
AM-243	7380.00Y	1.00	2.786E-01	2.786E-01	1.205E-01	43.23	
ANH-511	1.00E+09Y	1.00	1.123E-01	1.123E-01	0.971E-01	86.50	
	Total Activity :		9.662E+01	9.707E+01			

Grand Total Activity : 9.662E+01 9.707E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1202018264 Acquisition date : 26-JAN-2010 14:19:20

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	92.61	85	423	2.12	184.71	183	10	2.37E-02	95.4	7.31E+00	T
0	185.57	83	440	1.39	370.46	366	12	2.31E-02	****	6.54E+00	T
0	208.84	97	360	1.50	416.95	414	11	2.70E-02	77.9	6.08E+00	T
0	729.09	42	124	1.45	1456.87	1446	14	1.17E-02	****	2.26E+00	
0	1462.51	24	21	2.21	2924.00	2915	14	6.55E-03	93.9	1.21E+00	
0	1510.80	22	8	1.06	3020.64	3014	11	6.01E-03	67.1	1.18E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 26-JAN-2010 15:19:55.36

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202018264.CNF;1  *
* Acquisition date  : 26-JAN-2010 14:19:20  Detector SN#     :             *
* Detector ID       : GAM14                 Sensitivity      : 5.00000     *
* Geometry          : CAN                   Energy tolerance: 1.50000      *
* Elapsed live time: 0 01:00:00.00          Abundance limit : 75.00000     *
* Elapsed real time: 0 01:00:01.68          Half life ratio : 8.00000      *
*****************************************************************************
*                                                                           *
*                               SAMPLE DATA                                 *
*                                                                           *
* Sample date       : 19-JAN-2010 00:00:00  Nuclide Library : SOLID        *
* Sample ID         : G1202018264           Analyst initials: MXR1         *
* Batch Number      : 942718                Sample Quantity : 1.51730E+02 GRAM *
*****************************************************************************
*                                                                           *
*                                  QC DATA                                  *
*                                                                           *
* CALIB. DATE/TIME : 6-MAR-2009 11:43:06.61MS Isotope      :                *
* MSD ID           :                       MSD Isotope     :                *
* LCS ID           : 1032-A                LCS Isotope     :                *
*****************************************************************************
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	2.538E-01	8.306E-02	6.665E-02	4.742E-03	3.808
CO-60	6.747E+00	5.863E-01	9.196E-02	6.554E-03	73.367
CD-109	3.680E+01	4.374E+00	2.231E+00	1.951E-01	16.492
SN-126	3.658E+00	4.348E-01	2.225E-01	1.936E-02	16.437
BA-137M	5.640E+00	4.257E-01	1.180E-01	7.017E-03	47.790
CS-137	5.962E+00	4.511E-01	1.247E-01	7.448E-03	47.790
TL-208	4.576E-01	1.060E-01	1.214E-01	8.300E-03	3.771
BI-211	2.551E+00	7.074E-01	6.814E-01	4.317E-02	3.743
PB-212	1.540E+00	1.999E-01	1.611E-01	1.173E-02	9.562
PO-212	1.540E+00	1.999E-01	1.611E-01	1.173E-02	9.562
BI-214	9.674E-01	2.345E-01	2.220E-01	1.757E-02	4.358
PB-214	8.872E-01	2.504E-01	2.203E-01	1.808E-02	4.027
PO-214	8.872E-01	2.504E-01	2.203E-01	1.808E-02	4.027
PO-216	1.540E+00	1.999E-01	1.611E-01	1.173E-02	9.562
PO-218	8.872E-01	2.504E-01	2.203E-01	1.808E-02	4.027
RA-224	2.872E+00	1.590E+00	1.832E+00	1.053E-01	1.567
RA-226	9.674E-01	2.345E-01	2.220E-01	1.757E-02	4.358
AC-228	1.334E+00	6.477E-01	5.258E-01	6.175E-02	2.537

Sample ID : G1202018264 Acquisition date : 26-JAN-2010 14:19:20

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.334E+00	6.477E-01	5.258E-01	6.175E-02	2.537
TH-228	1.552E+00	2.015E-01	1.623E-01	1.182E-02	9.562
TH-230	9.674E-01	2.345E-01	2.220E-01	1.757E-02	4.358
TH-232	1.334E+00	6.477E-01	5.258E-01	6.175E-02	2.537
U-234	9.674E-01	2.345E-01	2.220E-01	1.757E-02	4.358
AM-241	1.504E+01	1.324E+00	4.571E-01	3.394E-02	32.900
AM-243	2.786E-01	1.205E-01	1.417E-01	1.063E-02	1.967
ANH-511	1.123E-01	9.714E-02	9.616E-02	5.649E-03	1.168

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-9.398E-02		6.411E-01	1.043E+00	7.029E-02	-0.090
NA-22	-1.541E-02		4.947E-02	7.757E-02	5.067E-03	-0.199
NA-24	-4.669E-05		1.144E-04	Half-Life too short		
AL-26	-2.272E-03		4.899E-02	7.970E-02	4.620E-03	-0.029
K-40	1.207E+00		6.476E-01	1.202E+00	8.727E-02	1.004
TI-44	2.990E-01	+	7.740E-02	1.113E-01	8.690E-03	2.686
SC-46	7.722E-02		8.908E-02	1.559E-01	1.441E-02	0.495
V-48	5.451E-02		1.181E-01	2.024E-01	1.719E-02	0.269
CR-51	1.311E-01		5.760E-01	9.664E-01	6.245E-02	0.136
MN-52	-3.229E-02		1.169E-01	1.815E-01	1.272E-02	-0.178
MN-54	-4.293E-02		8.110E-02	1.317E-01	1.105E-02	-0.326
CO-56	2.952E-02		8.284E-02	1.418E-01	1.215E-02	0.208
CO-58	4.431E-02		7.675E-02	1.282E-01	1.032E-02	0.346
FE-59	-5.802E-02		1.809E-01	2.931E-01	2.257E-02	-0.198
ZN-65	-2.913E-01		1.844E-01	2.684E-01	1.764E-02	-1.086
GE-68	2.069E+00		2.730E+00	4.752E+00	3.416E-01	0.435
AS-73	-1.481E-01		1.785E+00	2.549E+00	1.661E-01	-0.058
AS-74	1.435E-01		1.369E-01	2.363E-01	1.413E-02	0.607
SE-75	3.000E-03		7.646E-02	1.279E-01	7.509E-03	0.023
BR-77	-5.841E-02		2.337E+00	3.814E+00	2.248E-01	-0.015
SR-82	-2.924E-01		6.531E-01	1.015E+00	7.635E-02	-0.288
RB-83	-6.885E-03		1.310E-01	2.133E-01	1.257E-02	-0.032
RB-84	7.457E-02		1.443E-01	2.485E-01	2.265E-02	0.300
KR-85	1.708E+01		1.622E+01	2.471E+01	1.453E+00	0.692
SR-85	8.092E-02		7.683E-02	1.170E-01	6.883E-03	0.692
RB-86	8.625E-01		1.353E+00	2.336E+00	1.682E-01	0.369
Y-88	-3.257E-03		4.943E-02	7.862E-02	4.465E-03	-0.041
ZR-88	2.494E-02		5.637E-02	9.501E-02	5.173E-03	0.263
Y-91	-1.958E+01		2.325E+01	3.469E+01	2.018E+00	-0.564
NB-94	4.771E-03		6.467E-02	1.050E-01	6.807E-03	0.045
NB-95	-2.484E-02		7.491E-02	1.175E-01	8.656E-03	-0.211
NB-95M	5.102E-01		2.311E-01	3.689E-01	2.757E-02	1.383
ZR-95	-1.198E-03		1.246E-01	2.004E-01	1.653E-02	-0.006
NB-97	4.078E-04		7.398E-05	Half-Life too short		
ZR-97	1.187E-03		1.145E-03	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	-1.219E+00		3.572E+00	5.606E+00	8.029E-01	-0.217
TC-99M	-7.116E+01		2.919E+01	Half-Life too short		
RH-101	-6.772E-02		5.620E-02	8.966E-02	4.974E-03	-0.755
RH-102	3.551E-02		6.656E-02	1.119E-01	6.465E-03	0.317
RU-103	1.555E-02		7.199E-02	1.192E-01	1.510E-02	0.130
RH-106	-5.267E-01		5.993E-01	9.061E-01	1.072E-01	-0.581
RU-106	-5.267E-01		5.969E-01	9.061E-01	5.418E-02	-0.581
AG-108M	4.529E-02		6.798E-02	1.154E-01	7.090E-03	0.392
AG-110M	1.367E-01		8.092E-02	1.293E-01	8.165E-03	1.058
IN-111	-5.260E-02		3.448E-01	4.977E-01	2.868E-02	-0.106
IN-113M	-3.868E-02		8.171E-02	1.316E-01	7.698E-03	-0.294
SN-113	-3.868E-02		8.171E-02	1.316E-01	7.698E-03	-0.294
IN-114M	-1.451E-01		3.352E-01	4.815E-01	2.650E-02	-0.301
CD-115	6.831E-01		2.034E+00	3.389E+00	2.003E-01	0.202
SN-117M	4.564E-03		6.329E-02	1.016E-01	5.745E-03	0.045
SB-122	-4.121E-01		6.086E-01	9.499E-01	5.662E-02	-0.434
I-123	1.814E-04		3.405E-04	Half-Life too short		
TE-123M	1.210E-02		4.541E-02	7.346E-02	4.201E-03	0.165
I-124	-1.111E-01		4.155E-01	5.981E-01	3.578E-02	-0.186
SB-124	5.368E-02		1.011E-01	1.813E-01	1.225E-02	0.296
SB-125	-8.432E-02		1.949E-01	3.137E-01	1.839E-02	-0.269
TE-125M	5.476E+00		1.387E+01	2.270E+01	2.127E+00	0.241
I-126	8.777E-02		2.769E-01	3.981E-01	2.391E-02	0.220
SB-126	-9.462E-02		2.225E-01	2.958E-01	1.990E-02	-0.320
SB-127	-2.593E-02		6.907E-01	1.114E+00	8.393E-02	-0.023
XE-127	-3.351E-06		7.130E-02	1.134E-01	6.319E-03	0.000
I-131	-2.253E-02		1.171E-01	1.920E-01	1.202E-02	-0.117
TE-132	1.697E-01		2.479E-01	4.214E-01	5.536E-02	0.403
BA-133	-6.386E-03		8.979E-02	1.283E-01	1.475E-02	-0.050
I-133	1.532E-05		1.404E-05	Half-Life too short		
CS-134	2.579E-02		1.007E-01	1.645E-01	1.295E-02	0.157
CS-135	-3.632E-02		2.763E-01	4.588E-01	3.519E-02	-0.079
I-135	-2.068E+01		1.689E+01	Half-Life too short		
CS-136	-5.548E-02		1.618E-01	2.622E-01	2.108E-02	-0.212
CE-139	3.881E-02		4.928E-02	8.125E-02	4.362E-03	0.478
BA-140	-4.403E-02		3.229E-01	5.218E-01	1.698E-01	-0.084
LA-140	1.299E-02		8.538E-02	1.424E-01	9.440E-03	0.091
CE-141	4.185E-02		8.674E-02	1.418E-01	9.047E-03	0.295
CE-143	1.969E+01		7.533E+00	1.071E+01	2.190E+00	1.839
CE-144	-3.219E-01		3.551E-01	5.452E-01	7.937E-02	-0.590
PM-144	-7.682E-05		6.566E-02	1.061E-01	6.792E-03	-0.001
PR-144	-5.185E-03		4.432E+00	7.158E+00	4.583E-01	-0.001
PM-146	-4.574E-02		1.022E-01	1.643E-01	1.406E-02	-0.278
ND-147	4.335E-02		6.831E-01	1.120E+00	1.520E-01	0.039
PM-149	1.455E+01		1.590E+01	2.728E+01	3.865E+00	0.533
EU-152	-1.668E-01		2.281E-01	3.124E-01	2.021E-02	-0.534
GD-153	-6.336E-02		1.385E-01	1.907E-01	1.530E-02	-0.332
EU-154	-5.246E-02		1.374E-01	2.127E-01	2.086E-02	-0.247

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	-7.851E-02		1.743E-01	2.764E-01	2.139E-02	-0.284
TB-160	1.273E-01		3.088E-01	5.290E-01	4.804E-02	0.241
HO-166M	-3.173E-02		1.253E-01	1.987E-01	1.313E-02	-0.160
TM-171	-8.754E+00		4.126E+01	6.671E+01	4.651E+00	-0.131
LU-176	-3.385E-02		4.610E-02	7.407E-02	4.314E-03	-0.457
LU-177	1.578E+00	+	1.233E+00	1.506E+00	8.437E-02	1.048
LU-177M	-1.531E-01		3.473E-01	5.596E-01	3.103E-02	-0.274
HF-181	-1.426E-02		7.675E-02	1.245E-01	7.218E-03	-0.115
W-181	-5.240E-02		5.812E-01	8.267E-01	5.696E-02	-0.063
TA-182	9.811E-03		2.385E-01	3.951E-01	2.363E-02	0.025
RE-183	-7.284E-02		1.759E-01	2.764E-01	1.522E-02	-0.264
RE-184	3.614E-02		4.077E-01	6.843E-01	3.958E-02	0.053
OS-185	-2.314E-02		8.017E-02	1.273E-01	7.591E-03	-0.182
RE-188	-4.947E-02		2.673E-01	4.246E-01	2.460E-02	-0.117
W-188	-1.441E+01		1.432E+01	1.937E+01	1.130E+00	-0.744
IR-192	-3.114E-02		6.086E-02	9.875E-02	5.764E-03	-0.315
AU-195	2.496E-01		3.917E-01	5.715E-01	4.535E-02	0.437
TL-200	4.311E+00		7.118E+00	1.211E+01	6.786E-01	0.356
TL-201	8.737E-01		2.167E+00	3.520E+00	1.891E-01	0.248
TL-202	-3.675E-02		9.314E-02	1.500E-01	8.480E-03	-0.245
HG-203	-1.082E-02		6.505E-02	1.077E-01	6.664E-03	-0.100
BI-207	2.467E-02		1.099E-01	1.855E-01	1.373E-02	0.133
TL-207	-1.549E+00		1.307E+00	2.015E+00	3.327E-01	-0.769
PO-209	-1.084E+00		1.831E+01	3.051E+01	2.856E+00	-0.036
BI-210	-4.538E+00		5.280E+00	8.494E+00	6.298E-01	-0.534
PB-210	-4.538E+00		5.280E+00	8.494E+00	6.298E-01	-0.534
PO-210	-4.538E+00		5.277E+00	8.494E+00	5.329E-01	-0.534
PB-211	-8.993E-01		1.967E+00	3.036E+00	1.892E+00	-0.296
BI-212	7.327E-01		5.887E-01	1.021E+00	8.687E-02	0.718
PO-215	-1.549E+00		1.307E+00	2.015E+00	3.327E-01	-0.769
RN-219	6.498E-01		8.426E-01	1.432E+00	1.930E-01	0.454
RN-220	2.508E-01		5.279E+01	8.610E+01	5.118E+00	0.003
RA-223	-1.549E+00		1.307E+00	2.015E+00	3.327E-01	-0.769
AC-227	1.022E-02		6.759E-01	1.131E+00	1.578E-01	0.009
TH-227	1.022E-02		6.759E-01	1.131E+00	1.910E-01	0.009
TH-229	4.761E-01		9.013E-01	1.508E+00	8.326E-02	0.316
PA-231	1.329E+00		2.795E+00	4.742E+00	6.541E-01	0.280
TH-231	-1.549E+00		1.307E+00	2.015E+00	3.327E-01	-0.769
U-231	7.619E-02		5.280E-01	7.522E-01	6.107E-02	0.101
PA-233	6.909E-02		1.194E-01	2.035E-01	1.256E-02	0.340
PA-234	-1.151E-01		7.549E-01	1.248E+00	2.359E-01	-0.092
PA-234M	7.833E+00		1.031E+01	1.797E+01	1.738E+00	0.436
TH-234	-3.806E-01		2.157E+00	3.077E+00	5.289E-01	-0.124
U-235	-4.962E-02		3.461E-01	5.516E-01	9.080E-02	-0.090
NP-236	-3.788E-02		1.356E-01	2.144E-01	1.198E-02	-0.177
NP-237	8.613E+00		2.031E+00	1.222E+00	2.732E-01	7.047
U-238	-3.806E-01		2.157E+00	3.077E+00	5.289E-01	-0.124
NP-239	2.140E-01		3.497E-01	5.085E-01	3.675E-02	0.421

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-6.671E-02		1.581E-01	2.511E-01	1.930E-02	-0.266
AM-246	3.562E-01		3.173E-01	5.639E-01	4.040E-02	0.632
CM-247	4.913E-02		7.460E-02	1.268E-01	6.963E-03	0.388
CF-249	-6.945E-02		7.920E-02	1.250E-01	6.832E-03	-0.556
CF-251	6.820E-02		2.099E-01	3.398E-01	1.843E-02	0.201

VAX/VMS Nuclide Identification Report Generated

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*****************************************************************************
*                          GEL Laboratories LLC                             *
*                              2040 Savage Road                             *
*                            Charleston, SC 29414                           *
*****************************************************************************
*                                                                           *
*                              DETECTOR DATA                                *
*                                                                           *
* Configuration     : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202018264          *
* Acquisition date  : 26-JAN-2010 14:19:20 Detector SN#     :               *
* Detector ID       : GAM14                Sensitivity      : 5.000         *
* Geometry          : CAN                  Energy tolerance: 1.500          *
* Elapsed live time:    0 01:00:00.00      Abundance limit : 75.000         *
* Elapsed real time:    0 01:00:01.68      Half life ratio : 8.000          *
*****************************************************************************
*                                                                           *
*                              SAMPLE DATA                                  *
*                                                                           *
* Sample date       : 19-JAN-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1202018264          Analyst initials: MXR1           *
* Batch Number      : 942718               Sample Quantity : 1.5173E+02 GRAM *
* Recovery          :    1.00000           Carrier Weight :    0.00000      *
*****************************************************************************
*                                                                           *
*                                QC DATA                                    *
*                                                                           *
* CALIB. DATE/TIME :  6-MAR-2009 11:43:06 MS Isotope      :                 *
* MSD DPM          :    0.000             MSD Isotope     :                 *
* LCS DPM          :    0.000             LCS Isotope     :                 *
* LCSD DPM         :    0.000             LCSD Isotope    :                 *
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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
CO-57	2.538E-01	8.140E-02	3.574E-02	4.153E-02
CO-60	6.747E+00	5.746E-01	4.646E-02	2.931E-01
CD-109	3.680E+01	4.286E+00	1.206E+00	2.187E+00
SN-126	3.658E+00	4.261E-01	1.203E-01	2.174E-01
BA-137M	5.640E+00	4.172E-01	6.072E-02	2.129E-01
CS-137	5.962E+00	4.421E-01	6.418E-02	2.256E-01
TL-208	4.576E-01	1.039E-01	6.264E-02	5.299E-02
BI-211	2.551E+00	6.932E-01	3.562E-01	3.537E-01
PB-212	1.540E+00	1.959E-01	8.501E-02	9.997E-02
PO-212	1.540E+00	1.959E-01	8.501E-02	9.997E-02
BI-214	9.674E-01	2.298E-01	1.144E-01	1.173E-01
PB-214	8.872E-01	2.454E-01	1.152E-01	1.252E-01
PO-214	8.872E-01	2.454E-01	1.152E-01	1.252E-01
PO-216	1.540E+00	1.959E-01	8.501E-02	9.997E-02
PO-218	8.872E-01	2.454E-01	1.152E-01	1.252E-01
RA-224	2.872E+00	1.559E+00	9.667E-01	7.952E-01
RA-226	9.674E-01	2.298E-01	1.144E-01	1.173E-01
AC-228	1.334E+00	6.347E-01	2.683E-01	3.238E-01
RA-228	1.334E+00	6.347E-01	2.683E-01	3.238E-01
TH-228	1.552E+00	1.974E-01	8.566E-02	1.007E-01
TH-230	9.674E-01	2.298E-01	1.144E-01	1.173E-01
TH-232	1.334E+00	6.347E-01	2.683E-01	3.238E-01
U-234	9.674E-01	2.298E-01	1.144E-01	1.173E-01
AM-241	1.504E+01	1.298E+00	2.492E-01	6.620E-01
AM-243	2.786E-01	1.181E-01	7.684E-02	6.023E-02
ANH-511	1.123E-01	9.520E-02	4.980E-02	4.857E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-9.398E-02	6.283E-01	5.411E-01	3.205E-01 NOT IDENT.

NA-22	-1.541E-02	4.848E-02	3.924E-02	2.474E-02	NOT IDENT.
NA-24	-4.669E+01	2.242E+02	0.000E+00	1.144E+02	SHORT HLIF
AL-26	-2.272E-03	4.801E-02	3.994E-02	2.450E-02	NOT IDENT.
K-40	1.207E+00	6.346E-01	6.057E-01	3.238E-01	NOT IDENT.
TI-44	2.990E-01	7.585E-02	6.031E-02	3.870E-02	FAIL ABUN
SC-46	7.722E-02	8.730E-02	7.963E-02	4.454E-02	NOT IDENT.
V-48	5.451E-02	1.158E-01	1.031E-01	5.907E-02	NOT IDENT.
CR-51	1.311E-01	5.645E-01	5.064E-01	2.880E-01	NOT IDENT.
MN-52	-3.229E-02	1.146E-01	9.150E-02	5.847E-02	FAIL ABUN
MN-54	-4.293E-02	7.948E-02	6.737E-02	4.055E-02	NOT IDENT.
CO-56	2.952E-02	8.118E-02	7.247E-02	4.142E-02	FAIL ABUN
CO-58	4.431E-02	7.521E-02	6.563E-02	3.837E-02	NOT IDENT.
FE-59	-5.802E-02	1.773E-01	1.489E-01	9.045E-02	NOT IDENT.
ZN-65	-2.913E-01	1.807E-01	1.362E-01	9.218E-02	NOT IDENT.
GE-68	2.069E+00	2.675E+00	2.414E+00	1.365E+00	NOT IDENT.
AS-73	-1.481E-01	1.750E+00	1.393E+00	8.927E-01	NOT IDENT.
AS-74	1.435E-01	1.342E-01	1.219E-01	6.845E-02	NOT IDENT.
SE-75	3.000E-03	7.493E-02	6.733E-02	3.823E-02	FAIL ABUN
BR-77	-5.841E-02	2.291E+00	1.974E+00	1.169E+00	FAIL ABUN
SR-82	-2.924E-01	6.400E-01	5.203E-01	3.265E-01	NOT IDENT.
RB-83	-6.885E-03	1.283E-01	1.104E-01	6.548E-02	NOT IDENT.
RB-84	7.457E-02	1.414E-01	1.269E-01	7.216E-02	NOT IDENT.
KR-85	1.708E+01	1.590E+01	1.279E+01	8.110E+00	NOT IDENT.
SR-85	8.092E-02	7.529E-02	6.059E-02	3.841E-02	NOT IDENT.
RB-86	8.625E-01	1.326E+00	1.187E+00	6.763E-01	NOT IDENT.
Y-88	-3.257E-03	4.844E-02	3.938E-02	2.471E-02	NOT IDENT.
ZR-88	2.494E-02	5.524E-02	4.953E-02	2.819E-02	NOT IDENT.
Y-91	-1.958E+01	2.279E+01	1.757E+01	1.163E+01	NOT IDENT.
NB-94	4.771E-03	6.337E-02	5.392E-02	3.233E-02	NOT IDENT.
NB-95	-2.484E-02	7.341E-02	6.025E-02	3.746E-02	NOT IDENT.
NB-95M	5.102E-01	2.265E-01	1.947E-01	1.156E-01	NOT IDENT.
ZR-95	-1.198E-03	1.221E-01	1.027E-01	6.229E-02	NOT IDENT.
NB-97	4.078E+02	1.450E+02	0.000E+00	7.398E+01	SHORT HLIF
ZR-97	1.187E+03	2.244E+03	0.000E+00	1.145E+03	SHORT HLIF
MO-99	-1.219E+00	3.501E+00	2.876E+00	1.786E+00	NOT IDENT.
TC-99M	-7.116E+07	5.722E+07	0.000E+00	2.919E+07	SHORT HLIF
RH-101	-6.772E-02	5.508E-02	4.753E-02	2.810E-02	NOT IDENT.
RH-102	3.551E-02	6.523E-02	5.804E-02	3.328E-02	NOT IDENT.
RU-103	1.555E-02	7.055E-02	6.179E-02	3.599E-02	FAIL ABUN
RH-106	-5.267E-01	5.874E-01	4.669E-01	2.997E-01	FAIL ABUN
RU-106	-5.267E-01	5.850E-01	4.669E-01	2.985E-01	FAIL ABUN
AG-108M	4.529E-02	6.662E-02	6.002E-02	3.399E-02	NOT IDENT.
AG-110M	1.367E-01	7.930E-02	6.651E-02	4.046E-02	NOT IDENT.
IN-111	-5.260E-02	3.379E-01	2.625E-01	1.724E-01	NOT IDENT.
IN-113M	-3.868E-02	8.007E-02	6.859E-02	4.085E-02	NOT IDENT.
SN-113	-3.868E-02	8.007E-02	6.859E-02	4.085E-02	NOT IDENT.
IN-114M	-1.451E-01	3.285E-01	2.555E-01	1.676E-01	NOT IDENT.
CD-115	6.831E-01	1.993E+00	1.754E+00	1.017E+00	NOT IDENT.
SN-117M	4.564E-03	6.202E-02	5.413E-02	3.164E-02	NOT IDENT.
SB-122	-4.121E-01	5.964E-01	4.907E-01	3.043E-01	NOT IDENT.
I-123	1.814E+02	6.673E+02	0.000E+00	3.405E+02	SHORT HLIF
TE-123M	1.210E-02	4.450E-02	3.915E-02	2.270E-02	NOT IDENT.
I-124	-1.111E-01	4.072E-01	3.085E-01	2.077E-01	FAIL ABUN
SB-124	5.368E-02	9.903E-02	9.100E-02	5.053E-02	NOT IDENT.
SB-125	-8.432E-02	1.910E-01	1.632E-01	9.743E-02	NOT IDENT.
TE-125M	5.476E+00	1.359E+01	1.221E+01	6.934E+00	NOT IDENT.
I-126	8.777E-02	2.713E-01	2.048E-01	1.384E-01	NOT IDENT.
SB-126	-9.462E-02	2.180E-01	1.519E-01	1.112E-01	FAIL ABUN
SB-127	-2.593E-02	6.769E-01	5.724E-01	3.454E-01	NOT IDENT.
XE-127	-3.351E-06	6.988E-02	6.006E-02	3.565E-02	NOT IDENT.
I-131	-2.253E-02	1.148E-01	1.003E-01	5.857E-02	NOT IDENT.
TE-132	1.697E-01	2.429E-01	2.226E-01	1.240E-01	NOT IDENT.
BA-133	-6.386E-03	8.799E-02	6.704E-02	4.489E-02	NOT IDENT.
I-133	1.532E+01	2.753E+01	0.000E+00	1.404E+01	SHORT HLIF
CS-134	2.579E-02	9.871E-02	8.424E-02	5.036E-02	NOT IDENT.
CS-135	-3.632E-02	2.708E-01	2.414E-01	1.382E-01	NOT IDENT.
I-135	-2.068E+07	3.310E+07	0.000E+00	1.689E+07	SHORT HLIF
CS-136	-5.548E-02	1.585E-01	1.333E-01	8.088E-02	NOT IDENT.
CE-139	3.881E-02	4.830E-02	4.326E-02	2.464E-02	NOT IDENT.
BA-140	-4.403E-02	3.164E-01	2.699E-01	1.614E-01	NOT IDENT.
LA-140	1.299E-02	8.367E-02	7.160E-02	4.269E-02	NOT IDENT.
CE-141	4.185E-02	8.501E-02	7.572E-02	4.337E-02	NOT IDENT.
CE-143	1.969E+01	7.383E+00	5.622E+00	3.767E+00	FAIL ABUN
CE-144	-3.219E-01	3.480E-01	2.918E-01	1.775E-01	NOT IDENT.
PM-144	-7.682E-05	6.435E-02	5.449E-02	3.283E-02	NOT IDENT.
PR-144	-5.185E-03	4.343E+00	3.678E+00	2.216E+00	NOT IDENT.
PM-146	-4.574E-02	1.002E-01	8.532E-02	5.110E-02	NOT IDENT.
ND-147	4.335E-02	6.695E-01	5.793E-01	3.416E-01	FAIL ABUN

PM-149	1.455E+01	1.558E+01	1.434E+01	7.948E+00	NOT IDENT.
EU-152	-1.668E-01	2.235E-01	1.634E-01	1.140E-01	FAIL ABUN
GD-153	-6.336E-02	1.357E-01	1.028E-01	6.924E-02	NOT IDENT.
EU-154	-5.246E-02	1.347E-01	1.076E-01	6.871E-02	FAIL ABUN
EU-155	-7.851E-02	1.708E-01	1.487E-01	8.717E-02	FAIL ABUN
TB-160	1.273E-01	3.026E-01	2.702E-01	1.544E-01	FAIL ABUN
HO-166M	-3.173E-02	1.228E-01	1.020E-01	6.266E-02	FAIL ABUN
TM-171	-8.754E+00	4.043E+01	3.628E+01	2.063E+01	FAIL ABUN
LU-176	-3.385E-02	4.518E-02	3.885E-02	2.305E-02	FAIL ABUN
LU-177	1.578E+00	1.208E+00	7.972E-01	6.163E-01	FAIL ABUN
LU-177M	-1.531E-01	3.403E-01	2.913E-01	1.736E-01	FAIL ABUN
HF-181	-1.426E-02	7.521E-02	6.455E-02	3.837E-02	NOT IDENT.
W-181	-5.240E-02	5.696E-01	4.498E-01	2.906E-01	NOT IDENT.
TA-182	9.811E-03	2.337E-01	2.001E-01	1.192E-01	NOT IDENT.
RE-183	-7.284E-02	1.724E-01	1.472E-01	8.795E-02	FAIL ABUN
RE-184	3.614E-02	3.996E-01	3.606E-01	2.039E-01	FAIL ABUN
OS-185	-2.314E-02	7.856E-02	6.553E-02	4.008E-02	FAIL ABUN
RE-188	-4.947E-02	2.619E-01	2.264E-01	1.336E-01	NOT IDENT.
W-188	-1.441E+01	1.403E+01	1.017E+01	7.158E+00	NOT IDENT.
IR-192	-3.114E-02	5.965E-02	5.176E-02	3.043E-02	FAIL ABUN
AU-195	2.496E-01	3.839E-01	3.080E-01	1.959E-01	FAIL ABUN
TL-200	4.311E+00	6.976E+00	6.325E+00	3.559E+00	NOT IDENT.
TL-201	8.737E-01	2.124E+00	1.873E+00	1.083E+00	NOT IDENT.
TL-202	-3.675E-02	9.128E-02	7.796E-02	4.657E-02	NOT IDENT.
HG-203	-1.082E-02	6.374E-02	5.663E-02	3.252E-02	NOT IDENT.
BI-207	2.467E-02	1.077E-01	9.429E-02	5.495E-02	FAIL ABUN
TL-207	-1.549E+00	1.281E+00	1.055E+00	6.534E-01	FAIL ABUN
PO-209	-1.084E+00	1.794E+01	1.558E+01	9.153E+00	NOT IDENT.
BI-210	-4.538E+00	5.174E+00	4.657E+00	2.640E+00	NOT IDENT.
PB-210	-4.538E+00	5.174E+00	4.657E+00	2.640E+00	NOT IDENT.
PO-210	-4.538E+00	5.171E+00	4.657E+00	2.638E+00	NOT IDENT.
PB-211	-8.993E-01	1.927E+00	1.582E+00	9.834E-01	NOT IDENT.
BI-212	7.327E-01	5.769E-01	5.241E-01	2.943E-01	NOT IDENT.
PO-215	-1.549E+00	1.281E+00	1.055E+00	6.534E-01	FAIL ABUN
RN-219	6.498E-01	8.258E-01	7.462E-01	4.213E-01	NOT IDENT.
RN-220	2.508E-01	5.173E+01	4.451E+01	2.639E+01	NOT IDENT.
RA-223	-1.549E+00	1.281E+00	1.055E+00	6.534E-01	FAIL ABUN
AC-227	1.022E-02	6.624E-01	5.957E-01	3.380E-01	NOT IDENT.
TH-227	1.022E-02	6.624E-01	5.957E-01	3.380E-01	FAIL ABUN
TH-229	4.761E-01	8.833E-01	7.997E-01	4.507E-01	FAIL ABUN
PA-231	1.329E+00	2.739E+00	2.492E+00	1.397E+00	NOT IDENT.
TH-231	-1.549E+00	1.281E+00	1.055E+00	6.534E-01	FAIL ABUN
U-231	7.619E-02	5.175E-01	4.057E-01	2.640E-01	FAIL ABUN
PA-233	6.909E-02	1.170E-01	1.067E-01	5.972E-02	FAIL ABUN
PA-234	-1.151E-01	7.398E-01	6.362E-01	3.774E-01	FAIL ABUN
PA-234M	7.833E+00	1.010E+01	9.149E+00	5.153E+00	NOT IDENT.
TH-234	-3.806E-01	2.114E+00	1.675E+00	1.079E+00	FAIL ABUN
U-235	-4.962E-02	3.392E-01	2.947E-01	1.731E-01	FAIL ABUN
NP-236	-3.788E-02	1.329E-01	1.142E-01	6.781E-02	NOT IDENT.
NP-237	8.613E+00	1.990E+00	6.608E-01	1.015E+00	NOT IDENT.
U-238	-3.806E-01	2.114E+00	1.675E+00	1.079E+00	FAIL ABUN
NP-239	2.140E-01	3.427E-01	2.729E-01	1.748E-01	FAIL ABUN
CM-243	-6.671E-02	1.549E-01	1.352E-01	7.905E-02	FAIL ABUN
AM-246	3.562E-01	3.110E-01	2.865E-01	1.587E-01	NOT IDENT.
CM-247	4.913E-02	7.311E-02	6.604E-02	3.730E-02	NOT IDENT.
CF-249	-6.945E-02	7.762E-02	6.516E-02	3.960E-02	NOT IDENT.
CF-251	6.820E-02	2.057E-01	1.806E-01	1.050E-01	NOT IDENT.

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*                          GEL Laboratories LLC                             *
*                             2040 SAVAGE ROAD                              *
*                           CHARLESTON ,SC 29417                            *
*                     GAMMA SPECTROSCOPY BACKGROUND REPORT                  *
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ENERGY	MDA COUNTS
46.50	777.2960
46.50	777.2960
46.50	777.2960
48.70	851.6425
49.72	894.4651
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52.97	1018.7528
53.15	1041.8905
53.44	1043.8632
54.07	982.2737
56.28	1073.3947
56.28	1073.3977
57.37	1071.3567
57.53	829.1659
57.53	829.1675
57.60	829.2274
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57.98	829.5610
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59.54	830.9185
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60.01	831.3228
61.10	545.2009
61.14	545.2231
61.30	545.3127
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63.29	546.4135
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64.28	561.8723
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65.20	540.8189
66.05	547.9125
66.72	547.2321
66.83	547.2924
66.91	563.9520
67.20	554.7616
67.20	554.7616
67.75	565.4513
67.85	565.5052
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68.90	579.3975
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70.82	595.4670
70.83	595.4714
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72.87	556.5006
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74.81	607.9307
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74.81	607.9307
74.81	607.9307
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77.11	609.1985

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83.78	639.5625
83.78	639.5625
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86.72	639.4692
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88.47	640.4036
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92.38	399.4139
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94.67	388.2304
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94.90	369.5675
94.90	369.5675
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95.87	364.7404
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97.43	389.0807
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98.44	367.1862
98.88	350.2279
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99.55	365.7945
99.86	370.4413
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100.10	371.9364
103.18	373.8865
103.76	387.9848
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105.31	383.0726
108.00	350.5112
109.28	360.5291

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111.00	366.3705
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117.00	318.6028
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121.62	346.3411
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122.32	346.5078
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144.24	342.7069
144.24	342.7069
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147.16	337.8089
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152.70	338.9551
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154.21	331.5024
154.21	331.5024
154.21	331.5024
154.21	331.5024
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162.64	368.8143
163.35	333.2977
163.89	314.4445
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172.10	299.1181
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176.60	292.0100
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186.00	362.1482
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193.63	339.5368
197.04	370.6241
198.01	377.1715
198.60	359.1043
200.40	293.9193
201.83	314.1682
202.84	323.4413
205.31	339.0528

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208.81	295.4818
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209.75	307.2009
210.97	311.0469
215.65	304.1277
216.55	290.1185
218.09	311.2224
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226.40	287.5869
227.00	283.0587
227.08	283.0700
227.20	283.0850
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228.18	298.9011
228.18	298.9011
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236.00	302.4697
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238.63	302.2205
238.63	302.2205
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241.98	294.0222
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245.39	303.7797
247.94	302.5789
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249.79	287.9222
252.40	282.6607
252.85	278.0527
252.85	278.0527
254.15	0.0000
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256.20	268.1875
260.50	278.9930
260.90	276.2348
262.80	249.2841
264.65	269.1816
268.24	273.3560
268.79	274.3631
269.46	262.2232
269.46	262.2232
269.46	262.2232
269.46	262.2232
271.23	261.4802
273.65	283.4074
276.40	246.9747
277.35	249.8997
277.60	238.6112
277.60	238.6112
278.00	238.6514
278.60	256.6369
279.20	266.1410
279.53	270.8948
280.46	280.4424
281.68	274.9190
283.67	242.0531
284.30	243.0614
285.00	224.2126
285.90	231.8677
286.10	233.7786
286.10	233.7786
287.40	248.3205
288.45	0.0000
290.67	278.1546
290.80	278.1689
291.72	248.2320
293.26	234.1497
293.70	229.4447
295.21	241.3031
295.21	241.3031

295.21	241.3031
295.96	241.3744
296.50	259.8035
297.23	261.4648
298.57	242.5831
299.80	233.1837
299.80	233.1837
300.09	223.6918
300.09	223.6918
300.09	223.6918
300.09	223.6918
300.12	223.6946
301.29	214.2773
302.84	235.8501
303.76	236.4144
303.91	250.7264
304.40	240.2890
304.40	240.2890
304.84	249.8659
306.84	254.8364
308.46	241.6286
311.98	219.9684
316.51	247.1818
318.01	227.1954
319.02	226.3232
319.41	244.5815
320.08	225.4560
323.87	279.5902
323.87	279.5902
323.87	279.5902
323.87	279.5902
325.23	262.4326
328.77	228.1328
333.44	266.7847
334.20	231.4951
334.20	231.4951
334.30	231.5039
338.28	246.3371
338.28	246.3371
338.28	246.3371
338.28	246.3371
338.32	238.6149
338.32	238.6149
338.32	238.6149
340.50	235.2628
340.57	235.2688
344.27	271.0894
345.85	258.3301
350.59	245.8403
351.07	257.2072
351.92	221.3648
351.92	221.3648
351.92	221.3648
355.39	0.0000
356.01	194.4653
364.48	211.6359
366.43	197.1448
367.43	194.2849
367.94	184.5542
369.80	195.4248
374.96	204.5889
383.85	224.8572
387.95	228.1230
388.63	207.5228
391.69	203.8010
391.69	203.8010
392.90	191.0800
398.62	223.0288
400.65	200.4675
401.10	206.4232
401.81	199.5564
402.60	198.6225
404.84	224.4812
410.95	192.2357
411.60	218.0476
413.65	219.1844
414.70	203.3859
415.30	204.4183

415.76	205.4435
417.63	0.0000
418.52	202.6478
423.70	233.8353
427.08	209.1848
427.89	220.2015
432.53	208.5535
433.93	182.6895
439.47	199.0121
439.56	199.0194
439.89	200.0391
443.98	210.3127
444.90	216.3823
445.03	216.3929
445.03	216.3929
445.03	216.3929
445.03	216.3929
453.90	251.1444
463.38	245.8318
468.07	250.2190
473.00	233.4138
475.06	205.2500
475.35	207.2897
476.78	213.4469
477.59	201.3563
477.96	202.3926
482.03	171.2280
484.57	172.3719
487.03	174.5258
490.36	144.2274
492.35	157.5240
497.08	154.6886
507.63	0.0000
510.53	0.0000
510.84	166.5447
511.00	166.5527
511.85	173.7468
511.85	173.7468
513.99	158.5127
513.99	158.5127
520.41	150.6068
520.65	150.6176
527.90	133.4722
528.96	0.0000
529.64	126.3453
529.87	0.0000
531.02	136.6692
537.32	127.6449
543.00	123.7207
546.56	0.0000
549.76	142.5450
552.65	147.8249
555.20	129.3091
563.23	128.5531
563.90	160.7179
568.70	138.0849
569.32	127.7236
569.50	124.6143
569.67	124.6201
573.80	205.8504
574.00	203.7807
574.64	201.7344
578.91	116.2522
579.30	112.7926
583.14	150.0785
585.48	123.4035
591.81	137.8846
592.07	144.1622
593.00	154.6448
595.88	118.1617
600.56	144.4789
602.52	0.0000
602.71	145.1583
602.71	145.1583
603.60	134.4649
604.41	111.7865
604.70	117.0346
609.31	140.6084

609.31	140.6084
609.31	140.6084
609.31	140.6084
610.33	139.9447
612.46	147.0205
614.37	112.0703
618.01	114.6283
621.84	125.2667
621.84	125.2667
631.29	122.3976
633.02	102.3923
633.10	102.3947
634.78	118.2781
635.90	116.1982
636.97	119.4004
645.85	118.6035
646.12	120.7298
656.30	123.8615
657.75	102.6635
657.90	0.0000
661.65	129.6935
661.65	129.6935
664.57	113.4714
666.33	117.0684
666.33	117.0684
675.00	120.5094
677.61	106.7139
685.20	111.1830
692.80	111.3811
695.00	118.9402
696.49	113.6213
696.49	113.6213
697.00	108.2742
697.49	102.9258
698.33	113.6705
698.50	113.6757
699.00	108.3260
702.63	111.6375
706.10	102.0577
706.58	0.0000
706.67	114.9649
709.31	106.4347
711.68	124.7793
713.82	116.2318
717.42	108.7871
720.50	122.1571
721.93	106.0252
722.20	115.0182
722.78	109.6392
722.78	109.6392
722.89	109.6441
722.95	109.6441
723.30	116.8445
724.18	113.2723
727.18	101.4746
733.00	100.8870
735.90	97.3477
739.58	114.7497
742.81	96.4159
744.21	86.6934
747.13	107.3531
751.79	90.0963
752.31	79.2503
753.82	90.1369
755.35	94.5127
756.15	94.5297
756.87	94.5445
763.93	99.0469
765.79	113.2422
766.42	109.9904
766.84	95.8418
776.49	120.0547
778.00	124.4621
778.57	129.9354
778.89	113.5672
783.80	96.1963
785.46	120.2883
792.07	111.6995

795.84	121.6529
796.30	116.1859
798.80	123.9248
801.93	115.2283
805.60	105.4336
810.29	92.3467
810.76	94.5538
815.85	111.8979
817.79	97.2637
818.51	89.9370
819.60	82.6135
826.30	109.3860
828.27	96.5576
831.60	126.0711
831.96	119.6401
834.83	143.6506
836.80	0.0000
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848.13	122.8096
856.28	0.0000
856.80	136.9012
860.37	94.4193
867.32	112.1648
867.82	113.1042
871.10	101.1186
873.19	129.9312
874.81	133.6875
875.33	0.0000
876.40	125.3732
879.36	121.7304
880.27	110.5989
880.51	110.6038
881.50	123.6403
883.24	143.2126
884.67	142.3231
889.25	116.3839
896.60	138.0002
898.02	128.7096
899.00	113.8091
903.28	142.2890
911.07	136.2544
911.07	136.2544
911.07	136.2544
919.63	112.3975
920.93	115.7971
925.00	130.3295
925.24	129.3975
926.50	131.3041
935.52	155.0198
937.48	145.6815
944.10	155.2750
946.00	139.3281
949.00	168.6064
962.29	166.7392
964.01	150.5995
966.15	139.3181
968.20	155.5781
969.11	146.5550
969.11	146.5550
969.11	146.5550
977.42	119.9509
980.50	108.0184
983.50	104.2865
989.30	105.3475
996.32	117.8394
1001.03	97.0154
1001.68	96.0756
1004.76	109.4550
1021.30	0.0000
1024.50	0.0000
1034.80	107.1784
1036.00	104.3297
1037.82	96.7054
1038.57	98.6329
1038.76	0.0000
1045.16	94.9153
1046.59	103.5703
1048.07	106.4744

1050.47	114.1966
1050.47	114.1966
1062.04	98.0820
1063.62	85.6067
1076.63	94.4789
1077.35	89.6699
1078.86	83.9060
1085.78	99.4585
1099.22	107.4319
1112.02	80.5076
1112.84	89.2485
1115.52	123.2586
1120.29	73.8198
1120.29	73.8198
1120.29	73.8198
1120.29	73.8198
1120.51	67.0234
1121.28	63.1460
1124.00	0.0000
1129.67	71.0188
1131.51	0.0000
1147.95	0.0000
1167.94	60.4235
1173.22	58.7964
1175.09	58.8159
1177.93	60.5240
1189.05	55.0202
1204.90	50.2363
1205.75	46.3020
1213.00	52.2732
1221.42	38.5176
1230.97	32.6415
1235.34	41.5728
1236.41	0.0000
1238.25	27.7277
1246.25	37.6784
1260.41	0.0000
1271.85	28.8702
1274.45	24.8983
1274.54	24.8983
1291.56	20.9692
1298.22	0.0000
1312.09	18.0300
1325.50	22.3682
1325.50	22.3682
1332.49	27.1285
1333.61	27.1340
1360.21	9.0806
1362.66	0.0000
1365.15	12.1162
1368.21	19.1925
1368.53	0.0000
1376.25	21.2384
1384.27	23.2882
1394.10	14.1960
1395.20	15.2124
1407.95	20.3206
1434.06	17.3376
1436.60	20.4045
1457.56	0.0000
1460.81	14.0396
1489.15	10.2779
1509.49	13.3988
1596.49	17.7284
1620.62	13.6004
1678.03	0.0000
1691.02	9.5013
1691.02	9.5013
1706.46	0.0000
1750.46	0.0000
1764.49	12.7856
1764.49	12.7856
1764.49	12.7856
1764.49	12.7856
1770.23	7.3111
1771.40	5.4842
1791.20	0.0000
1808.65	11.7837

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202018264

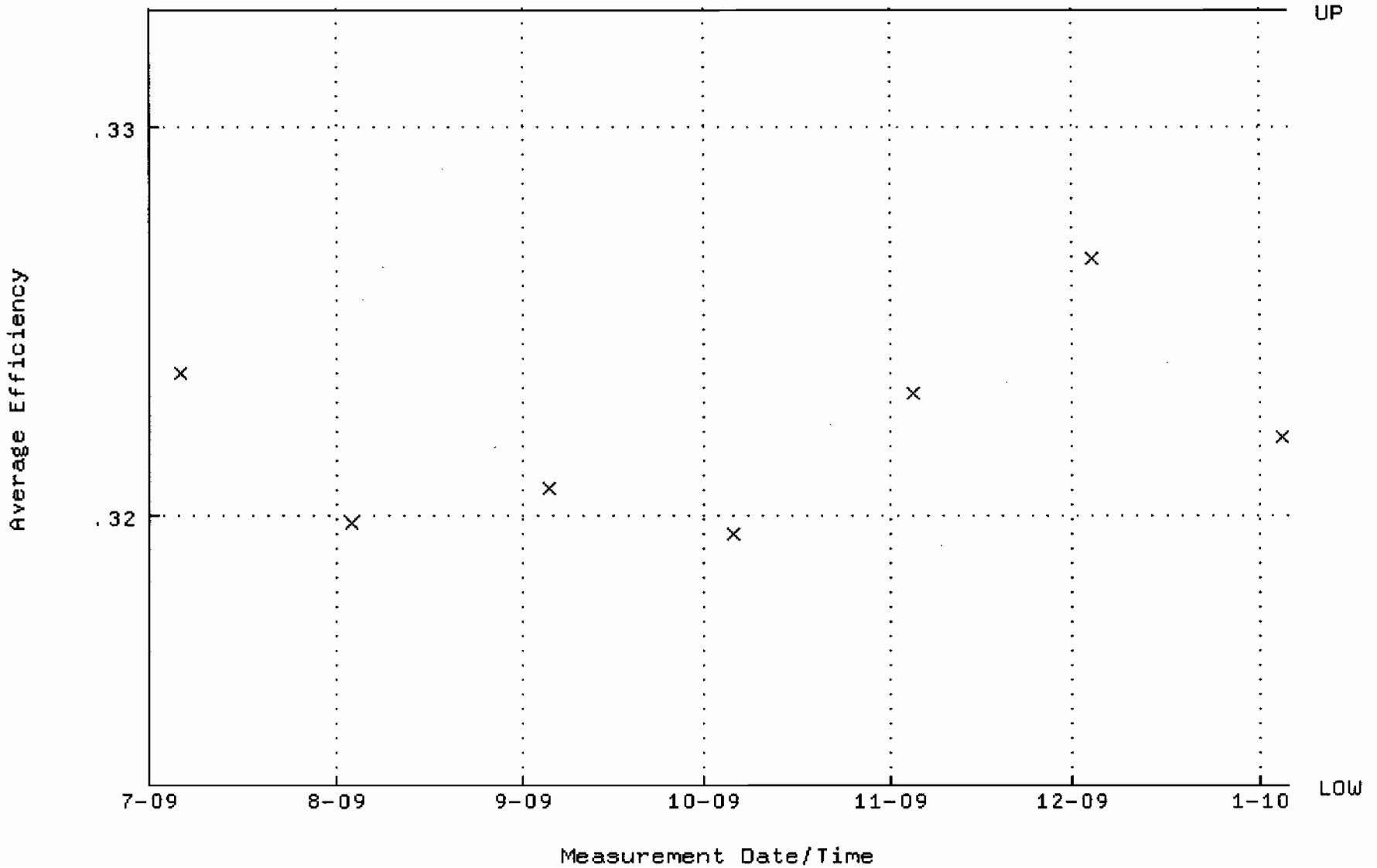
Total Uranium Activity	-1.1551E+00	ug/g
Total Uranium Counting Unc.	6.2907E+00	ug/g
Total Uranium Tpu	3.2095E-06	ug/g
Total Uranium Mda	4.9861E+00	ug/g

```
*****************************************************************************
*                                                                           *
*                          GEL Laboratories LLC                             *
*                               2040 SAVAGE ROAD                            *
*                             CHARLESTON ,SC 29417                          *
*                              GROSS GAMMA REPORT                           *
*                                                                           *
*                                                                           *
*****************************************************************************
*                                                                           *
*   BATCH ID      : 942718                    SAMPLE ID   : G1202018264     *
*   ANALYST       : MXR1                      DETECTOR    : GAM14           *
*   SAMPLE DATE   : 19-JAN-2010 00:00:00.00   COUNT TIME :    0 01:00:00.00 *
*   ANALYSIS DATE: 26-JAN-2010 14:19:20.89    SAMPLE ALQT:  151.730 GRAM    *
*                                                                           *
*****************************************************************************

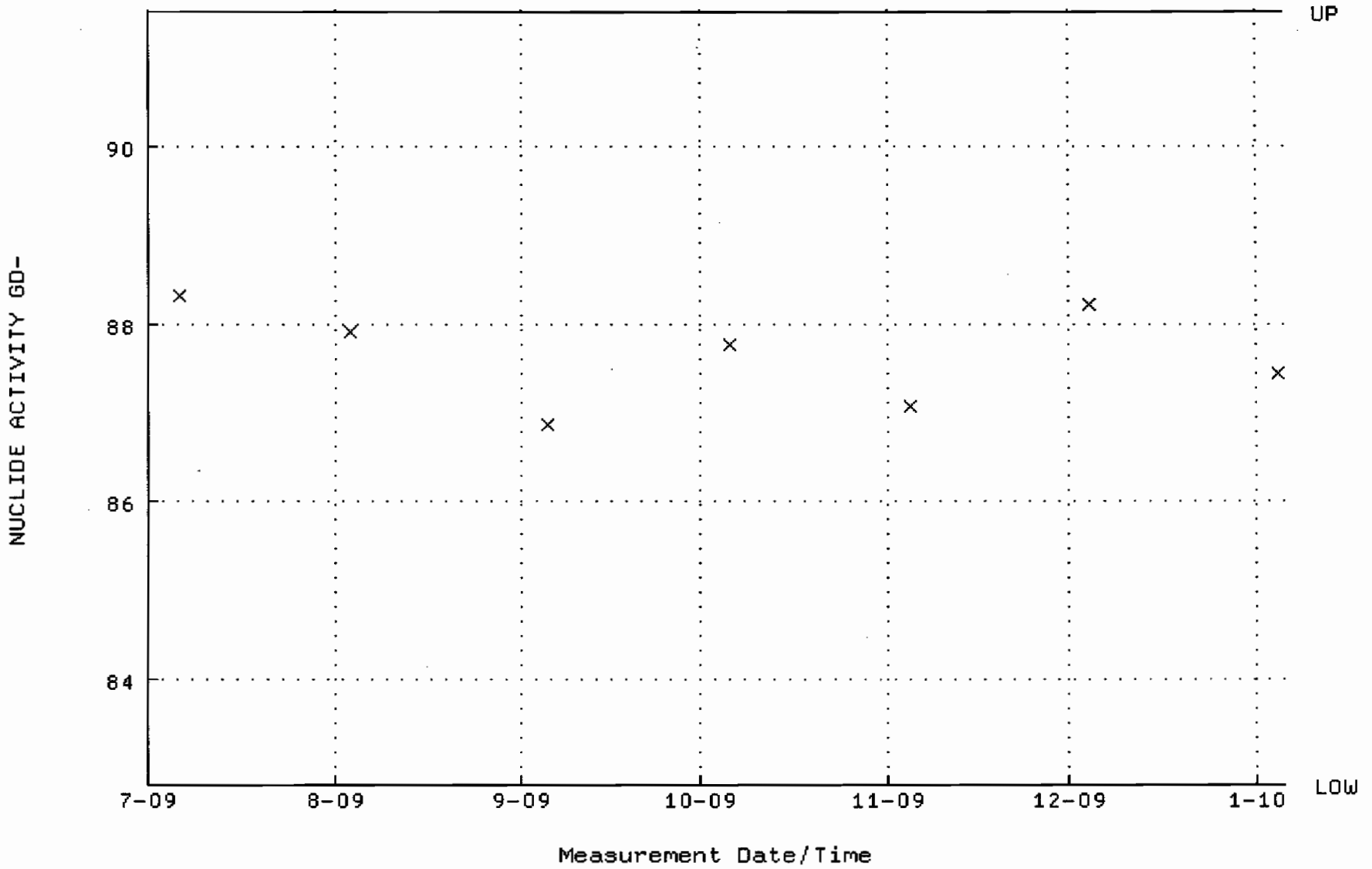

        GROSS GAMMA ACTIVITY (pCi/GRAM  ) : 3.000E+01
        GROSS GAMMA ERROR   (pCi/GRAM  )  : 3.131E+00
        GROSS GAMMA MDA     (pCi/GRAM  )  : 6.514E+00
        GROSS GAMMA DLC     (pCi/GRAM  )  : 3.196E+00
```

BACKGROUND AND EFFICIENCY DATA

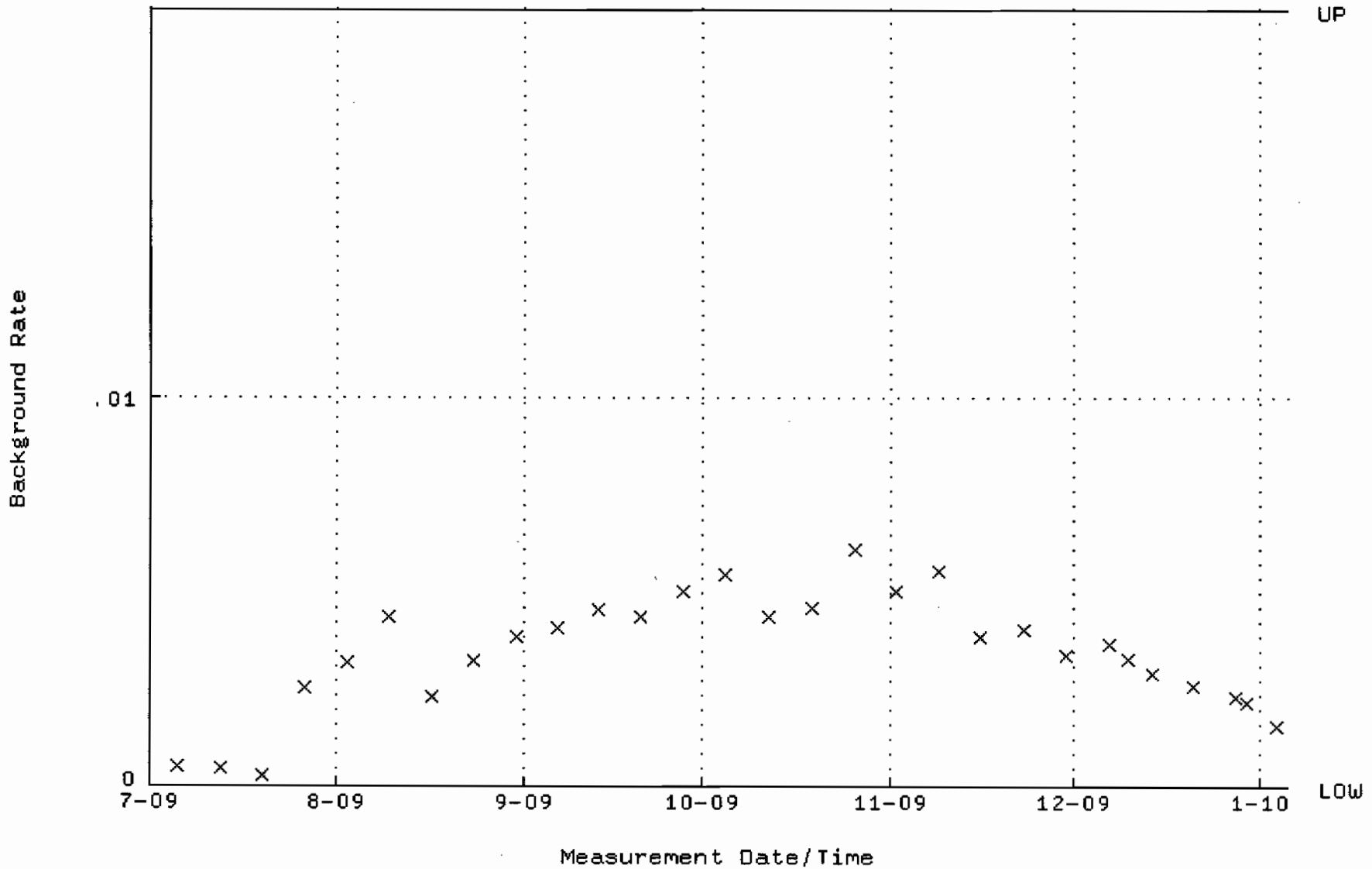
QA filename : DKA100:[ENV_ALPHA.QA.W]W040.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JUL-2009 09:46:16 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.313016 through 0.333016



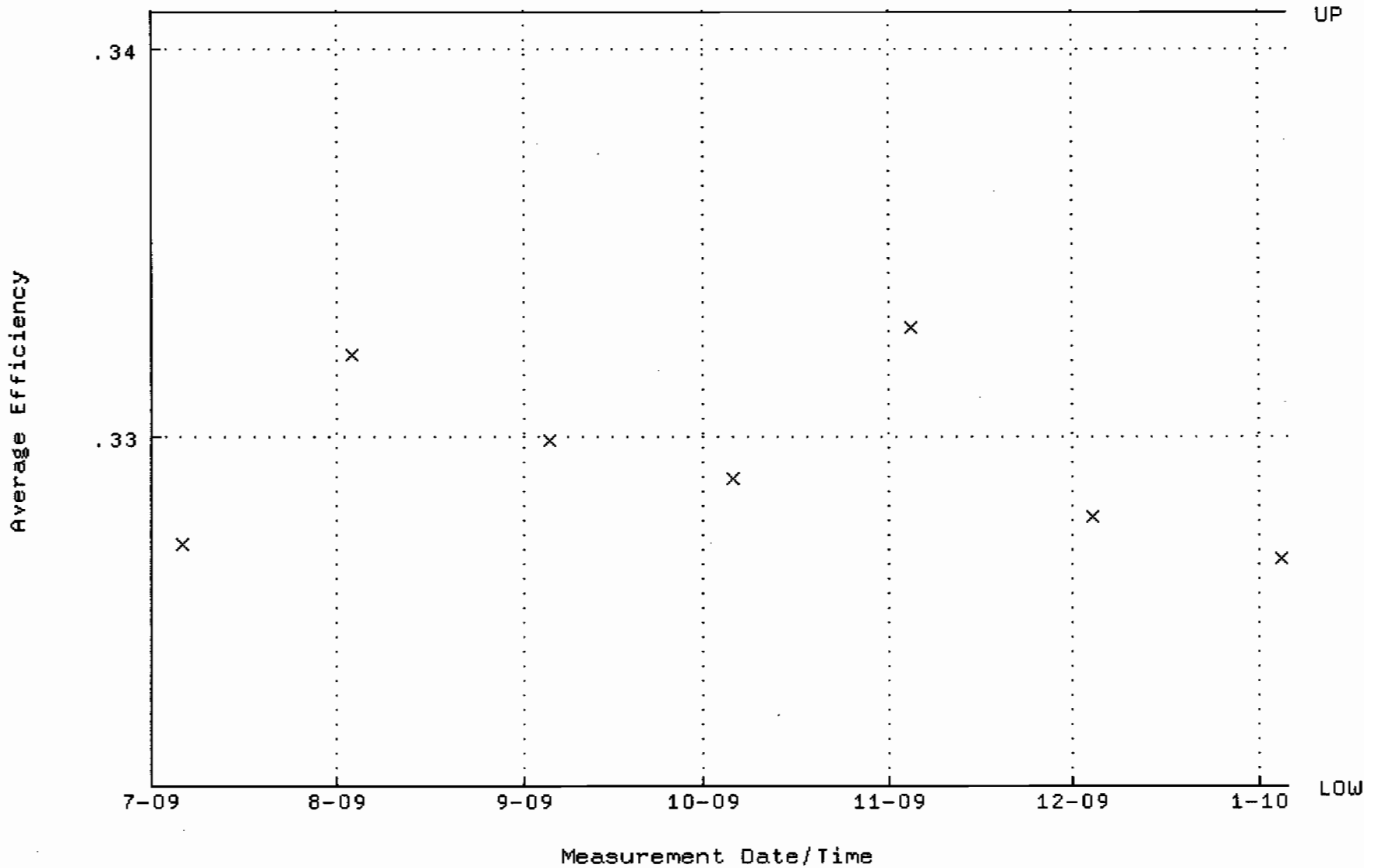
QA filename : DKA100:[ENV_ALPHA.QA.W]W040.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JUL-2009 09:46:16 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 82.8065 through 91.5229



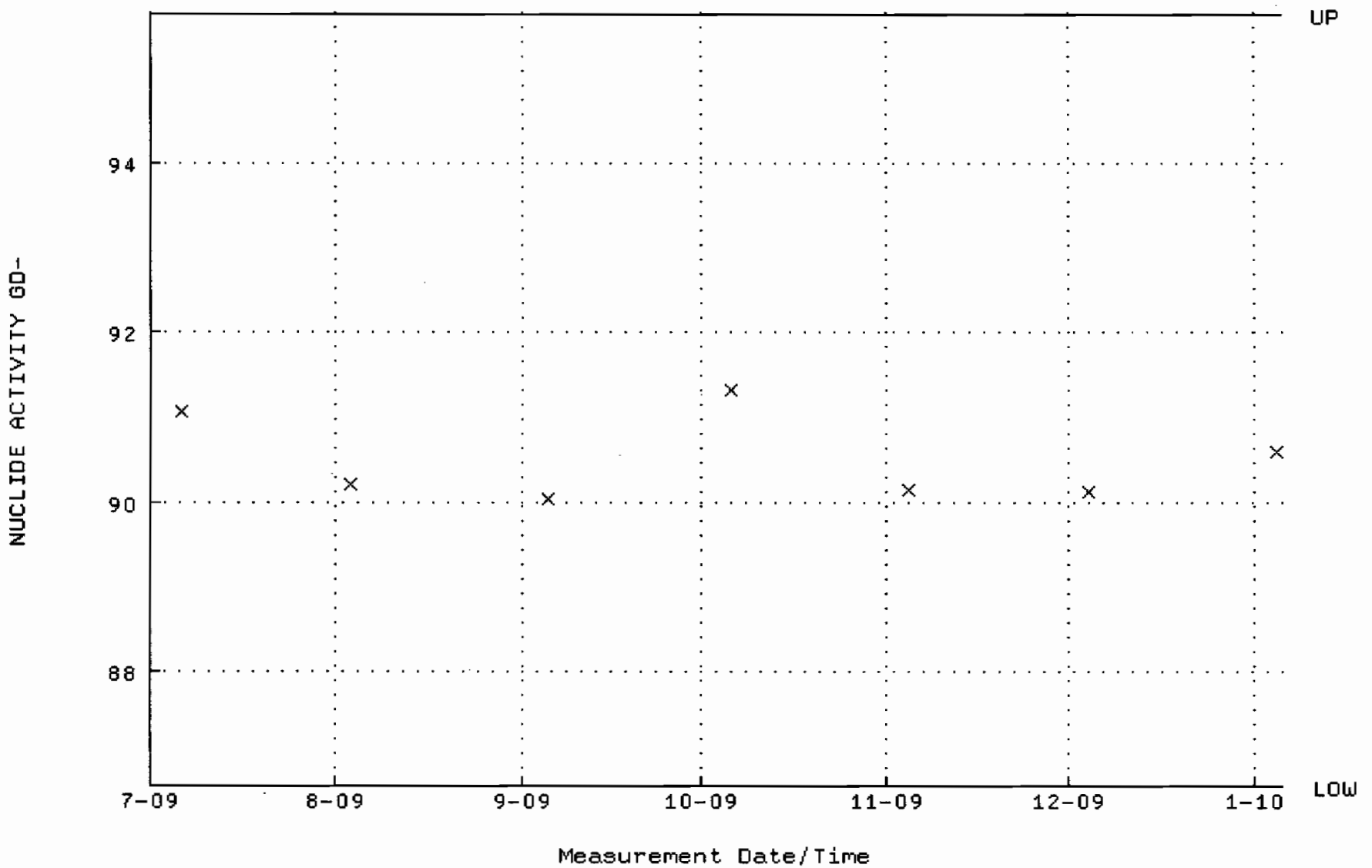
QA filename : DKA100:[ENV_ALPHA.QA.B]B040.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:00 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



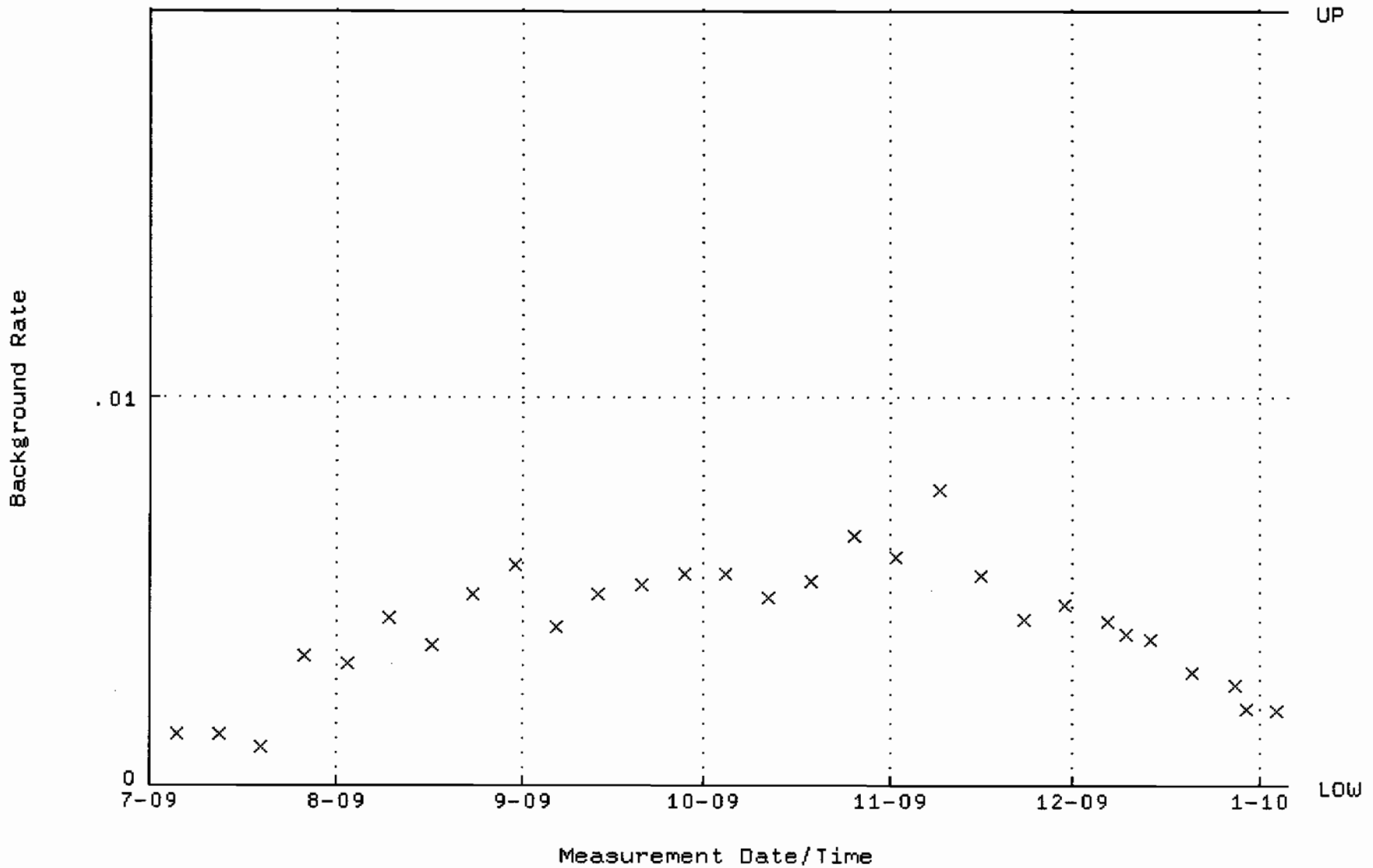
QA filename : DKA100:[ENV_ALPHA.QA.W]W041.QAF;5
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JUL-2009 09:46:16 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.320943 through 0.340943



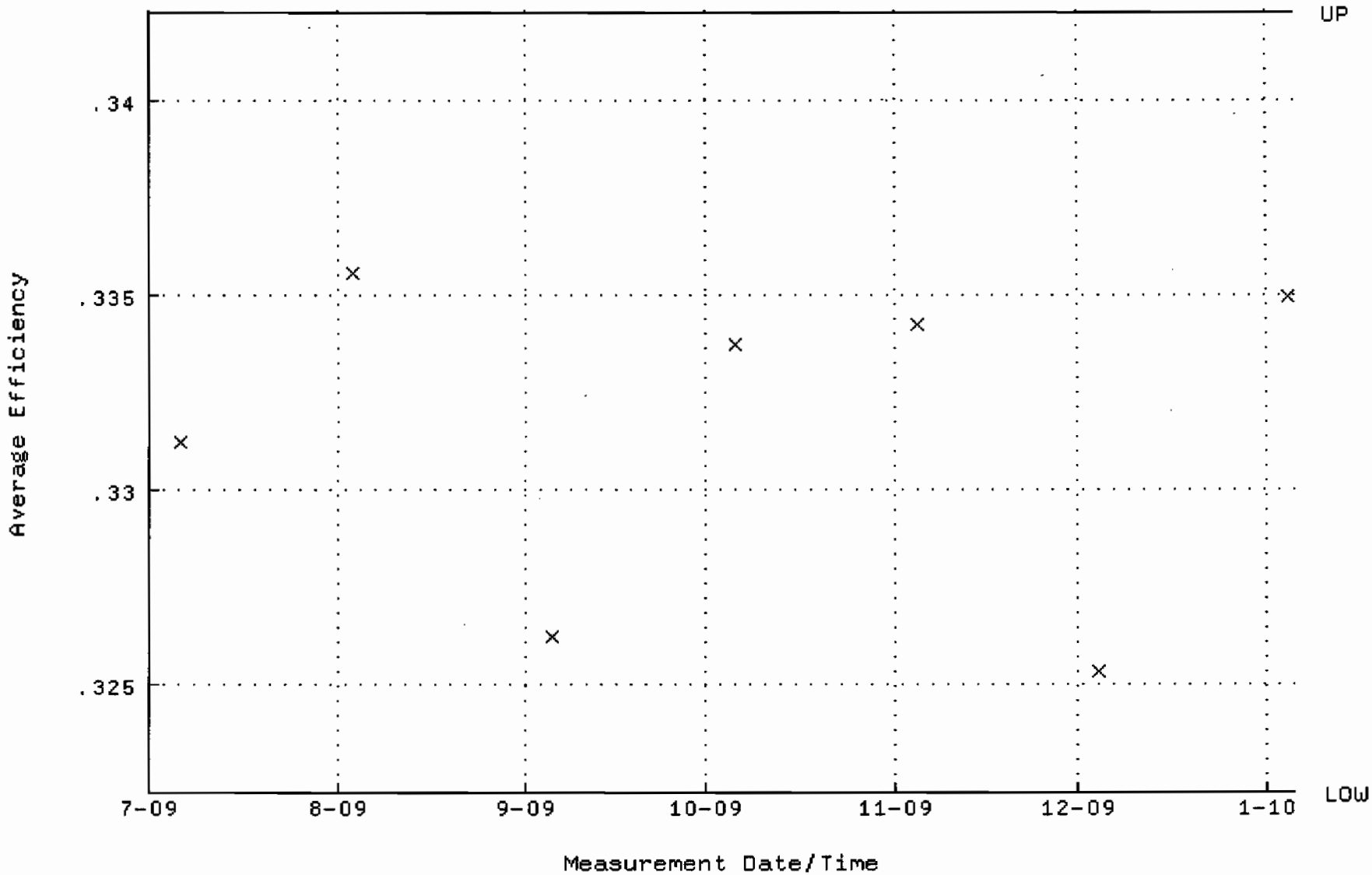
QA filename : DKA100:[ENV_ALPHA.QA.W]W041.QAF;5
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JUL-2009 09:46:16 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 86.6435 through 95.7639



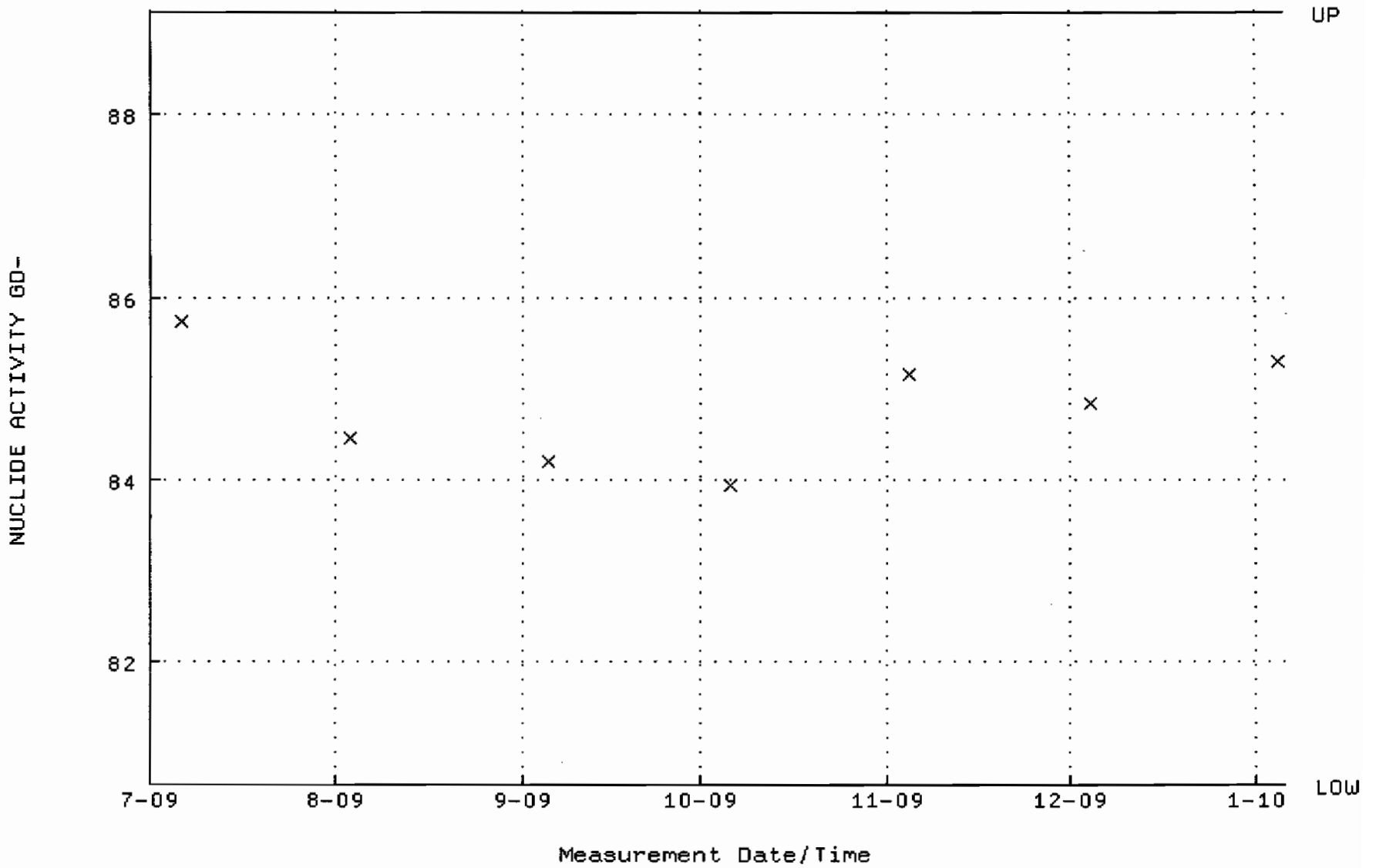
QA filename : DKA100:[ENV_ALPHA.QA.B]B041.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:00 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



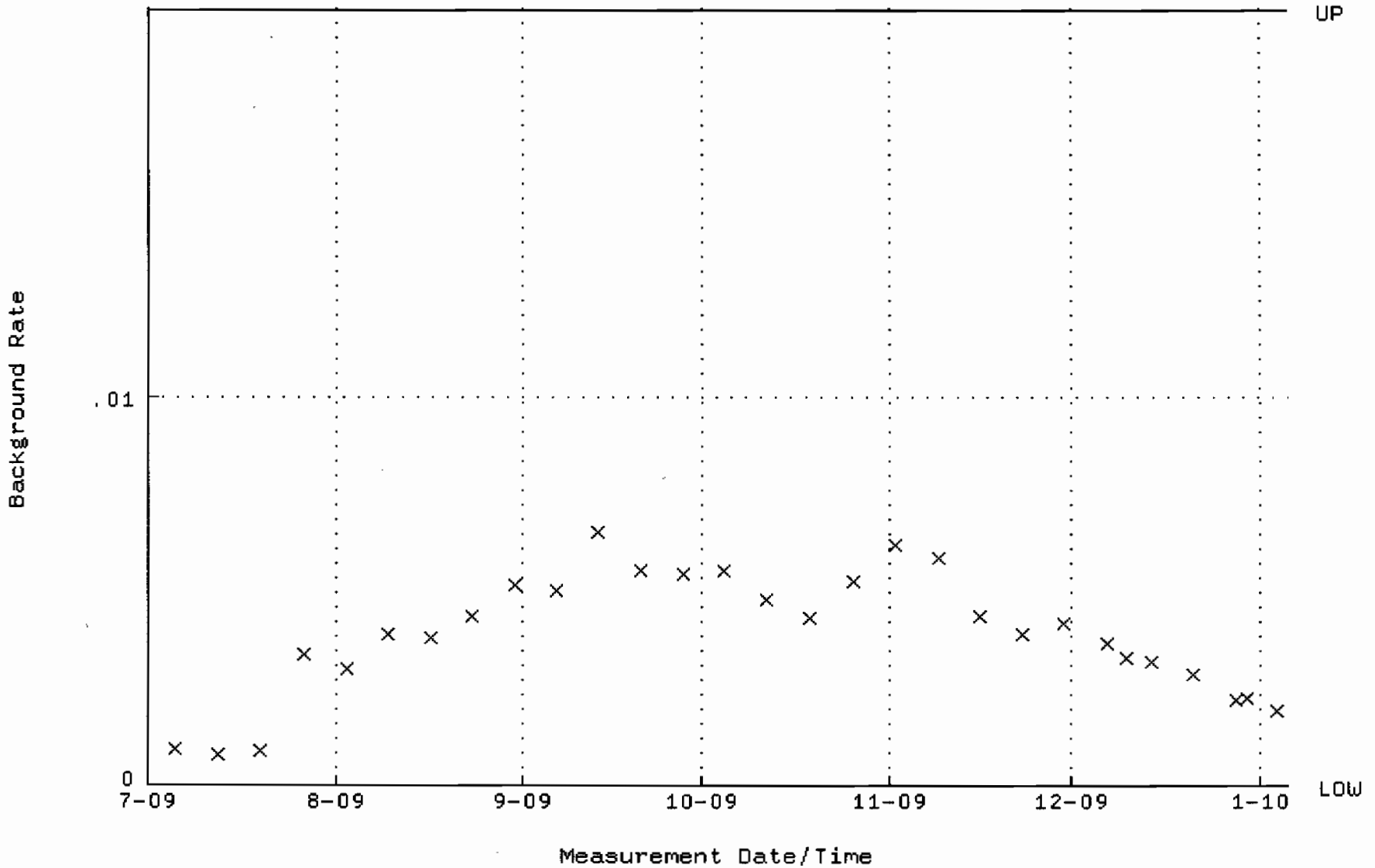
QA filename : DKA100:[ENV_ALPHA.QA.W]W042.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JUL-2009 09:46:16 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.322243 through 0.342243



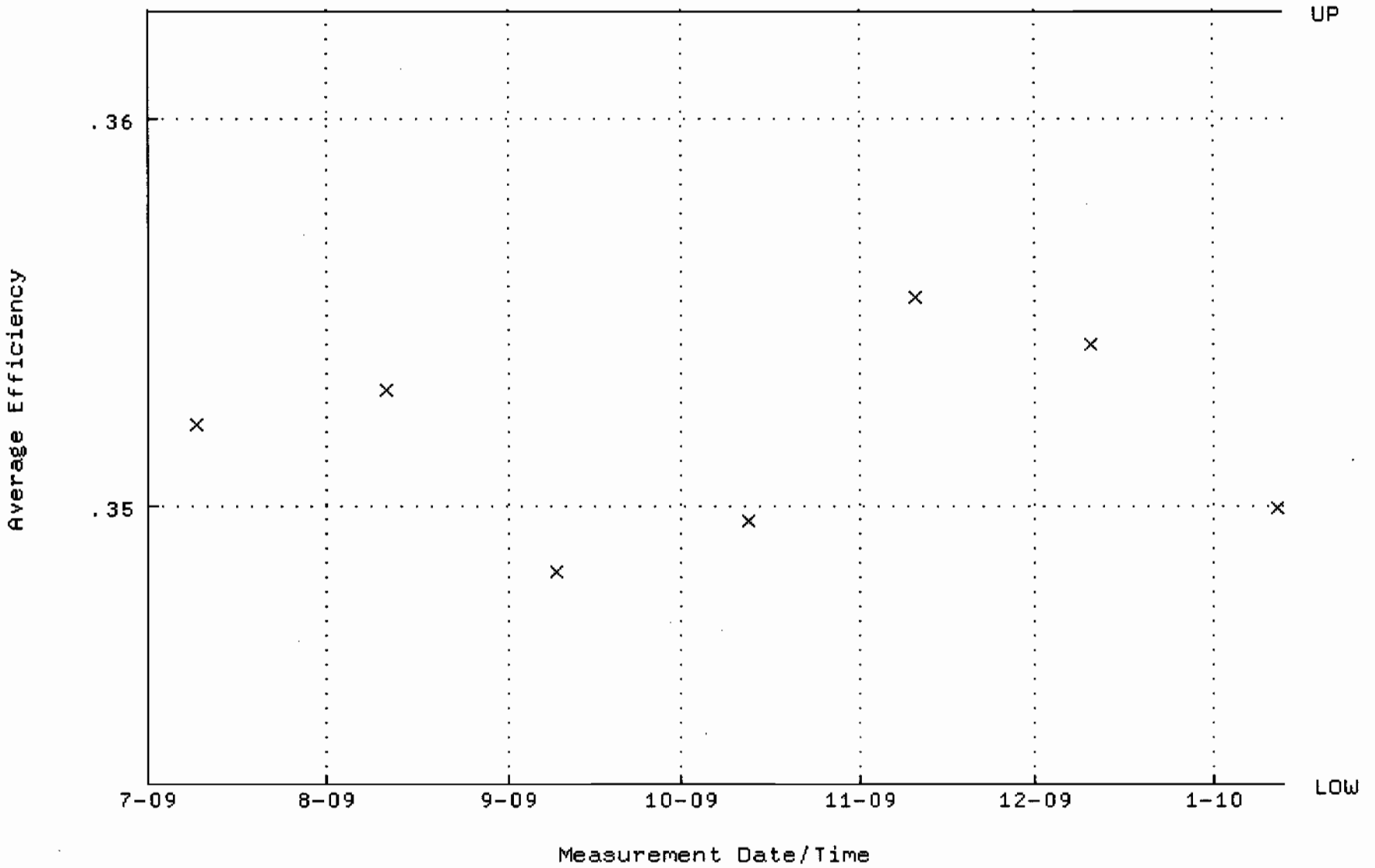
QA filename : DKA100:[ENV_ALPHA.QA.W]W042.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JUL-2009 09:46:16 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 80.6389 through 89.1273



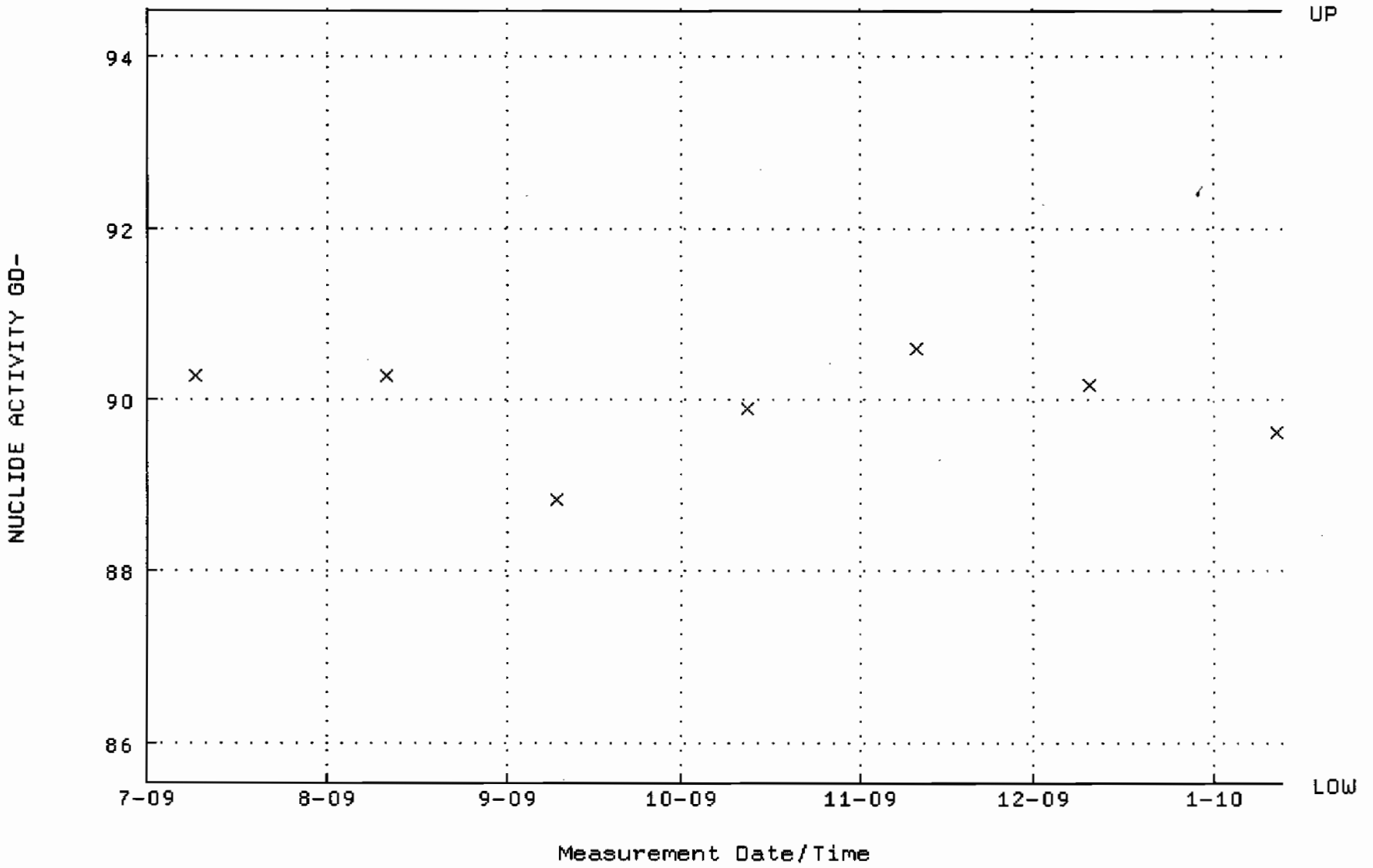
QA filename : DKA100:[ENV_ALPHA.QA.B]B042.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:00 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



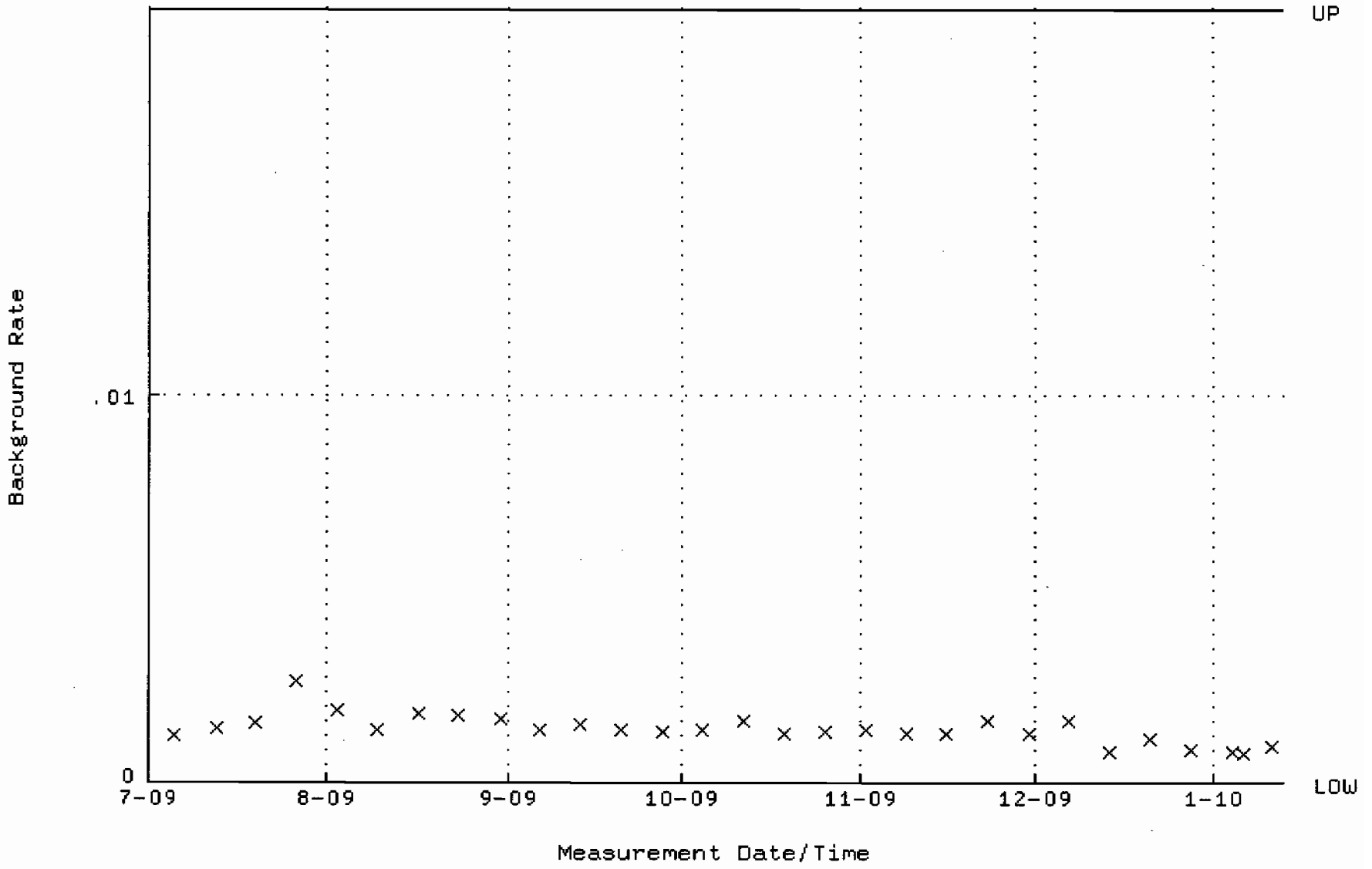
QA filename : DKA100:[ENV_ALPHA.QA.W]W070.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:10 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.342785 through 0.362785



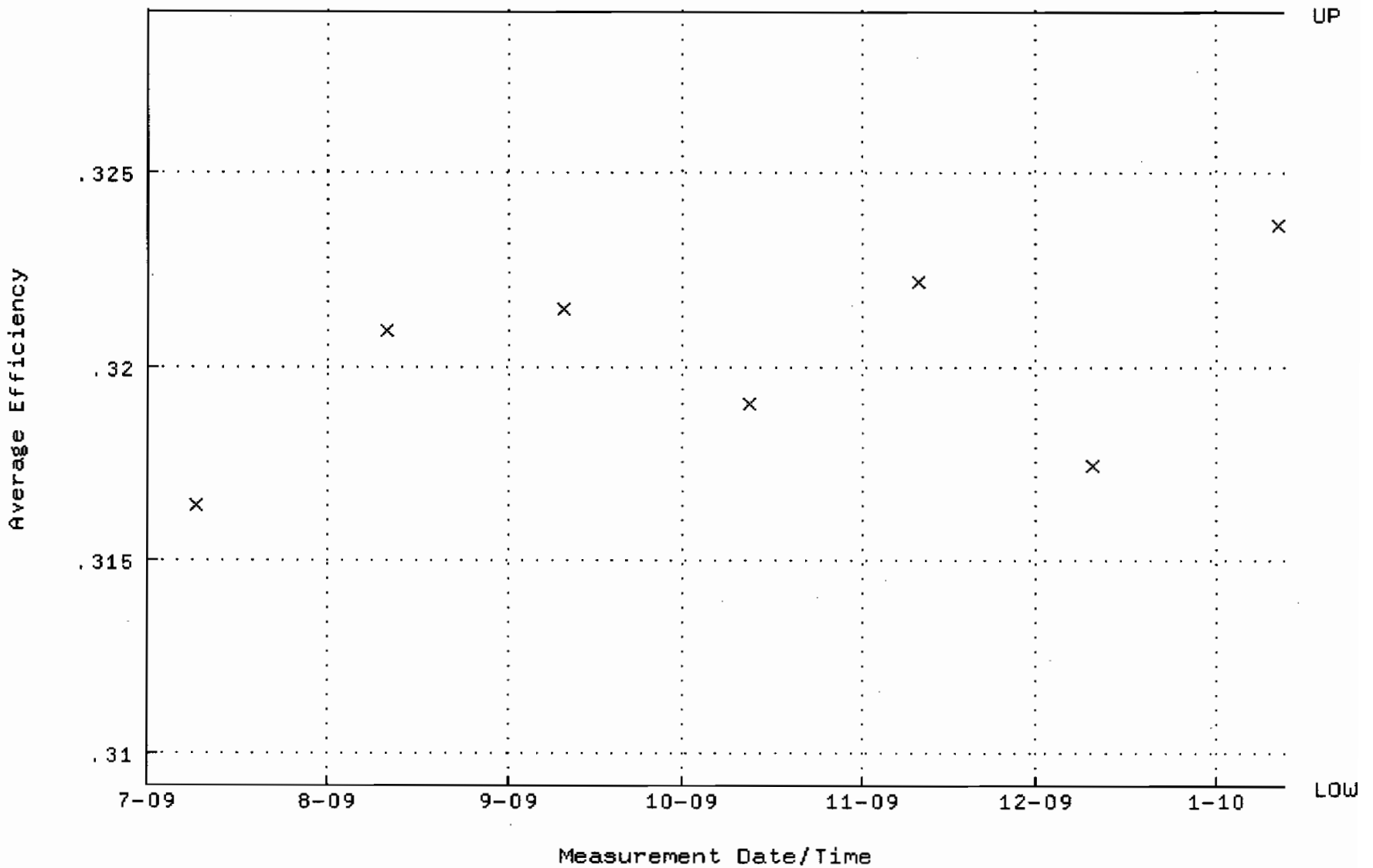
QA filename : DKA100:[ENV_ALPHA.QA.W]W070.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:10 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 85.5293 through 94.5323



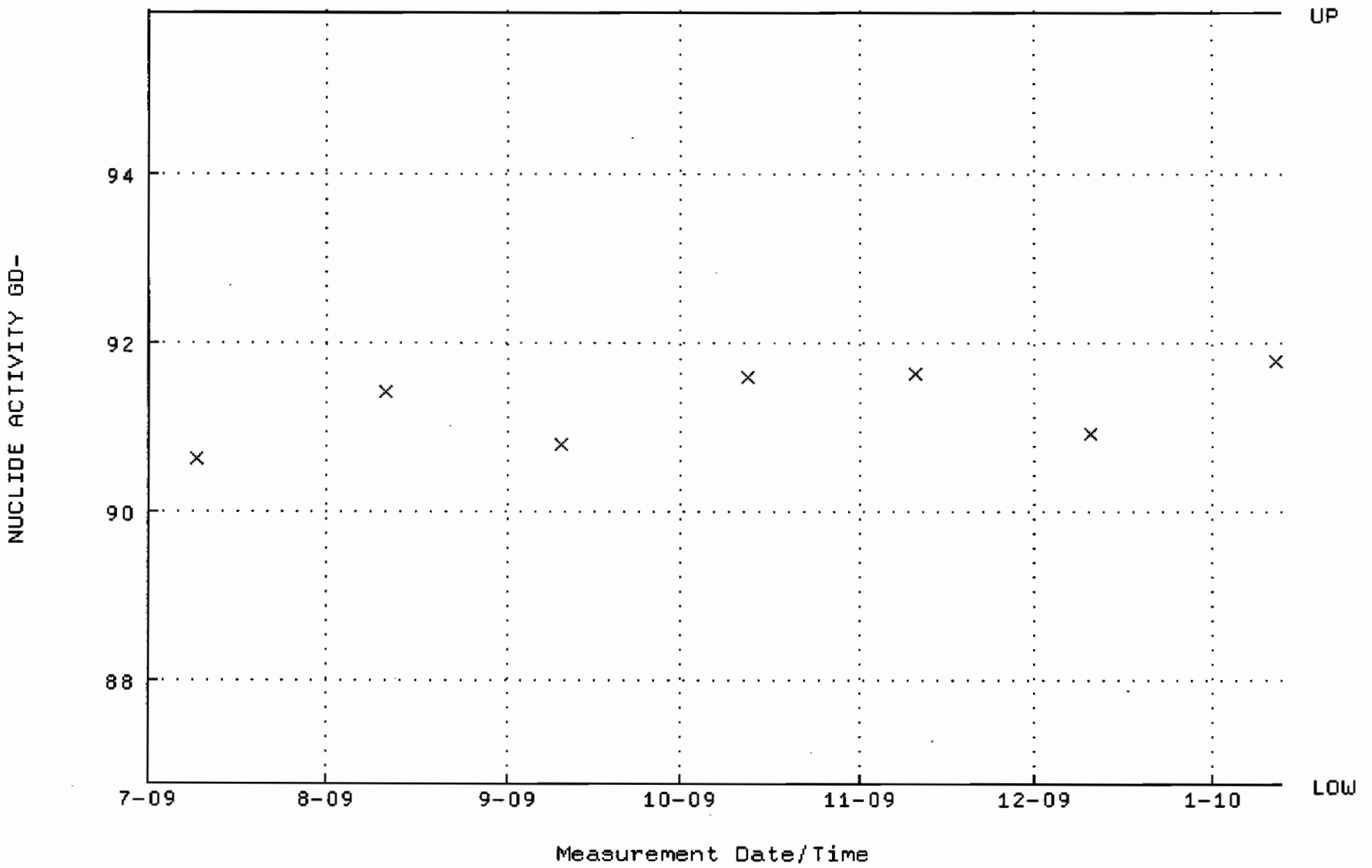
QA filename : DKA100:[ENV_ALPHA.QA.B]B070.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:01 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



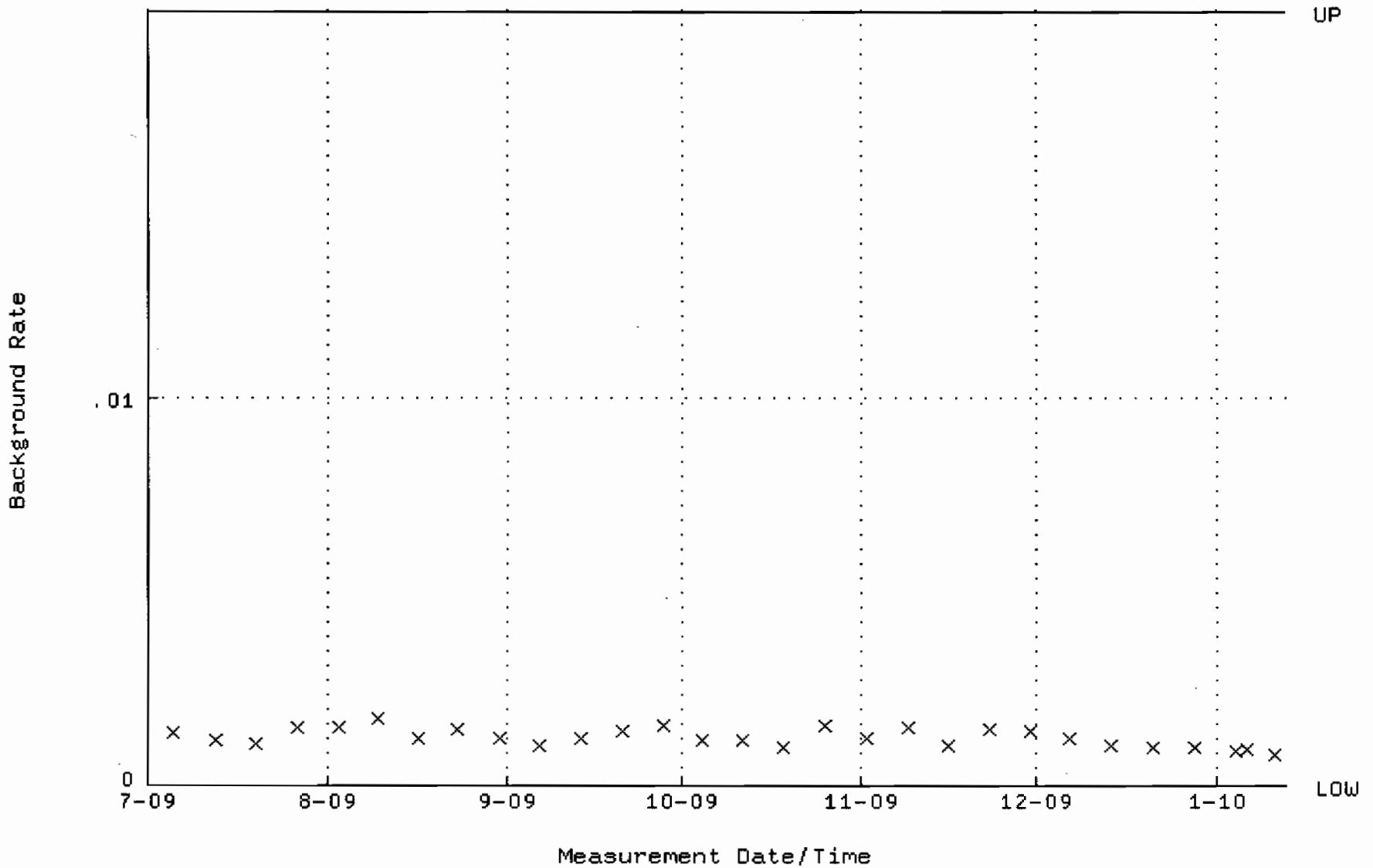
QA filename : DKA100:[ENV_ALPHA.QA.W]W071.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.309161 through 0.329161



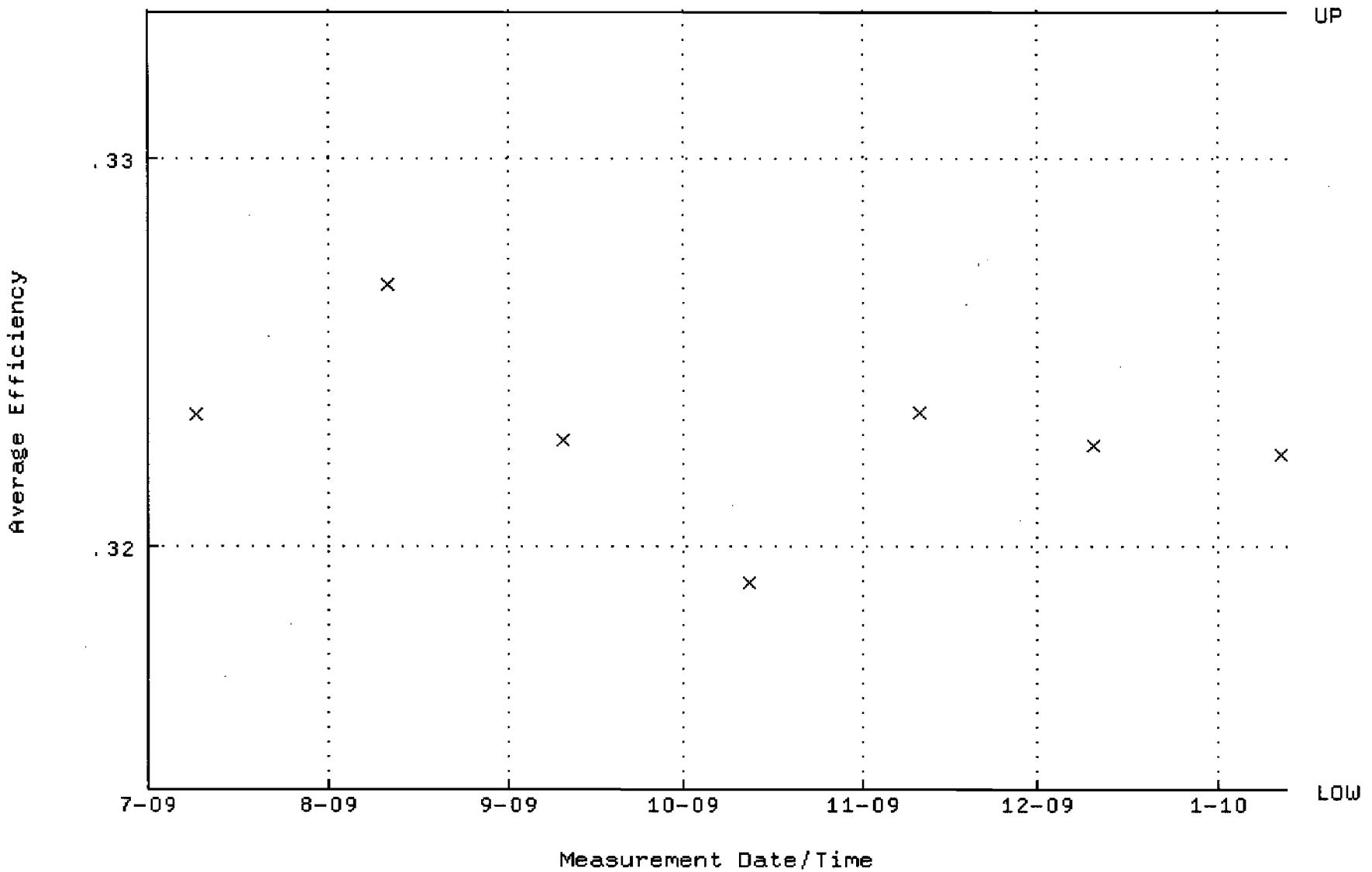
QA filename : DKA100:[ENV_ALPHA.QA.W]W071.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 86.7769 through 95.9113



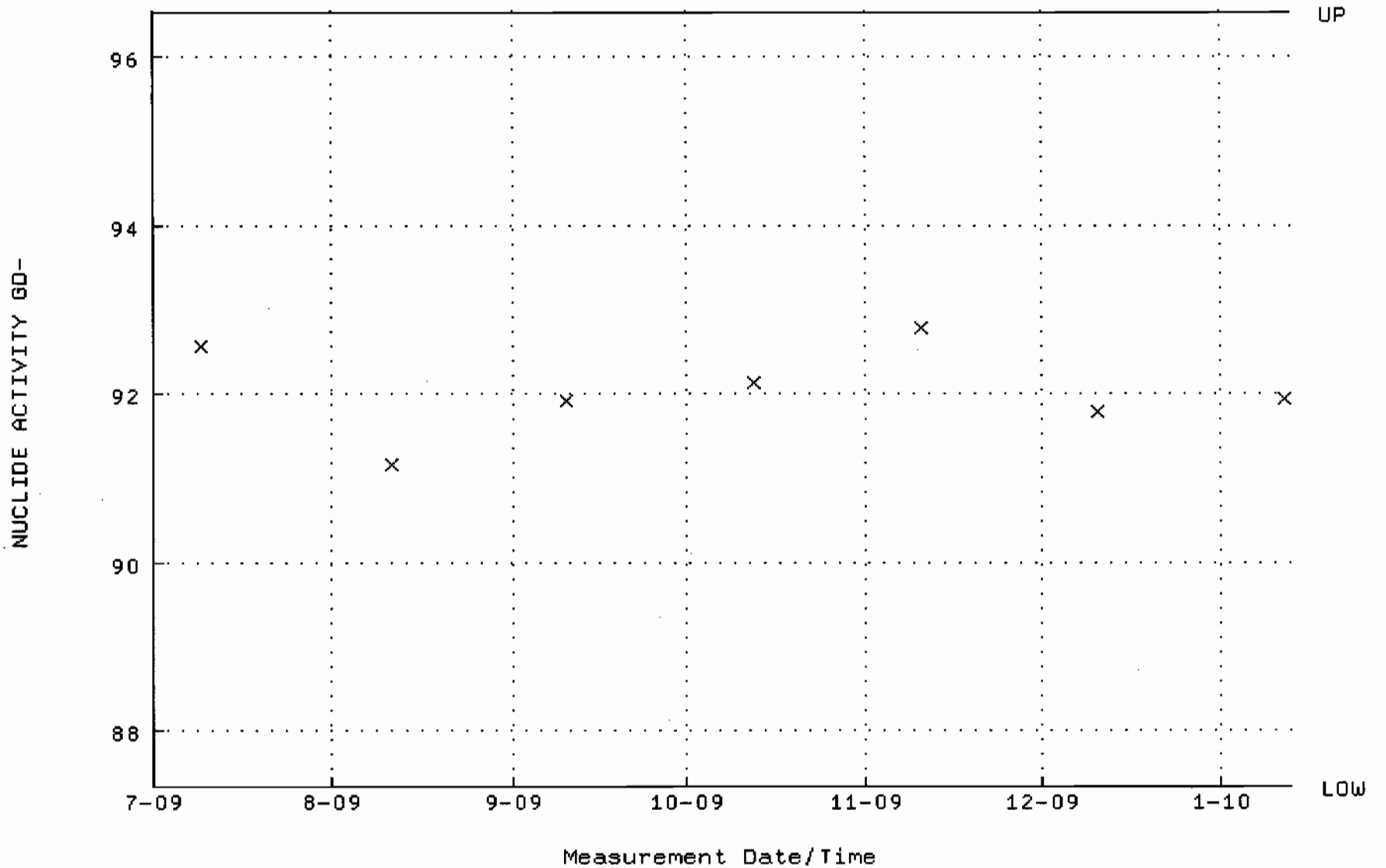
QA filename : DKA100:[ENV_ALPHA.QA.B]B071.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:02 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



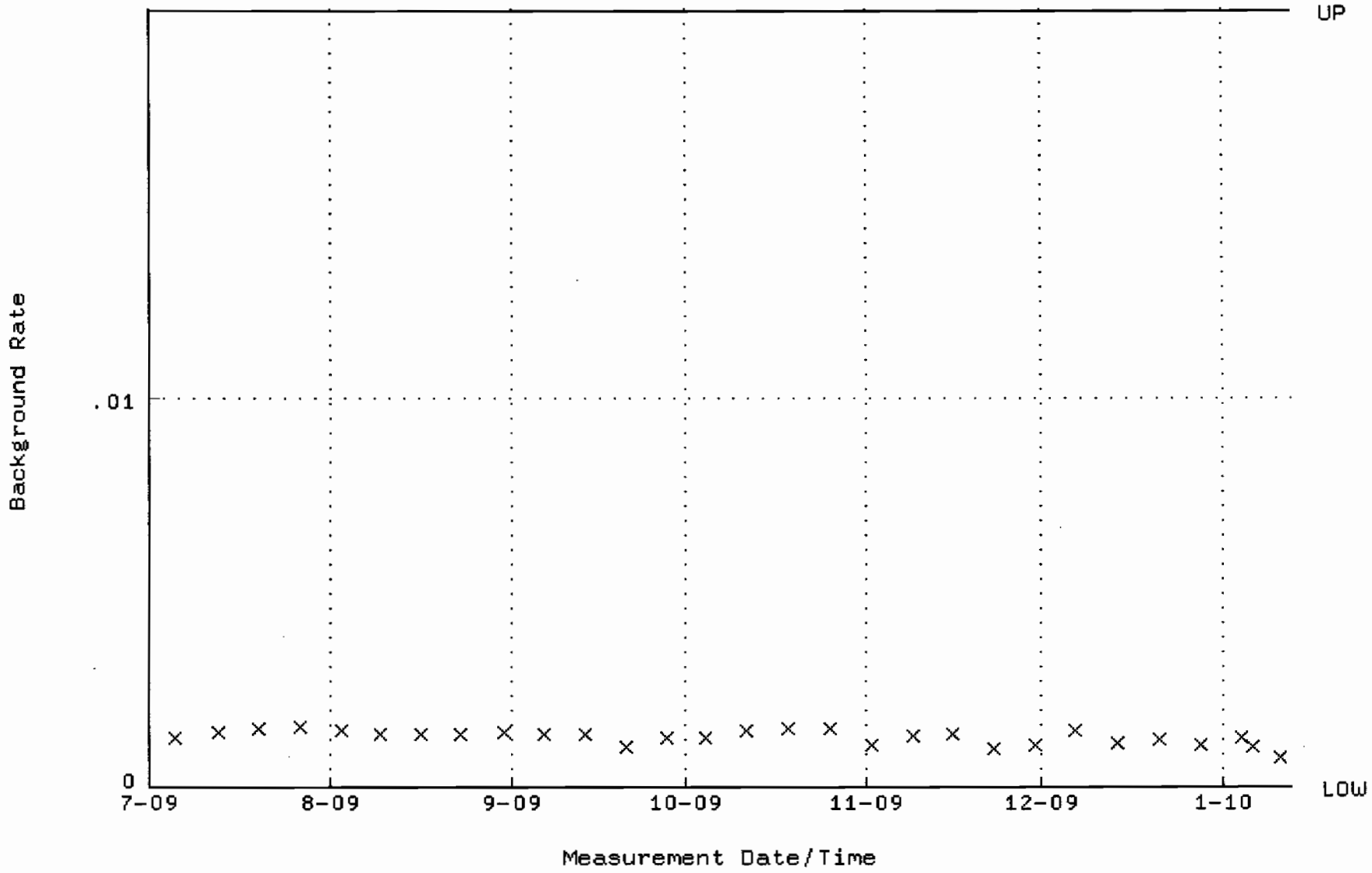
QA filename : DKA100:[ENV_ALPHA.QA.W]W072.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.313761 through 0.333761



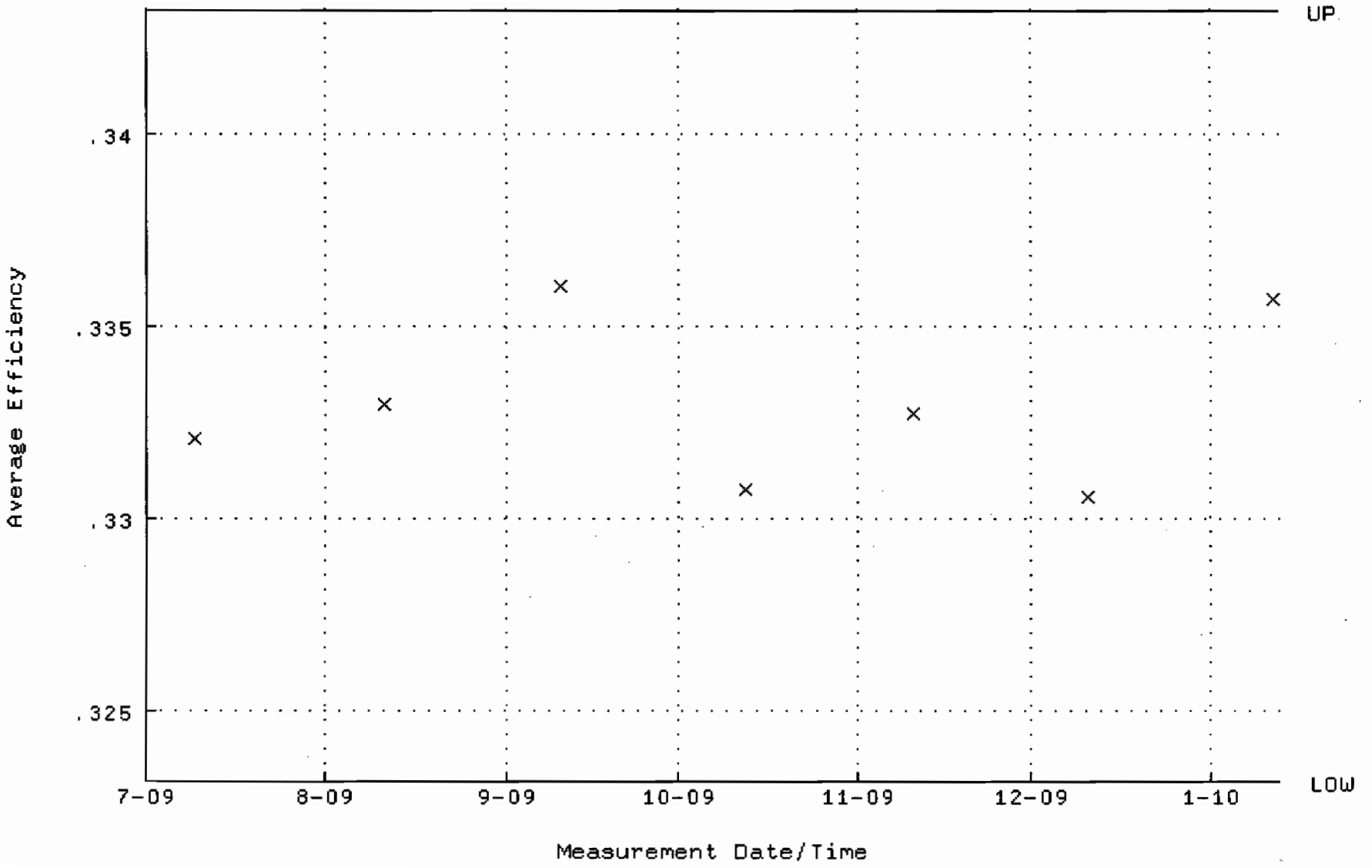
QA filename : DKA100:[ENV_ALPHA.QA.W]W072.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 87.3348 through 96.5280



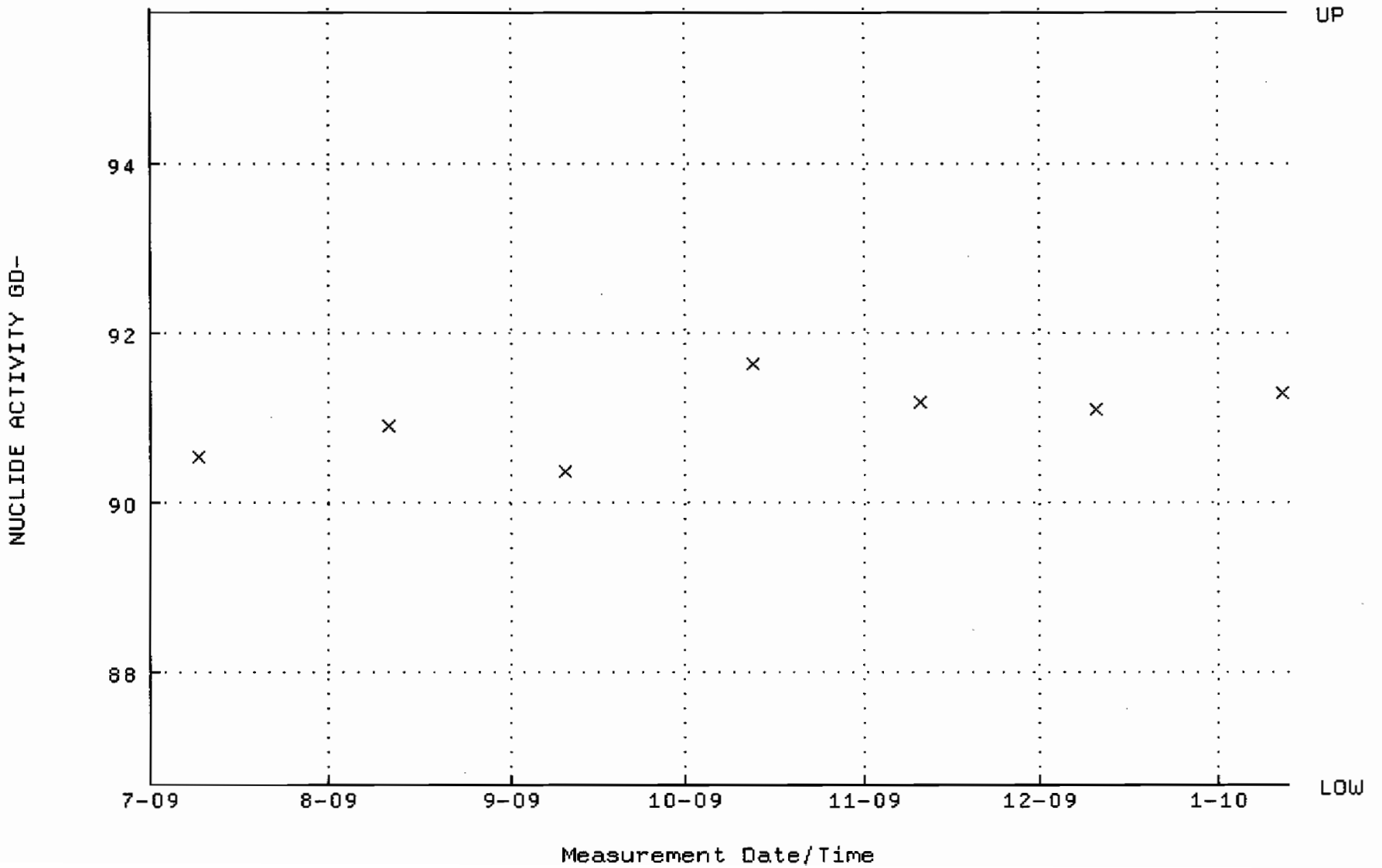
QA filename : DKA100:[ENV_ALPHA.QA.B]B072.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:02 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



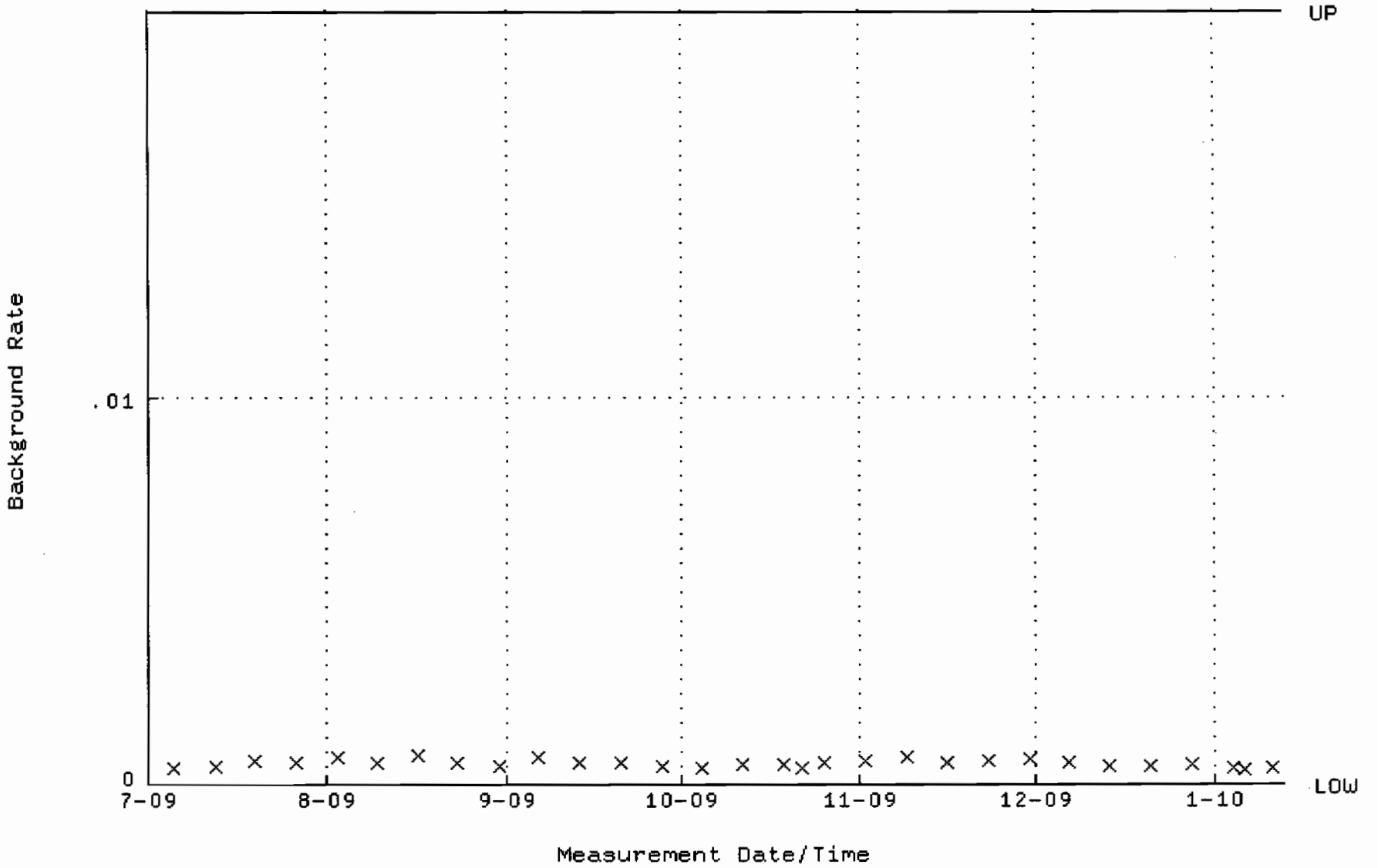
QA filename : DKA100:[ENV_ALPHA.QA.W]W073.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.323184 through 0.343184



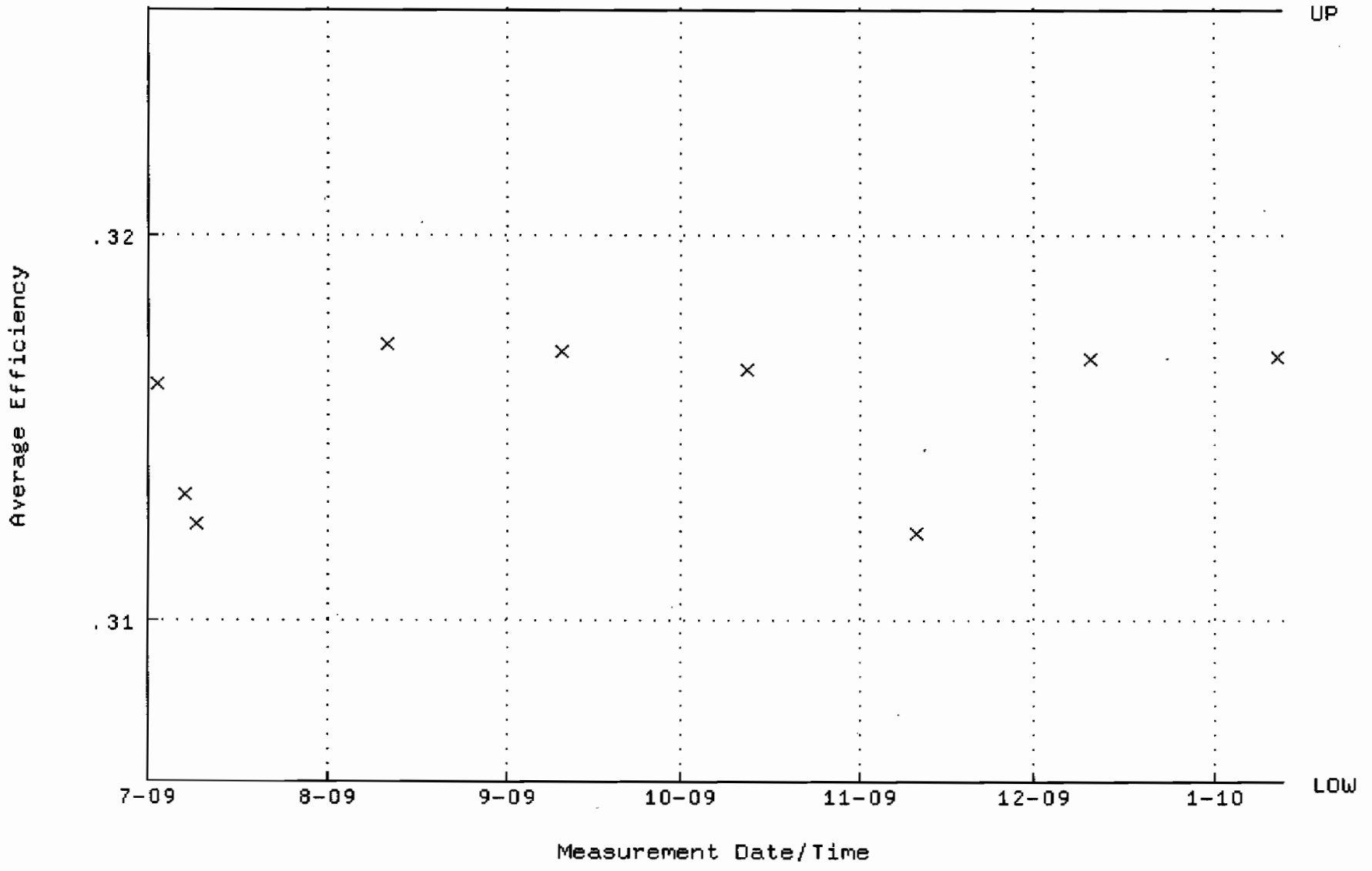
QA filename : DKA100:[ENV_ALPHA.QA.W]W073.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 86.6734 through 95.7970



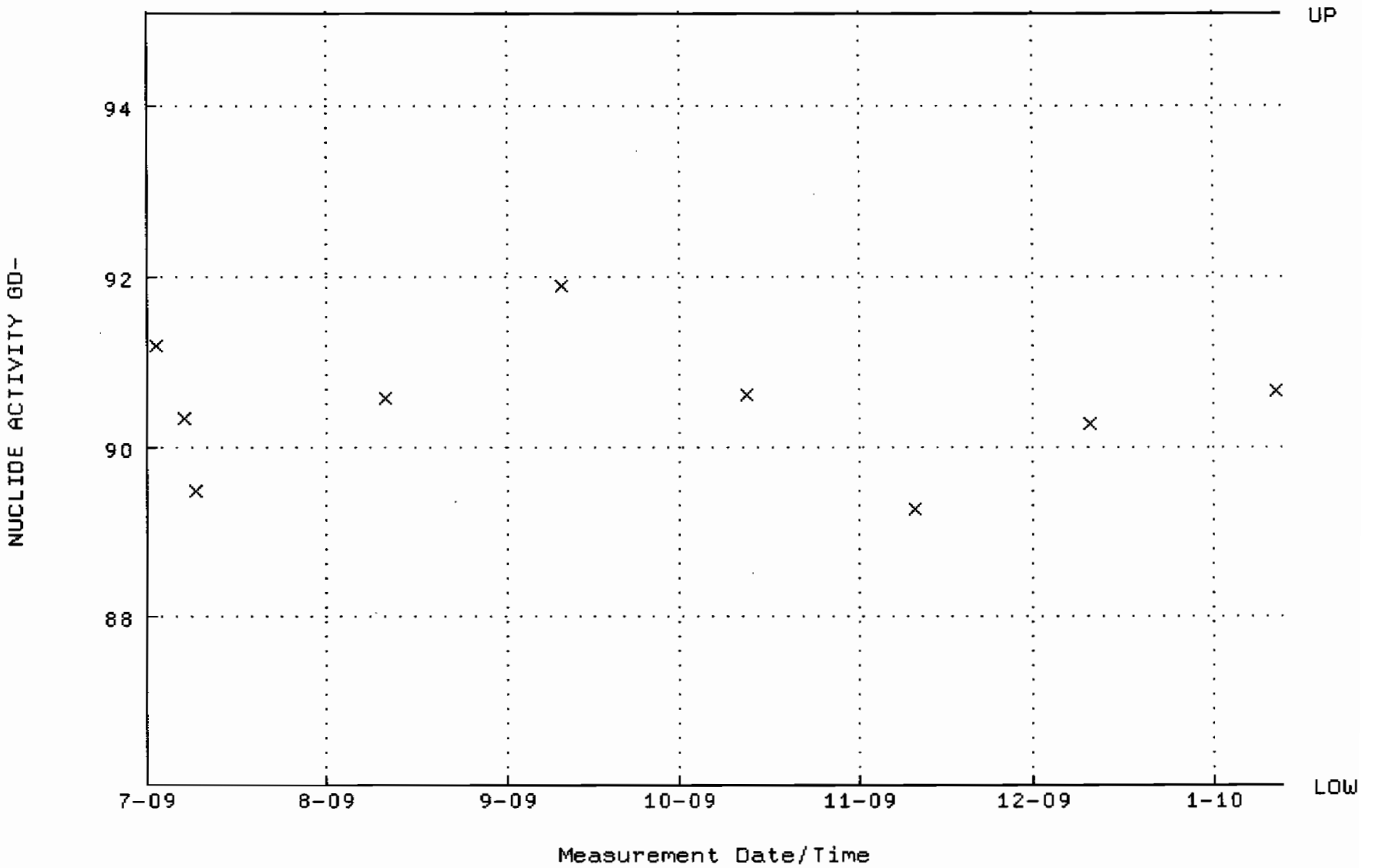
QA filename : DKA100:[ENV_ALPHA.QA.B]B073.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:02 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



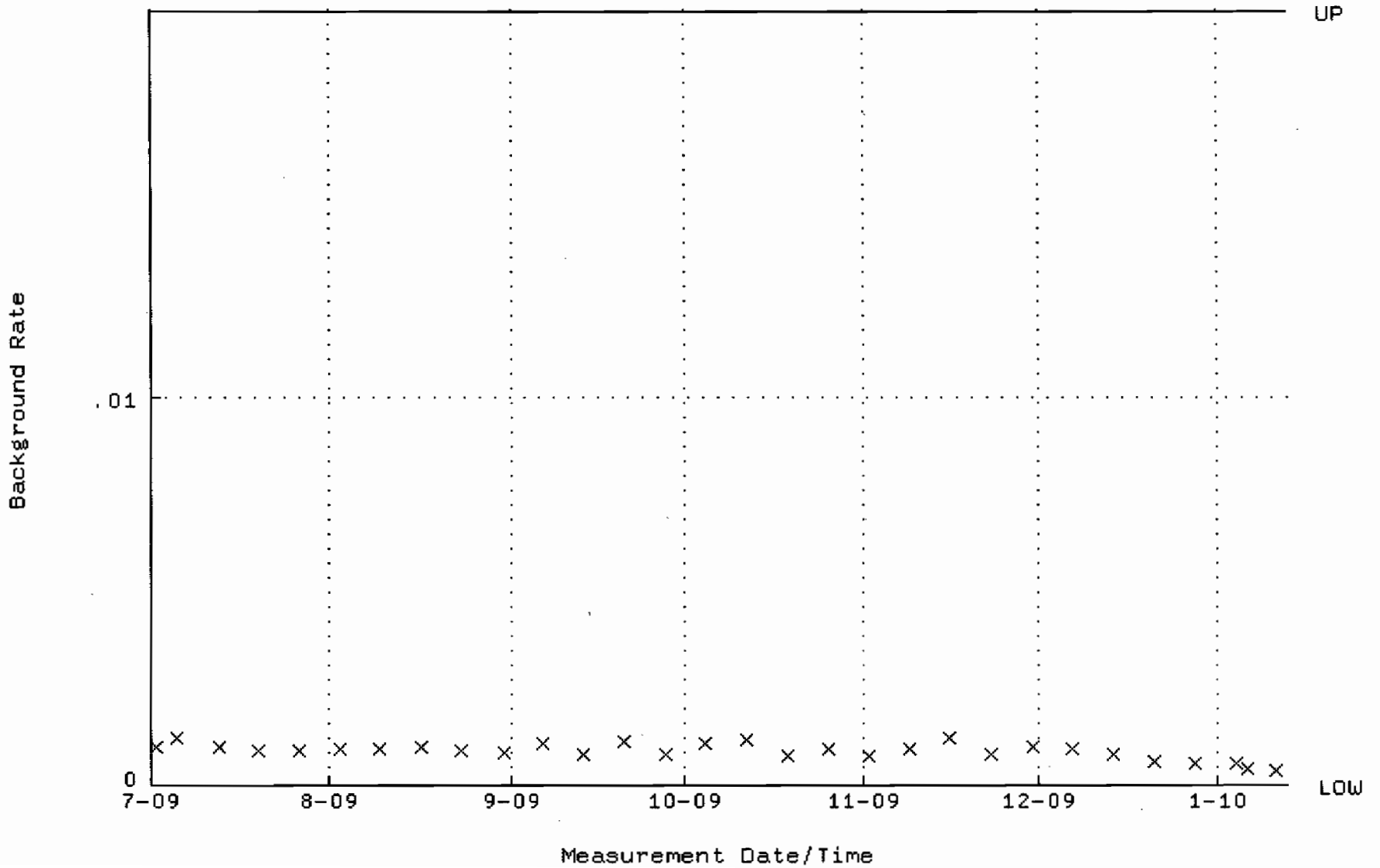
QA filename : DKA100:[ENV_ALPHA.QA.W]W074.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JUL-2009 15:04:13 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.305830 through 0.325830



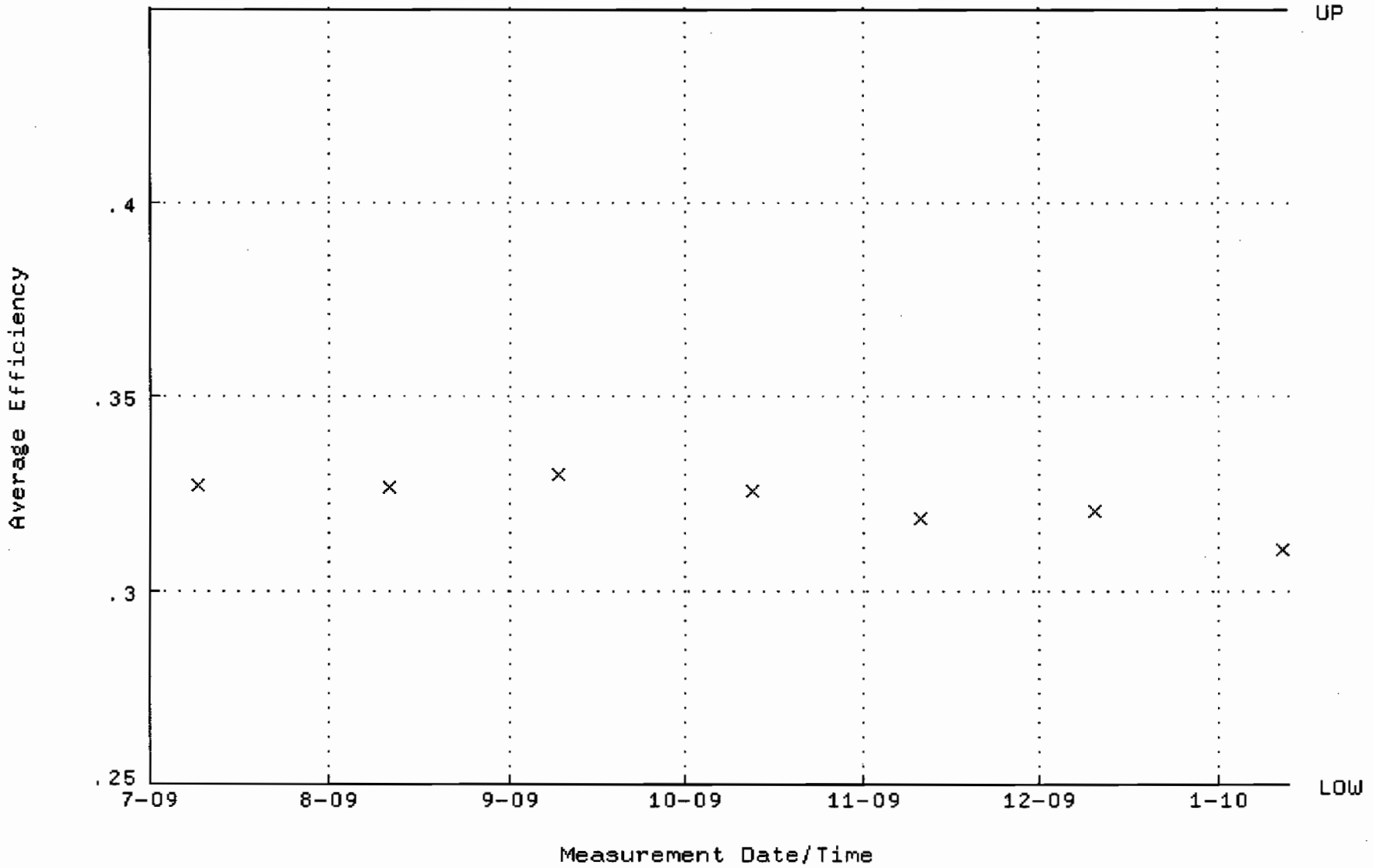
QA filename : DKA100:[ENV_ALPHA.QA.W]W074.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JUL-2009 15:04:13 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 86.0289 through 95.0845



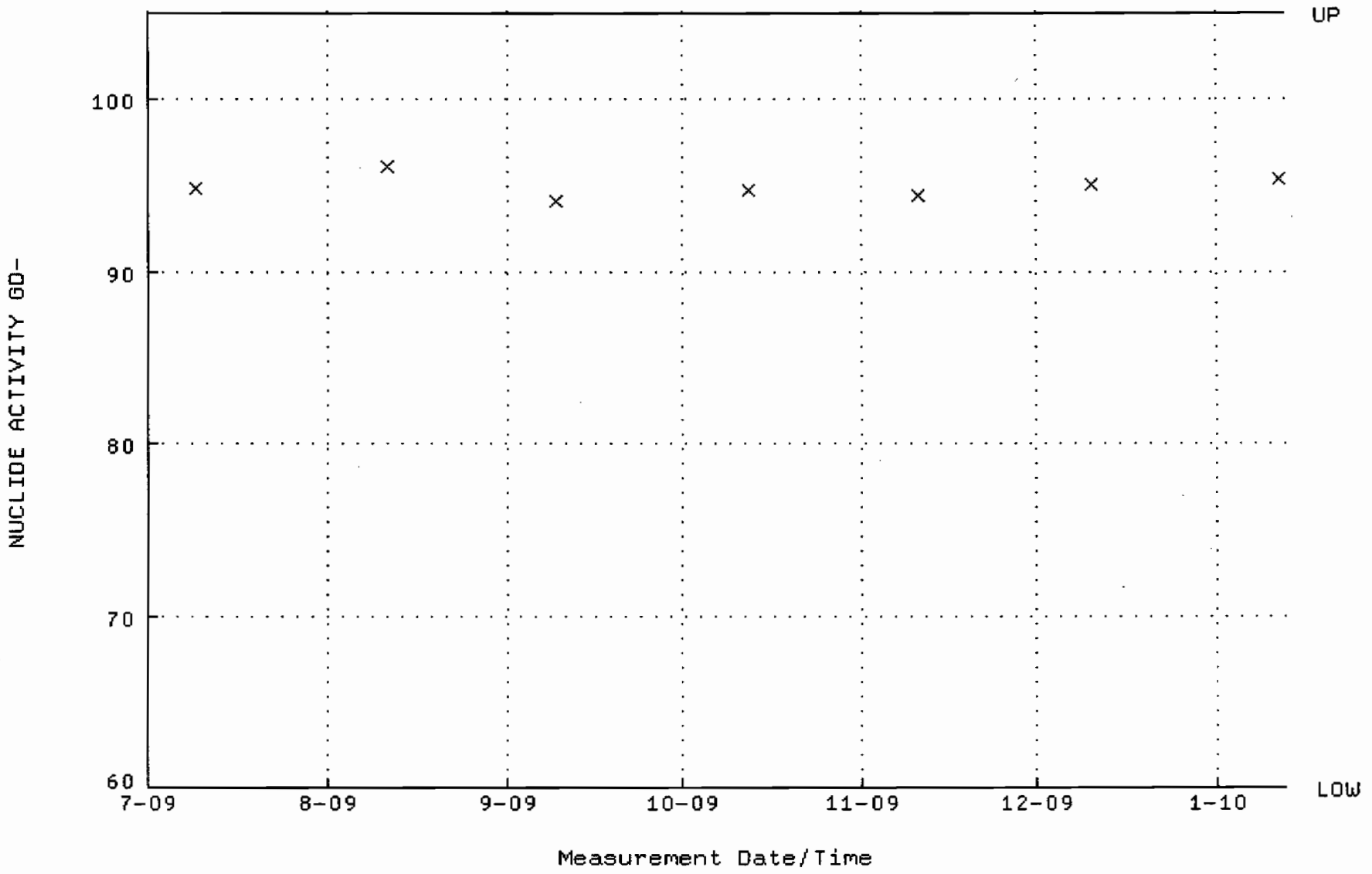
QA filename : DKA100:[ENV_ALPHA.QA.B]B074.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUL-2009 21:39:57 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



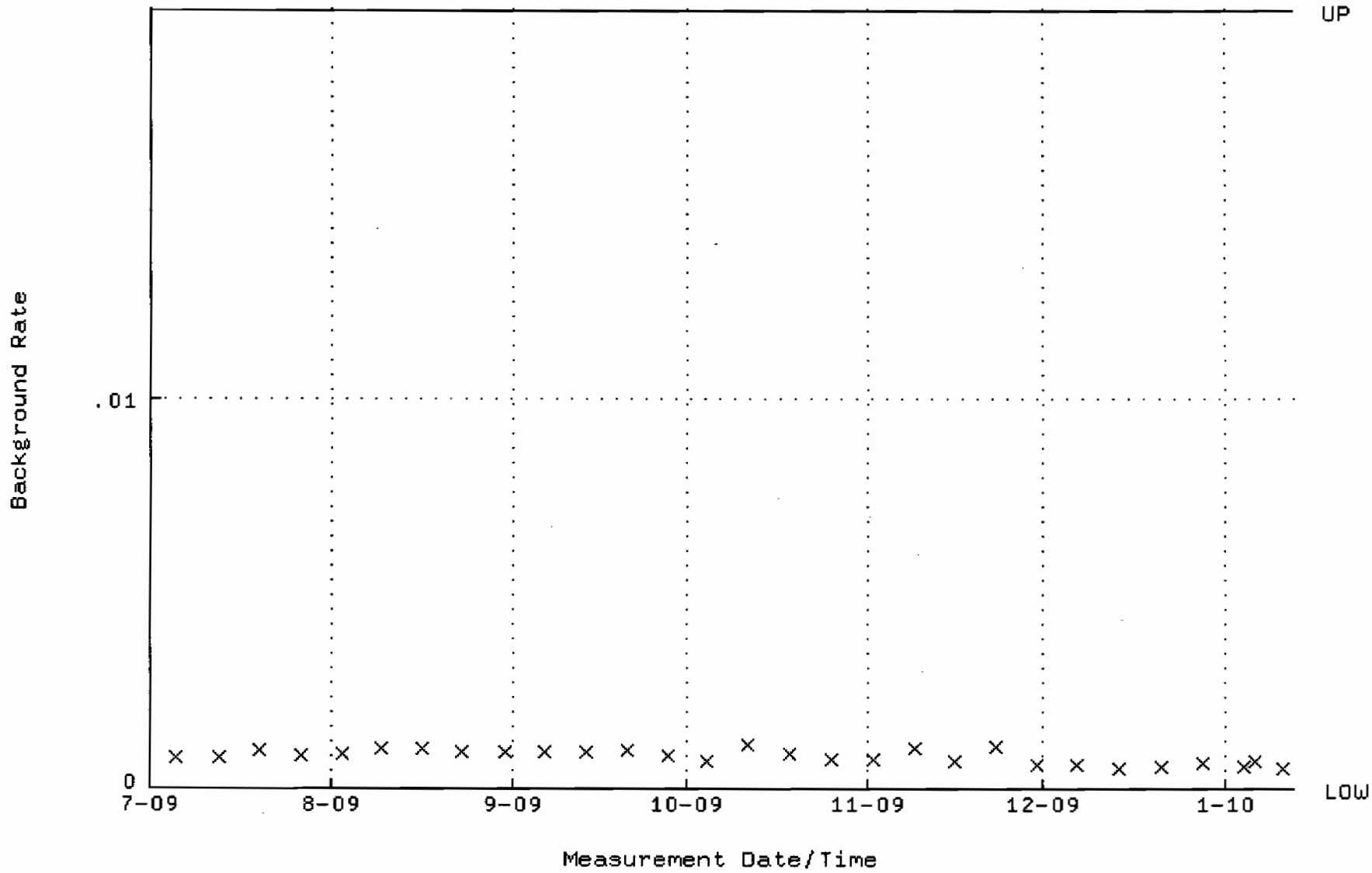
QA filename : DKA100:[ENV_ALPHA.QA.W]W078.QAF;6
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000



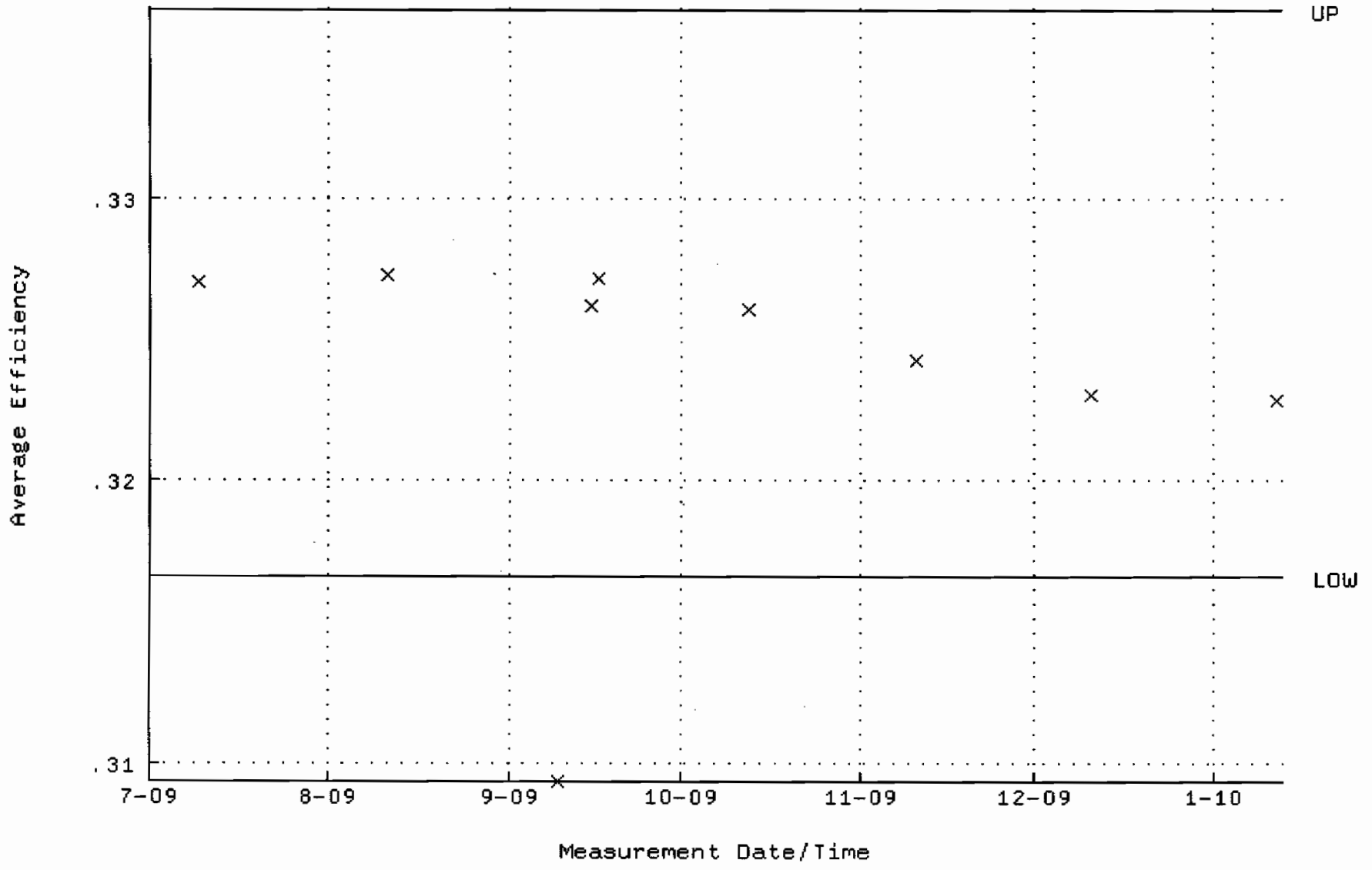
QA filename : DKA100:[ENV_ALPHA.QA.W]W078.QAF;6
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000



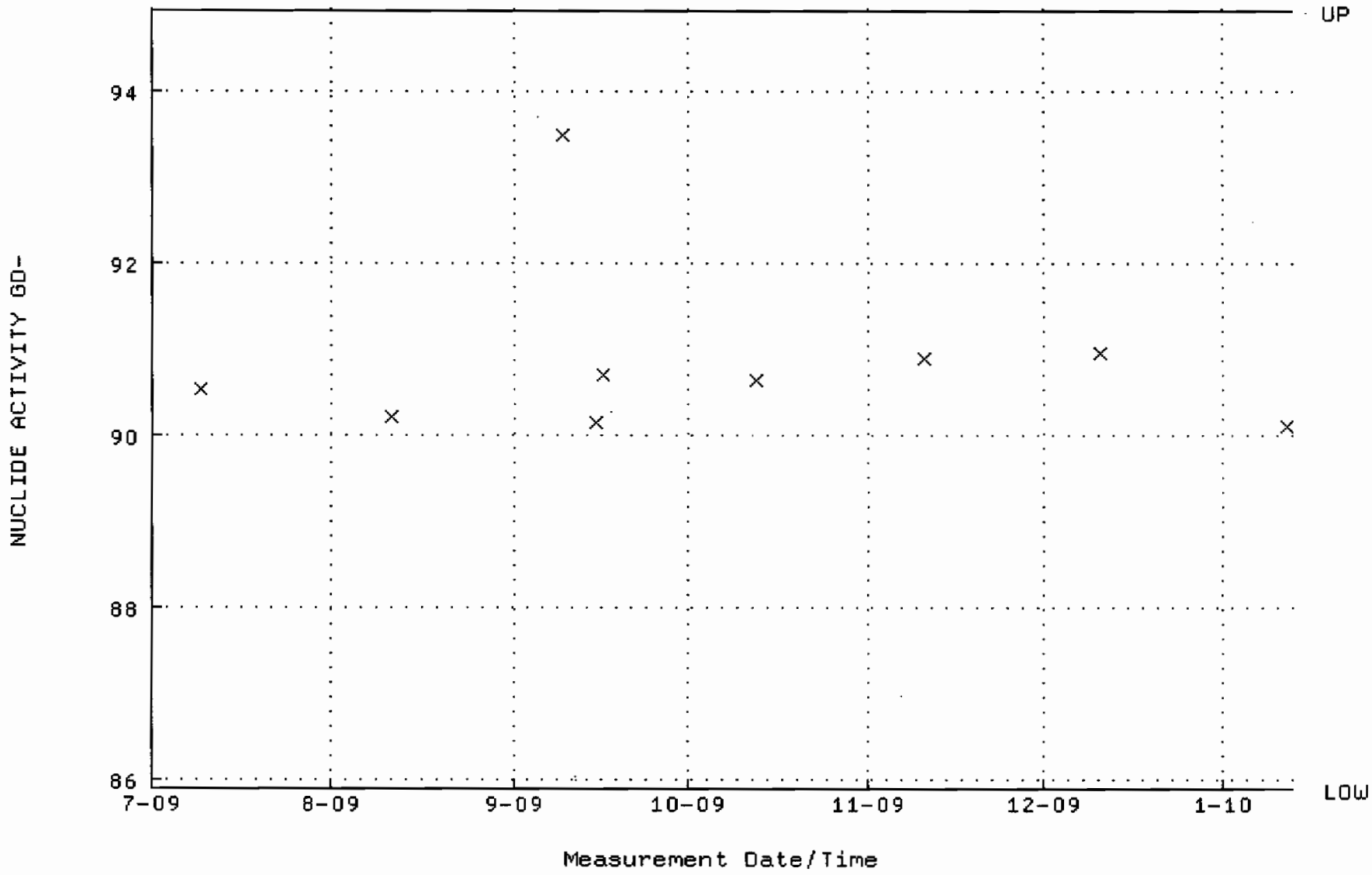
QA filename : DKA100:[ENV_ALPHA.QA.B]B078.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:03 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



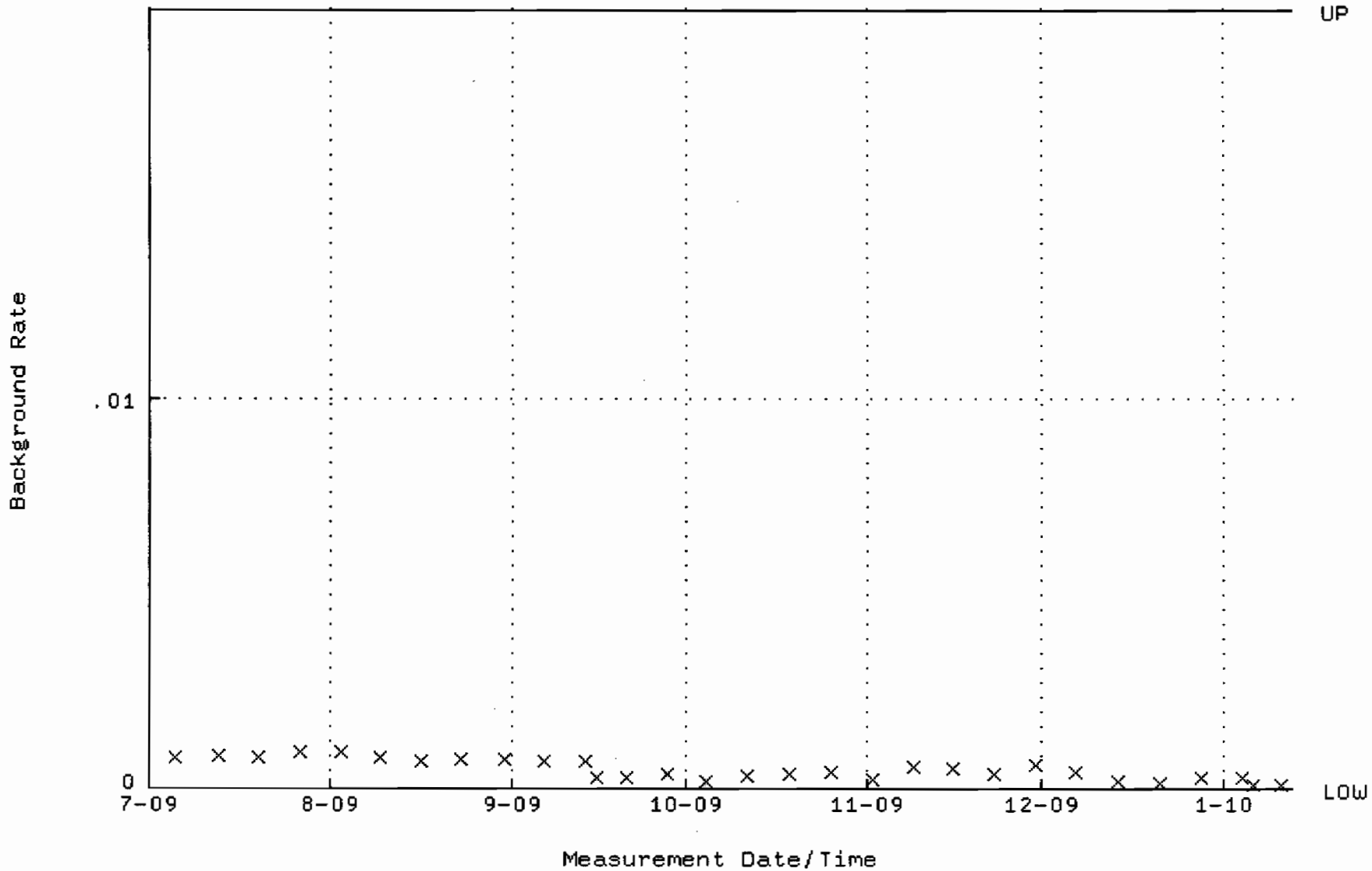
QA filename : DKA100:[ENV_ALPHA.QA.W]W079.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.316654 through 0.336654



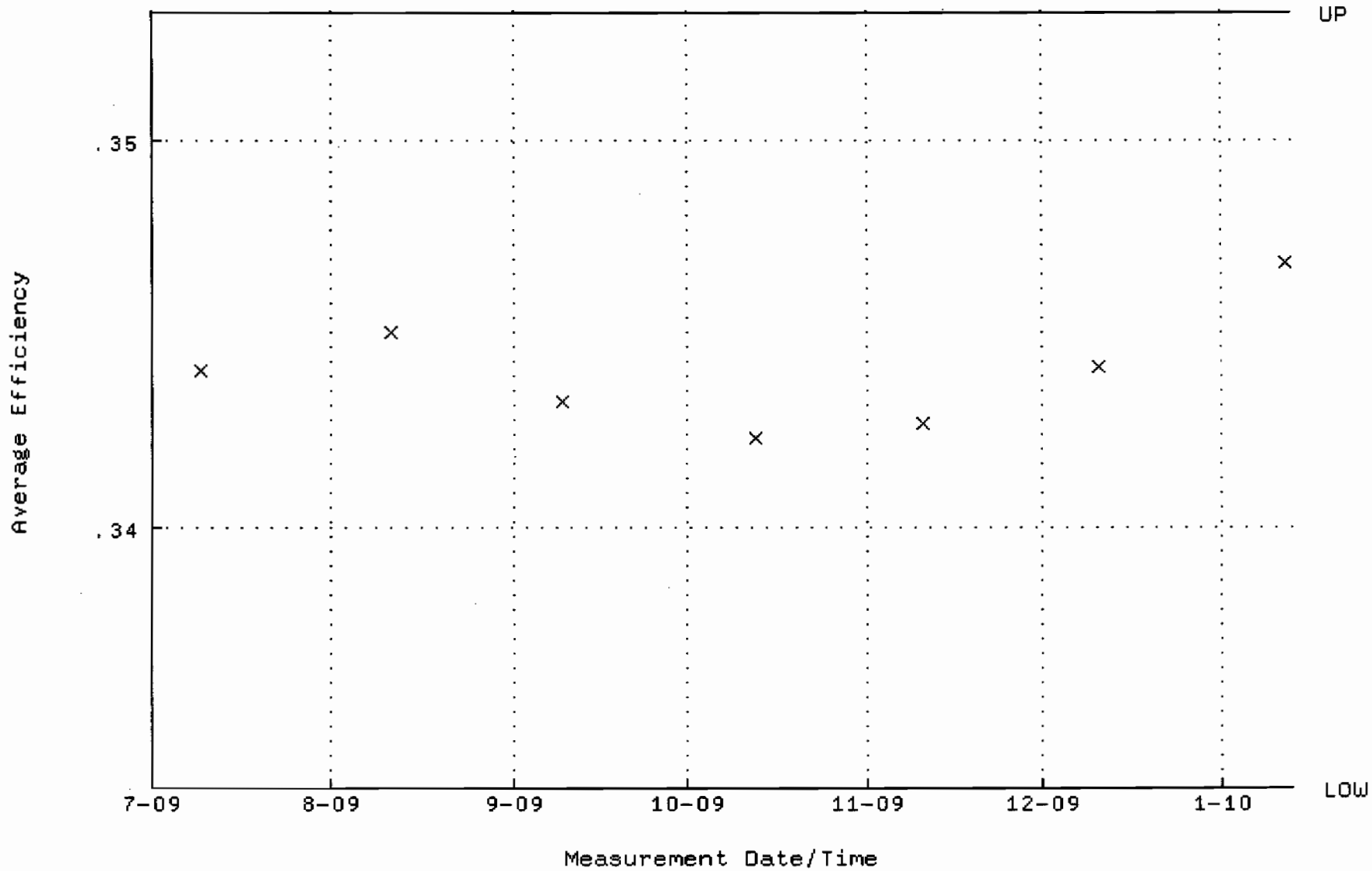
QA filename : DKA100:[ENV_ALPHA.QA.W]W079.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 85.8913 through 94.9325



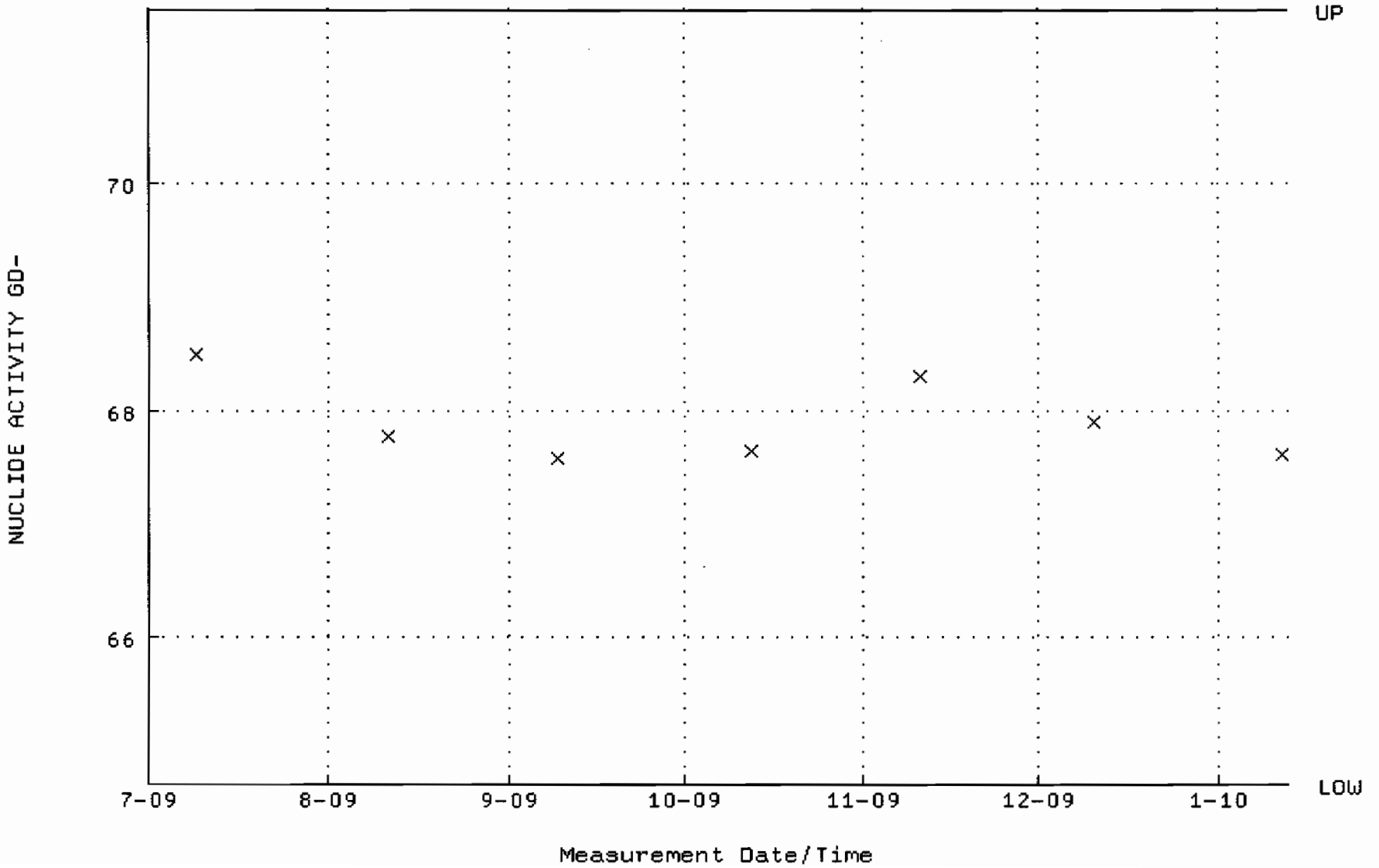
QA filename : DKA100:[ENV_ALPHA.QA.B]B079.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:03 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



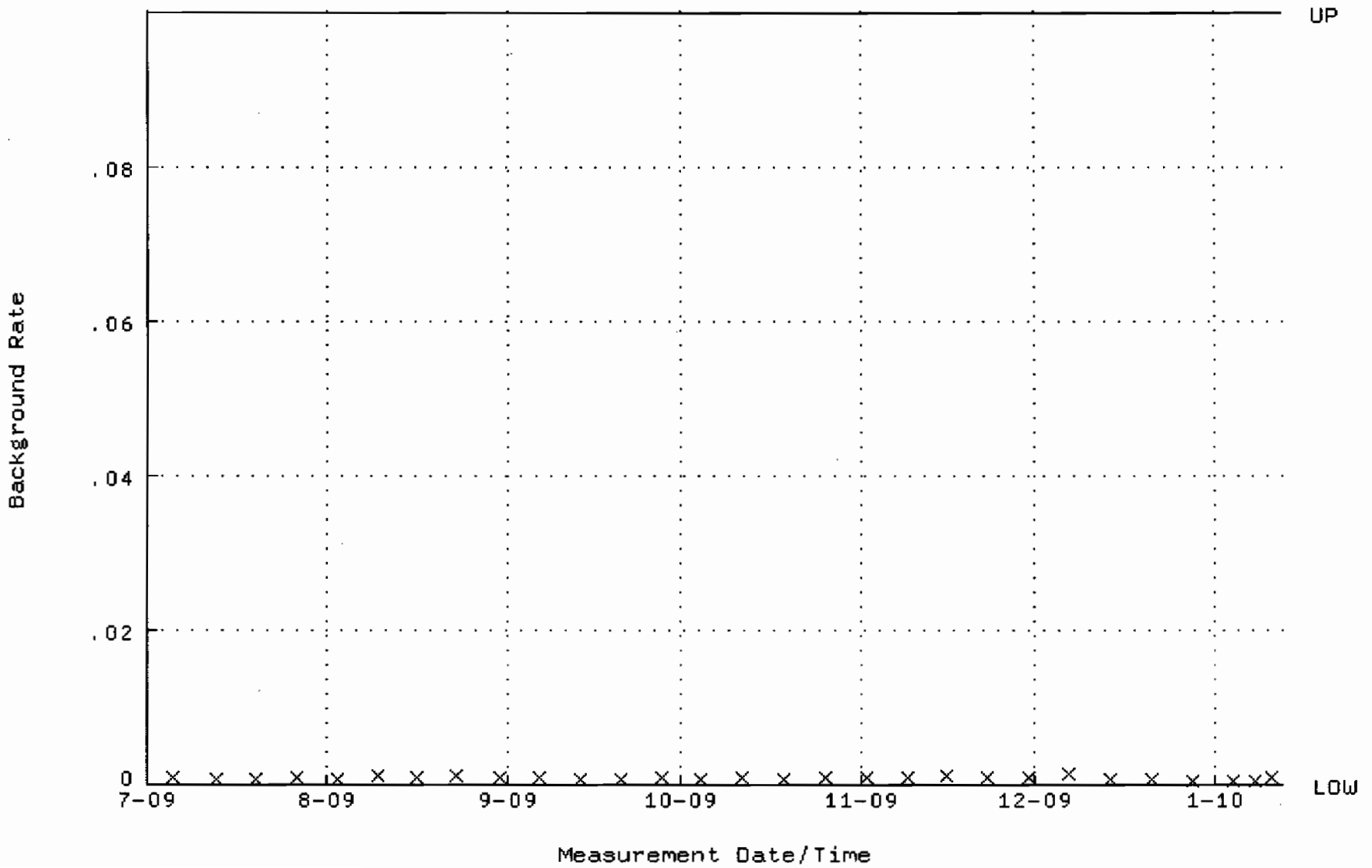
QA filename : DKA100:[ENV_ALPHA.QA.W]W097.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:14 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.333275 through 0.353275



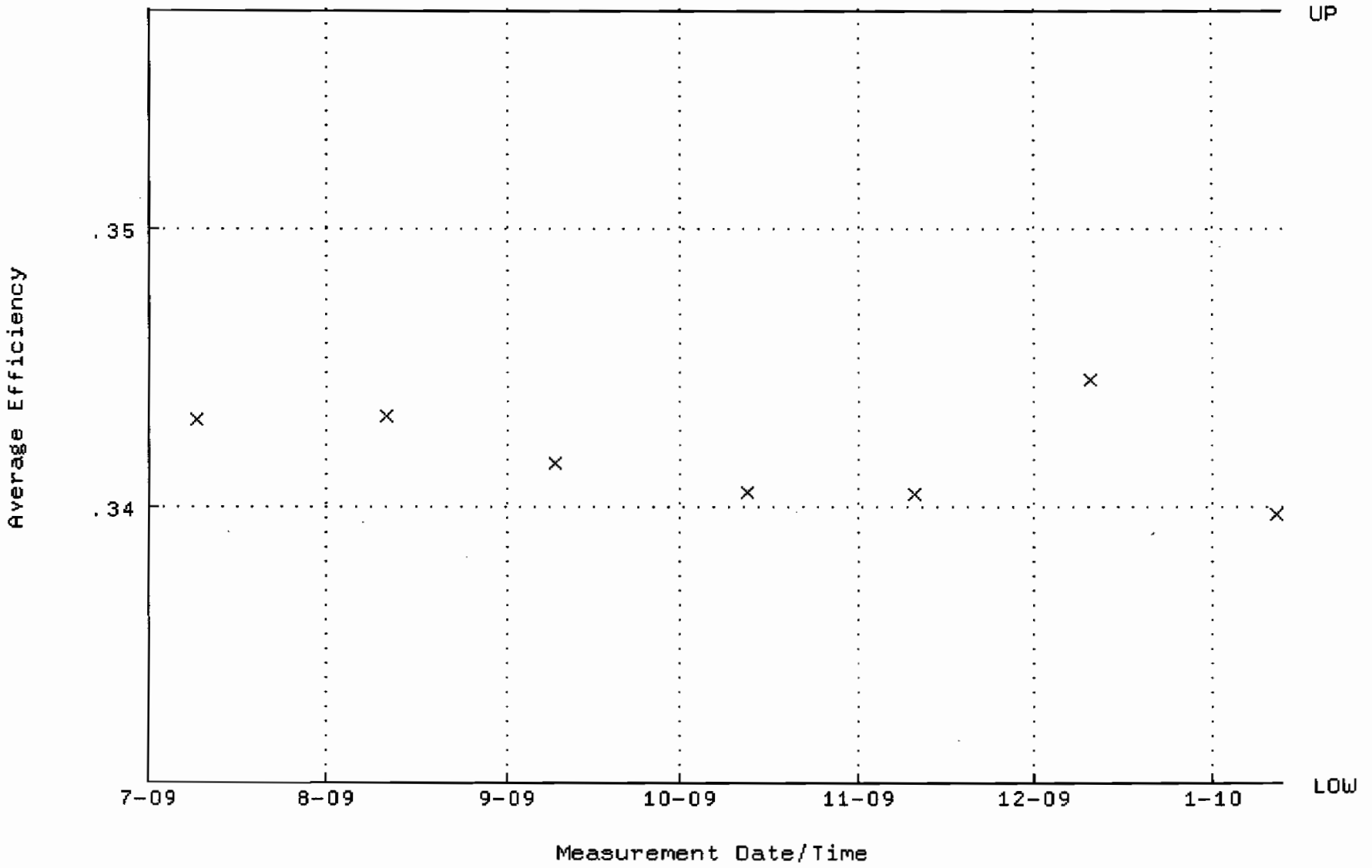
QA filename : DKA100:[ENV_ALPHA.QA.W]W097.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:14 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 64.7068 through 71.5180



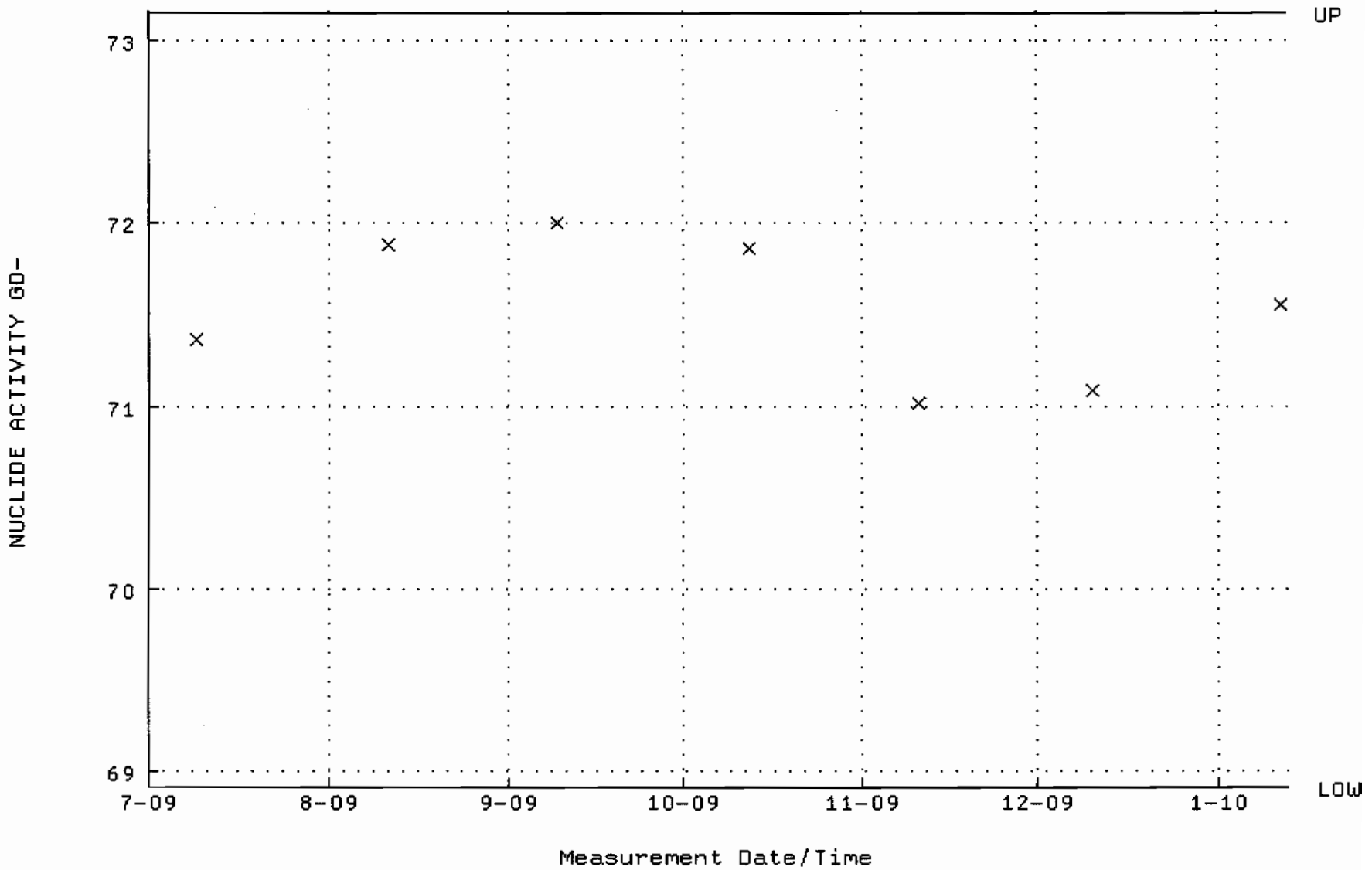
QA filename : DKA100:[ENV_ALPHA.QA.B]B097.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:05 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



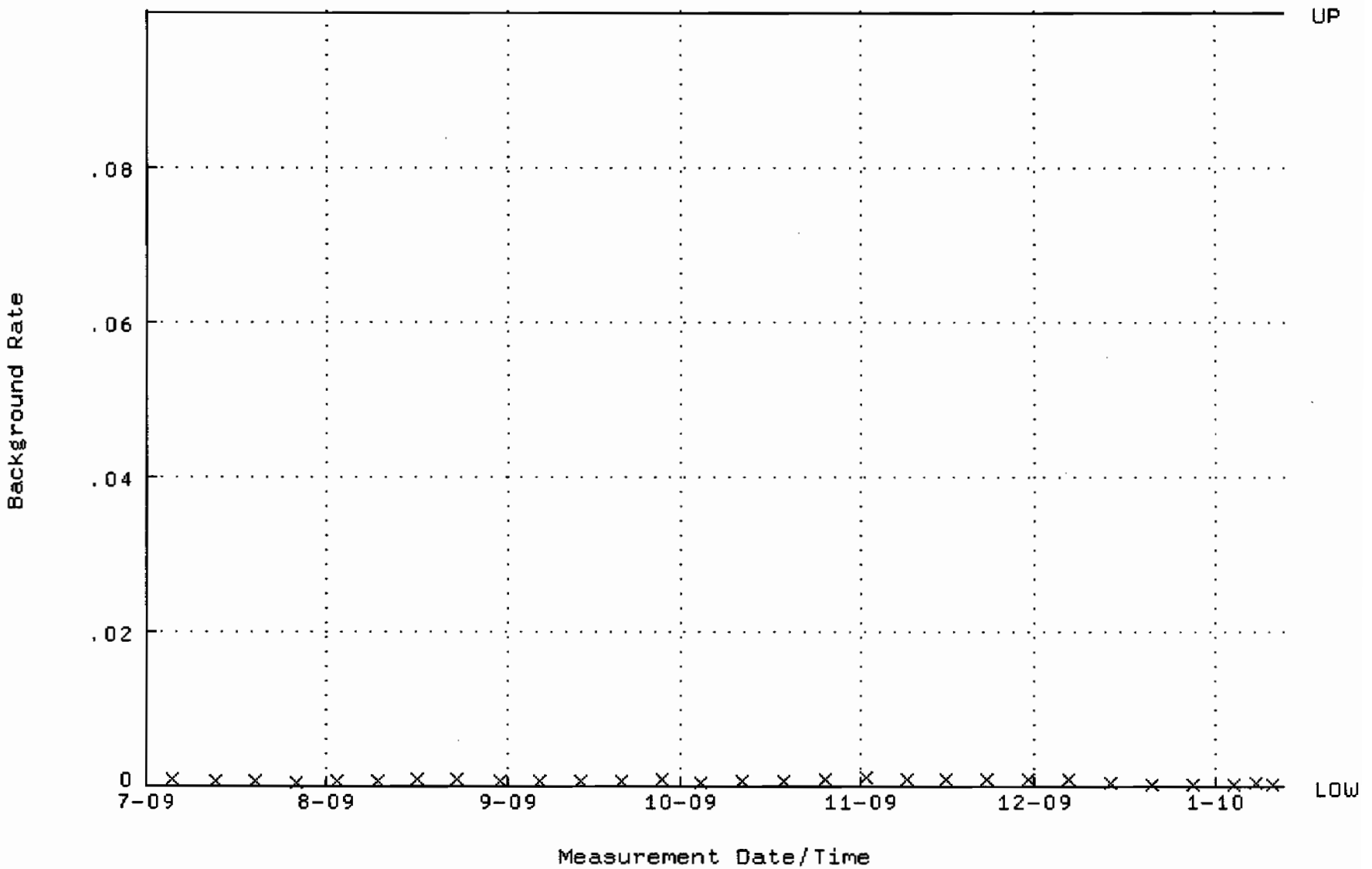
QA filename : DKA100:[ENV_ALPHA.QA.W]W099.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:14 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.330127 through 0.357809



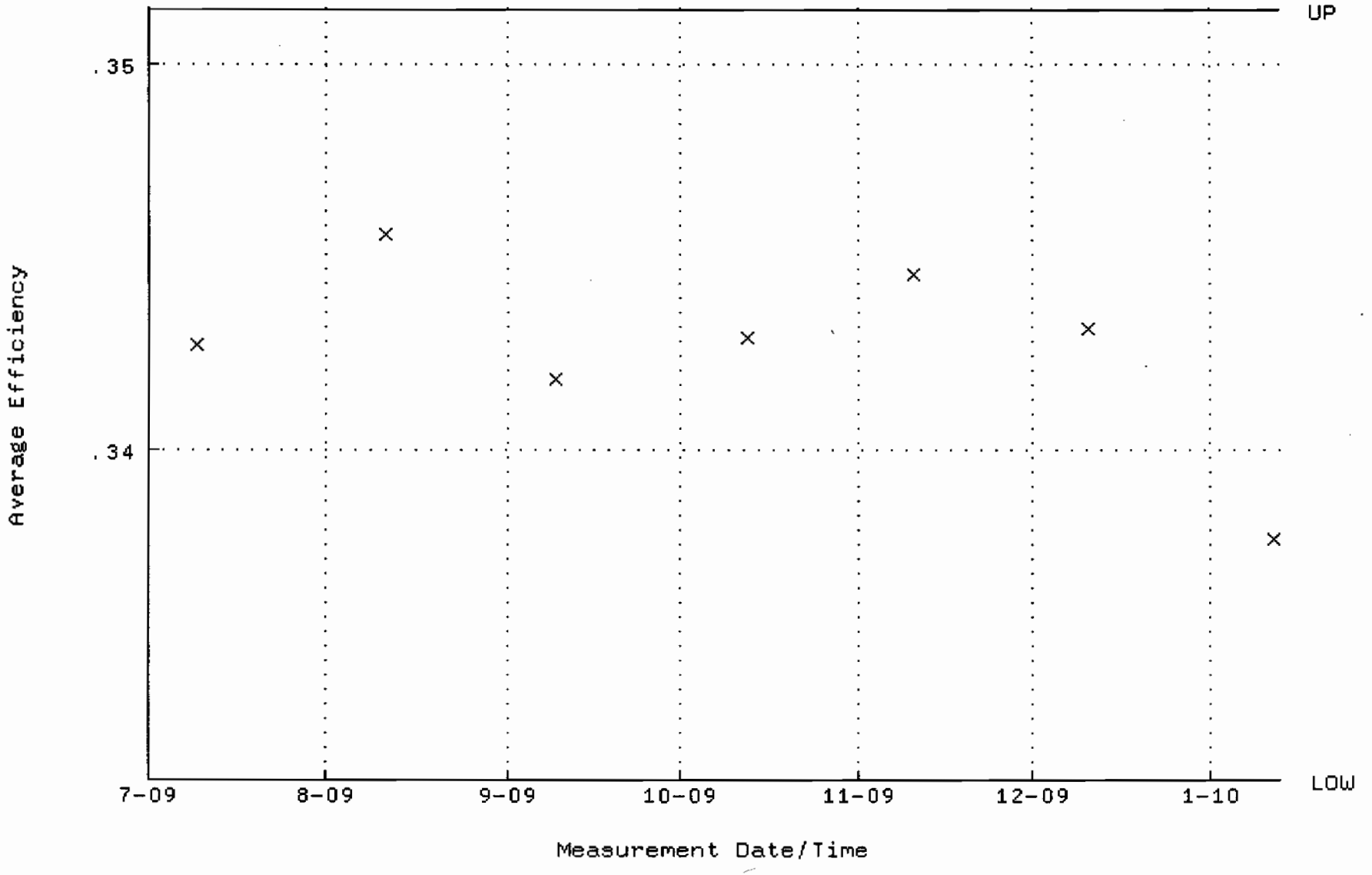
QA filename : DKA100:[ENV_ALPHA.QA.W]W099.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:14 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 68.9116 through 73.1498



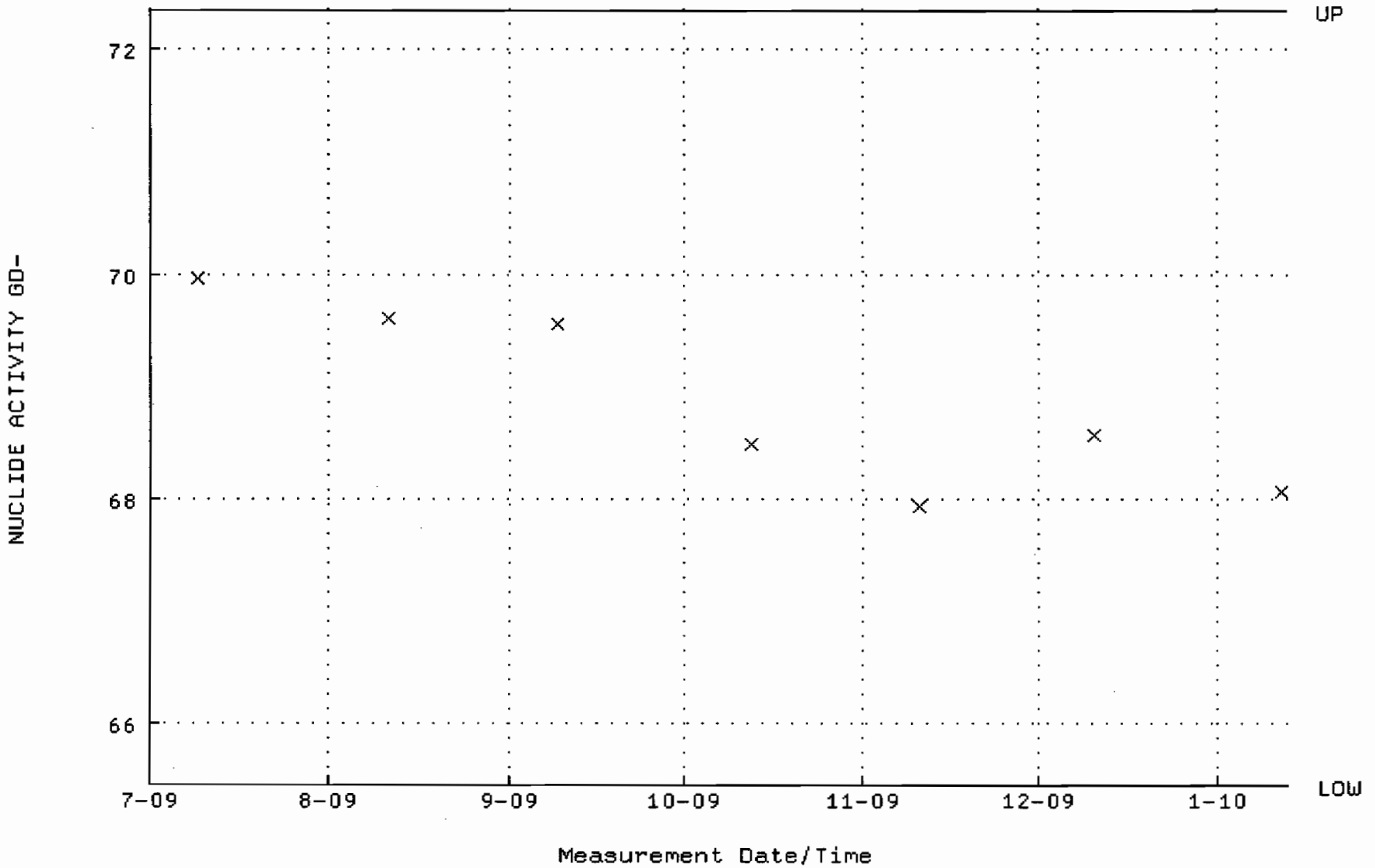
QA filename : DKA100:[ENV_ALPHA.QA.B]B099.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:05 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



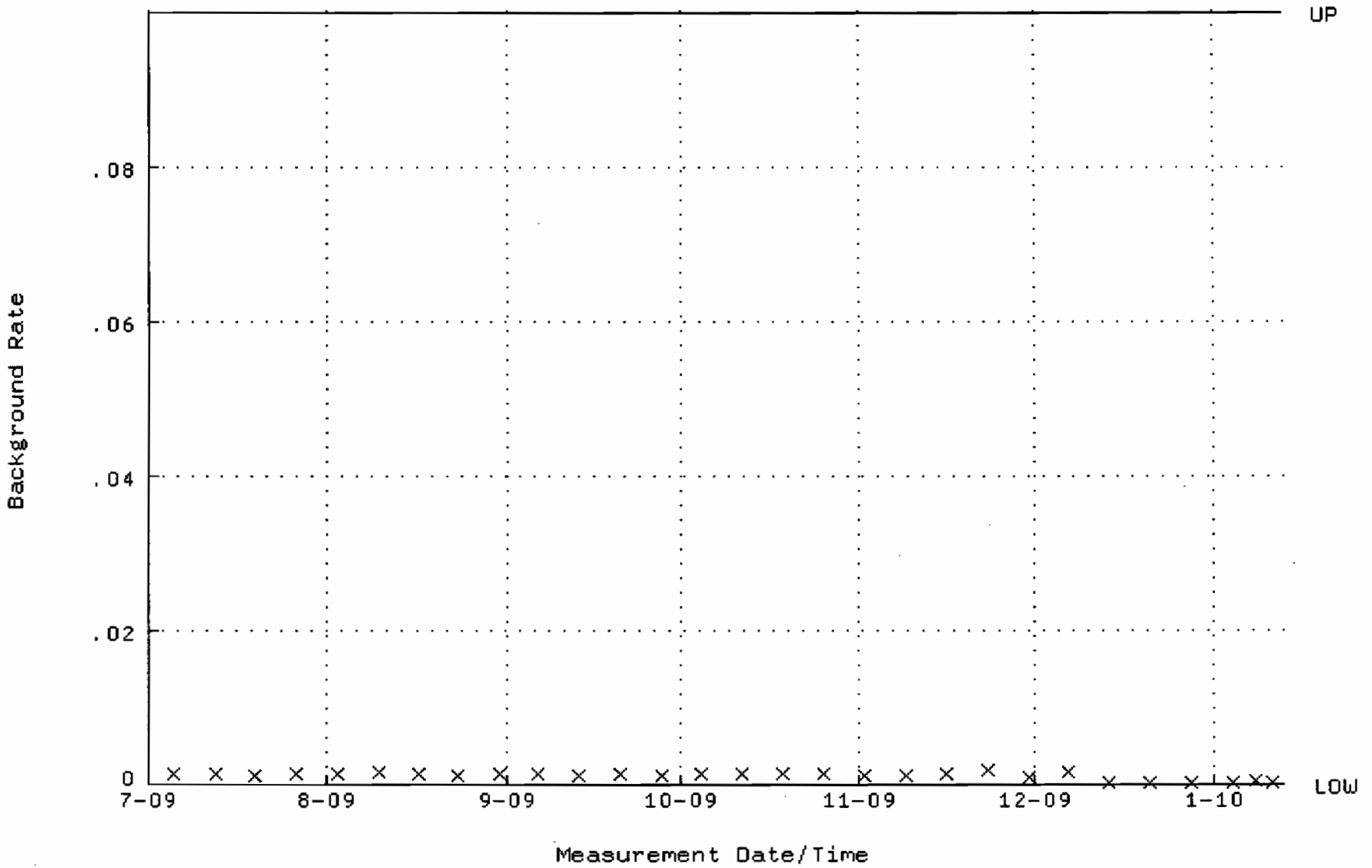
QA filename : DKA100:[ENV_ALPHA.QA.W]W100.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:14 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.331433 through 0.351433



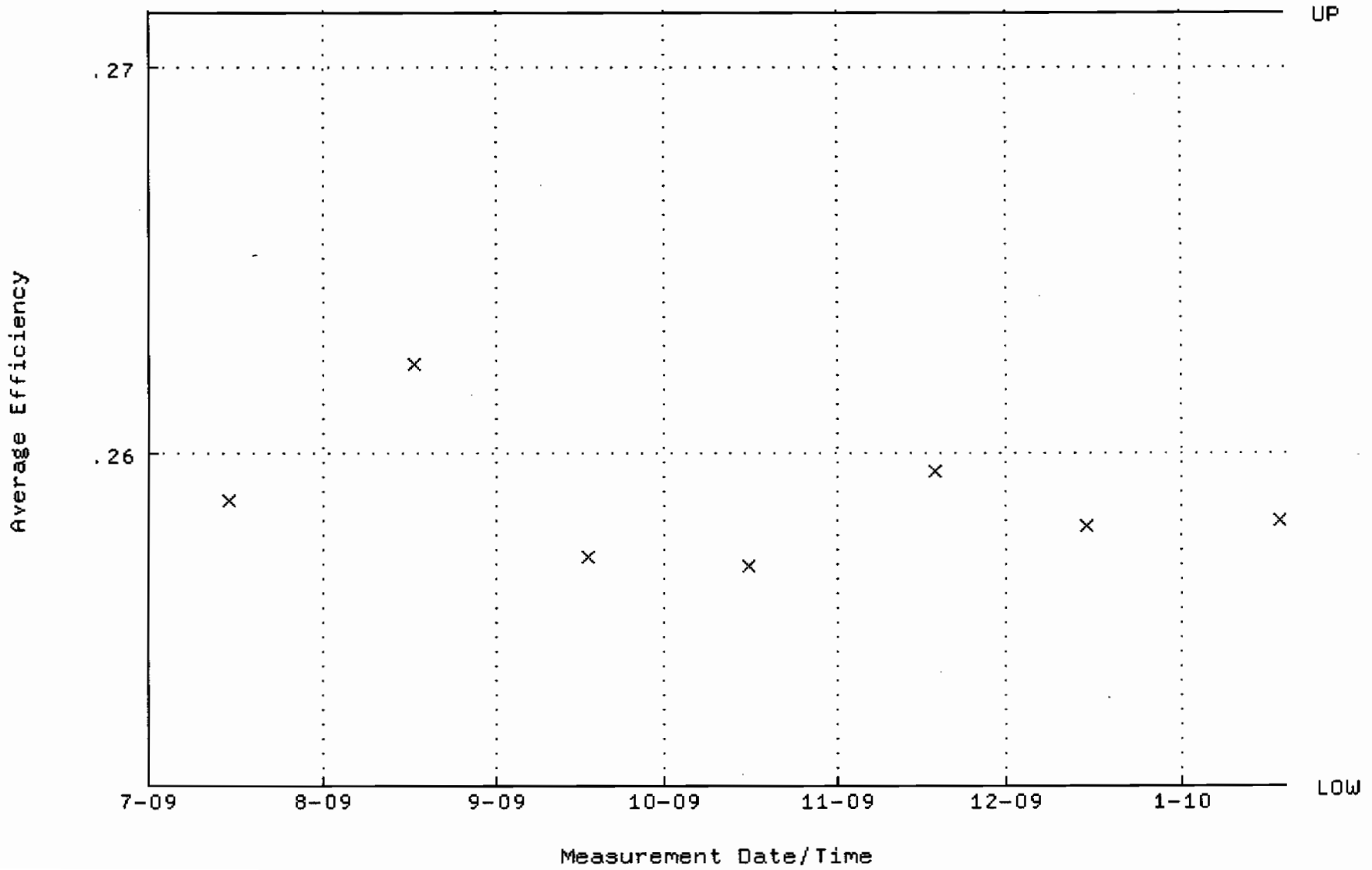
QA filename : DKA100:[ENV_ALPHA.QA.W]W100.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:14 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 65.4550 through 72.3450



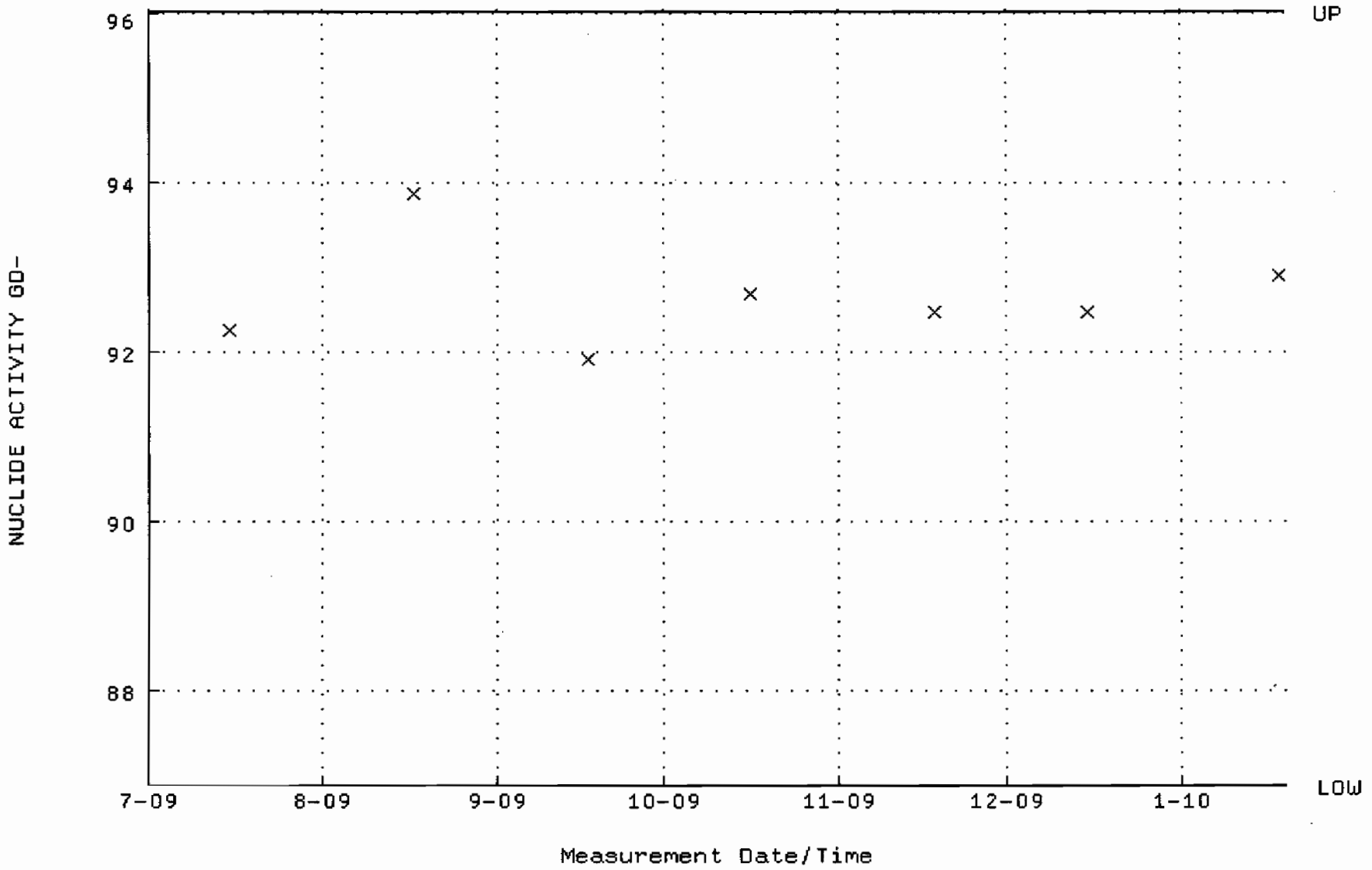
QA filename : DKA100:[ENV_ALPHA.QA.B]B100.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:05 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



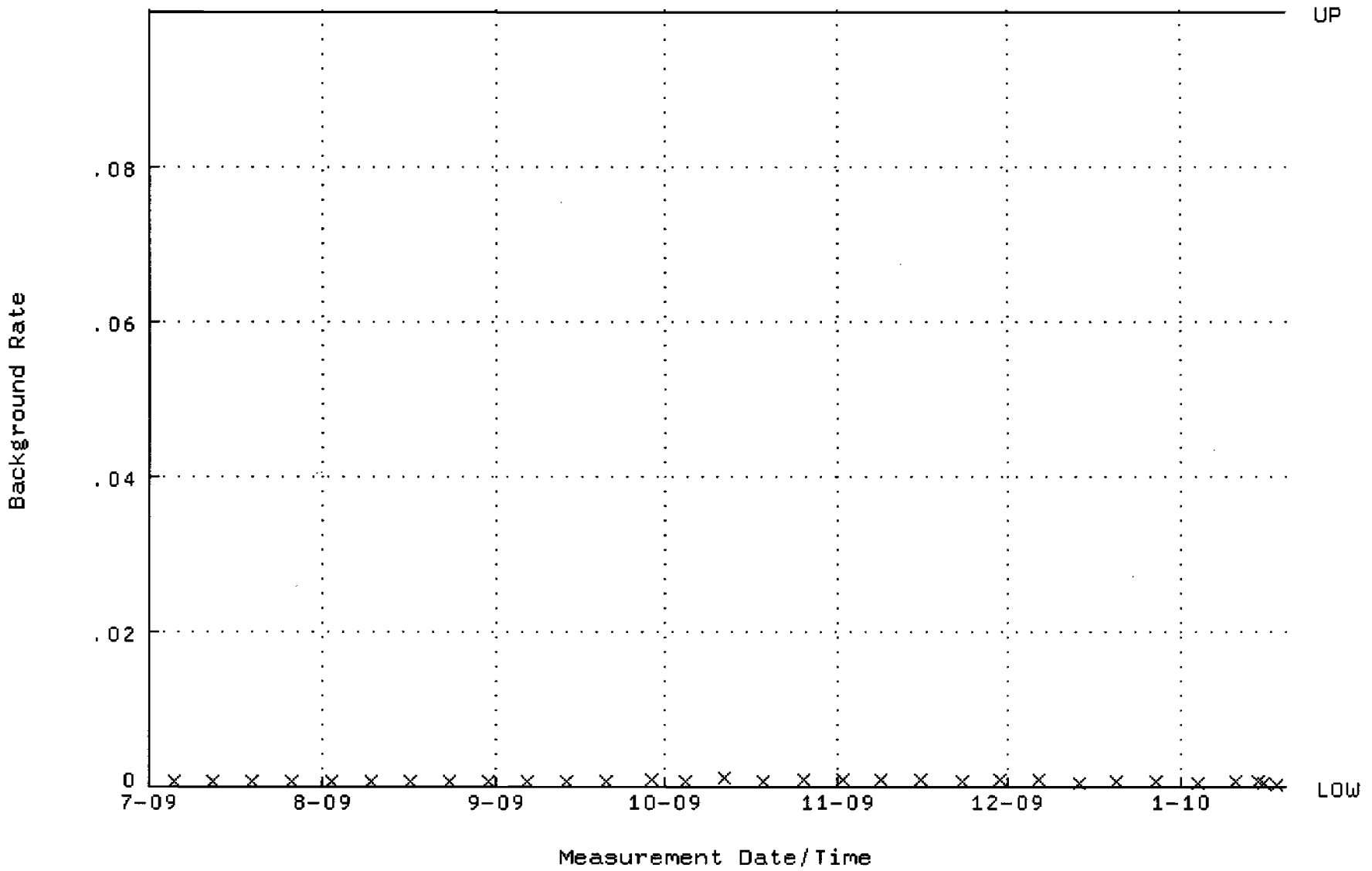
QA filename : DKA100:[ENV_ALPHA.QA.W]W124.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 15-JUL-2009 08:38:38 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.251398 through 0.271398



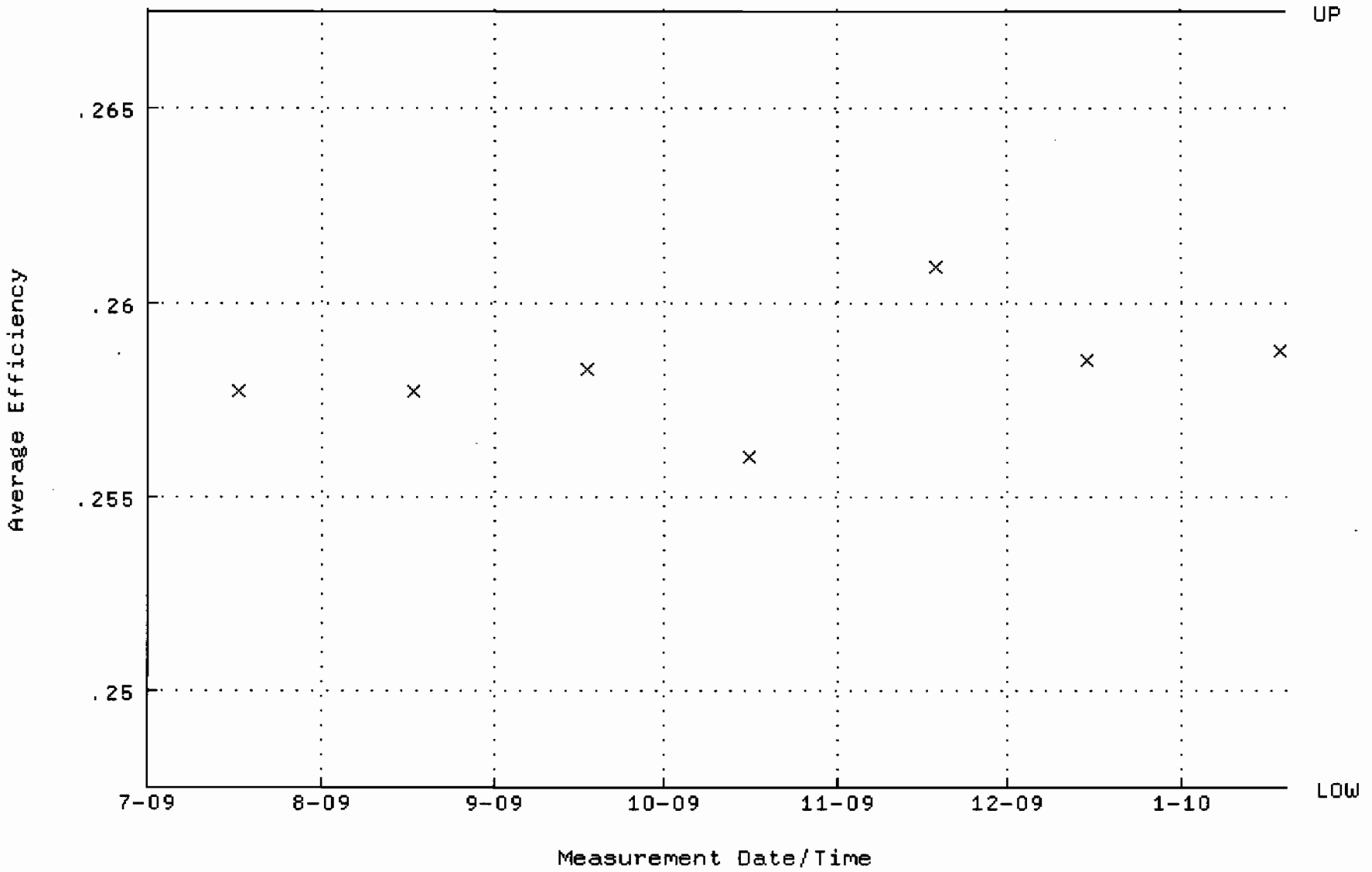
QA filename : DKA100:[ENV_ALPHA.QA.W]W124.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 15-JUL-2009 08:38:38 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 86.8862 through 96.0322



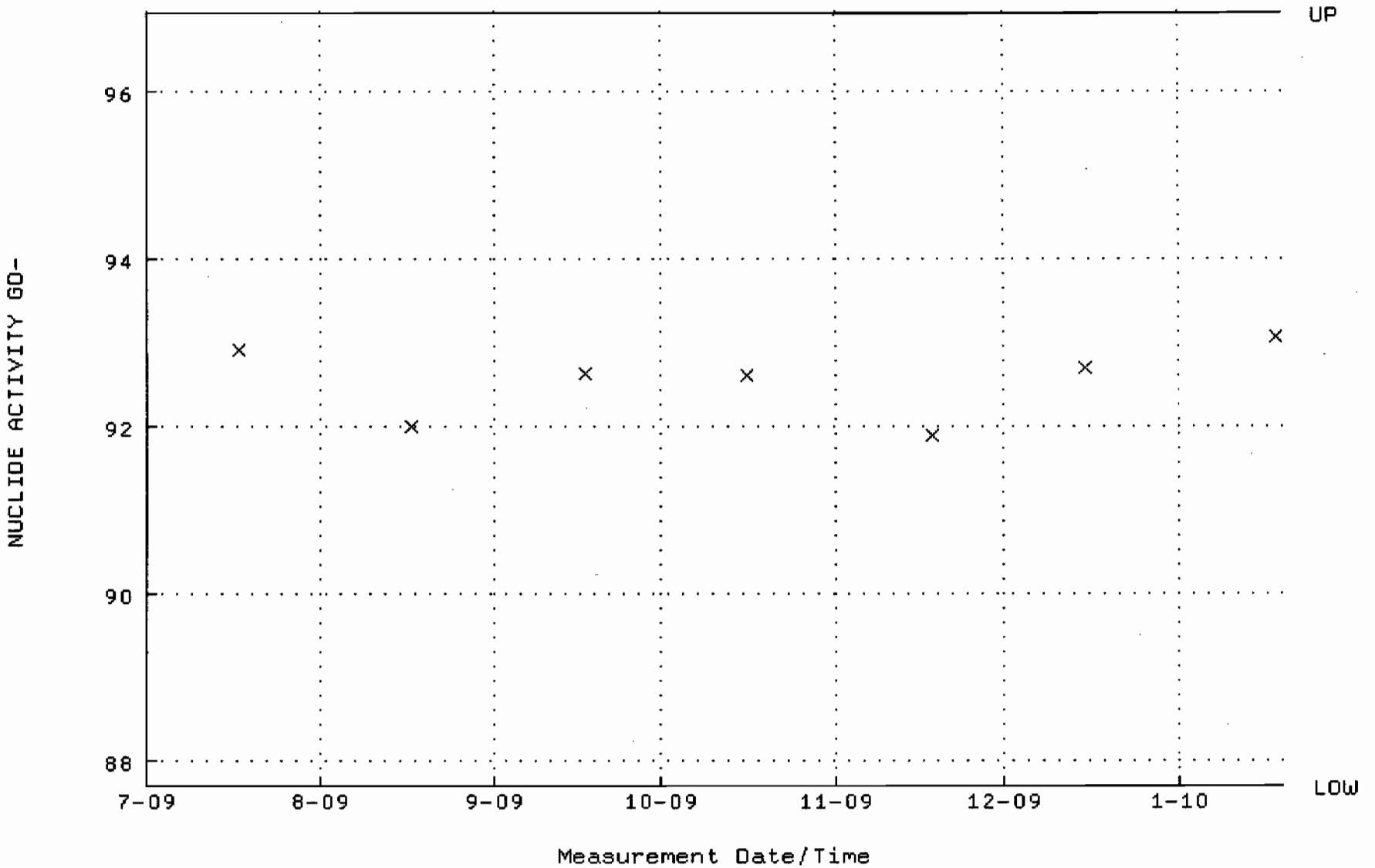
QA filename : DKA100:[ENV_ALPHA.QA.B]B124.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 14:55:40 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



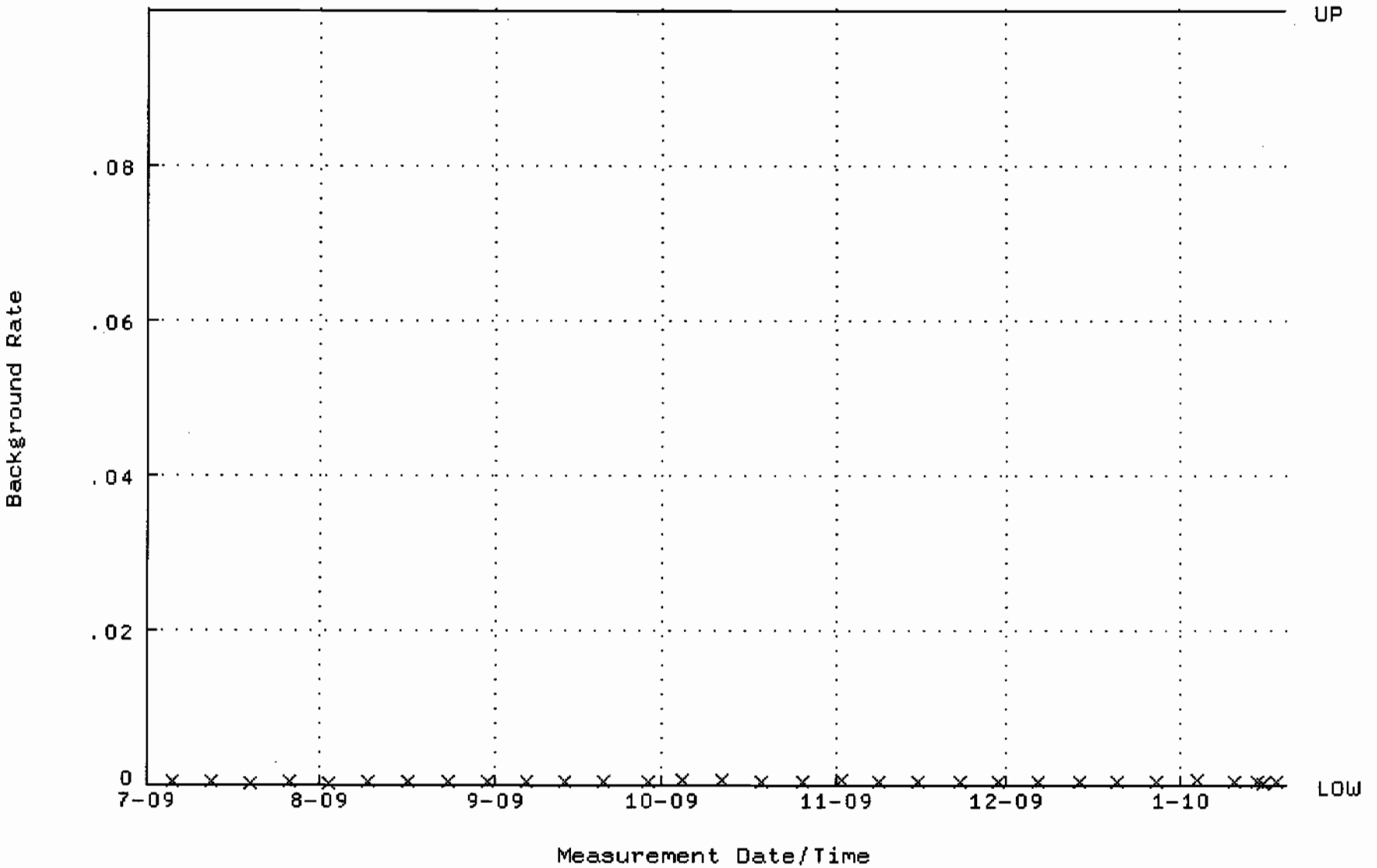
QA filename : DKA100:[ENV_ALPHA.QA.W]W125.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 17-JUL-2009 09:11:36 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.247512 through 0.267512



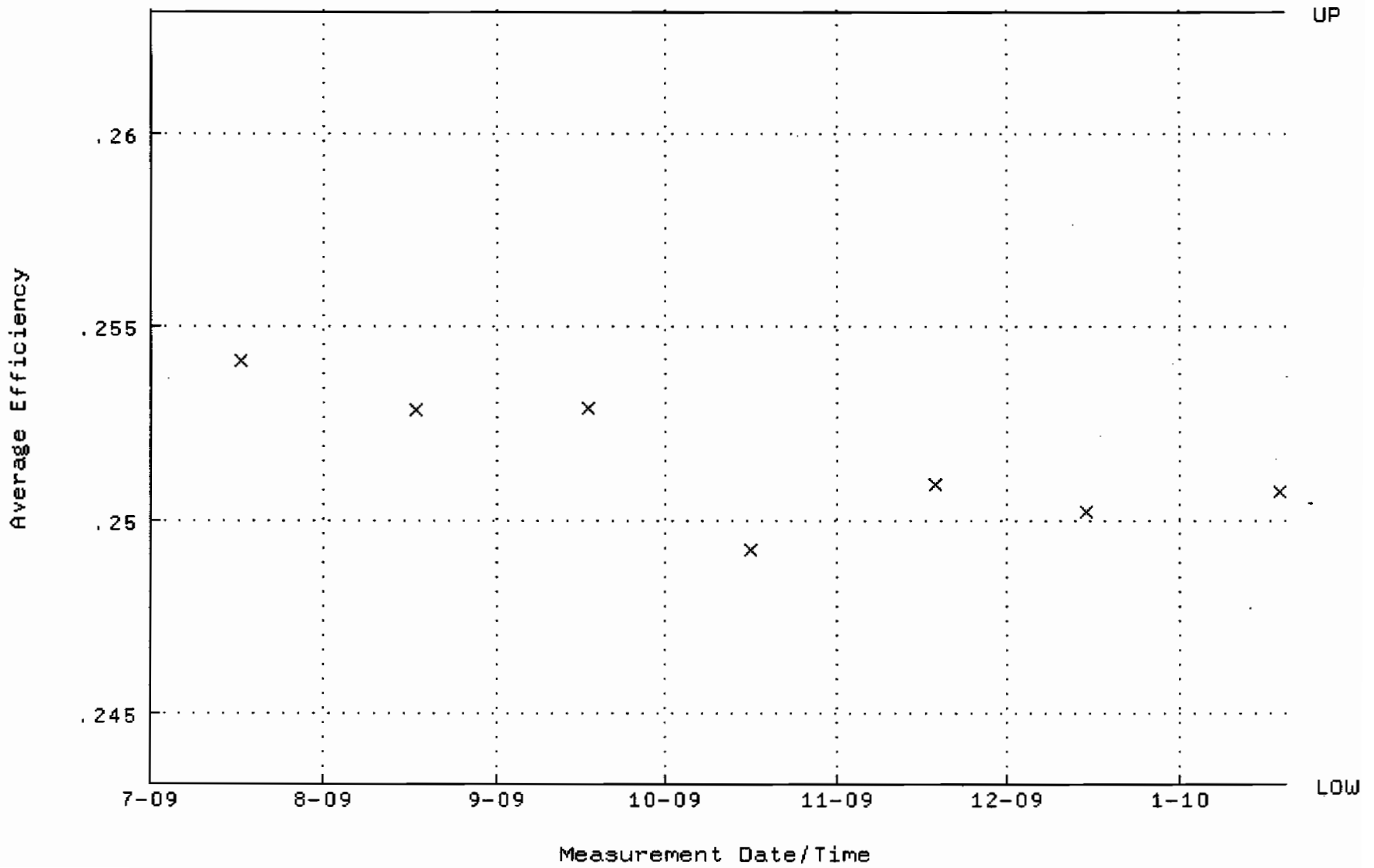
QA filename : DKA100:[ENV_ALPHA.QA.W]W125.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 17-JUL-2009 09:11:36 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 87.6956 through 96.9268



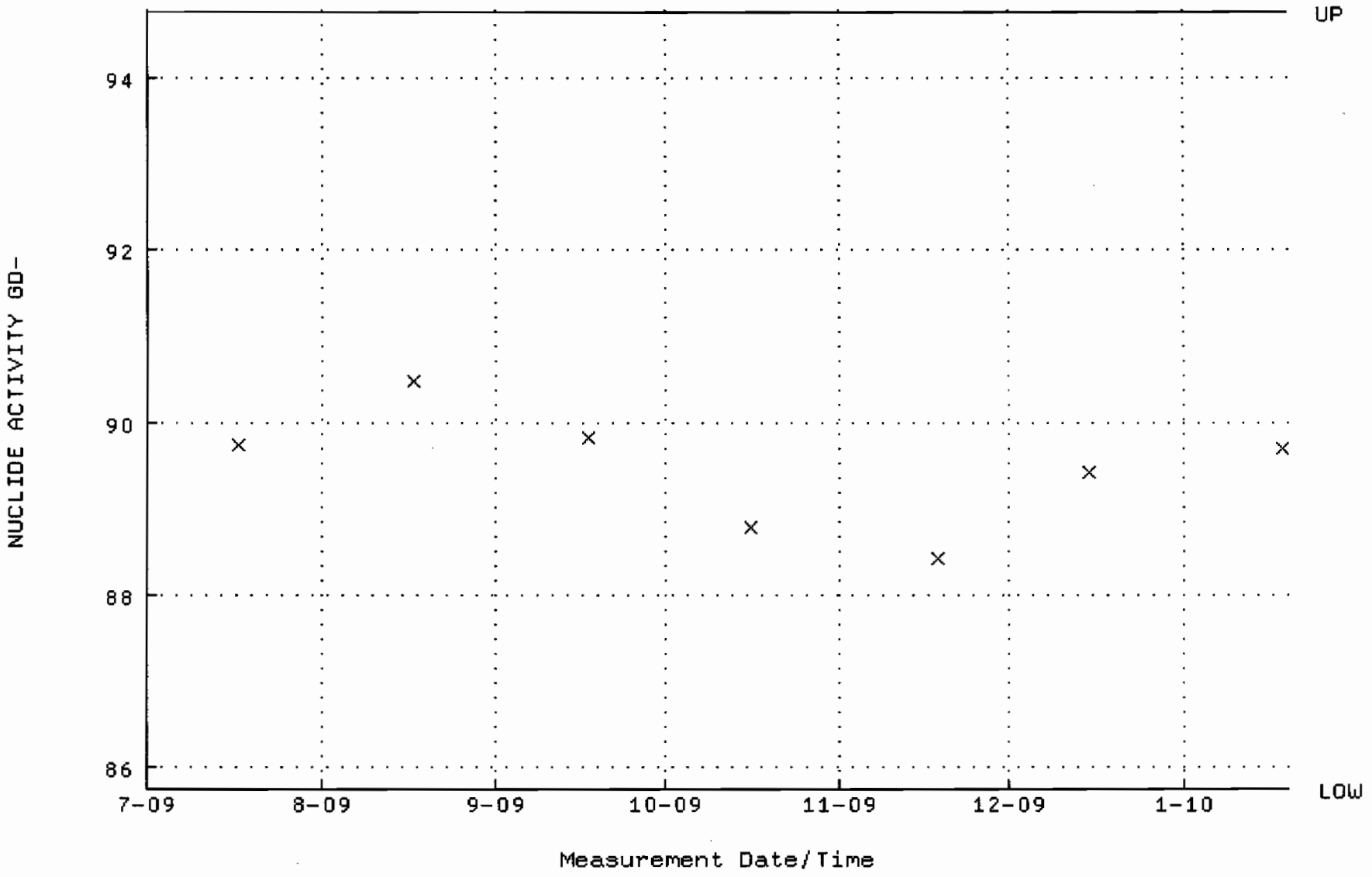
QA filename : DKA100:[ENV_ALPHA.QA.B]B125.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 14:55:45 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



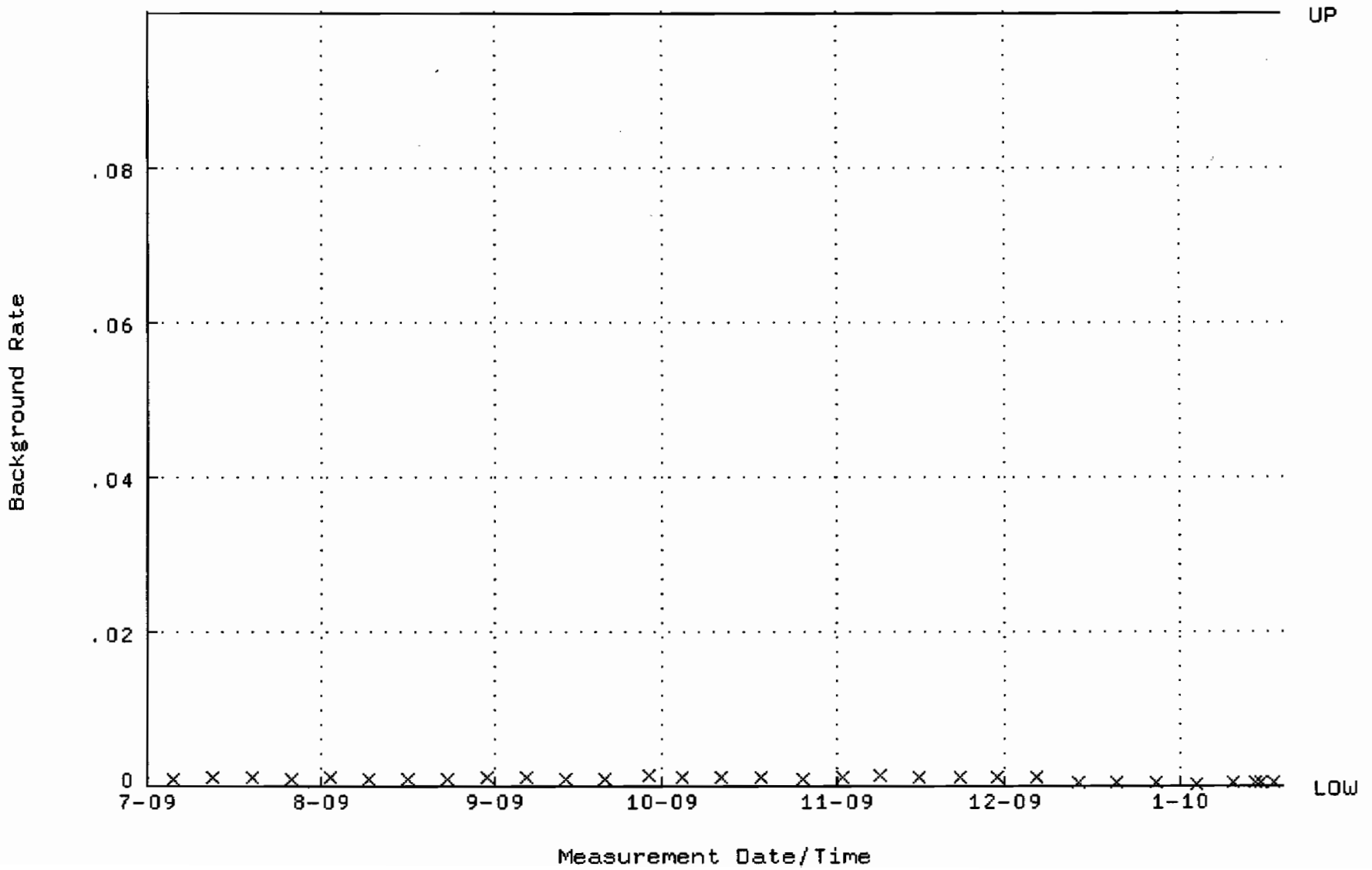
QA filename : DKA100:[ENV_ALPHA.QA.W]W126.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 17-JUL-2009 09:11:44 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.243156 through 0.263156



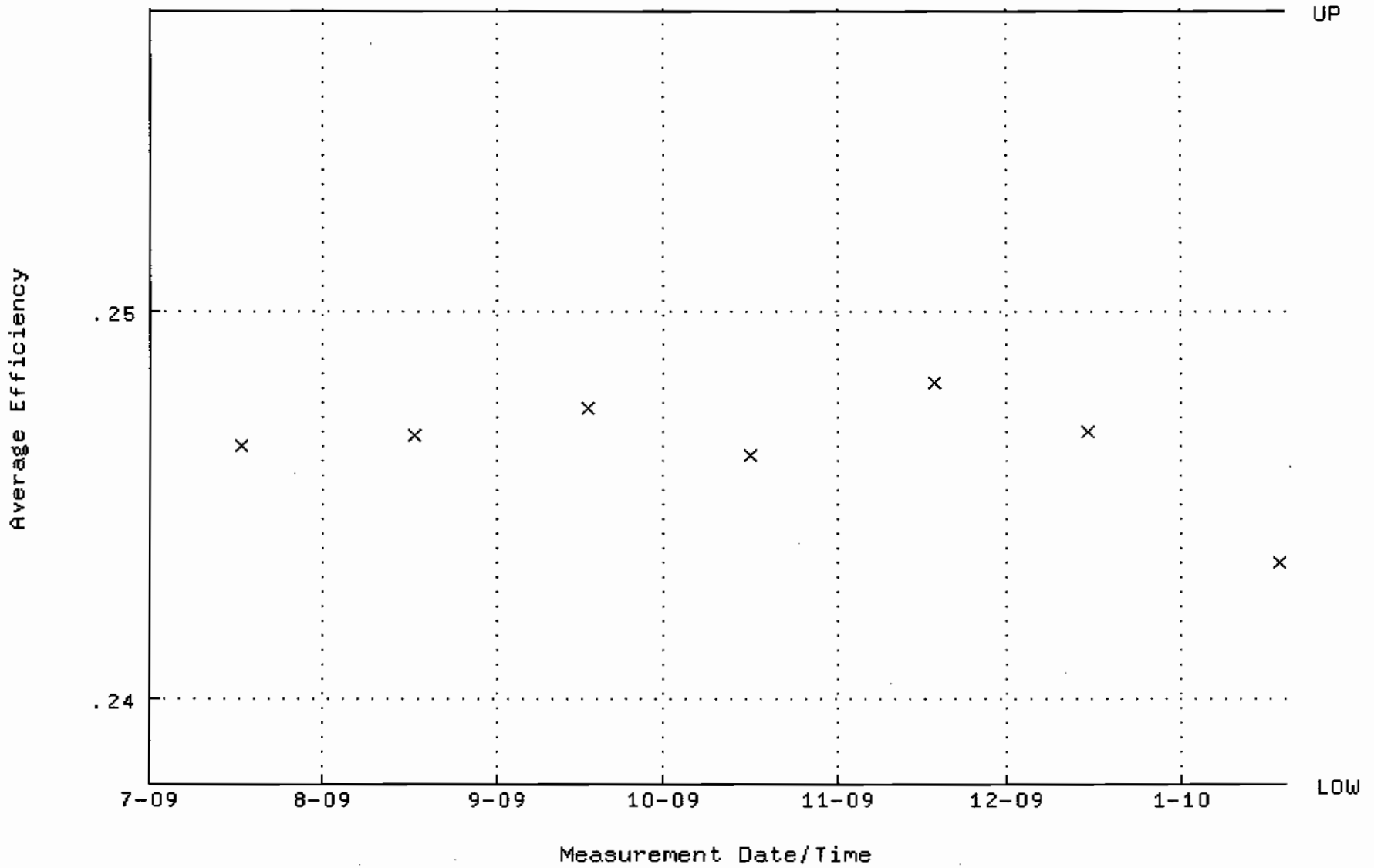
QA filename : DKA100:[ENV_ALPHA.QA.W]W126.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 17-JUL-2009 09:11:44 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 85.7449 through 94.7707



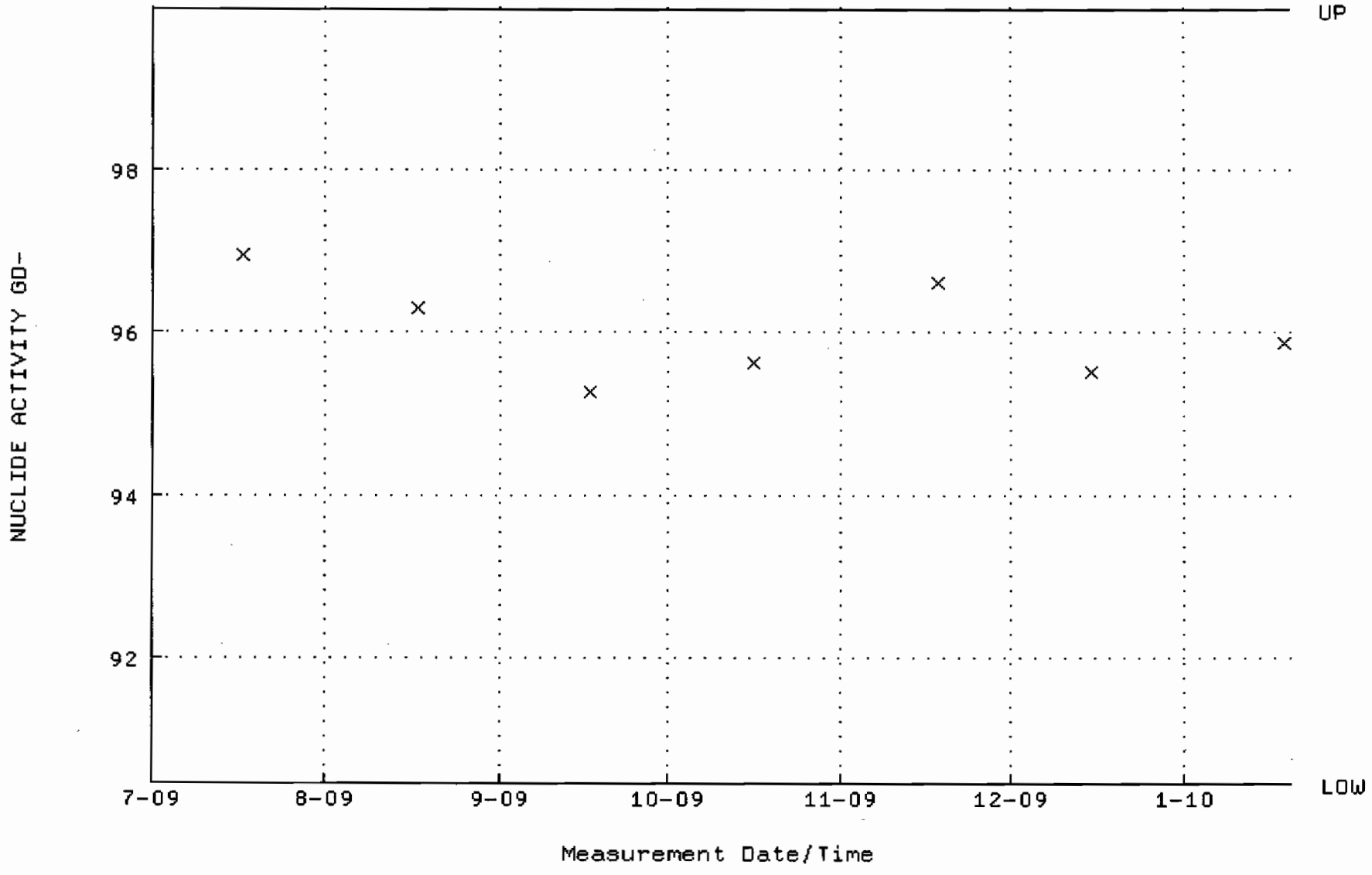
QA filename : DKA100:[ENV_ALPHA.QA.B]B126.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 14:55:50 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



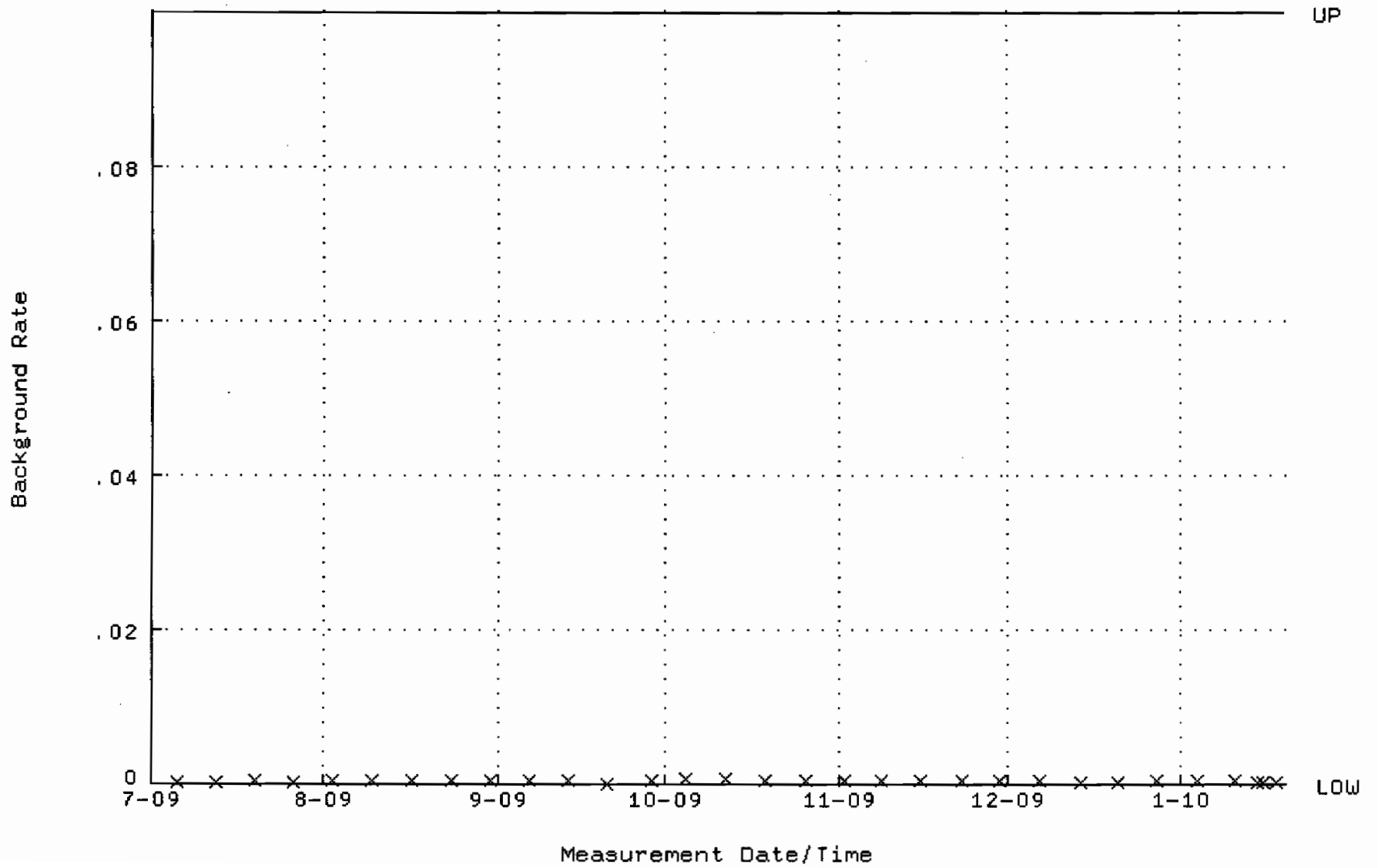
QA filename : DKA100:[ENV_ALPHA.QA.W]W127.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 17-JUL-2009 09:11:52 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.237773 through 0.257773



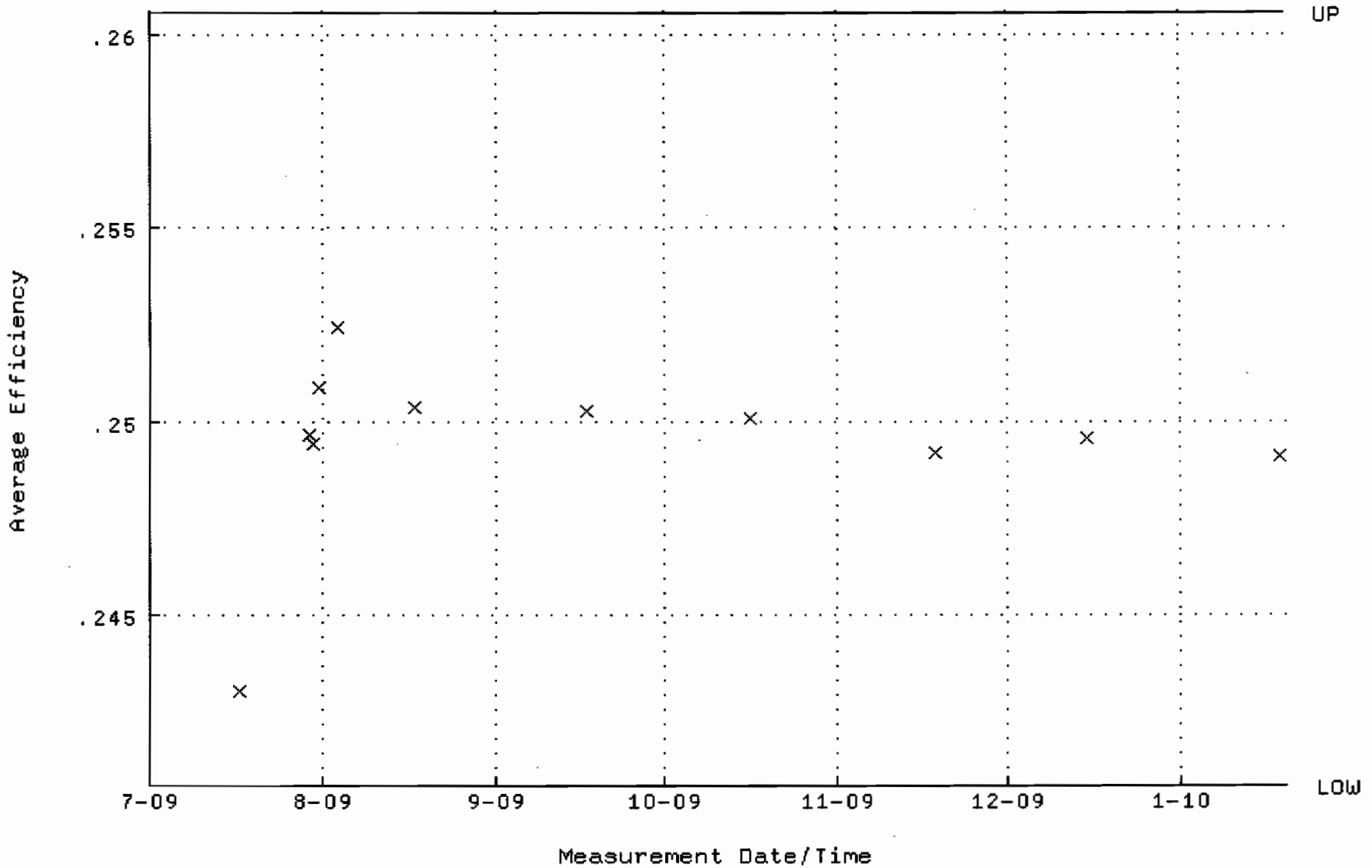
QA filename : DKA100:[ENV_ALPHA.QA.W]W127.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 17-JUL-2009 09:11:52 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 90.4503 through 99.9713



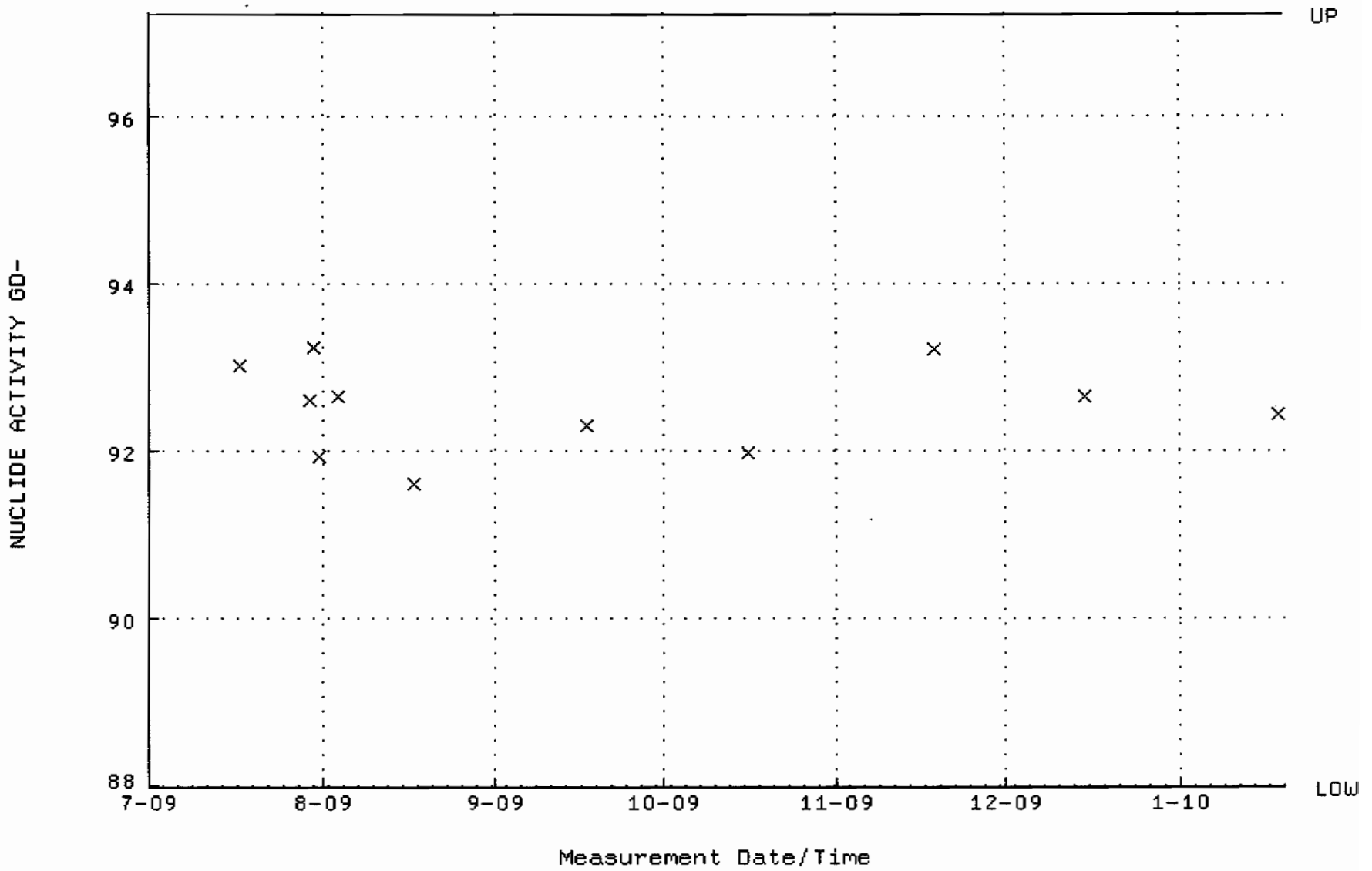
QA filename : DKA100:[ENV_ALPHA.QA.B]B127.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 14:55:55 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



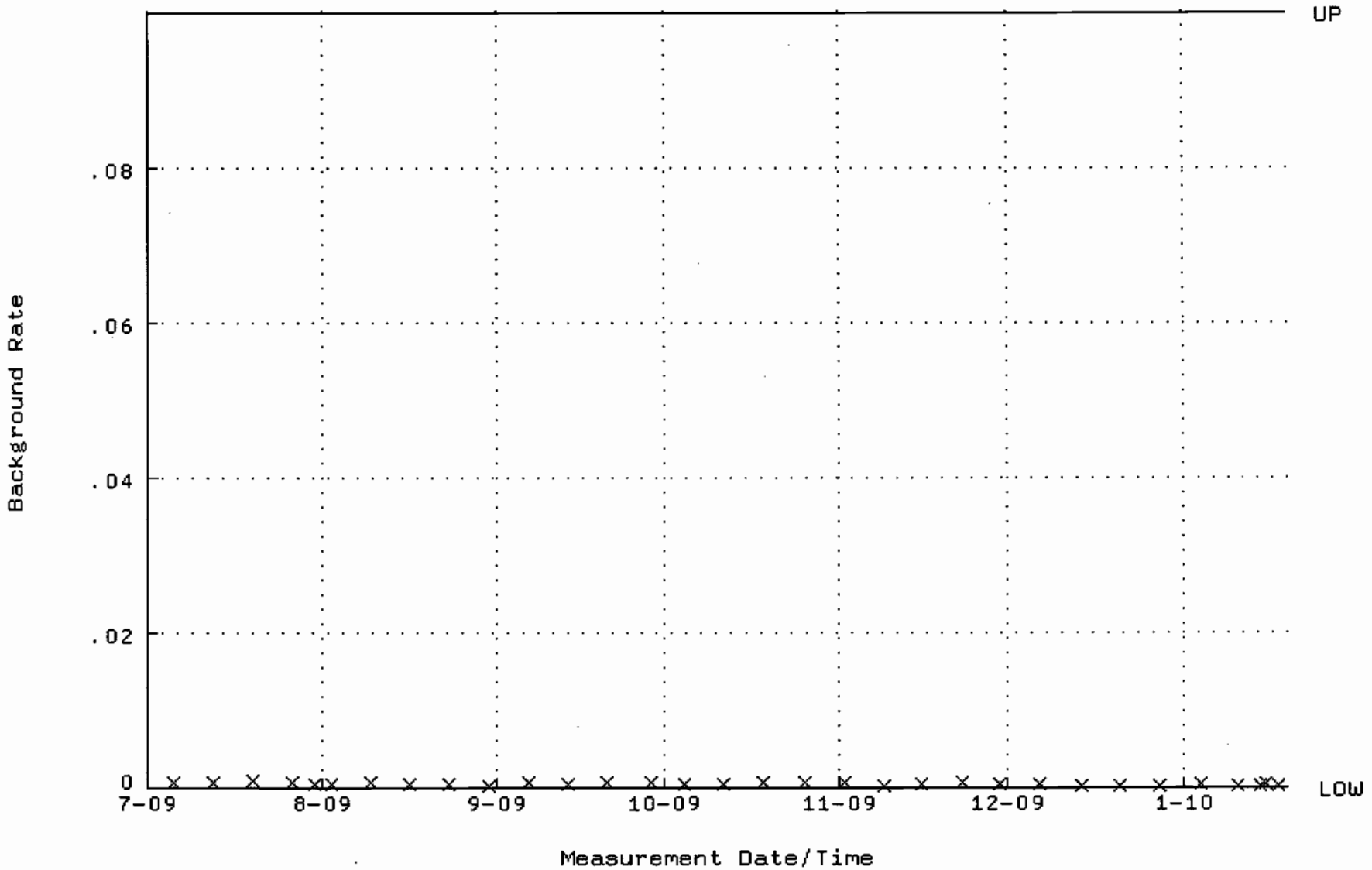
QA filename : DKA100:[ENV_ALPHA.QA.W]W132.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 17-JUL-2009 09:12:16 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.240573 through 0.260573



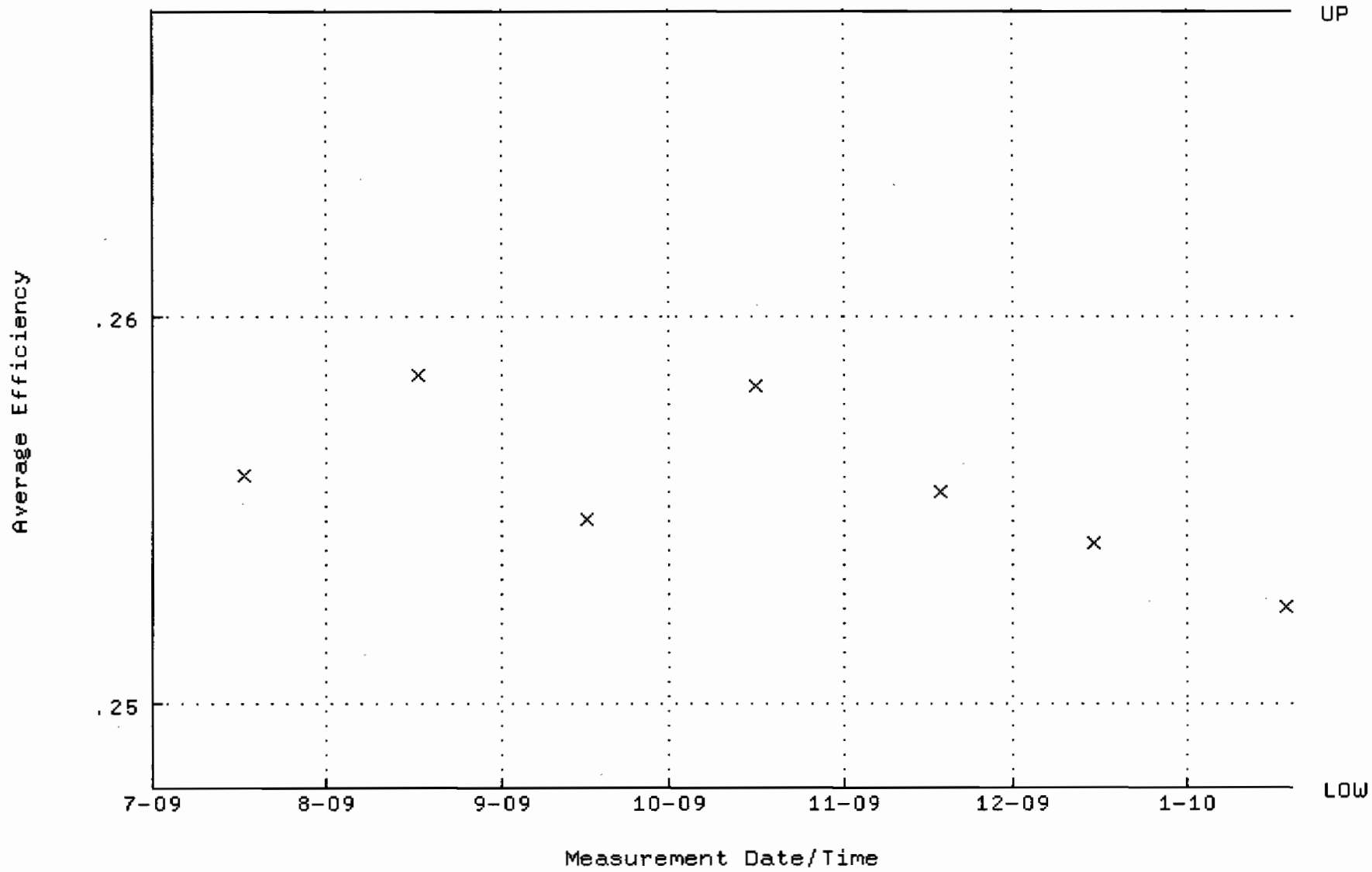
QA filename : DKA100:[ENV_ALPHA.QA.W]W132.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 17-JUL-2009 09:12:16 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 87.9674 through 97.2272



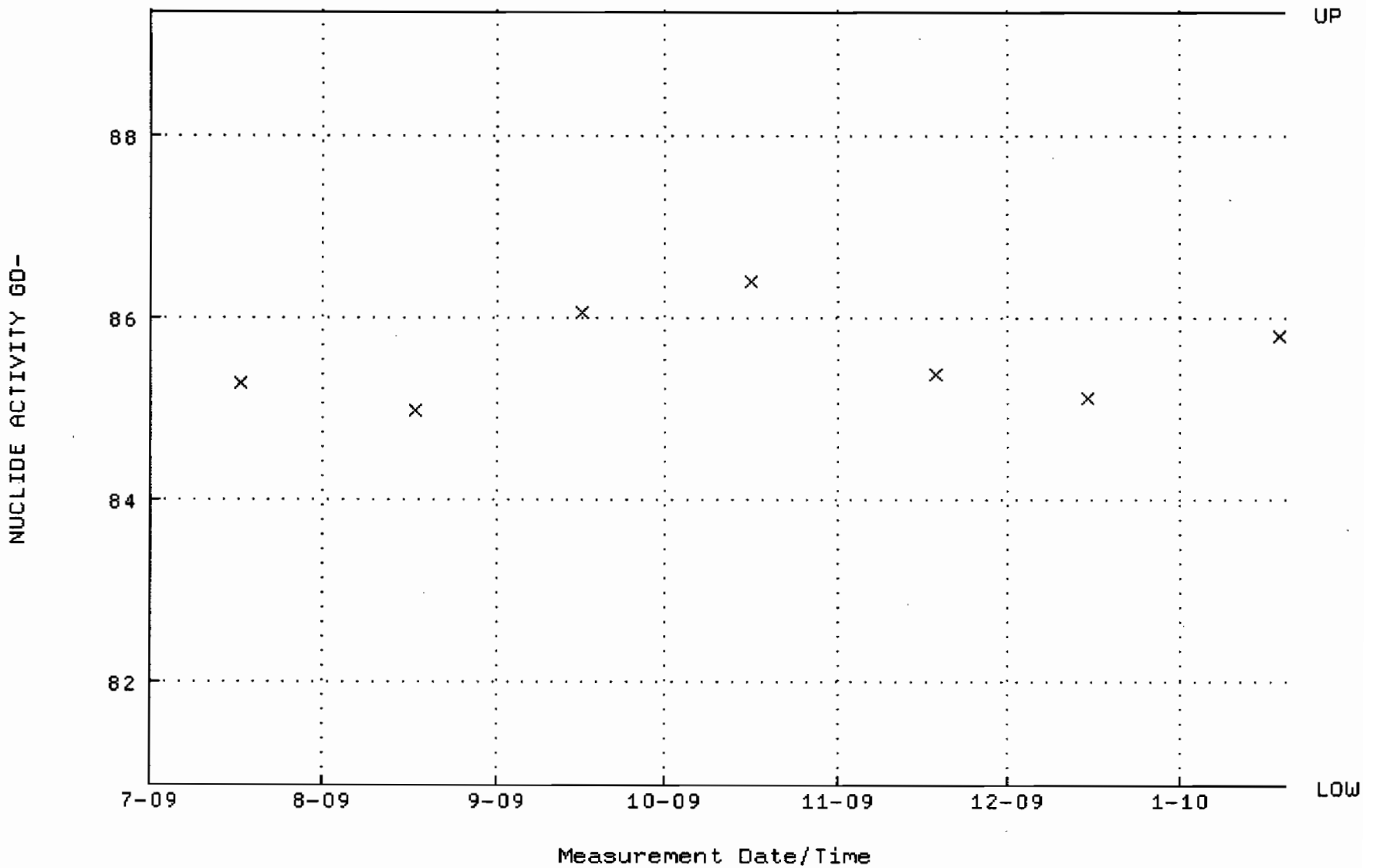
QA filename : DKA100:[ENV_ALPHA.QA.B]B132.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 14:56:21 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



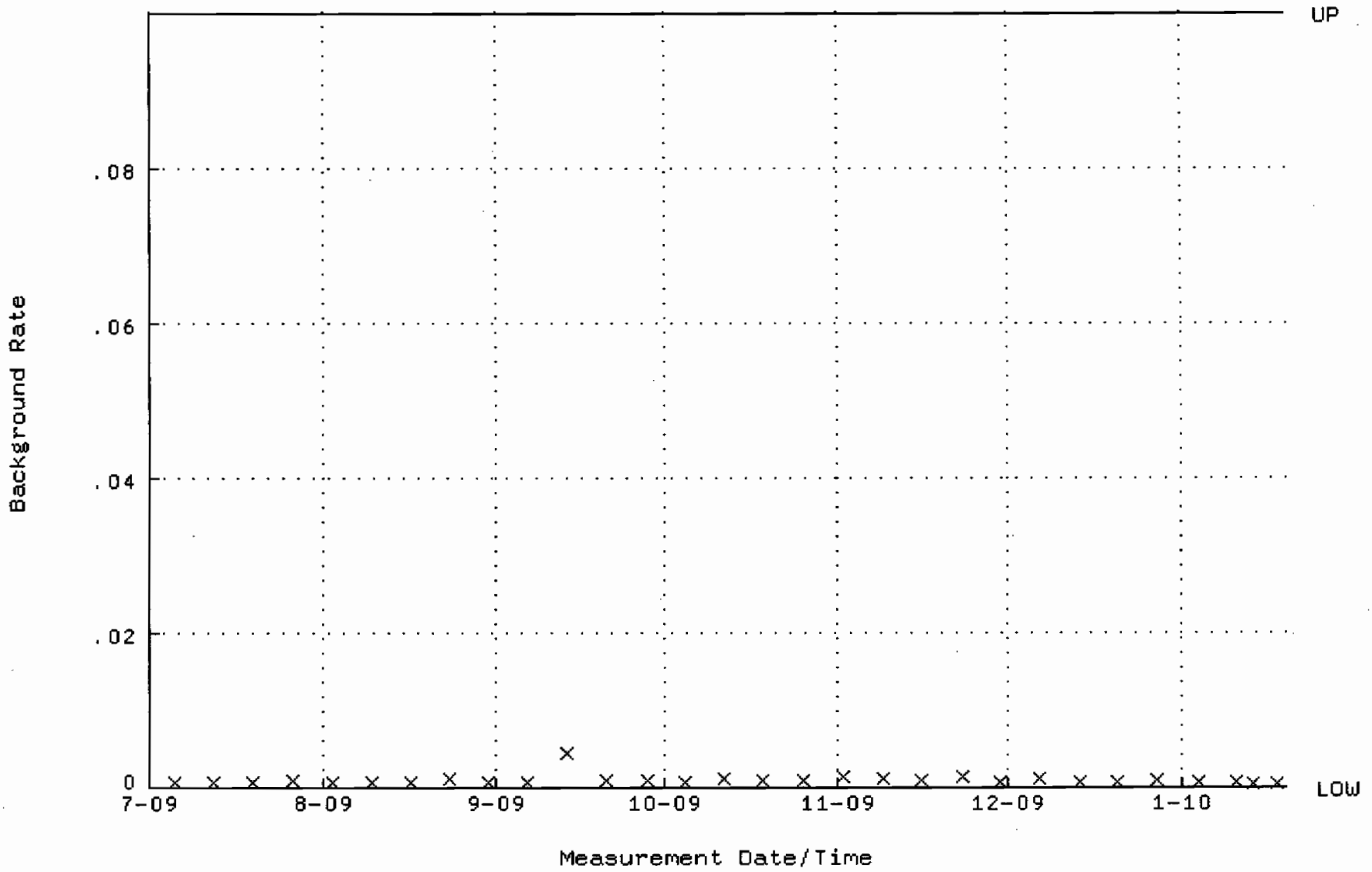
QA filename : DKA100:[ENV_ALPHA.QA.W]W141.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 17-JUL-2009 09:12:58 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.247845 through 0.267845



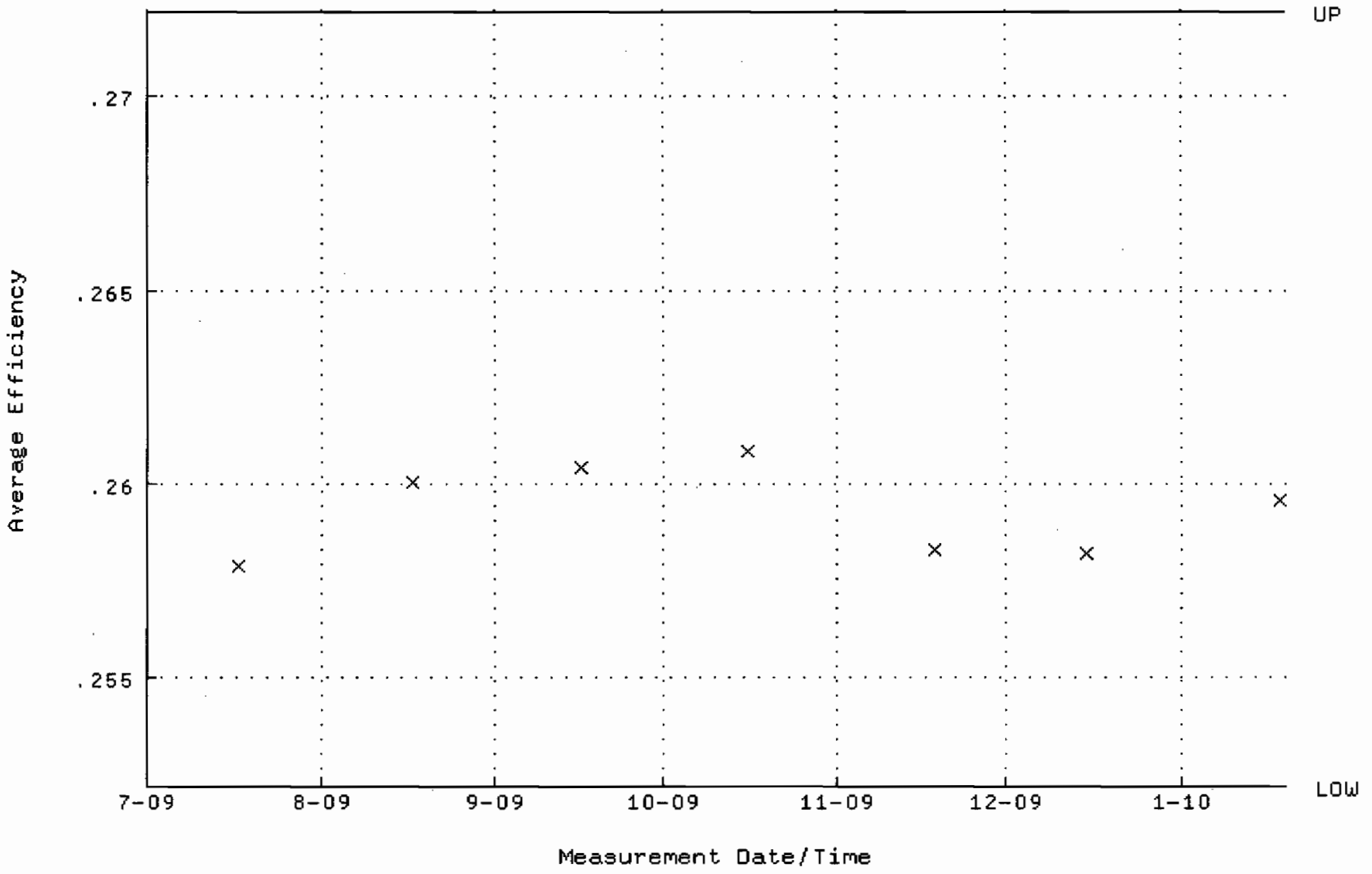
QA filename : DKA100:[ENV_ALPHA.QA.W]W141.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 17-JUL-2009 09:12:58 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 80.8595 through 89.3711



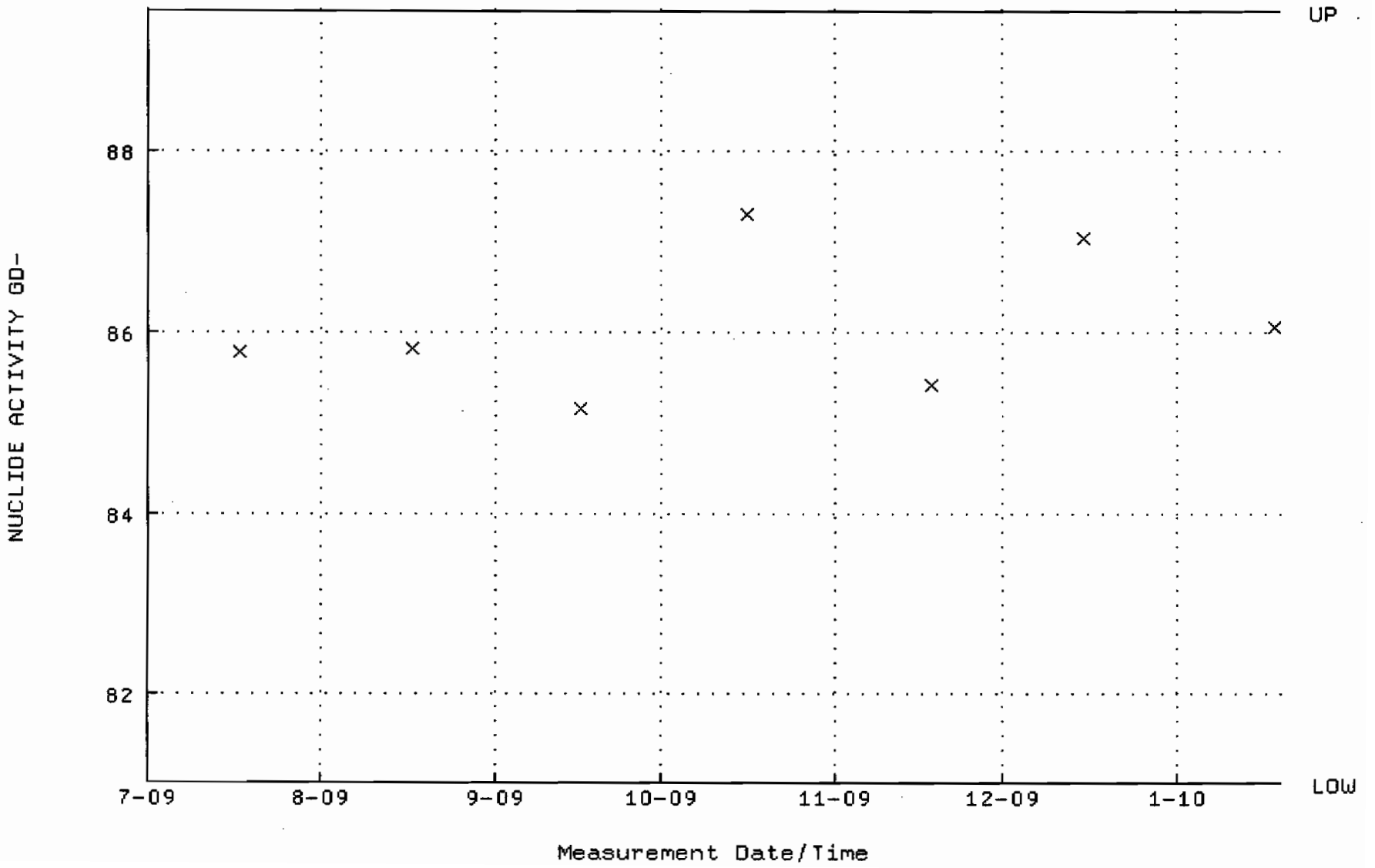
QA filename : DKA100:[ENV_ALPHA.QA.B]B141.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 14:57:04 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



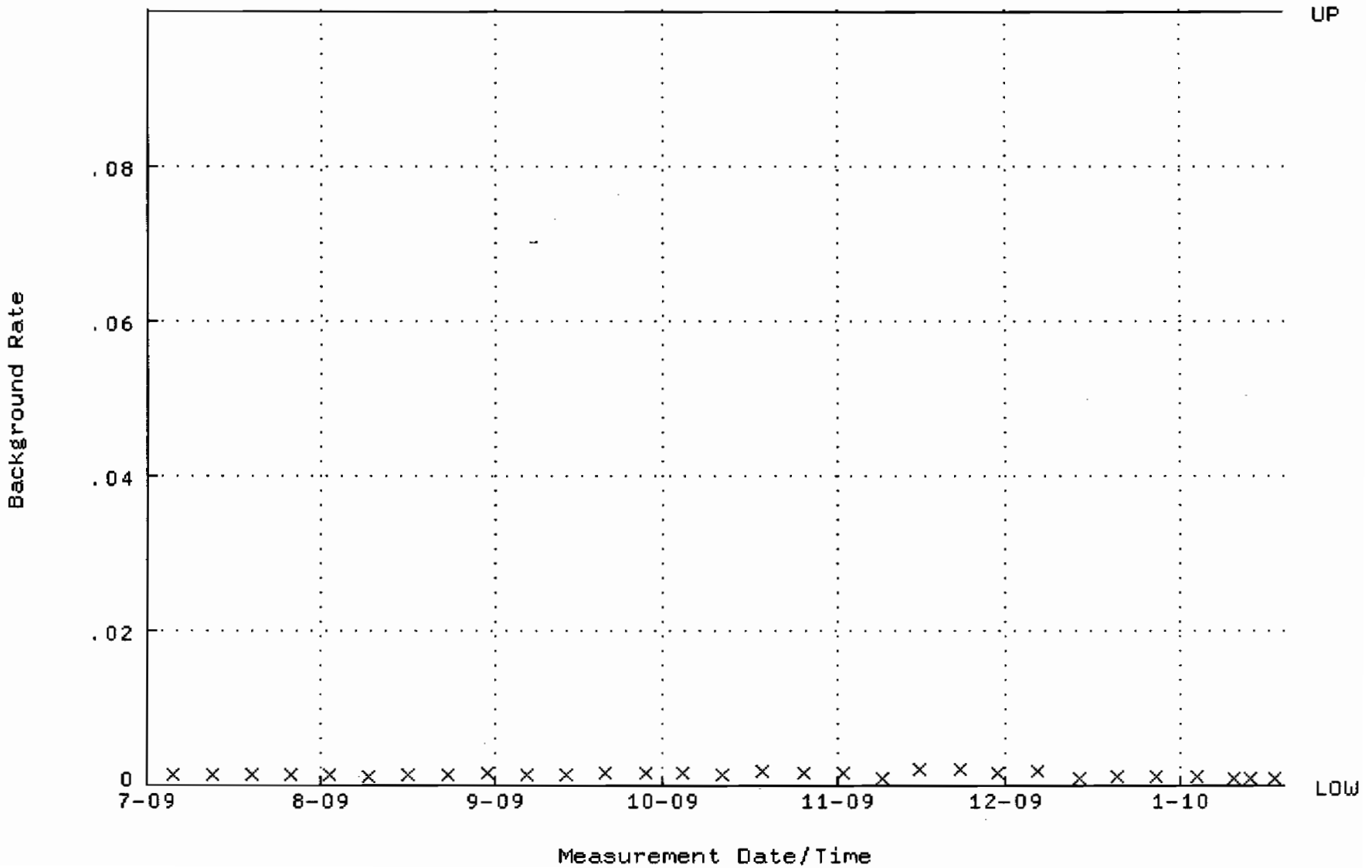
QA filename : DKA100:[ENV_ALPHA.QA.W]W142.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 17-JUL-2009 09:13:03 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.252182 through 0.272182



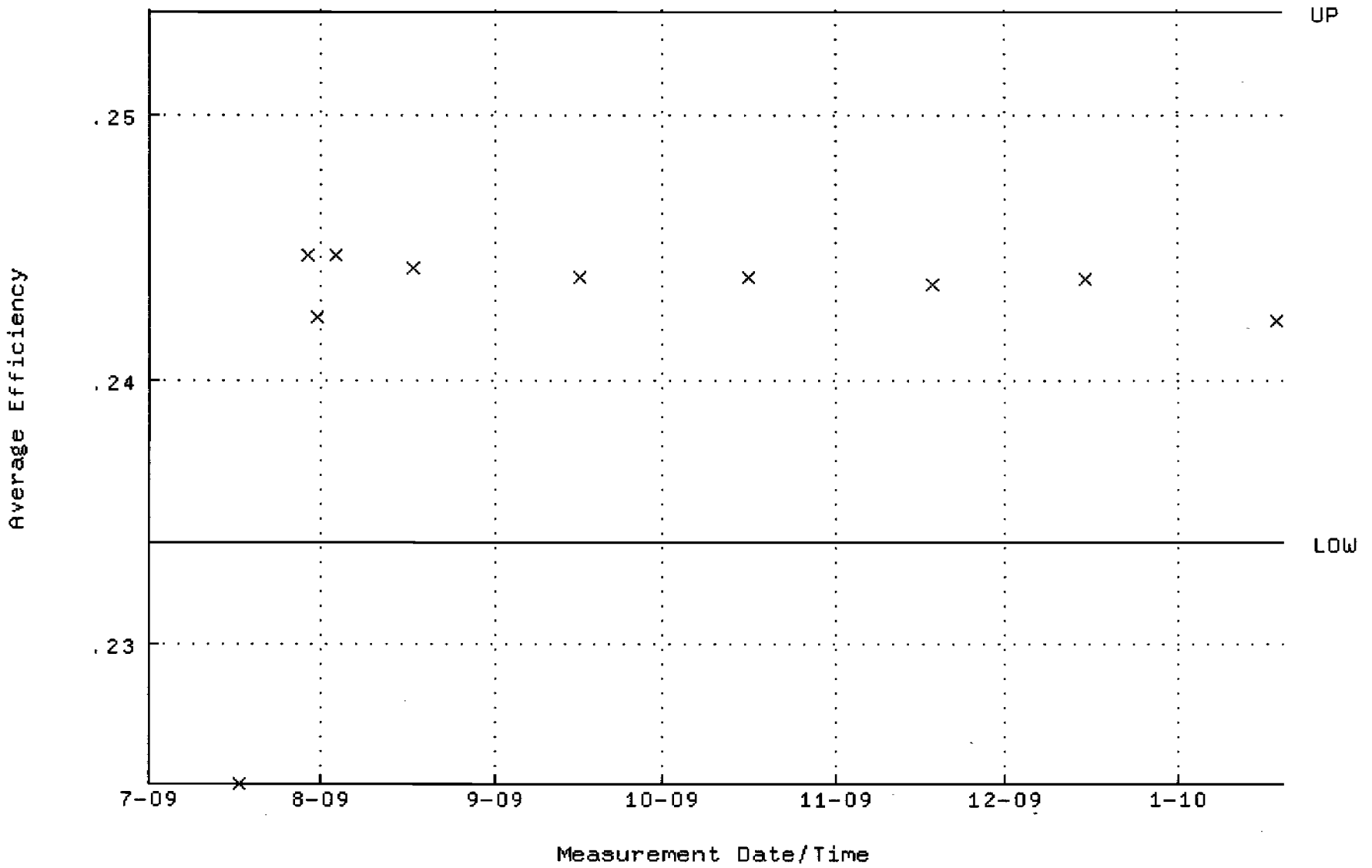
QA filename : DKA100:[ENV_ALPHA.QA.W]W142.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 17-JUL-2009 09:13:03 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 81.0245 through 89.5533



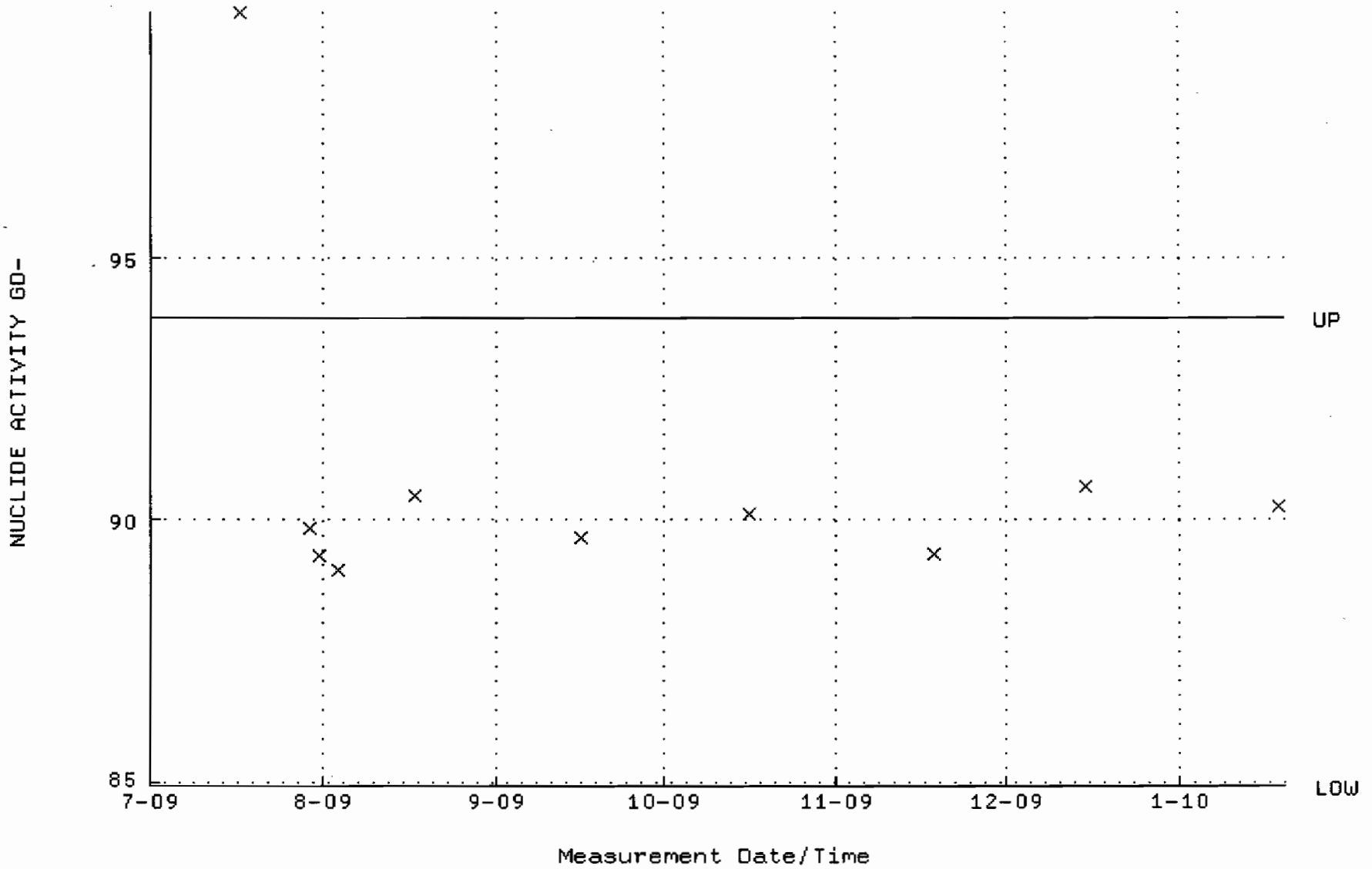
QA filename : DKA100:[ENV_ALPHA.QA.B]B142.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 14:57:09 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



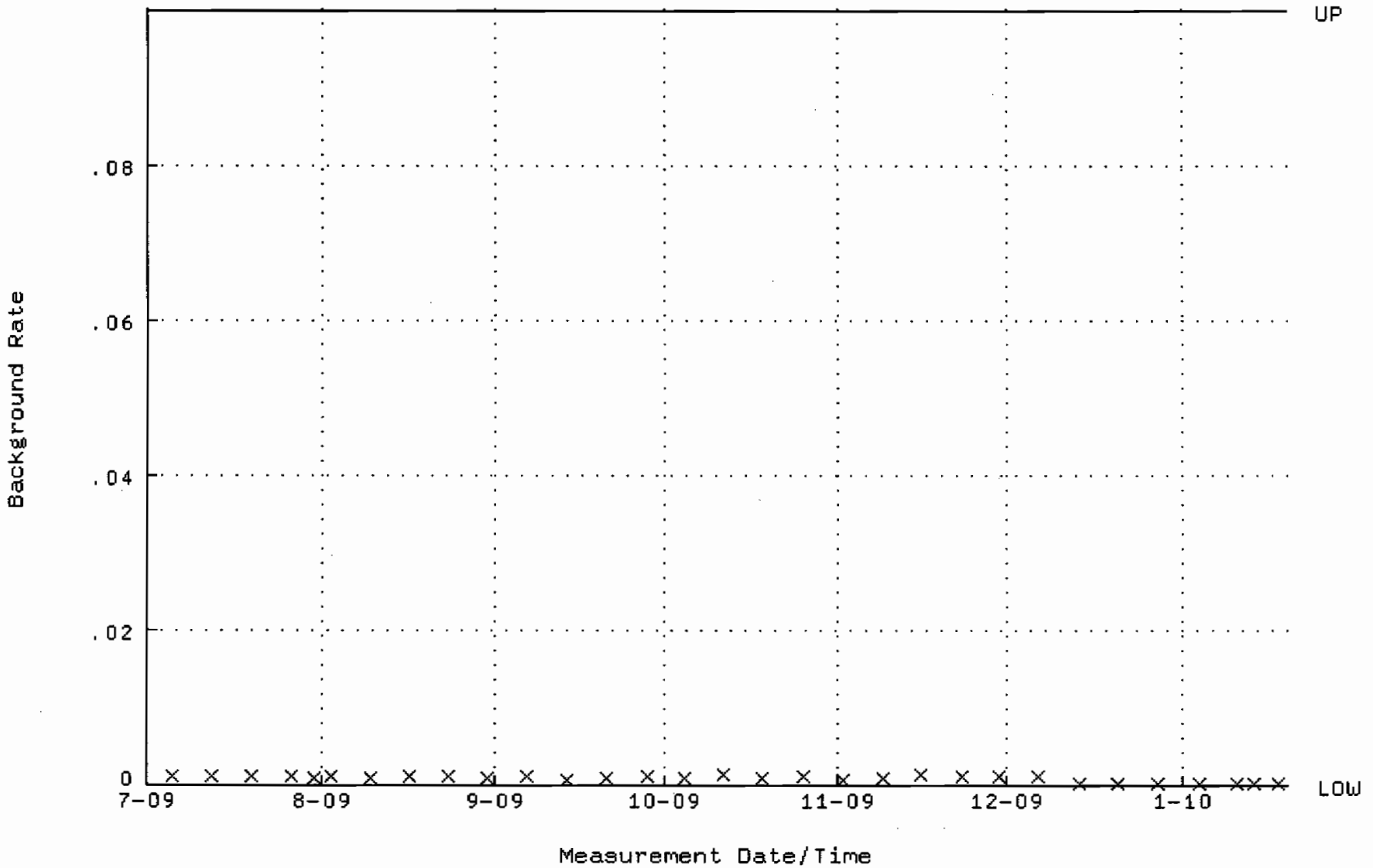
QA filename : DKA100:[ENV_ALPHA.QA.W]W143.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 17-JUL-2009 09:13:09 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.233879 through 0.253879



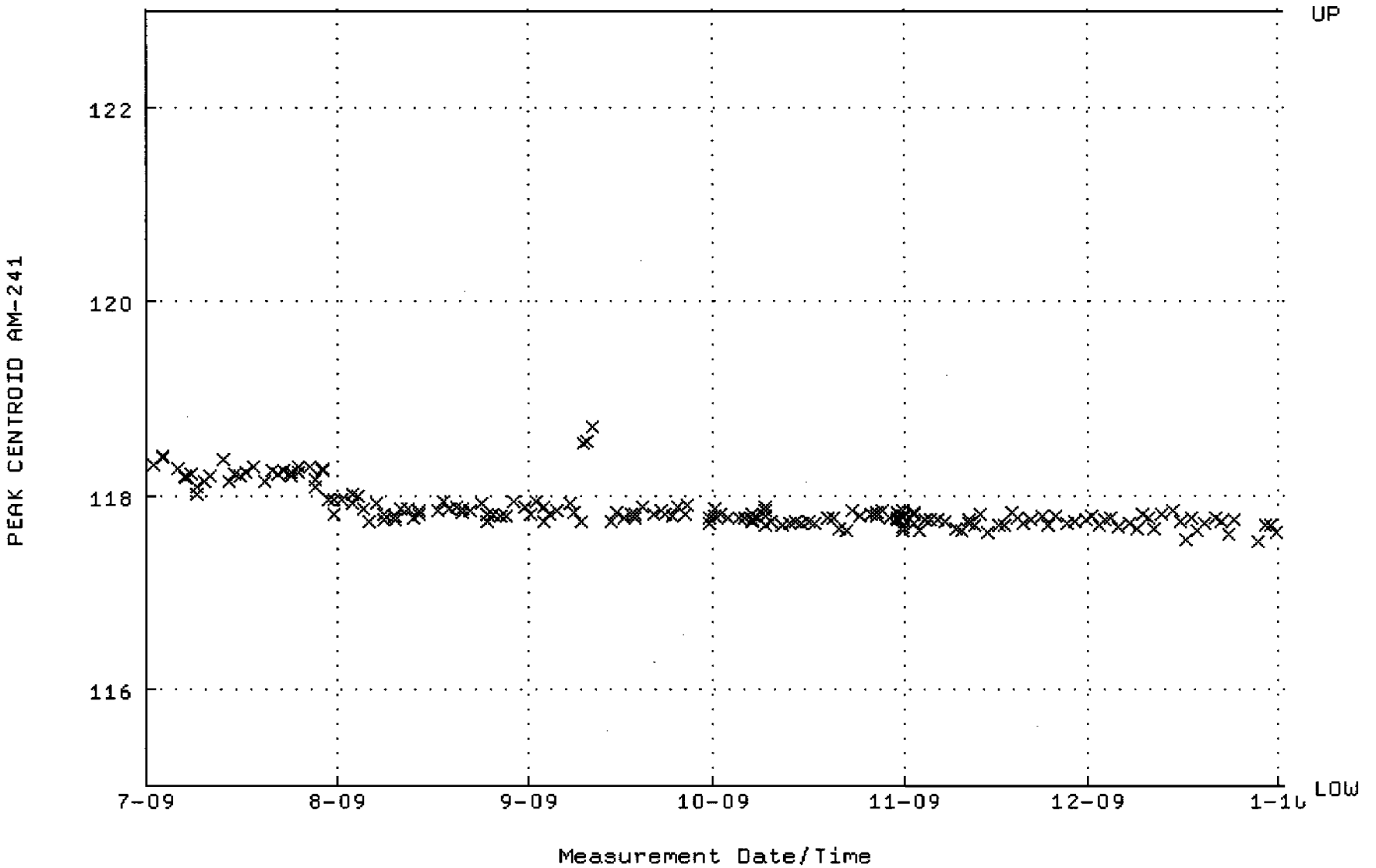
QA filename : DKA100:[ENV_ALPHA.QA.W]W143.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 17-JUL-2009 09:13:09 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 84.9200 through 93.8590



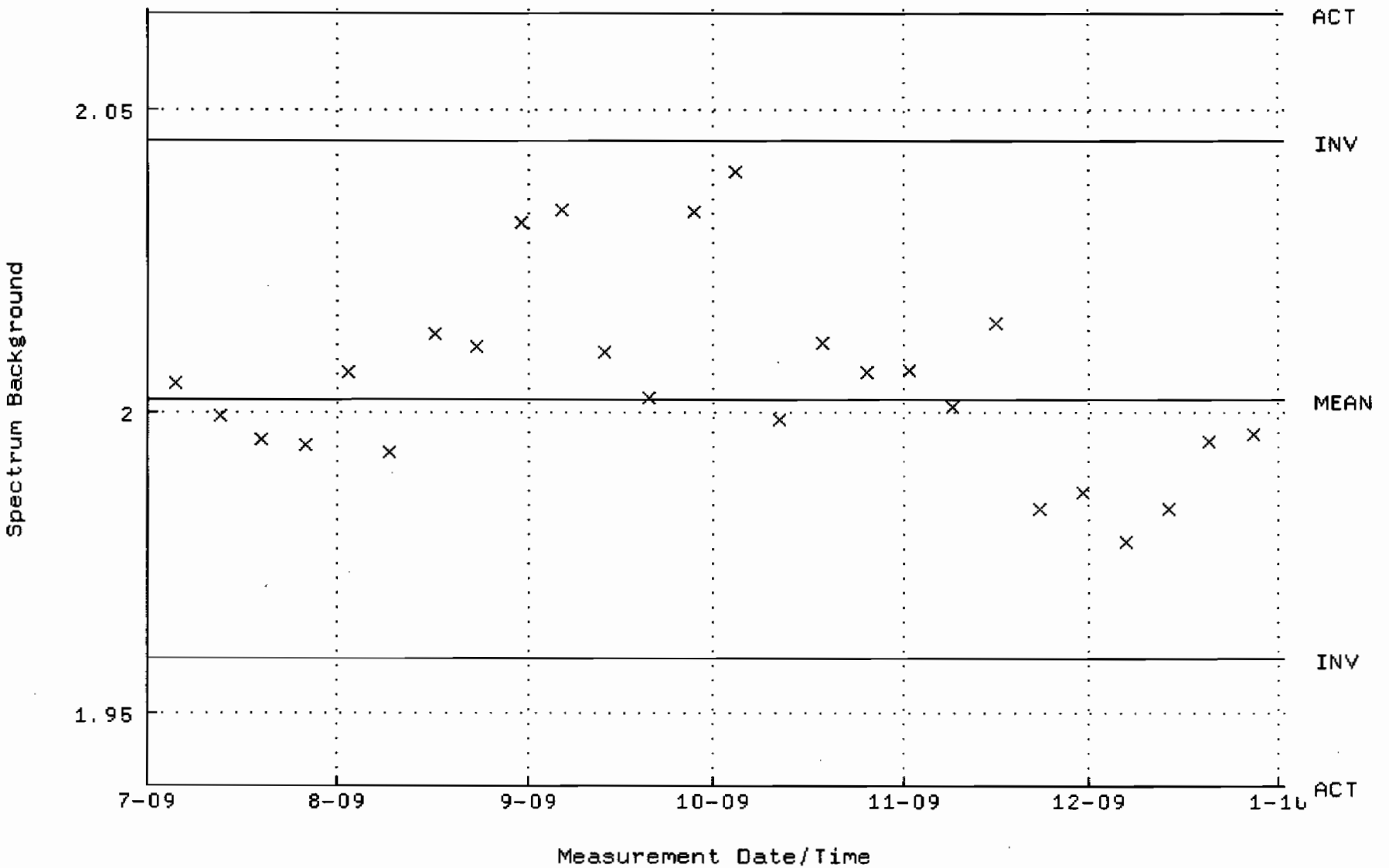
QA filename : DKA100:[ENV_ALPHA.QA.B]B143.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 14:57:14 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



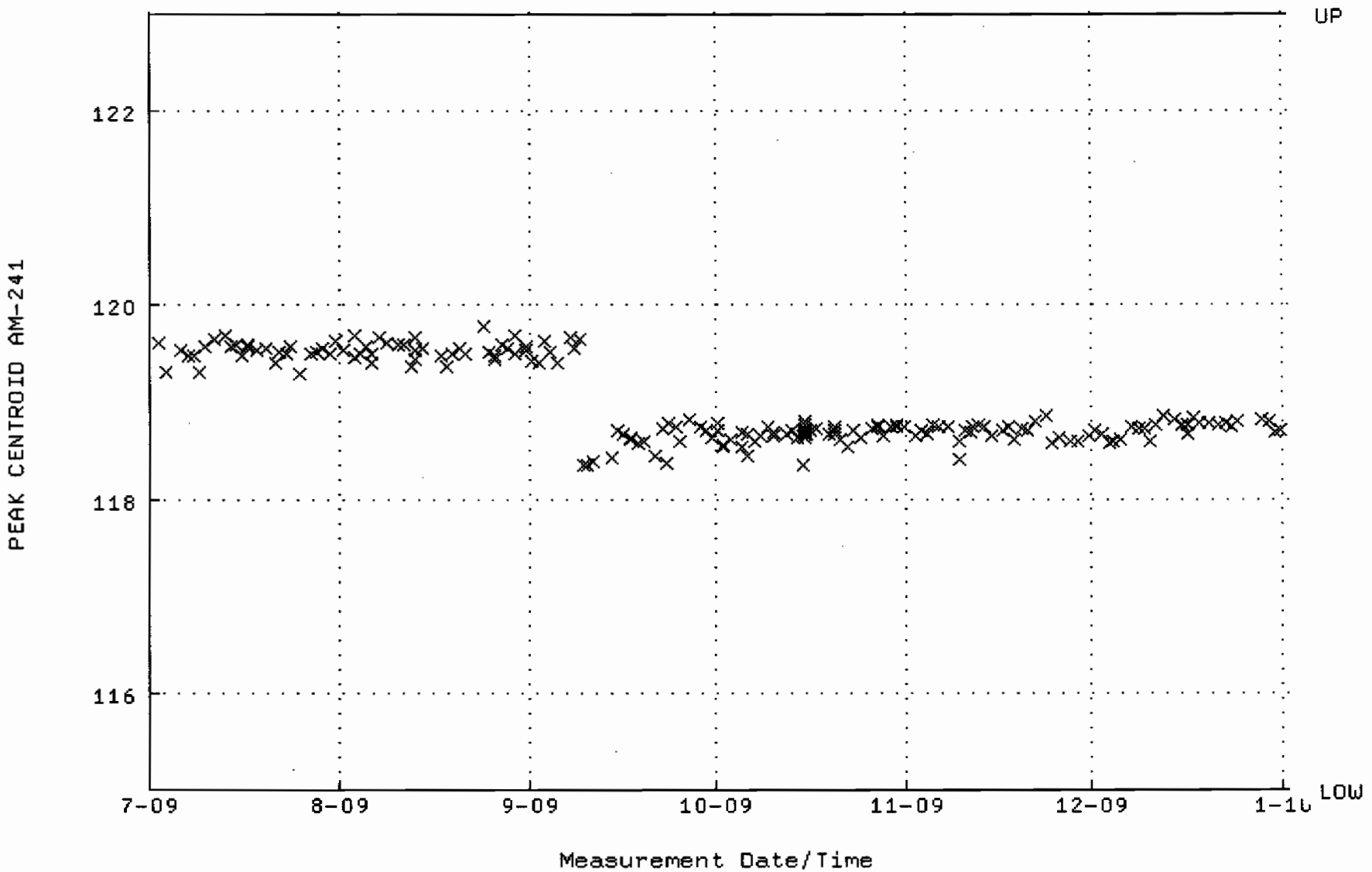
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM02_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 04:58:43 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



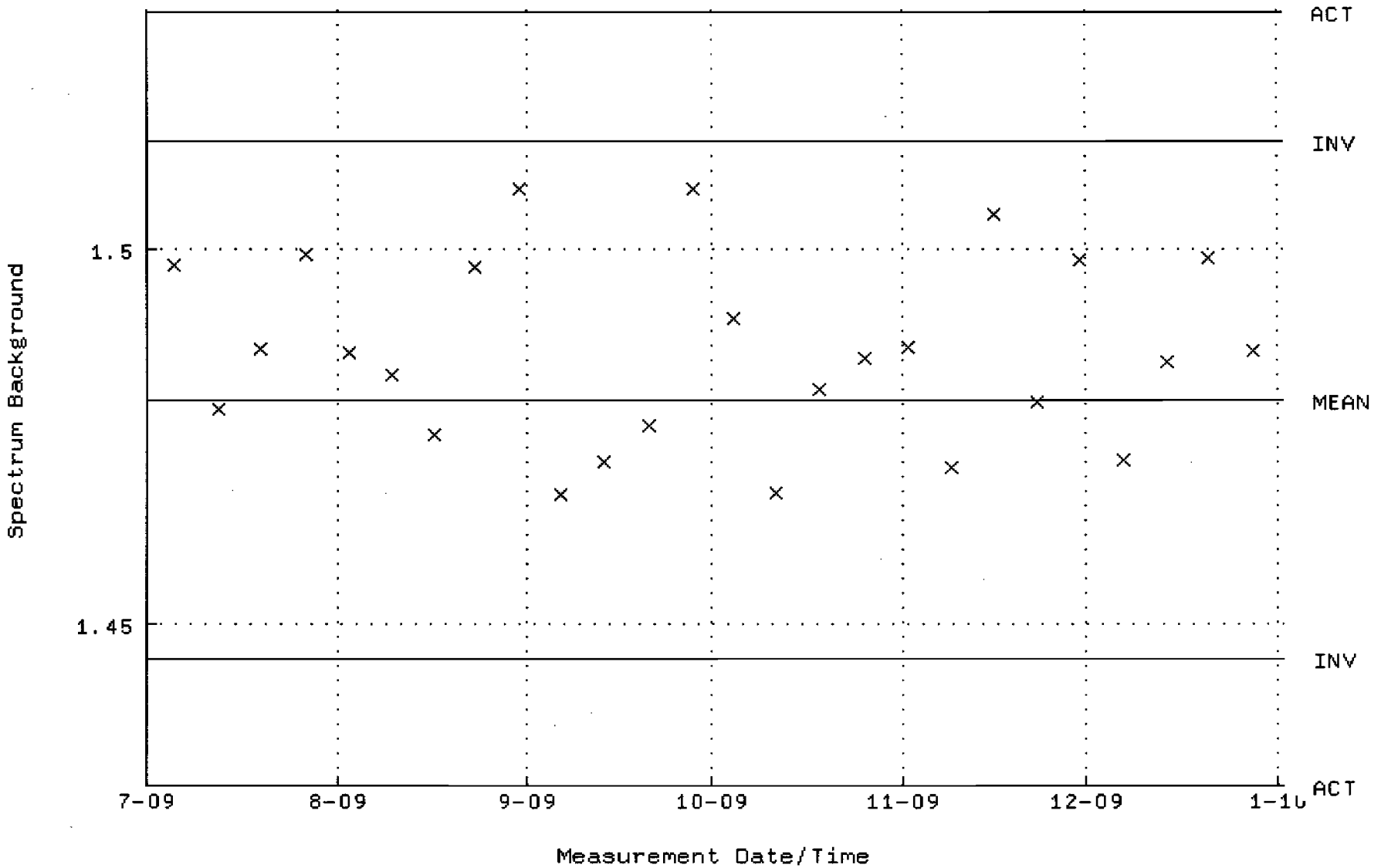
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM02.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:49:39 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 2.00226 +- 2.139827E-02 (1.07 %)



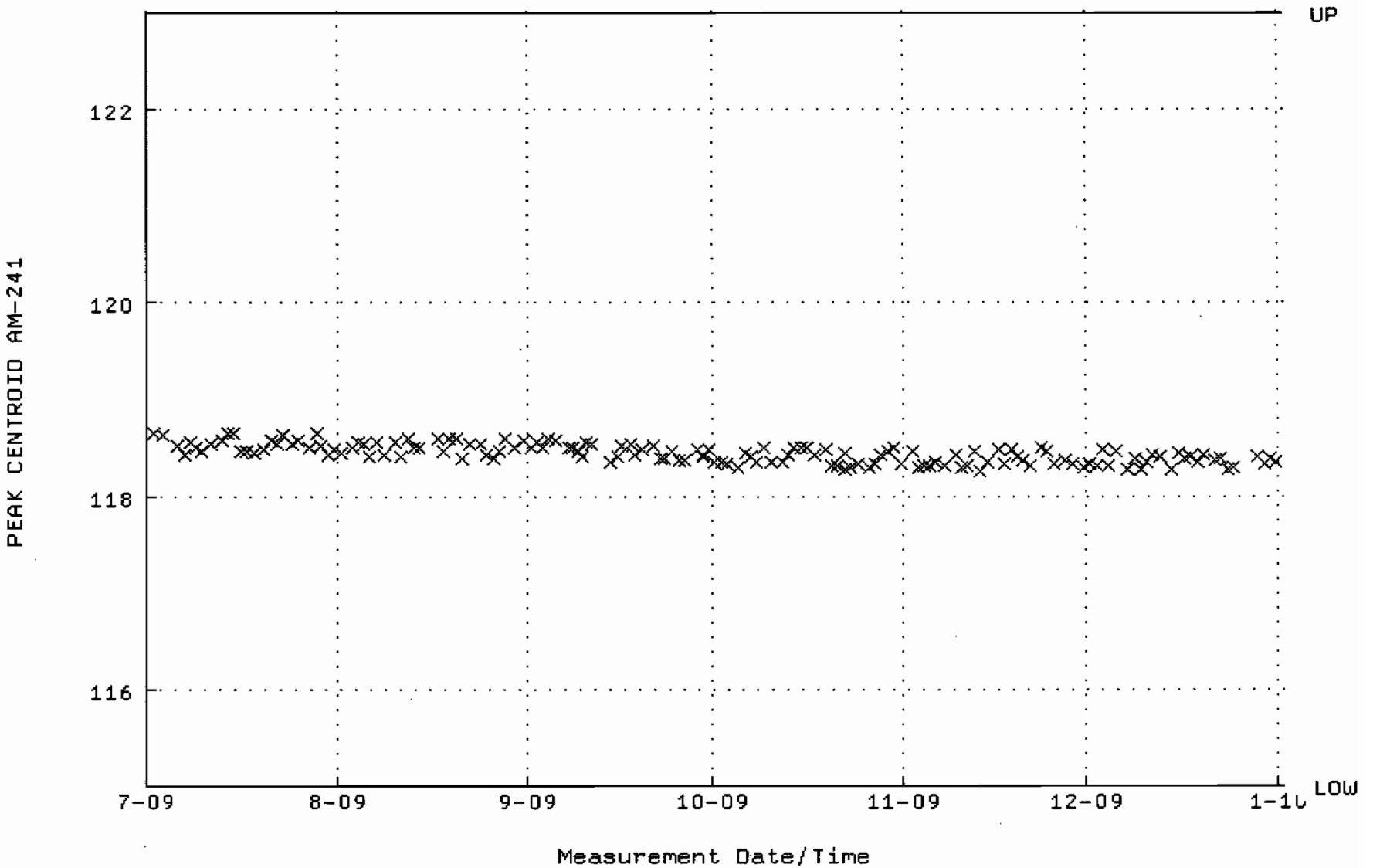
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM10_500MLMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 10:47:17 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



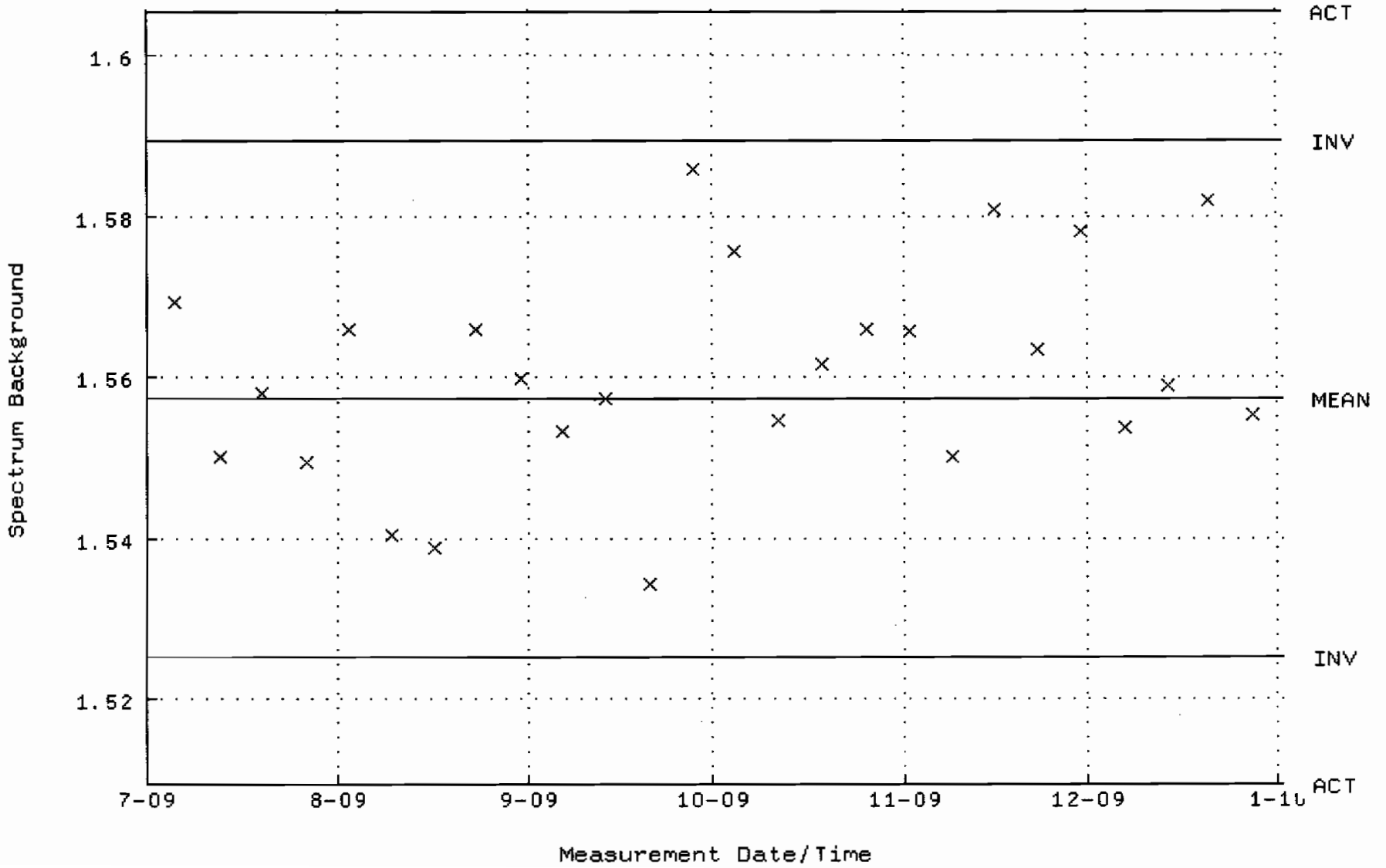
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM10.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:51:14 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.48000 +- 1.723892E-02 (1.16 %)



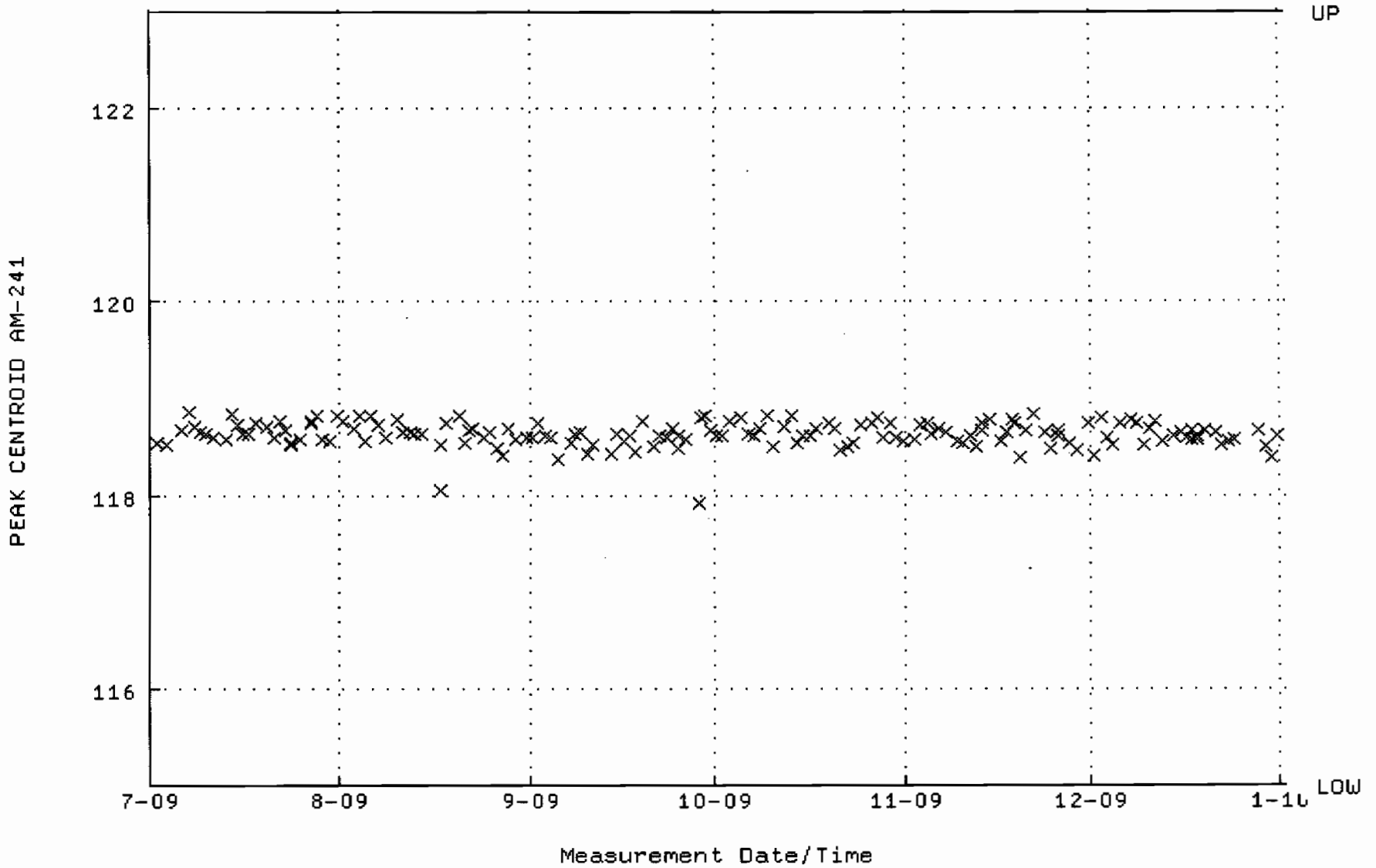
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM12_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 05:29:11 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



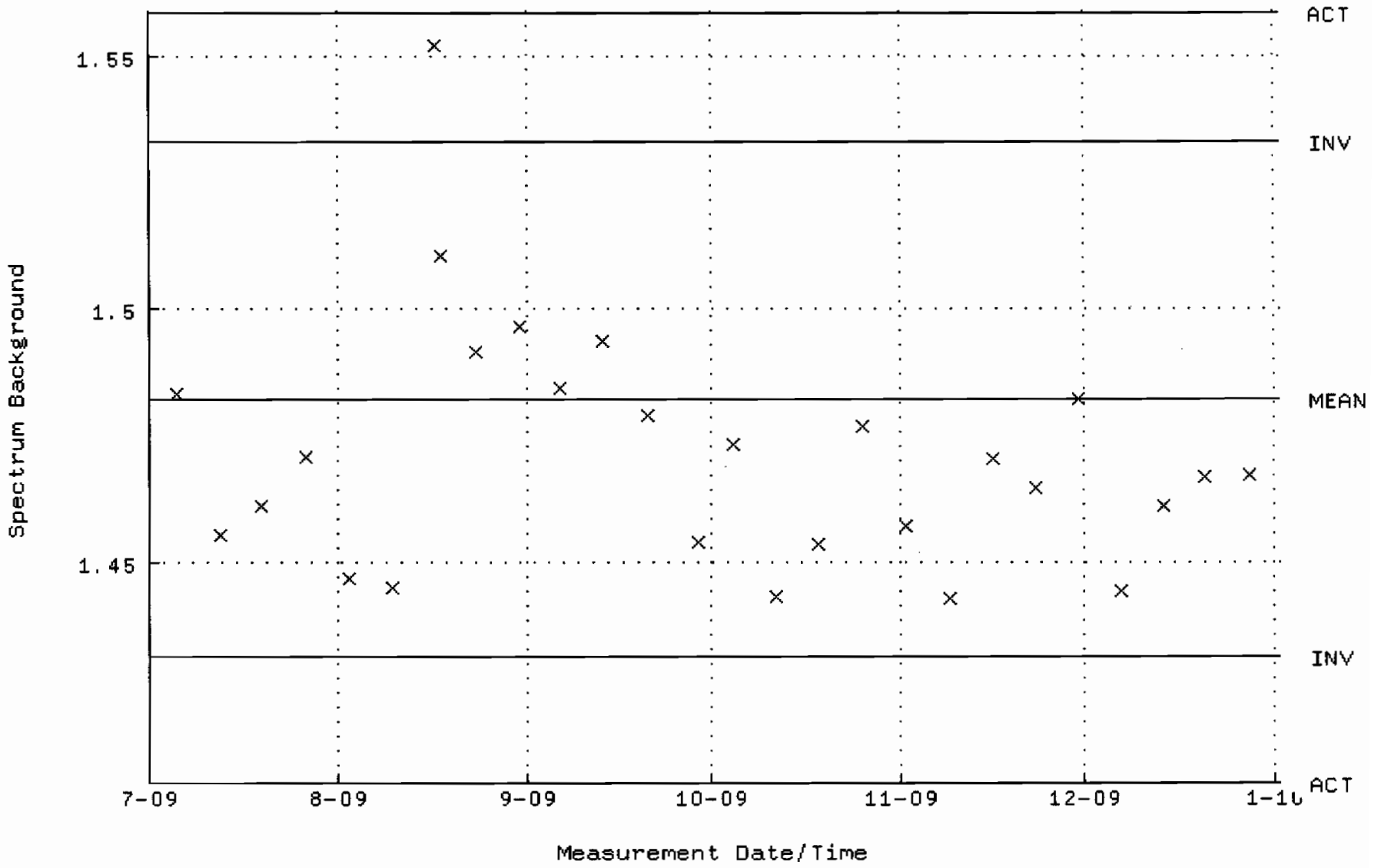
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM12.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:52:04 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.55746 +- 1.601675E-02 (1.03 %)



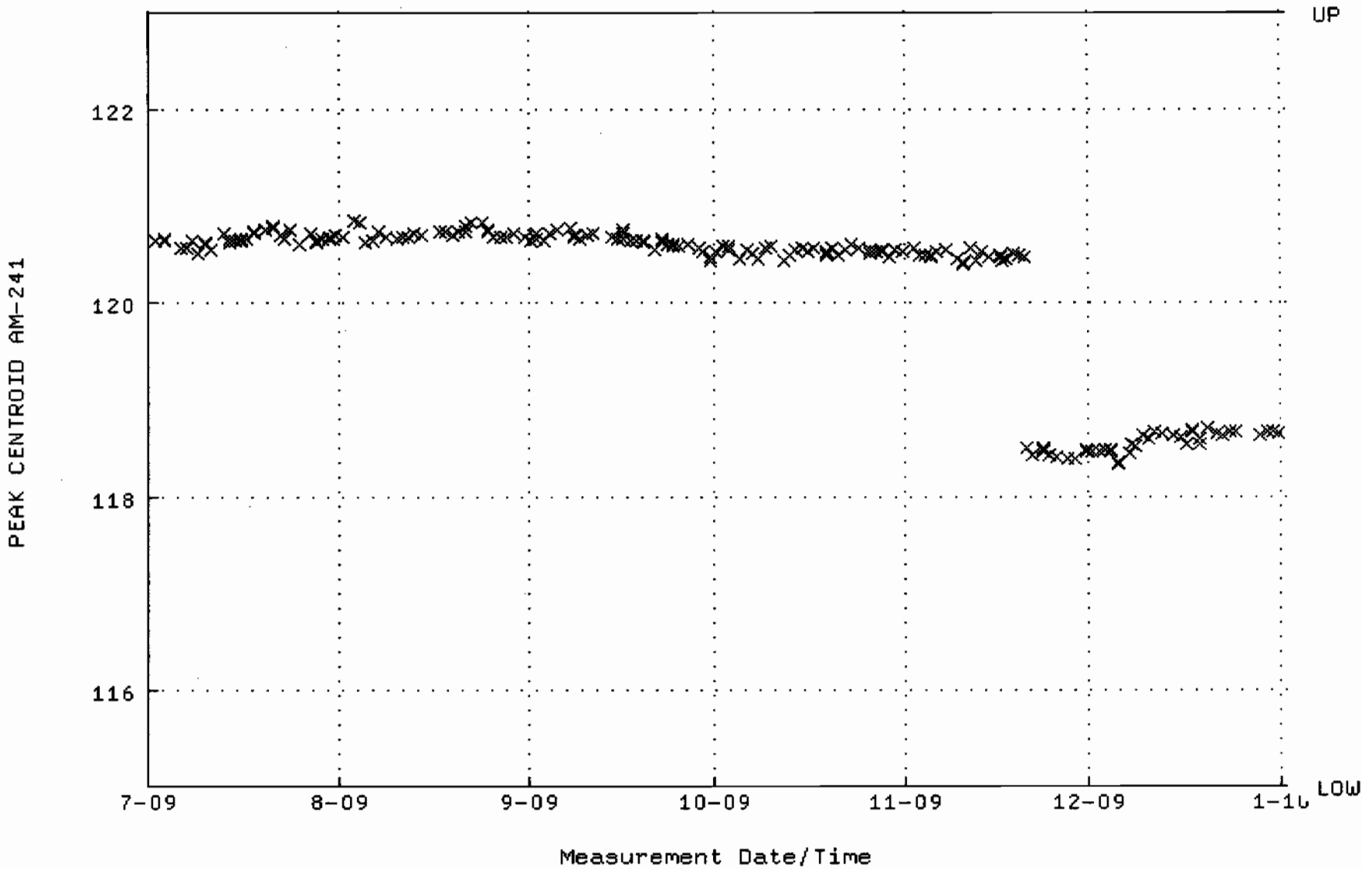
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM14_2LMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 04:59:23 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



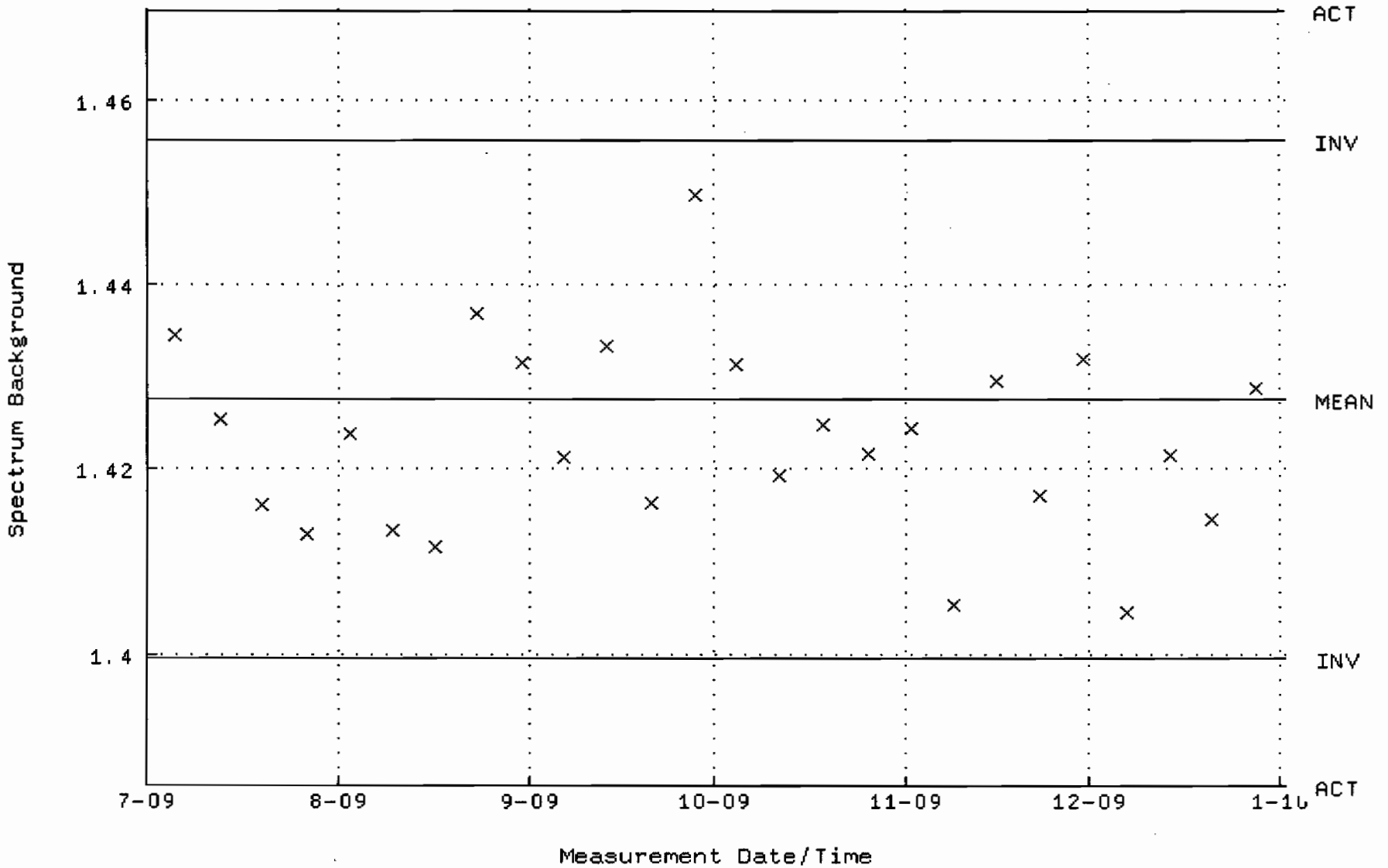
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM14.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:52:31 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.48240 +- 2.535500E-02 (1.71 %)



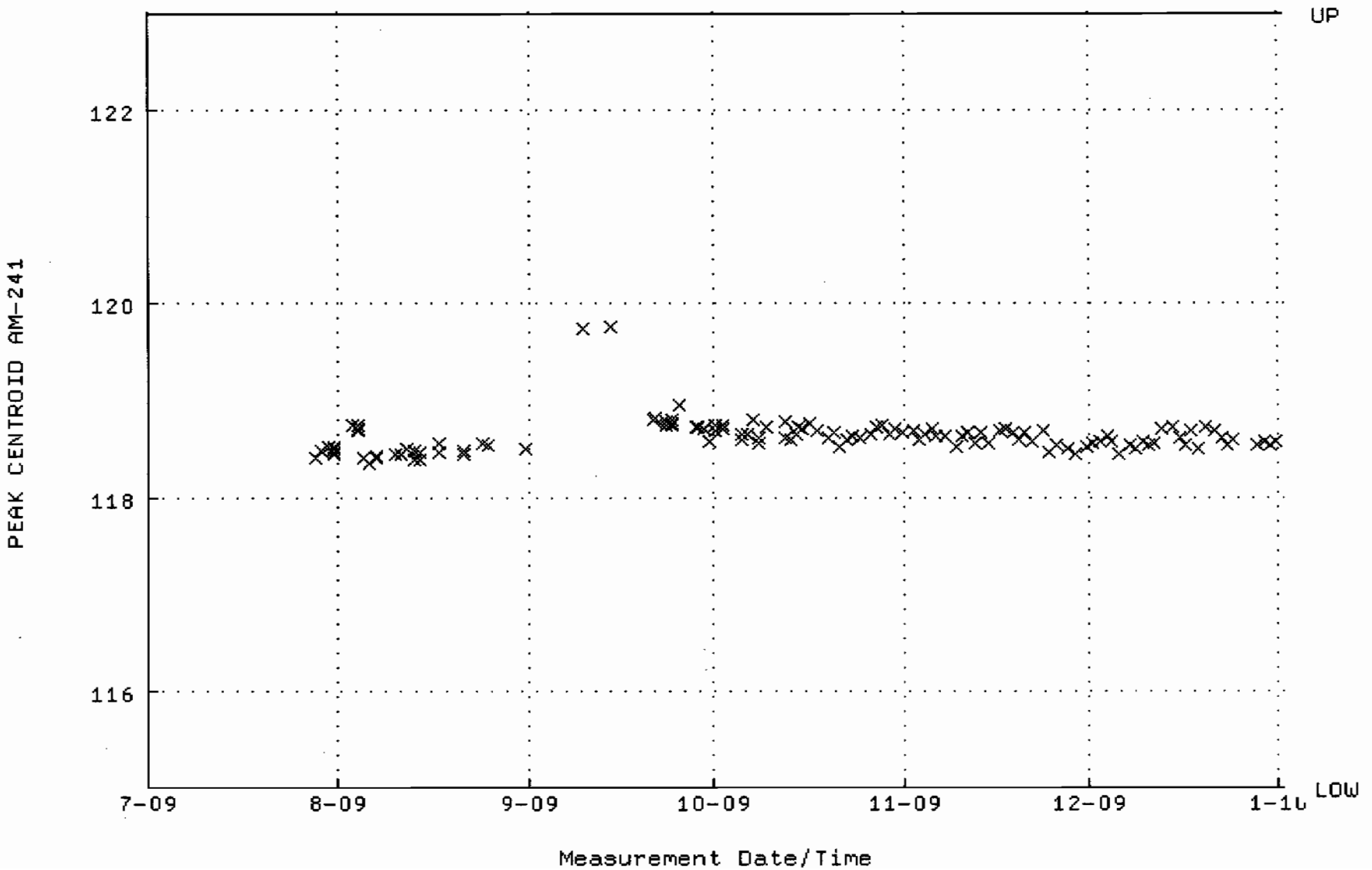
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM17_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 05:29:26 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



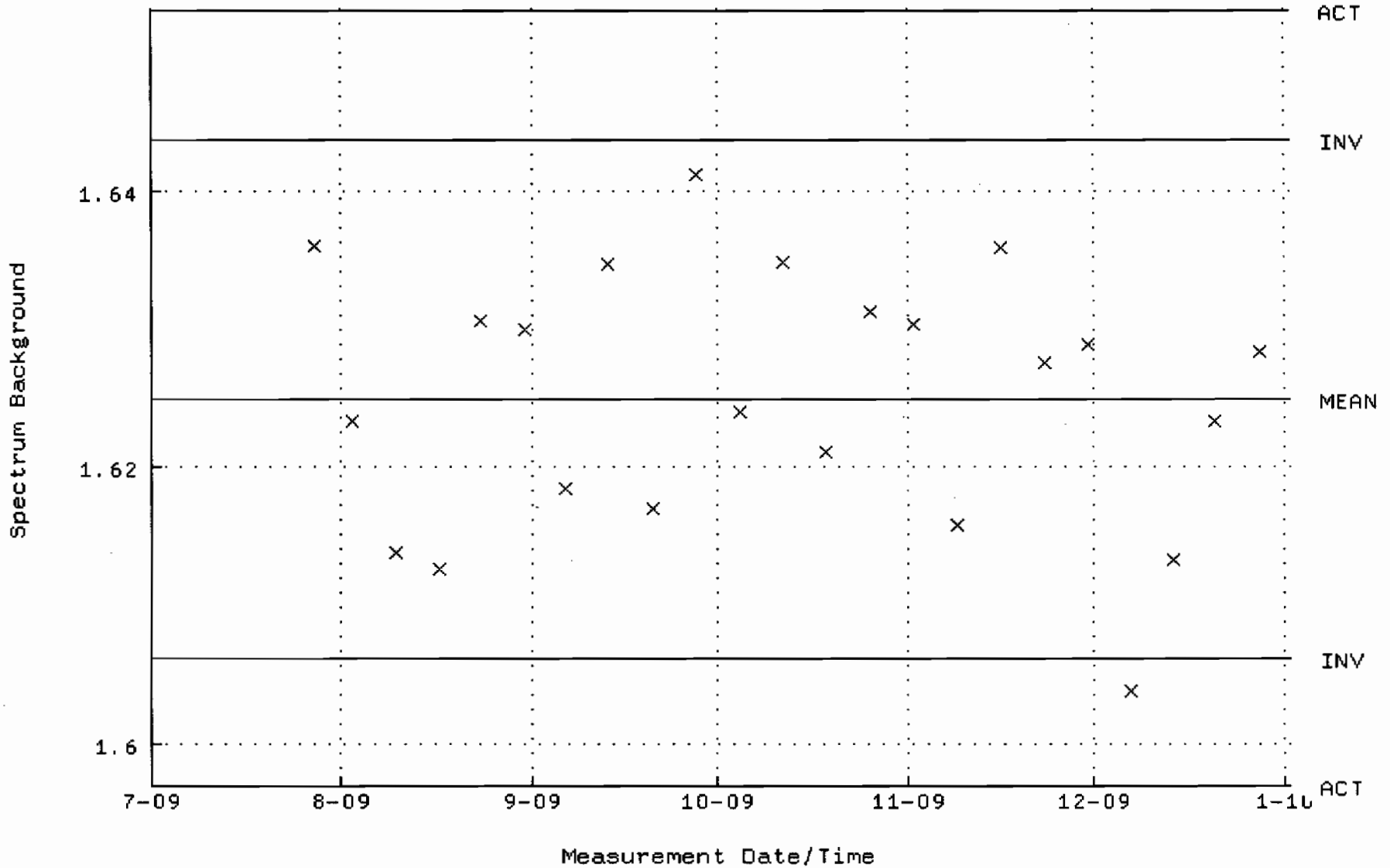
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM17.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:53:11 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.42766 +- 1.396974E-02 (0.98 %)



QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM25_2LMB.QAF;1
Parameter Name : PSCENTRD-59 (PEAK CENTROID AM-241)
Start/End Dates : 28-JUL-2009 10:32:53 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM25.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 27-JUL-2009 17:25:45 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.62502 +- 9.370414E-03 (0.58 %)



STANDARDS DATA

ANALYTICS
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1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: [signature] 11-28-06

This standard will expire one year after the calibration date.

rec'd 11/30/06
RC-S-045-073-0

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ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)
HPGe (High Purity Germanium Gamma Ray Spectrometer)
IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Operations Manual Forms, ANA-QA-06 Form 1, Rev. 2, 6/7/2005

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info	
Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/02/2009
Expiration Date:	12/02/2010
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL
(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Am-241	Isotope	Result		
	Mixed Gamma N1	2534	pCi/L	- Ver. JAR-1
	Mixed Gamma N2	2510	pCi/L	- Ver. JAR-3
	Mixed Gamma N3	2413	pCi/L	- Ver. JAR. 5
Mean Value (Counting) =	2485.67	**100.00**	**Pass**	
Stdev =	64.065		**Rule 3 (Pass/Fail)**	

Certificate Value =	2485.68018	pCi/L
Lower Limit =	2357.536524	pCi/L
Upper Limit =	2613.796809	pCi/L
Rule 1 (Pass/Fail)	**Pass**	
Two sigma =	128.1301422	
10 % of Mean =	248.56666667	
Rule 2 (Pass/Fail)	**Pass**	

M. Stamps 12/2/09 [illegible] 12/4/09

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Cs-137	Isotope	Result		
	Mixed Gamma N1	854.2	pCi/L	- Ver. Jar. 1
	Mixed Gamma N2	907.6	pCi/L	- Ver. Jar. 3
	Mixed Gamma N3	898.9	pCi/L	- Ver. Jar. 2
Mean Value (Counting) =	886.90	95.01	**Pass**	
Stdev =	28.651	**Rule 3 (Pass/Fail)**		
Certificate Value =	933.44144	pCi/L		
Lower Limit =	829.597644	pCi/L		
Upper Limit =	944.202356	pCi/L		
Rule 1 (Pass/Fail)	**Pass**			
Two sigma =	57.30235597			
10 % of Mean =	88.69000000			
Rule 2 (Pass/Fail)	**Pass**			

M. Stamps 12/2/09

12/4/09

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Co-60 (1332.5)	Isotope	Result	
	Mixed Gamma N1	1572	pCi/L - VER-JAR-5
	Mixed Gamma N2	1495	pCi/L - VER-JAR-2
	Mixed Gamma N3	1501	pCi/L - VER-JAR-3
Mean Value (Counting) =	1522.67	**98.50**	**Pass**
Stdev =	42.829	**Rule 3 (Pass/Fail)**	
Certificate Value =	1545.8378	pCi/L	
Lower Limit =	1437.008431	pCi/L	
Upper Limit =	1608.324902	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	85.65823564		
10 % of Mean =	152.26666667		
Rule 2 (Pass/Fail)	**Pass**		

M. Stamps 12/2/09 [illegible] 12/4/09

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

0244-A Characterization

Sample #	Uranium-233/234 Result (pCi/g)	Uranium-238 Result (pCi/g)	Thorium-230 Result (pCi/g)
0244-A 1	6.59	6.12	25.3
0244-A 2	6.36	6.07	28.5
0244-A 3	5.78	5.53	26.5
0244-A 4	6.48	5.97	25.5
0244-A 5	5.65	5.59	26.2
0244-A 6	6.96	5.78	27.0
0244-A 7	5.95	5.75	24.2
0244-A 8	5.29	5.67	27.2
0244-A 9	5.51	6.05	24.3
0244-A 10	6.37	5.57	25.6
0244-A 11	6.50	5.80	25.8
0244-A 12	6.13	5.42	22.4
0244-A 13	5.49	5.24	24.7
0244-A 14	6.19	5.21	26.9
0244-A 15	6.50	6.27	27.6
0244-A 16	6.50	5.24	24.9
0244-A 17	6.25	6.05	24.7
0244-A 18	6.14	6.00	25.4
0244-A 19	6.19	6.14	26.4
0244-A 20	5.67	5.61	23.2
Mean Value	6.13	5.75	25.62
1 sigma	0.439	0.325	1.493
2 sigma	0.878	0.650	2.986
75% Limit	4.60	4.31	19.22
125% Limit	7.66	7.19	32.03
Expected Result	6.2 +/- 4.0	6.0 +/- 4.0	24.5 +/- 0.6
Achieved Results	6.13 +/- 0.439	5.75 +/- 0.325	25.62 +/- 1.493

REFERENCE DATE 4/14/2000 [signature] 12/1/04

Angela A. Johnson 12/3/04

TRM

Invoice:

5 boxes of TRM-1
10 " " TRM-2 and 3
5 " each of NRM-1 through 6
7 " baghouse dirt

Use 1/4 gm x 10 Samples WITH Together for TRM-2

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM-1	TRM-2	TRM-3	TRM-4
U-238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U-234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Th-230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra-226	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb-210	425 ± 24	22.1 ± 1.2	56.0 ± 2.1	38.9 ± 2.0

Attention Nancy Slater At GEL
Not For Log-In

9911627-01->0

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No.: 726494
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 1.3
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept. _____
P.O. Box 5800 MS 0154

Location — Tech Area VI — Building N/A — Room N/A

Reference LOV (available at SMO)

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID (LAB USE)
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab
Turnaround Time ☒Normal ☐Rush Required Report Date

Sample Tracking SMO USE
Data Entered (mm/dd/yy)
Entered by
QC Initials

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well characterized rad materials being sent to GEL on behalf of Mark Mintzer
Please list as separate report.

Abnormal Conditions on Receipt LAB USE

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	[signature]	[initials]	Weston / 7577 / 845-0867

1. Relinquished by	[signature]	Org. 7577	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original To Accompany Samples, Laboratory Copy (White) — 1st Copy To Accompany Samples, Return to SMO (Blue) — 2nd Copy SMO Suspense Copy (Yellow) — 3rd Copy Field Copy (Pink)

0244-B Characterization

Sample #	Plutonium-239 Result (pCi/g)	Plutonium-238 Result (pCi/g)	Americium-241 Result (pCi/g)
0244-B 1	39.9	7.88	38.4
0244-B 2	44.1	7.97	40.6
0244-B 3	45.8	6.56	31.8
0244-B 4	43.6	7.69	31.5
0244-B 5	43	7.9	40.2
0244-B 6	43.5	7.84	29.4
0244-B 7	41.3	7.67	36
0244-B 8	44.3	6.95	33.2
0244-B 9	42.7	7.2	29.2
0244-B 10	44.9	7.69	30
0244-B 11	41.4	7.22	30.2
0244-B 12	41.3	7.74	36
0244-B 13	39.2	6.65	33.8
0244-B 14	39.6	7.78	31.1
0244-B 15	45.3	8.41	37.3
0244-B 16	38.1	6.74	33.6
0244-B 17	48.5	8.51	30.5
0244-B 18	36.5	7.23	38.6
0244-B 19	35.3	6.98	30.9
0244-B 20	37.4	8.55	31.3
Mean Value	41.79	7.56	33.68
1 sigma	3.418	0.596	3.724
2 sigma	6.835	1.193	7.448
75% Limit	30.75	6.02	24.38
125% Limit	51.25	10.04	40.63
Expected Result	41.0 +/- 3.0	8.03 +/- 0.37	32.5 +/- 1.1
Achieved Results	41.79 +/- 3.418	7.56 +/- .596	33.68 +/- 3.724

REFERENCE DATE 4/14/2000

Amanda L. Fehr 4/30/04
[illegible] 5/1/04

PEM-1

PREPARATION AND CHARACTERIZATION OF THE PERFORMANCE EVALUATION SOIL SAMPLE PEM-1

INTRODUCTION

Rust Geotech (Rust) was contracted by Los Alamos National Laboratory (LANL) to prepare and characterize a soil performance evaluation sample designated PEM-1. This report describes sample preparation, homogeneity assessment, and determination of the concentrations of 28 elements and radioactive isotopes in the sample.

SAMPLE PREPARATION

Rust received nine five-gallon buckets of soil from LANL. The soils were dried overnight in ovens at 103 °C. The large pieces of leaves and sticks were removed and the soils were ground with ceramic-plate grinders to a particle size that passed through a 325 mesh screen. The samples were blended at the proportions specified by LANL for 48 hours in a 3-cubic-foot cross-flow blender. The sample identifications and the amounts used are listed in Table 1.

Table 1. Sample Identifications and Amounts Used to Prepare PEM-1

LANL Sample ID	Amount Used (kg)
AAA 1592	1.7
AAA 2505-1	10.9
AAA 2505-2	12.8
AAA 2750-1	8.4
AAA 2750-2	8.4
AAA 3205	12.6
AAA 8581	4.2
AAB 3417	12.8
AAB 3475	12.6

The blended sample was transferred to three five-gallon plastic containers. While the sample was being transferred, 10 samples were taken at pre-determined time intervals to be used for homogeneity assessment and sample characterization. These samples are believed to be representative of the bulk material.

Attention Nancy Slater At GEL
Not For Log-In

9911627-01->0

SF 2001-COC (10-97)
Supersedes (5-97) Issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No.: 7026494
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 1.3
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept. _____
P.O. Box 5800 MS 0154

Location Tech Area VI
Building N/A Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
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050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

Reference LOV (available at SMO)

LAB USE

RMMA ☐Yes ☒No Ref. No.
Sample Disposal ☐Return to Client ☒Disposal by lab
Turnaround Time ☒Normal ☐Rush Required Report Date

Sample Tracking SMO USE
Date Entered (mm/dd/yy)
Entered by
QC Units

Special Instructions/QC Requirements
EDD ☐Yes ☒No
Raw data package ☐Yes ☒No
These "samples" are well characterized rad materials being sent to GEL on behalf of Mark Mintzer
Please list as separate report.

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1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original To Accompany Samples, Laboratory Copy (White) | 1st Copy To Accompany Samples, Return to SMO (Blue) | 2nd Copy SMO Suspense Copy (Yellow) | 3rd Copy Field Copy (Pink)

CERTIFICATE OF CALIBRATION
ALPHA STANDARD SOLUTION

Radionuclide	Am-243	Customer:	GENERAL ENGINEERING LABS
Half Life:	7380 ± 40 years	P.O.No.:	9290-RAD
Catalog No.:	7243	Reference Date:	January 1 1994 12:00 PST.
Source No.:	445-96-2	Contained Radioactivity:	(Am-243) 101.2 μCi
		Contained Radioactivity:	(Am-243) 3750 kBq

Description of Solution

a. Mass of solution: 5.3739 g (in a 5 ml Flame Sealed Ampoule)

b. Chemical form: Am(NO3)3 in 2N HNO3

c. Carrier content: None added

d. Density: 1.0651 g/ml @ 20°C.

Radioimpurities None detected

Radioactive Daughters

Np-239 (beta active) in equilibrium

Radionuclide Concentration

(Am-243) 18.84 μCi/g

Method of Calibration

Weighed aliquots of the solution were assayed using gamma spectrometry for Np-239:

Energy peak(s) intergrated under: 228, 278 keV.

Branching ratio(s) used: 0.108, 0.1420 gamma rays per decay.

Uncertainty of Measurement

a. Systematic uncertainty in instrument calibration: ±3.0%

b. Random uncertainty in assay: ±0.4%

c. Random uncertainty in weighing(s): ±0.0%

d. Total uncertainty at the 99% confidence level: ±3.0%

NIST Traceability

This calibration is implicitly traceable to the National Institute of Standards and Technology.

Leak Test(s)

See reverse side for Leak Test(s) applied to this source.

Notes

1. Nuclear data were taken from "Table of Radioactive Isotopes", edited by Virginia S. Shirley, 1986.
2. IPL participates in an NIST measurement assurance program to establish and maintain implicit traceability for a number of nuclides, based on the blind assay (and later NIST certification) of Standard Reference Materials (As in NRC Regulatory Guide 4.15).

Anna U. Khan
QUALITY CONTROL

Jan 3, 1994
Date Signed

ISOTOPE PRODUCTS LABORATORIES
1800 North Keystone Street
Burbank, California 91504
(818) 843 - 7000

RC-S-~~004~~ 005-32

THE LEAK TEST(S) INDICATED BY THE CHECKED BOX(ES) WAS(WERE) APPLIED TO DETERMINE THE INTEGRITY OF THE SOURCE DESCRIBED ON THE FRONT SIDE

☑ **1. STANDARD WIPE TEST**

The source is wiped over its entire surface with a moistened filter paper disk. After drying, the disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ **2. SOAK TEST**

The source is immersed in distilled water and maintained at 50 ± 10° C for a minimum of four hours. After removal of the source, the liquid is a) checked for activity using a liquid scintillation counter, or b) evaporated in a planchet and the residue is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ **3. SOAK TEST – BERYLLIUM WINDOW**

The source is immersed in distilled water and maintained at 50 ± 10° C for 20 minutes. The entire surface of the source is then wiped with a moistened cotton swab or filter paper disk. After drying, the swab or disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ **4. GAS SOURCE TEST (Radioactive Gas)**

The source is placed in a vacuum desiccator and maintained at a pressure of less than 1 mm Hg for not less than 12 hours. The activity is checked by introducing air into the desiccator and monitoring the air with an end-window G.M. tube. Activity levels exceeding 1000 cpm are cause for rejection of the source.

☑ **5. OTHER LEAK TEST**

The ampoule is kept in an inverted position on a filter paper disk for a minimum of 16 hours. The filter paper disk is then checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ **6. LEAK TEST NOT APPLICABLE**

The active area of this source is uncovered or is protected by a very thin coating. Although the deposit is adherent, it is not designed or certified to pass a standard leak test. The inactive portions of the source have been checked using the standard wipe test. Levels of removable activity did not exceed 0.001 μCi beta-gamma or 0.0001 μCi alpha at the time of shipment.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	445-96-2
Prepared By:	Genie Bost
Carrier Conc:	2M HNO3
Reference Date:	01/01/1994
Ampoule Mass (g):	5.3739 g
Uncertainty:	+/- 3 %
LogBook No:	RC S 005 032

A Solution Material Info	
Isotope:	Americium-243
Prepared By:	Angela Johnson
Prep Date:	01/05/1994
Verification Date:	05/11/2009
Expiration Date:	05/11/2010
Primary Code:	445-96-2-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.3419 g
Density(g/mL):	1.0785
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (uCi/g)) * (conversion dpm to uCi) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (uCi/g)) * (conversion dpm to uCi) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3419 g) * (18.84 uCi/g) * (2220000 dpm/uCi) / (100 mL) = 2234238.9912 dpm/mL
(5.3419 g) * (18.84 uCi/g) * (2220000 dpm/uCi) / (1.0785 g/mL) / (100 mL) = 2071617.0528 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
01/05/1994	Genie Bost	.0058	100	445-96-2-B	120.1 dpm/ml	01/05/1995	01/05/1996
09/10/2004	Amanda Fehr	.0325	1000	445-96-2-BB	67.328 dpm/mL	09/10/2005	09/10/2006
01/05/1994	Genie Bost	.0025	100	445-96-2-C	51.77 dpm/ml	01/05/1995	01/05/1996
05/27/2005	Brenda Burke	.000246	100	445-96-2-CC	5.10613 dpm/mL	05/31/2005	05/31/2006
03/25/1994	Genie Bost	.0064	100	445-96-2-D	132.53 dpm/ml	01/05/1995	01/05/1996
08/16/2005	Brenda Burke	.001224	500	445-96-2-DD	5.07144 dpm/mL	08/18/2007	08/18/2008
08/04/1994	Genie Bost	.0094	100	445-96-2-E	194.65 dpm/ml	01/05/1995	01/05/1996
10/13/2005	Brenda Burke	.0017	500	445-96-2-EE	7.0435 dpm/mL	11/15/2005	11/15/2006
08/04/1994	Genie Bost	.0046	100	445-96-2-F	95.25 dpm/ml	01/05/1995	01/05/1996
10/14/2005	Mary Aders	.0141	500	445-96-2-FF	58.4196 dpm/mL	10/14/2005	10/14/2006
09/01/1994	Genie Bost	.0031	100	445-96-2-G	64.19 dpm/ml	01/05/1995	01/05/1996
05/10/2006	Mary Aders	2.0753	1000	445-96-2-GG	4299.227 dpm/mL	09/30/2008	09/30/2009
10/17/1994	Genie Bost	.0969	100	445-96-2-H	2006.52 dpm/ml	01/05/1995	01/05/1996
06/07/2006	Mary Aders	.0365	1000	445-96-2-HH	75.614 dpm/mL	06/19/2006	06/19/2007
02/06/1995	Genie Bost	.0043	100	445-96-2-I	89.04 dpm/ml	01/05/1995	01/05/1996
05/11/2006	Brenda Burke	.000009739	100	445-96-2-II	.201761 dpm/mL	07/26/2006	07/26/2007
07/20/1995	Theresa Austin	.0041	100	445-96-2-J	84.9 dpm/ml	01/05/1995	01/05/1996
05/01/2007	Daniel Roy	.0352	1000	445-96-2-JJ	72.9209 dpm/ml	04/30/2008	04/30/2009
08/10/1995	Garret Ray	.0952	100	445-96-2-K	1971.32 dpm/ml	01/05/1995	01/05/1996
06/12/2007	Julie Strock	.01038	250	445-96-2-KK	22.1496 dpm/mL	05/28/2008	05/28/2009

09/11/1995	Theresa Austin	1.0525	100	445-96-2-L	21794.23 dpm/ml	01/05/1995	01/05/1996
09/11/1995	Theresa Austin	.5107	100	445-96-2-L-1	111.3 dpm/ml	01/05/1995	01/05/1996
04/28/1998	Richard Kinney	.1264	100	445-96-2-M	2617.4 dpm/ml	04/28/1998	04/28/1999
11/01/2007	Eric Williamson	.001274	500	445-96-2-MM	5.27945 dpm/mL	04/06/2008	04/06/2010
10/12/1998	Gregory Smith	.1348	100	445-96-2-N	2791.32 dpm/mL	01/05/1995	01/05/1996
01/25/1999	Gregory Smith	1.9382	100	445-96-2-N-1	50.16 dpm/ml	01/05/1995	01/05/1996
04/19/2008	Daniel Roy	.0424	1000	445-96-2-NN	87.8366 dpm/ml	04/16/2009	04/16/2010
04/21/1999	Greg Smith	.1645	100	445-96-2-O	3406.32 dpm/mL	04/21/1999	04/21/2000
07/27/1999	Gregory Smith	1.567	100	445-96-2-O-2	50.56 dpm/ml	05/13/1999	05/13/2000
10/12/1999	Richard Kinney	1.5589	100	445-96-2-O-3	50.31 dpm/mL	05/13/1999	05/13/2000
04/21/1999	Greg Smith	1.5309	100	445-96-2-O-1	49.4 dpm/mL	04/21/1999	04/21/2000
11/10/1999	Joe Davis	.1809	100	445-96-2-P	3745.92 dpm/mL	05/13/1999	05/13/2000
01/04/2008	Julie Strock	.00001005	100	445-96-2-PP	.20819 dpm/mL	12/29/2008	12/29/2009
01/28/2000	Angela Johnson	.0354	1000	445-96-2-Q	73.3 dpm/mL	02/08/2001	02/08/2002
09/29/2008	Julie Strock	.0025219	250	445-96-2-QQ	20.8977 dpm/mL	09/30/2008	09/29/2009
04/18/2000	Robert Timm	.429	250	445-96-2-R	3553.34 dpm/mL	04/18/2000	04/18/2001
04/23/2009	Tina Schoneman	.001251	500	445-96-2-RR	4.8075 dpm/mL	04/23/2009	04/23/2010
04/13/2001	Angela Johnson	.1869	100	445-96-2-S	3870.16 dpm/mL	04/13/2001	04/13/2002
05/08/2009	Mary Aders	.0141	1000	445-96-2-SS	29.2098 dpm/ml	05/11/2009	05/11/2010
07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-103	4153.225 dpm/mL	07/03/2002	07/03/2003
07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-203	4153.225 dpm/mL	07/03/2002	07/03/2003

07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-303	4153.225 dpm/mL	07/03/2002	07/03/2003
06/03/2009	Julie Strock	.00000927	100	445-96-2-TT	.1923 dpm/mL	06/05/2009	06/03/2010
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-103	80.34 dpm/mL	08/23/2001	08/23/2002
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-203	80.34 dpm/mL	08/23/2001	08/23/2002
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-303	80.34 dpm/ml	08/23/2001	08/23/2002
06/02/2009	Mary Aders	2.1177	1000	445-96-2-UU	4385.1449 dpm/ml	06/04/2009	06/04/2010
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-103	81.586 dpm/mL	08/27/2002	08/27/2003
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-203	81.586 dpm/mL	08/27/2002	08/27/2003
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-303	81.586 dpm/mL	08/27/2002	08/27/2003
03/17/2003	Angela Johnson	2.1108	1000	445-96-2-W	4370.857 dpm/mL	03/14/2006	03/14/2007
04/14/2003	Lonnie Morris	.0315	1000	445-96-2-X	65.2559 dpm/mL	04/14/2004	04/14/2005
05/03/2003	Tim Chandler	.0103	1000	445-96-2-Y	21.3376 dpm/mL	05/05/2003	05/05/2004
05/05/2003	Eric Williamson	.011	1000	445-96-2-Z	22.7877 dpm/mL	04/03/2007	04/03/2008

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Am-243 Standard *445-96-2-SS*

M. Aders	Isotope	Value	Uncertainty
5/15/2009	445-96-2-SS #1	1.360	0.1690
	445-96-2-SS #2	1.370	0.1690
	445-96-2-SS #3	1.290	0.1590

Mean Value (Counting) =	1.340	101.99	**Pass**
Stdev =	0.043588989		**Rule 3 (Pass/Fail)**

Target =	1.314
Lower Limit =	1.252822021
Upper Limit =	1.427177979
Rule 1 Pass/Fail	**Pass**
Two sigma =	0.087177979
10 % of Mean =	0.134
Rule 2 (Pass/Fail)	**Pass**

The analyst prepared three standard verification sources for standard ***445-96-2-SS*** using 0.1 mL for each source. Each standard was combined with 0.1 mL of ***Cm-244*** standard ***0533-O*** and 50 micrograms of neodymium carrier in a disposable centrifuge tube. Each standard was diluted with 4 mL of 2 M HCl and 6 mL of DI Water. Two mL of 48% HF was added to precipitate Nd(and Americium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Am-243 were calculated by comparison to Am-241certified values.

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

5/15/09

007509

1374

National Institute of Standards & Technology
Certificate

Standard Reference Material 4334H
Plutonium-242 Radioactivity Standard

This Standard Reference Material (SRM) consists of radioactive plutonium-242 nitrate and nitric acid dissolved in 5 mL of distilled water. The solution is contained in a flame-sealed NIST borosilicate-glass ampoule. The SRM is intended for the calibration of alpha-particle counting instruments and for the monitoring of radiochemical procedures.

Radiological Hazard: The SRM ampoule contains plutonium-242 with a total activity of approximately 150 Bq. Plutonium-242 decays by alpha-particle emission. None of the alpha particles escape from the SRM ampoule. During the decay process, X-rays and gamma rays with energies from 10 keV to 160 keV are also emitted. Most of these photons escape from the SRM ampoule but their intensities are so small that they do not represent a radiation hazard. Approximate unshielded dose rates at several distances (as of the reference time) are given in note [a]*. The SRM should be used only by persons qualified to handle radioactive material.

Chemical Hazard: The SRM ampoule contains nitric acid (HNO_3) with a concentration of 3 moles per liter of water. The solution is corrosive and represents a health hazard if it comes in contact with eyes or skin. If the ampoule is to be opened to transfer the solution, the recommended procedure is given on page 2. The ampoule should be opened only by persons qualified to handle both radioactive material and strong acid solution.

Storage and Handling: The SRM should be stored and used at a temperature between 5 °C and 65 °C. The solution in an unopened ampoule should remain stable and homogeneous until at least January 2015. The ampoule (or any subsequent container) should always be clearly marked as containing radioactive material. If the ampoule is transported it should be packed, marked, labeled, and shipped in accordance with the applicable national, international, and carrier regulations. The solution in the ampoule is a dangerous good (hazardous material) both because of the radioactivity and because of the strong acid.

Preparation: This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation Division, Radioactivity Group, M.P. Unterweger, Acting Group Leader. The overall technical direction and physical measurements leading to certification were provided by L.L. Lucas of the Radioactivity Group. The support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program.

RECEIVED 12/21/04

Lisa R. Karam, Acting Chief
Ionizing Radiation Division

Gaithersburg, Maryland 20899
January 2005

Robert L. Watters, Jr., Chief
Measurement Services Division

*Notes and references are on pages 5 to 7.

DC-5-051-093

Recommended Procedure for Opening the SRM Ampoule

1) If the SRM solution is to be diluted, it is recommended that the diluting solution have a composition comparable to that of the SRM solution.

2) Wear eye protection, gloves, and protective clothing and work over a tray with absorbent paper in it. Work in a fume hood. In addition to the radioactive material, the solution contains strong acid and is corrosive.

3) Shake the ampoule to wet all of the inside surface of the ampoule. Return the ampoule to the upright position.

4) Check that all of the liquid has drained out of the neck of the ampoule. If necessary, gently tap the neck to speed the process.

5) Holding the ampoule upright, score the narrowest part of the neck with a scribe or diamond pencil.

6) Lightly wet the scored line. This reduces the crack propagation velocity and makes for a cleaner break.

7) Hold the ampoule upright with a paper towel, a wiper, or a support jig. Position the scored line away from you. Using a paper towel or wiper to avoid contamination, snap off the top of the ampoule by pressing the narrowest part of the neck away from you while pulling the tip of the ampoule towards you.

8) Transfer the solution from the ampoule using a pycnometer or a pipet with dispenser handle. NEVER PIPETTE BY MOUTH.

9) Seal any unused SRM solution in a flame-sealed glass ampoule, if possible, to minimize the evaporation loss.

See also reference [4]*.

*Notes and references are on pages 5 to 7.

PROPERTIES OF SRM 4334H

Certified values

Radionuclide	**Plutonium-242**
Reference time	**1200 EST, 07 June 1994 [b]***
Massic activity of the solution [c]	**26.31 $Bq \cdot g^{-1}$**
Relative expanded uncertainty (k=2)	**0.72% [d] [e]**
Solution density	**(1.105 ± 0.002) $g \cdot mL^{-1}$ at 20 °C [f]**

Uncertified values

Physical Properties:			
Source description	Liquid in flame-sealed NIST borosilicate-glass ampoule		
Ampoule specifications	Body outside diameter Wall thickness Barium content Lead-oxide content Other heavy elements	(16.5 ± 0.5) mm (0.60 ± 0.04) mm Less than 2.5% Less than 0.02% Trace quantities	
Solution mass	Approximately 5.5 g		
Chemical Properties:			
Solution composition	Chemical Formula	Concentration ($mol \cdot L^{-1}$)	Mass Fraction ($g \cdot g^{-1}$)
	H_2O HNO_3 $^{242}Pu^{+6}$	50 3.2 8×10^{-7}	0.81 0.19 2×10^{-7}
Radiological Properties:			
Alpha-particle-emitting impurities	None detected [g] [h]. See table on page 5.		
Beta-particle-emitting impurities	Plutonium-241: (0.092 ± 0.018) $Bq \cdot g^{-1}$ [f] [h]		
Photon-emitting impurities	None detected [i]		
Half lives used	Plutonium-242: (373 500 ± 1100) a [j] [5] Plutonium-241: (14.35 ± 0.10) a [j] [5] Americium-241: (432.2 ± 0.7) a [j] [5]		
Calibration method and measuring instrument(s)	Three $4\pi\alpha$ liquid-scintillation counters, a calibrated germanium detector system, and a silicon surface-barrier detector		

*Notes and references are on pages 5 to 7.

EVALUATION OF THE UNCERTAINTY OF THE MASSIC ACTIVITY [d] [e]*

Input Quantity x_i, the source of uncertainty (and individual uncertainty components where appropriate)	Method Used To Evaluate $u(x_i)$, the standard uncertainty of x_i (A) denotes evaluation by statistical methods (B) denotes evaluation by other methods	Relative Uncertainty Of Input Quantity, $u(x_i)/x_i$, (%) [k]	Relative Sensitivity Factor, $\lvert\partial y/\partial x_i\rvert \cdot (x_i/y)$ [m]	Relative Uncertainty Of Output Quantity, $u_i(y)/y$, (%) [n]
Massic alpha-particle emission rate, corrected for background and decay	Standard deviation of the mean for 80 sets of $4\pi\alpha$ liquid-scintillation measurements (A)	0.05	1.0	0.05
Half life of Pu-242	Standard uncertainty of the half life (A)	0.32 [p]	0.00001 [q]	0.000003
Decay-scheme data	Standard uncertainty of the probability of decay by alpha-particle emission (A)	0.001	1.0	0.001
Extrapolation of alpha-particle-count-rate-versus-energy to zero energy	Estimated (B)	0.25	1.0	0.25
Gravimetric measurements	Estimated (B)	0.10	1.0	0.10
Live time [r]	Estimated (B)	0.10	1.0	0.10
Alpha-particle detection efficiency of scintillators	Estimated (B)	0.15	1.0	0.15
Alpha-particle-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Photon-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Relative Combined Standard Uncertainty of the Output Quantity, $u_c(y)/y$, (%)				0.36
Coverage Factor, k				x 2
Relative Expanded Uncertainty of the Output Quantity, U/y, (%)				0.72

*Notes and references are on pages 5 to 7.

RELATIVE ACTIVITIES OF RADIONUCLIDIC IMPURITIES AT THE REFERENCE TIME [b]

Radionuclide	Half Life (years) [j] [5]	Relative Activity As Determined By	
		LLNL	NIST
Plutonium-242	373 500 ± 1100	1.000 000	1.000 000
Plutonium-241	14.35 ± 0.10	- -	0.0035 ± 0.0004 [t]
Plutonium-240	6 564 ± 11	^{239}Pu + ^{240}Pu <0.000 001 [u]	^{239}Pu + ^{240}Pu 0.000 020 ± 0.000 021 [v]
Plutonium-239	24 110 ± 30		
Plutonium-238	87.7 ± 0.1	^{238}Pu + ^{241}Am <0.000 016 [u]	0.000 009 ± 0.000 016 [v]
Americium-241	432.2 ± 0.7		0.000 000 assumed [t]

NOTES

[a] The Sievert is the SI unit for dose equivalent. See reference [1]. One µSv is equal to 0.1 mrem.

Distance from Ampoule (cm):	1	30	100
Approximate Dose Rate (µSv/h):	<0.1	-	-

[b] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994.

[c] **Massic activity** is the preferred name for the quantity activity divided by the total mass of the sample. See reference [1].

[d] The reported value, y, of massic activity (activity per unit mass) at the reference time was not measured directly but was derived from measurements and calculations of other quantities. This can be expressed as $y = f(x_1, x_2, x_3, \ldots x_n)$, where f is a mathematical function derived from the assumed model of the measurement process. The value, x_i, used for each input quantity i has a **standard uncertainty**, $u(x_i)$, that generates a corresponding uncertainty in y, $u_i(y) \equiv |\partial y/\partial x_i| \cdot u(x_i)$, called a **component of combined standard uncertainty** of y. The **combined standard uncertainty** of y, $u_c(y)$, is the positive square root of the sum of the squares of the components of combined standard uncertainty. The combined standard uncertainty is multiplied by a **coverage factor** of $k = 2$ to obtain U, the **expanded uncertainty** of y.

Since it can be assumed that the possible estimated values of the massic activity are approximately normally distributed with approximate standard deviation $u_c(y)$, the unknown value of the massic activity is believed to lie in the interval $y \pm U$ with a level of confidence of approximately 95 percent.

For further information on the expression of uncertainties, see references [2] and [3].

[e] The value of each component of combined standard uncertainty, and hence the value of the expanded uncertainty itself, is a best estimate based upon all available information, but is only approximately known. That is to say, the "uncertainty of the uncertainty" is large and not well known. This is true for uncertainties evaluated by statistical methods (e.g., the relative standard deviation of the standard deviation of the mean for the massic response is approximately 50%) and for uncertainties evaluated by other methods (which could easily be over estimated or under estimated by substantial amounts). The unknown value of the expanded uncertainty is believed to lie in the interval $U/2$ to $2U$ (i.e., within a factor of 2 of the estimated value).

[f] The stated uncertainty is two times the standard uncertainty.

[g] Estimated limits of detection for alpha-particle-emitting impurities, expressed as massic alpha-particle emission rates (numbers of alpha particles per second per gram), are:
0.003 $s^{-1} \cdot g^{-1}$ for energies less than 3.1 MeV,
0.03 $s^{-1} \cdot g^{-1}$ for energies between 3.1 and 4.4 MeV, and
0.003 $s^{-1} \cdot g^{-1}$ for energies greater than 5.0 MeV.

[h] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994. Americium-241, the daughter of plutonium-241, was removed but has been growing in since that time.

[i] Estimated limits of detection for photon-emitting impurities, expressed as massic photon emission rates (numbers of photons per second per gram), are:
5×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 19 and 39 keV,
7×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 49 and 92 keV,
2×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 106 and 507 keV,
1×10^{-5} $s^{-1} \cdot g^{-1}$ for energies between 515 and 1456 keV, and
5×10^{-6} $s^{-1} \cdot g^{-1}$ for energies between 1465 and 2750 keV,
provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of plutonium-242, plutonium-241, or americium-241.

[j] The stated uncertainty is the standard uncertainty.

[k] Relative standard uncertainty of the input quantity x_i.

[m] The relative change in the output quantity y divided by the relative change in the input quantity x_i. If $|\partial y/\partial x_i| \cdot (x_i/y) = 1.0$, then a 1% change in x_i results in a 1% change in y. If $|\partial y/\partial x_i| \cdot (x_i/y) = 0.05$, then a 1% change in x_i results in a 0.05% change in y.

[n] Relative component of combined standard uncertainty of output quantity y, rounded to two significant figures or less. The relative component of combined standard uncertainty of y is given by $u_i(y)/y \equiv |\partial y/\partial x_i| \cdot u(x_i)/y = |\partial y/\partial x_i| \cdot (x_i/y) \cdot u(x_i)/x_i$. The numerical values of $u(x_i)/x_i$, $|\partial y/\partial x_i| \cdot (x_i/y)$, and $u_i(y)/y$, all dimensionless quantities, are listed in columns 3, 4, and 5, respectively. Thus, the value in column 5 is equal to the value in column 4 multiplied by the value in column 3. The input quantities are independent, or very nearly so. Hence the covariances are zero or negligible.

[p] The relative standard uncertainty of $\lambda \cdot t$ is determined by the relative standard uncertainty of λ (i.e., of the half life). The relative standard uncertainty of t is negligible.

[q] $|\partial y/\partial x_i| \cdot (x_i/y) = |\lambda \cdot t|$

[r] The live time is determined by counting the pulses from a gated crystal-controlled oscillator.

[s] The standard uncertainty for each undetected impurity that might reasonably be expected to be present is estimated to be equal to the estimated limit of detection for that impurity, i.e. $u(x_i)/x_i$ = 100%. $|\partial y/\partial x_i| \cdot (x_i/y)$ = {(response per Bq of impurity)/(response per Bq of Pu-242)}·{(Bq of impurity)/(Bq of Pu-242)}. Thus $u_i(y)/y$ is the relative change in y if the impurity were present with a massic activity equal to the estimated limit of detection.

[t] The stated uncertainty is the standard uncertainty. The plutonium-241 activity was calculated from a gamma-ray measurement of the americium-241 ingrowth as of 25 November 1998, assuming that americium-241 was completely removed at the time of chemical purification.

[u] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The value shown is an estimated upper limit based upon background and counting statistics. Measurements were made at the Lawrence Livermore National Laboratory (LLNL) in July of 1994.

[v] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The stated uncertainty is the standard uncertainty. Measurements were made at the National Institute of Standards and Technology (NIST) in June and July of 1999.

REFERENCES

[1] International Organization for Standardization (ISO), *ISO Standards Handbook - Quantities and Units*, 1993. Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[2] International Organization for Standardization (ISO), *Guide to the Expression of Uncertainty in Measurement*, 1993 (corrected and reprinted, 1995). Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[3] B.N. Taylor and C.E. Kuyatt, *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*, NIST Technical Note 1297, 1994. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20407, U.S.A.

[4] National Council on Radiation Protection and Measurements Report No. 58, *A Handbook of Radioactivity Measurements Procedures*, Second Edition, 1985. Available from the National Council on Radiation Protection and Measurements, 7910 Woodmont Avenue, Bethesda, MD 20814 U.S.A.

[5] Evaluated Nuclear Structure Data File (ENSDF), January 2005.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1374
Prepared By:	Mary Aders
Carrier Conc:	0.5M HNO3
Reference Date:	06/07/1994
Ampoule Mass (g):	5.5 g
Uncertainty:	+/- .72 %
LogBook No:	RC-S-051-093

A Solution Material Info	
Isotope:	Plutonium-242
Prepared By:	Ashley Drochter
Prep Date:	12/02/2009
Verification Date:	12/08/2009
Expiration Date:	12/08/2010
Primary Code:	1374-A
Dilution(mL):	250 mL
Mass of Parent(g):	5.3616 g
Density(g/mL):	1.0136
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3616 g) * (26.31 Bq/g) * (60 dpm/Bq) / (250 mL) = 33.8553 dpm/mL
(5.3616 g) * (26.31 Bq/g) * (60 dpm/Bq) / (1.0136 g/mL) / (250 mL) = 33.4010 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Pu-242 Standard 1374-*A*

A.Drochter	**Isotope**	**Value**	**Uncertainty**
12/8/2009	1374-A	1.610	0.2480
	1374-A	1.580	0.2510
	1374-A	1.530	0.2440

Mean Value (Counting) =	1.573	103.17	**Pass**
Stdev =	0.040414519		**Rule 3 (Pass/Fail)**

Target =	1.52
Lower Limit =	1.492504296
Upper Limit =	1.654162371
Rule 1 Pass/Fail	**Pass**
Two sigma =	0.080829038
10 % of Mean =	0.157333333
Rule 2 (Pass/Fail)	**Pass**

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard 1374-A using 0.1 mL for each source. Each standard was combined with 0.1 mL of Pu239 standard 0338-BB and 50 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 6 mL of DI water. Four drops of 25% Hydrazine dihydrochloride were added to each centrifuge tube and swirled. Two mL of 49% HF was added to precipitate neodymium(and plutonium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Pu-242 were calculated by comparison to Pu-239 certified values.

12/9/09

Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404-352-8677
Fax 404-352-2837
www.analyticsinc.com

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

1283

78747-278

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:
Impurities: U-233 <0.3%, Am-241 <0.15%
5.20453 grams 1M HNO_3 solution.

Source Prepared By: _____
W. Mao, Radiochemist

QA Approved: _____ Date: 12-11-08
D. M. Montgomery, QA Manager

End of Certificate

RECEIVED 12/15/08
RC-S-05

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (5.20453 g * 100 mL) = 2174.4872 dpm/mL
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (1.0285 g/mL)/ (5.20453 g * 100 mL) = 2114.1700 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/30/2008	12/30/2009
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010
12/02/2009	Julie Strock	2.076	250	1283-F	17.5561 dpm/mL	01/09/2009	12/30/2009
12/02/2009	Julie Strock	.517	250	1283-G	4.3721 dpm/mL	01/09/2009	12/30/2009
12/09/2009	Ashley Drochter	21.56	1000	1283-H	45.58 dpm/mL	12/09/2009	12/09/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-232 Standard *1283-H*

Analyst: A. Drochter	Serial #	Value		Uncertainty	
Date: 12/10/09	1283-H N1	2.020	pCi/L	0.238	pCi/L
	1283-H N2	2.000	pCi/L	0.234	pCi/L
	1283-H N3	2.060	pCi/L	0.242	pCi/L
Mean Value (Counting) =	2.027	pCi/L		**99.66904**	**Pass**
Stdev =	0.030550505	pCi/L			**Rule 3 (Pass/Fail)**
Target =	2.033	pCi/L			
Lower Limit =	1.965565657	pCi/L			
Upper Limit =	2.087767676	pCi/L			
Rule 1 Pass/Fail	**Pass**				
Two sigma =	0.061101009				
10 % of Mean =	0.202666667				
Rule 2 (Pass/Fail)	**Pass**				

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1283-H** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-238** standard **1163-G** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 49% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

A Drochter 12/14/09

RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 942718**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
244852001	SAMPLE	MXR1	GAM12	26-JAN-10 12:06	DONE	CAN	10-FEB-09 00:00
244852002	SAMPLE	MXR1	GAM02	26-JAN-10 13:00	DONE	CAN	29-OCT-09 00:00
244852003	SAMPLE	MXR1	GAM17	26-JAN-10 13:10	DONE	CAN	06-JAN-10 00:00
244852004	SAMPLE	MXR1	GAM10	26-JAN-10 13:20	DONE	CAN	16-MAR-09 00:00
244881002	SAMPLE	MXR1	GAM16	26-JAN-10 13:20	DONE	CAN	16-NOV-09 00:00
244881003	SAMPLE	MXR1	GAM20	26-JAN-10 13:21	DONE	CAN	26-AUG-09 00:00
244881004	SAMPLE	MXR1	GAM23	26-JAN-10 13:21	DONE	CAN	02-JUN-09 00:00
244881001	SAMPLE	MXR1	GAM18	26-JAN-10 13:24	DONE	CAN	23-APR-09 00:00
244902001	SAMPLE	MXR1	GAM19	26-JAN-10 13:25	DONE	CAN	12-MAR-09 00:00
244905001	SAMPLE	MXR1	GAM04	26-JAN-10 14:04	DONE	CAN	05-MAY-09 00:00
244905002	SAMPLE	MXR1	GAM06	26-JAN-10 14:05	DONE	CAN	04-FEB-09 00:00
244905003	SAMPLE	MXR1	GAM07	26-JAN-10 14:05	DONE	CAN	20-JUL-09 00:00
244905004	SAMPLE	MXR1	GAM11	26-JAN-10 14:06	DONE	CAN	18-NOV-09 00:00
244905005	SAMPLE	MXR1	GAM15	26-JAN-10 14:06	DONE	CAN	16-FEB-09 00:00
244905006	SAMPLE	MXR1	GAM22	26-JAN-10 14:07	DONE	CAN	02-DEC-09 00:00
1202018262	MB	MXR1	GAM25	26-JAN-10 14:07	DONE	CAN	07-OCT-09 00:00
1202018263	DUP	MXR1	GAM12	26-JAN-10 14:10	DONE	CAN	10-FEB-09 00:00
1202018264	LCS	MXR1	GAM14	26-JAN-10 14:19	DONE	CAN	06-MAR-09 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 942753**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
244905004	SAMPLE	KXM4	1041	26-JAN-10 14:17	DONE		
244905005	SAMPLE	KXM4	1042	26-JAN-10 14:17	DONE		
244905006	SAMPLE	KXM4	1043	26-JAN-10 14:17	DONE		
244852001	SAMPLE	KXM4	1071	26-JAN-10 14:17	DONE		
244852002	SAMPLE	KXM4	1072	26-JAN-10 14:17	DONE		
244852003	SAMPLE	KXM4	1073	26-JAN-10 14:17	DONE		
244852004	SAMPLE	KXM4	1074	26-JAN-10 14:17	DONE		
244881001	SAMPLE	KXM4	1075	26-JAN-10 14:17	DONE		
244881002	SAMPLE	KXM4	1076	26-JAN-10 14:17	DONE		
244881003	SAMPLE	KXM4	1077	26-JAN-10 14:17	DONE		
244881004	SAMPLE	KXM4	1078	26-JAN-10 14:17	DUSE		
244902001	SAMPLE	KXM4	1079	26-JAN-10 14:17	DONE		
244905001	SAMPLE	KXM4	1080	26-JAN-10 14:17	DONE		
244905002	SAMPLE	KXM4	1081	26-JAN-10 14:17	DONE		
244905003	SAMPLE	KXM4	1082	26-JAN-10 14:17	DONE		
1202018341	MB	KXM4	1097	26-JAN-10 14:17	DONE		
1202018342	DUP	KXM4	1099	26-JAN-10 14:17	DONE		
1202018343	LCS	KXM4	1100	26-JAN-10 14:17	DONE		
244881004	SAMPLE	KXM4	1087	27-JAN-10 21:01	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 942754**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
1202018344	MB	KXM4	1040	23-JAN-10 12:08	DONE		
1202018345	DUP	KXM4	1041	23-JAN-10 12:08	DONE		
1202018346	LCS	KXM4	1042	23-JAN-10 12:08	DONE		
244852001	SAMPLE	KXM4	1070	23-JAN-10 12:08	DONE		
244852002	SAMPLE	KXM4	1071	23-JAN-10 12:08	DONE		
244852003	SAMPLE	KXM4	1072	23-JAN-10 12:08	DONE		
244852004	SAMPLE	KXM4	1073	23-JAN-10 12:08	DONE		
244881001	SAMPLE	KXM4	1074	23-JAN-10 12:08	DONE		
244881002	SAMPLE	KXM4	1075	23-JAN-10 12:08	DONE		
244881003	SAMPLE	KXM4	1076	23-JAN-10 12:08	DONE		
244881004	SAMPLE	KXM4	1077	23-JAN-10 12:09	DONE		
244902001	SAMPLE	KXM4	1078	23-JAN-10 12:09	DONE		
244905001	SAMPLE	KXM4	1079	23-JAN-10 12:09	DONE		
244905002	SAMPLE	KXM4	1080	23-JAN-10 12:09	DONE		
244905003	SAMPLE	KXM4	1081	23-JAN-10 12:09	DONE		
244905004	SAMPLE	KXM4	1082	23-JAN-10 12:09	DONE		
244905005	SAMPLE	KXM4	1083	23-JAN-10 12:09	DONE		
244905006	SAMPLE	KXM4	1084	23-JAN-10 12:09	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 942756**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
244852001	SAMPLE	KXM4	1124	26-JAN-10 20:26	DONE		
244852002	SAMPLE	KXM4	1125	26-JAN-10 20:26	DONE		
244852003	SAMPLE	KXM4	1126	26-JAN-10 20:26	DONE		
244852004	SAMPLE	KXM4	1127	26-JAN-10 20:26	DONE		
244881001	SAMPLE	KXM4	1128	26-JAN-10 20:26	DONE		
244881002	SAMPLE	KXM4	1129	26-JAN-10 20:26	DONE		
244881003	SAMPLE	KXM4	1130	26-JAN-10 20:26	DONE		
244881004	SAMPLE	KXM4	1131	26-JAN-10 20:26	DONE		
244902001	SAMPLE	KXM4	1132	26-JAN-10 20:26	DONE		
244905001	SAMPLE	KXM4	1133	26-JAN-10 20:26	DONE		
244905002	SAMPLE	KXM4	1134	26-JAN-10 20:26	DONE		
244905003	SAMPLE	KXM4	1137	26-JAN-10 20:26	DONE		
244905004	SAMPLE	KXM4	1138	26-JAN-10 20:26	DONE		
244905005	SAMPLE	KXM4	1139	26-JAN-10 20:26	DONE		
244905006	SAMPLE	KXM4	1140	26-JAN-10 20:26	DONE		
1202018347	MB	KXM4	1141	26-JAN-10 20:27	DONE		
1202018348	DUP	KXM4	1142	26-JAN-10 20:27	DONE		
1202018349	LCS	KXM4	1143	26-JAN-10 20:27	DONE		