

Friday, January 22, 2010

LOS ALAMOS
NATIONAL LABORATORY

Page 1 of 3
REQUEST NUMBER: 10-1394

ATTN: Valerie Davis

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

These Samples are on:
LANL Request Number: 10-1394
Per Agreement Number: 126310011
Project Cost Code: MR3A05529E00

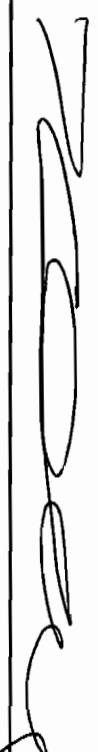
Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 1/22/2010
TURNAROUND/REPORT DUE: 2/21/2010
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	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
		1	RE15-10-7927	R	1/21/2010	
EPA:906.0		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
		1	RE15-10-7927	R	1/21/2010	
HASL-300,AM-241		1	RE15-10-7927	R	1/21/2010	

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:AM-241	1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	HASL-300:ISOPU	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
	HASL-300:ISOU	1	RE15-10-7930	R	1/21/2010	
		1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
		1	RE15-10-7927	R	1/21/2010	
	SW-846:6020	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
		1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
	SW-846:6850	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
		1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
	SW-846:7471A	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
		1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
	SW-846:8321A_MOD	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
		1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
	SW-846:9012A	1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
		1	RE15-10-7927	R	1/21/2010	

Friday, January 22, 2010

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REQUEST NUMBER: 10-1394

PRIORITY	METHOD CODE	CNTNR	SAMPLEID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
SW-846:9012A		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	

Final Page of REQUEST NUMBER 10-1394

Friday, January 22, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1394C

LOS ALAMOS

REQUEST NUMBER: 10-1394

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/21/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-7928	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7928	1	POLY	H3	Ice	R
RE15-10-7928	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7928	1	AMBER GLASS	NMED Explosives list	Ice	R
RE15-10-7929	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7929	1	POLY	H3	Ice	R
RE15-10-7929	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7929	1	AMBER GLASS	NMED Explosives list	Ice	R
RE15-10-7927	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7927	1	POLY	H3	Ice	R
RE15-10-7927	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7927	1	AMBER GLASS	NMED Explosives list	Ice	R
RE15-10-7930	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7930	1	POLY	H3	Ice	R
RE15-10-7930	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7930	1	AMBER GLASS	NMED Explosives list	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time


 1/22/10 3:00

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: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7929

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/21/2010		MEDIA: QBT3		ALLH	
TIME COLLECTED (HH:MM)		0950		SUB-MEDIA: TUFF 1		NA	
PRS ID:	15-008(b)	OK		SAMPLE TECH CODE: HA		OK	
LOCATION ID:	15-610734	↓		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	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	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY IL RS 01-11-10	Ice	Y	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: brown soil, some rock and roots

SAMPLE COMMENTS:

NA

LOCATION DESC: 8b-31 mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha \leq 49 dpm
Beta/Gamma \leq 2030 dpm

HE Neg

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

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT)

TLMcFarland

RELINQUISHED BY (Printed Name) Larry A. Lopez (Signature) Larry A. Lopez	Date/Time 01/21/2010 11:35	RECEIVED BY (Printed Name) [Signature] (Signature) [Signature]	Date/Time 1/21/10 1135
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7927

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/21/2010		MEDIA:	OBT3		01/16
TIME COLLECTED (HH:MM)		0855		SUB-MEDIA:	TUFF 1		NA
PRS ID:	15-008(b)			SAMPLE TECH CODE:	HA		ok
LOCATION ID:	15-610733			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	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	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY 1L RS 01-11-10	Ice	Y	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

Brown silty sand, rocks, wire, pine needles

SAMPLE COMMENTS:

NA

LOCATION DESC: 86-32, mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

HE negative

Alpha = 16 dpm
Beta Gamma = 2280 dpmPID Ambient 0.0
Reading 0.0 ppm

COLLECTED BY (PRINT)

FLAC Earlene

REVIEWED BY (PRINT)

R Saunders

RELINQUISHED BY (Printed Name) Gary A. Lopez (Signature) Gary A. Lopez	Date/Time 01/21/2010 12:35	RECEIVED BY (Printed Name) [Signature] (Signature) [Signature]	Date/Time 01/21/2010 12:35
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7930

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/21/2010		MEDIA:	QBT3		OK
TIME COLLECTED (HH:MM)		1016		SUB-MEDIA:	TUFF 1		↓
PRS ID:	15-008(b)		OK	SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610734		↓	FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC		↓	FIELD PREP:	NA		↓
TOP DEPTH:	0		2.5	SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0		3.5	SCREEN/PORT DESC:	NA		
FIELD MATRIX:	R		OK	EXCAVATED: YES/NO/NA	NA		
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
BOREHOLE: YES/NO/NA	NA			WATER FLOWING: YES/NO/NA	NA		
BOREHOLE DECLINATION:	NA			BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	normal	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	Y	
1		H3	500 ML POLY	Ice	Y	
1		Met+U+CLO4+C N	1 GAL POLY IL RS 01-11-10	Ice	Y	
1		NMED Explosives list	250 ML AMBER GLASS	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: grey tuff - wet

SAMPLE COMMENTS:

NA

LOCATION DESC: 8b-31, mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha \leq 27 dpm
Beta/Gamma \leq 2240 dpm

PID $\frac{\text{Ambient } Q_{10}}{\text{Reading } 0.0}$ ppm

COLLECTED BY (PRINT)

R Saunders

REVIEWED BY (PRINT) TLMcFarlane

RELINQUISHED BY (Printed Name) Larry A. Lopez (Signature) Larry A. Lopez	Date/Time 01/21/2010 14:35	RECEIVED BY (Printed Name) TLMcFarlane (Signature) TLMcFarlane	Date/Time 1/21/10 1231
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2499

EVENT NAME: 4th Qtr. FY09 - SWMU 15-008(b) - Threemile Canyon

SAMPLE ID: RE15-10-7928

WORK ORDER:

AS PLANNED		AS COLLECTED		AS PLANNED		AS COLLECTED	
DATE COLLECTED(MM/DD/YYYY):		01/21/2010		MEDIA:	QBT3		OK
TIME COLLECTED (HH:MM)		0920		SUB-MEDIA:	TUFF 1		↓
PRS ID:	15-008(b)	OK		SAMPLE TECH CODE:	HA		OK
LOCATION ID:	15-610733	↓		FIELD QC TYPE:	NA		↓
LOCATION TYPE:	GENERIC	↓		FIELD PREP:	NA		↓
TOP DEPTH:	0	3.0		SAMPLE USAGE:	INV		↓
BOTTOM DEPTH:	0	4.0		SCREEN/PORT DESC:			NA
FIELD MATRIX:	R	OK		EXCAVATED: YES/NO	NA		
COMPOSITE TYPE:	NA			COMPOSITE TIME INTERVAL:	NA		
BOREHOLE: YES/NO	NA			BOREHOLE DECLINATION:	NA		
				BOREHOLE DIRECTION:	NA		

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	y	
1	↓	H3	500 ML POLY	Ice	y	
1	↓	Met+U+CLO4+C N	1 GAL POLY IL RS 01-11-10	Ice	y	
1	↓	NMED Explosives list	250 ML AMBER GLASS	Ice	y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	y	

SAMPLE DESC: pinkish grey tuff

SAMPLE COMMENTS:
NA

LOCATION DESC: 8b-32 mesa top

FIELD SCREENING/MEASUREMENT RESULTS:

Alpha ≤ 27 dpm
Beta/Gamma ≤ 2210 dpm

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

COLLECTED BY (PRINT)
R Saunders

REVIEWED BY (PRINT) TLMcFarland

RELINQUISHED BY (Printed Name) Larry A Lopez (Signature) Larry A. Lopez	Date/Time 01/21/2010 12:35	RECEIVED BY (Printed Name) TLMcFarland (Signature) TLMcFarland	Date/Time 1/21/10 11:35
RELINQUISHED BY (Printed Name) (Signature)	Date/Time	RECEIVED BY (Printed Name) (Signature)	Date/Time



133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00019

Request or PO Number:

Client Sample ID: RE15-10-7927

ARS Sample ID: ARS2-10-00019-001

Sample Collection Date: 01/21/10 08:55

Date Received: 01/21/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/22/10 08:22

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	30.53	27.75	36.09	28.00		pCi/g	EPA 900.0M	1/21/2010	ME	N/A
GROSS BETA	74.19	18.68	18.22	20.77		pCi/g	EPA 900.0M	1/21/2010	ME	N/A
NA-22	0.00	0.00	0.13	0.00		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
K-40	22.72	8.95	1.98	8.97		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
CO-60	0.00	12.97	0.13	12.97		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
CS-134	0.00	0.00	0.10	0.00		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
CS-137	0.01	0.11	0.14	0.11		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
EU-152	1.02	0.67	0.15	0.67		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
PB-212	1.50	0.64	0.24	0.64		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
RA-228	0.50	0.71	0.35	0.71		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
U-235	2.72	1.73	0.70	1.73		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
U-238	28.13	7.30	2.17	9.72		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
AM-241	0.57	0.38	0.12	0.38		pCi/g	EPA 901.1M	1/21/2010	ME	N/A

NOTES: % Moisture: 2.74

Quality Assurance Review

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

NELAP Certificate# 30658

NELAP Certificate # E87558



133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00019

Request or PO Number:

Client Sample ID: RE15-10-7928

ARS Sample ID: ARS2-10-00019-002

Sample Collection Date: 01/21/10 09:20

Date Received: 01/21/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/22/10 08:22

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	29.52	25.69	32.15	25.95		pCi/g	EPA 900.0M	1/21/2010	ME	N/A
GROSS BETA	27.75	13.99	18.14	14.39		pCi/g	EPA 900.0M	1/21/2010	ME	N/A
NA-22	0.10	0.19	0.16	0.19		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
K-40	26.76	10.97	2.51	11.00		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
CO-60	0.17	0.21	0.17	0.21		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
CS-134	0.00	0.00	0.12	0.00		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
CS-137	-0.01	21.53	0.10	21.53		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
EU-152	0.00	17.11	0.19	17.11		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
PB-212	1.41	0.69	0.26	0.69		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
RA-228	1.69	0.98	0.44	0.98		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
U-235	2.03	1.18	0.26	1.18		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
U-238	2.37	3.92	1.87	3.96		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
AM-241	0.93	0.56	0.17	0.56		pCi/g	EPA 901.1M	1/21/2010	ME	N/A

NOTES: % Moisture: 0.42

Quality Assurance Review

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

LELAP Certificate# 30658

NELAP Certificate # E87558



133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00019

Request or PO Number:

Client Sample ID: RE15-10-7929

ARS Sample ID: ARS2-10-00019-003

Sample Collection Date: 01/21/10 09:50

Date Received: 01/21/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/22/10 08:22

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	26.54	25.23	33.24	25.44		pCi/g	EPA 900.0M	1/21/2010	ME	N/A
GROSS BETA	45.93	17.08	19.93	17.98		pCi/g	EPA 900.0M	1/21/2010	ME	N/A
NA-22	0.00	0.00	0.12	0.00		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
K-40	14.32	7.18	1.95	7.20		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
CO-60	0.00	12.76	0.13	12.76		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
CS-134	0.00	0.00	0.09	0.00		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
CS-137	0.43	0.29	0.08	0.29		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
EU-152	0.00	13.26	0.15	13.26		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
PB-212	0.83	0.52	0.23	0.52		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
RA-228	2.33	1.00	0.34	1.00		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
U-235	2.10	1.15	0.51	1.15		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
U-238	6.78	3.92	1.54	4.22		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
AM-241	-0.01	26.61	0.06	26.61		pCi/g	EPA 901.1M	1/21/2010	ME	N/A

NOTES: % Moisture: 2.52

Quality Assurance Review

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

LELAP Certificate# 30658

NELAP Certificate # E87558



133 State Road 4, White Rock, NM 87544

505-672-2770 FAX 505-672-9534

ARS Sample Delivery Group: ARS2-10-00019

Request or PO Number:

Client Sample ID: RE15-10-7930

ARS Sample ID: ARS2-10-00019-004

Sample Collection Date: 01/21/10 10:16

Date Received: 01/21/10 00:00

Sample Matrix: Soil/Solid

Report Date: 01/22/10 08:22

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	TPU	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
GROSS ALPHA	31.30	27.26	35.54	27.52		pCi/g	EPA 900.0M	1/21/2010	ME	N/A
GROSS BETA	47.32	16.37	18.46	17.37		pCi/g	EPA 900.0M	1/21/2010	ME	N/A
NA-22	0.09	0.19	0.16	0.19		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
K-40	-1.19	-27.35	5.06	-27.35		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
CO-60	0.00	16.12	0.16	16.12		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
CS-134	0.46	0.22	0.12	0.22		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
CS-137	-0.01	50.07	0.11	50.07		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
EU-152	1.07	0.68	0.19	0.68		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
PB-212	1.37	0.65	0.23	0.65		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
RA-228	1.64	1.38	0.43	1.38		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
U-235	1.21	1.13	0.43	1.13		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
U-238	10.61	6.96	2.72	7.36		pCi/g	EPA 901.1M	1/21/2010	ME	N/A
AM-241	0.31	0.44	0.20	0.44		pCi/g	EPA 901.1M	1/21/2010	ME	N/A

NOTES: % Moisture: 1.00

Quality Assurance Review

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

LELAP Certificate# 30658

NELAP Certificate # E87558

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): RE15-10-7927

↓ ↓
7928
7929
7930

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):

Reason:

.....
Print Last Name

Lopez

Signature

[Signature]

Date

01/21/2010

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only



Section I.

REQUEST NUMBER: 10-1394 VALIDATION DATE: 03/03/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Monica Dymerski ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

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

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

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


Reviewed by: Mary Donovan

Level: I


Date: 03/04/10

VALIDATOR'S SIGNATURE: Monica Dymerski


DATE: 03/03/10

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

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

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

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

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

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

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: 945234
 Extraction Type: Solid Prep
 Sample Volume/Weight: 2.00 g
 Concentrated Extract Volume: 20.0
 Client Sample No. RE15-10-7928
 Date Received: 23-JAN-10
 GEL Job No (SDG): 10-1394
 GEL Sample ID: 245396001
 Date Filtered: 05-FEB-10
 Injection Volume (uL): 20
 %Solids: 96.4

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.519	2.07	0.519	ug/kg	U	1	09-FEB-10 21:21	per0209080a
	Perchlorate Isotope Ratio						1	09-FEB-10 21:21	per0209080a
14797-73-0	Perchlorate-101	.519	2.07	0.519	ug/kg	U	1	09-FEB-10 21:21	per0209080a
	Perchlorate-O(18)			5.34	ug/kg		1	09-FEB-10 21:21	per0209080a

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

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

MLD
03/03/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC
 Lab Code: GEL
 Instrument: LCMSMS
 Method: SW846 6850 Modified
 Matrix: SOIL
 Extraction Batch ID: 945234
 Extraction Type: Solid Prep
 Sample Volume/Weight: 2.00 g
 Concentrated Extract Volume: 20.0
 Client Sample No. RE15-10-7929
 Date Received: 23-JAN-10
 GEL Job No (SDG): 10-1394
 GEL Sample ID: 245396002
 Date Filtered: 05-FEB-10
 Injection Volume (uL): 20
 %Solids: 73

CAS No.	Analyte ^a	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.689	2.76	0.689	ug/kg	U	1	09-FEB-10 21:28	per0209081a
	Perchlorate Isotope Ratio						1	09-FEB-10 21:28	per0209081a
14797-73-0	Perchlorate-101	.689	2.76	0.689	ug/kg	U	1	09-FEB-10 21:28	per0209081a
	Perchlorate-O(18)			7.62	ug/kg		1	09-FEB-10 21:28	per0209081a

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

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

MLD
 03/03/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC
 Lab Code: GEL
 Instrument: LCMSMS
 Method: SW846 6850 Modified
 Matrix: SOIL
 Extraction Batch ID: 245234
 Extraction Type: Solid Prep
 Sample Volume/Weight: 2.00 g
 Concentrated Extract Volume: 20.0
 Client Sample No. RE15-10-7927
 Date Received: 23-JAN-10
 GEL Job No (SDG): 10-1394
 GEL Sample ID: 245396003
 Date Filtered: 05-FEB-10
 Injection Volume (uL): 20
 %Solids: 76

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.662	2.65	0.662	ug/kg	U	1	09-FEB-10 21:34	per0209082a
	Perchlorate Isotope Ratio						1	09-FEB-10 21:34	per0209082a
14797-73-0	Perchlorate-101	.662	2.65	0.662	ug/kg	U	1	09-FEB-10 21:34	per0209082a
	Perchlorate-O(18)			7.59	ug/kg		1	09-FEB-10 21:34	per0209082a

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

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

MLD
 03/03/10

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC
 Lab Code: GEL
 Instrument: LCMSMS
 Method: SW846 6850 Modified
 Matrix: SOIL
 Extraction Batch ID: 945234
 Extraction Type: Solid Prep
 Sample Volume/Weight: 2.00 g
 Concentrated Extract Volume: 20.0
 Client Sample No. RE15-10-7930
 Date Received: 23-JAN-10
 GEL Job No (SDG): 10-1394
 GEL Sample ID: 245396004
 Date Filtered: 05-FEB-10
 Injection Volume (uL): 20
 %Solids: 89

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.565	2.26	0.565	ug/kg	U	1	09-FEB-10 21:41	per0209083a
	Perchlorate Isotope Ratio						1	09-FEB-10 21:41	per0209083a
14797-73-0	Perchlorate-101	.565	2.26	0.565	ug/kg	U	1	09-FEB-10 21:41	per0209083a
	Perchlorate-O(18)			5.89	ug/kg		1	09-FEB-10 21:41	per0209083a

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

*Concentration =

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

MLD
03/03/10

DATA VALIDATION COVER SHEET

5122-1

Data Validation Cover Sheet

Records Use only



Section I.

REQUEST NUMBER: 10-1394 VALIDATION DATE: 03/03/10 LAB CODE: GELCONTRACT LABORATORY NAME: GEL Laboratories LLCVALIDATOR: Monica Dymerski ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

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

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

1. The samples were extracted beyond the method prescribed HT but within 2X the HT. All associated sample results were NDs and, thus, were qualified UJ,HE9.
2. The bracketing CCV %Ds were >20% with positive bias for RDX; o-nitrotoluene; and PETN. The associated sample results were NDs and, thus, were not qualified.
3. The LCS %R was < the laboratory LAL but $\geq 10\%$ for 4-amino-2,6-dinitrotoluene. The associated sample results were NDs and, thus, were qualified UJ,HE12a.

Reviewed by: Mary Donovan Level: I Date: 03/04/10VALIDATOR'S SIGNATURE: *Monica Dymerski*DATE: 03/03/10

LC/MS/MS HIGH EXPLOSIVE ANALYTICAL DATA VALIDATION CHECKLIST


5122-2

LC/MS/MS High Explosive Analytical Data Validation Checklist


Records Use only



Yes No N/A (Check One)				Assign Qualifier Listed Below If Criterion = Yes	
				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. The IS retention time has shifted by more than 30 seconds.	R, UJ, HE0	J, HE0
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE0b	R, HE0b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, HE1d	R, HE1d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. The surrogate is <10%R. Follow the external laboratory limits.	R, HE3	J-, HE3
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. The surrogate is < the Lower Acceptance Limit but ≥10% recovery. Follow the external laboratory limits.	UJ, HE3a	J-, HE3a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. The surrogate %R value is > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, HE3b
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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 

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. The sample result is ≤5 times the concentration of the related analyte in the method blank.	U, HE4	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	16. The absence of sample carry-over must be determined and verified.	N/A	R, N, HE4f
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	19. The affected analytes were analyzed with a RRF of <0.05 in the initial calibration and/or CCV.	UJ, R, HE7b	J, HE7b
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20. The ICV and/or CCV were recovered outside the method limits.	UJ, R, HE7c	J, HE7c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, HE7d	J, HE7d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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 

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	24. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, HE9	J-, HE9
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	25. The holding time was >2 times the applicable holding time requirement.	R, HE9a	J-, HE9a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	26. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, HE12	J-, HE12
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	27. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, HE12a	J-, HE12a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	28. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, HE12b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	30. The MS/MSD percent recovery was <10%.	R, HE12d	R, HE12d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	31. The MS/MSD percent recovery was >10% but <70%.	UJ, HE12e	J, HE12e
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	32. The MS/MSD percent recover was >70%.	N/A	J+, HE12f
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	33. The MS/MSD relative percent difference was >30%.	UJ, HE12g	J, HE12g
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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 _____



Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	36. The Contract Required Detection Limit Check Standard (CRI) sample did not pass method acceptance criteria.	UJ, R, HE16	J, HE16
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	37. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, HE16c	R, HE16c
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	39. Duplicate, dilution, or reanalysis.	UJ, HE88	J, HE88

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7928

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396001

Sample Amount 2

Moisture: 3.6

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0216119a

Date Analyzed: 19-FEB-10 03:23

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene <u>UJHE9</u>	500	Uh
121-14-2	2,4-Dinitrotoluene	500	Uh
121-82-4	RDX	500	Uh
19406-51-0	4-Amino-2,6-dinitrotoluene	500	Uh
2691-41-0	HMX	500	Uh
35572-78-2	2-Amino-4,6-dinitrotoluene	500	Uh
479-45-8	Tetryl	500	Uh
606-20-2	2,6-Dinitrotoluene	500	Uh
78-11-5	PETN	1000	Uh
88-72-2	o-Nitrotoluene	500	Uh
98-95-3	Nitrobenzene	500	Uh
99-08-1	m-Nitrotoluene	500	Uh
99-35-4	1,3,5-Trinitrobenzene	500	Uh
99-65-0	m-Dinitrobenzene	500	Uh
99-99-0	p-Nitrotoluene	500	Uh

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7928

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396001

Sample Amount 2

Moisture: 3.6

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS02170119.wiff

Date Analyzed: 18-FEB-10 16:19

Units: ug/kg

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

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7929

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396002

Sample Amount 2

Moisture: 27.4

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0216122a

Date Analyzed: 19-FEB-10 04:52

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene <u>UJ,HE9</u>	500	Uh
121-14-2	2,4-Dinitrotoluene	500	Uh
121-82-4	RDX	500	Uh
19406-51-0	4-Amino-2,6-dinitrotoluene	500	Uh
2691-41-0	HMX	500	Uh
35572-78-2	2-Amino-4,6-dinitrotoluene	500	Uh
479-45-8	Tetryl	500	Uh
606-20-2	2,6-Dinitrotoluene	500	Uh
78-11-5	PETN	1000	Uh
88-72-2	o-Nitrotoluene	500	Uh
98-95-3	Nitrobenzene	500	Uh
99-08-1	m-Nitrotoluene	500	Uh
99-35-4	1,3,5-Trinitrobenzene	500	Uh
99-65-0	m-Dinitrobenzene	500	Uh
99-99-0	p-Nitrotoluene	500	Uh

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

1
High Explosives Analysis Data Sheet

Lab Name: <u>GEL Laboratories LLC</u>	Client Sample ID: <u>RE15-10-7929</u>
Lab Code: <u>GEL</u>	GEL Job No (SDG) <u>10-1394</u>
Matrix: <u>SOIL</u>	GEL Sample ID: <u>245396002</u>
Sample Amount <u>2</u>	Moisture: <u>27.4</u>
Amount Units <u>g</u>	Date Received: <u>23-JAN-10</u>
Extraction Type <u>Sonication</u>	Extraction Batch ID: <u>944913</u>
Concentrated Extract Volume (mL) <u>10</u>	Date Extracted: <u>17-FEB-10</u>
Dilution Factor: <u>2</u>	Injection Volume (uL): <u>50</u>
GEL data file: <u>EXS02170122.wiff</u>	Date Analyzed: <u>18-FEB-10 17:06</u>

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB UJHE9	1000	Uh
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	Uh
618-87-1	3,5-Dinitroaniline	1000	Uh
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	Uh
78-30-8	tris(o-cresyl) phosphate ↓	1000	Uh

*Concentration =

Instrument Value	X	$\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$	X	Dilution Factor
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1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7927

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396003

Sample Amount 2

Moisture: 24.4

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0216123a

Date Analyzed: 19-FEB-10 05:22

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene UJ.HE9	500	Uh
121-14-2	2,4-Dinitrotoluene	500	Uh
121-82-4	RDX	500	Uh
19406-51-0	4-Amino-2,6-dinitrotoluene	500	Uh
2691-41-0	HMX	500	Uh
35572-78-2	2-Amino-4,6-dinitrotoluene	500	Uh
479-45-8	Tetryl	500	Uh
606-20-2	2,6-Dinitrotoluene	500	Uh
78-11-5	PETN	1000	Uh
88-72-2	o-Nitrotoluene	500	Uh
98-95-3	Nitrobenzene	500	Uh
99-08-1	m-Nitrotoluene	500	Uh
99-35-4	1,3,5-Trinitrobenzene	500	Uh
99-65-0	m-Dinitrobenzene	500	Uh
99-99-0	p-Nitrotoluene	500	Uh

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7927

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396003

Sample Amount 2

Moisture: 24.4

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS02170123.wiff

Date Analyzed: 18-FEB-10 17:22

Units: ug/kg

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

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7930

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396004

Sample Amount 2

Moisture: 11.5

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0216124a

Date Analyzed: 19-FEB-10 05:51

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene <u>UJHE9</u>	500	Uh
121-14-2	2,4-Dinitrotoluene	500	Uh
121-82-4	RDX	500	Uh
19406-51-0	4-Amino-2,6-dinitrotoluene	500	Uh
2691-41-0	HMX	500	Uh
35572-78-2	2-Amino-4,6-dinitrotoluene	500	Uh
479-45-8	Tetryl	500	Uh
606-20-2	2,6-Dinitrotoluene	500	Uh
78-11-5	PETN	1000	Uh
88-72-2	o-Nitrotoluene	500	Uh
98-95-3	Nitrobenzene	500	Uh
99-08-1	m-Nitrotoluene	500	Uh
99-35-4	1,3,5-Trinitrobenzene	500	Uh
99-65-0	m-Dinitrobenzene	500	Uh
99-99-0	p-Nitrotoluene	500	Uh

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7930

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396004

Sample Amount 2

Moisture: 11.5

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS02170124.wiff

Date Analyzed: 18-FEB-10 17:38

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB <u>UJHE9</u>	1000	Uh
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	Uh
618-87-1	3,5-Dinitroaniline	1000	Uh
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	Uh
78-30-8	tris(o-cresyl) phosphate	1000	Uh

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only



Section I.

REQUEST NUMBER: 10-1394 VALIDATION DATE: 03/03/10/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Monica Dymerski ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

Section II. Completeness Check

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

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

1. Target analyte Pb was detected in the MB. The Pb result for sample RE15-10-7928 was a detect >5X but ≤50X the MB concentration and, thus, was qualified J,I4a. The remaining associated sample results were detects >50X the MB concentration and, thus, were not qualified based on professional judgment.
2. The MS %Rs were > the laboratory UAL for Al, K, Fe, and Mn. The associated Al and K sample results were detects and, thus, were qualified J+,I6b. The Fe and Mn parent sample concentrations were >4X the spike concentrations; thus, those sample results were not qualified, based on professional judgment.
3. The sample duplicate RPD was >35% for Cr, and the sample and duplicate concentrations were ≥5X the PQL. The associated sample results were detects and, thus, were qualified J,I10a.


Reviewed by: Mary Donovan

Level: I


Date: 03/04/10

VALIDATOR'S SIGNATURE: Monica Dymerski


DATE: 03/03/10

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


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

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2 Metals Analytical Data Validation Checklist	Records Use only _____ 

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

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

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

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2 Metals Analytical Data Validation Checklist	Records Use only _____ 

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

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1394

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245396001

BASIS: Dry Weight

DATE COLLECTED 21-JAN-10

CLIENT ID: RE15-10-7928

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 96.4

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum J+,16b	935000	ug/Kg	N	6880	20200	20200	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-36-0	Antimony	1010	ug/Kg	U	334	1010	1010	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-38-2	Arsenic	0.709	mg/kg	J	0.207	1.04	1.04	2	MS	BAJ	02/15/10 00:51	100214-8	945396
7440-39-3	Barium	18400	ug/Kg		101	506	506	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-41-7	Beryllium	0.360	mg/kg		0.0207	0.104	0.104	2	MS	BAJ	02/14/10 01:04	100213-4	945396
7440-43-9	Cadmium	506	ug/Kg	U	101	506	506	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-70-2	Calcium	328000	ug/Kg	*	8090	25300	25300	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-47-3	Chromium J,110a	8030	ug/Kg	*	152	506	506	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-48-4	Cobalt	1800	ug/Kg		152	506	506	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-50-8	Copper	5690	ug/Kg		303	1010	1010	1	P	HSC	02/12/10 00:38	021110-1	945399
7439-89-6	Iron	7680000	ug/Kg		8090	25300	25300	1	P	HSC	02/12/10 00:38	021110-1	945399
7439-92-1	Lead J,14a	5490	ug/Kg		253	1010	1010	1	P	HSC	02/12/10 00:38	021110-1	945399
7439-95-4	Magnesium	205000	ug/Kg		8600	30300	30300	1	P	HSC	02/12/10 00:38	021110-1	945399
7439-96-5	Manganese	238000	ug/Kg		202	1010	1010	1	P	HSC	02/12/10 00:38	021110-1	945399
7439-97-6	Mercury	9.91	ug/kg	J	3.96	11.7	11.7	1	AV	ETL	02/10/10 10:51	021010S1-9	945628
7440-02-0	Nickel	2.57	mg/kg	*	0.104	0.415	0.415	2	MS	BAJ	02/14/10 01:04	100213-4	945396
7440-09-7	Potassium J+,16b	225000	ug/Kg	N	6470	25300	25300	1	P	HSC	02/12/10 00:38	021110-1	945399
7782-49-2	Selenium	1.04	mg/kg	U	0.519	1.04	1.04	2	MS	BAJ	02/15/10 00:51	100214-8	945396
7440-22-4	Silver	396	ug/Kg	J	101	506	506	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-23-5	Sodium	134000	ug/Kg		7080	25300	25300	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-28-0	Thallium	0.207	mg/kg	U	0.0622	0.207	0.207	2	MS	BAJ	02/14/10 15:41	100214-5	945396
7440-61-1	Uranium	1.37	mg/kg	*	0.0137	0.0415	0.0415	2	MS	BAJ	02/14/10 09:00	100213-2	945396
7440-62-2	Vanadium	2860	ug/Kg		101	506	506	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-66-6	Zinc	32700	ug/Kg		334	1010	1010	1	P	HSC	02/12/10 00:38	021110-1	945399

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945396	945392	SW846 3050B	0.5	g	50	mL	02/04/10	FGA
945399	945398	SW846 3050B	0.513	g	50	mL	02/04/10	FGA
945628	945627	SW846 7471A Prep	0.534	g	30	mL	02/09/10	TXB3

MLD
03/03/10

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1394

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245396002

BASIS: Dry Weight

DATE COLLECTED 21-JAN-10

CLIENT ID: RE15-10-7929

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 73

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum J+,16b	10400000	ug/Kg	N	9300	27300	27300	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-36-0	Antimony	1370	ug/Kg	U	451	1370	1370	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-38-2	Arsenic	2.81	mg/kg		0.258	1.29	1.29	2	MS	BAJ	02/15/10 01:07	100214-8	945396
7440-39-3	Barium	157000	ug/Kg		137	684	684	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-41-7	Beryllium	2.06	mg/kg		0.0258	0.129	0.129	2	MS	BAJ	02/14/10 01:35	100213-4	945396
7440-43-9	Cadmium	1600	ug/Kg		137	684	684	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-70-2	Calcium	4070000	ug/Kg	*	10900	34200	34200	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-47-3	Chromium J,110a	10800	ug/Kg	*	205	684	684	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-48-4	Cobalt	7190	ug/Kg		205	684	684	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-50-8	Copper	73300	ug/Kg		410	1370	1370	1	P	HSC	02/12/10 01:12	021110-1	945399
7439-89-6	Iron	12500000	ug/Kg		10900	34200	34200	1	P	HSC	02/12/10 01:12	021110-1	945399
7439-92-1	Lead	102000	ug/Kg		342	1370	1370	1	P	HSC	02/12/10 01:12	021110-1	945399
7439-95-4	Magnesium	2150000	ug/Kg		11600	41000	41000	1	P	HSC	02/12/10 01:12	021110-1	945399
7439-96-5	Manganese	419000	ug/Kg		273	1370	1370	1	P	HSC	02/12/10 01:12	021110-1	945399
7439-97-6	Mercury	24.9	ug/kg		5.54	16.3	16.3	1	AV	ETL	02/10/10 11:00	021010S1-9	945628
7440-02-0	Nickel	8.61	mg/kg	*	0.129	0.516	0.516	2	MS	BAJ	02/14/10 01:35	100213-4	945396
7440-09-7	Potassium J+,16b	1870000	ug/Kg	N	8750	34200	34200	1	P	HSC	02/12/10 01:12	021110-1	945399
7782-49-2	Selenium	0.696	mg/kg	J	0.645	1.29	1.29	2	MS	BAJ	02/15/10 01:07	100214-8	945396
7440-22-4	Silver	748	ug/Kg		137	684	684	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-23-5	Sodium	70000	ug/Kg		9570	34200	34200	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-28-0	Thallium	0.240	mg/kg	J	0.0774	0.258	0.258	2	MS	BAJ	02/14/10 16:04	100214-5	945396
7440-61-1	Uranium	31.8	mg/kg	*	0.17	0.516	0.516	20	MS	BAJ	02/14/10 12:28	100214-3	945396
7440-62-2	Vanadium	24200	ug/Kg		137	684	684	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-66-6	Zinc	41700	ug/Kg		451	1370	1370	1	P	HSC	02/12/10 01:12	021110-1	945399

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945396	945392	SW846 3050B	0.534	g	50	mL	02/04/10	FGA
945399	945398	SW846 3050B	0.504	g	50	mL	02/04/10	FGA
945628	945627	SW846 7471A Prep	0.508	g	30	mL	02/09/10	TXB3

MLD
03/03/10

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1394

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245396003

BASIS: Dry Weight

DATE COLLECTED 21-JAN-10

CLIENT ID: RE15-10-7927

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 76

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum J+,16b	7000000	ug/Kg	N	8020	23600	23600	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-36-0	Antimony	778	ug/Kg	J	389	1180	1180	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-38-2	Arsenic	2.43	mg/kg		0.265	1.32	1.32	2	MS	BAJ	02/15/10 01:10	100214-8	945396
7440-39-3	Barium	97600	ug/Kg		118	590	590	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-41-7	Beryllium	5.83	mg/kg		0.0265	0.132	0.132	2	MS	BAJ	02/14/10 01:41	100213-4	945396
7440-43-9	Cadmium	1170	ug/Kg		118	590	590	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-70-2	Calcium	2120000	ug/Kg	*	9440	29500	29500	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-47-3	Chromium J,110a	12600	ug/Kg	*	177	590	590	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-48-4	Cobalt	3750	ug/Kg		177	590	590	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-50-8	Copper	526000	ug/Kg		354	1180	1180	1	P	HSC	02/12/10 01:20	021110-1	945399
7439-89-6	Iron	9560000	ug/Kg		9440	29500	29500	1	P	HSC	02/12/10 01:20	021110-1	945399
7439-92-1	Lead	102000	ug/Kg		295	1180	1180	1	P	HSC	02/12/10 01:20	021110-1	945399
7439-95-4	Magnesium	1230000	ug/Kg		10000	35400	35400	1	P	HSC	02/12/10 01:20	021110-1	945399
7439-96-5	Manganese	282000	ug/Kg		236	1180	1180	1	P	HSC	02/12/10 01:20	021110-1	945399
7439-97-6	Mercury	15.3	ug/kg		5.08	15	15	1	AV	ETL	02/10/10 11:01	021010S1-9	945628
7440-02-0	Nickel	7.08	mg/kg	*	0.132	0.529	0.529	2	MS	BAJ	02/14/10 01:41	100213-4	945396
7440-09-7	Potassium J+,16b	1250000	ug/Kg	N	7550	29500	29500	1	P	HSC	02/12/10 01:20	021110-1	945399
7782-49-2	Selenium	1.32	mg/kg	U	0.662	1.32	1.32	2	MS	BAJ	02/15/10 01:10	100214-8	945396
7440-22-4	Silver	771	ug/Kg		118	590	590	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-23-5	Sodium	63800	ug/Kg		8260	29500	29500	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-28-0	Thallium	0.127	mg/kg	J	0.0794	0.265	0.265	2	MS	BAJ	02/14/10 16:08	100214-5	945396
7440-61-1	Uranium	84.6	mg/kg	*	0.175	0.529	0.529	20	MS	BAJ	02/14/10 12:29	100214-3	945396
7440-62-2	Vanadium	16100	ug/Kg		118	590	590	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-66-6	Zinc	56800	ug/Kg		389	1180	1180	1	P	HSC	02/12/10 01:20	021110-1	945399

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945396	945392	SW846 3050B	0.5	g	50	mL	02/04/10	FGA
945399	945398	SW846 3050B	0.561	g	50	mL	02/04/10	FGA
945628	945627	SW846 7471A Prep	0.531	g	30	mL	02/09/10	TXB3

MLD
03/03/10

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1394

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245396004

BASIS: Dry Weight

DATE COLLECTED 21-JAN-10

CLIENT ID: RE15-10-7930

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum J+,16b	2300000	ug/Kg	N	7650	22500	22500	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-36-0	Antimony	1130	ug/Kg	U	371	1130	1130	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-38-2	Arsenic	1.37	mg/kg		0.214	1.07	1.07	2	MS	BAJ	02/15/10 01:12	100214-8	945396
7440-39-3	Barium	47300	ug/Kg		113	563	563	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-41-7	Beryllium	0.857	mg/kg		0.0214	0.107	0.107	2	MS	BAJ	02/14/10 01:47	100213-4	945396
7440-43-9	Cadmium	563	ug/Kg	U	113	563	563	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-70-2	Calcium	525000	ug/Kg	*	9000	28100	28100	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-47-3	Chromium J,110a	14100	ug/Kg	*	169	563	563	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-48-4	Cobalt	6480	ug/Kg		169	563	563	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-50-8	Copper	44700	ug/Kg		338	1130	1130	1	P	HSC	02/12/10 01:27	021110-1	945399
7439-89-6	Iron	15900000	ug/Kg		9000	28100	28100	1	P	HSC	02/12/10 01:27	021110-1	945399
7439-92-1	Lead	15800	ug/Kg		281	1130	1130	1	P	HSC	02/12/10 01:27	021110-1	945399
7439-95-4	Magnesium	388000	ug/Kg		9560	33800	33800	1	P	HSC	02/12/10 01:27	021110-1	945399
7439-96-5	Manganese	279000	ug/Kg		225	1130	1130	1	P	HSC	02/12/10 01:27	021110-1	945399
7439-97-6	Mercury	11.4	ug/kg	J	3.96	11.6	11.6	1	AV	ETL	02/10/10 11:03	021010S1-9	945628
7440-02-0	Nickel	3.84	mg/kg	*	0.107	0.428	0.428	2	MS	BAJ	02/14/10 01:47	100213-4	945396
7440-09-7	Potassium J+,16b	508000	ug/Kg	N	7200	28100	28100	1	P	HSC	02/12/10 01:27	021110-1	945399
7782-49-2	Selenium	1.07	mg/kg	U	0.535	1.07	1.07	2	MS	BAJ	02/15/10 01:12	100214-8	945396
7440-22-4	Silver	722	ug/Kg		113	563	563	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-23-5	Sodium	222000	ug/Kg		7880	28100	28100	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-28-0	Thallium	0.214	mg/kg	U	0.0642	0.214	0.214	2	MS	BAJ	02/14/10 16:13	100214-5	945396
7440-61-1	Uranium	8.68	mg/kg	*	0.0141	0.0428	0.0428	2	MS	BAJ	02/14/10 09:15	100213-2	945396
7440-62-2	Vanadium	4510	ug/Kg		113	563	563	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-66-6	Zinc	33800	ug/Kg		371	1130	1130	1	P	HSC	02/12/10 01:27	021110-1	945399

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945396	945392	SW846 3050B	0.528	g	50	mL	02/04/10	FGA
945399	945398	SW846 3050B	0.502	g	50	mL	02/04/10	FGA
945628	945627	SW846 7471A Prep	0.582	g	30	mL	02/09/10	TXB3

MLD
03/03/10

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only



Section I.

REQUEST NUMBER: 10-1394 VALIDATION DATE: 03/03/10 LAB CODE: GELCONTRACT LABORATORY NAME: GEL Laboratories LLCVALIDATOR: Monica Dymerski ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

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

☐ OTHER (DESCRIBE): total cyanide


Section II. Completeness Check

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


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

1. It should be noted that the matrix QC analyses were performed on LANL samples from another RN. No sample data were qualified as a result.


Reviewed by: Mary Donovan Level: I Date: 03/04/10VALIDATOR'S SIGNATURE: Monica Dymerski DATE: 03/03/10

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

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

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

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

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

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

GEL LABORATORIES LLC

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

Certificate of Analysis

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

Report Date: February 10, 2010

Client SDG: 10-1394

Client Sample ID: RE15-10-7928
Sample ID: 245396001
Matrix: R
Collect Date: 21-JAN-10 12:00
Receive Date: 23-JAN-10
Collector: Client
Moisture: 3.61%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	J	78.3	70.5	259	ug/kg	1	AXC2	02/03/10	1056	944845	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/02/10	1533	944844

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 10, 2010

Client SDG: 10-1394

Client Sample ID: RE15-10-7929
Sample ID: 245396002
Matrix: R
Collect Date: 21-JAN-10 12:00
Receive Date: 23-JAN-10
Collector: Client
Moisture: 27.4%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	J	232	80.8	297	ug/kg	1	AXC2	02/03/10	1057	944845	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/02/10	1533	944844

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 10, 2010

Client SDG: 10-1394

Client Sample ID: RE15-10-7927
Sample ID: 245396003
Matrix: R
Collect Date: 21-JAN-10 12:00
Receive Date: 23-JAN-10
Collector: Client
Moisture: 24.4%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis											
<i>SW9012A Cyanide, Total "Dry Weight Corrected"</i>											
Cyanide, Total	J	141	86.5	318	ug/kg	1	AXC2	02/03/10	1058	944845	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/02/10	1533	944844

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 10, 2010

Client SDG: 10-1394

Client Sample ID: RE15-10-7930
Sample ID: 245396004
Matrix: R
Collect Date: 21-JAN-10 12:00
Receive Date: 23-JAN-10
Collector: Client
Moisture: 11.5%

Project: LANL01004
Client ID: LANL010

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

SW9012A Cyanide, Total "Dry Weight Corrected"


Cyanide, Total	J	206	75.3	277	ug/kg	1	AXC2	02/03/10	1102	944845	1
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The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/02/10	1533	944844

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

DATA VALIDATION COVER SHEET	
5119-1 <p style="text-align: center;">Data Validation Cover Sheet</p>	Records Use only 

Section I.		
REQUEST NUMBER: <u>10-1394</u>	VALIDATION DATE: <u>03/03/10</u>	LAB CODE: <u>GEL</u>
CONTRACT LABORATORY NAME: <u>GEL Laboratories LLC</u>		
VALIDATOR: <u>Monica Dymerski</u> ORGANIZATION: <u>Analytical Quality Associates, Inc.</u>		
ANALYTICAL SUITE (CHECK ALL THAT APPLY):		
<input type="checkbox"/> TPH-GRO	<input type="checkbox"/> HIGH EXPLOSIVES	<input type="checkbox"/> DIOXIN FURANS
<input type="checkbox"/> TPH-DRO	<input type="checkbox"/> METALS	<input type="checkbox"/> PCB CONGENERS
<input type="checkbox"/> GENERAL CHEMISTRY	<input checked="" type="checkbox"/> RADIOCHEMISTRY	<input type="checkbox"/> LCMSMS HIGH EXPLOSIVES
		<input type="checkbox"/> LCMSMS PERCHLORATES
		<input type="checkbox"/> ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
<input type="checkbox"/> OTHER (DESCRIBE): _____		

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


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

1. The gamma spec sample results that were rejected by the laboratory due to low abundance or interference were qualified R,R5a. Some gamma spec results from QC samples were also rejected by the laboratory. No sample data were qualified as a result.
2. An MS analysis was not performed for tritium. An LCS analysis was performed and met QC acceptance criteria. No sample data were qualified as a result.
3. It should be noted that the gamma spec sample duplicate was performed on a LANL sample from another RN. No sample data were qualified as a result.


Reviewed by: Mary DonovanLevel: IDate: 03/04/10

VALIDATOR'S SIGNATURE: _____


DATE: 03/03/10

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

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, R9	J-, R9
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. The holding time was >2 times the applicable holding time requirement.	R, R9a	J-, R9a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. The analyte should be regarded as rejected because spectral interferences prevent positive identification of the analytes.	R, R5a	R, R5a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, R4	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, R4a
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R4e	R, R4e
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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 

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. The tracer is < the Lower Acceptance Level (LAL) but $\geq 10\%R$. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	19. Associated duplicate sample has DER or RER > the analytical laboratory's acceptance limits.	R, R10	J, J10
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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 

Yes No N/A				Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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

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: February 17, 2010

Client Sample ID: RE15-10-7928
Sample ID: 245396001
Matrix: R
Collect Date: 21-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 3.61%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
<i>"As Received"</i>												
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.0168	0.0232	+/-0.00521	0.050	pCi/g		CXM2	02/11/10	2103	944974	2
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0028	0.0229	+/-0.00199	0.050	pCi/g		CXM2	02/12/10	1251	944976	3
Plutonium-239/240	U	0.0126	0.0172	+/-0.00546	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		0.863	0.134	+/-0.0897	0.100	pCi/g		CXM2	02/01/10	1309	944978	4
Uranium-235/236	U	0.0267	0.083	+/-0.0233	0.100	pCi/g						
Uranium-238		1.19	0.0775	+/-0.114	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0193	0.157	+/-0.0494	0.200	pCi/g		MXR1	02/04/10	2255	944962	5
Bismuth-211	UI	4.03	R,R5a	0.216	+/-0.279	pCi/g						
Bismuth-214		1.18		0.0751	+/-0.0832	pCi/g						
Cadmium-109	UI	4.31	R,R5a	0.766	+/-0.405	pCi/g						
Cerium-139	U	-0.024		0.0337	+/-0.0101	pCi/g						
Cesium-134	UI	0.106	R,R5a	0.0553	+/-0.0217	pCi/g						
Cesium-137	U	0.00594		0.0405	+/-0.012	pCi/g						
Cobalt-60	U	0.00777		0.0406	+/-0.0121	pCi/g						
Europium-152	U	-0.0887		0.101	+/-0.0419	pCi/g						
Lanthanum-140	U	-0.0817		0.0792	+/-0.0268	pCi/g						
Lead-212		1.85		0.0629	+/-0.128	pCi/g						
Lead-214		1.40		0.0754	+/-0.104	pCi/g						
Mercury-203	U	0.0377		0.0459	+/-0.0154	pCi/g						
Potassium-40		39.6		0.337	+/-1.91	pCi/g						
Radium-223	U	0.323		0.756	+/-0.249	pCi/g						
Radium-224	UI	5.04	R,R5a	0.715	+/-0.529	pCi/g						
Radium-226		1.18		0.0751	+/-0.0832	pCi/g						
Radium-228		1.78		0.138	+/-0.150	pCi/g						
Ruthenium-106	U	-0.0524		0.338	+/-0.102	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: February 17, 2010

Client Sample ID: RE15-10-7928
Sample ID: 245396001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Sodium-22	U	-0.0217	0.0478	+/-0.0149	0.080	pCi/g						
Strontium-85	UI	0.131	0.0474	+/-0.0153		pCi/g						
Thallium-208		0.605	0.0366	+/-0.0421	0.080	pCi/g						
Thorium-227	U	0.140	0.442	+/-0.132		pCi/g						
Thorium-231	U	0.323	0.756	+/-0.249		pCi/g						
Thorium-234		2.06	1.30	+/-0.588	2.00	pCi/g						
Tin-113	U	-0.0238	0.0465	+/-0.0142	0.100	pCi/g						
Uranium-235	U	0.069	0.249	+/-0.0744	0.500	pCi/g						
Yttrium-88	U	0.0133	0.0335	+/-0.0106	0.100	pCi/g						

Rad Liquid Scintillation Analysis

H3 "As Received"

Tritium	2960	212	+/-233	250	pCi/L	KXK2	02/06/10	1138	948401	6
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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
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	86.1	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	80.1	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	84.1	(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.

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Certificate of Analysis

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

Report Date: February 17, 2010

Client Sample ID: RE15-10-7929
Sample ID: 245396002
Matrix: R
Collect Date: 21-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 27.4%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
<i>"As Received"</i>												
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00347	0.021	+/-0.00754	0.050	pCi/g		CXM2	02/04/10	1450	944974	2
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00625	0.0341	+/-0.00626	0.050	pCi/g		CXM2	02/04/10	1450	944976	3
Plutonium-239/240		0.0333	0.0256	+/-0.00905	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		3.02	0.207	+/-0.293	0.100	pCi/g		CXM2	02/10/10	1057	949620	4
Uranium-235/236		0.138	0.134	+/-0.0413	0.100	pCi/g						
Uranium-238		11.1	0.142	+/-0.940	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.263	0.398	+/-0.131	0.200	pCi/g		MXR1	02/05/10	1859	944962	7
Bismuth-211	UI	4.39	R,R5a	0.446	+/-0.390	pCi/g						
Bismuth-214		1.34		0.157	+/-0.131	pCi/g						
Cadmium-109	UI	2.59	R,R5a	2.15	+/-0.799	pCi/g						
Cerium-139	U	-0.0279		0.0652	+/-0.020	pCi/g						
Cesium-134	UI	0.150	R,R5a	0.125	+/-0.0325	pCi/g						
Cesium-137		0.435		0.0796	+/-0.065	pCi/g						
Cobalt-60	U	0.0132		0.0917	+/-0.027	pCi/g						
Europium-152	U	-0.00485		0.211	+/-0.0744	pCi/g						
Lanthanum-140	U	-0.134		0.148	+/-0.0587	pCi/g						
Lead-212		1.87		0.114	+/-0.121	pCi/g						
Lead-214		1.53		0.156	+/-0.141	pCi/g						
Mercury-203	U	0.0461		0.0947	+/-0.0276	pCi/g						
Potassium-40		25.6		0.716	+/-1.53	pCi/g						
Radium-223	U	-0.0223		1.44	+/-0.443	pCi/g						
Radium-224	UI	4.62	R,R5a	1.30	+/-0.780	pCi/g						
Radium-226		1.34		0.157	+/-0.131	pCi/g						
Radium-228		1.80		0.266	+/-0.218	pCi/g						
Ruthenium-106	U	-0.327		0.658	+/-0.213	pCi/g						
Sodium-22	U	-0.00298		0.0929	+/-0.0282	pCi/g						

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

Report Date: February 17, 2010

Client Sample ID: RE15-10-7929
Sample ID: 245396002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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Rad Gamma Spec Analysis

GAMMA SPEC "Dry Weight Corrected"

Strontium-85	UI	0.104	R,R5a	0.103	+/-0.0292							pCi/g
Thallium-208		0.453		0.0752	+/-0.0636	0.080						pCi/g
Thorium-227	U	-0.355		0.860	+/-0.272							pCi/g
Thorium-231	U	-0.0223		1.44	+/-0.443							pCi/g
Thorium-234		13.6		3.07	+/-1.99	2.00						pCi/g
Tin-113	U	-0.00635		0.0945	+/-0.0295	0.100						pCi/g
Uranium-235	U	0.265		0.467	+/-0.230	0.500						pCi/g
Yttrium-88	U	-0.00688		0.0674	+/-0.0218	0.100						pCi/g

Rad Liquid Scintillation Analysis

H3 "As Received"

Tritium		977		212	+/-105	250	pCi/L	KXK2	02/06/10	1316	948401	8
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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 EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	DOE HASL 300, 4.5.2.3/Ga-01-R
8	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	87.1	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	51.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	78.7	(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

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Certificate of Analysis

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

Report Date: February 17, 2010

Client Sample ID: RE15-10-7927
Sample ID: 245396003
Matrix: R
Collect Date: 21-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 24.4%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
<i>"As Received"</i>												
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00919	0.0219	+/-0.00453	0.050	pCi/g		CXM2	02/16/10	1433	944974	2
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0137	0.032	+/-0.00762	0.050	pCi/g		CXM2	02/04/10	1450	944976	3
Plutonium-239/240		0.0352	0.0241	+/-0.00854	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		8.62	0.255	+/-0.783	0.100	pCi/g		CXM2	02/10/10	1057	949620	4
Uranium-235/236		1.01	0.165	+/-0.146	0.100	pCi/g						
Uranium-238		43.6	0.176	+/-3.70	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.231	0.306	+/-0.0921	0.200	pCi/g		MXR1	02/05/10	1900	944962	6
Bismuth-211	UI	3.32	R,R5a	0.295	+/-0.265	pCi/g						
Bismuth-214		0.954		0.101	+/-0.0812	0.200						
Cadmium-109	U	-2.58		1.84	+/-0.812	pCi/g						
Cerium-139	U	-0.00713		0.0498	+/-0.0162	0.050						
Cesium-134	UI	0.108	R,R5a	0.0704	+/-0.0258	0.100						
Cesium-137		0.523		0.0604	+/-0.0429	0.100						
Cobalt-60	U	-0.0169		0.0472	+/-0.015	0.100						
Europium-152	U	-0.0665		0.141	+/-0.052	0.200						
Lanthanum-140	U	-0.14		0.103	+/-0.0381	pCi/g						
Lead-212		1.53		0.0894	+/-0.111	0.100						
Lead-214		1.16		0.103	+/-0.0971	0.100						
Mercury-203	U	0.0222		0.0655	+/-0.0193	0.100						
Potassium-40		24.7		0.440	+/-1.30	1.00						
Radium-223	U	0.373		1.02	+/-0.331	pCi/g						
Radium-224	UI	3.79	R,R5a	1.02	+/-0.577	pCi/g						
Radium-226		0.954		0.101	+/-0.0812	pCi/g						
Radium-228		1.38		0.187	+/-0.157	0.500						
Ruthenium-106	U	0.000502		0.474	+/-0.140	0.800						
Sodium-22	U	-0.0181		0.0525	+/-0.0164	0.080						

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

Report Date: February 17, 2010

Client Sample ID: RE15-10-7927
Sample ID: 245396003

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Strontium-85	UI	0.120	R,R5a	0.0639	+/-0.0196	pCi/g						
Thallium-208		0.443		0.0518	+/-0.0426	pCi/g						
Thorium-227	U	-0.332		0.595	+/-0.186	pCi/g						
Thorium-231	U	0.373		1.02	+/-0.331	pCi/g						
Thorium-234		34.2		2.38	+/-3.28	pCi/g						
Tin-113	U	0.00196		0.0651	+/-0.0191	pCi/g						
Uranium-235		0.927		0.356	+/-0.192	pCi/g						
Yttrium-88	U	-0.00146		0.0391	+/-0.012	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		1890		211	+/-162	pCi/L		KXK2	02/06/10	1454	948401	7

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 EML HASL-300, U-02-RC Modified
6	DOE HASL 300, 4.5.2.3/Ga-01-R
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	81.4	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	57.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	60.1	(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.

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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: February 17, 2010

Client Sample ID: RE15-10-7930
Sample ID: 245396004
Matrix: R
Collect Date: 21-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 11.5%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
<i>"As Received"</i>												
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00203	0.0204	+/-0.00538	0.050	pCi/g		CXM2	02/04/10	1450	944974	2
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00137	0.0225	+/-0.00138	0.050	pCi/g		CXM2	02/04/10	1450	944976	3
Plutonium-239/240	U	0.00687	0.0169	+/-0.00414	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.60	0.138	+/-0.145	0.100	pCi/g		CXM2	02/01/10	1309	944978	4
Uranium-235/236	U	0.077	0.0856	+/-0.0213	0.100	pCi/g						
Uranium-238		4.97	0.080	+/-0.394	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0442	0.225	+/-0.0732	0.200	pCi/g		MXR1	02/05/10	1914	944962	5
Bismuth-211	UI	3.49	R,R5a	0.315	+/-0.244	pCi/g						
Bismuth-214		1.13		0.112	+/-0.0914	pCi/g						
Cadmium-109	UI	2.51	R,R5a	1.35	+/-0.443	pCi/g						
Cerium-139	U	-0.00221		0.0494	+/-0.0148	pCi/g						
Cesium-134	UI	0.0907	R,R5a	0.0889	+/-0.0316	pCi/g						
Cesium-137		0.0918		0.0632	+/-0.0403	pCi/g						
Cobalt-60	U	-0.00333		0.063	+/-0.0193	pCi/g						
Europium-152	U	-0.0602		0.161	+/-0.0649	pCi/g						
Lanthanum-140	U	-0.00694		0.124	+/-0.0385	pCi/g						
Lead-212		1.71		0.0916	+/-0.0837	pCi/g						
Lead-214		1.21		0.110	+/-0.0905	pCi/g						
Mercury-203	U	0.00404		0.0673	+/-0.0222	pCi/g						
Potassium-40		38.3		0.528	+/-1.67	pCi/g						
Radium-223	U	0.0488		1.07	+/-0.356	pCi/g						
Radium-224	UI	3.69	R,R5a	1.04	+/-0.497	pCi/g						
Radium-226		1.13		0.112	+/-0.0914	pCi/g						
Radium-228		1.54		0.218	+/-0.169	pCi/g						
Ruthenium-106	U	0.174		0.517	+/-0.150	pCi/g						
Sodium-22	U	0.0018		0.0753	+/-0.0226	pCi/g						

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

Report Date: February 17, 2010

Client Sample ID: RE15-10-7930
Sample ID: 245396004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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Rad Gamma Spec Analysis

GAMMA SPEC "Dry Weight Corrected"

Strontium-85	UI	0.0983	R,R5a	0.0706	+/-0.0207	pCi/g						
Thallium-208		0.505		0.0561	+/-0.0404	pCi/g						
Thorium-227	U	-0.0474		0.623	+/-0.180	pCi/g						
Thorium-231	U	0.0488		1.07	+/-0.356	pCi/g						
Thorium-234		4.77		1.95	+/-0.970	pCi/g						
Tin-113	U	0.0106		0.0698	+/-0.0202	pCi/g						
Uranium-235	U	-0.0464		0.358	+/-0.107	pCi/g						
Yttrium-88	U	-0.0062		0.0481	+/-0.0156	pCi/g						

Rad Liquid Scintillation Analysis

H3 "As Received"

Tritium		2710		211	+/-215	250	pCi/L	KXX2	02/06/10	1632	948401	6
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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
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	85.8	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	86.1	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	79.8	(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

Friday, January 22, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1394C

LOS ALAMOS

REQUEST NUMBER: 10-1394

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/21/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

245396°/

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-7928	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7928	1	POLY	H3	Ice	R
RE15-10-7928	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7928	1	AMBER GLASS	NMED Explosives list	Ice	R
RE15-10-7929	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7929	1	POLY	H3	Ice	R
RE15-10-7929	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7929	1	AMBER GLASS	NMED Explosives list	Ice	R
RE15-10-7927	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7927	1	POLY	H3	Ice	R
RE15-10-7927	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7927	1	AMBER GLASS	NMED Explosives list	Ice	R
RE15-10-7930	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7930	1	POLY	H3	Ice	R
RE15-10-7930	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7930	1	AMBER GLASS	NMED Explosives list	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Printed Name

Signature

Received for DISPOSAL By:

Date

Time

Remarks:

Printed Name

Signature

REQUEST NUMBER: 10-1394

Friday, January 22, 2010

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number: 10-1394

Per Agreement Number: 126310011

Project Cost Code: MR3A05529E00

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 1/22/2010

TURNAROUND/REPORT DUE: 2/21/2010

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	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	EPA:906.0	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	HASL-300:AM-241	1	RE15-10-7927	R	1/21/2010	

Friday, January 22, 2010

Page 2 of 3

REQUEST NUMBER: 10-1394

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:AM-241	1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	HASL-300:ISOPU	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	HASL-300:ISOU	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	SW-846:6020	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	SW-846:6850	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	SW-846:7471A	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	SW-846:8321A_MOD	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	SW-846:9012A	1	RE15-10-7927	R	1/21/2010	

Friday, January 22, 2010

REQUEST NUMBER: 10-1394

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	

Final Page of REQUEST NUMBER 10-1394



January 27, 2010

www.gel.com

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

Re: LANL ER Project
Work Order: 245396
SDG: 10-1394

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on January 23, 2010, and analyzed for Explosives by LCMSMS, 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,

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 10-1394
Enclosures

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 245396
SDG: 10-1394

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Case Narrative

**Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 245396
SDG # : 10-1394**

January 27, 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 23, 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 original chain of custody was received on 1/26/10. 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 12,13,15C temperatures. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

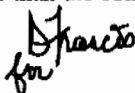
<u>Laboratory ID</u>	<u>Client ID</u>
245396001	RE15-10-7928
245396002	RE15-10-7929
245396003	RE15-10-7927
245396004	RE15-10-7930

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, 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.



Valerie Davis

Project Manager

List of current GEL Certifications as of 27 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

Friday, January 22, 2010

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1394C

LOS ALAMOS

REQUEST NUMBER: 10-1394

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 2/21/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

245396%

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE15-10-7928	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7928	1	POLY	H3	Ice	R
RE15-10-7928	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7928	1	AMBER GLASS	NMED Explosives list	Ice	R
RE15-10-7929	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7929	1	POLY	H3	Ice	R
RE15-10-7929	1	POLY	Met+U+CLO4+CN	Ice	R
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RE15-10-7927	1	POLY	AM241+GS+ISOPU+ISO U	None	R
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RE15-10-7927	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7927	1	AMBER GLASS	NMED Explosives list	Ice	R
RE15-10-7930	1	POLY	AM241+GS+ISOPU+ISO U	None	R
RE15-10-7930	1	POLY	H3	Ice	R
RE15-10-7930	1	POLY	Met+U+CLO4+CN	Ice	R
RE15-10-7930	1	AMBER GLASS	NMED Explosives list	Ice	R

Relinquished By:

Date

Time

Received By:

Date

Time



1/22/10

3:00

 Patricia Dorsey-Dent P. Dorsey-Dent 1-23-10 09:20

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

REQUEST NUMBER: 10-1394

Friday, January 22, 2010

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number: 10-1394

Per Agreement Number: 126310011

Project Cost Code: MR3A05529E00

Please analyse the enclosed samples according to the schedule indicated:

SHIP DATE: 1/22/2010

TURNAROUND/REPORT DUE: 2/21/2010

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	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	EPA:906.0	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	HASL-300:AM-241	1	RE15-10-7927	R	1/21/2010	

Friday, January 22, 2010

REQUEST NUMBER: 10-1394

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:AM-241	1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	HASL-300:ISOPU	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
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		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	SW-846:6020	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	SW-846:6850	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	SW-846:7471A	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	SW-846:8321A_MOD	1	RE15-10-7927	R	1/21/2010	
		1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	
	SW-846:9012A	1	RE15-10-7927	R	1/21/2010	

Friday, January 22, 2010

REQUEST NUMBER: 10-1394

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	RE15-10-7928	R	1/21/2010	
		1	RE15-10-7929	R	1/21/2010	
		1	RE15-10-7930	R	1/21/2010	

Final Page of REQUEST NUMBER 10-1394



SAMPLE RECEIPT & REVIEW FORM

Client: LANL			SDG/ARCOC/Work Order: 10-1394		
Received By: Patricia Dover-Dent			Date Received: January 23, 2009		
Suspected Hazard Information		Yes	No	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further investigation.	
COC/Samples marked as radioactive?			X	Maximum Counts Observed*: 60 CPM	
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) 1-4 12,13,15C
3 Chain of custody documents included with shipment?			X	Original COC was received 01/26/10
4 Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
5 Samples requiring chemical preservation at proper pH?		X		Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7 Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8 Samples received within holding time?	X			Id's and tests affected:
9 Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?			X	Sample ID's affected: time written on containers, not on COC
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: FEDEX#S

7209 7849 6695 1C	7209 7849 6560 4C
7209 7849 6776 1C	7209 7849 6559 4C
7209 7849 6526 2C	7209 7849 6684 4C
7209 7849 6700 2C	7209 7849 6732 12C
7209 7849 6710 2C	7209 7849 6504 13C
7209 7849 6548 2C	7209 7849 6743 13C
7209 7849 6537 3C	7209 7849 6765 13C
7209 7849 6570 3C	7209 7849 6754 15C
7209 7849 6515 4C	

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

SHIP DATE: 22JAN10
ACTWT: 55.8 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

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

SHIP DATE: 22JAN10
ACTWT: 55.8 LB MAN
CAD: 0014176/CAFE2449

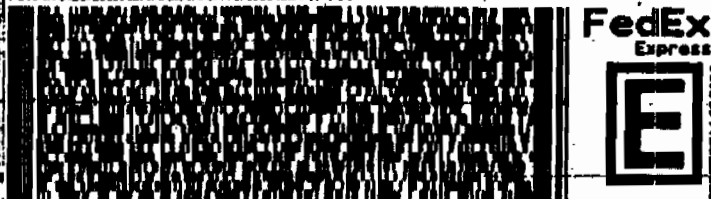
BILL SENDER

10
VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

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

10
VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

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



2 of 2
PSN 7209 7849 6695
Mat-N 7209 7849 6684 [0201]
SATURDAY ### A1
PRIORITY OVERNIGHT

X0 CHSA

29407
SC-US
CHS



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

BILL SENDER

20
VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

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



4 of 4
PSN 7209 7849 6526
Mat-N 7209 7849 6490 [0201]
SATURDAY ### A1
PRIORITY OVERNIGHT

X0 CHSA

29407
SC-US
CHS



2 of 2
PSN 7209 7849 6776
Mat-N 7209 7849 6776 [0201]
SATURDAY ### A1
PRIORITY OVERNIGHT

X0 CHSA

29407
SC-US
CHS



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

SHIP DATE: 22JAN10
ACTWT: 55.8 LB MAN
CAD: 0014176/CAFE2449

BILL SENDER

20
VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

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



1 of 2
PSN 7209 7849 6776
Mat-N 7209 7849 6776 [0201]
SATURDAY ### A1
PRIORITY OVERNIGHT

X0 CHSA

29407
SC-US
CHS



ORIGIN ID: SAFA (505) 665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TR08 BLDG 1237 DPU 83

SHIP DATE: 22JAN10
ACTGCT: 57.0 LB MAN
CRD: 0014176/CAFE2449

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 555-8171

REF: 68010AMR2A0515BYDO



2040

2 of 2
NPSN 7209 7849 6710
[0263]

MatrN 7209 7849 6700 [0201]

SATURDAY ###
PRIORITY OVERNIGHT

X0 CHSA

294



LOS ALAMOS NATL LAB
TR08 BLDG 1237 DPU 83

ACTGCT: 57.0 LB MAN
CRD: 0014176/CAFE2449

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 555-8171

REF: 68010AMR2A0515BYDO



1 of 3
NPSN 7209 7849 6537
[0201]

MatrN MASTER NN

SATURDAY ###
PRIORITY OVERNIGHT

X0 CHSA

2940

SC-US
CHS

156148-434 NRT V3 04-09

JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TR08 BLDG 1237 DPU 83

SHIP DATE: 22JAN10
ACTGCT: 58.0 LB MAN
CRD: 0014176/CAFE2449

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

REF: 68010AMR2A0515BYDO



2 of 3
NPSN 7209 7849 6548
[0263]

MatrN 7209 7849 6537 [0201]

SATURDAY ###
PRIORITY OVERNIGHT

X0 CHSA

29407
SC-US
CHS



LOS ALAMOS NATL LAB
TR08 BLDG 1237 DPU 83

SHIP DATE: 22JAN10
ACTGCT: 58.0 LB MAN
CRD: 0014176/CAFE2449

LOS ALAMOS, NM 87545
UNITED STATES US

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 555-8171

REF: 68010AMR3A0352VAD0



2 of 2
NPSN 7209 7849 6570
[0263]

MatrN 7209 7849 6560 [0201]

SATURDAY ###
PRIORITY OVERNIGHT

X0 CHSA

2940

SC-US
CHS

156148-434 NRT V3 04-09

JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGS BLDG 1237 DPU 83
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22JAN18
ACTMGT: 88-8-LS-MAN
CRD: 0014176/CFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 68010AMR2A0515BYD0

12c

FedEx
Express



LOS ALAMOS NATL LAB
TAGS BLDG 1237 DPU 83
LOS ALAMOS, NM 87545
UNITED STATES US

CRD: 0014176/CFE2449

BILL SENDER

VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407

(843) 556-8171
REF: 68010AMR2A0515BYD0

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7209 7849 6732

SATURDAY ### A1
PRIORITY OVERNIGHT

X0 CHSA

29407
SC-US
CHS



2 of 4

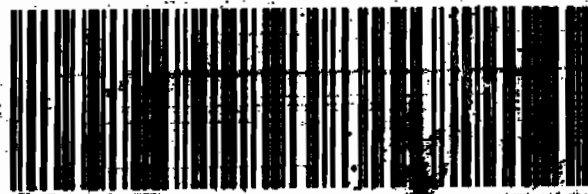
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BRDAY ### A1
PRIORITY OVERNIGHT

X0 CHSA

29407
SC-US
CHS



ORIGIN ID: 606A (505) 685-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TAGS BLDG 1237 DPU 83
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22JAN18
ACTMGT: 88-8-LS-MAN
CRD: 0014176/CFE2449

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2 of 2
NPSN 7209 7849 6765

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SATURDAY ### A1
PRIORITY OVERNIGHT

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SC-US
CHS



2 of 2
NPSN 7209 7849 6743

7209 7849 6732 0201

SATURDAY ### A1
PRIORITY OVERNIGHT

X0 CHSA

29407
SC-US
CHS

SNIP DATE: 22JAN10
ACTWGT: 22.0 LB MAN
CRD: 0014170/CAPE2449

LOS ALAMOS, NM 87545
UNITED STATES OF AMERICA

BILL SENDER

VALERIE DAVIS
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(843)-556-8171

REF: 6B010AMR2A0515BYDX



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1 of 2

SATURDAY ### A1 2

TRK# 7209 7849 6754
1201

PRIORITY OVERNIGHT

MASTER

2940

X0 CHSA

SC-1.

CHS



Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier Explanation

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

LC/MS/MS PERCHLORATE ANALYSIS

**Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 10-1394**

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: 945236

Prep Batch Number: 945234

Sample Analysis

Sample ID	Client ID
245396001	RE15-10-7928
245396002	RE15-10-7929
245396003	RE15-10-7927
245396004	RE15-10-7930
1202024414	Interference Check Sample (ICS)
1202024410	Method Blank (MB)
1202024411	Laboratory Control Sample (LCS)
1202024412	245385002(RE15-10-7305) Matrix Spike (MS)
1202024413	245385002(RE15-10-7305) 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.

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.

10-1394-PERLCMS

Page 1 of 4

CCB Requirements

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

CCV Requirements

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

Low Level Standard (CRI) Requirements

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

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

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

Interference Check Sample (ICS)

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

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

QC Sample Designation

Client sample 245385002 (RE15-10-7305) from SDG 10-1383 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement

The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement

The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement

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

Retention Time Standard Area Acceptance

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

Retention Time

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

Technical Information**Holding Time Specifications**

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

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP.

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis

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

Miscellaneous Information

Data Exception (DER) Documentation

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

Manual Integrations

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

Method Comments

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

Additional Comments

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

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

Perchlorate Isotope Ratio

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

System Configuration

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

Chromatographic Columns

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

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

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

Review Validation:

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

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

Reviewer: Hester M. Mauer Date: 02/11/10

SAMPLE DATA SUMMARY

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC
 Lab Code: GEL
 Instrument: LCMSMS
 Method: SW846 6850 Modified
 Matrix: SOIL
 Extraction Batch ID: 945234
 Extraction Type: Solid Prep
 Sample Volume/Weight: 2.00 g
 Concentrated Extract Volume: 20.0
 Client Sample No. RE15-10-7928
 Date Received: 23-JAN-10
 GEL Job No (SDG): 10-1394
 GEL Sample ID: 245396001
 Date Filtered: 05-FEB-10
 Injection Volume (uL): 20
 %Solids: 96.4

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.519	2.07	0.519	ug/kg	U	1	09-FEB-10 21:21	per0209080a
	Perchlorate Isotope Ratio						1	09-FEB-10 21:21	per0209080a
14797-73-0	Perchlorate-101	.519	2.07	0.519	ug/kg	U	1	09-FEB-10 21:21	per0209080a
	Perchlorate-O(18)			5.34	ug/kg		1	09-FEB-10 21:21	per0209080a

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

*Concentration =

Instrument Value X Concentrated Extract Volume X 1
 Aliquot %Solids

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: 945234

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7929

Date Received: 23-JAN-10

GEL Job No (SDG): 10-1394

GEL Sample ID: 245396002

Date Filtered: 05-FEB-10

Injection Volume (uL): 20

%Solids: 73

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.689	2.76	0.689	ug/kg	U	1	09-FEB-10 21:28	per0209081a
	Perchlorate Isotope Ratio						1	09-FEB-10 21:28	per0209081a
14797-73-0	Perchlorate-101	.689	2.76	0.689	ug/kg	U	1	09-FEB-10 21:28	per0209081a
	Perchlorate-O(18)			7.62	ug/kg		1	09-FEB-10 21:28	per0209081a

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

*Concentration =

Instrument Value X Concentrated Extract Volume X Aliquot

1
%Solids

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 245234

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

RE15-10-7927

Date Received: 23-JAN-10

GEL Job No (SDG): 10-1394

GEL Sample ID: 245396003

Date Filtered: 05-FEB-10

Injection Volume (uL): 20

% Solids: 76

CAS No.	Analyte ^a	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.662	2.65	0.662	ug/kg	U	1	09-FEB-10 21:34	per0209082a
	Perchlorate Isotope Ratio						1	09-FEB-10 21:34	per0209082a
14797-73-0	Perchlorate-101	.662	2.65	0.662	ug/kg	U	1	09-FEB-10 21:34	per0209082a
	Perchlorate-O(18)			7.59	ug/kg		1	09-FEB-10 21:34	per0209082a

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

*Concentration =

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

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: 945234
 Extraction Type: Solid Prep
 Sample Volume/Weight: 2.00 g
 Concentrated Extract Volume: 20.0
 Client Sample No. RE15-10-7930
 Date Received: 23-JAN-10
 GEL Job No (SDG): 10-1394
 GEL Sample ID: 245396004
 Date Filtered: 05-FEB-10
 Injection Volume (uL): 20
 %Solids: 89

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.565	2.26	0.565	ug/kg	U	1	09-FEB-10 21:41	per0209083a
	Perchlorate Isotope Ratio						1	09-FEB-10 21:41	per0209083a
14797-73-0	Perchlorate-101	.565	2.26	0.565	ug/kg	U	1	09-FEB-10 21:41	per0209083a
	Perchlorate-O(18)			5.89	ug/kg		1	09-FEB-10 21:41	per0209083a

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

*Concentration =

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

QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10-1394

Extract Batch Code: 945234

Date Filtered: 05-FEB-10

Matrix: SOIL

Sample ID: 1202024411

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.15	ug/kg	107		70 - 130
Perchlorate Isotope Ratio		3				-
Perchlorate-101	2.00	2.21	ug/kg	111		70 - 130
Perchlorate-O(18)		5.28	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.

Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10-1394

Extract Batch Code: 945234

Date Filtered: 05-FEB-10

Matrix: SOIL

Sample ID: 1202024414

Analyte [^]	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.24	ug/kg	112		70 - 130
Perchlorate Isotope Ratio		3				
Perchlorate-101	2.00	2.3	ug/kg	115		70 - 130
Perchlorate-O(18)		5.28	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.

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

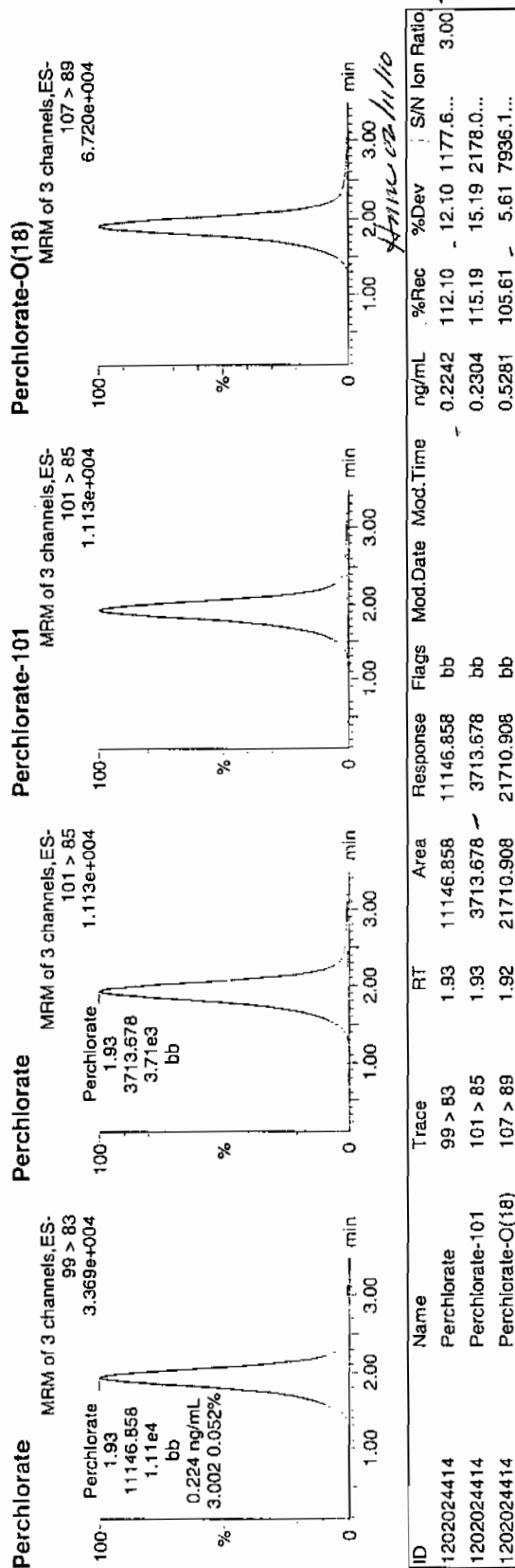
Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209063a
Date: 09-Feb-2010
Time: 19:30:07
ID: 1202024414
Vial: 2;2,C

32-10-10

1202024414 | 945236 | 5020 | ICS | 11



Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 10-1394

Extract Batch Code: 945234

Date Extracted: 05-FEB-10

GEL MS/PS ID: 1202024412

Client ID: RE15-10-7305

GEL MSD/PSD ID: 1202024413

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec	#	MSD Conc	MSD Rec	#	RPD	#	RPD Limit	Recovery Limit
Perchlorate	2.82	0.404	ug/kg	3.54	111		3.33	104		5.86		30	75 - 125
Perchlorate Isotope Ratio	0	0.00		3.06			3.14			0			-
Perchlorate-101	2.82	0.408	ug/kg	3.56	112		3.28	102		8.36		30	75 - 125
Perchlorate-O(18)	0	7.12	ug/kg	7.23			7.27			.485			-

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

Comments:

Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1394

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	09-FEB-10	per0209001a	IPB001
Perchlorate-101	0.00	0	NA	09-FEB-10	per0209001a	IPB001
Perchlorate	0.00	0	NA	09-FEB-10	per0209002a	IPB001
Perchlorate-101	0.00	0	NA	09-FEB-10	per0209002a	IPB001

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

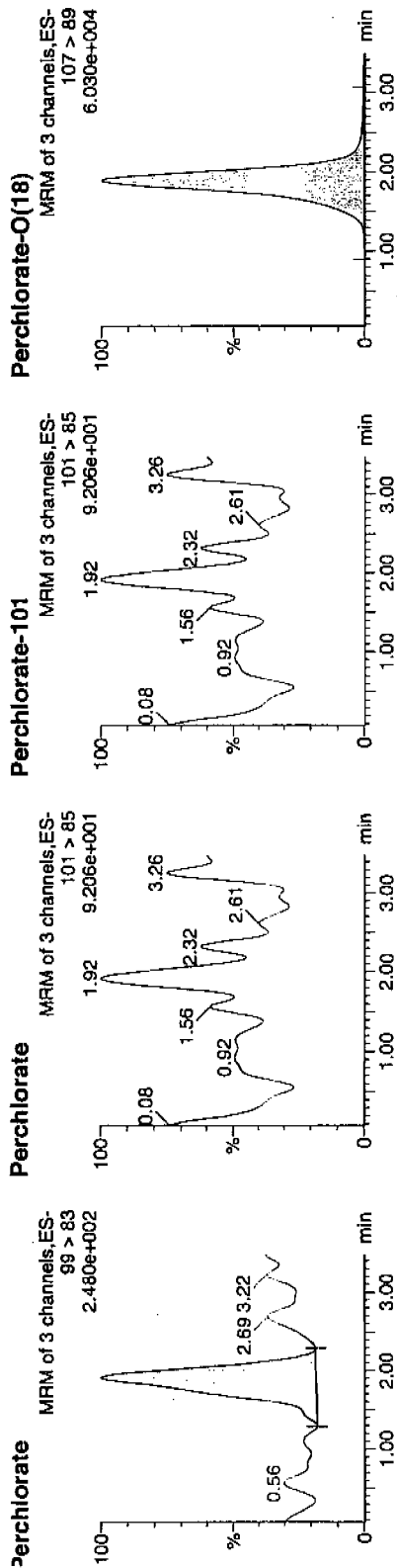
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Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per020910a.mdb 10 Feb 2010 11:45:47
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per020910a.cdb 10 Feb 2010 11:47:15

Name: per0209001a
Date: 09-Feb-2010
Time: 12:32:38
D: IPB001
Vial: 1:1,A

Handwritten:
CWS
02-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	1.91	74.661	74.661	bb			0.0015			39.975	0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	1.89	20230.795	20230.795	bb			0.4921	98.41	-1.59	2813.9...	

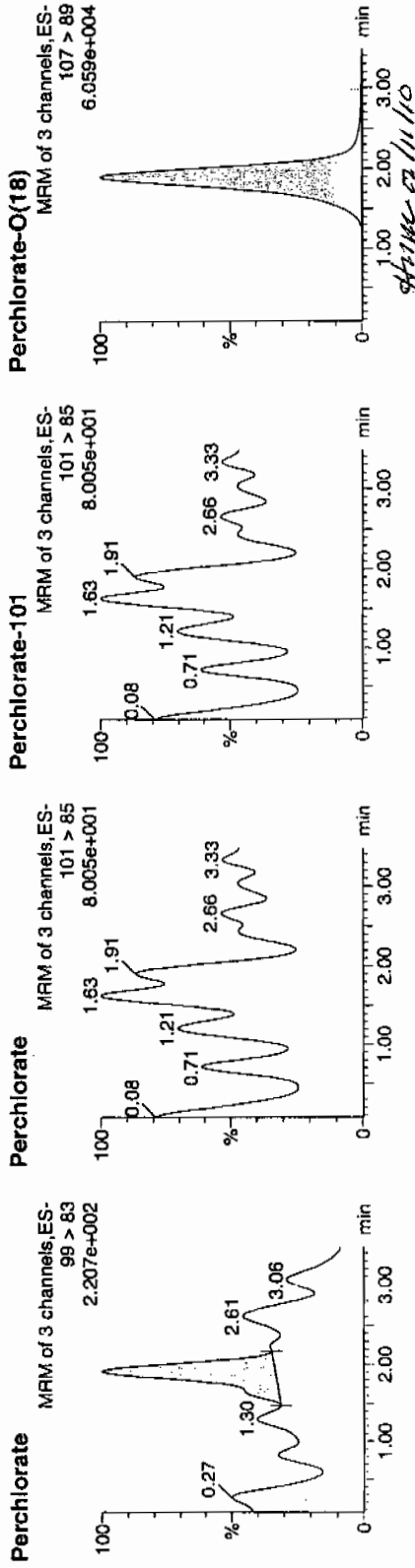
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209002a
Date: 09-Feb-2010
Time: 12:39:20
ID: IPB001
Vial: 1:1,A

02-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83	1.92	40.009	40.009	bb			0.0008			4.195	0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	1.91	20195.441	20195.441	bb			0.4912	98.24	-1.76	3163.4...	

Perchlorate Continuing Calibration Blank

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GEL Job No.(SDG): 10-1394

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	09-FEB-10	per0209008a	IPB002
Perchlorate-101	0.00	0	NA	09-FEB-10	per0209008a	IPB002
Perchlorate	0.00	0	NA	09-FEB-10	per0209010a	IPB003
Perchlorate-101	0.00	0	NA	09-FEB-10	per0209010a	IPB003
Perchlorate	0.00	0	NA	09-FEB-10	per0209022a	IPB004
Perchlorate-101	0.00	0	NA	09-FEB-10	per0209022a	IPB004
Perchlorate	0.00	0	NA	09-FEB-10	per0209026a	IPB005
Perchlorate-101	0.00	0	NA	09-FEB-10	per0209026a	IPB005
Perchlorate	0.00	0	NA	09-FEB-10	per0209034a	IPB006
Perchlorate-101	0.00	0	NA	09-FEB-10	per0209034a	IPB006
Perchlorate	0.00	0	NA	09-FEB-10	per0209046a	IPB007
Perchlorate-101	0.00	0	NA	09-FEB-10	per0209046a	IPB007
Perchlorate	0.00	0	NA	09-FEB-10	per0209055a	IPB008

Form 4

Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1394

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate-101	0.00	0	NA	09-FEB-10	per0209055a	IPB008
Perchlorate	0.00	0	NA	09-FEB-10	per0209059a	IPB009
Perchlorate-101	0.00	0	NA	09-FEB-10	per0209059a	IPB009
Perchlorate	0.00	0	NA	09-FEB-10	per0209072a	IPB010
Perchlorate-101	0.00	0	NA	09-FEB-10	per0209072a	IPB010
Perchlorate	0.00	0	NA	09-FEB-10	per0209085a	IPB011
Perchlorate-101	0.00	0	NA	09-FEB-10	per0209085a	IPB011

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209008a

Date: 09-Feb-2010

Time: 13:18:28

ID: IPB002

Vial: 1:1,A

02-10-10

Perchlorate

MRM of 3 channels, ES-

99 > 83

3.280e+002

min

1.00 2.00 3.00

0.08

1.20

2.86

%

100

Perchlorate

MRM of 3 channels, ES-

101 > 85

1.040e+002

min

1.00 2.00 3.00

0.08

0.94

1.26

2.76

3.35

%

100

Perchlorate-101

MRM of 3 channels, ES-

101 > 85

1.040e+002

min

1.00 2.00 3.00

0.08

0.94

1.26

2.76

3.35

%

100

Perchlorate-O(18)

MRM of 3 channels, ES-

107 > 89

6.058e+004

min

1.00 2.00 3.00

0.08

1.20

2.86

%

100

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB002	Perchlorate	99 > 83	1.92	59.767	59.767	bb			0.0012			5.668	2.55
IPB002	Perchlorate-101	101 > 85	1.94	23.411	23.411	bb			0.0015			18.041	
IPB002	Perchlorate-O(18)	107 > 89	1.88	20395.850	20395.850	bb			0.4961	99.22	-0.78	2103.5...	

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209010a

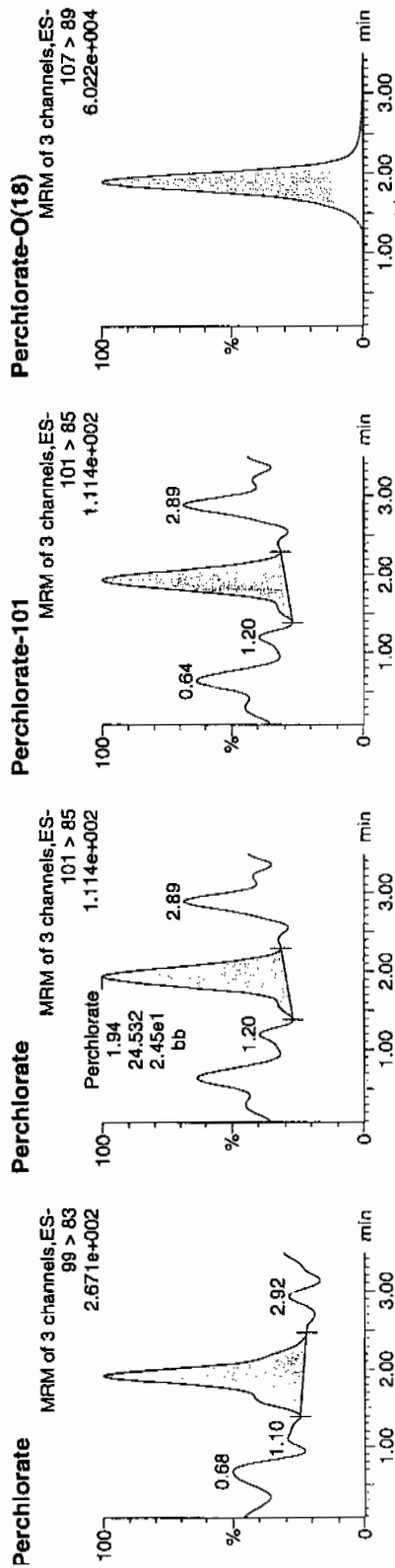
Date: 09-Feb-2010

Time: 13:31:32

ID: IPB003

Vial: 1:1,A

02-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB003	Perchlorate	99 > 83	1.92	68.754	68.754	bb			0.0014			13.111	2.80
IPB003	Perchlorate-101	101 > 85	1.94	24.532	24.532	bb			0.0015			10.267	
IPB003	Perchlorate-O(18)	107 > 89	1.89	20143.693	20143.693	bb			0.4899	97.99	-2.01	900.944	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209022a

Date: 09-Feb-2010

Time: 14:50:03

ID: IPB004

Vial: 1:1,A

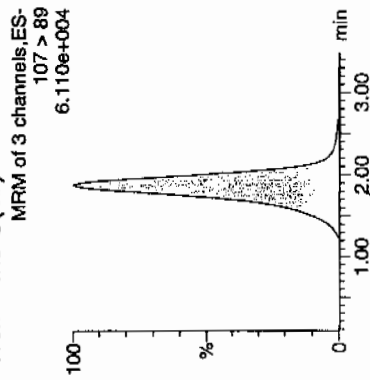
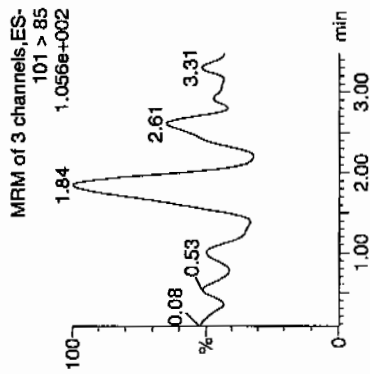
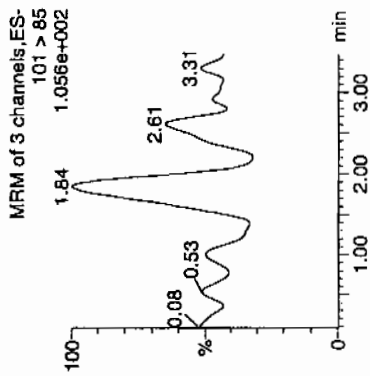
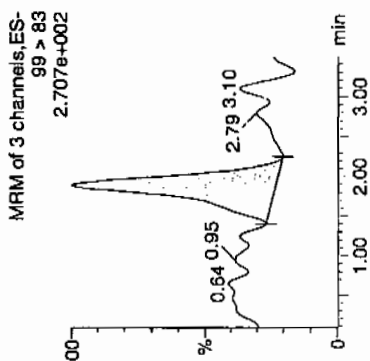
02-10-10

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
IPB004	Perchlorate	99 > 83	1.89	66.141	66.141	bb			0.0013			55.297	0.00
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-O(18)	107 > 89	1.88	20327.338	20327.338	bb			0.4944	98.88	-1.12	2266.4...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209026a

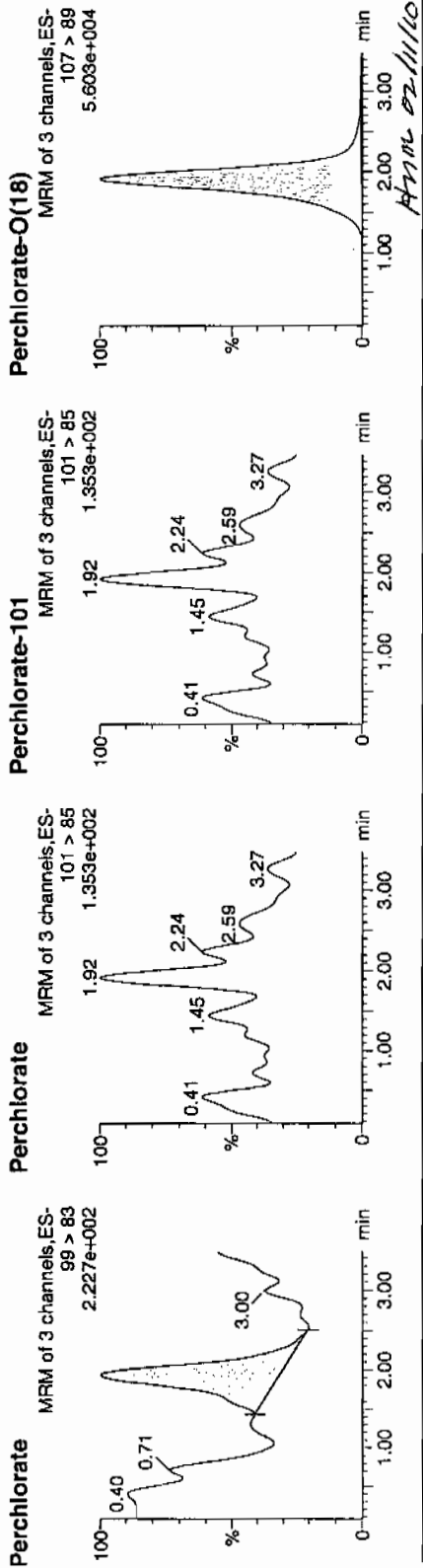
Date: 09-Feb-2010

Time: 15:16:11

ID: IPB005

Vial: 1:1,A

02-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
PB005	Perchlorate	99 > 83	1.93	57.697	57.697	bb			0.0012			35.475	0.00
PB005	Perchlorate-101	101 > 85											
PB005	Perchlorate-O(18)	107 > 89	1.91	19950.926	19950.926	bb			0.4853	97.05	-2.95	1958.1...	

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

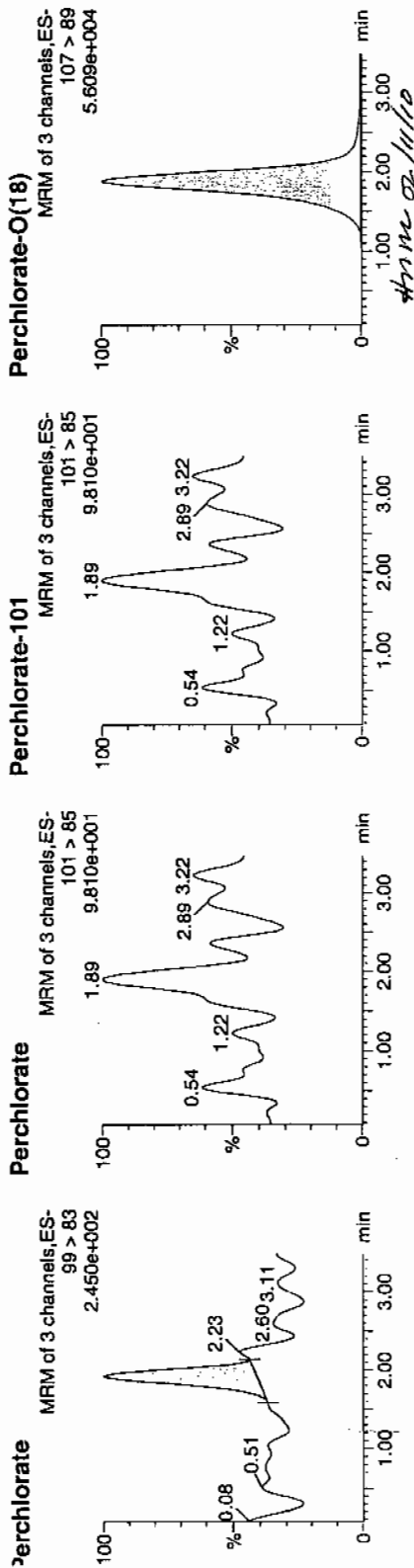
Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209034a
Date: 09-Feb-2010
Time: 16:08:32
D: IPB006
/lal: 1:1,A

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02-10-10



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
PB006	Perchlorate	99 > 83	1.92	31.827	31.827	bb			0.0006			11.537	0.00
PB006	Perchlorate-101	101 > 85											
PB006	Perchlorate-Q(18)	107 > 89	1.89	19229.414	19229.414	bb			0.4677	93.54	-6.46	3120.9...	

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

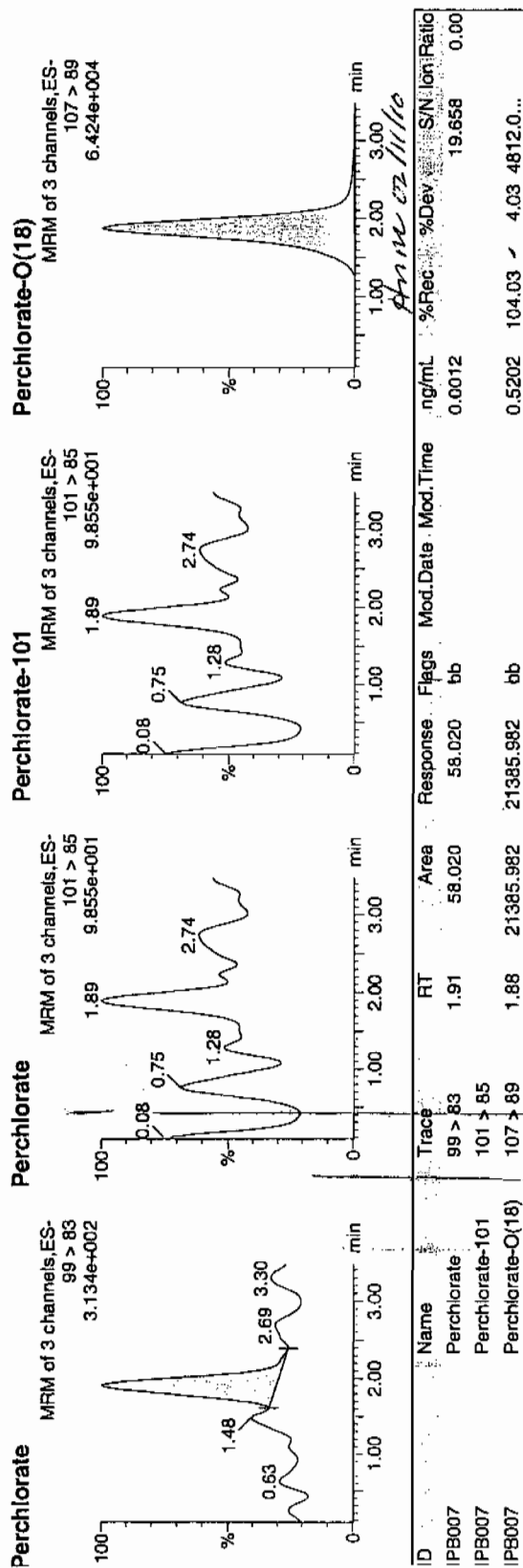
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209046a
Date: 09-Feb-2010
Time: 17:34:58
ID: IPB007
Vial: 1:1,A

02-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB007	Perchlorate	99 > 83	1.91	58.020	58.020	bb			0.0012			19.658	0.00
IPB007	Perchlorate-101	101 > 85											
IPB007	Perchlorate-O(18)	107 > 89	1.88	21385.982	21385.982	bb			0.5202	104.03	4.03	4812.0...	

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

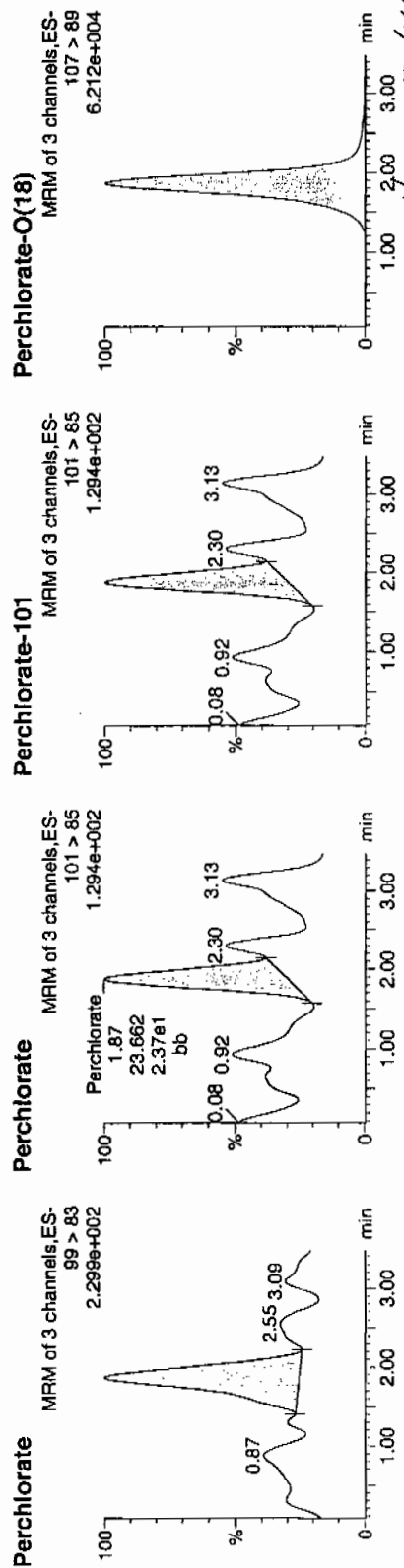
Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209055a
Date: 09-Feb-2010
Time: 18:36:54
ID: IPB008
Vial: 1:1,A

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02-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB008	Perchlorate	99 > 83	1.87	58.819	58.819	bb			0.0012			29.016	2.49
IPB008	Perchlorate-101	101 > 85	1.87	23.662	23.662	bb			0.0015			10.330	
IPB008	Perchlorate-O(18)	107 > 89	1.87	20546.270	20546.270	bb			0.4997	99.95	-0.05	2120.3...	

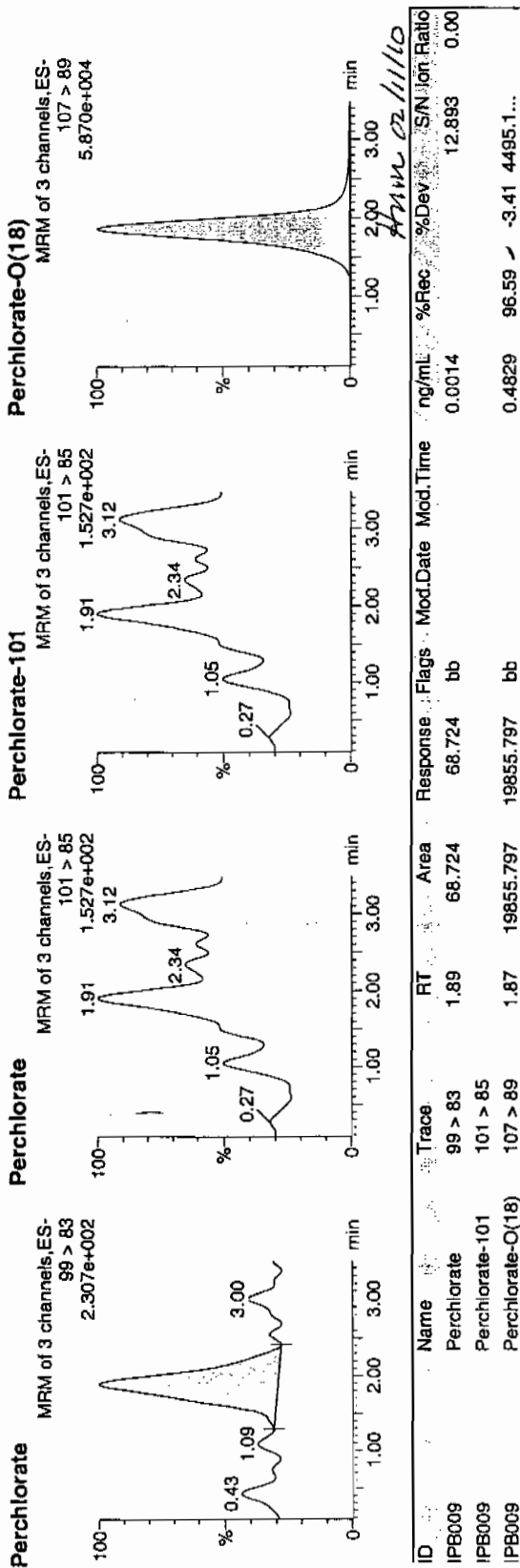
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charles W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209059a
Date: 09-Feb-2010
Time: 19:03:37
ID: IPB009
Vial: 1:1,A

02-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB009	Perchlorate	99 > 83	1.89	68.724	68.724	bb			0.0014			12.893	0.00
IPB009	Perchlorate-101	101 > 85											
IPB009	Perchlorate-O(18)	107 > 89	1.87	19855.797	19855.797	bb			0.4829	96.59	-3.41	4495.1...	

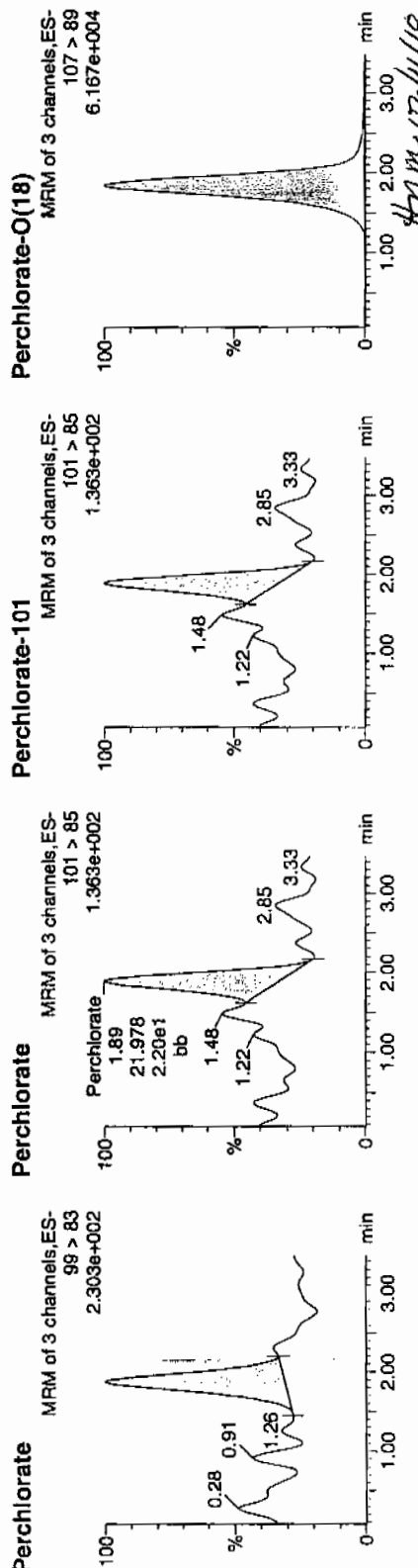
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209072a
Date: 09-Feb-2010
Time: 20:29:10
ID: IPB010
Vial: 1:1,A

02-10-10



D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
PB010	Perchlorate	99 > 83	1.87	44.041	44.041	bb			0.0009			19.567	2.00
PB010	Perchlorate-101	101 > 85	1.89	21.978	21.978	bb			0.0014			10.135	
PB010	Perchlorate-O(18)	107 > 89	1.84	20254.883	20254.883	bb			0.4927	98.53	-1.47	1038.6	

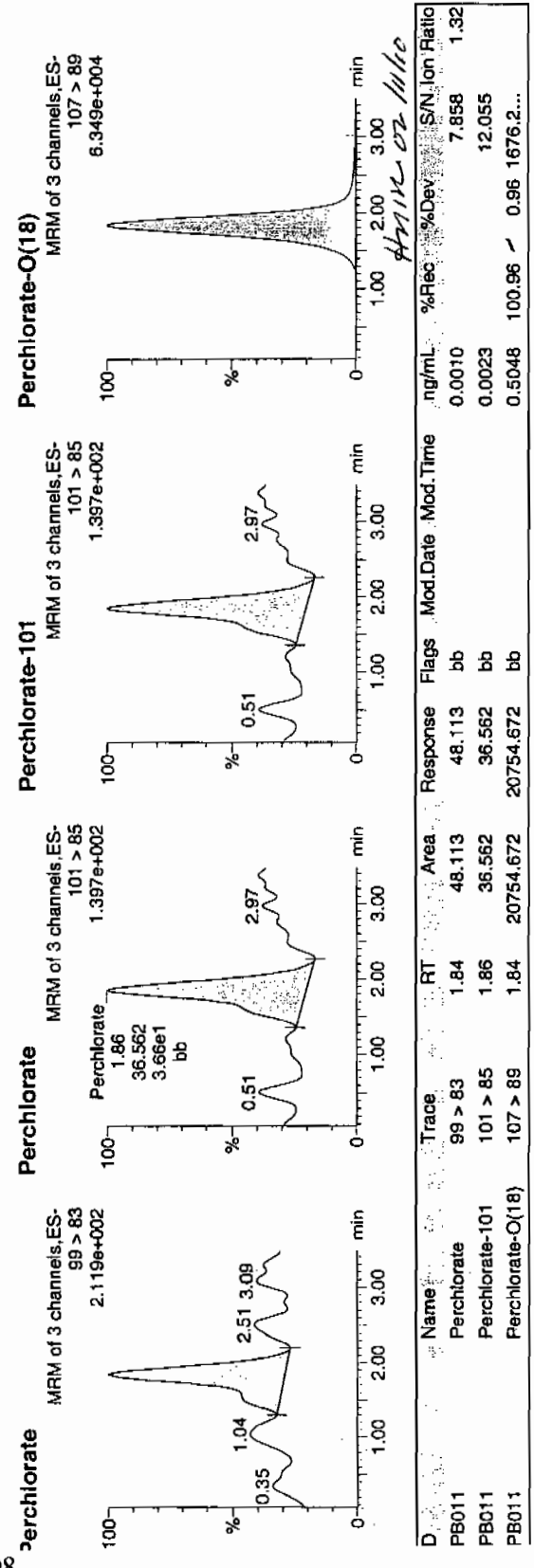
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209085a
Date: 09-Feb-2010
Time: 21:54:36
D: IPB011
Vial: 1:1,A

02-10-10



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

QUATRO ULTIMA: nairb_01_08_08.ca

Calibration Report - MS1 Static

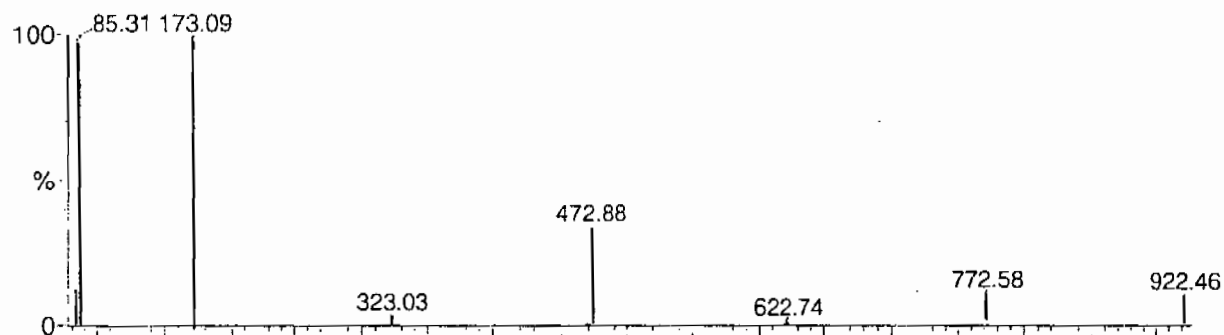
Page 1 of 1

Printed: Tue Jan 08 12:19:12 2008

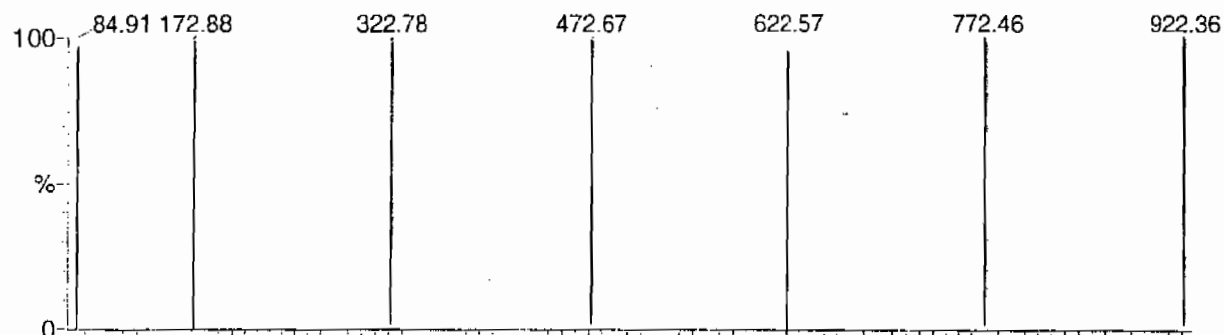
POINTS HIGHLIGHTED BY CURVED 01-07-08

Data file: STATMS1 - Uncalibrated

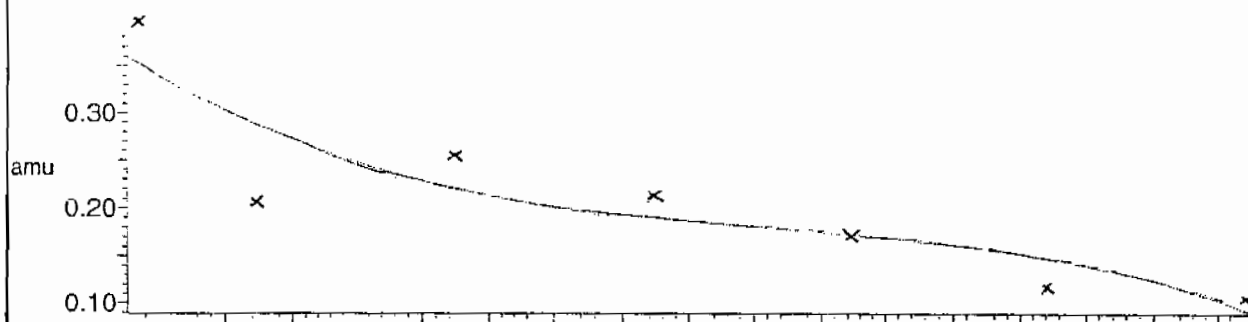
7 matches of 7 tested references



Reference file: Nairb

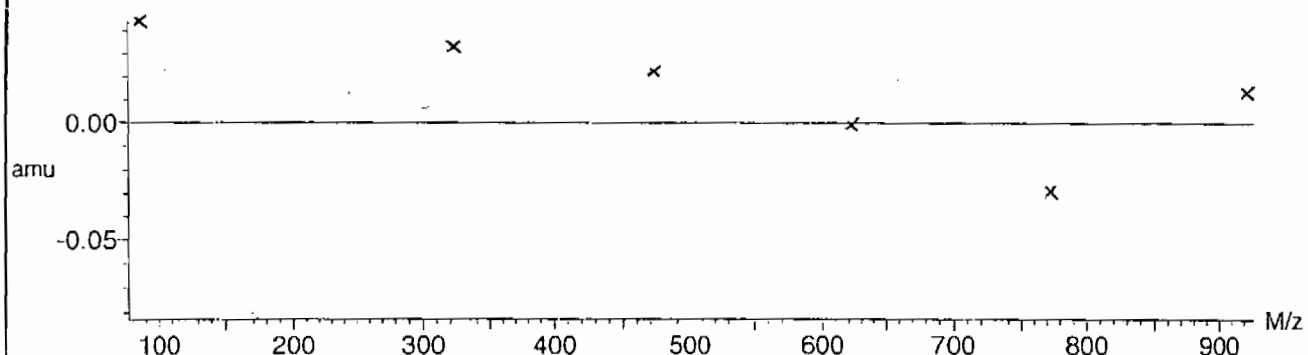


Mass difference (Raw - Ref mass)



Residuals

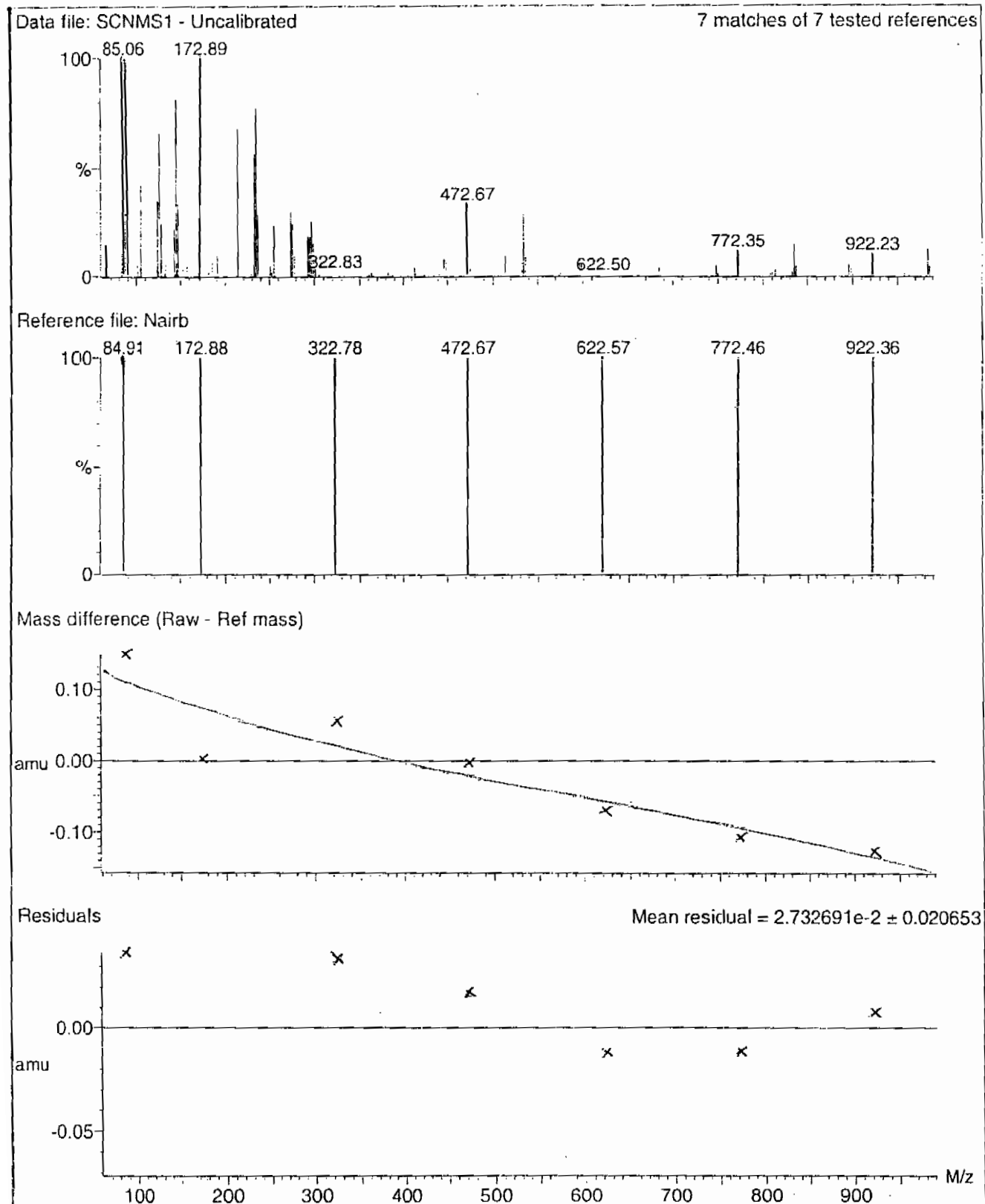
Mean residual = $3.212012 \times 10^{-2} \pm 0.024108$



Calibration Report - MS1 Scanning

Page 1 of 1

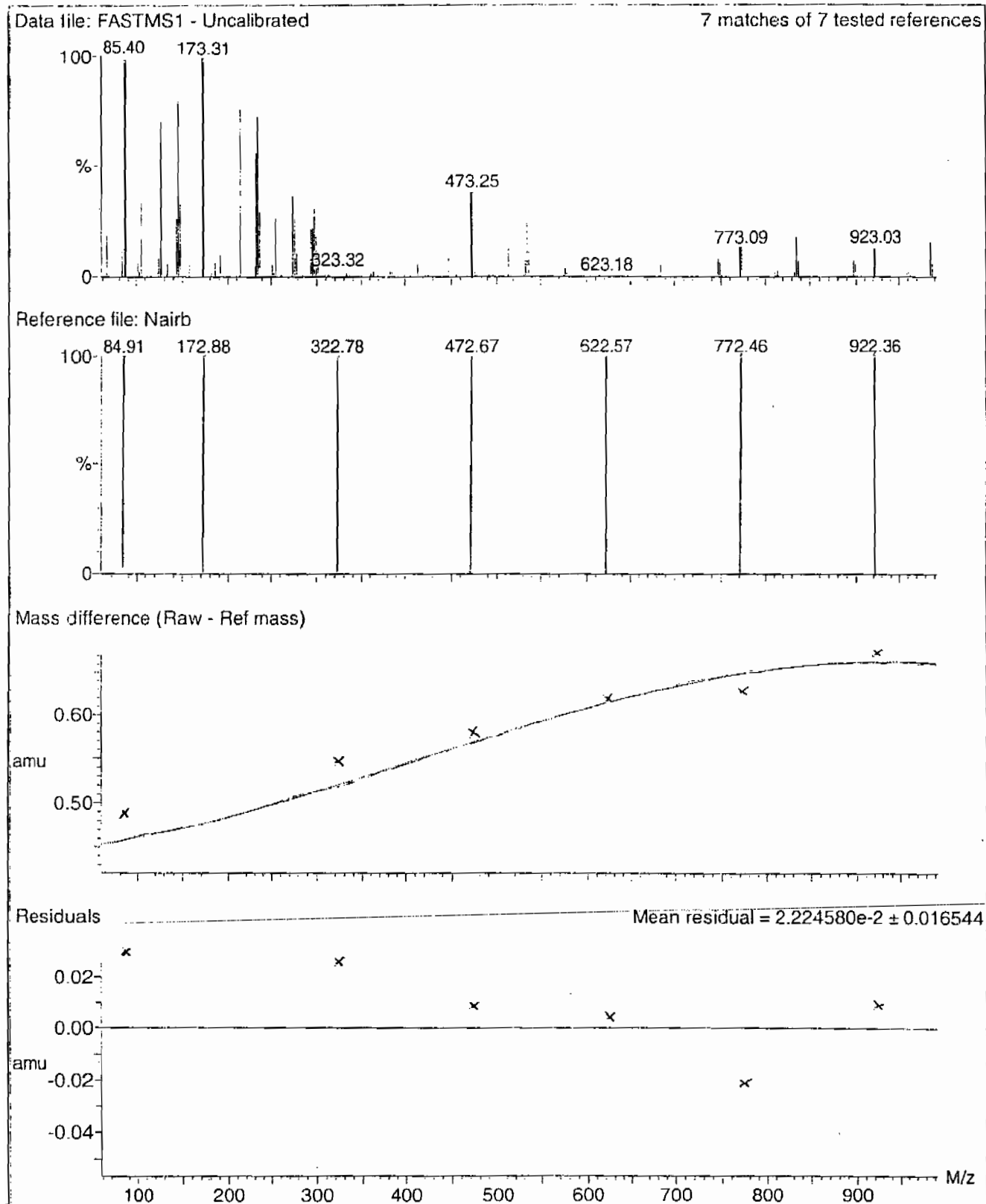
Printed: Tue Jan 08 12:20:09 2008



Calibration Report - MS1 Scan Speed Compensation

Page 1 of 1

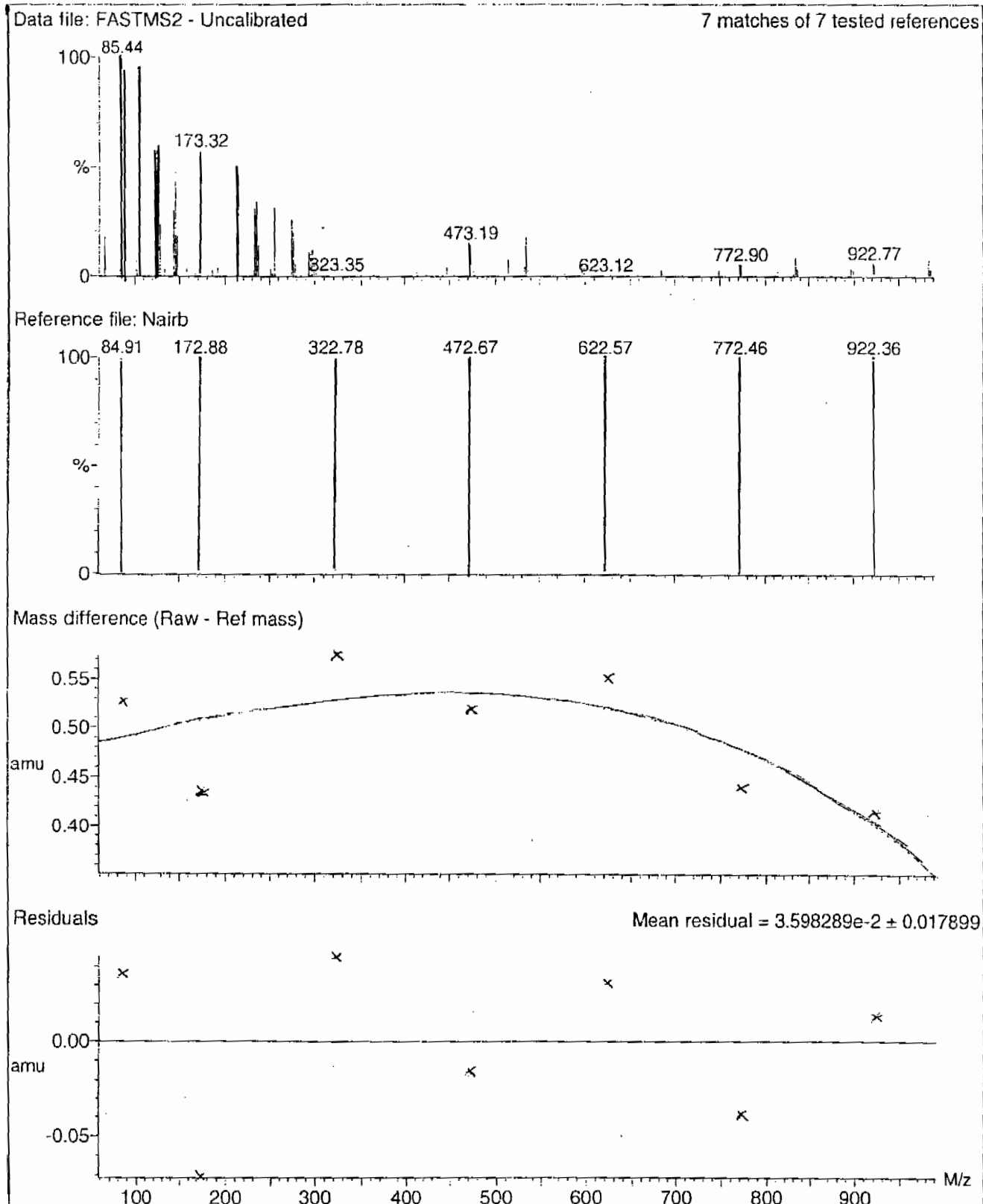
Printed: Tue Jan 08 12:21:04 2008



Calibration Report - MS2 Scan Speed Compensation

Page 1 of 1

Printed: Tue Jan 08 12:23:51 2008



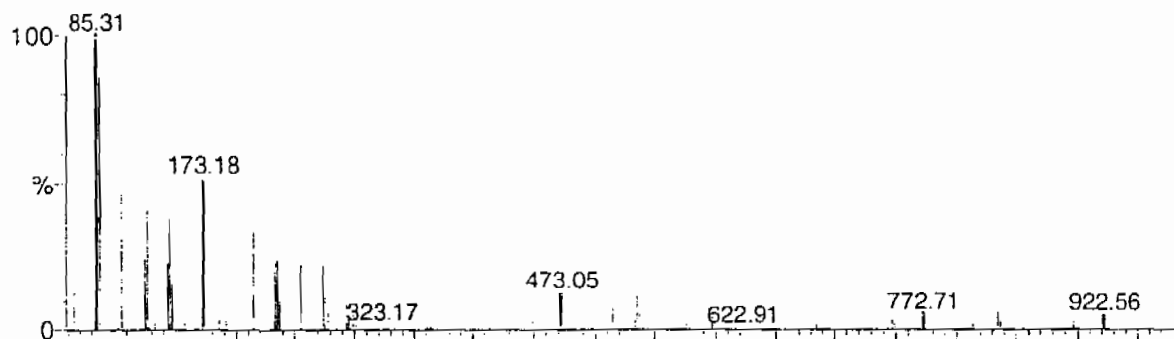
Calibration Report - MS2 Scanning

Page 1 of 1

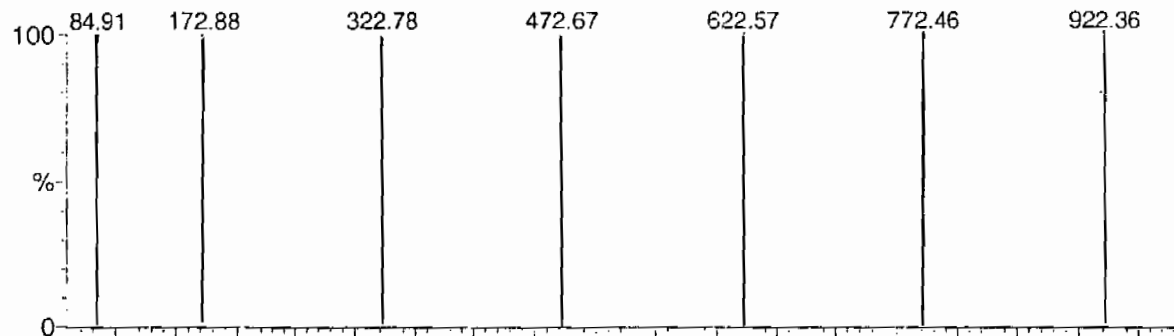
Printed: Tue Jan 08 12:22:56 2008

Data file: SCNMS2 - Uncalibrated

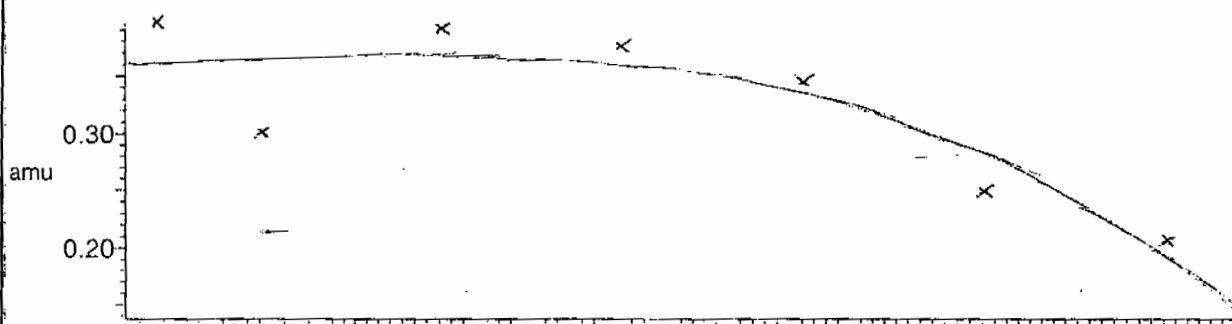
7 matches of 7 tested references



Reference file: Nairb

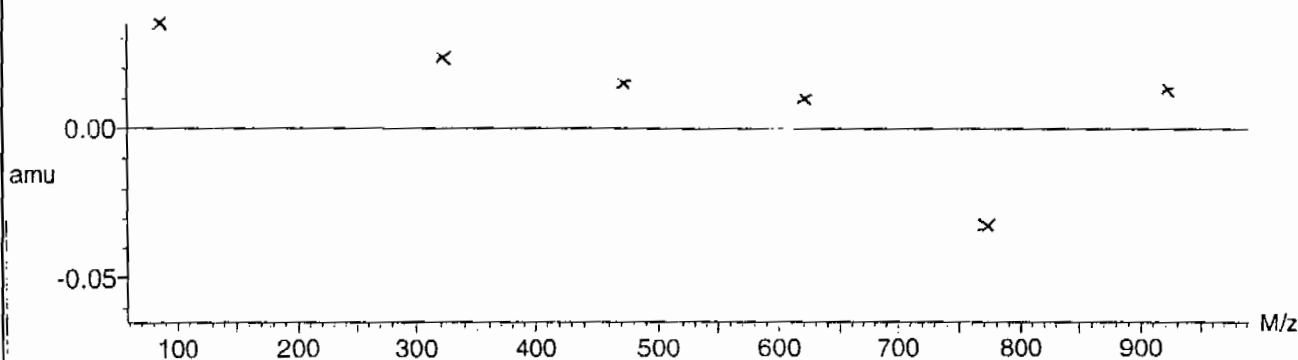


Mass difference (Raw - Ref mass)



Residuals

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



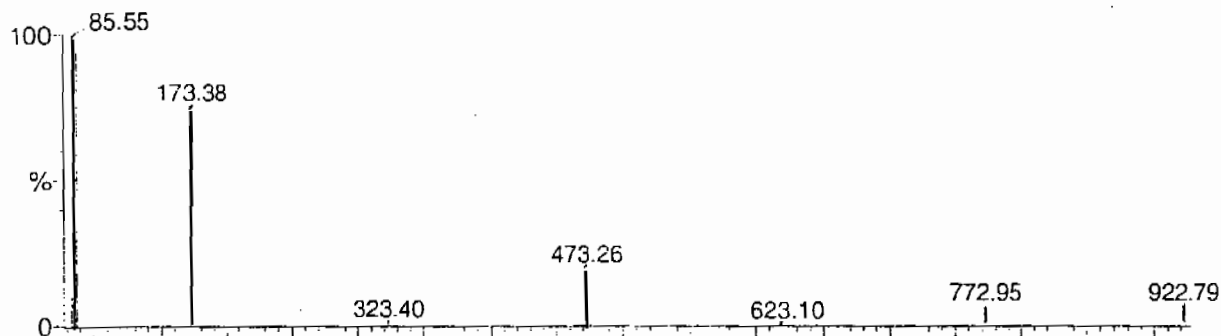
Calibration Report - MS2 Static

Page 1 of 1

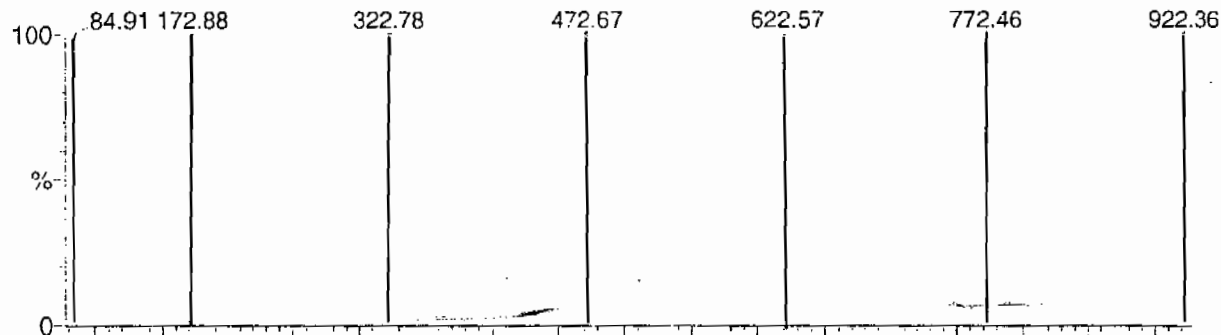
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Data file: STATMS2 - Uncalibrated

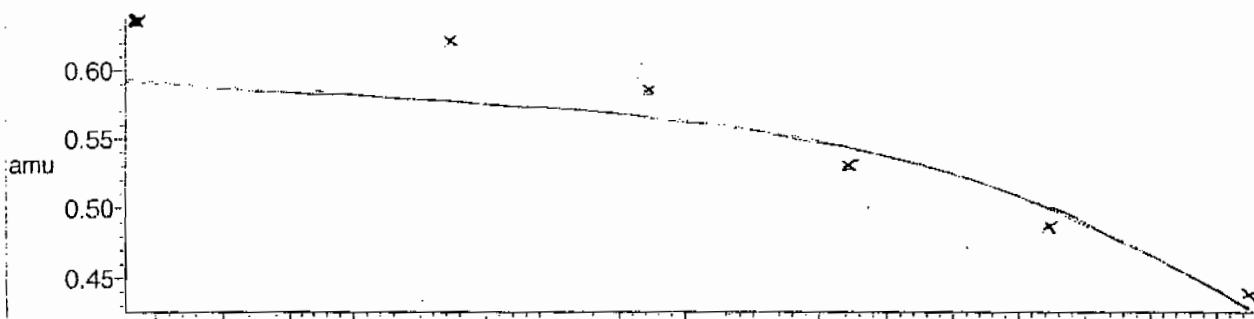
7 matches of 7 tested references



Reference file: Nairb

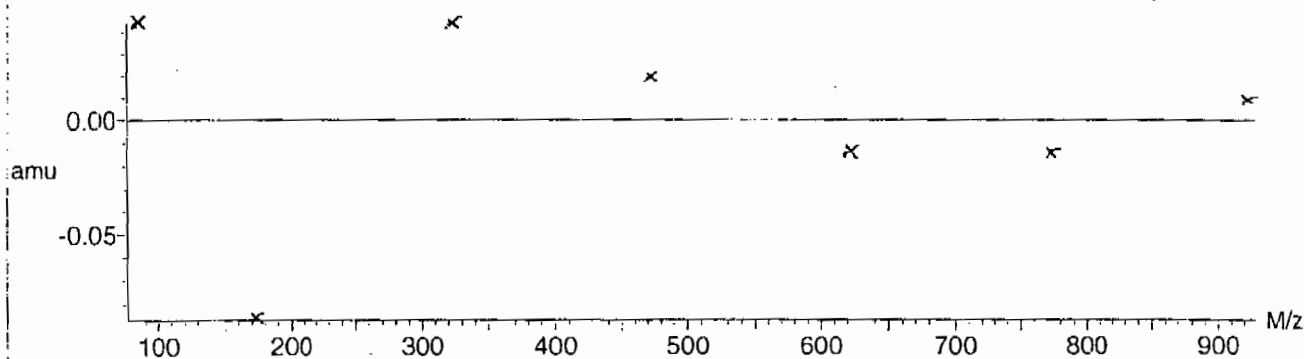


Mass difference (Raw - Ref mass)



Residuals

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



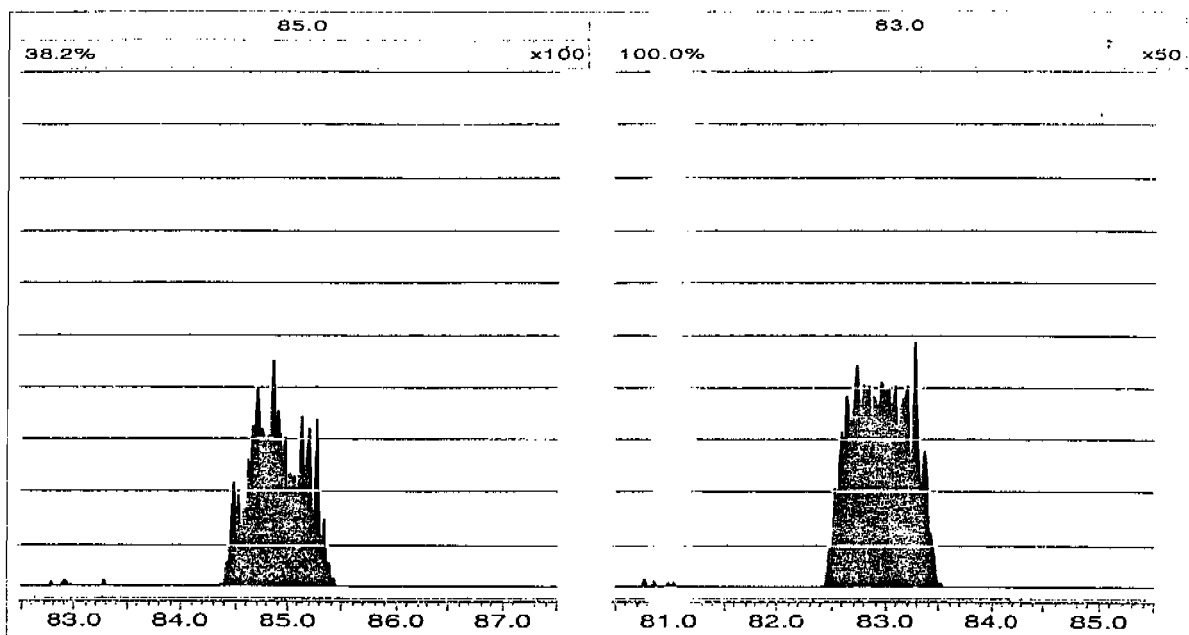
Tune Parameters

MassLynx 4.0 SP4

Page 1 of 1

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

Printed: Tuesday, February 09, 2010 11:13:33 Eastern Standard Time



Perchlorate RT And Area Summary

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

GEL Job No.(SDG): 10-1394

Lab Name: General Engineering Laboratories

Lab Code: GEL

Instrument ID: LCMSMS

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

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98-1.02
MidLevel Standard Area	per0209006a	09-FEB-10	20537.5				
Lower Area Limit			10268.75				
Upper Area Limit			41075				
1202024410	per0209061a	09-FEB-10 19:16	19710.7	1.87	1.86795	.999	
1202024411	per0209062a	09-FEB-10 19:23	21717.6	1.86	1.86793	1.004	
1202024414	per0209063a	09-FEB-10 19:30	21710.9	1.92	1.93003	1.005	
245396001	per0209080a	09-FEB-10 21:21	21167.2	1.84	1.84302	1.002	
245396002	per0209081a	09-FEB-10 21:28	22716.4	1.84	1.85548	1.008	
245396003	per0209082a	09-FEB-10 21:34	23585.7	1.83	1.84302	1.007	
245396004	per0209083a	09-FEB-10 21:41	21451.2	1.83	1.83068	1	

SAMPLE DATA

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC
 Lab Code: GEL
 Instrument: LCMSMS
 Method: SW846 6850 Modified
 Matrix: SOIL
 Extraction Batch ID: 245234
 Extraction Type: Solid Prep
 Sample Volume/Weight: 2.00 g
 Concentrated Extract Volume: 20.0
 Client Sample No. RE15-10-7928
 Date Received: 23-JAN-10
 GEL Job No (SDG): 10-1394
 GEL Sample ID: 245396001
 Date Filtered: 05-FEB-10
 Injection Volume (uL): 20
 %Solids: 96.4

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.519	2.07	0.519	ug/kg	U	1	09-FEB-10 21:21	per0209080a
	Perchlorate Isotope Ratio						1	09-FEB-10 21:21	per0209080a
14797-73-0	Perchlorate-101	.519	2.07	0.519	ug/kg	U	1	09-FEB-10 21:21	per0209080a
	Perchlorate-O(18)			5.34	ug/kg		1	09-FEB-10 21:21	per0209080a

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

*Concentration =

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

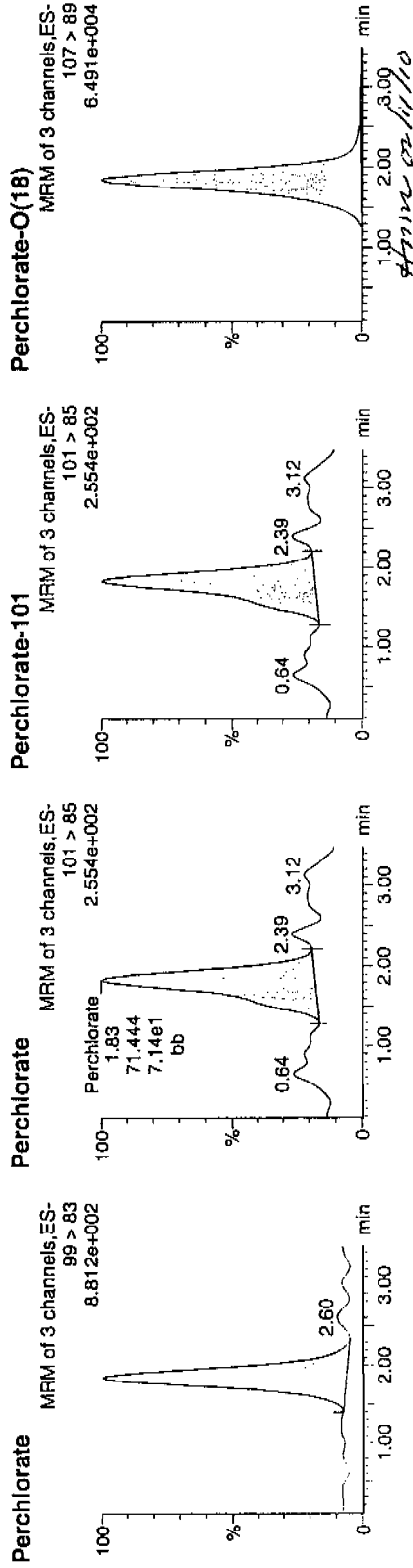
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charters W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209080a
Date: 09-Feb-2010
Time: 21:21:39
ID: 245396001
Vial: 2:4,E

663
02-10-10
1945236 | 5020 | 1 |



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245396001	Perchlorate	99 > 83	1.84	245.754	245.754	bb			0.0049			31.810	3.44
245396001	Perchlorate-101	101 > 85	1.83	71.444	71.444	bb			0.0044			27.542	
245396001	Perchlorate-O(18)	107 > 89	1.84	21167.150	21167.150	bb			0.5148	102.97	2.97	5679.0...	

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC
 Lab Code: GEL
 Instrument: LCMSMS
 Method: SW846 6850 Modified
 Matrix: SOIL
 Extraction Batch ID: 245234
 Extraction Type: Solid Prep
 Sample Volume/Weight: 2.00 g
 Concentrated Extract Volume: 20.0
 Client Sample No. RE15-10-7929
 Date Received: 23-JAN-10
 GEL Job No (SDG): 10-1394
 GEL Sample ID: 245396002
 Date Filtered: 05-FEB-10
 Injection Volume (uL): 20
 %Solids: 73

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.689	2.76	0.689	ug/kg	U	1	09-FEB-10 21:28	per0209081a
	Perchlorate Isotope Ratio						1	09-FEB-10 21:28	per0209081a
14797-73-0	Perchlorate-101	.689	2.76	0.689	ug/kg	U	1	09-FEB-10 21:28	per0209081a
	Perchlorate-O(18)			7.62	ug/kg		1	09-FEB-10 21:28	per0209081a

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

*Concentration =

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

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

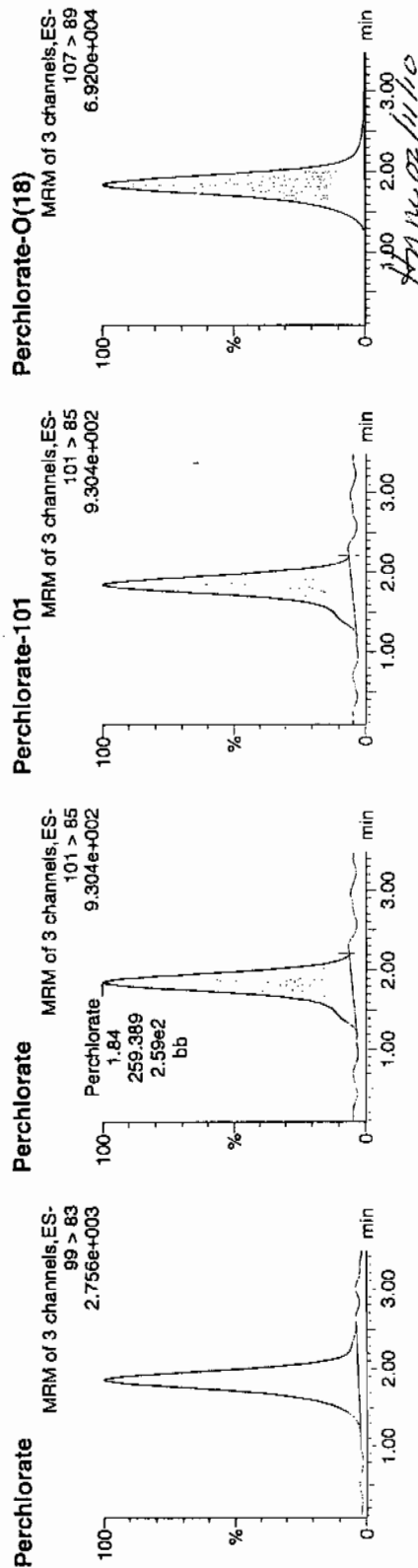
Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209081a
Date: 09-Feb-2010
Time: 21:28:10
ID: 245396002
Vial: 2:4,F

1945236 | 5000 | 11

02-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245396002	Perchlorate	99 > 83	1.86	858.804	858.804	bb			0.0173			407.972	3.31
245396002	Perchlorate-101	101 > 85	1.84	259.389	259.389	bb			0.0161			187.550	
245396002	Perchlorate-O(18)	107 > 89	1.84	22716.381	22716.381	bb			0.5525	110.50	10.50	1819.0...	

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC
 Lab Code: GEL
 Instrument: LCMSMS
 Method: SW846 6850 Modified
 Matrix: SOIL
 Extraction Batch ID: 945234
 Extraction Type: Solid Prep
 Sample Volume/Weight: 2.00 g
 Concentrated Extract Volume: 20.0
 Client Sample No. RE15-10-7927
 Date Received: 23-JAN-10
 GEL Job No (SDG): 10-1394
 GEL Sample ID: 245396003
 Date Filtered: 05-FEB-10
 Injection Volume (uL): 20
 %Solids: 76

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.662	2.65	0.662	ug/kg	U	1	09-FEB-10 21:34	per0209082a
	Perchlorate Isotope Ratio						1	09-FEB-10 21:34	per0209082a
14797-73-0	Perchlorate-101	.662	2.65	0.662	ug/kg	U	1	09-FEB-10 21:34	per0209082a
	Perchlorate-O(18)			7.59	ug/kg		1	09-FEB-10 21:34	per0209082a

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

*Concentration =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209082a

Date: 09-Feb-2010

Time: 21:34:42

ID: 245396003

Vial: 2:5,A

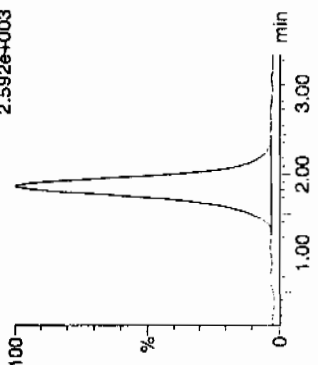
600
02-10-10

LAWS | 94236 | 50025 | 11

Perchlorate

MRM of 3 channels, ES-

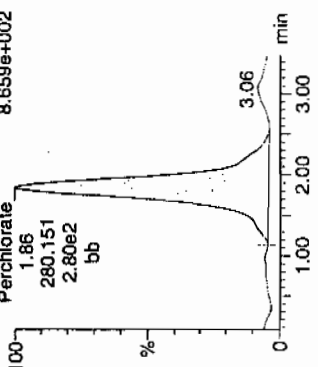
99 > 83
2.592e+003



Perchlorate

MRM of 3 channels, ES-

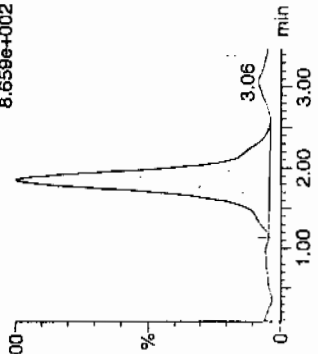
101 > 85
8.659e+002



Perchlorate-101

MRM of 3 channels, ES-

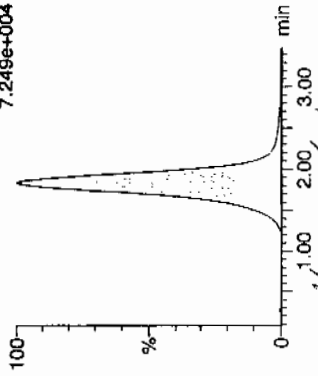
101 > 85
8.659e+002



Perchlorate-O(18)

MRM of 3 channels, ES-

107 > 89
7.249e+004



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245396003	Perchlorate	99 > 83	1.84	800.246	800.246	bb			0.0161	✓		205.117	2.86
245396003	Perchlorate-101	101 > 85	1.86	280.151	280.151	bb			0.0174			242.599	
245396003	Perchlorate-O(18)	107 > 89	1.83	23585.658	23585.658	bb			0.5737	114.73	✓	14.73	9547.4...

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: 945234
 Extraction Type: Solid Prep
 Sample Volume/Weight: 2.00 g
 Concentrated Extract Volume: 20.0
 Client Sample No. RE15-10-7930
 Date Received: 23-JAN-10
 GEL Job No (SDG): 10-1394
 GEL Sample ID: 245396004
 Date Filtered: 05-FEB-10
 Injection Volume (uL): 20
 %Solids: 89

CAS No.	Analyte [^]	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.565	2.26	0.565	ug/kg	U	1	09-FEB-10 21:41	per0209083a
	Perchlorate Isotope Ratio						1	09-FEB-10 21:41	per0209083a
14797-73-0	Perchlorate-101	.565	2.26	0.565	ug/kg	U	1	09-FEB-10 21:41	per0209083a
	Perchlorate-O(18)			5.89	ug/kg		1	09-FEB-10 21:41	per0209083a

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

*Concentration =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209083a

Date: 09-Feb-2010

Time: 21:41:16

ID: 245396004

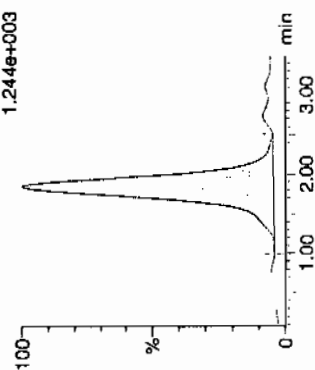
Vial: 2:5,B

622
02-10-10

1.94536 | 5020 | 11

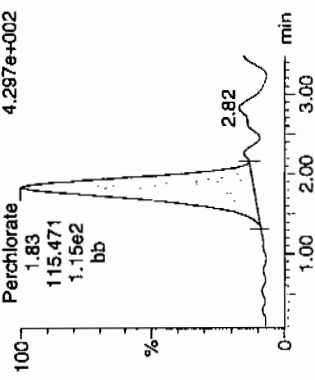
Perchlorate

MRM of 3 channels, ES-
99 > 83
1.244e+003



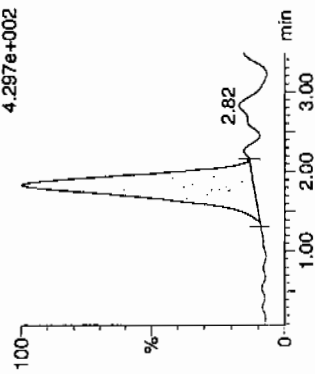
Perchlorate

MRM of 3 channels, ES-
101 > 85
4.287e+002



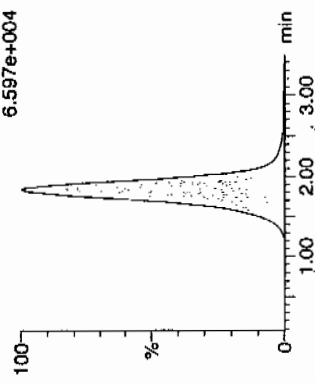
Perchlorate-101

MRM of 3 channels, ES-
101 > 85
4.287e+002



Perchlorate-O(18)

MRM of 3 channels, ES-
107 > 89
6.597e+004



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
245396004	Perchlorate	99 > 83	1.83	394.170	394.170	bb			0.0079			62.649	3.41
245396004	Perchlorate-101	101 > 85	1.83	115.471	115.471	bb			0.0072			16.497	
245396004	Perchlorate-O(18)	107 > 89	1.83	21451.172	21451.172	bb			0.5218	104.35	4.35	1829.5...	

STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories GEL Job No.(SDG): 10-1394

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 09-FEB-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: 49719.52

Response Type: External Standard

Curve Type: RF

Perchlorate Initial Calibration

GEL Job No.(SDG): 10-1394

Lab Name: General Engineering Laboratories

Lab Code: GEL

Instrument ID: LCMSMS Date Analyzed: 09-FEB-10

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

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

Paramname Perchlorate-101

Coefficient of Determination:

Calibration Curve: 16119.76

Response Type: External Standard

Curve Type: RF

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qtd

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per020910a.mdb 10 Feb 2010 11:45:47
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per020910a.cdb 10 Feb 2010 11:47:15

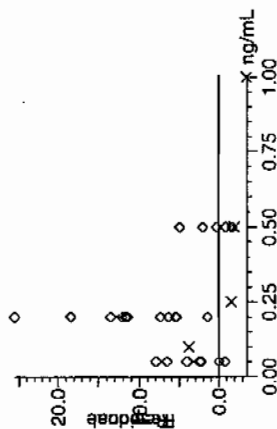
Compound name: Perchlorate

Response Factor: 49719.5

RRF SD: 1652.68, % Relative SD: 3.324

Response type: External Std, Area

Curve type: RF



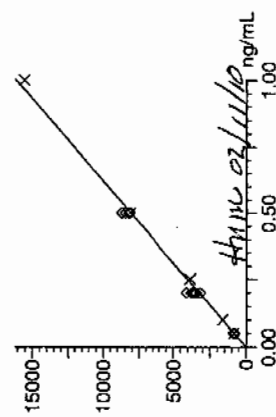
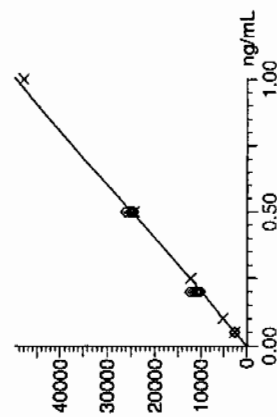
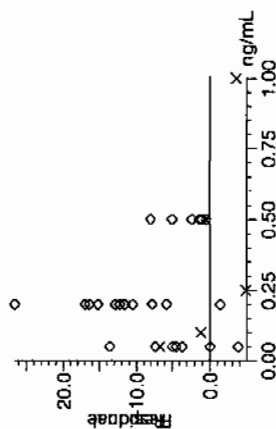
Compound name: Perchlorate-101

Response Factor: 16119.7

RRF SD: 729.686, % Relative SD: 4.52667

Response type: External Std, Area

Curve type: RF



Quantify Calibration Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time

Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

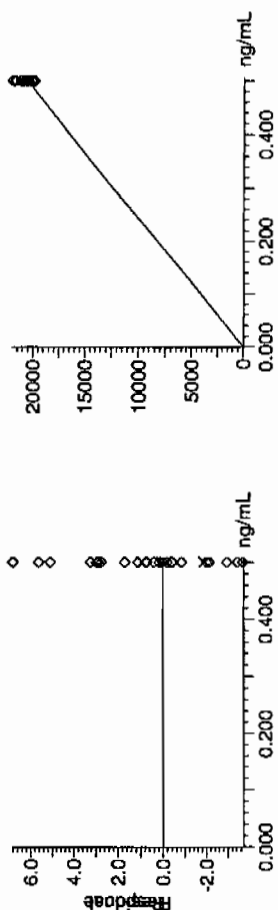
Compound name: Perchlorate-O(18)

Response Factor: 41113.8

RRF SD: 474.905, % Relative SD: 1.1551

Response type: External Std, Area

Curve type: RF



Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1394

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.53	105.03	09-FEB-10 13:25	per0209009a
Perchlorate Isotope Ratio		3.09		09-FEB-10 13:25	per0209009a
Perchlorate-101	.5	.52	104.99	09-FEB-10 13:25	per0209009a

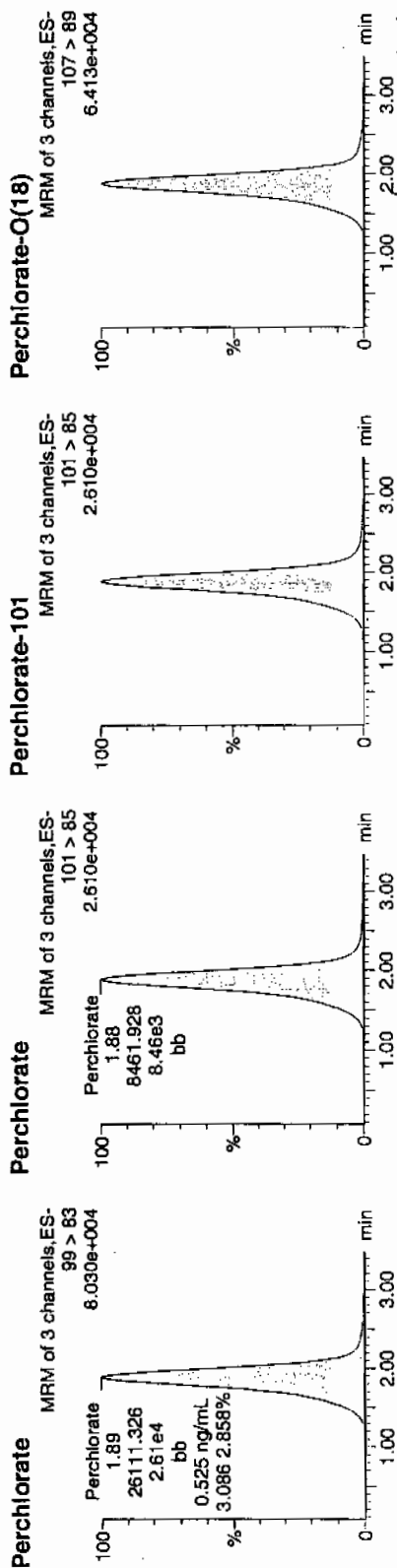
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qid

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209009a
Date: 09-Feb-2010
Time: 13:25:00
ID: WCL100128-06ICV
Vial: 1:2,A

Pure
CWS
02-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-06ICV	Perchlorate	99 > 83	1.89	26111.326	26111.326	bb			0.5252	105.03	5.03	897.151	3.09
WCL100128-06ICV	Perchlorate-101	101 > 85	1.88	8461.928	8461.928	bb			0.5249	104.99	4.99	912.402	
WCL100128-06ICV	Perchlorate-O(18)	107 > 89	1.87	20709.299	20709.299	bb			0.5037	100.74	0.74	764.944	

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1394

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.5	99.1	09-FEB-10 14:43	per0209021a
Perchlorate Isotope Ratio		3.02		09-FEB-10 14:43	per0209021a
Perchlorate-101	.5	.51	101.26	09-FEB-10 14:43	per0209021a
Perchlorate	.5	.49	98.27	09-FEB-10 16:01	per0209033a
Perchlorate Isotope Ratio		3		09-FEB-10 16:01	per0209033a
Perchlorate-101	.5	.5	100.96	09-FEB-10 16:01	per0209033a
Perchlorate	.5	.51	102.06	09-FEB-10 17:27	per0209045a
Perchlorate Isotope Ratio		3.08		09-FEB-10 17:27	per0209045a
Perchlorate-101	.5	.51	102.35	09-FEB-10 17:27	per0209045a
Perchlorate	.5	.51	102.11	09-FEB-10 18:56	per0209058a
Perchlorate Isotope Ratio		3.11		09-FEB-10 18:56	per0209058a
Perchlorate-101	.5	.51	101.41	09-FEB-10 18:56	per0209058a
Perchlorate	.5	.5	100.23	09-FEB-10 20:22	per0209071a

Lab Name: General Engineering Laboratories

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate Isotope Ratio		3.08		09-FEB-10 20:22	per0209071a
Perchlorate-101	.5	.5	100.46	09-FEB-10 20:22	per0209071a
Perchlorate	.5	.52	104.89	09-FEB-10 21:47	per0209084a
Perchlorate Isotope Ratio		2.99		09-FEB-10 21:47	per0209084a
Perchlorate-101	.5	.54	108.05	09-FEB-10 21:47	per0209084a

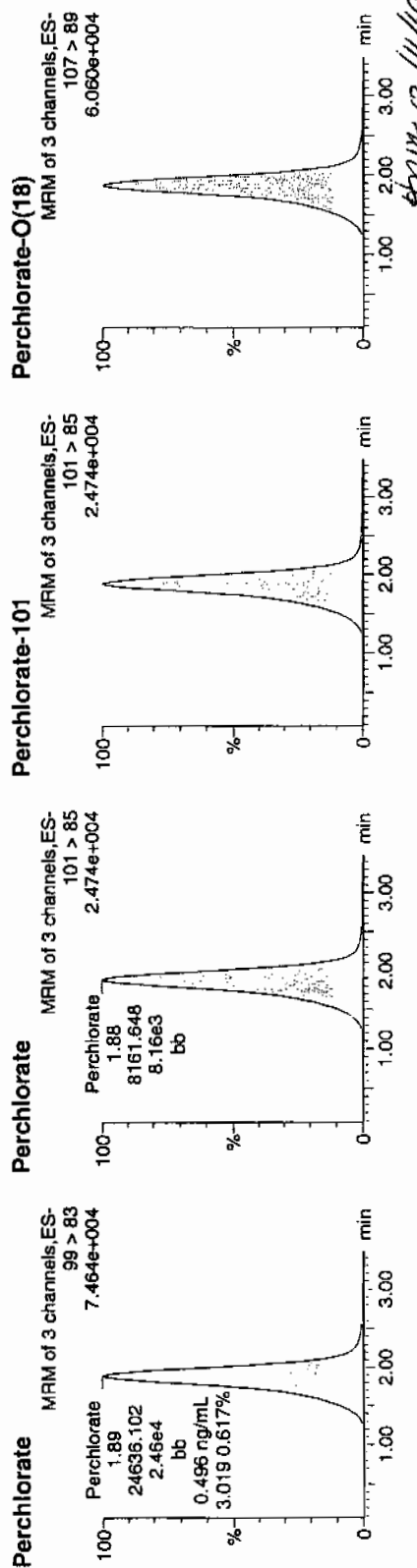
Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209021a
Date: 09-Feb-2010
Time: 14:43:30
ID: WCL100128-06CCV
Vial: 1:2,A

Per
02-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-06CCV	Perchlorate	99 > 83	1.89	24636.102	24636.102	bb			0.4955	99.10	-0.90	3259.5...	3.02
WCL100128-06CCV	Perchlorate-101	101 > 85	1.88	8161.648	8161.648	bb			0.5063	101.26	1.26	4524.4...	
WCL100128-06CCV	Perchlorate-O(18)	107 > 89	1.88	19801.271	19801.271	bb			0.4816	96.32	-3.68	3313.1...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209033a

Date: 09-Feb-2010

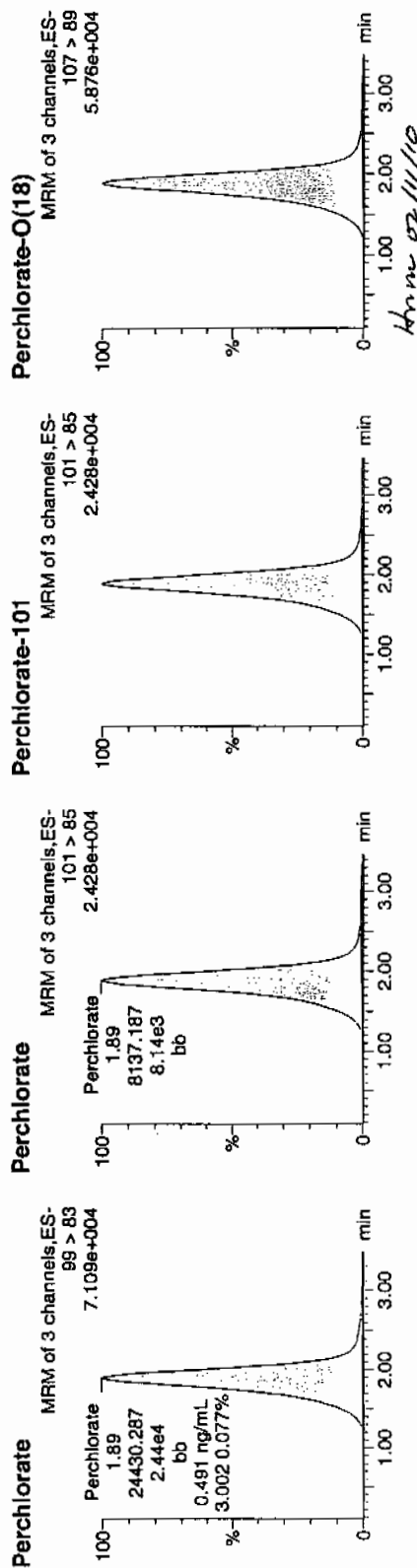
Time: 16:01:59

ID: WCL100128-06CCV

Vial: 1:2,A

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Per
02-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-06CCV	Perchlorate	99 > 83	1.89	24430.287	24430.287	bb			0.4914	98.27	-1.73	2691.6...	3.00
WCL100128-06CCV	Perchlorate-101	101 > 85	1.89	8137.187	8137.187	bb			0.5048	100.96	0.96	1283.8...	
WCL100128-06CCV	Perchlorate-O(18)	107 > 89	1.88	19851.232	19851.232	bb			0.4828	96.57	-3.43	814.183	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209045a

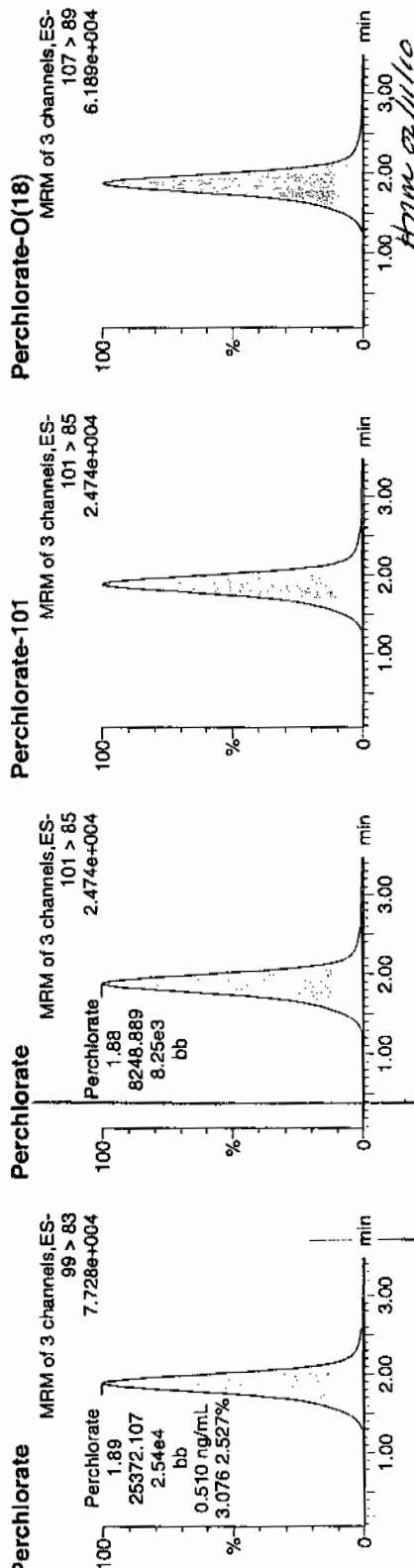
Date: 09-Feb-2010

Time: 17:27:41

ID: WCL100128-06CCV

Vial: 1:2,A

Per
GW
02-10-10



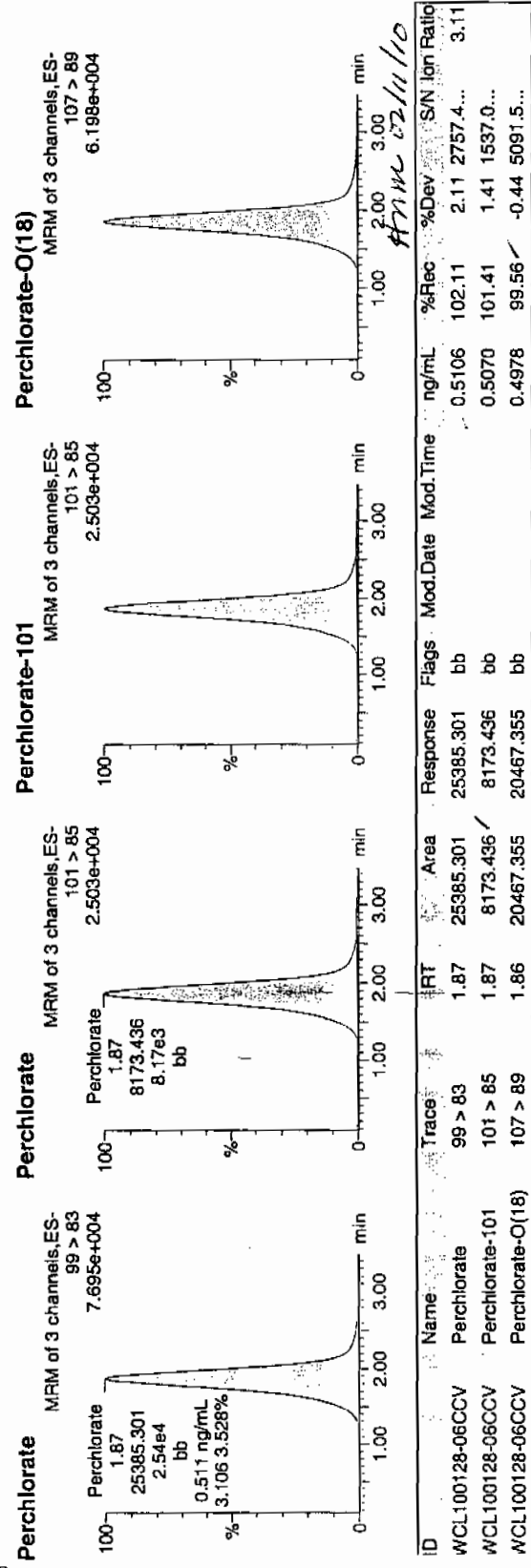
ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-06CCV	Perchlorate	99 > 83	1.88	25372.107	25372.107	bb			0.5103	102.06	2.06	10187...	3.08
WCL100128-06CCV	Perchlorate-101	101 > 85	1.88	8248.889	8248.889	bb			0.5117	102.35	2.35	918.186	
WCL100128-06CCV	Perchlorate-O(18)	107 > 89	1.88	20718.590	20718.590	bb			0.5039	100.79	0.79	2229.1...	

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209058a
Date: 09-Feb-2010
Time: 18:56:51
ID: WCL100128-06CCV
Vial: 1:2,A

Pure
0.000
20-10-10



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

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209071a

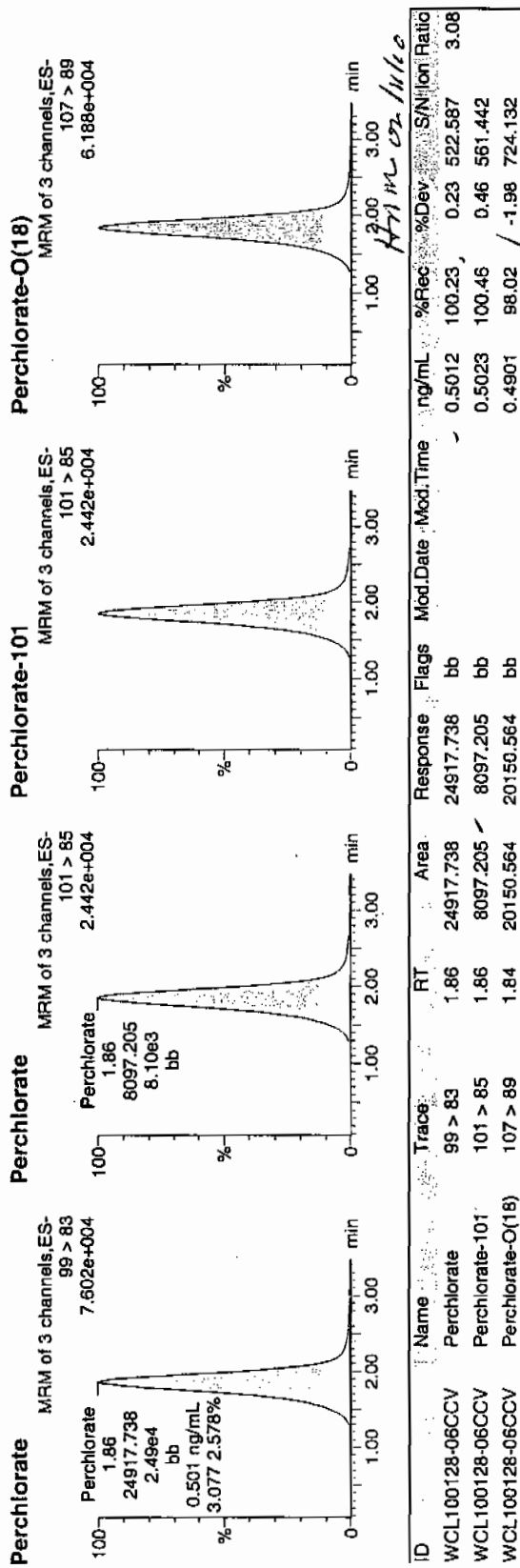
Date: 09-Feb-2010

Time: 20:22:23

ID: WCL100128-06CCV

Vial: 1:2,A

Per
and
02-10-10



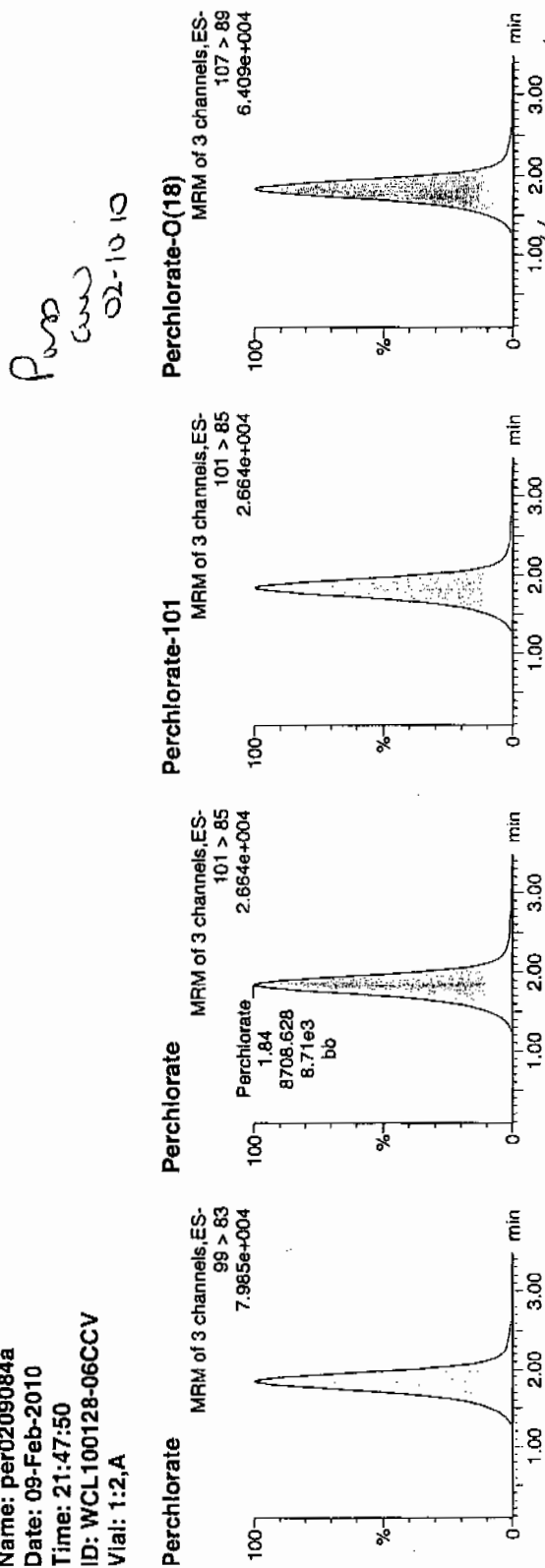
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209084a
Date: 09-Feb-2010
Time: 21:47:50
ID: WCL100128-06CCV
Vial: 1:2,A

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ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
WCL100128-06CCV	Perchlorate	99 > 83	1.84	26074.250	26074.250	bb			0.5244	104.89	4.89	5389.9...	2.99
WCL100128-06CCV	Perchlorate-101	101 > 85	1.84	8708.628	8708.628	bb			0.5402	108.05	8.05	148.125	
WCL100128-06CCV	Perchlorate-O(18)	107 > 89	1.83	20905.199	20905.199	bb			0.5085	101.69	1.69	1069.5...	

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1394

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	104.14	09-FEB-10 13:38	per0209011a
Perchlorate Isotope Ratio		2.83		09-FEB-10 13:38	per0209011a
Perchlorate-101	.05	.06	113.58	09-FEB-10 13:38	per0209011a
Perchlorate	.05	.05	99.99	09-FEB-10 14:56	per0209023a
Perchlorate Isotope Ratio		2.87		09-FEB-10 14:56	per0209023a
Perchlorate-101	.05	.05	107.4	09-FEB-10 14:56	per0209023a
Perchlorate	.05	.05	102.52	09-FEB-10 16:15	per0209035a
Perchlorate Isotope Ratio		3.29		09-FEB-10 16:15	per0209035a
Perchlorate-101	.05	.05	96.23	09-FEB-10 16:15	per0209035a
Perchlorate	.05	.05	102.28	09-FEB-10 17:41	per0209047a
Perchlorate Isotope Ratio		3.16		09-FEB-10 17:41	per0209047a

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1394

Lab Code: GEL

Reporting Units: ug/kg

Perchlorate-101	.05	.05	99.97	09-FEB-10 17:41	per0209047a
Perchlorate	.05	.05	106.65	09-FEB-10 19:10	per0209060a
Perchlorate Isotope Ratio		3.17		09-FEB-10 19:10	per0209060a
Perchlorate-101	.05	.05	103.64	09-FEB-10 19:10	per0209060a
Perchlorate	.05	.05	99.23	09-FEB-10 20:35	per0209073a
Perchlorate Isotope Ratio		2.93		09-FEB-10 20:35	per0209073a
Perchlorate-101	.05	.05	104.44	09-FEB-10 20:35	per0209073a
Perchlorate	.05	.05	107.98	09-FEB-10 22:01	per0209086a
Perchlorate Isotope Ratio		3.17		09-FEB-10 22:01	per0209086a
Perchlorate-101	.05	.05	104.91	09-FEB-10 22:01	per0209086a

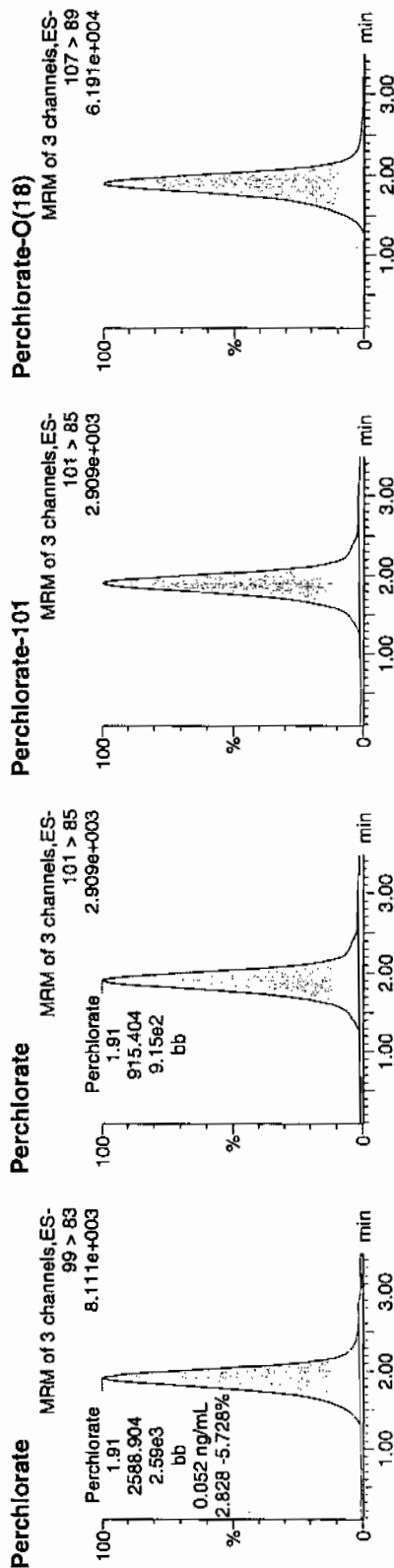
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209011a
Date: 09-Feb-2010
Time: 13:38:05
ID: WCL100128-07CRI
Vial: 1:2,B

Pure
02-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	SN	Ion Ratio
WCL100128-07CRI	Perchlorate	99 > 83	1.91	2588.904	2588.904	bb			0.0521	104.14	4.14	174.258	2.83
WCL100128-07CRI	Perchlorate-101	101 > 85	1.91	915.404	915.404	bb			0.0568	113.58	13.58	940.309	
WCL100128-07CRI	Perchlorate-O(18)	107 > 89	1.99	20588.137	20588.137	bb			0.5008	100.15	0.15	3127.8...	

Quantify Sample Report MassLynx 4.0 SP4

The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
 Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209023a

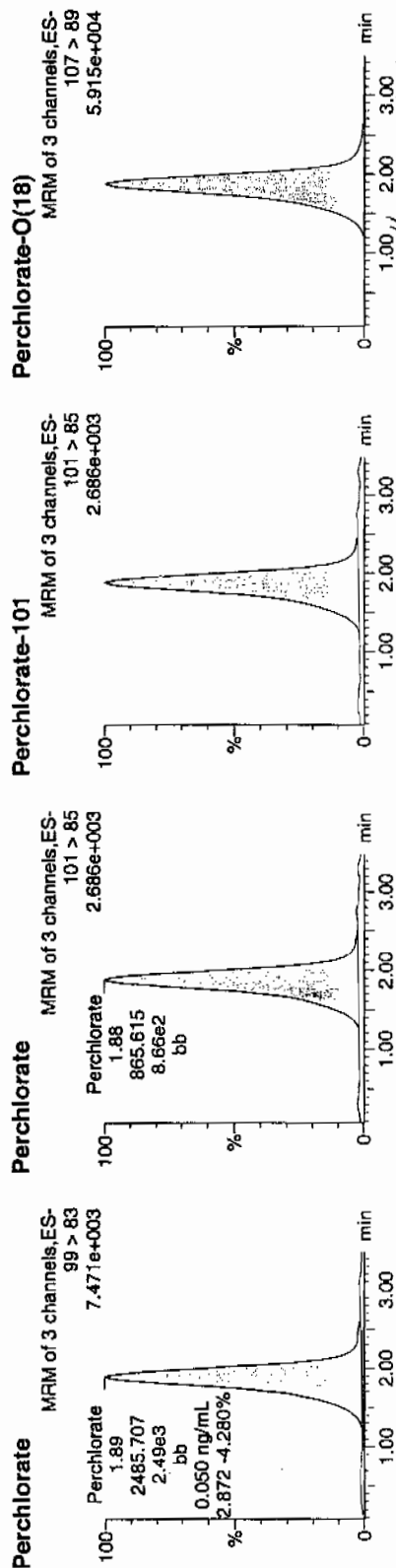
Date: 09-Feb-2010

Time: 14:56:36

ID: WCL100128-07CRI

Vial: 1:2,B

Per
02-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-07CRI	Perchlorate	99 > 83	1.89	2485.707	2485.707	bb			0.0500	99.99	-0.01	167.072	2.87
WCL100128-07CRI	Perchlorate-101	101 > 85	1.88	865.615	865.615	bb			0.0537	107.40	7.40	282.934	
WCL100128-07CRI	Perchlorate-O(18)	107 > 89	1.88	20113.150	20113.150	bb			0.4892	97.84	-2.16	3501.7...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209035a

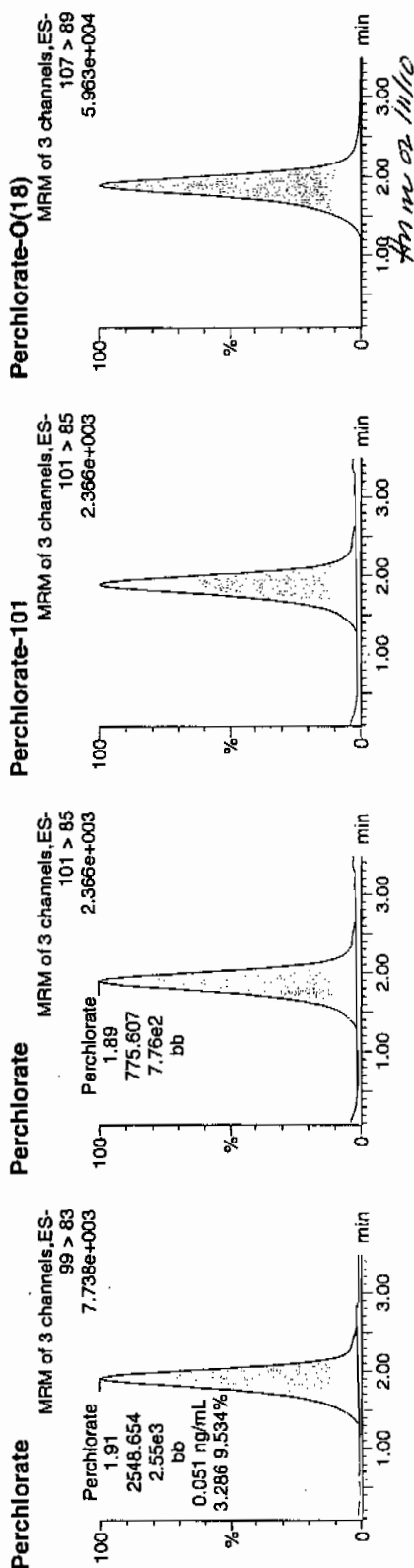
Date: 09-Feb-2010

Time: 16:15:05

ID: WCL100128-07CRI

Vial: 1:2,B

*Perms
and
02-10-10*



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ratio
WCL100128-07CRI	Perchlorate	99 > 83	1.91	2548.654	2548.654	bb			0.0513	102.52	2.52	540.657	3.29
WCL100128-07CRI	Perchlorate-101	101 > 85	1.89	775.607	775.607	bb			0.0481	96.23	-3.77	633.797	
WCL100128-07CRI	Perchlorate-O(18)	107 > 89	1.89	20520.305	20520.305	bb			0.4991	99.82	-0.18	2097.6...	

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209047a

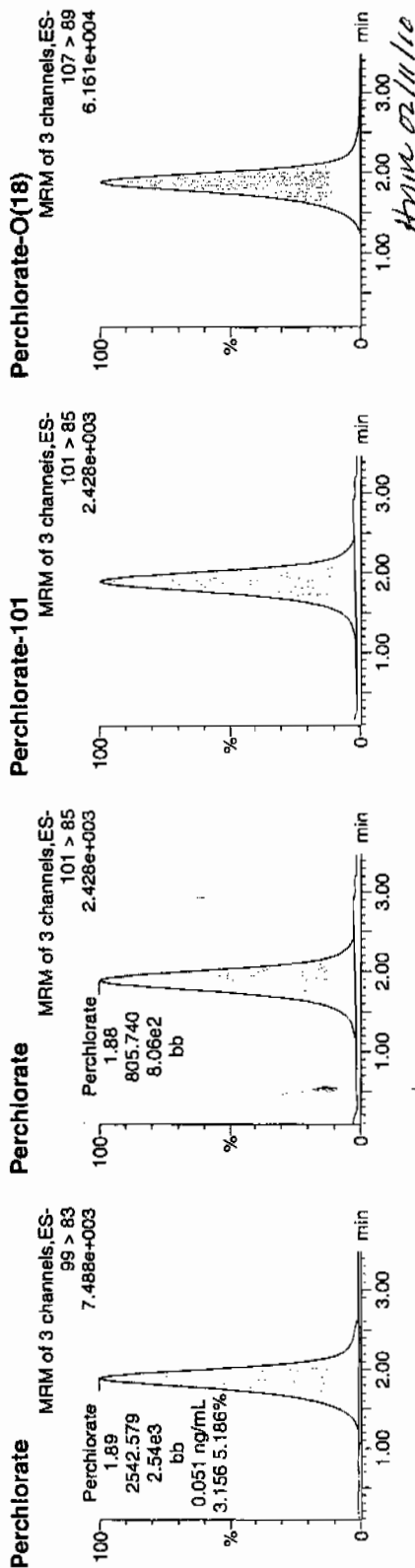
Date: 09-Feb-2010

Time: 17:41:43

ID: WCL100128-07CRI

Vial: 1:2,B

Pass
and
02-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-07CRI	Perchlorate	99 > 83	1.88	2542.579	2542.579	bb			0.0511	102.28	2.28	245.608	3.16
WCL100128-07CRI	Perchlorate-101	101 > 85	1.88	805.740	805.740	bb			0.0500	99.97	-0.03	287.803	
WCL100128-07CRI	Perchlorate-O(18)	107 > 89	1.88	20644.211	20644.211	bb			0.5021	100.42	0.42	2287.8...	

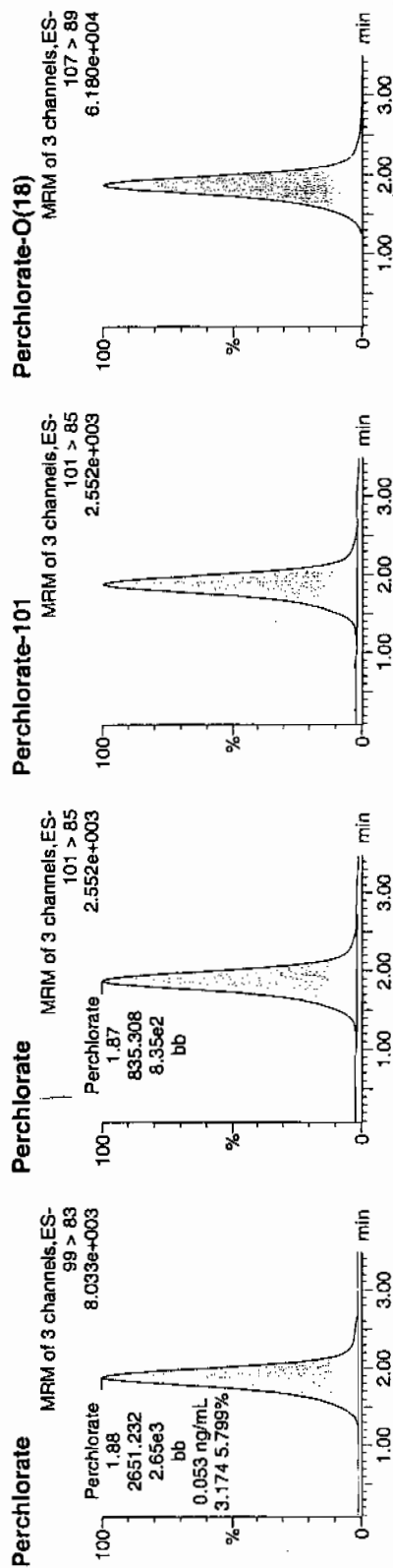
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209060a
Date: 09-Feb-2010
Time: 19:10:10
ID: WCL100128-07CRI
Vial: 1:2,B

Pure
and
02-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-07CRI	Perchlorate	99 > 83	1.88	2651.232	2651.232	bb			0.0533	106.65	6.65	591.630	3.17
WCL100128-07CRI	Perchlorate-101	101 > 85	1.87	835.308	835.308	bb			0.0518	103.64	3.64	259.980	
WCL100128-07CRI	Perchlorate-O(18)	107 > 89	1.87	20480.260	20480.260	bb			0.4981	99.63	-0.37	2193.5...	

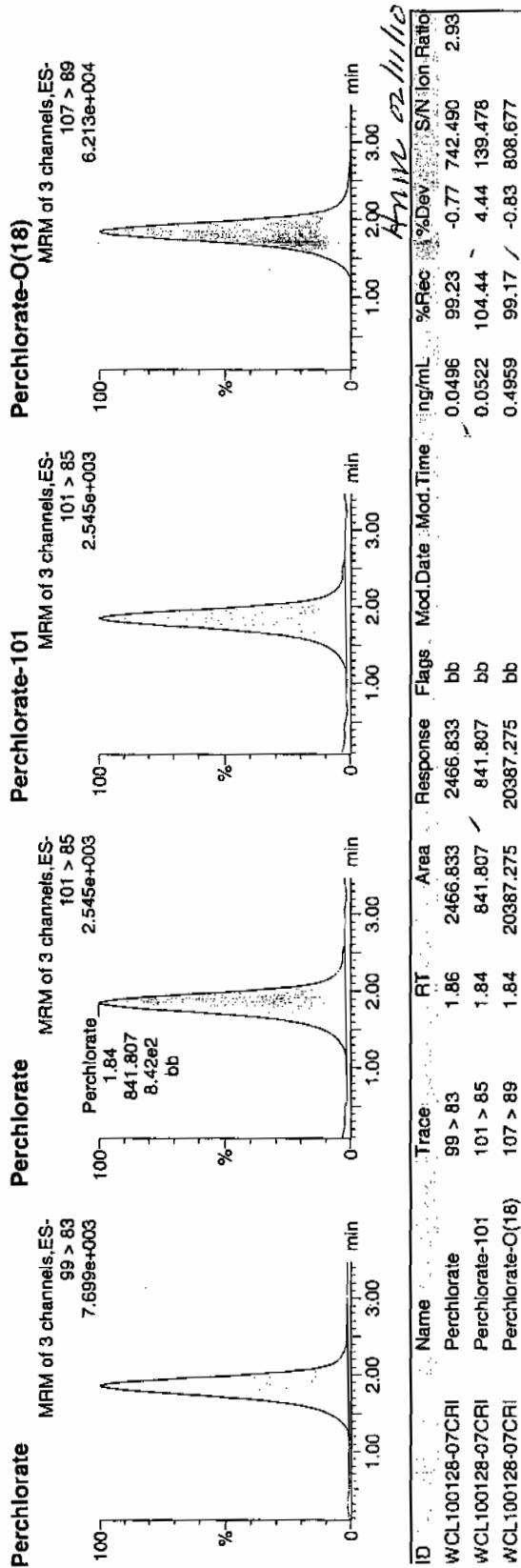
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charfers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209073a
Date: 09-Feb-2010
Time: 20:35:42
ID: WCL100128-07CRI
Vial: 1:2, B

02-10-10



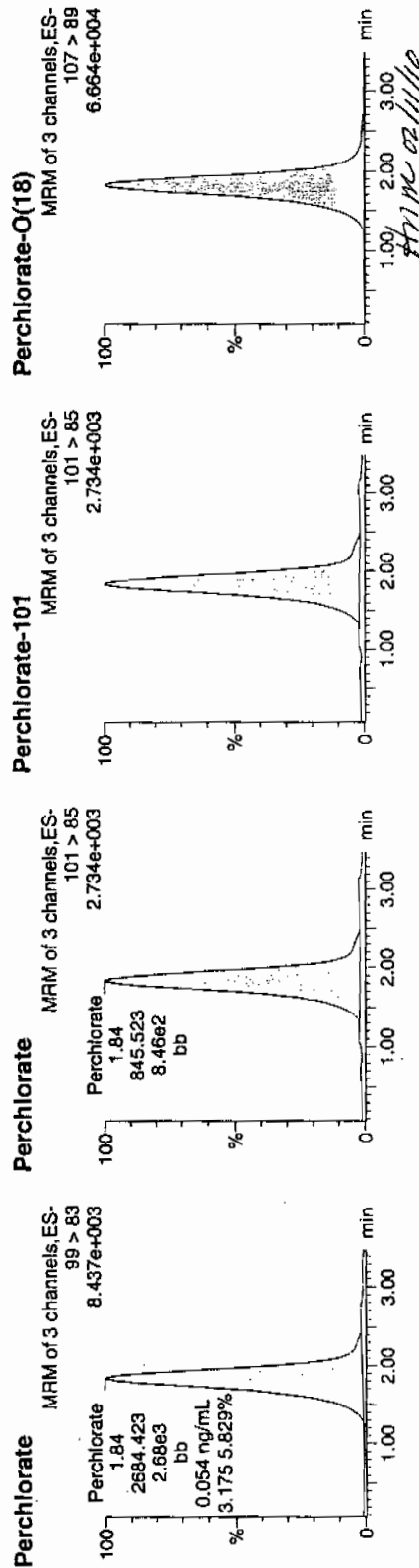
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209086a
Date: 09-Feb-2010
Time: 22:01:09
ID: WCL100128-07CRI
Vial: 1:2,B

Pure
02-10-10



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100128-07CRI	Perchlorate	99 > 83	1.84	2684.423	2684.423	bb			0.0540	107.98	7.98	444.573	3.17
WCL100128-07CRI	Perchlorate-101	101 > 85	1.84	845.523	845.523	bb			0.0525	104.91	4.91	218.998	
WCL100128-07CRI	Perchlorate-O(18)	107 > 89	1.83	21604.939	21604.939	bb			0.5255	105.10	5.10	3257.5...	

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: 945234

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

MB

Date Received: 05-FEB-10

GEL Job No (SDG): 10-1394

GEL Sample ID: 1202024410

Date Filtered: 05-FEB-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	09-FEB-10 19:16	per0209061a
	Perchlorate Isotope Ratio						1	09-FEB-10 19:16	per0209061a
14797-73-0	Perchlorate-101	.5	2	0.500	ug/kg	U	1	09-FEB-10 19:16	per0209061a
	Perchlorate-O(18)			4.79	ug/kg		1	09-FEB-10 19:16	per0209061a

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

*Concentration =

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

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209061a

Date: 09-Feb-2010

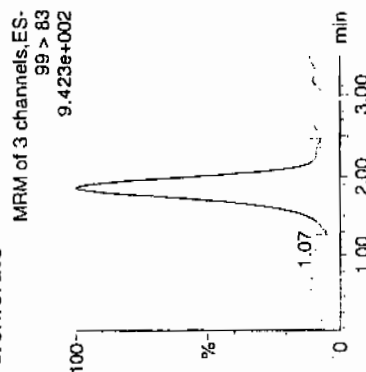
Time: 19:16:44

ID: 1202024410

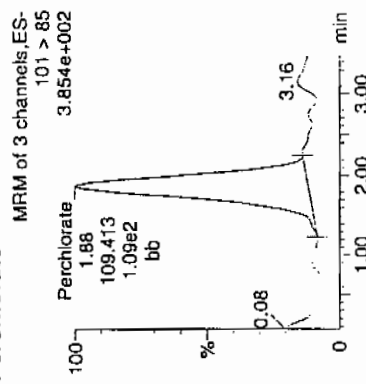
Vial: 2:2,A

1.4126 | 945236 | 30225 | 170 | 11
02-10-10

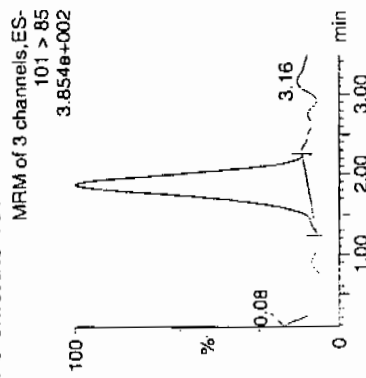
Perchlorate



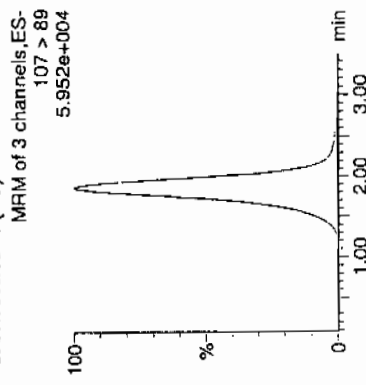
Perchlorate



Perchlorate-101



Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202024410	Perchlorate	99 > 83	1.87	299.268	299.268	bb			0.0060			22.505	2.74
1202024410	Perchlorate-101	101 > 85	1.88	109.413	109.413	bb			0.0068			60.399	
1202024410	Perchlorate-O(18)	107 > 89	1.87	19710.719	19710.719	bb			0.4794	95.88	-4.12	1760.7...	

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 245234

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.

LCS

Date Received: 05-FEB-10

GEL Job No (SDG): 10-1394

GEL Sample ID: 1202024411

Date Filtered: 05-FEB-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	2.15	ug/kg		1	09-FEB-10 19:23	per0209062a
	Perchlorate Isotope Ratio			3			1	09-FEB-10 19:23	per0209062a
14797-73-0	Perchlorate-101	.5	2	2.21	ug/kg		1	09-FEB-10 19:23	per0209062a
	Perchlorate-O(18)			5.28	ug/kg		1	09-FEB-10 19:23	per0209062a

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

*Concentration =

Instrument Value X Concentrated Extract Volume X 1
Aliquot %Solids

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

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209062a

Date: 09-Feb-2010

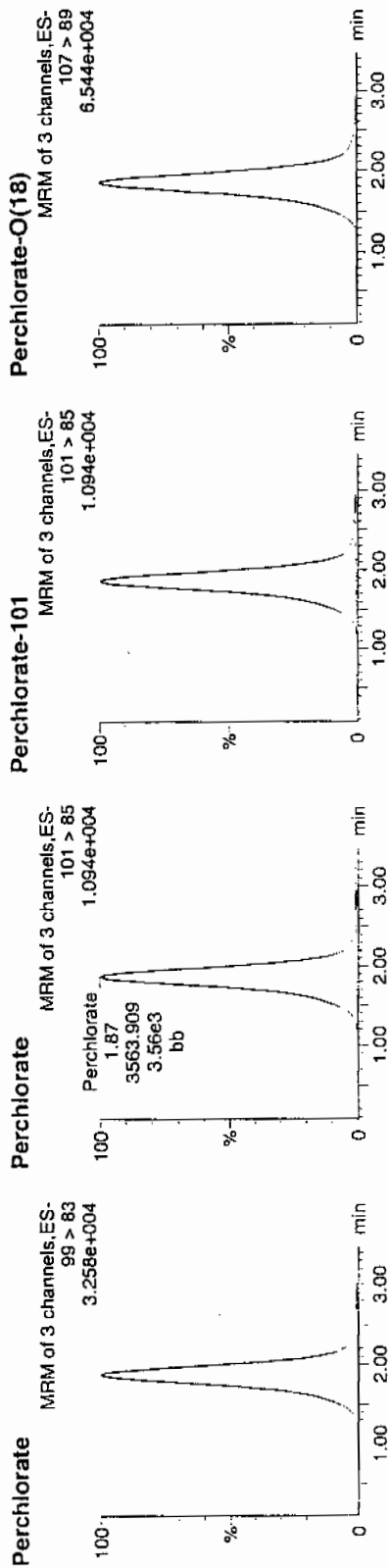
Time: 19:23:35

ID: 1202024411

Vial: 2:2,B

0.002
02-10-10

1.87 | 945236 | 3000 | 4.5 | 11



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202024411	Perchlorate	99 > 83	1.87	10681.772	10681.772	bb			0.2148	107.42	7.42	4043.6...	3.00
1202024411	Perchlorate-101	101 > 85	1.87	3563.909	3563.909	bb			0.2211	110.54	10.54	382.883	
1202024411	Perchlorate-O(18)	107 > 89	1.86	21717.555	21717.555	bb			0.5282	105.65	5.65	1289.5...	

$$\frac{10681.772}{49719.5} = 0.2148$$

Amc 02/11/10

MISCELLANEOUS DATA

Prep Logbook

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

Batch ID: 945234 Verified by: Lab SOP: GL-OA-E-067 REV# 6
 Analyst: Jareth Shirley Instrument: MicroMass Quattro Ultima
 Method: SW846 6850 Modified

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202024410 MB	05-FEB-2010 11:49:17	2	20	10
1202024411 LCS	05-FEB-2010 11:49:17	2	20	10
245385001	05-FEB-2010 11:49:17	2	20	10
245385002	05-FEB-2010 11:49:17	2	20	10
1202024412 MS (245385002)	05-FEB-2010 11:49:17	2	20	10
1202024413 MSD (245385002)	05-FEB-2010 11:49:17	2	20	10
245385003	05-FEB-2010 11:49:17	2	20	10
245385004	05-FEB-2010 11:49:17	2	20	10
245385005	05-FEB-2010 11:49:17	2	20	10
245385006	05-FEB-2010 11:49:17	2	20	10
245385007	05-FEB-2010 11:49:17	2	20	10
245385008	05-FEB-2010 11:49:17	2	20	10
245385009	05-FEB-2010 11:49:17	2	20	10
245385010	05-FEB-2010 11:49:17	2	20	10
245385011	05-FEB-2010 11:49:17	2	20	10
245396001	05-FEB-2010 11:49:17	2	20	10
245396002	05-FEB-2010 11:49:17	2	20	10
245396003	05-FEB-2010 11:49:17	2	20	10
245396004	05-FEB-2010 11:49:17	2	20	10
1202024414 LCS	05-FEB-2010 11:49:17	2	20	10

Comments:

Desulting cartridges used: 090812-1-Ba & 091230-1-H

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1202024414	10 ug/L ICV/CCV Second Source	UCL100126-02.1	.4	mL
LCS	1202024411	10 ug/L ICV/CCV Second Source	UCL100126-02.1	.4	mL
MS	1202024412	10 ug/L ICV/CCV Second Source	UCL100126-02.1	.4	mL
MSD	1202024413	10 ug/L ICV/CCV Second Source	UCL100126-02.1	.4	mL

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Reviewed BY: *hym*
Date: *22/11/10*
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL100128-06

Method: EPA 6850-Modified
Int. Std.: UCL100122-01
Mobile Phase Lot#: 1254342, 1261217
Standard-Samp Reagent Lot#: 1233976

Date: 02/09/10
Extr. Injection Volume: 20ul
Sequence Number: per020910a
Initial Calibration Date: 02/09/10

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0209001a	IPB001	CWW	2/9/2010 12:32			1		USE	B
per0209002a	IPB001	CWW	2/9/2010 12:39			1		USE	B
per0209003a	WCLICAL-01	CWW	2/9/2010 12:45			1		USE	I
per0209004a	WCLICAL-02	CWW	2/9/2010 12:52			1		USE	I
per0209005a	WCLICAL-03	CWW	2/9/2010 12:58			1		USE	I
per0209006a	WCLICAL-04	CWW	2/9/2010 13:05			1		USE	I
per0209007a	WCLICAL-05	CWW	2/9/2010 13:11			1		USE	I
per0209008a	IPB002	CWW	2/9/2010 13:18			1		USE	B
per0209009a	WCLICV	CWW	2/9/2010 13:25			1		USE	C
per0209010a	IPB003	CWW	2/9/2010 13:31			1		USE	B
per0209011a	WCLCRI	CWW	2/9/2010 13:38			1		USE	C
per0209012a	1202037492	CWW	2/9/2010 13:44	950760	VARIOUS	1	LANL	USE	S
per0209013a	1202037493	CWW	2/9/2010 13:51	950760	VARIOUS	1	LANL	USE	S
per0209014a	1202037496	CWW	2/9/2010 13:57	950760	VARIOUS	1	LANL	USE	S
per0209015a	246431001	CWW	2/9/2010 14:04	950760	10-1650	1	LANL	USE	S
per0209016a	1202037494	CWW	2/9/2010 14:10	950760	10-1650	1	LANL	USE	S
per0209017a	1202037495	CWW	2/9/2010 14:17	950760	10-1650	1	LANL	USE	S
per0209018a	246431002	CWW	2/9/2010 14:23	950760	10-1650	1	LANL	USE	S
per0209019a	246431003	CWW	2/9/2010 14:30	950760	10-1650	1	LANL	USE	S
per0209020a	246431004	CWW	2/9/2010 14:36	950760	10-1650	1	LANL	USE	S
per0209021a	WCLCCV	CWW	2/9/2010 14:43			1		USE	C
per0209022a	IPB004	CWW	2/9/2010 14:50			1		USE	B
per0209023a	WCLCRI	CWW	2/9/2010 14:56			1		USE	C
per0209024a	246472001	CWW	2/9/2010 15:03	950760	10-1640	1	LANL	USE	S
per0209025a	246472002	CWW	2/9/2010 15:09	950760	10-1640	1	LANL	USE	S
per0209026a	IPB005	CWW	2/9/2010 15:16			1		USE	B
per0209027a	1202024400	CWW	2/9/2010 15:22	945231	VARIOUS	1	LANL	USE	S
per0209028a	1202024401	CWW	2/9/2010 15:29	945231	VARIOUS	1	LANL	USE	S
per0209029a	1202024404	CWW	2/9/2010 15:35	945231	VARIOUS	1	LANL	USE	S

per0209030a	245374001	CWW	2/9/2010 15:42	945231	10-1373	1	LANL	USE	S
per0209031a	245374002	CWW	2/9/2010 15:48	945231	10-1373	1	LANL	USE	S
per0209032a	245374003	CWW	2/9/2010 15:55	945231	10-1373	1	LANL	USE	S
per0209033a	WCLCCV	CWW	2/9/2010 16:01			1		USE	C
per0209034a	IPB006	CWW	2/9/2010 16:08			1		USE	B
per0209035a	WCLCRI	CWW	2/9/2010 16:15			1		USE	C
per0209036a	245374004	CWW	2/9/2010 16:21	945231	10-1373	1	LANL	USE	S
per0209037a	245374005	CWW	2/9/2010 16:28	945231	10-1373	1	LANL	USE	S
per0209038a	245374006	CWW	2/9/2010 16:36	945231	10-1373	1	LANL	USE	S
per0209039a	245374007	CWW	2/9/2010 16:43	945231	10-1373	1	LANL	USE	S
per0209040a	245377001	CWW	2/9/2010 16:50	945231	10-1378	1	LANL	USE	S
per0209041a	1202024402	CWW	2/9/2010 16:57	945231	10-1378	1	LANL	USE	S
per0209042a	1202024403	CWW	2/9/2010 17:05	945231	10-1378	1	LANL	USE	S
per0209043a	245377002	CWW	2/9/2010 17:12	945231	10-1378	1	LANL	USE	S
per0209044a	245377003	CWW	2/9/2010 17:20	945231	10-1378	1	LANL	USE	S
per0209045a	WCLCCV	CWW	2/9/2010 17:27			1		USE	C
per0209046a	IPB007	CWW	2/9/2010 17:34			1		USE	B
per0209047a	WCLCRI	CWW	2/9/2010 17:41			1		USE	C
per0209048a	245377004	CWW	2/9/2010 17:48	945231	10-1378	1	LANL	USE	S
per0209049a	245377005	CWW	2/9/2010 17:55	945231	10-1378	1	LANL	USE	S
per0209050a	245377006	CWW	2/9/2010 18:03	945231	10-1378	1	LANL	USE	S
per0209051a	245377007	CWW	2/9/2010 18:10	945231	10-1378	1	LANL	USE	S
per0209052a	245377008	CWW	2/9/2010 18:17	945231	10-1378	1	LANL	USE	S
per0209053a	245377009	CWW	2/9/2010 18:23	945231	10-1378	1	LANL	USE	S
per0209054a	245377010	CWW	2/9/2010 18:30	945231	10-1378	1	LANL	USE	S
per0209055a	IPB008	CWW	2/9/2010 18:36			1		USE	B
per0209056a	245934001	CWW	2/9/2010 18:43	950028	10-1502	5	LANL	USE	S
per0209057a	245934004	CWW	2/9/2010 18:50	950028	10-1502	1	LANL	USE	S
per0209058a	WCLCCV	CWW	2/9/2010 18:56			1		USE	C
per0209059a	IPB009	CWW	2/9/2010 19:03			1		USE	B
per0209060a	WCLCRI	CWW	2/9/2010 19:10			1		USE	C
per0209061a	1202024410	CWW	2/9/2010 19:16	945236	VARIOUS	1	LANL	USE	S
per0209062a	1202024411	CWW	2/9/2010 19:23	945236	VARIOUS	1	LANL	USE	S
per0209063a	1202024414	CWW	2/9/2010 19:30	945236	VARIOUS	1	LANL	USE	S
per0209064a	245385001	CWW	2/9/2010 19:36	945236	10-1383	1	LANL	USE	S
per0209065a	245385002	CWW	2/9/2010 19:43	945236	10-1383	1	LANL	USE	S
per0209066a	1202024412	CWW	2/9/2010 19:49	945236	10-1383	1	LANL	USE	S

per0209067a	1202024413	CWW	2/9/2010 19:56	945236	10-1383	1	LANL	USE	S
per0209068a	245385003	CWW	2/9/2010 20:02	945236	10-1383	1	LANL	USE	S
per0209069a	245385004	CWW	2/9/2010 20:09	945236	10-1383	1	LANL	USE	S
per0209070a	245385005	CWW	2/9/2010 20:15	945236	10-1383	1	LANL	USE	S
per0209071a	WCLCCV	CWW	2/9/2010 20:22			1		USE	C
per0209072a	IPB010	CWW	2/9/2010 20:29			1		USE	B
per0209073a	WCLCRI	CWW	2/9/2010 20:35			1		USE	C
per0209074a	245385006	CWW	2/9/2010 20:42	945236	10-1383	1	LANL	USE	S
per0209075a	245385007	CWW	2/9/2010 20:48	945236	10-1383	1	LANL	USE	S
per0209076a	245385008	CWW	2/9/2010 20:55	945236	10-1383	1	LANL	USE	S
per0209077a	245385009	CWW	2/9/2010 21:02	945236	10-1383	1	LANL	USE	S
per0209078a	245385010	CWW	2/9/2010 21:08	945236	10-1383	1	LANL	USE	S
per0209079a	245385011	CWW	2/9/2010 21:15	945236	10-1383	1	LANL	USE	S
per0209080a	245396001	CWW	2/9/2010 21:21	945236	10-1394	1	LANL	USE	S
per0209081a	245396002	CWW	2/9/2010 21:28	945236	10-1394	1	LANL	USE	S
per0209082a	245396003	CWW	2/9/2010 21:34	945236	10-1394	1	LANL	USE	S
per0209083a	245396004	CWW	2/9/2010 21:41	945236	10-1394	1	LANL	USE	S
per0209084a	WCLCCV	CWW	2/9/2010 21:47			1		USE	C
per0209085a	IPB011	CWW	2/9/2010 21:54			1		USE	B
per0209086a	WCLCRI	CWW	2/9/2010 22:01			1		USE	C

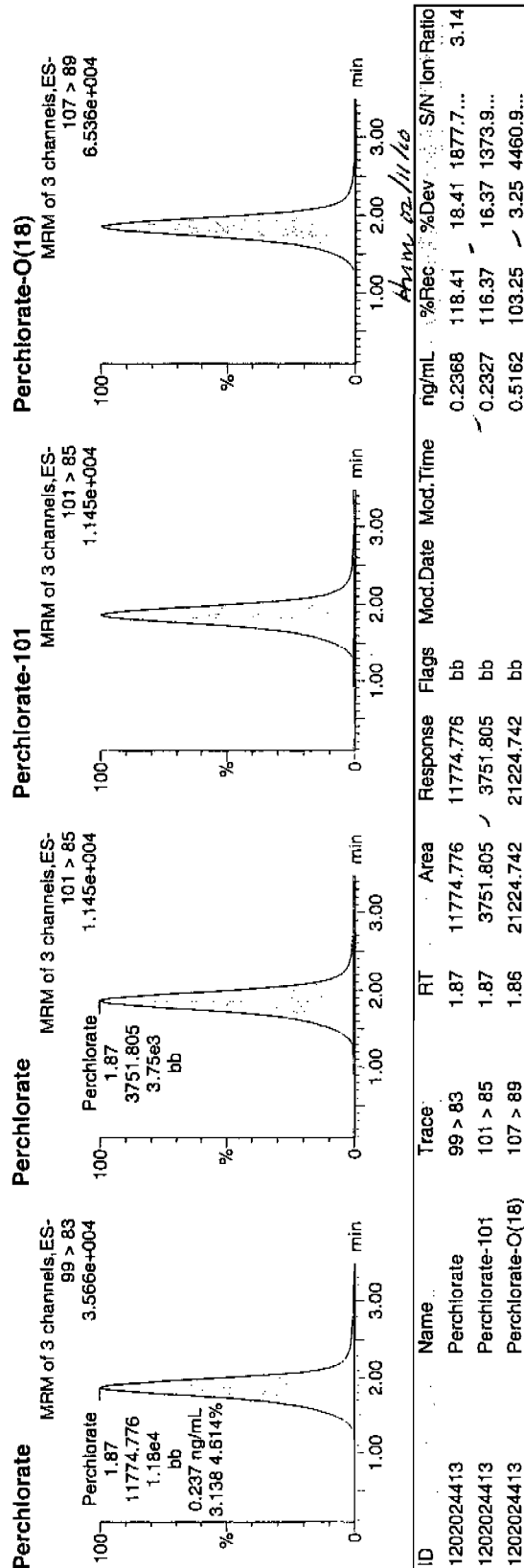
Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per020910a.qld

Last Altered: Wednesday, February 10, 2010 11:47:17 AM Eastern Standard Time
Printed: Wednesday, February 10, 2010 12:00:02 PM Eastern Standard Time

Name: per0209067a
Date: 09-Feb-2010
Time: 19:56:13
ID: 1202024413
Vial: 2:3,A

LANC / 915236 / 5020 / 150 / 11
02-10-10



Isotope Ratio Criteria

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

2.31-3.85

Tune Criteria

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

LC/MS/MS EXPLOSIVES ANALYSIS

**LC/MS/MS Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1394**

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: 944915

Prep Batch Number: 944913

Sample Analysis

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

Sample ID	Client ID
245396001	RE15-10-7928
245396002	RE15-10-7929
245396003	RE15-10-7927
245396004	RE15-10-7930
1202023589	Method Blank (MB)
1202023590	Laboratory Control Sample (LCS)
1202023591	245396001(RE15-10-7928) Matrix Spike (MS)
1202023592	245396001(RE15-10-7928) 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.

10-1394-EXPLCMS

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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.

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 recovered 4-Amino-2,6-dinitrotoluene at 81.8%. The limits are 84-130%. Both the MS and MSD had passing recoveries for 4-Amino-2,6-dinitrotoluene at 95% and 90.1% respectively. The data are reported. Please see data exception report 793186.

QC Sample Designation

Sample 245396001 (RE15-10-7928) was chosen for matrix spike and matrix spike duplicate analysis.

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

Samples 1202023591(RE15-10-7928MS), 1202023592(RE15-10-7928MSD), 245396001 (RE15-10-7928), 245396002 (RE15-10-7929), 245396003 (RE15-10-7927) and 245396004 (RE15-10-7930) were extracted out of holding due to prep analyst oversight. The samples were extracted within two times the holding period. The data are reported. Please see data exception report 793186. 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.

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

Sample 245396001 (RE15-10-7928) was chosen for matrix spike and matrix spike duplicate analysis.

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 standards were not added to the secondary analyte extracts.

Technical Information**Holding Time Specifications**

Samples 1202023591 (RE15-10-7928MS), 1202023592 (RE15-10-7928MSD), 245396001 (RE15-10-7928), 245396002 (RE15-10-7929), 245396003 (RE15-10-7927) and 245396004 (RE15-10-7930) were extracted out of holding due to prep analyst oversight. The samples were extracted within two times the holding period. The data are reported. Please see data exception report 793186. 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 793186 was generated for this SDG.

The LCS recovered 4-Amino-2,6-dinitrotoluene at 81.8%. The limits are 84-130%. Both the MS and MSD had passing recoveries for 4-Amino-2,6-dinitrotoluene at 95% and 90.1% respectively. The data are reported.

Samples 1202023591 (RE15-10-7928MS), 1202023592 (RE15-10-7928MSD), 245396001 (RE15-10-7928), 245396002 (RE15-10-7929), 245396003 (RE15-10-7927) and 245396004 (RE15-10-7930) were extracted out of holding due to prep analyst oversight. The samples were extracted within two times the holding period. 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.

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: Hebert Mauer Date: 02/19/16

10-1394-EXPLCMS

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SAMPLE DATA SUMMARY

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7928

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396001

Sample Amount 2

Moisture: 3.6

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0216119a

Date Analyzed: 19-FEB-10 03:23

Units: ug/kg

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

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7928

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396001

Sample Amount 2

Moisture: 3.6

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS02170119.wiff

Date Analyzed: 18-FEB-10 16:19

Units: ug/kg

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

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7929

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396002

Sample Amount 2

Moisture: 27.4

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0216122a

Date Analyzed: 19-FEB-10 04:52

Units: ug/kg

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

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7929

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396002

Sample Amount 2

Moisture: 27.4

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS02170122.wiff

Date Analyzed: 18-FEB-10 17:06

Units: ug/kg

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

*Concentration =

Instrument X Concentrated Extract Volume X Dilution
Value Sample Amoun Factor

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7927

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396003

Sample Amount 2

Moisture: 24.4

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0216123a

Date Analyzed: 19-FEB-10 05:22

Units: ug/kg

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

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7927

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396003

Sample Amount 2

Moisture: 24.4

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS02170123.wiff

Date Analyzed: 18-FEB-10 17:22

Units: ug/kg

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

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7930

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396004

Sample Amount 2

Moisture: 11.5

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0216124a

Date Analyzed: 19-FEB-10 05:51

Units: ug/kg

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

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7930

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396004

Sample Amount 2

Moisture: 11.5

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS02170124.wiff

Date Analyzed: 18-FEB-10 17:38

Units: ug/kg

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

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

QUALITY CONTROL SUMMARY

High Explosives Surrogate Recovery Summary

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

HPLC Column: Phenomenex Ultracarb 5u ODS(20)

Lab Sample ID	Client Sample ID	DNT	QC Limits	Flg
245396001	RE15-10-7928	105	70 - 144	
245396001	RE15-10-7928	110	70 - 144	
245396002	RE15-10-7929	108	70 - 144	
245396002	RE15-10-7929	107	70 - 144	
245396003	RE15-10-7927	108	70 - 144	
245396003	RE15-10-7927	124	70 - 144	
245396004	RE15-10-7930	112	70 - 144	
245396004	RE15-10-7930	119	70 - 144	
1202023589	MB for batch 944913	105	70 - 144	
1202023589	MB for batch 944913	111	70 - 144	
1202023590	LCS for batch 944913	86.8	70 - 144	
1202023590	LCS for batch 944913	119	70 - 144	
1202023591	RE15-10-7928(245396001MS)	116	70 - 144	
1202023591	RE15-10-7928(245396001MS)	108	70 - 144	
1202023592	RE15-10-7928(245396001MSD)	110	70 - 144	
1202023592	RE15-10-7928(245396001MSD)	112	70 - 144	

DNT = 3,4-Dinitrotoluene

3B
High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 10-1394

Extract Batch Code: 944913

Date Extracted: 17-FEB-10

GEL LCS ID: 1202023590

GEL LCSDUP ID:

Analysis Date/Time: 18-FEB-10 20:29

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
1,3,5-Trinitrobenzene	5000	3990	79.7					69 – 126
2,4,6-Trinitrotoluene	5000	4010	80.1					73 – 149
2,4-Dinitrotoluene	5000	4990	99.9					87 – 137
2,6-Dinitrotoluene	5000	4640	92.9					89 – 120
2-Amino-4,6-dinitrotoluene	5000	5150	103					90 – 130
4-Amino-2,6-dinitrotoluene	5000	4090	81.8 *					84 – 130
HMX	5000	4480	89.6					58 – 138
Nitrobenzene	5000	4280	85.6					71 – 122
PETN	5000	4430	88.7					64 – 137
RDX	5000	4580	91.7					81 – 137
Tetryl	5000	2810	56.2					51 – 112
m-Dinitrobenzene	5000	4790	95.8					83 – 122
m-Nitrotoluene	5000	4280	85.5					73 – 118
o-Nitrotoluene	5000	3840	76.8					72 – 119
p-Nitrotoluene	5000	4080	81.6					67 – 131

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

* Values outside of QC limits

3B

High Explosives LCS/LCS Duplicate Summary

Lab Name: GEL Laboratories LLC

Client ID: LCS

Lab Code: GEL

GEL Job No (SDG) 10-1394

Extract Batch Code: 944913

Date Extracted: 17-FEB-10

GEL LCS ID: 1202023590

GEL LCSDUP ID:

Analysis Date/Time: 18-FEB-10 12:39

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	4980	99.6					52 - 114
2,6-Diamino-4-nitrotoluene	5000	5620	112					64 - 122
3,5-Dinitroaniline	5000	5080	102					70 - 127
tris(o-cresyl) phosphate	5000	5030	101					84 - 119
TATB	5000	7190	144					28 - 162

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

* Values outside of QC limits

3
High Explosives MS/MSD Summary

Lab Name: GEL Laboratories LLC

Client ID: RE15-10-7928

Lab Code: GEL

GEL Job No (SDG) 10-1394

Extract Batch Code: 944913

Date Extracted: 17-FEB-10

GEL Spike ID: 1202023591

GEL SpikeDup ID: 1202023592

Analysis Date/Time: 19-FEB-10 03:52

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	4680	93.6	4920	98.3	4.96	30	50 – 140
2,4,6-Trinitrotoluene	5000	0	5540	111	5290	106	4.75	30	76 – 144
2,4-Dinitrotoluene	5000	0	5430	109	4960	99.2	9.1	30	86 – 135
2,6-Dinitrotoluene	5000	0	5130	103	5110	102	452	30	90 – 118
2-Amino-4,6-dinitrotoluene	5000	0	4950	99	4930	98.5	49	30	85 – 137
4-Amino-2,6-dinitrotoluene	5000	0	4750	95	4500	90.1	5.34	30	72 – 143
HMX	5000	0	5620	112	5050	101	10.6	30	51 – 144
Nitrobenzene	5000	0	4560	91.2	4310	86.2	5.64	30	70 – 122
PETN	5000	0	6640	133	6200	124	6.87	30	60 – 140
RDX	5000	0	5930	119	5510	110	7.32	30	59 – 152
Tetryl	5000	0	4230	84.5	3870	77.3	8.9	30	36 – 124
m-Dinitrobenzene	5000	0	5140	103	5390	108	4.79	30	85 – 118
m-Nitrotoluene	5000	0	4920	98.3	4500	90.1	8.79	30	70 – 120
o-Nitrotoluene	5000	0	5230	105	4770	95.5	9.21	30	69 – 123
p-Nitrotoluene	5000	0	5110	102	4580	91.5	11.1	30	65 – 133

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

3
High Explosives MS/MSD Summary

Lab Name: GEL Laboratories LLC

Client ID: RE15-10-7928

Lab Code: GEL

GEL Job No (SDG) 10-1394

Extract Batch Code: 944913

Date Extracted: 17-FEB-10

GEL Spike ID: 1202023591

GEL SpikeDup ID: 1202023592

Analysis Date/Time: 18-FEB-10 16:35

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	5050	101	5410	108	6.88	26	34 – 135
2,6-Diamino-4-nitrotoluene	5000	0	5530	111	5840	117	5.45	30	55 – 130
3,5-Dinitroaniline	5000	0	4890	97.8	4710	94.2	3.75	30	73 – 129
tris(o-cresyl) phosphate	5000	0	4900	98	4850	97	1.03	30	72 – 127
TATB	5000	0	6300	126	5650	113	10.9	30	29 – 155

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

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 16-FEB-10 17:07

GEL Data File: EXP0216001a

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	509.816
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	531.163
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

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010

Method: C:\MASSLYNX\New_Exp.PRO\MethDB\021610expa.mdb, Time: Wed Feb 17 09:19:04 2010
Calibration: Untitled, Time: Wed Feb 17 10:00:06 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216001a

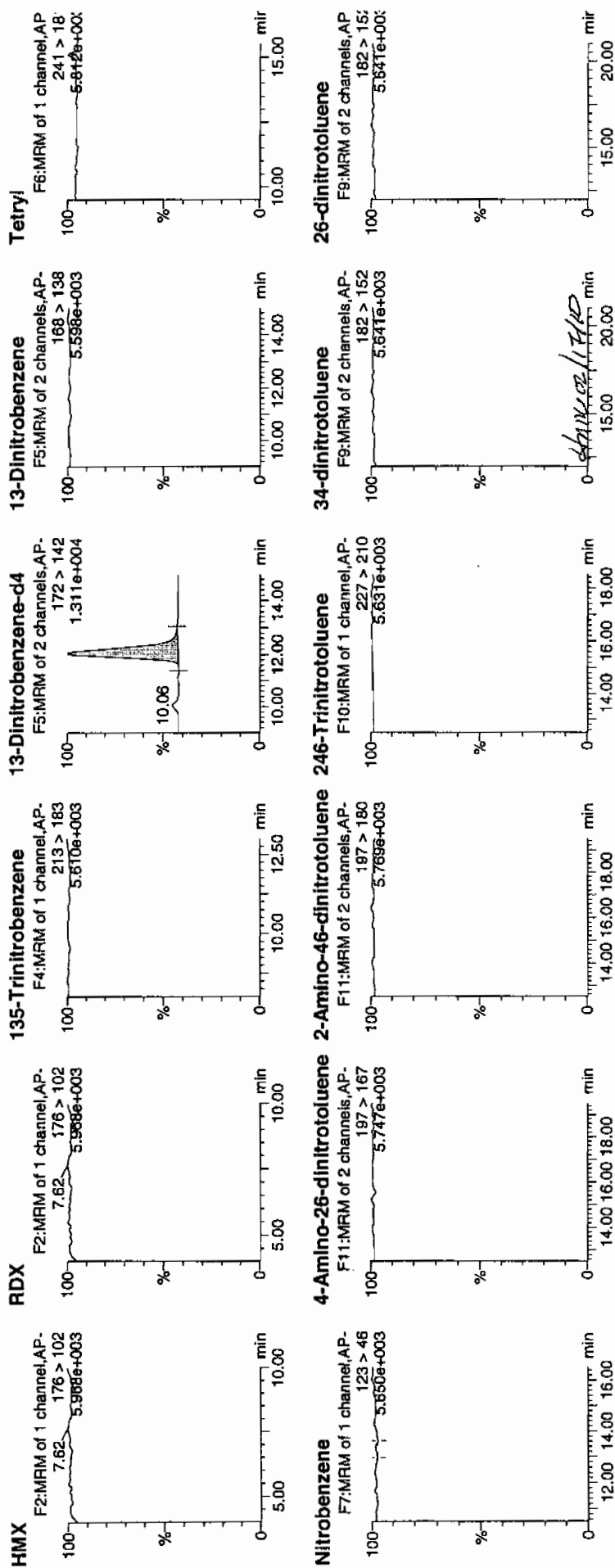
Date: 16-Feb-2010

Time: 17:07:38

ID: XIBLK01

Vial: 1:1,A

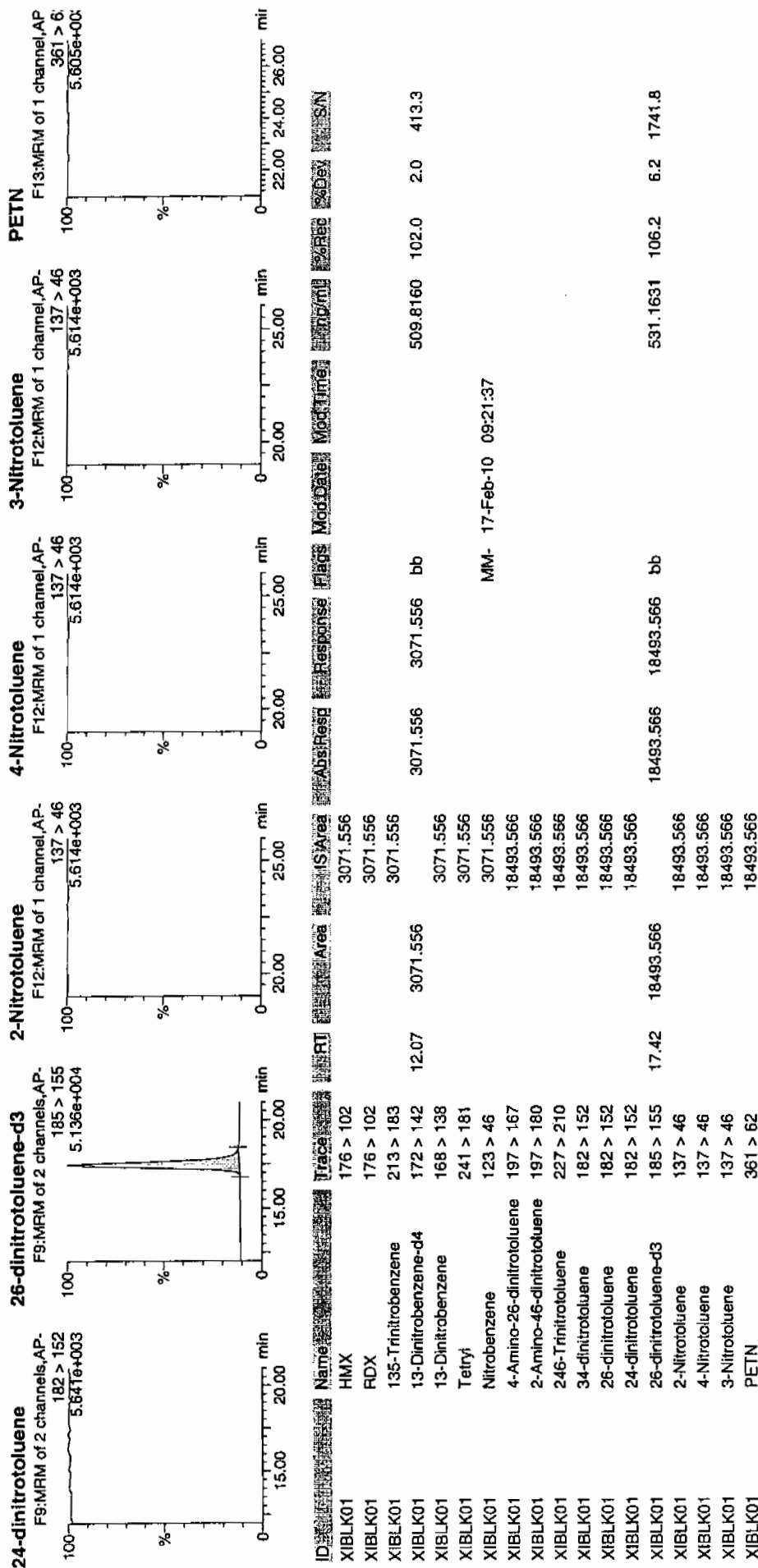
100%
2/17/10



Printed: Wed Feb 17 10:00:54 2010, Page 2 of 59

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

Dataset: C:\MASSLYNX\New_Exp_PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010



Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 16-FEB-10 17:37

GEL Data File: EXP0216002a

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	540.968
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	530.887
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

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216002a

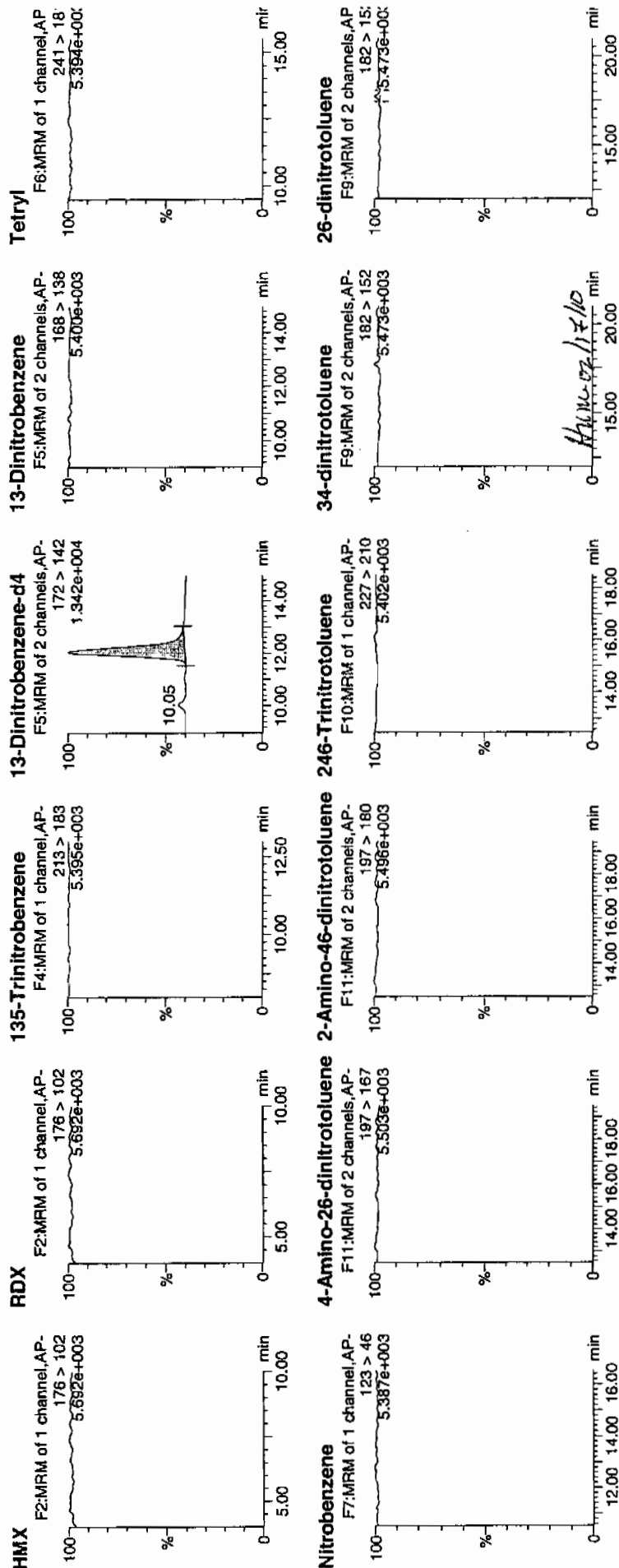
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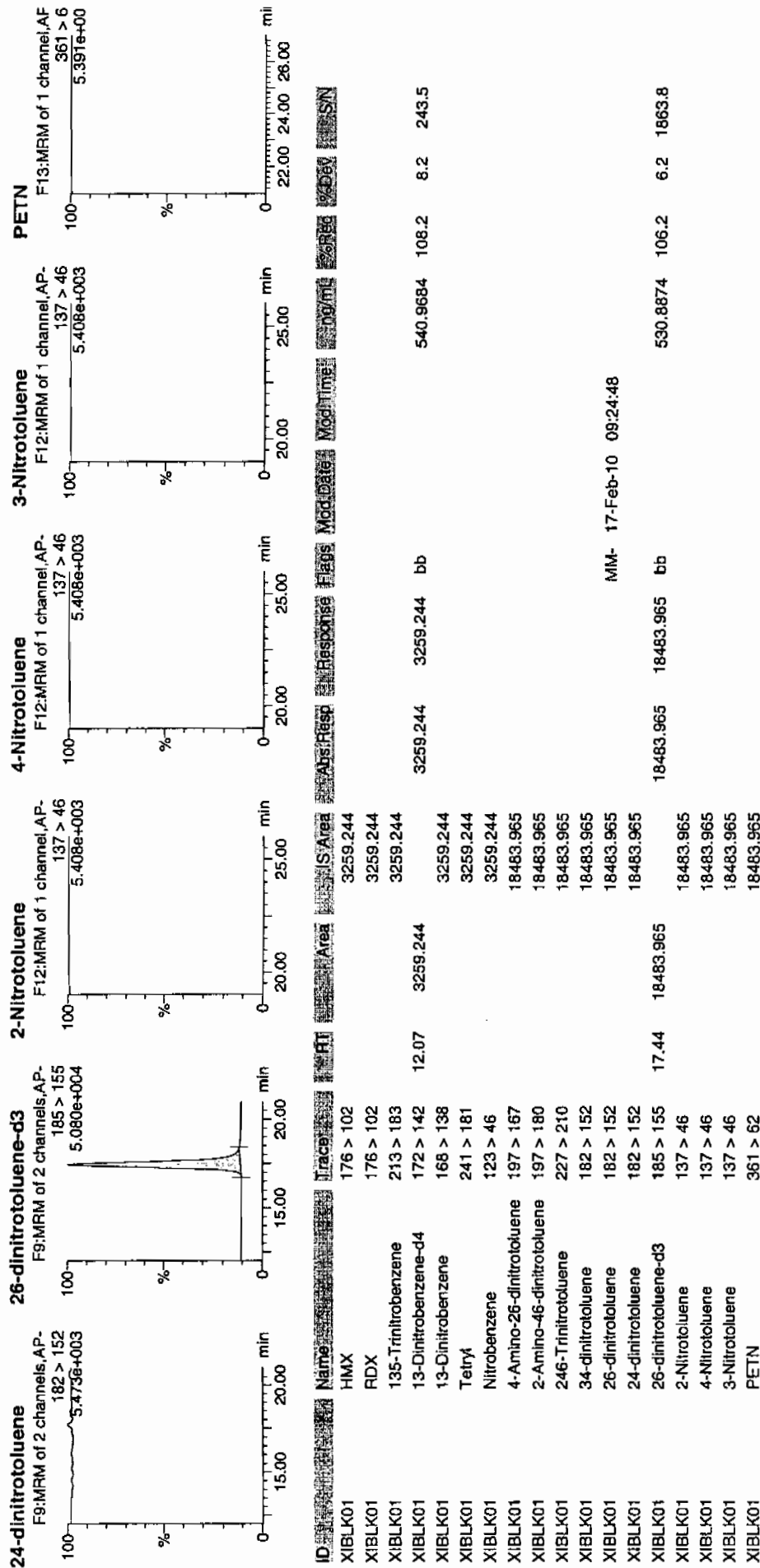
Time: 17:37:26

ID: XIBLK01

Vial: 1:1,A

WFF
2/17/10





Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 17-FEB-10 09:26

GEL Data File: EXS02170001.wiff

Instrument ID: LCMSMS

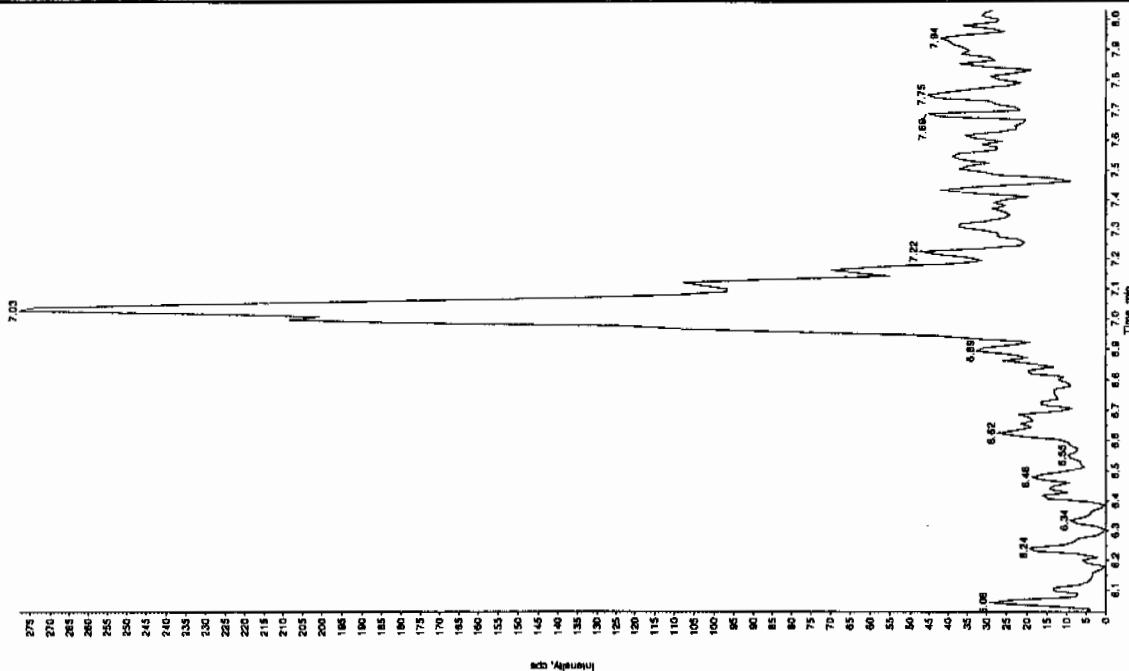
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	1.59
TATB	0	0

See 2/19/10

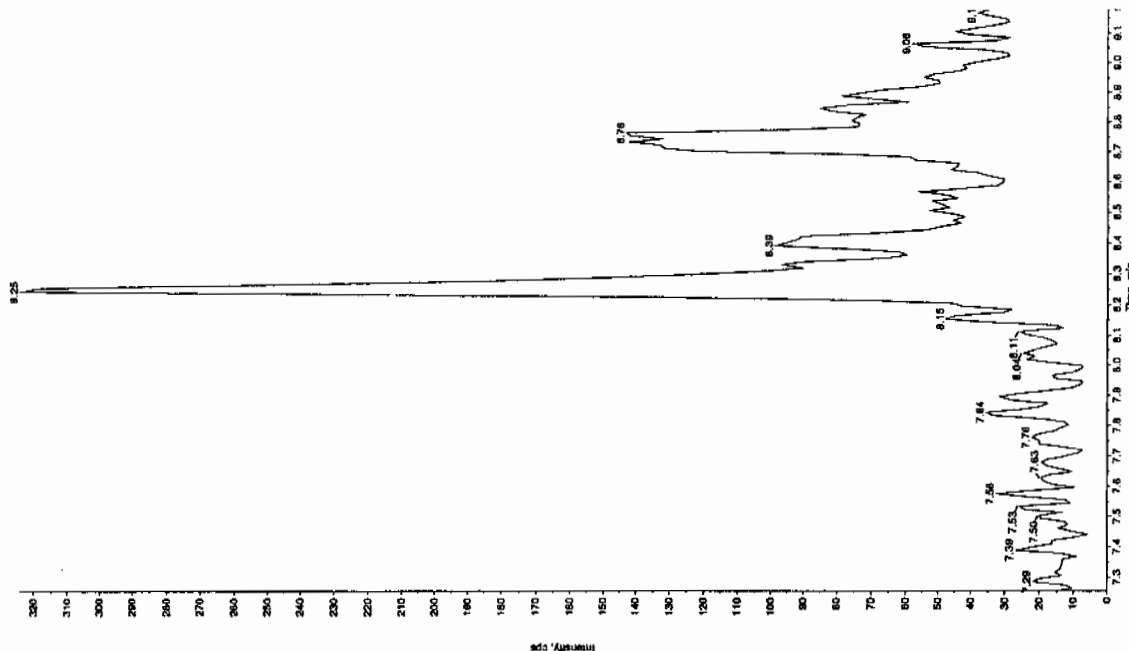
Sample Name: "XIBUK01" Sample ID: "HILLER" File: "EX502170001.will"
Peak Name: "TATB" Mass(es): "257.2204.9 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 2/17/2010
Acq. Time: 9:26:16 AM
Modified: No

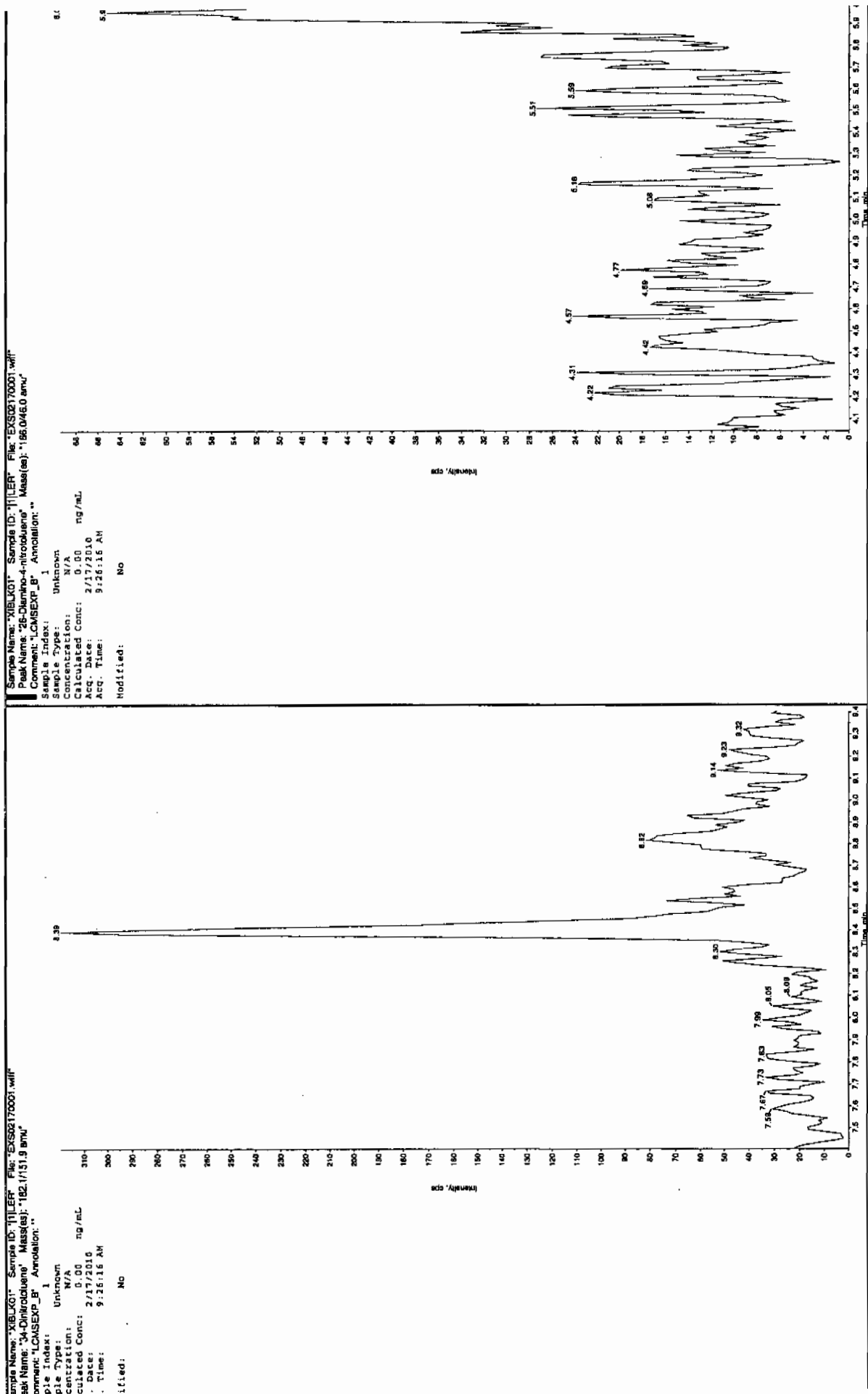


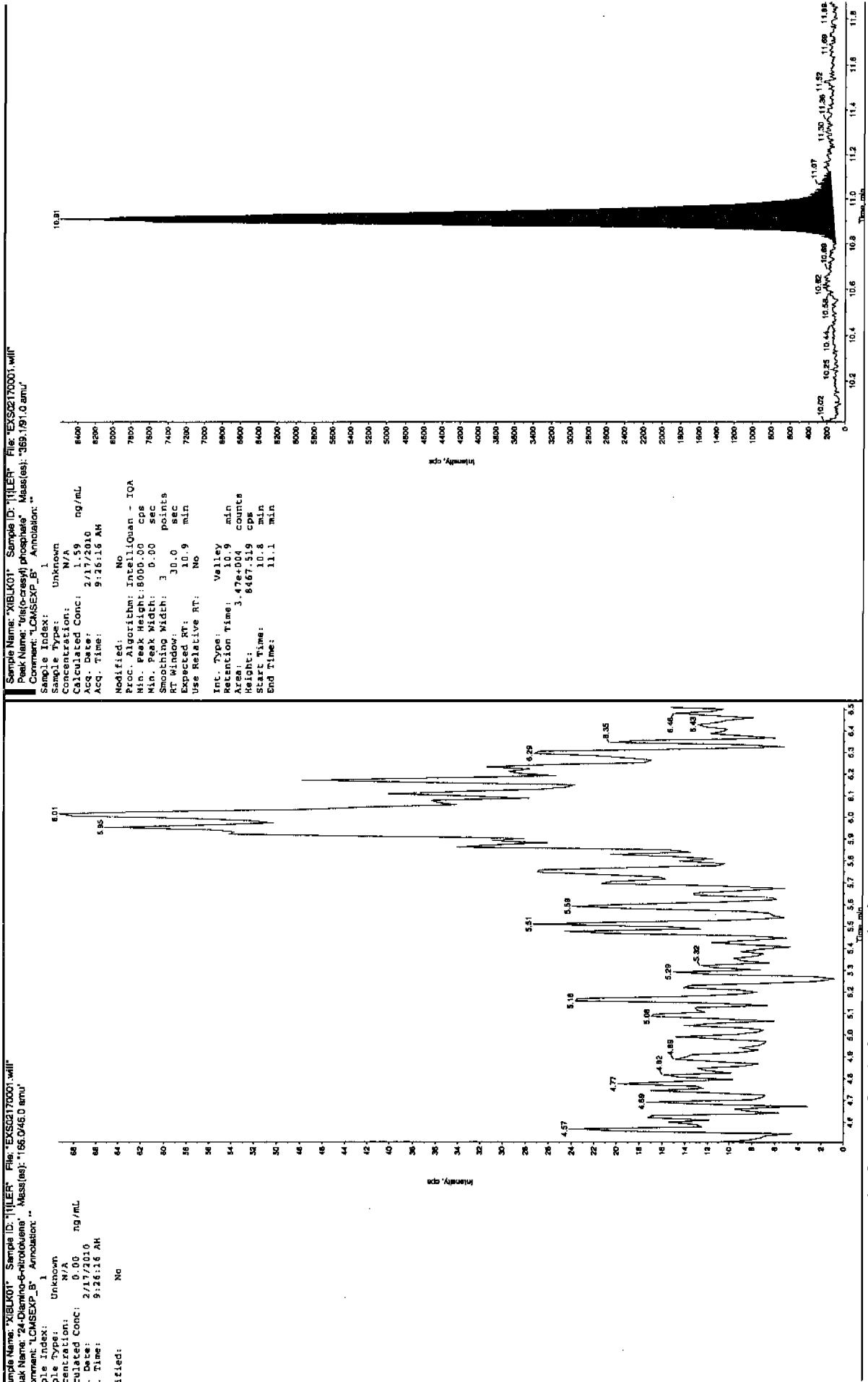
Sample Name: "XIBUK01" Sample ID: "HILLER" File: "EX502170001.will"
Peak Name: "35-Dinitroaniline" Mass(es): "182.046.0 amu"
Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00 ng/mL
Acq. Date: 2/17/2010
Acq. Time: 9:26:16 AM
Modified: No



See 2/19/10





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

Explosives Initial Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK01

Analysis Date: 17-FEB-10 09:42

GEL Data File: EXS02170002.wiff

Instrument ID: LCMSMS

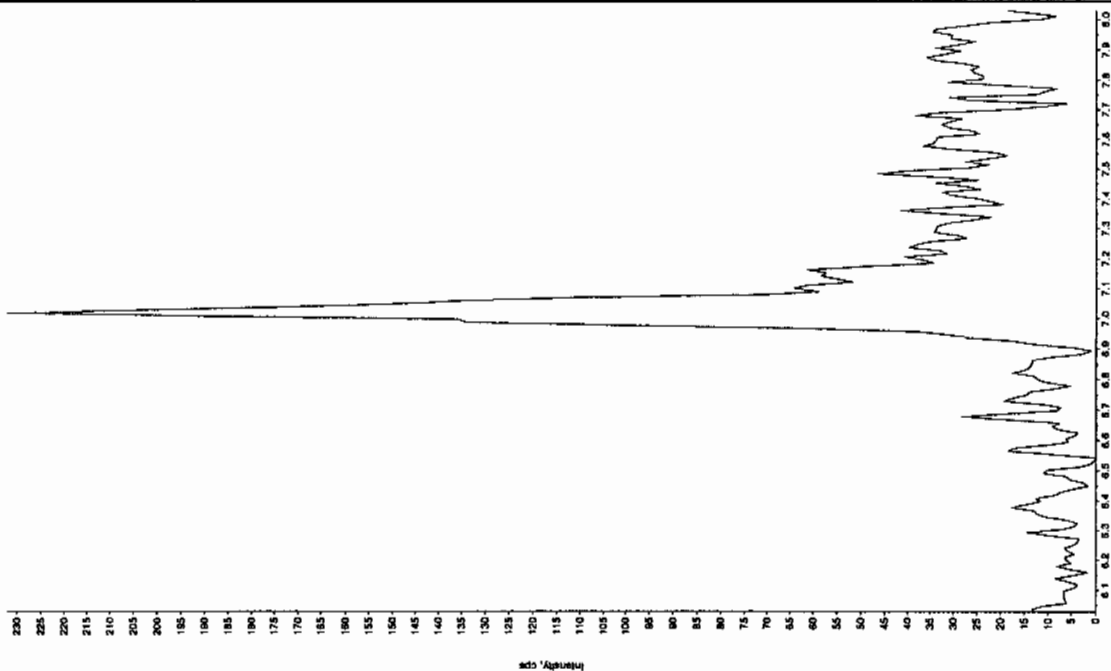
Column: Phenomenex Ultracarb 5u ODS(20)

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

Run 2/19/10

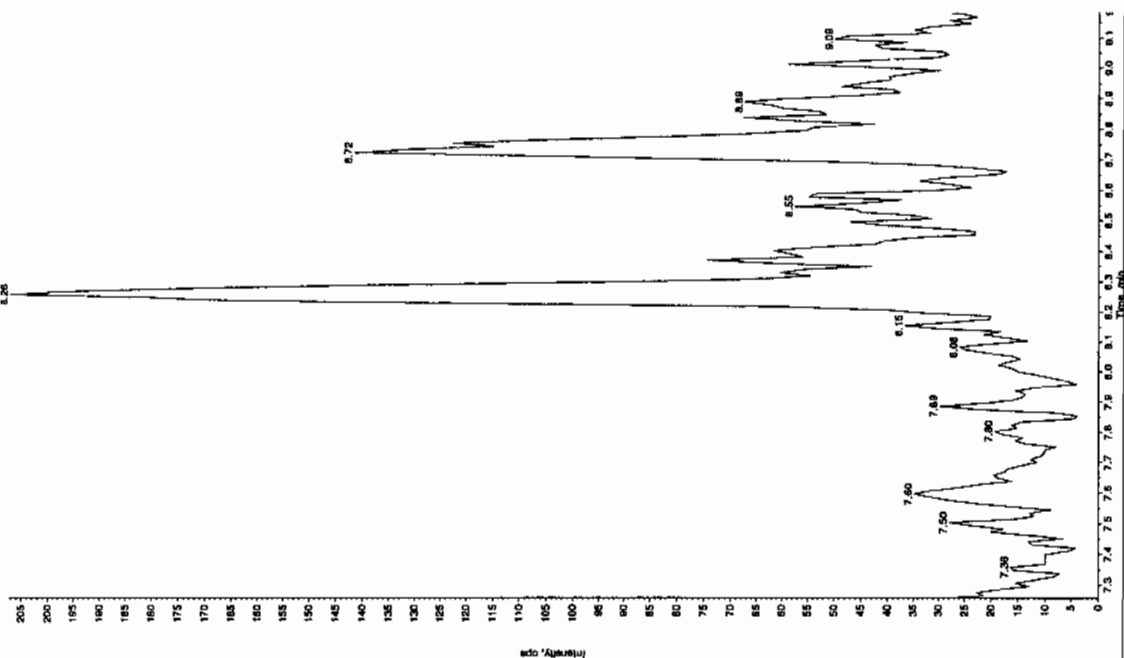
Sample Name: "XBL001" Sample ID: "T1LER" File: "EX02170002.will"
 Peak Name: "TATB" Mass(es): "257.2204.9 amu"
 Comment: "LCMSEXP_9" Annotation: ""

File Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Calculated Conc: 2/17/2010
 Date: 9:42:02 AM
 Acq. Time: 9:42:02 AM
 Modified: No

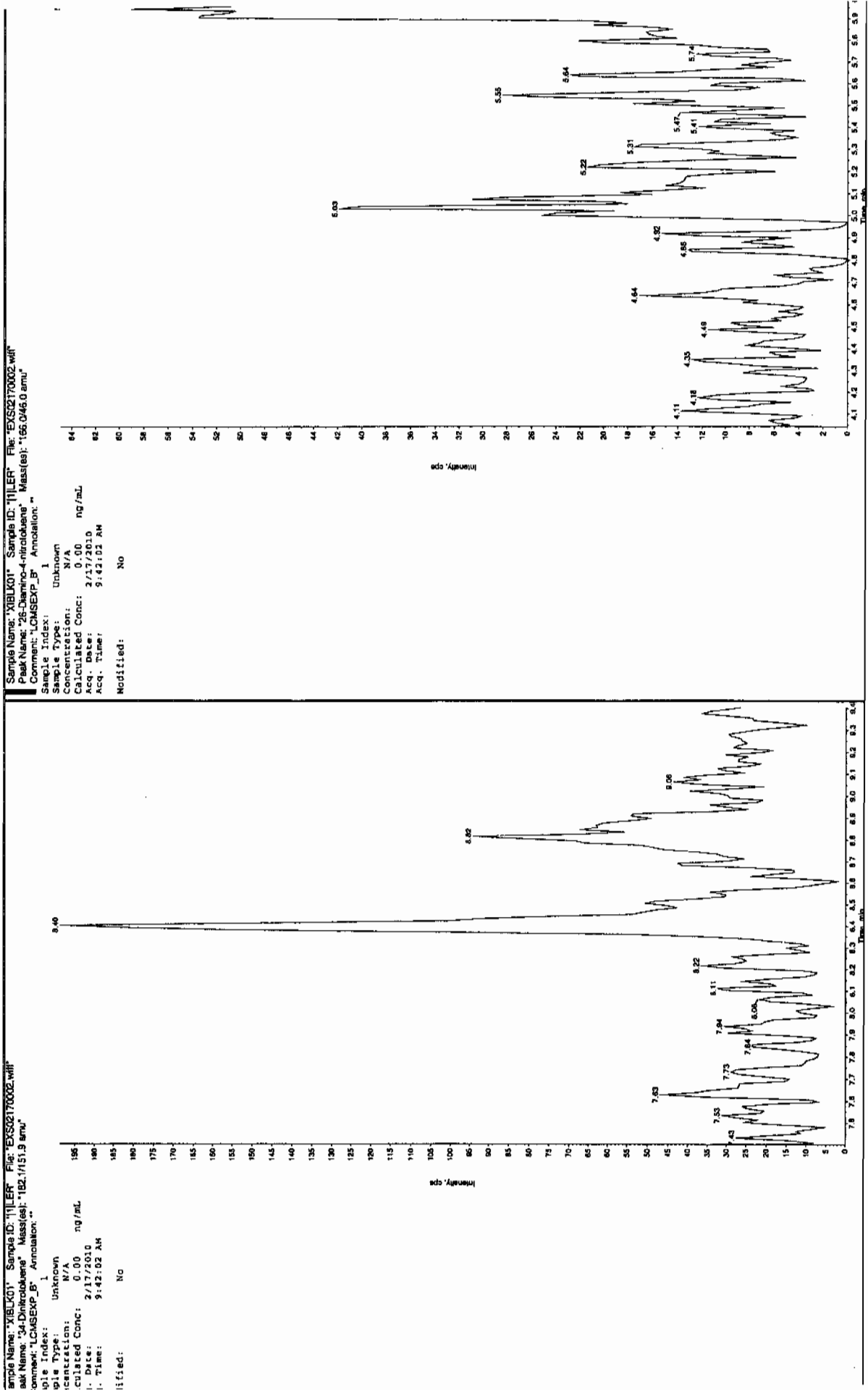


Sample Name: "XBL001" Sample ID: "T1LER" File: "EX02170002.will"
 Peak Name: "35-Dinitrobenzine" Mass(es): "182.046.0 amu"
 Comment: "LCMSEXP_9" Annotation: ""

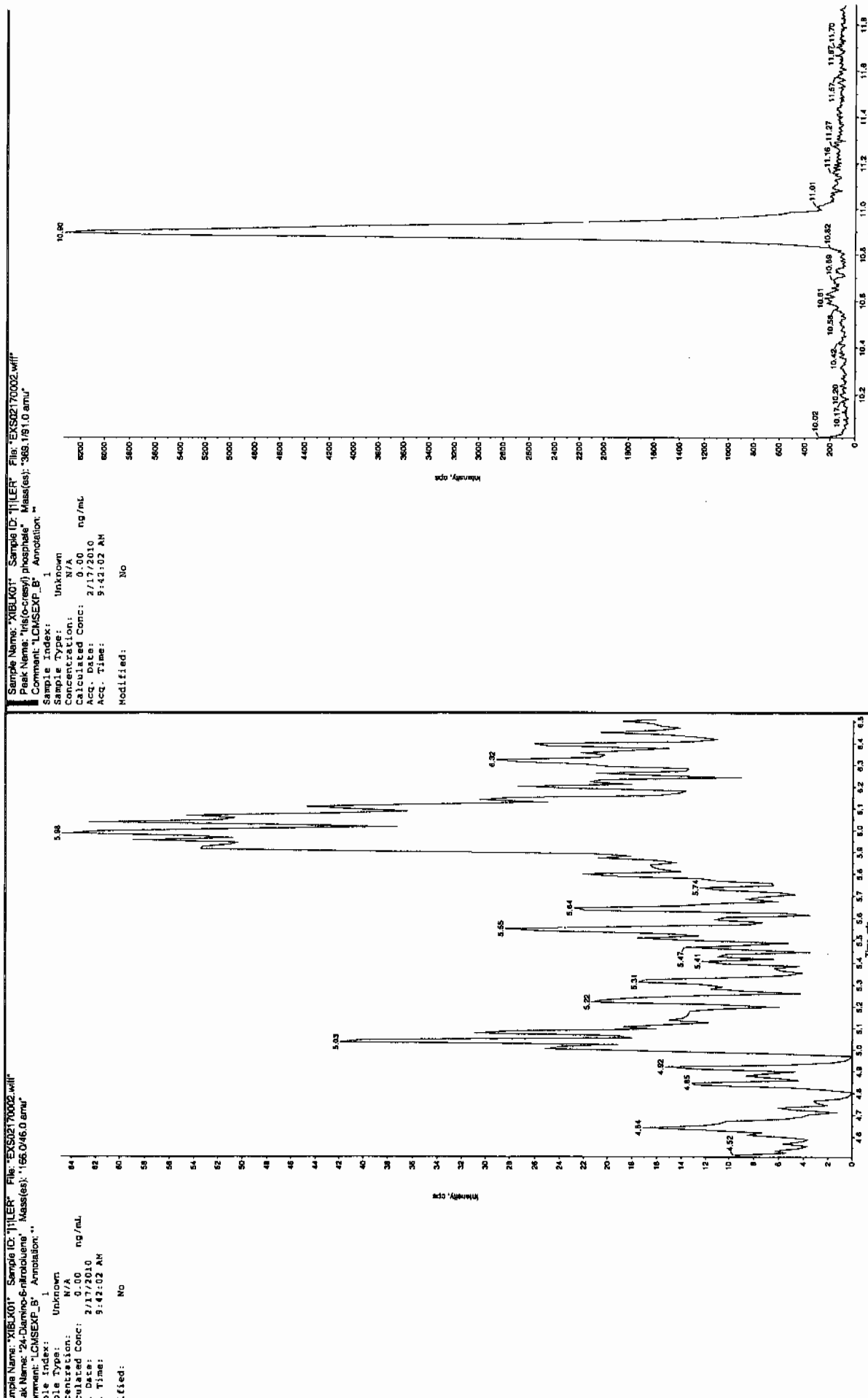
File Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Calculated Conc: 2/17/2010
 Date: 9:42:02 AM
 Acq. Time: 9:42:02 AM
 Modified: No



Run 2/19/10



3L SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4



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

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 16-FEB-10 21:04

GEL Data File: EXP0216009a

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	570.463
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	494.232
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

Printed: Wed Feb 17 10:00:54 2010, Page 17 of 59

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216009a

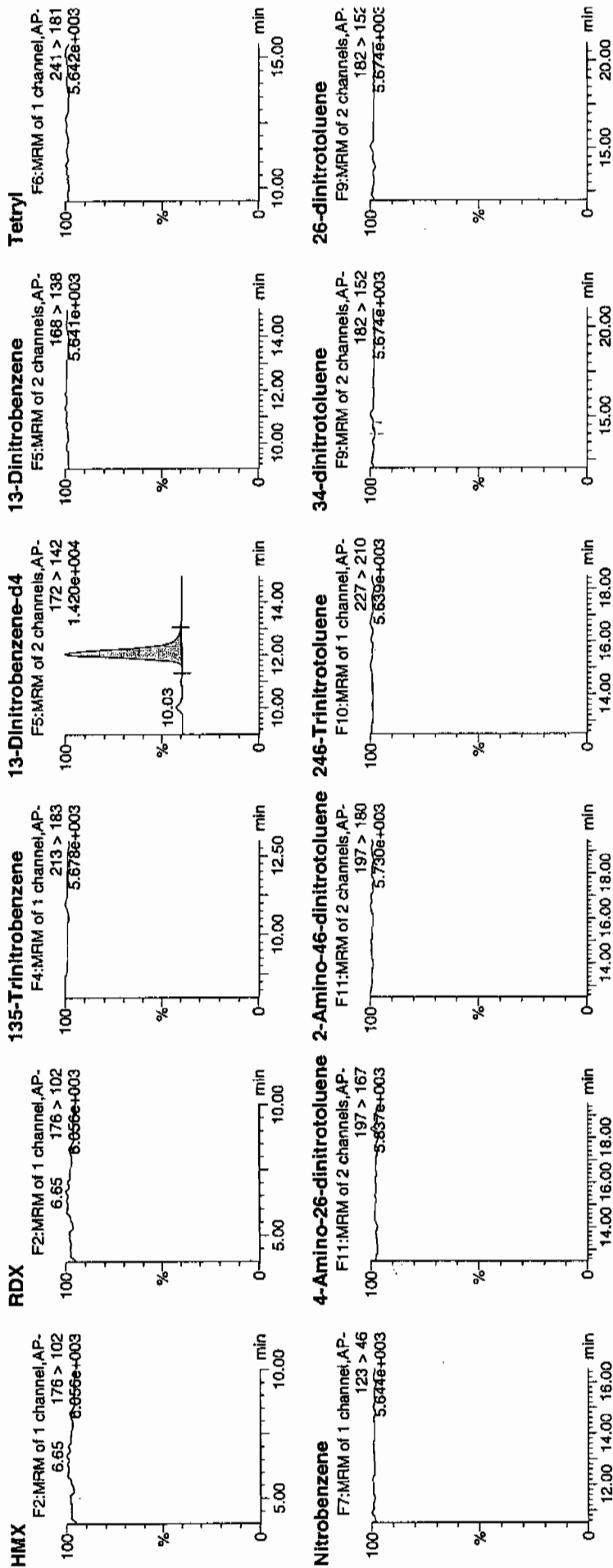
Date: 16-Feb-2010

Time: 21:04:59

ID: XIBLK02

Vial: 1:1,A

WTF
2/17/10

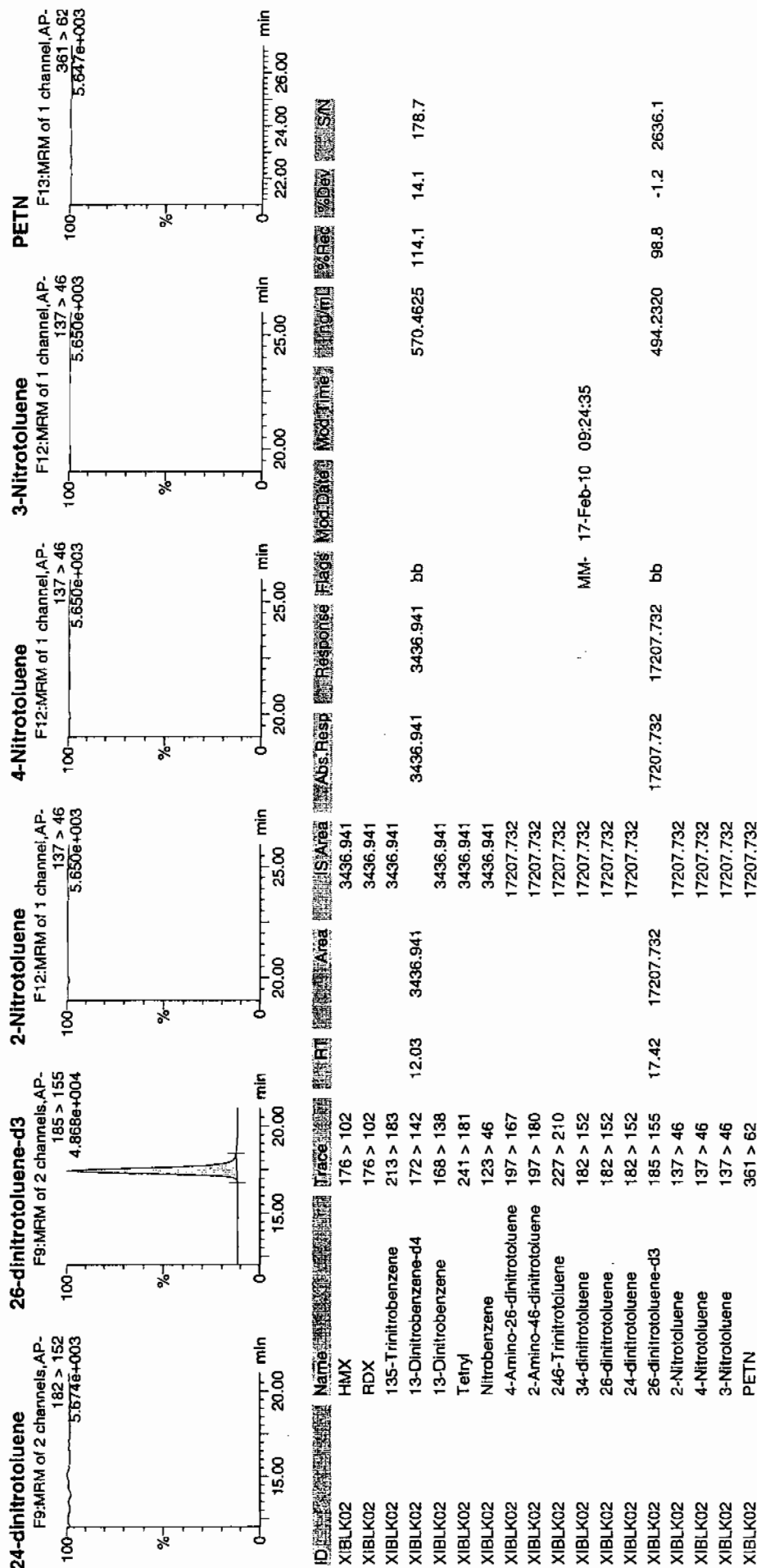


Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Wed Feb 17 10:00:54 2010, Page 18 of 59

Dataset: C:\MASSLYNX\New_Exp_PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 16-FEB-10 22:04

GEL Data File: EXP0216011a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	445.165
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	575.243
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

Printed: Wed Feb 17 10:00:54 2010, Page 21 of 59

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

Dataset: C:\MASSLYNX\New_Exp_PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010

Name: C:\MASSLYNX\NEW_EXP_PRO\Data\EXP0216011a

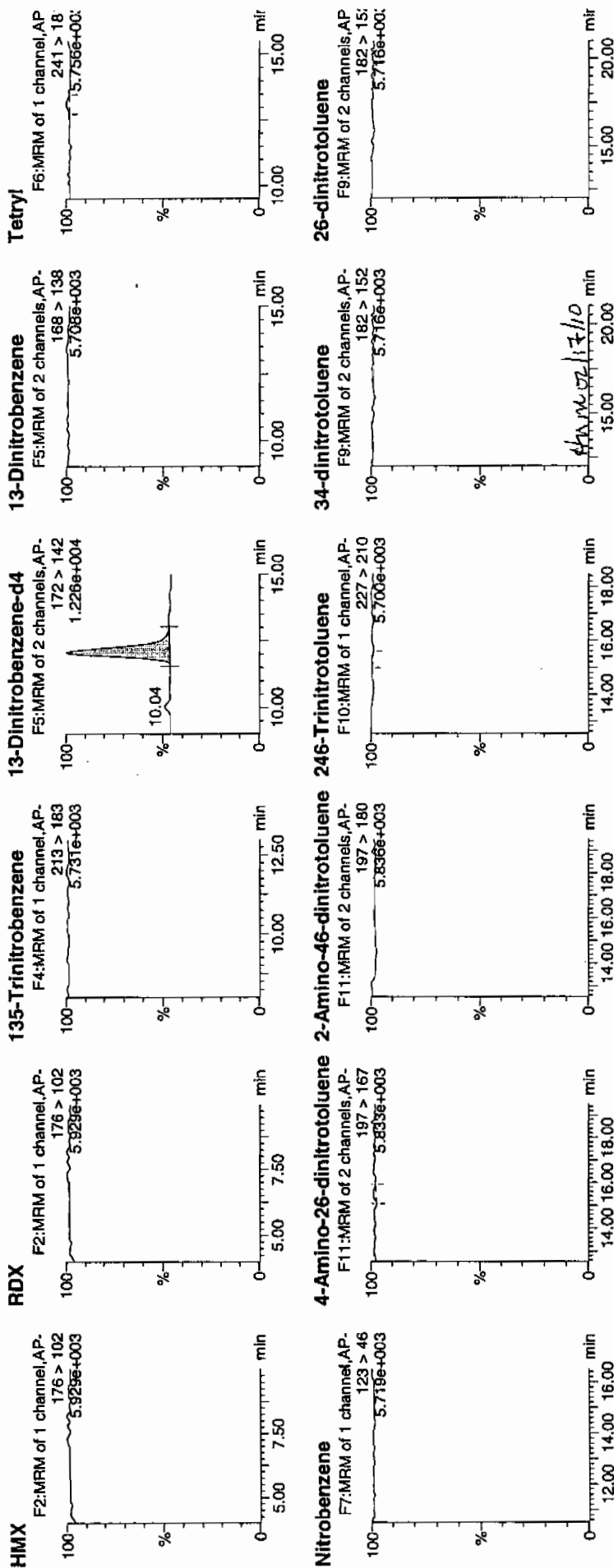
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Time: 22:04:12

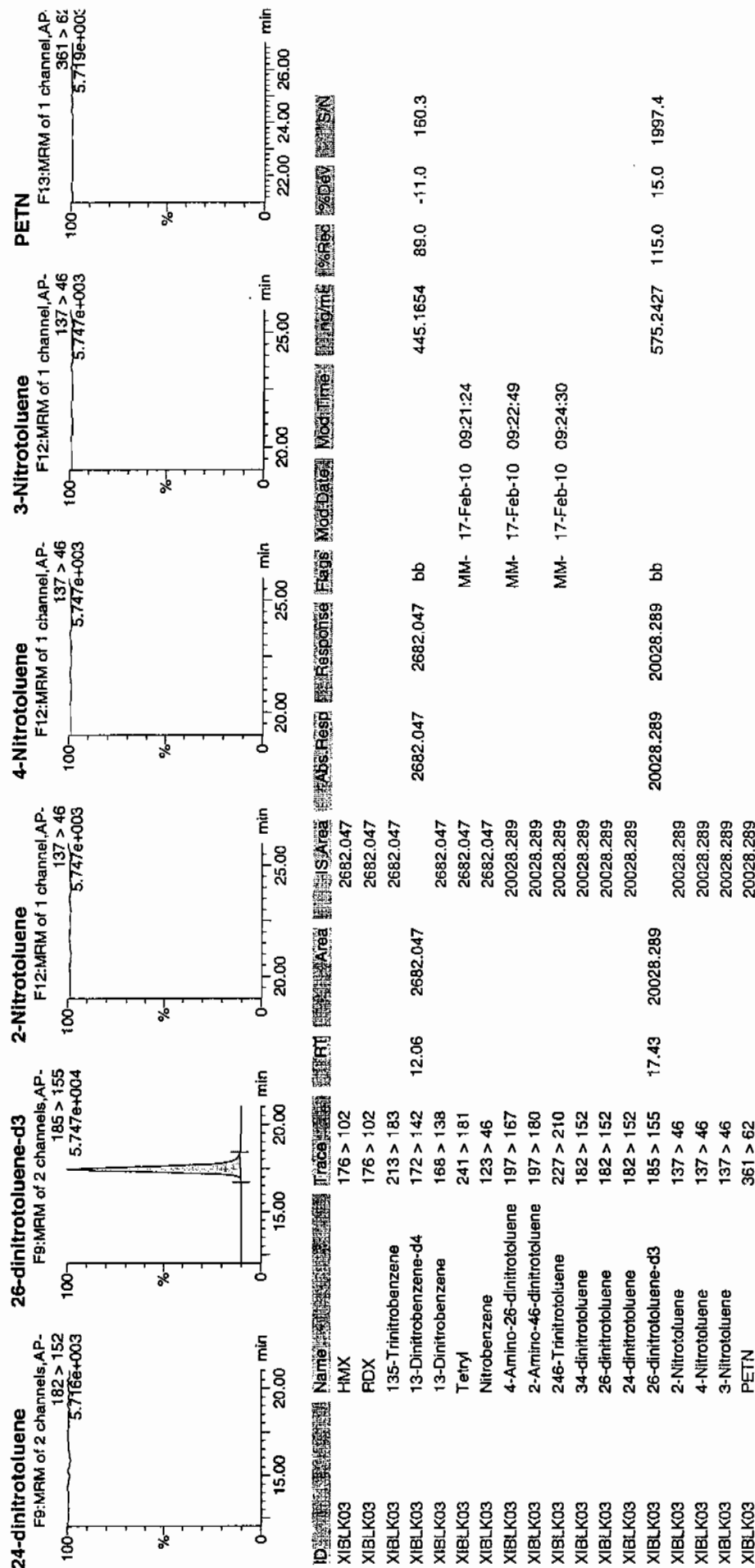
ID: XIBLK03

Vial: 1:1,A

4/2/10



Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 17-FEB-10 03:30

GEL Data File: EXP0216022a

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	470.843
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	468.456
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

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216022a

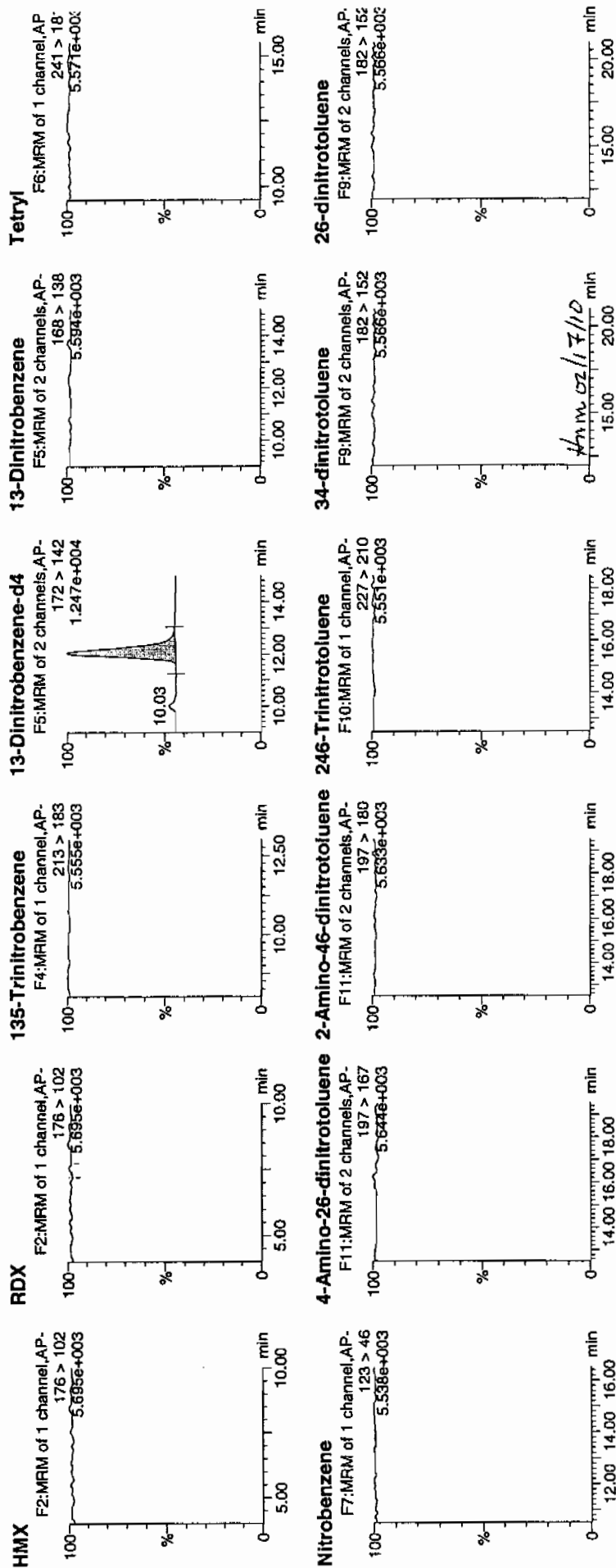
Date: 17-Feb-2010

Time: 03:30:28

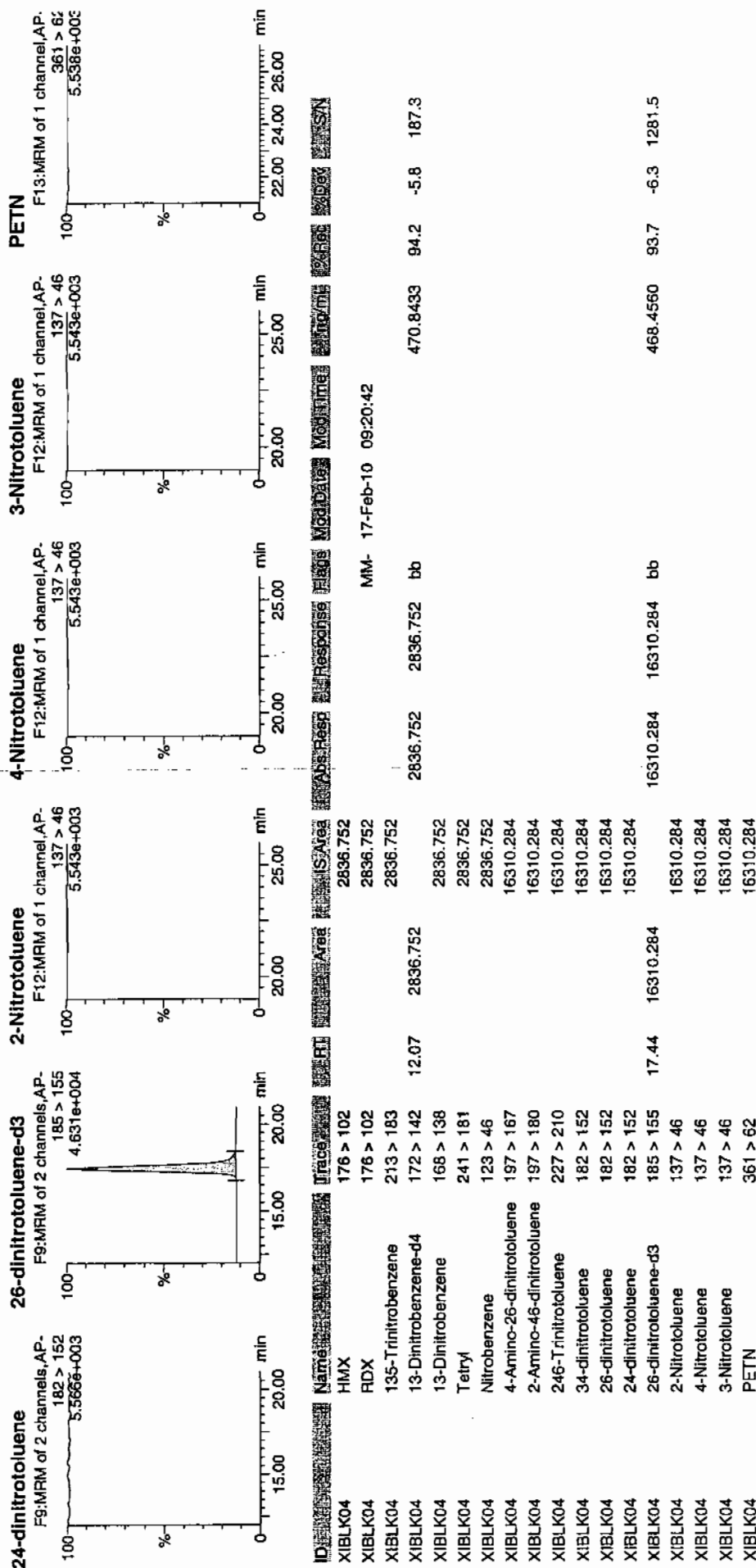
ID: XIBLK04

Vial: 1:1,A

2/17/10



Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 17-FEB-10 06:28

GEL Data File: EXP0216028a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	443.214
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	440.83
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

Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Wed Feb 17 10:00:54 2010, Page 55 of 59

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216028a

Date: 17-Feb-2010

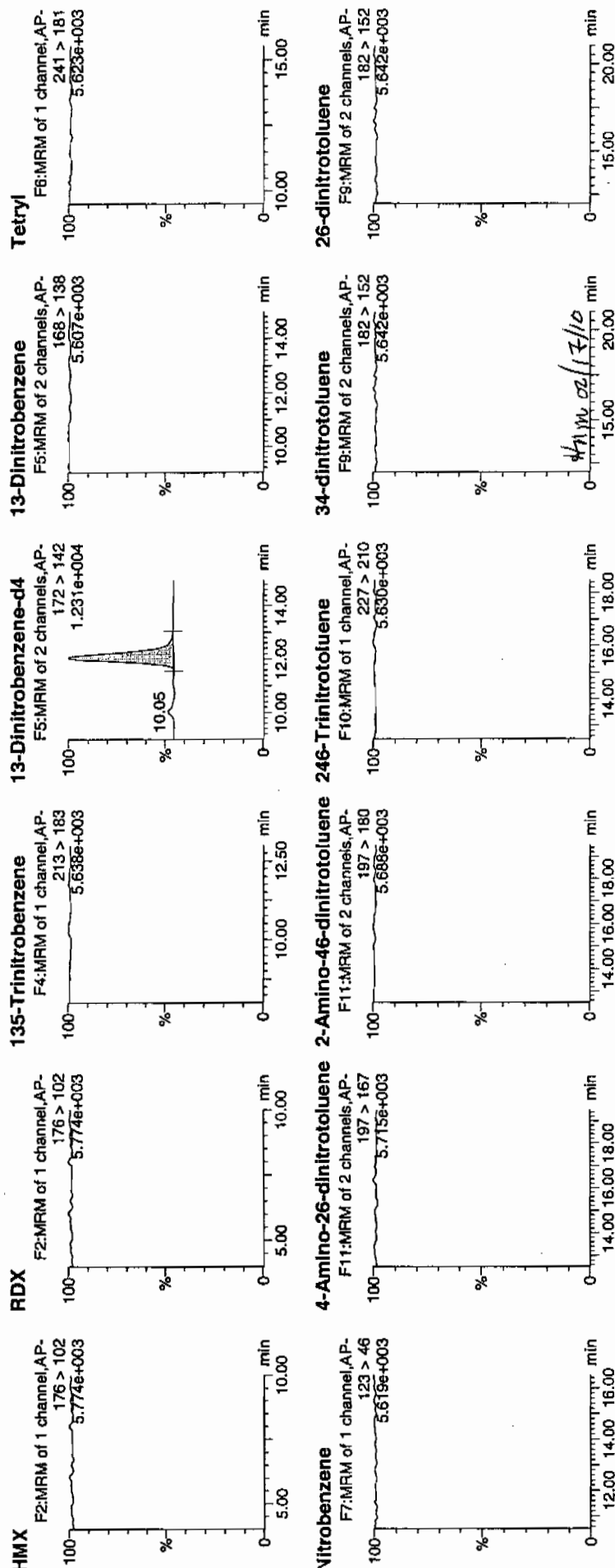
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ID: XIBLK05

Vial: 1:1,A

2/17/10
MJP

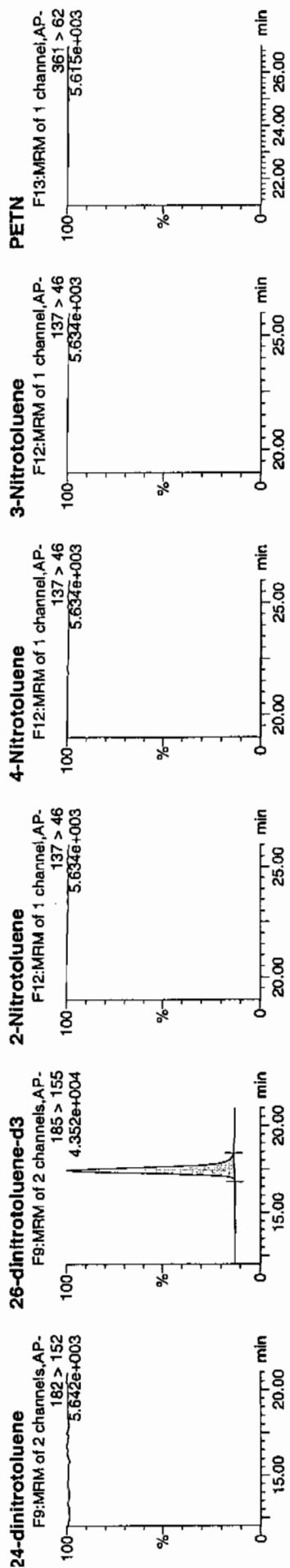
Page 147 of 1698



Printed: Wed Feb 17 10:00:54 2010, Page 56 of 59

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

Dataset: C:\MASSLYNX\New_Exp\PRO1021610expA.qld, Time: Wed Feb 17 10:00:06 2010



ID	Name	Trace	RT	Area	IS Area	Abst Resp	Flags	Mod Date	Mod Time	Conc/mL	% Rec	% Dev	SN
XIBLK05	HMX	176 > 102		2670.289									
XIBLK05	RDX	176 > 102		2670.289									
XIBLK05	135-Trinitrobenzene	213 > 183		2670.289									
XIBLK05	13-Dinitrobenzene-d4	172 > 142	12.07	2670.289		2670.289	bb			443.2139	88.6	-11.4	203.6
XIBLK05	13-Dinitrobenzene	168 > 138		2670.289									
XIBLK05	Tetryl	241 > 181		2670.289									
XIBLK05	Nitrobenzene	123 > 46		2670.289									
XIBLK05	4-Amino-26-dinitrotoluene	197 > 187		15348.437									
XIBLK05	2-Amino-46-dinitrotoluene	197 > 180		15348.437									
XIBLK05	246-Trinitrotoluene	227 > 210		15348.437									
XIBLK05	34-dinitrotoluene	182 > 152		15348.437									
XIBLK05	26-dinitrotoluene	182 > 152		15348.437									
XIBLK05	24-dinitrotoluene	182 > 152		15348.437									
XIBLK05	26-dinitrotoluene-d3	185 > 155	17.44	15348.437		15348.437	bb			440.8303	88.2	-11.8	1328.0
XIBLK05	2-Nitrotoluene	137 > 46		15348.437									
XIBLK05	4-Nitrotoluene	137 > 46		15348.437									
XIBLK05	3-Nitrotoluene	137 > 46		15348.437									
XIBLK05	PETN	361 > 62		15348.437									

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK06

Analysis Date: 17-FEB-10 12:24

GEL Data File: EXP0216040a

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	431.007
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	413.713
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

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216040a

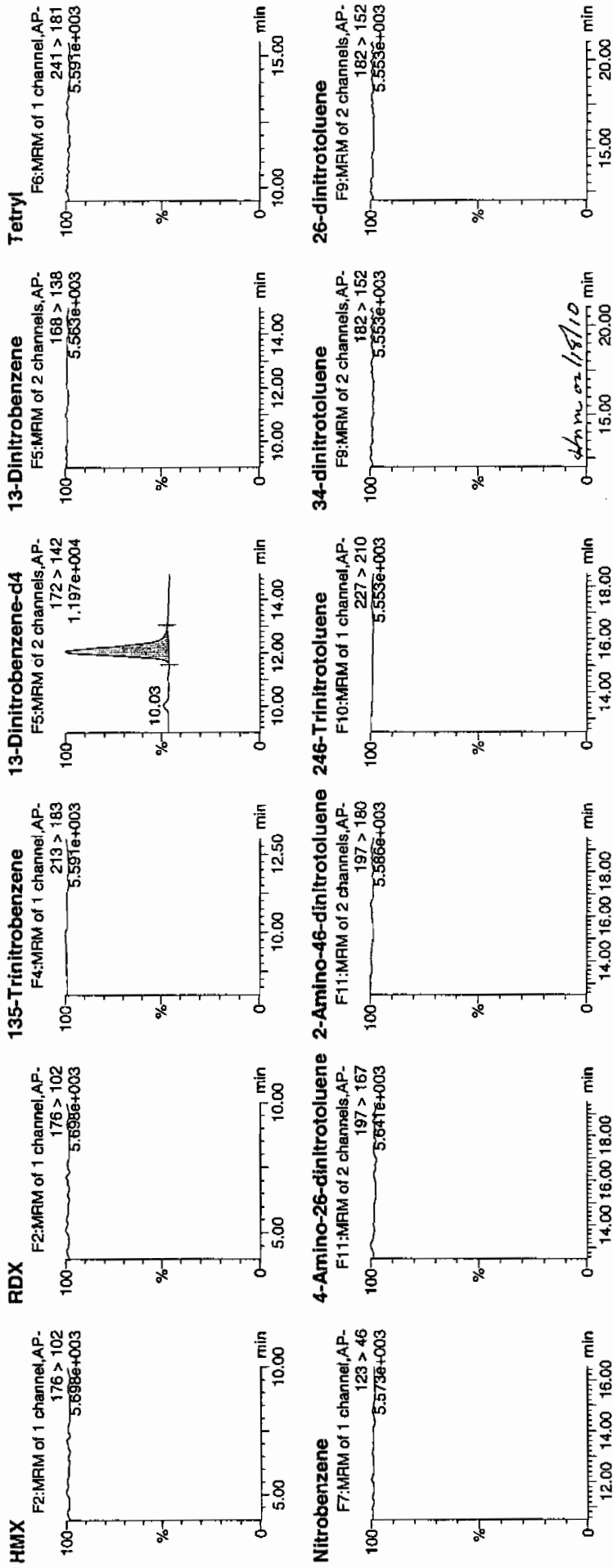
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Time: 12:24:42

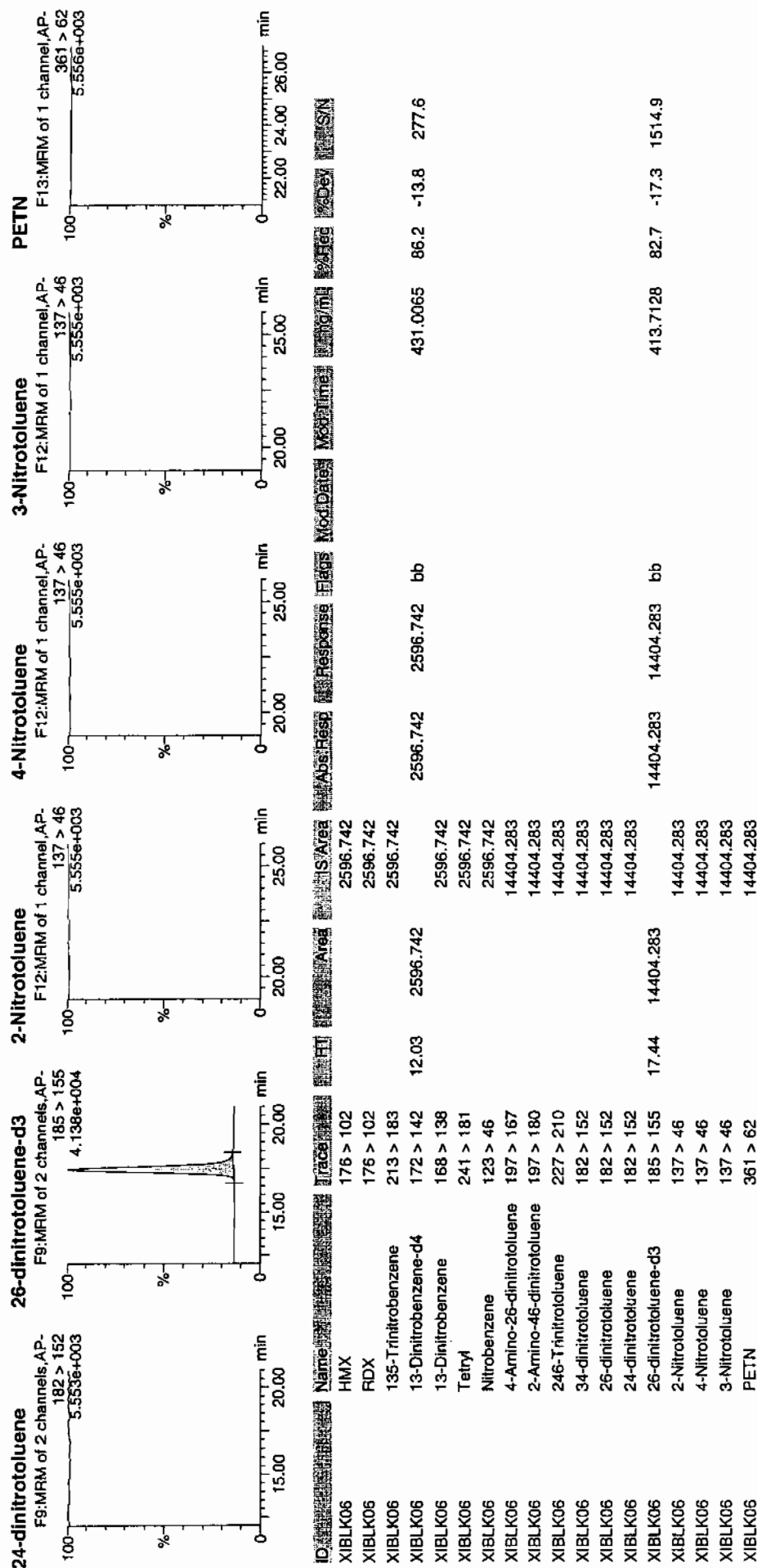
ID: XIBLK06

Vial: 1:1,A

u/13/10



Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK07

Analysis Date: 17-FEB-10 18:50

GEL Data File: EXP0216053a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	517.203
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	500.527
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0
PETN	0	0

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

Dataset: C:\MASSLYNX\New_Exp\PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010

Name: C:\MASSLYNX\NEW_EXP\PRO\Data\EXP0216053a

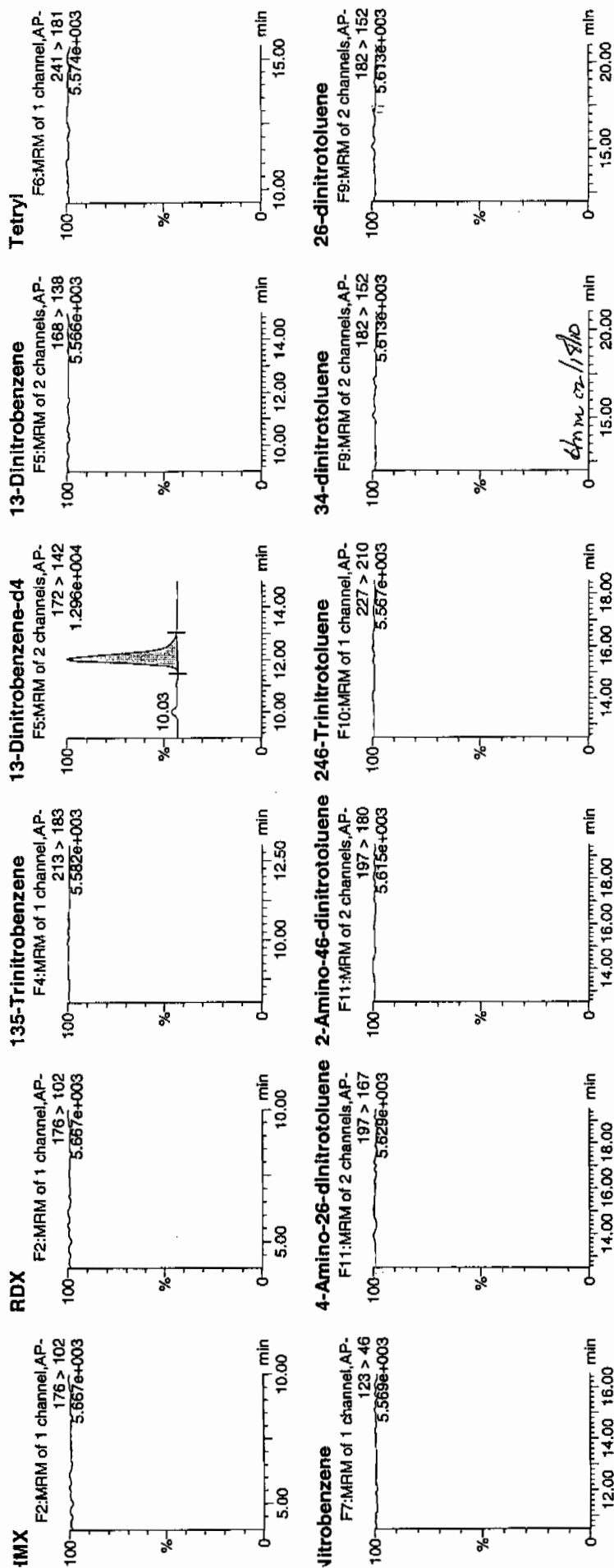
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Time: 18:50:03

D: XIBLK07

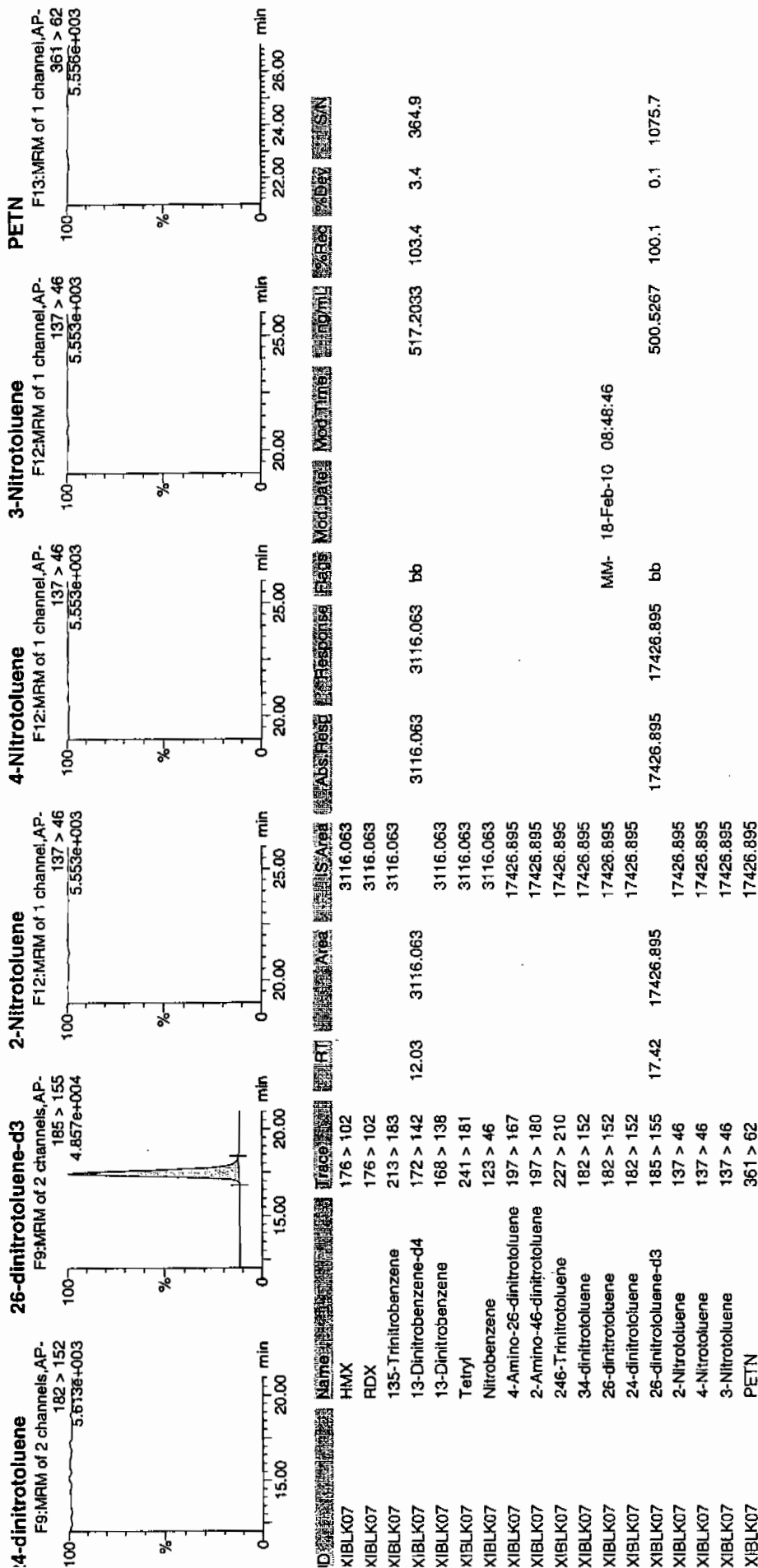
File: 1:1,A

2/18/10



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

Dataset: C:\MASSLYNX\New_Exp\PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK08

Analysis Date: 18-FEB-10 01:14

GEL Data File: EXP0216066a

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	555.508
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	477.827
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

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA1.qtd, Time: Thu Feb 18 08:53:07 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216066a

Date: 18-Feb-2010

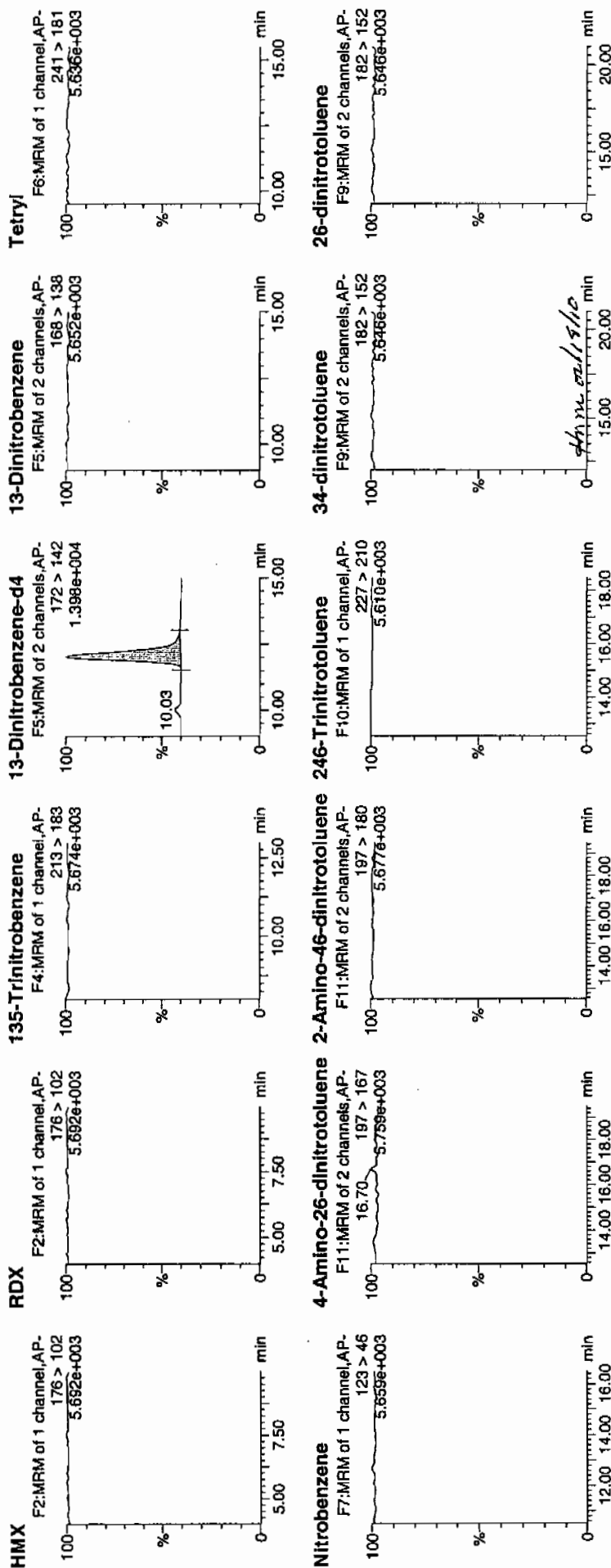
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ID: XIBLK08

Vial: 1:1,A

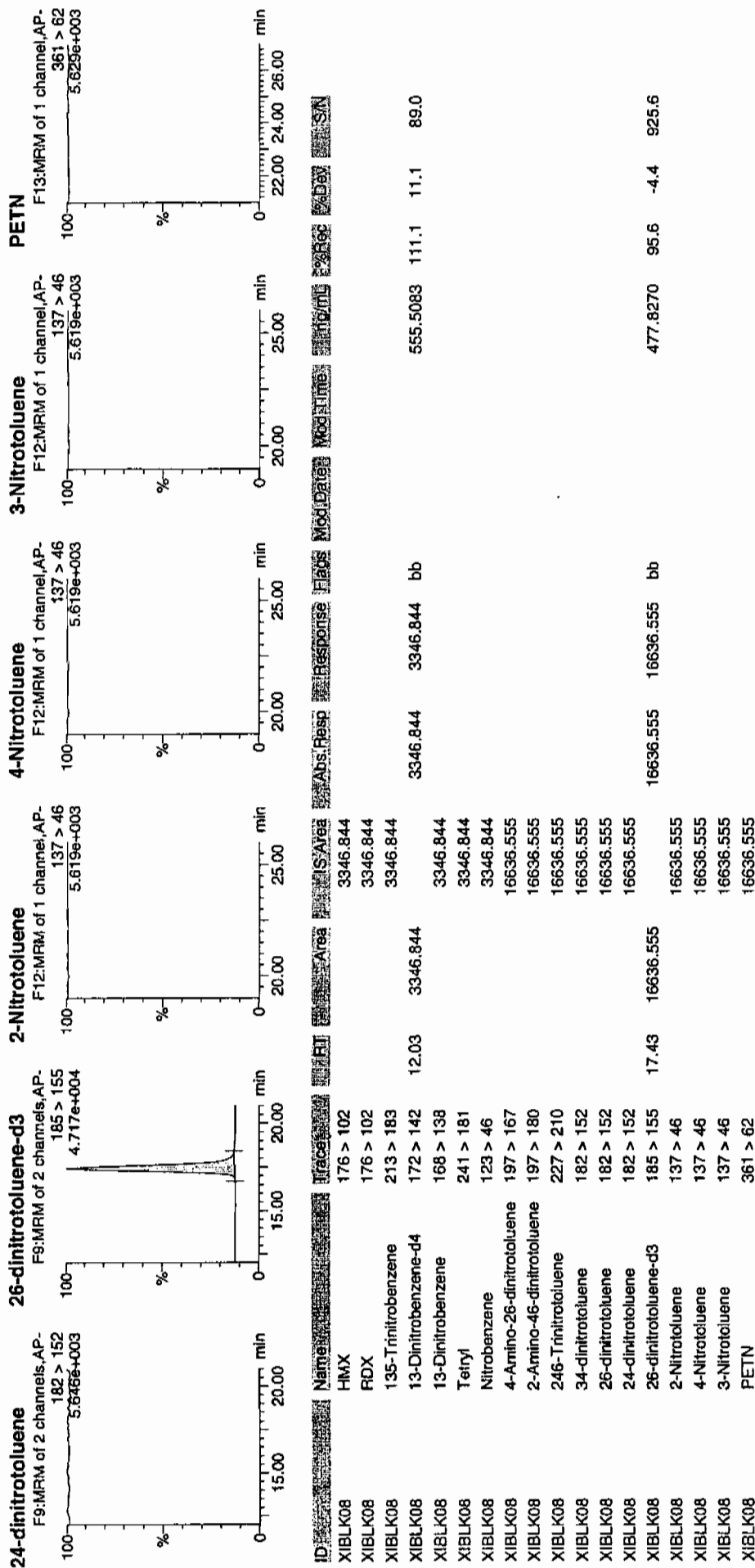
WAT
1/18/10

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

Dataset: C:\MASSLYNX\New_Exp\PRO021610expA1.qld, Time: Thu Feb 18 08:53:07 2010



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK09

Analysis Date: 18-FEB-10 02:43

GEL Data File: EXP0216069a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
RDX	0	0
Tetryl	0	0
m-Dinitrobenzene	0	0
m-Nitrotoluene	0	0
o-Nitrotoluene	0	0
p-Nitrotoluene	0	0
PETN	0	0
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	533.187
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	509.45
2-Amino-4,6-dinitrotoluene	0	0
4-Amino-2,6-dinitrotoluene	0	0
HMX	0	0
Nitrobenzene	0	0

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216069a

Date: 18-Feb-2010

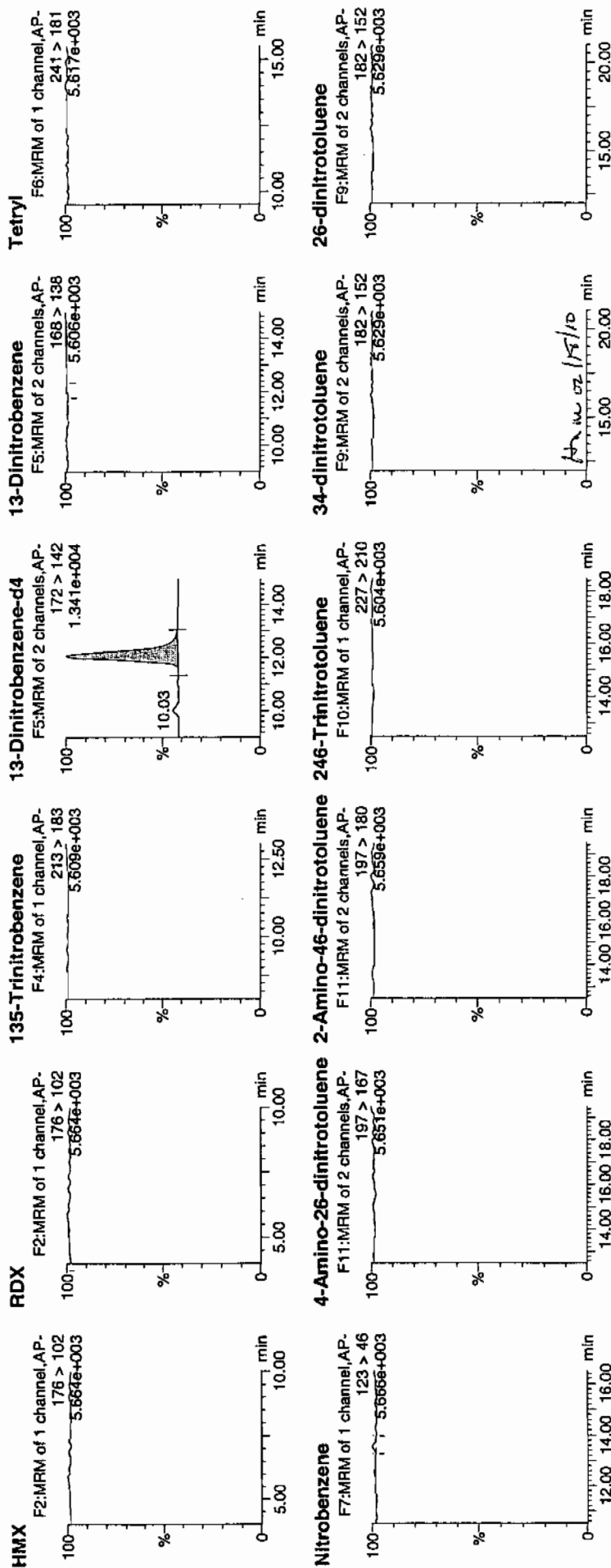
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Vial: 1:1,F

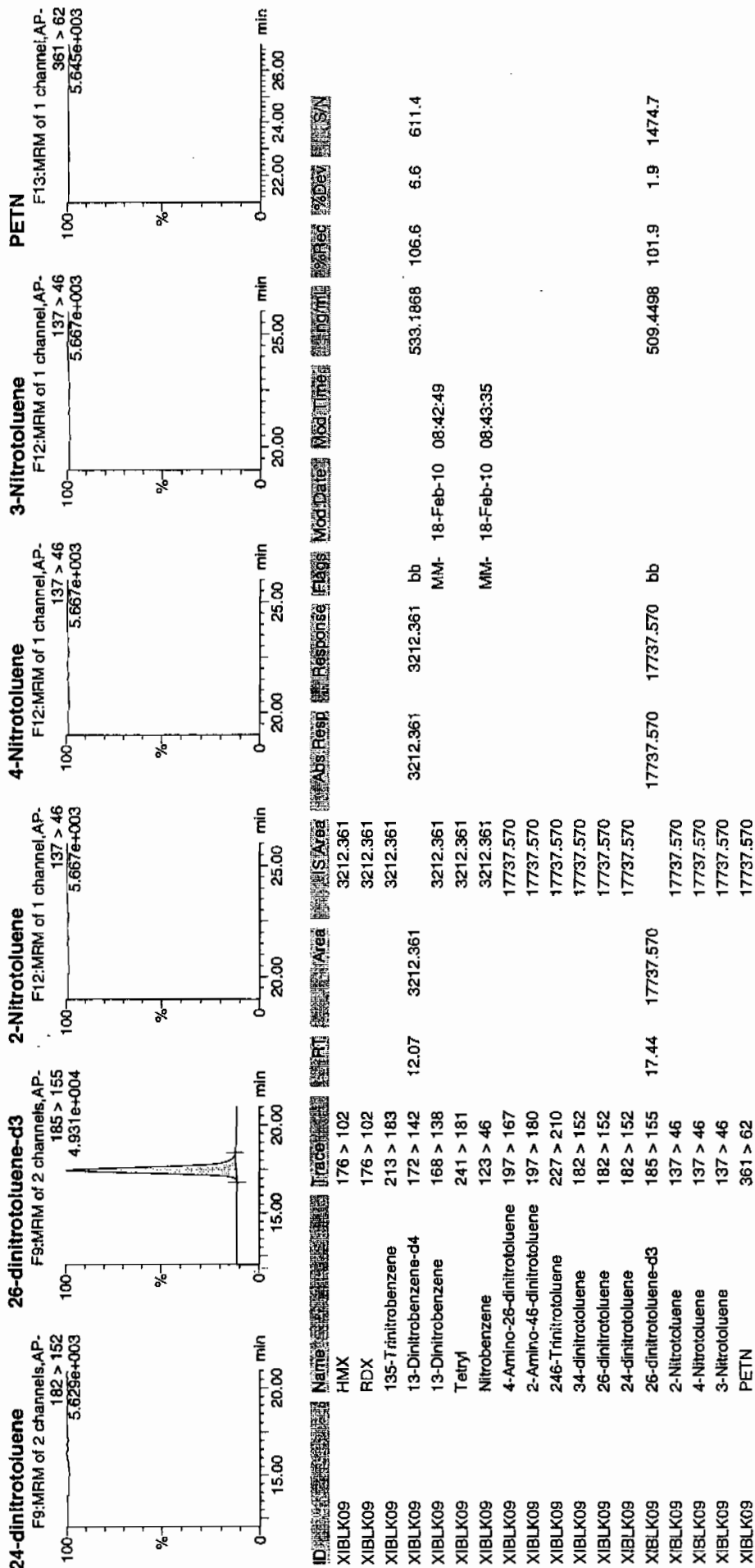
1/18/10

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

Dataset: C:\MASSLYNX\New_Exp_PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK10

Analysis Date: 18-FEB-10 07:40

GEL Data File: EXP0216079a

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	480.33
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	458.446
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

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216079a

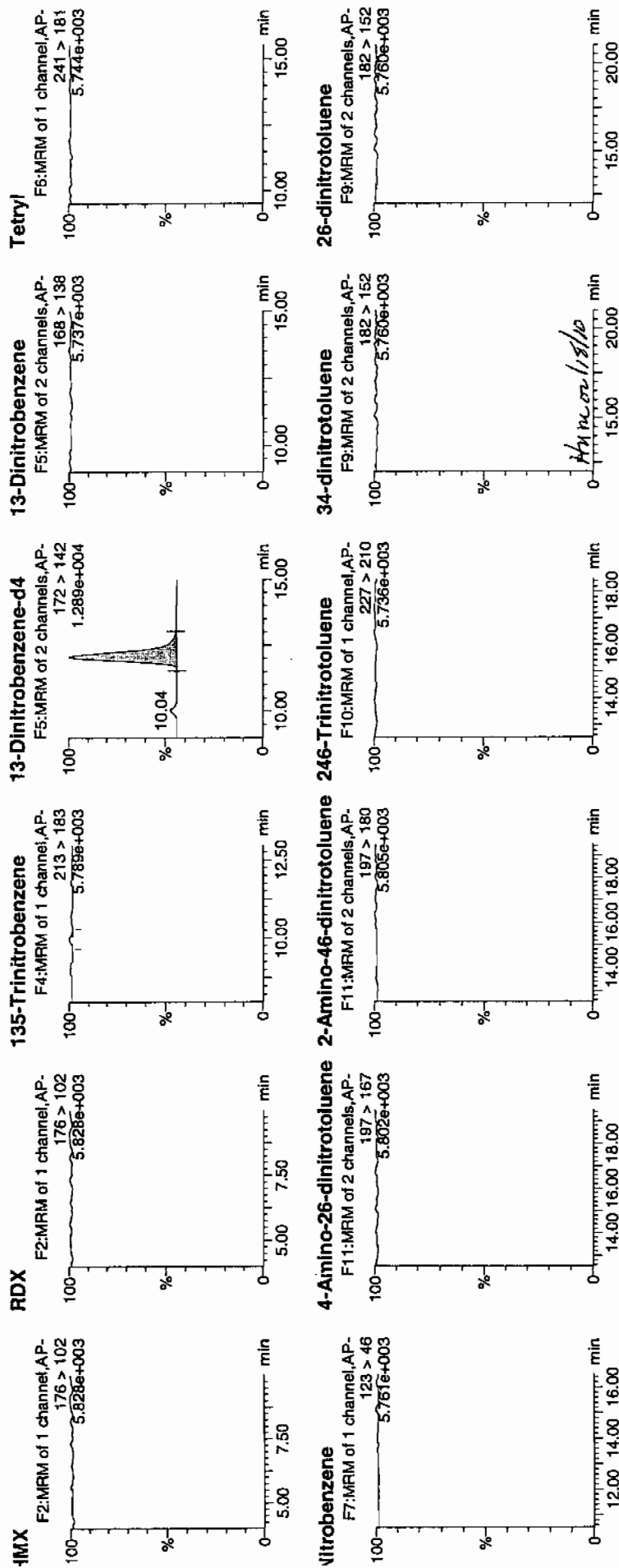
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Time: 07:40:00

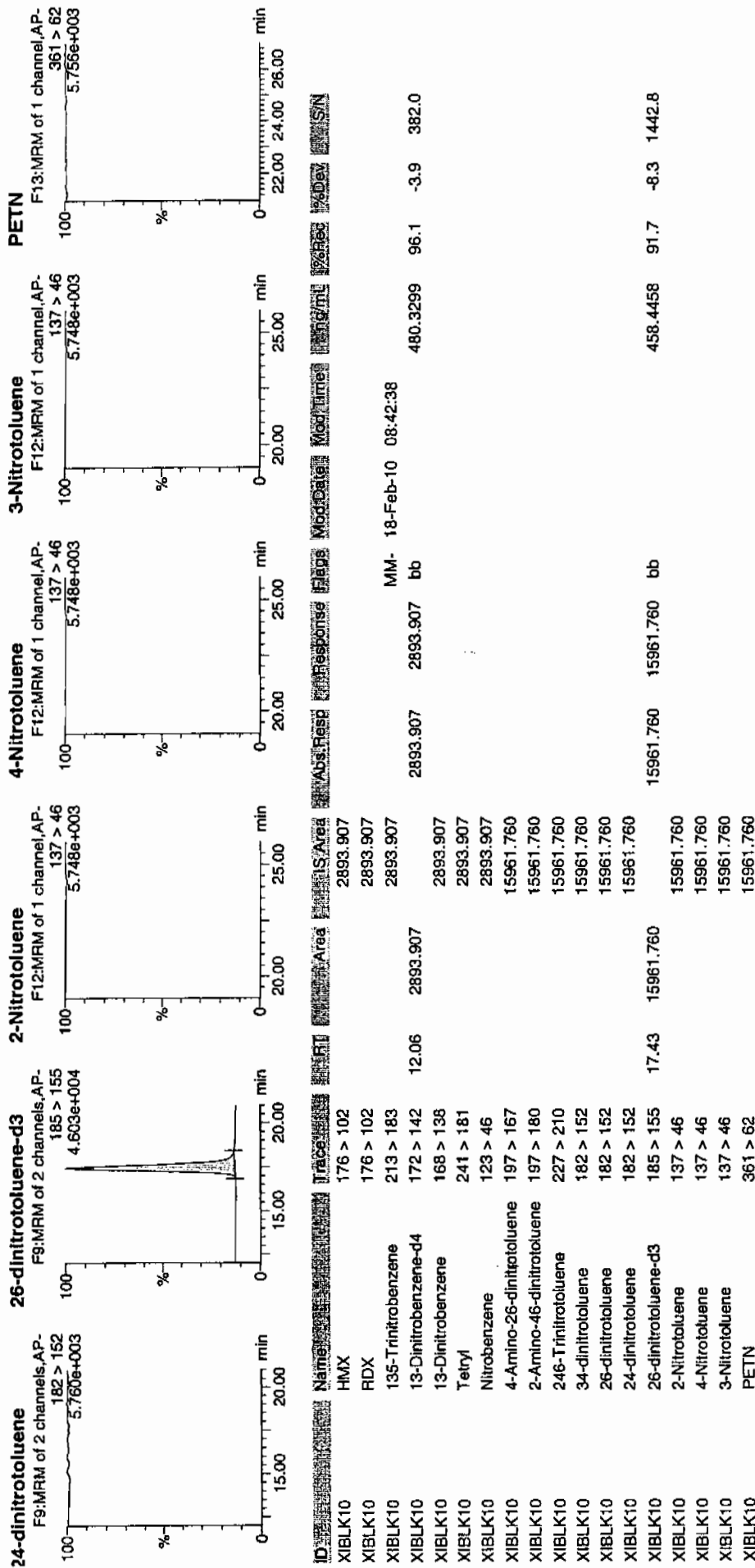
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/lat: 1:1,A

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1/18/10



Dataset: C:\MASSLYNX\New_Exp_PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK11

Analysis Date: 18-FEB-10 13:05

GEL Data File: EXP0216090a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	434.95
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
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	455.405
2,4,6-Trinitrotoluene	0	0

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216090a

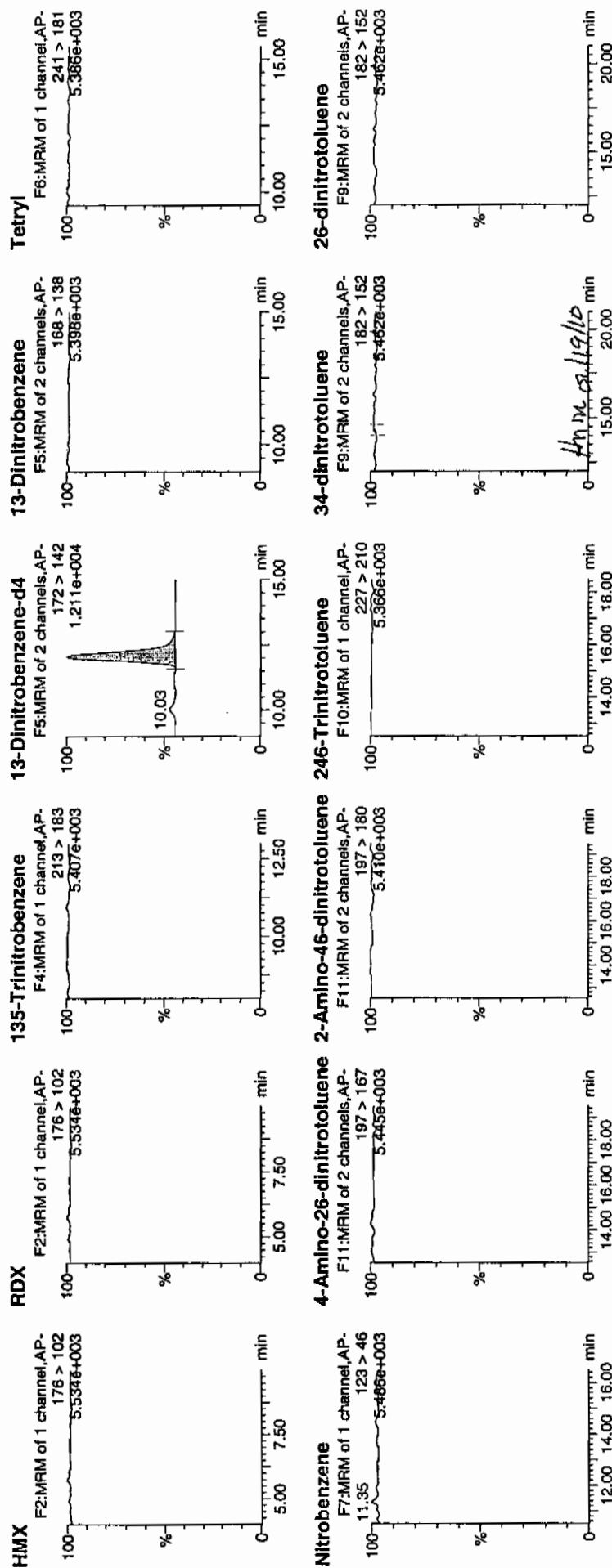
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Time: 13:05:54

ID: XIBLK11

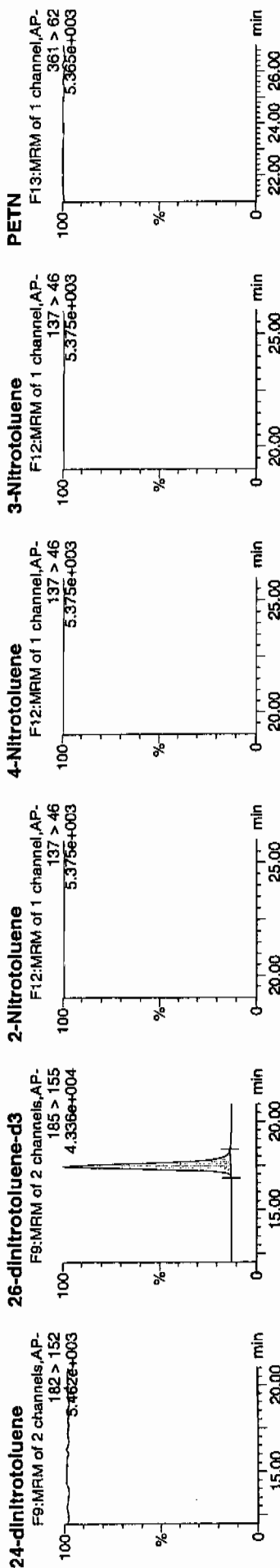
Vial: 1:1,A

1/19/10



Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

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ID	Name	Trace	Hit	Area	SArea	Abs.Resh	Response	Flags	Mod.Date	Mod.Time	End.ms	%Rec	%Dev	SN
XIBLK11	HMX	176 > 102			2743.740									
XIBLK11	RDX	176 > 102			2743.740									
XIBLK11	135-Trinitrobenzene	213 > 183			2743.740									
XIBLK11	13-Dinitrobenzene-d4	172 > 142	12.06	2743.740		2743.740	2743.740	bb			455.4052	91.1	-8.9	327.5
XIBLK11	13-Dinitrobenzene	168 > 138			2743.740									
XIBLK11	Tetryl	241 > 181			2743.740									
XIBLK11	Nitrobenzene	123 > 46			2743.740									
XIBLK11	4-Amino-26-dinitrotoluene	197 > 167			15143.687									
XIBLK11	2-Amino-46-dinitrotoluene	197 > 180			15143.687									
XIBLK11	246-Trinitrotoluene	227 > 210			15143.687				MM-	19-Feb-10	08:42:41			
XIBLK11	34-dinitrotoluene	182 > 152			15143.687									
XIBLK11	26-dinitrotoluene	182 > 152			15143.687									
XIBLK11	24-dinitrotoluene	182 > 152			15143.687									
XIBLK11	26-dinitrotoluene-d3	185 > 155	17.43	15143.687		15143.687	15143.687	bb			434.9496	87.0	-13.0	1161.5
XIBLK11	2-Nitrotoluene	137 > 46			15143.687									
XIBLK11	4-Nitrotoluene	137 > 46			15143.687									
XIBLK11	3-Nitrotoluene	137 > 46			15143.687									
XIBLK11	PETN	361 > 62			15143.687									

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK12

Analysis Date: 18-FEB-10 19:00

GEL Data File: EXP0216102a

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	463.109
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	440.854
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

Printed: Fri Feb 19 08:50:21 2010, Page 43 of 97

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216102a

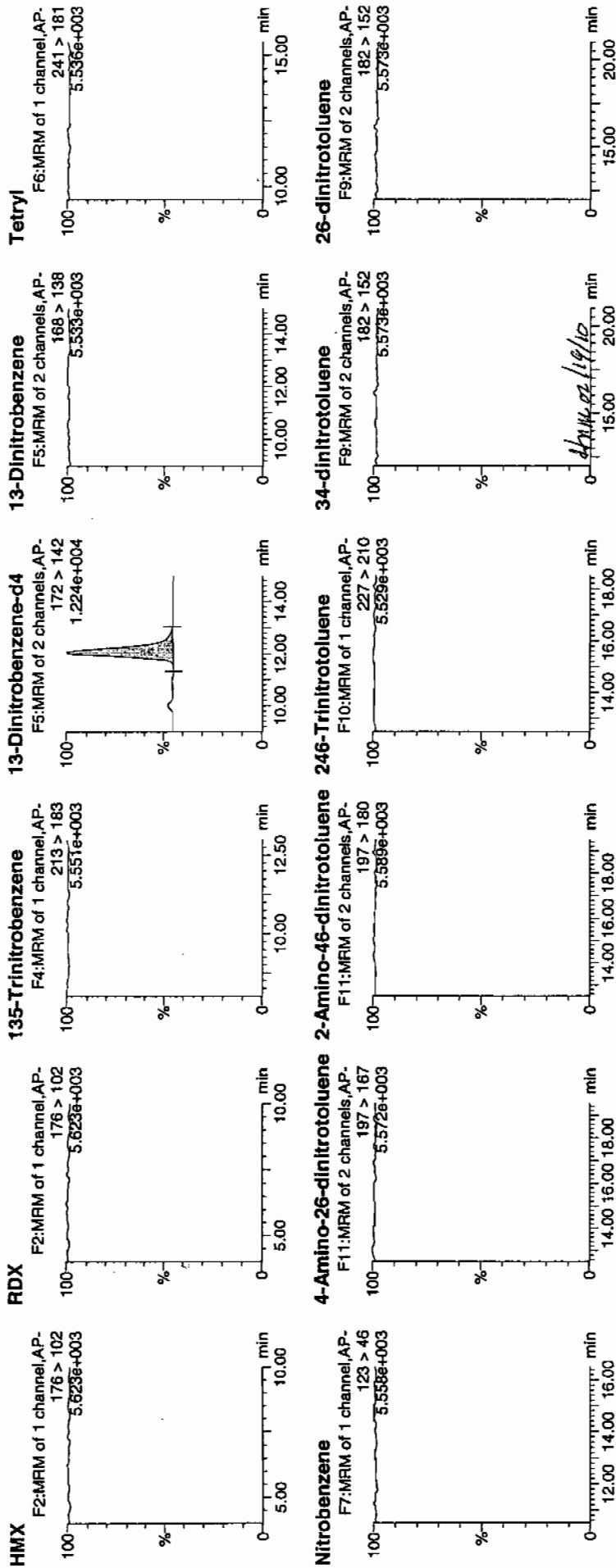
Date: 18-Feb-2010

Time: 19:00:50

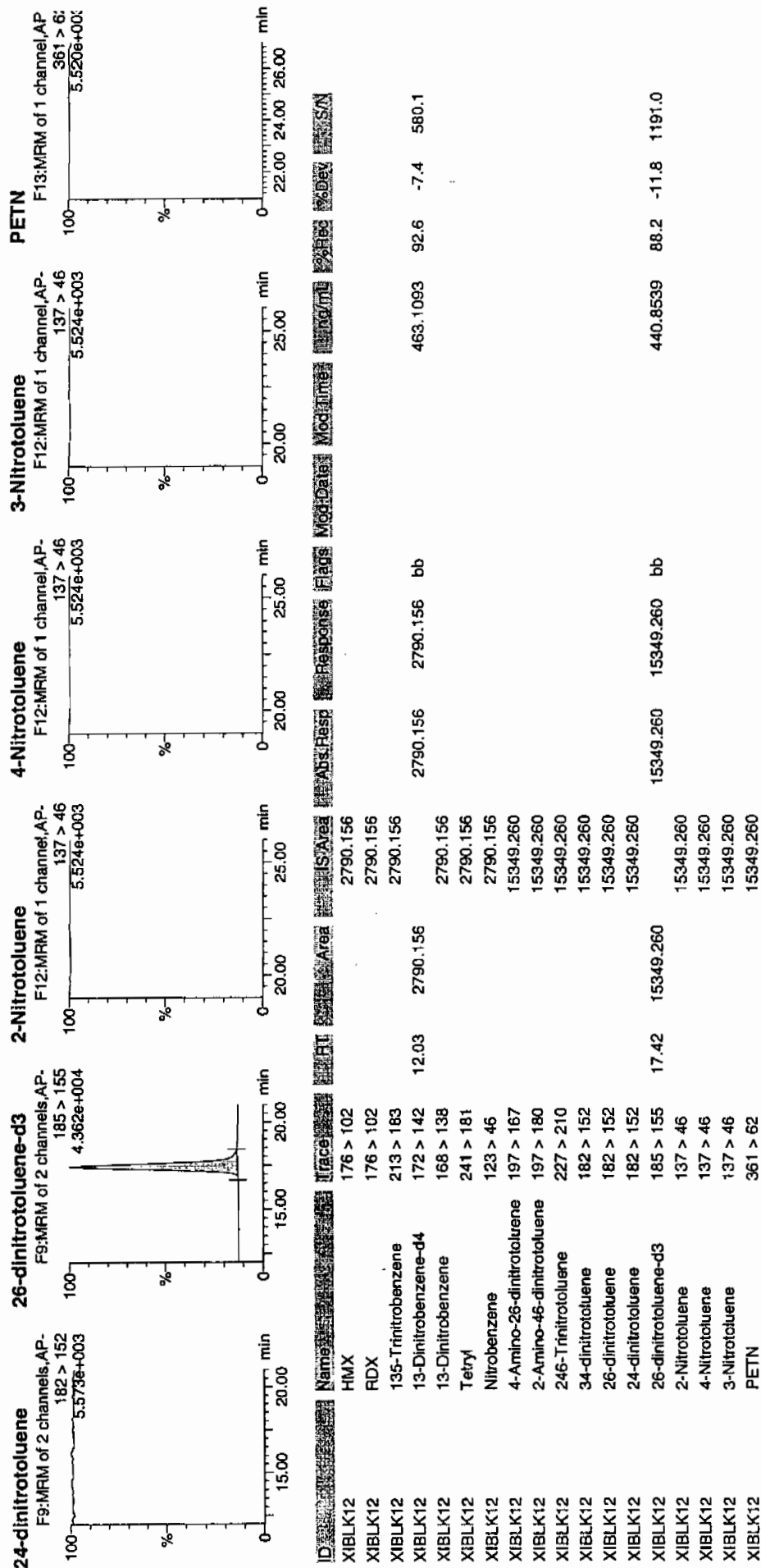
ID: XIBLK12

Vial: 1:1,A

107
2/19/10



Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010



Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK13

Analysis Date: 19-FEB-10 01:24

GEL Data File: EXP0216115a

Instrument ID: LCMSMS

Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	485.557
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
3,4-Dinitrotoluene	0	0
1,3,5-Trinitrobenzene	0	0
1,3-Dinitrobenzene-d4	500	480.924

Printed: Fri Feb 19 08:50:21 2010, Page 69 of 97

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216115a

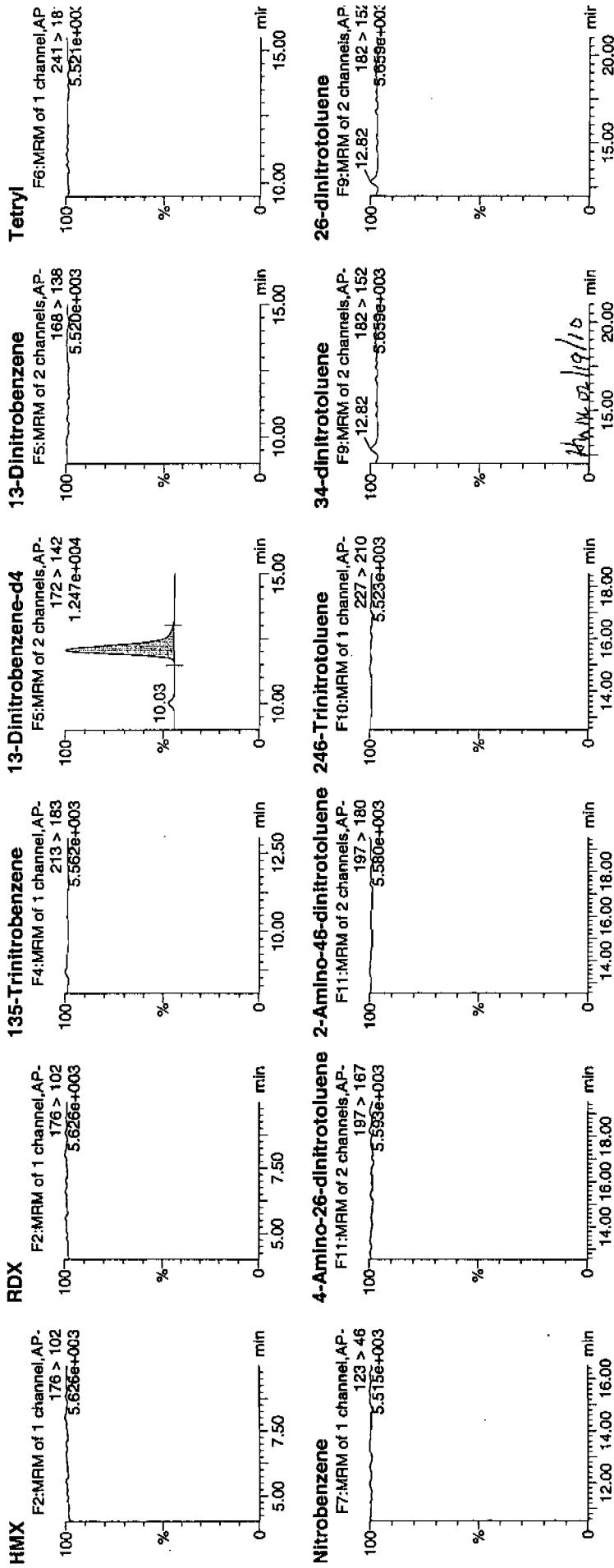
Date: 19-Feb-2010

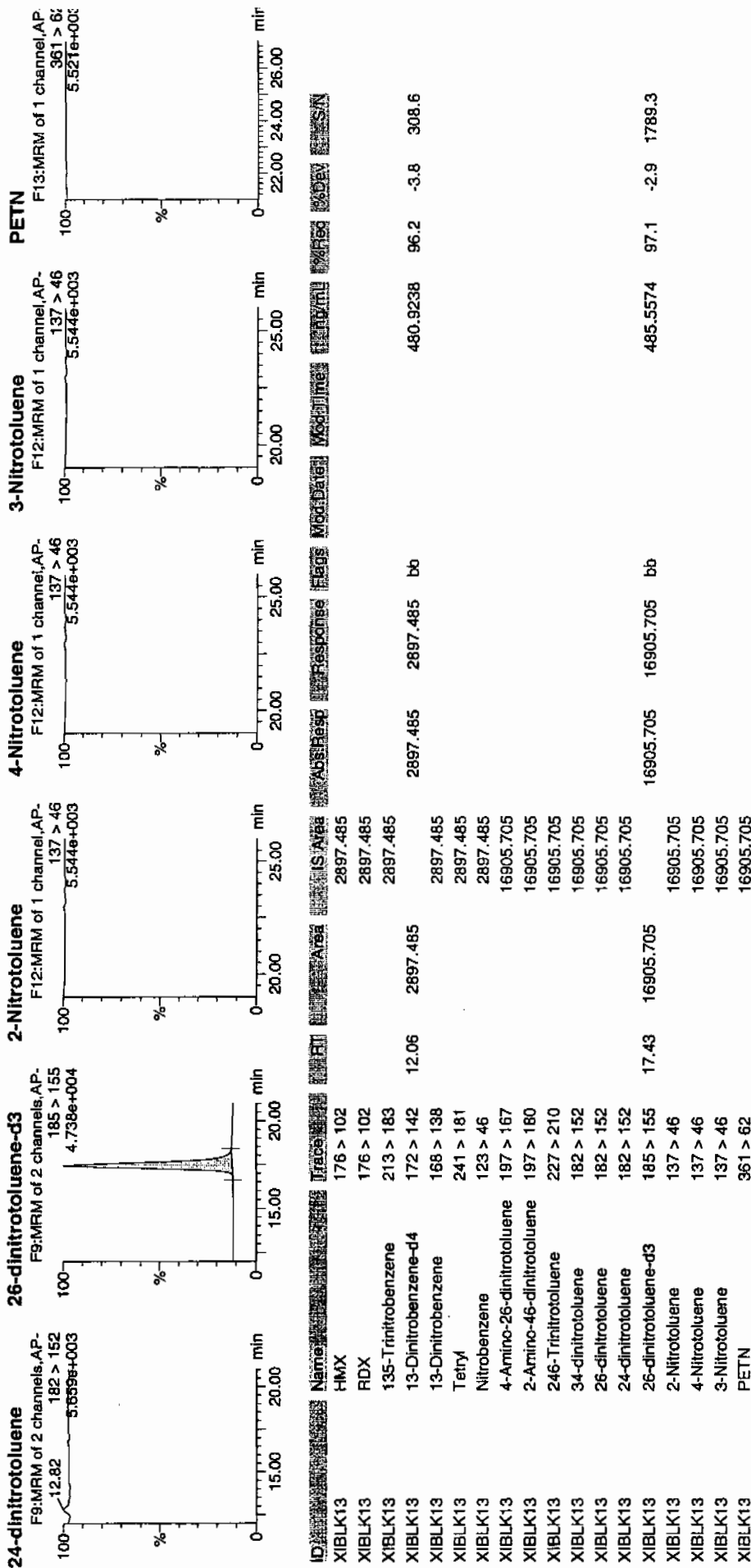
Time: 01:24:51

ID: XIBLK13

Vial: 1:1,A

2/19/10
MTP





4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK14

Analysis Date: 19-FEB-10 07:21

GEL Data File: EXP0216127a

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	437.668
2,4,6-Trinitrotoluene	0	0
2,4-Dinitrotoluene	0	0
2,6-Dinitrotoluene	0	0
2,6-Dinitrotoluene-d3	500	437.697
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

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216127a

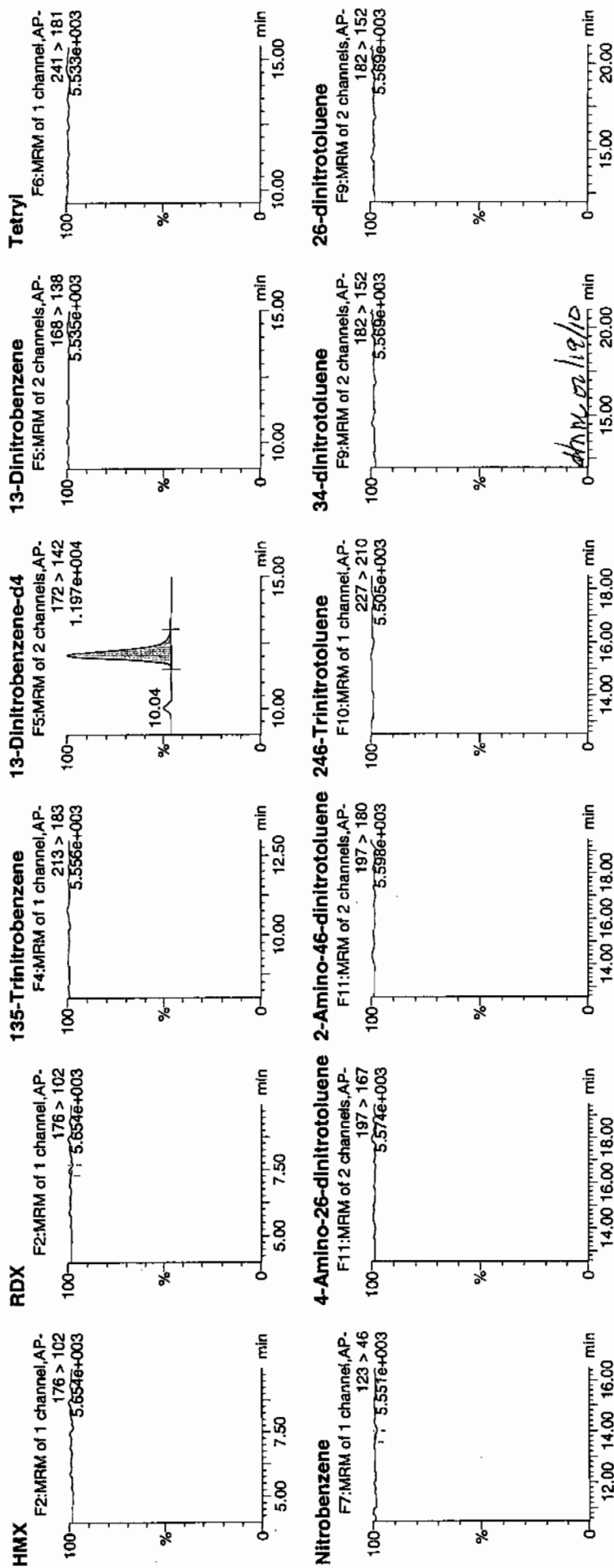
Date: 19-Feb-2010

Time: 07:21:28

ID: XIBLK14

Vial: 1:1,A

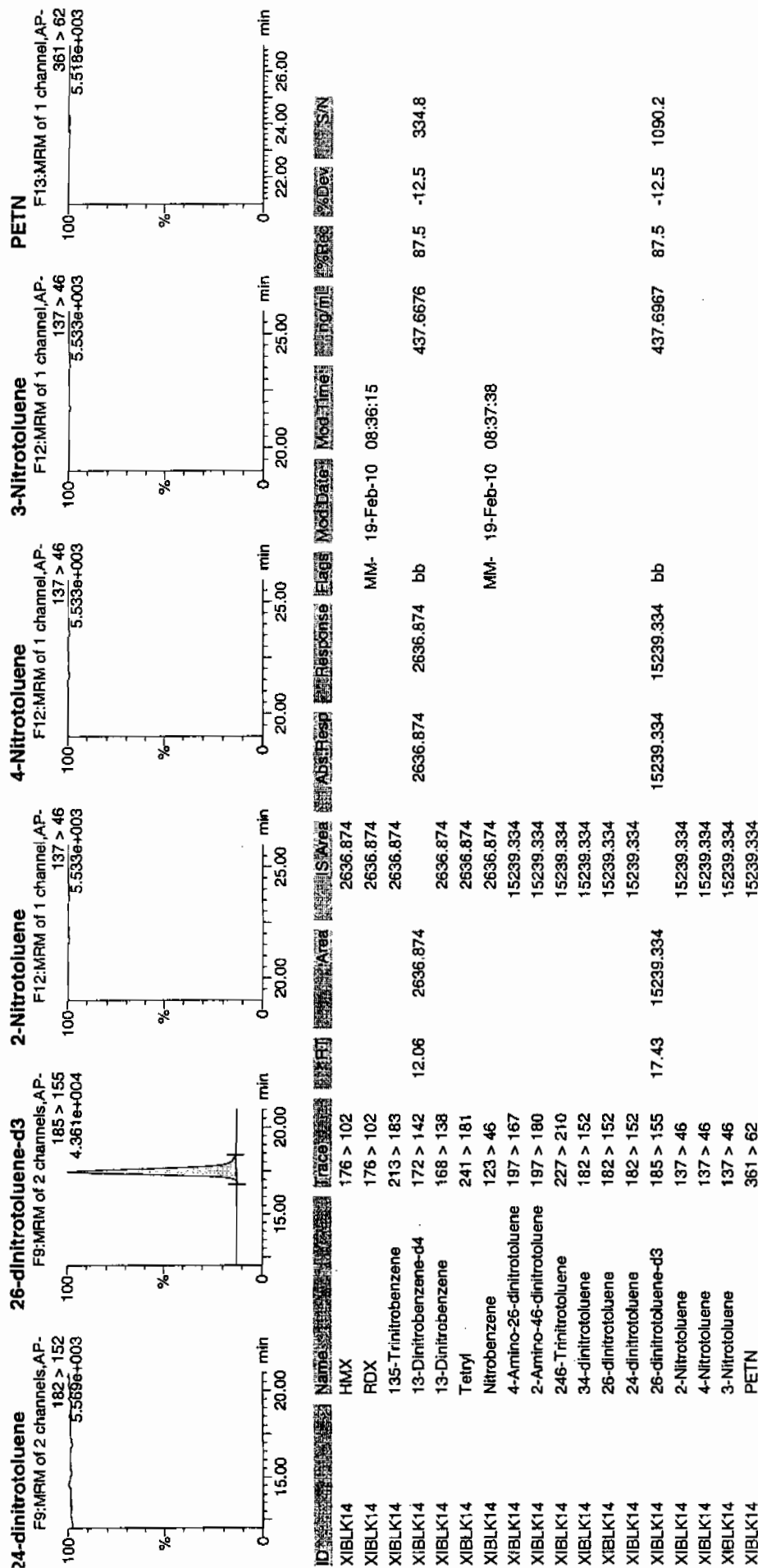
10/11
2/19/10



Printed: Fri Feb 19 08:50:21 2010, Page 94 of 97

Quantify Sample Report
 3EL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK02

Analysis Date: 17-FEB-10 11:47

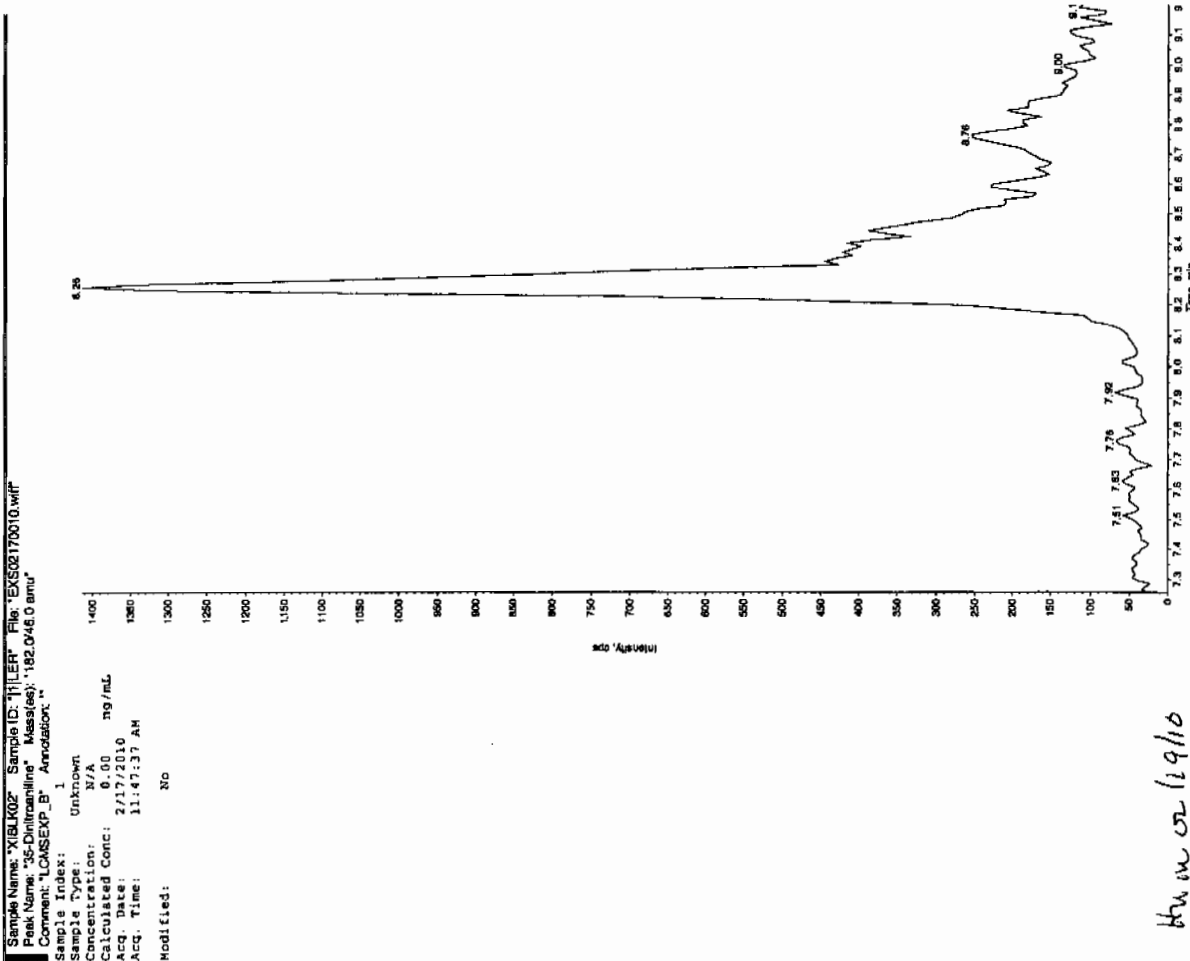
GEL Data File: EXS02170010.wiff

Instrument ID: LCMSMS

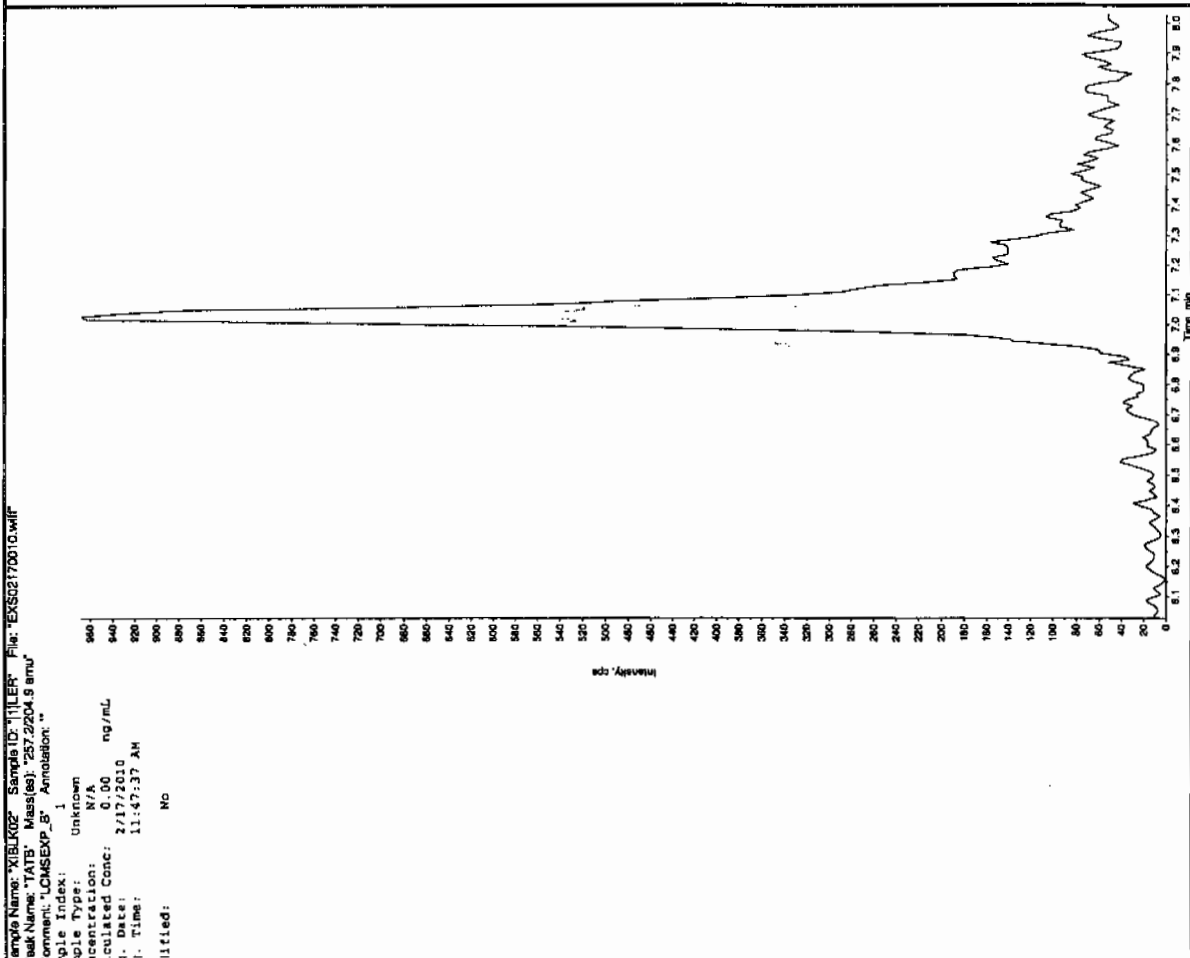
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	11.1
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

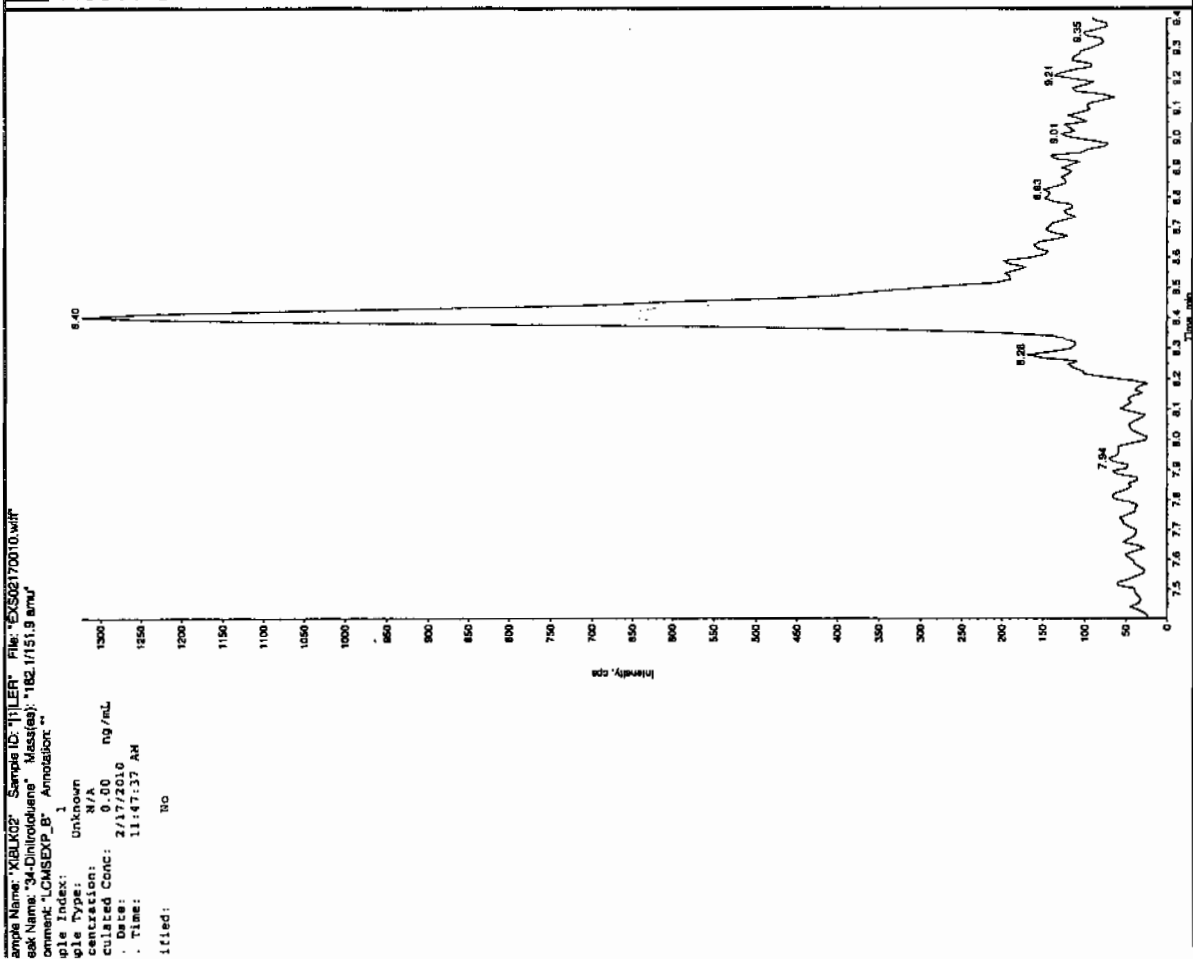
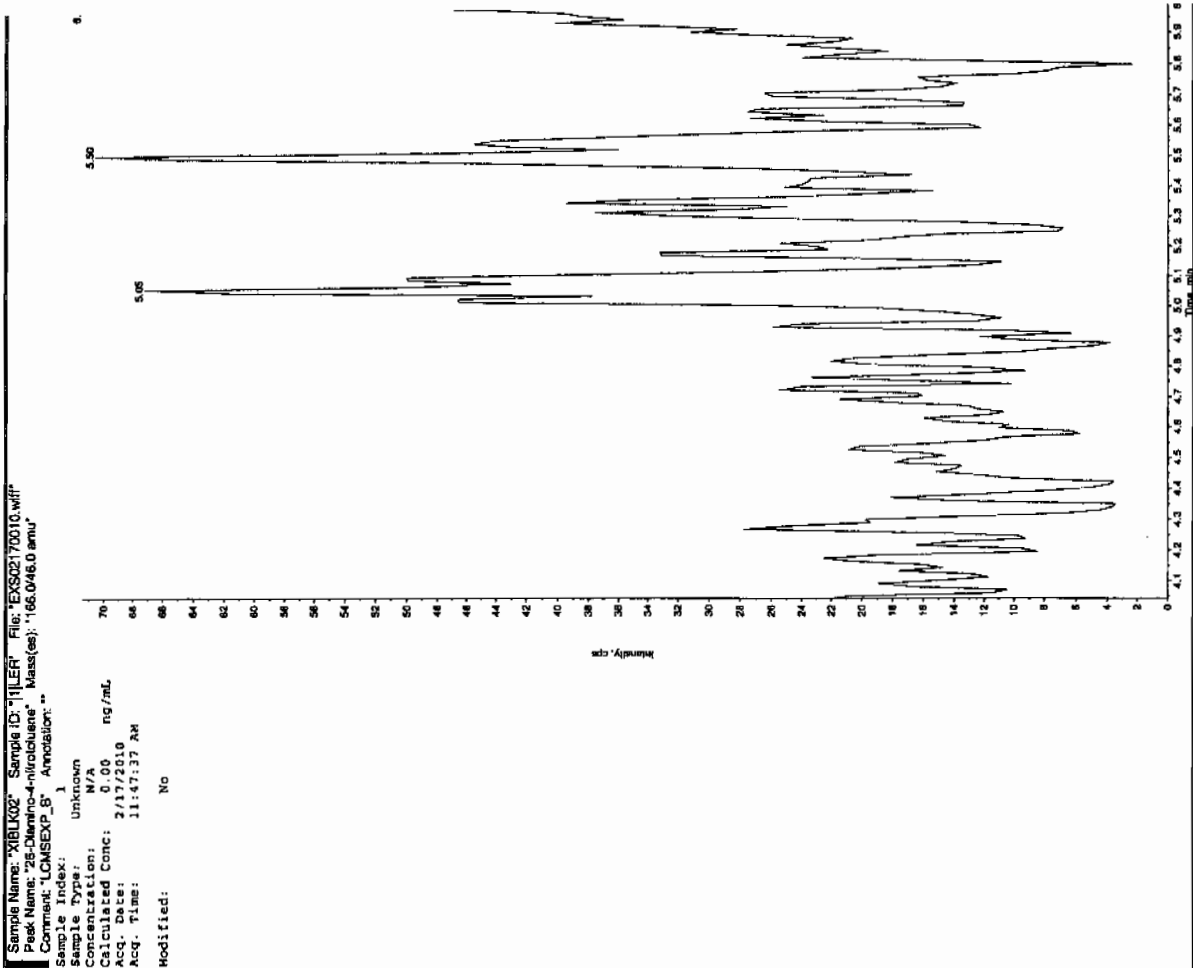
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EL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

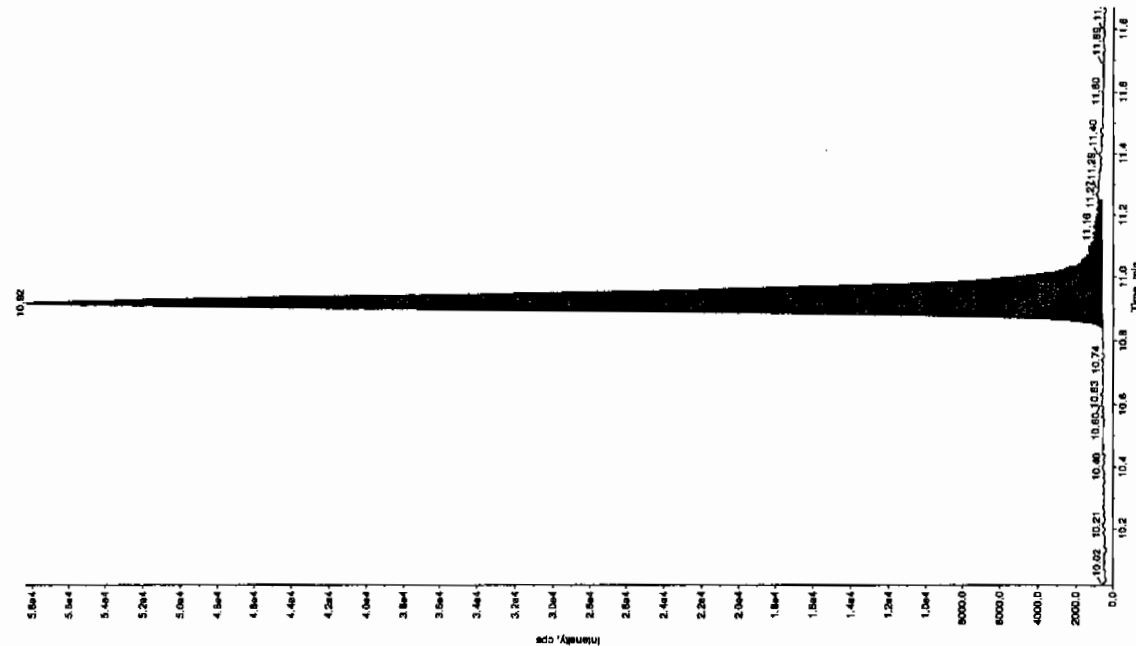
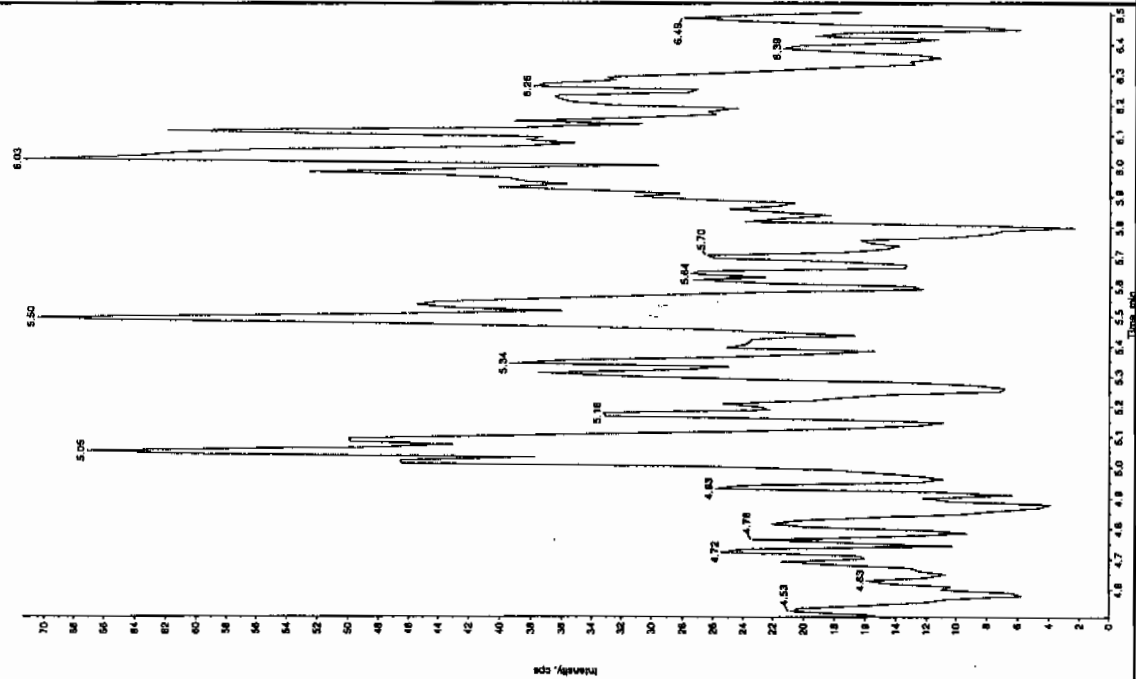


3L SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XBLK02" Sample ID: "JLLER" File: "EXS02170010.wiff"
Peak Name: "tris(o-cresyl) phosphate" Mass(es): "369, 1491.0 amu"
Comment: "LCMSEXP B" Annotation: ""

File Index:	1
File Type:	Unknown
Concentration:	N/A
Calculated Conc:	0.00 ng/mL
Date:	2/17/2010
Time:	11:47:37 AM
ified:	No

Sample ID:	1	Unknown
Sample Type:		
Concentration:	11.1	ng/mL
Calculated Conc:	11.1	
Acq. Date:	2/17/2010	
Acq. Time:	11:57:37 AM	
Modified:	No	
Process:	Algorithm: IntelliQuan - IQA	
Min:	8000.00	cps
Max:	0.00	sec
Peak Width:	3	points
Smoothing Width:	30.0	sec
Run Window:	10.5	min
Expected RT:	No	
Use Relative RT:		
Int. Type:	Valley	
Integration Time:	10.9	min
Area:	2.42e+005	counts
Height:	5758.788	cps
Start Time:	10.8	min
End Time:	11.3	min



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK03

Analysis Date: 17-FEB-10 12:19

GEL Data File: EXS02170012.wiff

Instrument ID: LCMSMS

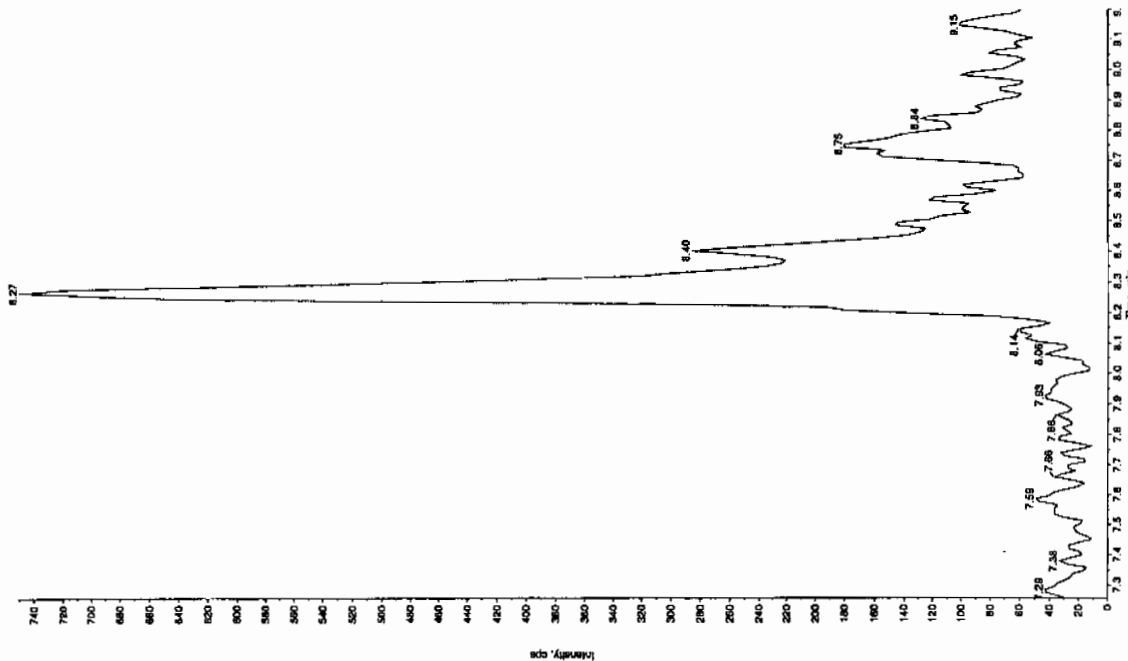
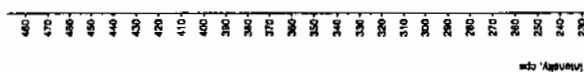
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	5.28
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Jan 21/9/10

Sample Name: "XIBUK03" Sample ID: "T1LER" File: "EXS02170012.wif"
 Peak Name: "T1ATB" Mass(es): "237.2204.9 amu"
 Comment: "LCMSEXP_B" Annotation: ""

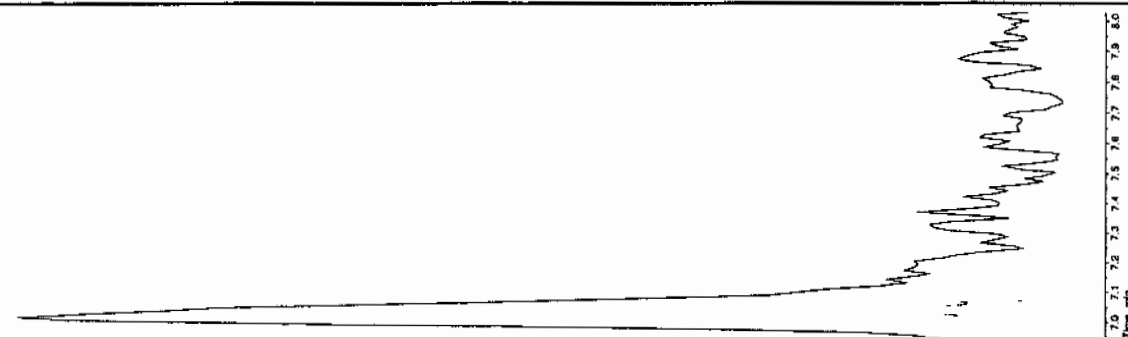
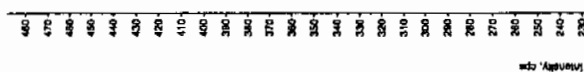
Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A ng/mL
 Calculated Conc: 9.00
 Acq. Date: 2/11/2010
 Acq. Time: 12:15:01 PM
 Modified: No

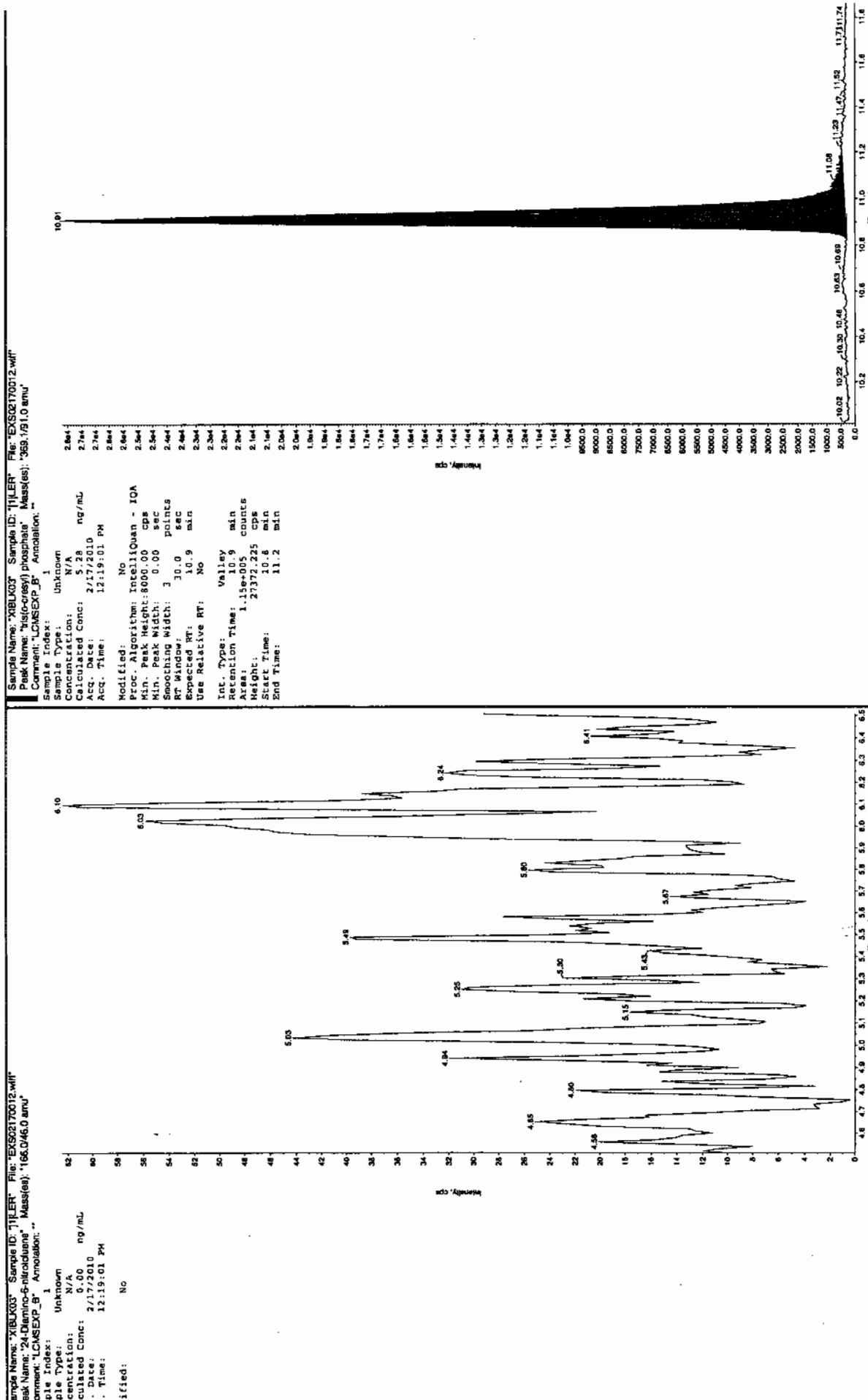


Jan 21/9/10

Sample Name: "XIBUK03" Sample ID: "T1LER" File: "EXS02170012.wif"
 Peak Name: "T1ATB" Mass(es): "237.2204.9 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A ng/mL
 Calculated Conc: 9.00
 Acq. Date: 2/11/2010
 Acq. Time: 12:15:01 PM
 Modified: No





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

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK04

Analysis Date: 17-FEB-10 15:43

GEL Data File: EXS02170025.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	3.23
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

San 2/19/10

Sample Name: "XIBUKA" Sample ID: "JILLER" File: "EX502170025.wit"

Peak Name: "TATB" Mass(es): "257.2/204.9 amu"

Comment: "LCMSEXP_B" Annotation: "

Sample Index: 1

Sample Type: Unknown

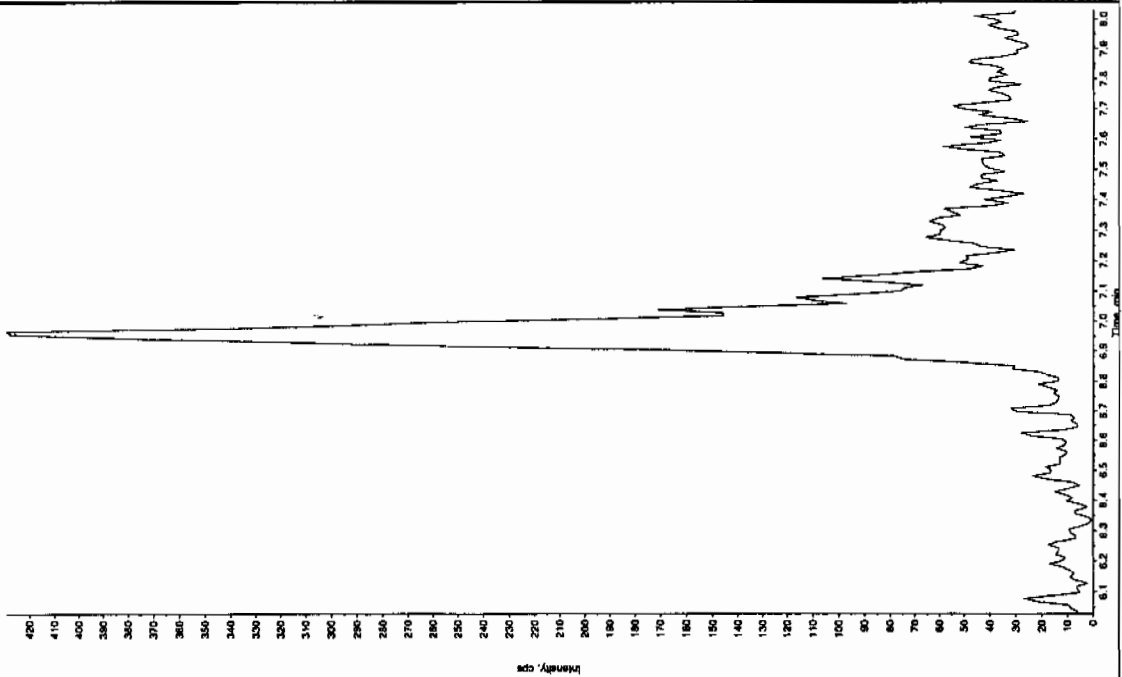
Concentration: N/A

Calculated Conc: 0.00 ng/mL

Acq. Date: 2/17/2010

Acq. Time: 3:43:08 PM

Modified: No



Sample Name: "XIBUKA" Sample ID: "JILLER" File: "EX502170025.wit"

Peak Name: "35-Dinitroaniline" Mass(es): "182.0/160.0 amu"

Comment: "LCMSEXP_B" Annotation: "

Sample Index: 1

Sample Type: Unknown

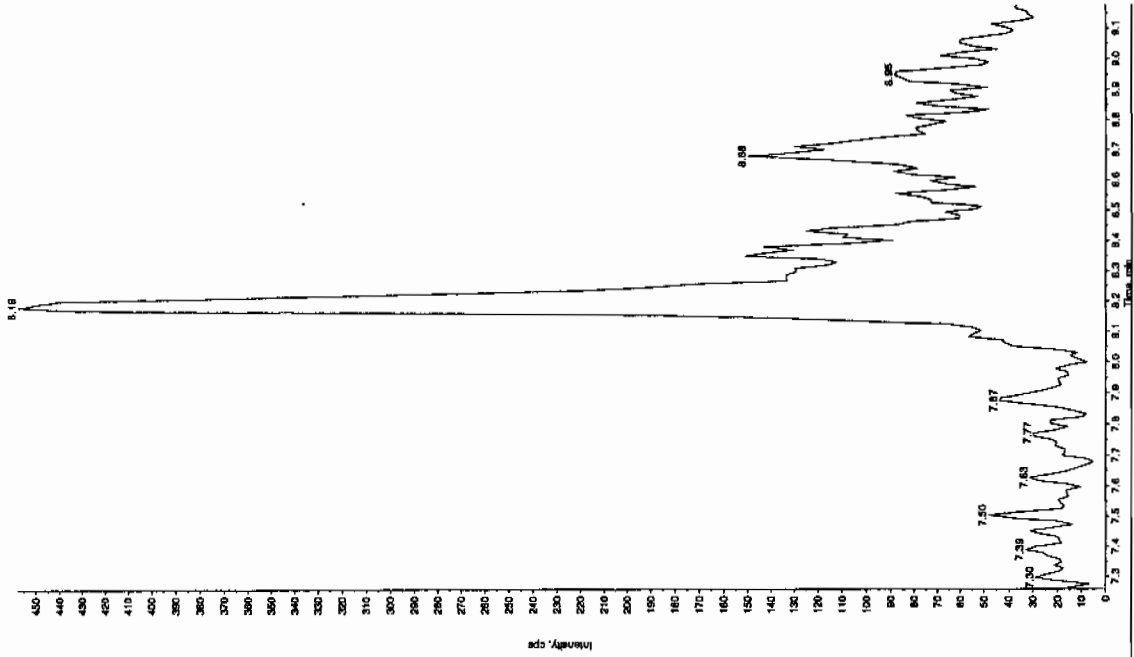
Concentration: N/A

Calculated Conc: 0.00 ng/mL

Acq. Date: 2/17/2010

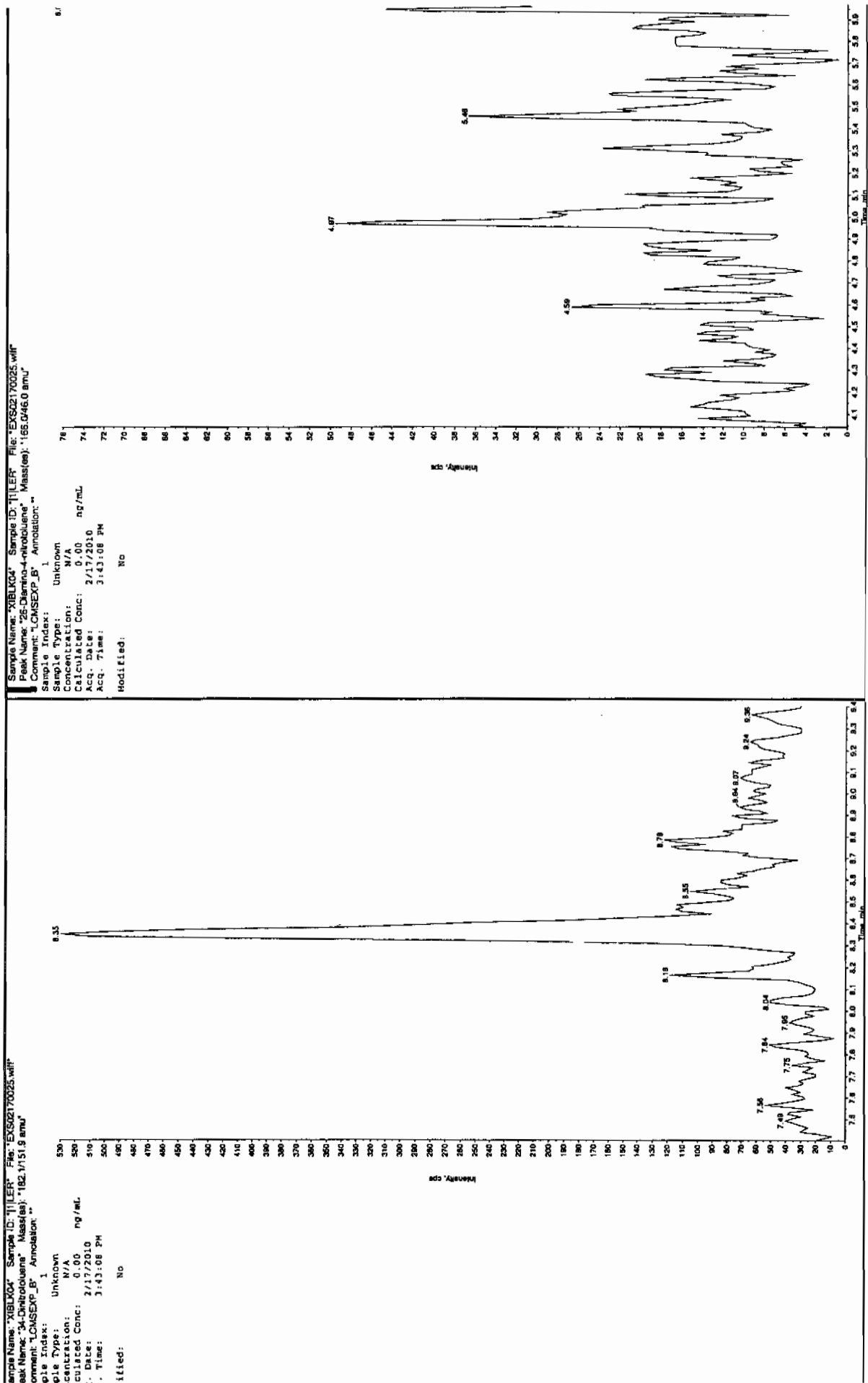
Acq. Time: 3:43:08 PM

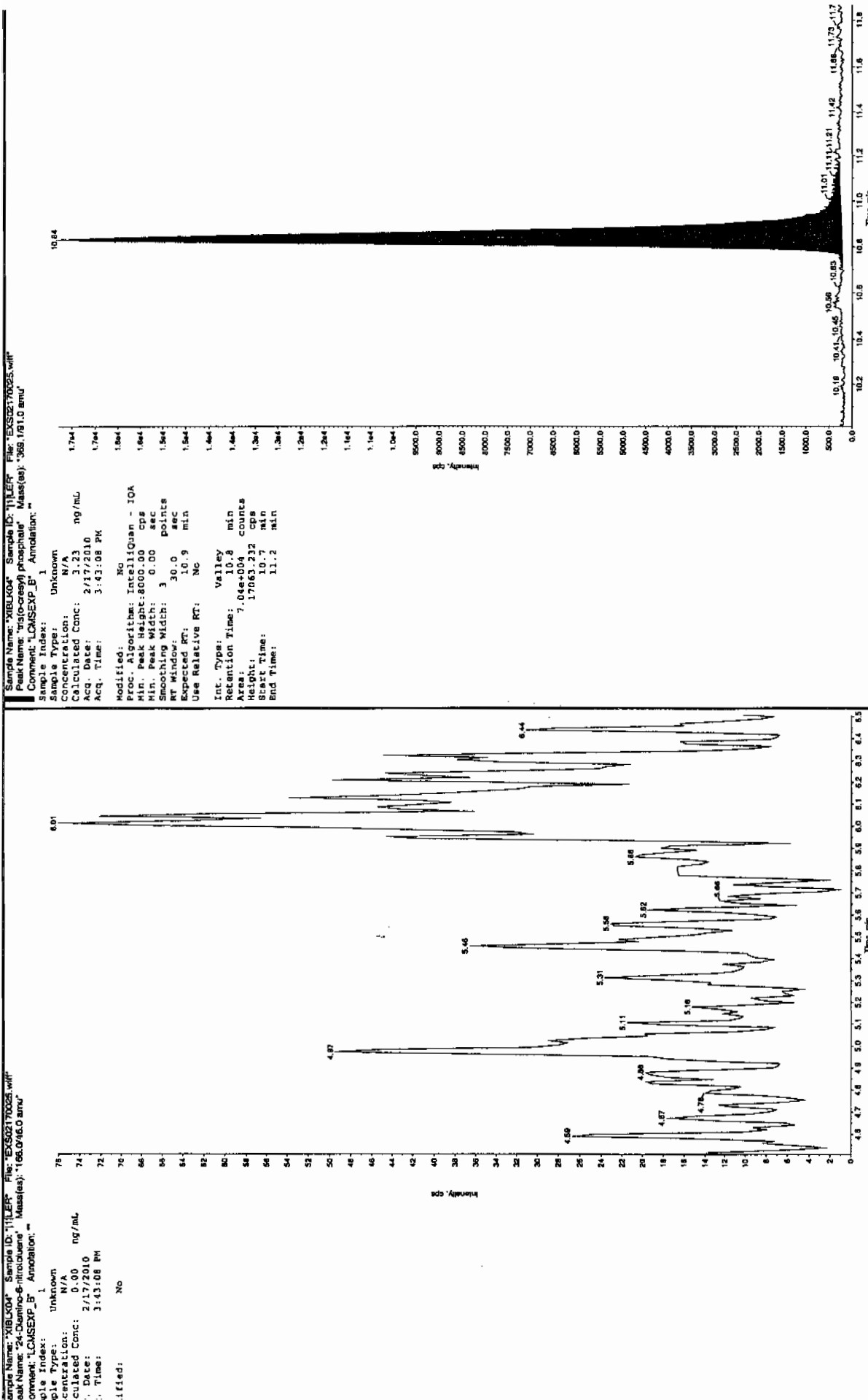
Modified: No



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





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

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK05

Analysis Date: 17-FEB-10 19:07

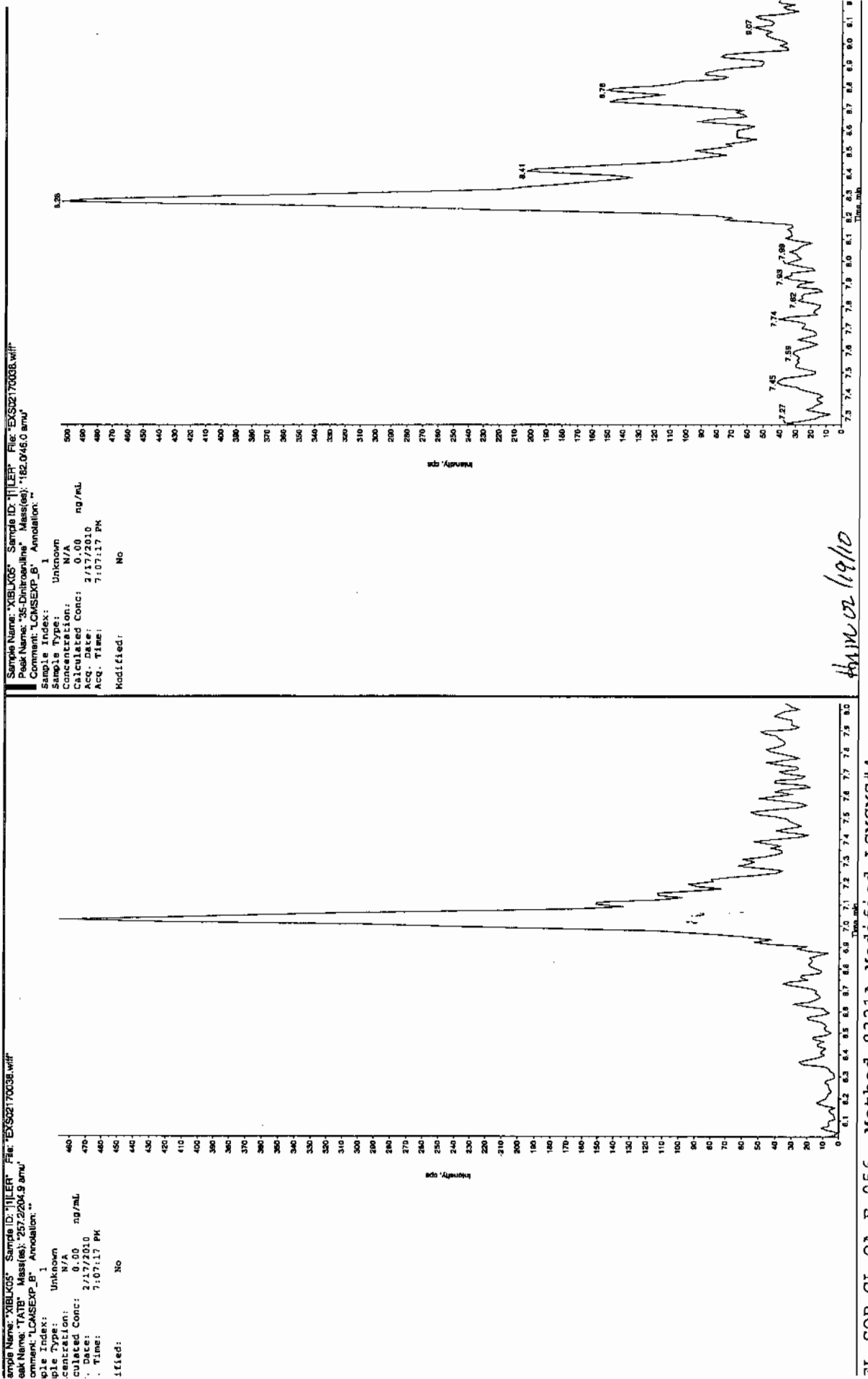
GEL Data File: EXS02170038.wiff

Instrument ID: LCMSMS

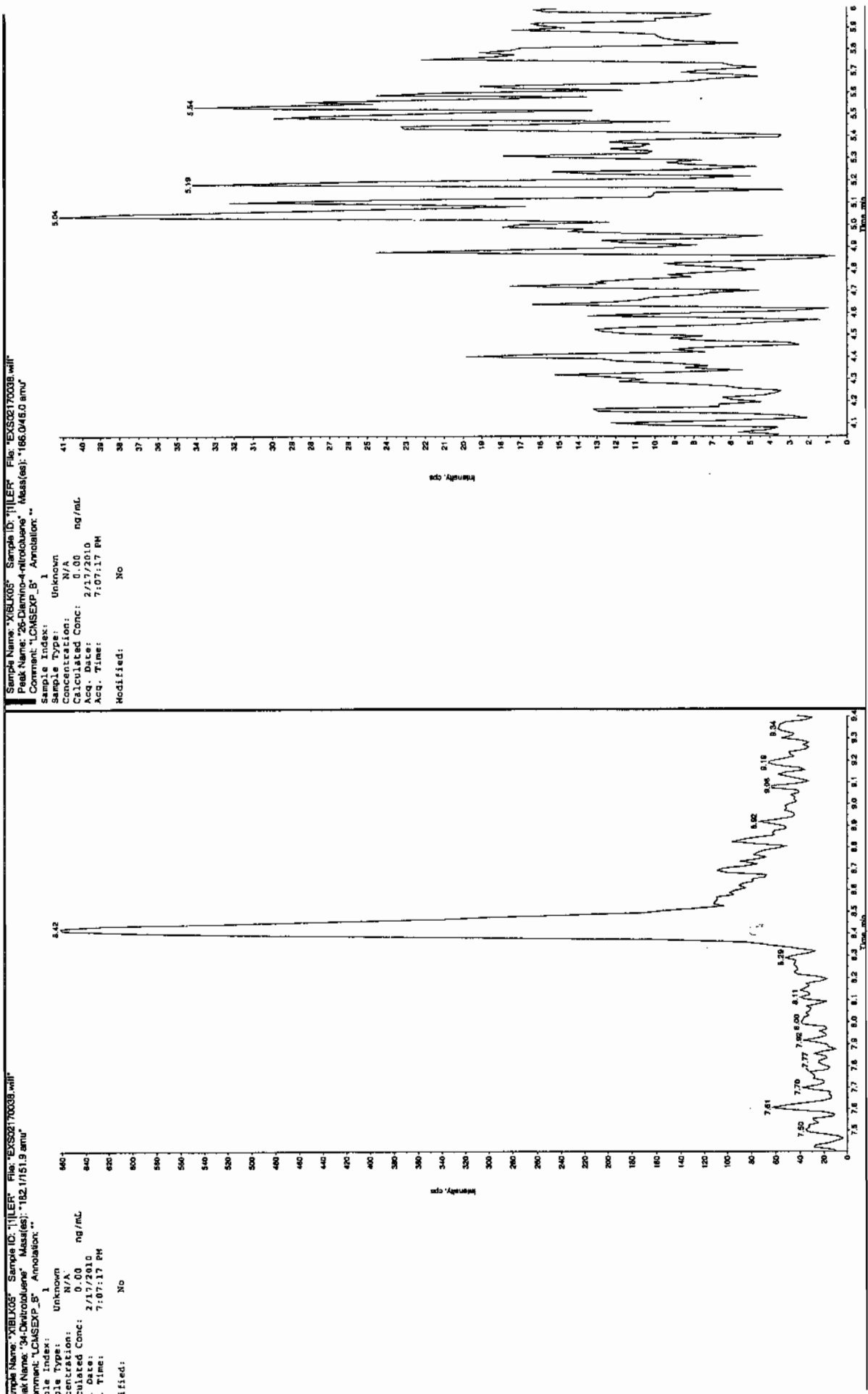
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	3.34
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Sen 2/19/10



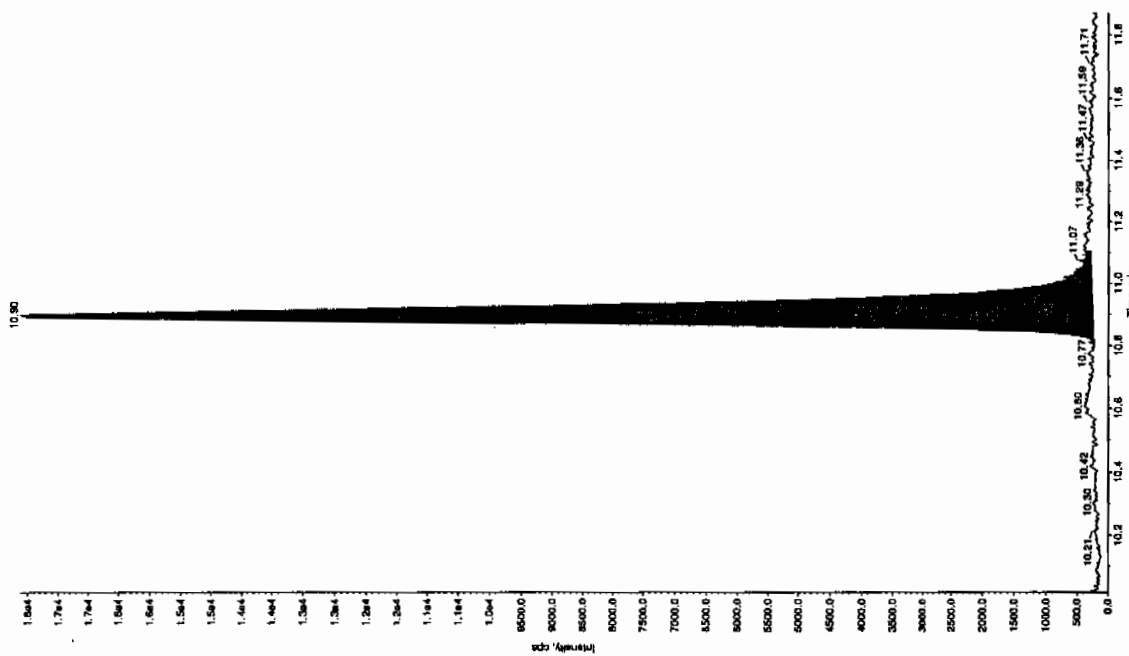
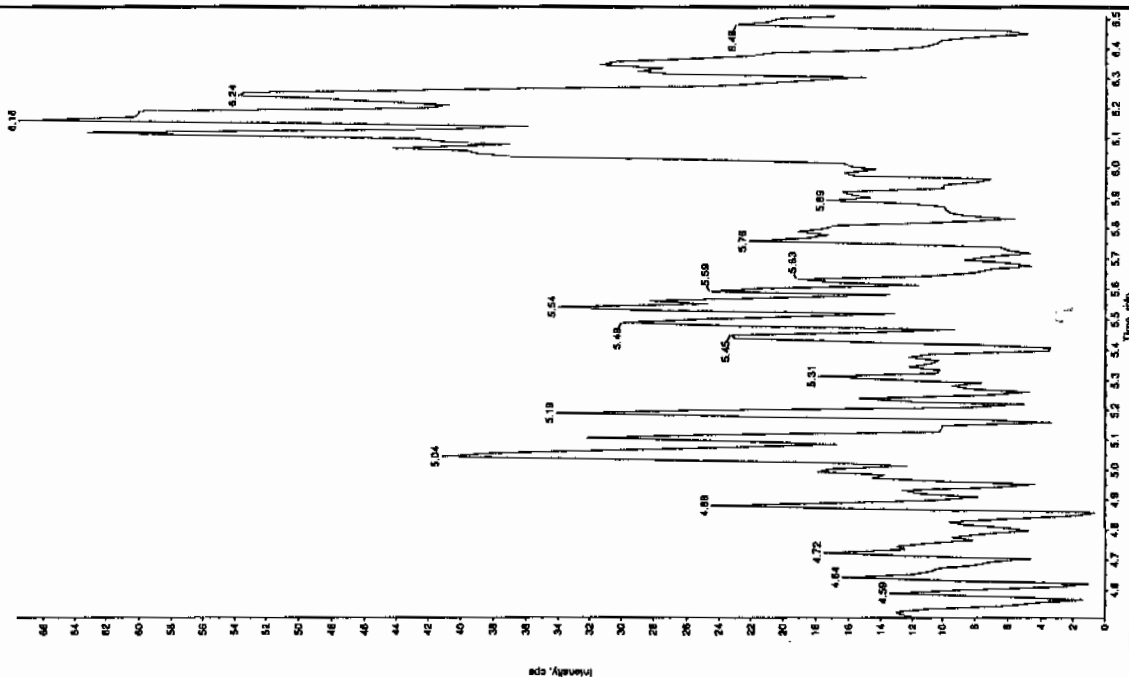
Sen 2/19/10



Sample Name: "XIBLK05" Sample ID: "11LEP" File: "EX502170038.wif"
 Peak Name: "24-Diethyl-6-nitrobenzene" Mass(es): "166.046.0 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 2/17/2010
 Acq. Time: 7:07:17 PM
 Modified: No

Proc. Algorithm: IntelliQuan - IOA
 Min. Peak Height: 8000.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 10.9 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 10.9 min
 Area: 7.28e+004 counts
 Height: 17382.101 cps
 Start Time: 10.8 min
 End Time: 11.1 min



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK06

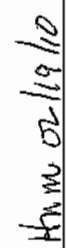
Analysis Date: 17-FEB-10 20:41

GEL Data File: EXS02170044.wiff

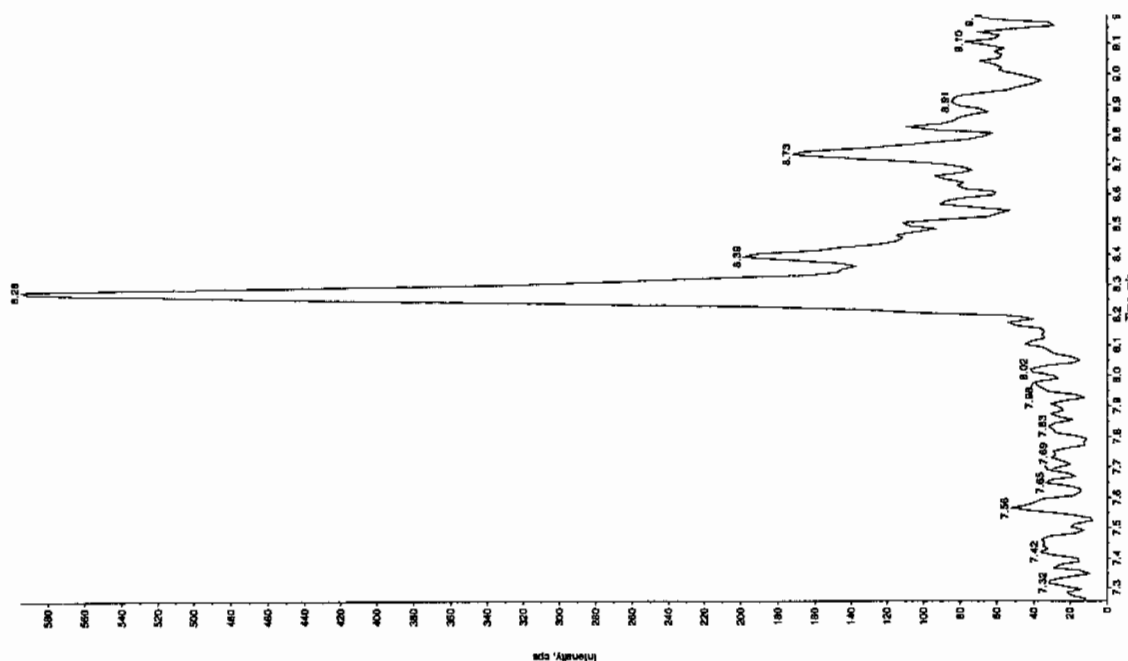
Instrument ID: LCMSMS

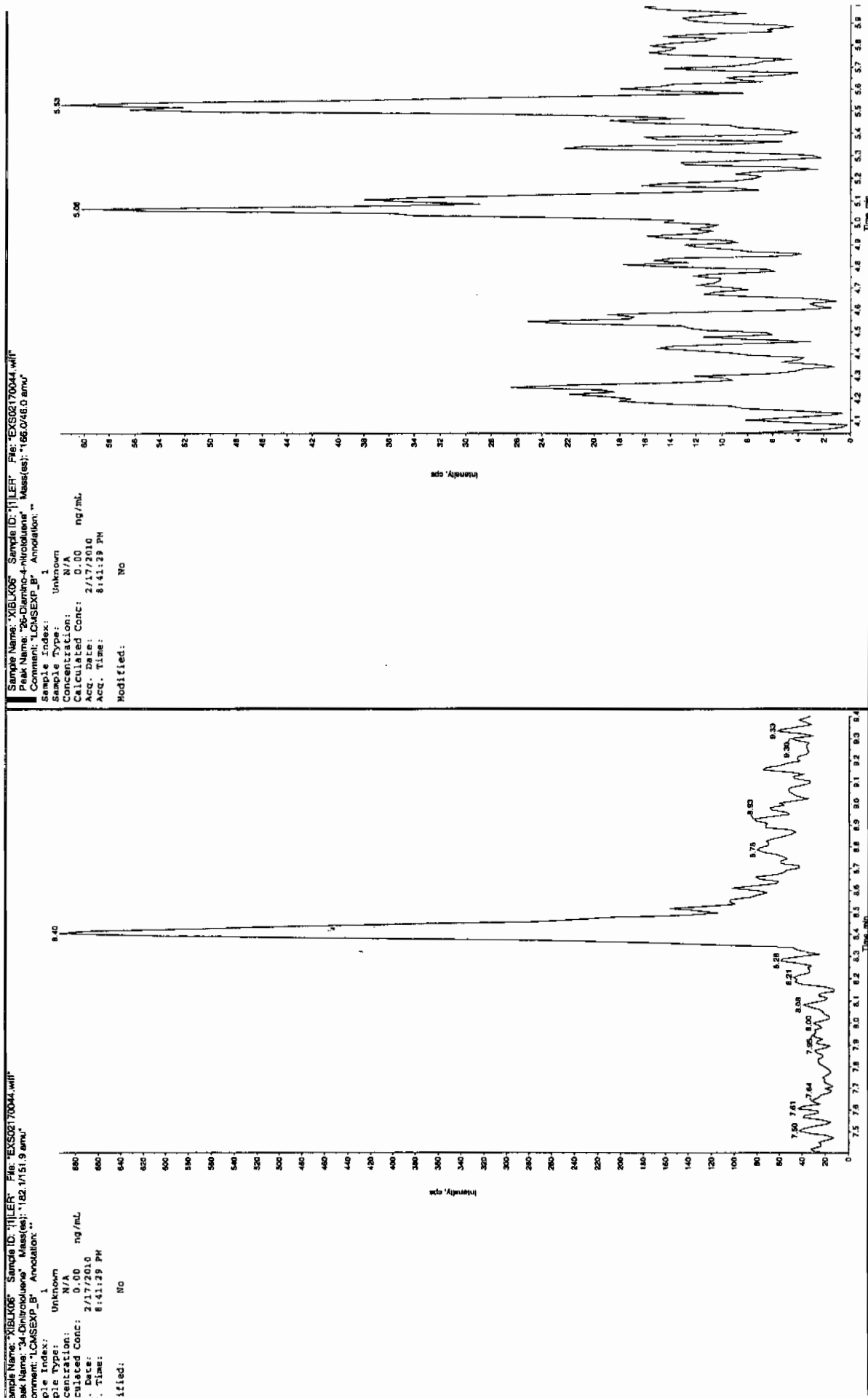
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	3.52
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

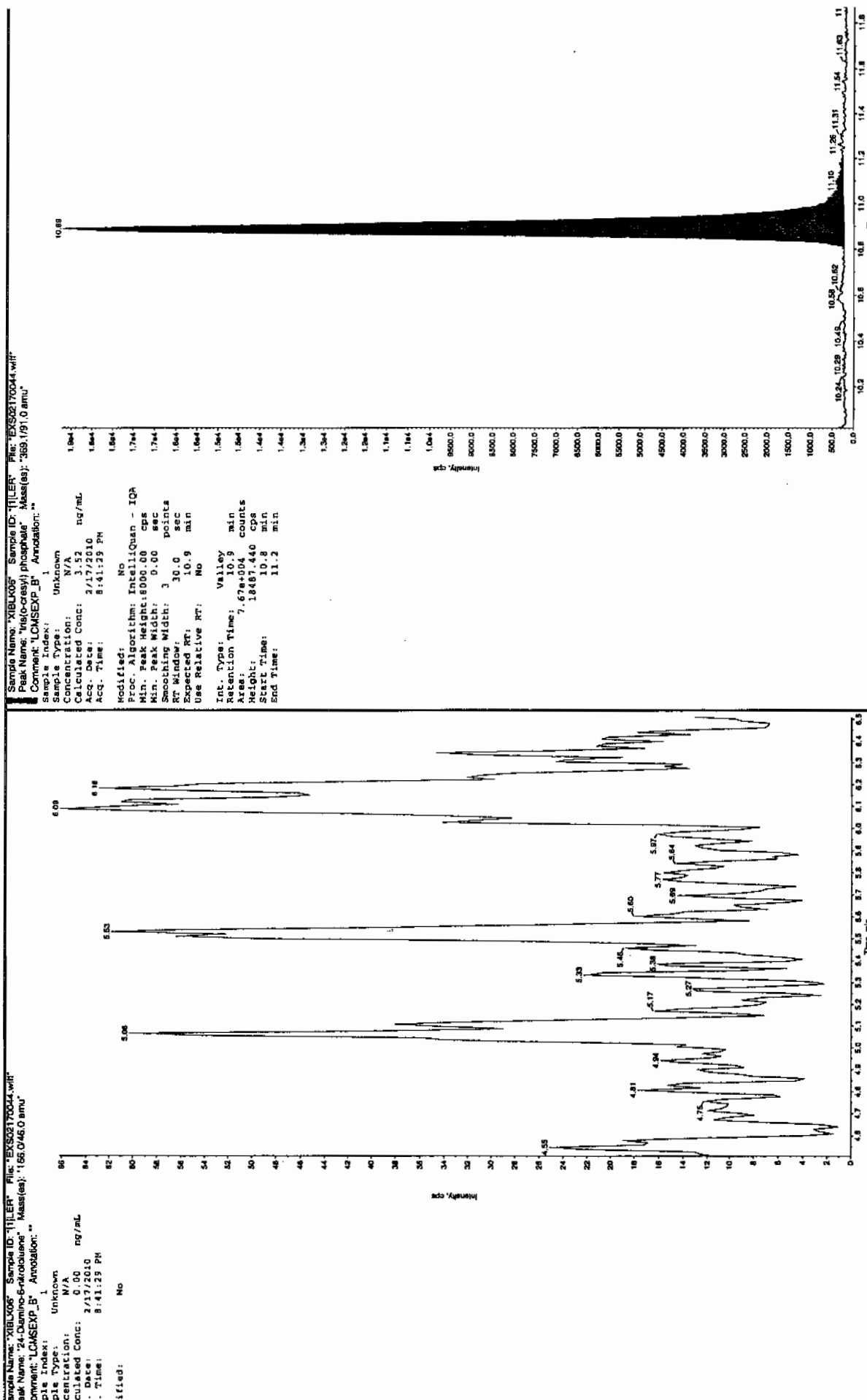


Sample Name:	XBL-K05	Sample ID:	11LRL	File:	EXSD02170044.wit
Peak Name:	35-Diindolylamine	Mass(es):	182.046.0 amu		
Comment:	L1CMSEXP_B1	Annotation:			
Sample Index:	1				
Sample Type:	Unknown				
Concentration:	N/A				
Batch/Prep Conc:	2.17122010			500	ng/mL
Acq. Time:	8.41129 PM			500	
Modified:	No				





EL SOP GL-OA-E-056, Method 8321A-Modified LCM SMS#4



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

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK07

Analysis Date: 18-FEB-10 00:05

GEL Data File: EXS02170057.wiff

Instrument ID: LCMSMS

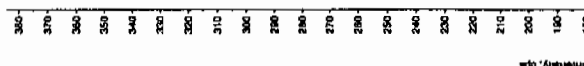
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	3.94
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

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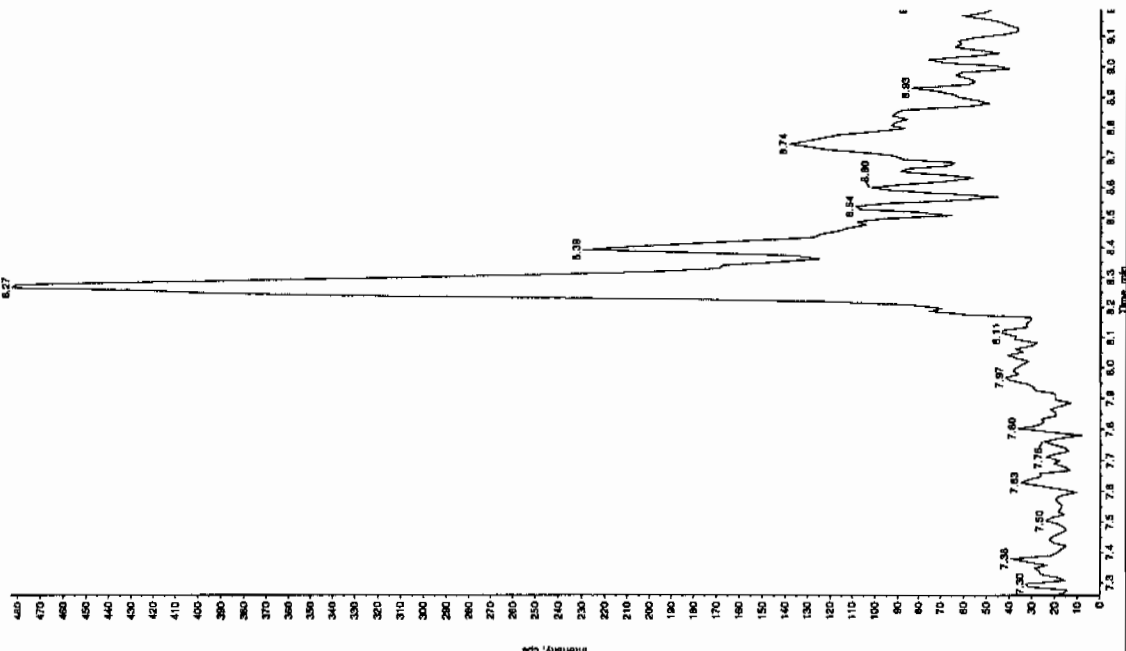
Sample Name: "XBLK07" Sample ID: "HILER" File: "EXS02170057.wif"
 Peak Name: "35-Dinitroaniline" Mass(es): "182.046.0 amu"
 Comment: "LOWEXP_B" Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Date: 2/18/2010
 Acq. Time: 12:05:40 AM
 Modified: No

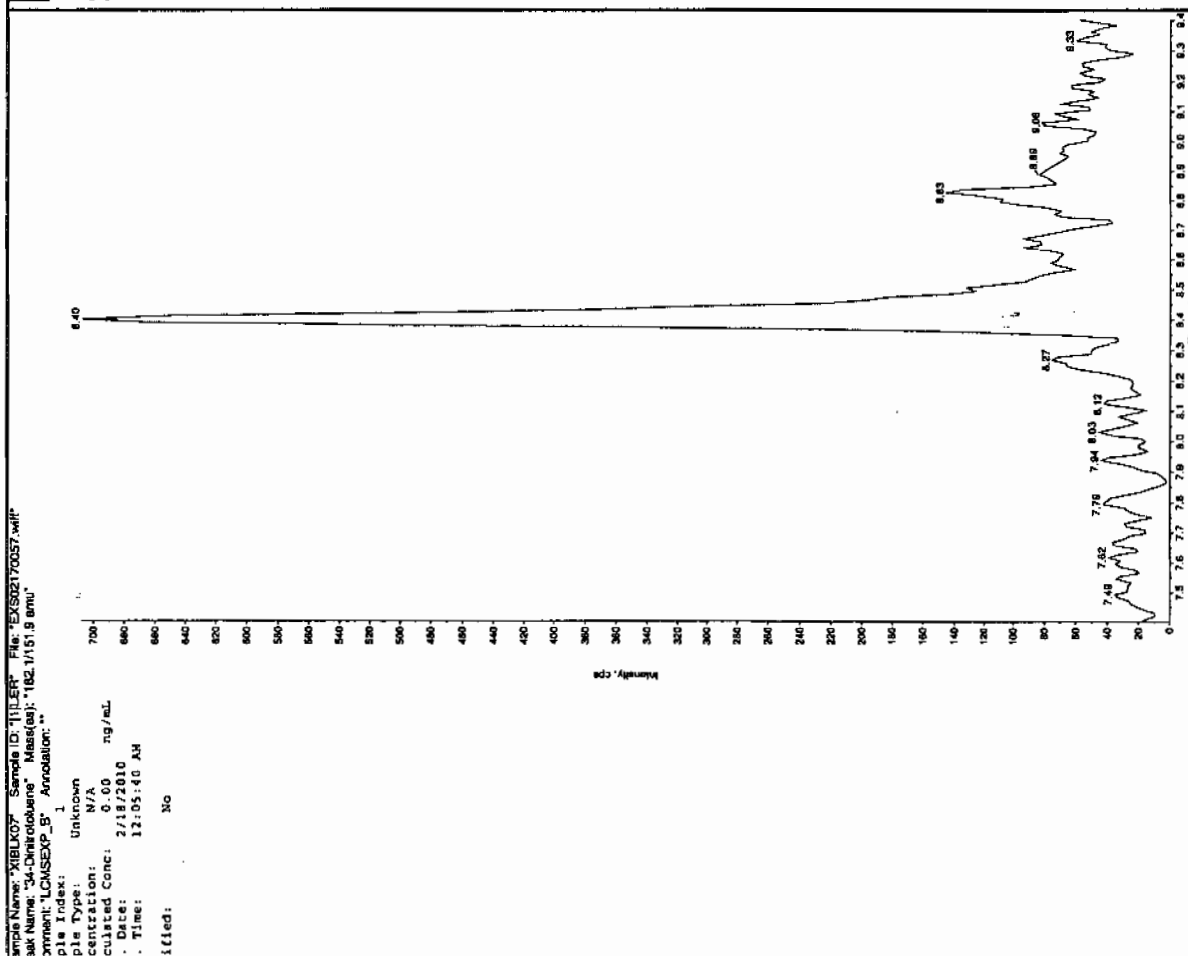


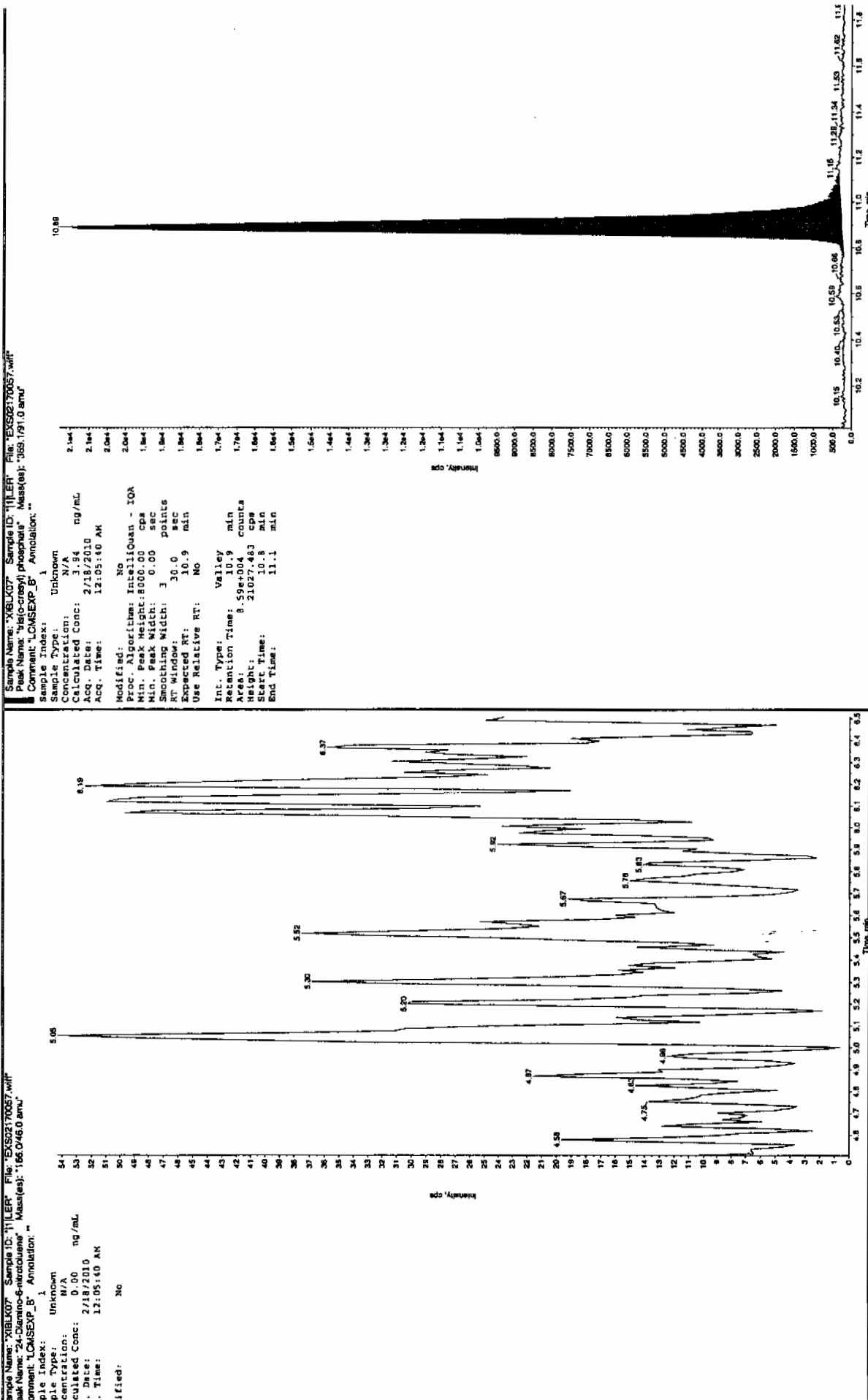
Sample Name: "XBLK07" Sample ID: "HILER" File: "EXS02170057.wif"
 Peak Name: "35-Dinitroaniline" Mass(es): "182.046.0 amu"
 Comment: "LOWEXP_B" Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Date: 2/18/2010
 Acq. Time: 12:05:40 AM
 Modified: No



Jan 21/9/10





EL SOP GL-OA-E-056, Method 8321A-Modified LCM SMS#4

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK08

Analysis Date: 18-FEB-10 03:29

GEL Data File: EXS02170070.wiff

Instrument ID: LCMSMS

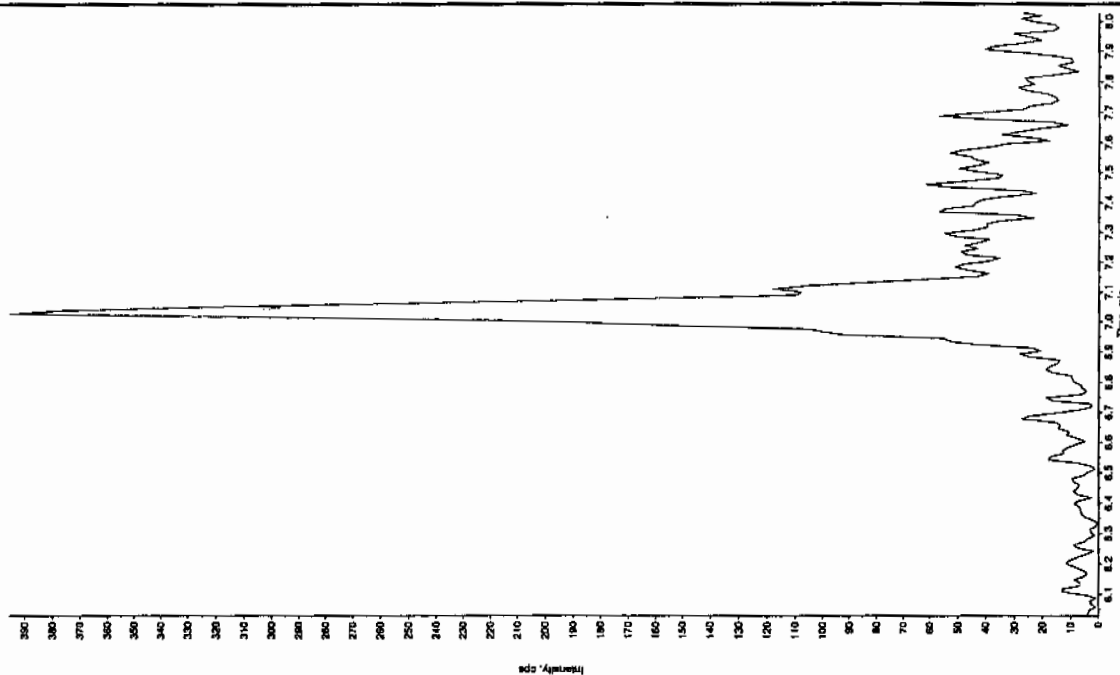
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	3.66
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

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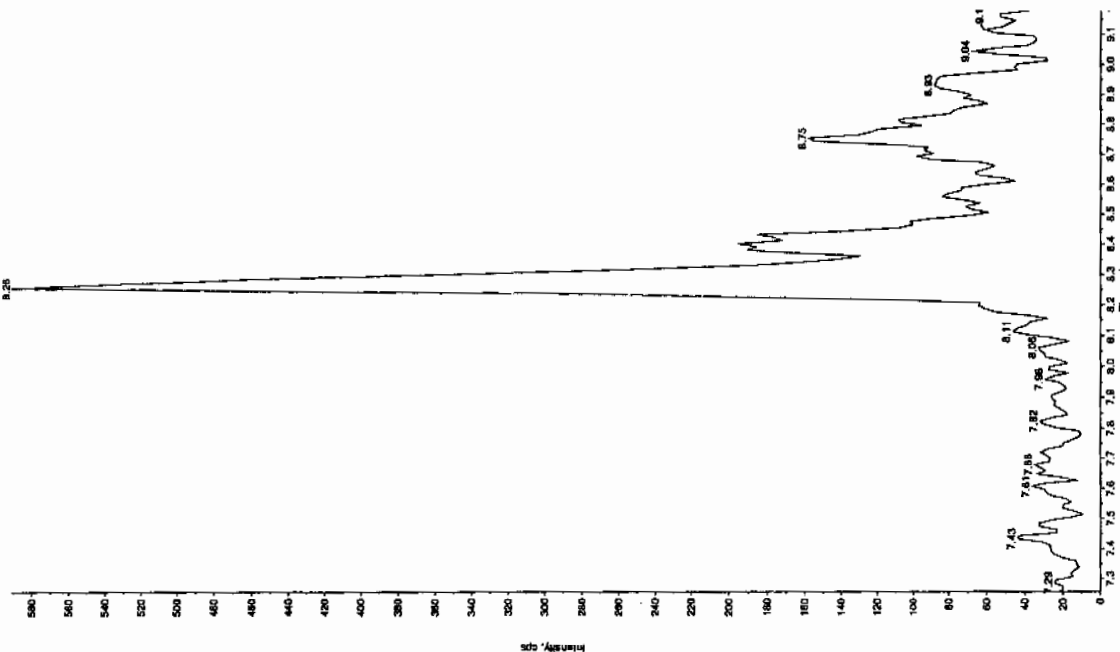
Sample Name: "XIBU08" Sample ID: "TJLER" File: "EXS02170070.wif"
 Peak Name: "TATB" Mass(es): "237.2204.9 amu"
 Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 2/18/2010
 Acq. Time: 3:29:48 AM
 Modified: No

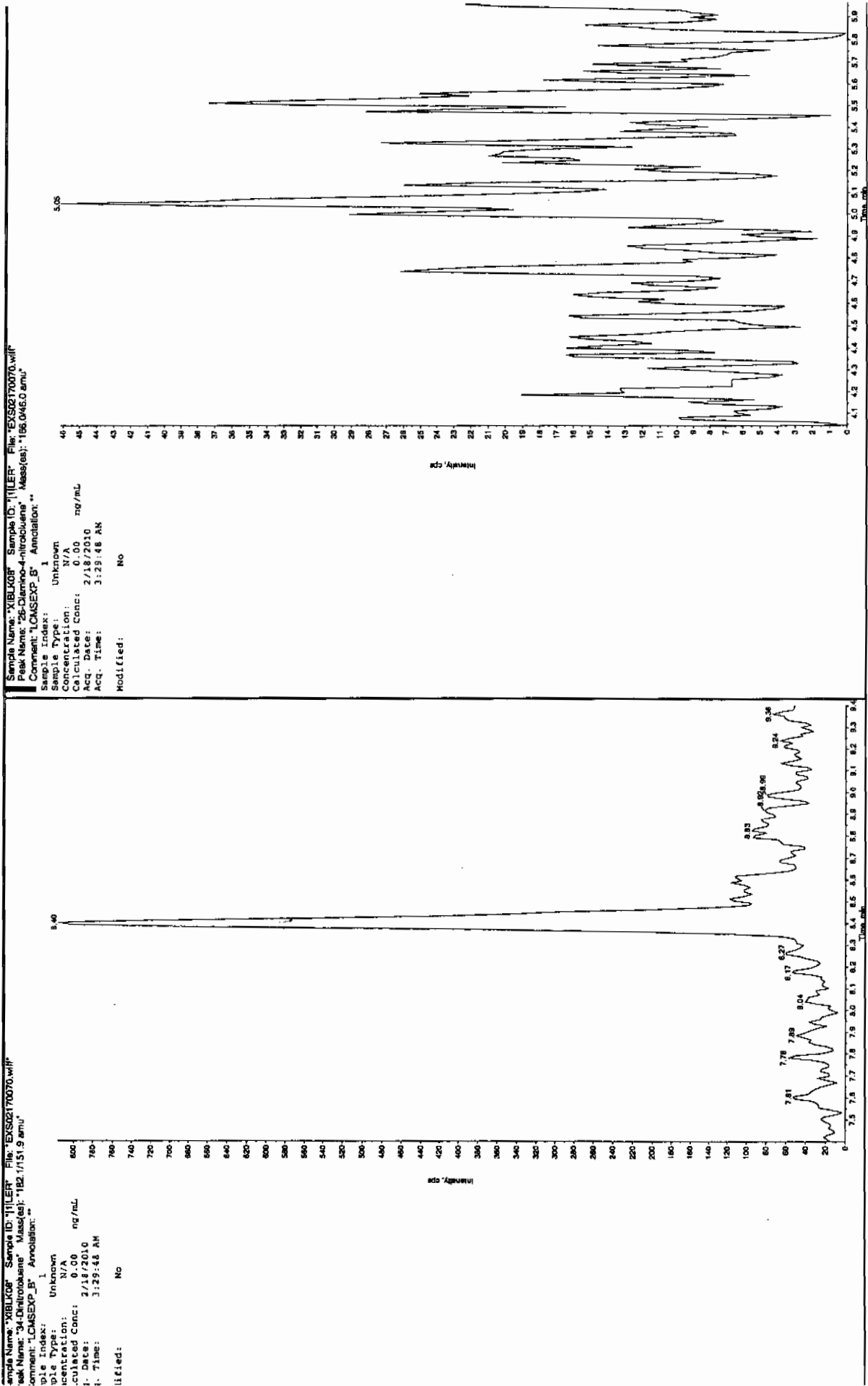


Sample Name: "XIBU08" Sample ID: "TJLER" File: "EXS02170070.wif"
 Peak Name: "35-Dinitroaniline" Mass(es): "182.046.0 amu"
 Comment: "LCMSEXP_B" Annotation: ""

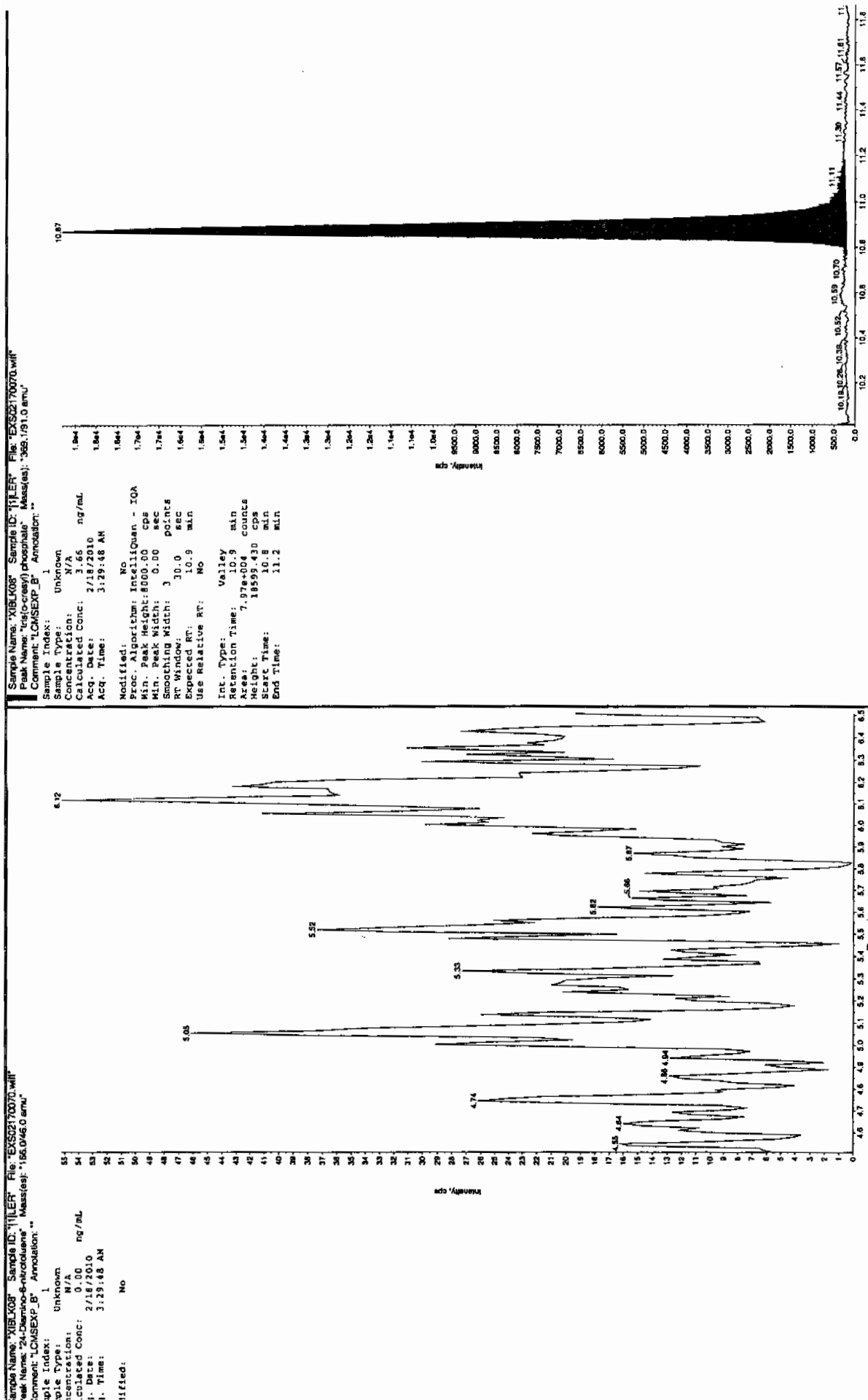
Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 2/18/2010
 Acq. Time: 3:29:48 AM
 Modified: No



Gen 02119110



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



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK09

Analysis Date: 18-FEB-10 04:16

GEL Data File: EXS02170073.wiff

Instrument ID: LCMSMS

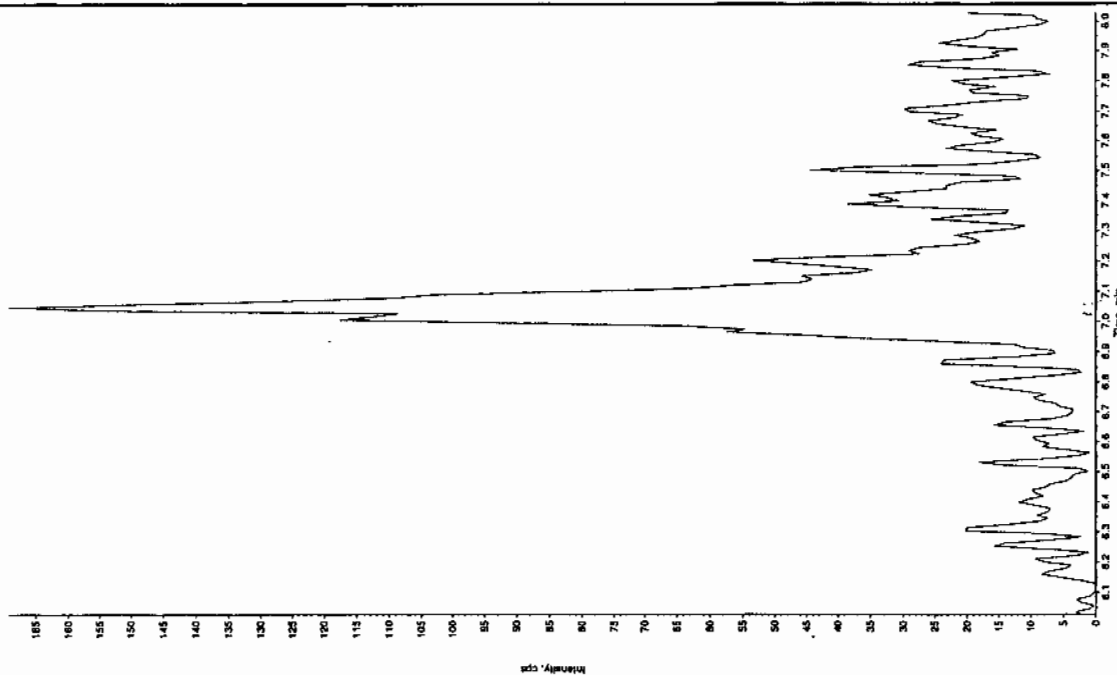
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	1.94
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

See 2/19/10

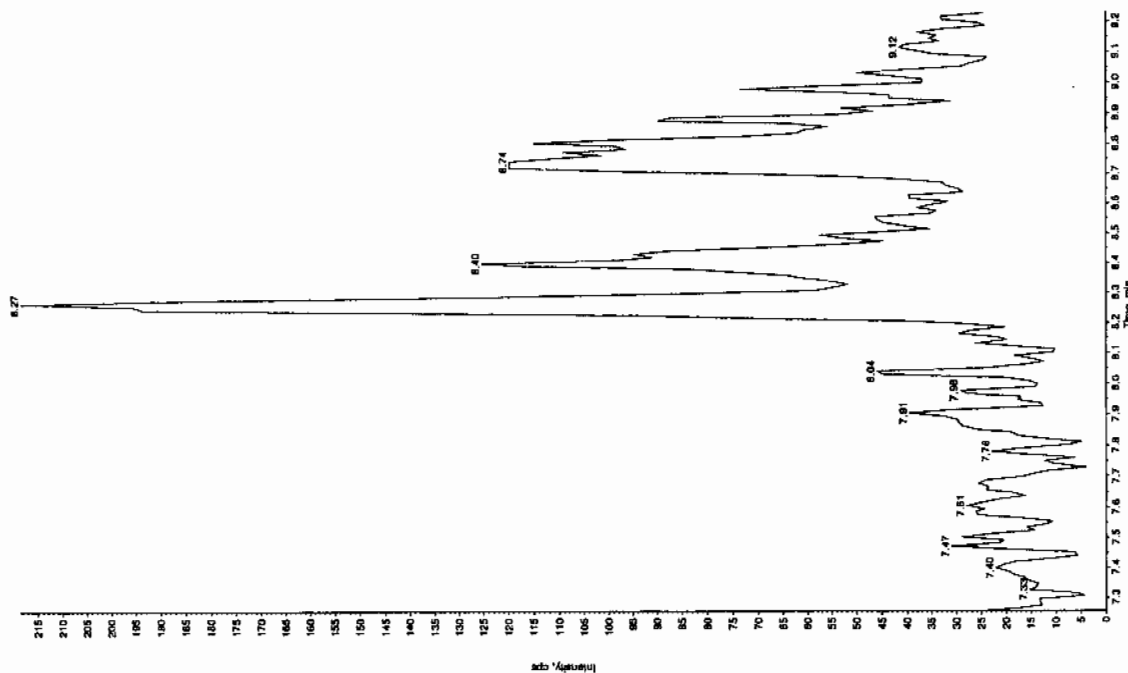
Sample Name: "XIBLK09" Sample ID: "11LER" File: "EXS02170073.wif"
 Peak Name: "1A1B" Mass(es): "257.2204.9 amu"
 Comment: "LCMSEXP_B" Annotation: "1"

Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Calculated Conc: 2/18/2010
 Acq. Date: 4/16/55 AM
 Acq. Time:
 Modified: No

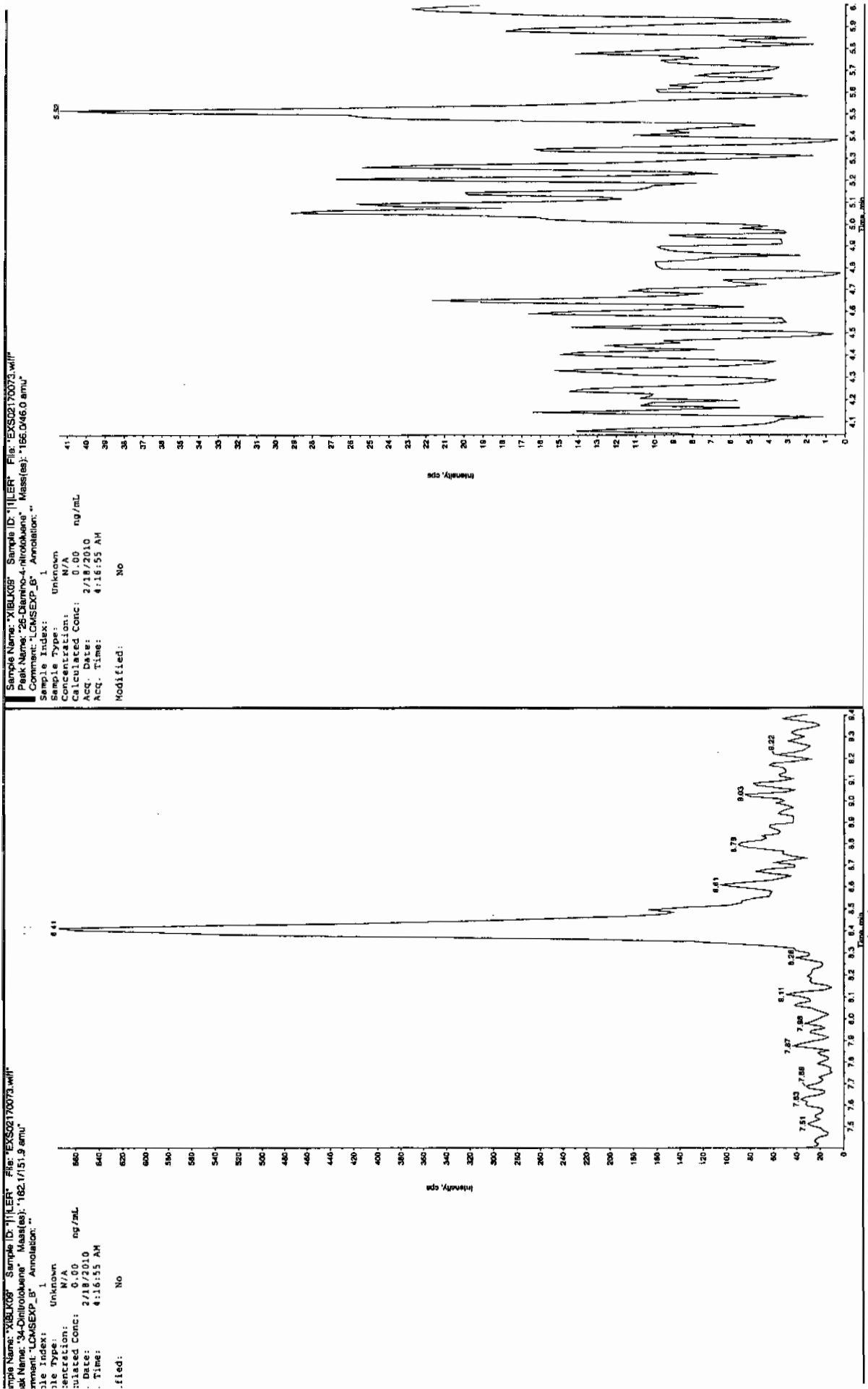


Sample Name: "XIBLK09" Sample ID: "11LER" File: "EXS02170073.wif"
 Peak Name: "35-Dinitroaniline" Mass(es): "182.046.0 amu"
 Comment: "LCMSEXP_B" Annotation: "1"

Sample Index: 1
 Sample Type: Unknown
 Concentration: 0.00 ng/mL
 Calculated Conc: 2/18/2010
 Acq. Date: 4/16/55 AM
 Acq. Time:
 Modified: No



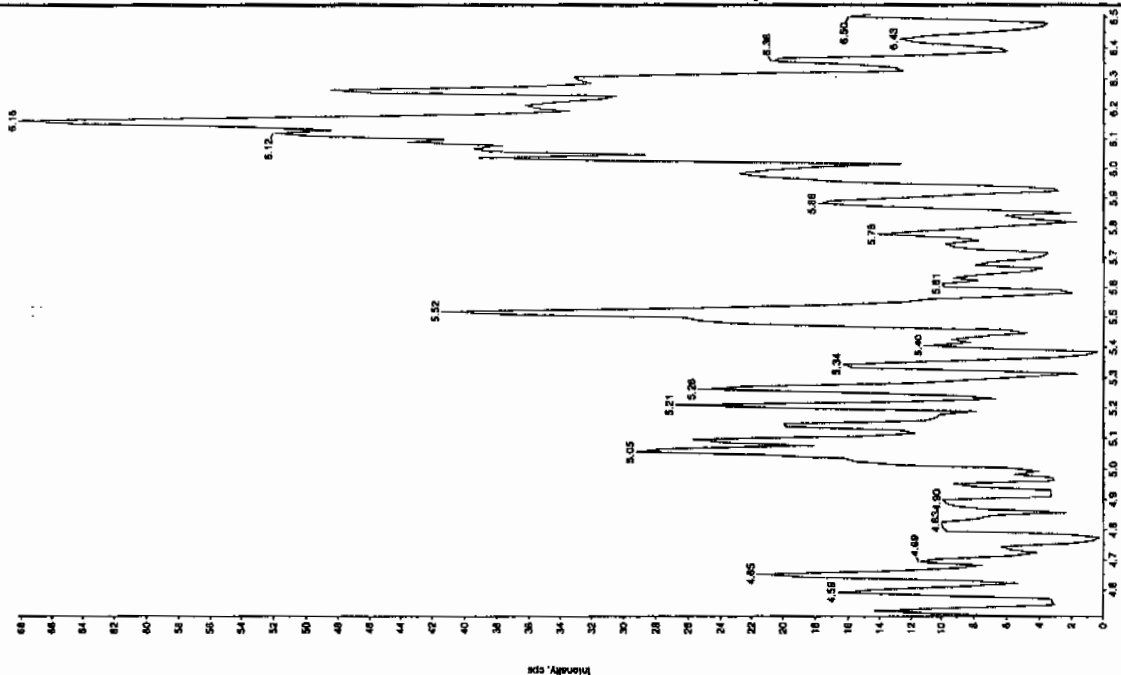
See 2/19/10



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

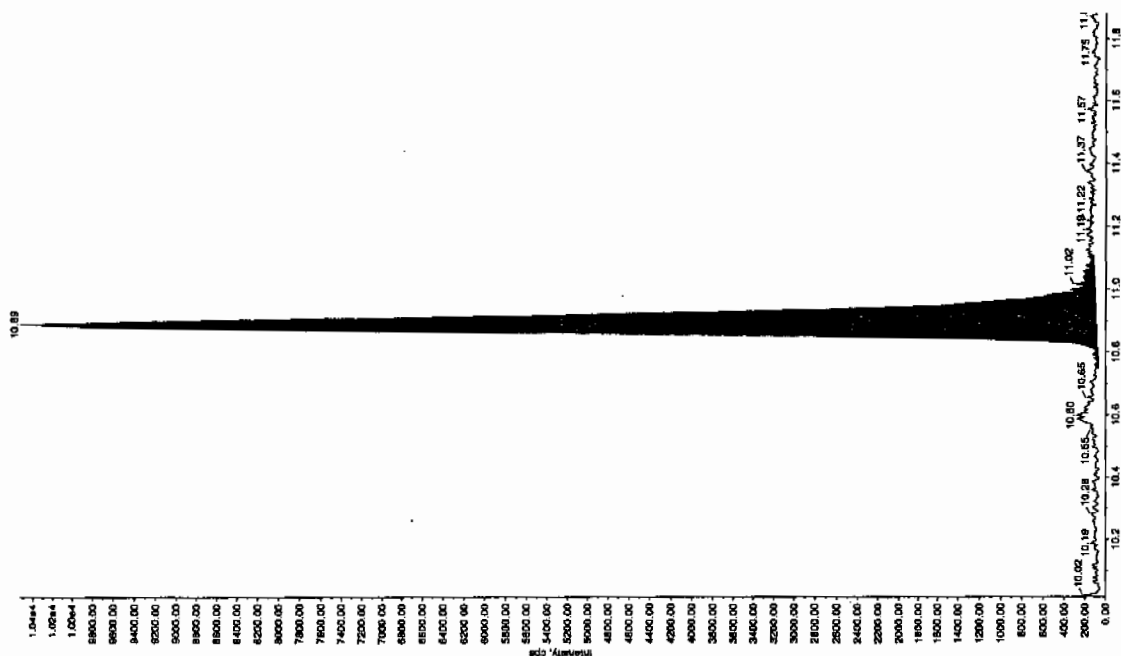
Sample Name: "VIELK09" Sample ID: "VIELK09" File: "EX52170073.will"
 Peak Name: "24-Damino-6-alkiciduanone" Mass(es): "166.046.0 amu"
 Comment: "LCMSEXP_B" Annotation: "

File Index: 1
 File Type: Unknown
 Calculated Conc: 0.00 ng/mL
 Date: 2/18/2010
 Time: 4:16:55 AM
 fied: No



Sample Name: "VIELK09" Sample ID: "VIELK09" File: "EX52170073.will"
 Peak Name: "10642.022" Mass(es): "389.191.0 amu"
 Comment: "LCMSEXP_B" Annotation: "

File Index: 1
 File Type: Unknown
 Calculated Conc: 1.94 ng/mL
 Date: 2/18/2010
 Time: 4:16:55 AM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 8000.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 10.9 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 10.9 min
 Area: 4.21e+004 counts
 Height: 10642.022 cps
 Start Time: 10.7 min
 End Time: 11.1 min



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

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK10

Analysis Date: 18-FEB-10 06:53

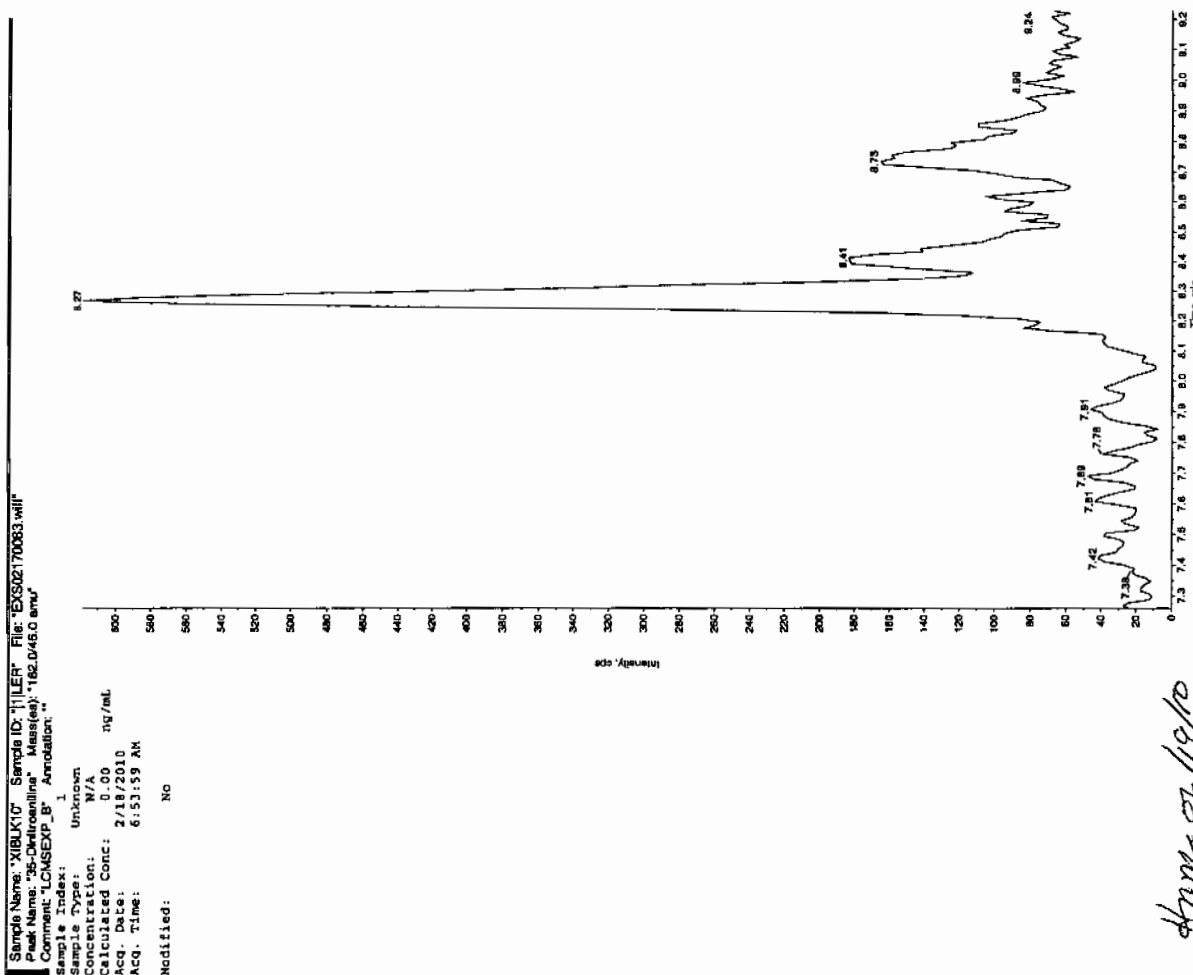
GEL Data File: EXS02170083.wiff

Instrument ID: LCMSMS

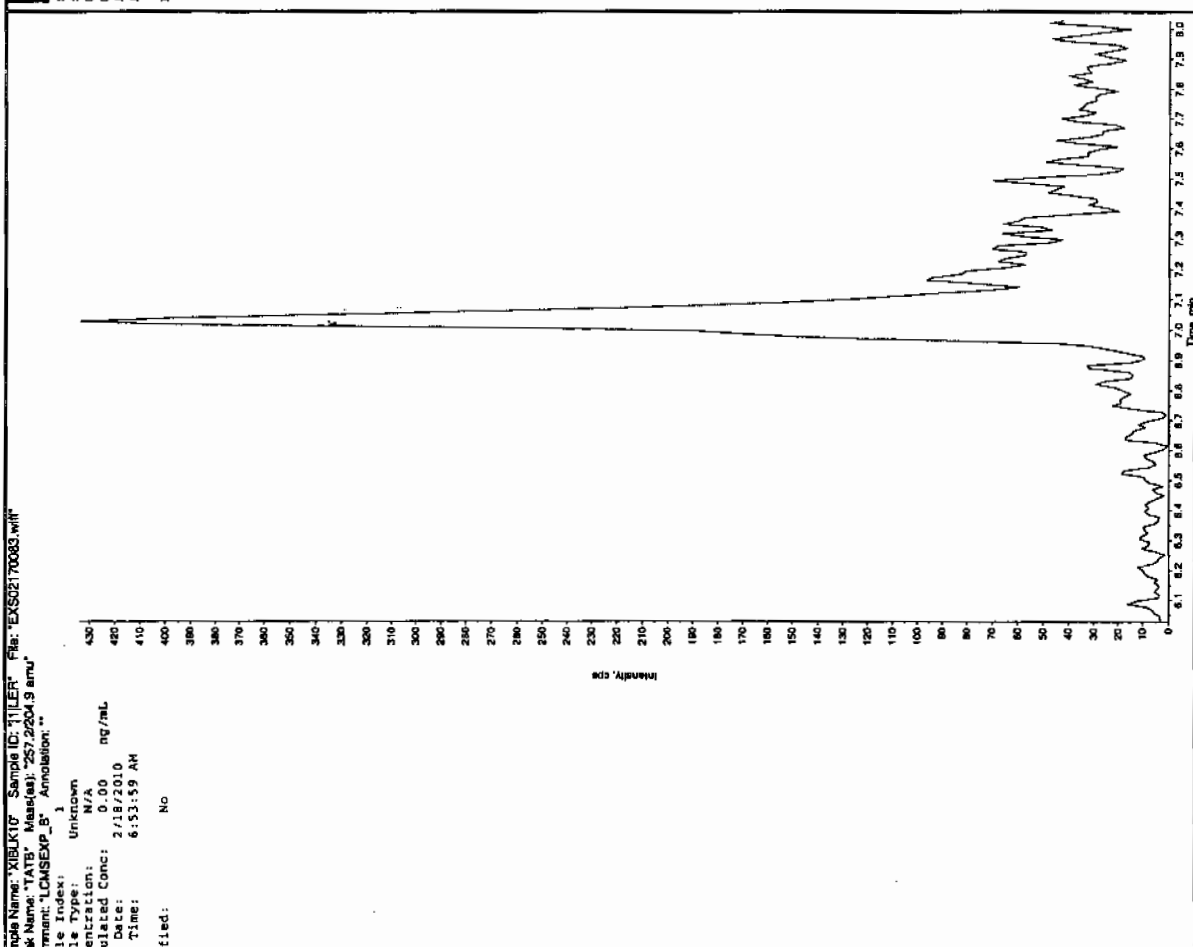
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	5.23
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

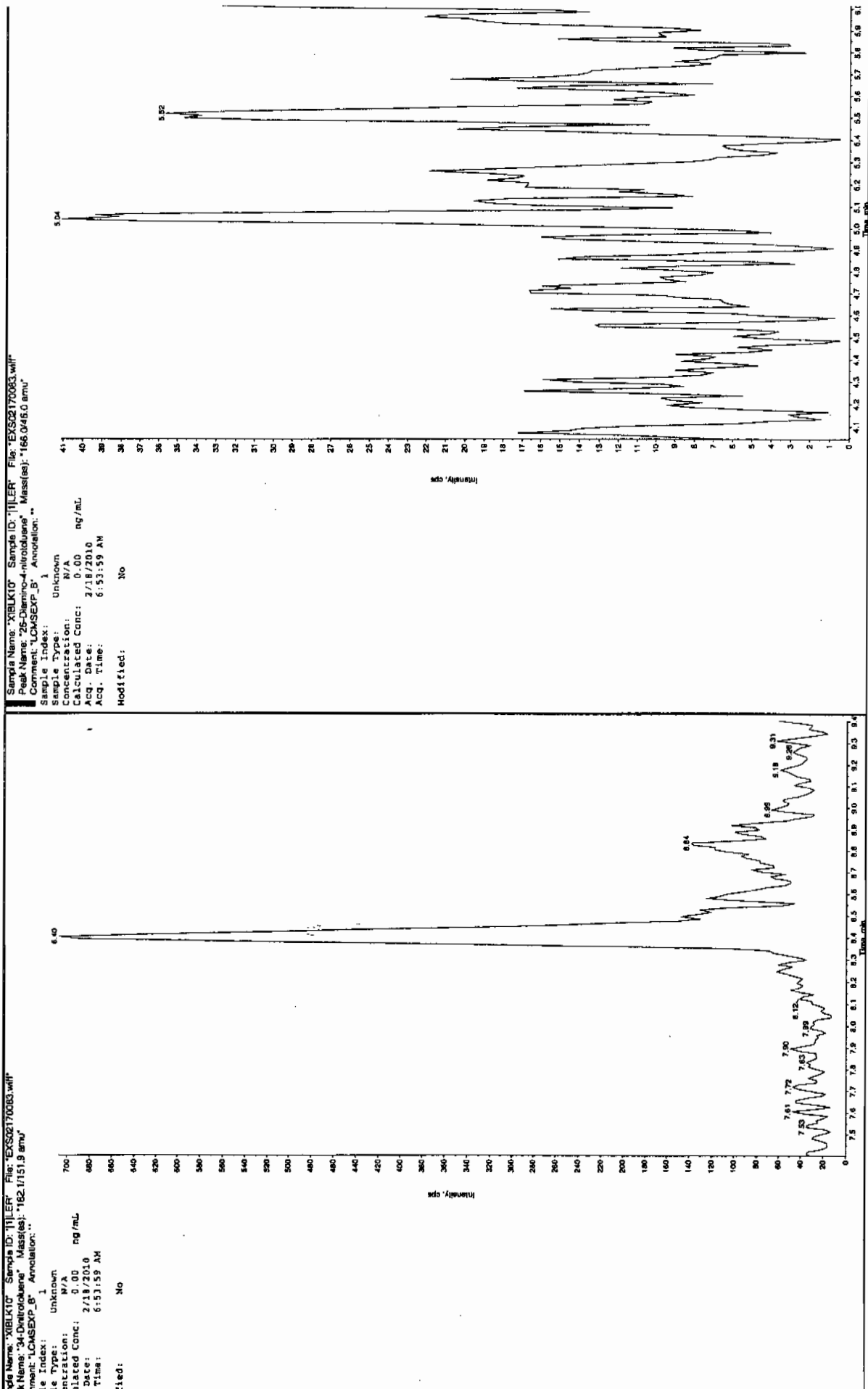
for 2/19/10



done 2/19/10



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



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

Sample Name: "XIBLX10" Sample ID: "T1LER" File: "EXS02170083.wif"
 Peak Name: "24-Diamino-6-nitrobenzene" Mass(es): "166.096.0 amu"
 Comment: "LCMSEXP_B" Annotation: "--

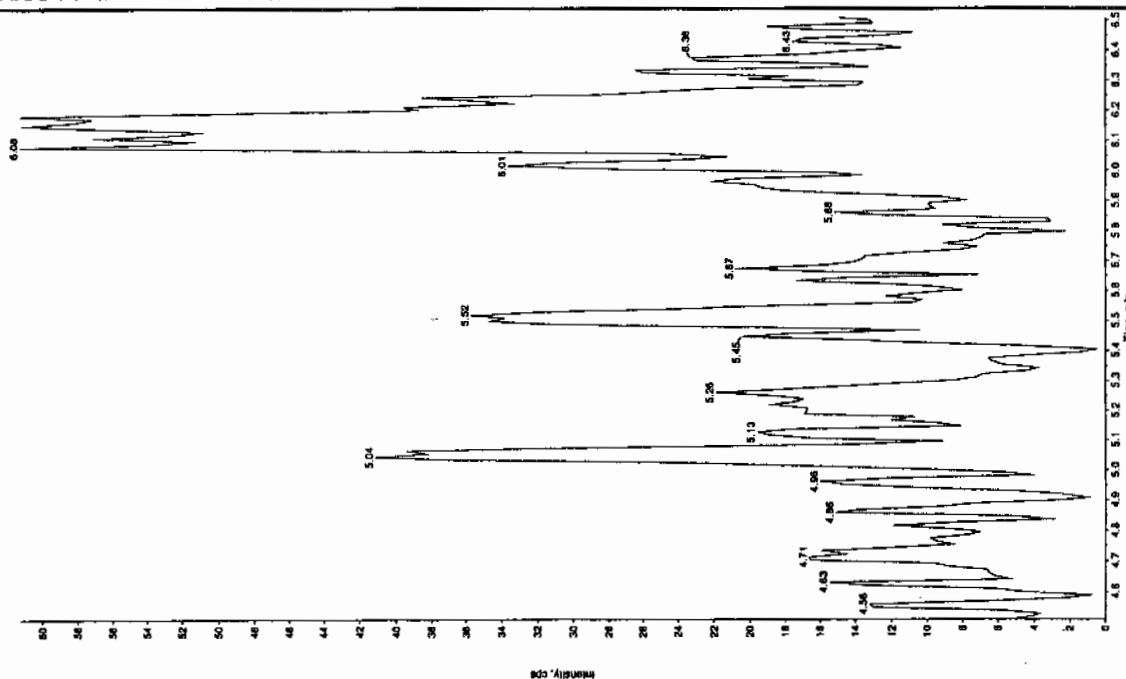
Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Diluted Conc: 2/18/2010 ng/mL
 Acq. Date: 6/13/10 AM
 Acq. Time: 6:53:59 AM
 Modified: No
 Proc. Algorithm: IntelliQuan - IOA
 Min. Peak Height: 8000.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 10.9 min
 Use Relative RT: No

Int. Type: Valley
 Retention Time: 10.9 min
 Area: 1.14e+003 counts
 Height: 27569.943 cps
 Start Time: 10.5 min
 End Time: 11.2 min

Sample Name: "XIBLX10" Sample ID: "T1LER" File: "EXS02170083.wif"
 Peak Name: "tri(n-octyl) phosphate" Mass(es): "368.191.0 amu"
 Comment: "LCMSEXP_B" Annotation: "--

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Diluted Conc: 2/18/2010 ng/mL
 Acq. Date: 6/13/10 AM
 Acq. Time: 6:53:59 AM
 Modified: No
 Proc. Algorithm: IntelliQuan - IOA
 Min. Peak Height: 8000.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 10.9 min
 Use Relative RT: No

Int. Type: Valley
 Retention Time: 10.9 min
 Area: 1.14e+003 counts
 Height: 27569.943 cps
 Start Time: 10.5 min
 End Time: 11.2 min



4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK11

Analysis Date: 18-FEB-10 10:18

GEL Data File: EXS02170096.wiff

Instrument ID: LCMSMS

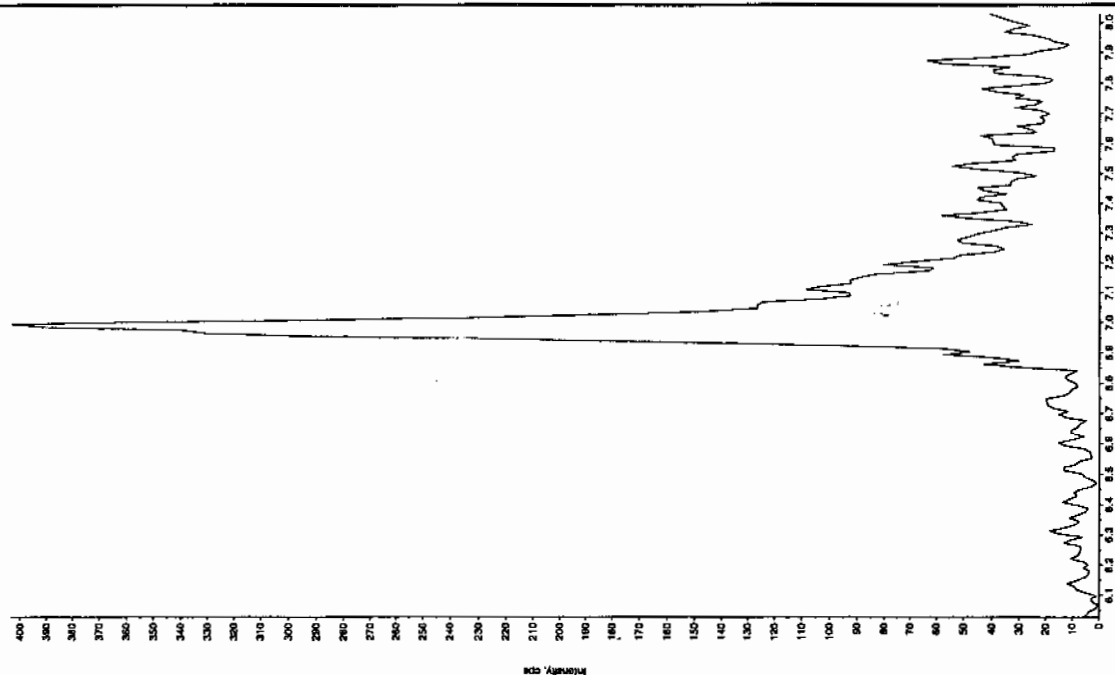
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	3.82
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

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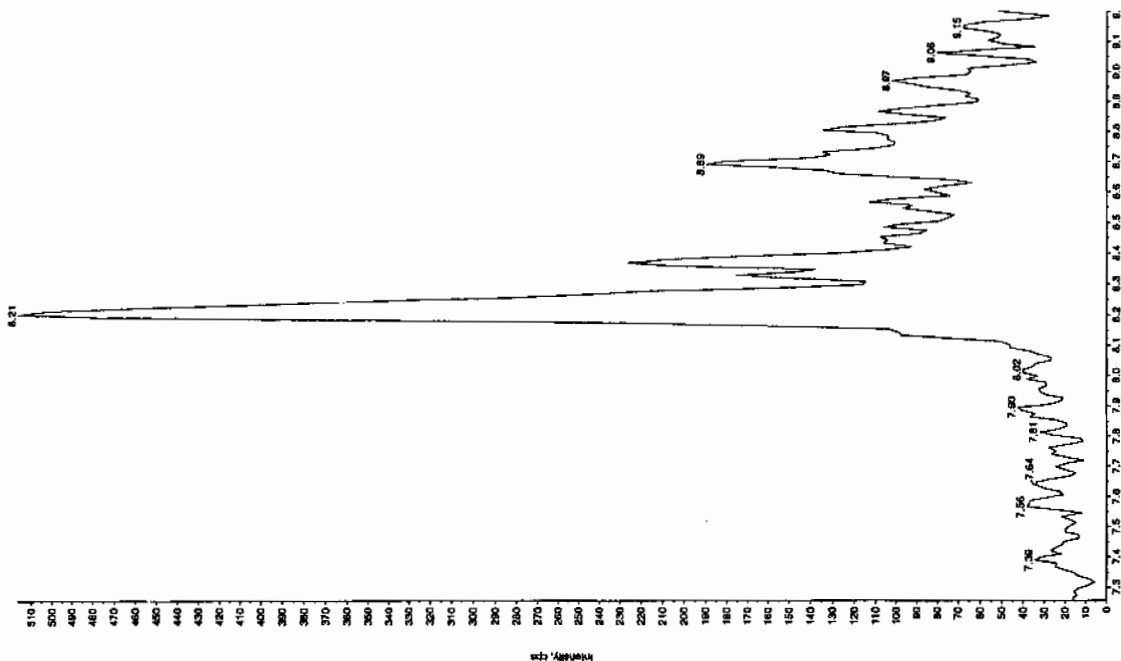
Sample Name: "XIBLK11" Sample ID: "TILER" File: "EXS02170056.wif"
 Peak Name: "TATB" Mass(es): "257.2204.8 amu"
 Comment: "LCMSXP_B" Annotation: "

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 2/18/2010
 Acq. Time: 10:18:09 AM
 Modified: No

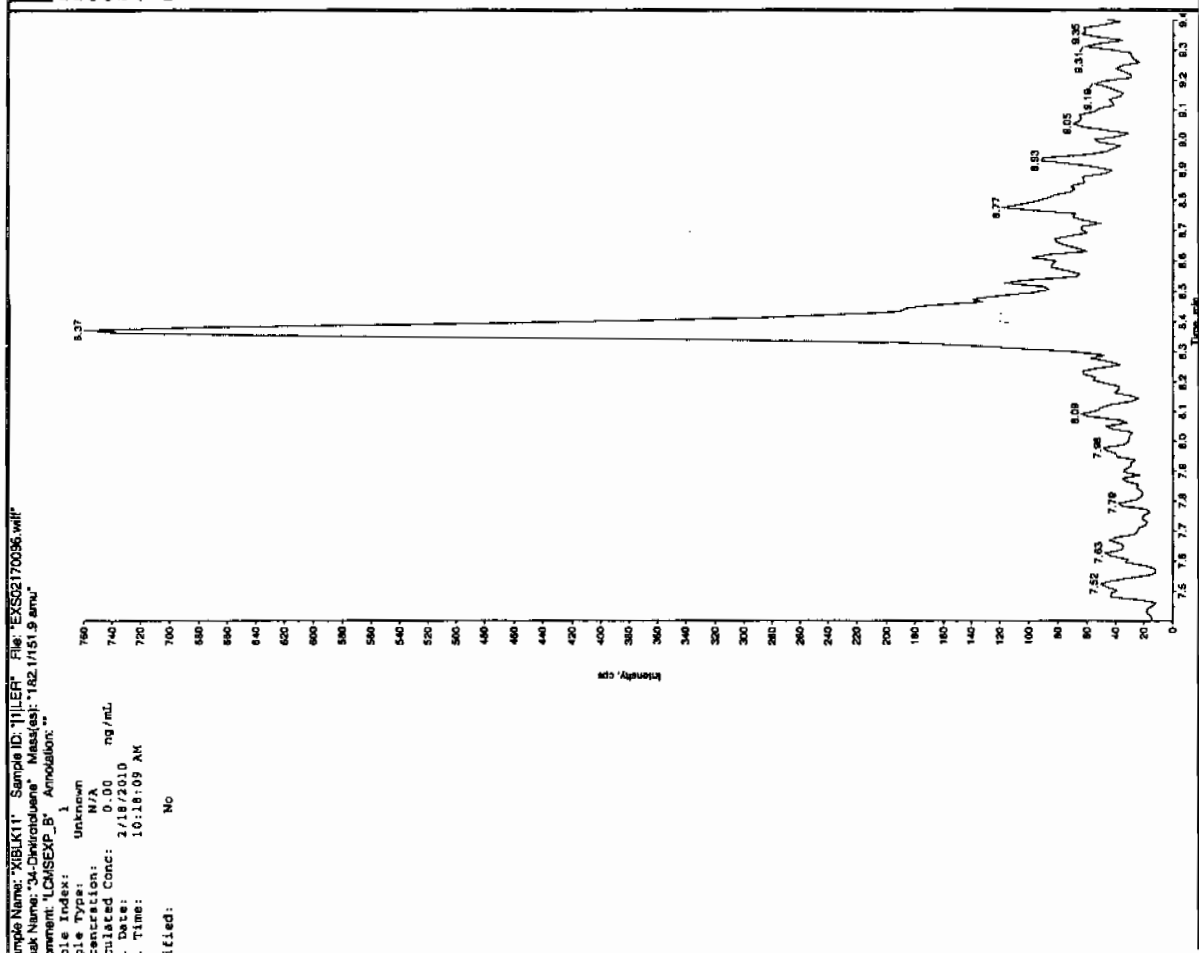
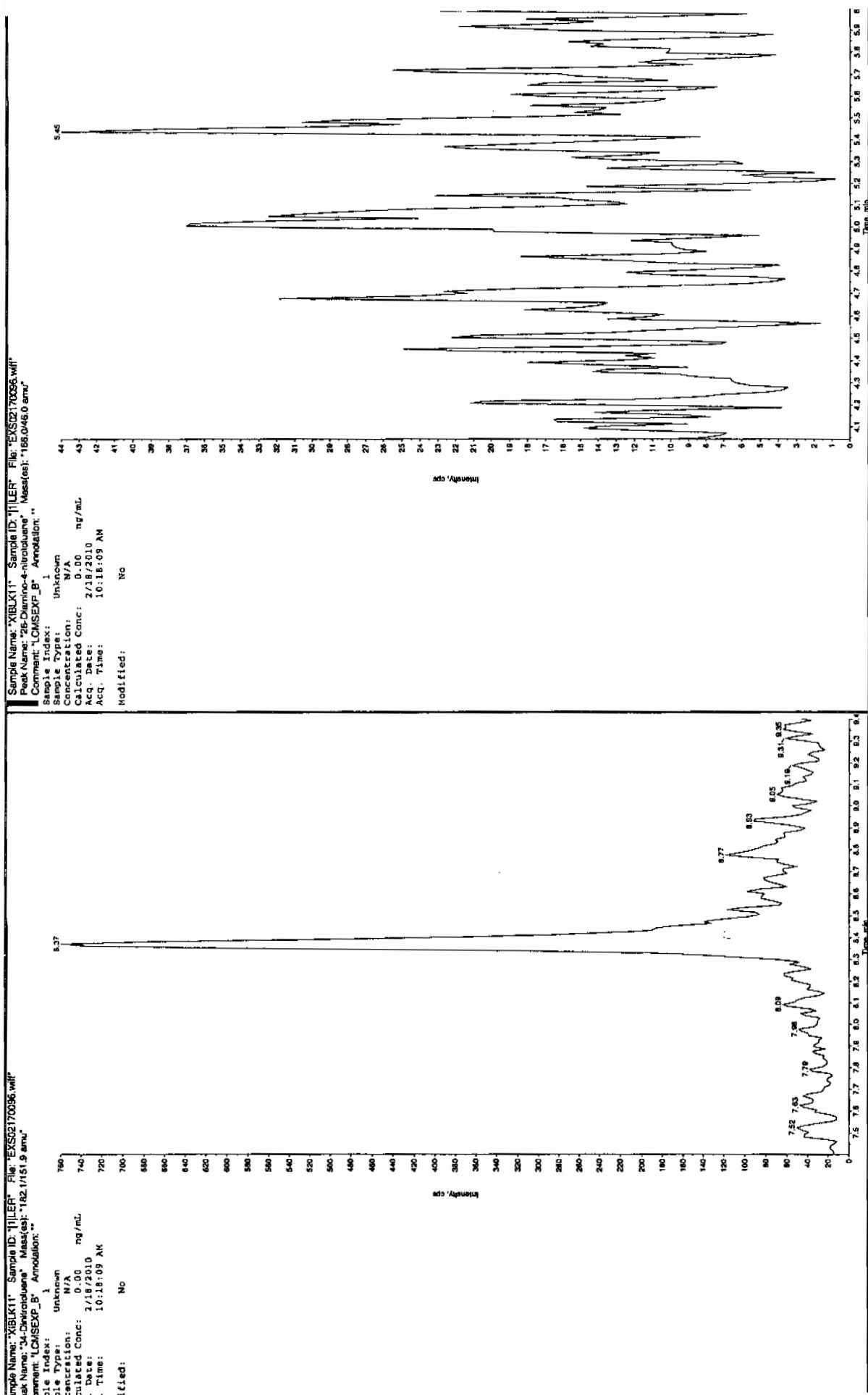


Sample Name: "XIBLK11" Sample ID: "TILER" File: "EXS02170056.wif"
 Peak Name: "35-Detoxaphine" Mass(es): "182.046.0 amu"
 Comment: "LCMSXP_B" Annotation: "

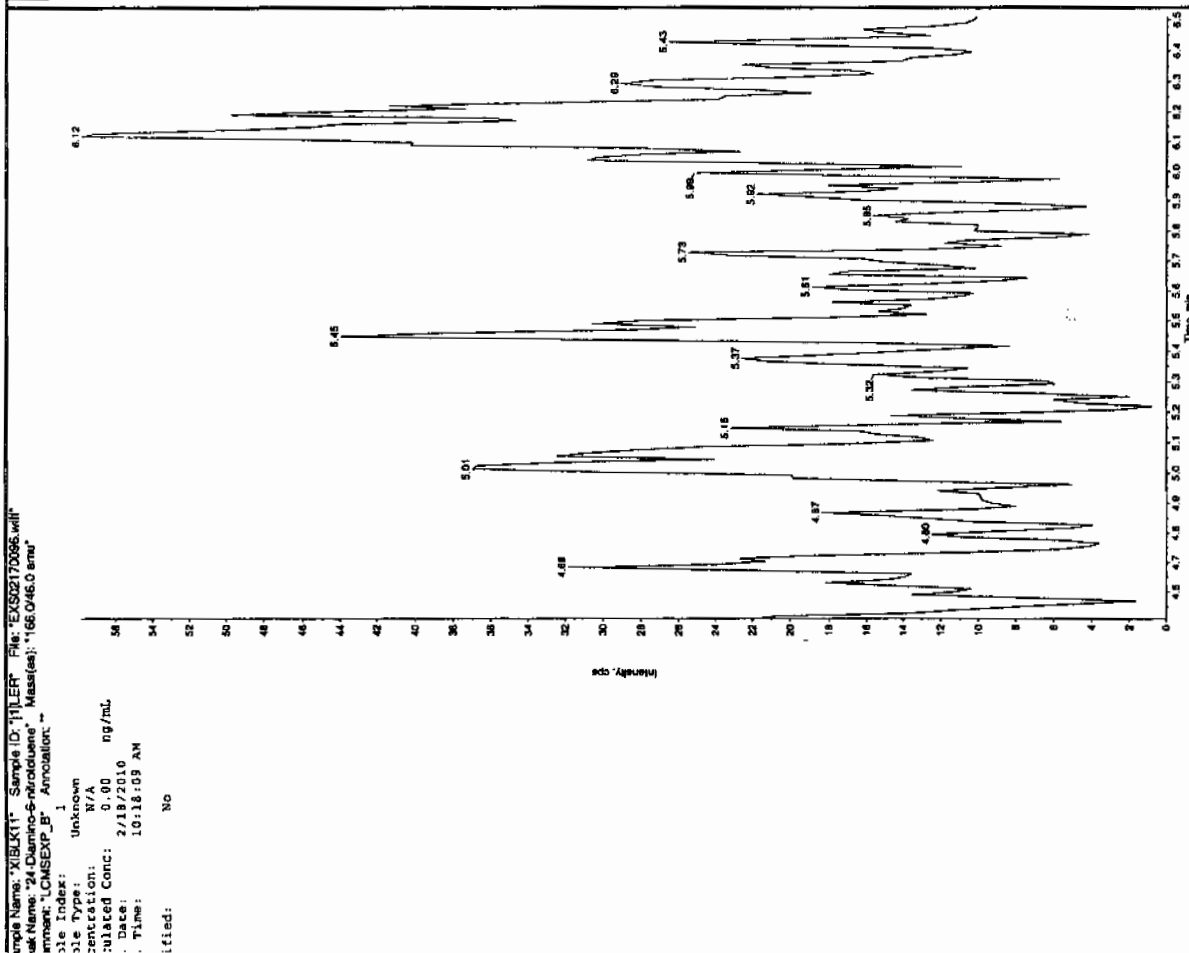
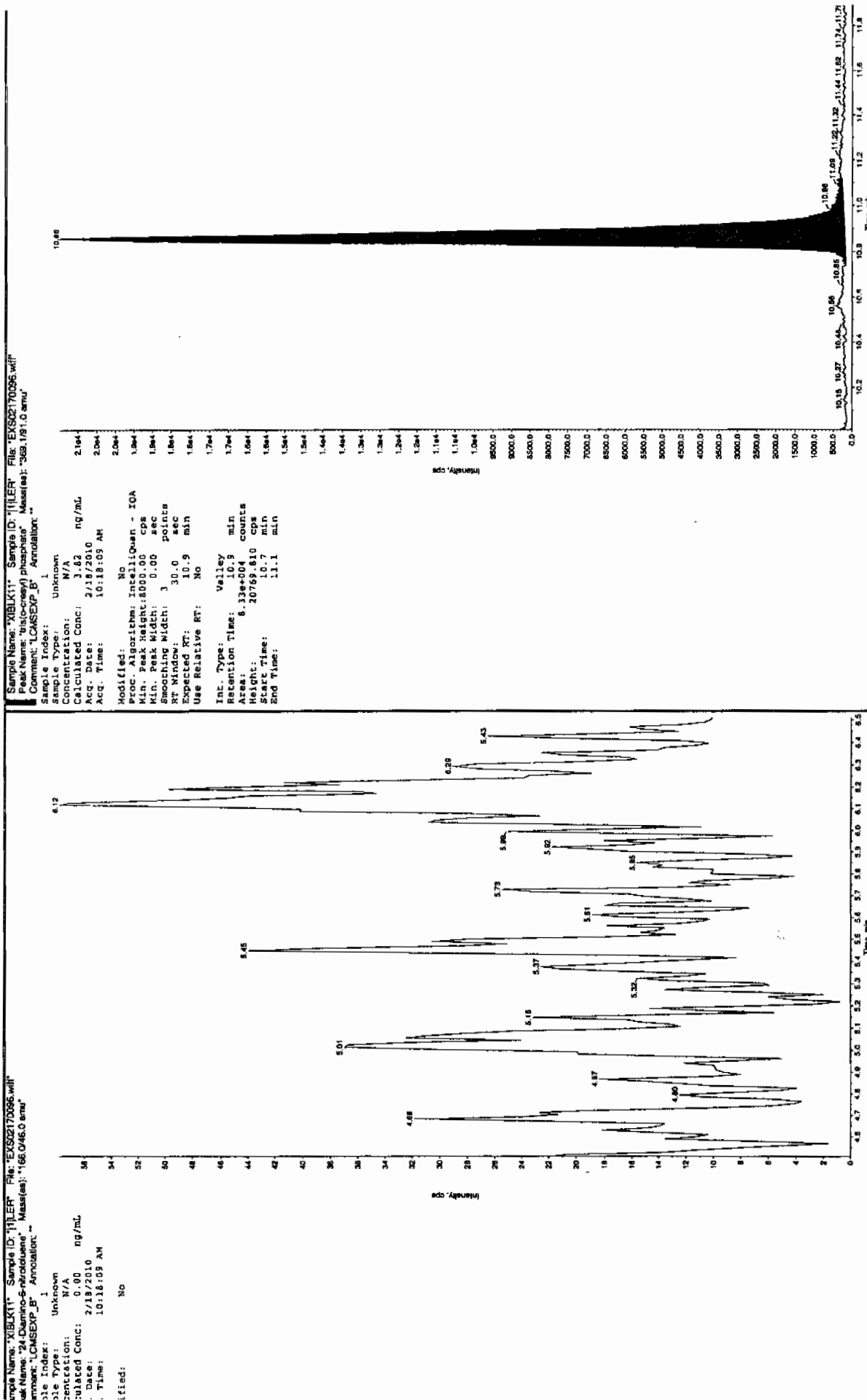
Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Acq. Date: 2/18/2010
 Acq. Time: 10:18:09 AM
 Modified: No



Jan 21/9/10



3L SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4



EL SOP GL-OA-E-056, Method 8321A-Modified LCM SMS#4

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK12

Analysis Date: 18-FEB-10 11:52

GEL Data File: EXS02170102.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	4.35
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

Jan 21/10

Sample Name: "XIBLX12" Sample ID: "HILIR" File: "EXS02170102.wif"

Peak Name: "TATB" Mass(es): "257.22049 amu"

Comment: "LCMSEXP_B" Annotation: ""

File Index: 1

Sample Type: Unknown

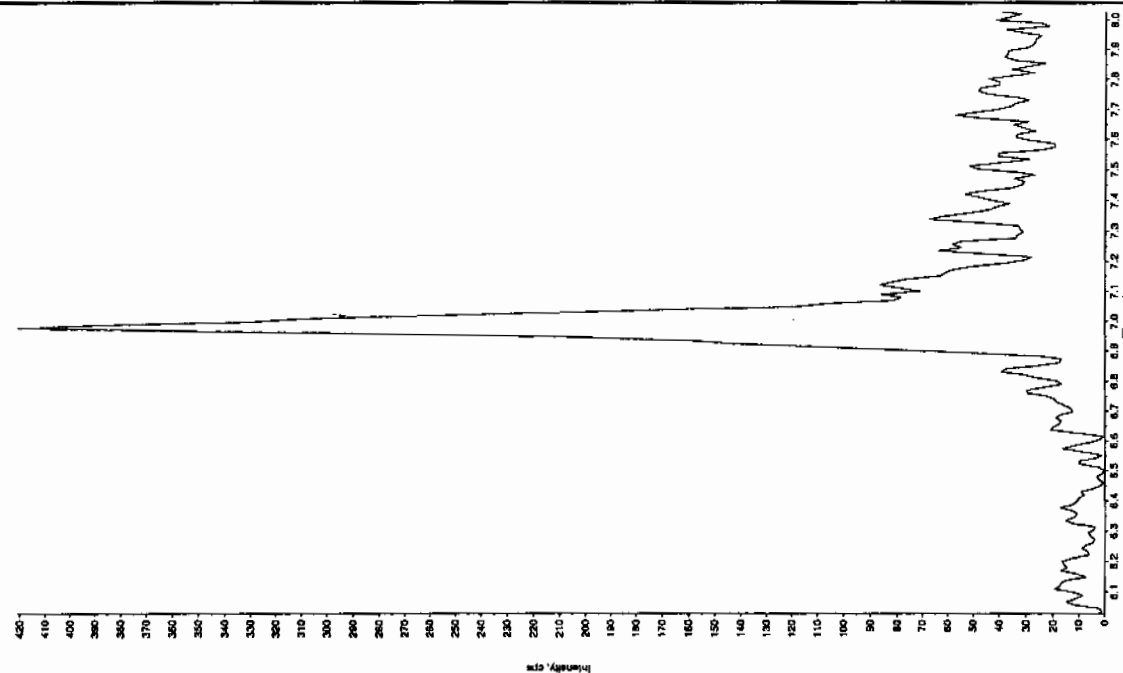
Concentration: N/A

Calculated Conc: 0.00 ng/mL

Acq. Date: 2/18/2010

Acq. Time: 11:32:26 AM

Modified: No



3L SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "XIBLX12" Sample ID: "HILIR" File: "EXS02170102.wif"

Peak Name: "35-Dinitroaniline" Mass(es): "182.0480 amu"

Comment: "LCMSEXP_B" Annotation: ""

File Index: 1

Sample Type: Unknown

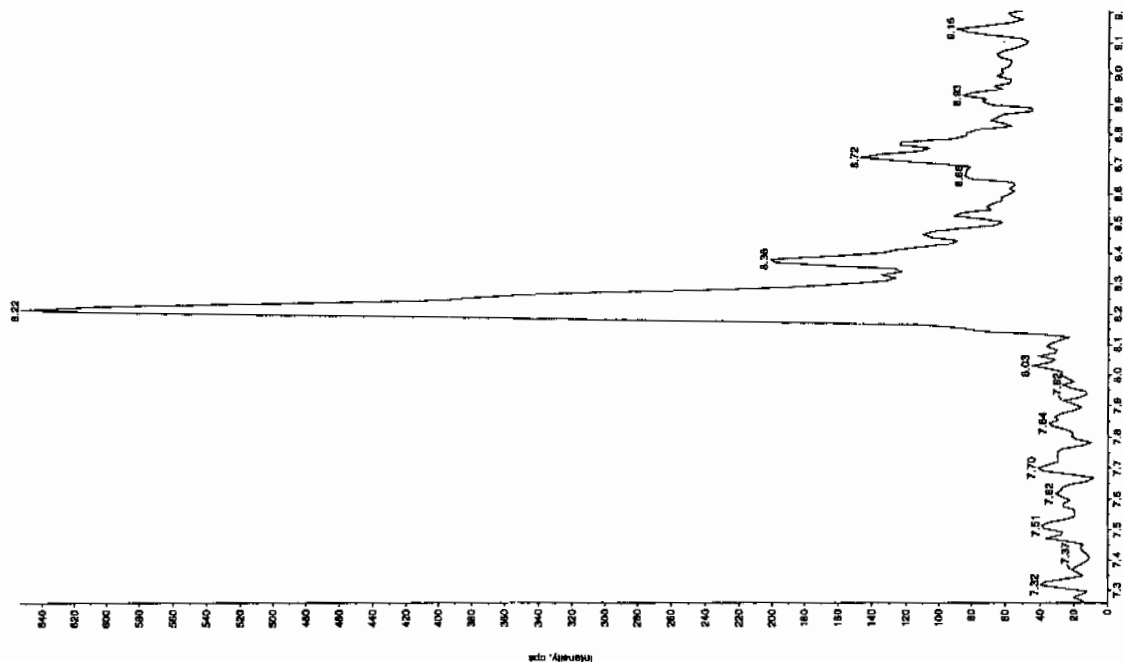
Concentration: N/A

Calculated Conc: 0.00 ng/mL

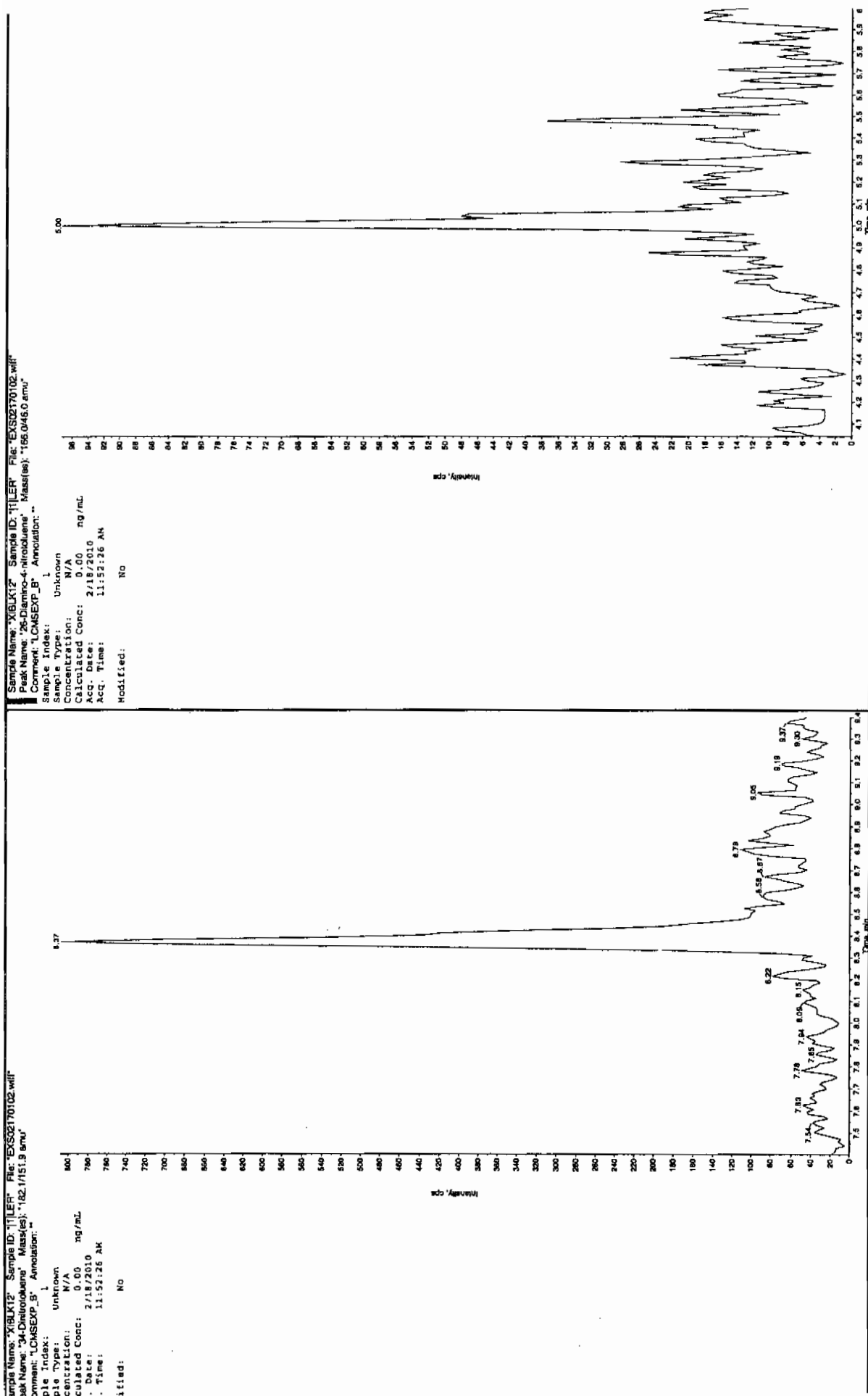
Acq. Date: 2/18/2010

Acq. Time: 11:32:26 AM

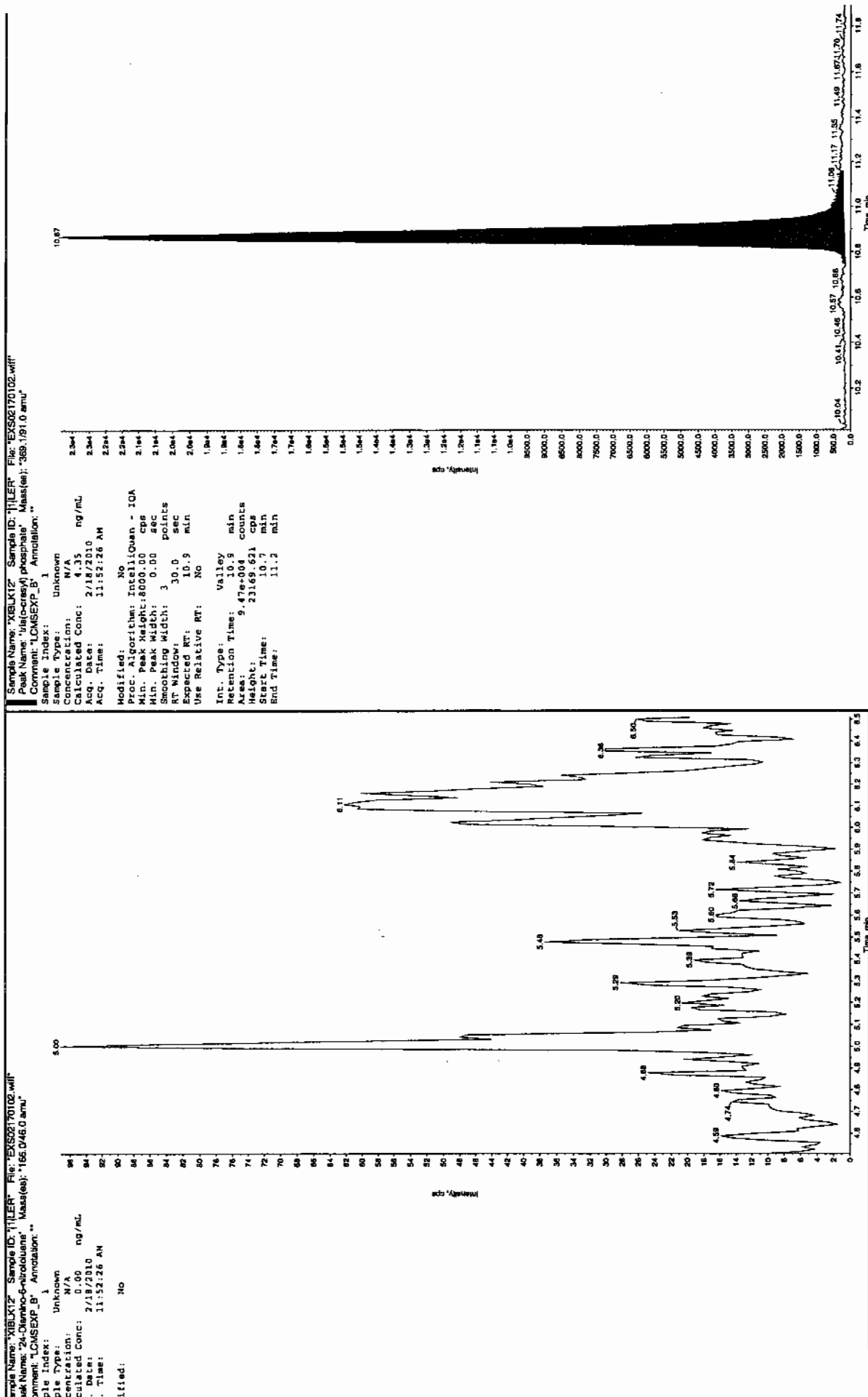
Modified: No



Jan 21/10



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



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

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK13

Analysis Date: 18-FEB-10 15:16

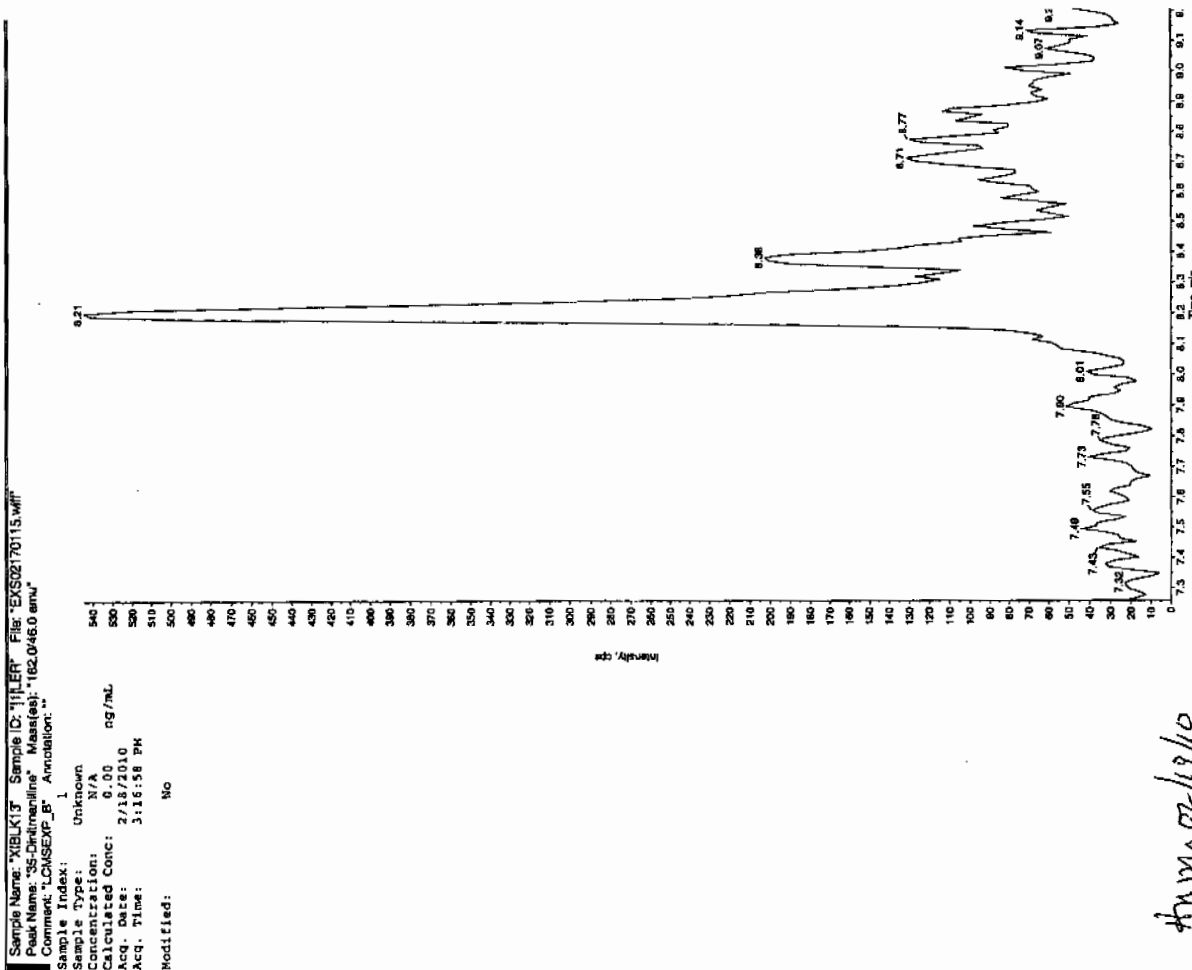
GEL Data File: EXS02170115.wiff

Instrument ID: LCMSMS

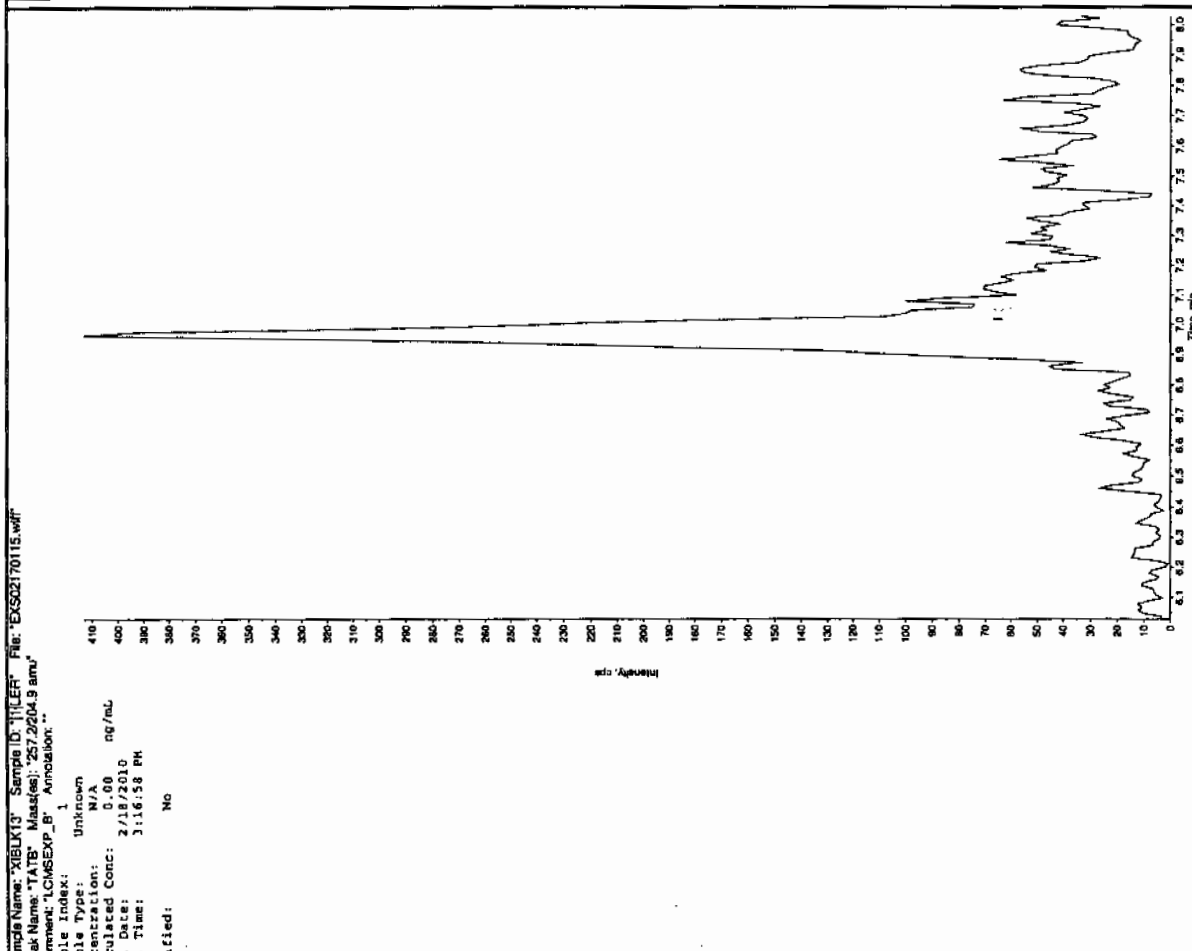
Column: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found (ug/L)
3,4-Dinitrotoluene	0	0
tris(o-cresyl) phosphate	0	3.88
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

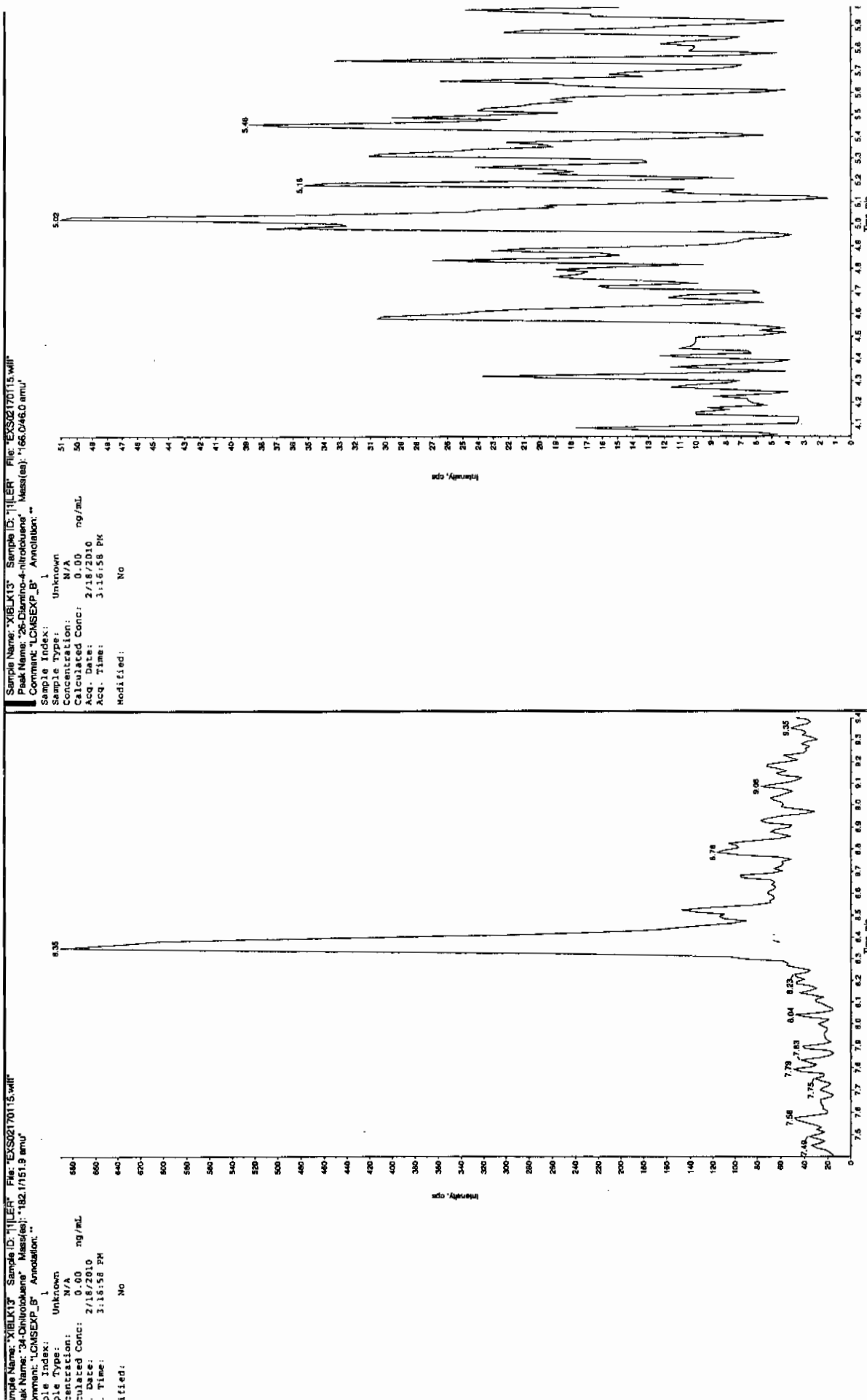
Sen 2/19/10



Amr 2/18/10



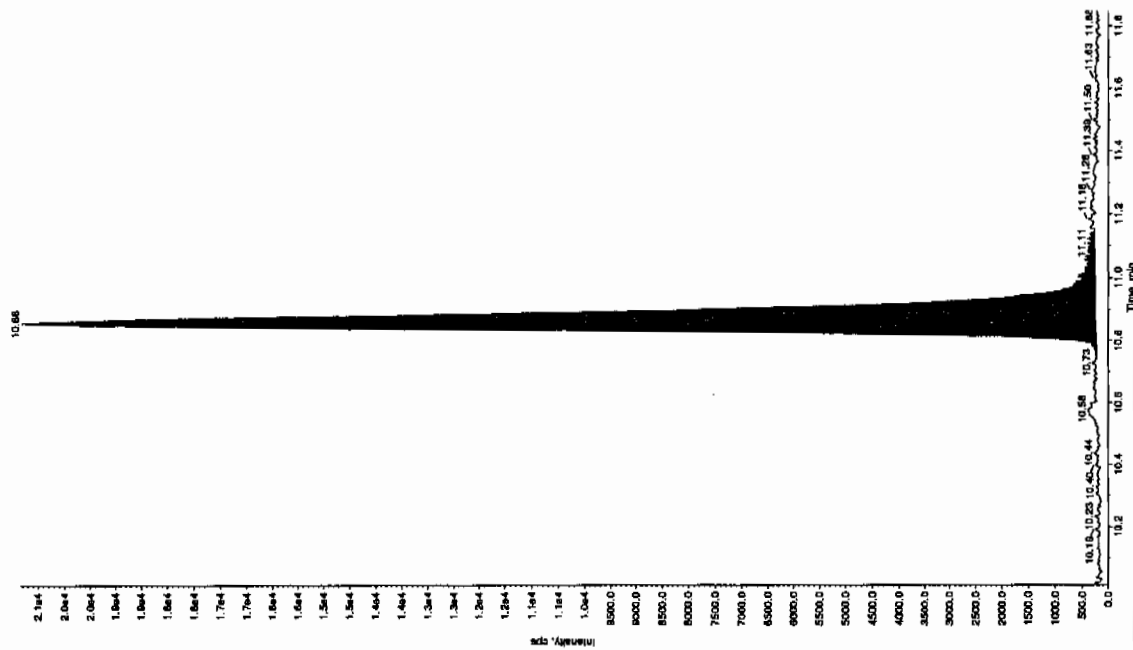
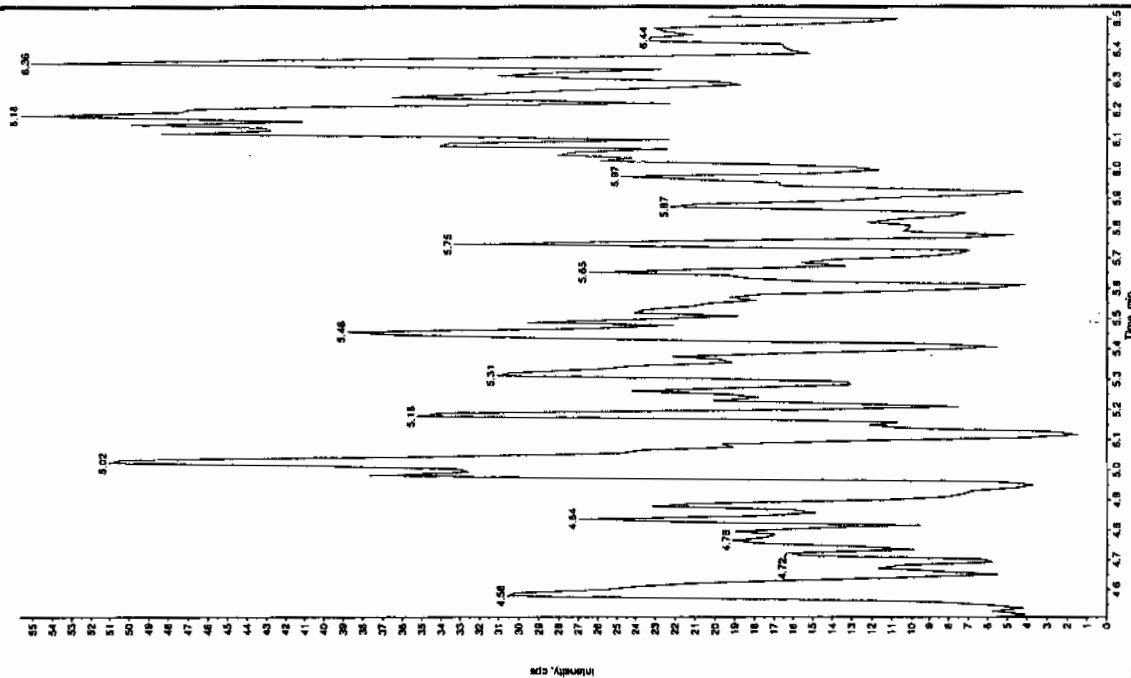
3L SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4



Sample Name: 'XBLK13' Sample ID: 'TILER' File: 'EX502170115.wif'
 Peak Name: '1,3-bis(4-oxocyclohex-2-en-1-yl)propane' Mass(es): '186.046.0 amu'
 Comment: 'LONSEXP_B' Annotation: ''

Sample Index: Unknown
 Sample System: N/A
 Concentration: 0.00 ng/mL
 Calculated Conc: 2/18/2010
 Acq. Date: 3:16:58 PM
 Acq. Time: No
 Modified: No
 Proc. Algorithm: IntelliQuan - IOA
 Min. Peak Height: 8000.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 30.0 sec
 Expected RT: 10.9 min
 Use Relative RT: No

Int. Type: Valley
 Retention Time: 10.9 min
 Area: 8.46e+004 cps
 Height: 20600 cps
 Start Time: 11.1 min
 End Time: 11.1 min



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

4A

Explosives Continuing Calibration Blank

Lab Name: GEL Laboratories LLC

GEL Job No(SDG): 10-1394

Lab Code: GEL

Lab Sample ID: XIBLK14

Analysis Date: 18-FEB-10 18:25

GEL Data File: EXS02170127.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	2.7
TATB	0	0
3,5-Dinitroaniline	0	0
2,4-Diamino-6-nitrotoluene	0	0
2,6-Diamino-4-nitrotoluene	0	0

See 2/19/10

Sample Name: "XIBLK14" Sample ID: "HILIR" File: "EXS02170127.wif"

Peak Name: "TATB" Mass(es): "257.2204.9 amu"

Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1

Sample Type: Unknown

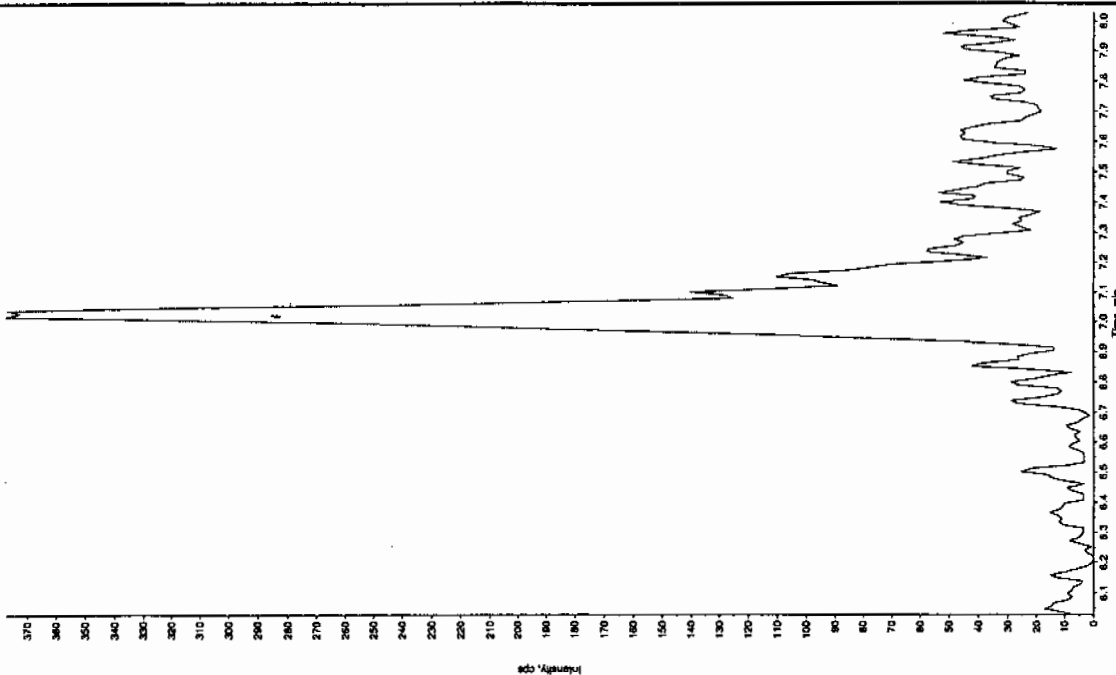
Concentration: N/A ng/mL

Calculated Conc: 0.00

Acq. Date: 2/18/2010

Acq. Time: 8:23:41 PM

Modified: No



Sample Name: "XIBLK14" Sample ID: "HILIR" File: "EXS02170127.wif"

Peak Name: "35-Dinitroaniline" Mass(es): "182.046.0 amu"

Comment: "LCMSEXP_B" Annotation: ""

Sample Index: 1

Sample Type: Unknown

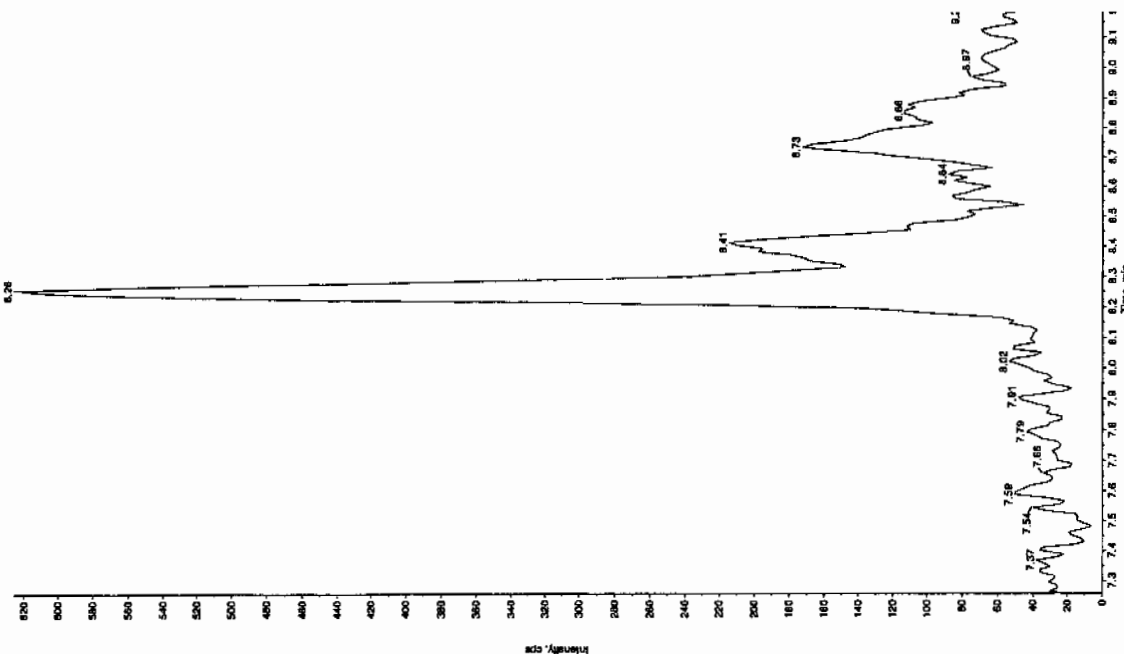
Concentration: N/A ng/mL

Calculated Conc: 0.00

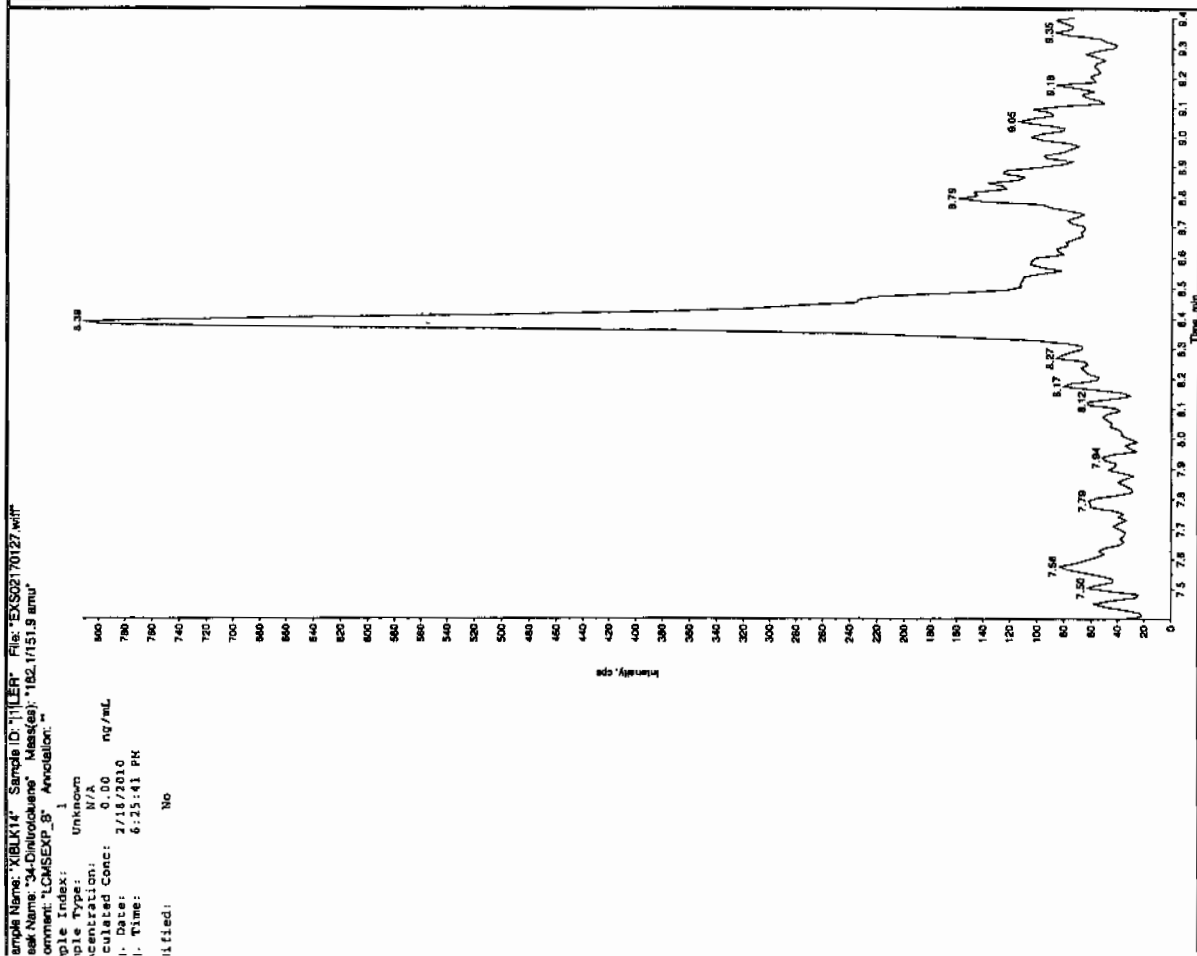
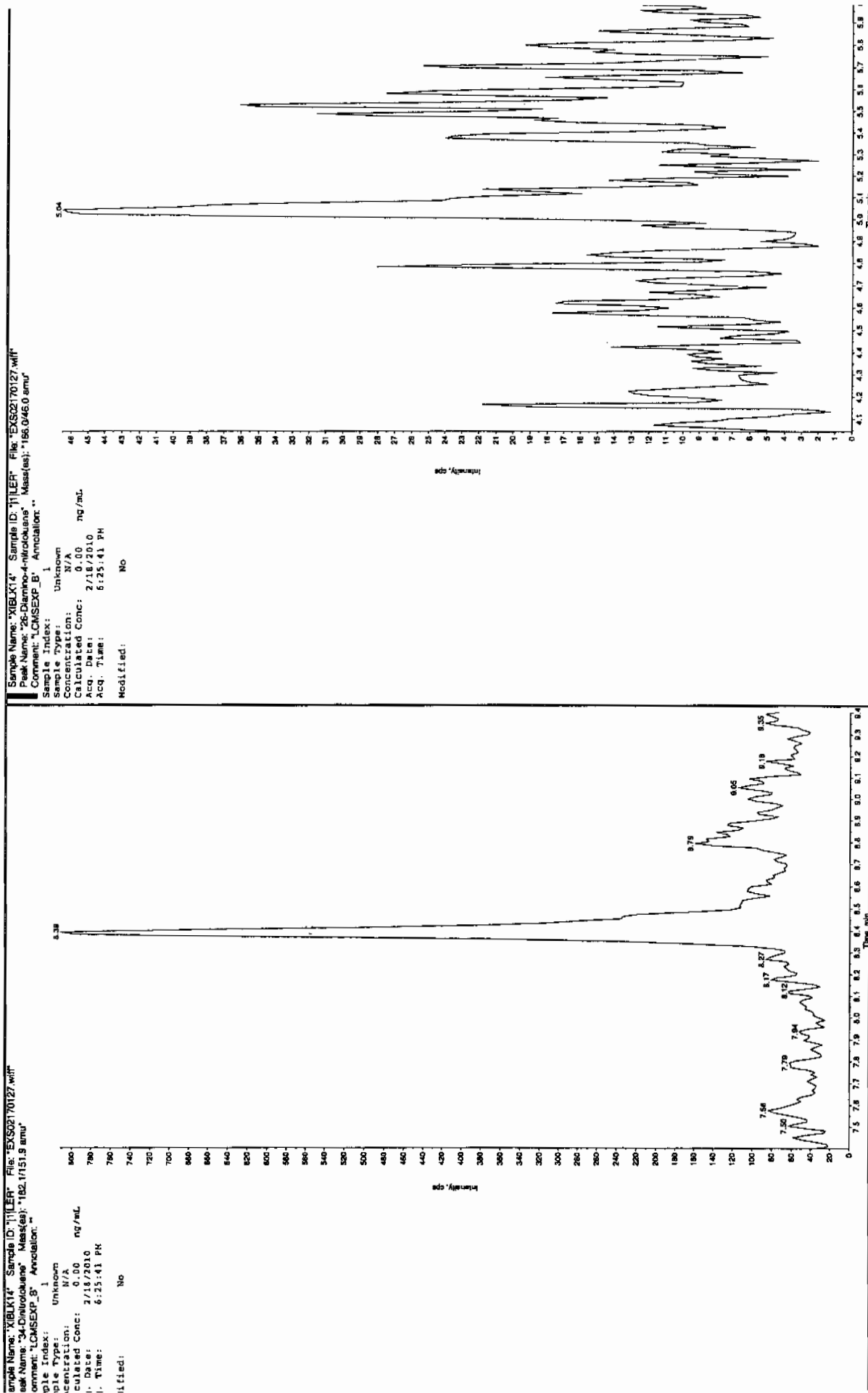
Acq. Date: 2/18/2010

Acq. Time: 8:23:41 PM

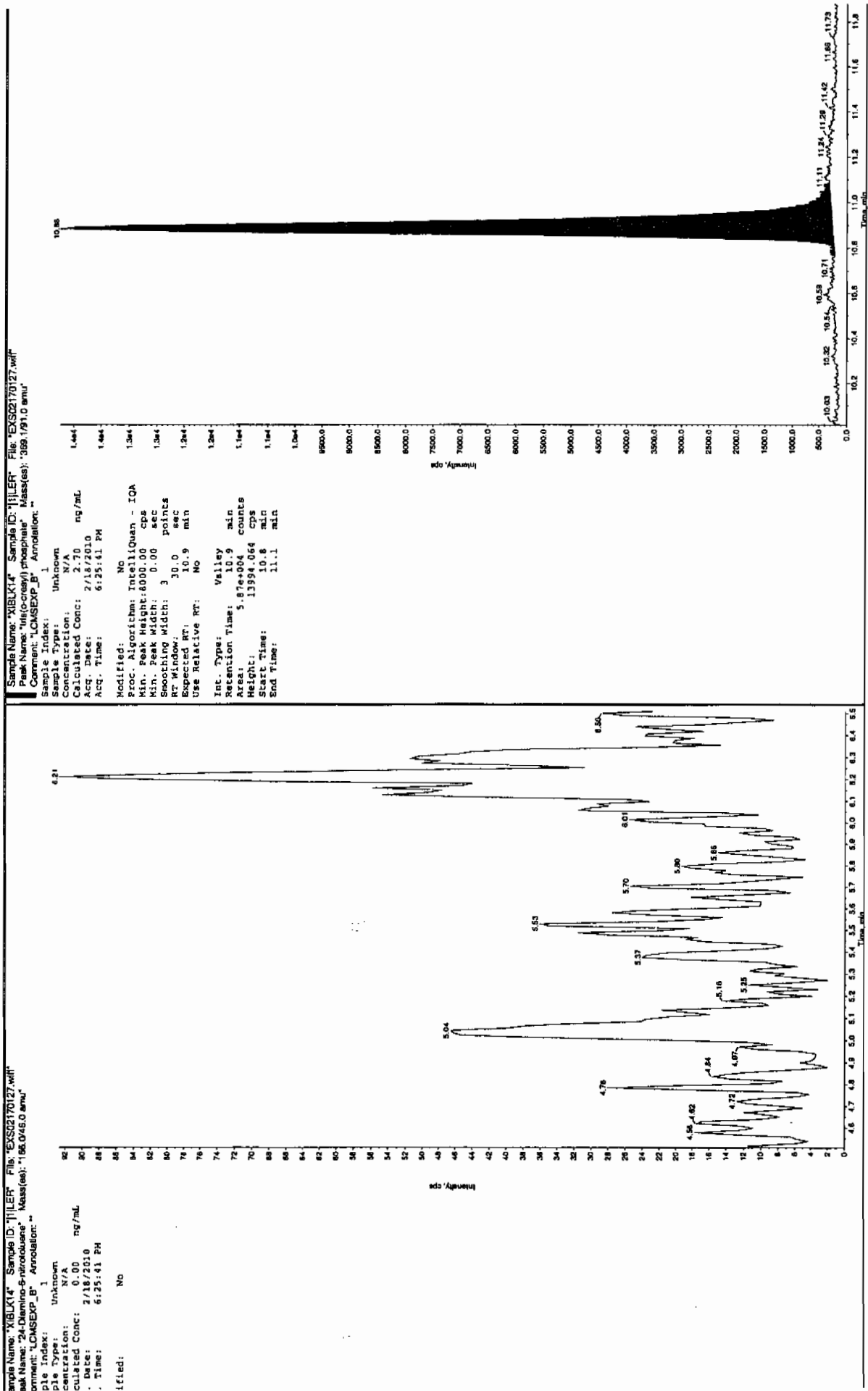
Modified: No



See 2/19/10



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



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

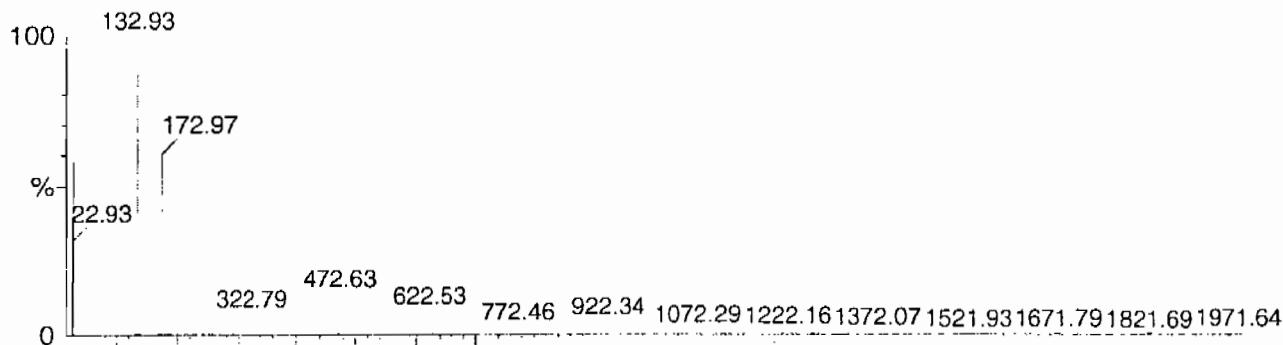
Calibration Report - MS1 Static

Page 1 of 1

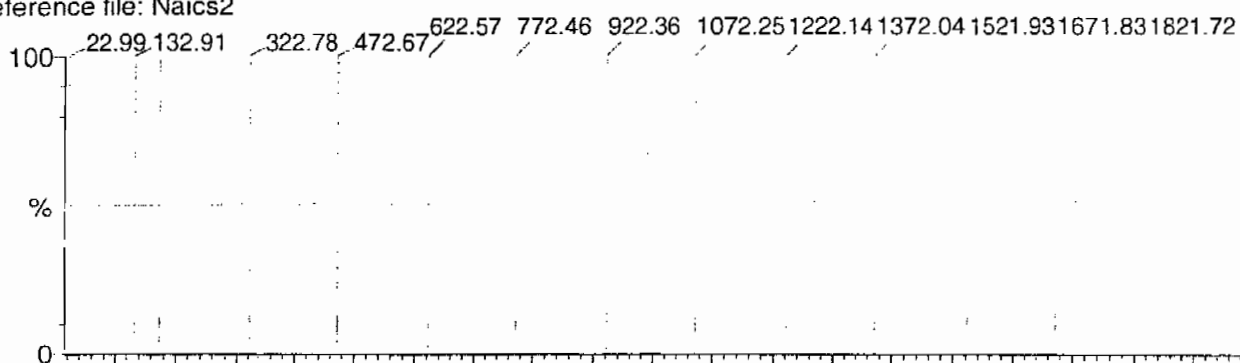
Printed: Fri Aug 25 10:50:01 2006

Data file: STATMS1 - Calibrated

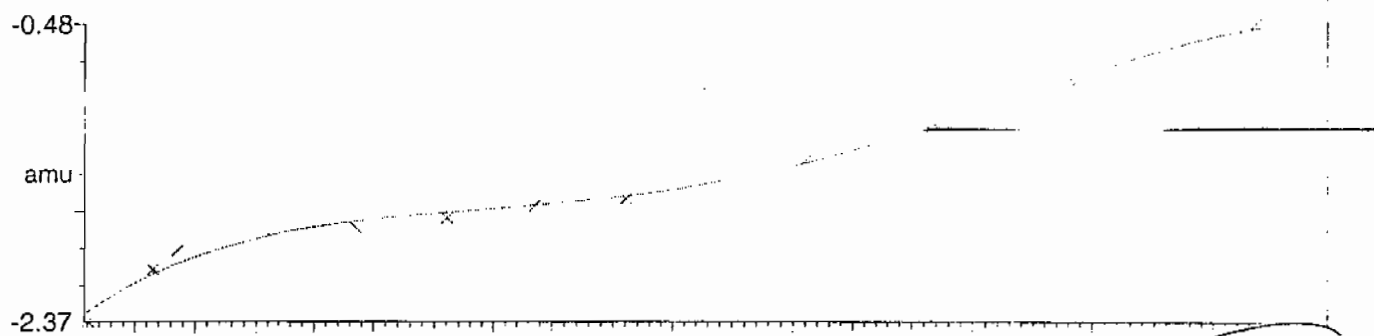
15 matches of 15 tested references



Reference file: Naics2

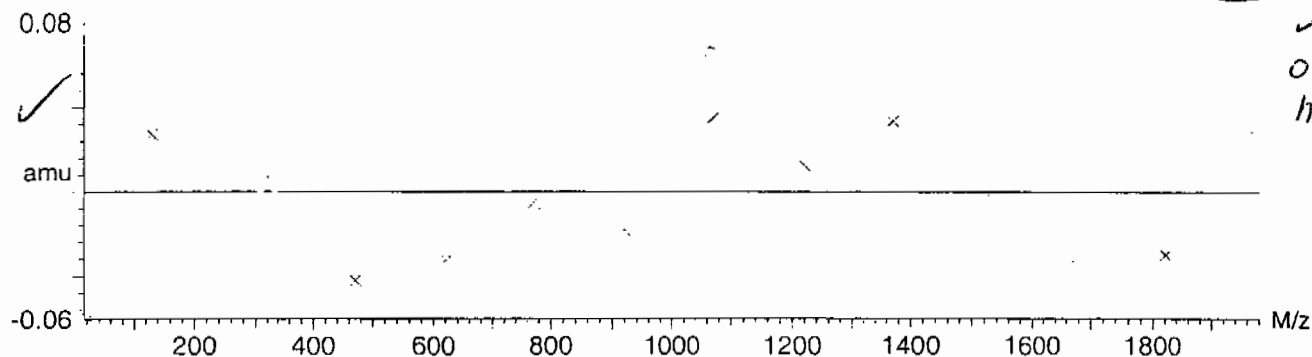


Mass difference (Raw - Ref mass)



Residuals

Mean residual = $-1.673470 \times 10^{-9} \pm 0.036953$



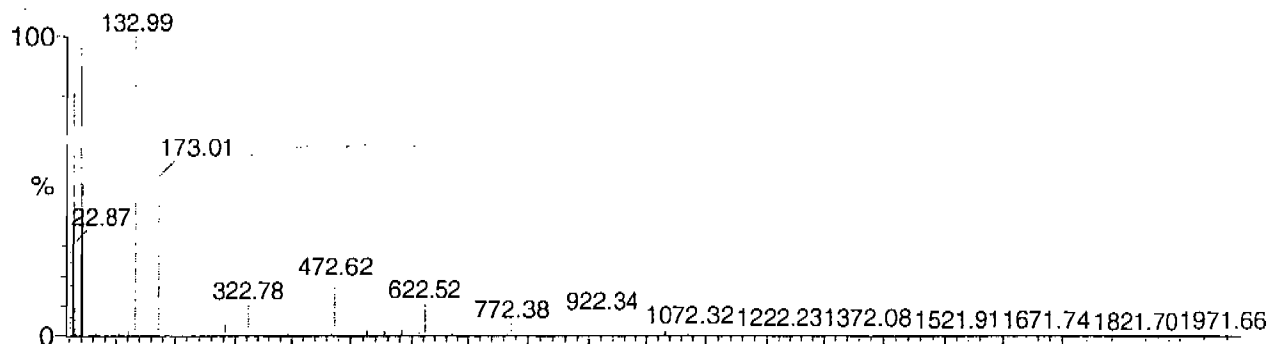
Calibration Report - MS1 Scanning

Page 1 of 1

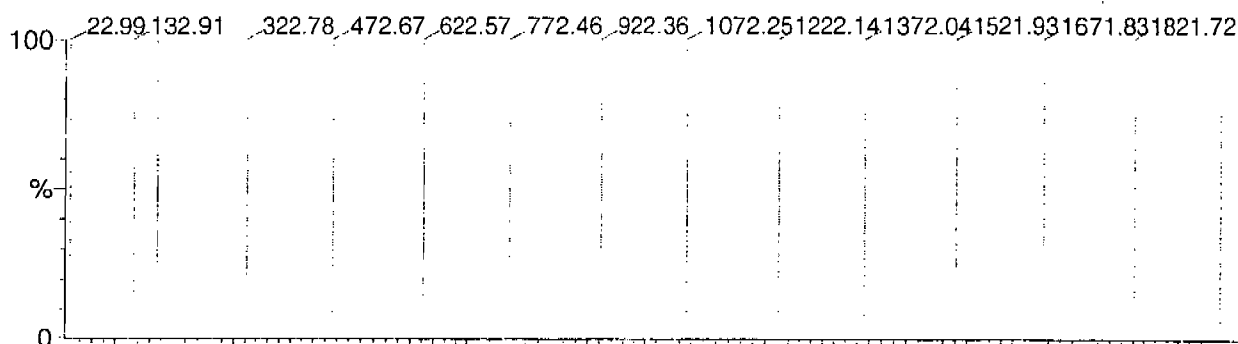
Printed: Fri Aug 25 10:51:06 2006

Data file: SCNMS1 - Calibrated

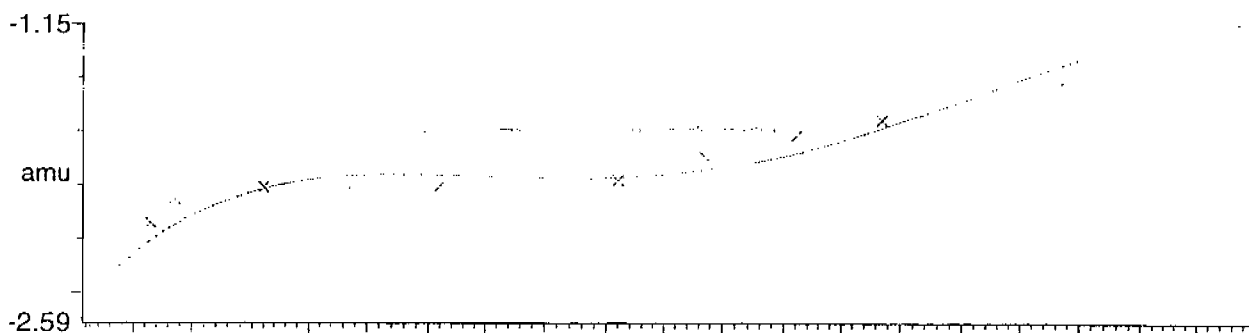
15 matches of 15 tested references



Reference file: Naics2

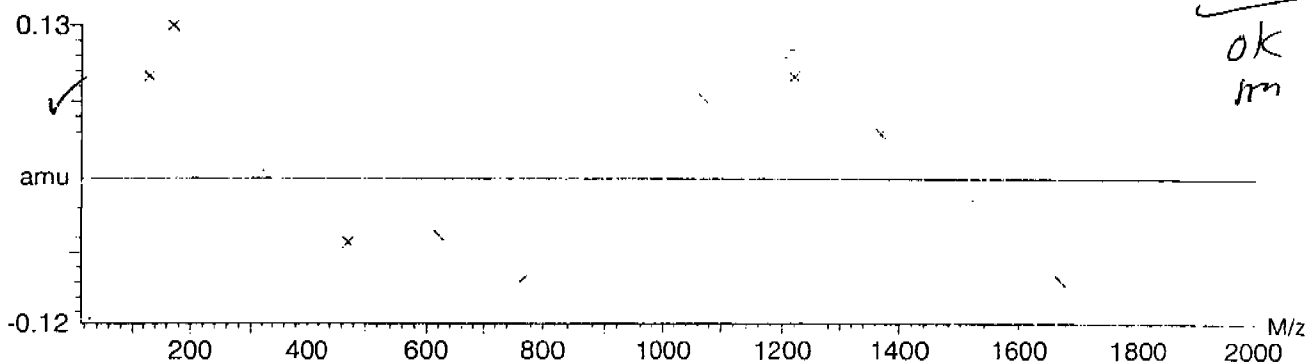


Mass difference (Raw - Ref mass)



Residuals

Mean residual = $-5.432715e-9 \pm 0.069858$



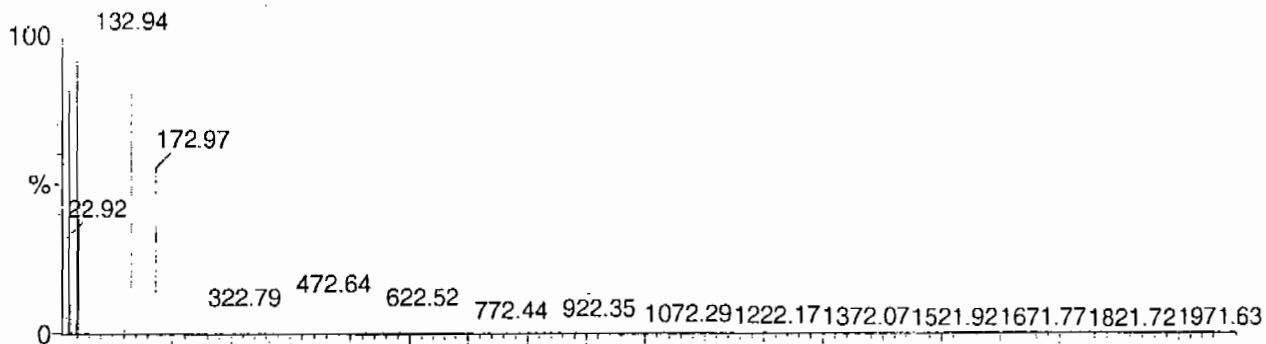
Calibration Report - MS1 Scan Speed Compensation

Page 1 of 1

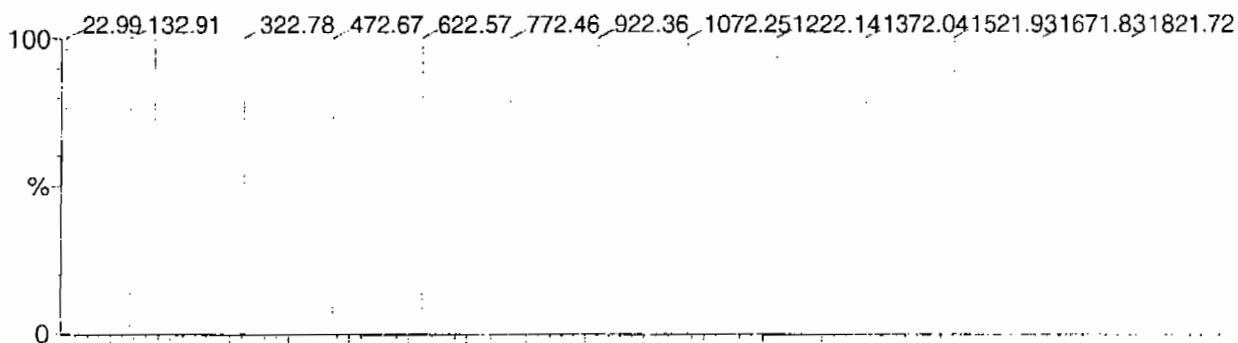
Printed: Fri Aug 25 10:52:01 2006

Data file: FASTMS1 - Calibrated

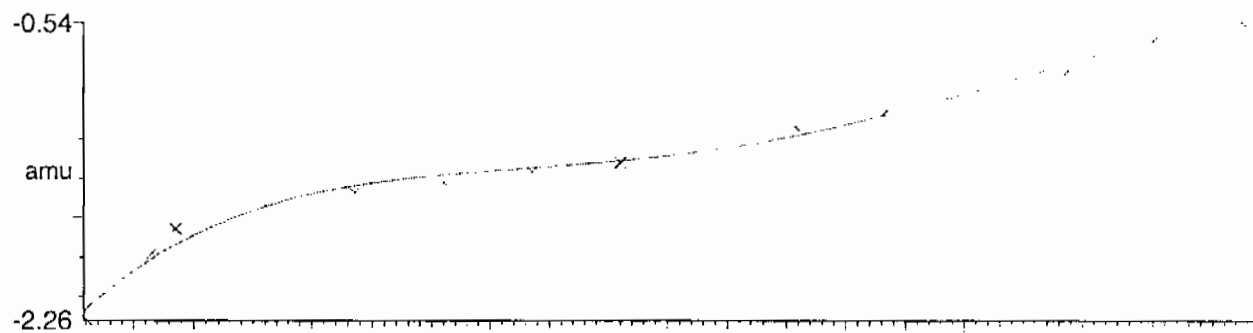
15 matches of 15 tested references



Reference file: Naics2

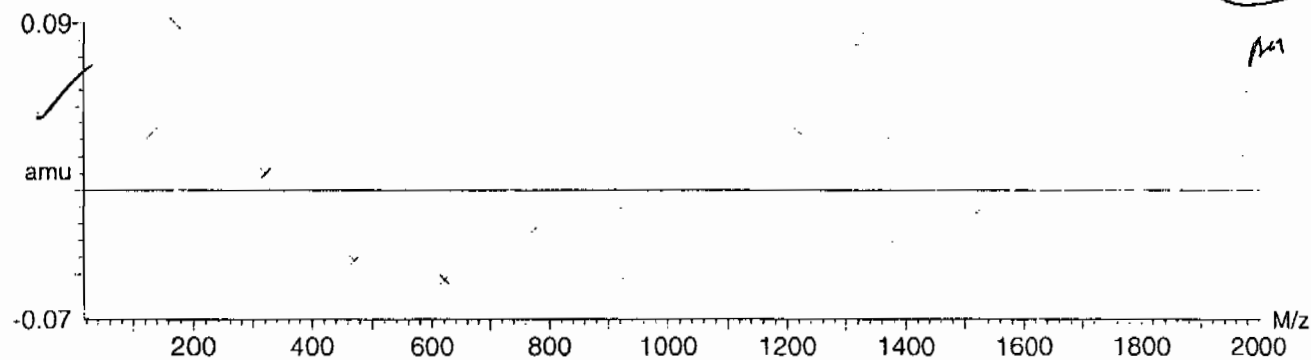


Mass difference (Raw - Ref mass)



Residuals

Mean residual = $3.486639e-9 \pm 0.040487$



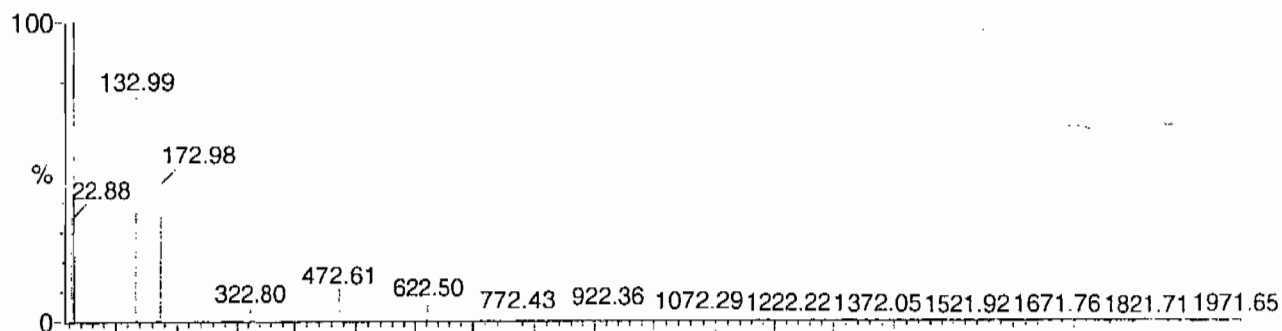
Calibration Report - MS2 Static

Page 1 of 1

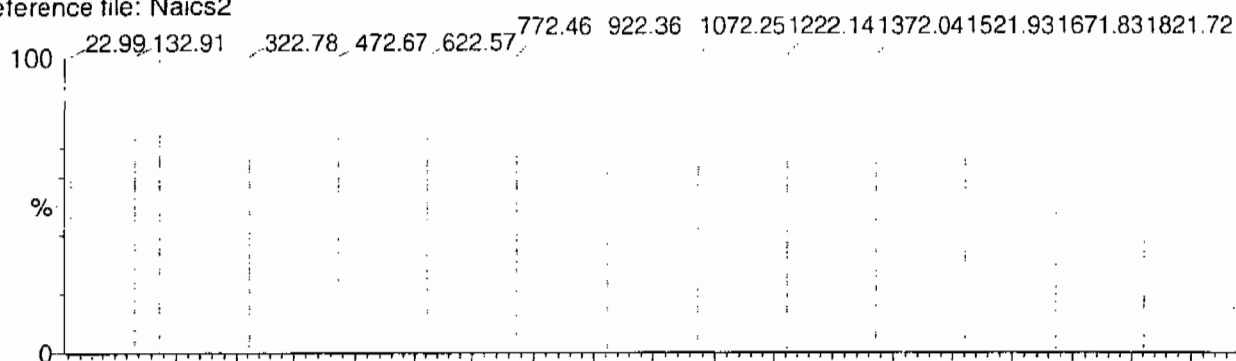
Printed: Fri Aug 25 10:52:54 2006

Data file: STATMS2 - Calibrated

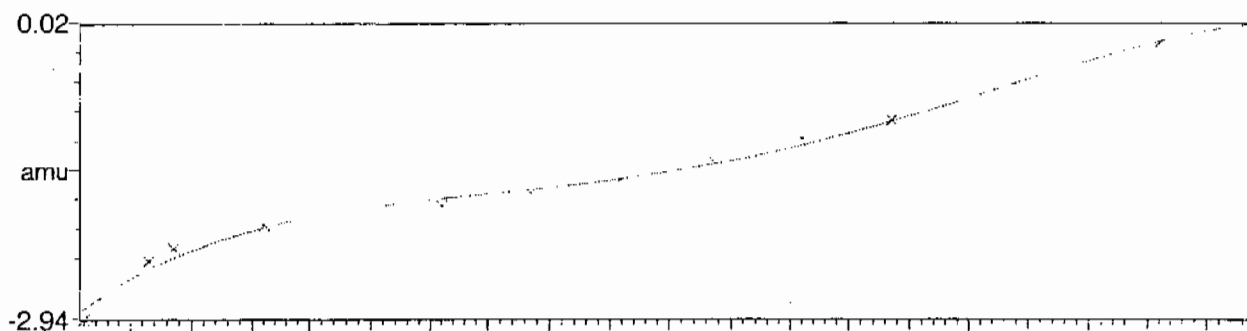
15 matches of 15 tested references



Reference file: Naics2

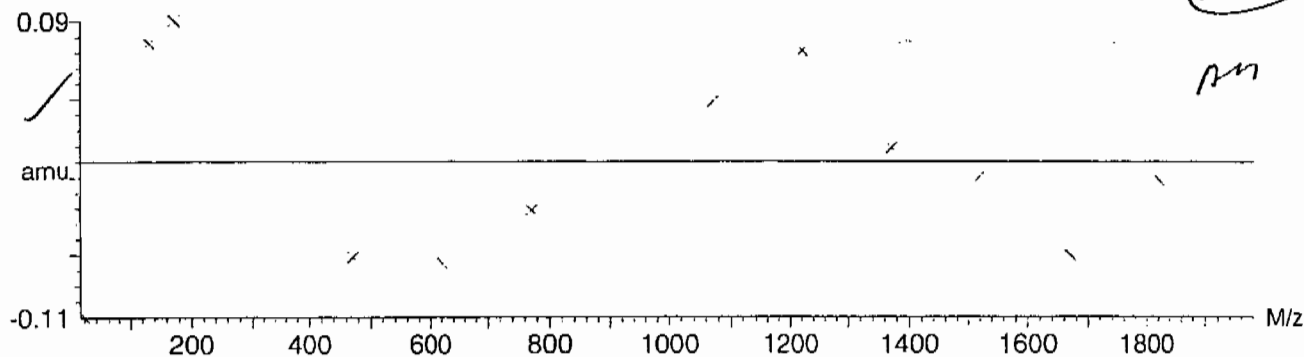


Mass difference (Raw - Ref mass)



Residuals

Mean residual = $2.048910 \times 10^{-9} \pm 0.057803$



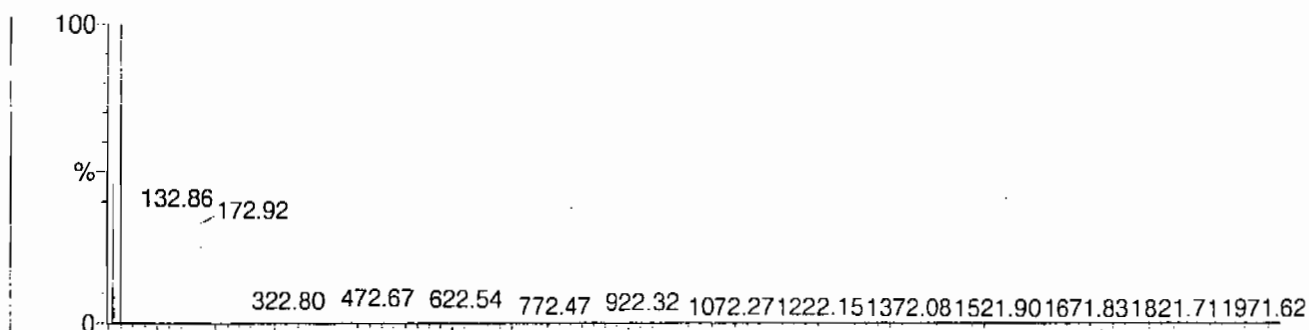
Calibration Report - MS2 Scanning

Page 1 of 1

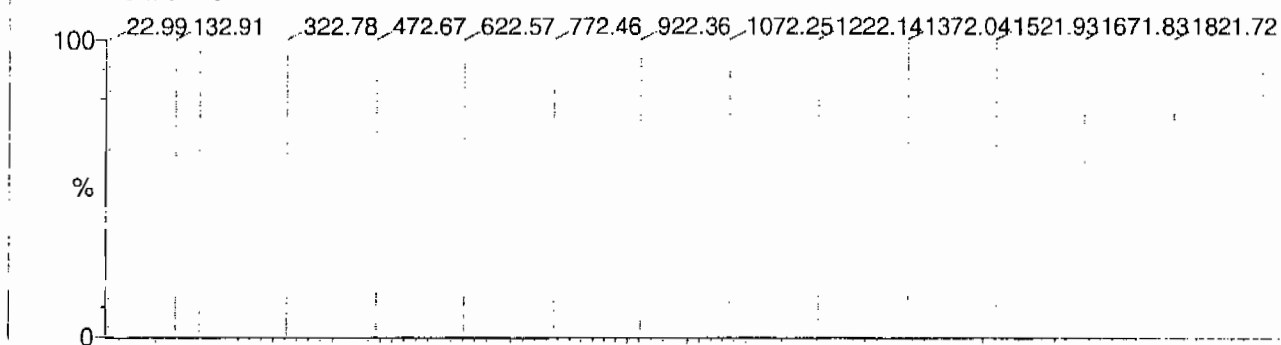
Printed: Fri Aug 25 10:54:00 2006

Data file: SCNMS2 - Calibrated

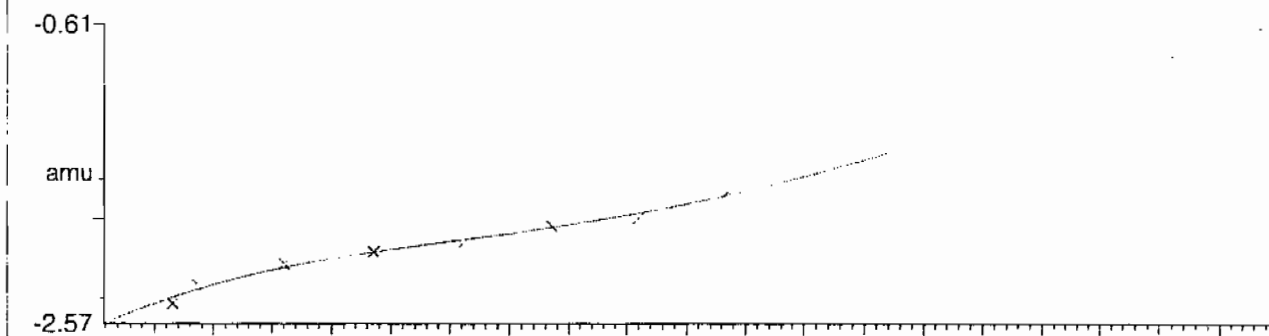
14 matches of 15 tested references



Reference file: Naics2

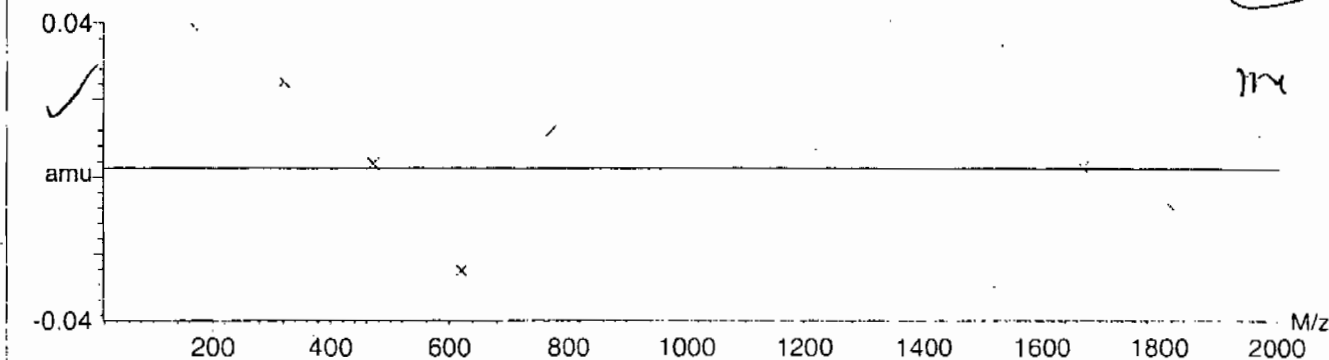


Mass difference (Raw - Ref mass)



Residuals

Mean residual = $-2.623502 \times 10^{-9} \pm 0.025622$



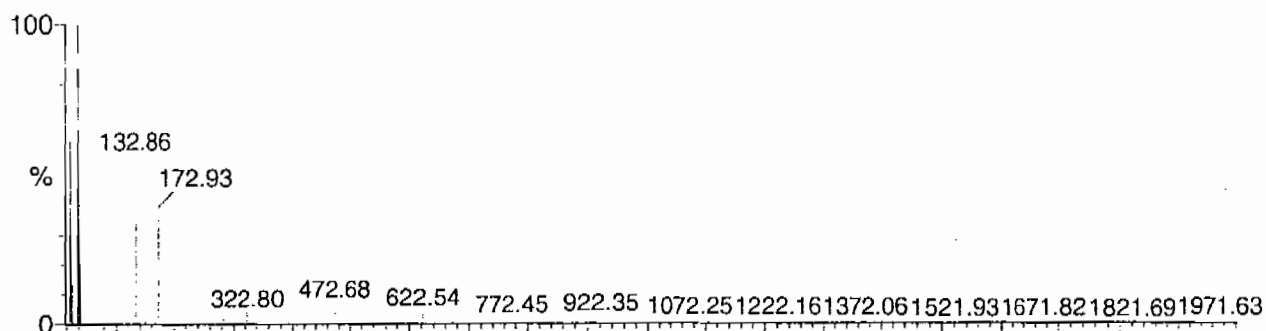
Calibration Report - MS2 Scan Speed Compensation

Page 1 of 1

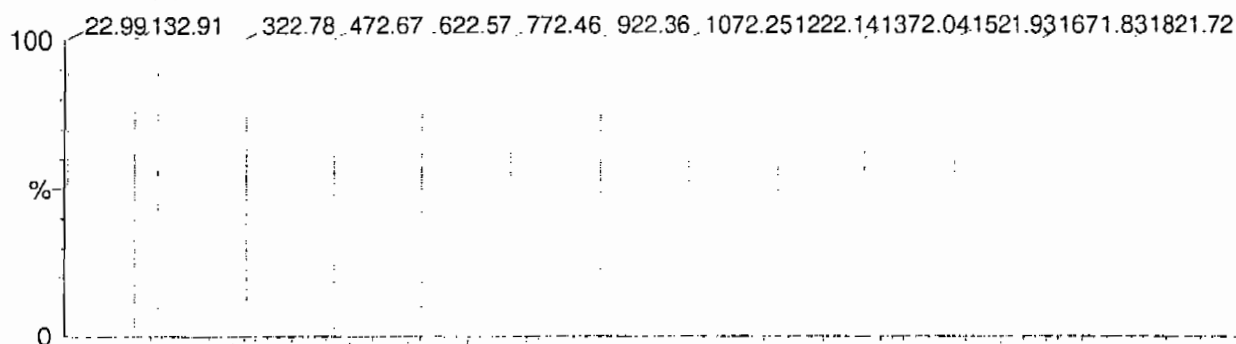
Printed: Fri Aug 25 10:54:54 2006

Data file: FASTMS2 - Calibrated

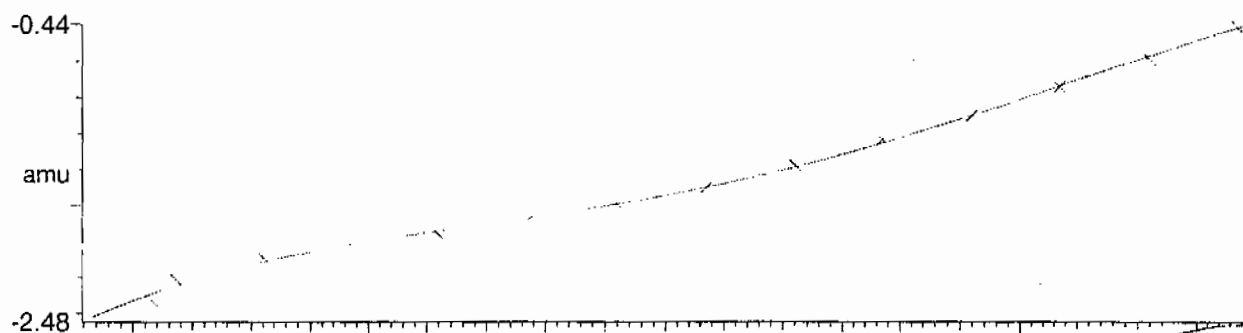
14 matches of 15 tested references



Reference file: Naics2

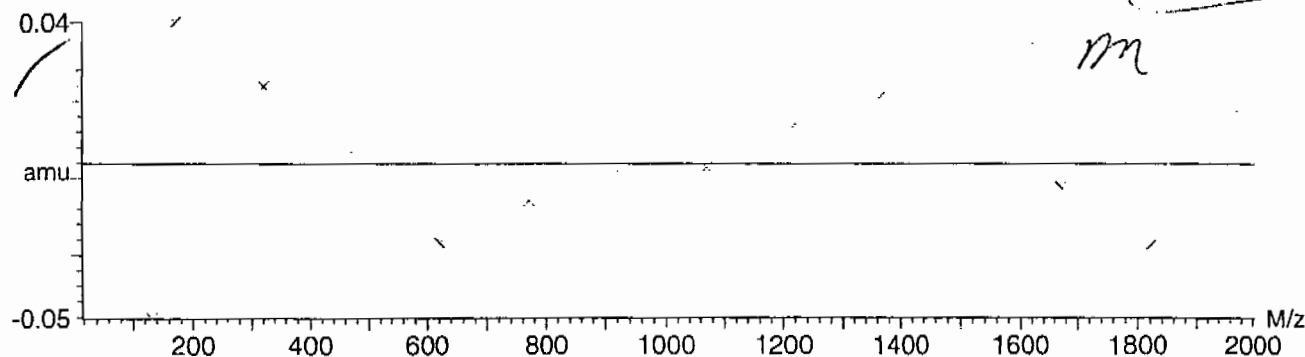


Mass difference (Raw - Ref mass)



Residuals

Mean residual = $-6.785350 \times 10^{-9} \pm 0.023134$

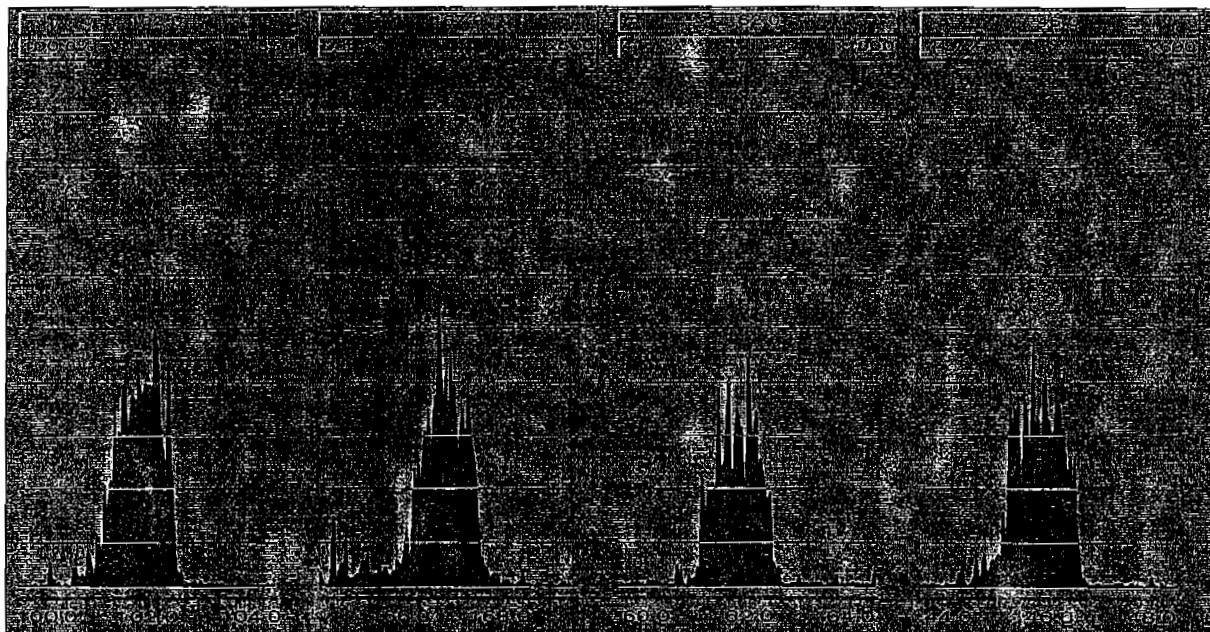


Quattro Micro Tune Parameters

Page 1

Parameter File: C:\MASSLYNX\NEW_EXP.PROVACQ\UDB\explosives04.IPR

Printed : Tue Feb 16 13:37:41 2010



High Explosives Internal Standard Summary

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

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) #
			3012.417	12.049	17408.567	17.428
Upper Limit			3916.1421	12.549	22631.1371	17.928
Lower Limit			2108.6919	11.549	12185.9969	16.928
MB for batch 944913	18-feb-10 19:59	EXP0216104a	2912.39	12.033	16431.2	17.419
LCS for batch 944913	18-feb-10 20:29	EXP0216105a	3552.89	12.033	19999.7	17.423
RE15-10-7928	19-feb-10 03:23	EXP0216119a	2585.34	12.067	15761.4	17.422
RE15-10-7928(245396001MS)	19-feb-10 03:52	EXP0216120a	2522.96	12.067	13794.2	17.422
RE15-10-7928(245396001MSD)	19-feb-10 04:22	EXP0216121a	2755.35	12.064	14582.7	17.433
RE15-10-7929	19-feb-10 04:52	EXP0216122a	2408.14	12.067	14479.6	17.423
RE15-10-7927	19-feb-10 05:22	EXP0216123a	2429.9	12.033	13730.1	17.423
RE15-10-7930	19-feb-10 05:51	EXP0216124a	2377.8	12.067	13095.4	17.422

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

SAMPLE DATA

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7928

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396001

Sample Amount 2

Moisture: 3.6

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0216119a

Date Analyzed: 19-FEB-10 03:23

Units: ug/kg

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

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

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

Dataset: C:\MASSLYNX\New_Exp_PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

Name: C:\MASSLYNX\NEW_EXP_PRO\Data\EXP0216119a

Date: 19-Feb-2010

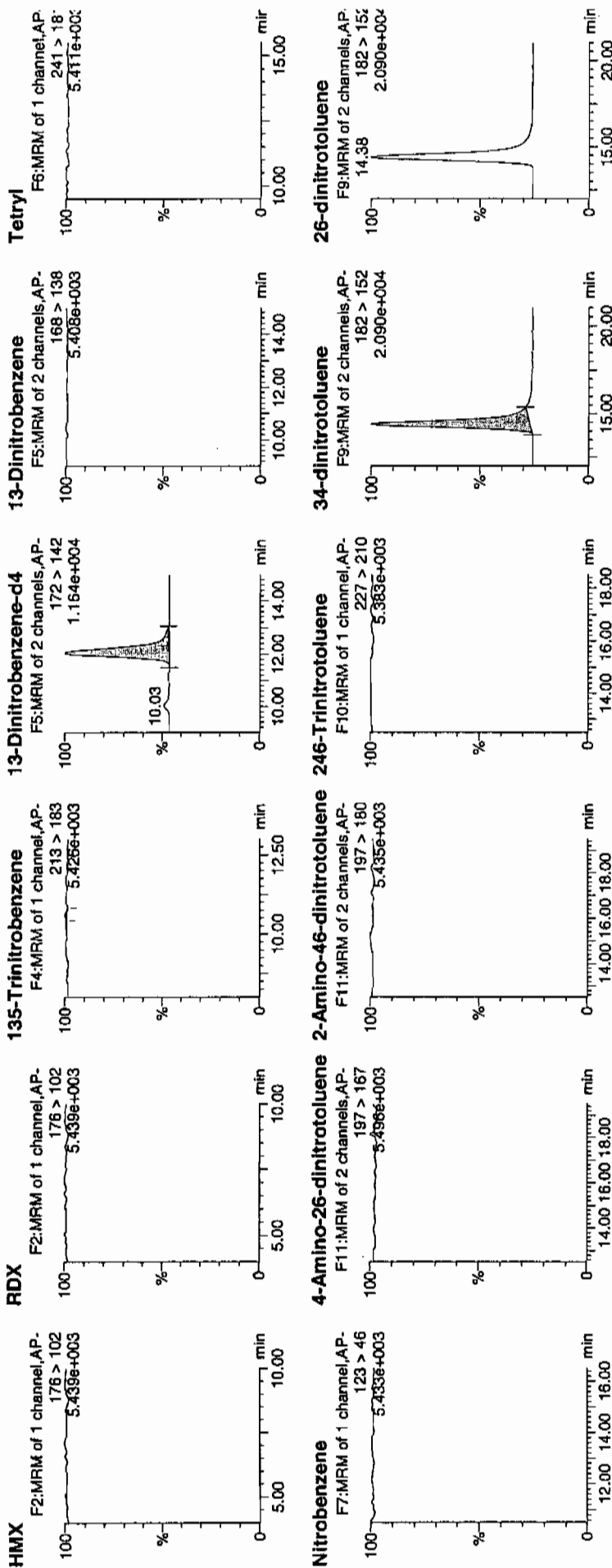
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ID: 245396001

Vial: 3:7,A

447
2/19/10

LAU 1944915 | 5.439e+003 | 21

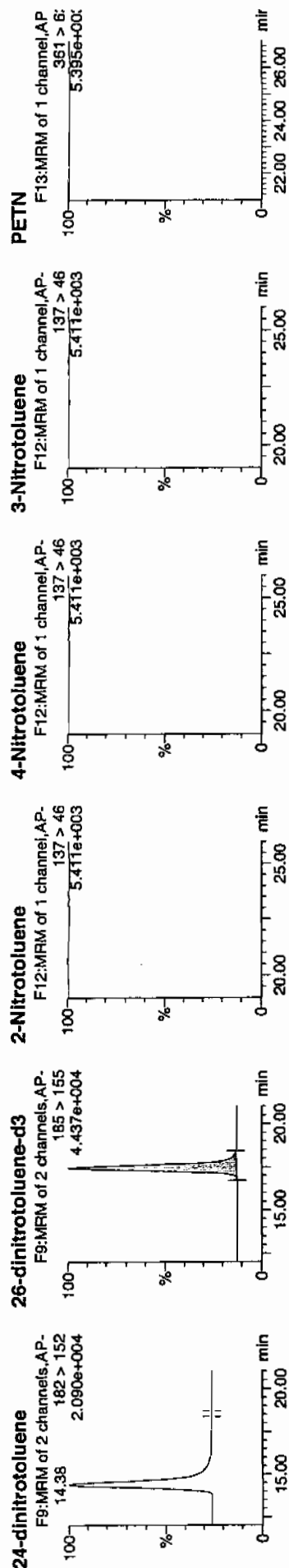


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Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYN\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

[illegible]

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7928

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396001

Sample Amount 2

Moisture: 3.6

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS02170119.wiff

Date Analyzed: 18-FEB-10 16:19

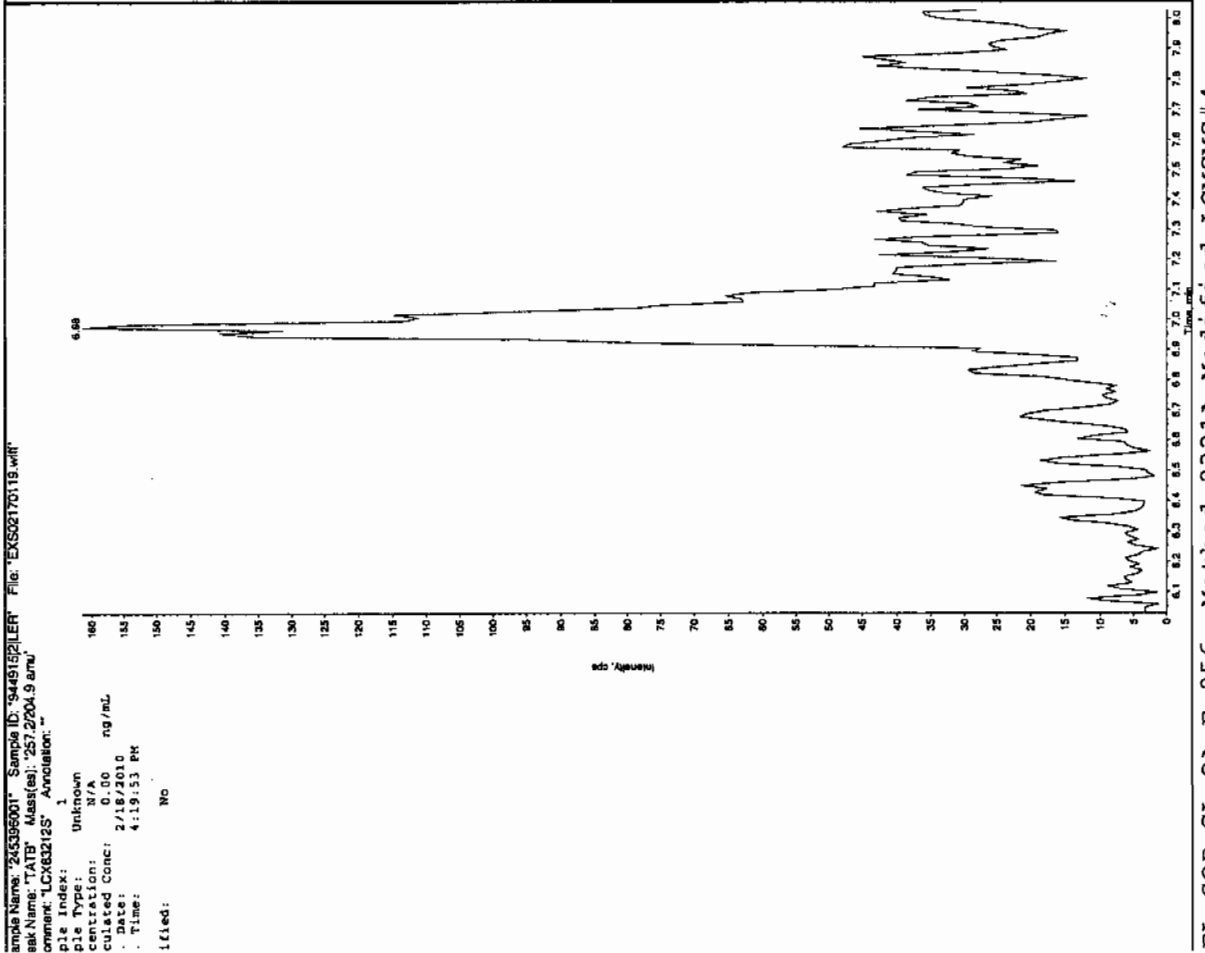
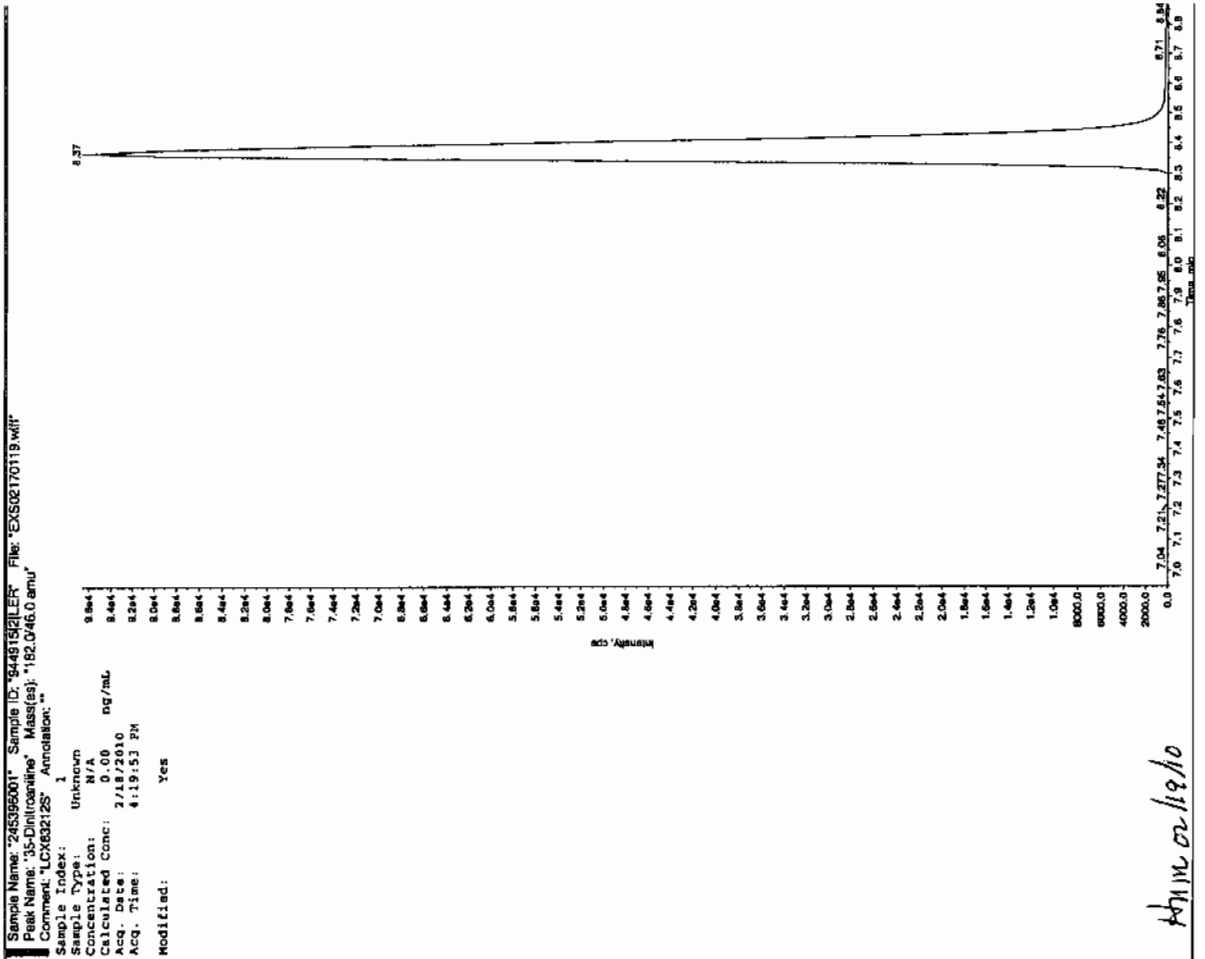
Units: ug/kg

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

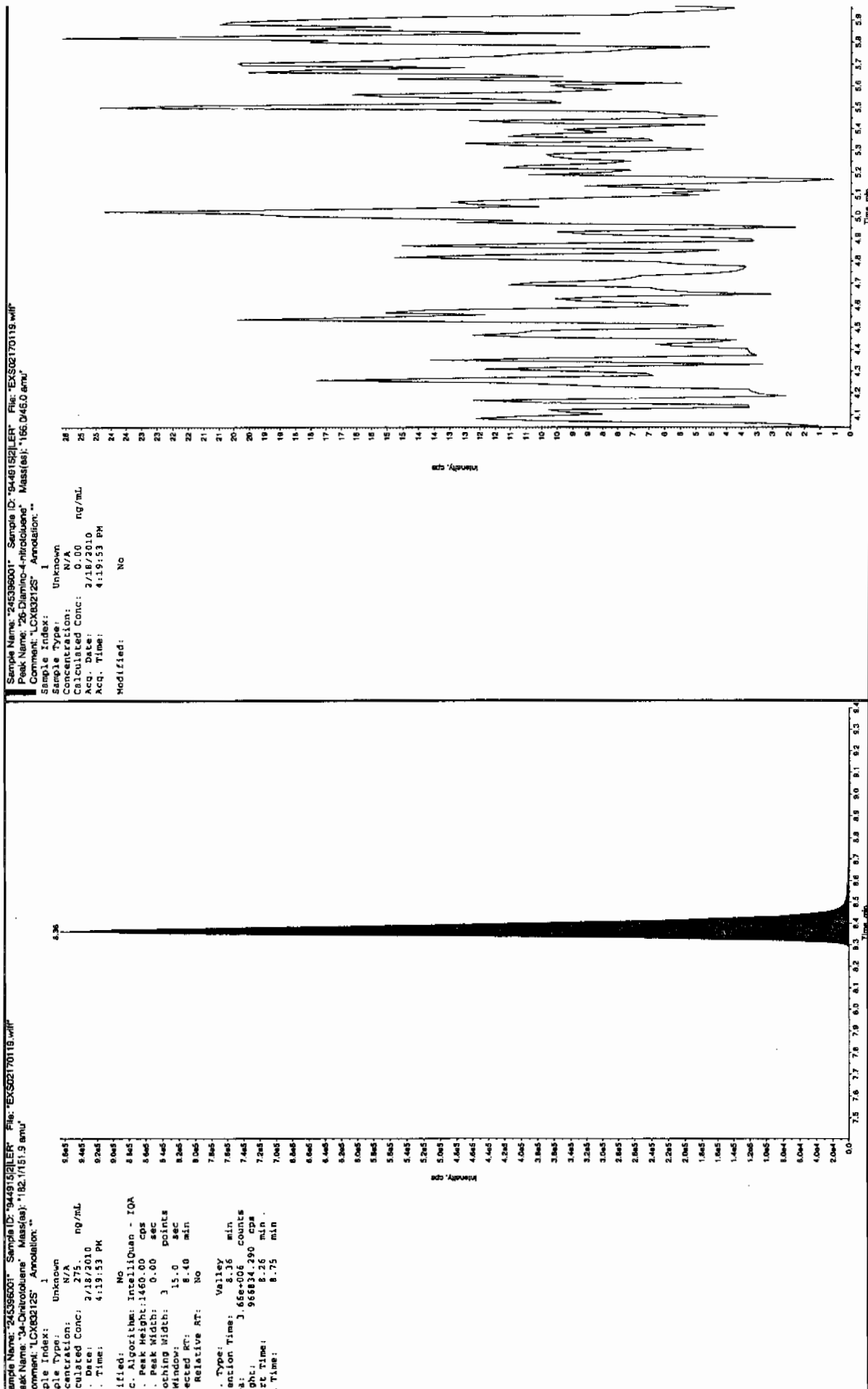
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Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

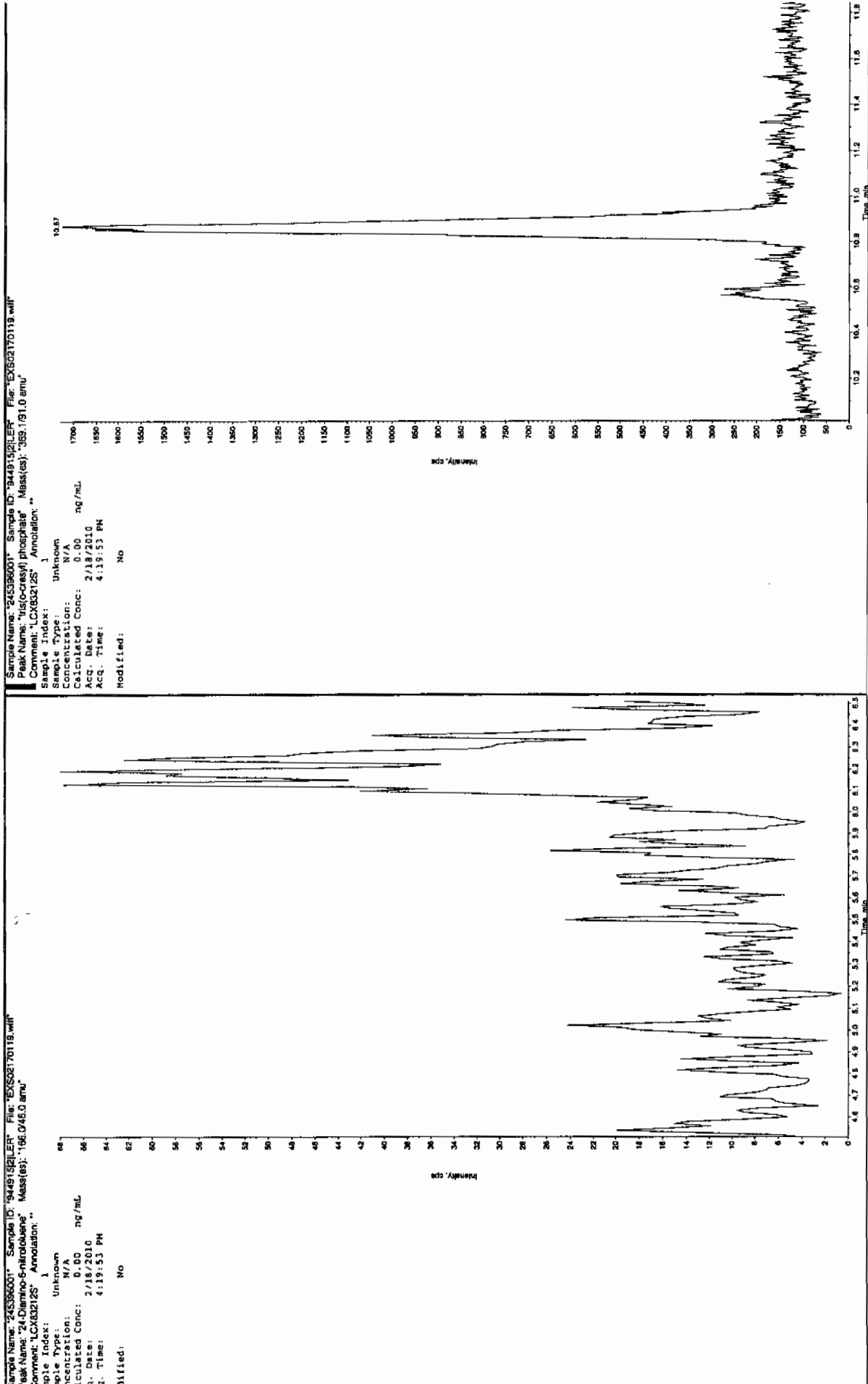
Jan 2/19/10



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



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



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

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7929

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396002

Sample Amount 2

Moisture: 27.4

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0216122a

Date Analyzed: 19-FEB-10 04:52

Units: ug/kg

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

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

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Date: 19-Feb-2010

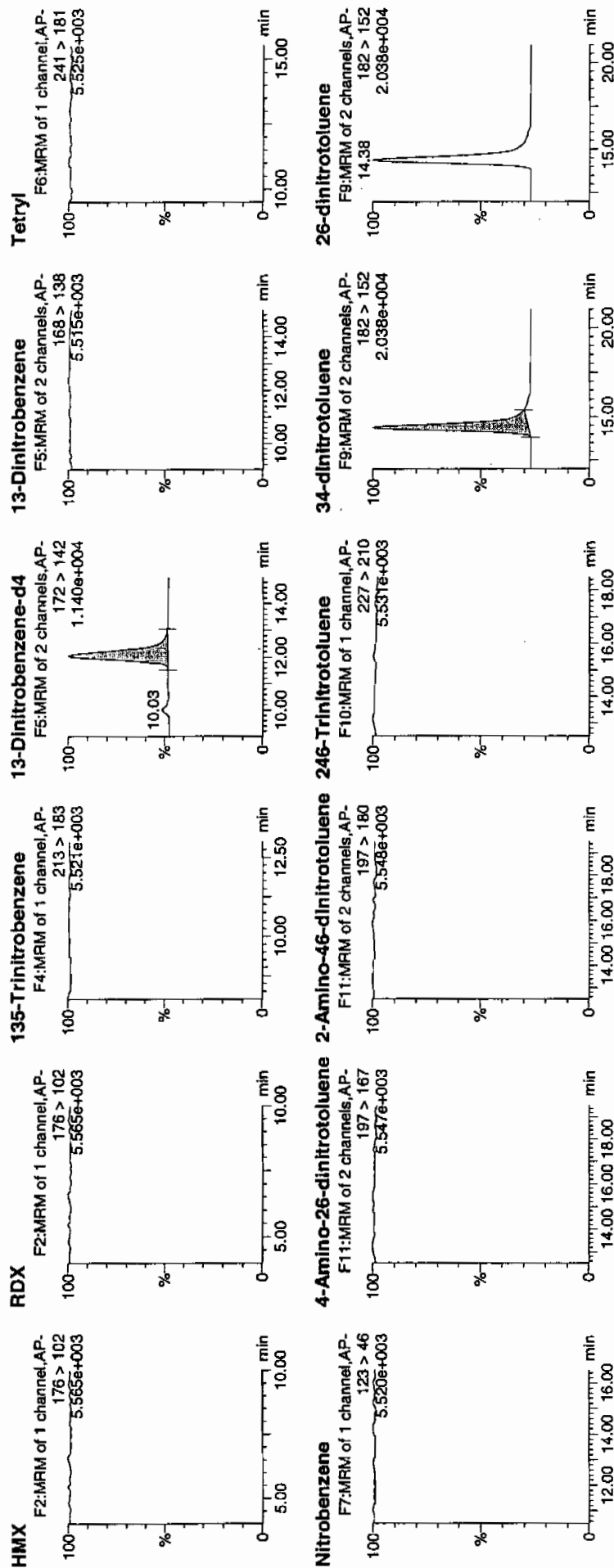
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ID: 245396002

Vial: 3:7,D

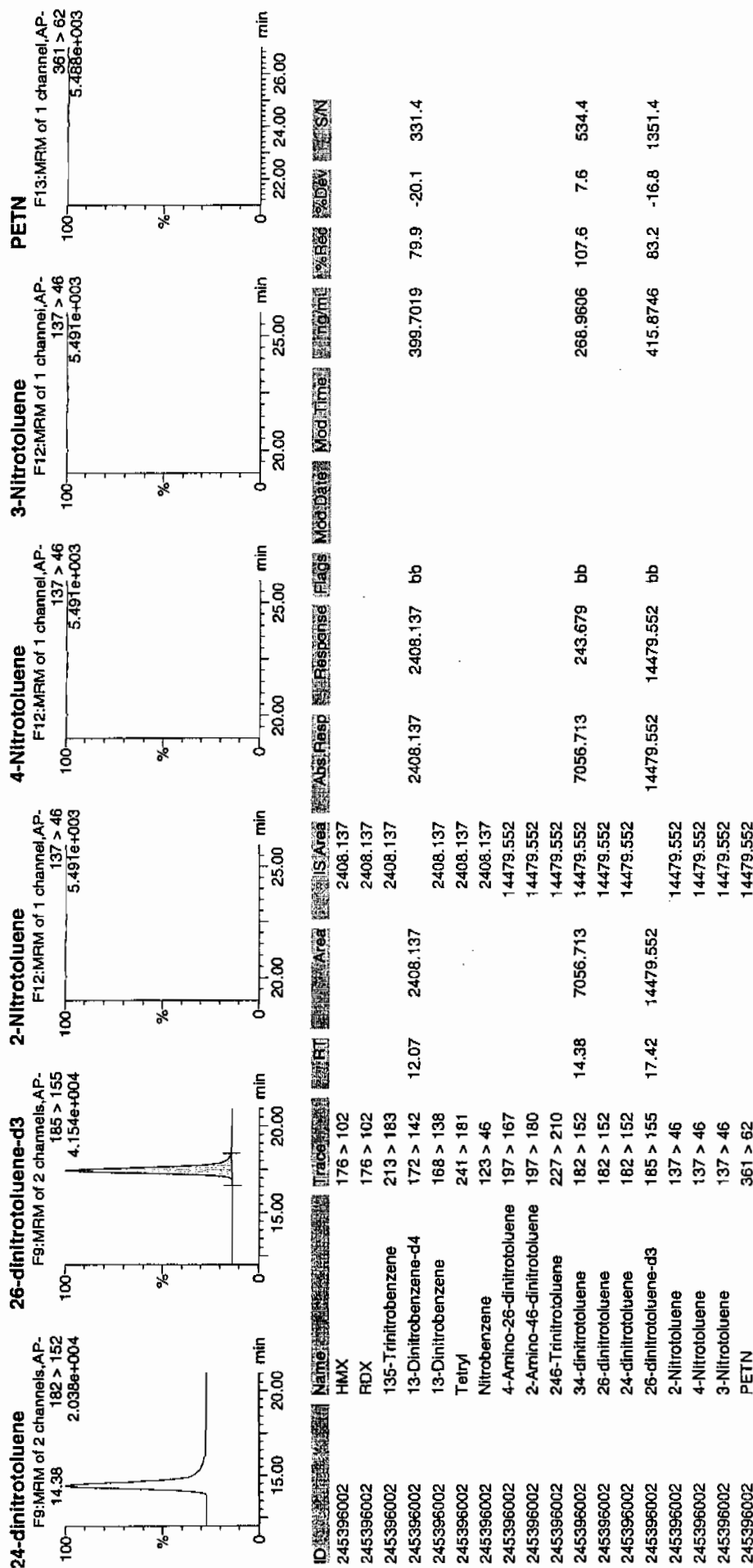
MSD
 2/19/10

WAV 944915 | 21 | 2010



4mm 02/19/10

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010



1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7929

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396002

Sample Amount 2

Moisture: 27.4

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS02170122.wiff

Date Analyzed: 18-FEB-10 17:06

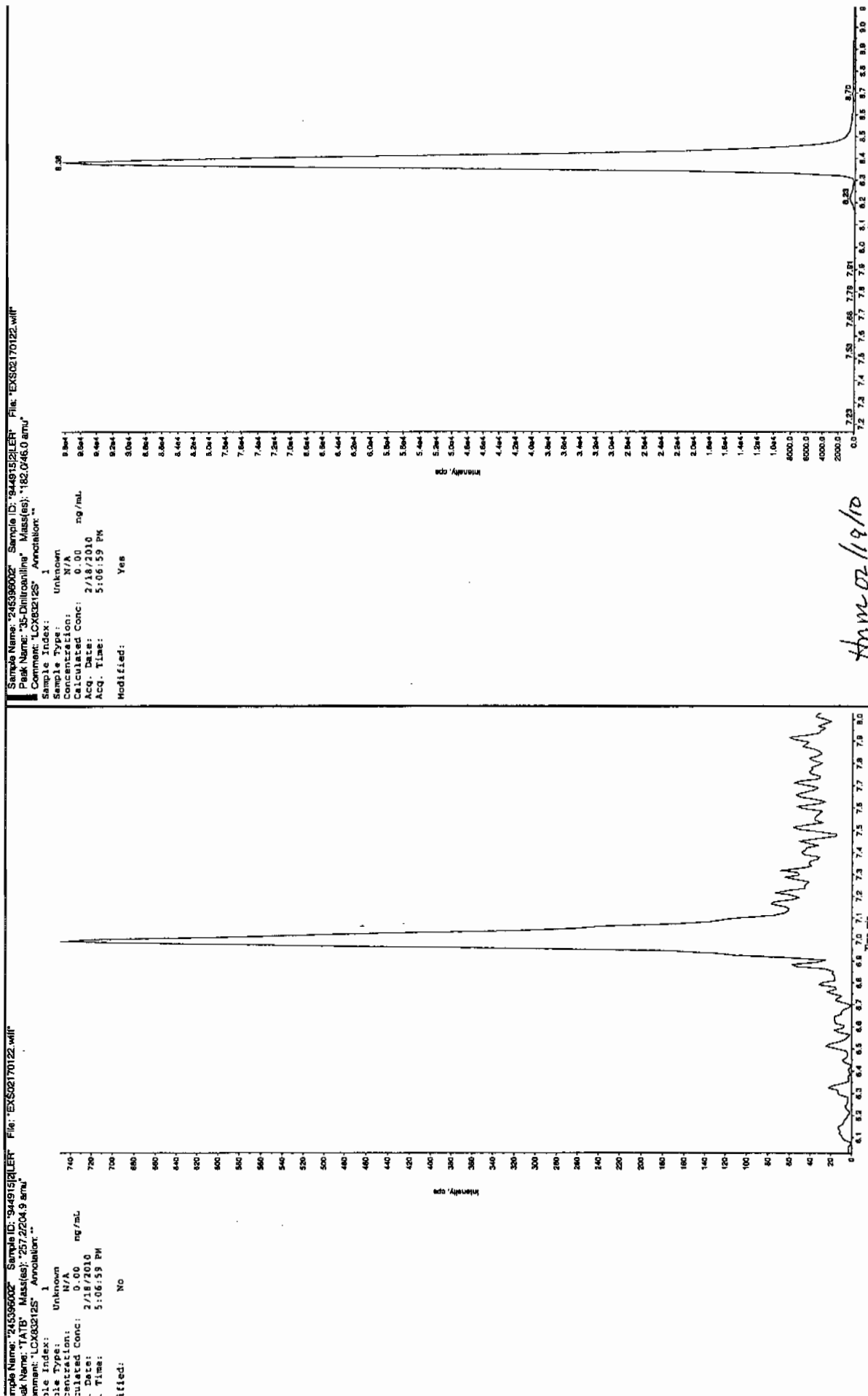
Units: ug/kg

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

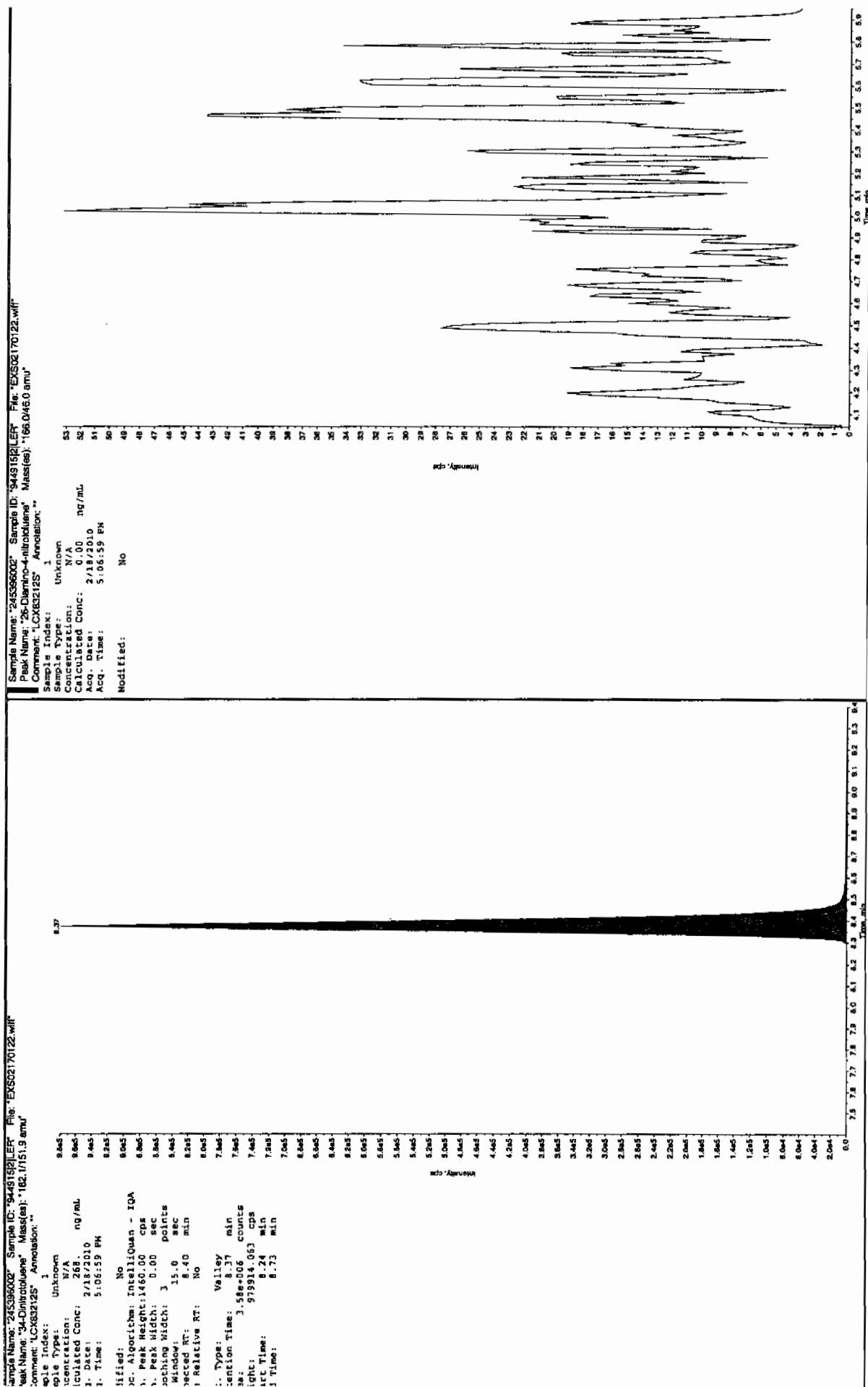
*Concentration =

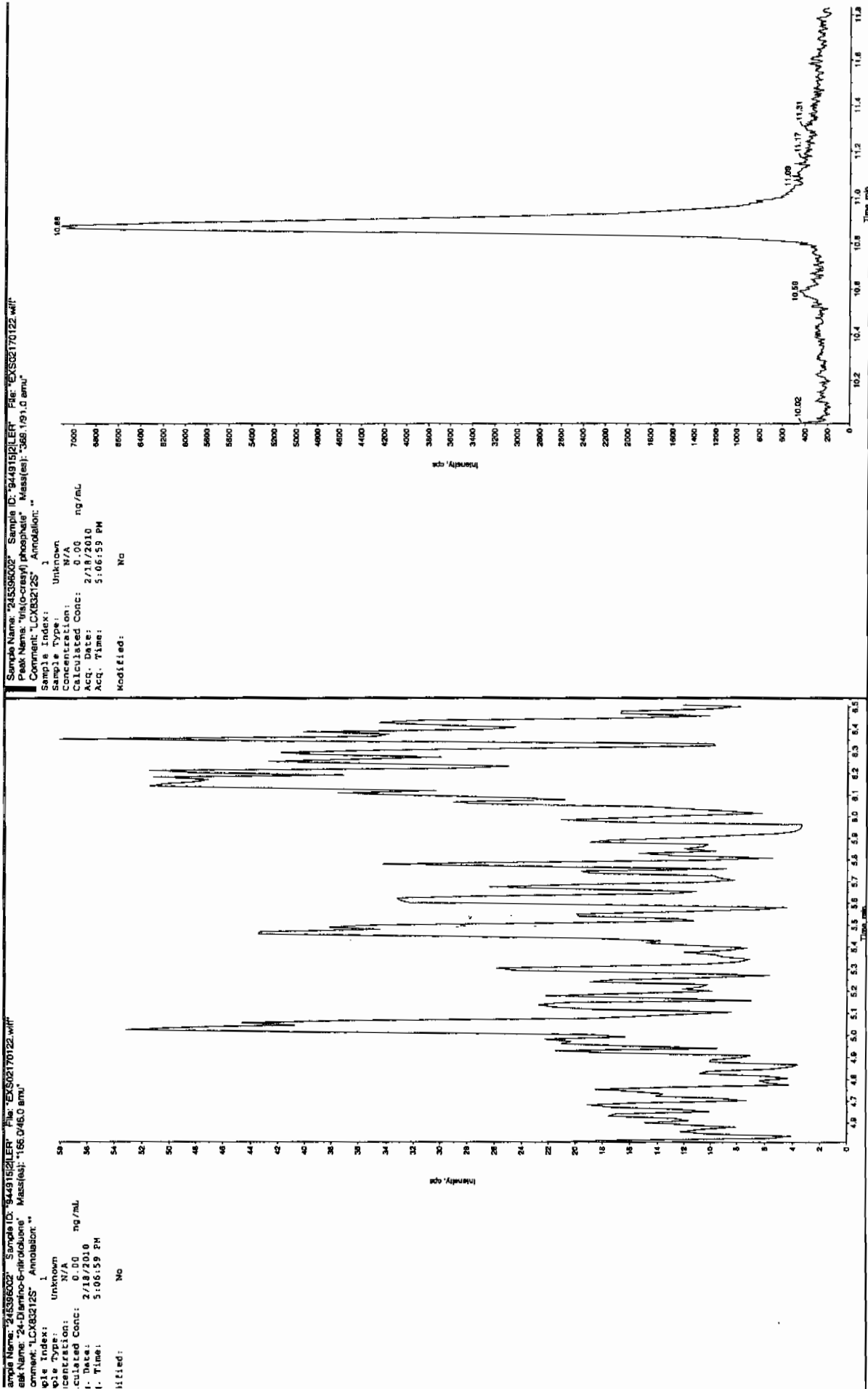
Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

San 2/19/10



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





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

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7927

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396003

Sample Amount 2

Moisture: 24.4

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0216123a

Date Analyzed: 19-FEB-10 05:22

Units: ug/kg

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

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216123a

Date: 19-Feb-2010

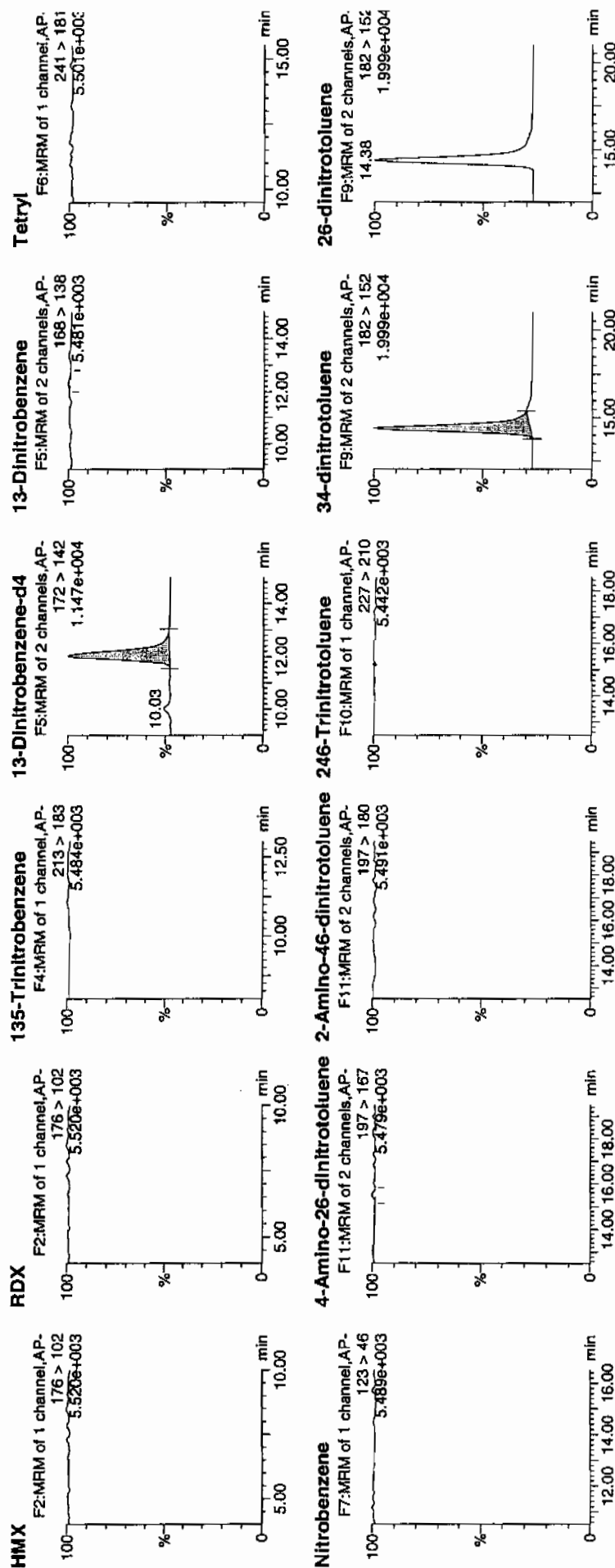
Time: 05:22:09

ID: 245396003

Vial: 3:7,E

WAF
2/19/10

944915 / 8012 / 2

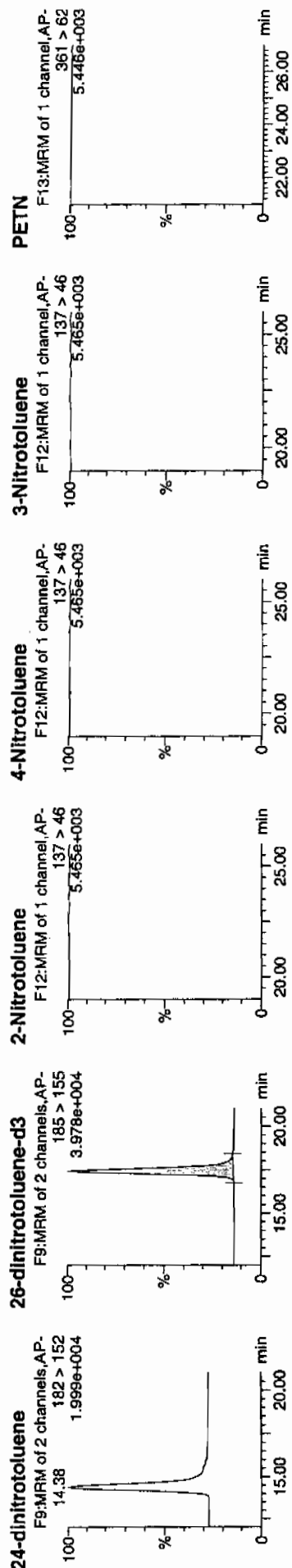


4/19/10

Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010



ID	Name	Trace	Rt	Area	IS Area	Abs. Resp	Response	Flags	Mod Date	Intg/mL	% Rec	% Dev	S/N
245396003	HMX	176 > 102			2429.899								
245396003	RDX	176 > 102			2429.899								
245396003	135-Trinitrobenzene	213 > 183			2429.899								
245396003	13-Dinitrobenzene-d4	172 > 142	12.03	2429.899		2429.899	2429.899	bb		403.3140	80.7	-19.3	197.3
245396003	13-Dinitrobenzene	168 > 138			2429.899			MM-	19-Feb-10	08:36:56			
245396003	Tetryl	241 > 181			2429.899								
245396003	Nitrobenzene	123 > 46			2429.899								
245396003	4-Amino-26-dinitrotoluene	197 > 167			13730.130			MM-	19-Feb-10	08:40:28			
245396003	2-Amino-46-dinitrotoluene	197 > 180			13730.130								
245396003	246-Trinitrotoluene	227 > 210			13730.130								
245396003	34-dinitrotoluene	182 > 152	14.38	6737.633	13730.130	6737.633	245.359	bb		270.8158	108.3	8.3	504.7
245396003	26-dinitrotoluene	182 > 152			13730.130								
245396003	24-dinitrotoluene	182 > 152			13730.130								
245396003	26-dinitrotoluene-d3	185 > 155	17.42	13730.130		13730.130	13730.130	bb		394.3501	78.9	-21.1	921.4
245396003	2-Nitrotoluene	137 > 46			13730.130								
245396003	4-Nitrotoluene	137 > 46			13730.130								
245396003	3-Nitrotoluene	137 > 46			13730.130								
245396003	PETN	361 > 62			13730.130								

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7927

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396003

Sample Amount 2

Moisture: 24.4

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS02170123.wiff

Date Analyzed: 18-FEB-10 17:22

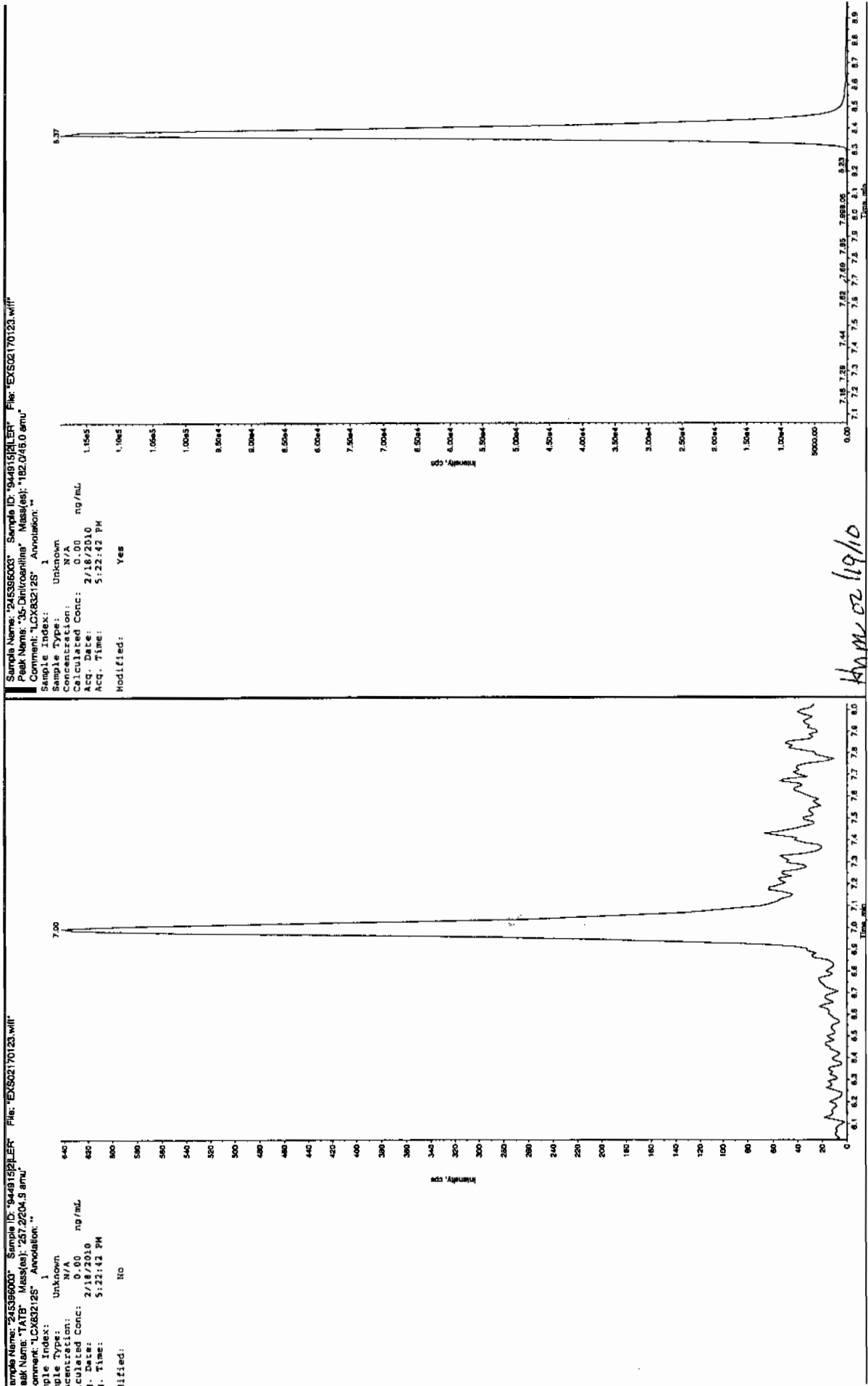
Units: ug/kg

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

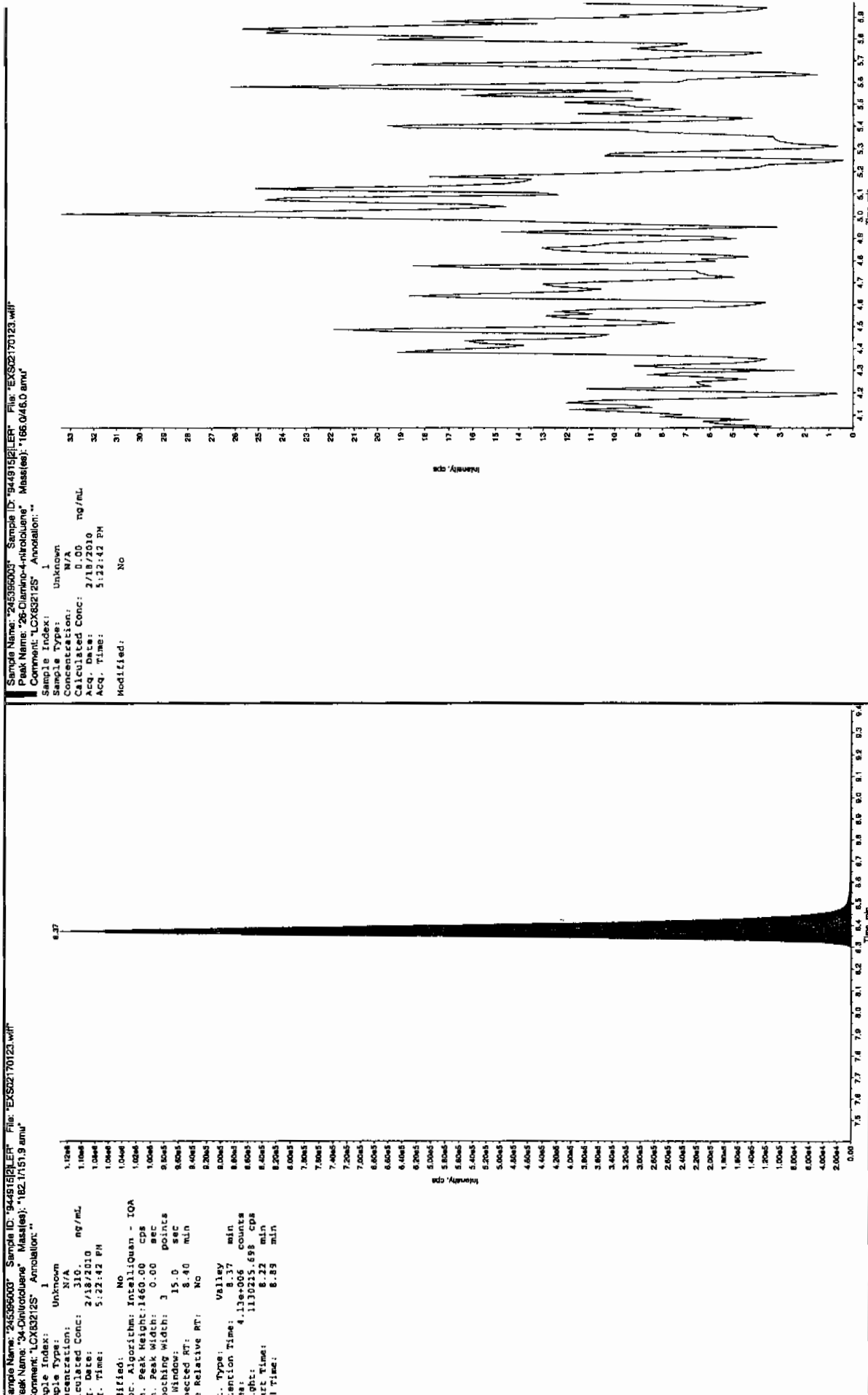
*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

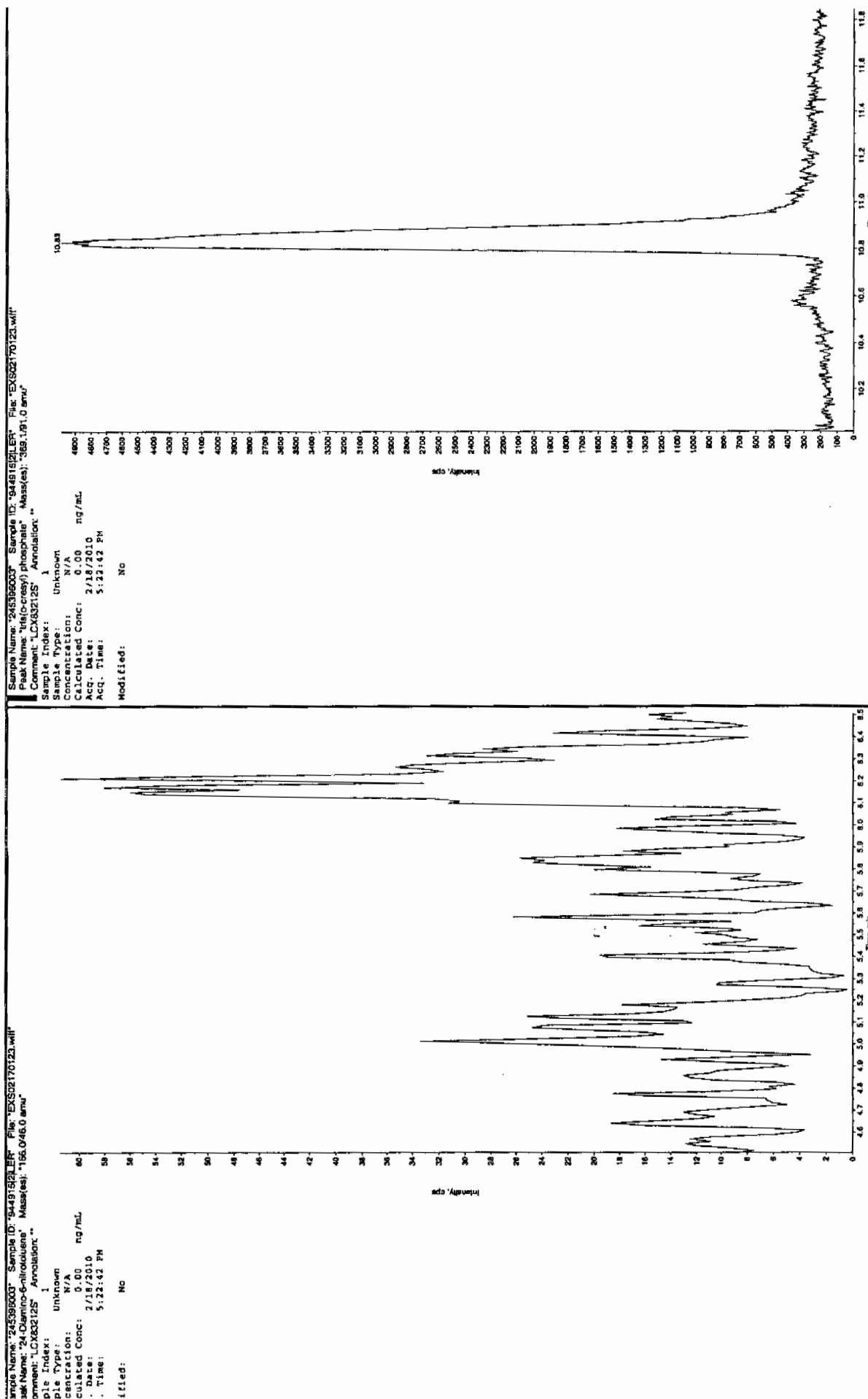
San 210110



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



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



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

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7930

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396004

Sample Amount 2

Moisture: 11.5

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0216124a

Date Analyzed: 19-FEB-10 05:51

Units: ug/kg

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

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216124a

Date: 19-Feb-2010

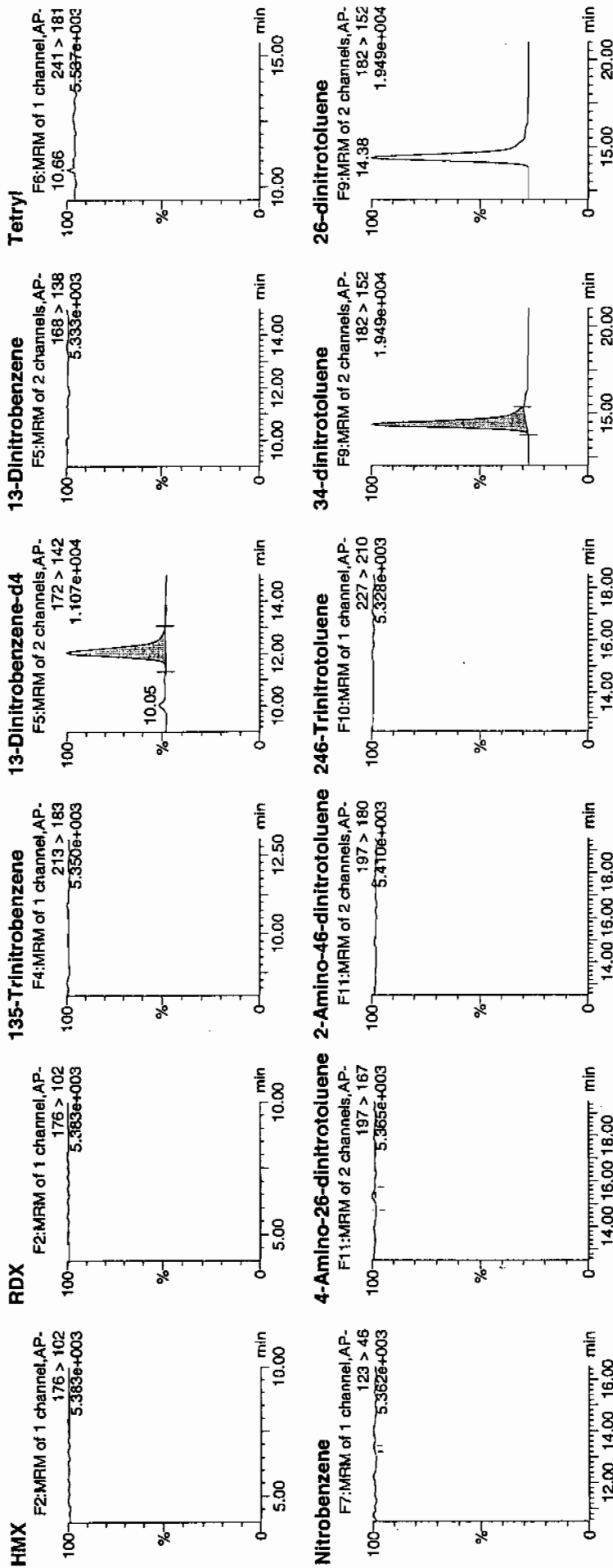
Time: 05:51:53

ID: 245396004

Vial: 3:7,F

4477
2/19/10

LAUL 944915 | 21 | 2022



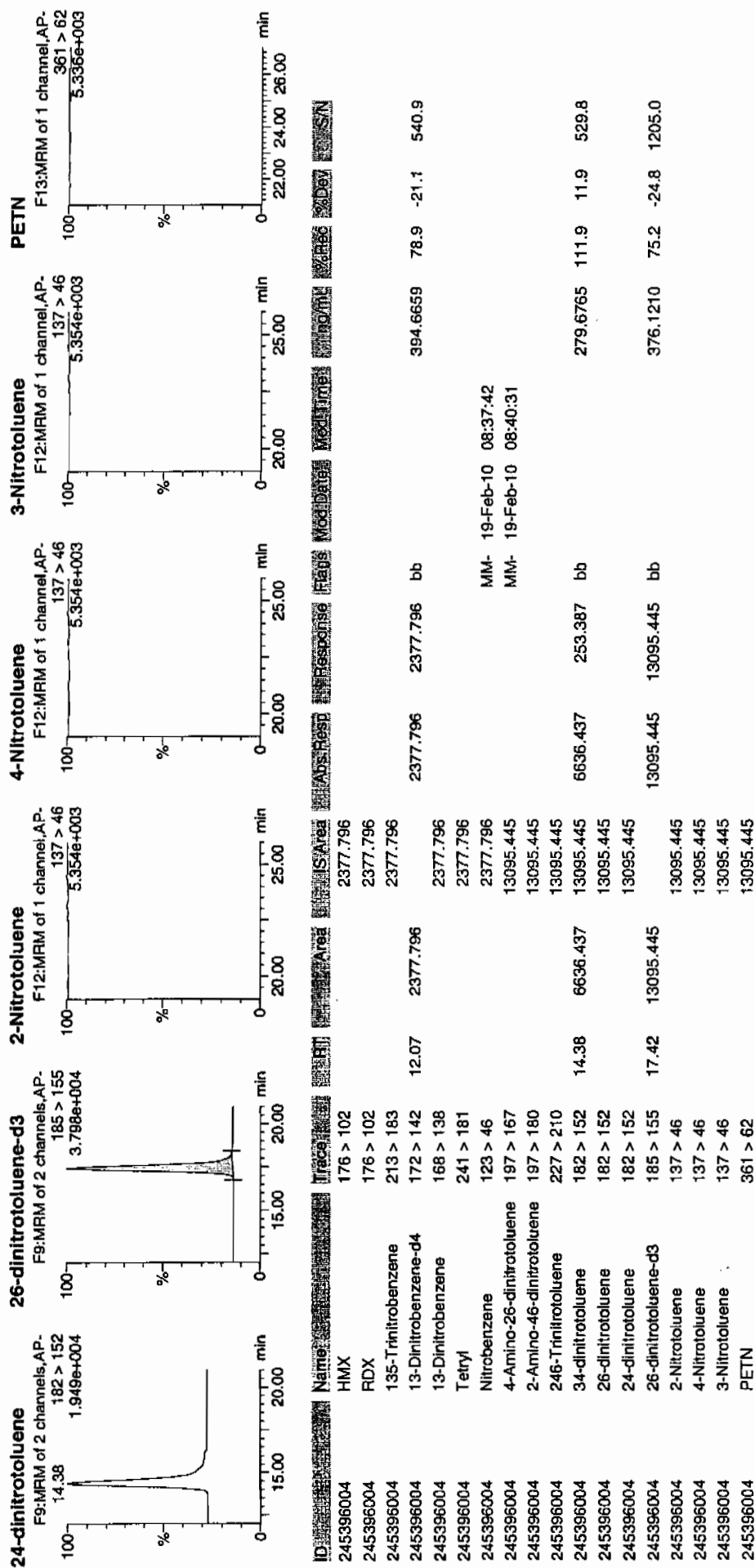
4477 2/19/10

Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Fri Feb 19 08:50:21 2010, Page 88 of 97

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qid, Time: Fri Feb 19 08:48:26 2010



1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7930

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 245396004

Sample Amount 2

Moisture: 11.5

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS02170124.wiff

Date Analyzed: 18-FEB-10 17:38

Units: ug/kg

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

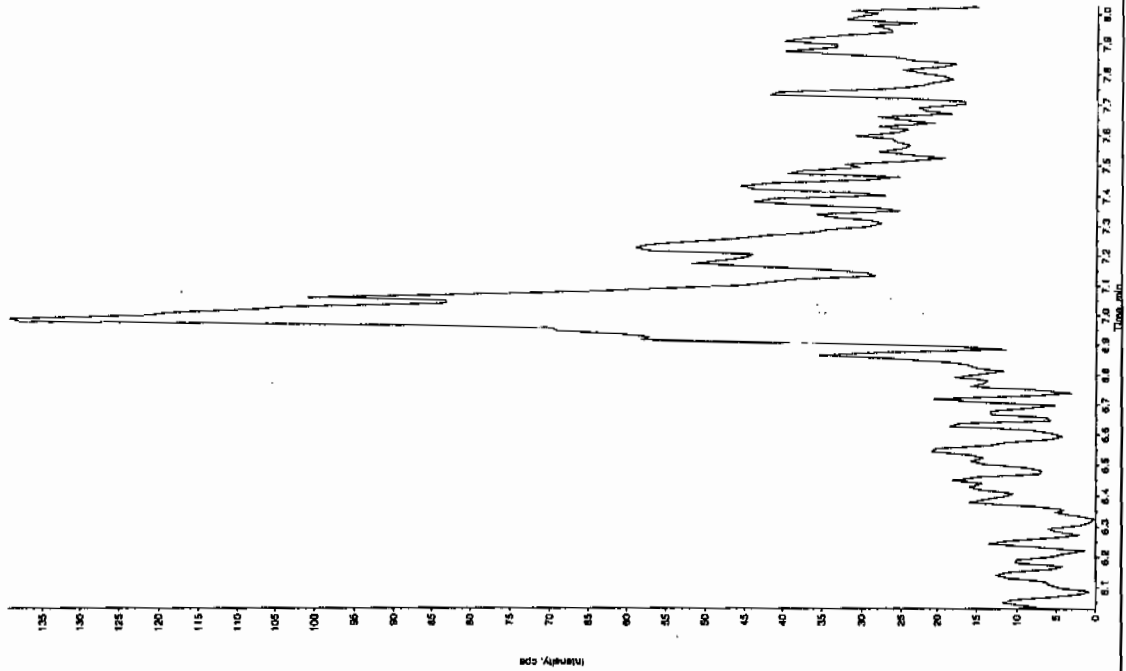
*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

Gen 21010

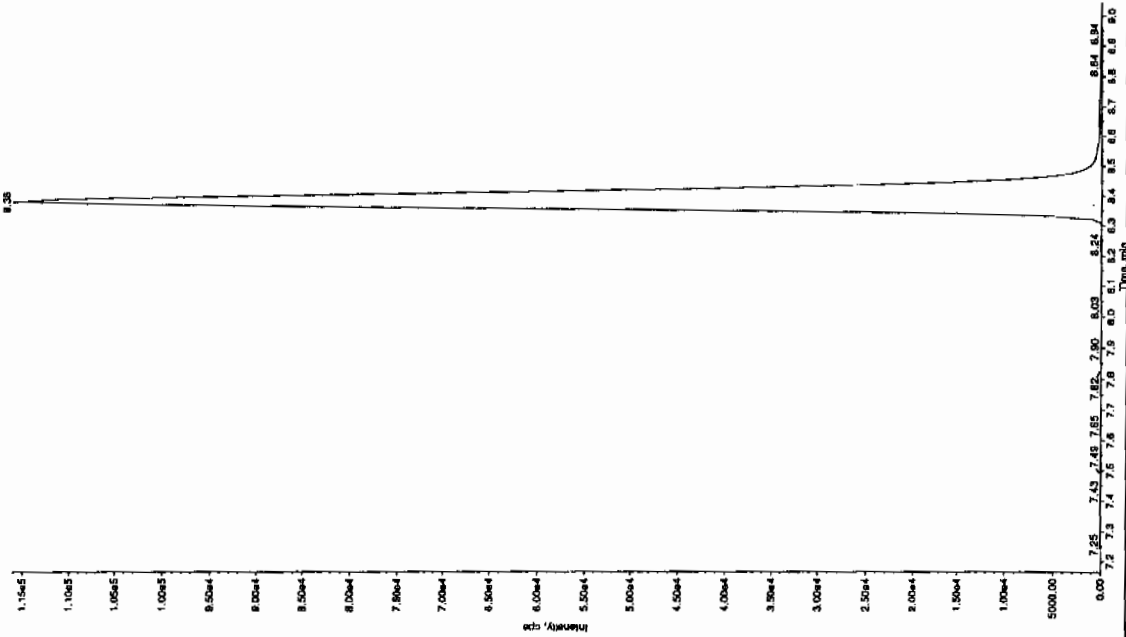
Sample Name: "245396004" Sample ID: "944915121.ER" File: "EXS02170124.will"
 Peak Name: "TATB" Mass (m/z): "267.2004.9 amu"
 Comment: "CX832125" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Date: 2/18/2010
 Time: 5:38:25 PM
 Modified: No

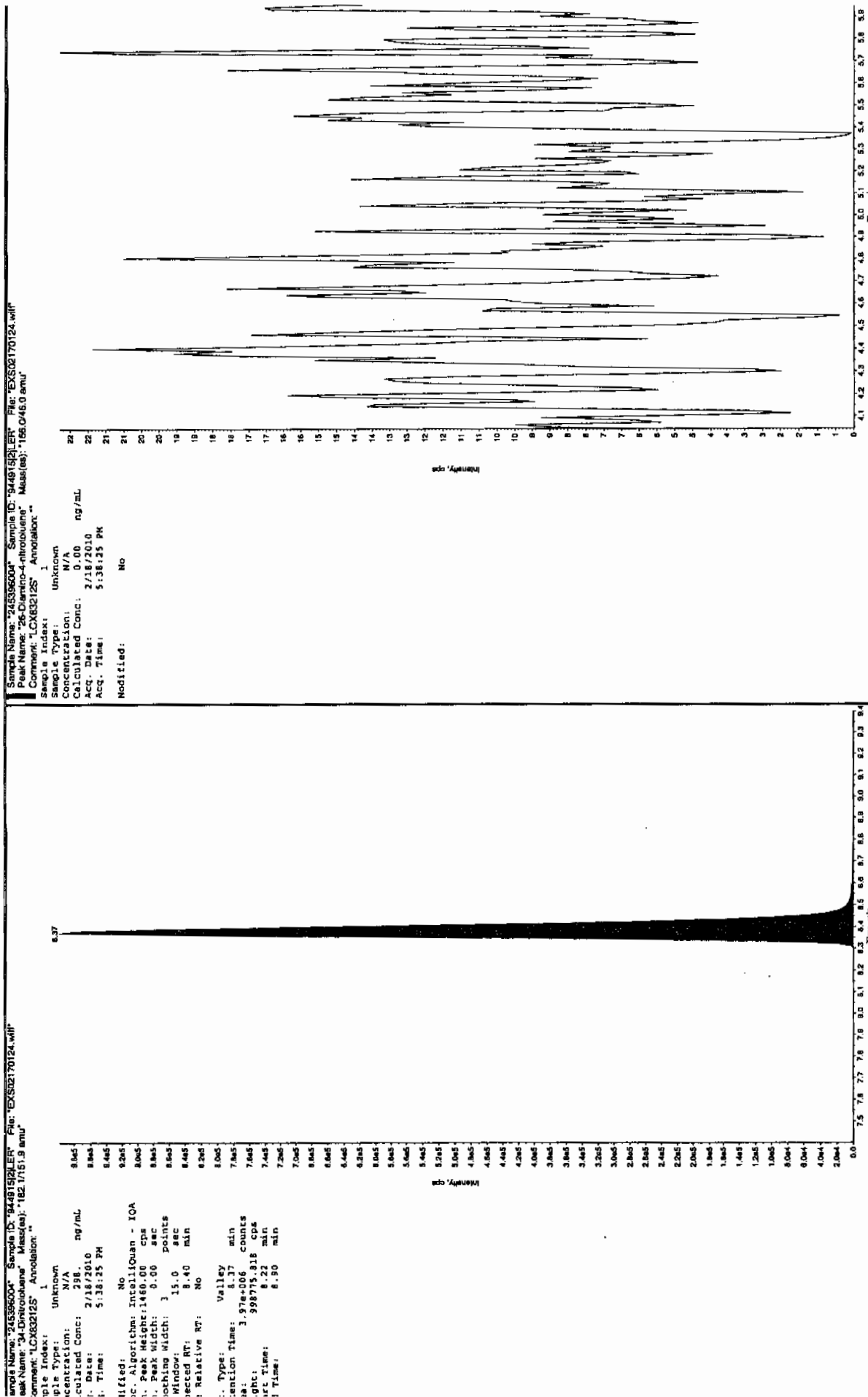


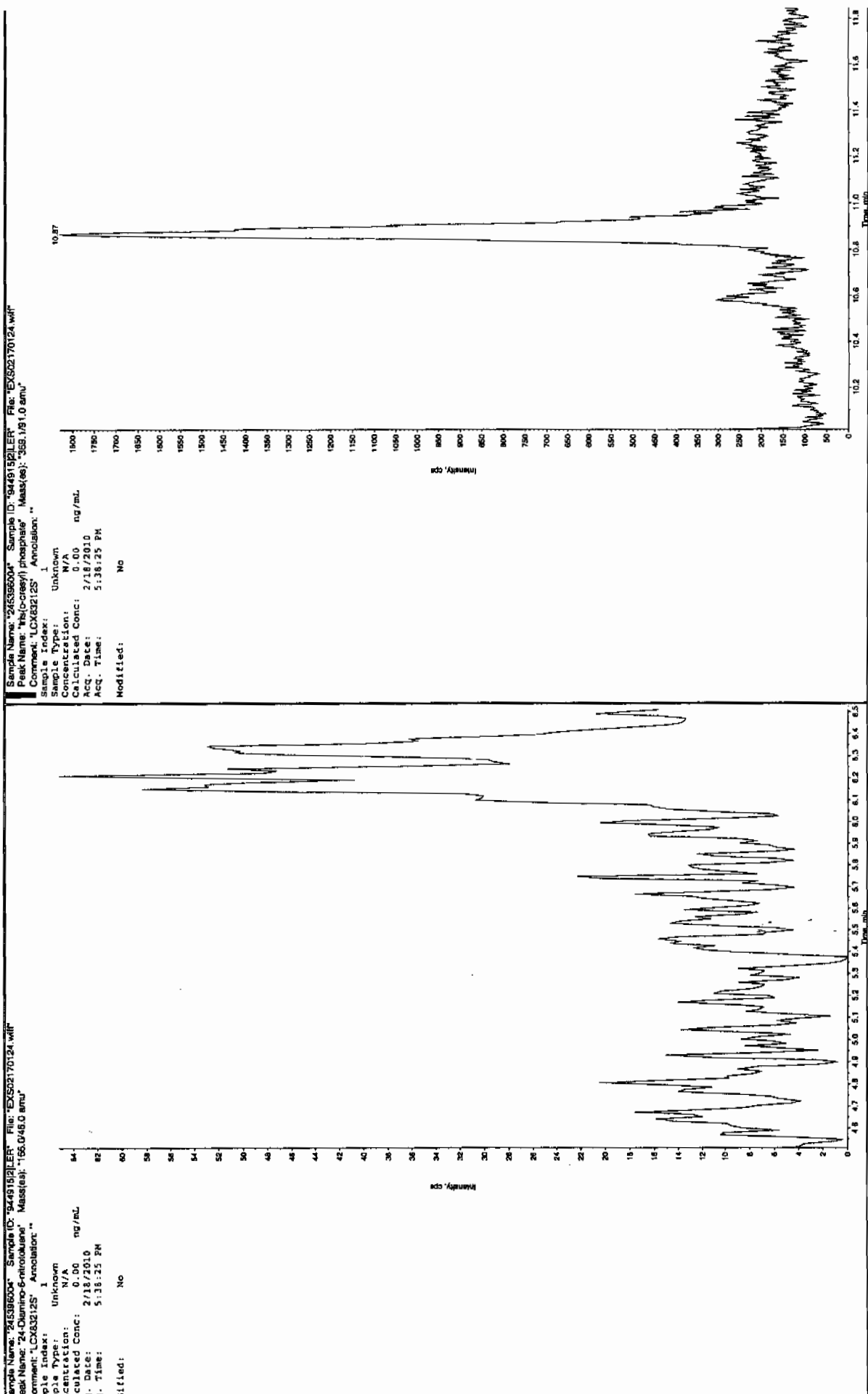
Sample Name: "245396004" Sample ID: "944915121.ER" File: "EXS02170124.will"
 Peak Name: "35-Oxycodone" Mass (m/z): "312.0460 amu"
 Comment: "CX832125" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 0.00 ng/mL
 Date: 2/18/2010
 Time: 5:38:25 PM
 Modified: Yes



44m 02 14/10





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

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
MXN	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)

Calibration Levels 8321A-Modified-EXPL.xls

Explosives Initial Calibration

Lab Name: GEL Laboratories LLC GEL Job No: 10-1394
 Lab Code: GEL Run Date: 16-FEB-10.17-FEB-10
 LCMSMS Instrument ID: LCMSMS Method: 8321A Modified HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: Average RF

Parname	1	2	3	4	5	6	Ave RF	RSD	Q
Calibration Level:	EXP0216003a	EXP0216004a	EXP0216005a	EXP0216006a	EXP0216007a	EXP0216008a			
Data File:									
1,3,5-Trinitrobenzene	3.974	4.275	3.998	3.443	3.801	3.743	3.872	7.253	
1,3-Dinitrobenzene-d4	6.479	6.269	6.407	6.397	5.489	5.109	6.025	9.613	
2,4,6-Trinitrotoluene	.311	.331	.325	.38	.335	.329	0.335	7.003	
2,4-Dinitrotoluene	.22	.247	.233	.258	.258	.262	0.246	6.788	
2,6-Dinitrotoluene	.926	1.085	1.036	1.071	1.113	1.126	1.060	6.868	
2,6-Dinitrotoluene-d3	37.517	35.811	37.549	35.639	32.457	29.93	34.817	8.699	
2-Amino-4,6-dinitrotoluene	.4	.452	.421	.427	.458	.435	0.432	4.923	
3,4-Dinitrotoluene	.812	.944	.904	1.008	.893	.876	0.906	7.276	
4-Amino-2,6-dinitrotoluene	.35	.323	.285	.352	.298	.312	0.320	8.491	
HMX	3.59	3.564	3.729	3.903	4.47	3.894	3.858	8.619	
Nitrobenzene	.831	.943	.785	.911	.849	.831	0.858	6.765	
RDX	2.28	2.16	2.79	2.593	3.02	2.717	2.593	12.46	
Tetryl	1.117	1.386	1.084	1.014	.989	.952	1.090	14.415	
m-Dinitrobenzene	.991	1.315	1.169	1.17	1.25	1.236	1.189	9.364	
m-Nitrotoluene	.078	.09	.083	.1	.095	.091	0.090	8.99	
o-Nitrotoluene	.139	.156	.146	.153	.159	.159	0.152	5.121	
p-Nitrotoluene	.072	.072	.076	.082	.083	.076	0.077	6.293	

Q column used to flag RSD values outside of Limit (>20%)

* Values outside of QC Limit

Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 10-1394

Lab Code: GEL

Run Date: 16-FEB-10 17-FEB-10

LCMSMS Instrument ID: LCMSMS

Method: 8321A Modified

HPLC Column: Phenomenex Ultracarb 5 ODS(20)

Calibration Type: 2nd Order

Calibration Level:	1	2	3	4	5	6	X	X^2	Intercept	COD	Q
Data File:	EXP0216003a	EXP0216004a	EXP0216005a	EXP0216006a	EXP0216007a	EXP0216008a					
Parname:											
PETN	2110.32	4458.8	14532.6	25000.7	38622.3	42985.8	1.84	-0004443	26.645	.9992	

Quadratic 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

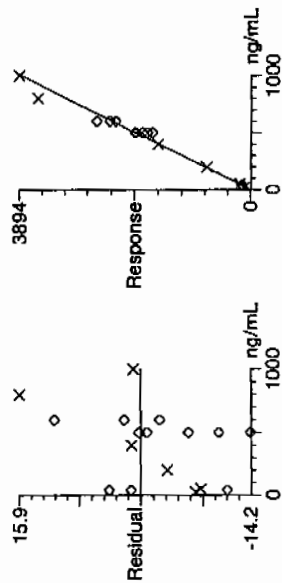
Quantify Calibration Report
 3EL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp\PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010

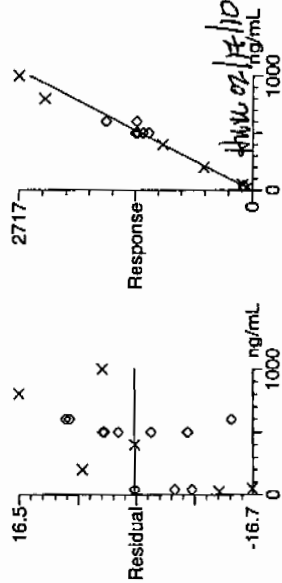
Method: C:\MASSLYNX\New_Exp\PRO\MethDB\021610expa.mdb, Time: Wed Feb 17 09:19:04 2010
 Calibration: Untitled, Time: Wed Feb 17 10:00:06 2010

Page 270 of 1698

Compound name: HMX
 Response Factor: 3.85837
 RRF SD: 0.33256, % Relative SD: 8.61918
 Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
 Curve type: RF



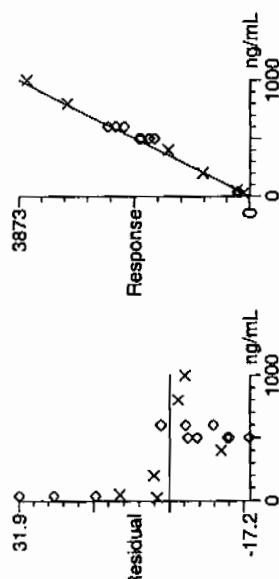
Compound name: RDX
 Response Factor: 2.59344
 RRF SD: 0.323138, % Relative SD: 12.4598
 Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
 Curve type: RF



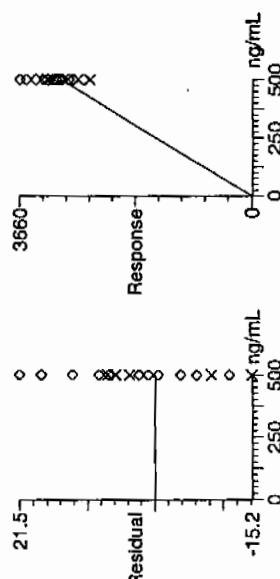
Quantity Calibration Report
EL Laboratories, LLC / Analyst: Michael A. Penny

atset: C:\MASSLYNX\New_Exp\PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010

Compound name: 135-Trinitrobenzene
Response Factor: 3.87255
RF SD: 0.280856, % Relative SD: 7.2525
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF



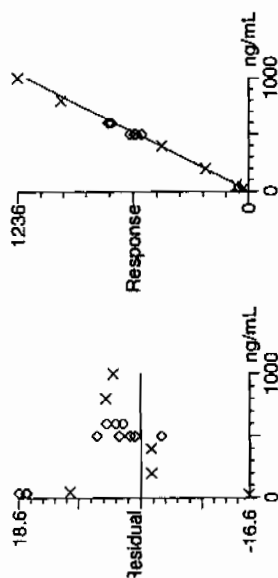
Compound name: 13-Dinitrobenzene-d4
Response Factor: 6.02483
RF SD: 0.579171, % Relative SD: 9.61306
Response type: External Std, Area
Curve type: RF



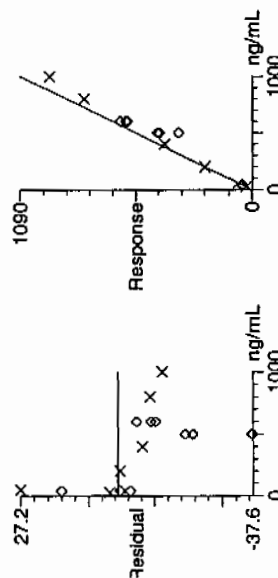
Quantify Calibration Report iEL Laboratories, LLC / Analyst: Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp\PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010

Compound name: 13-Dinitrobenzene
Response Factor: 1.18852
RF SD: 0.111292, % Relative SD: 9.36391
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF



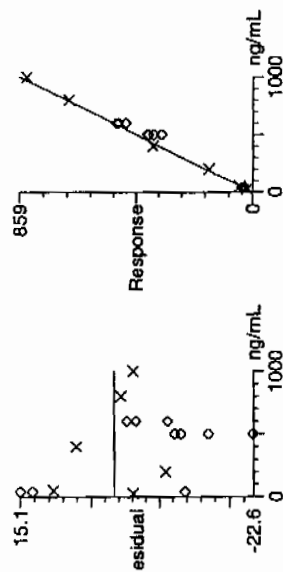
Compound name: Tetraol
Response Factor: 1.09023
RF SD: 0.157158, % Relative SD: 14.4151
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF



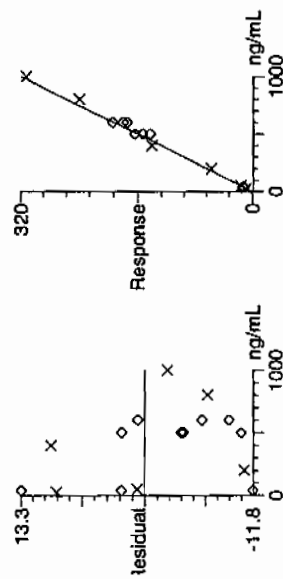
Identify Calibration Report
EL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010

Compound name: Nitrobenzene
Response Factor: 0.858509
RF SD: 0.0580797, % Relative SD: 6.76517
Response type: Internal Std (Ref 4), Area * (IS Conc. / IS Area)
Curve type: RF



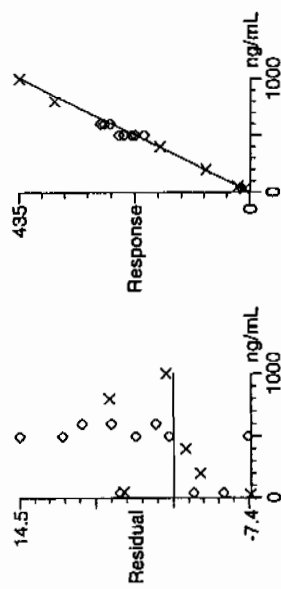
Compound name: 4-Amino-26-dinitrotoluene
Response Factor: 0.320217
RF SD: 0.0271885, % Relative SD: 8.49063
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



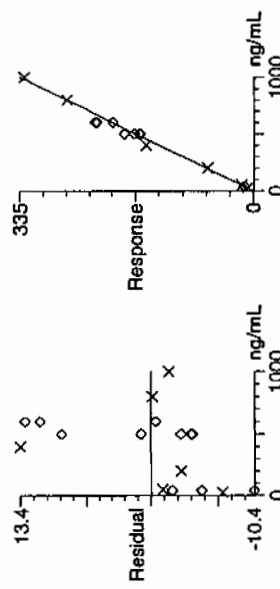
Quantify Calibration Report
 3EL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010

Compound name: 2-Amino-46-dinitrotoluene
 Response Factor: 0.432055
 RRF SD: 0.0212718, % Relative SD: 4.9234
 Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
 Curve type: RF



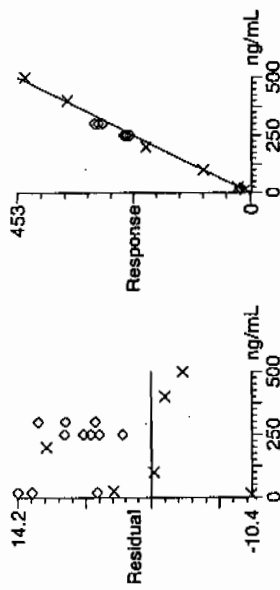
Compound name: 246-Trinitrotoluene
 Response Factor: 0.335255
 RRF SD: 0.0234791, % Relative SD: 7.00337
 Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
 Curve type: RF



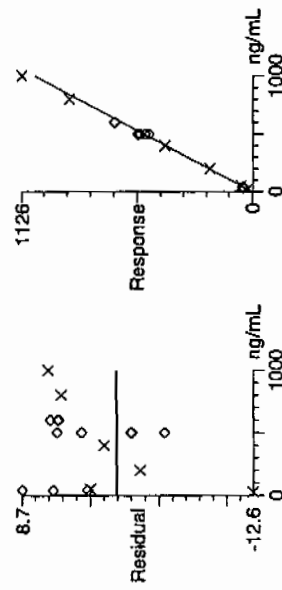
Quantify Calibration Report GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010

Compound name: 34-dinitrotoluene
Response Factor: 0.906001
RRF SD: 0.0659248, % Relative SD: 7.27646
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



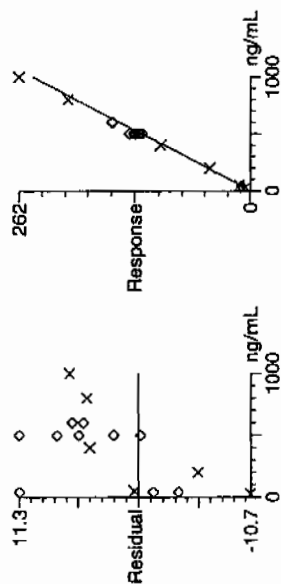
Compound name: 26-dinitrotoluene
Response Factor: 1.05944
RRF SD: 0.0727574, % Relative SD: 6.86754
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



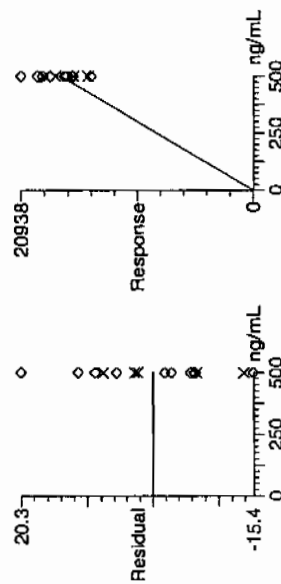
Quantify Calibration Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010

Compound name: 24-dinitrotoluene
Response Factor: 0.24651
RRF SD: 0.0167341, % Relative SD: 6.78841
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



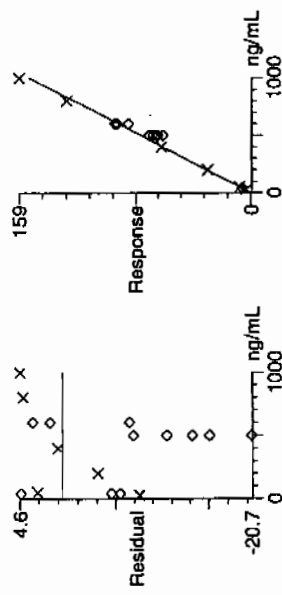
Compound name: 26-dinitrotoluene-d3
Response Factor: 34.8171
RRF SD: 3.02888, % Relative SD: 8.6994
Response type: External Std, Area
Curve type: RF



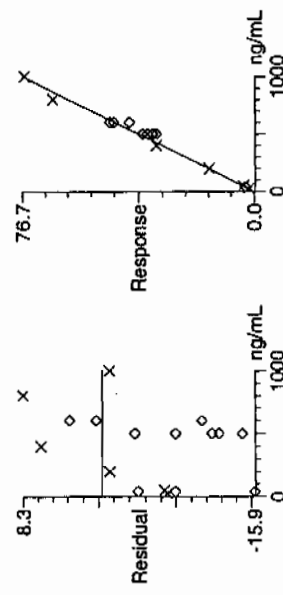
Quantify Calibration Report
GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qid, Time: Wed Feb 17 10:00:06 2010

Compound name: 2-Nitrotoluene
Response Factor: 0.152194
RRF SD: 0.0077939, % Relative SD: 5.12103
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



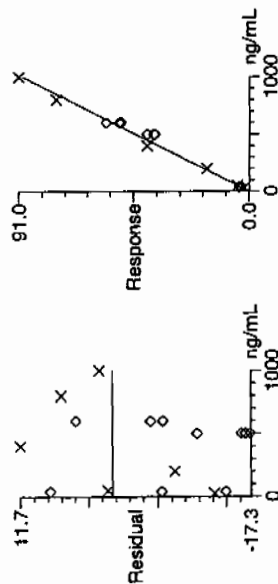
Compound name: 4-Nitrotoluene
Response Factor: 0.0766512
RRF SD: 0.00482394, % Relative SD: 6.29336
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



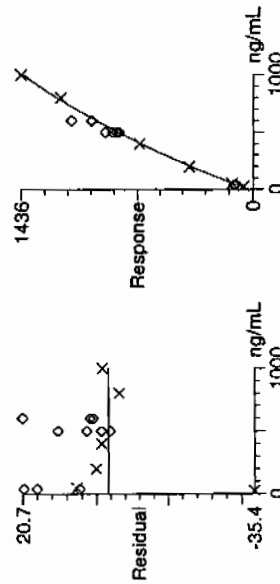
Quantify Calibration Report
JEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qtd, Time: Wed Feb 17 10:00:06 2010

Compound name: 3-Nitrotoluene
Response Factor: 0.0894891
RF SD: 0.0080453, % Relative SD: 8.99027
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF



Compound name: PETN
Coefficient of Determination: 0.999195
Calibration curve: $-0.000444334 \cdot x^2 + 1.84022 \cdot x + 26.6447$
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: Null, Axis trans: None



Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXP0216010a

Analysis Date: 16-FEB-10 21:34

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	544.138	91	
1,3-Dinitrobenzene-d4	500	505.15	101	
2,4,6-Trinitrotoluene	600	596.996	99	
2,4-Dinitrotoluene	600	637.037	106	
2,6-Dinitrotoluene	600	631.497	105	
2,6-Dinitrotoluene-d3	500	470.813	94	
2-Amino-4,6-dinitrotoluene	600	609.733	102	
3,4-Dinitrotoluene	300	318.405	106	
4-Amino-2,6-dinitrotoluene	600	544.592	91	
HMX	600	667.211	111	
Nitrobenzene	600	546.753	91	
PETN	600	622.003	104	
RDX	600	517.279	86	
Tetryl	600	535.085	89	
m-Dinitrobenzene	600	615.667	103	
m-Nitrotoluene	600	571.306	95	
o-Nitrotoluene	600	619.132	103	
p-Nitrotoluene	600	620.215	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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216010a

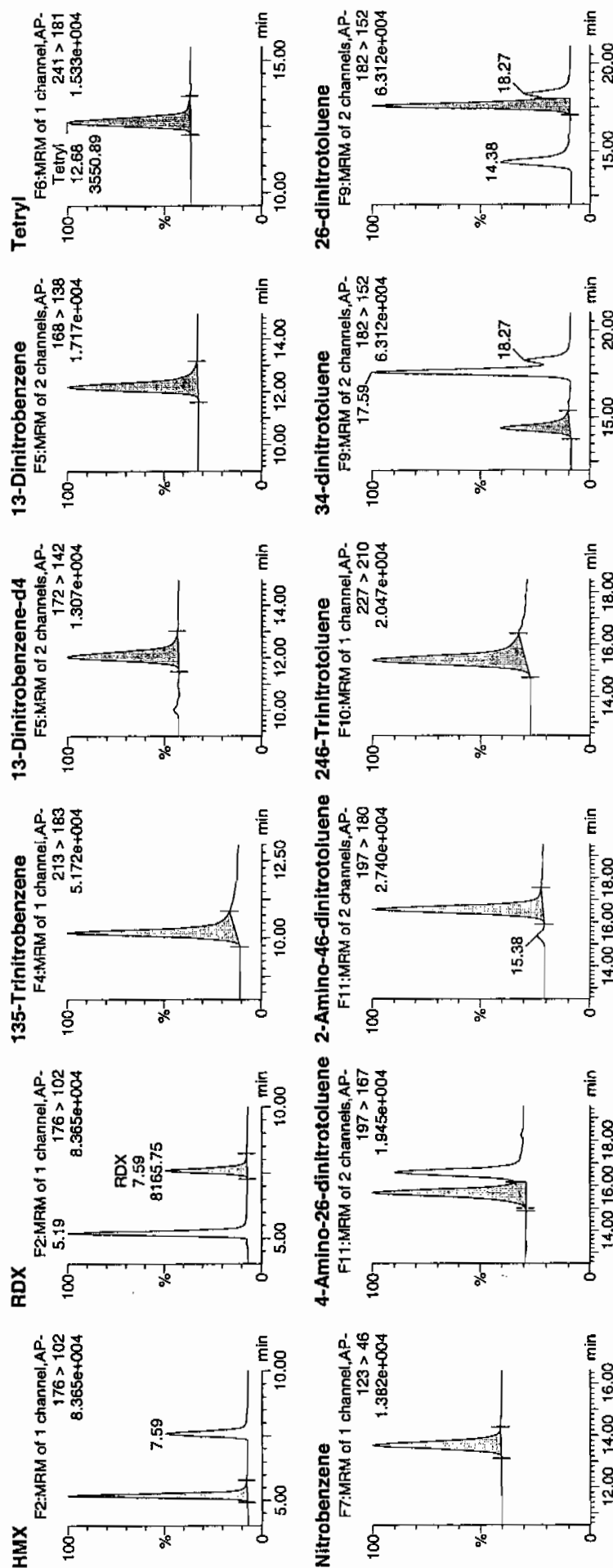
Date: 16-Feb-2010

Time: 21:34:44

ID: WXX100216-071CV

Vial: 1:1,B

Handwritten: 2/17/10



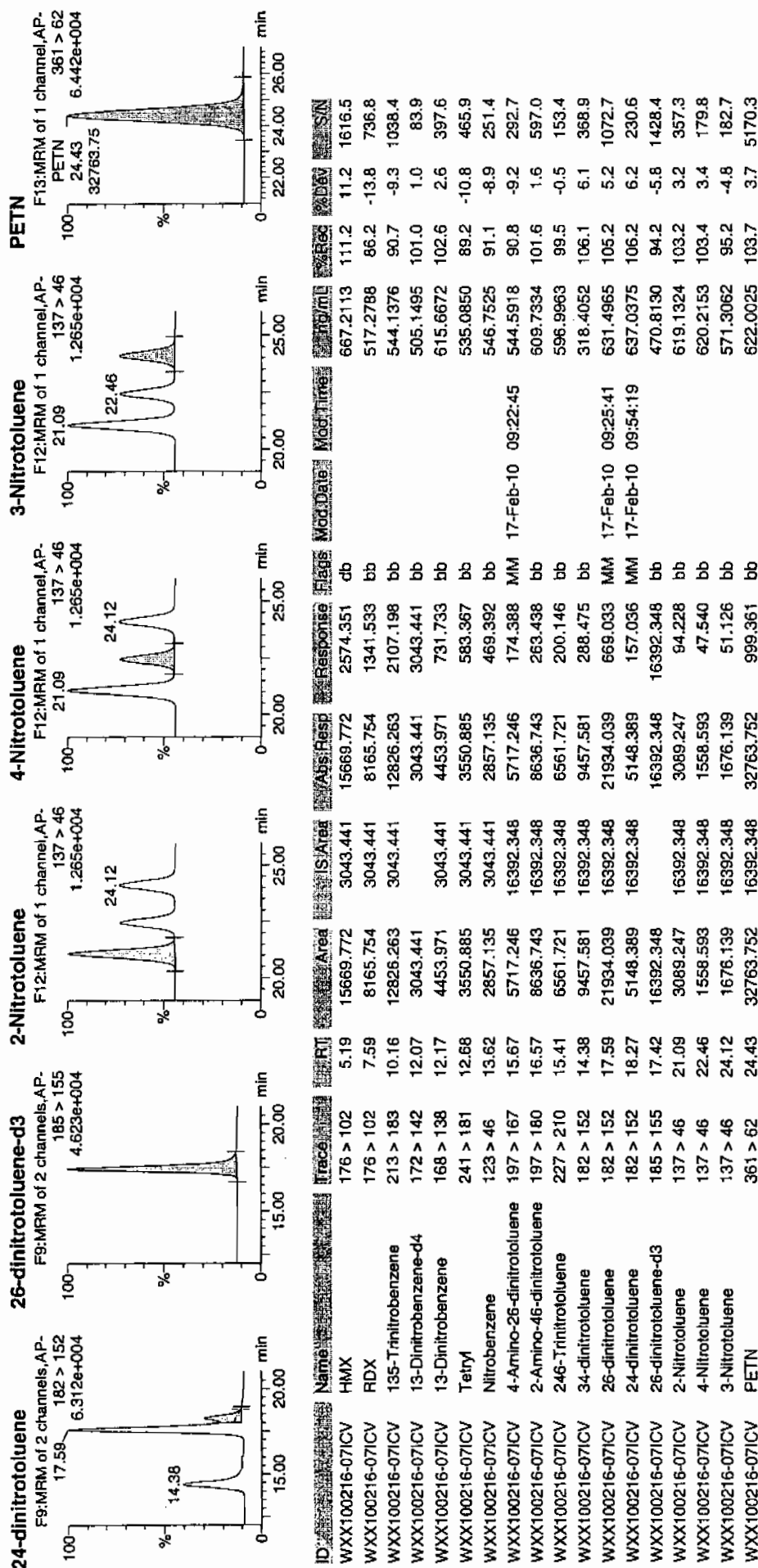
Handwritten: 2/17/10

Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Wed Feb 17 10:00:54 2010, Page 20 of 59

Dataset: C:\MASSLYNXNew_Exp\PRO1021610expA.qld, Time: Wed Feb 17 10:00:06 2010



GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 02/16/10
 Time of Injection: 2134
 Standard Number: WXX100216-07ICV
 Data File: EXP0216010a

HMX	111.2
RDX	86.2
135-TNB	90.7
13-DNB	102.6
Tetryl	89.2
Nitrobenzene	91.1
4A-26-DNT	90.8
2A-46-DNT	101.6
246-TNT	99.5
34-DNT(surr)	106.1
26-DNT	105.2
24-DNT	106.2
2-NT	103.2
4-NT	103.4
3-NT	95.2
PETN	103.7

*WXX
2/17/10*

Total 1585.9

WXX 02/17/10

Average 99.1

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

Form 6

Explosives Initial Calibration

Lab Name: GEL Laboratories LLC

GEL Job No: 10-1394

Lab Code: GEL

Run Date: 16-FEB-10 17-FEB-10

LCMSMS Instrument ID: LCMSMS4

Method: 8321A Modified

HPLC Column: YMC J-Sphere ODS-H8Q

Calibration Type: Average RF

Parname	19	20	21	22	23	24	25	Ave RF	RSD	Q
Calibration Level:	EXS02170003.W	EXS02170004.W	EXS02170005.W	EXS02170006.W	EXS02170007.W	EXS02170008.W	EXS02170009.W			
Data File:										
2,4-Diamino-6-nitrotoluene	1240	1340	1270	1220	1250	1240	1090	1235.714	6.03	
2,6-Diamino-4-nitrotoluene	2010	2030	2100	1920	1730	2070	1920	1968.571	6.42	
3,4-Dinitrotoluene	14000	13200	13200	12400	15900	12700	11800	13314.286	9.91	
3,5-Dinitroaniline	8310	7580	7260	7390	7380	7150	6410	7354.286	7.67	
TATB	1770	1730	1760	1710	1710	1650	1550	1697.143	4.42	
tris(o-cresyl) phosphate	25700	24600	23700	22100	21200	19500	15500	21757.143	16	

Q column used to flag RSD values outside of Limit (>20%)

* Values outside of QC Limit

021710ICAL

Peak Name: TATB
No Internal Standard
Q1/Q3 Masses: 257.20/204.90 amu

Fit	Mean Response Factor	Weighting	None	Iterate No
Factor	1.7e+003			
Standard deviation	75.1			
%RSD	4.42			
Use Area				

Peak Name: 35-Dinitroaniline
No Internal Standard
Q1/Q3 Masses: 182.00/46.00 amu

Fit	Mean Response Factor	Weighting	None	Iterate No
Factor	7.36e+003			
Standard deviation	564			
%RSD	7.67			
Use Area				

Peak Name: 34-Dinitrotoluene
No Internal Standard
Q1/Q3 Masses: 182.08/151.90 amu

Fit	Mean Response Factor	Weighting	None	Iterate No
Factor	1.33e+004			
Standard deviation	1.32e+003			
%RSD	9.91			
Use Area				

Peak Name: 26-Diamino-4-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Fit	Mean Response Factor	Weighting	None	Iterate No
Factor	1.97e+003			
Standard deviation	126			
%RSD	6.42			
Use Area				

Peak Name: 24-Diamino-6-nitrotoluene
No Internal Standard
Q1/Q3 Masses: 165.97/46.00 amu

Don
2/19/10

Amu 119/10

021710ICAL

Fit Mean Response Factor Weighting None Iterate No

Factor 1.24e+003

Standard deviation 74.5

%RSD 6.03

Use Area

Peak Name: tris(o-cresyl) phosphate

No Internal Standard

Q1/Q3 Masses: 369.15/91.00 amu

Fit Mean Response Factor Weighting None Iterate No

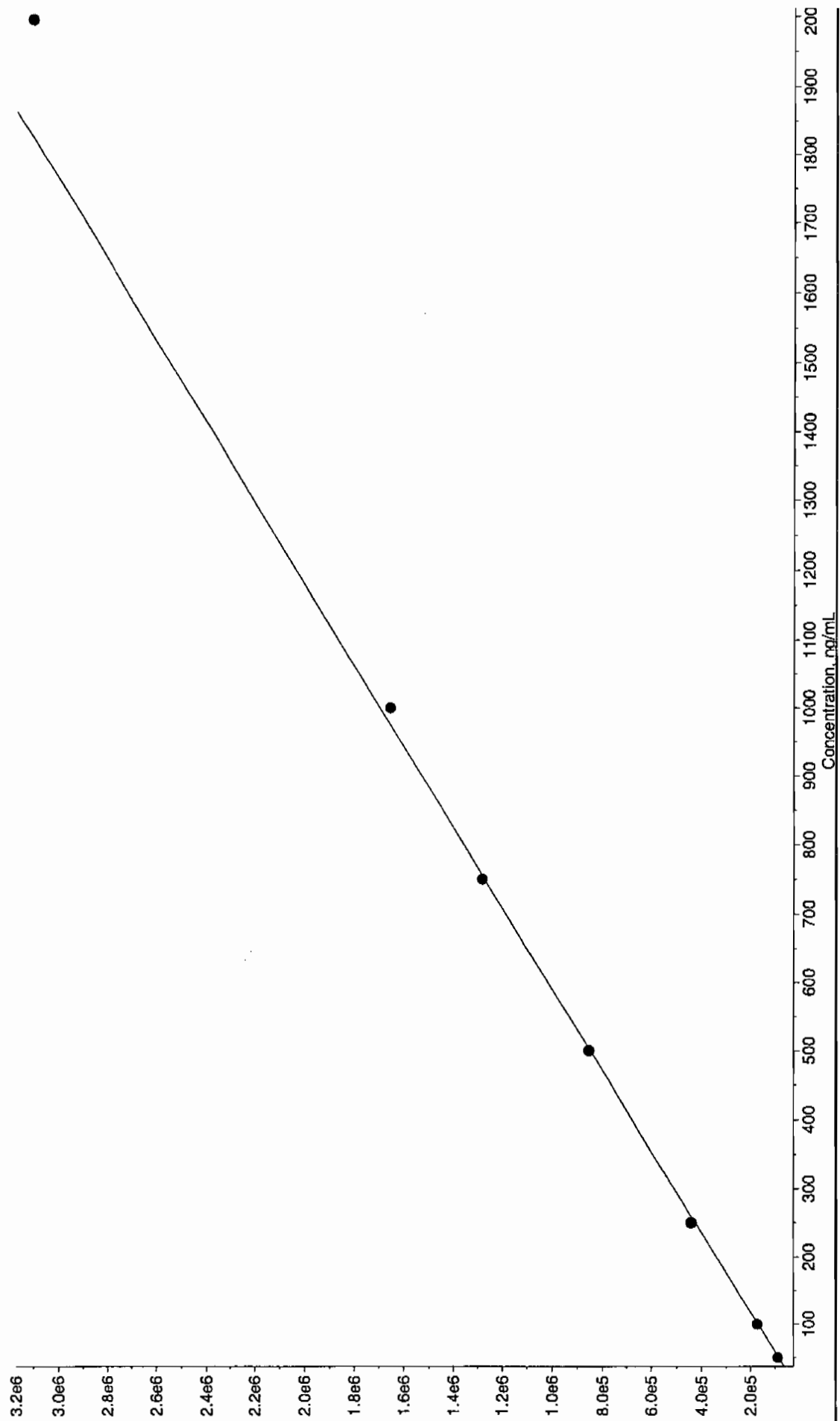
Factor 2.18e+004

Standard deviation 3.47e+003

%RSD 16

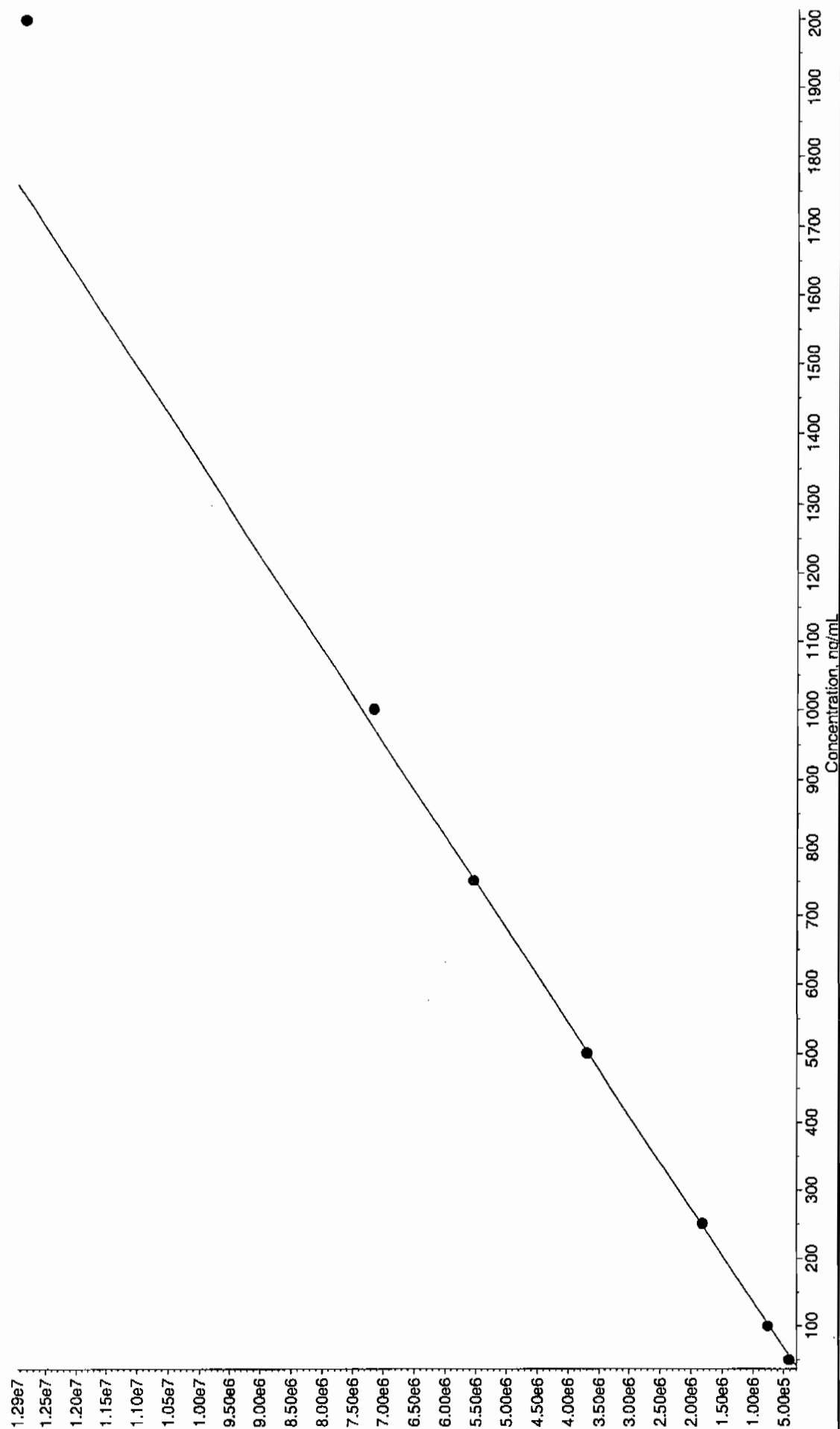
Use Area

021710.rdb (TATB): "Mean Response Factor" Regression ("No" weighting): $y = 1.7e+003 \times (\text{std. dev.} = 75.1)$



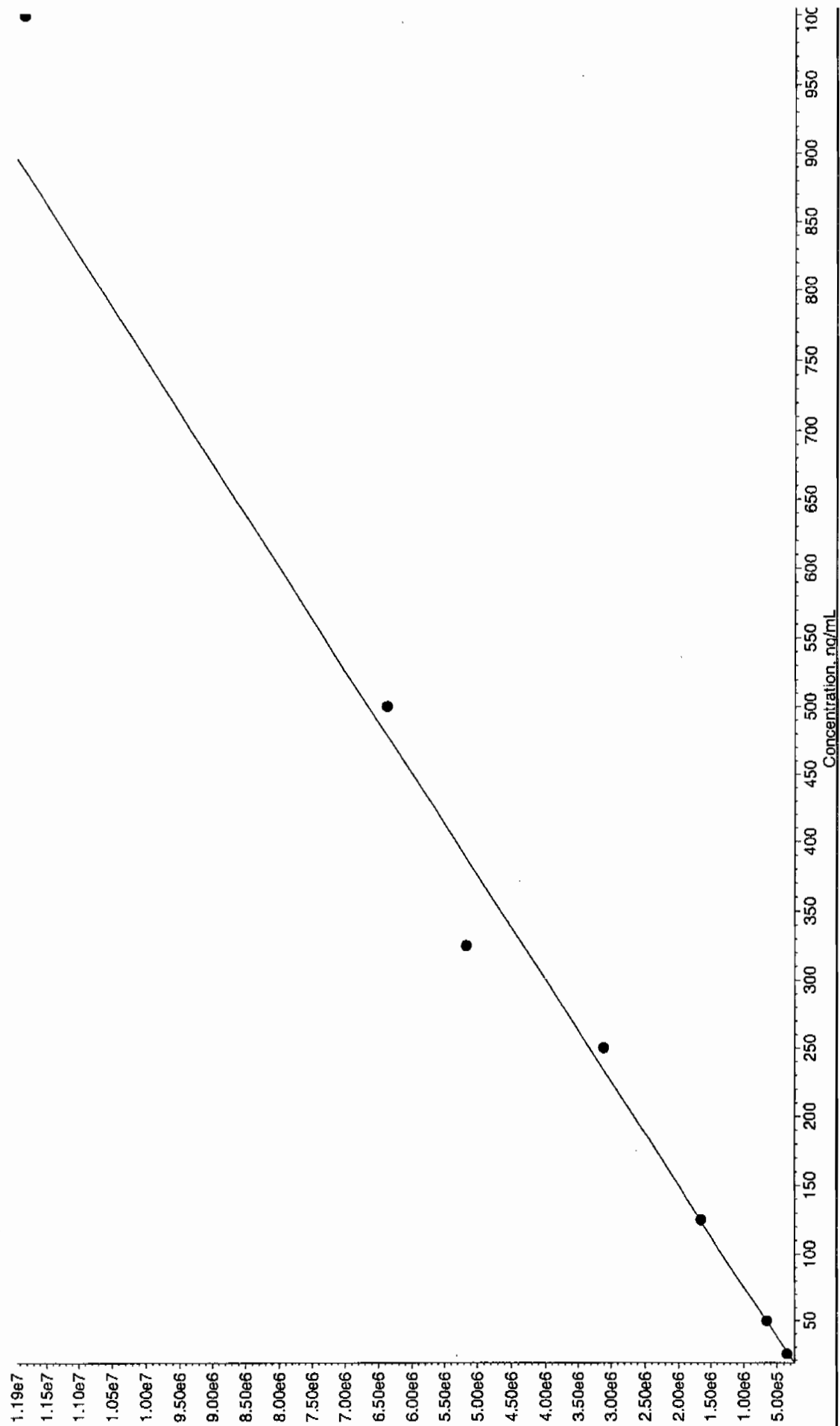
EL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

021710.rdb (35-Dinitroaniline): "Mean Response Factor" Regression ("No" weighting): $y = 7.36e+003 \times (\text{std. dev.} = 564)$



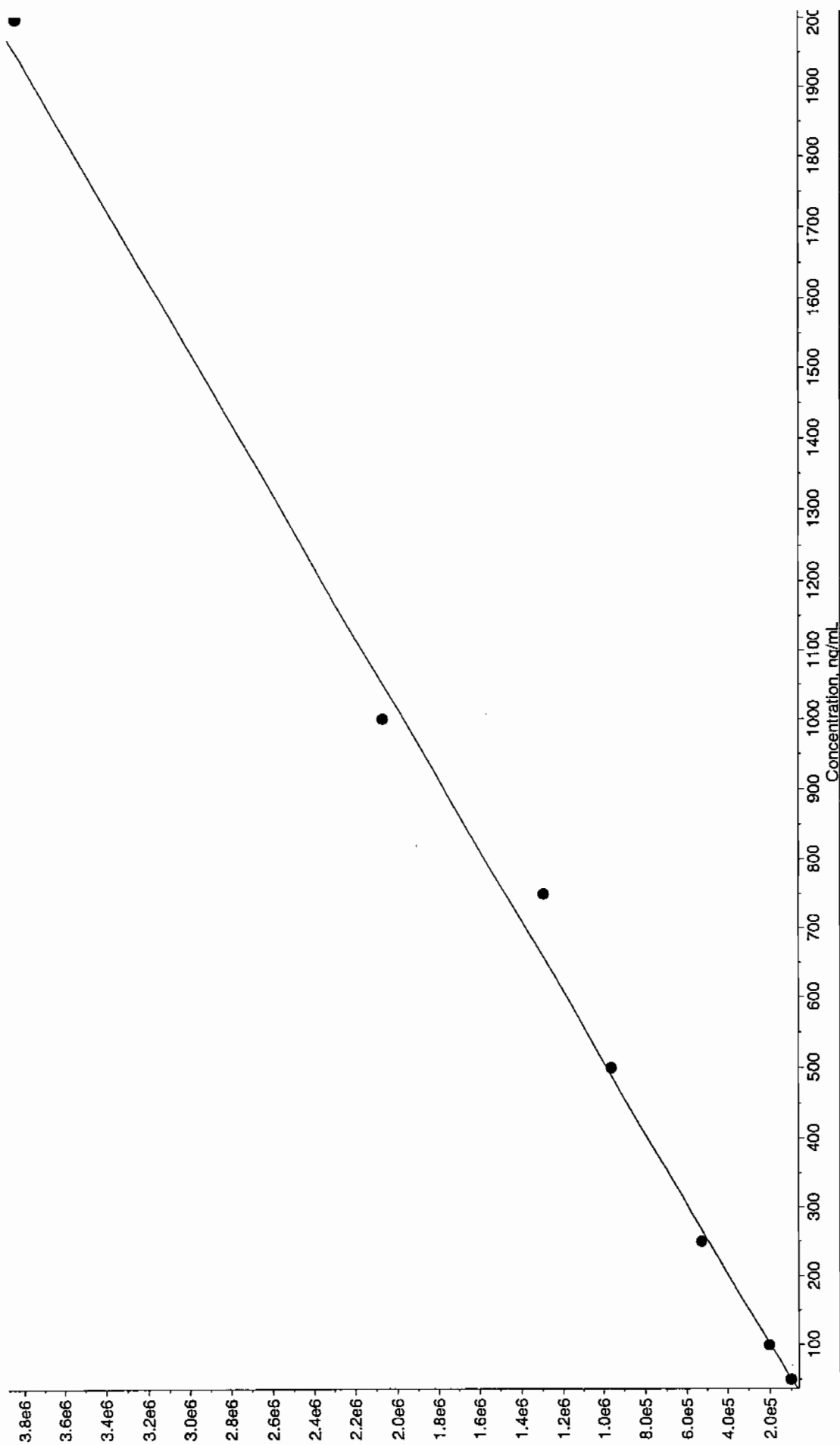
EL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

021710.rdb (34-Dinitrotoluene): "Mean Response Factor" Regression ("No" weighting): $y = 1.33e+004 \times (\text{std. dev.} = 1.32e+003)$



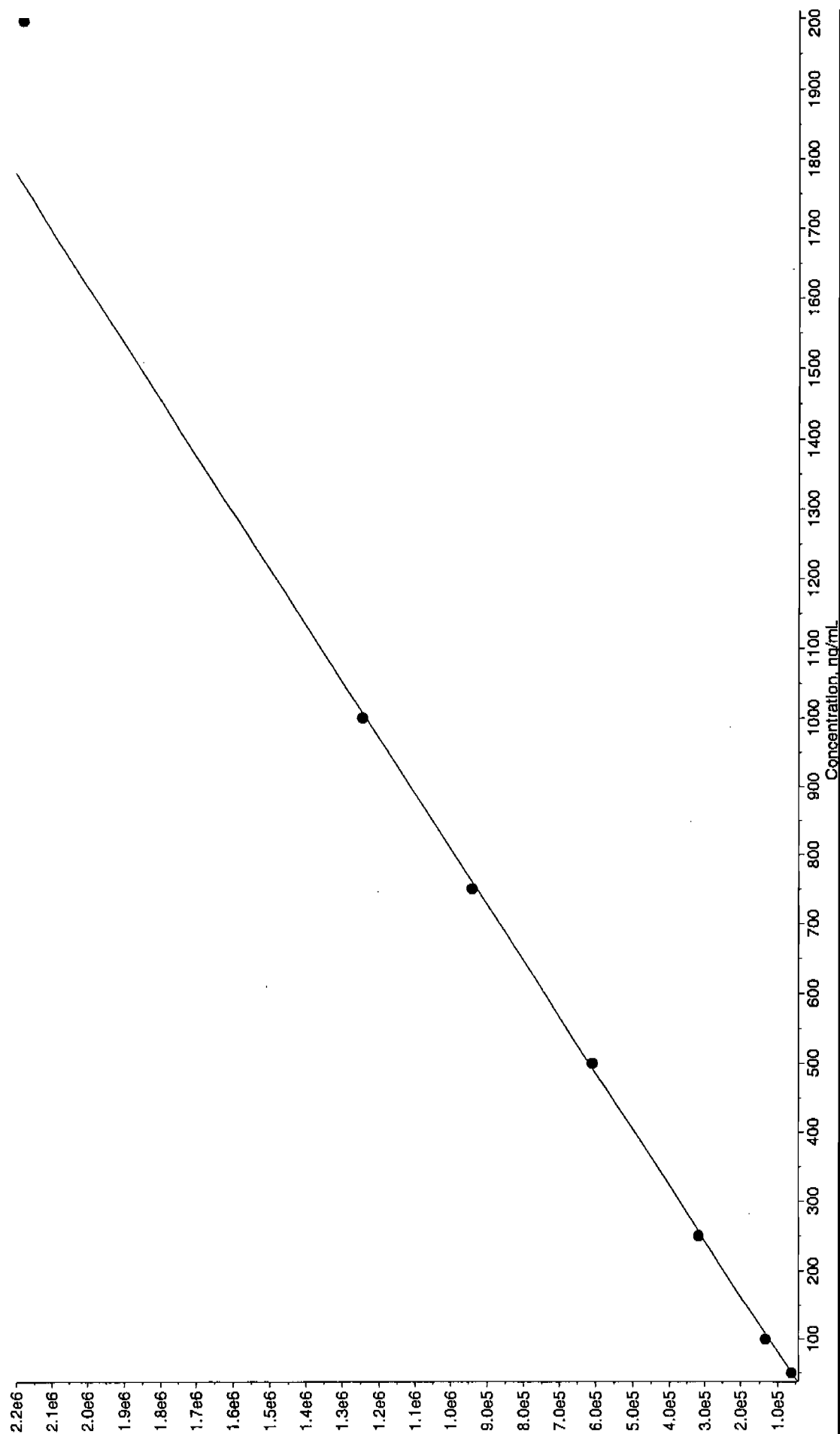
EL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

021710.rdb (26-Diamino-4-nitrotoluene): "Mean Response Factor" Regression ("No" weighting): $y = 1.97e+003 \times (\text{std. dev.} = 126)$



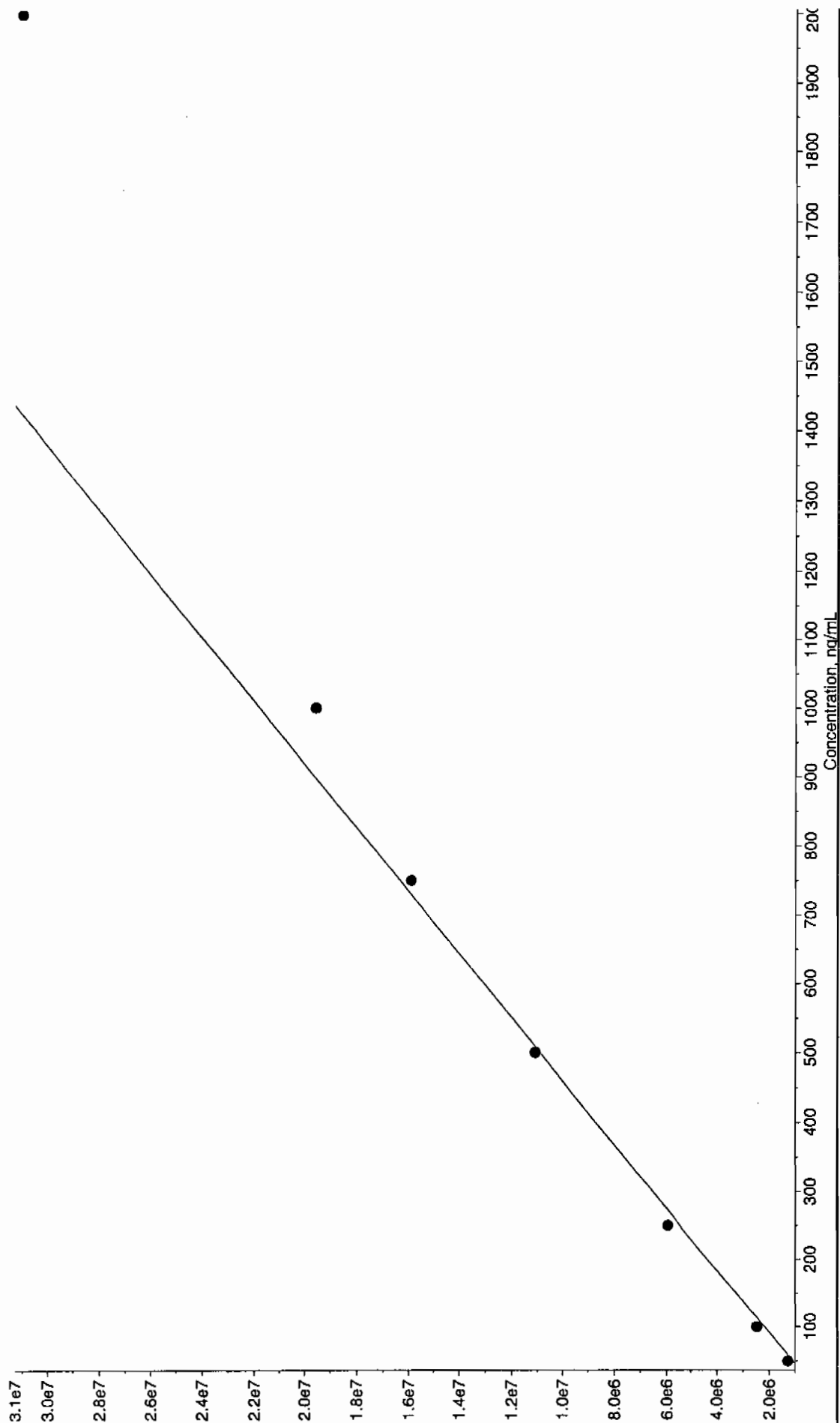
EL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

021710.rdb (24-Diamino-6-nitrotoluene): "Mean Response Factor" Regression ("No" weighting): $y = 1.24e+003 \times (\text{std. dev.} = 74.5)$



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

021710.rdb (tris(o-cresyl) phosphate): "Mean Response Factor" Regression ("No" weighting): $y = 2.18e+004 \times (\text{std. dev.} = 3.47e+003)$



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

Explosives Initial Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXICV

GEL Data File EXS02170011.wiff

Analysis Date: 17-FEB-10 12:03

LCMSMS ID: 1358

Column ID: Sphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	434	87	
2,6-Diamino-4-nitrotoluene	500	522	104	
3,4-Dinitrotoluene	250	238	95	
3,5-Dinitroaniline	500	521	104	
TATB	500	485	97	
tris(o-cresyl) phosphate	500	498	100	

Recovery Limits:

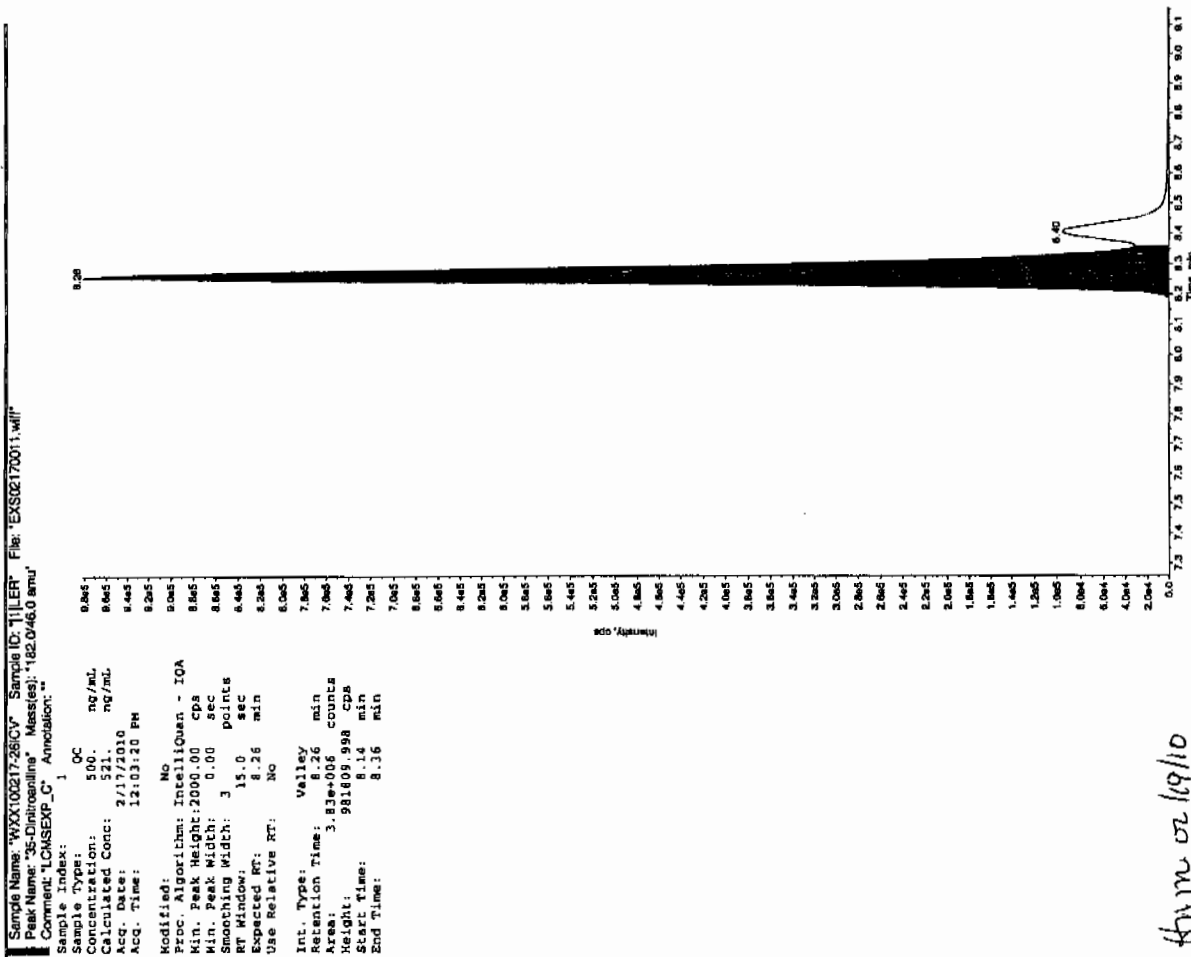
3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

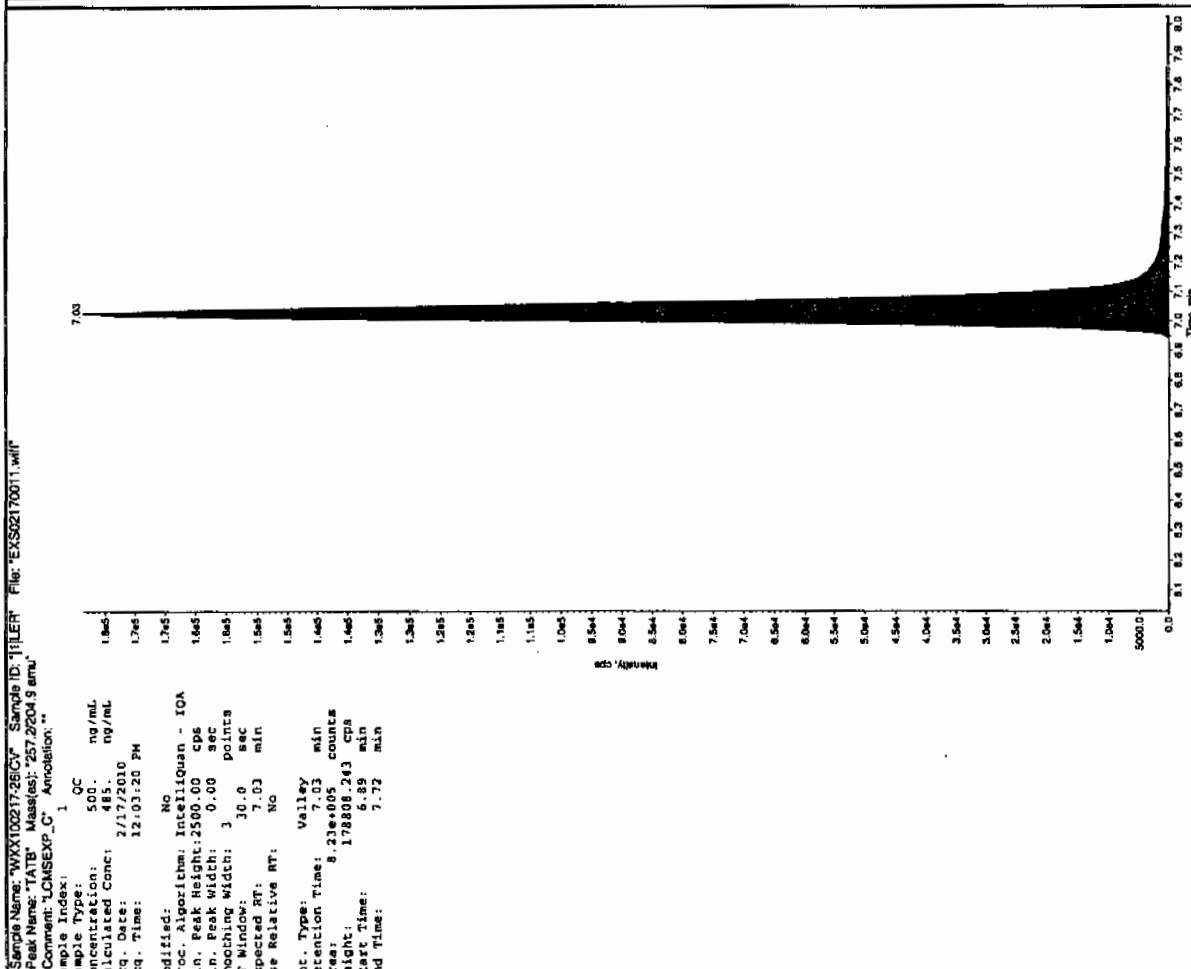
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

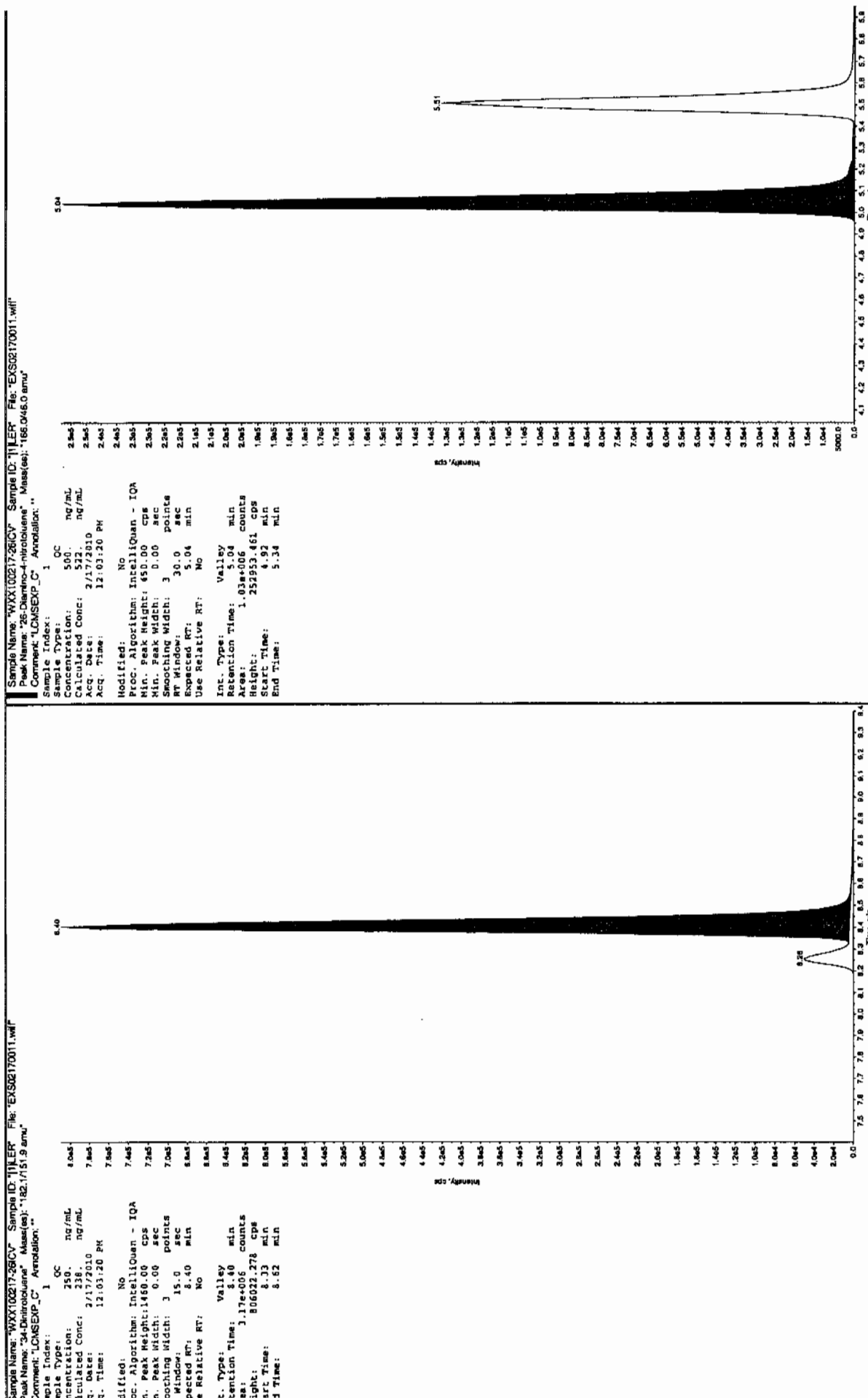
Jan 21/9/10



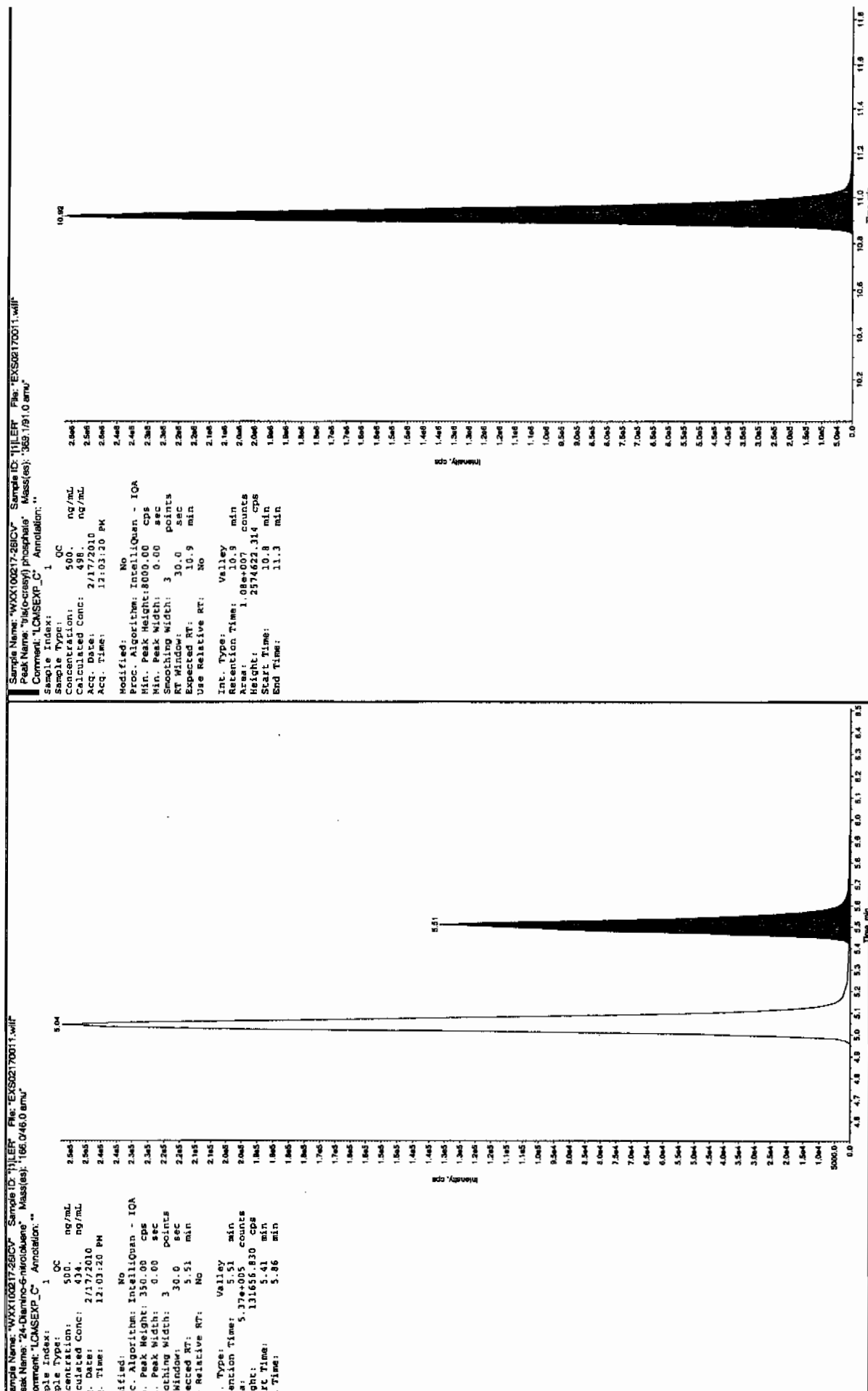
44 m on 10/9/10



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



EL SOP GL-OA-E-056, Method 8321A-Modified LCMSSMS#4



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

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0216012a

Analysis Date: 16-FEB-10 22:33

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	52.773	132	*
1,3-Dinitrobenzene-d4	500	467.275	93	
2,4,6-Trinitrotoluene	40	39.143	98	
2,4-Dinitrotoluene	40	38.529	96	
2,6-Dinitrotoluene	40	43.494	109	
2,6-Dinitrotoluene-d3	500	466.982	93	
2-Amino-4,6-dinitrotoluene	40	39.227	98	
3,4-Dinitrotoluene	20	22.552	113	
4-Amino-2,6-dinitrotoluene	40	41.012	103	
HMX	40	41.651	104	
Nitrobenzene	40	45.259	113	
PETN	40	42.843	107	
RDX	40	36.749	92	
Tetryl	40	39.776	99	
m-Dinitrobenzene	40	46.913	117	
m-Nitrotoluene	40	43.185	108	
o-Nitrotoluene	40	41.818	105	
p-Nitrotoluene	40	36.985	92	

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%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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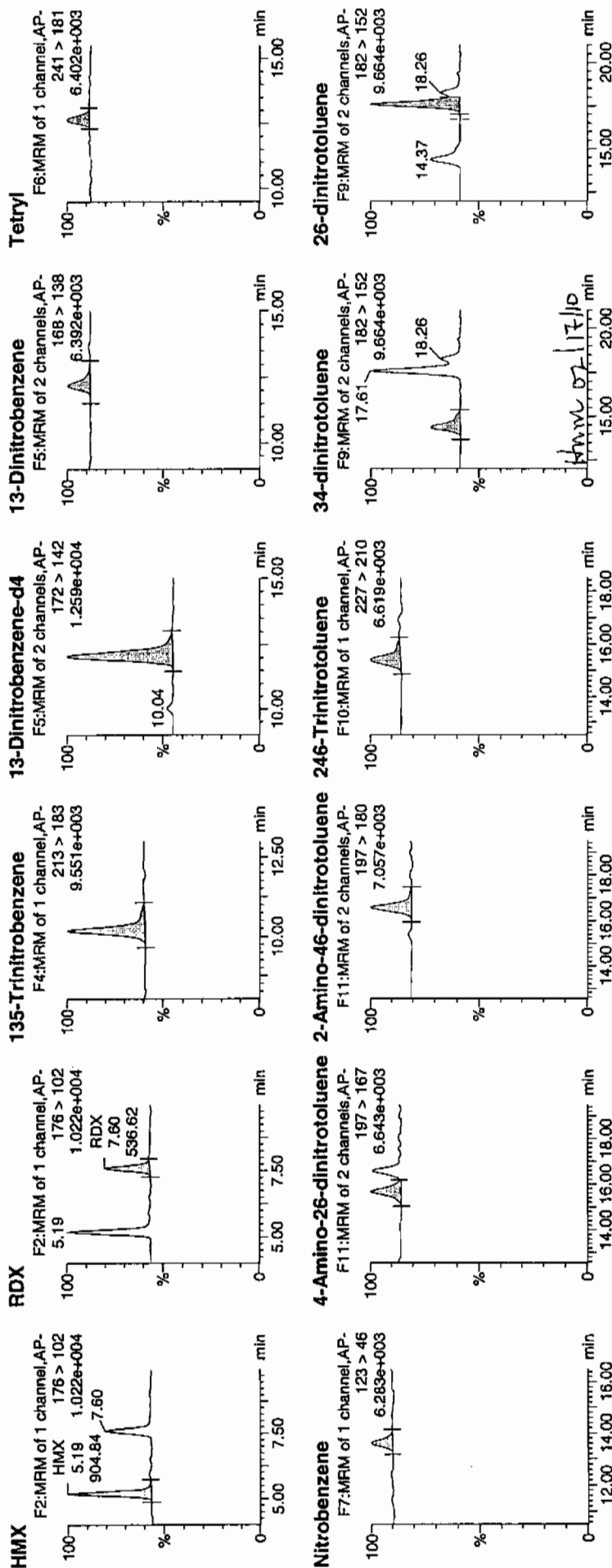
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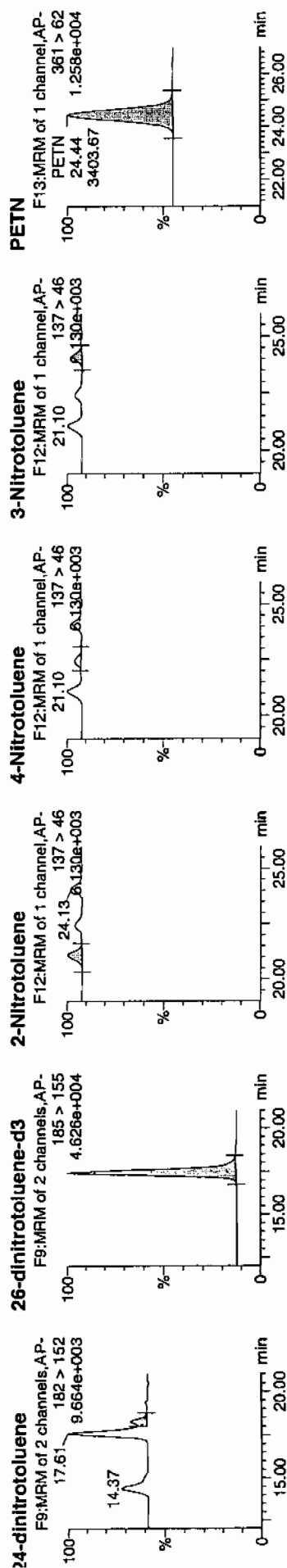
Time: 22:33:56

ID: WXX100216-08CRI

Vial: 1:1,C

1/17/10
2/17/10





ID	Name	Trace	RT	Area	S Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Room	Rec	Rev	ASN
WXX100216-08CRI	HMX	176 > 102	5.19	904.843	2815.255	904.843	160.704	bb			41.6506	104.1	4.1	146.1
WXX100216-08CRI	RDX	176 > 102	7.60	536.624	2815.255	536.624	95.306	bb			36.7490	91.9	-8.1	78.6
WXX100216-08CRI	135-Trinitrobenzene	213 > 183	10.18	1150.692	2815.255	1150.692	204.367	bb			52.7734	131.9	31.9	153.3
WXX100216-08CRI	13-Dinitrobenzene-d4	172 > 142	12.06	2815.255		2815.255	2815.255	bb			467.2753	93.5	-6.5	116.9
WXX100216-08CRI	13-Dinitrobenzene	168 > 138	12.20	313.940	2815.255	313.940	55.757	bb			46.9129	117.3	17.3	56.5
WXX100216-08CRI	Tetryl	241 > 181	12.66	244.166	2815.255	244.166	43.365	bb			39.7758	99.4	-0.6	26.2
WXX100216-08CRI	Nitrobenzene	123 > 46	13.61	218.774	2815.255	218.774	38.855	bb			45.2588	113.1	13.1	13.8
WXX100216-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.67	427.054	16258.972	427.054	13.133	MM	17-Feb-10	09:22:56	41.0124	102.5	2.5	29.2
WXX100216-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.57	551.120	16258.972	551.120	16.948	bb			39.2269	98.1	-1.9	56.9
WXX100216-08CRI	246-Trinitrotoluene	227 > 210	15.40	426.730	16258.972	426.730	13.123	bb			39.1431	97.9	-2.1	30.4
WXX100216-08CRI	34-dinitrotoluene	182 > 152	14.37	664.397	16258.972	664.397	20.432	bb			22.5515	112.8	12.8	21.1
WXX100216-08CRI	26-dinitrotoluene	182 > 152	17.61	1498.403	16258.972	1498.403	46.079	MM	17-Feb-10	09:25:53	43.4940	108.7	8.7	65.6
WXX100216-08CRI	24-dinitrotoluene	182 > 152	18.26	308.850	16258.972	308.850	9.498	MM	17-Feb-10	09:54:26	38.5291	96.3	-3.7	13.0
WXX100216-08CRI	26-dinitrotoluene-d3	185 > 155	17.43	16258.972		16258.972	16258.972	bb			466.9822	93.4	-6.6	1321.7
WXX100216-08CRI	2-Nitrotoluene	137 > 46	21.10	206.957	16258.972	206.957	6.364	bb			41.8176	104.5	4.5	61.3
WXX100216-08CRI	4-Nitrotoluene	137 > 46	22.41	92.186	16258.972	92.186	2.835	bb			36.9848	92.5	-7.5	27.2
WXX100216-08CRI	3-Nitrotoluene	137 > 46	24.13	125.667	16258.972	125.667	3.865	bb			43.1945	108.0	8.0	39.5
WXX100216-08CRI	PETN	361 > 62	24.44	3403.665	16258.972	3403.665	104.670	bb			42.8433	107.1	7.1	656.3

GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 02/16/10
 Time of Injection 2233
 Standard Number WXX100216-08CRI
 Data File EXP0216012a

HMX	104.1
RDX	91.9
135-TNB	131.9
13-DNB	117.3
Tetryl	99.4
Nitrobenzene	113.1
4A-26-DNT	102.5
2A-46-DNT	98.1
246-TNT	97.9
34-DNT(surr)	112.8
26-DNT	108.7
24-DNT	96.3
2-NT	104.5
4-NT	92.5
3-NT	108.0
PETN	107.1

*WXX
2/17/10*

Total 1686.1

Average 105.4

Sum = 1686.1

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0216021a

Analysis Date: 17-FEB-10 03:00

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	579.243	97	
1,3-Dinitrobenzene-d4	500	497.509	100	
2,4,6-Trinitrotoluene	600	668.453	111	
2,4-Dinitrotoluene	600	630.739	105	
2,6-Dinitrotoluene	600	632.433	105	
2,6-Dinitrotoluene-d3	500	485.976	97	
2-Amino-4,6-dinitrotoluene	600	634.785	106	
3,4-Dinitrotoluene	300	327.796	109	
4-Amino-2,6-dinitrotoluene	600	562.441	94	
HMX	600	585.906	98	
Nitrobenzene	600	587.781	98	
PETN	600	627.186	105	
RDX	600	656.37	109	
Tetryl	600	543.324	91	
m-Dinitrobenzene	600	630.615	105	
m-Nitrotoluene	600	562.285	94	
o-Nitrotoluene	600	556.59	93	
p-Nitrotoluene	600	538.033	90	

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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010

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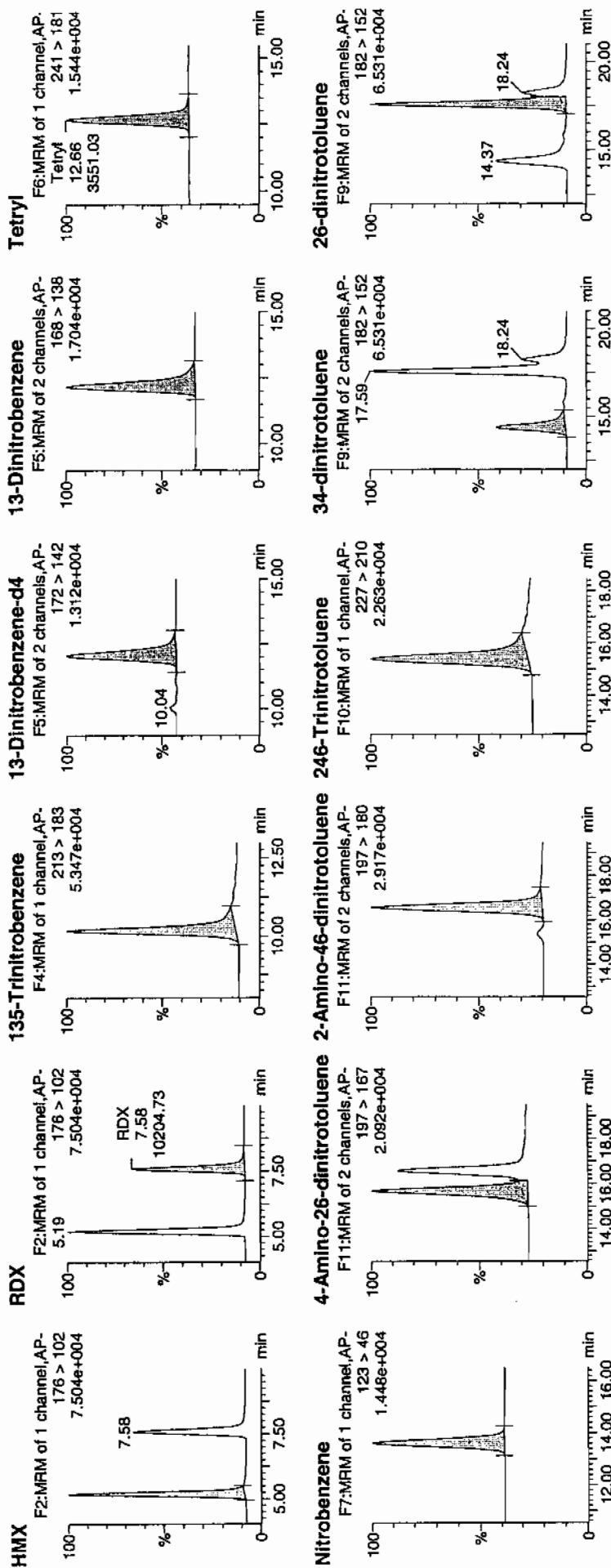
Date: 17-Feb-2010

Time: 03:00:59

ID: WXX100216-07CCV

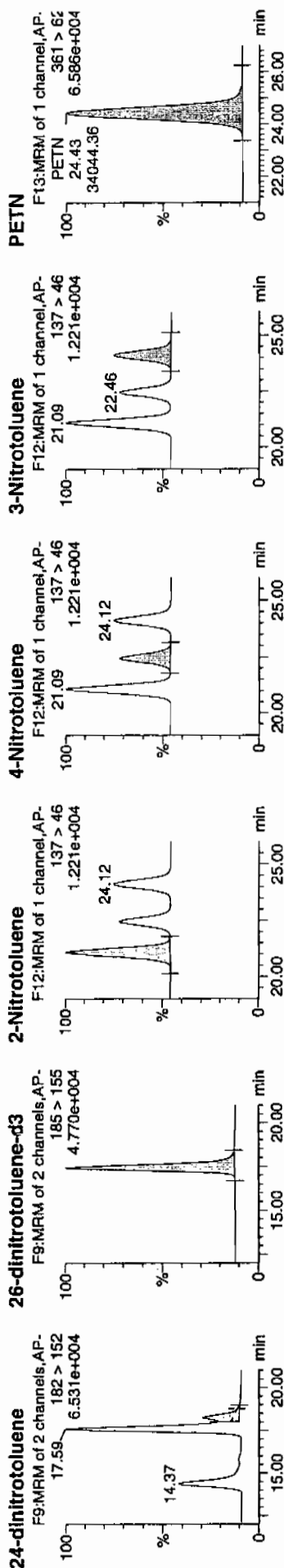
Vial: 1:1,B

2/17/10



2/17/10

Dataset: C:\MASSLYNX\New_Exp\PRO1021610expA.qld, Time: Wed Feb 17 10:00:06 2010



ID	Name	Trace	RT	Area	IS Area	Abundance	Response	Flags	Mod Date	Mod Time	%Area	%Dev	SN
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WXX100216-07CCV	RDX	176 > 102	7.58	10204.725	2997.406	10204.725	1702.259	bb			656.3705	109.4	9.4
WXX100216-07CCV	135-Trinitrobenzene	213 > 183	10.18	13447.239	2997.406	13447.239	2243.146	bb			579.2434	96.5	-3.5
WXX100216-07CCV	13-Dinitrobenzene	172 > 142	12.06	2997.406		2997.406	2997.406	bb			497.5086	99.5	-0.5
WXX100216-07CCV	13-Dinitrobenzene	168 > 138	12.17	4493.104	2997.406	4493.104	749.499	bb			630.6152	105.1	5.1
WXX100216-07CCV	Tetryl	241 > 181	12.66	3551.025	2997.406	3551.025	592.350	bb			543.3244	90.6	-9.4
WXX100216-07CCV	Nitrobenzene	123 > 46	13.61	3025.073	2997.406	3025.073	504.615	bb			587.7805	98.0	-2.0
WXX100216-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.67	6094.788	16920.273	6094.788	180.103	MM	17-Feb-10	09:23:30	562.4405	93.7	-6.3
WXX100216-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.57	9281.178	16920.273	9281.178	274.262	bb			634.7853	105.8	5.8
WXX100216-07CCV	246-Trinitrotoluene	227 > 210	15.40	7583.733	16920.273	7583.733	224.102	bb			668.4527	111.4	11.4
WXX100216-07CCV	34-dinitrotoluene	182 > 152	14.37	10050.091	16920.273	10050.091	296.984	bb			327.7962	109.3	9.3
WXX100216-07CCV	26-dinitrotoluene	182 > 152	17.59	22674.004	16920.273	22674.004	670.025	MM	17-Feb-10	09:26:18	632.4328	105.4	5.4
WXX100216-07CCV	24-dinitrotoluene	182 > 152	18.24	5261.653	16920.273	5261.653	155.484	MM	17-Feb-10	09:58:25	630.7389	105.1	5.1
WXX100216-07CCV	26-dinitrotoluene-d3	185 > 155	17.43	16920.273	16920.273	16920.273	16920.273	bb			485.9758	97.2	-2.8
WXX100216-07CCV	2-Nitrotoluene	137 > 46	21.09	2866.625	16920.273	2866.625	84.710	bb			556.5902	92.8	-7.2
WXX100216-07CCV	4-Nitrotoluene	137 > 46	22.46	1395.615	16920.273	1395.615	41.241	bb			538.0334	89.7	-10.3
WXX100216-07CCV	3-Nitrotoluene	137 > 46	24.12	1702.802	16920.273	1702.802	50.318	bb			562.2854	93.7	-6.3
WXX100216-07CCV	PETN	361 > 62	24.43	34044.359	16920.273	34044.359	1006.023	bb			627.1860	104.5	4.5

GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 02/17/10
 Time of Injection: 0300
 Standard Number: WXX100216-07CCV
 Data File: EXP0216021a

HMX	97.7
RDX	109.4
135-TNB	96.5
13-DNB	105.1
Tetryl	90.6
Nitrobenzene	98.0
4A-26-DNT	93.7
2A-46-DNT	105.8
246-TNT	111.4
34-DNT(surr)	109.3
26-DNT	105.4
24-DNT	105.1
2-NT	92.8
4-NT	89.7
3-NT	93.7
PETN	104.5

WXX
2/17/10

Total 1608.7

Average 100.5

WXX-02/17/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0216023a

Analysis Date: 17-FEB-10 03:59

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
Nitrobenzene	40	46.027	115	
PETN	40	46.88	117	
RDX	40	40.003	100	
Tetryl	40	46.382	116	
m-Dinitrobenzene	40	47.022	118	
m-Nitrotoluene	40	34.333	86	
o-Nitrotoluene	40	37.918	95	
p-Nitrotoluene	40	33.624	84	
1,3,5-Trinitrobenzene	40	49.744	124	
1,3-Dinitrobenzene-d4	500	479.66	96	
2,4,6-Trinitrotoluene	40	35.851	90	
2,4-Dinitrotoluene	40	39.455	99	
2,6-Dinitrotoluene	40	41.064	103	
2,6-Dinitrotoluene-d3	500	491.1	98	
2-Amino-4,6-dinitrotoluene	40	38.066	95	
3,4-Dinitrotoluene	20	21.18	106	
4-Amino-2,6-dinitrotoluene	40	45.31	113	
HMX	40	40.495	101	

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%
Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Quantify Sample Report

3EL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Wed Feb 17 10:00:54 2010, Page 45 of 59

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Date: 17-Feb-2010

Time: 03:59:56

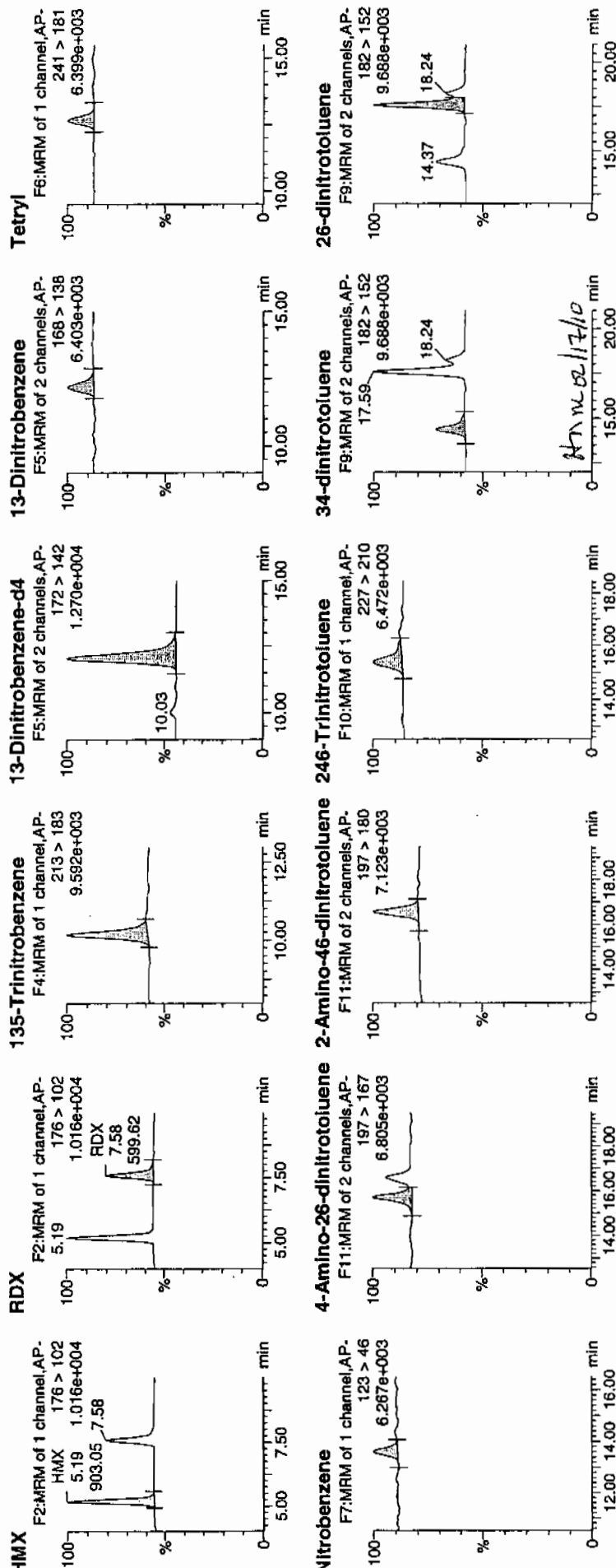
D: WXX100216-08CRI

Vial: 1:1,C

17/2/10

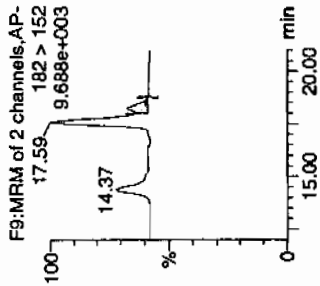
Page 305 of 1698

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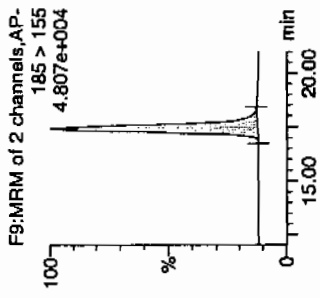


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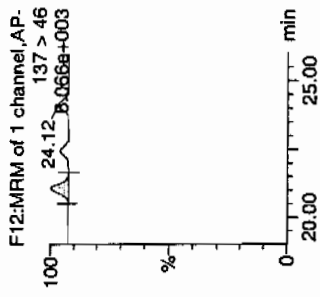
4-dinitrotoluene



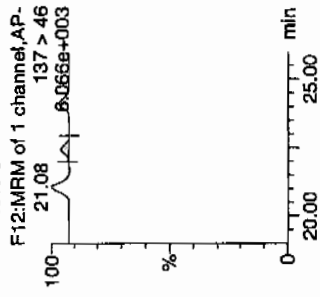
26-dinitrotoluene-d3



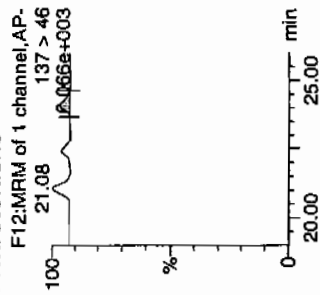
2-Nitrotoluene



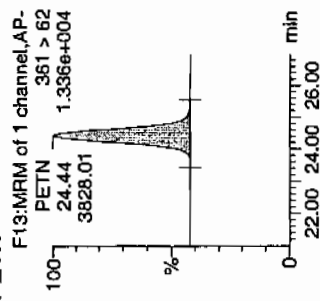
4-Nitrotoluene



3-Nitrotoluene



PETN



Di	Name	RT	Area	Area	Area	Response	Flags	Mod	Date	Mod	Time	%	Area	SN
WXX100216-08CRI	HMX	176 > 102	5.19	903.051	2889.872	903.051	155.244	bb				101.2	1.2	129.0
WXX100216-08CRI	RD	176 > 102	7.58	599.618	2889.872	599.618	103.745	bb				100.0	0.0	71.5
WXX100216-08CRI	135-Trinitrobenzene	213 > 183	10.18	1113.391	2889.872	1113.391	192.637	bb				124.4	24.4	149.0
WXX100216-08CRI	13-Dinitrobenzene-d4	172 > 142	12.03	2889.872	2889.872	2889.872	2889.872	bb				95.9	-4.1	417.1
WXX100216-08CRI	13-Dinitrobenzene	168 > 138	12.20	323.009	2889.872	323.009	55.886	bb				117.6	17.6	49.9
WXX100216-08CRI	Tetryl	241 > 181	12.66	292.267	2889.872	292.267	50.567	bb				116.0	16.0	23.4
WXX100216-08CRI	Nitrobenzene	123 > 46	13.61	228.386	2889.872	228.386	39.515	bb				115.1	15.1	23.5
WXX100216-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.70	496.172	17098.684	496.172	14.509	MM	17-Feb-10	09:23:37		113.3	13.3	43.7
WXX100216-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.57	562.424	17098.684	562.424	16.446	bb				95.2	-4.8	54.4
WXX100216-08CRI	246-Trinitrotoluene	227 > 210	15.37	411.028	17098.684	411.028	12.019	bb				89.6	-10.4	34.7
WXX100216-08CRI	34-dinitrotoluene	182 > 152	14.37	656.211	17098.684	656.211	19.189	bb				105.9	5.9	25.2
WXX100216-08CRI	26-dinitrotoluene	182 > 152	17.59	1487.743	17098.684	1487.743	43.505	MM	17-Feb-10	09:26:28		102.7	2.7	76.0
WXX100216-08CRI	24-dinitrotoluene	182 > 152	18.24	332.609	17098.684	332.609	9.726	MM	17-Feb-10	09:58:34		98.6	-1.4	15.9
WXX100216-08CRI	26-dinitrotoluene-d3	185 > 155	17.43	17098.684	17098.684	17098.684	17098.684	bb				98.2	-1.8	1844.2
WXX100216-08CRI	2-Nitrotoluene	137 > 46	21.08	197.351	17098.684	197.351	5.771	bb				94.8	-5.2	50.3
WXX100216-08CRI	4-Nitrotoluene	137 > 46	22.44	88.137	17098.684	88.137	2.577	bb				84.1	-15.9	24.1
WXX100216-08CRI	3-Nitrotoluene	137 > 46	24.12	105.069	17098.684	105.069	3.072	bb				85.8	-14.2	27.3
WXX100216-08CRI	PETN	361 > 62	24.44	3828.005	17098.684	3828.005	111.939	bb				117.2	17.2	698.1

GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 02/17/10
 Time of Injection 0359
 Standard Number WXX100216-08CRI
 Data File EXP0216023a

HMX	101.2
RDX	100.0
135-TNB	124.4
13-DNB	117.6
Tetryl	116.0
Nitrobenzene	115.1
4A-26-DNT	113.3
2A-46-DNT	95.2
246-TNT	89.6
34-DNT(surr)	105.9
26-DNT	102.7
24-DNT	98.6
2-NT	94.8
4-NT	84.1
3-NT	85.8
PETN	117.2

*WXX
2/17/10*

Total 1661.5

Average 103.8

WXX 02/17/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0216027a

Analysis Date: 17-FEB-10 05:58

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
2,6-Dinitrotoluene	600	636.41	106	
2,6-Dinitrotoluene-d3	500	422.753	85	
2-Amino-4,6-dinitrotoluene	600	651.036	109	
3,4-Dinitrotoluene	300	336.279	112	
4-Amino-2,6-dinitrotoluene	600	604.644	101	
HMX	600	612.626	102	
Nitrobenzene	600	578.267	96	
PETN	600	723.944	121	*
RDX	600	659.537	110	
Tetryl	600	567.895	95	
m-Dinitrobenzene	600	622.089	104	
m-Nitrotoluene	600	628.032	105	
o-Nitrotoluene	600	608.219	101	
p-Nitrotoluene	600	603.723	101	
1,3,5-Trinitrobenzene	600	611.171	102	
1,3-Dinitrobenzene-d4	500	441.467	88	
2,4,6-Trinitrotoluene	600	677.667	113	
2,4-Dinitrotoluene	600	637.719	106	

Recovery Limits:

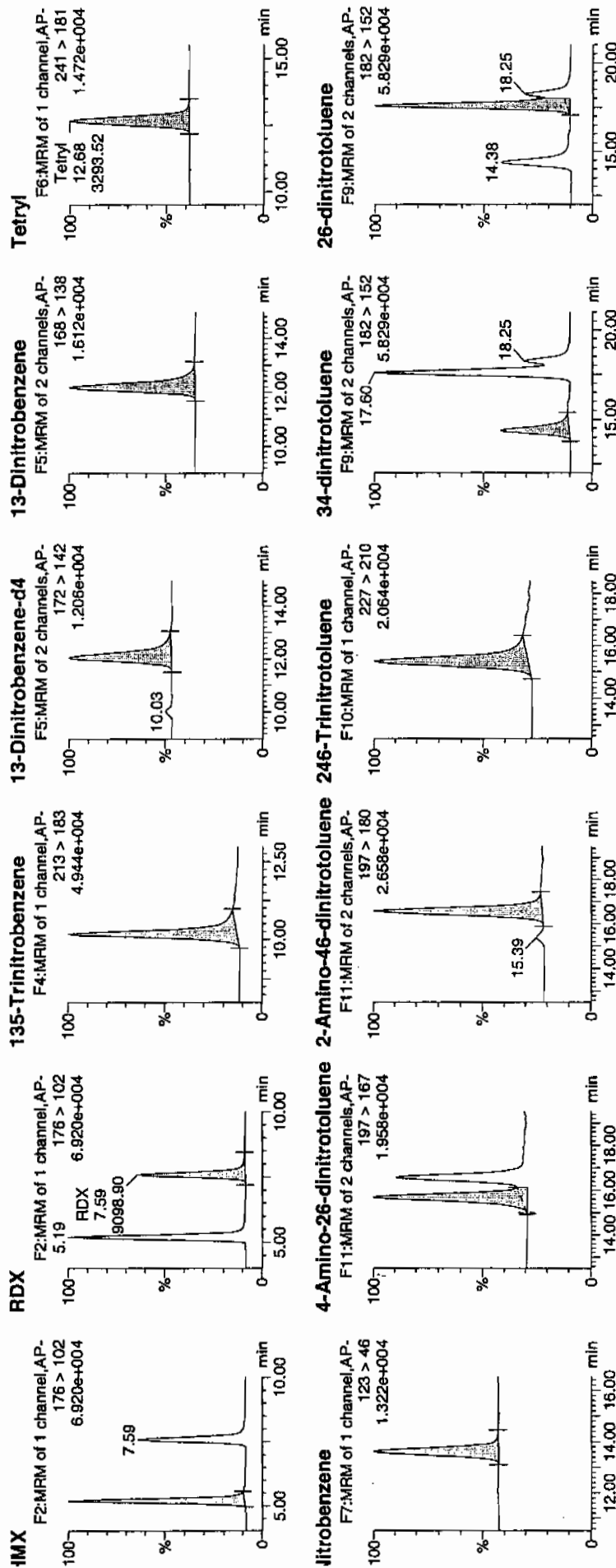
3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

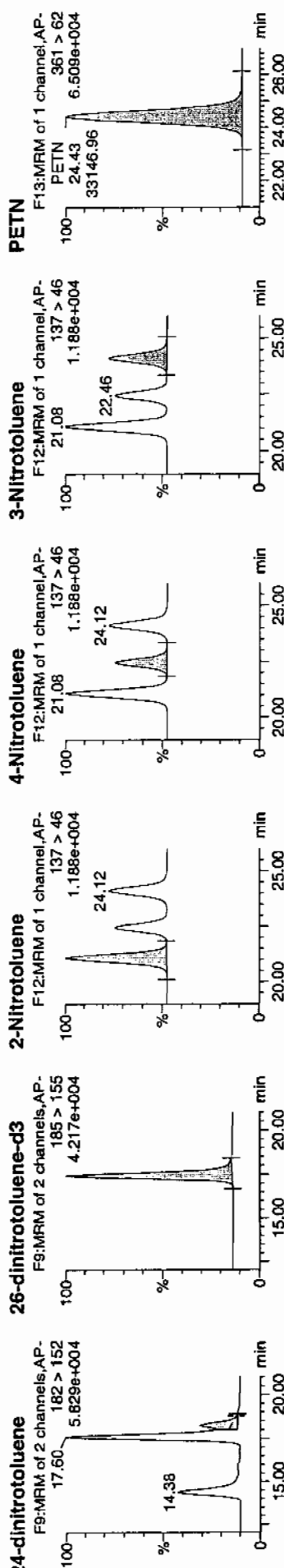
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

WAT
2/17/10



WAT
2/17/10



D	Name	Trace	Rt	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Inj Vol	% Rec	% Dev	SN
NXX100216-07CCV	HMX	176 > 102	5.19	12573.983	2659.764	12573.983	2363.740	bb			612.6259	102.1	2.1	1867.4
NXX100216-07CCV	RDX	176 > 102	7.59	9098.897	2659.764	9098.897	1710.471	bb			659.5367	103.9	9.9	1136.2
NXX100216-07CCV	135-Trinitrobenzene	213 > 183	10.18	12590.188	2659.764	12590.188	2366.787	bb			611.1709	101.9	1.9	720.5
NXX100216-07CCV	13-Dinitrobenzene-d4	172 > 142	12.03	2659.764		2659.764	2659.764	bb			441.4669	88.3	-11.7	384.7
NXX100216-07CCV	13-Dinitrobenzene	168 > 138	12.17	3933.075	2659.764	3933.075	739.365	bb			622.0892	103.7	3.7	572.6
NXX100216-07CCV	Tetryl	241 > 181	12.68	3293.519	2659.764	3293.519	619.137	bb			567.8951	94.6	-5.4	186.1
NXX100216-07CCV	Nitrobenzene	123 > 46	13.63	2640.866	2659.764	2640.866	496.447	bb			578.2667	96.4	-3.6	244.7
NXX100216-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.68	5699.717	14719.028	5699.717	193.617	MM	17-Feb-10	09:24:07	604.6437	100.8	0.8	191.5
NXX100216-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.58	8280.438	14719.028	8280.438	281.283	bb			651.0364	108.5	8.5	208.4
NXX100216-07CCV	246-Trinitrotoluene	227 > 210	15.41	6688.060	14719.028	6688.060	227.191	bb			677.6666	112.9	12.9	176.3
NXX100216-07CCV	34-dinitrotoluene	182 > 152	14.38	8968.860	14719.028	8968.860	304.869	bb			336.2788	112.1	12.1	355.9
NXX100216-07CCV	26-dinitrotoluene	182 > 152	17.60	19848.275	14719.028	19848.275	674.239	MM	17-Feb-10	09:27:00	636.4103	106.1	6.1	997.2
NXX100216-07CCV	24-dinitrotoluene	182 > 152	18.25	4627.791	14719.028	4627.791	157.204	MM	17-Feb-10	09:59:44	637.7191	106.3	6.3	221.0
NXX100216-07CCV	26-dinitrotoluene-d3	185 > 155	17.42	14719.028		14719.028	14719.028	bb			422.7527	84.6	-15.4	873.5
NXX100216-07CCV	2-Nitrotoluene	137 > 46	21.08	2725.003	14719.028	2725.003	92.567	bb			608.2189	101.4	1.4	310.4
NXX100216-07CCV	4-Nitrotoluene	137 > 46	22.46	1362.278	14719.028	1362.278	46.276	bb			603.7228	100.6	0.6	155.4
NXX100216-07CCV	3-Nitrotoluene	137 > 46	24.12	1654.478	14719.028	1654.478	56.202	bb			628.0322	104.7	4.7	174.3
NXX100216-07CCV	PETN	361 > 62	24.43	33146.961	14719.028	33146.961	1125.990	bb			723.9440	120.7	20.7	4875.3

GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 02/17/10
 Time of Injection: 0558
 Standard Number: WXX100216-07CCV
 Data File: EXP0216027a

HMX	102.1
RDX	109.9
135-TNB	101.9
13-DNB	103.7
Tetryl	94.6
Nitrobenzene	96.4
4A-26-DNT	100.8
2A-46-DNT	108.5
246-TNT	112.9
34-DNT(surr)	112.1
26-DNT	106.1
24-DNT	106.3
2-NT	101.4
4-NT	100.6
3-NT	104.7
PETN	120.7

*WAF
2/17/10*

Total 1682.7

Average 105.2

WAF 2/17/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0216029a

Analysis Date: 17-FEB-10 06:57

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	46.171	115	
1,3-Dinitrobenzene-d4	500	512.607	103	
2,4,6-Trinitrotoluene	40	37.982	95	
2,4-Dinitrotoluene	40	44.51	111	
2,6-Dinitrotoluene	40	42.325	106	
2,6-Dinitrotoluene-d3	500	468.417	94	
2-Amino-4,6-dinitrotoluene	40	42.003	105	
3,4-Dinitrotoluene	20	22.85	114	
4-Amino-2,6-dinitrotoluene	40	35.28	88	
HMX	40	35.563	89	
Nitrobenzene	40	35.31	88	
PETN	40	48.188	120	
RDX	40	37.715	94	
Tetryl	40	38.583	96	
m-Dinitrobenzene	40	47.424	119	
m-Nitrotoluene	40	37.561	94	
o-Nitrotoluene	40	37.519	94	
p-Nitrotoluene	40	38.529	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%
Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qid, Time: Wed Feb 17 10:00:06 2010

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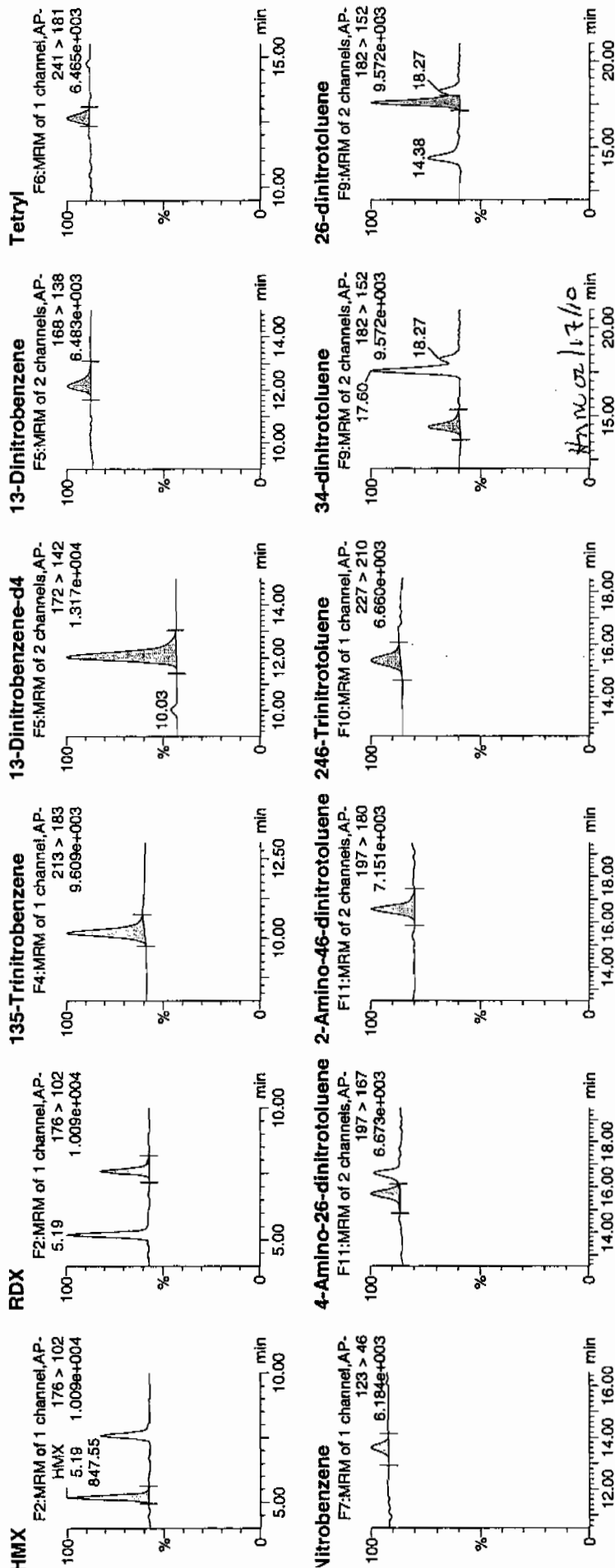
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ID: WXX100216-08CRI

Vial: 1:1,C

WXX
2/17/10

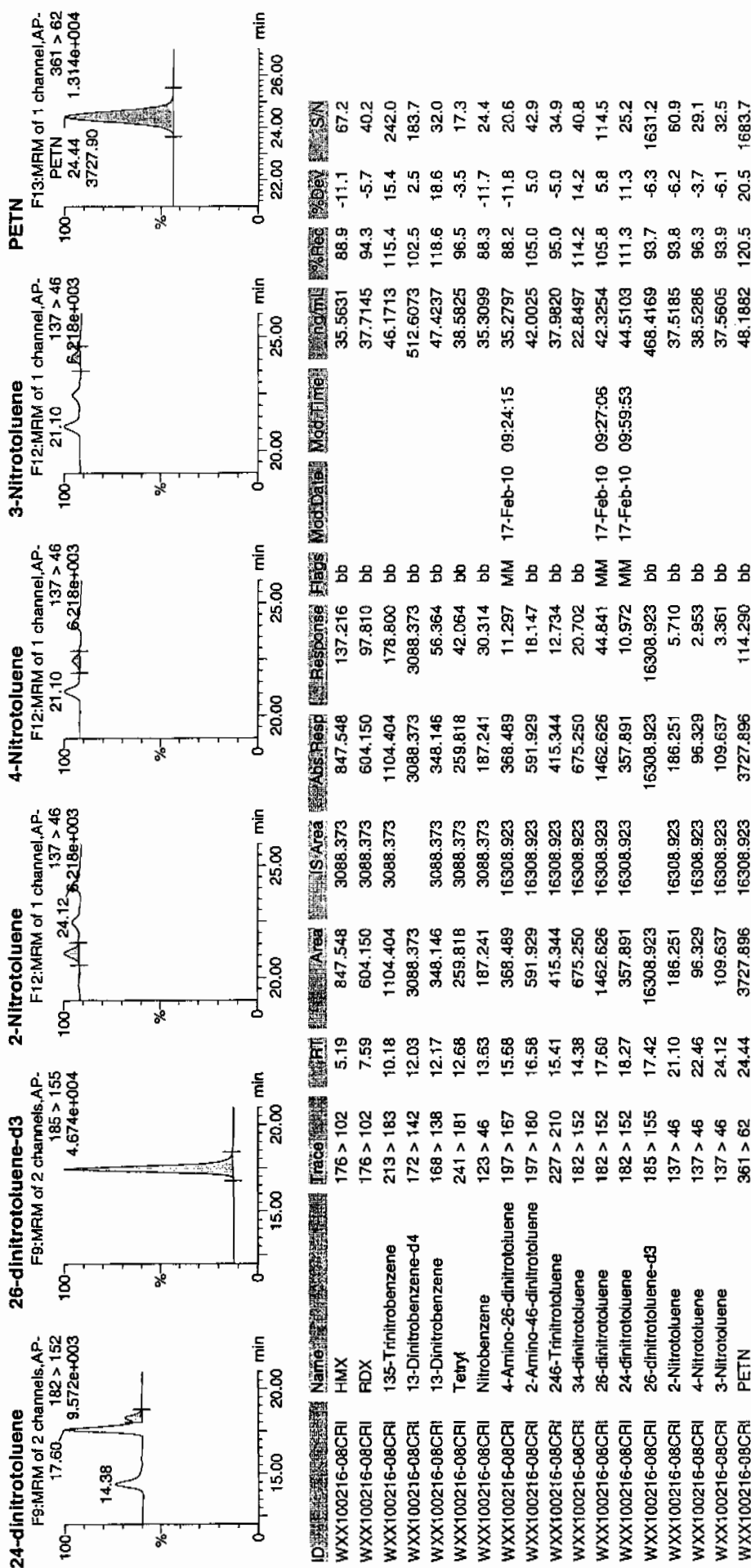


Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Wed Feb 17 10:00:54 2010, Page 58 of 59

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA.qld, Time: Wed Feb 17 10:00:06 2010



GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 02/17/10
 Time of Injection 0657
 Standard Number WXX100216-08CRI
 Data File EXP0216029a

HMX	88.9
RDX	94.3
135-TNB	115.4
13-DNB	118.6
Tetryl	96.5
Nitrobenzene	88.3
4A-26-DNT	88.2
2A-46-DNT	105.0
246-TNT	95.0
34-DNT(surr)	114.2
26-DNT	105.8
24-DNT	111.3
2-NT	93.8
4-NT	96.3
3-NT	93.9
PETN	120.5

*MTT
2/17/10*

Total 1626.0

Average 101.6

HMM-02/17/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0216039a

Analysis Date: 17-FEB-10 11:55

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
o-Nitrotoluene	600	662.654	110	
p-Nitrotoluene	600	651.214	109	
1,3,5-Trinitrobenzene	600	585.479	98	
1,3-Dinitrobenzene-d4	500	387.961	78	*
2,4,6-Trinitrotoluene	600	707.346	118	
2,4-Dinitrotoluene	600	645.209	108	
2,6-Dinitrotoluene	600	613.479	102	
2,6-Dinitrotoluene-d3	500	403.474	81	
2-Amino-4,6-dinitrotoluene	600	628.06	105	
3,4-Dinitrotoluene	300	337.542	113	
4-Amino-2,6-dinitrotoluene	600	652.842	109	
HMX	600	593.956	99	
Nitrobenzene	600	632.339	105	
PETN	600	805.557	134	*
RDX	600	659.382	110	
Tetryl	600	551.825	92	
m-Dinitrobenzene	600	625.313	104	
m-Nitrotoluene	600	627.48	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 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Quantify Sample Report
 3EL Laboratories, LLC / Analyst: Michael A. Penny

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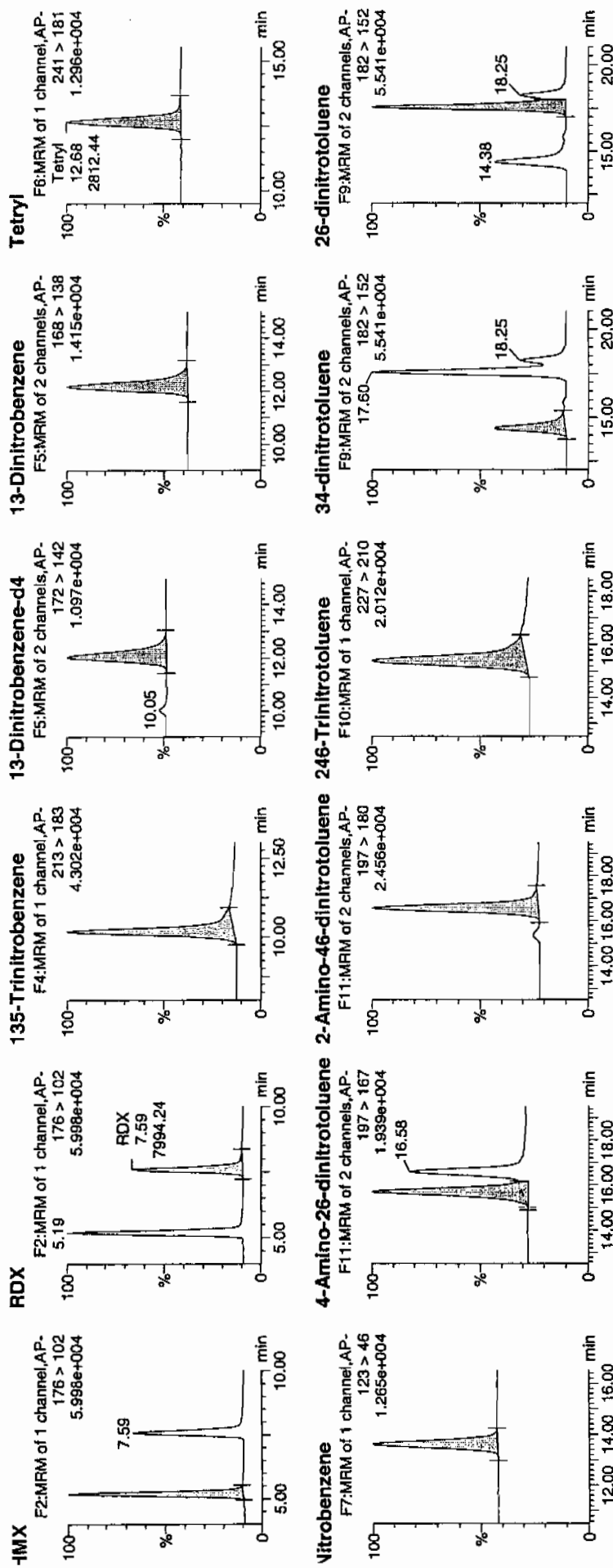
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D: WXX100216-07CCV

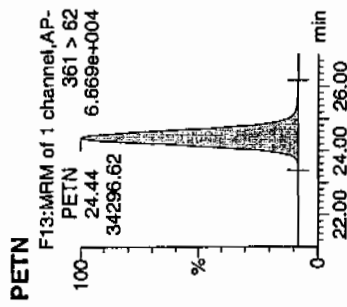
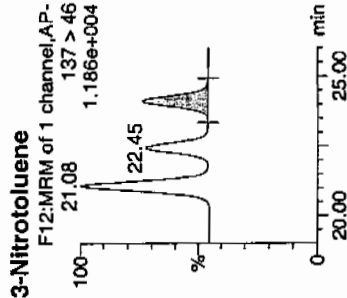
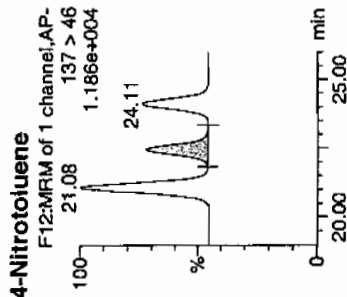
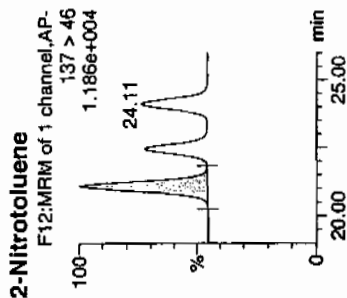
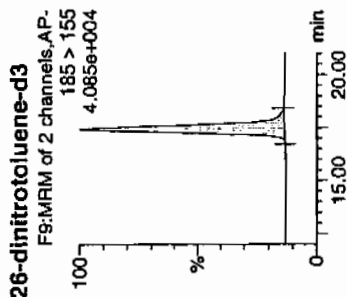
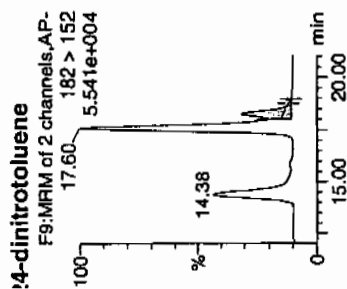
Vial: 1:1,B

10/10/10



10/10/10

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010



Name	Trace	RT	Area	IS Area	Response	Flags	Mod Date	Mod Time	Norm	Dev	SN
NXX100216-07CCV	HMV	176 > 102	5.19	10713.271	2337.401	2291.706	bb	593.9562	99.0	-1.0	1627.0
NXX100216-07CCV	RDX	176 > 102	7.59	7994.240	2337.401	1710.070	bb	559.3823	109.9	9.9	1027.0
NXX100216-07CCV	135-Trinitrobenzene	213 > 183	10.18	10599.146	2337.401	2267.293	bb	585.4788	97.6	-2.4	1024.7
NXX100216-07CCV	13-Dinitrobenzene	172 > 142	12.03	2337.401	2337.401	2337.401	bb	387.9612	77.6	-22.4	133.1
NXX100216-07CCV	13-Dinitrobenzene	168 > 138	12.17	3474.301	2337.401	743.197	bb	625.3134	104.2	4.2	284.5
NXX100216-07CCV	Tetryl	241 > 181	12.68	2812.442	2337.401	601.617	bb	551.8250	92.0	-8.0	285.9
NXX100216-07CCV	Nitrobenzene	123 > 46	13.63	2537.805	2337.401	542.869	bb	632.3390	105.4	5.4	222.2
NXX100216-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.68	5873.420	14047.796	209.051	MM	552.8422	108.8	8.8	505.6
NXX100216-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.58	7623.921	14047.796	271.356	bb	628.0603	104.7	4.7	448.6
NXX100216-07CCV	246-Trinitrotoluene	227 > 210	15.38	6662.623	14047.796	237.141	bb	707.3463	117.9	17.9	323.1
NXX100216-07CCV	34-dinitrotoluene	182 > 152	14.38	8592.021	14047.796	305.814	bb	337.5425	112.5	12.5	393.2
NXX100216-07CCV	26-dinitrotoluene	182 > 152	17.60	18260.570	14047.796	649.944	MM	613.4790	102.2	2.2	1068.9
NXX100216-07CCV	24-dinitrotoluene	182 > 152	18.25	4468.623	14047.796	159.051	MM	645.2089	107.5	7.5	245.7
NXX100216-07CCV	26-dinitrotoluene-d3	185 > 155	17.42	14047.796	14047.796	14047.796	bb	403.4739	80.7	-19.3	1385.8
NXX100216-07CCV	2-Nitrotoluene	137 > 46	21.08	2833.500	14047.796	100.852	bb	662.6544	110.4	10.4	243.8
NXX100216-07CCV	4-Nitrotoluene	137 > 46	22.45	1402.429	14047.796	49.916	bb	651.2139	108.5	8.5	120.3
NXX100216-07CCV	3-Nitrotoluene	137 > 46	24.11	1577.640	14047.796	56.153	bb	627.4798	104.6	4.6	127.1
NXX100216-07CCV	PETN	361 > 62	24.44	34296.621	14047.796	34296.621	bb	805.5575	134.3	34.3	5120.9

GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 02/17/10
 Time of Injection: 1155
 Standard Number: WXX100216-07CCV
 Data File: EXP0216039a

HMX	99.0
RDX	109.9
135-TNB	97.6
13-DNB	104.2
Tetryl	92.0
Nitrobenzene	105.4
4A-26-DNT	108.8
2A-46-DNT	104.7
246-TNT	117.9
34-DNT(surr)	112.5
26-DNT	102.2
24-DNT	107.5
2-NT	110.4
4-NT	108.5
3-NT	104.6
PETN	134.3

Total 1719.5

Average 107.5

*not
2/18/10*

Sum 02-18/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0216041a

Analysis Date: 17-FEB-10 12:54

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
2,4-Dinitrotoluene	40	48.789	122	
2,6-Dinitrotoluene	40	42.876	107	
2,6-Dinitrotoluene-d3	500	442.639	89	
2-Amino-4,6-dinitrotoluene	40	38.248	96	
3,4-Dinitrotoluene	20	20.64	103	
4-Amino-2,6-dinitrotoluene	40	36.085	90	
HMX	40	43.087	108	
Nitrobenzene	40	41.223	103	
PETN	40	49.973	125	
RDX	40	39.872	100	
Tetryl	40	51.62	129	
m-Dinitrobenzene	40	47.407	119	
m-Nitrotoluene	40	45.574	114	
o-Nitrotoluene	40	37.868	95	
p-Nitrotoluene	40	46.625	117	
1,3,5-Trinitrobenzene	40	49.958	125	
1,3-Dinitrobenzene-d4	500	436.567	87	
2,4,6-Trinitrotoluene	40	33.868	85	

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%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Quantify Sample Report
 3EL Laboratories, LLC / Analyst: Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010

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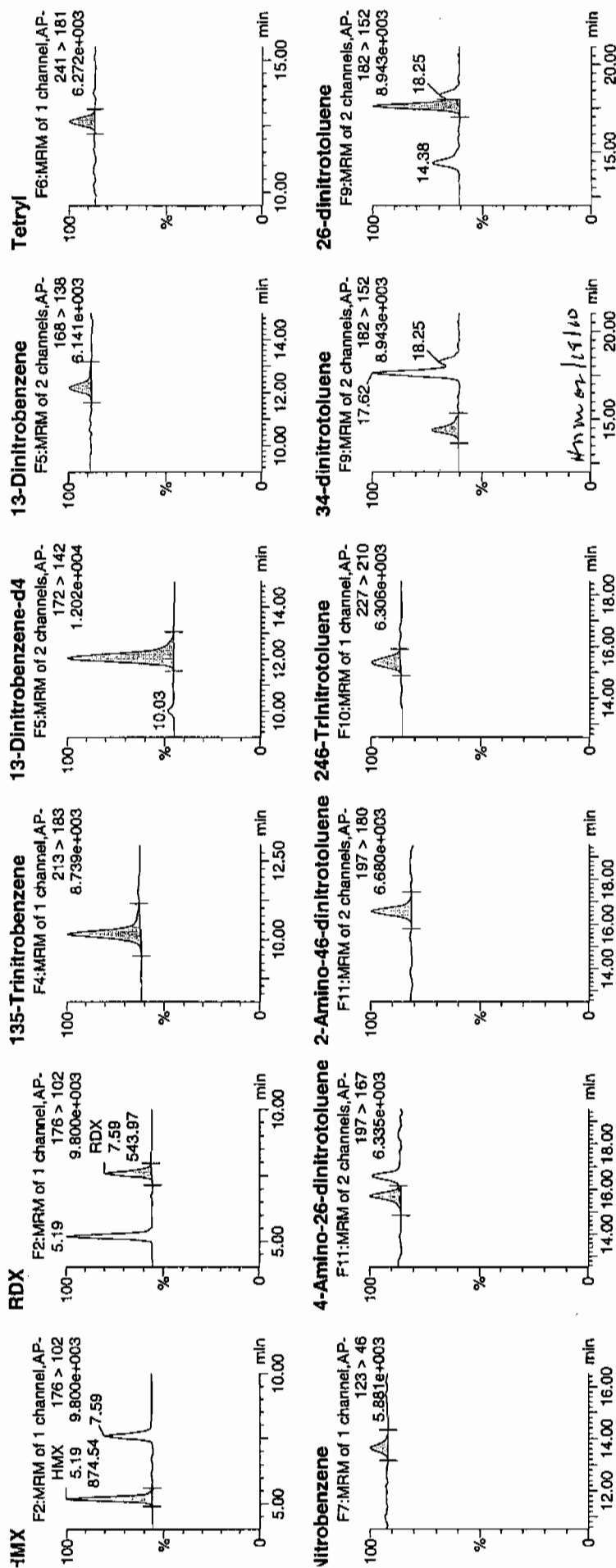
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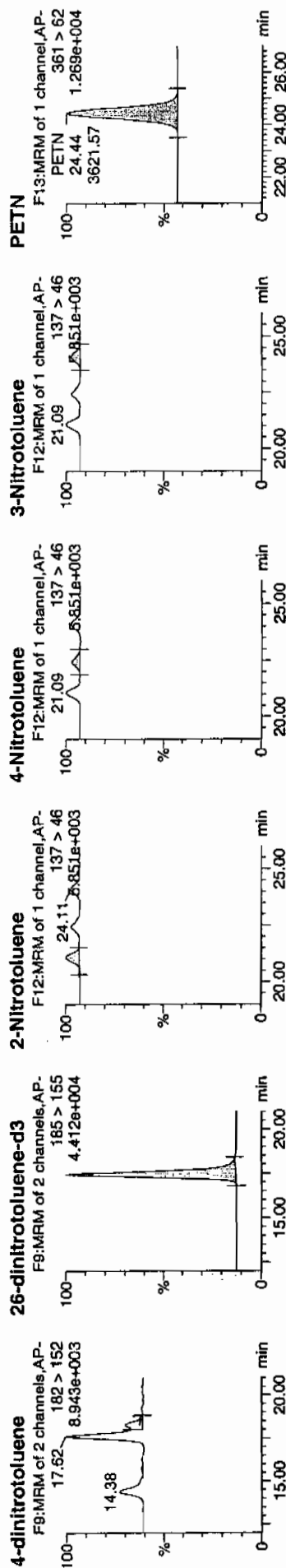
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2/18/10



Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010

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Name	D	Trace	RT	Area	IS Area	Abn Resp	Response	Flags	Mod Date	Mod Time	200/m1	% Rec	%Dev	SN
HMx	WXX100216-08CRI	176 > 102	5.19	874.541	2630.245	874.541	166.247	bb			43.0873	107.7	7.7	143.8
RDX	WXX100216-08CRI	176 > 102	7.59	543.971	2630.245	543.971	103.407	bb			39.8724	99.7	-0.3	77.7
135-Trinitrobenzene	WXX100216-08CRI	213 > 183	10.18	1017.727	2630.245	1017.727	193.466	bb			49.9584	124.9	24.9	42.9
13-Dinitrobenzene-d4	WXX100216-08CRI	172 > 142	12.07	2630.245		2630.245	2630.245	bb			436.5674	87.3	-12.7	269.0
13-Dinitrobenzene	WXX100216-08CRI	168 > 138	12.20	296.395	2630.245	296.395	56.344	bb			47.4065	118.5	18.5	27.0
Tetryl	WXX100216-08CRI	241 > 181	12.68	296.048	2630.245	296.048	56.278	bb			51.6199	129.0	29.0	24.9
Nitrobenzene	WXX100216-08CRI	123 > 46	13.63	186.169	2630.245	186.169	35.390	bb			41.2227	103.1	3.1	18.2
4-Amino-26-dinitrotoluene	WXX100216-08CRI	197 > 167	15.68	356.159	15411.399	356.159	11.555	MM	18-Feb-10 08:44:35		36.0850	90.2	-9.8	23.5
2-Amino-46-dinitrotoluene	WXX100216-08CRI	197 > 180	16.58	509.352	15411.399	509.352	16.525	bb			38.2479	95.6	-4.4	62.5
246-Trinitrotoluene	WXX100216-08CRI	227 > 210	15.38	349.977	15411.399	349.977	11.354	bb			33.8682	84.7	-15.3	59.5
34-dinitrotoluene	WXX100216-08CRI	182 > 152	14.38	576.394	15411.399	576.394	18.700	bb			20.6404	103.2	3.2	14.6
26-dinitrotoluene	WXX100216-08CRI	182 > 152	17.62	1400.108	15411.399	1400.108	45.424	MM	18-Feb-10 08:48:09		42.8759	107.2	7.2	47.1
24-dinitrotoluene	WXX100216-08CRI	182 > 152	18.25	370.708	15411.399	370.708	12.027	MM	18-Feb-10 08:51:46		48.7893	122.0	22.0	10.9
26-dinitrotoluene-d3	WXX100216-08CRI	185 > 155	17.42	15411.399		15411.399	15411.399	bb			442.6386	88.5	-11.5	1346.2
2-Nitrotoluene	WXX100216-08CRI	137 > 46	21.09	177.640	15411.399	177.640	5.763	bb			37.8679	94.7	-5.3	32.4
4-Nitrotoluene	WXX100216-08CRI	137 > 46	22.44	110.157	15411.399	110.157	3.574	bb			46.6252	116.6	16.6	18.9
3-Nitrotoluene	WXX100216-08CRI	137 > 46	24.11	125.706	15411.399	125.706	4.078	bb			45.5737	113.9	13.9	20.0
PETN	WXX100216-08CRI	361 > 62	24.44	3621.569	15411.399	3621.569	117.496	bb			49.9729	124.9	24.9	470.4

GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 02/17/10
 Time of Injection 1254
 Standard Number WXX100216-08CRI
 Data File EXP0216041a

HMX	107.7
RDX	99.7
135-TNB	124.9
13-DNB	118.5
Tetryl	129.0
Nitrobenzene	103.1
4A-26-DNT	90.2
2A-46-DNT	95.6
246-TNT	84.7
34-DNT(surr)	103.2
26-DNT	107.2
24-DNT	122.0
2-NT	94.7
4-NT	116.6
3-NT	113.9
PETN	124.9

Handwritten: 1077
2/18/10

Total 1735.9

Average 108.5

Handwritten: H m 02/18/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0216052a

Analysis Date: 17-FEB-10 18:20

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
m-Dinitrobenzene	600	614.714	102	
m-Nitrotoluene	600	522.1	87	
o-Nitrotoluene	600	521.805	87	
p-Nitrotoluene	600	528.568	88	
1,3,5-Trinitrobenzene	600	586.393	98	
1,3-Dinitrobenzene-d4	500	469.603	94	
2,4,6-Trinitrotoluene	600	667.732	111	
2,4-Dinitrotoluene	600	640.278	107	
2,6-Dinitrotoluene	600	617.89	103	
2,6-Dinitrotoluene-d3	500	472.936	95	
2-Amino-4,6-dinitrotoluene	600	700.294	117	
3,4-Dinitrotoluene	300	322.55	108	
4-Amino-2,6-dinitrotoluene	600	558.036	93	
HMX	600	526.292	88	
Nitrobenzene	600	561.562	94	
PETN	600	685.593	114	
RDX	600	615.154	103	
Tetryl	600	581.072	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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216052a

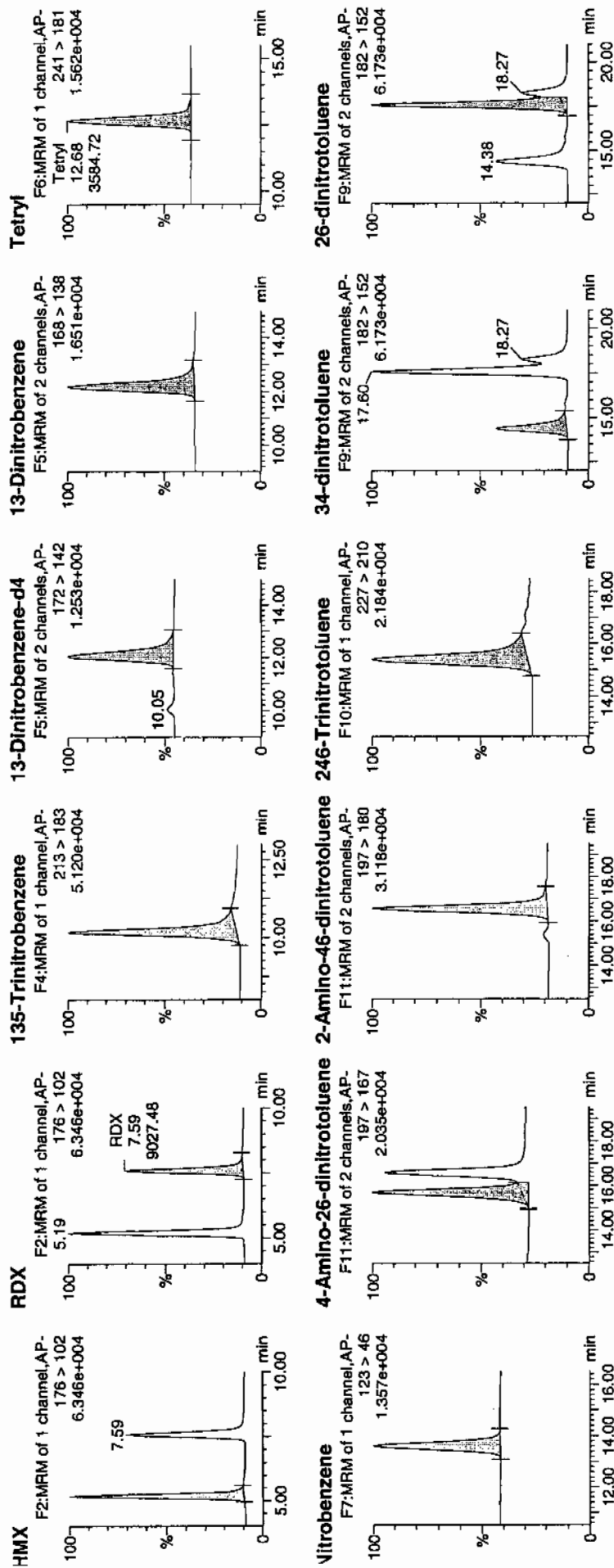
Date: 17-Feb-2010

Time: 18:20:28

ID: WXX100216-07CCV

Val: 1:1,B

MM 2/18/10

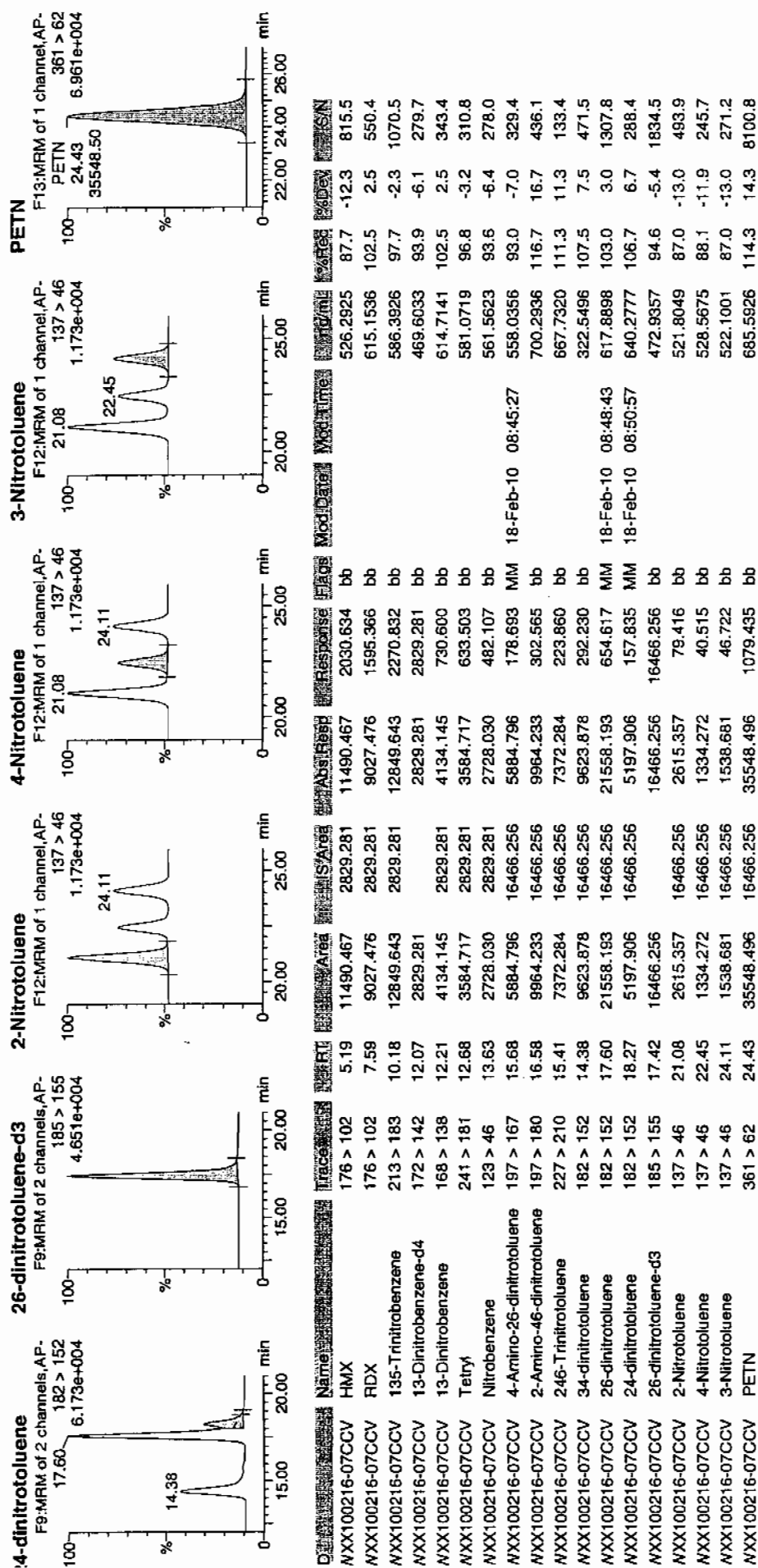


MM 2/18/10

Printed: Thu Feb 18 08:53:51 2010, Page 46 of 103

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010



GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 02/17/10
 Time of Injection: 1820
 Standard Number: WXX100216-07CCV
 Data File: EXP0216052a

HMX	87.7
RDX	102.5
135-TNB	97.7
13-DNB	102.5
Tetryl	96.8
Nitrobenzene	93.6
4A-26-DNT	93.0
2A-46-DNT	116.7
246-TNT	111.3
34-DNT(surr)	107.5
26-DNT	103.0
24-DNT	106.7
2-NT	87.0
4-NT	88.1
3-NT	87.0
PETN	114.3

WAT
2/18/10

Total 1595.4

Average 99.7

WAT
2/18/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0216054a

Analysis Date: 17-FEB-10 19:19

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
m-Dinitrobenzene	40	46.393	116	
m-Nitrotoluene	40	35.588	89	
o-Nitrotoluene	40	43.751	109	
p-Nitrotoluene	40	34.462	86	
1,3,5-Trinitrobenzene	40	49.067	123	
1,3-Dinitrobenzene-d4	500	526.622	105	
2,4,6-Trinitrotoluene	40	45.215	113	
2,4-Dinitrotoluene	40	38.588	96	
2,6-Dinitrotoluene	40	43.371	108	
2,6-Dinitrotoluene-d3	500	482.623	97	
2-Amino-4,6-dinitrotoluene	40	45.806	115	
3,4-Dinitrotoluene	20	22.123	111	
4-Amino-2,6-dinitrotoluene	40	49.639	124	
HMX	40	43.201	108	
Nitrobenzene	40	41.456	104	
PETN	40	47.927	120	
RDX	40	45.793	114	
Tetryl	40	38.525	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%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Printed: Thu Feb 18 08:53:51 2010, Page 49 of 103

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010

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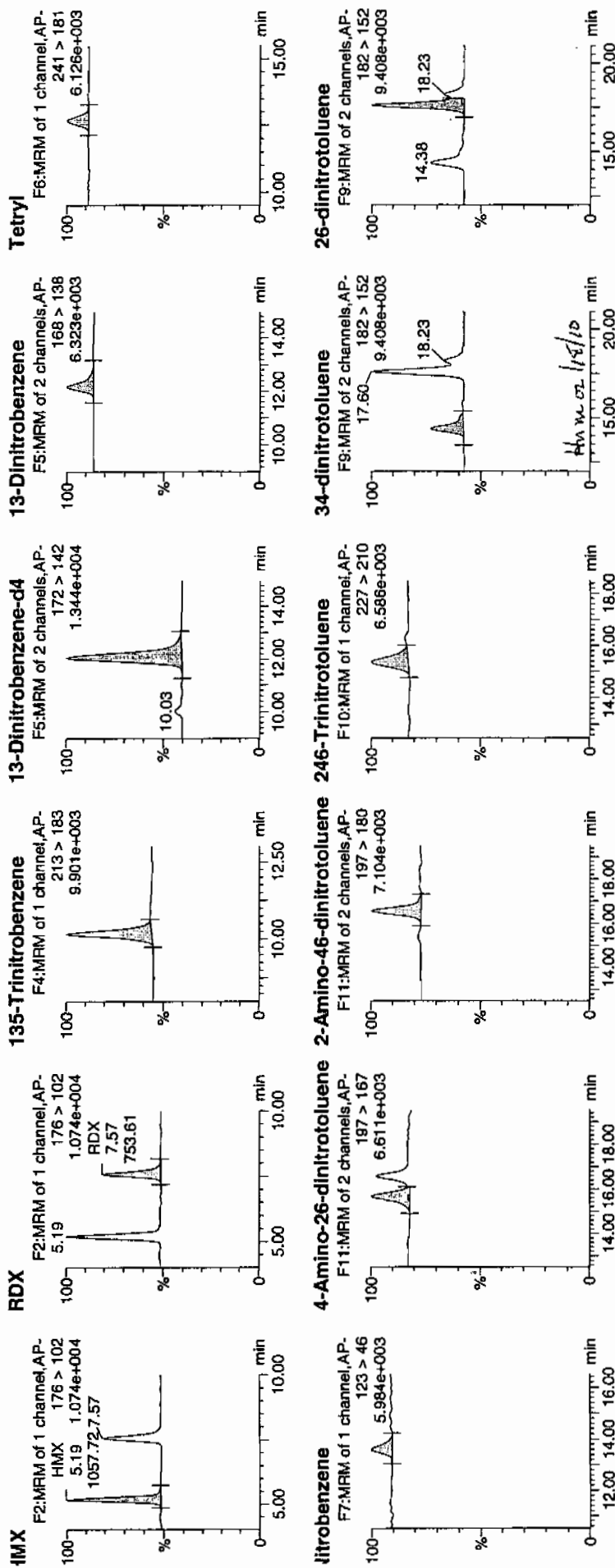
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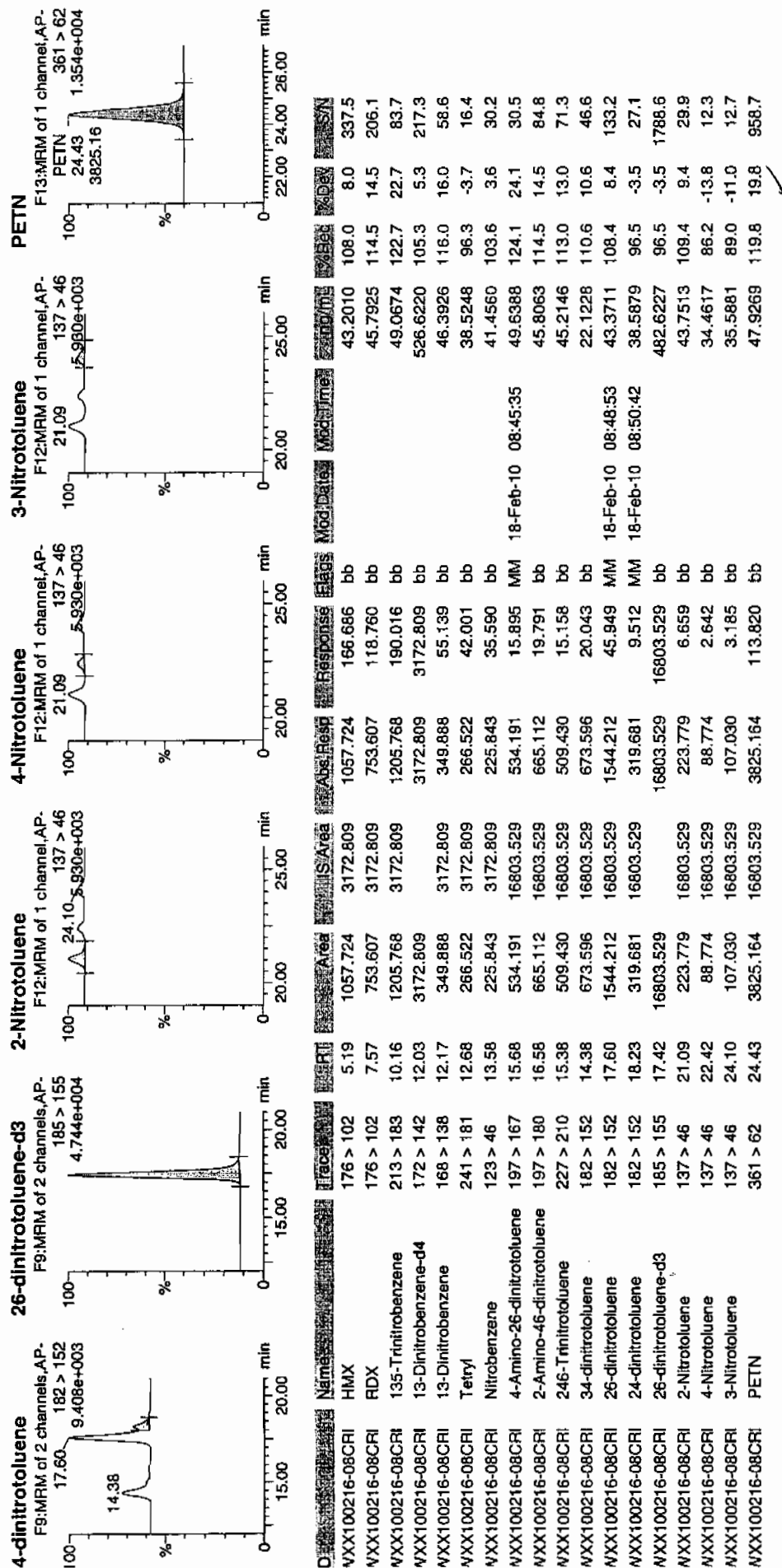
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File: 1:1,C

WAP
2/18/10





GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 02/17/10
 Time of Injection 1919
 Standard Number WXX100216-08CRI
 Data File EXP0216054a

HMX	108.0
RDX	114.5
135-TNB	122.7
13-DNB	116.0
Tetryl	96.3
Nitrobenzene	103.6
4A-26-DNT	124.1
2A-46-DNT	114.5
246-TNT	113.0
34-DNT(surr)	110.6
26-DNT	108.4
24-DNT	96.5
2-NT	109.4
4-NT	86.2
3-NT	89.0
PETN	119.8

*WTP
4/8/10*

Total 1732.6

Average 108.3

WTP 02/18/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0216065a

Analysis Date: 18-FEB-10 00:45

LCMSMS ID: 903

Column ID Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	589.98	98	
1,3-Dinitrobenzene-d4	500	503.448	101	
2,4,6-Trinitrotoluene	600	674.628	112	
2,4-Dinitrotoluene	600	646.389	108	
2,6-Dinitrotoluene	600	642.938	107	
2,6-Dinitrotoluene-d3	500	484.848	97	
2-Amino-4,6-dinitrotoluene	600	685.308	114	
3,4-Dinitrotoluene	300	332.023	111	
4-Amino-2,6-dinitrotoluene	600	595.679	99	
HMX	600	685.513	114	
Nitrobenzene	600	619.311	103	
PETN	600	592.614	99	
RDX	600	694.615	116	
Tetryl	600	564.648	94	
m-Dinitrobenzene	600	607.21	101	
m-Nitrotoluene	600	591.803	99	
o-Nitrotoluene	600	604.859	101	
p-Nitrotoluene	600	605.824	101	

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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010

Sample Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216065a

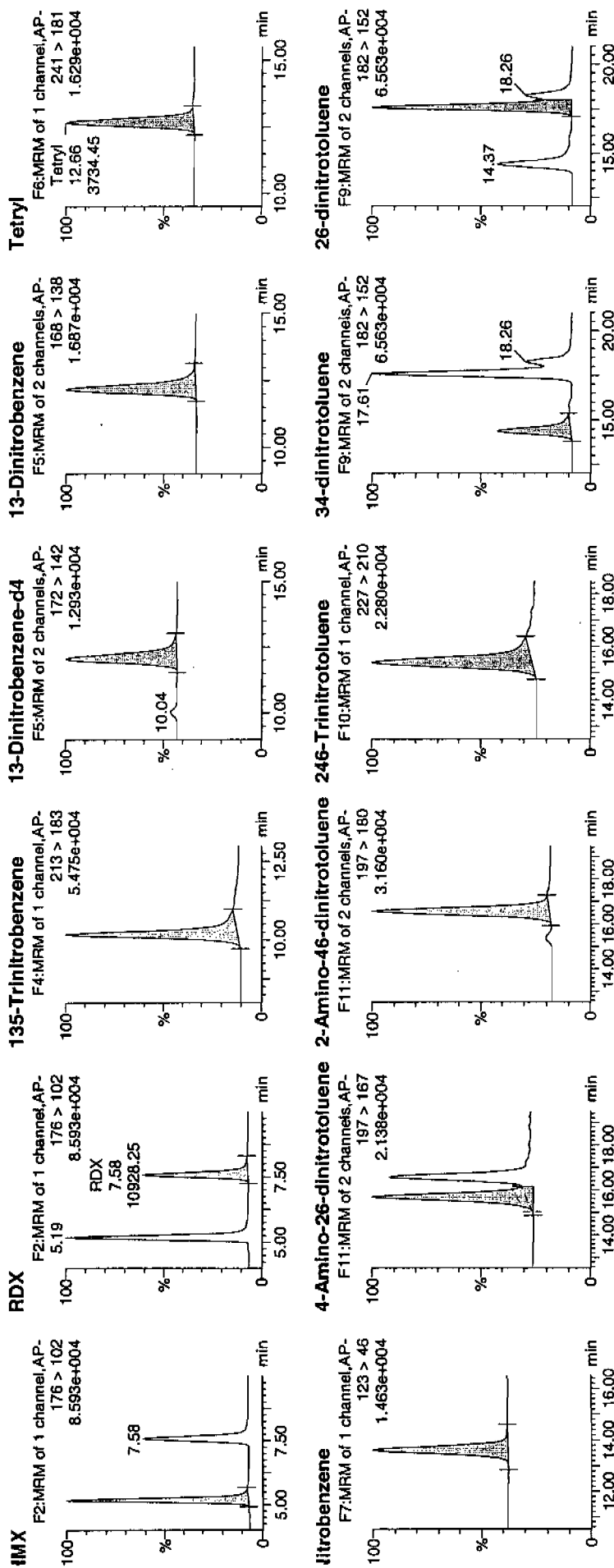
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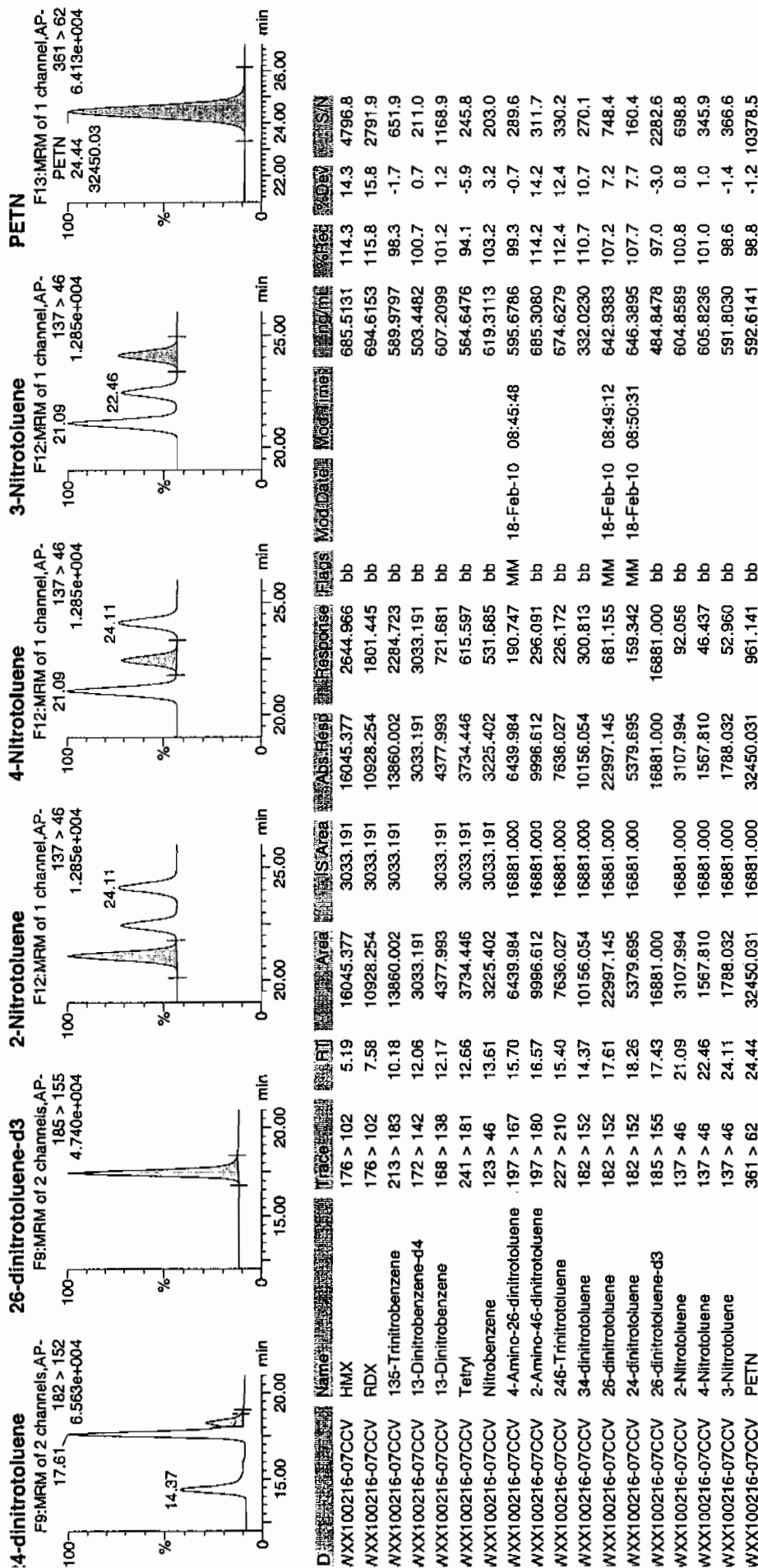
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Handwritten: 2/18/10

Quantity Sample Report
IEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp_PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010



GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 02/18/10
 Time of Injection: 0045
 Standard Number: WXX100216-07CCV
 Data File: EXP0216065a

HMX	114.3
RDX	115.8
135-TNB	98.3
13-DNB	101.2
Tetryl	94.1
Nitrobenzene	103.2
4A-26-DNT	99.3
2A-46-DNT	114.2
246-TNT	112.4
34-DNT(surr)	110.7
26-DNT	107.2
24-DNT	107.7
2-NT	100.8
4-NT	101.0
3-NT	98.6
PETN	98.8

not
2/18/10

Total 1677.6

Average 104.9

HMM on 2/18/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0216067a

Analysis Date: 18-FEB-10 01:44

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	50.874	127	
1,3-Dinitrobenzene-d4	500	574.253	115	
2,4,6-Trinitrotoluene	40	44.52	111	
2,4-Dinitrotoluene	40	35.748	89	
2,6-Dinitrotoluene	40	41.094	103	
2,6-Dinitrotoluene-d3	500	534.755	107	
2-Amino-4,6-dinitrotoluene	40	37.567	94	
3,4-Dinitrotoluene	20	20.903	105	
4-Amino-2,6-dinitrotoluene	40	37.482	94	
HMX	40	31.977	80	
Nitrobenzene	40	28.466	71	
PETN	40	44.163	110	
RDX	40	37.7	94	
Tetryl	40	40.159	100	
m-Dinitrobenzene	40	38.48	96	
m-Nitrotoluene	40	33.219	83	
o-Nitrotoluene	40	44.575	111	
p-Nitrotoluene	40	37.562	94	

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%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010

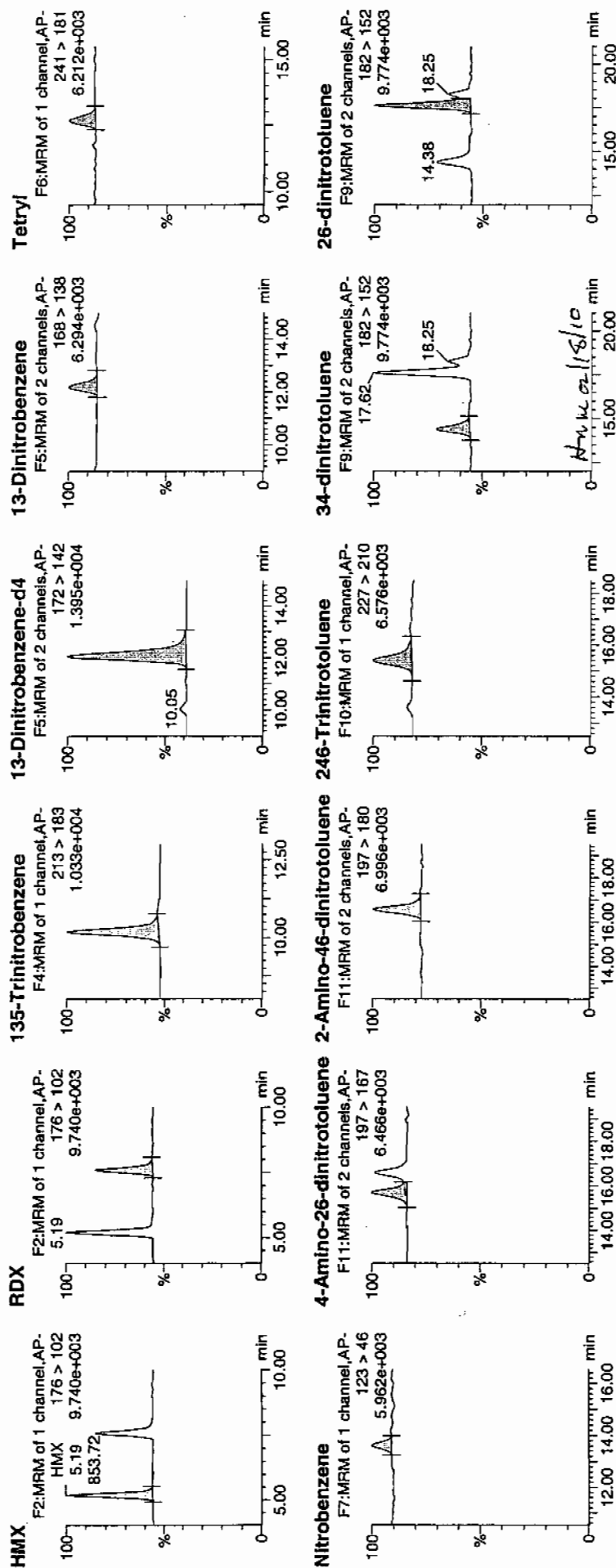
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Date: 18-Feb-2010

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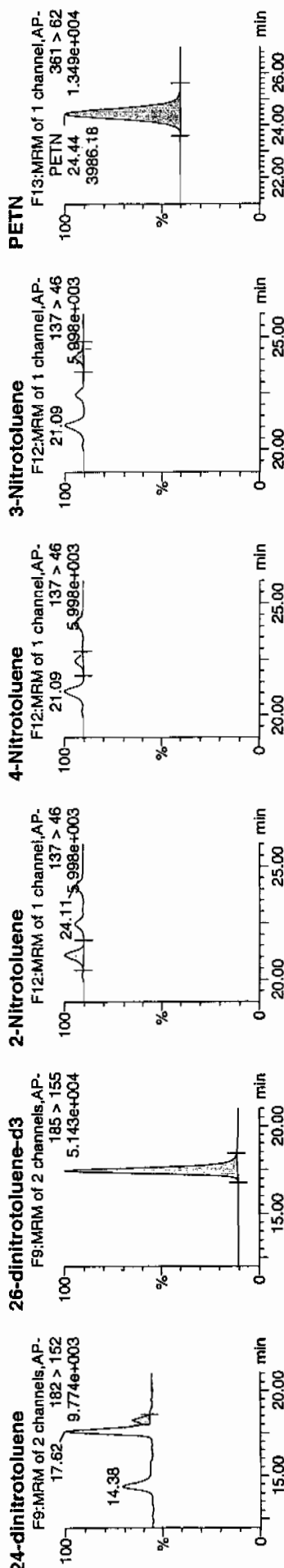
ID: WXX100216-08CRI

Vial: 1:1,C



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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010



ID	Name	Trace	RT	Area	IS Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Intg/mL	%Rec	%Dev	SN
WXX100216-08CRI	HMX	176 > 102	5.19	853.724	3459.779	853.724	123.378	bb	31.9768	79.9	-20.1	197.3		
WXX100216-08CRI	RDX	176 > 102	7.59	676.552	3459.779	676.552	97.774	bb	37.7004	94.3	-5.7	132.5		
WXX100216-08CRI	135-Trinitrobenzene	213 > 183	10.18	1363.239	3459.779	1363.239	197.012	bb	50.8741	127.2	27.2	225.1		
WXX100216-08CRI	13-Dinitrobenzene-d4	172 > 142	12.07	3459.779		3459.779	3459.779	bb	574.2532	114.9	14.9	215.0		
WXX100216-08CRI	13-Dinitrobenzene	168 > 138	12.17	316.458	3459.779	316.458	45.734	bb	38.4797	96.2	-3.8	49.6		
WXX100216-08CRI	Tetryl	241 > 181	12.68	302.953	3459.779	302.953	43.782	bb	40.1585	100.4	0.4	45.9		
WXX100216-08CRI	Nitrobenzene	123 > 46	13.58	169.101	3459.779	169.101	24.438	bb	28.4658	71.2	-28.8	16.7		
WXX100216-08CRI	4-Amino-26-dinitrotoluene	197 > 167	15.68	446.929	18618.615	446.929	12.002	MM	37.4815	93.7	-6.3	9.9		
WXX100216-08CRI	2-Amino-46-dinitrotoluene	197 > 180	16.58	604.400	18618.615	604.400	16.231	bb	37.5671	93.9	-6.1	115.4		
WXX100216-08CRI	246-Trinitrotoluene	227 > 210	15.38	555.791	18618.615	555.791	14.926	bb	44.5204	111.3	11.3	29.1		
WXX100216-08CRI	34-dinitrotoluene	182 > 152	14.38	705.192	18618.615	705.192	18.938	bb	20.9026	104.5	4.5	30.4		
WXX100216-08CRI	26-dinitrotoluene	182 > 152	17.62	1621.167	18618.615	1621.167	43.536	MM	41.0936	102.7	2.7	86.4		
WXX100216-08CRI	24-dinitrotoluene	182 > 152	18.25	328.140	18618.615	328.140	8.812	MM	35.7476	89.4	-10.6	18.8		
WXX100216-08CRI	26-dinitrotoluene-d3	185 > 155	17.44	18618.615		18618.615	18618.615	bb	534.7547	107.0	7.0	729.5		
WXX100216-08CRI	2-Nitrotoluene	137 > 46	21.09	252.621	18618.615	252.621	6.784	bb	44.5753	111.4	11.4	39.4		
WXX100216-08CRI	4-Nitrotoluene	137 > 46	22.46	107.213	18618.615	107.213	2.879	bb	37.5622	93.9	-6.1	17.2		
WXX100216-08CRI	3-Nitrotoluene	137 > 46	24.11	110.695	18618.615	110.695	2.973	MM	33.2186	83.0	-17.0	17.0		
WXX100216-08CRI	PETN	361 > 82	24.44	3986.175	18618.615	3986.175	107.048	bb	44.1631	110.4	10.4	1704.1		

GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 02/18/10
 Time of Injection 0144
 Standard Number WXX100216-08CRI
 Data File EXP0216067a

HMX	79.9
RDX	94.3
135-TNB	127.2
13-DNB	96.2
Tetryl	100.4
Nitrobenzene	71.2
4A-26-DNT	93.7
2A-46-DNT	93.9
246-TNT	111.3
34-DNT(surr)	104.5
26-DNT	102.7
24-DNT	89.4
2-NT	111.4
4-NT	93.9
3-NT	83.0
PETN	110.4

mtf
2/18/10

Total 1563.4

Average 97.7

Hym on 1/18/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0216078a

Analysis Date: 18-FEB-10 07:10

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u QDS(20)

Compound	True	Found	Recovery	Q
2-Amino-4,6-dinitrotoluene	600	615.257	103	
3,4-Dinitrotoluene	300	357.759	119	
4-Amino-2,6-dinitrotoluene	600	549.787	92	
HMX	600	519.274	87	
Nitrobenzene	600	504.757	84	
PETN	600	715.342	119	
RDX	600	628.868	105	
Tetryl	600	541.018	90	
m-Dinitrobenzene	600	590.189	98	
m-Nitrotoluene	600	537.034	90	
o-Nitrotoluene	600	576.847	96	
p-Nitrotoluene	600	589.034	98	
1,3,5-Trinitrobenzene	600	520.611	87	
1,3-Dinitrobenzene-d4	500	542.41	108	
2,4,6-Trinitrotoluene	600	648.856	108	
2,4-Dinitrotoluene	600	647.037	108	
2,6-Dinitrotoluene	600	629.886	105	
2,6-Dinitrotoluene-d3	500	468.716	94	

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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Printed: Thu Feb 18 08:53:51 2010, Page 97 of 103

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010

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Date: 18-Feb-2010

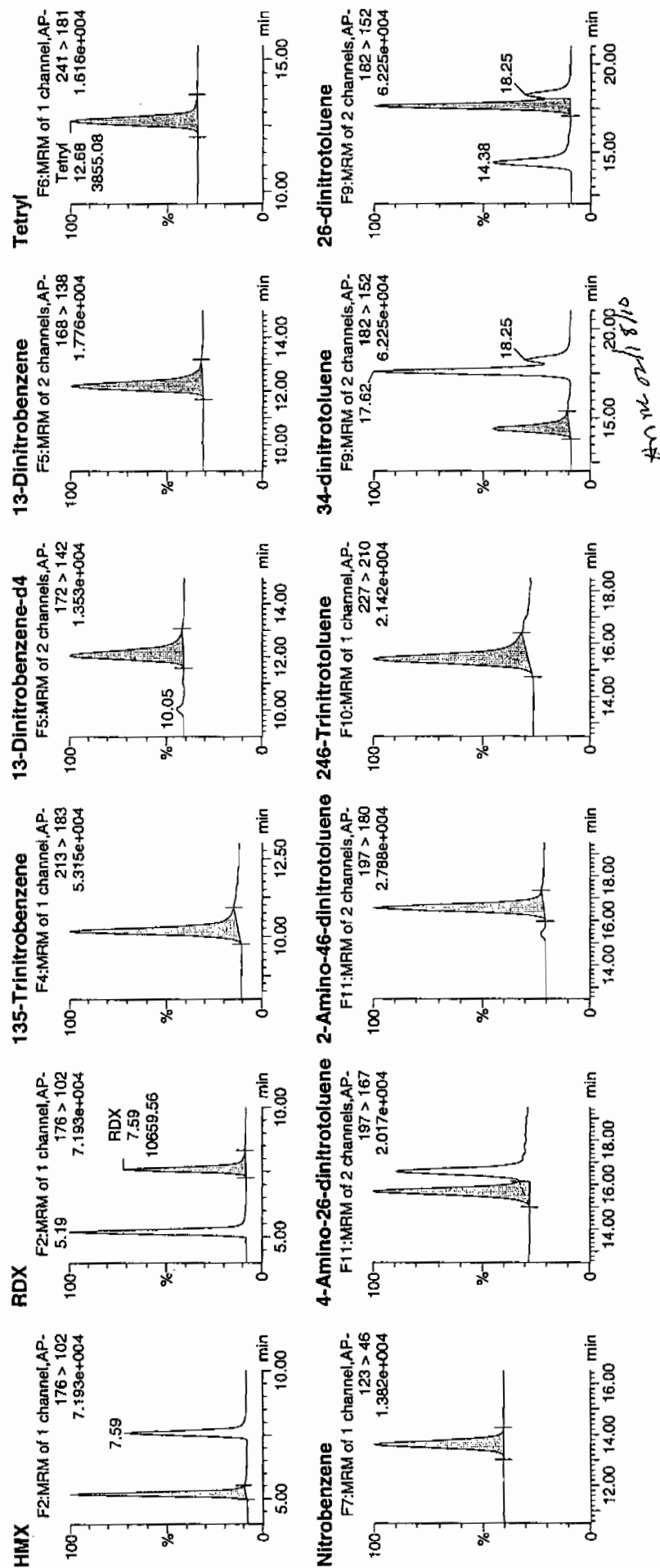
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ID: WXX100216-07CCV

Vial: 1:1, B

Handwritten: 1/18/10

Page 341 of 1698

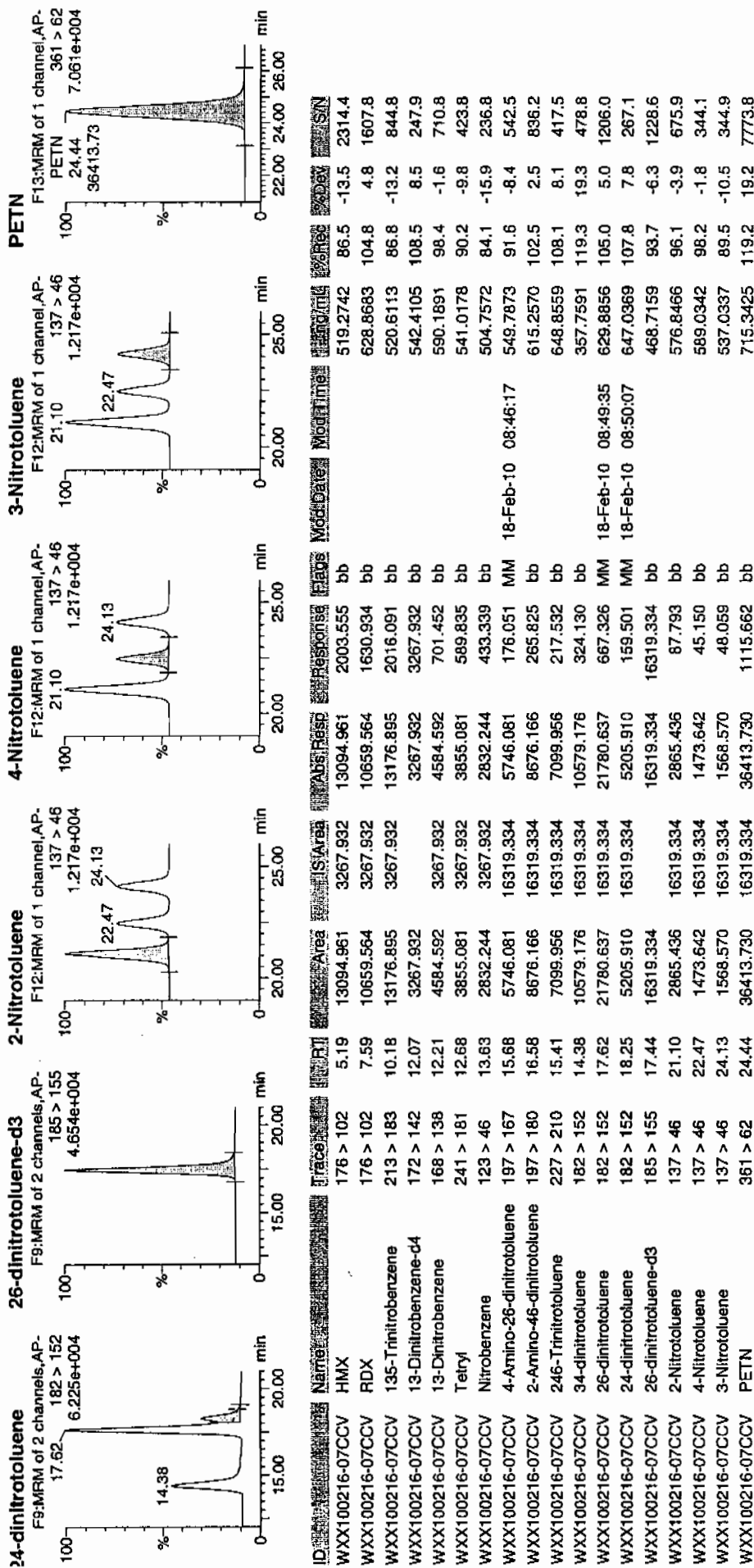


Quantify Sample Report

SEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Thu Feb 18 08:53:51 2010, Page 98 of 103

Dataset: C:\MASSLYNX\New_Exp_PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010



GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 02/18/10
 Time of Injection: 0710
 Standard Number: WXX100216-07CCV
 Data File: EXP0216078a

HMX	86.5
RDX	104.8
135-TNB	86.8
13-DNB	98.4
Tetryl	90.2
Nitrobenzene	84.1
4A-26-DNT	91.6
2A-46-DNT	102.5
246-TNT	108.1
34-DNT(surr)	119.3
26-DNT	105.0
24-DNT	107.8
2-NT	96.1
4-NT	98.2
3-NT	89.5
PETN	119.2

*WXX
2/18/10*

Total 1588.1

Average 99.3

done 02/18/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0216080a

Analysis Date: 18-FEB-10 08:10

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
2-Amino-4,6-dinitrotoluene	40	41.233	103	
3,4-Dinitrotoluene	20	22.678	113	
4-Amino-2,6-dinitrotoluene	40	37.418	94	
HMX	40	43.826	110	
Nitrobenzene	40	37.223	93	
PETN	40	54.239	136	*
RDX	40	42.015	105	
Tetryl	40	39.964	100	
m-Dinitrobenzene	40	45.818	115	
m-Nitrotoluene	40	40.759	102	
o-Nitrotoluene	40	45.987	115	
p-Nitrotoluene	40	51.62	129	
1,3,5-Trinitrobenzene	40	48.403	121	
1,3-Dinitrobenzene-d4	500	494.727	99	
2,4,6-Trinitrotoluene	40	41.136	103	
2,4-Dinitrotoluene	40	38.771	97	
2,6-Dinitrotoluene	40	44.76	112	
2,6-Dinitrotoluene-d3	500	481.497	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%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Quantify Sample Report 3EL Laboratories, LLC / Analyst: Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010

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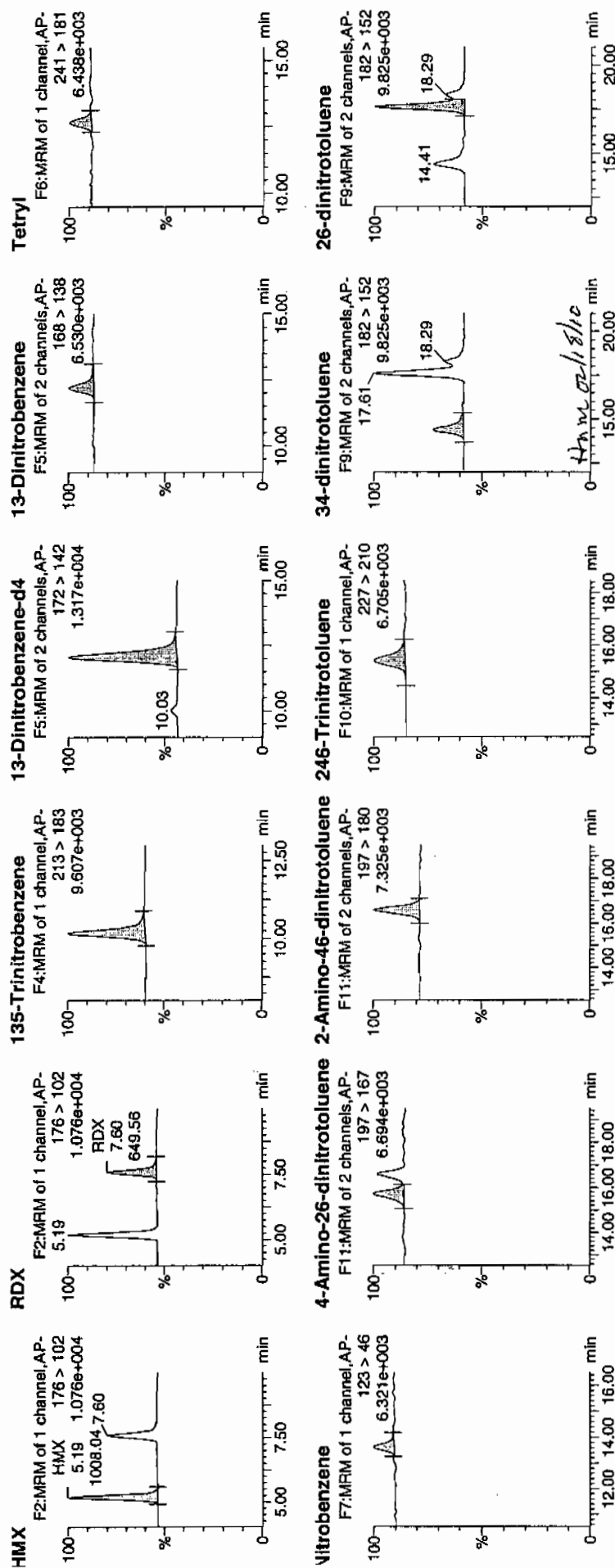
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Time: 08:10:12

ID: WXX100216-08CRI

Vial: 1:1,C

MM
1/18/10

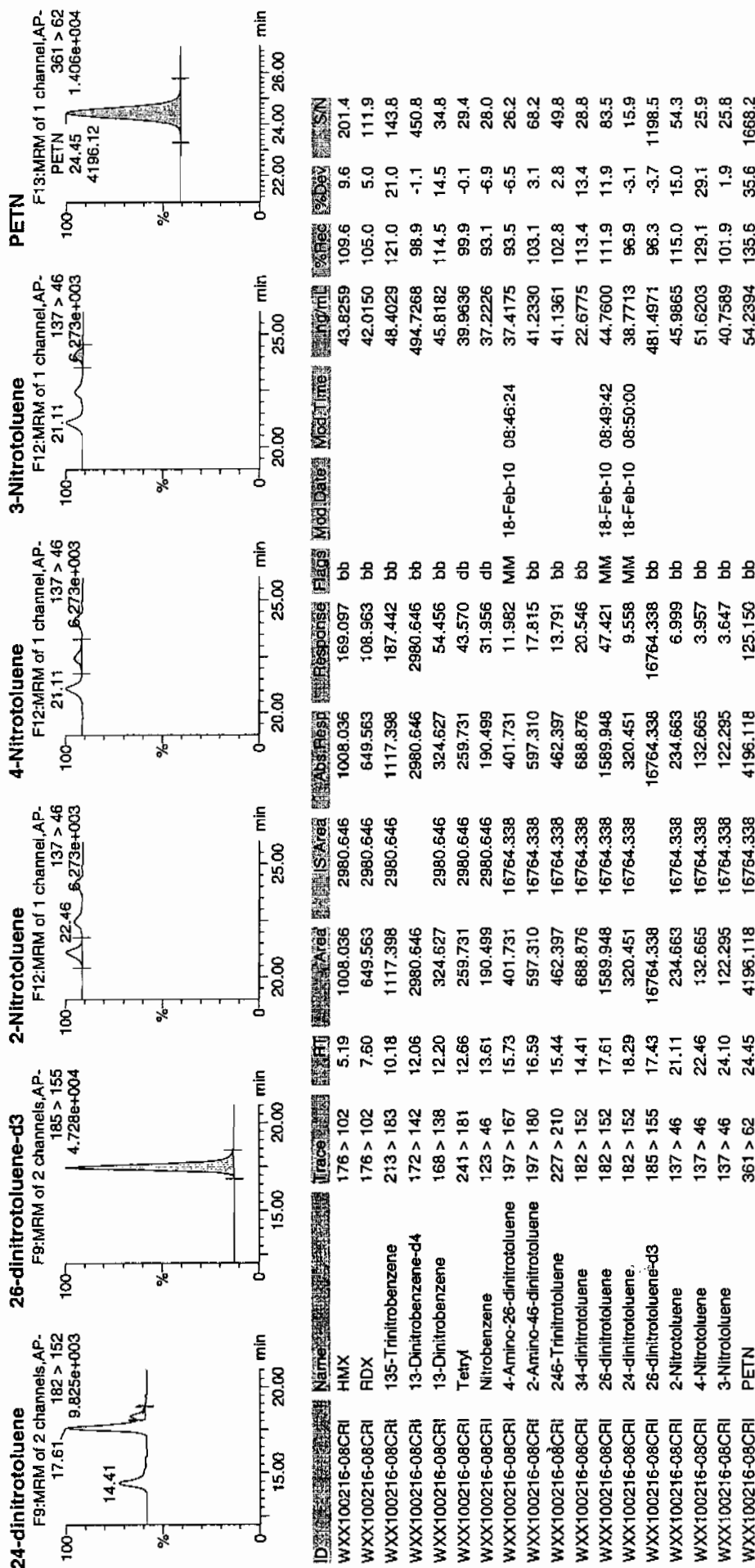


Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA1.qld, Time: Thu Feb 18 08:53:07 2010

Printed: Thu Feb 18 08:53:51 2010, Page 102 of 103



GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 02/18/10
 Time of Injection 0810
 Standard Number WXX100216-08CRI
 Data File EXP0216080a

HMX	109.6
RDX	105.0
135-TNB	121.0
13-DNB	114.5
Tetryl	99.9
Nitrobenzene	93.1
4A-26-DNT	93.5
2A-46-DNT	103.1
246-TNT	102.8
34-DNT(surr)	113.4
26-DNT	111.9
24-DNT	96.9
2-NT	115.0
4-NT	129.1
3-NT	101.9
PETN	135.6

*MAF
2/18/10*

Total 1746.3

Average 109.1

Home on 2/18/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0216089a

Analysis Date: 18-FEB-10 12:36

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
Nitrobenzene	600	570.735	95	
PETN	600	765.325	128	*
RDX	600	762.426	127	*
Tetryl	600	584.833	97	
m-Dinitrobenzene	600	636.337	106	
m-Nitrotoluene	600	573.92	96	
o-Nitrotoluene	600	648.456	108	
p-Nitrotoluene	600	589.135	98	
1,3,5-Trinitrobenzene	600	575.828	96	
1,3-Dinitrobenzene-d4	500	495.598	99	
2,4,6-Trinitrotoluene	600	691.665	115	
2,4-Dinitrotoluene	600	659.229	110	
2,6-Dinitrotoluene	600	644.249	107	
2,6-Dinitrotoluene-d3	500	461.757	92	
2-Amino-4,6-dinitrotoluene	600	655.311	109	
3,4-Dinitrotoluene	300	351.733	117	
4-Amino-2,6-dinitrotoluene	600	586.497	98	
HMX	600	695.878	116	

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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216089a

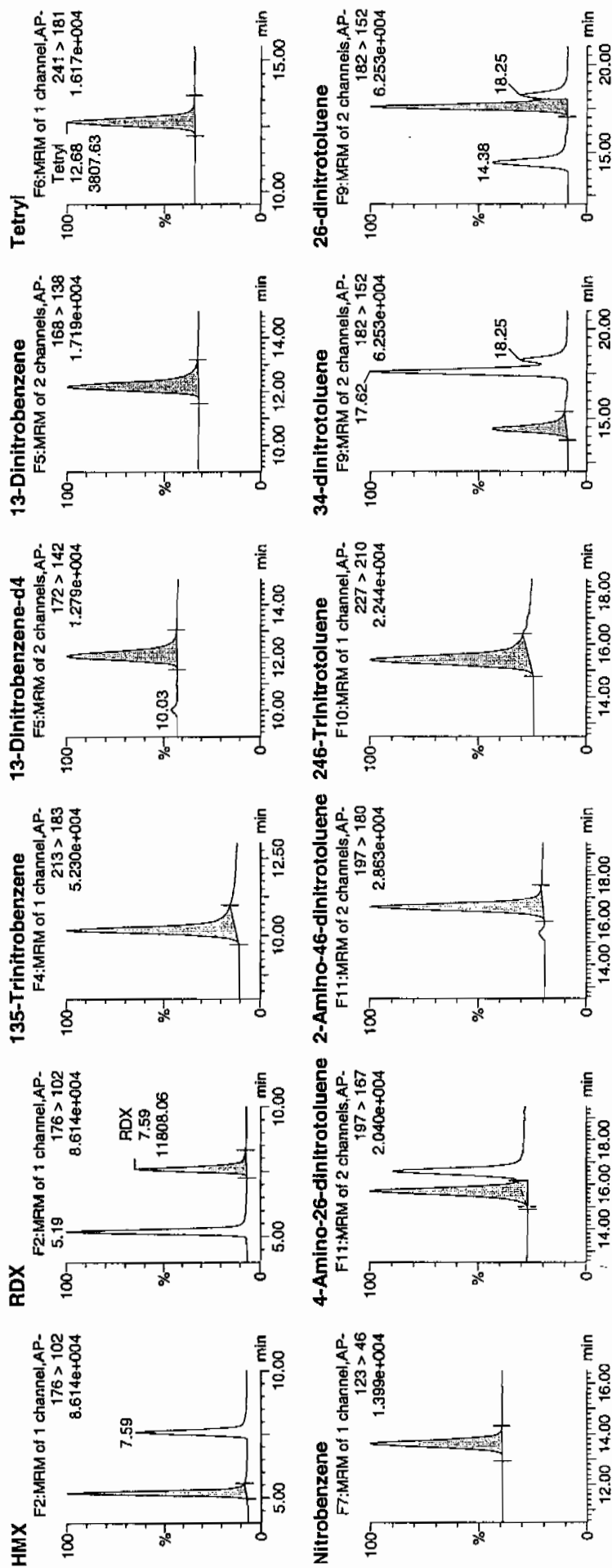
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Time: 12:36:18

ID: WXX100216-07CCV

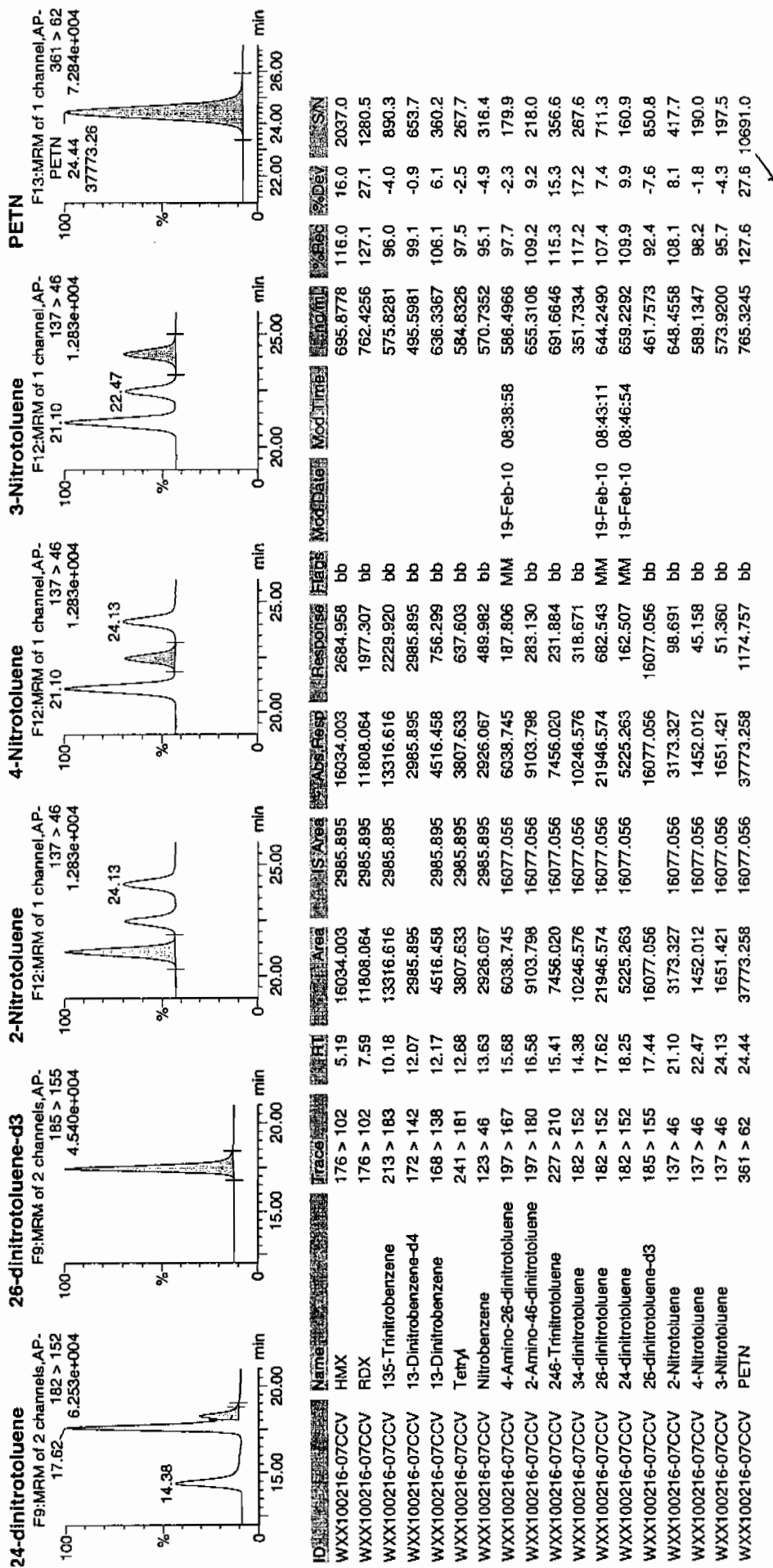
Vial: 1:1,B

1/19/10



1/19/10

Dataset: C:\MASSLYNX\New_Exp_PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010



GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 02/18/10
 Time of Injection: 1236
 Standard Number: WXX100216-07CCV
 Data File: EXP0216089a

HMX	116.0
RDX	127.1
135-TNB	96.0
13-DNB	106.1
Tetryl	97.5
Nitrobenzene	95.1
4A-26-DNT	97.7
2A-46-DNT	109.2
246-TNT	115.3
34-DNT(surr)	117.2
26-DNT	107.4
24-DNT	109.9
2-NT	108.1
4-NT	98.2
3-NT	95.7
PETN	127.6

*not
2/19/10*

Total 1724.1

Average 107.8

42 mg 02/18/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0216091a

Analysis Date: 18-FEB-10 13:35

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
Tetryl	40	44.164	110	
m-Dinitrobenzene	40	38.138	95	
m-Nitrotoluene	40	37.355	93	
o-Nitrotoluene	40	34.55	86	
p-Nitrotoluene	40	31.551	79	
1,3,5-Trinitrobenzene	40	49.419	124	
1,3-Dinitrobenzene-d4	500	495.095	99	
2,4,6-Trinitrotoluene	40	63.823	160	*
2,4-Dinitrotoluene	40	44.759	112	
2,6-Dinitrotoluene	40	43.488	109	
2,6-Dinitrotoluene-d3	500	500.11	100	
2-Amino-4,6-dinitrotoluene	40	42.691	107	
3,4-Dinitrotoluene	20	22.924	115	
4-Amino-2,6-dinitrotoluene	40	39.308	98	
HMX	40	45.096	113	
Nitrobenzene	40	40.389	101	
PETN	40	50.626	127	
RDX	40	44.527	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%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

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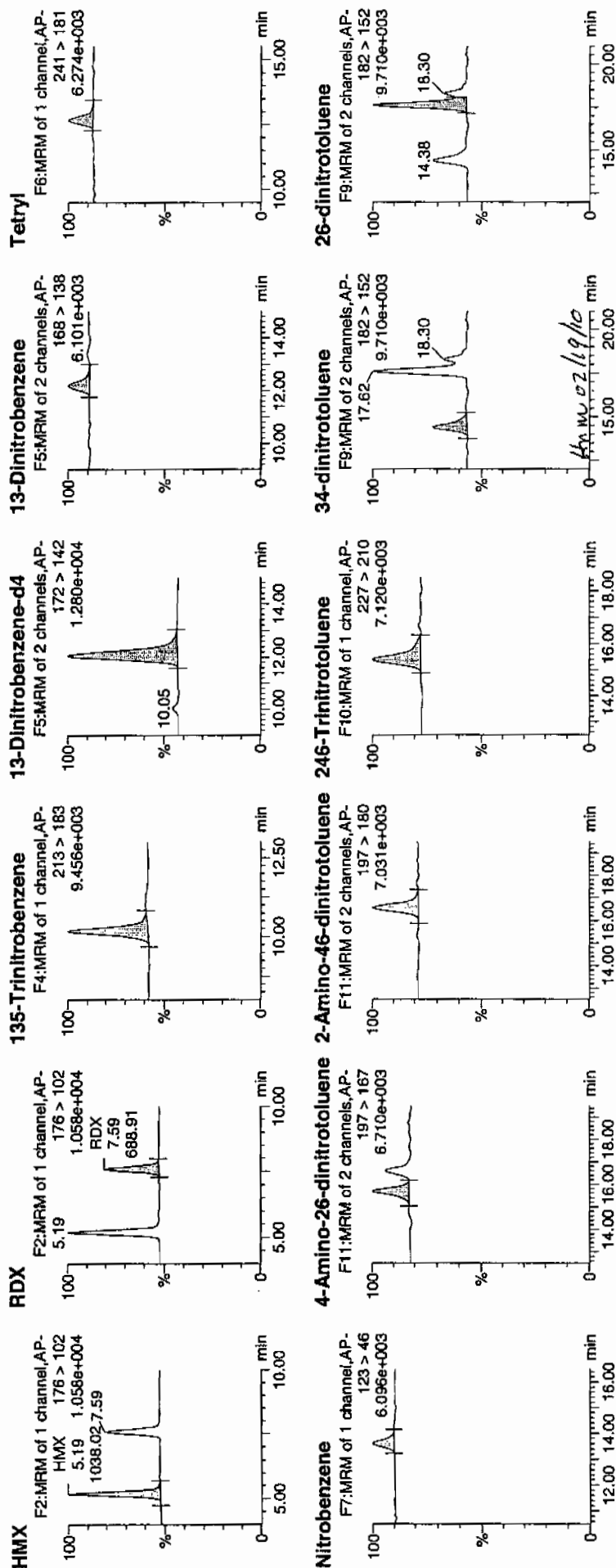
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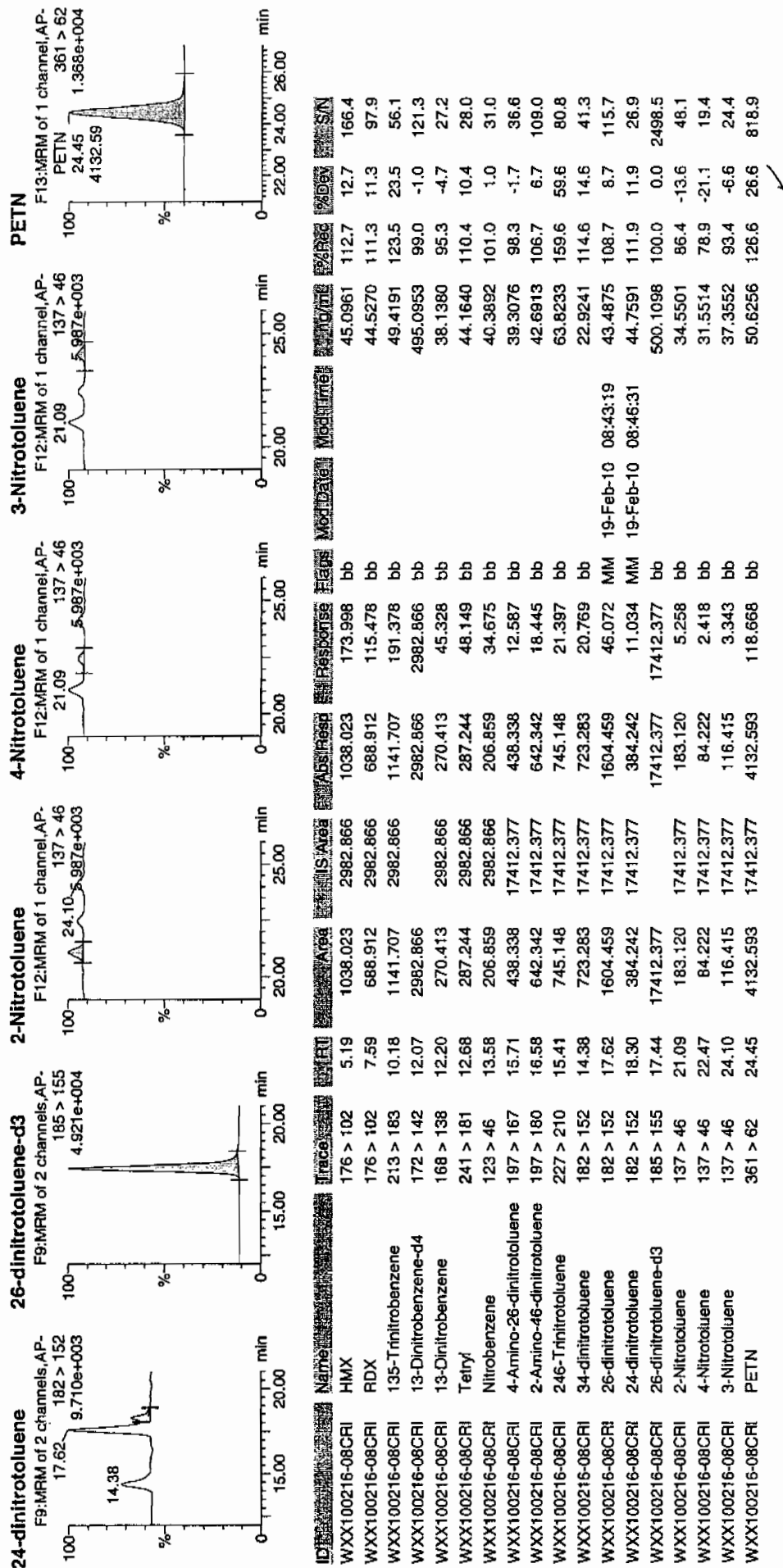
ID: WXX100216-08CRI

Vial: 1:1,C

Handwritten: 1/16/10



Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010



GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 02/18/10
 Time of Injection 1335
 Standard Number WXX100216-08CRI
 Data File EXP0216091a

HMX	112.7
RDX	111.3
135-TNB	123.5
13-DNB	95.3
Tetryl	110.4
Nitrobenzene	101.0
4A-26-DNT	98.3
2A-46-DNT	106.7
246-TNT	159.6
34-DNT(surr)	114.6
26-DNT	108.7
24-DNT	111.9
2-NT	86.4
4-NT	78.9
3-NT	93.4
PETN	126.6

uaf
2/18/10

Total 1739.3

Average 108.7

Handwritten: 02/18/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%

No single analyte > +/- 60%

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0216101a

Analysis Date: 18-FEB-10 18:31

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	600	636.536	106	
1,3-Dinitrobenzene-d4	500	417.68	84	
2,4,6-Trinitrotoluene	600	691.126	115	
2,4-Dinitrotoluene	600	637.013	106	
2,6-Dinitrotoluene	600	619.323	103	
2,6-Dinitrotoluene-d3	500	397.466	79	*
2-Amino-4,6-dinitrotoluene	600	648.012	108	
3,4-Dinitrotoluene	300	329.226	110	
4-Amino-2,6-dinitrotoluene	600	589.342	98	
HMX	600	661.47	110	
Nitrobenzene	600	556.503	93	
PETN	600	838.314	140	*
RDX	600	788.92	131	*
Tetryl	600	597.56	100	
m-Dinitrobenzene	600	622.496	104	
m-Nitrotoluene	600	569.513	95	
o-Nitrotoluene	600	604.641	101	
p-Nitrotoluene	600	614.496	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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

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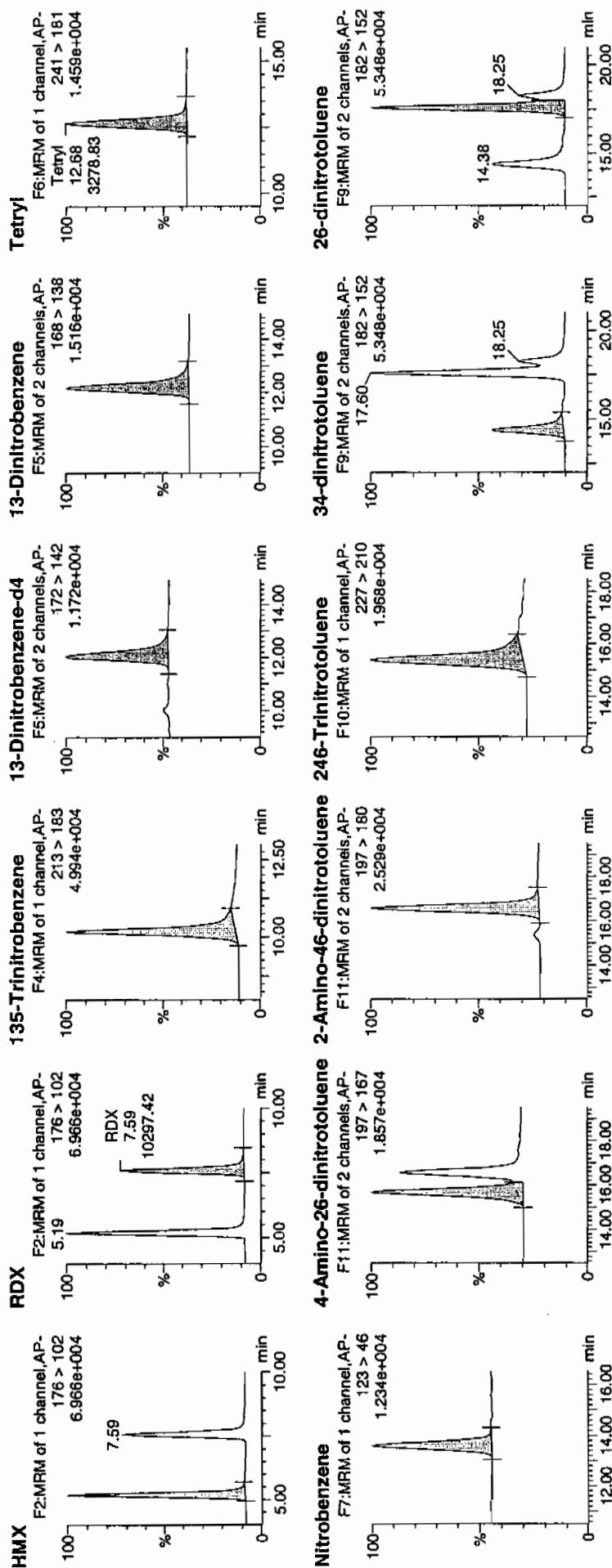
Date: 18-Feb-2010

Time: 18:31:14

ID: WXX100216-07CCV

Vial: 1:1,B

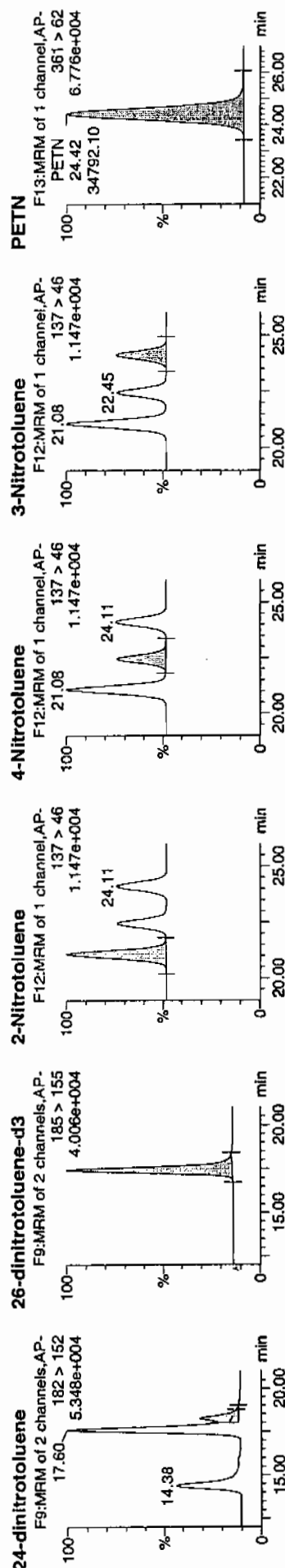
1/19/10



thru 1/19/10

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

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ID	Name	Trace	RT	Area	S/Avg	Abs Resp	Response	Flags	Mod Date	Mod Time	Conc (mg/L)	Varied	Co Dev	SN
WXX100216-07CCV	HMX	176 > 102	5.19	12844.975	2516.453	12844.975	2552.198	bb			661.4698	110.2	10.2	805.0
WXX100216-07CCV	RDX	176 > 102	7.59	10297.420	2516.453	10297.420	2046.019	bb			788.9199	131.5	31.5	562.4
WXX100216-07CCV	135-Trinitrobenzene	213 > 183	10.18	12406.179	2516.453	12406.179	2465.013	bb			636.5357	106.1	6.1	424.6
WXX100216-07CCV	13-Dinitrobenzene-d4	172 > 142	12.03	2516.453		2516.453	2516.453	bb			417.8802	83.5	-16.5	330.0
WXX100216-07CCV	13-Dinitrobenzene	168 > 138	12.17	3723.589	2516.453	3723.589	739.849	bb			622.4958	103.7	3.7	190.3
WXX100216-07CCV	Tetryl	241 > 181	12.68	3278.833	2516.453	3278.833	651.479	bb			597.5600	99.6	-0.4	372.1
WXX100216-07CCV	Nitrobenzene	123 > 46	13.63	2404.535	2516.453	2404.535	477.763	bb			556.5026	92.8	-7.2	198.0
WXX100216-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.68	5223.180	13838.627	5223.180	188.717	MM	19-Feb-10	08:39:12	589.3419	98.2	-1.8	189.6
WXX100216-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.58	7748.987	13838.627	7748.987	279.977	bb			648.0120	108.0	8.0	493.7
WXX100216-07CCV	246-Trinitrotoluene	227 > 210	15.38	6412.913	13838.627	6412.913	231.703	bb			691.1262	115.2	15.2	120.2
WXX100216-07CCV	34-dinitrotoluene	182 > 152	14.38	8255.552	13838.627	8255.552	298.279	bb			329.2262	109.7	9.7	337.2
WXX100216-07CCV	26-dinitrotoluene	182 > 152	17.60	18160.029	13838.627	18160.029	556.136	MM	19-Feb-10	08:43:33	619.3228	103.2	3.2	922.8
WXX100216-07CCV	24-dinitrotoluene	182 > 152	18.25	4346.167	13838.627	4346.167	157.030	MM	19-Feb-10	08:46:08	637.0129	106.2	6.2	207.3
WXX100216-07CCV	26-dinitrotoluene-d3	185 > 155	17.42	13838.627		13838.627	13838.627	bb			397.4663	79.5	-20.5	1774.9
WXX100216-07CCV	2-Nitrotoluene	137 > 46	21.08	2546.937	13838.627	2546.937	92.023	bb			604.6405	100.8	0.8	226.0
WXX100216-07CCV	4-Nitrotoluene	137 > 46	22.45	1303.650	13838.627	1303.650	47.102	bb			614.4959	102.4	2.4	112.4
WXX100216-07CCV	3-Nitrotoluene	137 > 46	24.11	1410.576	13838.627	1410.576	50.965	bb			569.5129	94.9	-5.1	114.8
WXX100216-07CCV	PETN	361 > 62	24.42	34792.098	13838.627	34792.098	1257.065	bb			838.3138	139.7	39.7	7852.2

GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 02/18/10
 Time of Injection: 1831
 Standard Number: WXX100216-07CCV
 Data File: EXP0216101a

HMX	110.2
RDX	131.5
135-TNB	106.1
13-DNB	109.7
Tetryl	99.6
Nitrobenzene	92.8
4A-26-DNT	98.2
2A-46-DNT	108.0
246-TNT	115.2
34-DNT(surr)	109.7
26-DNT	103.2
24-DNT	106.2
2-NT	100.8
4-NT	102.4
3-NT	94.9
PETN	139.7

*MP
2/19/10*

Total 1728.2

Average 108.0

Home 02/19/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0216103a

Analysis Date: 18-FEB-10 19:30

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
1,3,5-Trinitrobenzene	40	58.779	147	*
1,3-Dinitrobenzene-d4	500	457.386	91	
2,4,6-Trinitrotoluene	40	46.527	116	
2,4-Dinitrotoluene	40	46.8	117	
2,6-Dinitrotoluene	40	41.187	103	
2,6-Dinitrotoluene-d3	500	451.82	90	
2-Amino-4,6-dinitrotoluene	40	40.759	102	
3,4-Dinitrotoluene	20	21.612	108	
4-Amino-2,6-dinitrotoluene	40	34.649	87	
HMX	40	46.441	116	
Nitrobenzene	40	31.128	78	
PETN	40	54.273	136	*
RDX	40	41.533	104	
Tetryl	40	53.24	133	*
m-Dinitrobenzene	40	46.745	117	
m-Nitrotoluene	40	40.745	102	
o-Nitrotoluene	40	34.511	86	
p-Nitrotoluene	40	26.865	67	*

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%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Quantify Sample Report

GEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Fri Feb 19 08:50:21 2010, Page 45 of 97

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

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Date: 18-Feb-2010

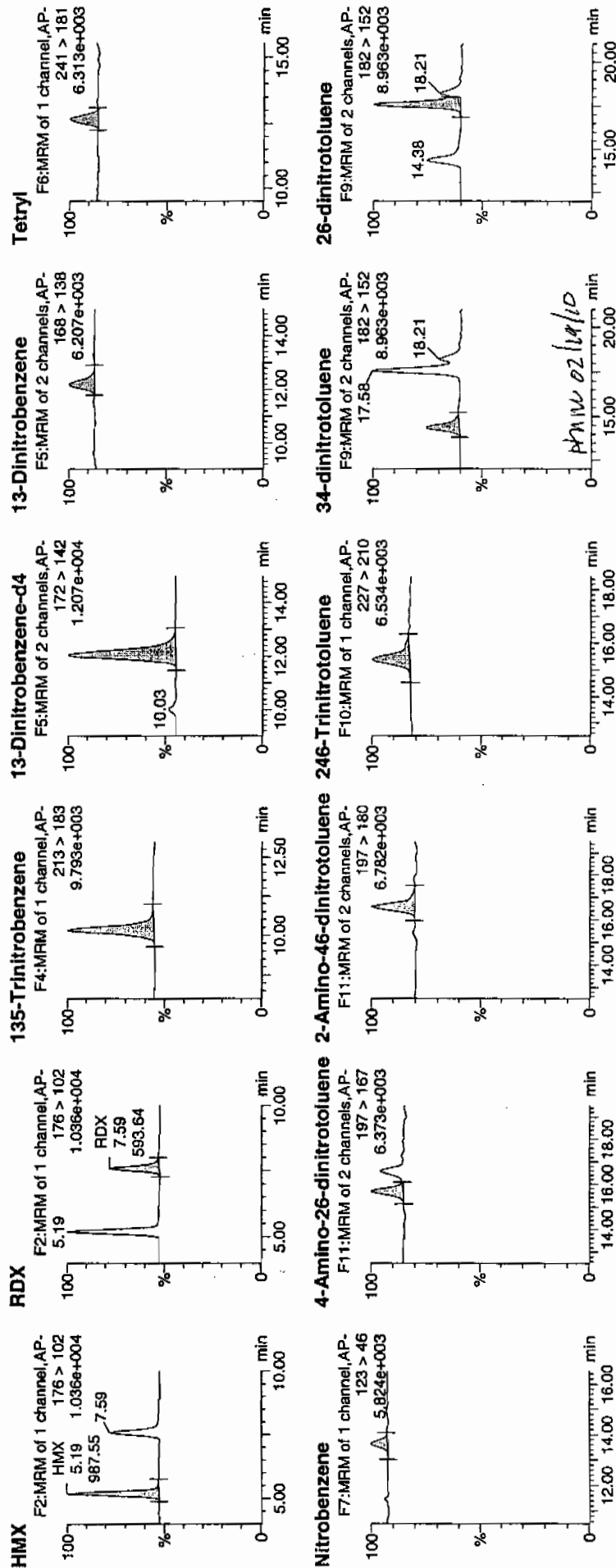
Time: 19:30:18

ID: WXX100216-08CRI

Vial: 1:1,C

1/19/10
1/19/10

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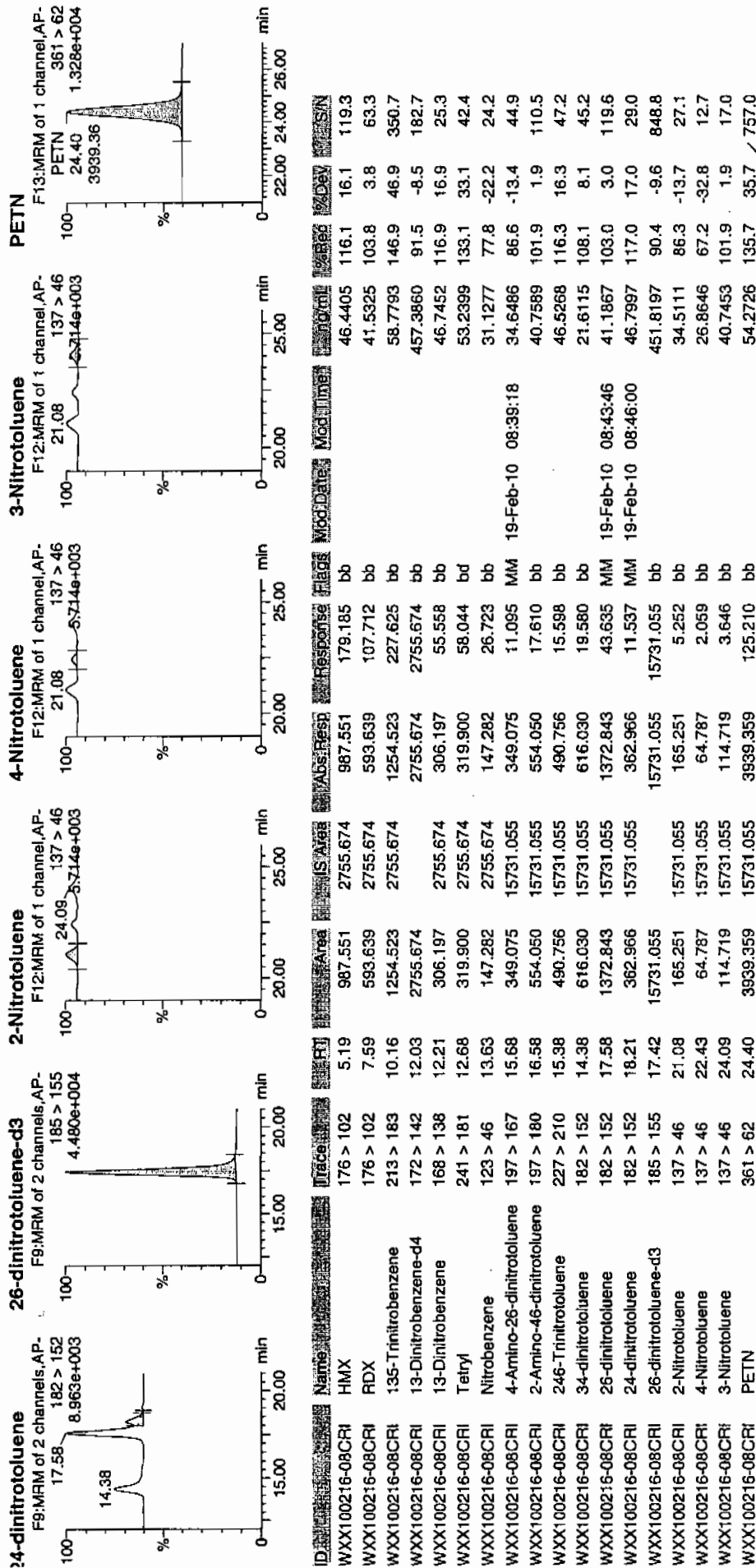


Quantify Sample Report

SEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Fri Feb 19 08:50:21 2010, Page 46 of 97

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010



GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 02/18/10
 Time of Injection 1930
 Standard Number WXX100216-08CRI
 Data File EXP0216103a

HMX	116.1
RDX	103.8
135-TNB	146.9
13-DNB	116.9
Tetryl	133.1
Nitrobenzene	77.8
4A-26-DNT	86.6
2A-46-DNT	101.9
246-TNT	116.3
34-DNT(surr)	108.1
26-DNT	103.0
24-DNT	117.0
2-NT	86.3
4-NT	67.2
3-NT	101.9
PETN	135.7

*mtf
2/18/10*

Total 1718.6

Average 107.4

Hand on 2/18/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0216114a

Analysis Date: 19-FEB-10 00:55

LCMSMS ID: 903

Column ID Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
2,4,6-Trinitrotoluene	600	690.895	115	
2,4-Dinitrotoluene	600	648.45	108	
2,6-Dinitrotoluene	600	627.387	105	
2,6-Dinitrotoluene-d3	500	447.599	90	
2-Amino-4,6-dinitrotoluene	600	606.475	101	
3,4-Dinitrotoluene	300	332.84	111	
4-Amino-2,6-dinitrotoluene	600	583.14	97	
HMX	600	691.106	115	
Nitrobenzene	600	588.13	98	
PETN	600	649.5	108	
RDX	600	760.723	127	*
Tetryl	600	549.314	92	
m-Dinitrobenzene	600	621.892	104	
m-Nitrotoluene	600	658.774	110	
o-Nitrotoluene	600	731.578	122	*
p-Nitrotoluene	600	638.105	106	
1,3,5-Trinitrobenzene	600	571.409	95	
1,3-Dinitrobenzene-d4	500	465.878	93	

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%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Quantify Sample Report

GEL Laboratories, LLC / Analyst : Michael A. Penny

Printed: Fri Feb 19 08:50:21 2010, Page 67 of 97

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

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Date: 19-Feb-2010

Time: 00:55:04

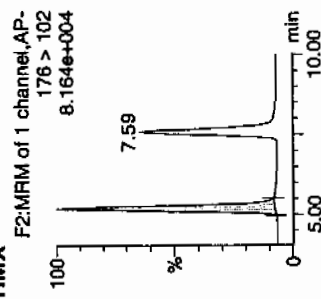
ID: WXX100216-07CCV

Vial: 1:1,B

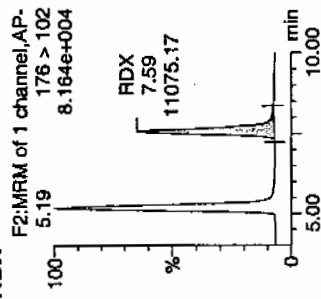
AP
2/19/10

AP
2/19/10

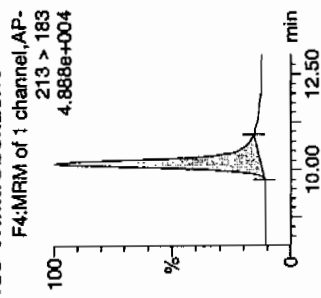
HMX



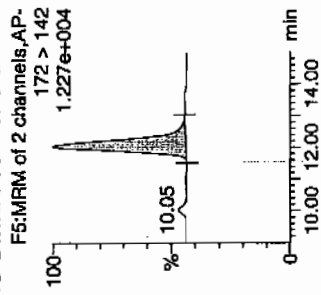
RDX



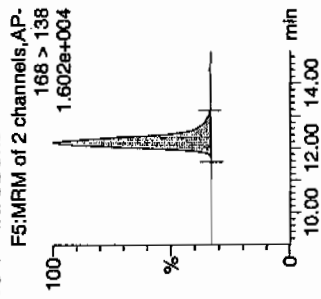
135-Trinitrobenzene



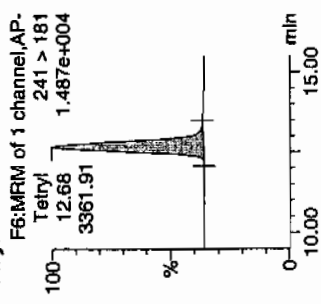
13-Dinitrobenzene-d4



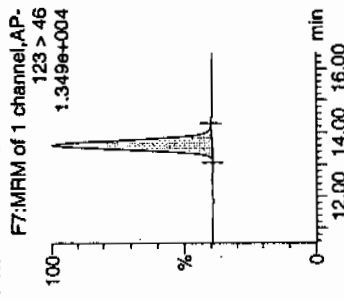
13-Dinitrobenzene



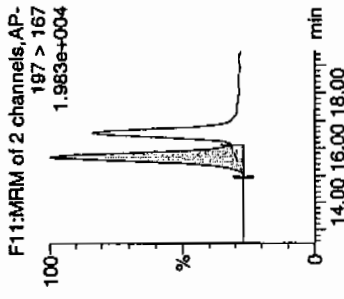
Tetryl



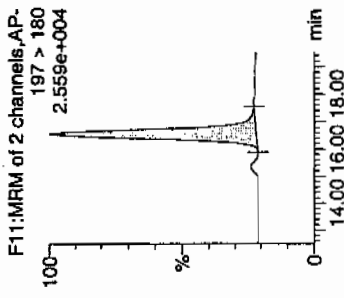
Nitrobenzene



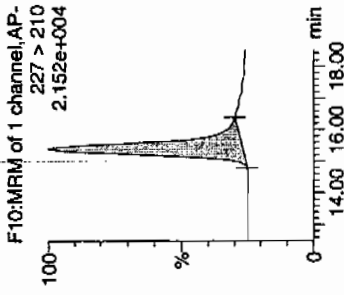
4-Amino-26-dinitrotoluene



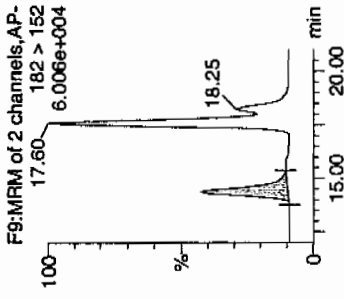
2-Amino-46-dinitrotoluene



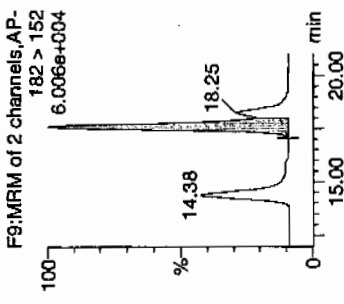
246-Trinitrotoluene



34-dinitrotoluene



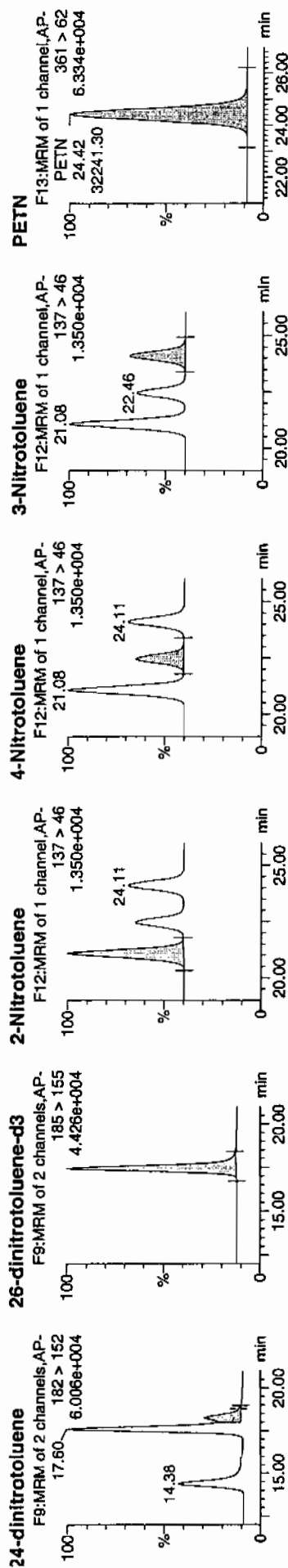
26-dinitrotoluene



AP
2/19/10

Dataset: C:\MASS\YNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

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ID	Name	Trace	FTI	Area	SArea	Abs.Resp	Response	Flags	Mod.Date	Mod.Time	Wind/m	Pressure	Temp	Hum	SN
WXX100216-07CCV	HMX	176 > 102	5.19	14969.111	2806.837	14969.111	2666.544	bb			691.1056	115.2	15.2	1193.4	
WXX100216-07CCV	RDX	176 > 102	7.59	11075.168	2806.837	11075.168	1972.891	bb			760.7228	126.8	26.8	742.0	
WXX100216-07CCV	135-Trinitrobenzene	213 > 183	10.18	12421.971	2806.837	12421.971	2212.806	bb			571.4087	95.2	-4.8	748.6	
WXX100216-07CCV	13-Dinitrobenzene-d4	172 > 142	12.07	2806.837		2806.837	2806.837	bb			465.8781	93.2	-6.8	619.5	
WXX100216-07CCV	13-Dinitrobenzene	168 > 138	12.20	4149.243	2806.837	4149.243	739.131	bb			621.8923	103.6	3.6	930.8	
WXX100216-07CCV	Tetryl	241 > 181	12.68	3361.914	2806.837	3361.914	598.879	bb			549.3137	91.6	-8.4	206.8	
WXX100216-07CCV	Nitrobenzene	123 > 46	13.63	2834.431	2806.837	2834.431	504.915	bb			588.1304	98.0	-2.0	310.1	
WXX100216-07CCV	4-Amino-26-dinitrotoluene	197 > 167	15.68	5820.088	15584.121	5820.088	186.731	MM	19-Feb-10	08:39:50	583.1397	97.2	-2.8	247.4	
WXX100216-07CCV	2-Amino-46-dinitrotoluene	197 > 180	16.58	8167.027	15584.121	8167.027	262.030	bb			606.4749	101.1	1.1	560.1	
WXX100216-07CCV	246-Trinitrotoluene	227 > 210	15.41	7219.366	15584.121	7219.366	231.626	bb			690.8946	115.1	15.1	540.5	
WXX100216-07CCV	34-dinitrotoluene	182 > 152	14.38	9398.891	15584.121	9398.891	301.553	bb			332.8401	110.9	10.9	291.8	
WXX100216-07CCV	26-dinitrotoluene	182 > 152	17.60	20716.889	15584.121	20716.889	664.679	MM	19-Feb-10	08:44:03	627.3874	104.6	4.6	804.4	
WXX100216-07CCV	24-dinitrotoluene	182 > 152	18.25	4982.229	15584.121	4982.229	159.850	MM	19-Feb-10	08:45:40	648.4495	108.1	8.1	168.8	
WXX100216-07CCV	26-dinitrotoluene-d3	185 > 155	17.42	15584.121		15584.121	15584.121	bb			447.5995	89.5	-10.5	1930.1	
WXX100216-07CCV	2-Nitrotoluene	137 > 46	21.08	3470.329	15584.121	3470.329	111.342	bb			731.5775	121.9	21.9	122.3	
WXX100216-07CCV	4-Nitrotoluene	137 > 46	22.46	1524.486	15584.121	1524.486	48.912	bb			638.1049	106.4	6.4	49.8	
WXX100216-07CCV	3-Nitrotoluene	137 > 46	24.11	1837.464	15584.121	1837.464	58.953	bb			658.7742	109.8	9.8	58.5	
WXX100216-07CCV	PETN	361 > 62	24.42	32241.301	15584.121	32241.301	1034.428	bb			649.5005	108.3	8.3	10805.1	

GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 02/19/10
 Time of Injection: 0055
 Standard Number: WXX100216-07CCV
 Data File: EXP0216114a

HMX	115.2
RDX	126.8
135-TNB	95.2
13-DNB	103.6
Tetryl	91.6
Nitrobenzene	98.0
4A-26-DNT	97.2
2A-46-DNT	101.1
246-TNT	115.1
34-DNT(surr)	110.9
26-DNT	104.6
24-DNT	108.1
2-NT	121.9
4-NT	106.4
3-NT	109.8
PETN	108.3

*mtf
2/19/10*

Total 1713.8

Home on 1/9/10

Average 107.1

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0216116a

Analysis Date: 19-FEB-10 01:54

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
2,6-Dinitrotoluene-d3	500	447.67	90	
2-Amino-4,6-dinitrotoluene	40	36.207	91	
3,4-Dinitrotoluene	20	19.336	97	
4-Amino-2,6-dinitrotoluene	40	36.956	92	
HMX	40	44.381	111	
Nitrobenzene	40	40.08	100	
PETN	40	50.067	125	
RDX	40	41.692	104	
Tetryl	40	48.261	121	
m-Dinitrobenzene	40	44.048	110	
m-Nitrotoluene	40	38.744	97	
o-Nitrotoluene	40	45.248	113	
p-Nitrotoluene	40	44.246	111	
1,3,5-Trinitrobenzene	40	54.134	135	*
1,3-Dinitrobenzene-d4	500	470.242	94	
2,4,6-Trinitrotoluene	40	41.446	104	
2,4-Dinitrotoluene	40	40.654	102	
2,6-Dinitrotoluene	40	43.246	108	

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%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp_PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

Name: C:\MASSLYNX\NEW_EXP_PRO\Data\EXP0216116a

Date: 19-Feb-2010

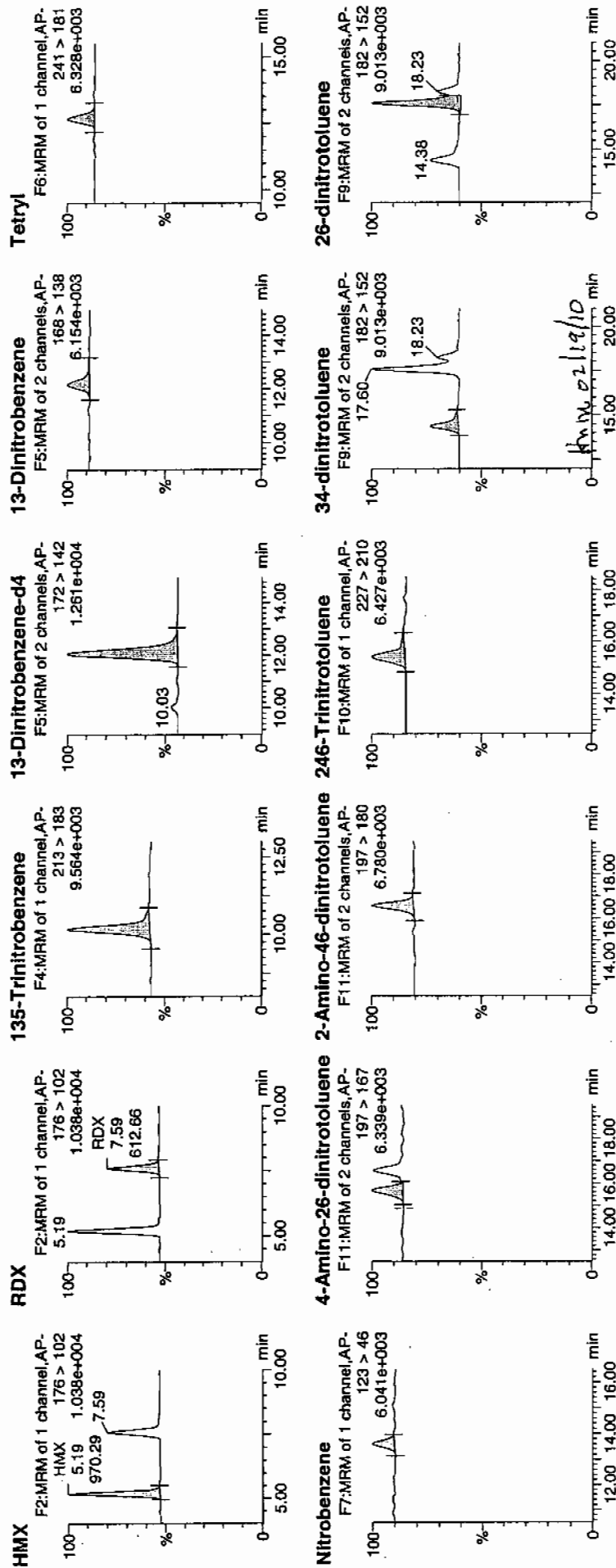
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ID: WXX100216-08CRI

Vial: 1:1,C

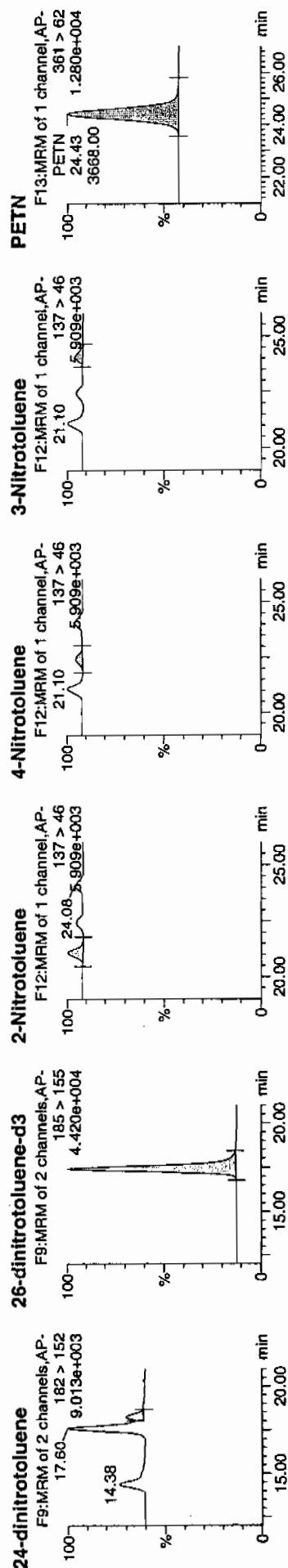
WXX
02/19/10

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Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

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ID	Sample	Name	Trace	RT	Area	S Area	Abs. Resp	Response	Flags	Mod Date	Mod Time	ng/ml	%Rec	%Dev	S/N
WXX100216-08C1	HMZ		176 > 102	5.19	970.289	2833.130	970.289	171.240	bb			44.3813	111.0	11.0	149.0
WXX100216-08C1	RDX		176 > 102	7.59	612.665	2833.130	612.665	108.125	bb			41.6917	104.2	4.2	82.7
WXX100216-08C1	135-Trinitrobenzene		213 > 183	10.18	1187.855	2833.130	1187.855	209.637	bb			54.1340	135.3	35.3	146.8
WXX100216-08C1	13-Dinitrobenzene-d4		172 > 142	12.07	2833.130		2833.130	2833.130	bb			470.2422	94.0	-6.0	767.4
WXX100216-08C1	13-Dinitrobenzene		168 > 138	12.17	296.639	2833.130	296.639	52.352	bb			44.0479	110.1	10.1	43.0
WXX100216-08C1	Tetryl		241 > 181	12.68	298.134	2833.130	298.134	52.616	bb			48.2610	120.7	20.7	37.3
WXX100216-08C1	Nitrobenzene		123 > 46	13.63	194.969	2833.130	194.969	34.409	bb			40.0797	100.2	0.2	15.5
WXX100216-08C1	4-Amino-26-dinitrotoluene		197 > 167	15.68	368.902	15586.563	368.902	11.834	MM	19-Feb-10	08:40:08	36.9561	92.4	-7.6	33.0
WXX100216-08C1	2-Amino-46-dinitrotoluene		197 > 180	16.58	487.656	15586.563	487.656	15.643	bb			36.2071	90.5	-9.5	37.9
WXX100216-08C1	246-Trinitrotoluene		227 > 210	15.41	433.146	15586.563	433.146	13.895	bb			41.4457	103.6	3.6	86.2
WXX100216-08C1	34-dinitrotoluene		182 > 152	14.38	546.092	15586.563	546.092	17.518	bb			19.3356	96.7	-3.3	50.2
WXX100216-08C1	26-dinitrotoluene		182 > 152	17.60	1428.232	15586.563	1428.232	45.816	MM	19-Feb-10	08:44:14	43.2456	108.1	8.1	158.9
WXX100216-08C1	24-dinitrotoluene		182 > 152	18.23	312.408	15586.563	312.408	10.022	MM	19-Feb-10	08:45:32	40.6543	101.6	1.6	37.0
WXX100216-08C1	26-dinitrotoluene-d3		185 > 155	17.42	15586.563		15586.563	15586.563	bb			447.6696	89.5	-10.5	3275.7
WXX100216-08C1	2-Nitrotoluene		137 > 46	21.10	214.671	15586.563	214.671	6.886	bb			45.2476	113.1	13.1	114.9
WXX100216-08C1	4-Nitrotoluene		137 > 46	22.44	105.725	15586.563	105.725	3.392	bb			44.2464	110.6	10.6	49.1
WXX100216-08C1	3-Nitrotoluene		137 > 46	24.08	108.083	15586.563	108.083	3.467	bb			38.7442	96.9	-3.1	54.6
WXX100216-08C1	PETN		361 > 62	24.43	3668.000	15586.563	3668.000	117.665	bb			50.0670	125.2	25.2	1125.6

GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 02/19/10
 Time of Injection 0154
 Standard Number WXX100216-08CRI
 Data File EXP0216116a

HMX	111.0
RDX	104.2
135-TNB	135.3
13-DNB	110.1
Tetryl	120.7
Nitrobenzene	100.2
4A-26-DNT	92.4
2A-46-DNT	90.5
246-TNT	103.6
34-DNT(surr)	96.7
26-DNT	108.1
24-DNT	101.6
2-NT	113.1
4-NT	110.6
3-NT	96.9
PETN	125.2

Handwritten:
 107.5
 2/19/10

Total 1720.2

Average 107.5

Handwritten: Hinc. as 119/10

ICV Limits 85-115%
CRI Limits 70-130%
CCV Limits 85-115%
No single analyte > +/- 60%

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXP0216126a

Analysis Date: 19-FEB-10 06:51

LCMSMS ID: 903

Column ID Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
RDX	600	664.439	111	
Tetryl	600	546.113	91	
m-Dinitrobenzene	600	654.383	109	
m-Nitrotoluene	600	546.709	91	
o-Nitrotoluene	600	565.725	94	
p-Nitrotoluene	600	596.095	99	
1,3,5-Trinitrobenzene	600	602.103	100	
1,3-Dinitrobenzene-d4	500	399.789	80	*
2,4,6-Trinitrotoluene	600	636.088	106	
2,4-Dinitrotoluene	600	631.293	105	
2,6-Dinitrotoluene	600	639.245	107	
2,6-Dinitrotoluene-d3	500	397.902	80	*
2-Amino-4,6-dinitrotoluene	600	620.207	103	
3,4-Dinitrotoluene	300	328.459	109	
4-Amino-2,6-dinitrotoluene	600	549.091	92	
HMX	600	579.088	97	
Nitrobenzene	600	570.011	95	
PETN	600	752.558	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 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

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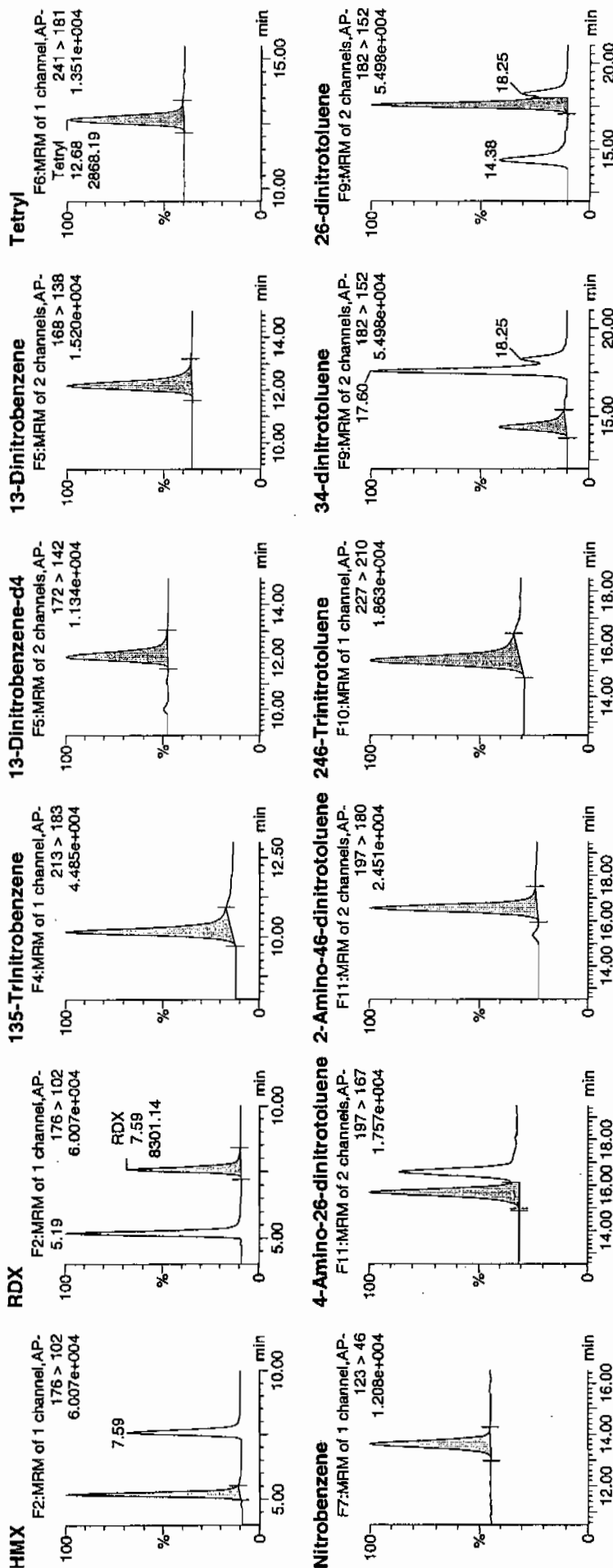
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Time: 06:51:55

ID: WXX100216-07CCV

Vial: 1:1,B

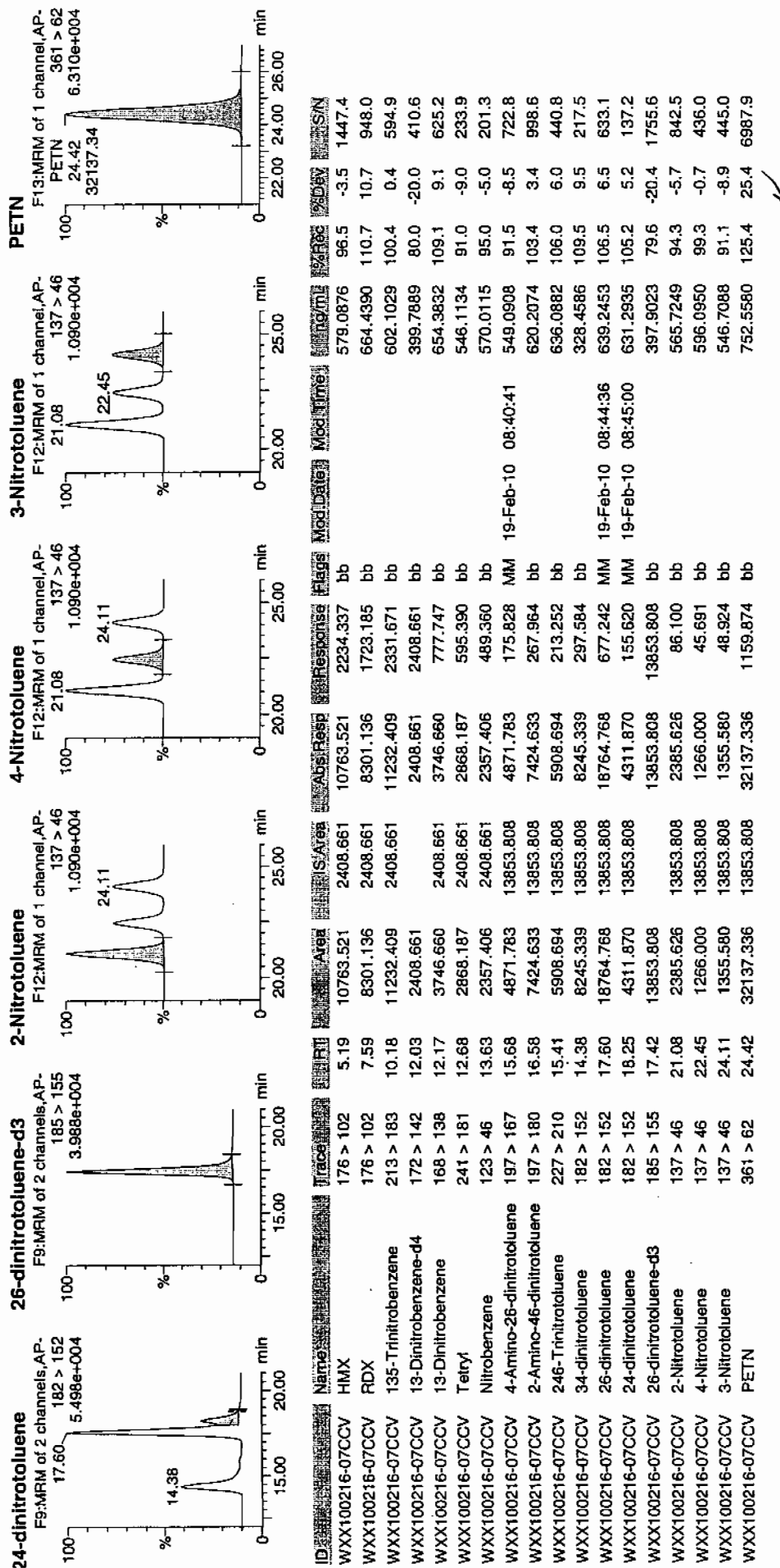
AP
1/19/10



AP
2/19/10

Quantify Sample Report
3EL Laboratories, LLC / Analyst.: Michael A. Penny

Dataset: C:\MASSLYNX\New_Exp\PRO021610expA2.qld, Time: Fri Feb 19 08:48:26 2010



GRAND MEAN AVERAGE

Vendor: Restek
 Date of Analysis: 02/19/10
 Time of Injection: 0651
 Standard Number: WXX100216-07CCV
 Data File: EXP0216126a

HMX	96.5
RDX	110.7
135-TNB	100.4
13-DNB	109.1
Tetryl	91.0
Nitrobenzene	95.0
4A-26-DNT	91.5
2A-46-DNT	103.4
246-TNT	106.0
34-DNT(surr)	109.5
26-DNT	106.5
24-DNT	105.2
2-NT	94.3
4-NT	99.3
3-NT	91.1
PETN	125.4

Handwritten: 100%
2/19/10

Total 1634.9

Average 102.2

Handwritten: 100% or 119/110

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXP0216128a

Analysis Date: 19-FEB-10 07:51

LCMSMS ID: 903

Column ID: Phenomenex Ultracarb 5u ODS(20)

Compound	True	Found	Recovery	Q
o-Nitrotoluene	40	39.368	98	
p-Nitrotoluene	40	54.772	137	*
1,3,5-Trinitrobenzene	40	55.601	139	*
1,3-Dinitrobenzene-d4	500	449.803	90	
2,4,6-Trinitrotoluene	40	55.731	139	*
2,4-Dinitrotoluene	40	40.622	102	
2,6-Dinitrotoluene	40	39.408	99	
2,6-Dinitrotoluene-d3	500	428.152	86	
2-Amino-4,6-dinitrotoluene	40	37.221	93	
3,4-Dinitrotoluene	20	25.924	130	
4-Amino-2,6-dinitrotoluene	40	38.795	97	
HMX	40	51.235	128	
Nitrobenzene	40	44.876	112	
PETN	40	54.004	135	*
RDX	40	44.767	112	
Tetryl	40	41.893	105	
m-Dinitrobenzene	40	46.8	117	
m-Nitrotoluene	40	44.528	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%

Other Target Analytes 70-130%

Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

Sample Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216128a

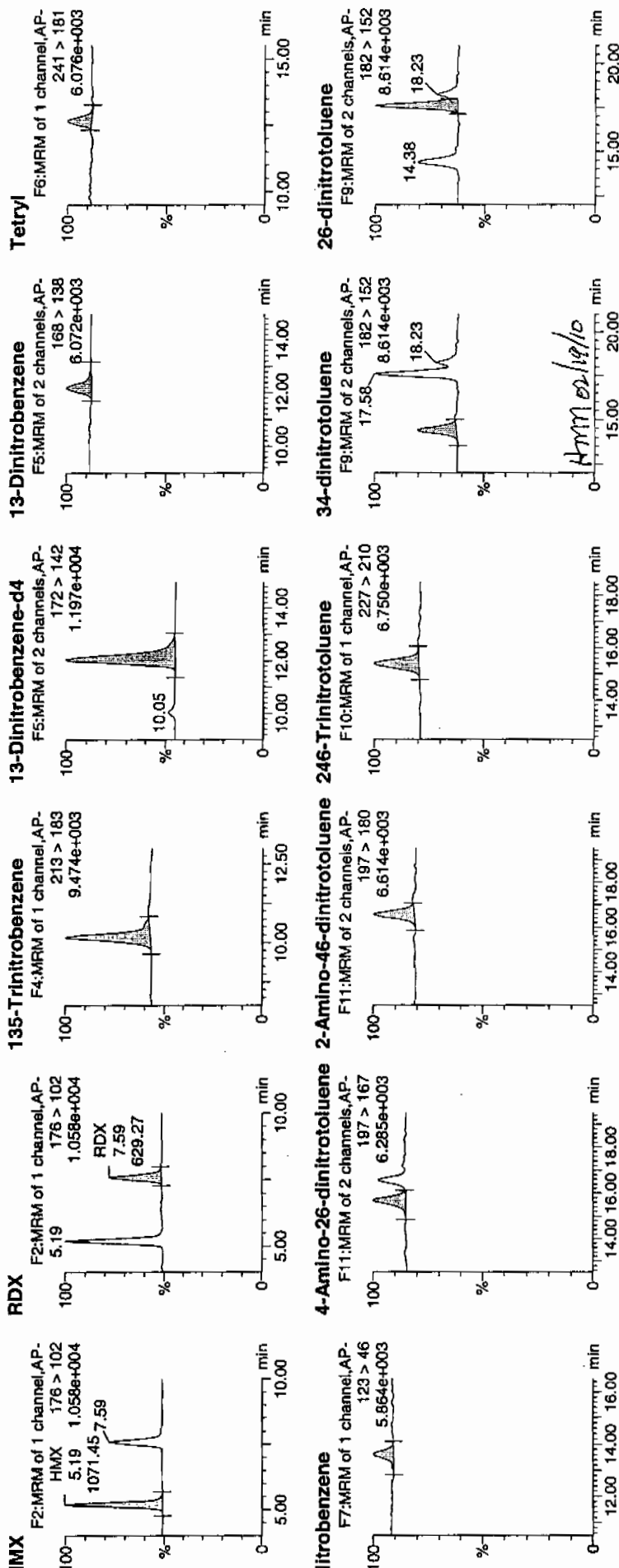
Date: 19-Feb-2010

Time: 07:51:13

Job: WXX100216-08CRI

Label: 1:1,C

MM 02/19/10

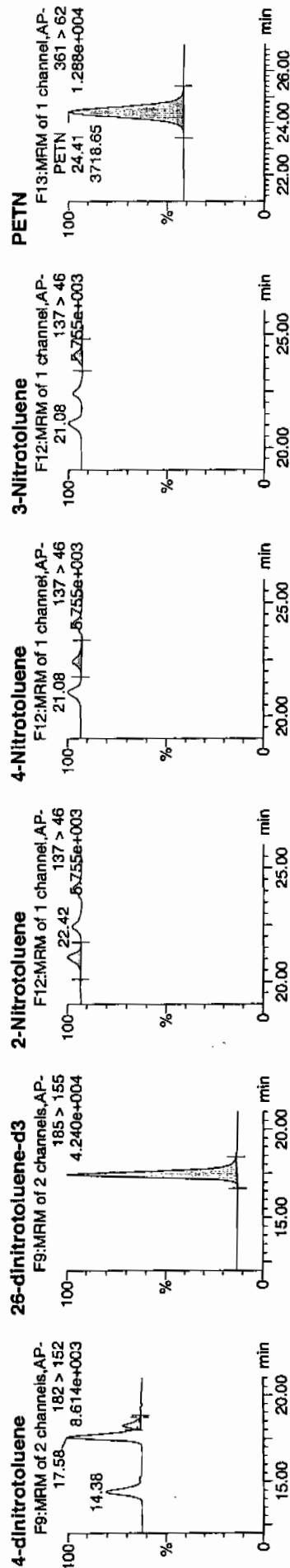


Quantify Sample Report

iEL Laboratories, LLC / Analyst: Michael A. Penny

Printed: Fri Feb 19 08:50:21 2010, Page 96 of 97

Dataset: C:\MASSLYNX\New_Exp\PRO021610expA2.qld, Time: Fri Feb 19 08:48:26 2010



Compound	Name	Trace	RT	Area	Is Area	Abs Resp	Response	Flags	Mod Date	Mod Time	Int Time	Area	Dev	SN
4-dinitrotoluene	WXX100216-08CRI	176 > 102	5.19	1071.448	2709.986	1071.448	197.685	bb				51.2353	128.1	28.1
26-dinitrotoluene-d3	WXX100216-08CRI	176 > 102	7.59	629.268	2709.986	629.268	116.102	bb				44.7674	111.9	136.1
2-Nitrotoluene	WXX100216-08CRI	213 > 183	10.18	1167.005	2709.986	1167.005	215.316	bb				55.6006	139.0	39.0
4-Nitrotoluene	WXX100216-08CRI	172 > 142	12.03	2709.986		2709.986	2709.986	bb				449.8027	90.0	-10.0
3-Nitrotoluene	WXX100216-08CRI	168 > 138	12.20	301.476	2709.986	301.476	55.623	bb				46.8004	117.0	17.0
PETN	WXX100216-08CRI	241 > 181	12.68	247.547	2709.986	247.547	45.673	bb				41.8930	104.7	4.7
	WXX100216-08CRI	123 > 46	13.63	208.814	2709.986	208.814	38.527	bb				44.8763	112.2	12.2
	WXX100216-08CRI	197 > 167	15.68	370.375	14907.007	370.375	12.423	MM	19-Feb-10	08:40:47		38.7951	97.0	-3.0
	WXX100216-08CRI	197 > 180	16.58	479.459	14907.007	479.459	16.082	bb				37.2214	93.1	-6.9
	WXX100216-08CRI	227 > 210	15.38	557.049	14907.007	557.049	18.684	bb				55.7311	139.3	39.3
	WXX100216-08CRI	182 > 152	14.38	700.235	14907.007	700.235	23.487	bb				25.9236	129.6	29.6
	WXX100216-08CRI	182 > 152	17.58	1244.735	14907.007	1244.735	41.750	MM	19-Feb-10	08:44:46		39.4076	98.5	-1.5
	WXX100216-08CRI	182 > 152	18.23	298.548	14907.007	298.548	10.014	MM	19-Feb-10	08:44:53		40.6217	101.6	1.6
	WXX100216-08CRI	185 > 155	17.42	14907.007		14907.007	14907.007	bb				428.1517	85.6	-14.4
	WXX100216-08CRI	137 > 46	21.08	178.632	14907.007	178.632	5.992	bb				39.3678	98.4	-1.6
	WXX100216-08CRI	137 > 46	22.42	125.170	14907.007	125.170	4.198	bb				54.7723	136.9	36.9
	WXX100216-08CRI	137 > 46	24.11	118.801	14907.007	118.801	3.985	bb				44.5276	111.3	11.3
	WXX100216-08CRI	361 > 62	24.41	3718.648	14907.007	3718.648	124.728	bb				54.0040	135.0	35.0

GRAND MEAN AVERAGE

Vendor: UltraScientific
 Date of Analysis 02/19/10
 Time of Injection 0751
 Standard Number WXX100216-08CRI
 Data File EXP0216128a

HMX	128.1
RDX	111.9
135-TNB	139.0
13-DNB	117.0
Tetryl	104.7
Nitrobenzene	112.2
4A-26-DNT	97.0
2A-46-DNT	93.1
246-TNT	139.3
34-DNT(surr)	129.6
26-DNT	98.5
24-DNT	101.6
2-NT	98.4
4-NT	136.9
3-NT	111.3
PETN	135.0

*WAF
2/19/10*

Total 1853.6

Average 115.9

Handwritten: 02/19/10

ICV Limits 85-115%

CRI Limits 70-130%

CCV Limits 85-115%

No single analyte > +/- 60%

7B
Explosives CRI Standard.

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS02170013.wiff

Analysis Date: 17-FEB-10 12:34

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	91.2	91	
2,6-Diamino-4-nitrotoluene	100	82.2	82	
3,4-Dinitrotoluene	50	49.3	99	
3,5-Dinitroaniline	100	97.1	97	
TATB	100	96.4	96	
tris(o-cresyl) phosphate	100	112	112	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

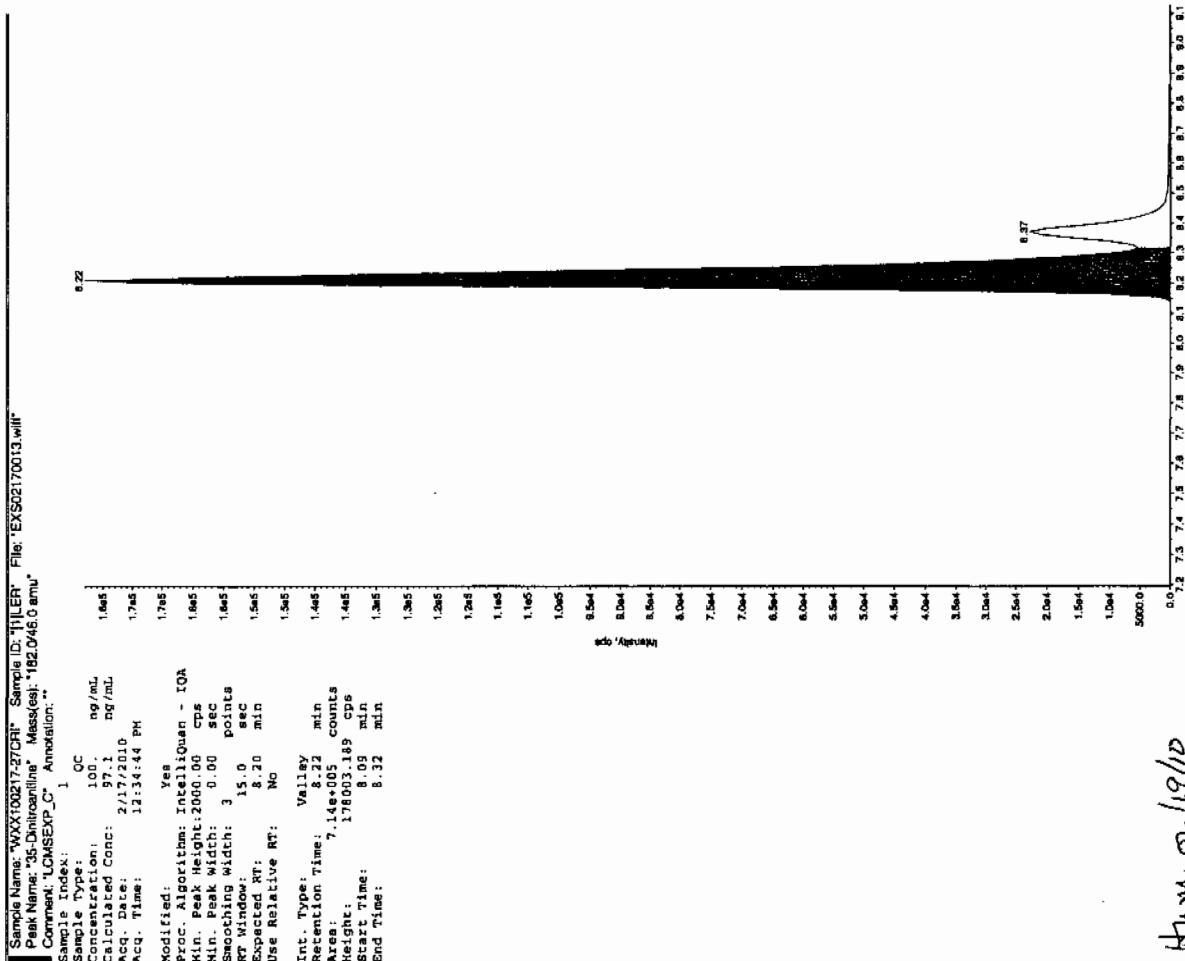
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

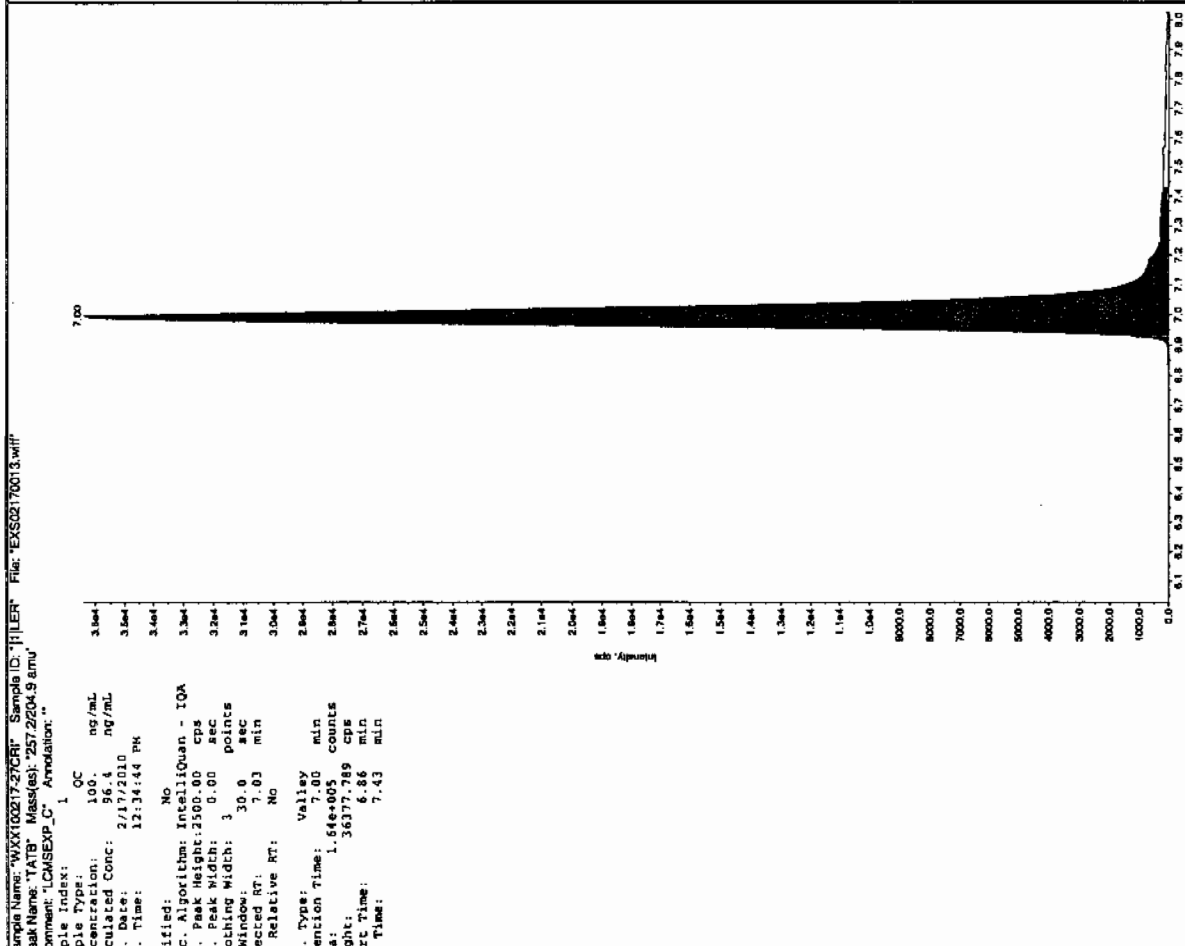
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

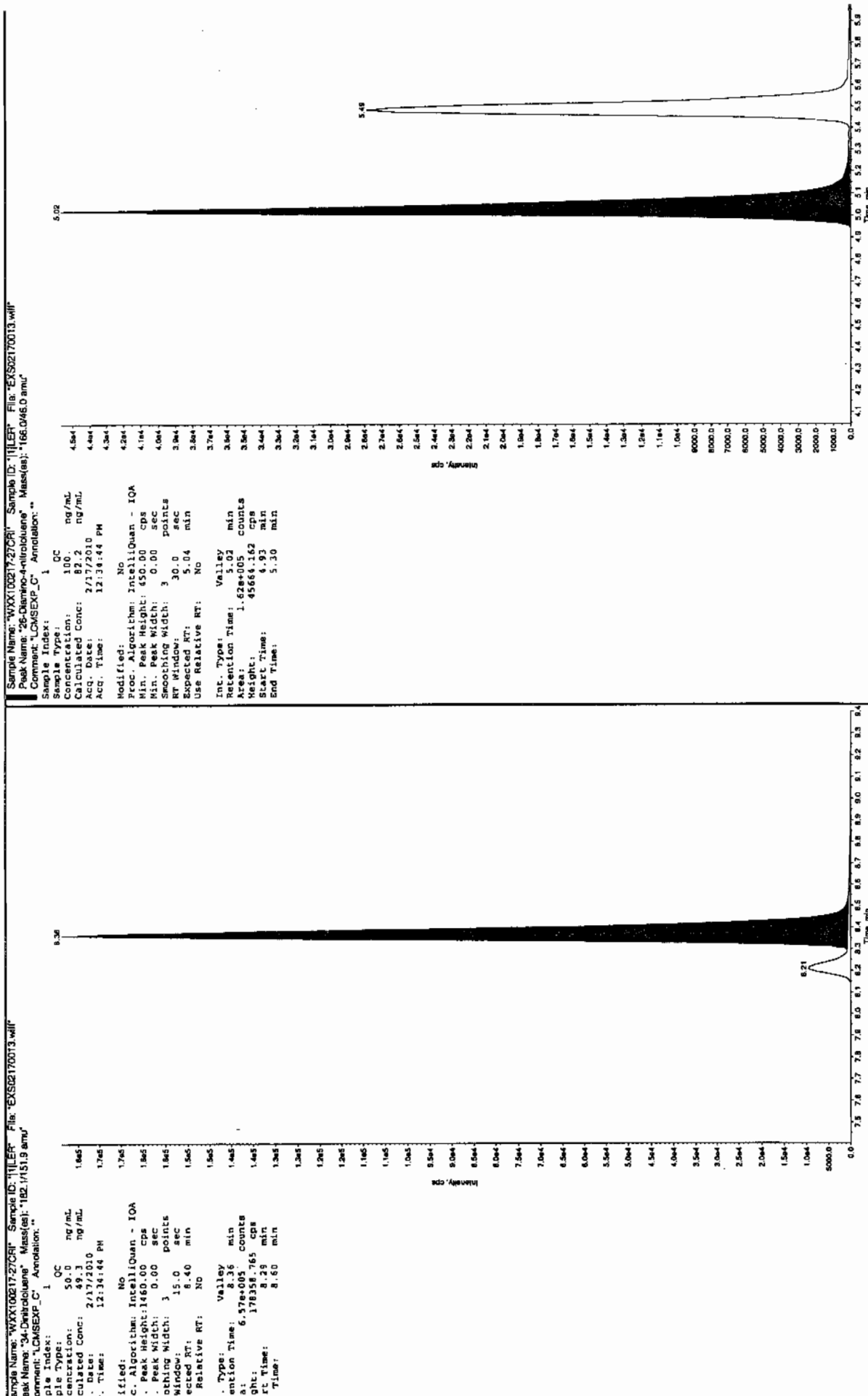
Sen 2/19/10



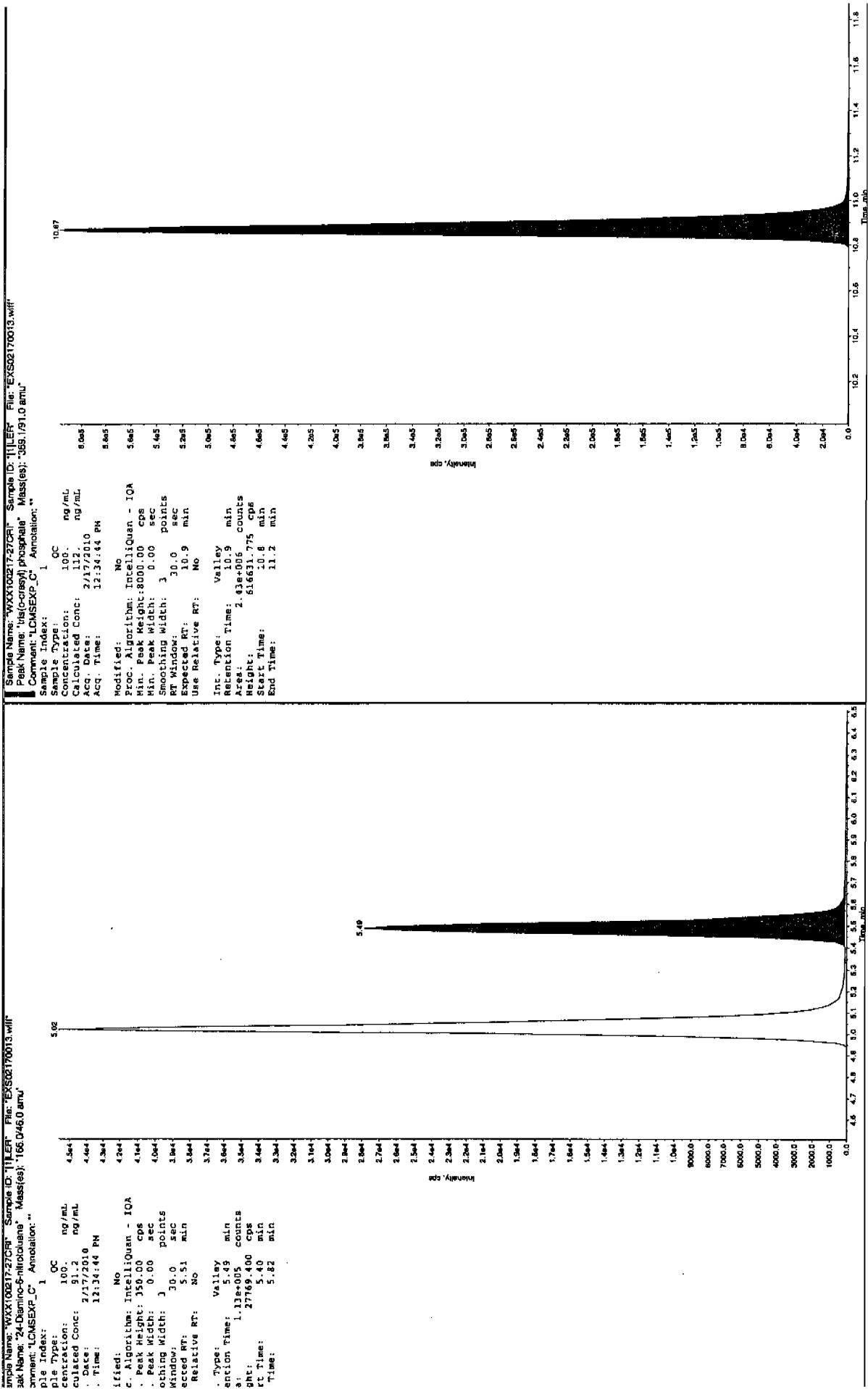
HW on 1/9/10



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



EL SOP GL-OA-E-056, Method 8321A-Modified LCM SMS#4



7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS02170024.wiff

Analysis Date: 17-FEB-10 15:27

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	464	93	
3,4-Dinitrotoluene	250	257	103	
3,5-Dinitroaniline	500	497	100	
TATB	500	470	94	
tris(o-cresyl) phosphate	500	488	98	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

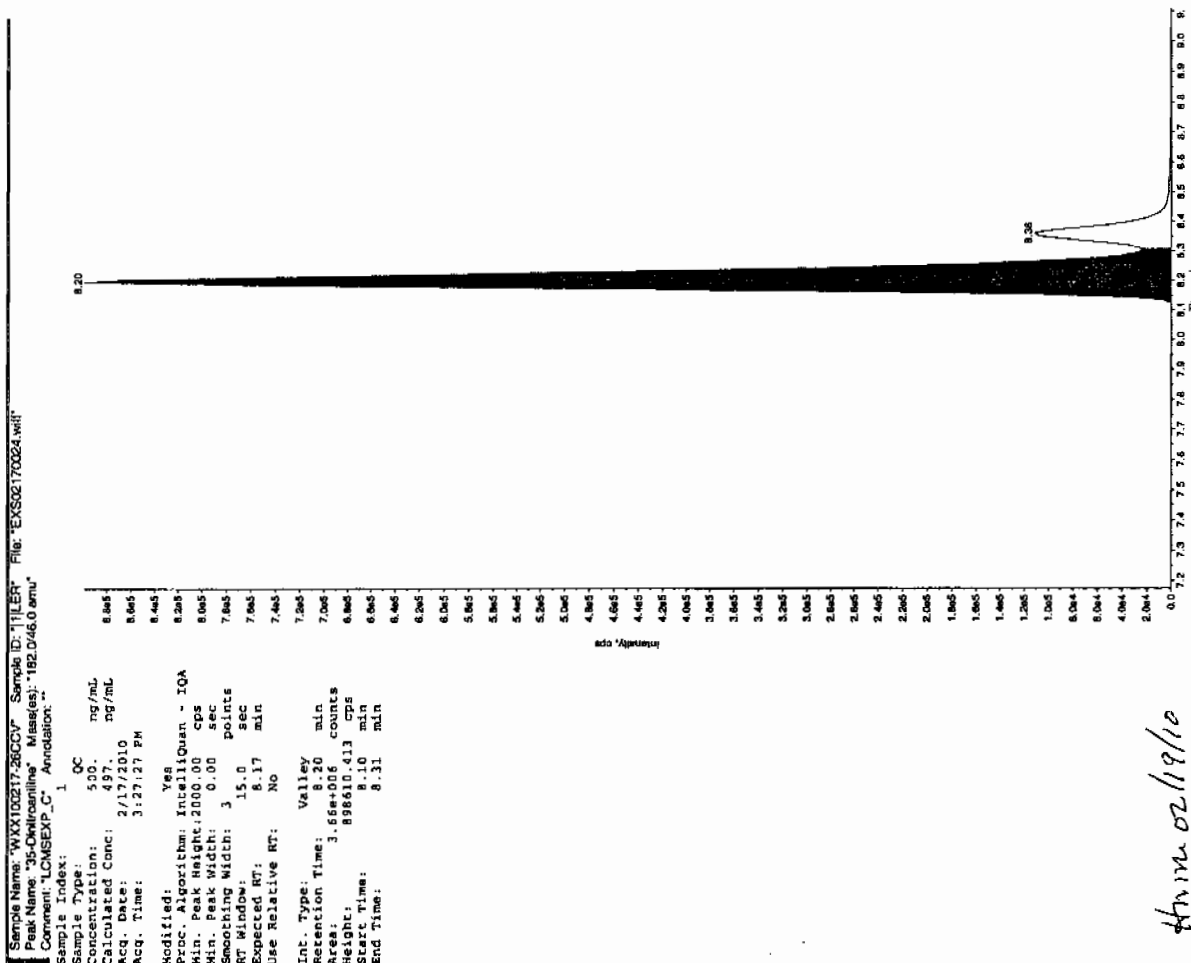
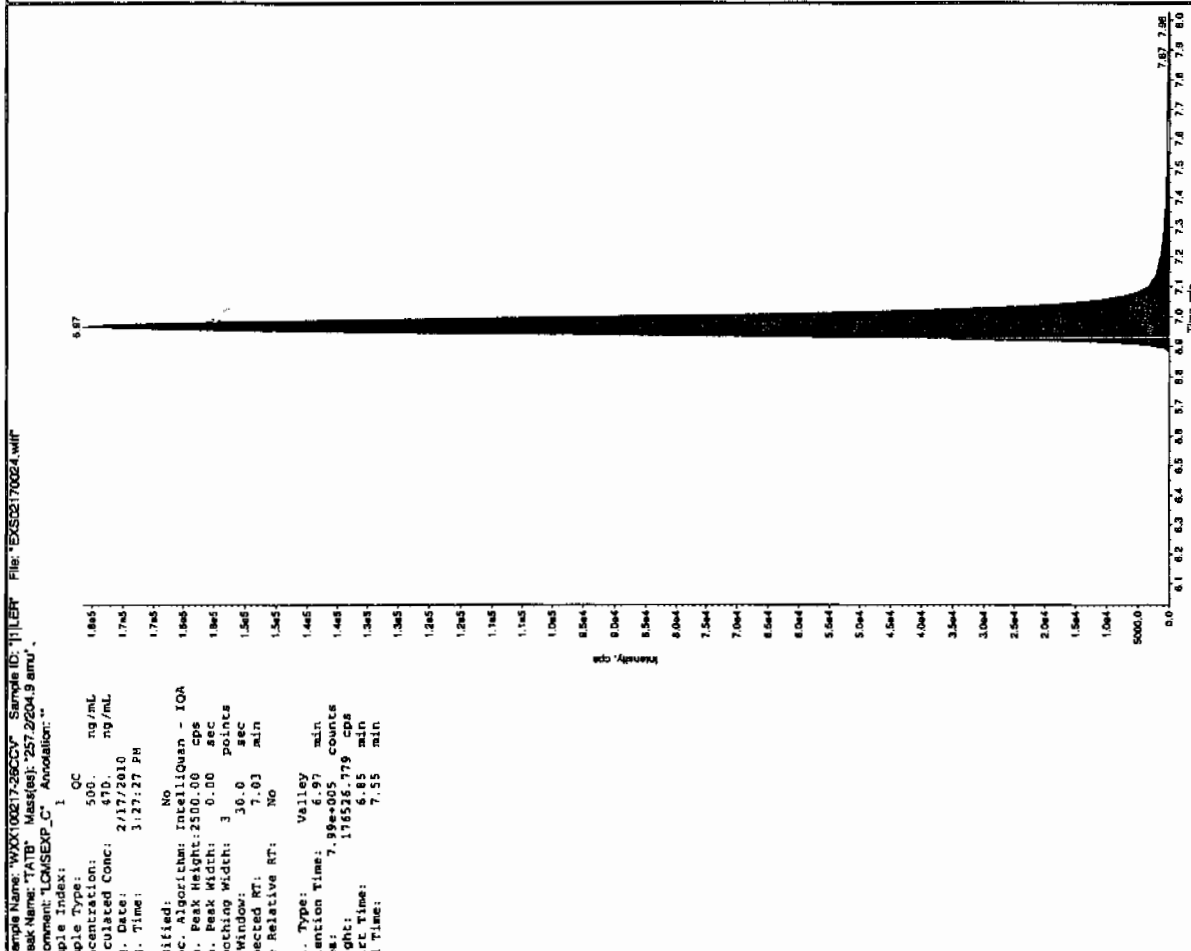
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

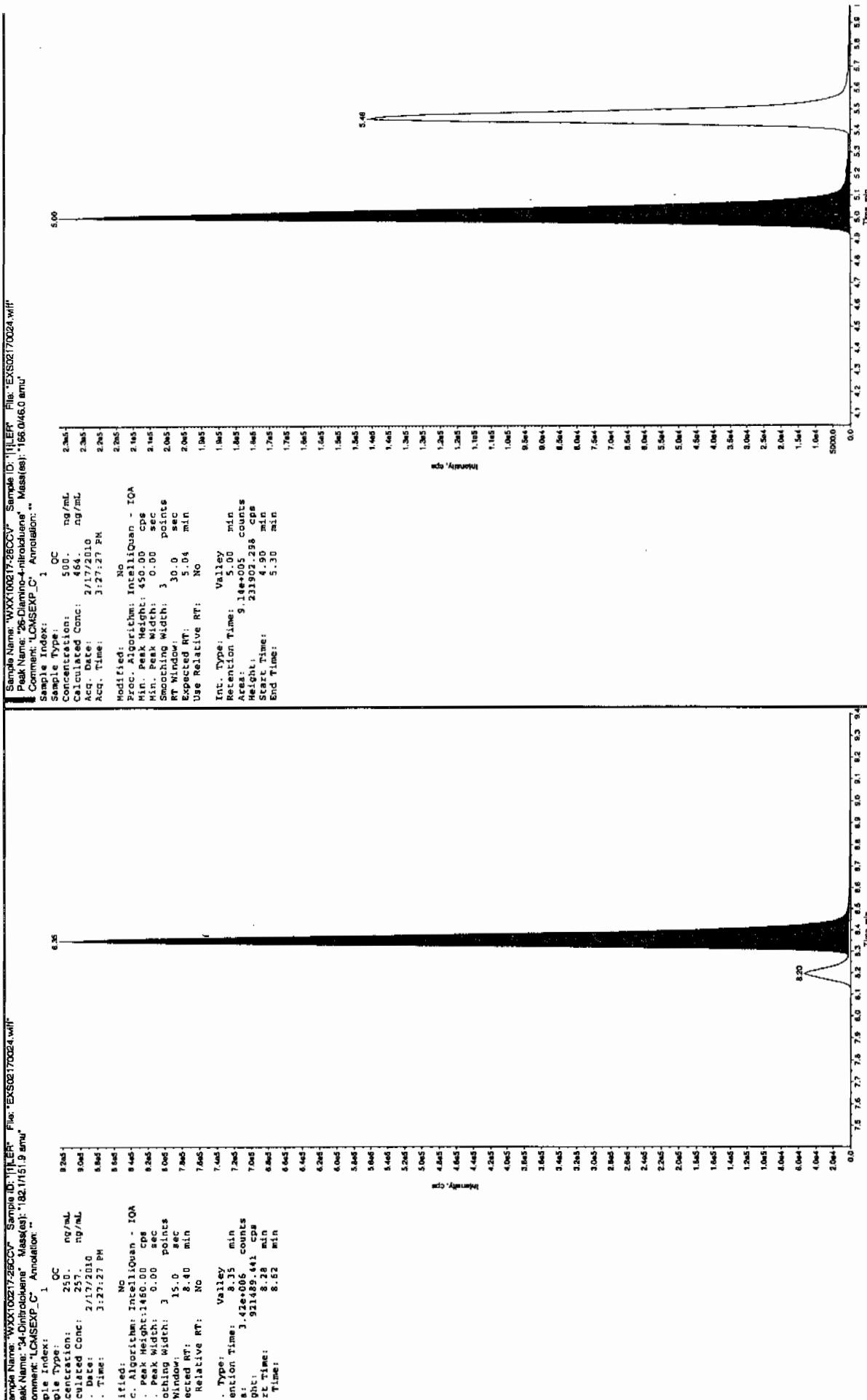
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

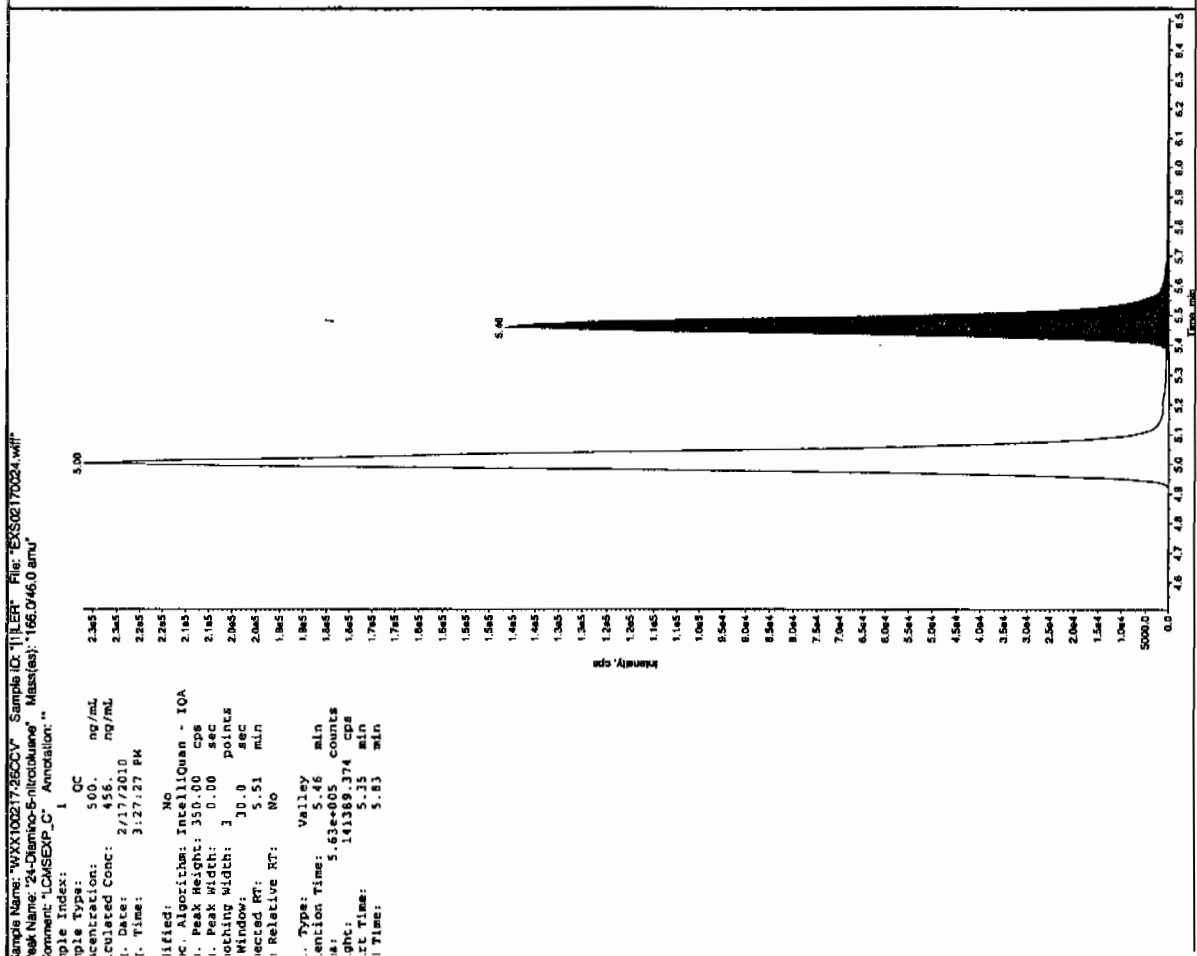
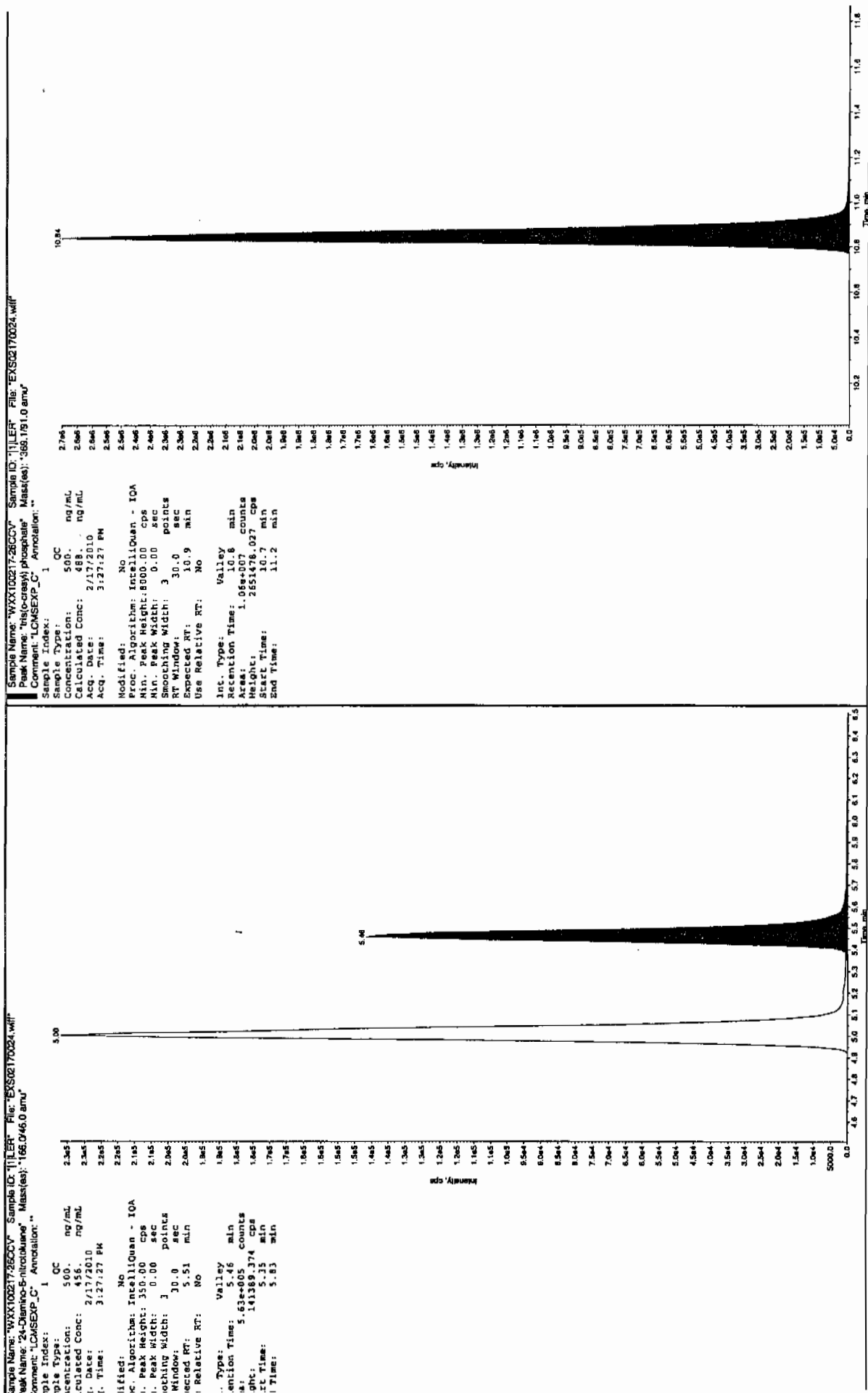
Ken 2/19/10



4/11/10 02/19/10



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



EL SOP GL-OA-E-056, Method 8321A-Modified LCM SMS#4

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS02170026.wiff

Analysis Date: 17-FEB-10 15:58

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	79.7	80	
2,6-Diamino-4-nitrotoluene	100	104	104	
3,4-Dinitrotoluene	50	51	102	
3,5-Dinitroaniline	100	114	114	
TATB	100	97.5	98	
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 ,

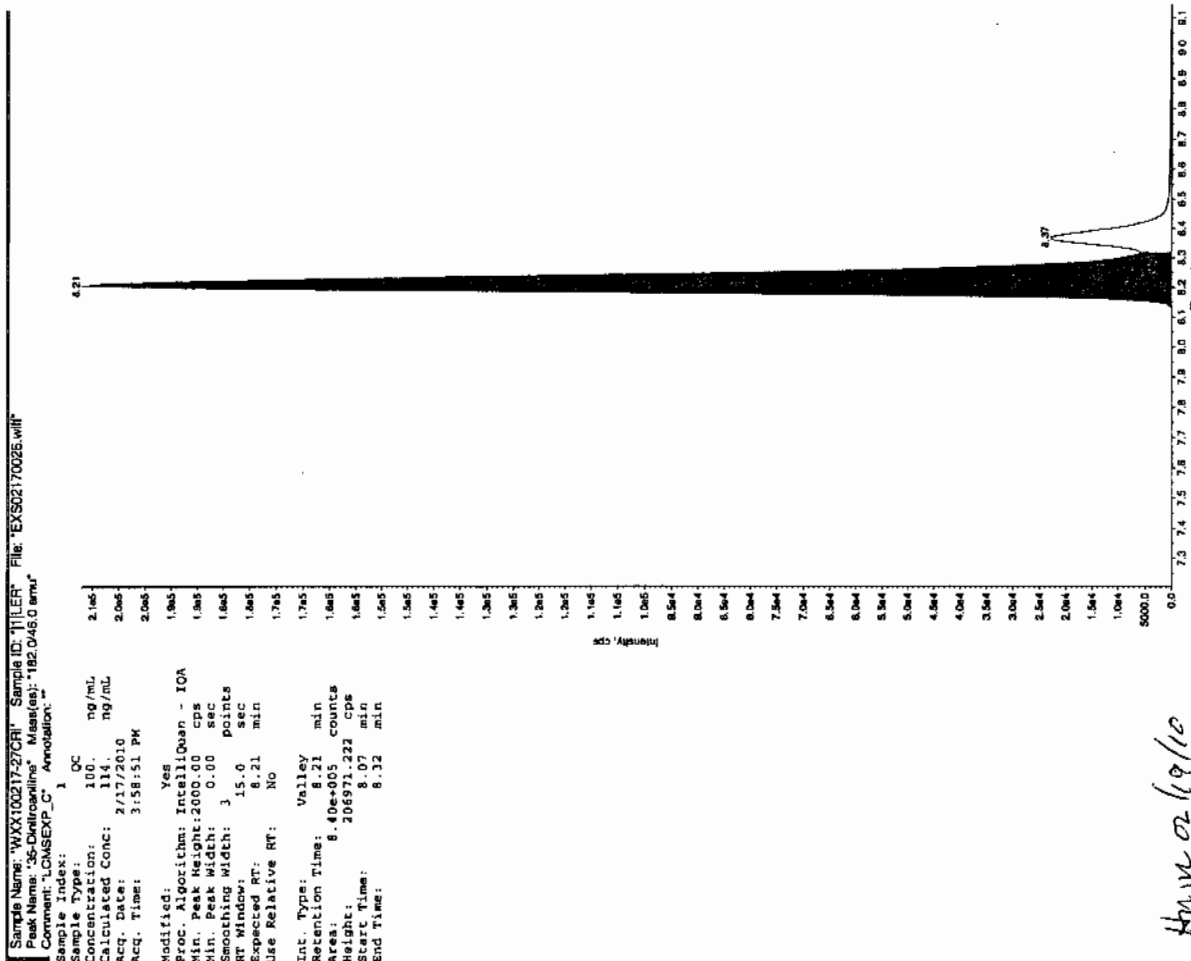
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

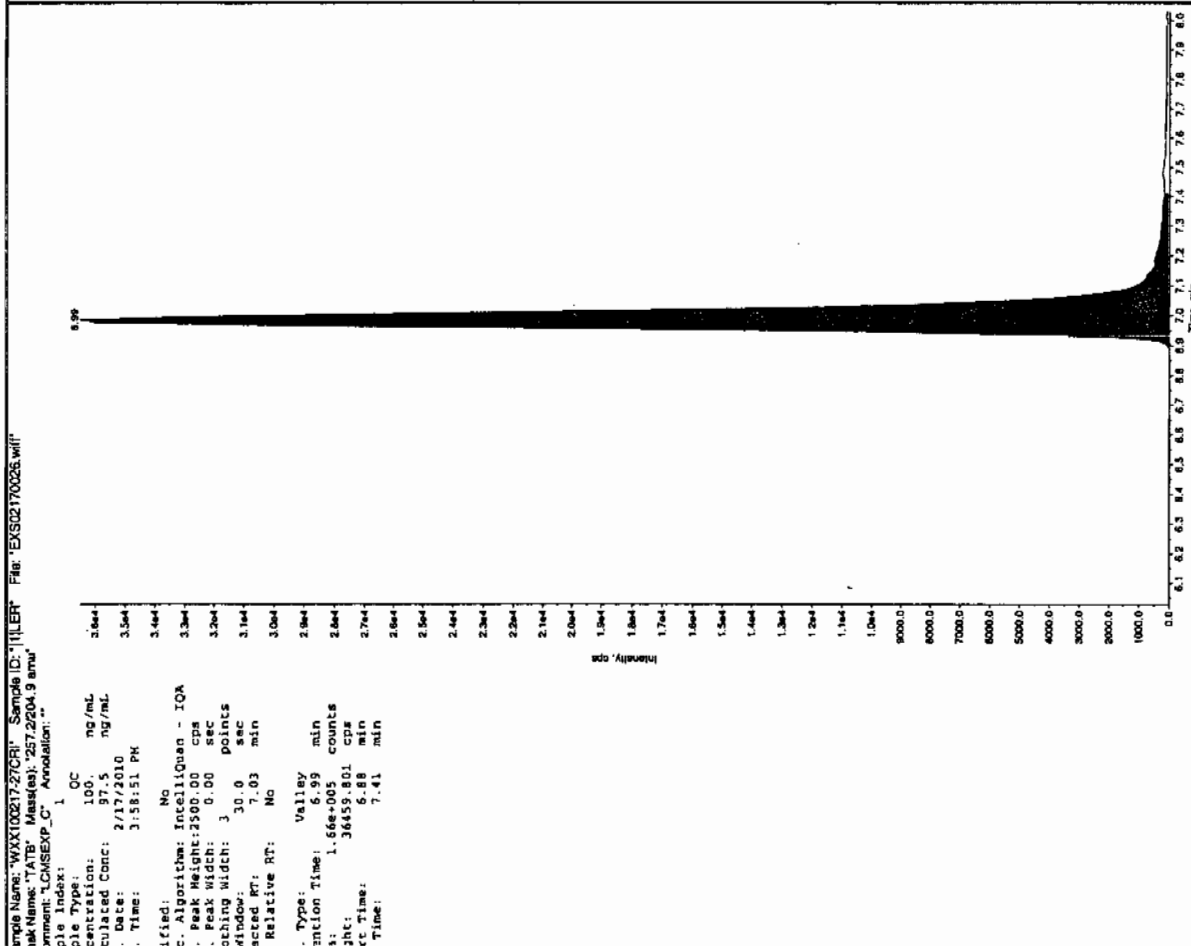
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

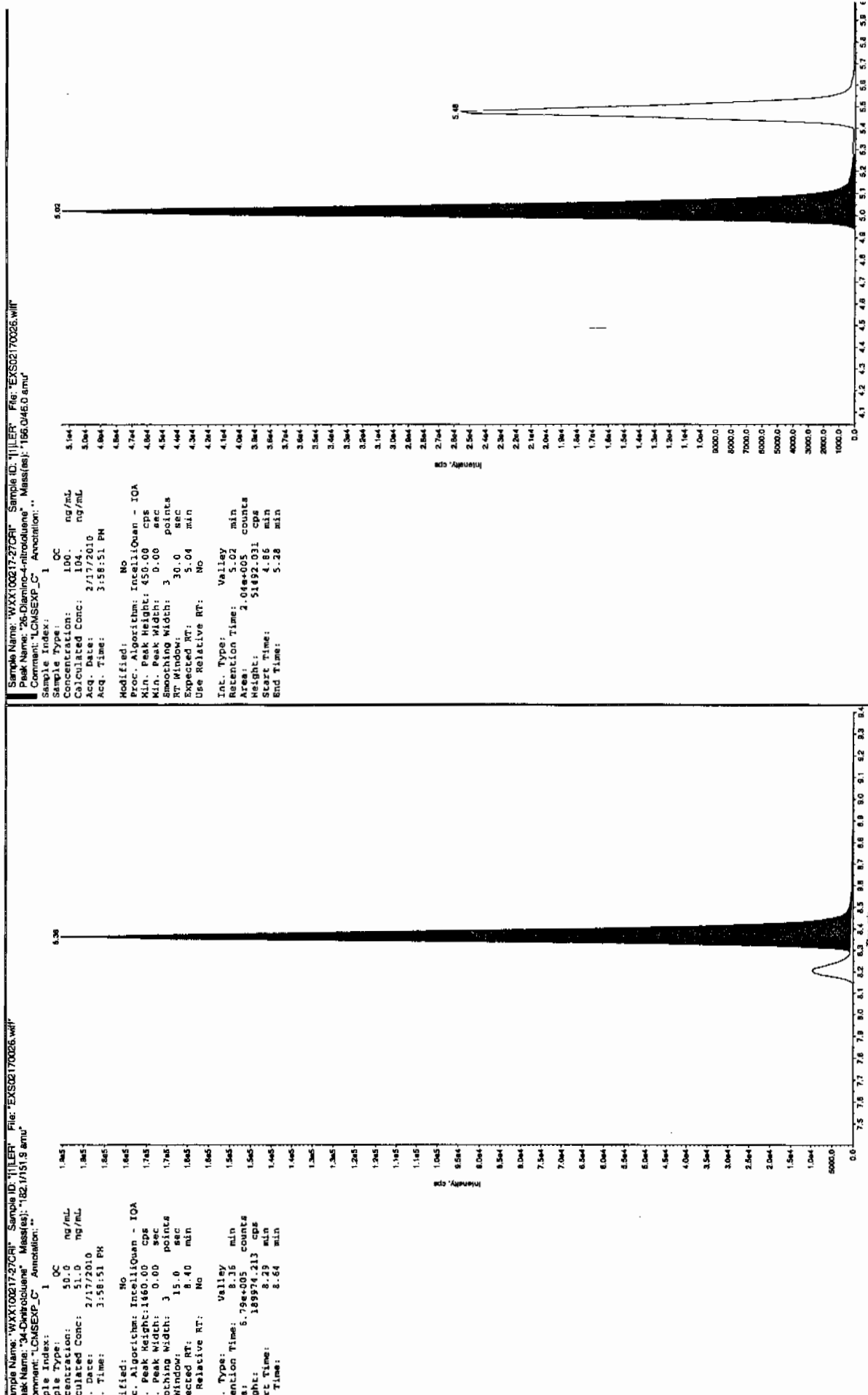
Jan 21/9/10



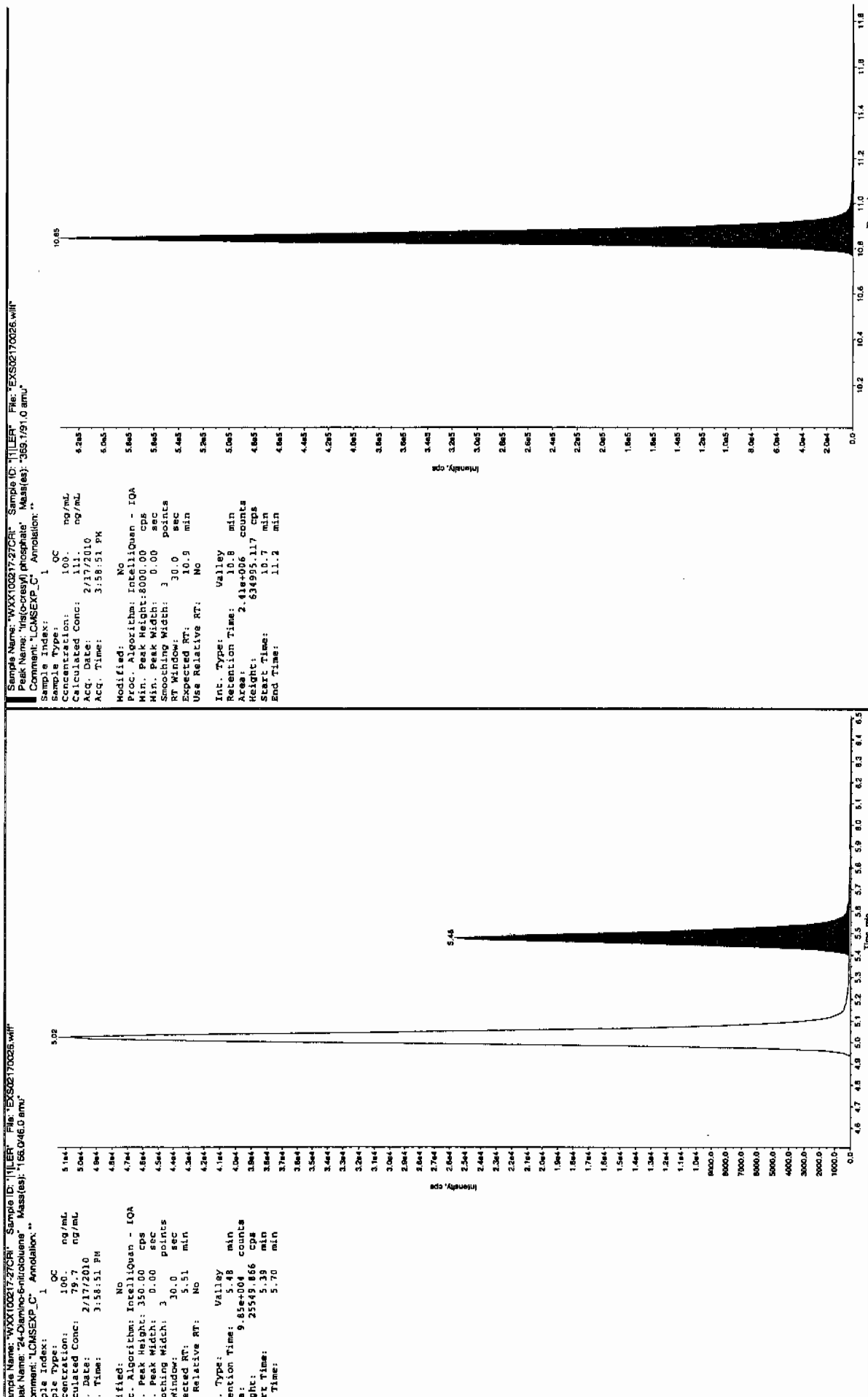
Jan 21/9/10



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



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



7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS02170037.wiff

Analysis Date: 17-FEB-10 18:51

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	351	70	
2,6-Diamino-4-nitrotoluene	500	477	95	
3,4-Dinitrotoluene	250	253	101	
3,5-Dinitroaniline	500	506	101	
TATB	500	509	102	
tris(o-cresyl) phosphate	500	502	100	

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%

Other Target Analytes 80-120%

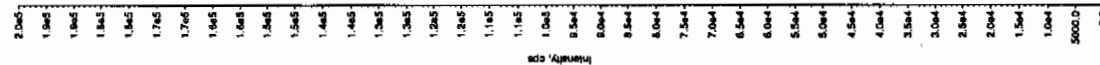
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

See 2/19/10

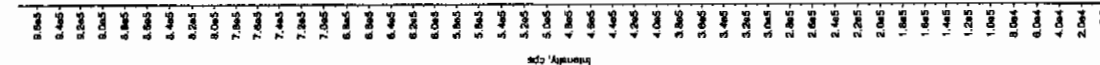
Sample Name: WXX100217-260CV Sample ID: 111ER File: EXS02170037.wif
Peak Name: TATE- Mass(es): 257.20049 amu
Comment: LCMSEXP_C Annotation:

File Index: 1 OC
Sample Type: 500. ng/mL
Concentration: 500. ng/mL
Calculated Conc: 2/17/2010
Acq. Date: 6:51:36 PM
Acq. Time: 6:51:36 PM
Modified: No
Proc. Algorithm: IntelliQuan - IOA
Min. Peak Height: 2500.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 30.0 sec
Expected RT: 7.03 min
Use Relative RT: No
Int. Type: Valley
Retention Time: 7.03 min
Area: 8.64e+005 counts
Height: 195147.095 cps
Start Time: 6.92 min
End Time: 7.85 min

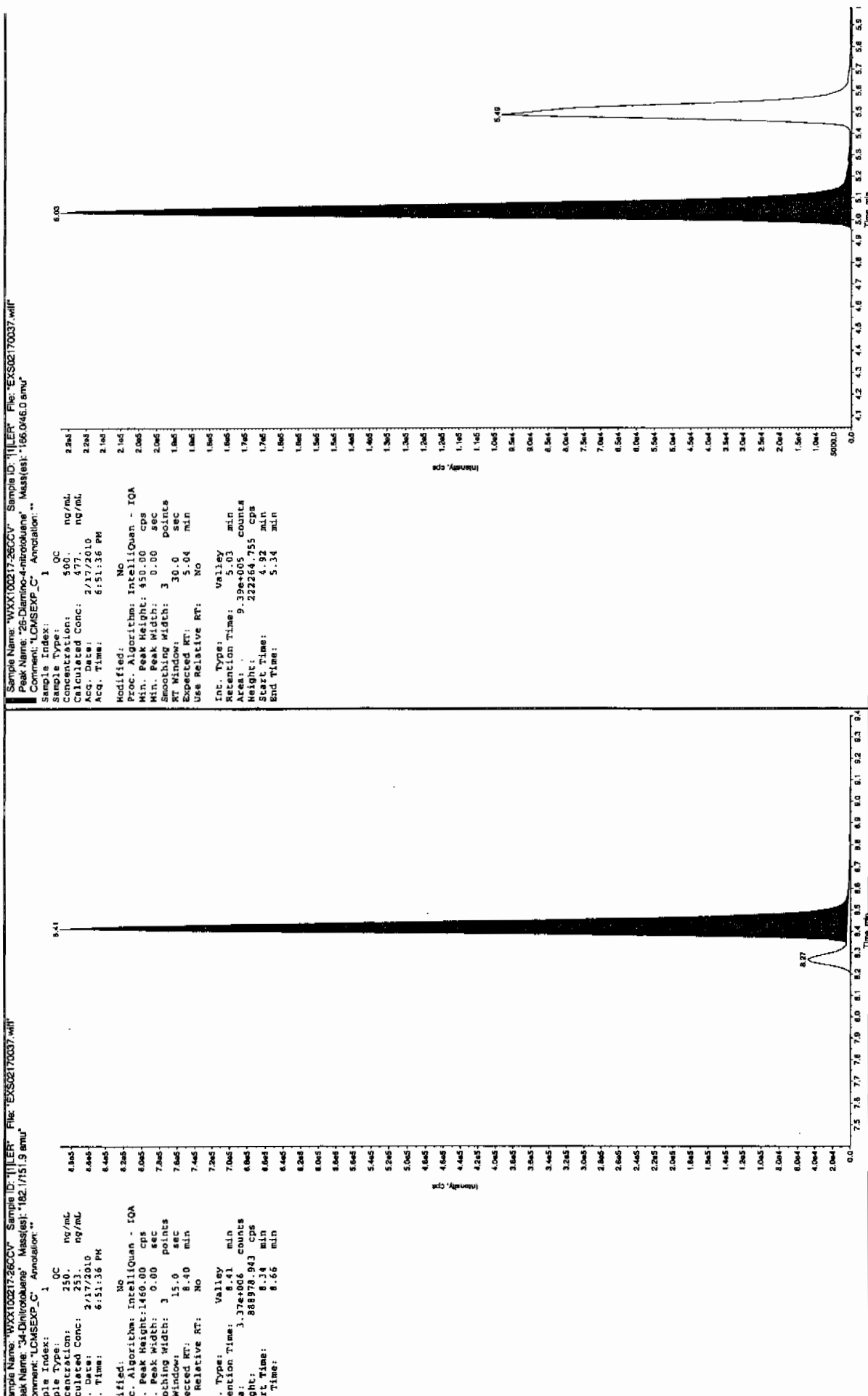


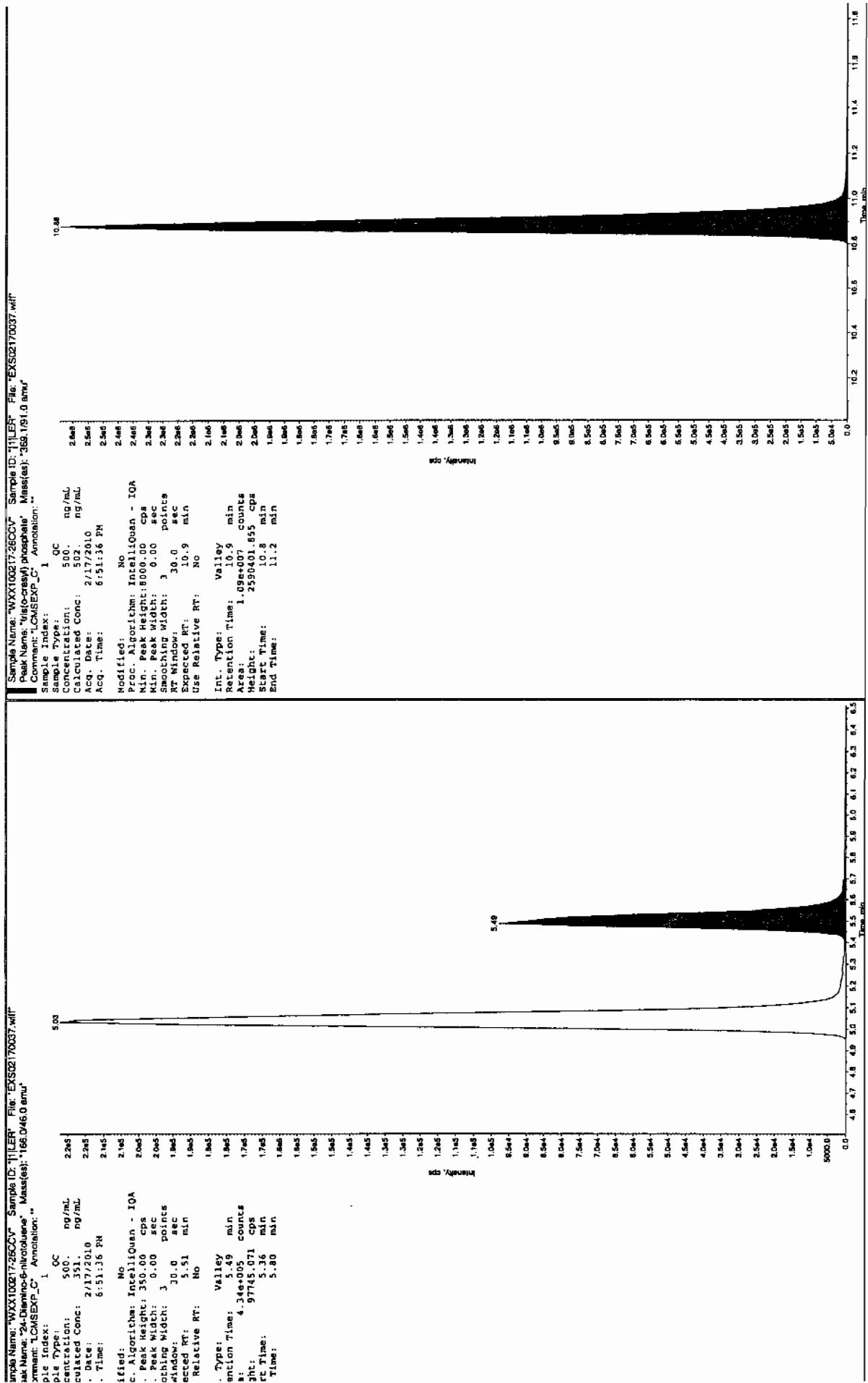
Sample Name: WXX100217-260CV Sample ID: 111ER File: EXS02170037.wif
Peak Name: 35-Contaminant- Mass(es): 182.046.0 amu
Comment: LCMSEXP_C Annotation:

File Index: 1 OC
Sample Type: 500. ng/mL
Concentration: 500. ng/mL
Calculated Conc: 2/17/2010
Acq. Date: 6:51:36 PM
Acq. Time: 6:51:36 PM
Modified: No
Proc. Algorithm: IntelliQuan - IOA
Min. Peak Height: 2000.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 15.0 sec
Expected RT: 8.26 min
Use Relative RT: No
Int. Type: Valley
Retention Time: 8.26 min
Area: 3.72e+006 counts
Height: 977664.917 cps
Start Time: 8.17 min
End Time: 8.37 min



thm 2/19/10





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

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS02170039.wiff

Analysis Date: 17-FEB-10 19:23

LCMSMS ID: 1358

Column ID: Sphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	87.9	88	
2,6-Diamino-4-nitrotoluene	100	98.8	99	
3,4-Dinitrotoluene	50	53.1	106	
3,5-Dinitroaniline	100	104	104	
TATB	100	97.2	97	
tris(o-cresyl) phosphate	100	111	111	

Recovery Limits:

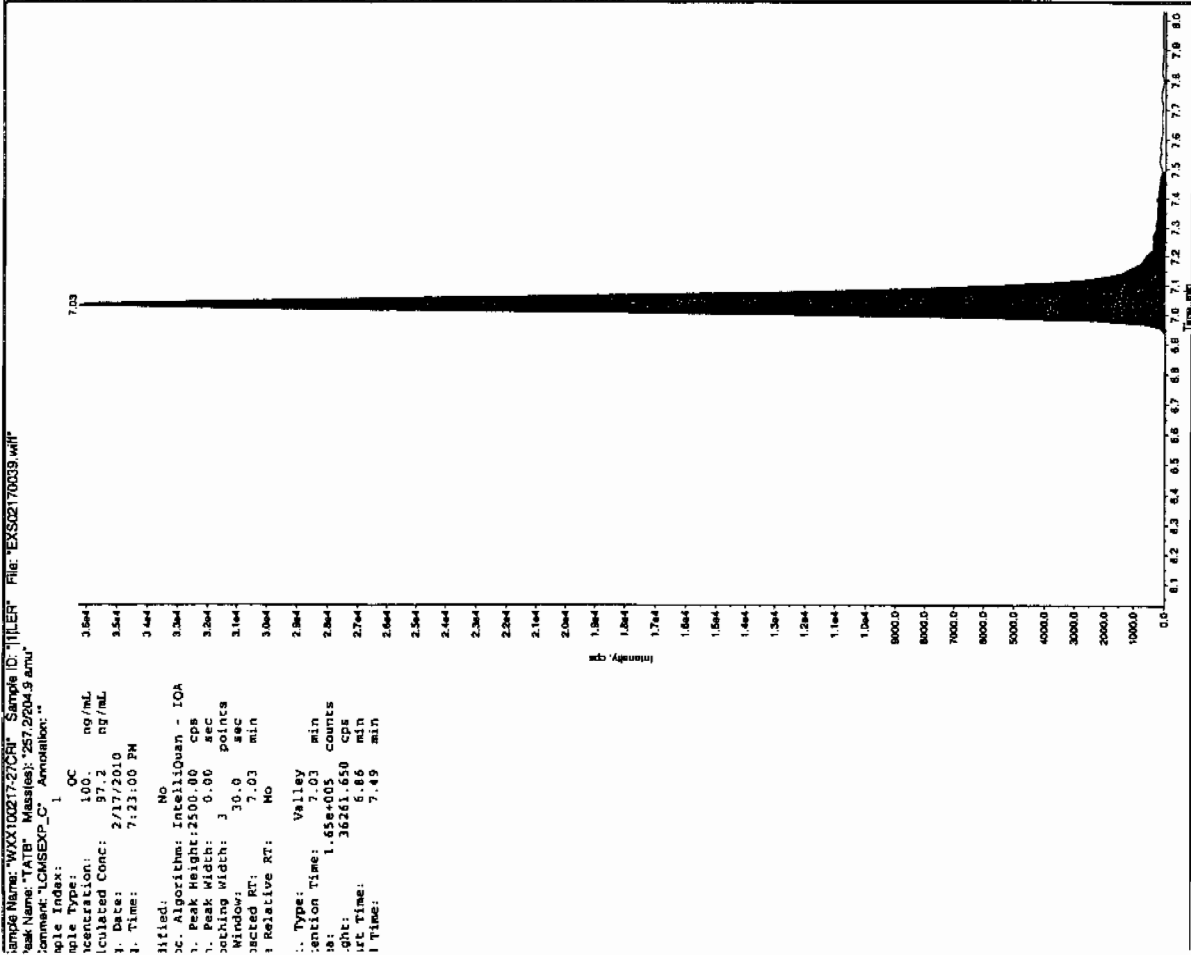
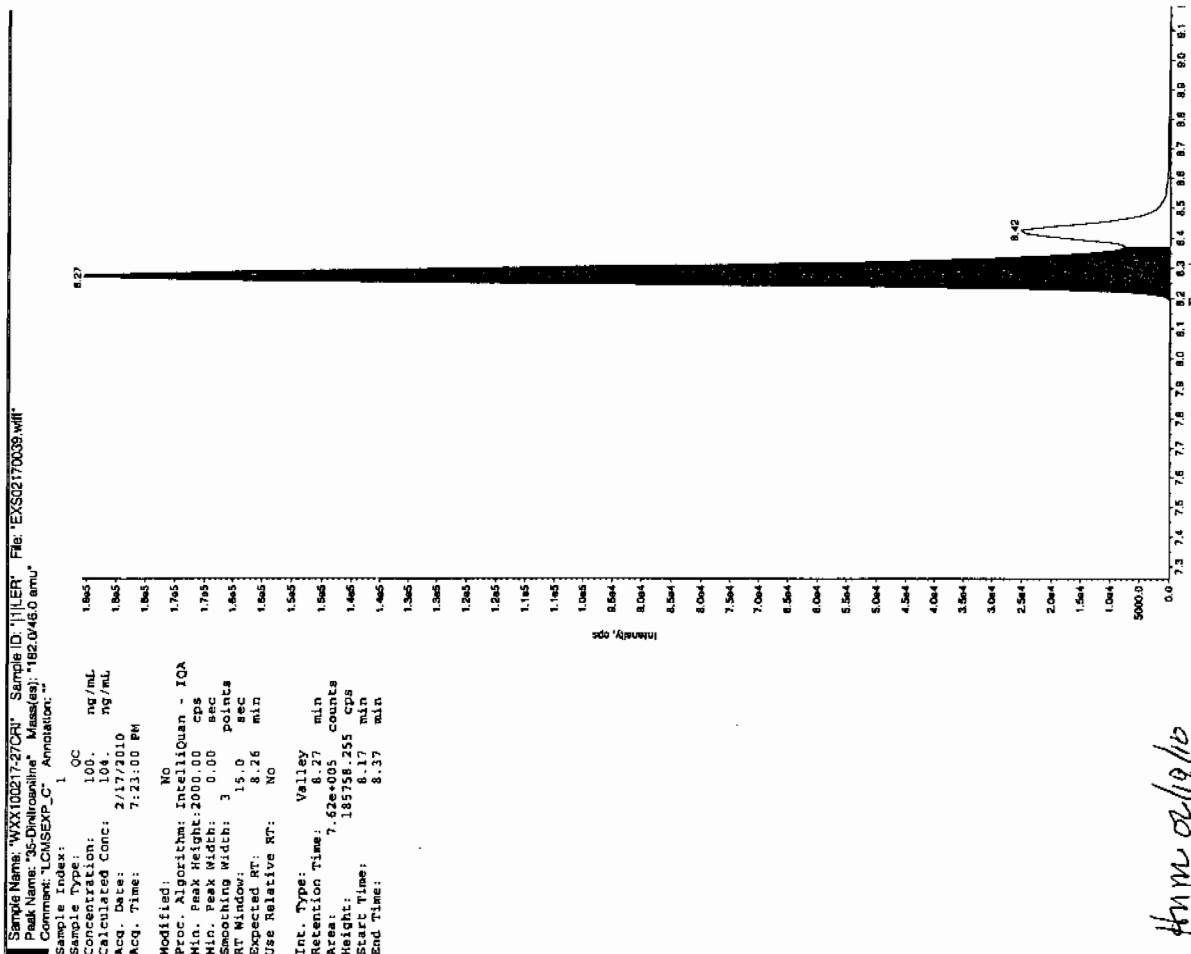
3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

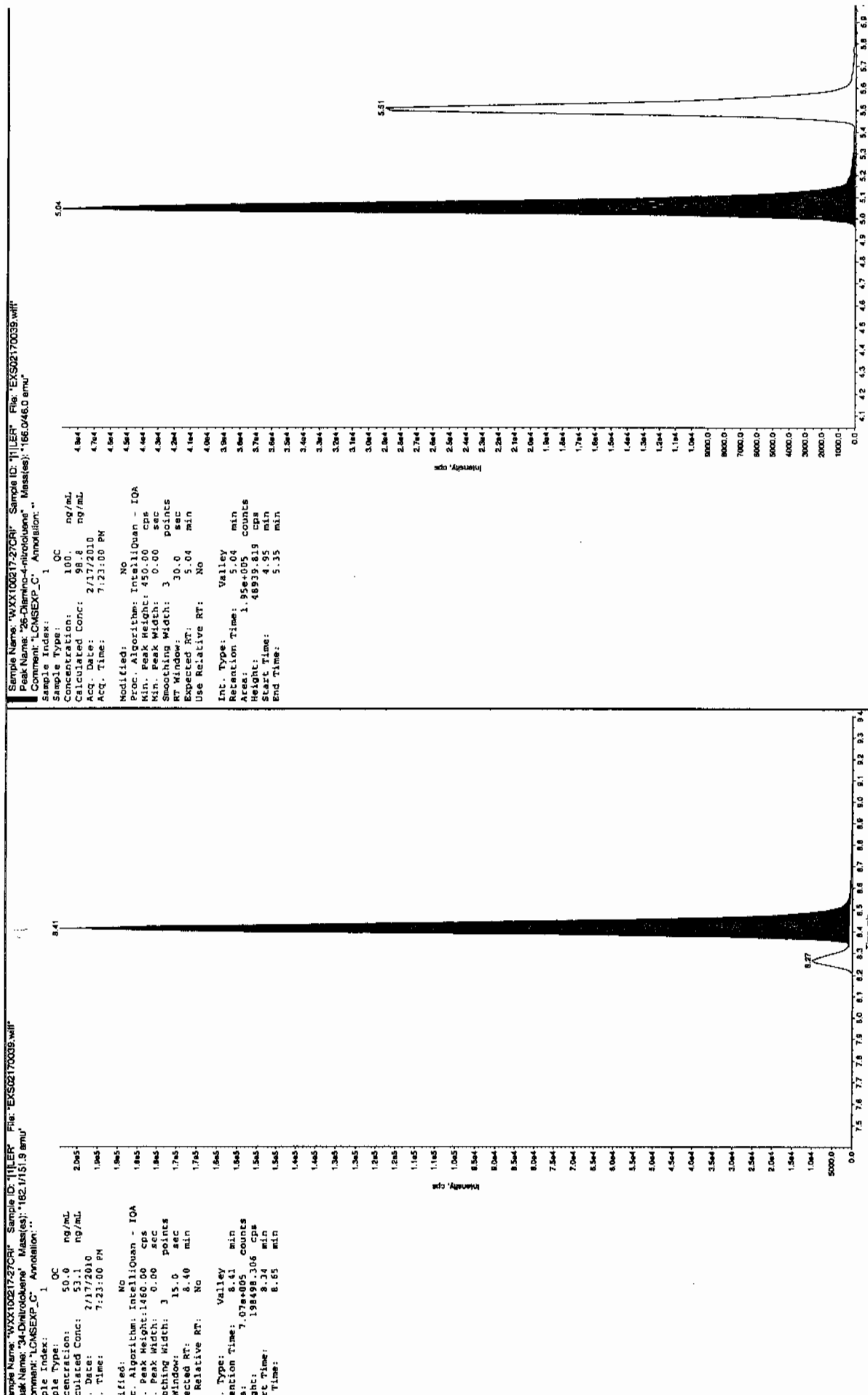
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

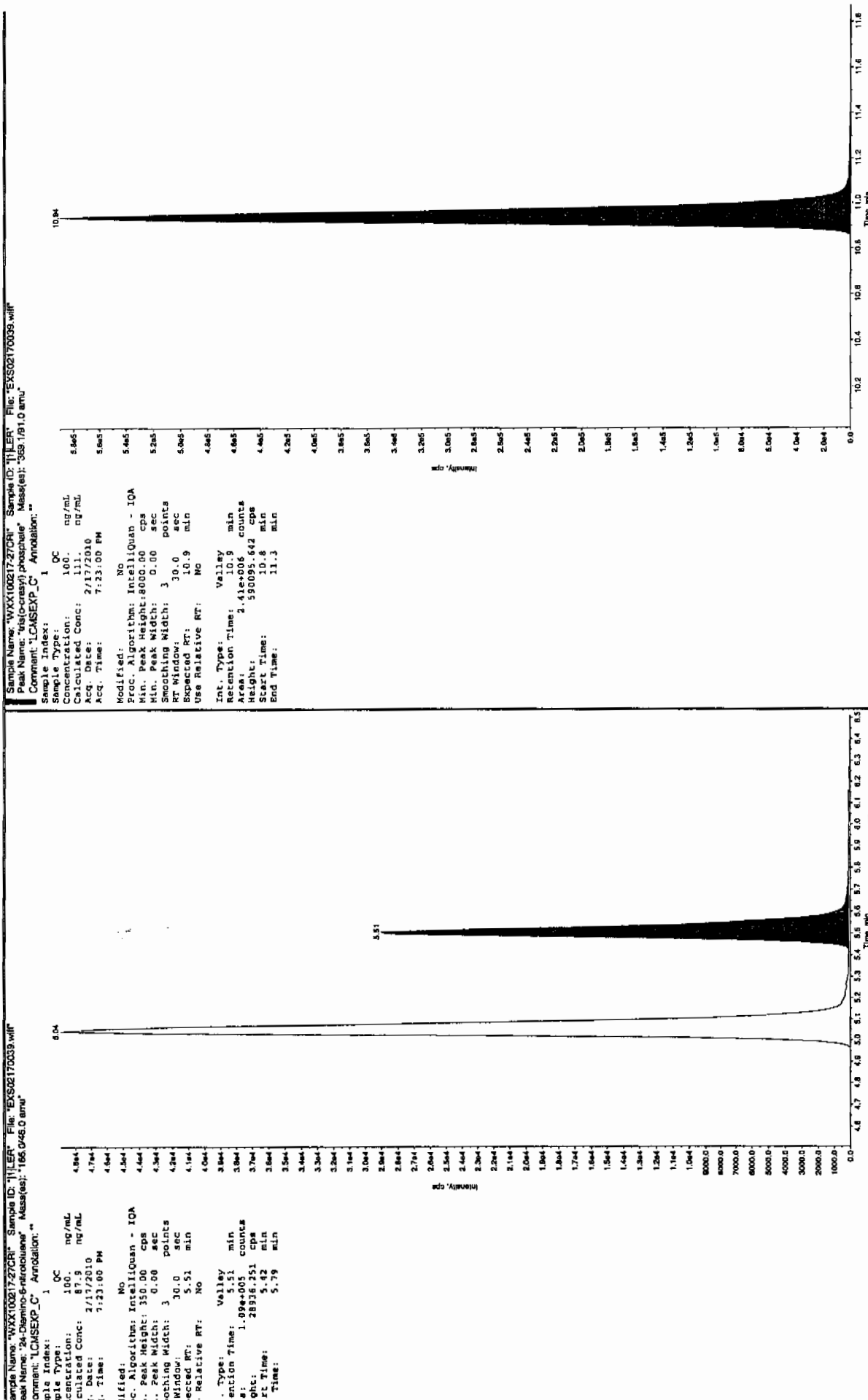
Jan 21/10/10



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



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



7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS02170043.wiff

Analysis Date: 17-FEB-10 20:25

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	500	100	
2,6-Diamino-4-nitrotoluene	500	503	101	
3,4-Dinitrotoluene	250	250	100	
3,5-Dinitroaniline	500	509	102	
TATB	500	483	97	
tris(o-cresyl) phosphate	500	502	100	

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%

Other Target Analytes 80-120%

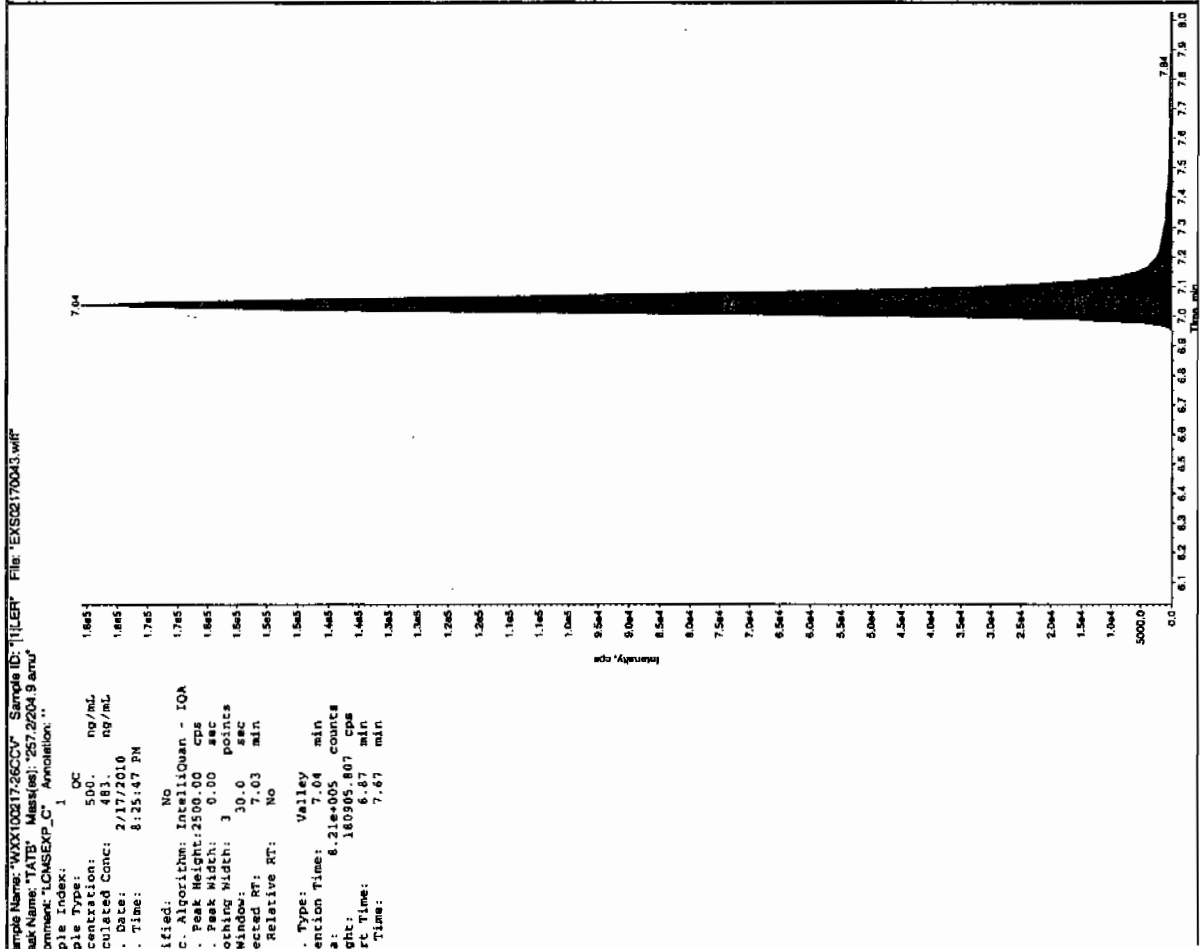
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

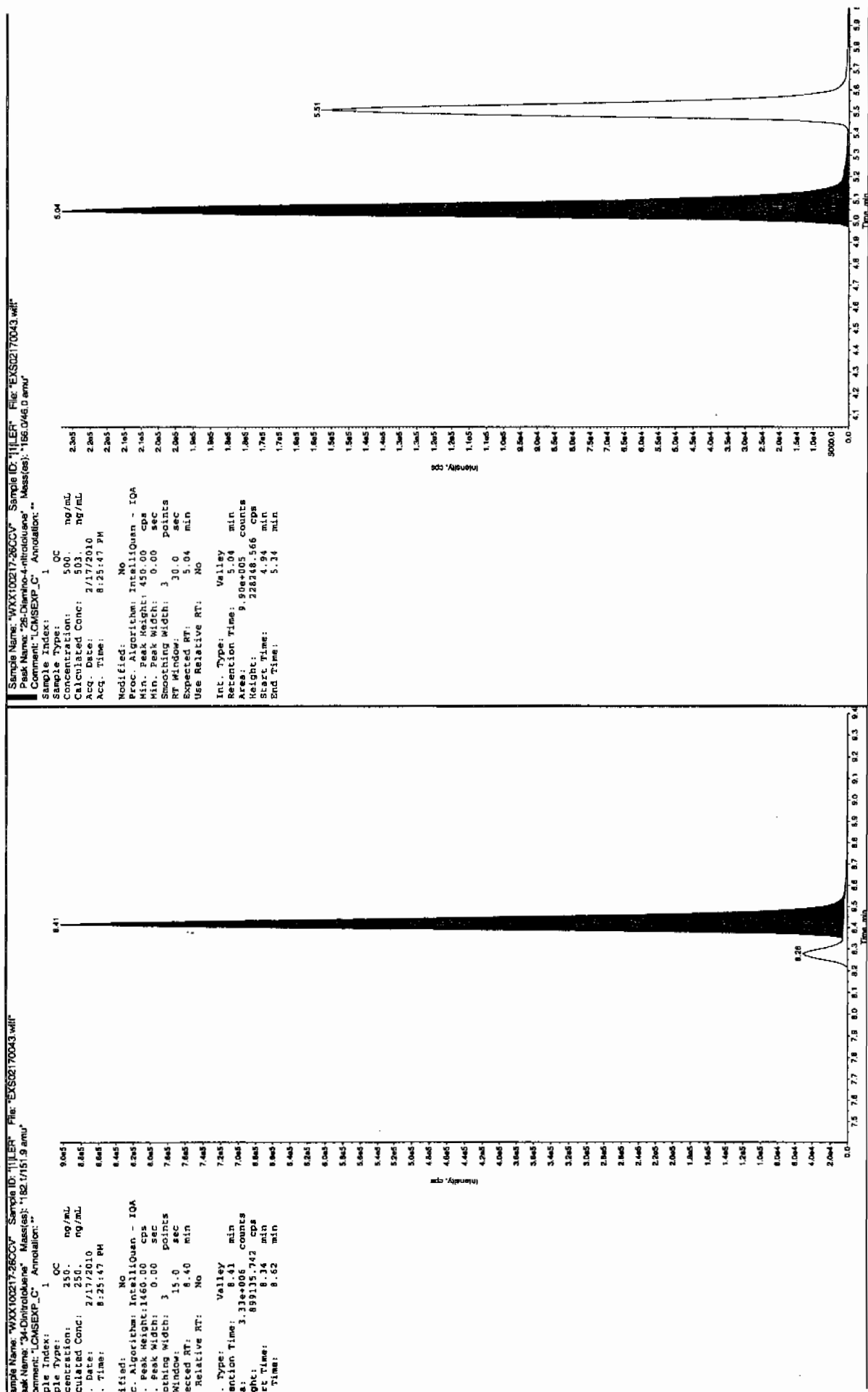
Sen 2/19/10



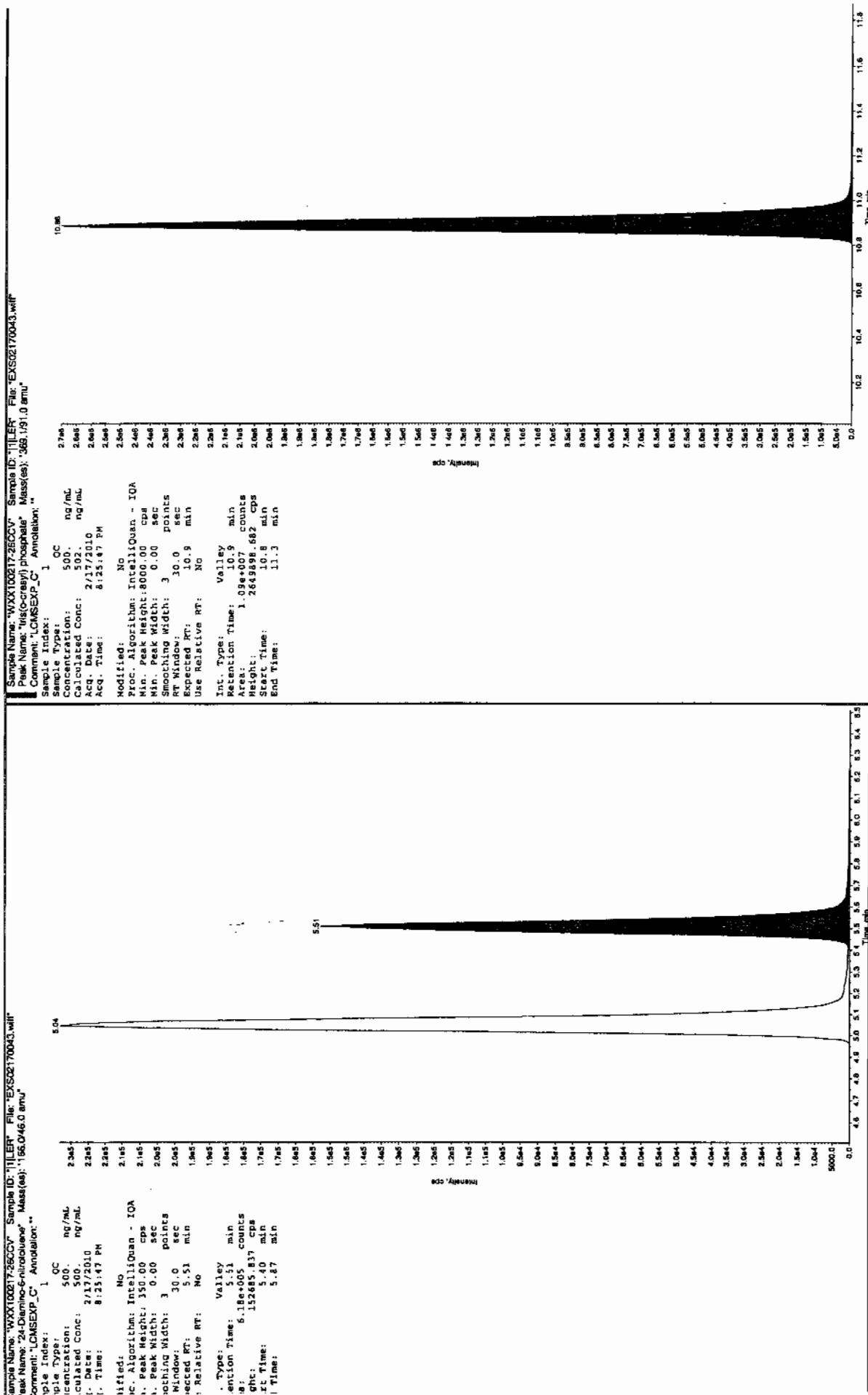
Hum 2/19/10



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



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



7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS02170045.wiff

Analysis Date: 17-FEB-10 20:57

LCMSMS ID: 1358

Column ID: JSphere ODS--H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	101	101	
2,6-Diamino-4-nitrotoluene	100	109	109	
3,4-Dinitrotoluene	50	50.3	101	
3,5-Dinitroaniline	100	108	108	
TATB	100	98.9	99	
tris(o-cresyl) phosphate	100	112	112	

Recovery Limits:

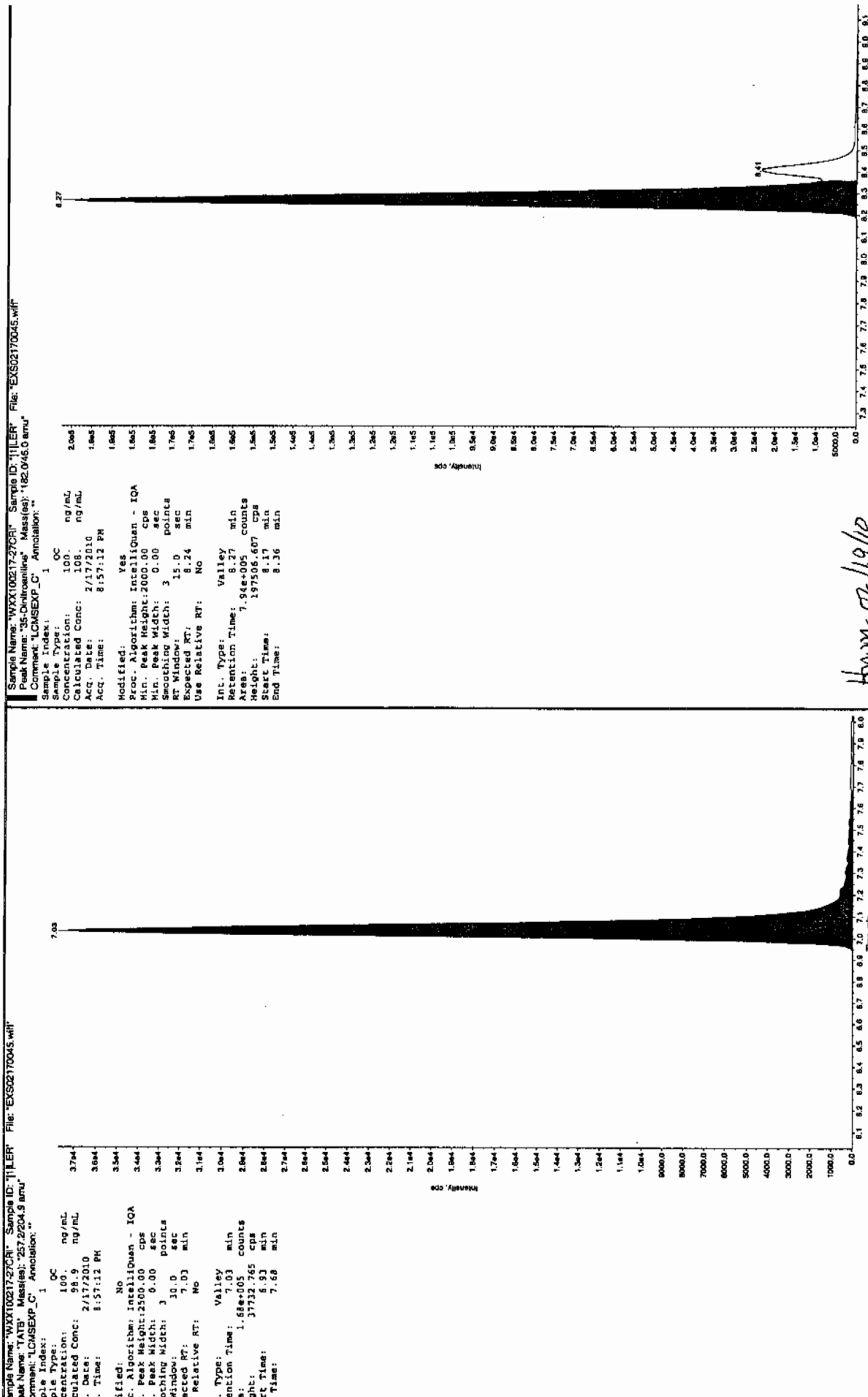
3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

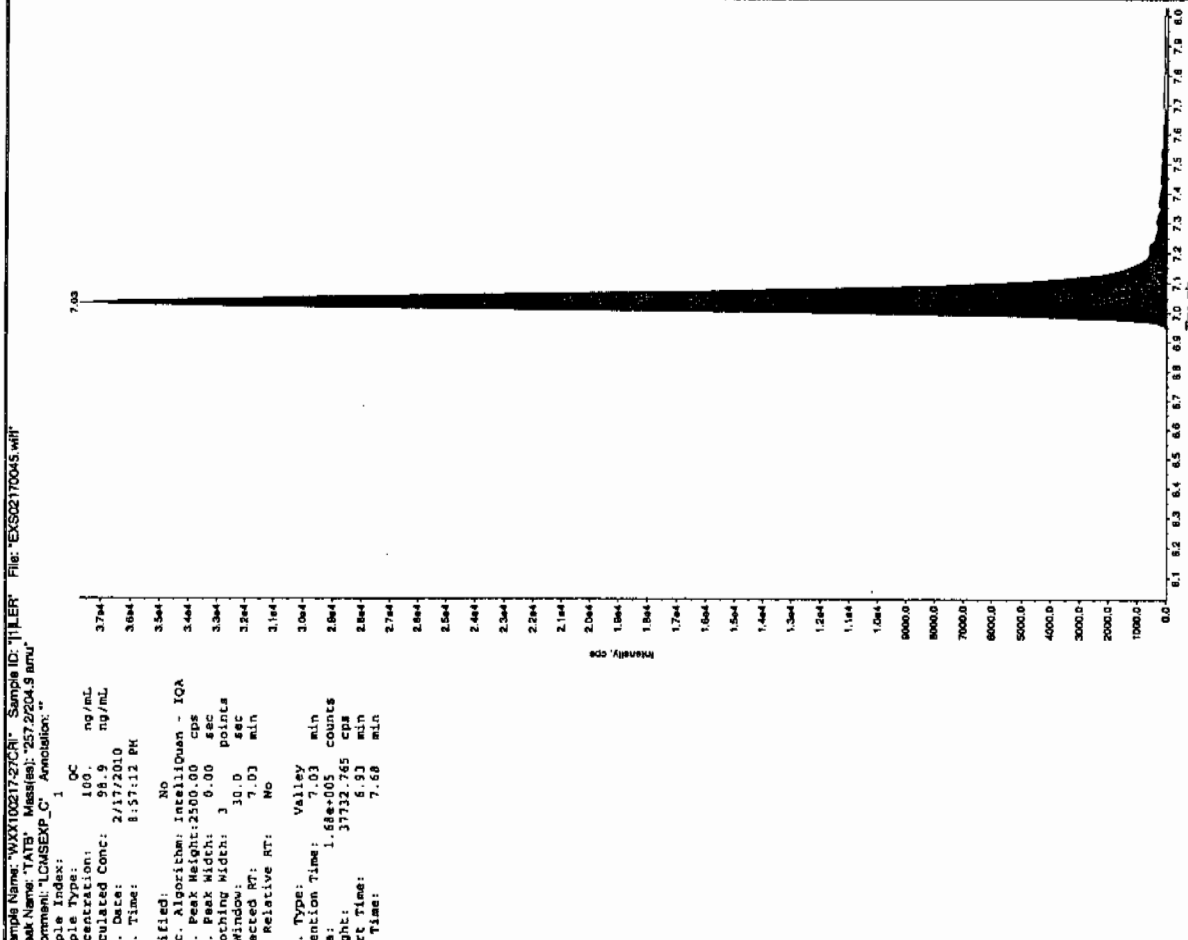
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

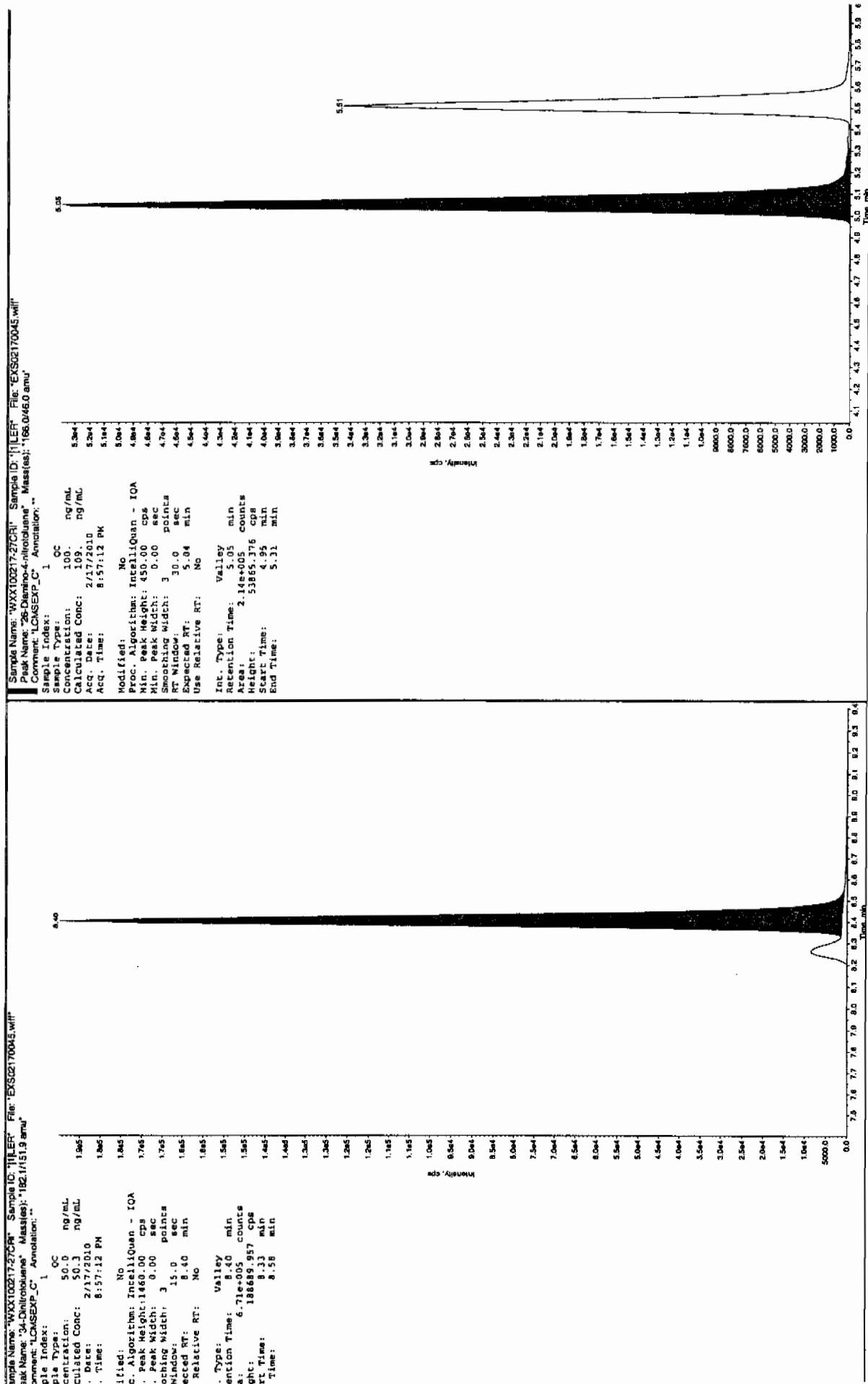
Jan 21/2010



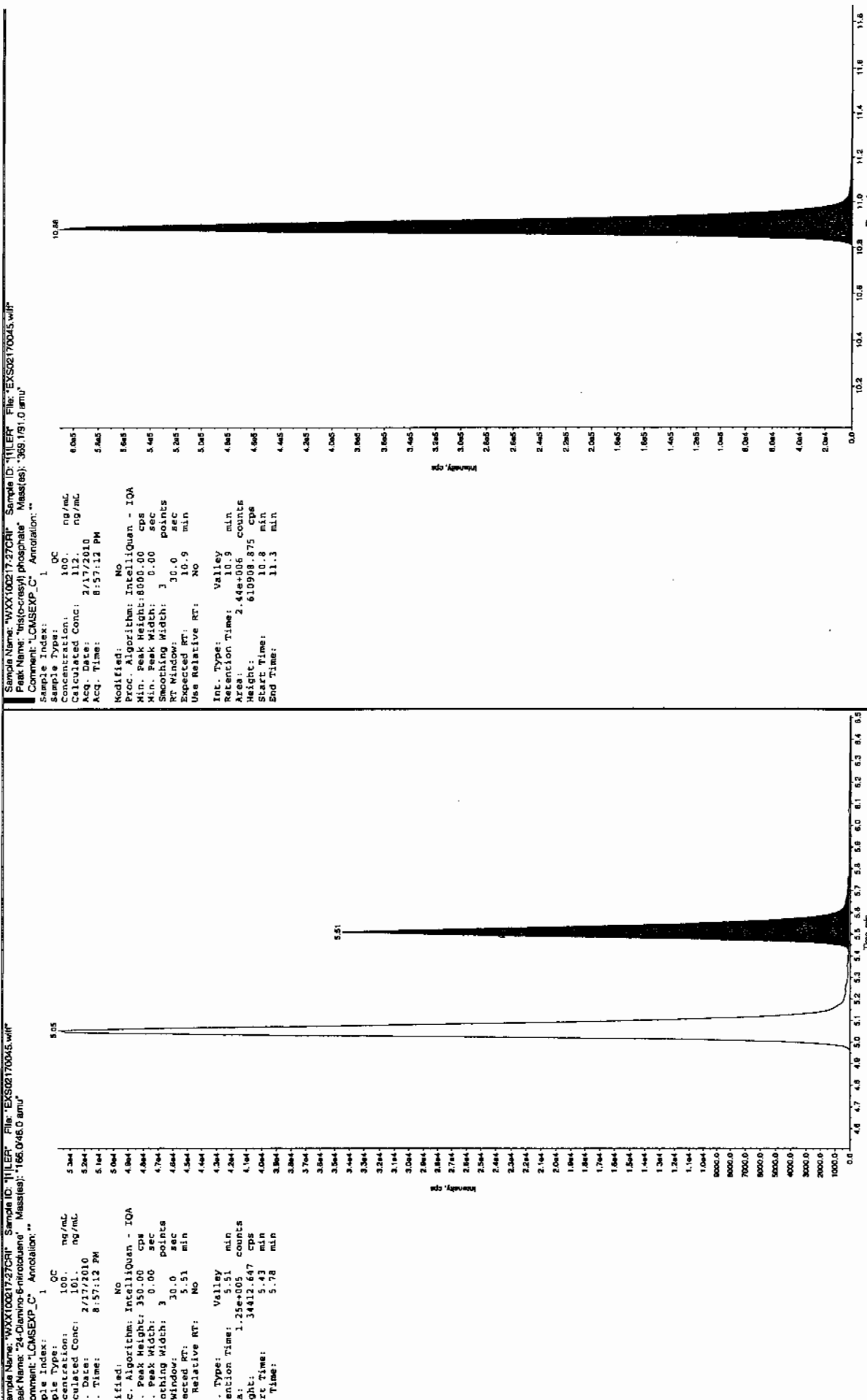
Hum 02/19/10



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



EL SOP GL-OA-E-056, Method 8321A-Modified LCMMSMS#4



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

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS02170056.wiff

Analysis Date: 17-FEB-10 23:49

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	551	110	
2,6-Diamino-4-nitrotoluene	500	526	105	
3,4-Dinitrotoluene	250	242	97	
3,5-Dinitroaniline	500	470	94	
TATB	500	477	96	
tris(o-cresyl) phosphate	500	504	101	

Recovery Limits:

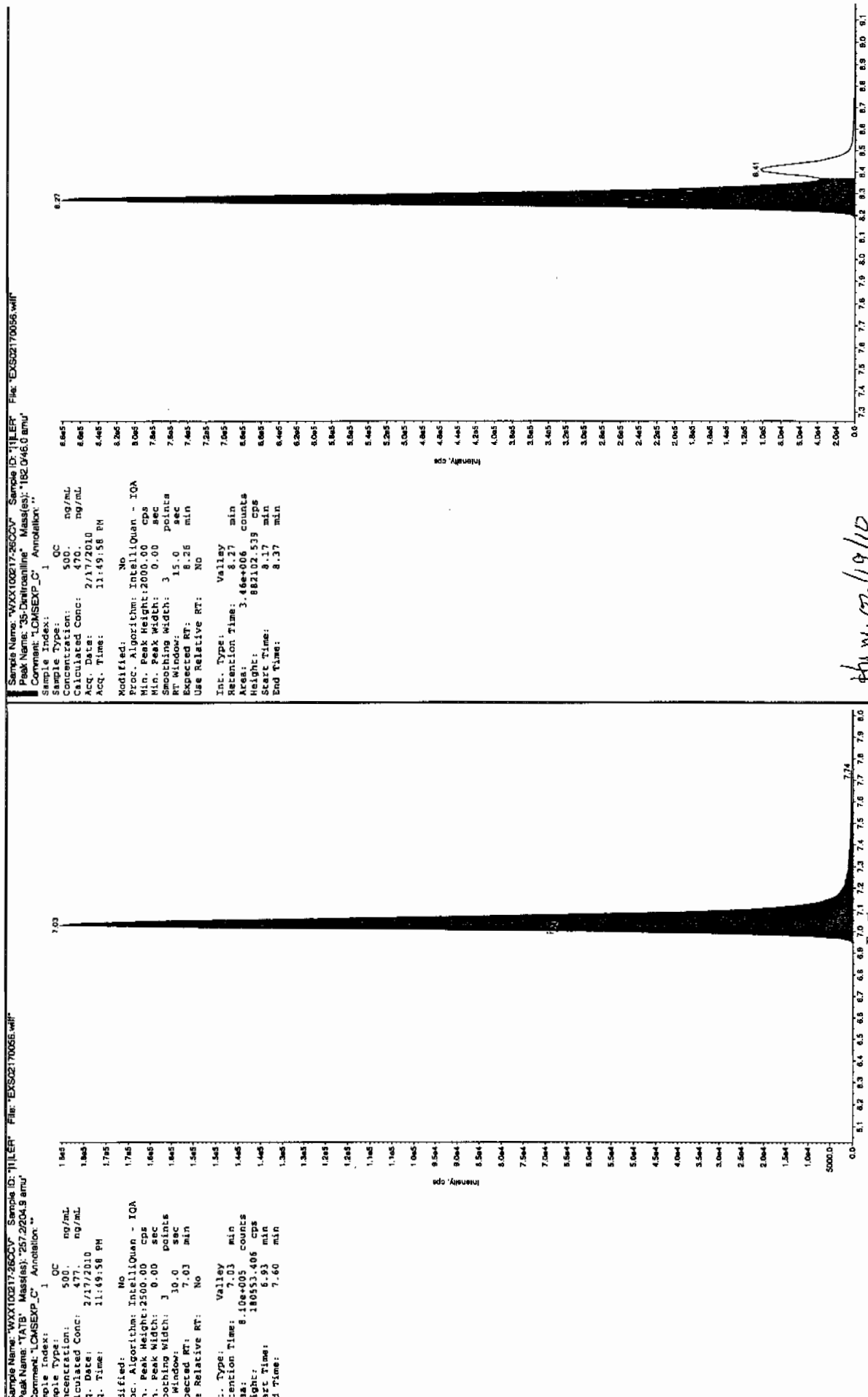
3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

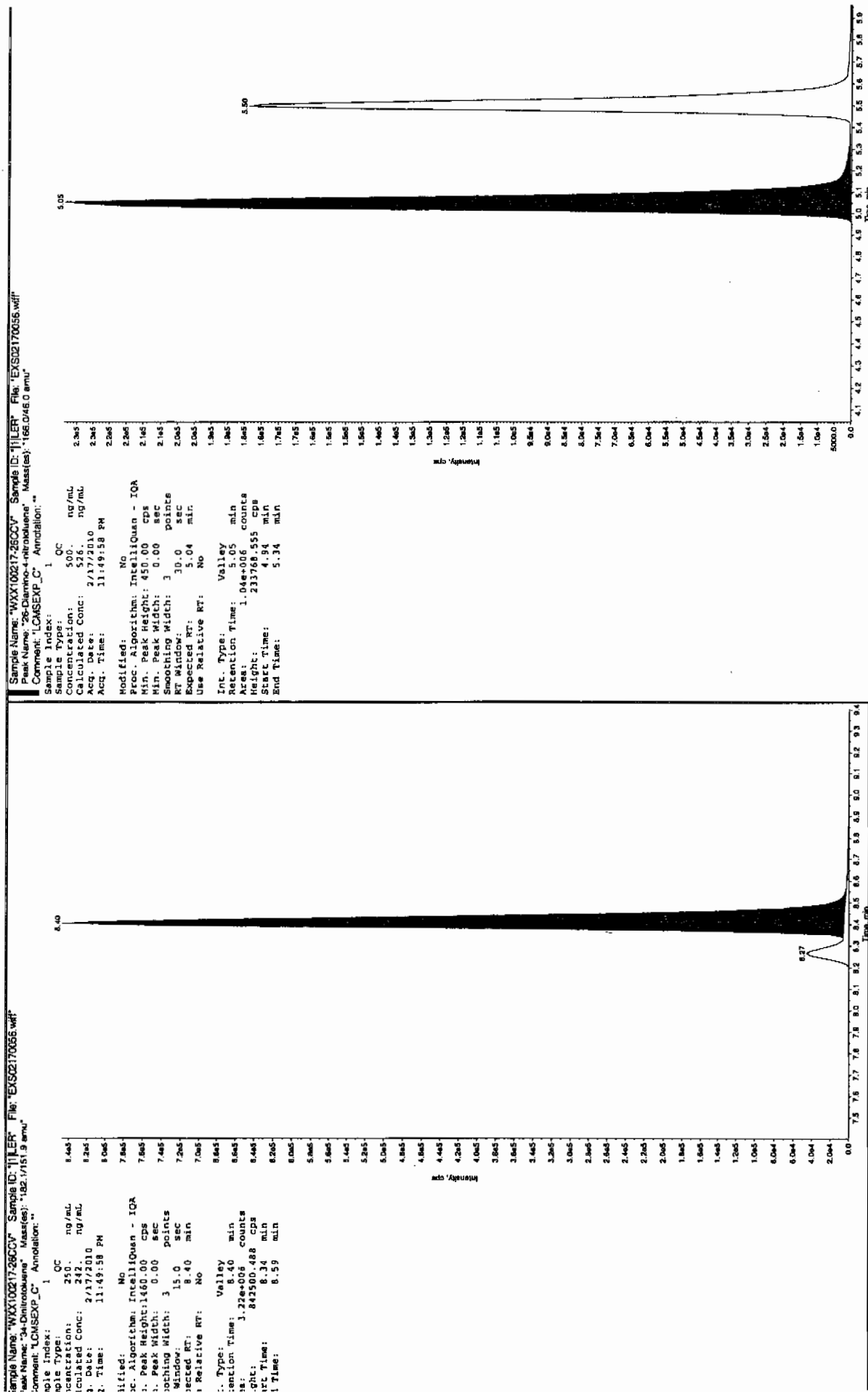
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

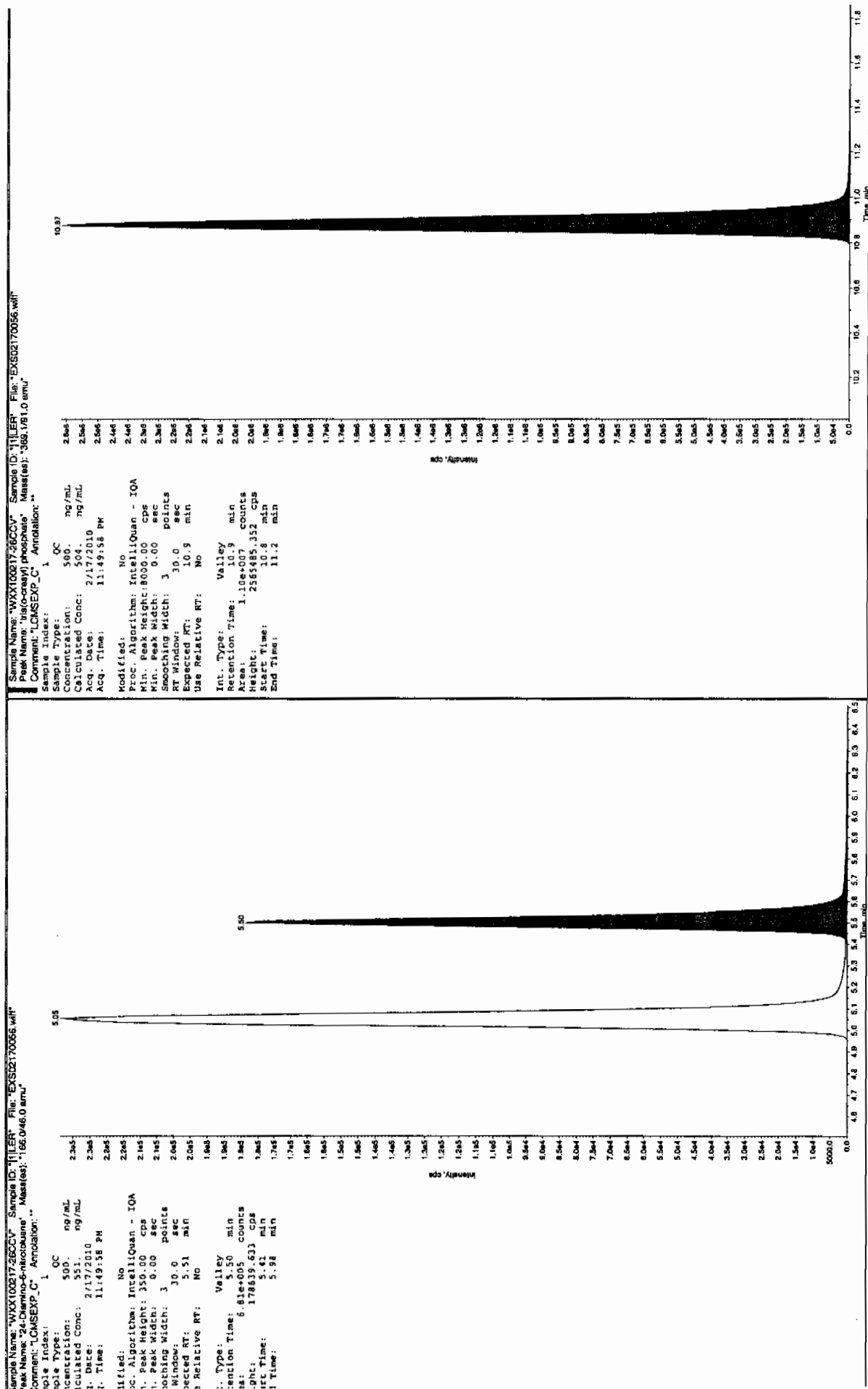
See 2/19/10



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



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



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

7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS02170058.wiff

Analysis Date: 18-FEB-10 00:21

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	102	102	
2,6-Diamino-4-nitrotoluene	100	109	109	
3,4-Dinitrotoluene	50	53.4	107	
3,5-Dinitroaniline	100	104	104	
TATB	100	95.1	95	
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 ,

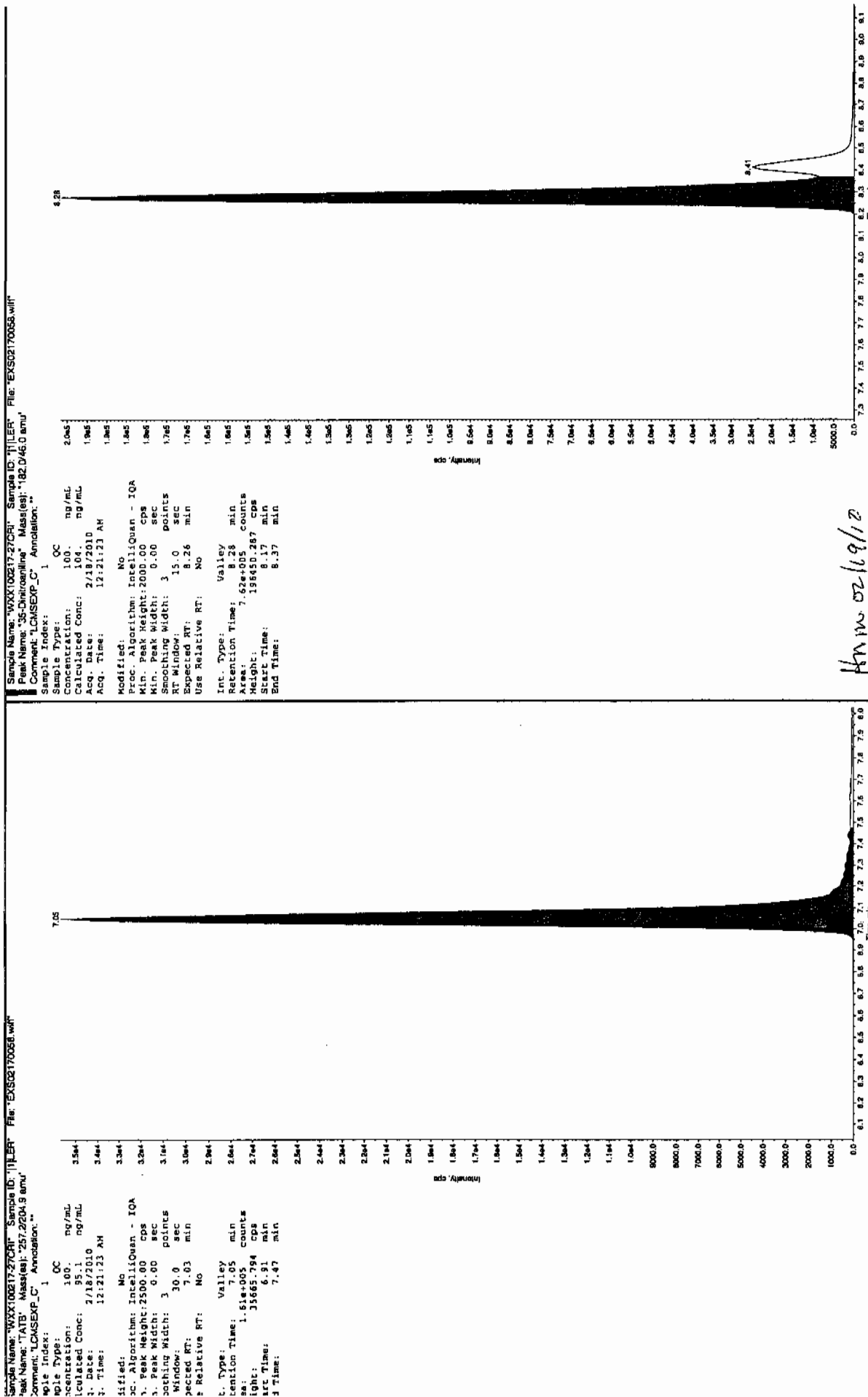
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

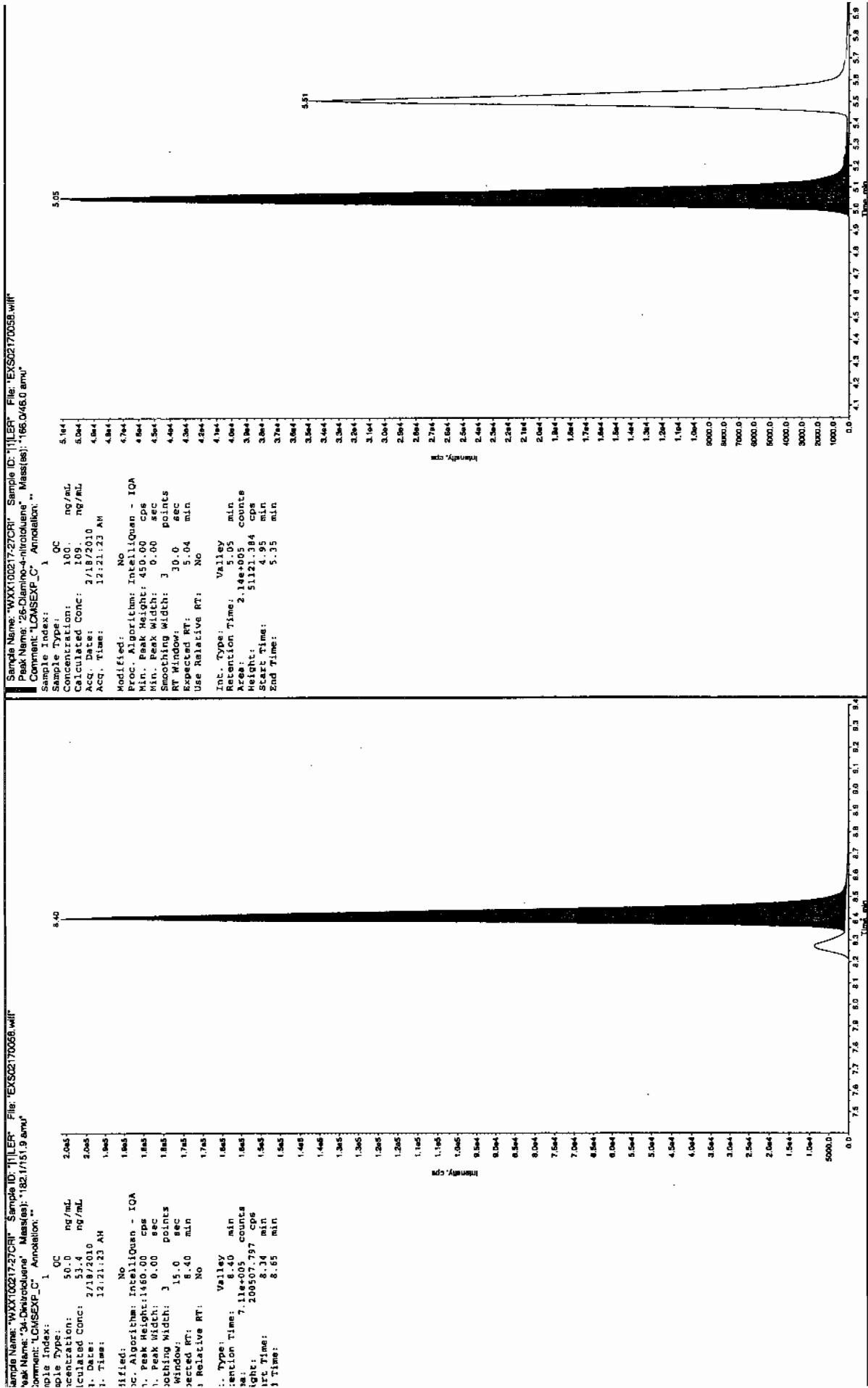
Column used to flag Recovery outside of Limits

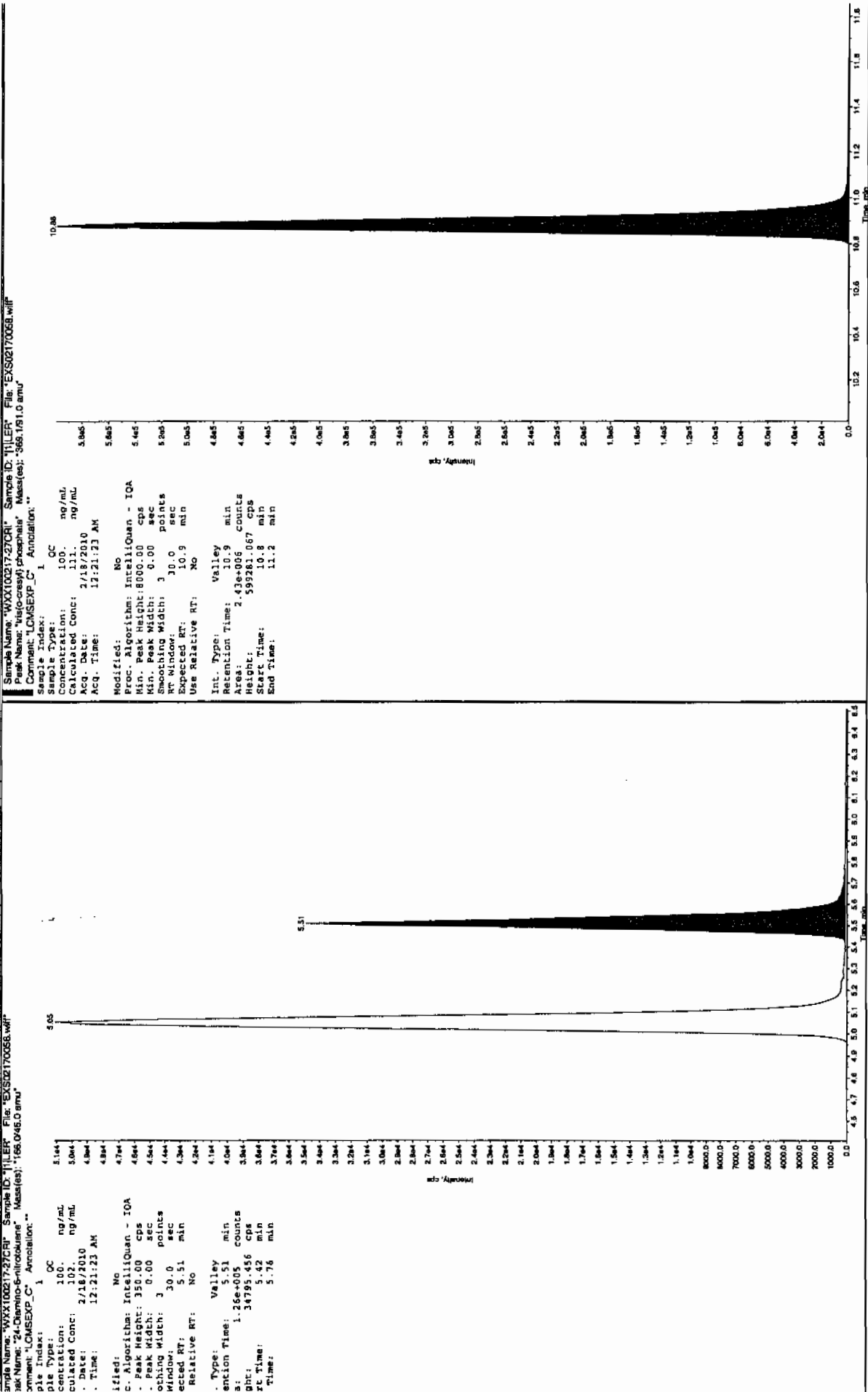
* Value outside of Recovery Limits

Scan 2/19/10



Amw 02/19/12





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

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS02170069.wiff

Analysis Date: 18-FEB-10 03:14

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	513	103	
2,6-Diamino-4-nitrotoluene	500	510	102	
3,4-Dinitrotoluene	250	240	96	
3,5-Dinitroaniline	500	485	97	
TATB	500	477	95	
tris(o-cresyl) phosphate	500	503	101	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

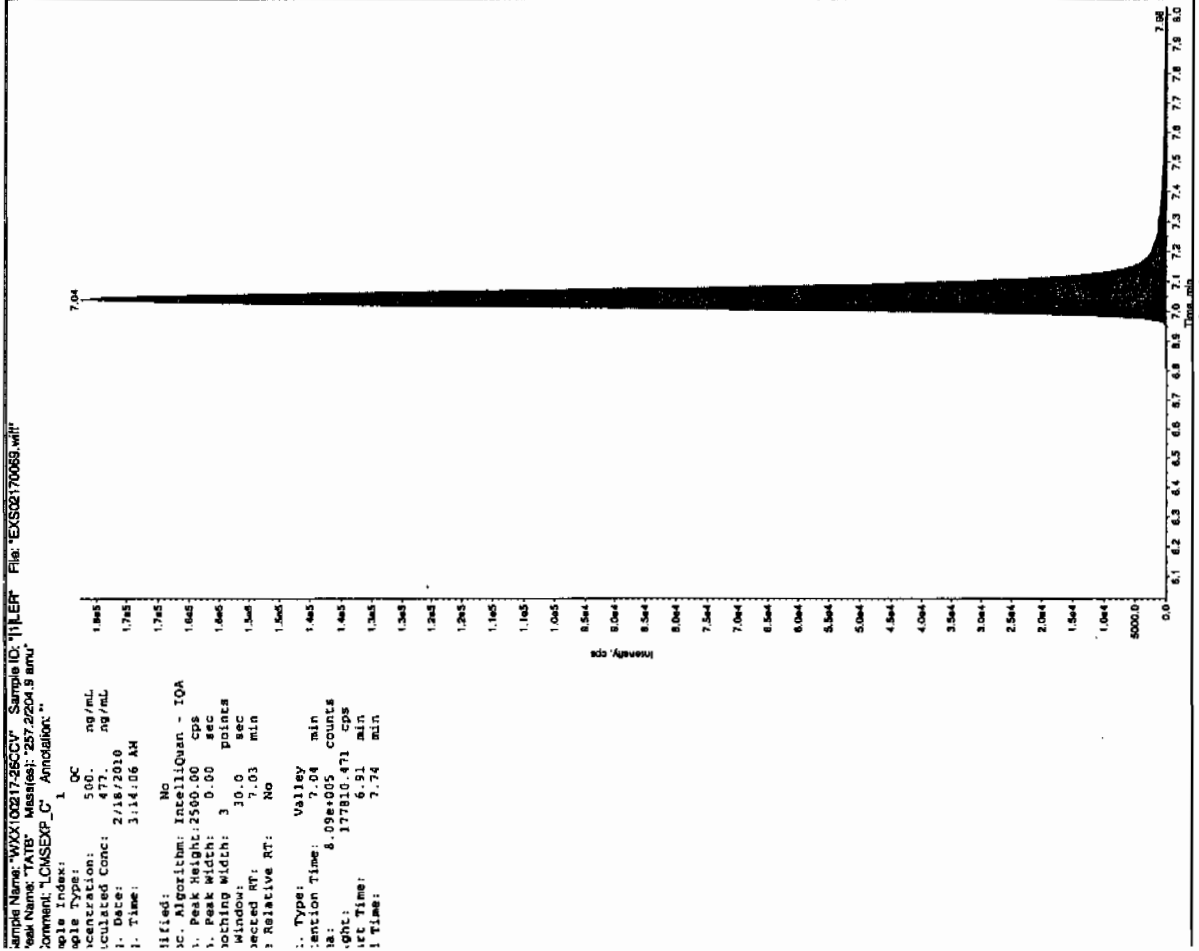
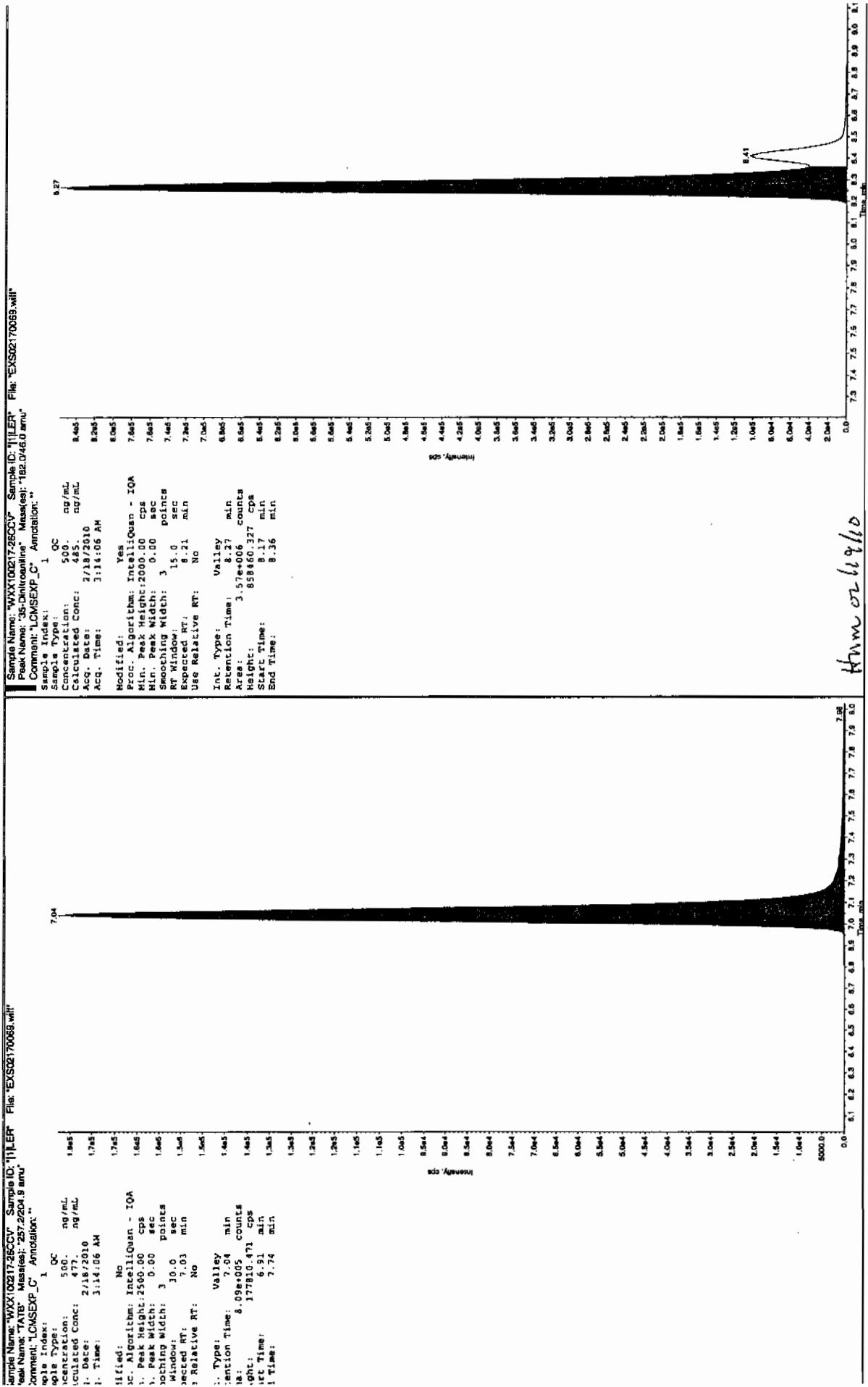
2,4-Diamino-6-nitrotoluene 70-130%

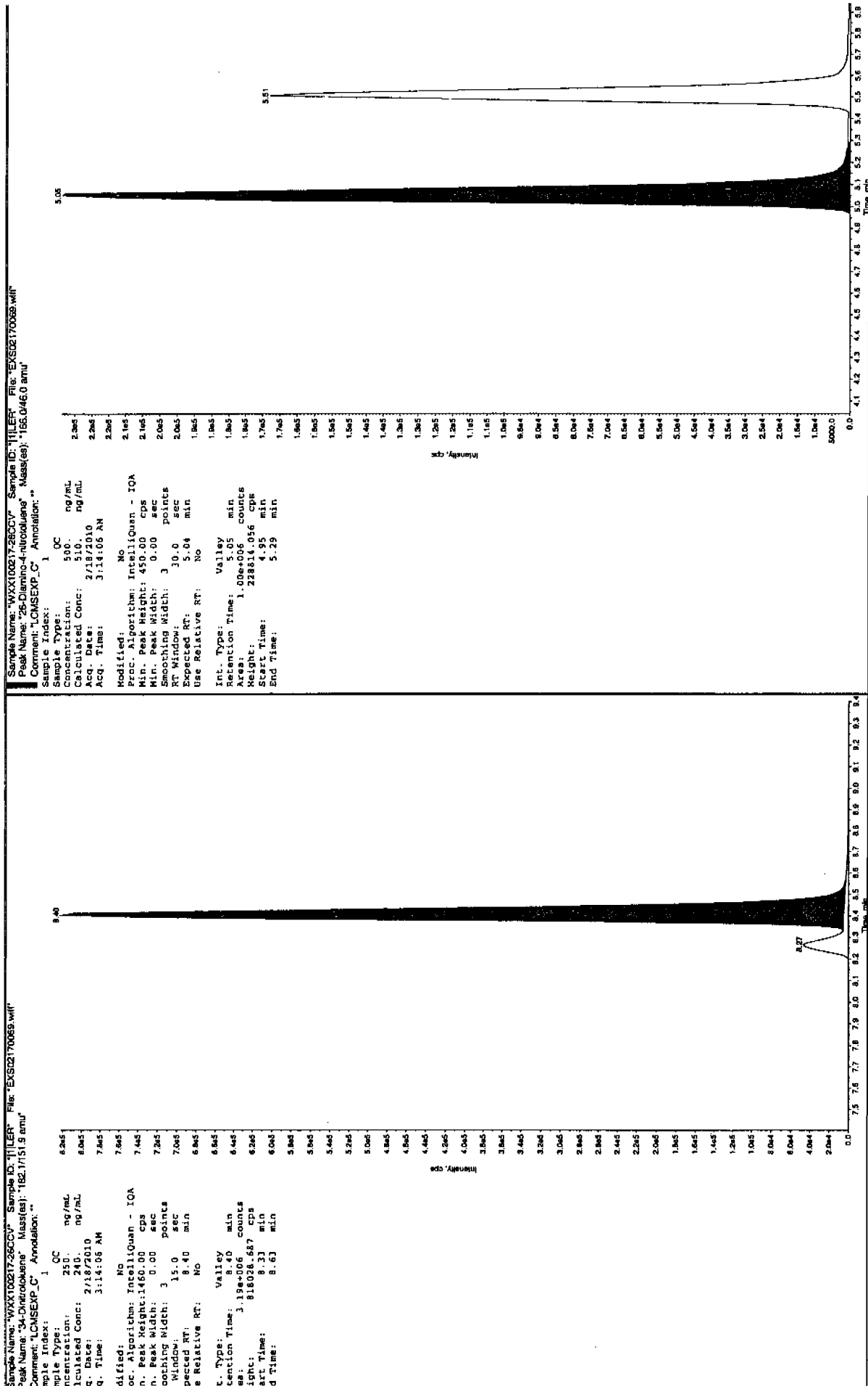
Other Target Analytes 80-120%

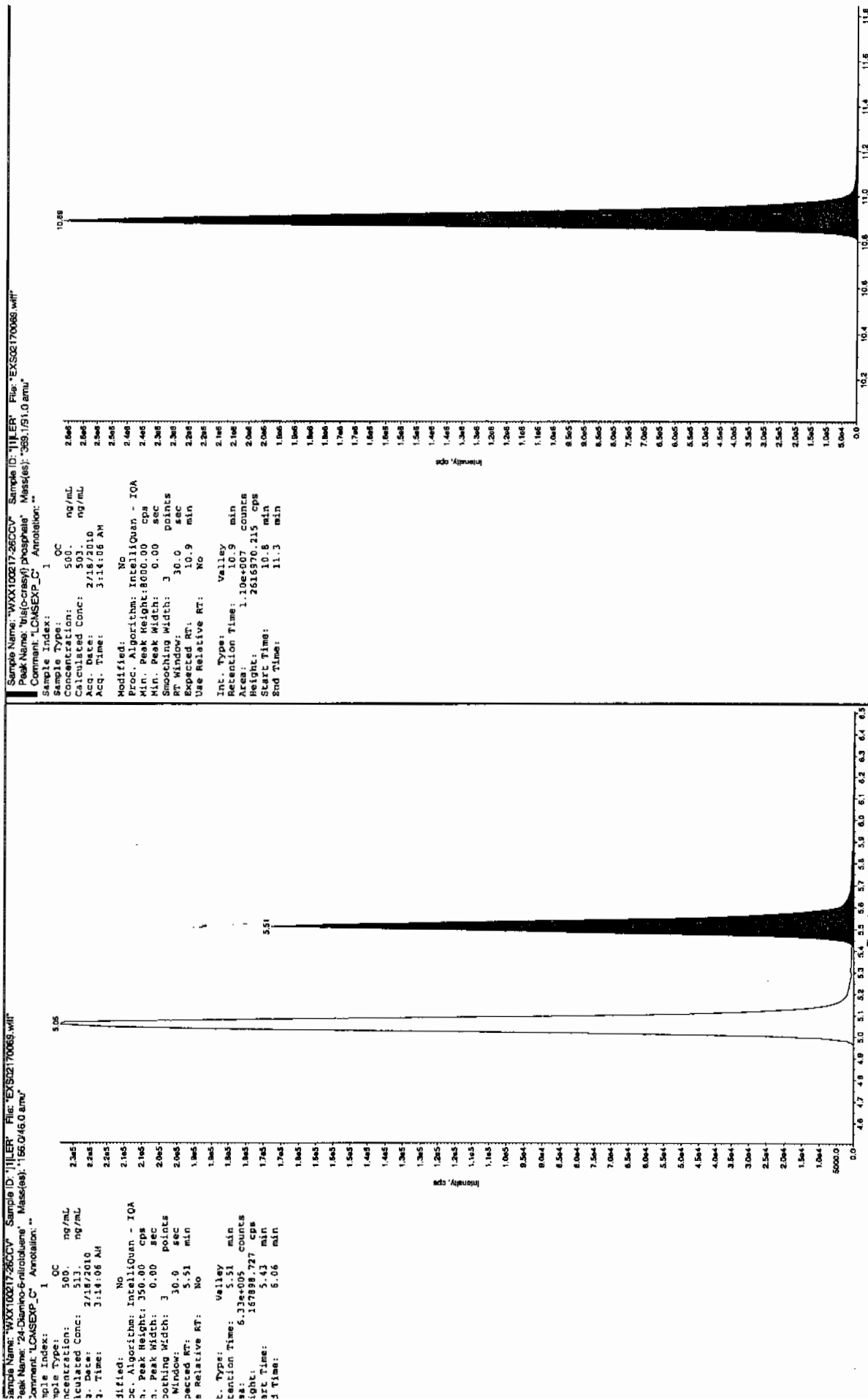
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

for 2/19/10







7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS02170071.wiff

Analysis Date: 18-FEB-10 03:45

LCMSMS ID: 1358

Column ID: Sphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	94.3	94	
2,6-Diamino-4-nitrotoluene	100	110	110	
3,4-Dinitrotoluene	50	49	98	
3,5-Dinitroaniline	100	103	103	
TATB	100	95.3	95	
tris(o-cresyl) phosphate	100	113	113	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

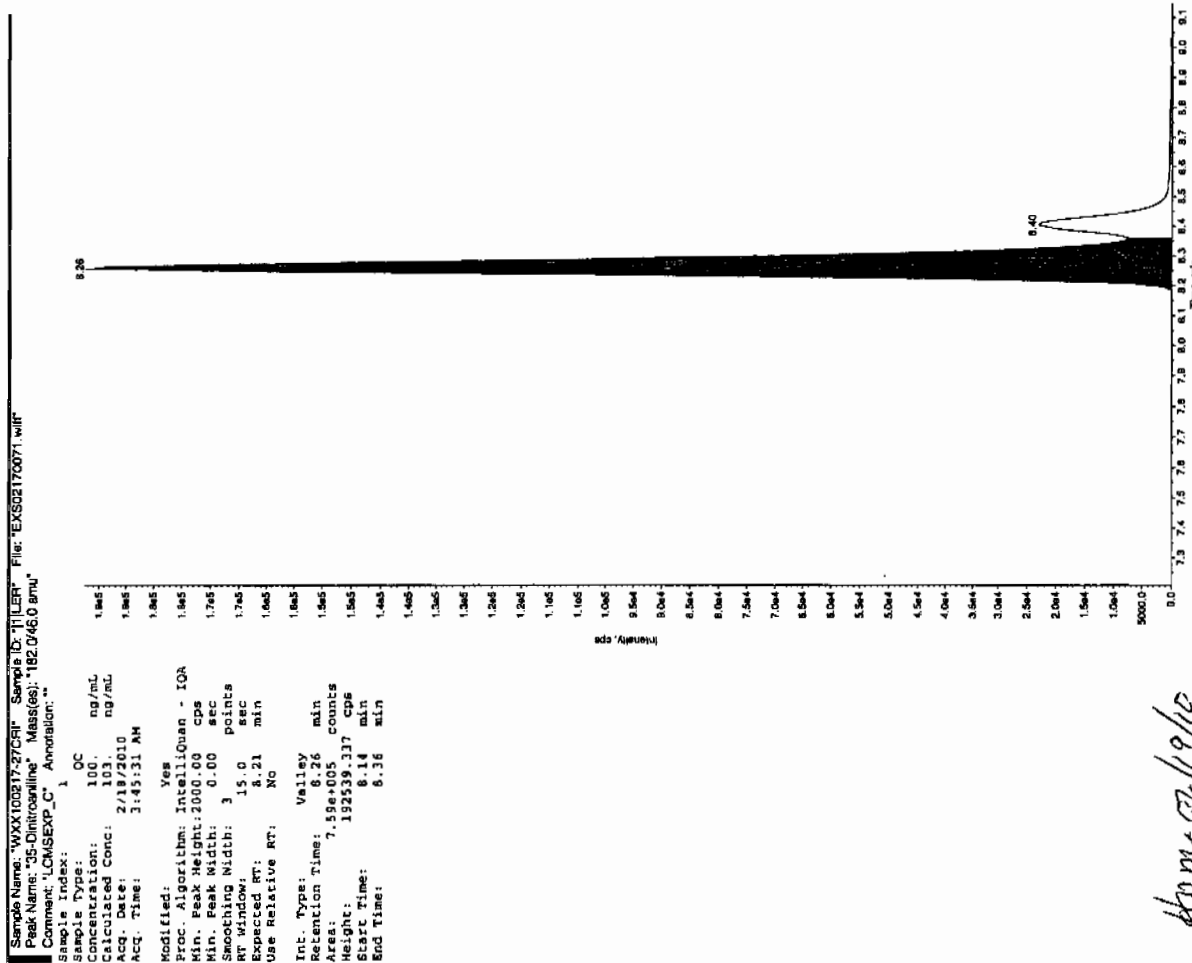
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

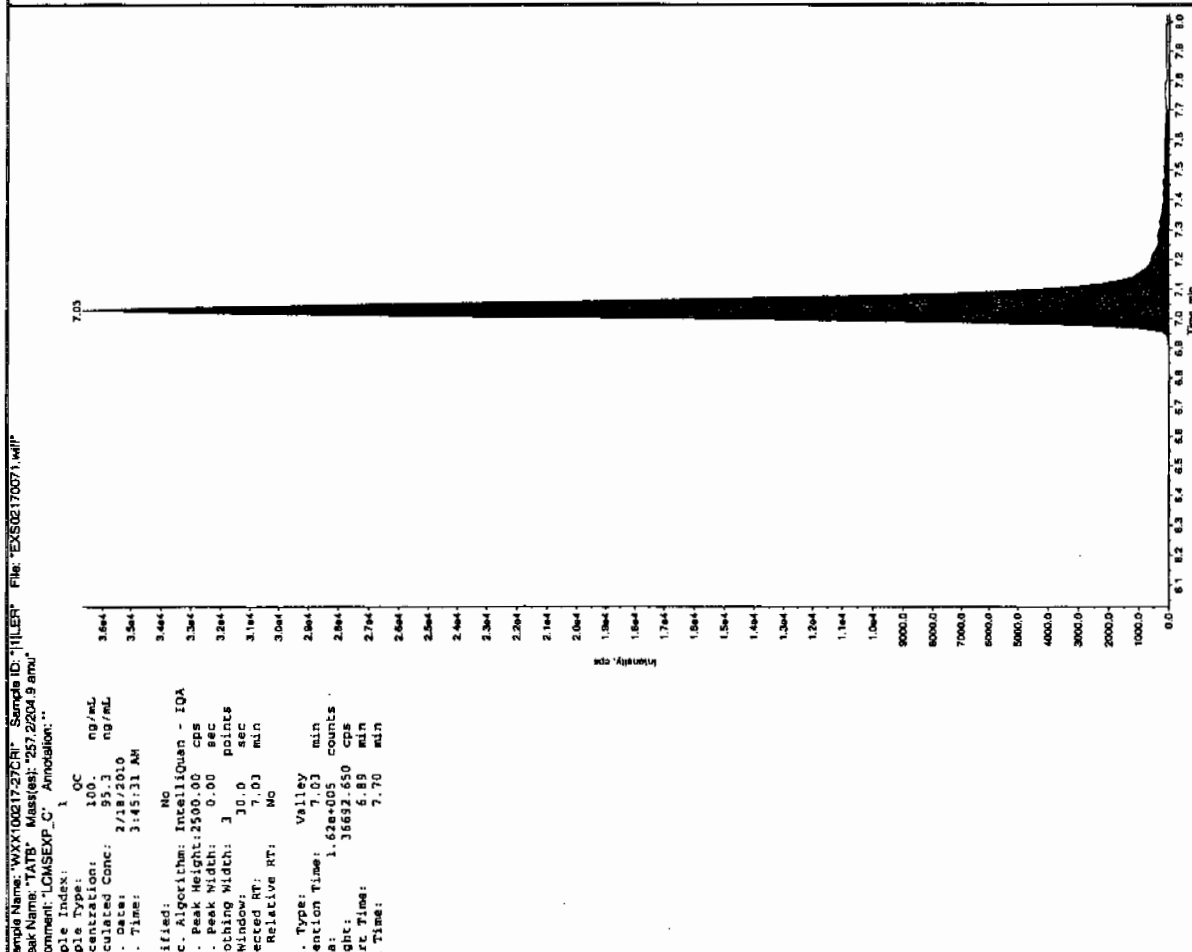
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

See 2/19/10



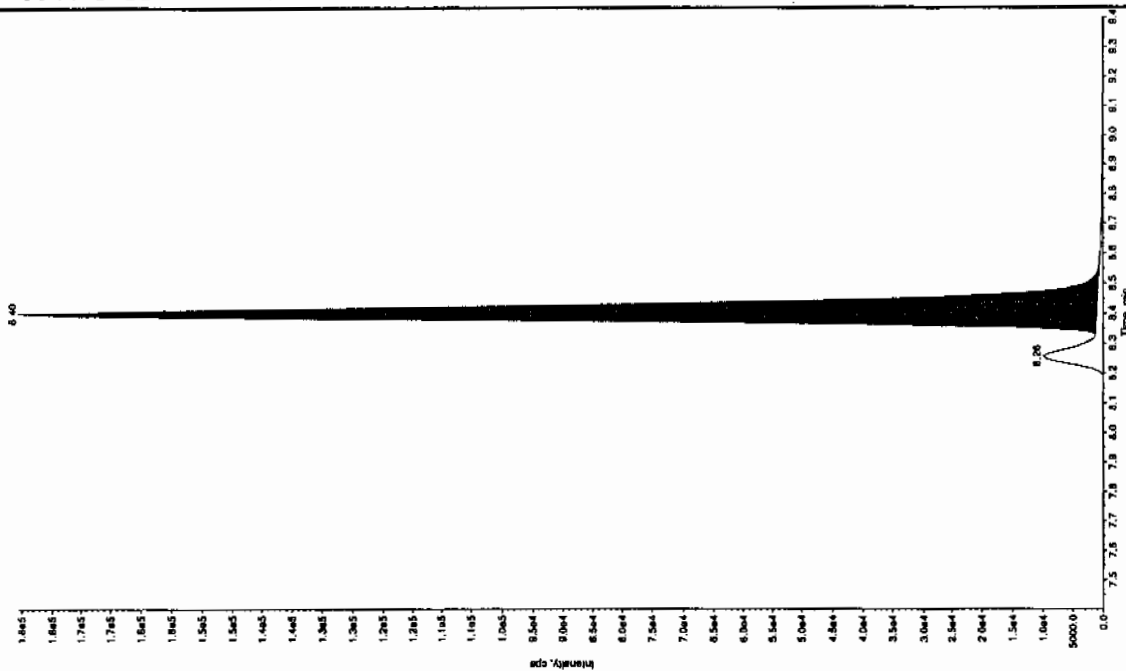
2/19/10



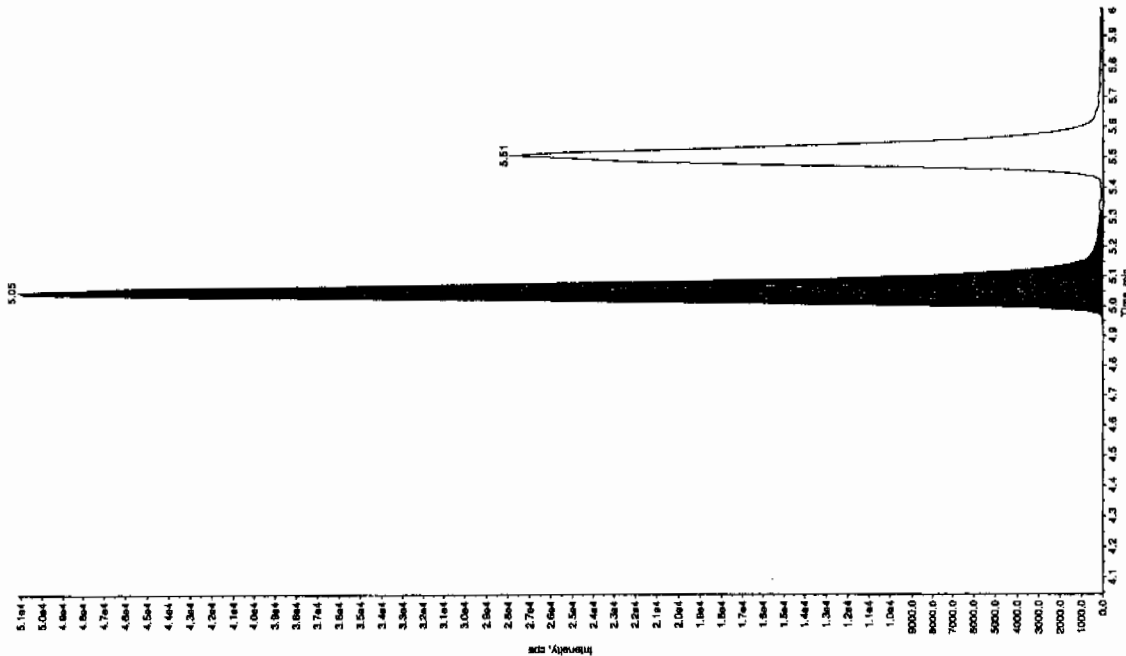
3L SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

Sample Name: "WXX100217-27CR" Sample ID: "111ER" File: "EXS02170071.wif"
 Peak Name: "34-Dinitrofluorene" Mass(es): "182.1/151.9 amu"
 Comment: "LCMSEXP_C" Annotation: ""

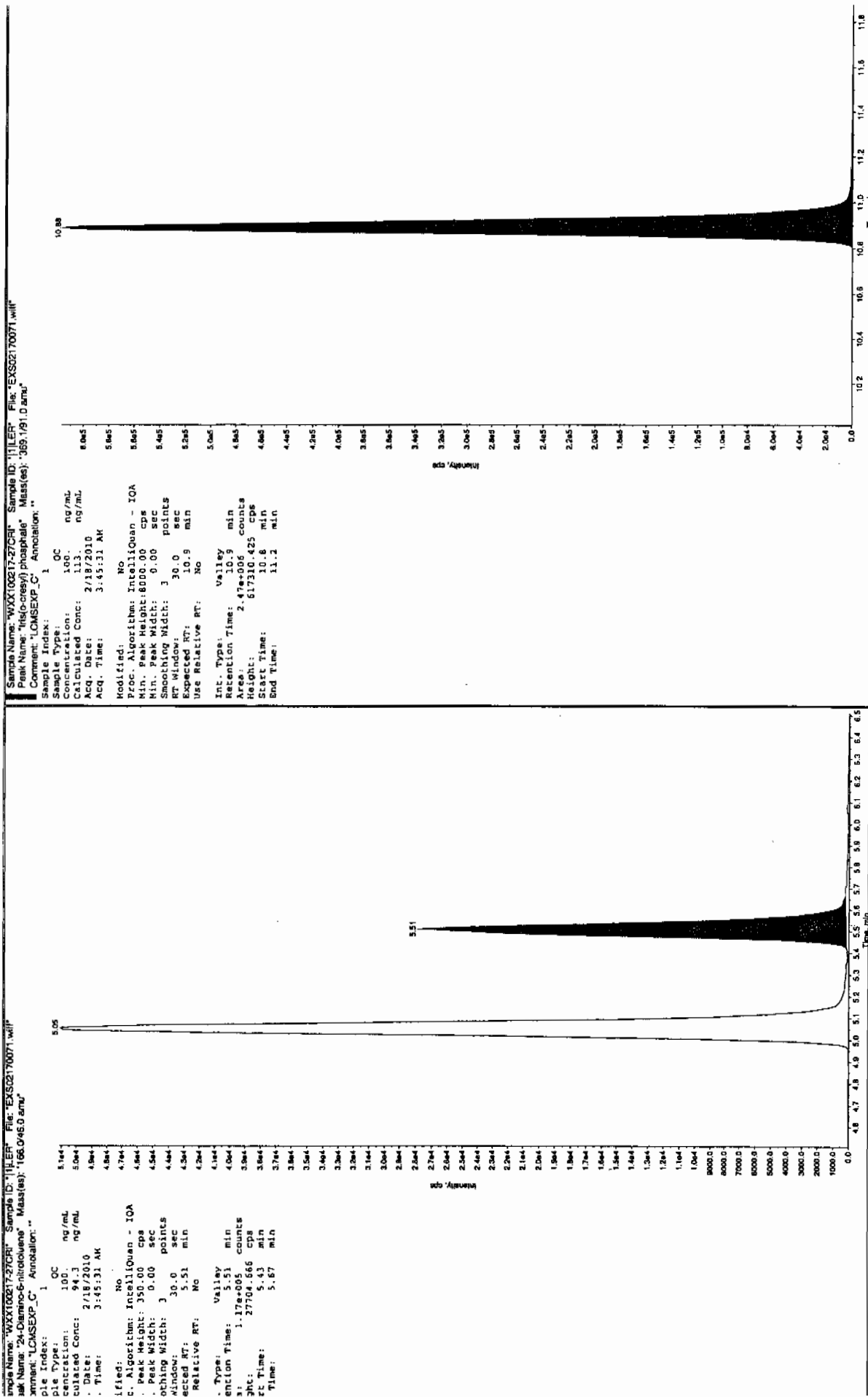
Sample Index: 1
 Sample Type: OC
 Concentration: 50.0 ng/mL
 Calculated Conc: 49.0 ng/mL
 Acq. Date: 2/18/2010
 Acq. Time: 3:45:31 AM
 Modified: No
 Proc. Algorithm: IntelliQuan - IQA
 Min. Peak Height: 160.0 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 15.0 sec
 Expected RT: 8.40 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 8.40 min
 Area: 6.52e+005 counts
 Height: 179557.709 cps
 Start Time: 8.33 min
 End Time: 8.61 min



Sample Index: 1
 Sample Type: OC
 Concentration: 100. ng/mL
 Calculated Conc: 110. ng/mL
 Acq. Date: 2/18/2010
 Acq. Time: 3:45:31 AM
 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: 5.04 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 5.05 min
 Area: 2.16e+005 counts
 Height: 51120.190 cps
 Start Time: 4.92 min
 End Time: 5.32 min



3L SOP GL-OA-E-056, Method 8321A-Modified LCMMS#4



7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS02170082.wiff

Analysis Date: 18-FEB-10 06:38

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	597	119	
2,6-Diamino-4-nitrotoluene	500	553	111	
3,4-Dinitrotoluene	250	249	100	
3,5-Dinitroaniline	500	509	102	
TATB	500	513	103	
tris(o-cresyl) phosphate	500	498	100	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

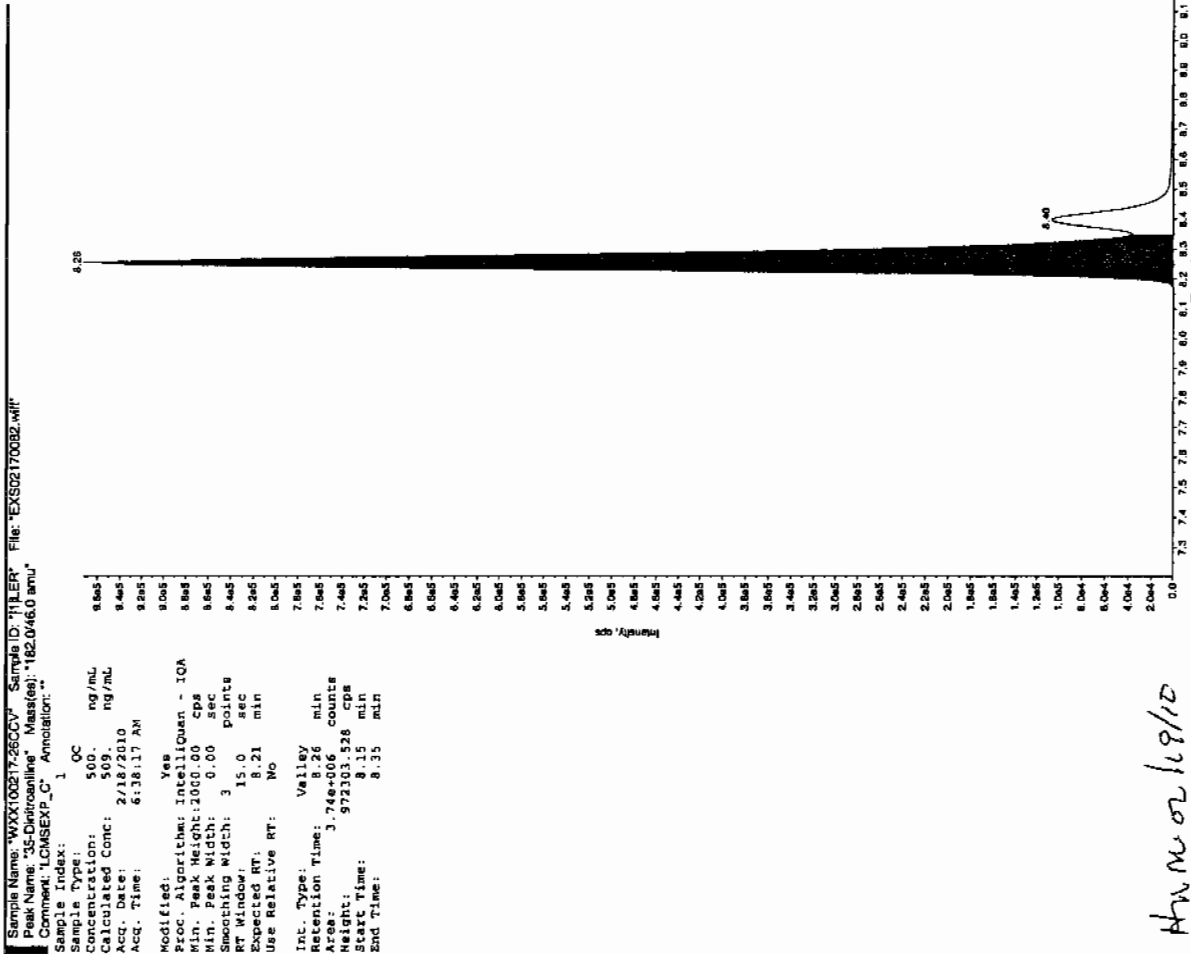
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

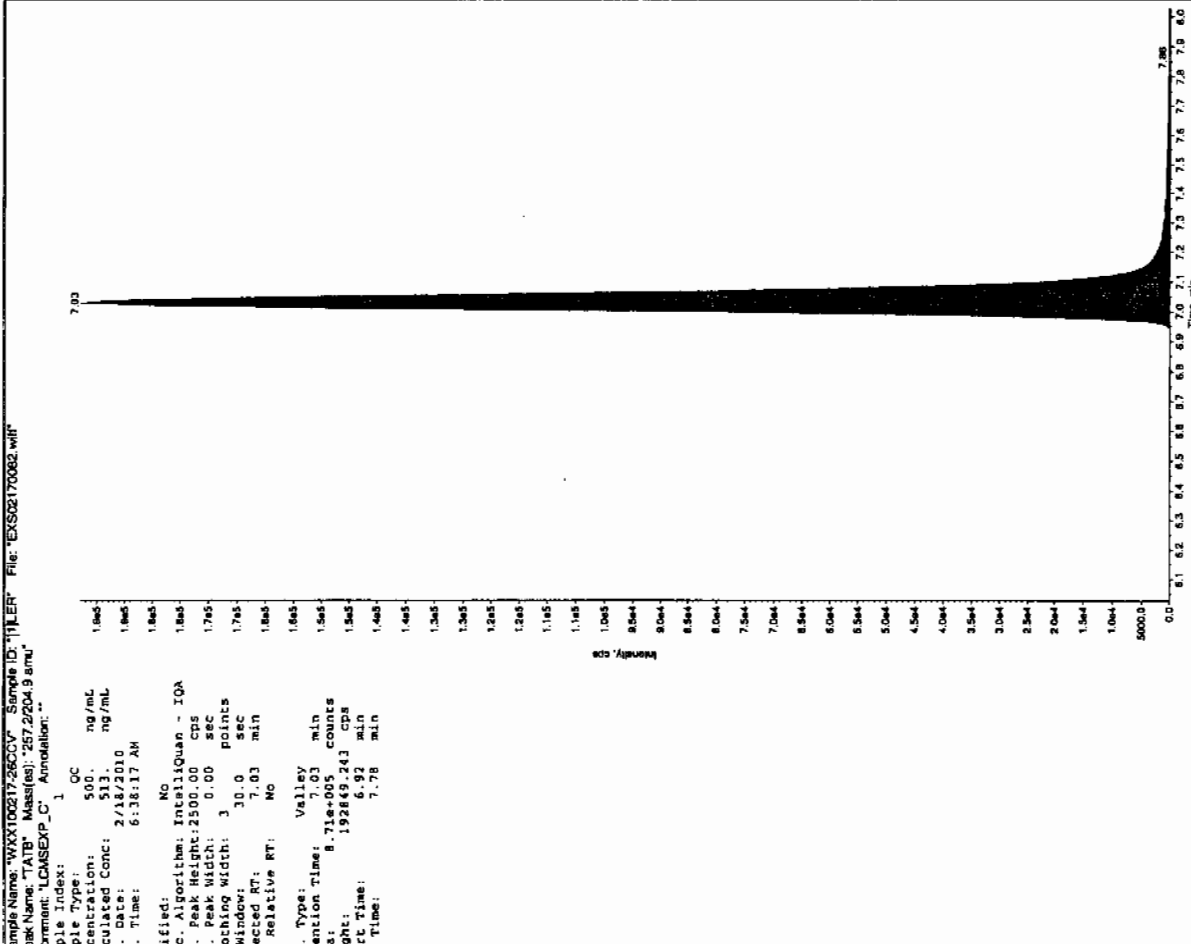
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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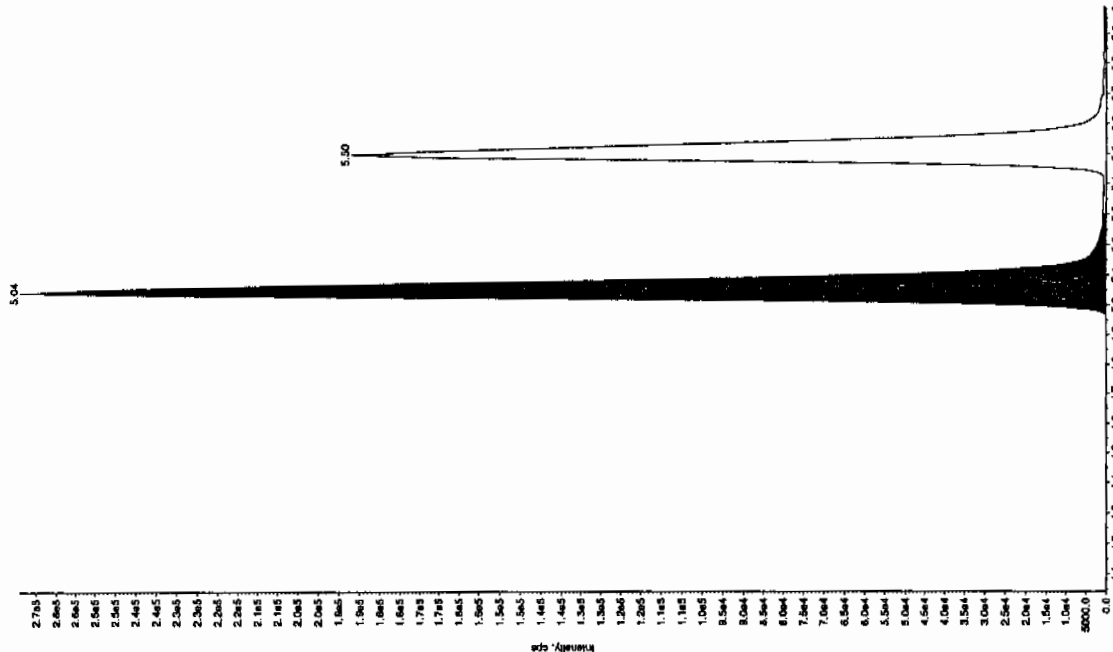
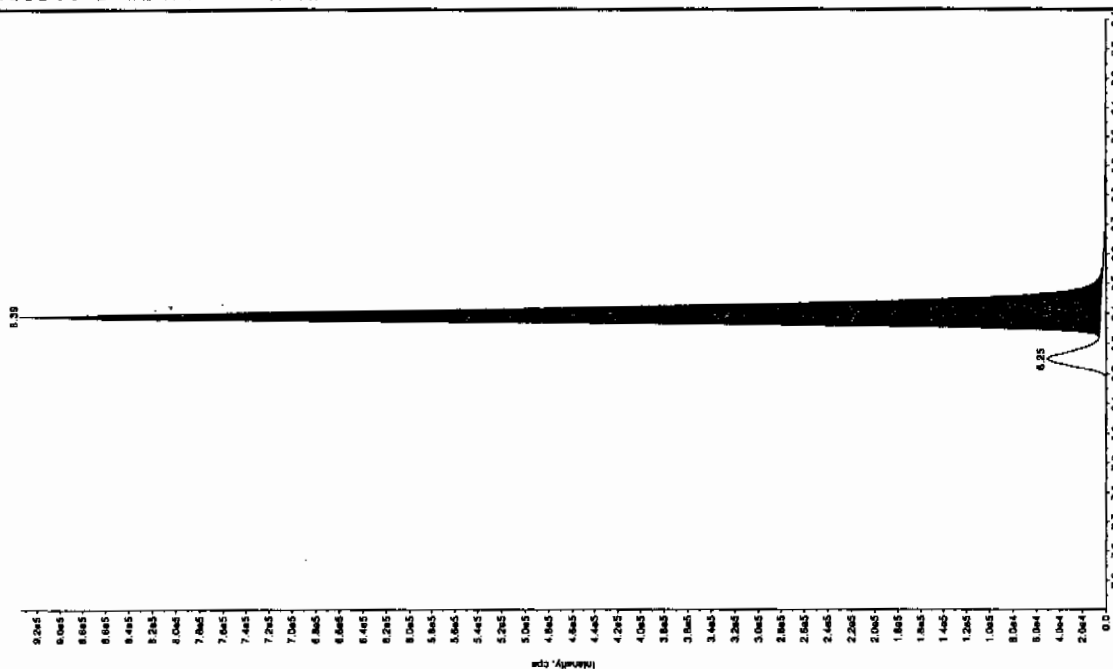
Hy N or 16/10

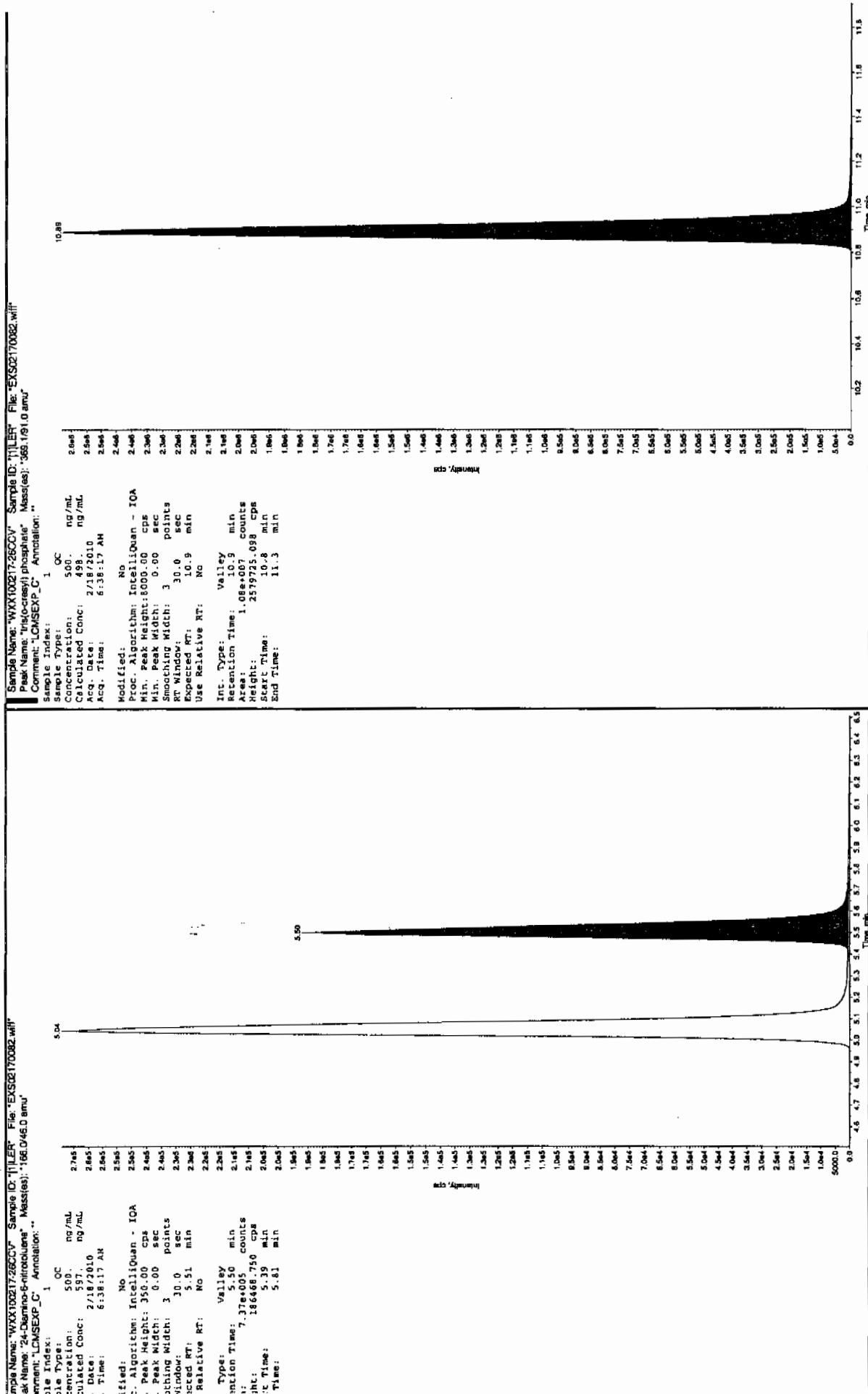


EL SOP GL-OA-E-056, Method 8321A-Modified LCM SMS#4

Sample Name: "WXX100217-280CV" Sample ID: "111ER" File: "EX502170082.wif"
 Peak Name: "34-Dinitrotoluene" Mass(es): "162.1151.9 amu"
 Comment: "LCMSEXP_C" Annotation: "

Sample Index: 1
 Sample Type: QC
 Concentration: 500. ng/mL
 Calculated Conc: 553. ng/mL
 Acq. Date: 2/18/2010
 Acq. Time: 6:38:17 AM
 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: 5.04 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 5.04 min
 Area: 1.09e+006 counts
 Height: 289186.594 cps
 Start Time: 4.94 min
 End Time: 5.30 min





7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS02170084.wiff

Analysis Date: 18-FEB-10 07:09

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	87.8	88	
2,6-Diamino-4-nitrotoluene	100	107	107	
3,4-Dinitrotoluene	50	51.1	102	
3,5-Dinitroaniline	100	107	107	
TATB	100	104	104	
tris(o-cresyl) phosphate	100	112	112	

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%

Other Target Analytes 70-130%

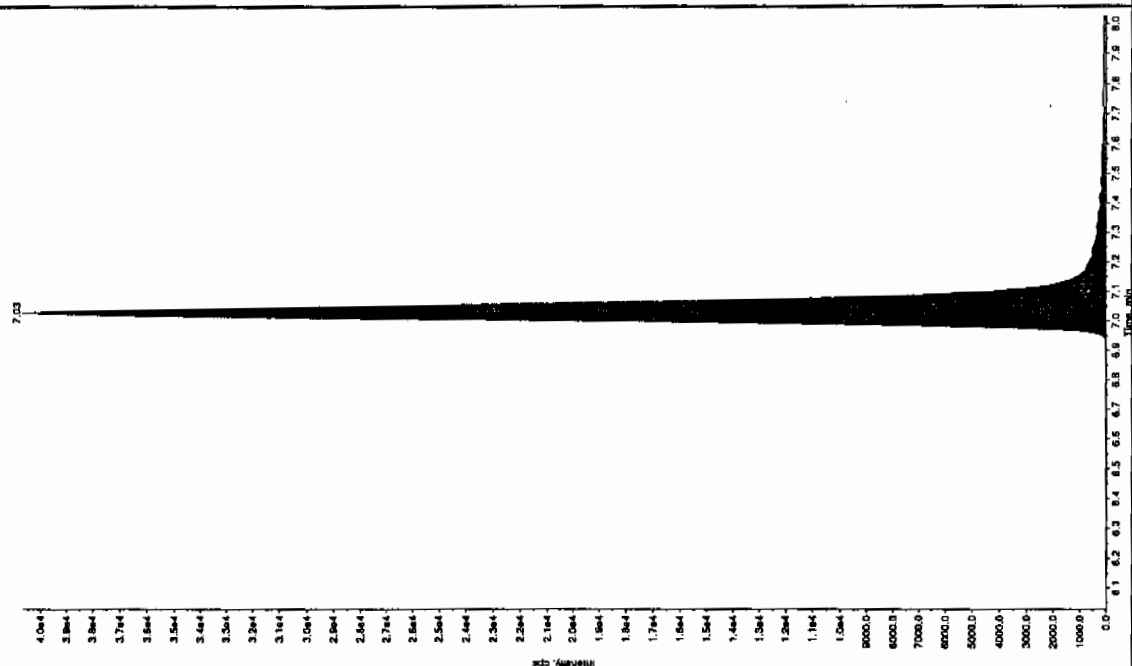
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

for 2/19/10

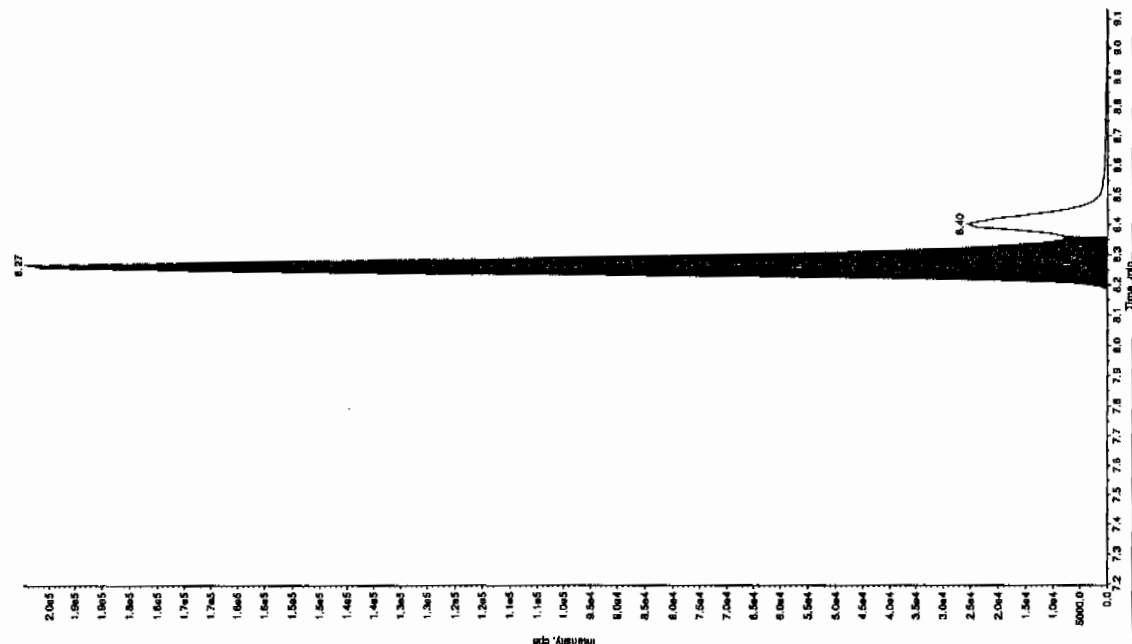
Sample Name: WXX100217-27091 Sample ID: 111517 File: EXS02170084.wif
 Peak Name: TATB Mass(es): 257.2/204.9 amu
 Comment: LCMSEXP_C Annotation: "

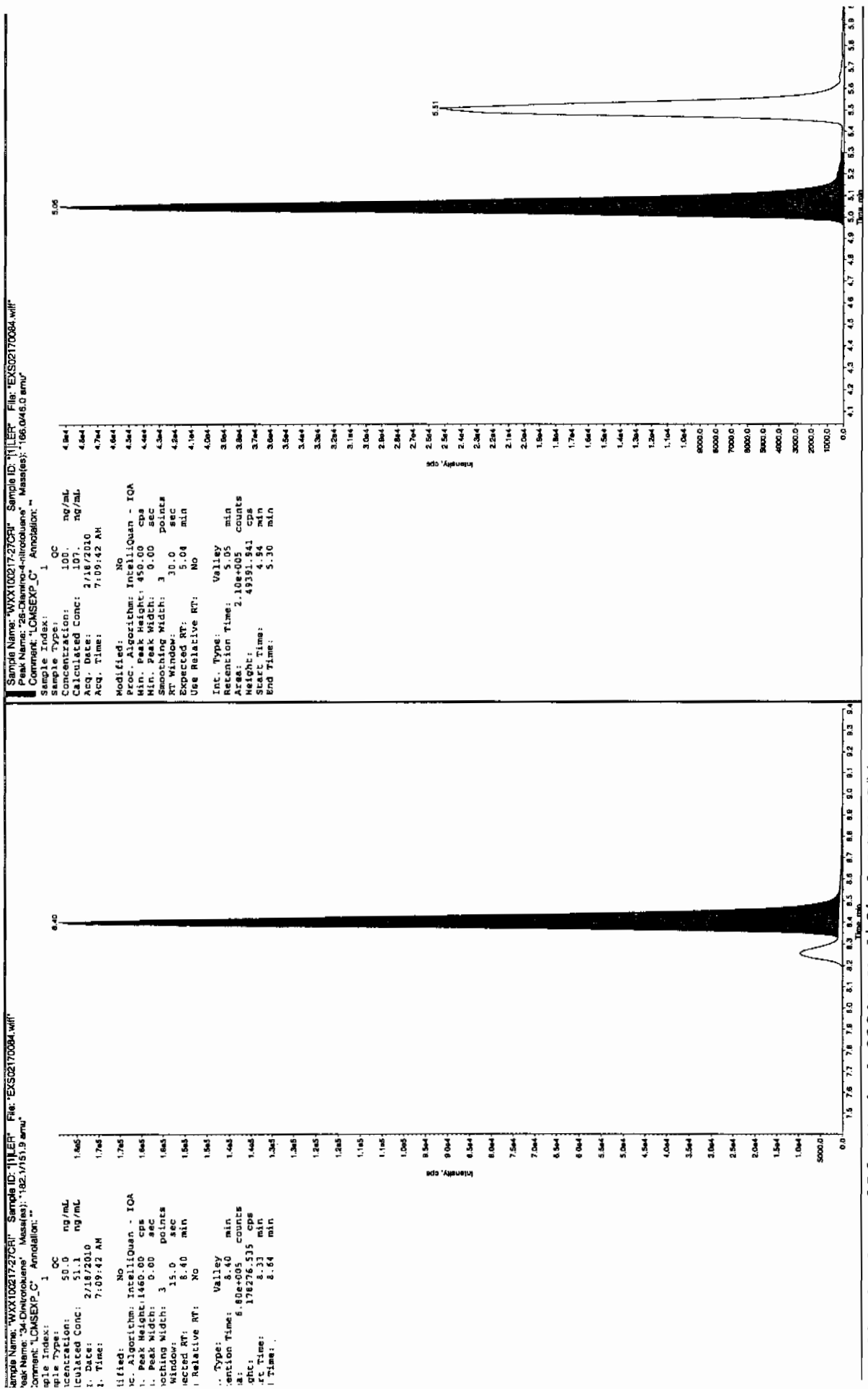
Sample Index: 1 QC
 Sample Type: 100 ng/mL
 Concentration: 104 ng/mL
 Calculated Conc: 104
 Acq. Date: 2/18/2010
 Acq. Time: 7:09:42 AM
 Modified: No
 Proc. Algorithm: IntelliQuan - IOA
 Min. Peak Height: 2500.00 cps
 Min. Peak Width: 0.00 sec
 Retention Width: 3.00 points
 Expected RT: 7.03 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 7.03 min
 Area: 1.76e+005 counts
 Height: 40695.309 cps
 Start Time: 6.90 min
 End Time: 7.71 min



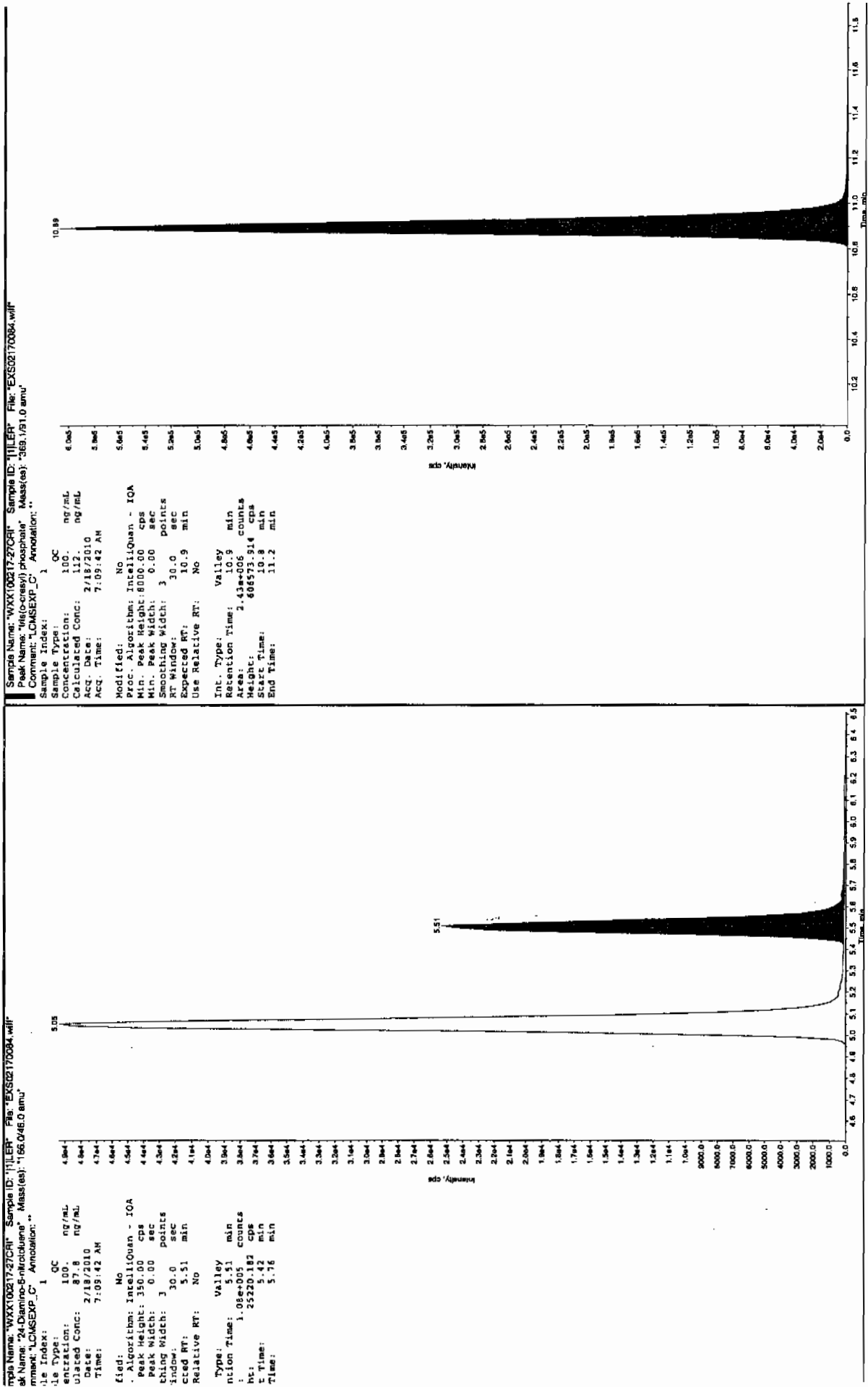
Sample Name: WXX100217-27091 Sample ID: 111517 File: EXS02170084.wif
 Peak Name: 15-Dichlorodiphenyl Ether Mass(es): 182.0/166.0 amu
 Comment: LCMSEXP_C Annotation: "

Sample Index: 1 QC
 Sample Type: 100 ng/mL
 Concentration: 107 ng/mL
 Calculated Conc: 107
 Acq. Date: 2/18/2010
 Acq. Time: 7:09:42 AM
 Modified: Yes
 Proc. Algorithm: IntelliQuan - IOA
 Min. Peak Height: 2000.00 cps
 Min. Peak Width: 0.00 sec
 Retention Width: 15.0 points
 Expected RT: 8.20 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 8.27 min
 Area: 7.85e+005 counts
 Height: 199861.481 cps
 Start Time: 8.15 min
 End Time: 8.36 min





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



7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS02170095.wiff

Analysis Date: 18-FEB-10 10:02

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	500	100	
2,6-Diamino-4-nitrotoluene	500	536	107	
3,4-Dinitrotoluene	250	240	96	
3,5-Dinitroaniline	500	462	92	
TATB	500	488	98	
tris(o-cresyl) phosphate	500	497	99	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

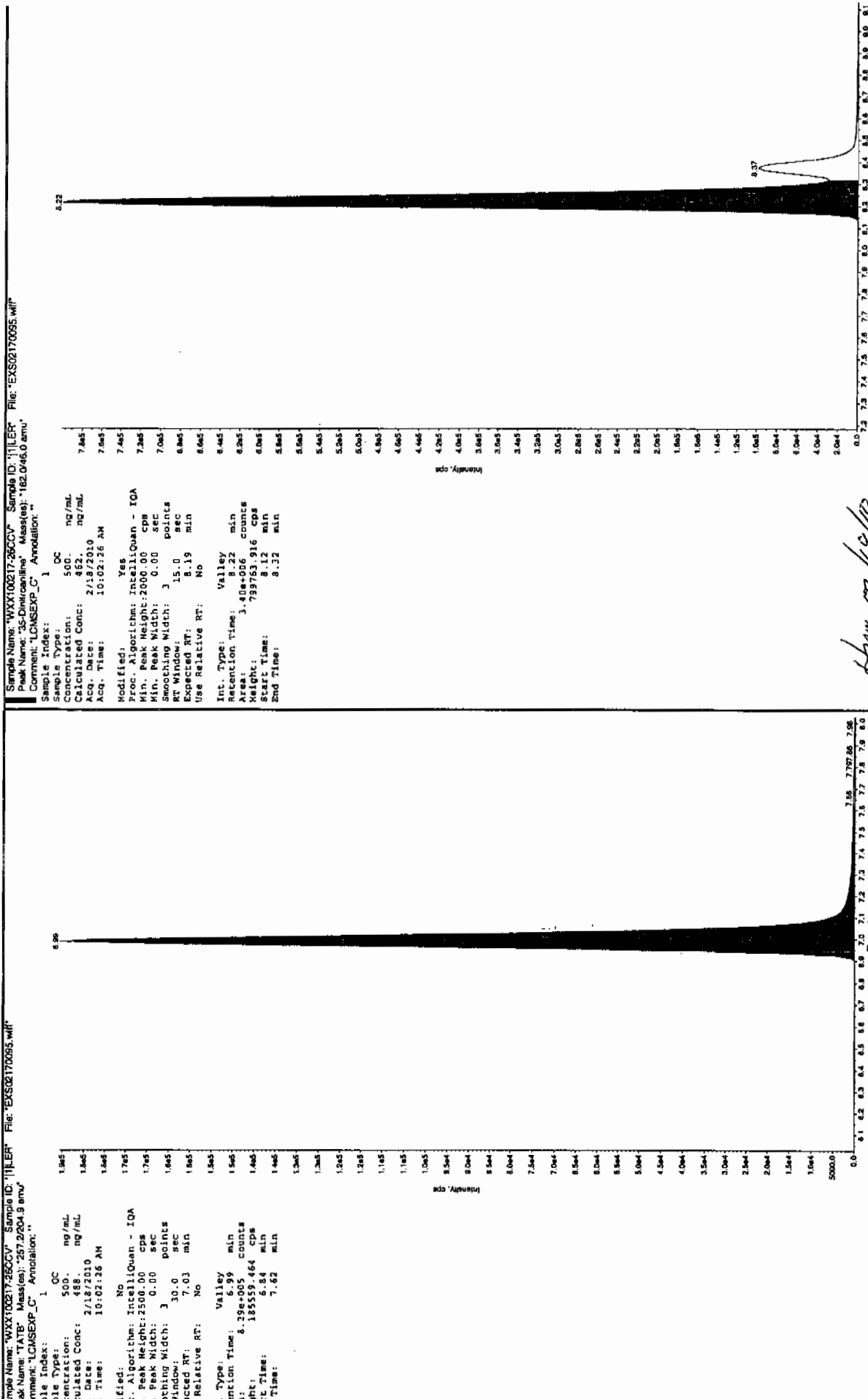
2,4-Diamino-6-nitrotoluene 70-130%

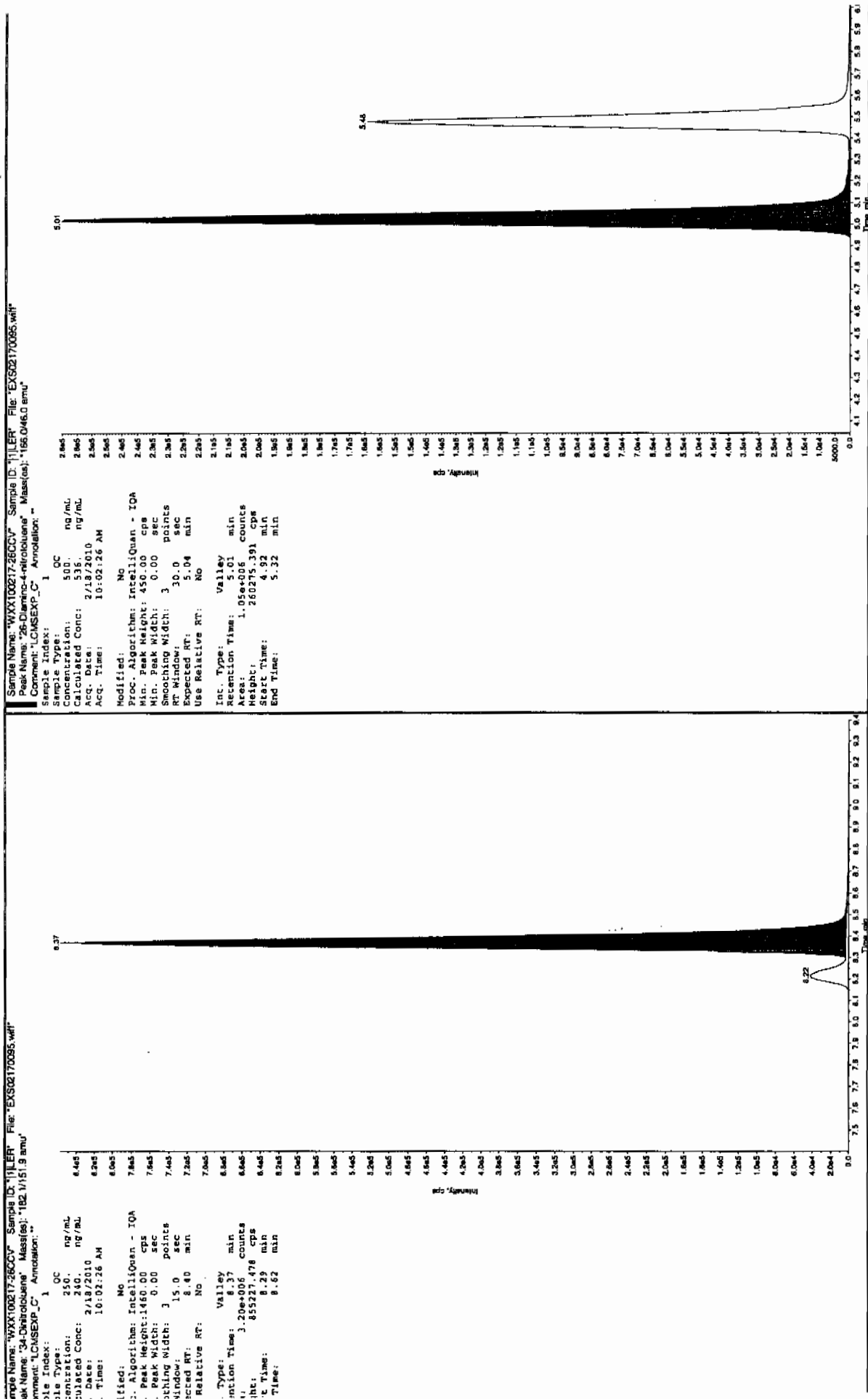
Other Target Analytes 80-120%

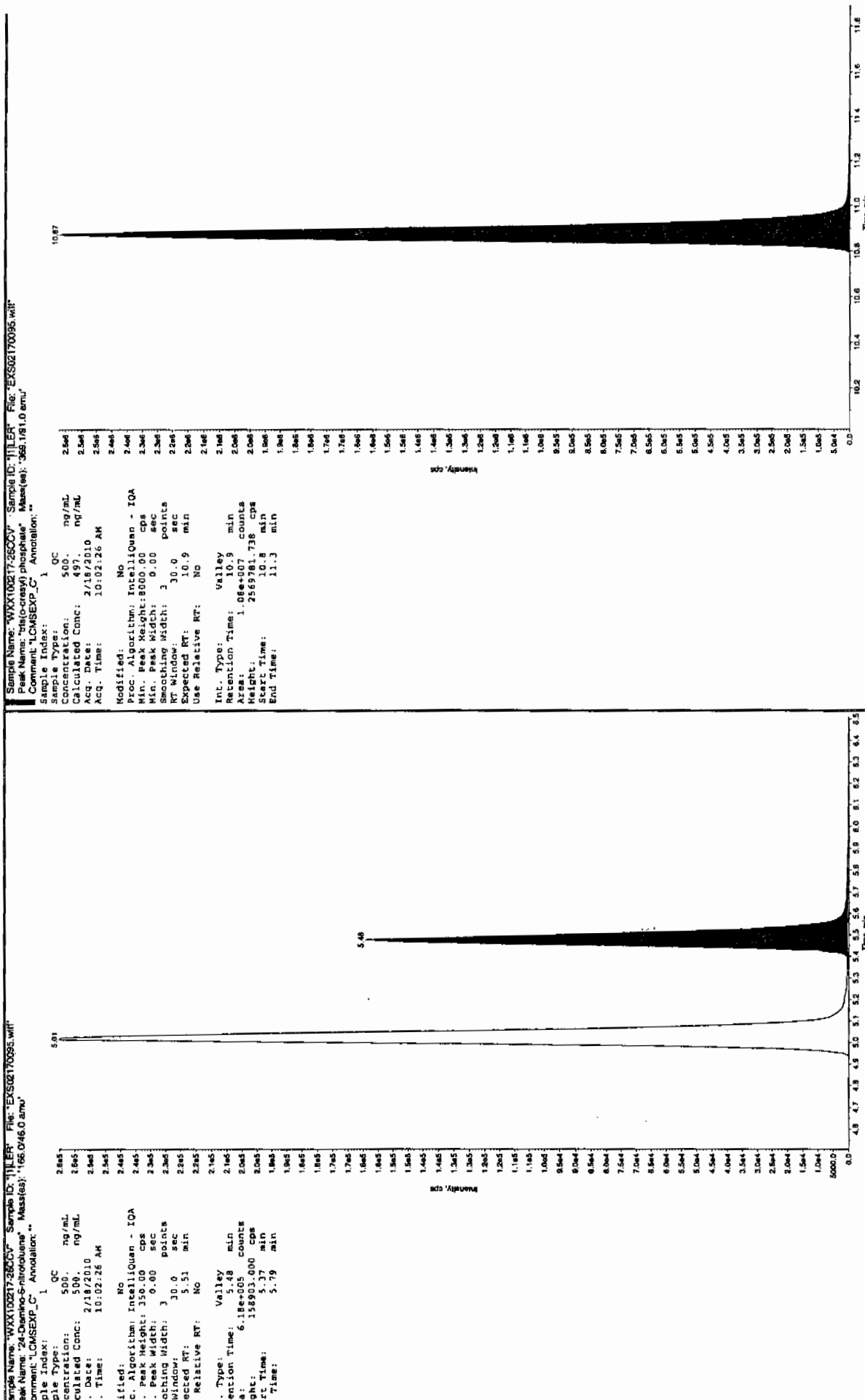
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

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7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS02170097.wiff

Analysis Date: 18-FEB-10 10:33

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	93.5	94	
2,6-Diamino-4-nitrotoluene	100	94.7	95	
3,4-Dinitrotoluene	50	50.6	101	
3,5-Dinitroaniline	100	104	104	
TATB	100	99.2	99	
tris(o-cresyl) phosphate	100	111	111	

Recovery Limits:

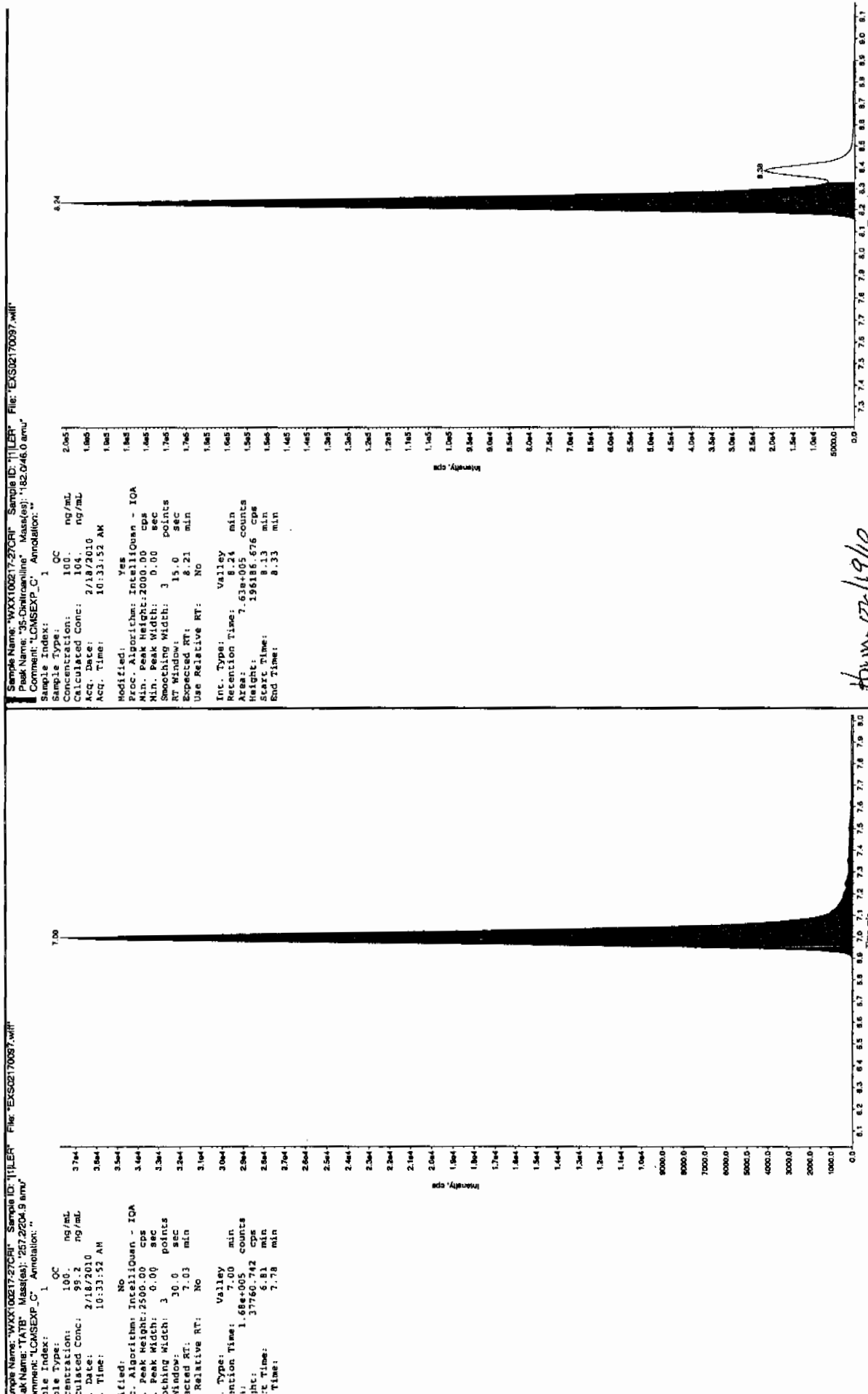
3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

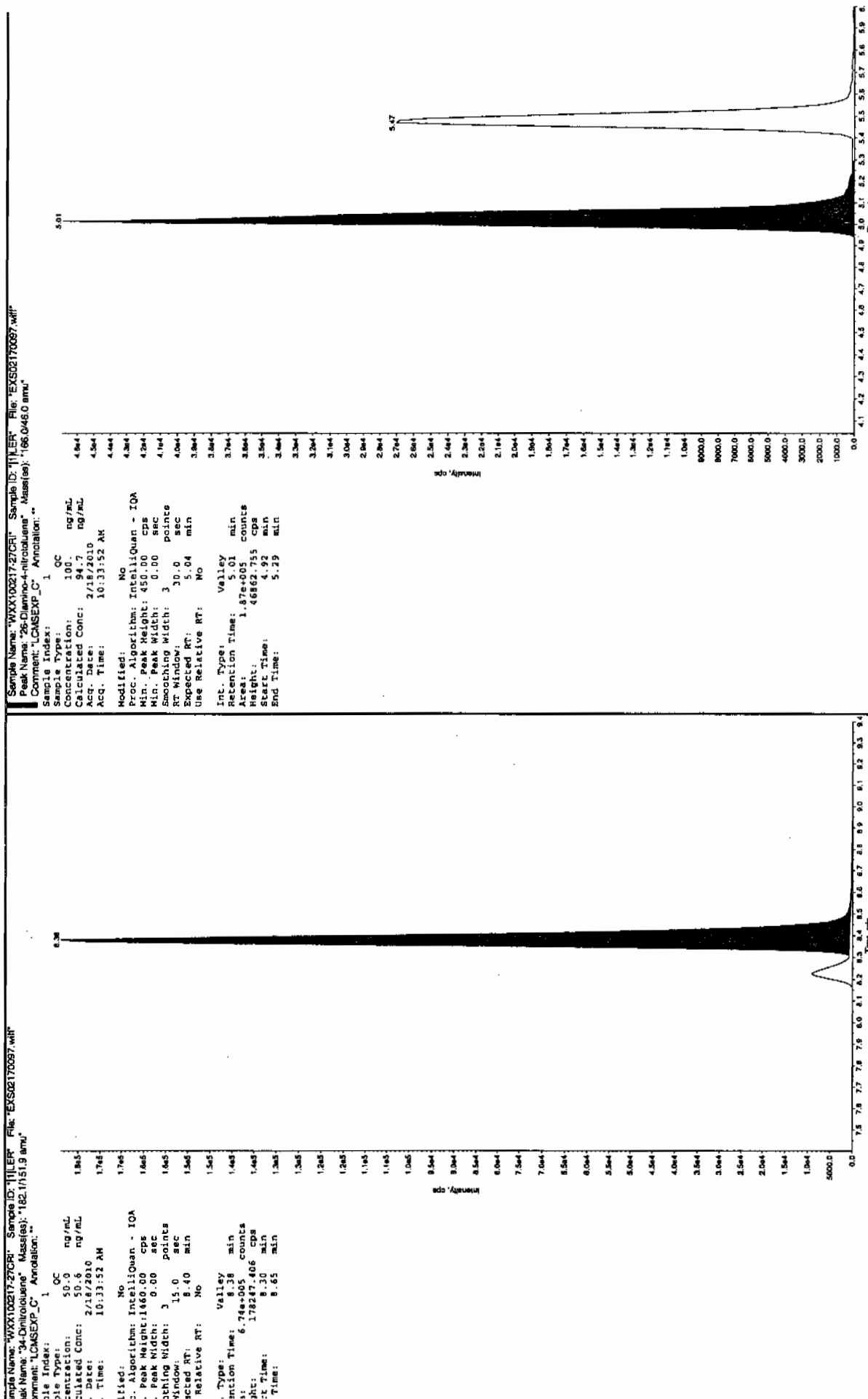
Column used to flag Recovery outside of Limits

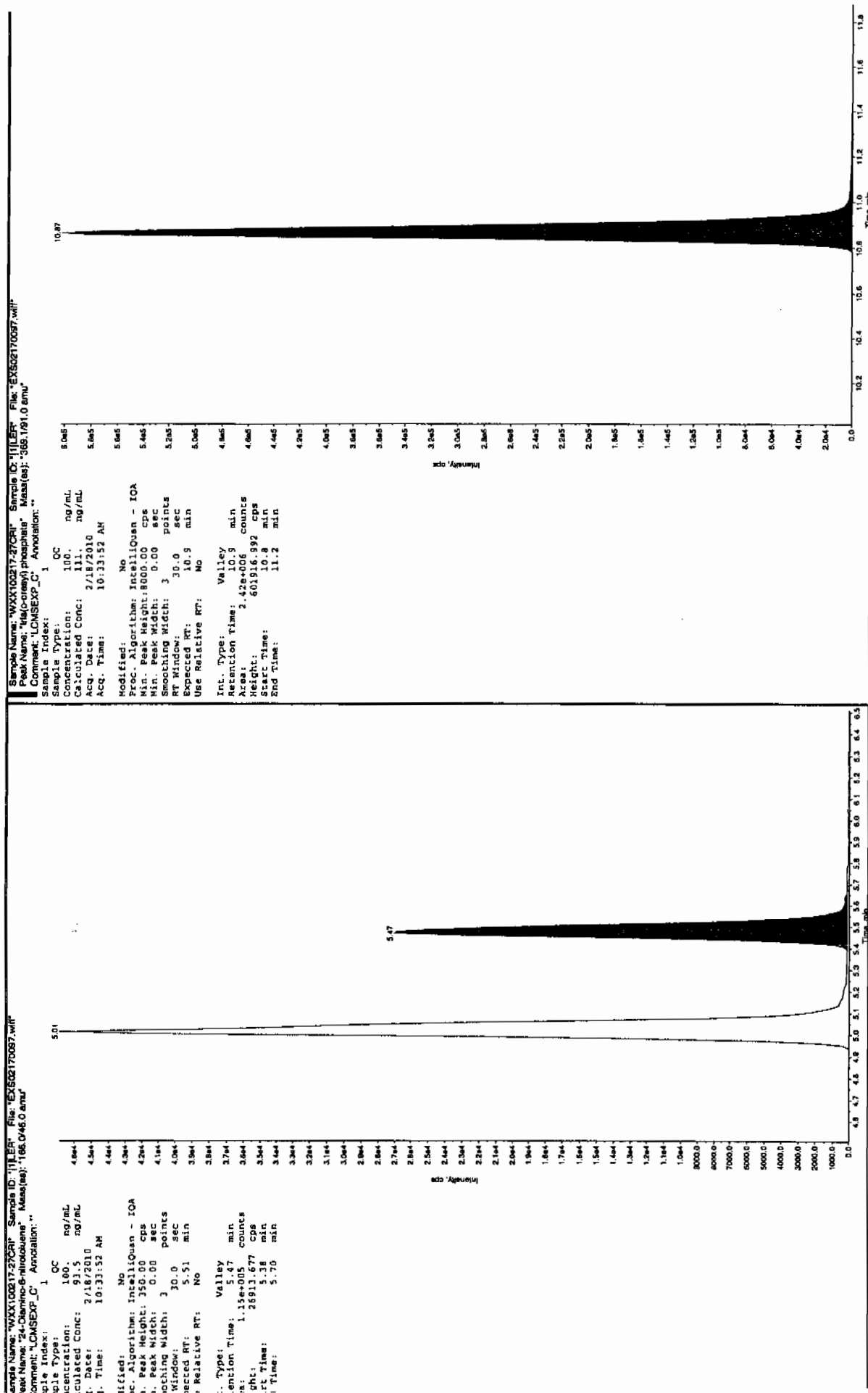
* Value outside of Recovery Limits

for 2/19/10



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3L SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS02170101.wiff

Analysis Date: 18-FEB-10 11:36

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	518	104	
2,6-Diamino-4-nitrotoluene	500	536	107	
3,4-Dinitrotoluene	250	236	94	
3,5-Dinitroaniline	500	491	98	
TATB	500	488	98	
tris(o-cresyl) phosphate	500	489	98	

Recovery Limits:

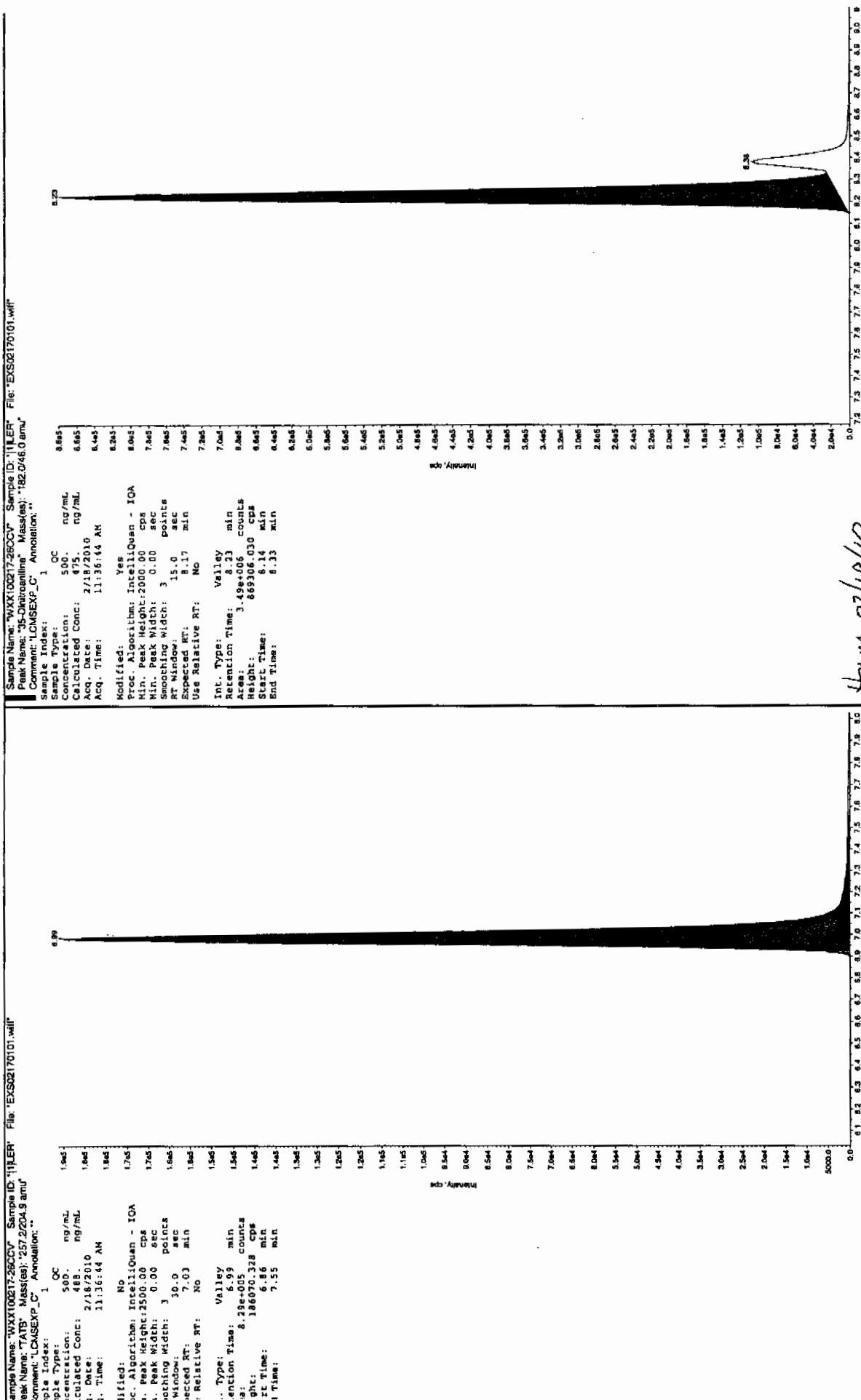
3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

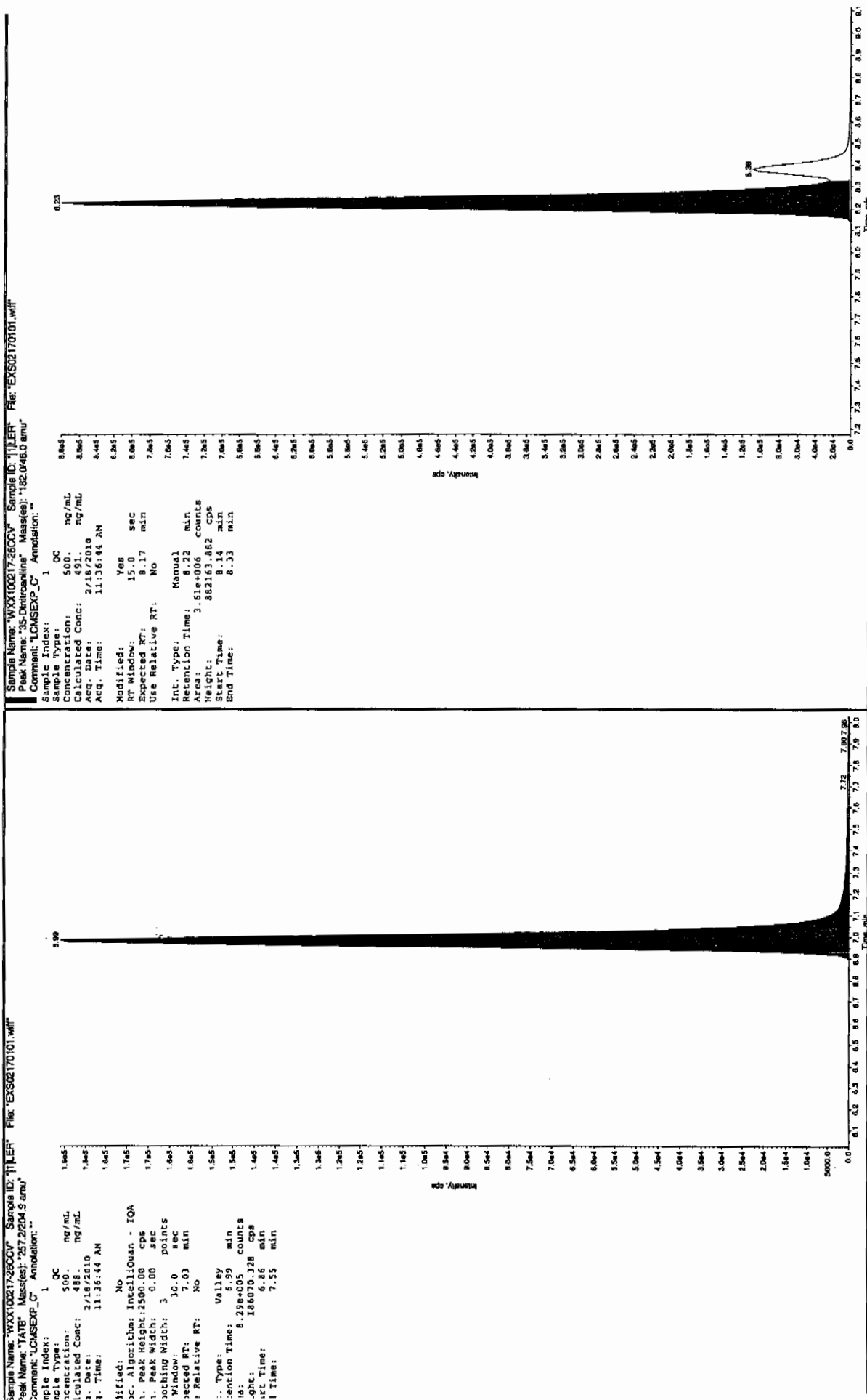
* Value outside of Recovery Limits

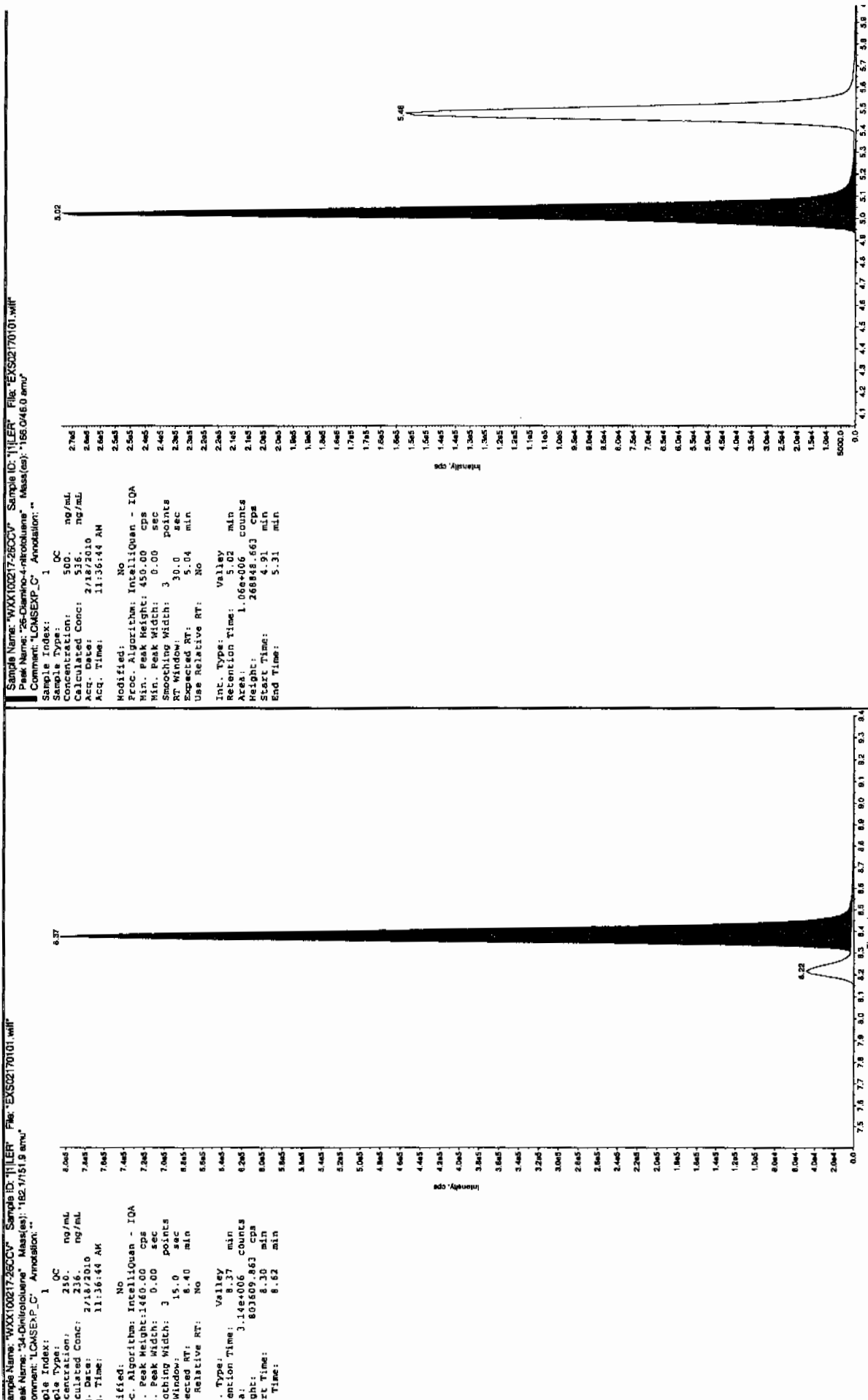
Before Run 2/19/10



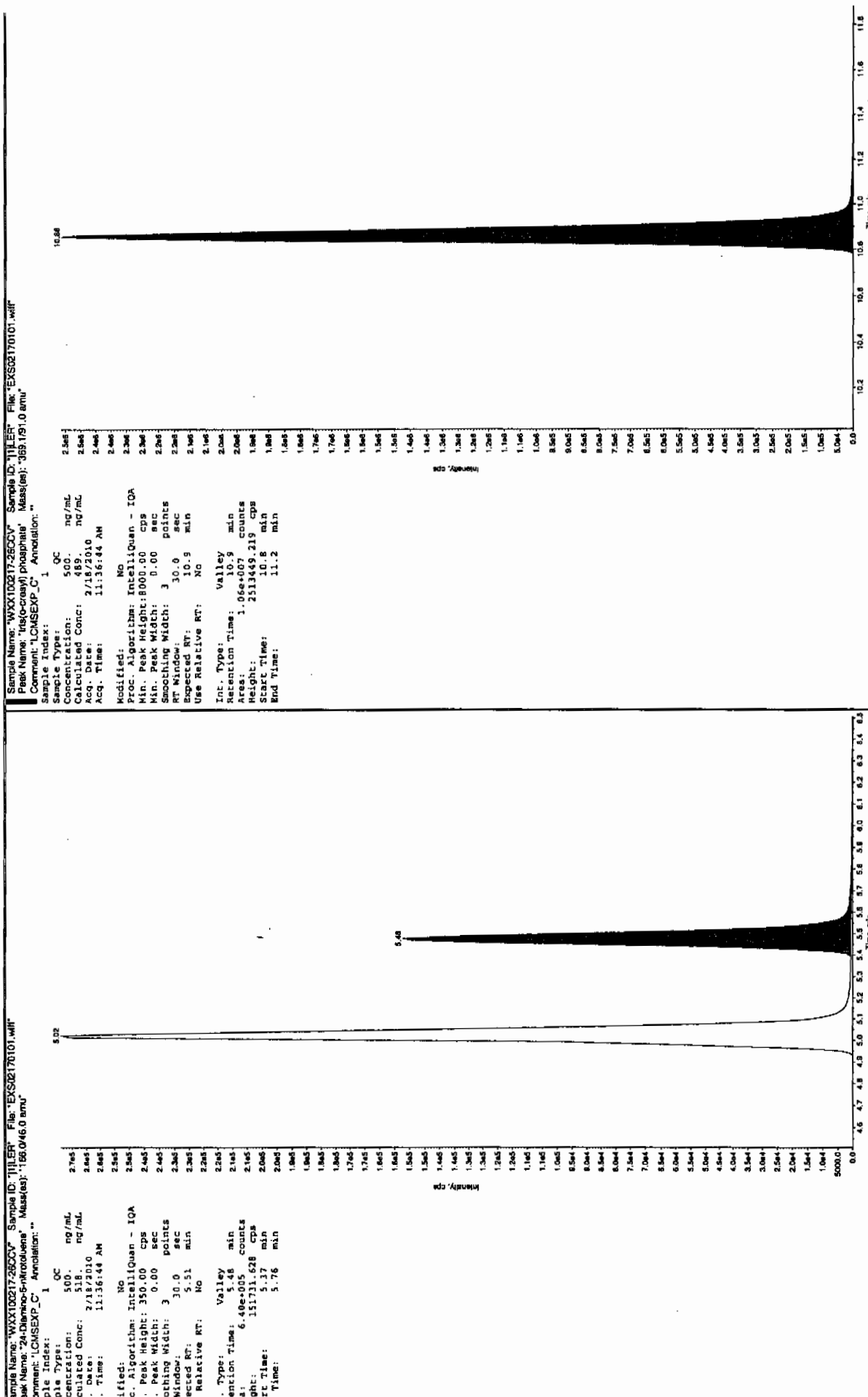
Run 2/19/10

after Jan 21/9/10





EL SOP GL-OA-E-056, Method 8321A-Modified LCM SMS#4



7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS02170103.wiff

Analysis Date: 18-FEB-10 12:08

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,6-Diamino-4-nitrotoluene	100	105	105	
3,4-Dinitrotoluene	50	47.7	96	
3,5-Dinitroaniline	100	95.8	96	
TATB	100	98.6	99	
tris(o-cresyl) phosphate	100	111	111	
2,4-Diamino-6-nitrotoluene	100	93.3	93	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

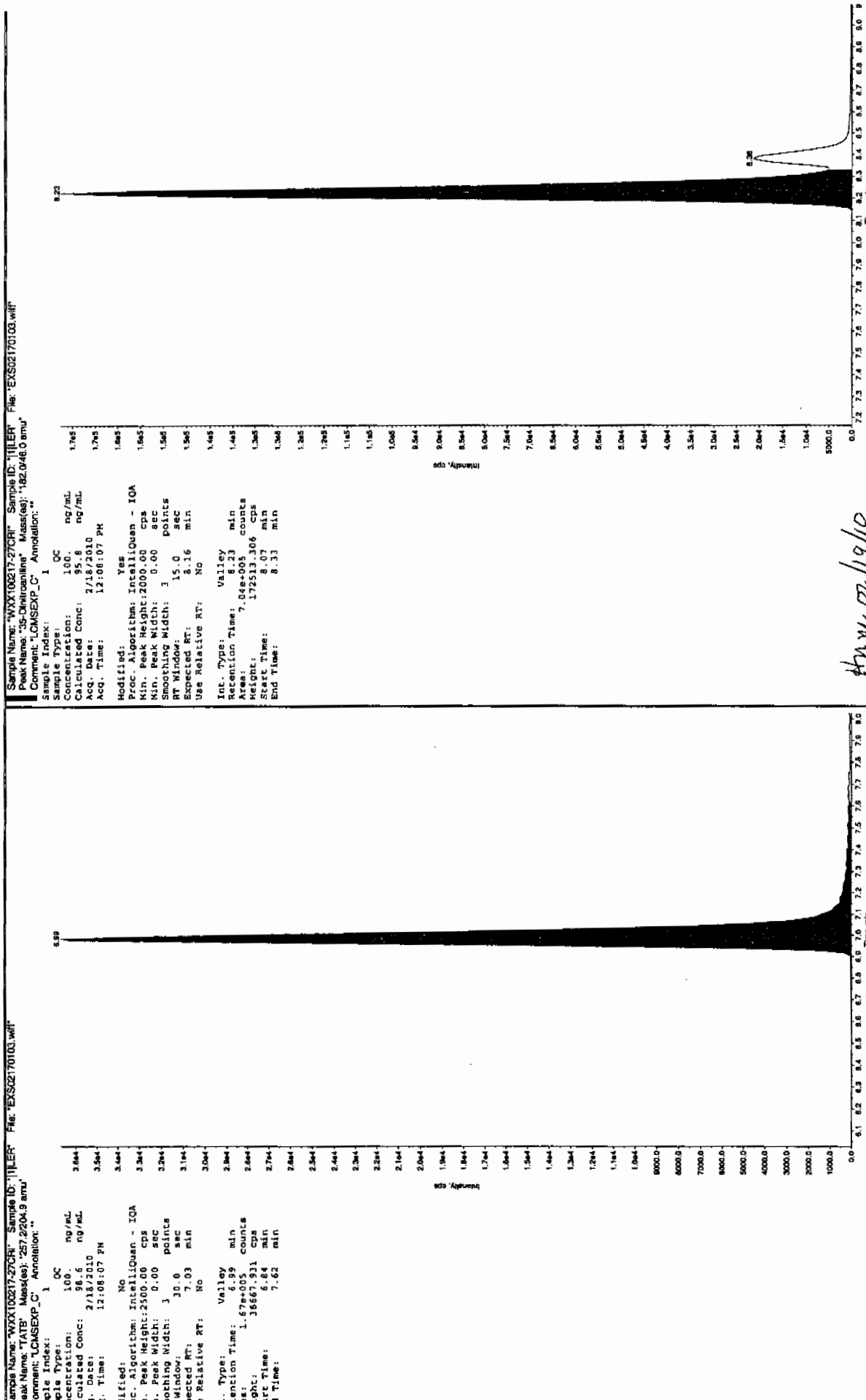
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

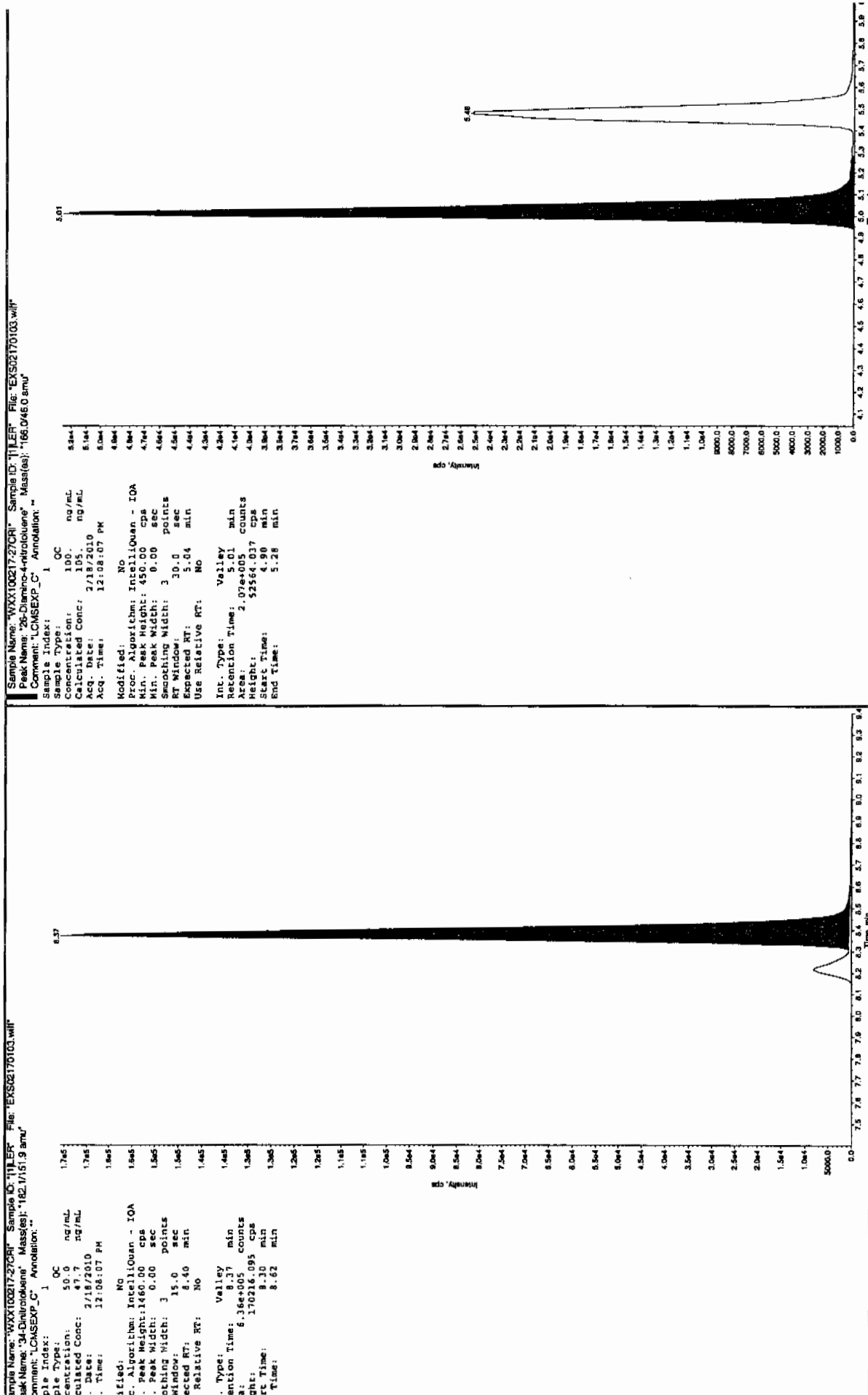
Column used to flag Recovery outside of Limits

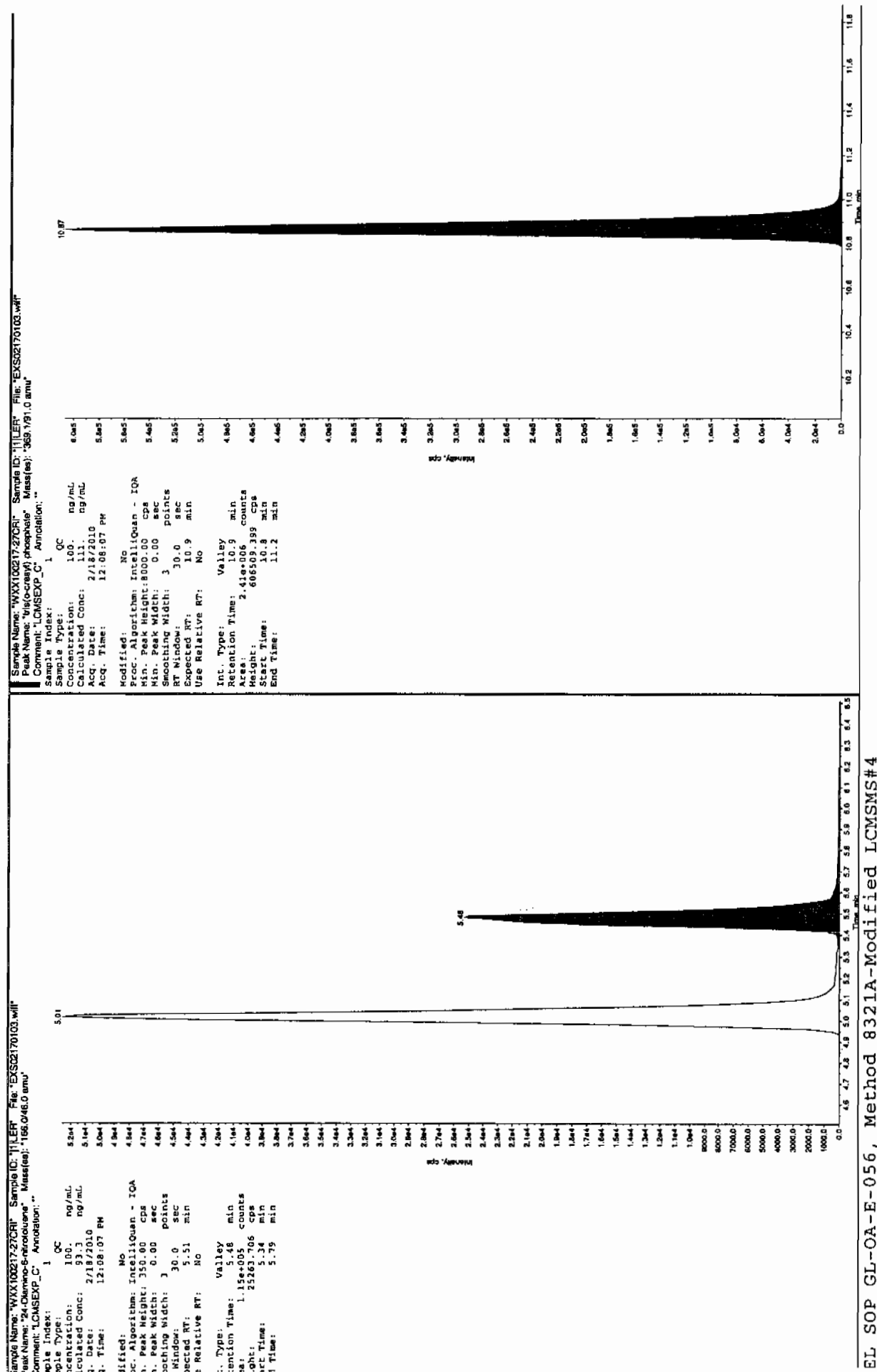
* Value outside of Recovery Limits

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Gen 2/19/10





7A
Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS02170114.wiff

Analysis Date: 18-FEB-10 15:01

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	480	96	
2,6-Diamino-4-nitrotoluene	500	551	110	
3,4-Dinitrotoluene	250	232	93	
3,5-Dinitroaniline	500	505	101	
TATB	500	481	96	
tris(o-cresyl) phosphate	500	489	98	

Recovery Limits:

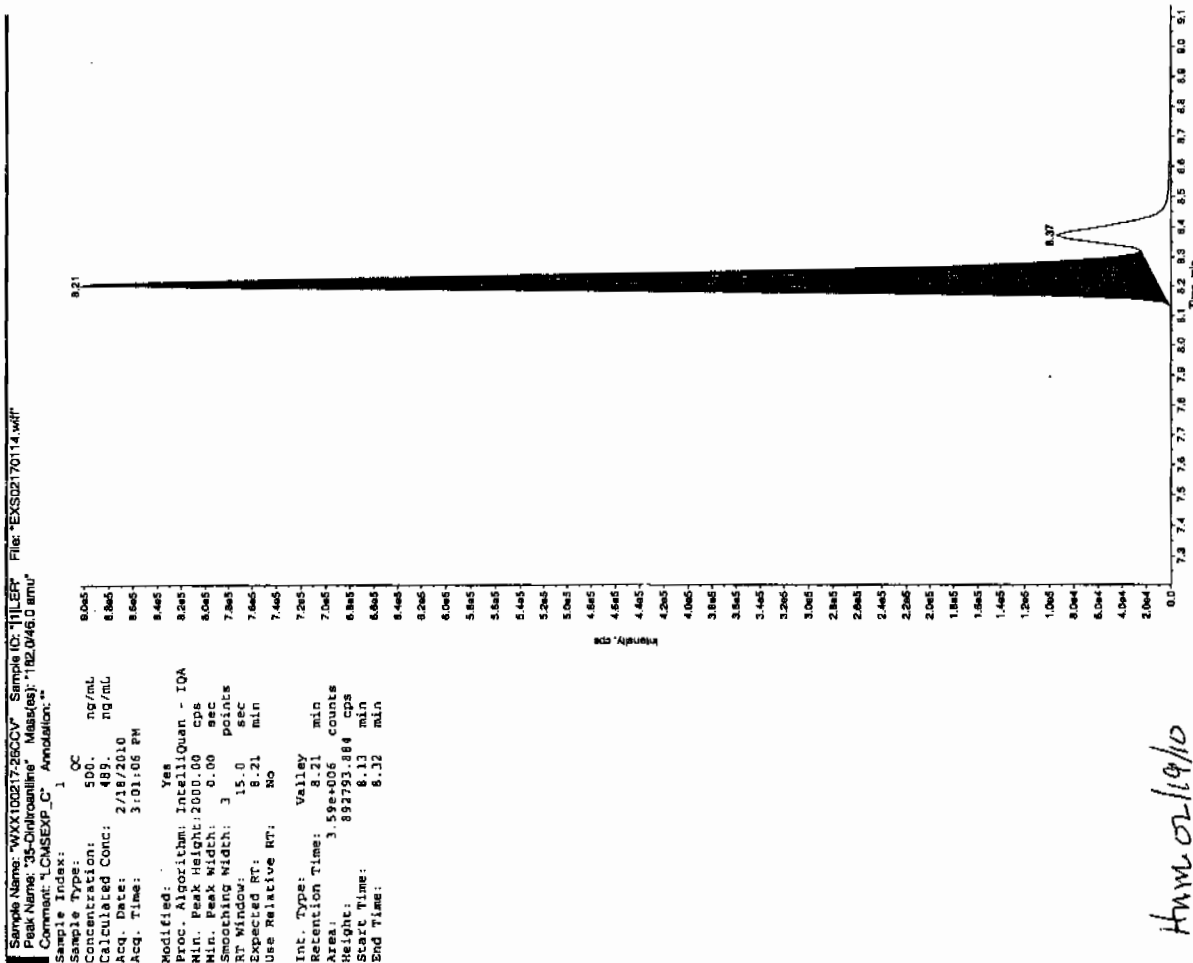
3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

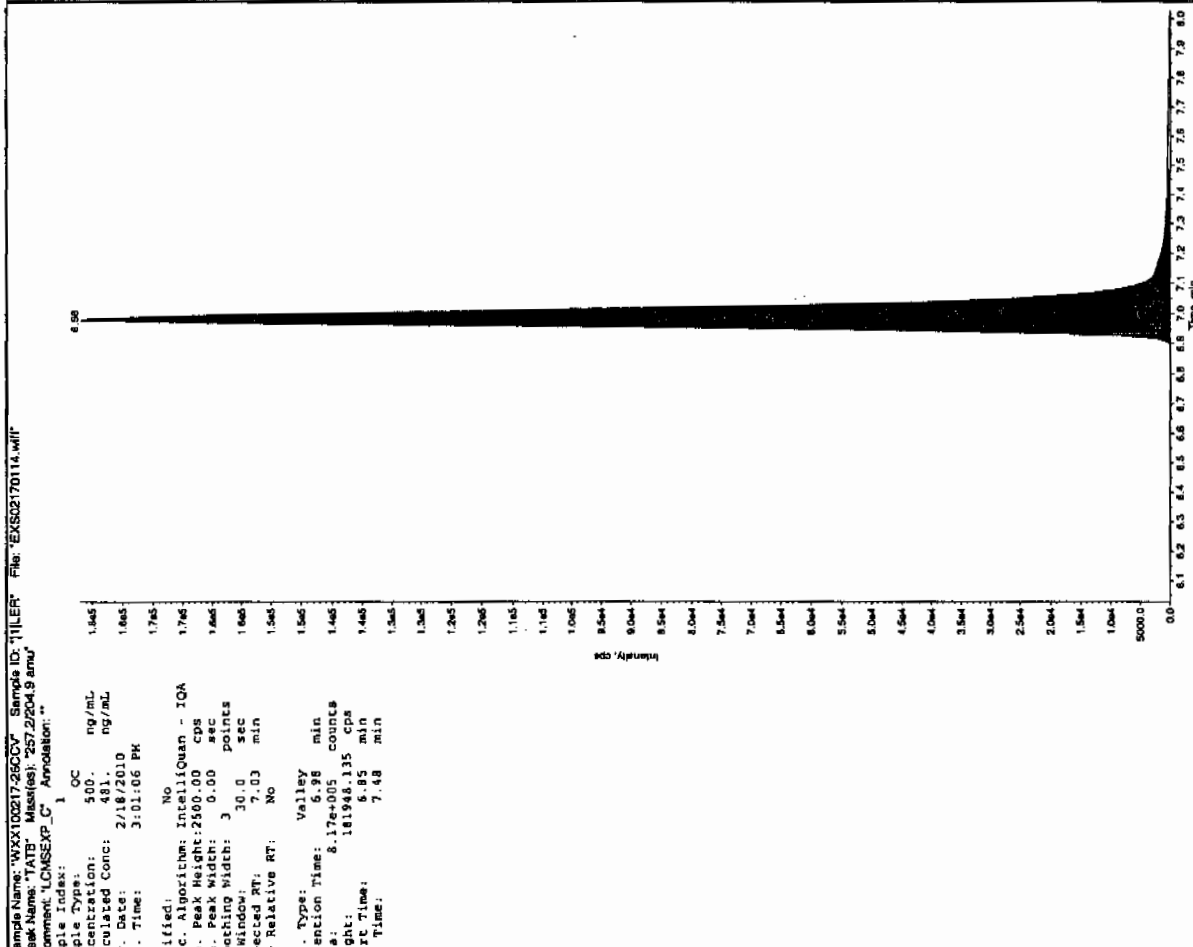
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Before Jan 21/9/10

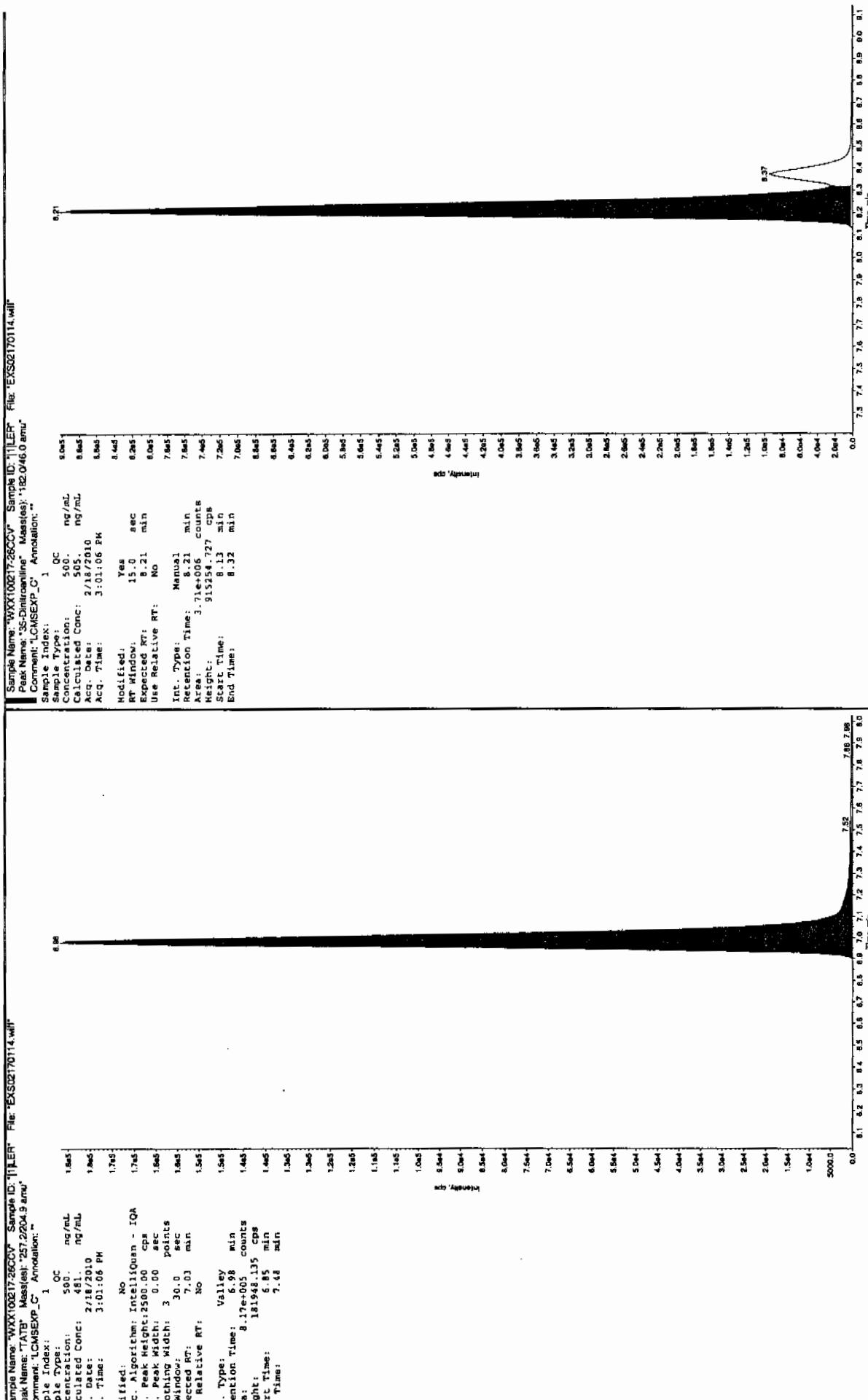


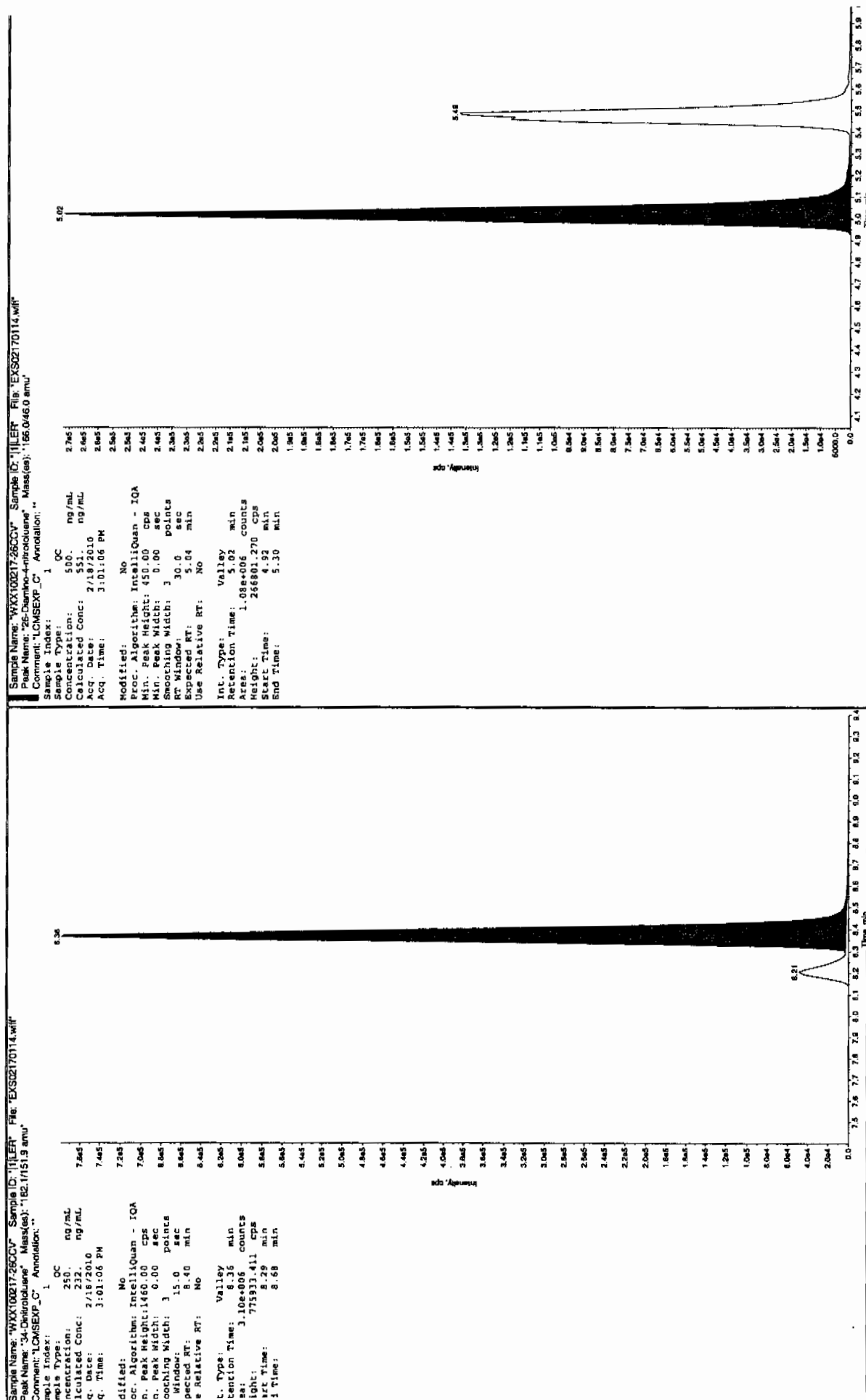
After 02/19/10

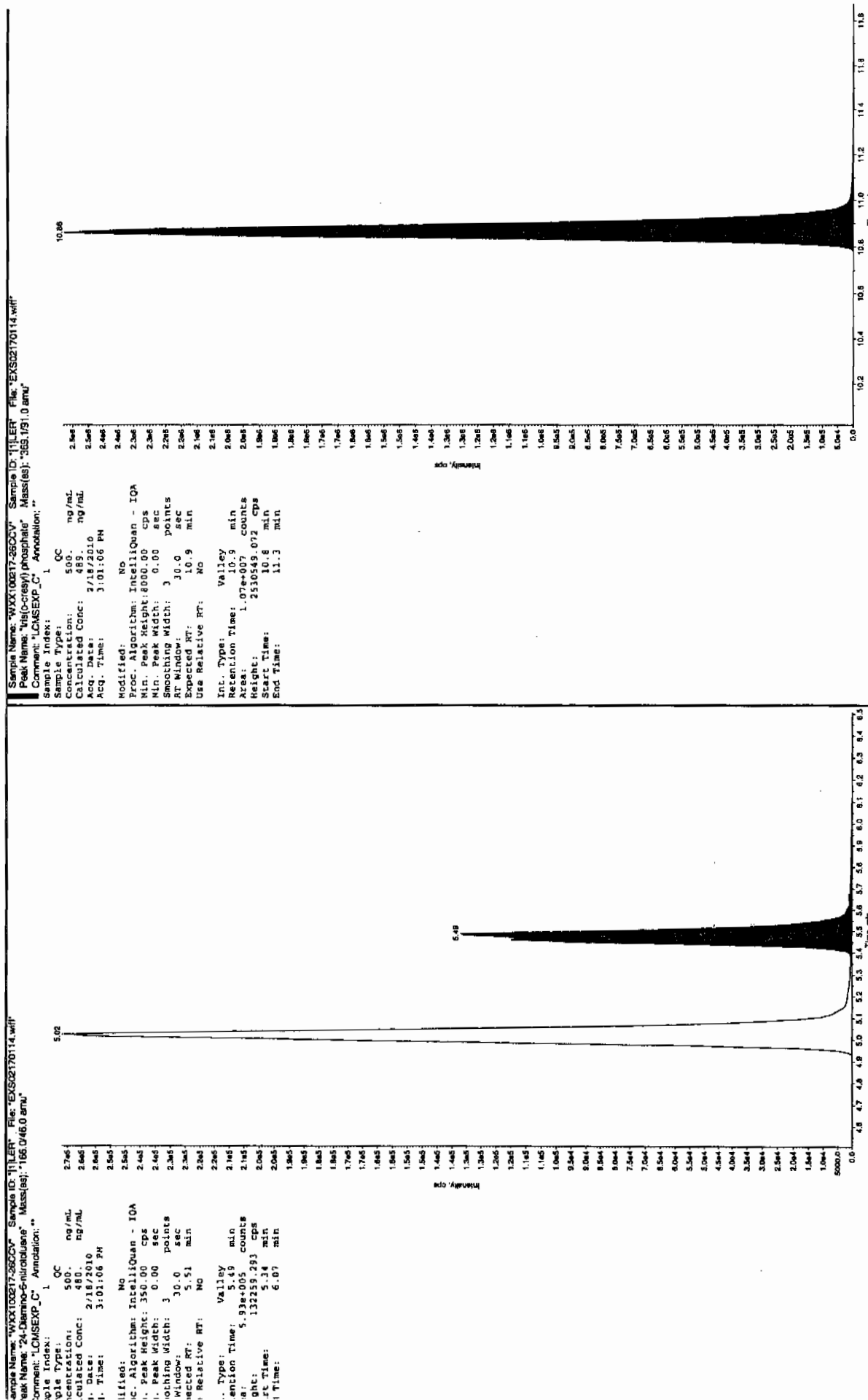


EL SOP GL-OA-E-056, Method 8321A-Modified LCMSMS#4

after Jan 21/9/10







7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS02170116.wiff

Analysis Date: 18-FEB-10 15:32

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	103	103	
2,6-Diamino-4-nitrotoluene	100	108	108	
3,4-Dinitrotoluene	50	49	98	
3,5-Dinitroaniline	100	105	105	
TATB	100	97.4	97	
tris(o-cresyl) phosphate	100	108	108	

Recovery Limits:

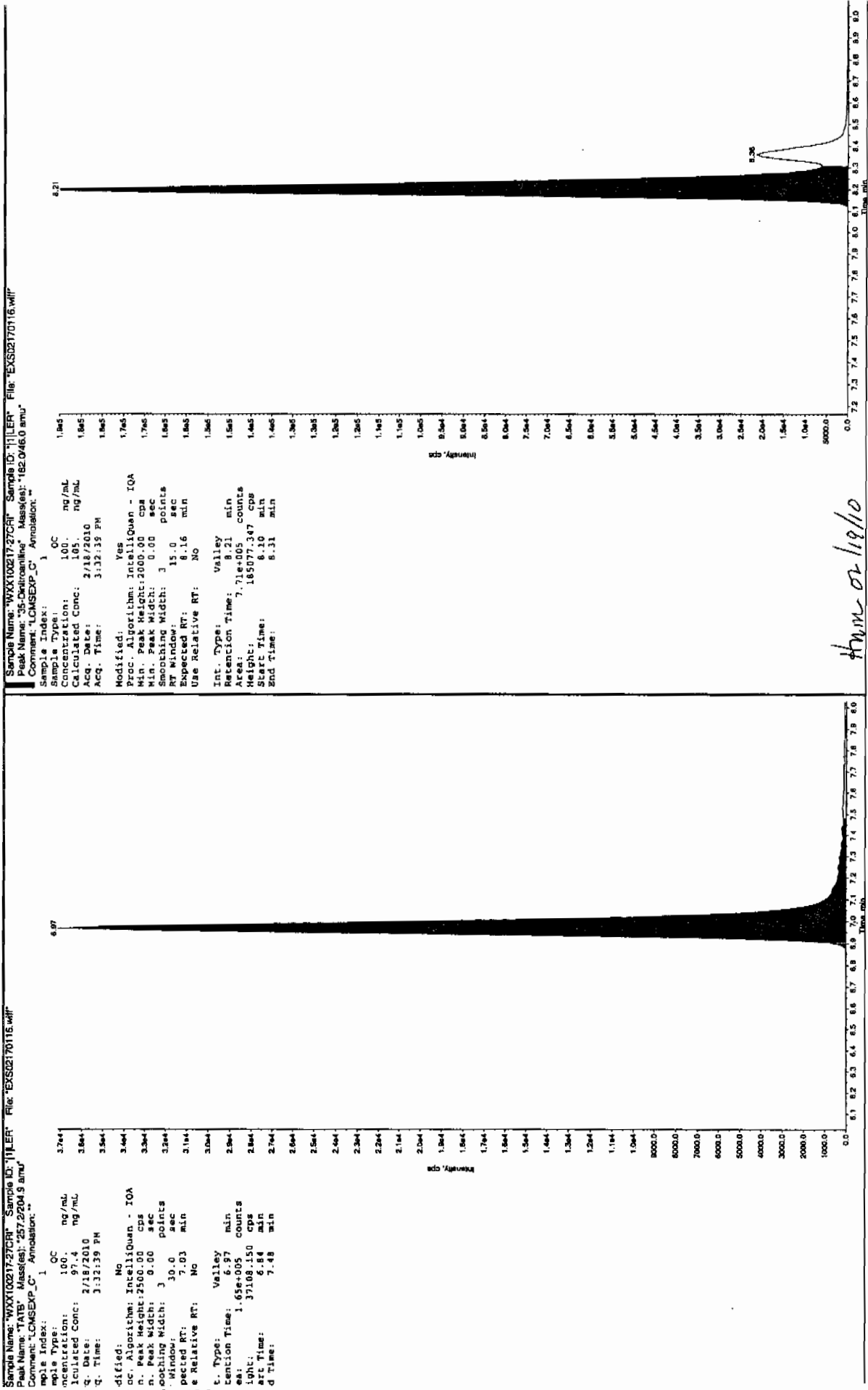
3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,
2,4-Diamino-6-nitrotoluene 50-150%

Other Target Analytes 70-130%

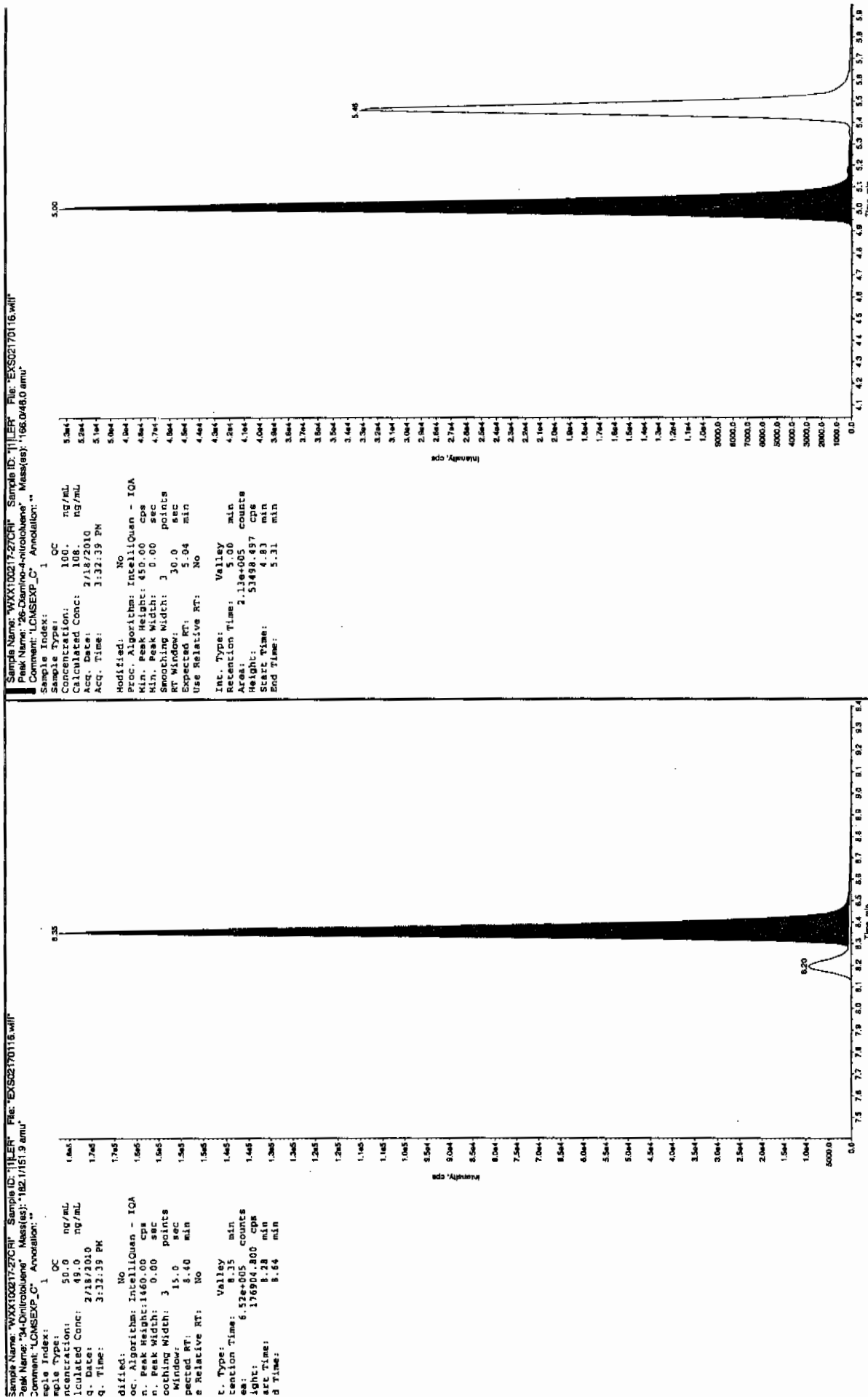
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

Jan 21/9/10



Jan 21/9/10

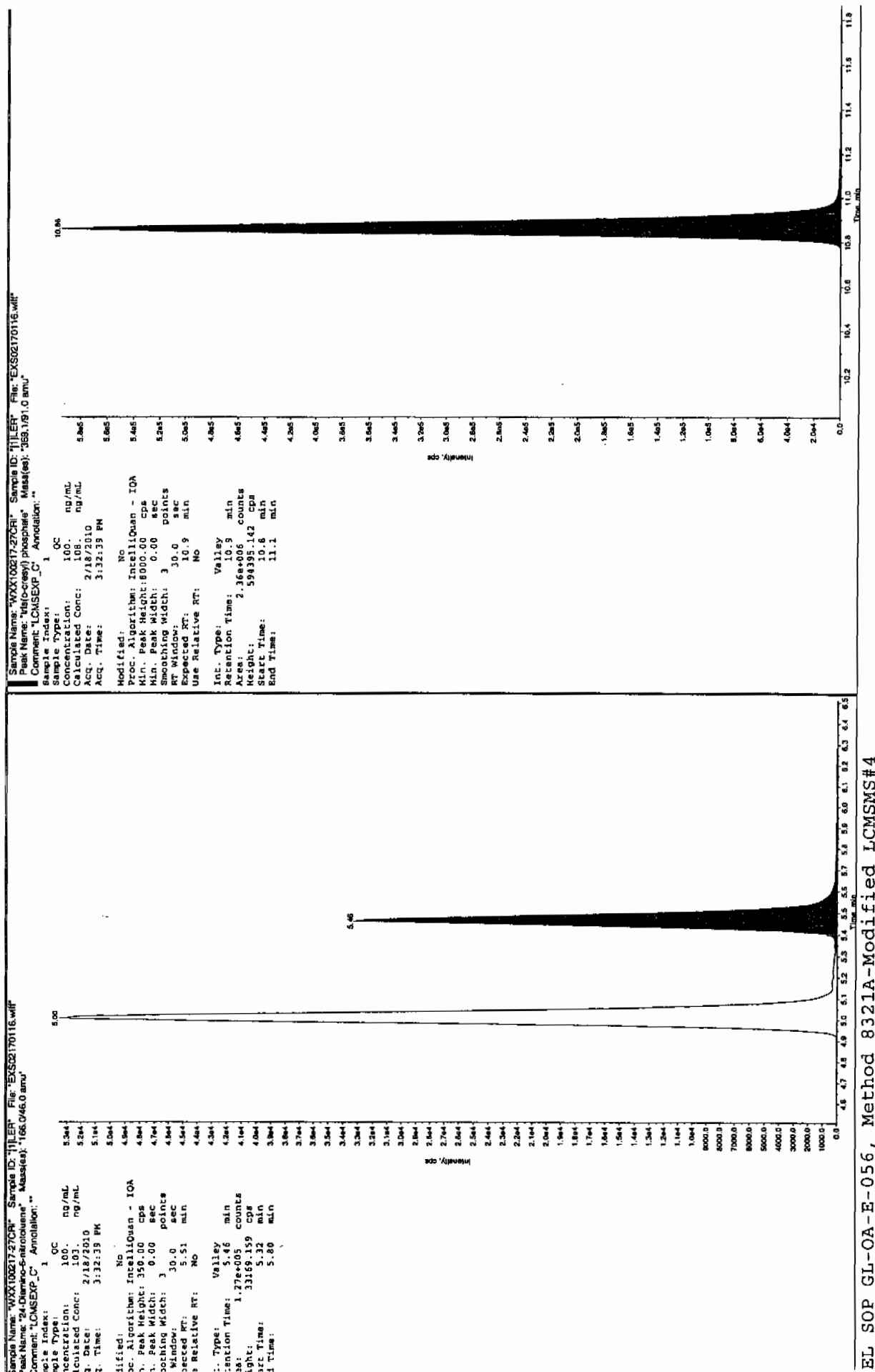


Sample Name: "WXX100217-27CH" Sample ID: "11ER" File: "EXS02170116.will"
 Peak Name: "34-Dinitrofluorene" Mass(es): "182.1151.9 amu"
 Comment: "LCMS/EXP_C" Annotation: ""

Sample Index: 1
 Sample Type: OC
 Concentration: 50.0 ng/mL
 Calculated Conc: 49.0 ng/mL
 Acq. Date: 2/18/2010
 Acq. Time: 3:32:39 PM

Modified: No
 Proc Algorithm: IntelliQuan - IQA
 Min. Peak Width: 1.00 sec
 Min. Peak Height: 450.00 cps
 Smoothing Width: 3 points
 RT Window: 15.0 sec
 Expected RT: 8.40 min
 Use Relative RT: No

Int. Type: Valley
 Retention Time: 8.35 min
 Area: 6.52e+005 counts
 Height: 176904.800 cps
 Start Time: 8.28 min
 End Time: 8.64 min



7A

Explosives Continuing Calibration Verification

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCCV

GEL Data File EXS02170126.wiff

Analysis Date: 18-FEB-10 18:09

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	500	544	109	
2,6-Diamino-4-nitrotoluene	500	580	116	
3,4-Dinitrotoluene	250	232	93	
3,5-Dinitroaniline	500	503	101	
TATB	500	484	97	
tris(o-cresyl) phosphate	500	495	99	

Recovery Limits:

3,4-Dinitrotoluene (Surrogate), TATB, tris(o-cresyl)phosphate, 3,5-Dinitroaniline, 2,6-Diamino-4-nitrotoluene ,

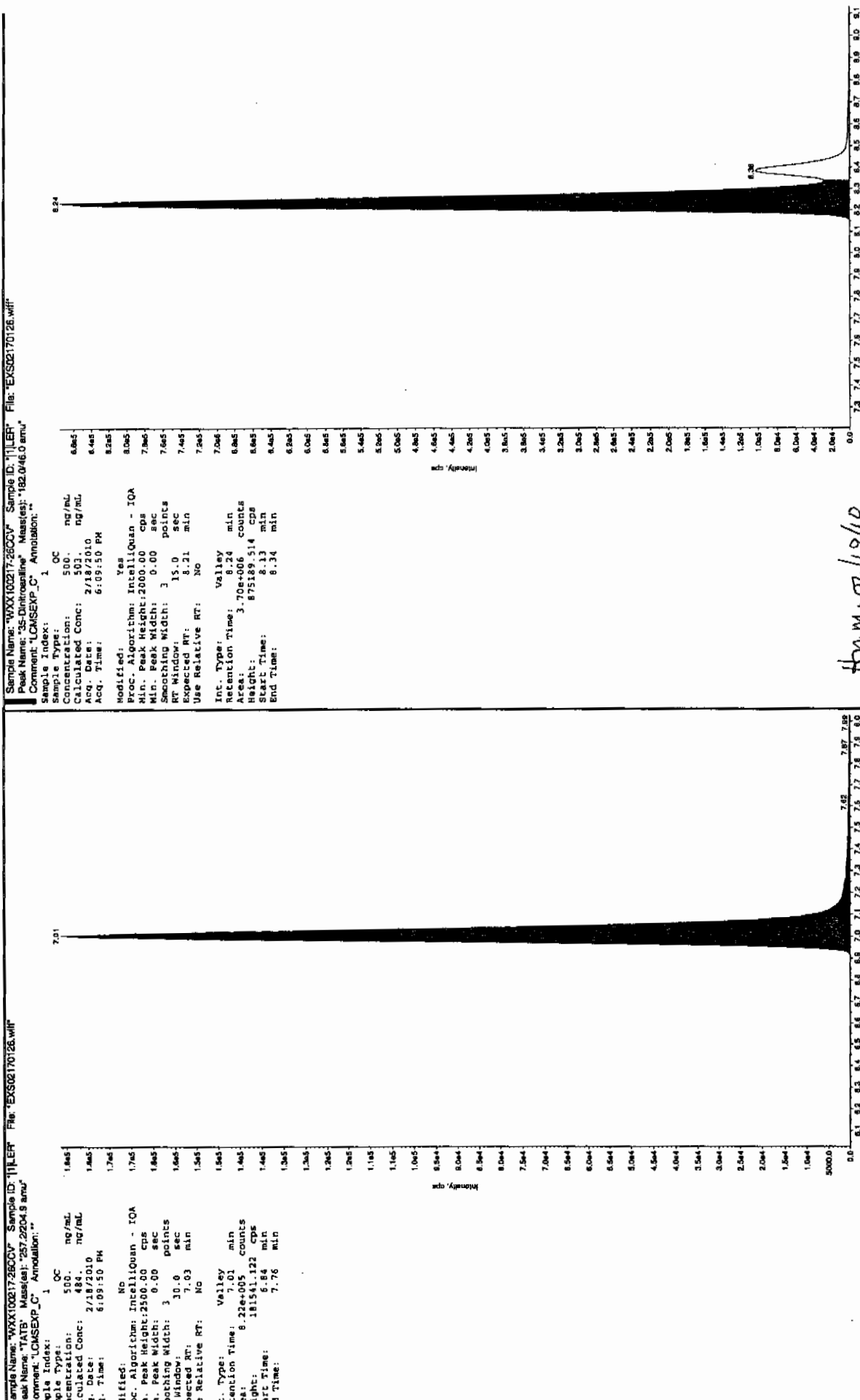
2,4-Diamino-6-nitrotoluene 70-130%

Other Target Analytes 80-120%

Column used to flag Recovery outside of Limits

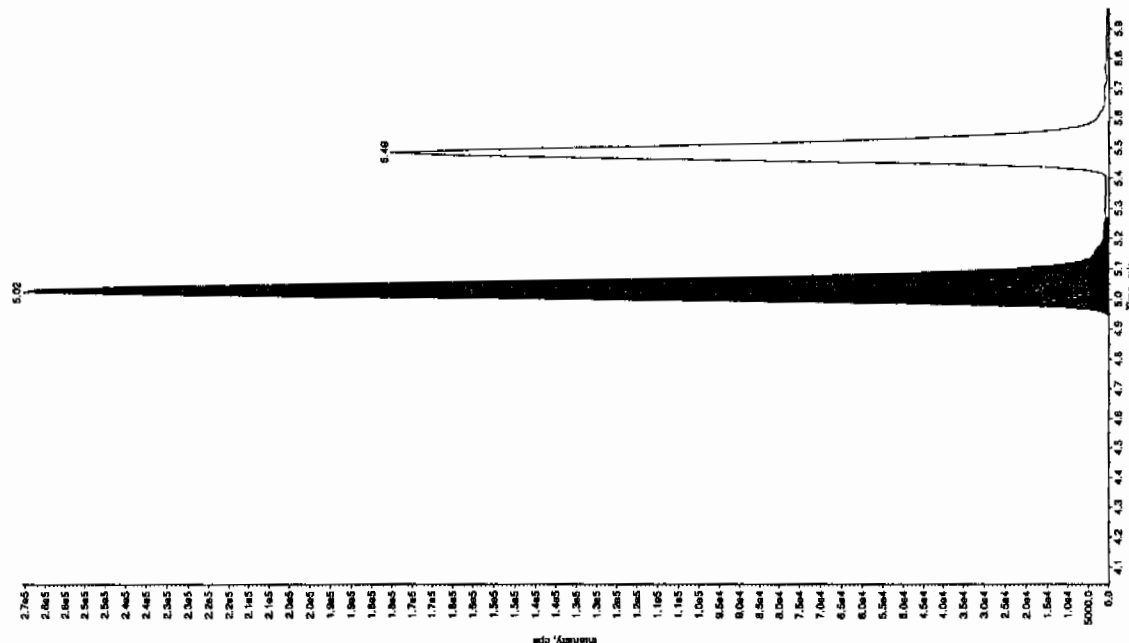
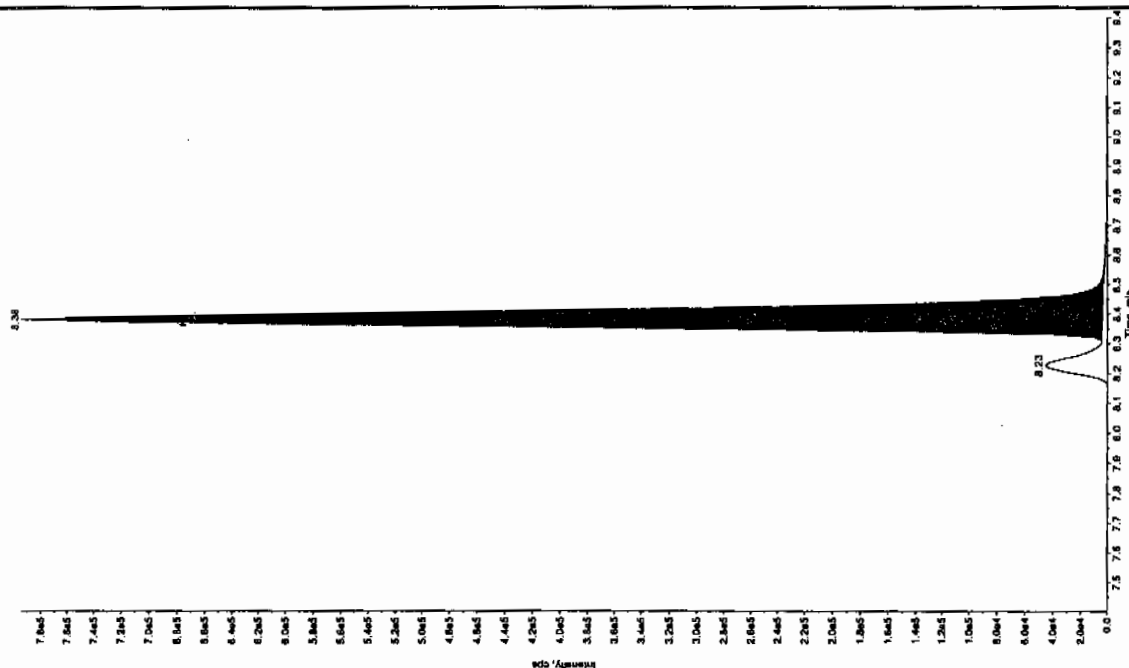
* Value outside of Recovery Limits

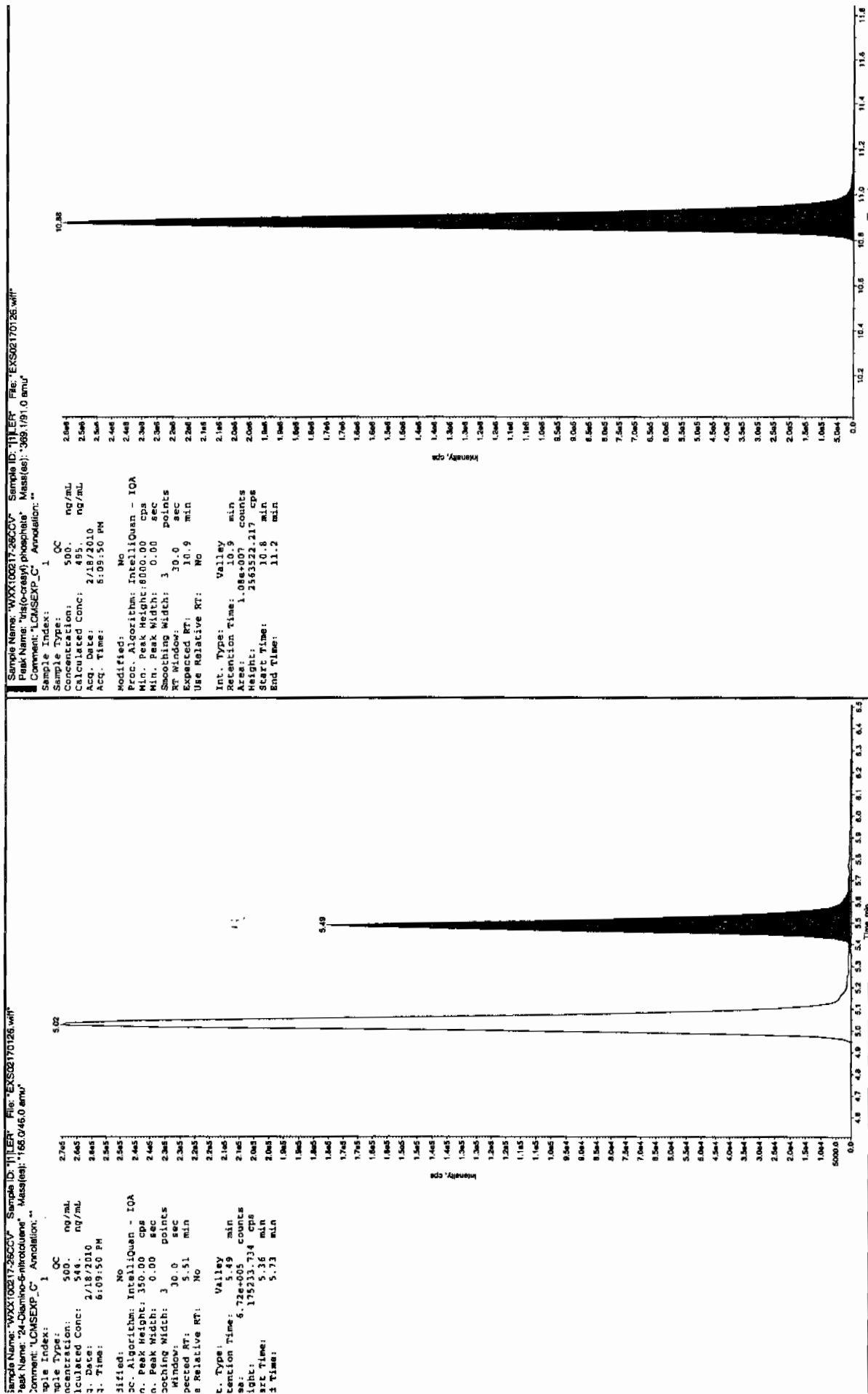
San 2/19/10



Sample Name: "WXX100217-26CCV" Sample ID: "11LER" File: "EXS02170126.wiff"
Peak Name: "26-Diamino-4-nitrotoluene" Mass(es): "166.0/46.0 amu"
Comment: "LCMSEXP C" Annotation: ""

Sample Index:	1	OC
Sample Type:	250	ng/mL
Concentration:	232	ng/mL
Concentrated Conc:	232	ng/mL
1. Date:	2/18/2010	
2. Time:	6:09:50 PM	
3. Operator:		
4. Analyst:		
5. Technician:		
6. Sample ID:		
7. Sample Name:		
8. Sample Location:		
9. Sample Volume:		
10. Sample Weight:		
11. Sample Height:		
12. Sample Width:		
13. Sample Depth:		
14. Sample Area:		
15. Sample Perimeter:		
16. Sample Surface Area:		
17. Sample Volume:		
18. Sample Weight:		
19. Sample Height:		
20. Sample Width:		
21. Sample Depth:		
22. Sample Area:		
23. Sample Perimeter:		
24. Sample Surface Area:		
25. Sample Volume:		
26. Sample Weight:		
27. Sample Height:		
28. Sample Width:		
29. Sample Depth:		
30. Sample Area:		
31. Sample Perimeter:		
32. Sample Surface Area:		
33. Sample Volume:		
34. Sample Weight:		
35. Sample Height:		
36. Sample Width:		
37. Sample Depth:		
38. Sample Area:		
39. Sample Perimeter:		
40. Sample Surface Area:		
41. Sample Volume:		
42. Sample Weight:		
43. Sample Height:		
44. Sample Width:		
45. Sample Depth:		
46. Sample Area:		
47. Sample Perimeter:		
48. Sample Surface Area:		
49. Sample Volume:		
50. Sample Weight:		
51. Sample Height:		
52. Sample Width:		
53. Sample Depth:		
54. Sample Area:		
55. Sample Perimeter:		
56. Sample Surface Area:		
57. Sample Volume:		
58. Sample Weight:		
59. Sample Height:		
60. Sample Width:		
61. Sample Depth:		
62. Sample Area:		
63. Sample Perimeter:		
64. Sample Surface Area:		
65. Sample Volume:		
66. Sample Weight:		
67. Sample Height:		
68. Sample Width:		
69. Sample Depth:		
70. Sample Area:		
71. Sample Perimeter:		
72. Sample Surface Area:		
73. Sample Volume:		
74. Sample Weight:		
75. Sample Height:		
76. Sample Width:		
77. Sample Depth:		
78. Sample Area:		
79. Sample Perimeter:		
80. Sample Surface Area:		
81. Sample Volume:		
82. Sample Weight:		
83. Sample Height:		
84. Sample Width:		
85. Sample Depth:		
86. Sample Area:		
87. Sample Perimeter:		
88. Sample Surface Area:		
89. Sample Volume:		
90. Sample Weight:		
91. Sample Height:		
92. Sample Width:		
93. Sample Depth:		
94. Sample Area:		
95. Sample Perimeter:		
96. Sample Surface Area:		
97. Sample Volume:		
98. Sample Weight:		
99. Sample Height:		
100. Sample Width:		
101. Sample Depth:		
102. Sample Area:		
103. Sample Perimeter:		
104. Sample Surface Area:		
105. Sample Volume:		
106. Sample Weight:		
107. Sample Height:		
108. Sample Width:		
109. Sample Depth:		
110. Sample Area:		
111. Sample Perimeter:		
112. Sample Surface Area:		
113. Sample Volume:		
114. Sample Weight:		
115. Sample Height:		
116. Sample Width:		
117. Sample Depth:		
118. Sample Area:		
119. Sample Perimeter:		
120. Sample Surface Area:		
121. Sample Volume:		
122. Sample Weight:		
123. Sample Height:		
124. Sample Width:		
125. Sample Depth:		
126. Sample Area:		
127. Sample Perimeter:		
128. Sample Surface Area:		
129. Sample Volume:		
130. Sample Weight:		
131. Sample Height:		
132. Sample Width:		
133. Sample Depth:		
134. Sample Area:		
135. Sample Perimeter:		
136. Sample Surface Area:		
137. Sample Volume:		
138. Sample Weight:		
139. Sample Height:		





7B
Explosives CRI Standard

Lab Name: GEL Laboratories LLC

GEL Job No (SDG): 10-1394

Lab Code: GEL

GEL Sample ID: WXXCRI

GEL Data File EXS02170128.wiff

Analysis Date: 18-FEB-10 18:41

LCMSMS ID: 1358

Column ID: JSphere ODS-H80

Compound	True	Found	Recovery	Q
2,4-Diamino-6-nitrotoluene	100	103	103	
2,6-Diamino-4-nitrotoluene	100	119	119	
3,4-Dinitrotoluene	50	47.3	95	
3,5-Dinitroaniline	100	99.7	100	
TATB	100	97.8	98	
tris(o-cresyl) phosphate	100	109	109	

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%

Other Target Analytes 70-130%

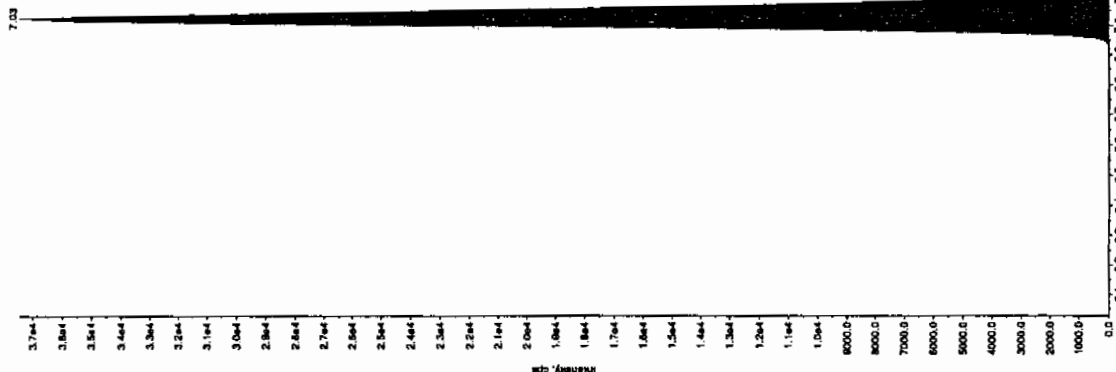
Column used to flag Recovery outside of Limits

* Value outside of Recovery Limits

San 2/19/10

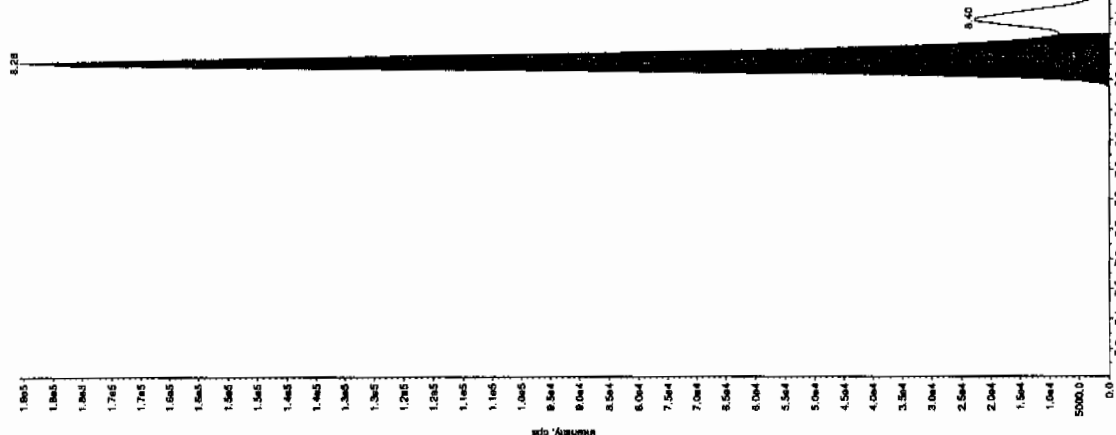
Sample Name: "WXX100217-2704" Sample ID: "111ER" File: "EXS02170128.wif"
 Peak Name: "TATB" Mass(es): "257.2204.9 amu"
 Comment: "LCMSEXP_C" Annotation: "

Sample Index: 1
 Sample Type: QC
 Concentration: 100. ng/mL
 Calculated Conc: 99.7 ng/mL
 Acq. Date: 2/18/2010
 Acq. Time: 6:41:23 PM
 Modified: Yes
 Proc. Algorithm: InCelliQuan - IOA
 Min. Peak Height: 2000.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 15.0 sec
 Expected RT: 8.21 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 8.26 min
 Area: 7.33e+005 counts
 Height: 185596.503 cps
 Start Time: 8.15 min
 End Time: 8.35 min

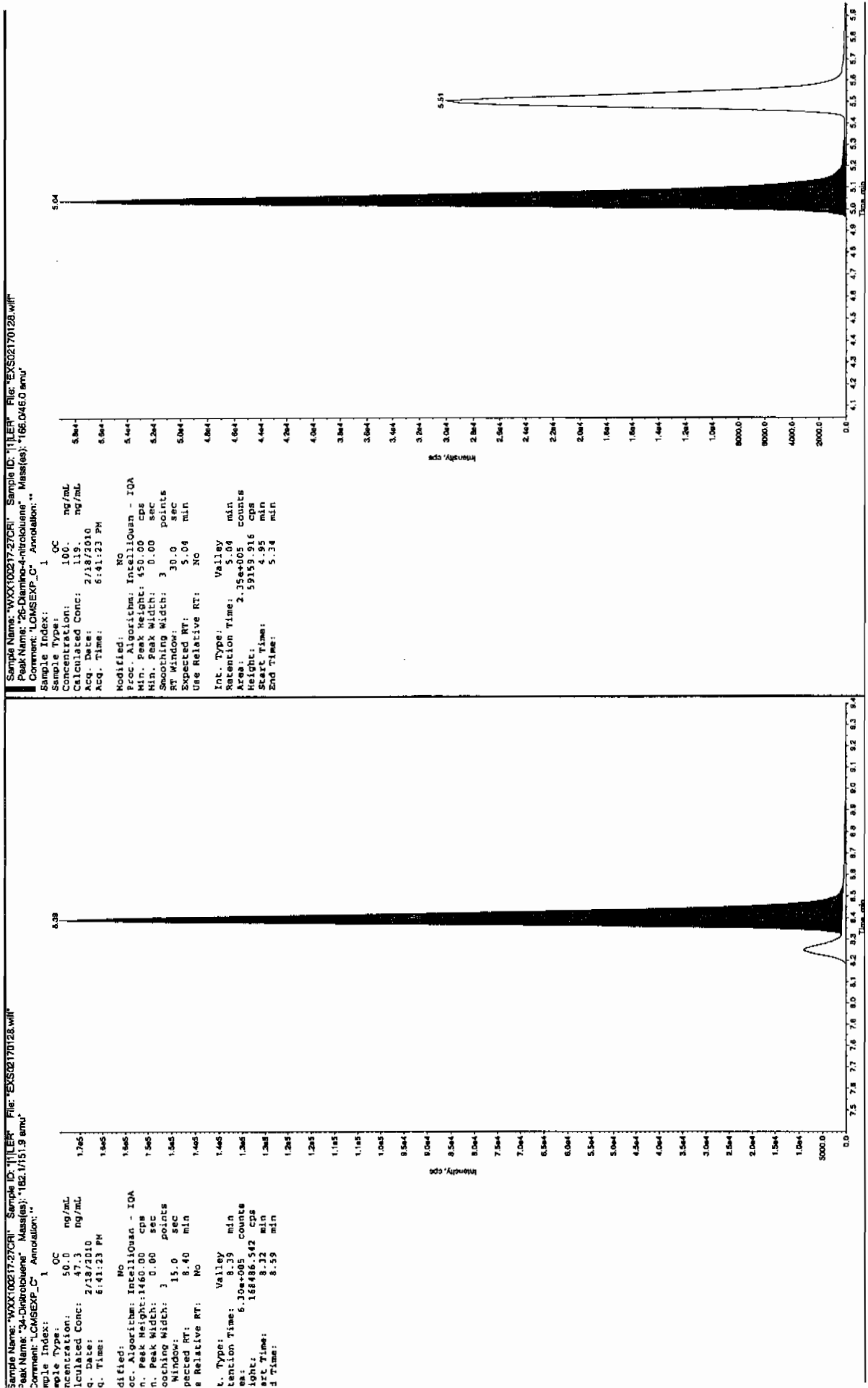


Sample Name: "WXX100217-2704" Sample ID: "111ER" File: "EXS02170128.wif"
 Peak Name: "35-Dinitroaniline" Mass(es): "182.0468.0 amu"
 Comment: "LCMSEXP_C" Annotation: "

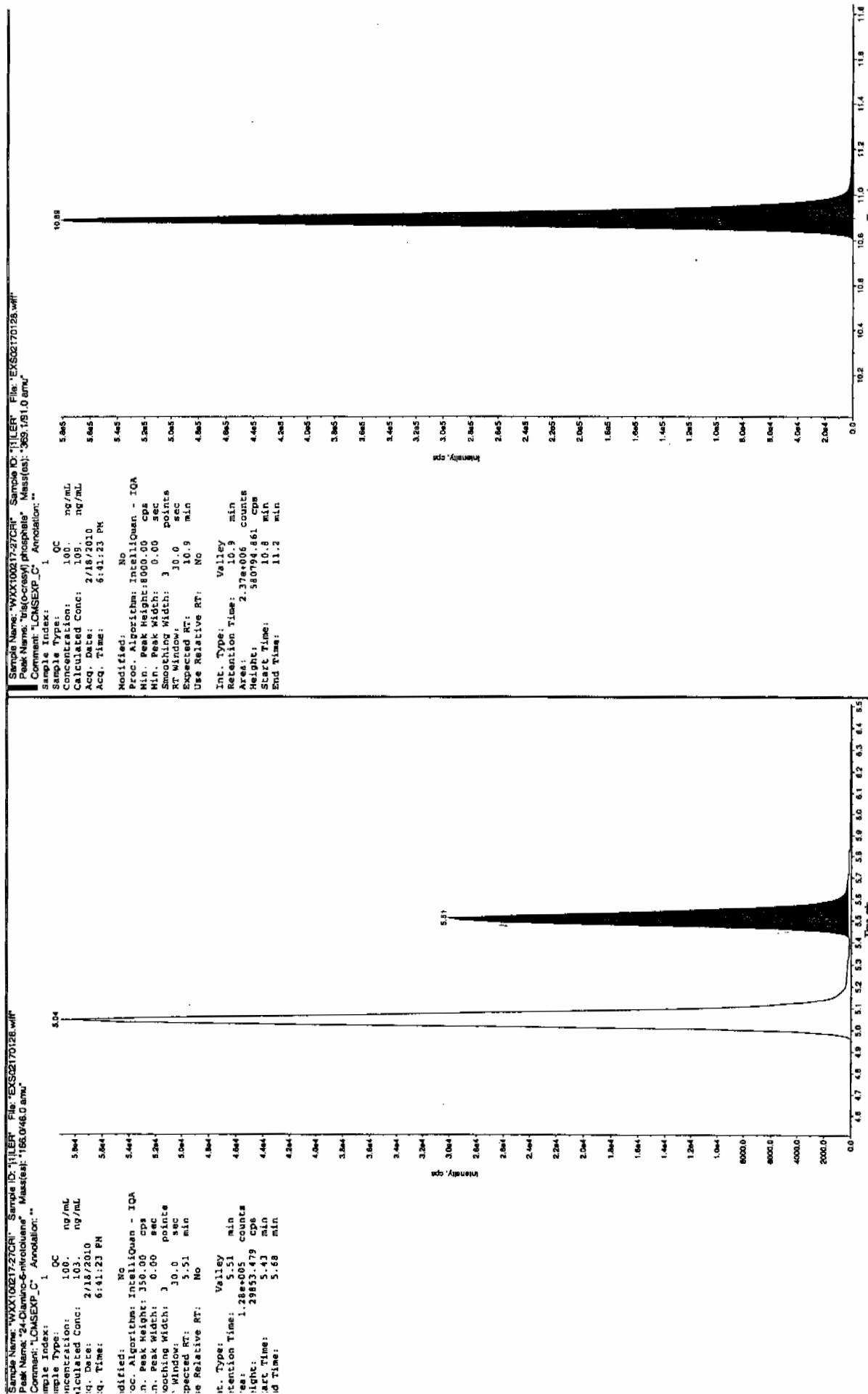
Sample Index: 1
 Sample Type: QC
 Concentration: 100. ng/mL
 Calculated Conc: 99.7 ng/mL
 Acq. Date: 2/18/2010
 Acq. Time: 6:41:23 PM
 Modified: Yes
 Proc. Algorithm: InCelliQuan - IOA
 Min. Peak Height: 2000.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 3 points
 RT Window: 15.0 sec
 Expected RT: 8.21 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 8.26 min
 Area: 7.33e+005 counts
 Height: 185596.503 cps
 Start Time: 8.15 min
 End Time: 8.35 min



4496 02/19/10



EL SOP GL-OA-E-056, Method 8321A-Modified LCMSEXP#4



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

QUALITY CONTROL DATA

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 944913

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 1202023589

Sample Amount 2

Moisture:

Amount Units g

Date Received: 25-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0216104a

Date Analyzed: 18-FEB-10 19:59

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 =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

Printed: Fri Feb 19 08:50:21 2010, Page 47 of 97

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

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\data\EXP0216104a

Date: 18-Feb-2010

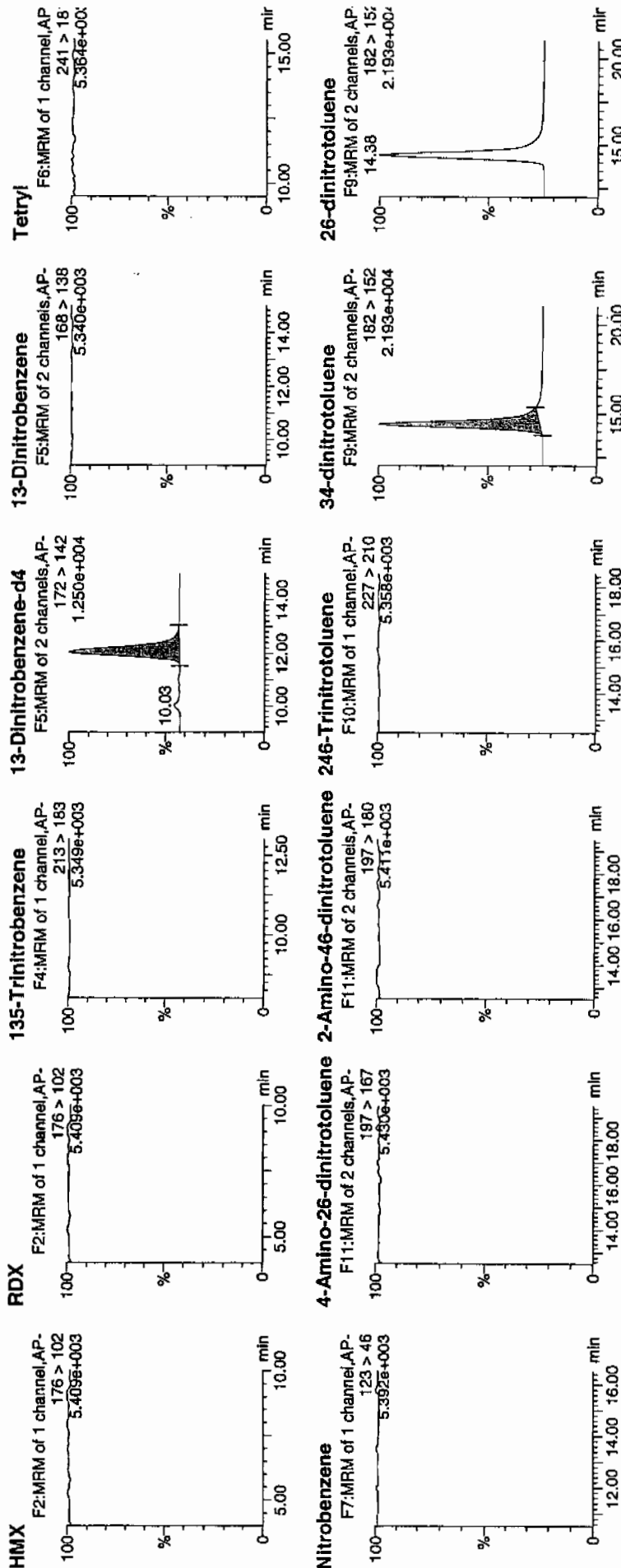
Time: 19:59:48

ID: 1202023589

Vial: 3:5,A

2/19/10

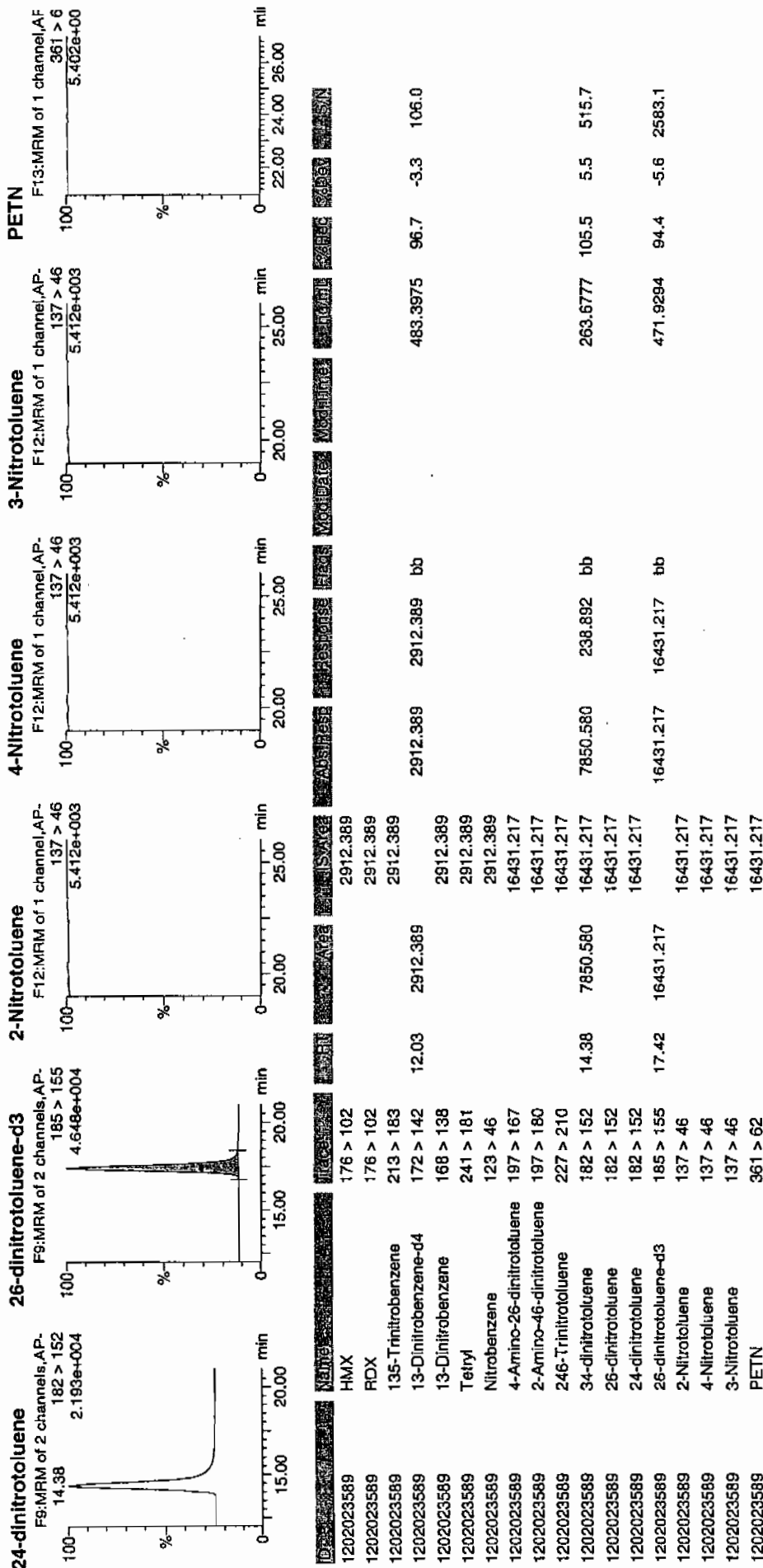
19449.5 / 80000 / 123 / 2 /



2/19/10

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

Dataset: C:\MASSLYN\New_Exp\PRO1021610expA2.qld, Time: Fri Feb 19 08:48:26 2010



1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: MB for batch 944913

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 1202023589

Sample Amount 2

Moisture:

Amount Units g

Date Received: 25-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS02170104.wiff

Date Analyzed: 18-FEB-10 12:23

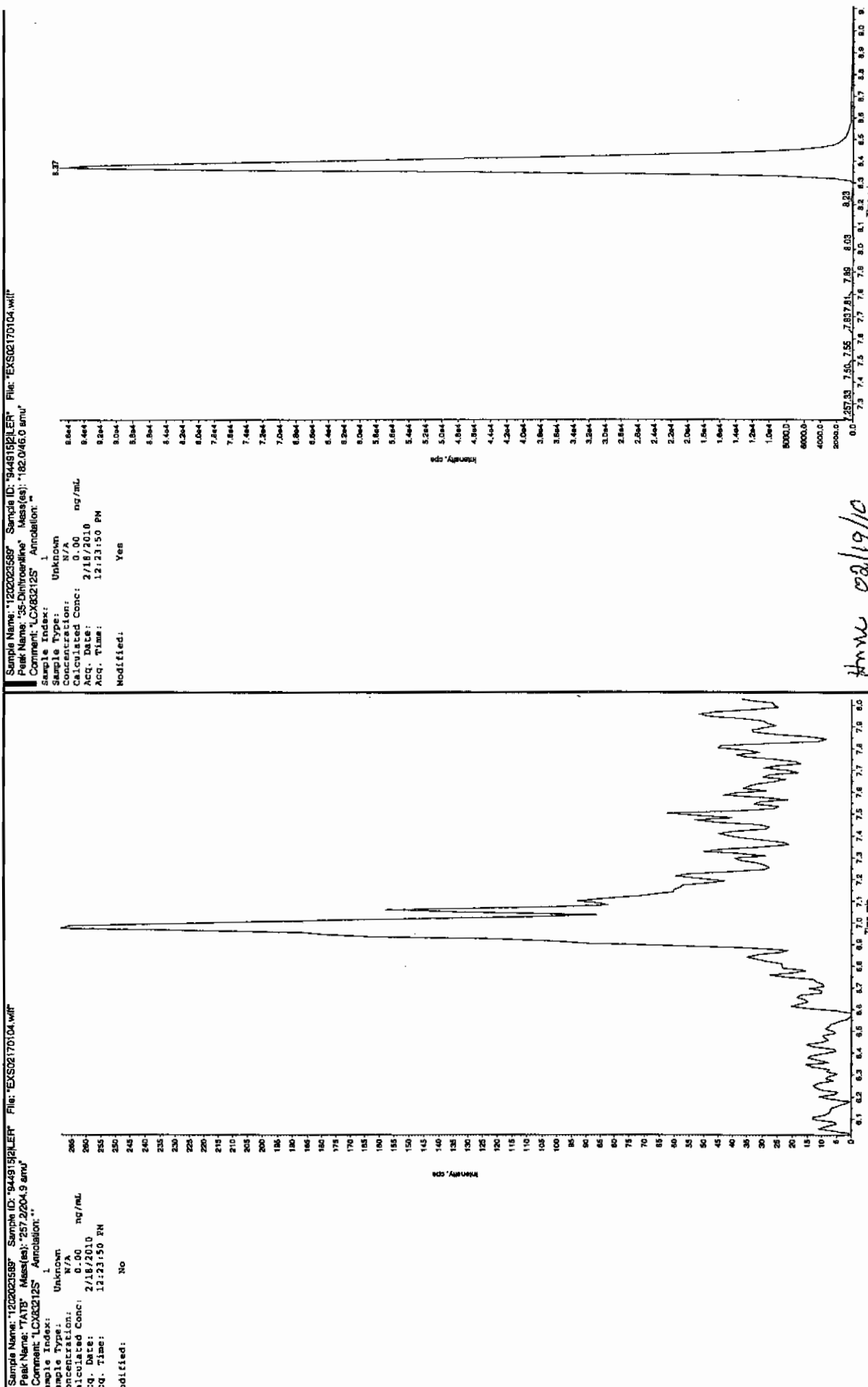
Units: ug/kg

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

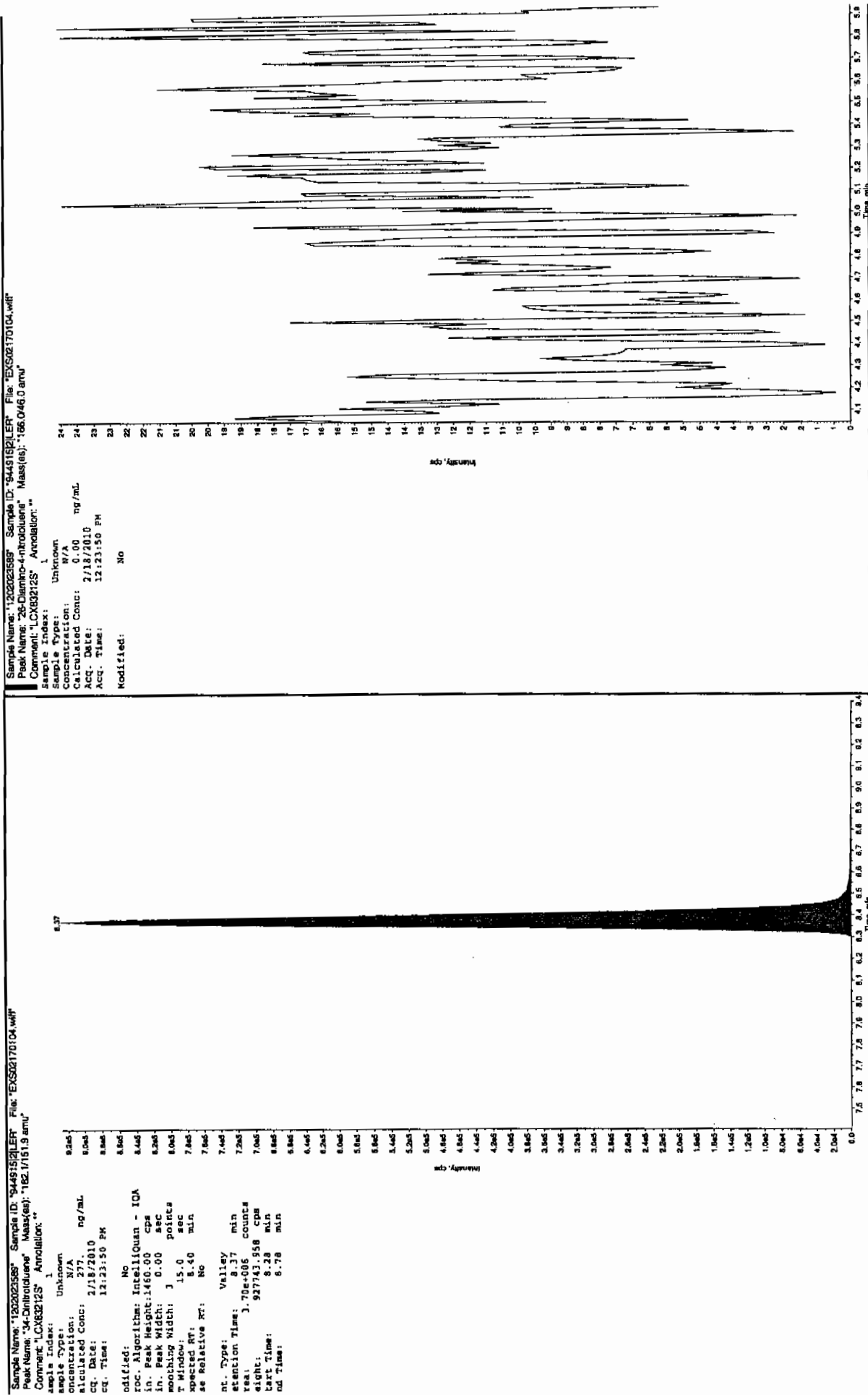
*Concentration =

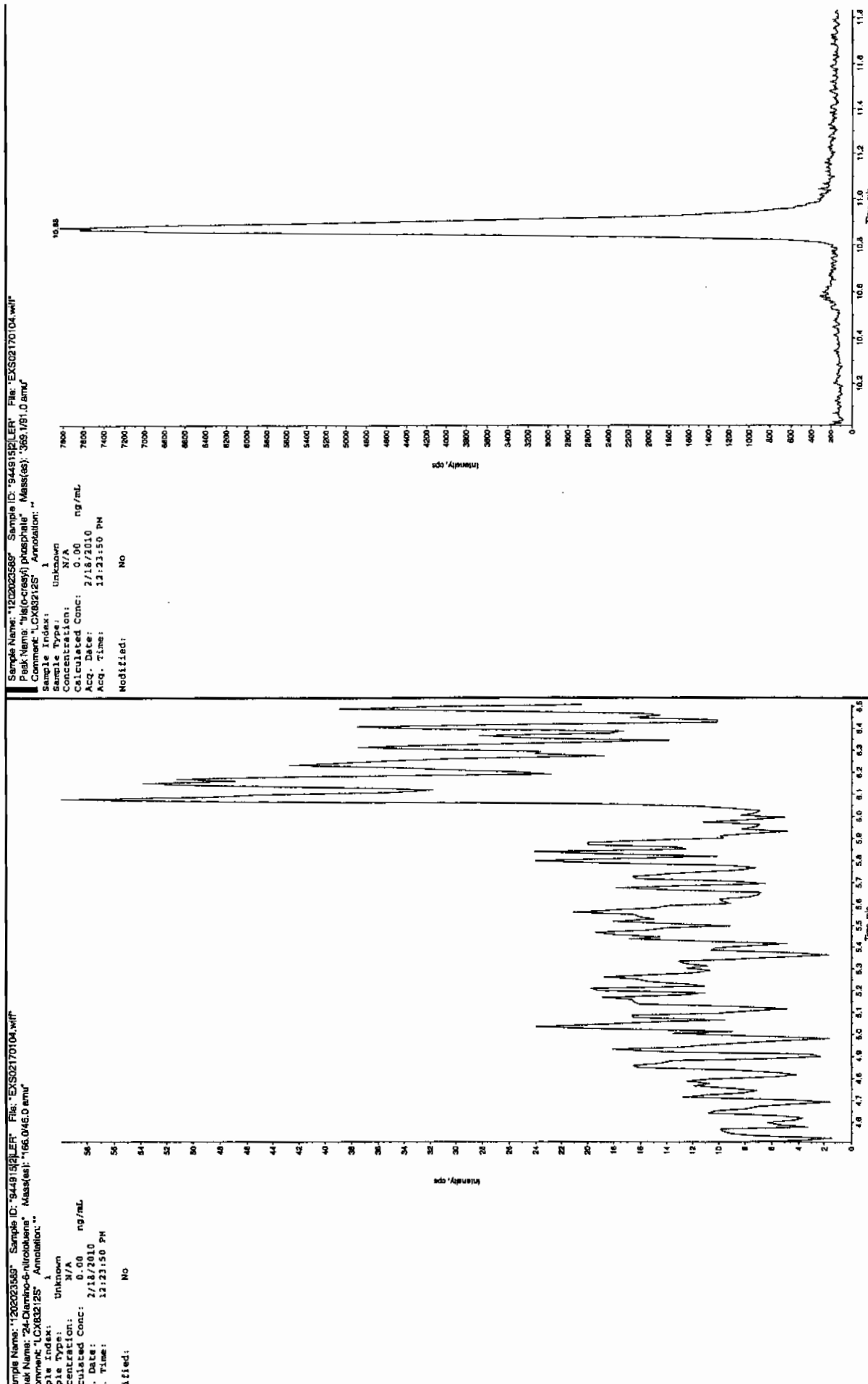
Instrument X Concentrated Extract Volume X Dilution
Value Sample Amount Factor

dan 2/19/10



dan 2/19/10





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

1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 944913

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 1202023590

Sample Amount 2

Moisture:

Amount Units g

Date Received: 25-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0216105a

Date Analyzed: 18-FEB-10 20:29

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	4010	
121-14-2	2,4-Dinitrotoluene	4990	
121-82-4	RDX	4580	
19406-51-0	4-Amino-2,6-dinitrotoluene	4090	
2691-41-0	HMX	4480	
35572-78-2	2-Amino-4,6-dinitrotoluene	5150	
479-45-8	Tetryl	2810	
606-20-2	2,6-Dinitrotoluene	4640	
78-11-5	PETN	4430	
88-72-2	o-Nitrotoluene	3840	
98-95-3	Nitrobenzene	4280	
99-08-1	m-Nitrotoluene	4280	
99-35-4	1,3,5-Trinitrobenzene	3990	
99-65-0	m-Dinitrobenzene	4790	
99-99-0	p-Nitrotoluene	4080	

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216105a

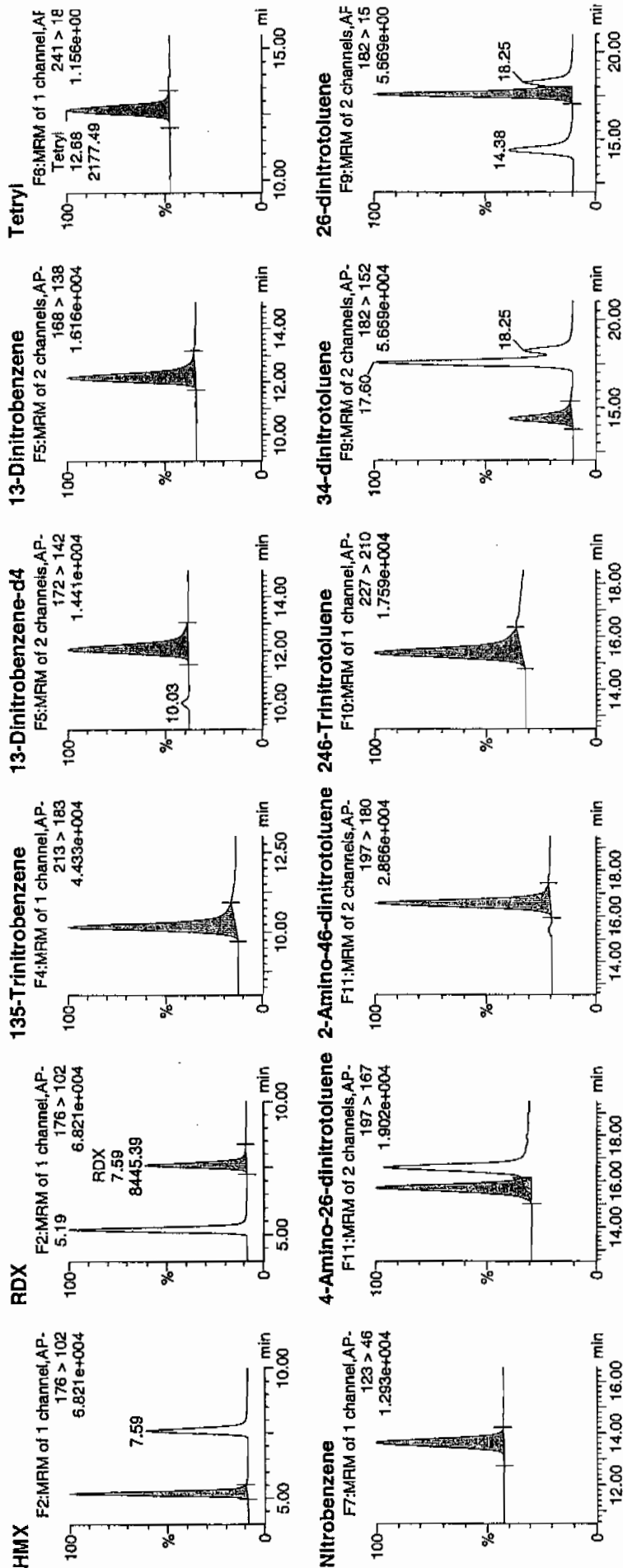
Date: 18-Feb-2010

Time: 20:29:23

ID: 1202023590

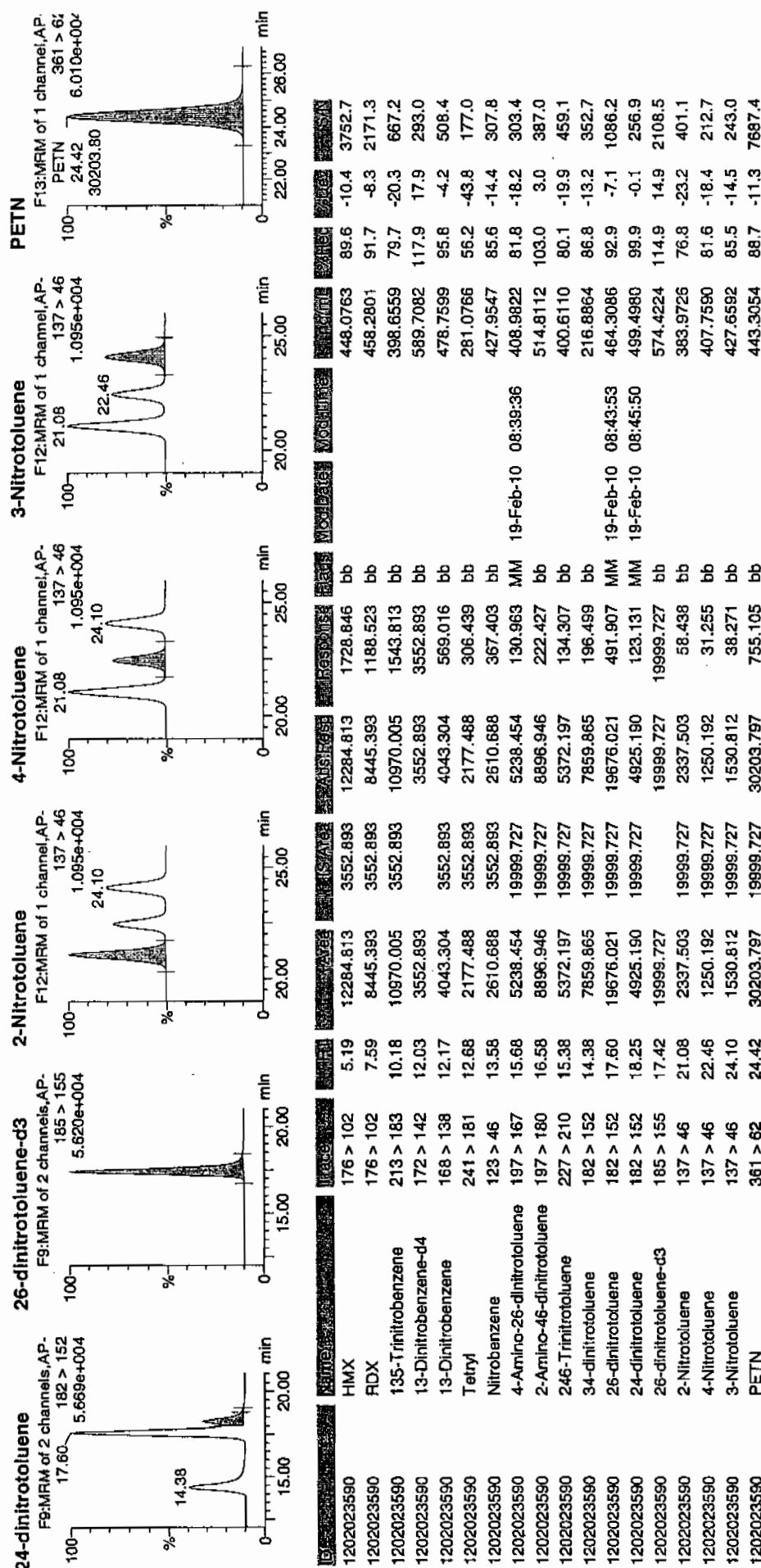
Vial: 3:5,B

Handwritten: 100% 2/19/10
AN019449.15 / 8033 / 108 / 21



Handwritten: 4/19/10

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



1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: LCS for batch 944913

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 1202023590

Sample Amount 2

Moisture:

Amount Units g

Date Received: 25-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS02170105.wiff

Date Analyzed: 18-FEB-10 12:39

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	7190	
59229-75-3	2,6-Diamino-4-nitrotoluene	5620	
618-87-1	3,5-Dinitroaniline	5080	
6629-29-4	2,4-Diamino-6-nitrotoluene	4980	
78-30-8	tris(o-cresyl) phosphate	5030	

*Concentration =

Instrument	X	<u>Concentrated Extract Volume</u>	X	Dilution
Value		<u>Sample Amount</u>		Factor

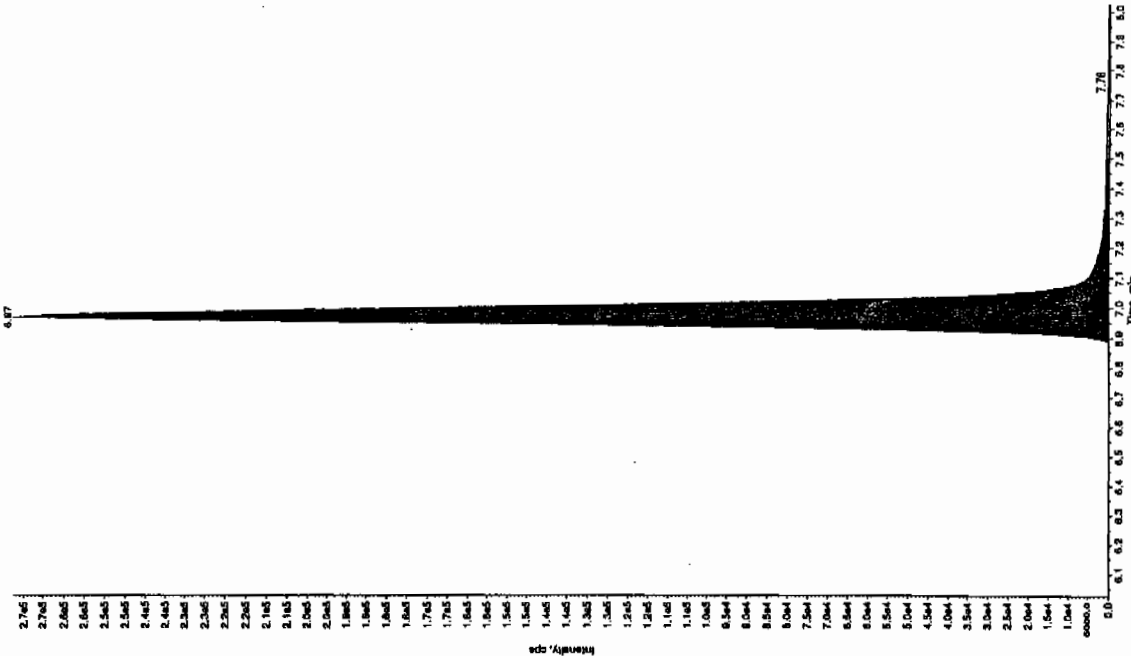
San 2/19/10

Sample Name: "1202023580" Sample ID: "944915121LER" File: "EXS02170105.wht"

Peak Name: "TATB" Mass(es): "257.2204.9 amu"

Comment: "LCX83212S" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 2/18/2010
 Acq. Date: 2/18/2010
 Acq. Time: 12:39:33 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: 7.03 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 6.97 min
 Area: 1.228+006 counts
 Height: 273526.245 cps
 Start Time: 6.84 min
 End Time: 7.50 min

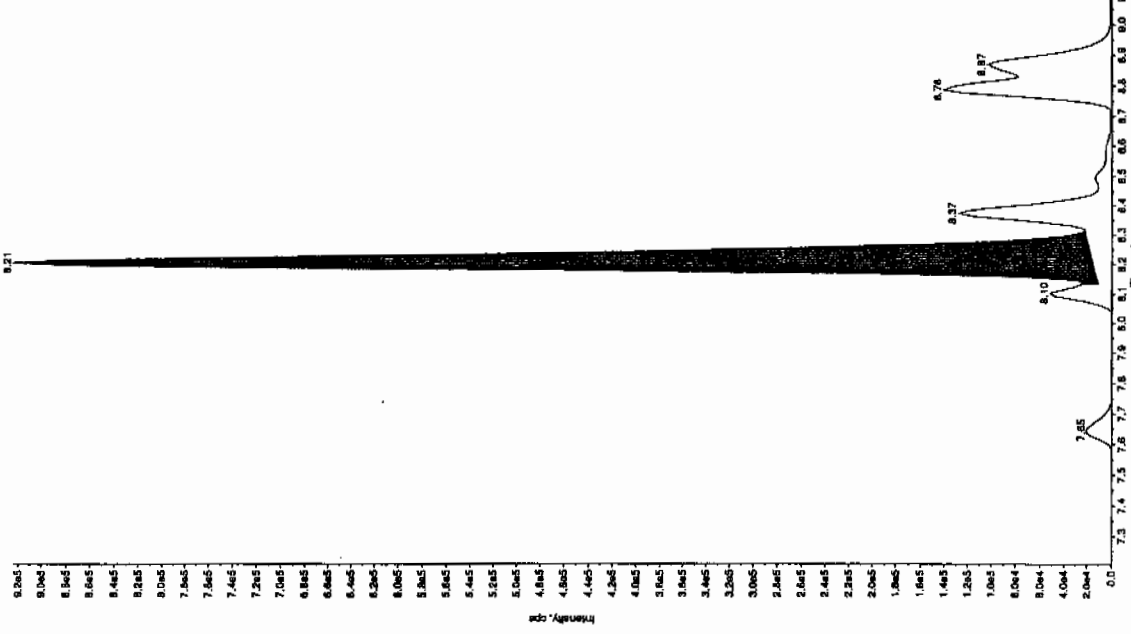


Sample Name: "1202023580" Sample ID: "944915121LER" File: "EXS02170105.wht"

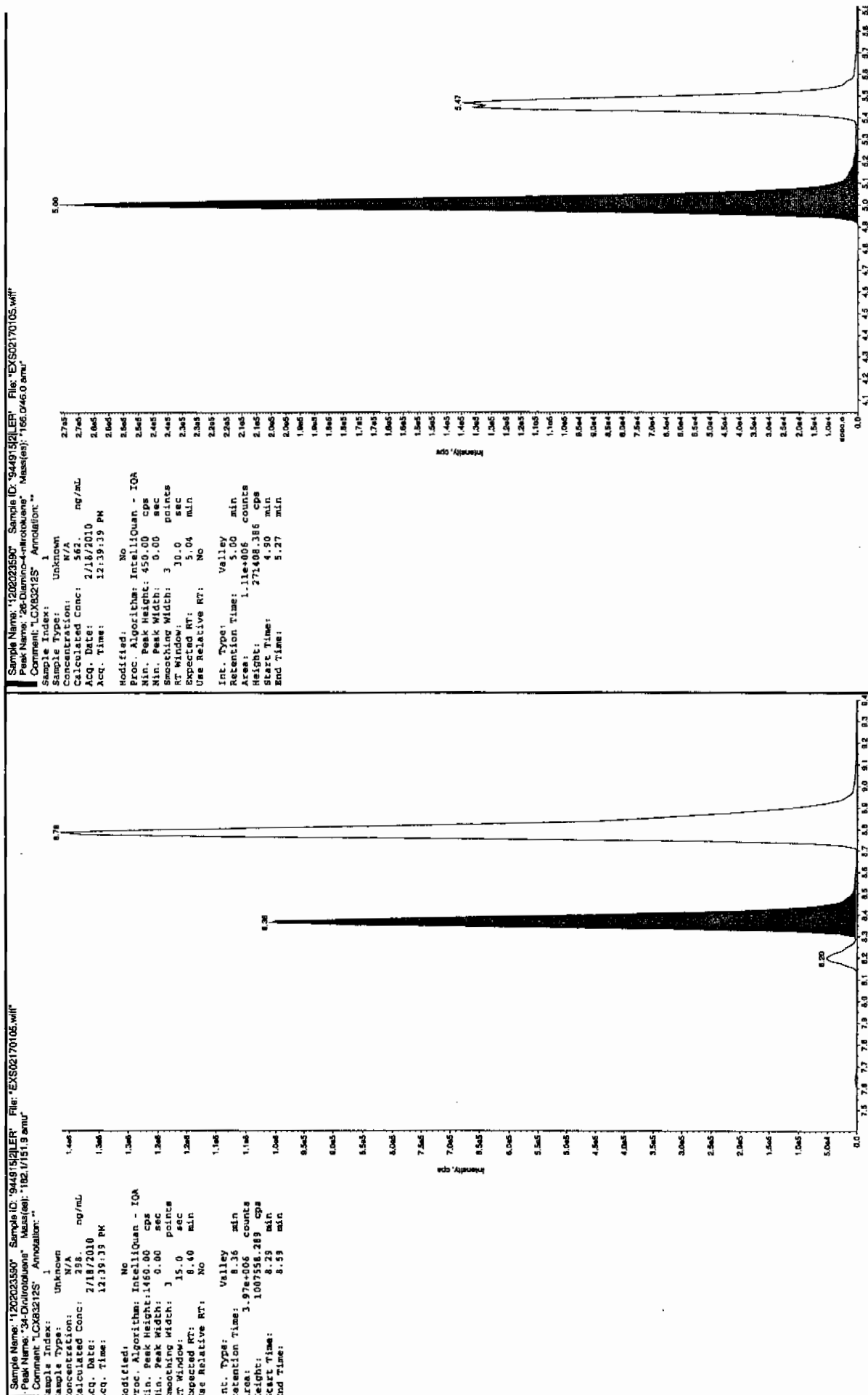
Peak Name: "35-Dinitroaniline" Mass(es): "182.046.0 amu"

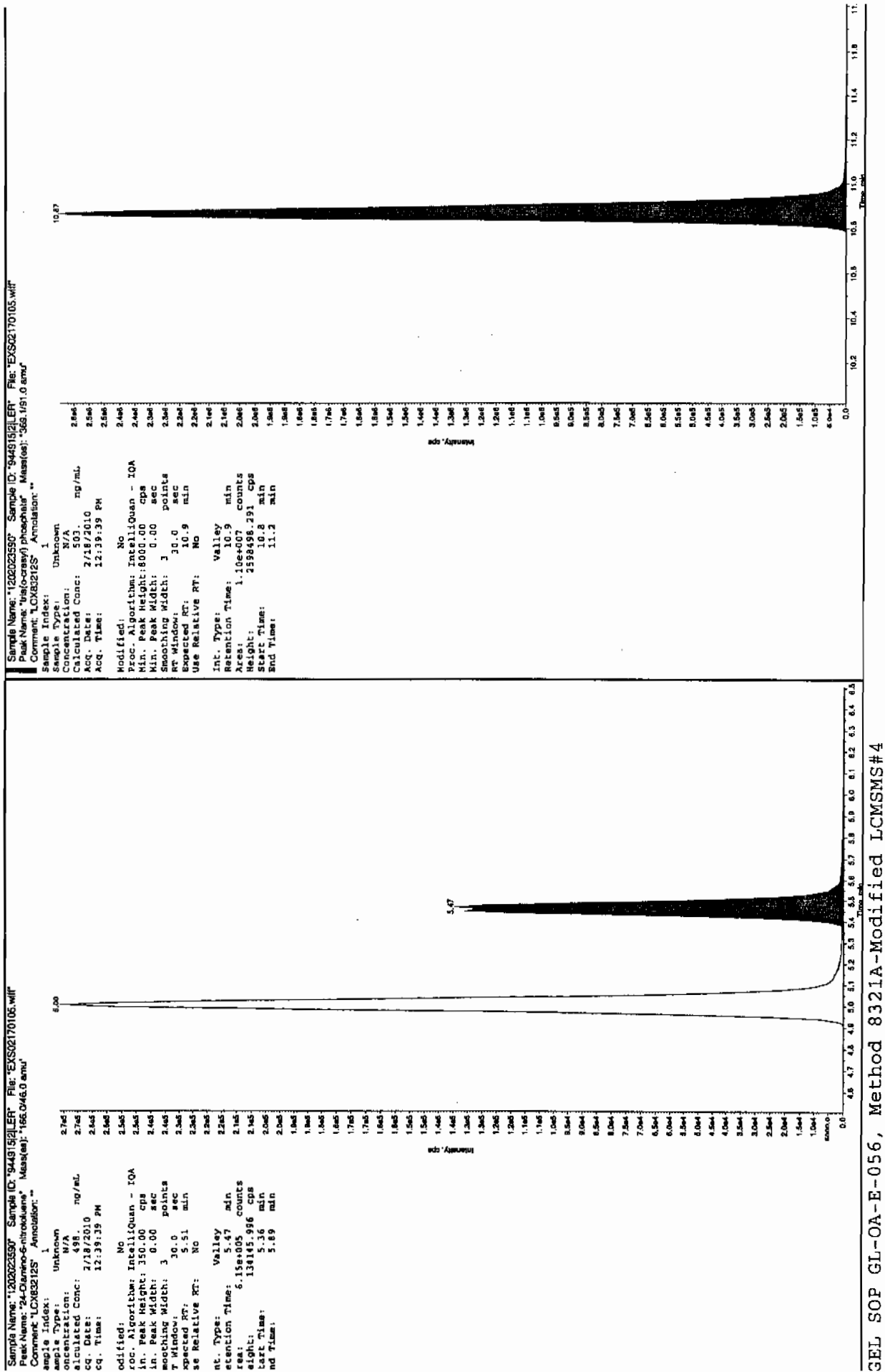
Comment: "LCX83212S" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 2/18/2010
 Acq. Date: 2/18/2010
 Acq. Time: 12:39:33 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: 8.21 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 8.21 min
 Area: 3.74e+006 counts
 Height: 509239.319 cps
 Start Time: 8.13 min
 End Time: 8.32 min



Ann-02 1/9/10





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

1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7928(245396001MS)

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 1202023591

Sample Amount 2

Moisture: 3.6

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0216120a

Date Analyzed: 19-FEB-10 03:52

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	5540	h
121-14-2	2,4-Dinitrotoluene	5430	h
121-82-4	RDX	5930	h
19406-51-0	4-Amino-2,6-dinitrotoluene	4750	h
2691-41-0	HMX	5620	h
35572-78-2	2-Amino-4,6-dinitrotoluene	4950	h
479-45-8	Tetryl	4230	h
606-20-2	2,6-Dinitrotoluene	5130	h
78-11-5	PETN	6640	h
88-72-2	o-Nitrotoluene	5230	h
98-95-3	Nitrobenzene	4560	h
99-08-1	m-Nitrotoluene	4920	h
99-35-4	1,3,5-Trinitrobenzene	4680	h
99-65-0	m-Dinitrobenzene	5140	h
99-99-0	p-Nitrotoluene	5110	h

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216120a

Date: 19-Feb-2010

Time: 03:52:52

ID: 1202023591

Vial: 3:7,B

MM
2/19/10

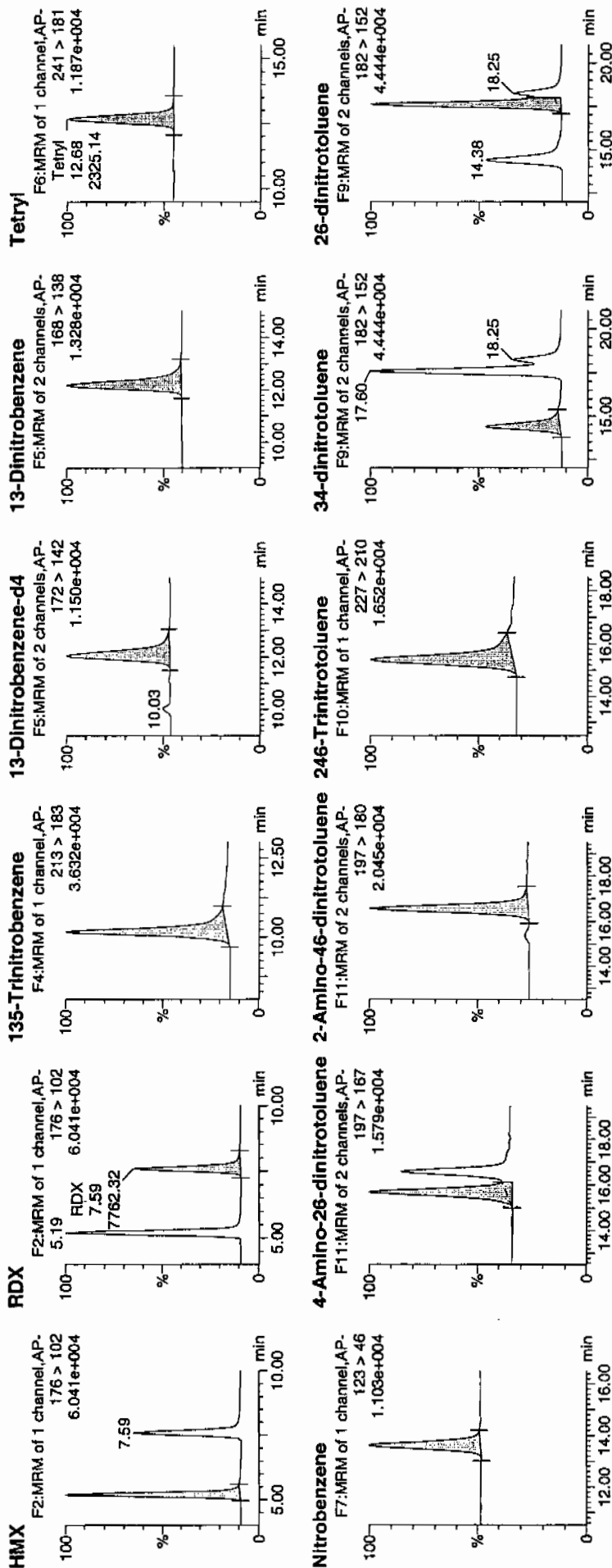
21

245396001MS

944915

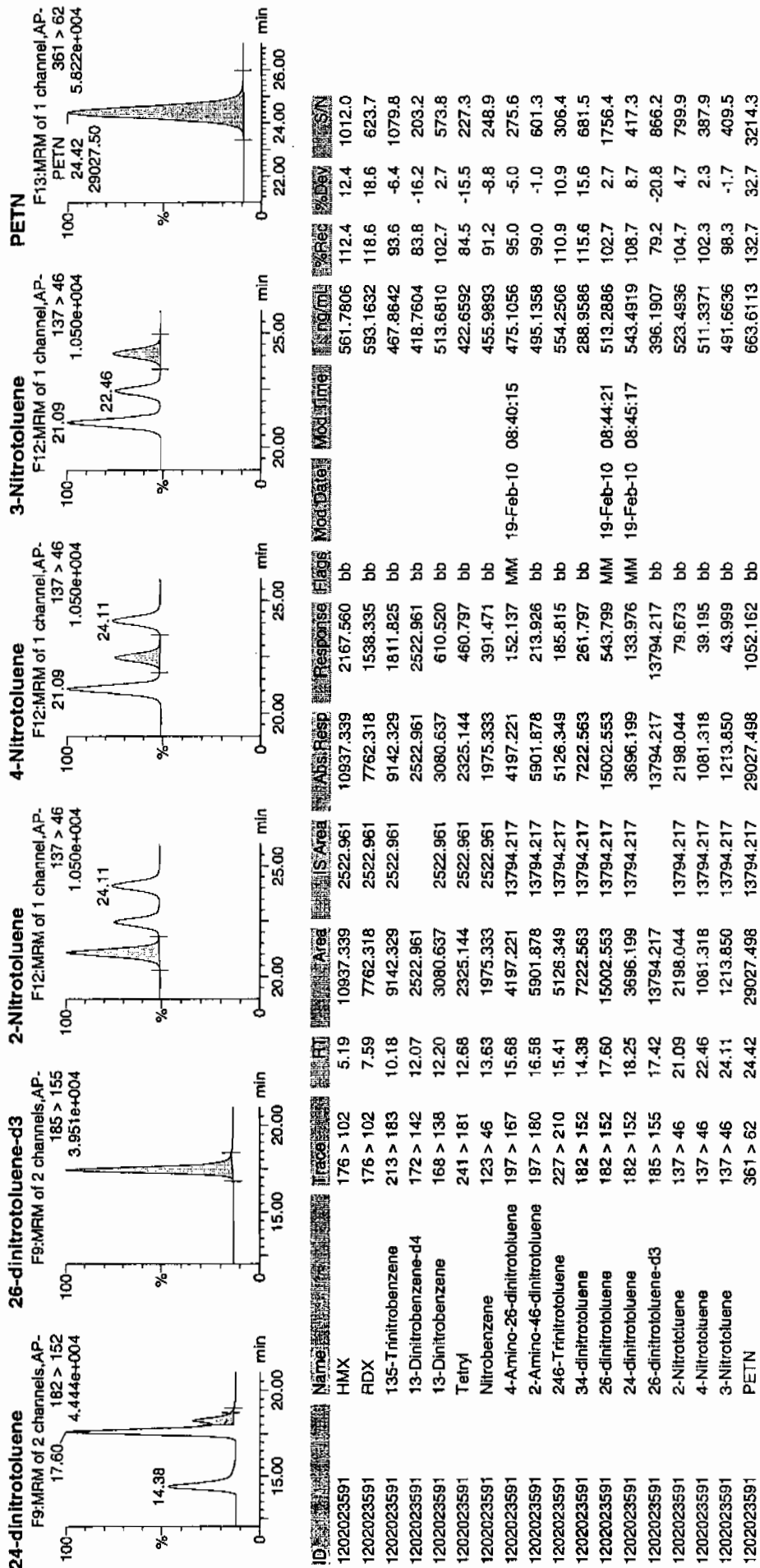
8022

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MM
2/19/10

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010



1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7928(245396001MS)

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 1202023591

Sample Amount 2

Moisture: 3.6

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS02170120.wiff

Date Analyzed: 18-FEB-10 16:35

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	6300	h
59229-75-3	2,6-Diamino-4-nitrotoluene	5530	h
618-87-1	3,5-Dinitroaniline	4890	h
6629-29-4	2,4-Diamino-6-nitrotoluene	5050	h
78-30-8	tris(o-cresyl) phosphate	4900	h

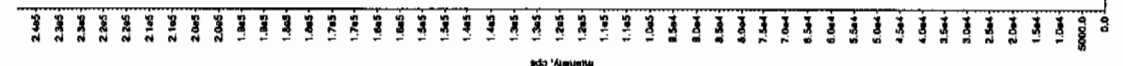
*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

See 2/19/10

Sample Name: "120202359" Sample ID: "94491321.ER" File: "EXS02170120.wif"
 Peak Name: "1A7B" Mass(es): "257.2204.9 amu"
 Comment: "LCX832125" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 489. ng/mL
 Acq. Date: 2/18/2010
 Acq. Time: 4:35:34 PM
 Modified: No
 Proc. Algorithm: IntelliQuan - IOA
 In. Peak Height: 2500.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 30.0 points
 RT Window: 30.0 sec
 Expected RT: 7.03 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 6.99 min
 Area: 1.07e+005 counts
 Height: 238965.177 cps
 Start Time: 6.87 min
 End Time: 7.62 min

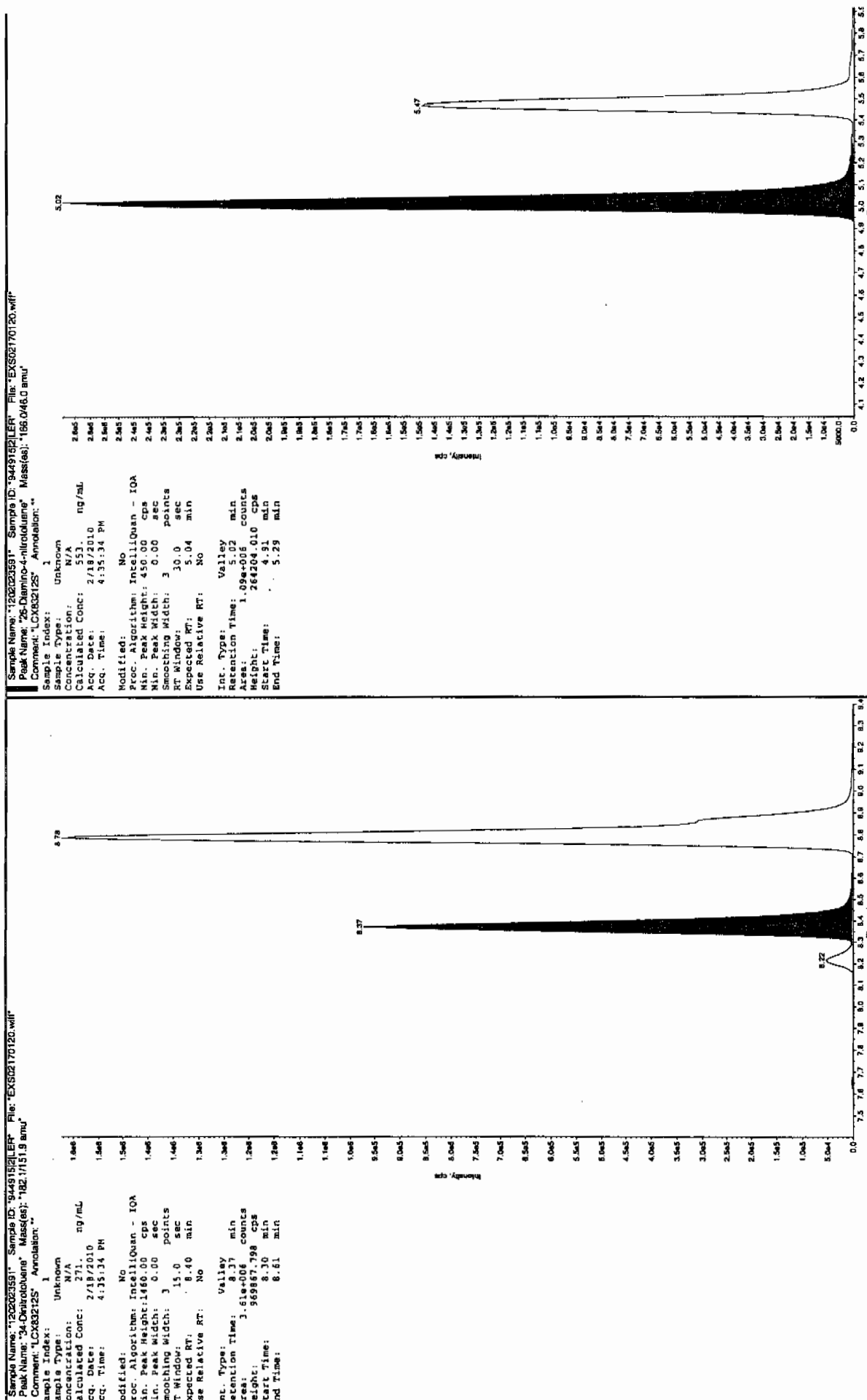


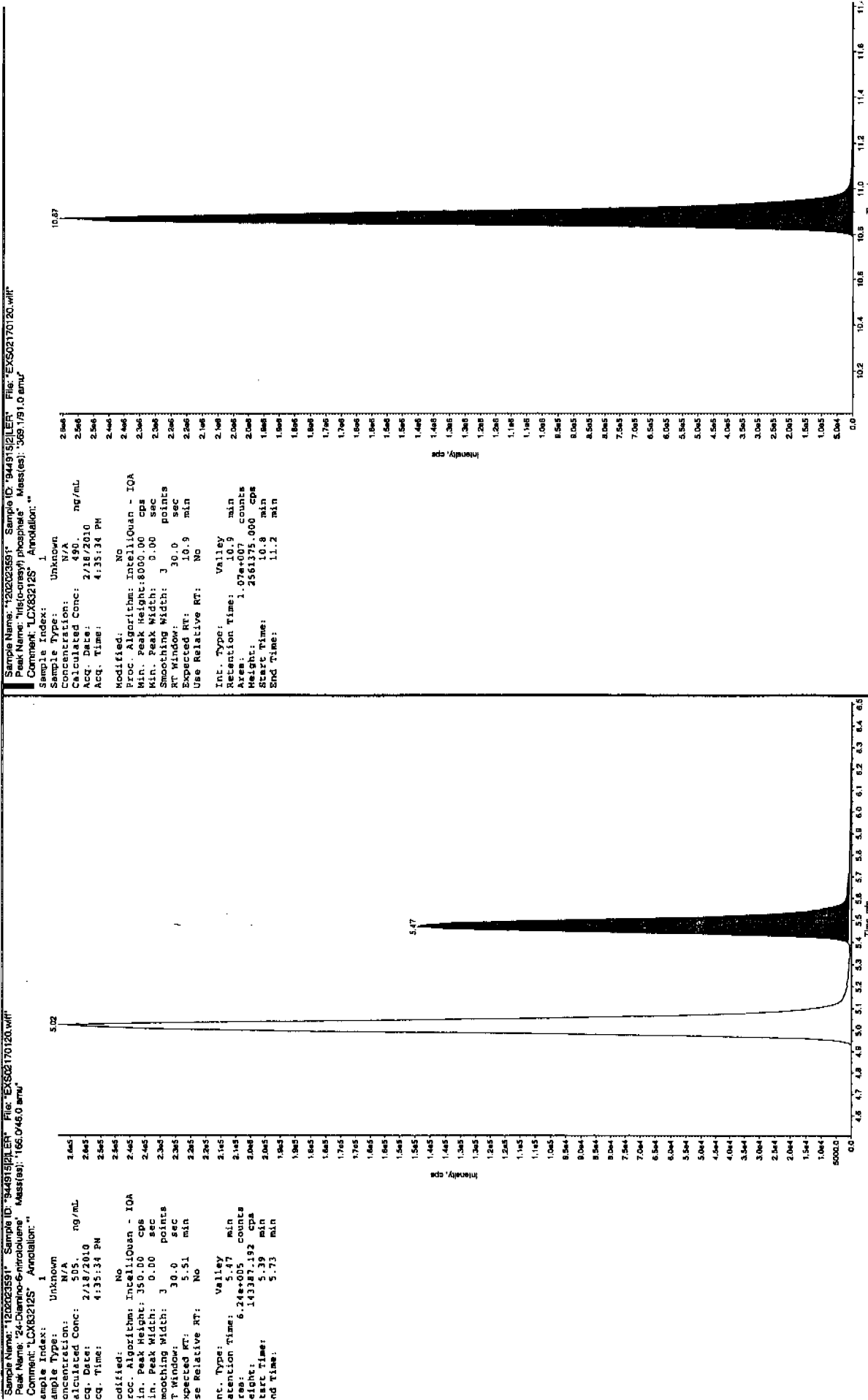
Sample Name: "120202359" Sample ID: "94491321.ER" File: "EXS02170120.wif"
 Peak Name: "35-Dinitroaniline" Mass(es): "182.0465.0 amu"
 Comment: "LCX832125" Annotation: ""

Sample Index: 1
 Sample Type: Unknown
 Concentration: N/A
 Calculated Conc: 489. ng/mL
 Acq. Date: 2/18/2010
 Acq. Time: 4:35:34 PM
 Modified: Yes
 Proc. Algorithm: IntelliQuan - IOA
 In. Peak Height: 2000.00 cps
 Min. Peak Width: 0.00 sec
 Smoothing Width: 30.0 points
 RT Window: 15.0 sec
 Expected RT: 8.22 min
 Use Relative RT: No
 Int. Type: Valley
 Retention Time: 8.22 min
 Area: 3.50e+006 counts
 Height: 967185.669 cps
 Start Time: 8.15 min
 End Time: 8.33 min



See 2/19/10





1
High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7928(245396001MSD)

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 1202023592

Sample Amount 2

Moisture: 3.6

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0216121a

Date Analyzed: 19-FEB-10 04:22

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	5290	h
121-14-2	2,4-Dinitrotoluene	4960	h
121-82-4	RDX	5510	h
19406-51-0	4-Amino-2,6-dinitrotoluene	4500	h
2691-41-0	HMX	5050	h
35572-78-2	2-Amino-4,6-dinitrotoluene	4930	h
479-45-8	Tetryl	3870	h
606-20-2	2,6-Dinitrotoluene	5110	h
78-11-5	PETN	6200	h
88-72-2	o-Nitrotoluene	4770	h
98-95-3	Nitrobenzene	4310	h
99-08-1	m-Nitrotoluene	4500	h
99-35-4	1,3,5-Trinitrobenzene	4920	h
99-65-0	m-Dinitrobenzene	5390	h
99-99-0	p-Nitrotoluene	4580	h

*Concentration =

Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

Dataset: C:\MASSLYNX\New_Exp.PRO\021610expA2.qld, Time: Fri Feb 19 08:48:26 2010

Name: C:\MASSLYNX\NEW_EXP.PRO\Data\EXP0216121a

Date: 19-Feb-2010

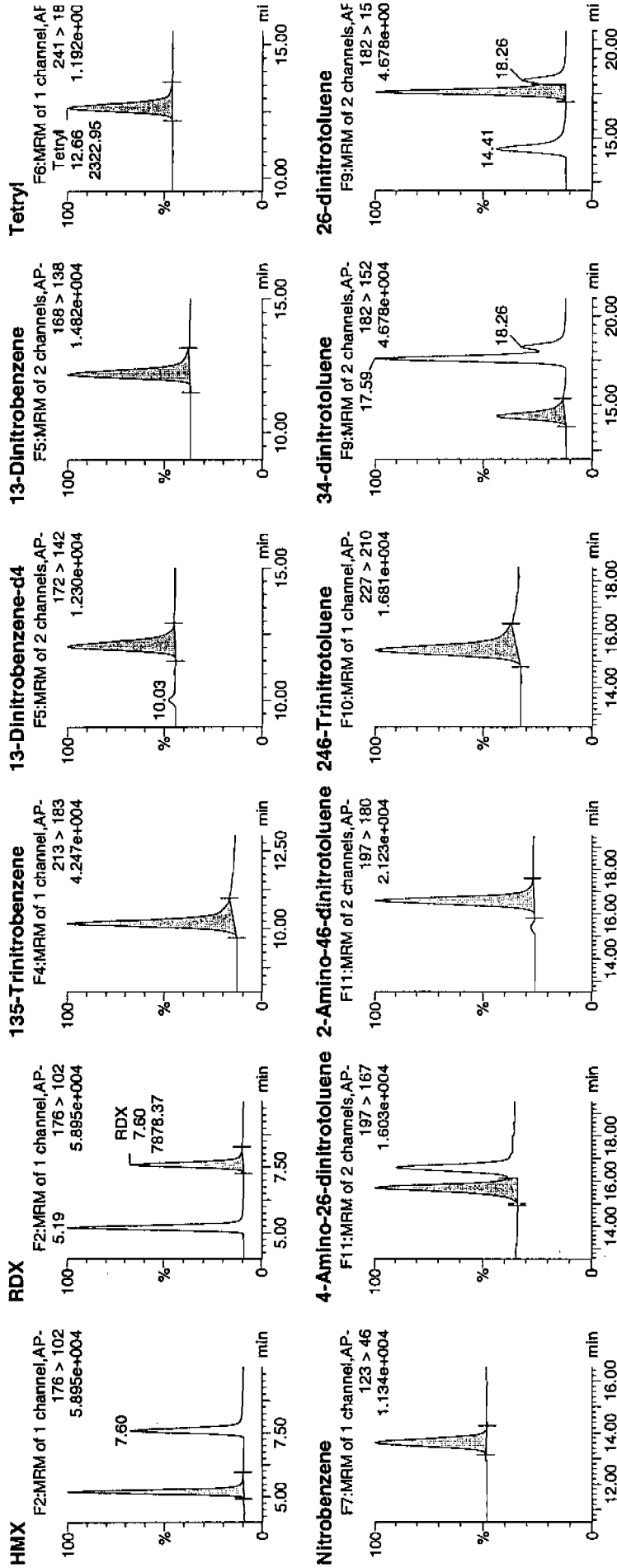
Time: 04:22:38

ID: 1202023592

Vial: 3:7,C

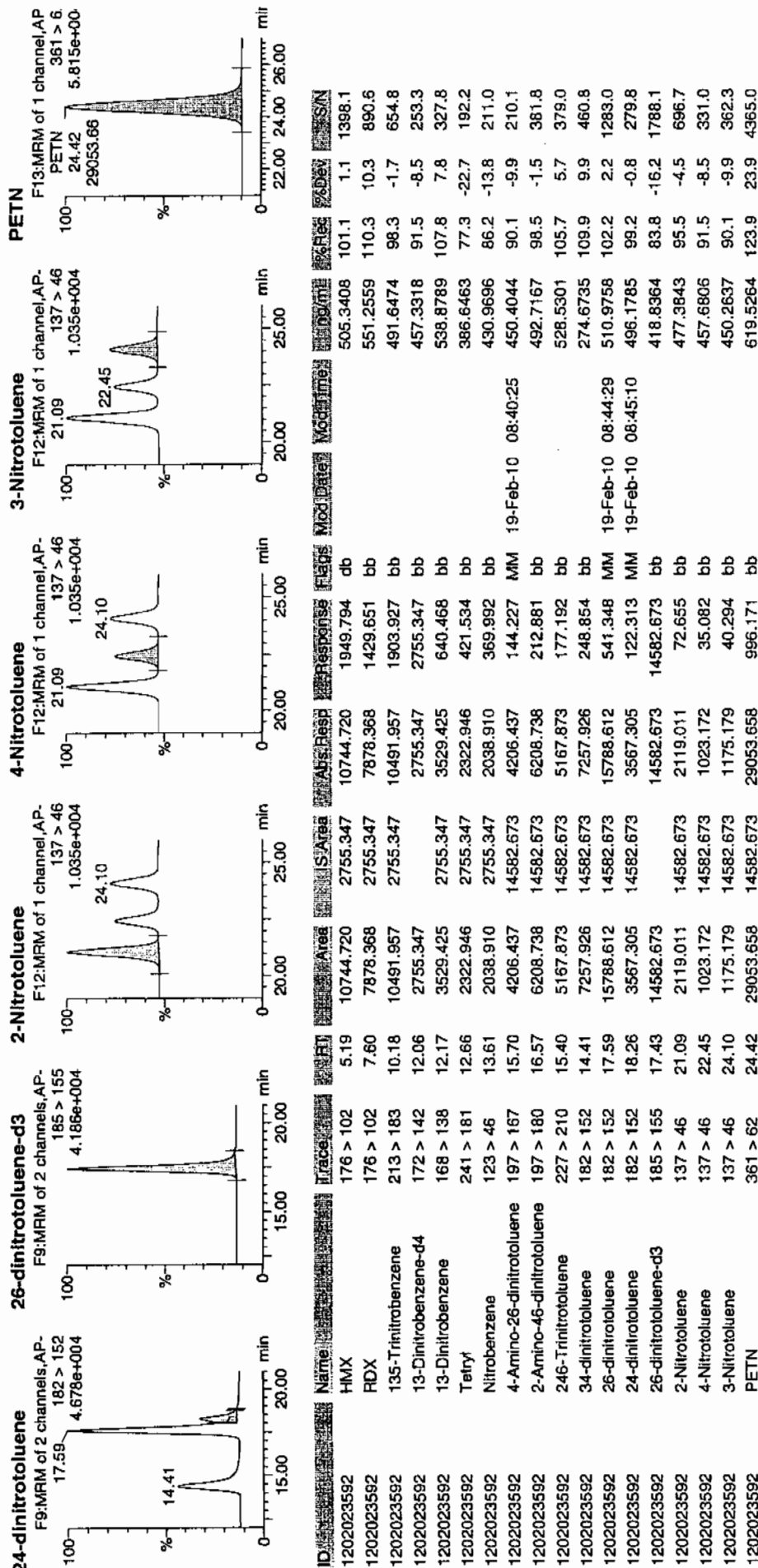
WAT
2/19/10

WAT / 944915 / 80LZ / 245396001 usd / 2 /



WAT 2/19/10

Dataset: C:\MASSLYNX\New_Exp_PROV021610expA2.qtd, Time: Fri Feb 19 08:48:26 2010



1

High Explosives Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Client Sample ID: RE15-10-7928(245396001MSD)

Lab Code: GEL

GEL Job No (SDG) 10-1394

Matrix: SOIL

GEL Sample ID: 1202023592

Sample Amount 2

Moisture: 3.6

Amount Units g

Date Received: 23-JAN-10

Extraction Type Sonication

Extraction Batch ID: 944913

Concentrated Extract Volume (mL) 10

Date Extracted: 17-FEB-10

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS02170121.wiff

Date Analyzed: 18-FEB-10 16:51

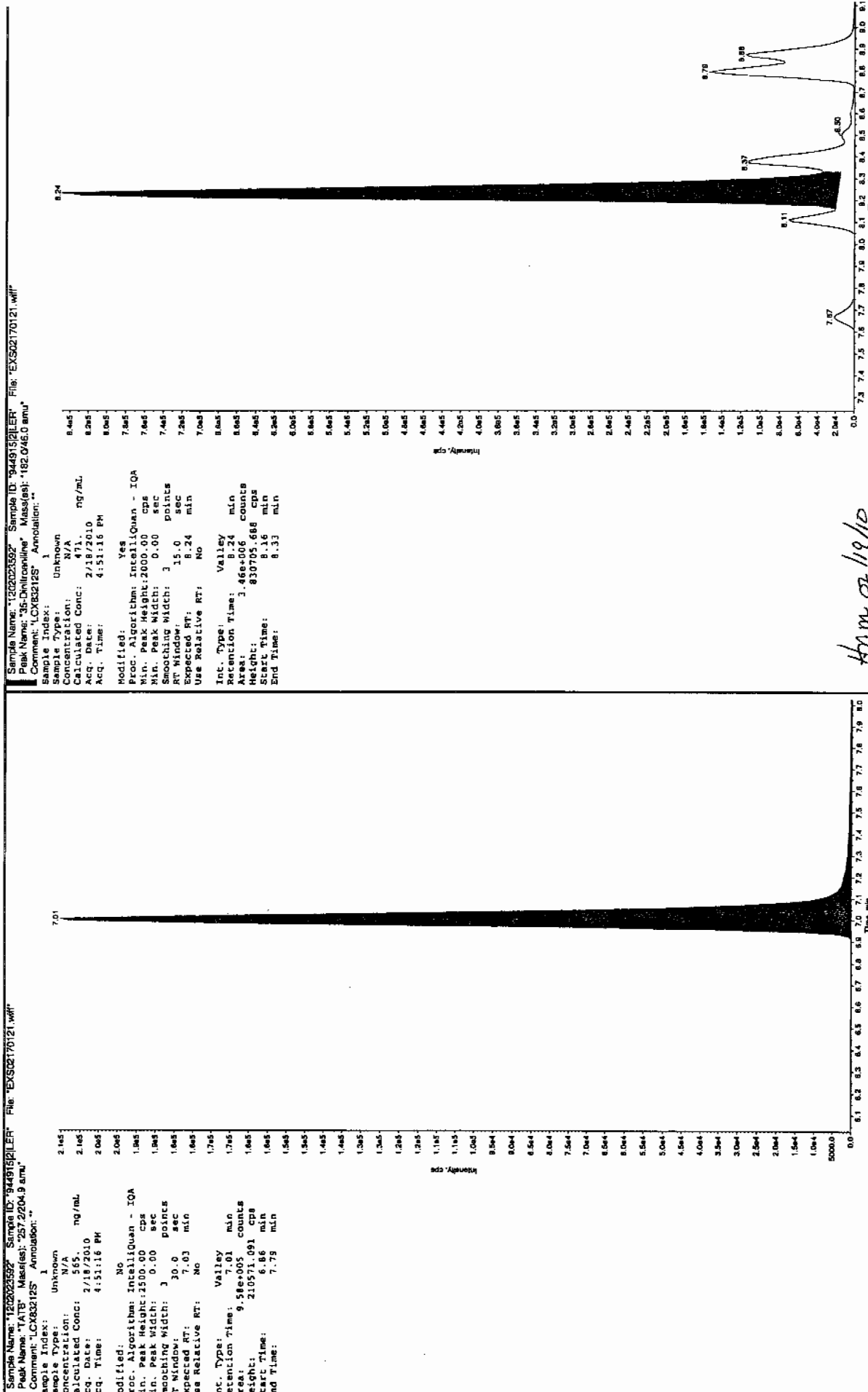
Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	5650	h
59229-75-3	2,6-Diamino-4-nitrotoluene	5840	h
618-87-1	3,5-Dinitroaniline	4710	h
6629-29-4	2,4-Diamino-6-nitrotoluene	5410	h
78-30-8	tris(o-cresyl) phosphate	4850	h

*Concentration =

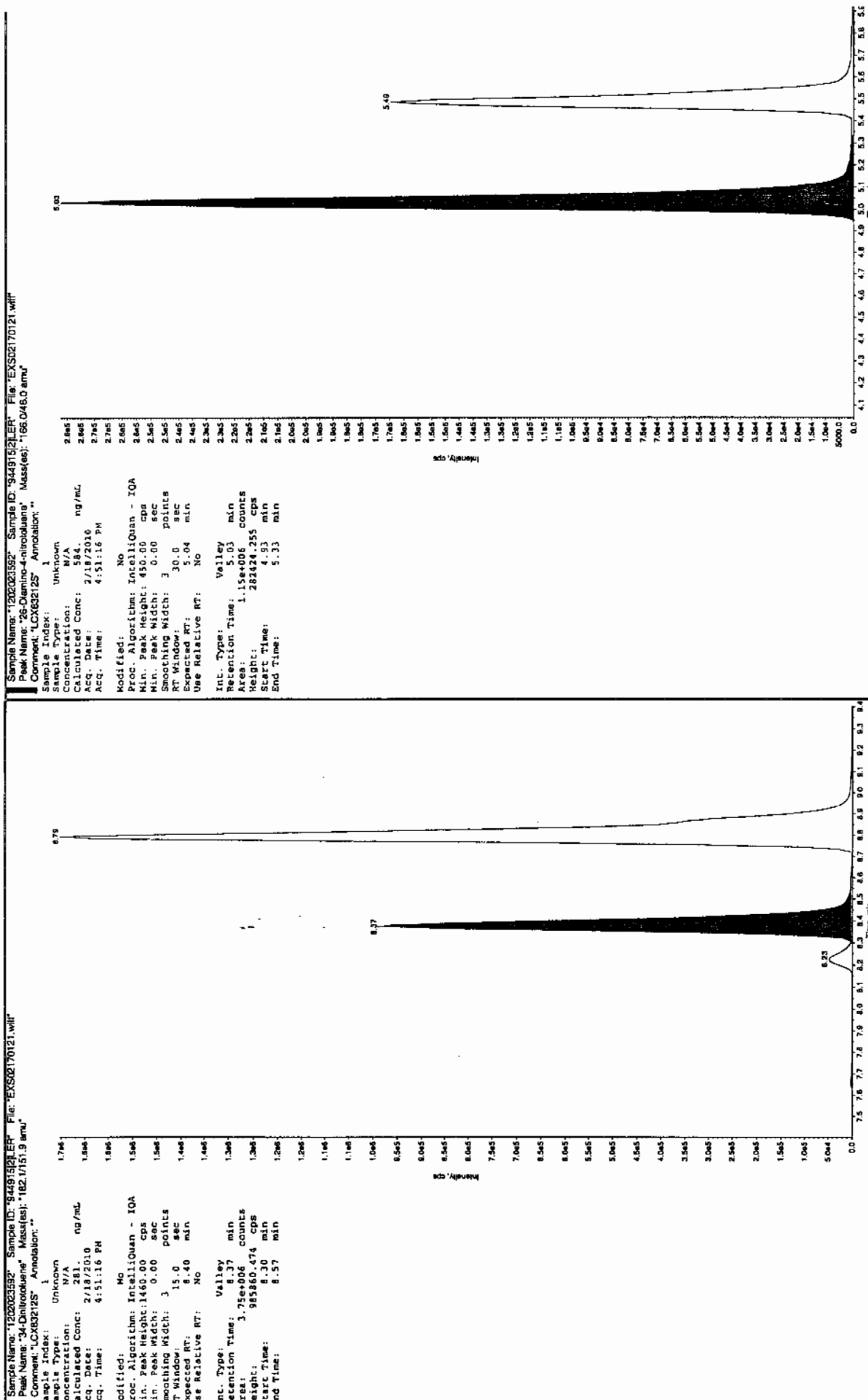
Instrument Value X $\frac{\text{Concentrated Extract Volume}}{\text{Sample Amount}}$ X Dilution Factor

San 2/19/10

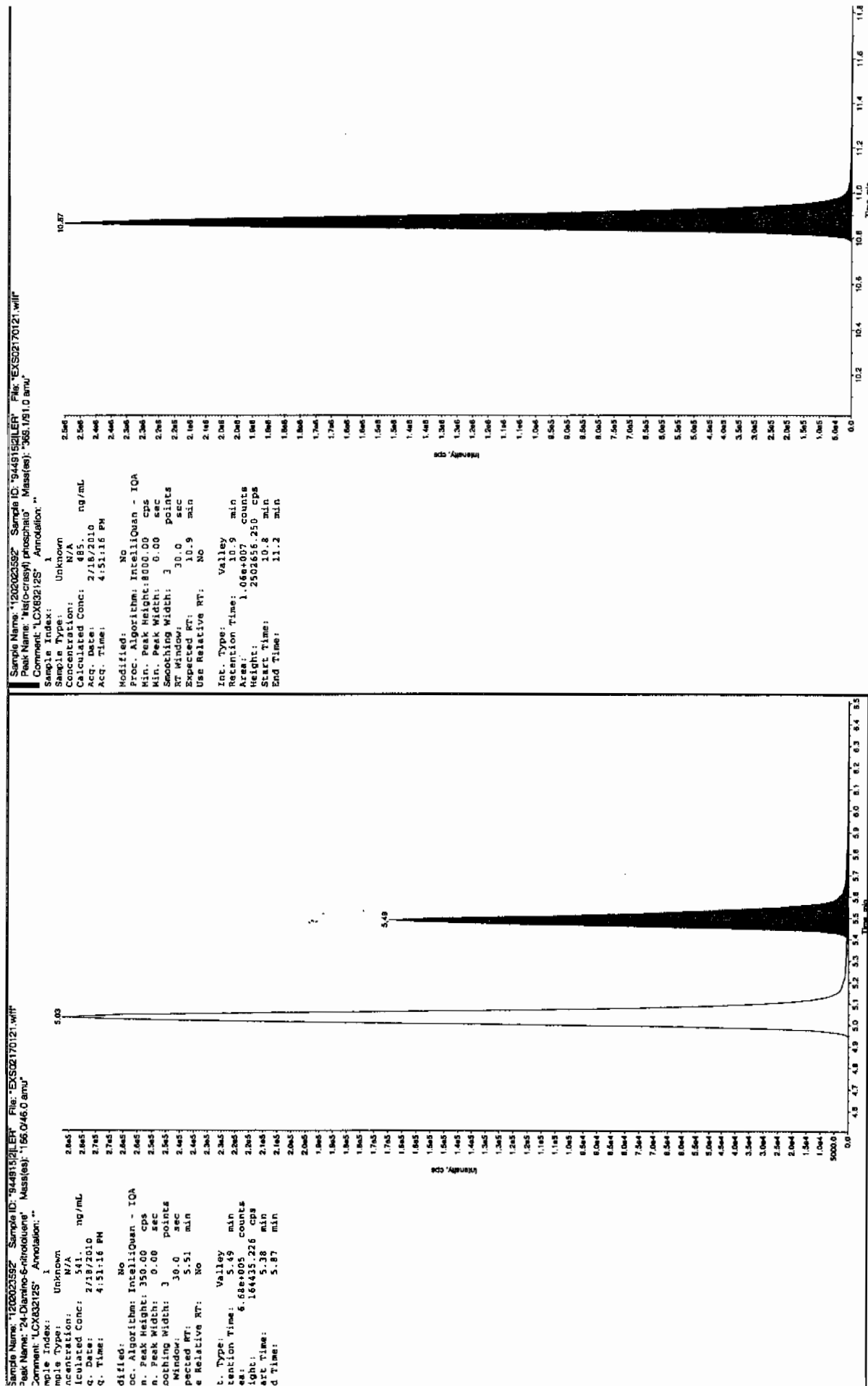


Am 02/19/10

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



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



MISCELLANEOUS DATA

Prep Logbook Nitroaromatics and Nitramines by High Performance Liquid Chromatography (HPLC)

Batch ID: 944913 Verified by: _____
 Analyst: Sirena White Lab SOP: GL-OA-E-033 REV# 17
 Method: SW846 8330 PREP Instrument: Semi-Volatiles Manual

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202023589 MB	17-FEB-2010 17:08:00	2	10	5
1202023590 LCS	17-FEB-2010 17:08:00	2	10	5
245377001	17-FEB-2010 17:08:00	2	10	5
245377002	17-FEB-2010 17:08:00	2	10	5
245377003	17-FEB-2010 17:08:00	2	10	5
245377004	17-FEB-2010 17:08:00	2	10	5
245377005	17-FEB-2010 17:08:00	2	10	5
245377006	17-FEB-2010 17:08:00	2	10	5
245377007	17-FEB-2010 17:08:00	2	10	5
245377008	17-FEB-2010 17:08:00	2	10	5
245377009	17-FEB-2010 17:08:00	2	10	5
245377010	17-FEB-2010 17:08:00	2	10	5
245396001	17-FEB-2010 17:08:00	2	10	5
1202023591 MS (245396001)	17-FEB-2010 17:08:00	2	10	5
1202023592 MSD (245396001)	17-FEB-2010 17:08:00	2	10	5
245396002	17-FEB-2010 17:08:00	2	10	5
245396003	17-FEB-2010 17:08:00	2	10	5
245396004	17-FEB-2010 17:08:00	2	10	5
247033002	17-FEB-2010 17:08:00	2	10	5

Comments:

Final Solvent: ACN

Type	Sample Id	Description	Serial Number	Spike Amt	Units
LCS	1202023590	8321 Explosives LCS	DXX100208-03	.1	mL
LCS	1202023590	8321 LANL Explosives Mix 10mg/L	UXXX100210-02.2	1	mL
MS	1202023591	8321 Explosives LCS	DXX100208-03	.1	mL
MS	1202023591	8321 LANL Explosives Mix 10mg/L	UXXX100210-02.2	1	mL
MSD	1202023592	8321 Explosives LCS	DXX100208-03	.1	mL
MSD	1202023592	8321 LANL Explosives Mix 10mg/L	UXXX100210-02.2	1	mL
SURR	All	3,4-Dinitrotoluene (8330 Surc.) 100ppm	DXP100215-02	.05	mL

GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS #1

Date: 02/16/10
 Extr. Injection Volume: 50uL
 Sequence Number: 021610expA
 Initial Calibration Date: 02/16/10
 Method: SW846 8321A-Modified
 Int. Std.: UXX100128-01.3
 Mobile Phase Lot#: 1269631, 1263794
 Standard-Samp Reagent Lot#: 1260901, 1261217
 Reviewed BY: *hmc*
 Date: 02/19/10
 SOP: GL-OA-E-056 Rev.12
 Alt Check Std. ID: WXX100216-07

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
EXP0216001a	XIBLK01	MAP	2/16/10 17:07			1		USE	B
EXP0216002a	XIBLK01	MAP	2/16/10 17:37			1		USE	B
EXP0216003a	WXXICAL-01	MAP	2/16/10 18:07			1		USE	I
EXP0216004a	WXXICAL-02	MAP	2/16/10 18:36			1		USE	I
EXP0216005a	WXXICAL-03	MAP	2/16/10 19:06			1		USE	I
EXP0216006a	WXXICAL-04	MAP	2/16/10 19:35			1		USE	I
EXP0216007a	WXXICAL-05	MAP	2/16/10 20:05			1		USE	I
EXP0216008a	WXXICAL-06	MAP	2/16/10 20:35			1		USE	I
EXP0216009a	XIBLK02	MAP	2/16/10 21:04			1		USE	B
EXP0216010a	WXXICV	MAP	2/16/10 21:34			1		USE	C
EXP0216011a	XIBLK03	MAP	2/16/10 22:04			1		USE	B
EXP0216012a	WXXCRI	MAP	2/16/10 22:33			1		USE	C
EXP0216013a	1202038759	MAP	2/16/10 23:03	951342	Various	2	LANL	USE	S
EXP0216014a	1202038760	MAP	2/16/10 23:33	951342	Various	2	LANL	USE	S
EXP0216015a	246569007	MAP	2/17/10 0:02	951342	10-1669	2	LANL	USE	S
EXP0216016a	1202038761	MAP	2/17/10 0:32	951342	10-1669	2	LANL	USE	S
EXP0216017a	1202038762	MAP	2/17/10 1:02	951342	10-1669	2	LANL	USE	S
EXP0216018a	246572005	MAP	2/17/10 1:32	951342	10-1678	2	LANL	USE	S
EXP0216019a	246580002	MAP	2/17/10 2:01	951342	10-1683	2	LANL	USE	S
EXP0216020a	246580003	MAP	2/17/10 2:31	951342	10-1683	2	LANL	USE	S
EXP0216021a	WXXCCV	MAP	2/17/10 3:00			1		USE	C
EXP0216022a	XIBLK04	MAP	2/17/10 3:30			1		USE	B
EXP0216023a	WXXCRI	MAP	2/17/10 3:59			1		USE	C
EXP0216024a	246595004	MAP	2/17/10 4:29	951342	10-1694	2	LANL	USE	S
EXP0216025a	1202038763	MAP	2/17/10 4:58	951342	10-1694	2	LANL	USE	S
EXP0216026a	1202038764	MAP	2/17/10 5:28	951342	10-1694	2	LANL	USE	S
EXP0216027a	WXXCCV	MAP	2/17/10 5:58			1		USE	C
EXP0216028a	XIBLK05	MAP	2/17/10 6:28			1		USE	B
EXP0216029a	WXXCRI	MAP	2/17/10 6:57			1		USE	C

EXP0216030a	1202030577	MAP	2/17/10 7:27	947919	Various	2	LANL	USE	S
EXP0216031a	1202030578	MAP	2/17/10 7:57	947919	Various	2	LANL	USE	S
EXP0216032a	245908001	MAP	2/17/10 8:27	947919	10-1486	2	LANL	USE	S
EXP0216033a	1202030579	MAP	2/17/10 8:56	947919	10-1486	2	LANL	USE	S
EXP0216034a	1202030580	MAP	2/17/10 9:26	947919	10-1486	2	LANL	USE	S
EXP0216035a	245908002	MAP	2/17/10 9:56	947919	10-1486	2	LANL	USE	S
EXP0216036a	245908005	MAP	2/17/10 10:25	947919	10-1486	2	LANL	USE	S
EXP0216037a	245908006	MAP	2/17/10 10:55	947919	10-1486	2	LANL	USE	S
EXP0216038a	245912003	MAP	2/17/10 11:25	947919	10-1488	2	LANL	USE	S
EXP0216039a	WXXCCV	MAP	2/17/10 11:55			1		USE	C
EXP0216040a	XIBLK06	MAP	2/17/10 12:24			1		USE	B
EXP0216041a	WXXCRI	MAP	2/17/10 12:54			1		USE	C
EXP0216042a	1202038769	MAP	2/17/10 13:23	951349	Various	2	LANL	USE	S
EXP0216043a	1202038770	MAP	2/17/10 13:53	951349	Various	2	LANL	USE	S
EXP0216044a	246554001	MAP	2/17/10 14:23	951349	10-1665	2	LANL	USE	S
EXP0216045a	1202038771	MAP	2/17/10 14:52	951349	10-1665	2	LANL	USE	S
EXP0216046a	1202038772	MAP	2/17/10 15:22	951349	10-1665	2	LANL	USE	S
EXP0216047a	246554002	MAP	2/17/10 15:52	951349	10-1665	2	LANL	USE	S
EXP0216048a	246554003	MAP	2/17/10 16:21	951349	10-1665	2	LANL	USE	S
EXP0216049a	246554004	MAP	2/17/10 16:51	951349	10-1665	2	LANL	USE	S
EXP0216050a	246554005	MAP	2/17/10 17:20	951349	10-1665	2	LANL	USE	S
EXP0216051a	246554006	MAP	2/17/10 17:50	951349	10-1665	2	LANL	USE	S
EXP0216052a	WXXCCV	MAP	2/17/10 18:20			1		USE	C
EXP0216053a	XIBLK07	MAP	2/17/10 18:50			1		USE	B
EXP0216054a	WXXCRI	MAP	2/17/10 19:19			1		USE	C
EXP0216055a	246557001	MAP	2/17/10 19:49	951349	10-1666	2	LANL	USE	S
EXP0216056a	246562001	MAP	2/17/10 20:19	951349	10-1668	2	LANL	USE	S
EXP0216057a	246575003	MAP	2/17/10 20:49	951349	10-1675	2	LANL	USE	S
EXP0216058a	246575004	MAP	2/17/10 21:18	951349	10-1675	2	LANL	USE	S
EXP0216059a	246582002	MAP	2/17/10 21:48	951349	10-1685	2	LANL	USE	S
EXP0216060a	246582003	MAP	2/17/10 22:17	951349	10-1685	2	LANL	USE	S
EXP0216061a	246582004	MAP	2/17/10 22:47	951349	10-1685	2	LANL	USE	S
EXP0216062a	246582005	MAP	2/17/10 23:16	951349	10-1685	2	LANL	USE	S
EXP0216063a	246582006	MAP	2/17/10 23:46	951349	10-1685	2	LANL	USE	S
EXP0216064a	246582007	MAP	2/18/10 0:15	951349	10-1685	2	LANL	USE	S
EXP0216065a	WXXCCV	MAP	2/18/10 0:45			1		USE	C
EXP0216066a	XIBLK08	MAP	2/18/10 1:14			1		USE	B

EXP0216067a	WXXCRI	MAP	2/18/10 1:44	951349	10-1685	1	LANL	USE	C
EXP0216068a	246582008	MAP	2/18/10 2:14			2		USE	S
EXP0216069a	XIBLK09	MAP	2/18/10 2:43			1		USE	B
EXP0216070a	1202032097	MAP	2/18/10 3:13	948572	Various	2	LANL	DUSE	S
EXP0216071a	1202032098	MAP	2/18/10 3:43	948572	Various	2	LANL	DUSE	S
EXP0216072a	245955001	MAP	2/18/10 4:12	948572	10-1509	2	LANL	DUSE	S
EXP0216073a	245955002	MAP	2/18/10 4:42	948572	10-1509	2	LANL	DUSE	S
EXP0216074a	245959001	MAP	2/18/10 5:12	948572	10-1510	2	LANL	DUSE	S
EXP0216075a	1202032099	MAP	2/18/10 5:42	948572	10-1510	2	LANL	DUSE	S
EXP0216076a	1202032100	MAP	2/18/10 6:11	948572	10-1510	2	LANL	DUSE	S
EXP0216077a	245959002	MAP	2/18/10 6:41	948572	10-1510	2	LANL	DUSE	S
EXP0216078a	WXXCCV	MAP	2/18/10 7:10			1		USE	C
EXP0216079a	XIBLK10	MAP	2/18/10 7:40			1		USE	B
EXP0216080a	WXXCRI	MAP	2/18/10 8:10			1		USE	C
EXP0216081a	1202032097	MAP	18/02/2010 08:39	948572	Various	2	LANL	USE	S
EXP0216082a	1202032098	MAP	18/02/2010 09:09	948572	Various	2	LANL	USE	S
EXP0216083a	245955001	MAP	18/02/2010 09:38	948572	10-1509	2	LANL	USE	S
EXP0216084a	245955002	MAP	18/02/2010 10:08	948572	10-1509	2	LANL	USE	S
EXP0216085a	245959001	MAP	18/02/2010 10:37	948572	10-1510	2	LANL	USE	S
EXP0216086a	1202032099	MAP	18/02/2010 11:07	948572	10-1510	2	LANL	USE	S
EXP0216087a	1202032100	MAP	18/02/2010 11:36	948572	10-1510	2	LANL	USE	S
EXP0216088a	245959002	MAP	18/02/2010 12:06	948572	10-1510	2	LANL	USE	S
EXP0216089a	WXXCCV	MAP	18/02/2010 12:36			1		USE	C
EXP0216090a	XIBLK11	MAP	18/02/2010 13:05			1		USE	B
EXP0216091a	WXXCRI	MAP	18/02/2010 13:35			1		USE	C
EXP0216092a	245959003	MAP	18/02/2010 14:04	948572	10-1510	2	LANL	USE	S
EXP0216093a	245959004	MAP	18/02/2010 14:34	948572	10-1510	2	LANL	USE	S
EXP0216094a	245959005	MAP	18/02/2010 15:03	948572	10-1510	2	LANL	USE	S
EXP0216095a	245959006	MAP	18/02/2010 15:33	948572	10-1510	2	LANL	USE	S
EXP0216096a	245959007	MAP	18/02/2010 16:03	948572	10-1510	2	LANL	USE	S
EXP0216097a	245959008	MAP	18/02/2010 16:32	948572	10-1510	2	LANL	USE	S
EXP0216098a	245959009	MAP	18/02/2010 17:02	948572	10-1510	2	LANL	USE	S
EXP0216099a	245959010	MAP	18/02/2010 17:32	948572	10-1510	2	LANL	USE	S
EXP0216100a	245959012	MAP	18/02/2010 18:01	948572	10-1510	2	LANL	USE	S
EXP0216101a	WXXCCV	MAP	18/02/2010 18:31			1		USE	C
EXP0216102a	XIBLK12	MAP	18/02/2010 19:00			1		USE	B
EXP0216103a	WXXCRI	MAP	18/02/2010 19:30			1		USE	C

EXP0216104a	1202023589	MAP	18/02/2010 19:59	944915	Various	2	LANL	USE	S
EXP0216105a	1202023590	MAP	18/02/2010 20:29	944915	Various	2	LANL	USE	S
EXP0216106a	245377001	MAP	18/02/2010 20:58	944915	10-1378	2	LANL	USE	S
EXP0216107a	245377002	MAP	18/02/2010 21:28	944915	10-1378	2	LANL	USE	S
EXP0216108a	245377003	MAP	18/02/2010 21:57	944915	10-1378	2	LANL	USE	S
EXP0216109a	245377004	MAP	18/02/2010 22:27	944915	10-1378	2	LANL	USE	S
EXP0216110a	245377005	MAP	18/02/2010 22:56	944915	10-1378	2	LANL	USE	S
EXP0216111a	245377006	MAP	18/02/2010 23:26	944915	10-1378	2	LANL	USE	S
EXP0216112a	245377007	MAP	18/02/2010 23:56	944915	10-1378	2	LANL	USE	S
EXP0216113a	245377008	MAP	19/02/2010 00:25	944915	10-1378	2	LANL	USE	S
EXP0216114a	WXCCV	MAP	19/02/2010 00:55			1		USE	C
EXP0216115a	XIBLK13	MAP	19/02/2010 01:24			1		USE	B
EXP0216116a	WXCCRI	MAP	19/02/2010 01:54			1		USE	C
EXP0216117a	245377009	MAP	19/02/2010 02:23	944915	10-1378	2	LANL	USE	S
EXP0216118a	245377010	MAP	19/02/2010 02:53	944915	10-1378	2	LANL	USE	S
EXP0216119a	245396001	MAP	19/02/2010 03:23	944915	10-1394	2	LANL	USE	S
EXP0216120a	1202023591	MAP	19/02/2010 03:52	944915	10-1394	2	LANL	USE	S
EXP0216121a	1202023592	MAP	19/02/2010 04:22	944915	10-1394	2	LANL	USE	S
EXP0216122a	245396002	MAP	19/02/2010 04:52	944915	10-1394	2	LANL	USE	S
EXP0216123a	245396003	MAP	19/02/2010 05:22	944915	10-1394	2	LANL	USE	S
EXP0216124a	245396004	MAP	19/02/2010 05:51	944915	10-1394	2	LANL	USE	S
EXP0216125a	247033002	MAP	19/02/2010 06:21	944915	10-1394	2	LANL	USE	S
EXP0216126a	WXCCV	MAP	19/02/2010 06:51			1		USE	C
EXP0216127a	XIBLK14	MAP	19/02/2010 07:21			1		USE	B
EXP0216128a	WXCCRI	MAP	19/02/2010 07:51			1		USE	C

GEL ORGANIC RUN LOG INSTRUMENT ID: LCMSMS4

Date: 02/17/10
 Extr. Injection Volume: 10uL
 Sequence Number: 021710exs
 Initial Calibration Date: 021710
 Method: 8321A-Modified
 Int. Std.: N/A
 Mobile Phase Lot#: 1263794, 1258141
 Standard-Samp Reagent Lot#: 1260901, 1261217
 Reviewed By: *hmc*
 Date: 02/19/10
 SOP: GL-OA-E-056 Rev. 12
 Alt Check Std. ID: WXX100217-26

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC Flag
EXS02170001.wiff	XIBLK01	LER	2/17/2010 9:26			1		USE	B
EXS02170002.wiff	XIBLK01	LER	2/17/2010 9:42			1		USE	B
EXS02170003.wiff	WXXICAL-19	LER	2/17/2010 9:57			1		USE	I
EXS02170004.wiff	WXXICAL-20	LER	2/17/2010 10:13			1		USE	I
EXS02170005.wiff	WXXICAL-21	LER	2/17/2010 10:29			1		USE	I
EXS02170006.wiff	WXXICAL-22	LER	2/17/2010 10:44			1		USE	I
EXS02170007.wiff	WXXICAL-23	LER	2/17/2010 11:00			1		USE	I
EXS02170008.wiff	WXXICAL-24	LER	2/17/2010 11:16			1		USE	I
EXS02170009.wiff	WXXICAL-25	LER	2/17/2010 11:31			1		USE	I
EXS02170010.wiff	XIBLK02	LER	2/17/2010 11:47			1		USE	B
EXS02170011.wiff	WXXICV	LER	2/17/2010 12:03			1		USE	C
EXS02170012.wiff	XIBLK03	LER	2/17/2010 12:19			1		USE	B
EXS02170013.wiff	WXXCRI	LER	2/17/2010 12:34			1		USE	C
EXS02170014.wiff	1202028685	LER	2/17/2010 12:50	947089	10-1470	2	LANL	USE	S
EXS02170015.wiff	1202028686	LER	2/17/2010 13:06	947089	10-1470	2	LANL	USE	S
EXS02170016.wiff	245795001	LER	2/17/2010 13:21	947089	10-1470	2	LANL	USE	S
EXS02170017.wiff	1202028687	LER	2/17/2010 13:37	947089	10-1470	2	LANL	USE	S
EXS02170018.wiff	1202028688	LER	2/17/2010 13:53	947089	10-1470	2	LANL	USE	S
EXS02170019.wiff	245795002	LER	2/17/2010 14:08	947089	10-1470	2	LANL	USE	S
EXS02170020.wiff	245795003	LER	2/17/2010 14:24	947089	10-1470	2	LANL	USE	S
EXS02170021.wiff	245795004	LER	2/17/2010 14:40	947089	10-1470	2	LANL	USE	S
EXS02170022.wiff	245795005	LER	2/17/2010 14:56	947089	10-1470	2	LANL	USE	S
EXS02170023.wiff	245795006	LER	2/17/2010 15:11	947089	10-1470	2	LANL	USE	S
EXS02170024.wiff	WXXCCV	LER	2/17/2010 15:27			1		USE	C
EXS02170025.wiff	XIBLK04	LER	2/17/2010 15:43			1		USE	B
EXS02170026.wiff	WXXCRI	LER	2/17/2010 15:58			1		USE	C
EXS02170027.wiff	245795007	LER	2/17/2010 16:14	947089	10-1470	2	LANL	USE	S
EXS02170028.wiff	245795008	LER	2/17/2010 16:30	947089	10-1470	2	LANL	USE	S
EXS02170029.wiff	245795009	LER	2/17/2010 16:45	947089	10-1470	2	LANL	USE	S
EXS02170030.wiff	245795010	LER	2/17/2010 17:01	947089	10-1470	2	LANL	USE	S

EXS02170031.wiff	245795011	LER	2/17/2010 17:17	947089	10-1470	2	LANL	USE	S
EXS02170032.wiff	245795012	LER	2/17/2010 17:33	947089	10-1470	2	LANL	USE	S
EXS02170033.wiff	245795013	LER	2/17/2010 17:48	947089	10-1470	2	LANL	USE	S
EXS02170034.wiff	245795014	LER	2/17/2010 18:04	947089	10-1470	2	LANL	USE	S
EXS02170035.wiff	245795015	LER	2/17/2010 18:20	947089	10-1470	2	LANL	USE	S
EXS02170036.wiff	245795016	LER	2/17/2010 18:35	947089	10-1470	2	LANL	USE	S
EXS02170037.wiff	WXXCCV	LER	2/17/2010 18:51			1		USE	C
EXS02170038.wiff	XIBLK05	LER	2/17/2010 19:07			1		USE	B
EXS02170039.wiff	WXXCRI	LER	2/17/2010 19:23			1		USE	C
EXS02170040.wiff	245795017	LER	2/17/2010 19:38	947089	10-1470	2	LANL	USE	S
EXS02170041.wiff	245795018	LER	2/17/2010 19:54	947089	10-1470	2	LANL	USE	S
EXS02170042.wiff	245795019	LER	2/17/2010 20:10	947089	10-1470	2	LANL	USE	S
EXS02170043.wiff	WXXCCV	LER	2/17/2010 20:25			1		USE	C
EXS02170044.wiff	XIBLK06	LER	2/17/2010 20:41			1		USE	B
EXS02170045.wiff	WXXCRI	LER	2/17/2010 20:57			1		USE	C
EXS02170046.wiff	1202035656	LER	2/17/2010 21:12	950070	VARIOUS	2	LANL	USE	S
EXS02170047.wiff	1202035657	LER	2/17/2010 21:28	950070	VARIOUS	2	LANL	USE	S
EXS02170048.wiff	246266001	LER	2/17/2010 21:44	950070	10-1547	2	LANL	USE	S
EXS02170049.wiff	1202035658	LER	2/17/2010 22:00	950070	10-1547	2	LANL	USE	S
EXS02170050.wiff	1202035659	LER	2/17/2010 22:15	950070	10-1547	2	LANL	USE	S
EXS02170051.wiff	246266002	LER	2/17/2010 22:31	950070	10-1547	2	LANL	USE	S
EXS02170052.wiff	246266003	LER	2/17/2010 22:47	950070	10-1547	2	LANL	USE	S
EXS02170053.wiff	246266004	LER	2/17/2010 23:02	950070	10-1547	2	LANL	USE	S
EXS02170054.wiff	246266005	LER	2/17/2010 23:18	950070	10-1547	2	LANL	USE	S
EXS02170055.wiff	246266006	LER	2/17/2010 23:34	950070	10-1547	2	LANL	USE	S
EXS02170056.wiff	WXXCCV	LER	2/17/2010 23:49			1		USE	C
EXS02170057.wiff	XIBLK07	LER	2/18/2010 0:05			1		USE	B
EXS02170058.wiff	WXXCRI	LER	2/18/2010 0:21			1		USE	C
EXS02170059.wiff	246273002	LER	2/18/2010 0:37	950070	10-1550	2	LANL	USE	S
EXS02170060.wiff	246273003	LER	2/18/2010 0:52	950070	10-1550	2	LANL	USE	S
EXS02170061.wiff	246273004	LER	2/18/2010 1:08	950070	10-1550	2	LANL	USE	S
EXS02170062.wiff	246273005	LER	2/18/2010 1:24	950070	10-1550	2	LANL	USE	S
EXS02170063.wiff	246273006	LER	2/18/2010 1:39	950070	10-1550	2	LANL	USE	S
EXS02170064.wiff	246273007	LER	2/18/2010 1:55	950070	10-1550	2	LANL	USE	S
EXS02170065.wiff	246273008	LER	2/18/2010 2:11	950070	10-1550	2	LANL	USE	S
EXS02170066.wiff	246273009	LER	2/18/2010 2:26	950070	10-1550	2	LANL	USE	S
EXS02170067.wiff	246273010	LER	2/18/2010 2:42	950070	10-1550	2	LANL	USE	S

EXS02170068.wiff	246273011	LER	2/18/2010 2:58	950070	10-1550	2	LANL	USE	S
EXS02170069.wiff	WXXCCV	LER	2/18/2010 3:14			1		USE	C
EXS02170070.wiff	XIBLK08	LER	2/18/2010 3:29			1		USE	B
EXS02170071.wiff	WXXCRI	LER	2/18/2010 3:45			1		USE	C
EXS02170072.wiff	246273012	LER	2/18/2010 4:01	950070	10-1550	2	LANL	USE	S
EXS02170073.wiff	XIBLK09	LER	2/18/2010 4:16			1		USE	B
EXS02170074.wiff	1202035670	LER	2/18/2010 4:32	950077	VARIOUS	2	LANL	USE	S
EXS02170075.wiff	1202035671	LER	2/18/2010 4:48	950077	VARIOUS	2	LANL	USE	S
EXS02170076.wiff	246287001	LER	2/18/2010 5:04	950077	10-1553	2	LANL	USE	S
EXS02170077.wiff	1202035672	LER	2/18/2010 5:19	950077	10-1553	2	LANL	USE	S
EXS02170078.wiff	1202035673	LER	2/18/2010 5:35	950077	10-1553	2	LANL	USE	S
EXS02170079.wiff	246287002	LER	2/18/2010 5:51	950077	10-1553	2	LANL	USE	S
EXS02170080.wiff	246287003	LER	2/18/2010 6:06	950077	10-1553	2	LANL	USE	S
EXS02170081.wiff	246287004	LER	2/18/2010 6:22	950077	10-1553	2	LANL	USE	S
EXS02170082.wiff	WXXCCV	LER	2/18/2010 6:38			1		USE	C
EXS02170083.wiff	XIBLK10	LER	2/18/2010 6:53			1		USE	B
EXS02170084.wiff	WXXCRI	LER	2/18/2010 7:09			1		USE	C
EXS02170085.wiff	246287005	LER	2/18/2010 7:25	950077	10-1553	2	LANL	USE	S
EXS02170086.wiff	246287006	LER	2/18/2010 7:41	950077	10-1553	2	LANL	USE	S
EXS02170087.wiff	246287007	LER	2/18/2010 7:56	950077	10-1553	2	LANL	USE	S
EXS02170088.wiff	246287008	LER	2/18/2010 8:12	950077	10-1553	2	LANL	USE	S
EXS02170089.wiff	246287010	LER	2/18/2010 8:28	950077	10-1553	2	LANL	USE	S
EXS02170090.wiff	246297002	LER	2/18/2010 8:43	950077	10-1556	2	LANL	USE	S
EXS02170091.wiff	246297003	LER	2/18/2010 8:59	950077	10-1556	2	LANL	USE	S
EXS02170092.wiff	246297004	LER	2/18/2010 9:15	950077	10-1556	2	LANL	USE	S
EXS02170093.wiff	246302001	LER	2/18/2010 9:31	950077	10-1558	2	LANL	USE	S
EXS02170094.wiff	246302002	LER	2/18/2010 9:46	950077	10-1558	2	LANL	USE	S
EXS02170095.wiff	WXXCCV	LER	2/18/2010 10:02			1		USE	C
EXS02170096.wiff	XIBLK11	LER	2/18/2010 10:18			1		USE	B
EXS02170097.wiff	WXXCRI	LER	2/18/2010 10:33			1		USE	C
EXS02170098.wiff	246302003	LER	2/18/2010 10:49	950077	10-1558	2	LANL	USE	S
EXS02170099.wiff	246302004	LER	2/18/2010 11:05	950077	10-1558	2	LANL	USE	S
EXS02170100.wiff	246312001	LER	2/18/2010 11:21	950077	10-1561	2	LANL	USE	S
EXS02170101.wiff	WXXCCV	LER	2/18/2010 11:36			1		USE	C
EXS02170102.wiff	XIBLK12	LER	2/18/2010 11:52			1		USE	B
EXS02170103.wiff	WXXCRI	LER	2/18/2010 12:08			1		USE	C
EXS02170104.wiff	1202023589	LER	2/18/2010 12:23	944915	VARIOUS	2	LANL	USE	S

EXS02170105.wiff	1202023590	LER	2/18/2010 12:39	944915	VARIOUS	2	LANL	USE	S
EXS02170106.wiff	245377001	LER	2/18/2010 12:55	944915	10-1378	2	LANL	USE	S
EXS02170107.wiff	245377002	LER	2/18/2010 13:11	944915	10-1378	2	LANL	USE	S
EXS02170108.wiff	245377003	LER	2/18/2010 13:26	944915	10-1378	2	LANL	USE	S
EXS02170109.wiff	245377004	LER	2/18/2010 13:42	944915	10-1378	2	LANL	USE	S
EXS02170110.wiff	245377005	LER	2/18/2010 13:58	944915	10-1378	2	LANL	USE	S
EXS02170111.wiff	245377006	LER	2/18/2010 14:13	944915	10-1378	2	LANL	USE	S
EXS02170112.wiff	245377007	LER	2/18/2010 14:29	944915	10-1378	2	LANL	USE	S
EXS02170113.wiff	245377008	LER	2/18/2010 14:45	944915	10-1378	2	LANL	USE	S
EXS02170114.wiff	WXCCV	LER	2/18/2010 15:01			1		USE	C
EXS02170115.wiff	XIBLK13	LER	2/18/2010 15:16			1		USE	B
EXS02170116.wiff	WXCCRI	LER	2/18/2010 15:32			1		USE	C
EXS02170117.wiff	245377009	LER	2/18/2010 15:48	944915	10-1378	2	LANL	USE	S
EXS02170118.wiff	245377010	LER	2/18/2010 16:04	944915	10-1378	2	LANL	USE	S
EXS02170119.wiff	245396001	LER	2/18/2010 16:19	944915	10-1394	2	LANL	USE	S
EXS02170120.wiff	1202023591	LER	2/18/2010 16:35	944915	10-1394	2	LANL	USE	S
EXS02170121.wiff	1202023592	LER	2/18/2010 16:51	944915	10-1394	2	LANL	USE	S
EXS02170122.wiff	245396002	LER	2/18/2010 17:06	944915	10-1394	2	LANL	USE	S
EXS02170123.wiff	245396003	LER	2/18/2010 17:22	944915	10-1394	2	LANL	USE	S
EXS02170124.wiff	245396004	LER	2/18/2010 17:38	944915	10-1394	2	LANL	USE	S
EXS02170125.wiff	247033002	LER	2/18/2010 17:54	944915	10-1821	2	LANL	USE	S
EXS02170126.wiff	WXCCV	LER	2/18/2010 18:09			1		USE	C
EXS02170127.wiff	XIBLK14	LER	2/18/2010 18:25			1		USE	B
EXS02170128.wiff	WXCCRI	LER	2/18/2010 18:41			1		USE	C
EXS02170129.wiff	1202035674	LER	2/18/2010 18:57	950079	10-1562	2	LANL	USE	S
EXS02170130.wiff	1202035675	LER	2/18/2010 19:12	950079	10-1562	2	LANL	USE	S
EXS02170131.wiff	246316001	LER	2/18/2010 19:28	950079	10-1562	2	LANL	USE	S
EXS02170132.wiff	1202035676	LER	2/18/2010 19:44	950079	10-1562	2	LANL	USE	S
EXS02170133.wiff	1202035677	LER	2/18/2010 19:59	950079	10-1562	2	LANL	USE	S
EXS02170134.wiff	246316002	LER	2/18/2010 20:15	950079	10-1562	2	LANL	USE	S
EXS02170135.wiff	246316003	LER	2/18/2010 20:31	950079	10-1562	2	LANL	USE	S
EXS02170136.wiff	246316004	LER	2/18/2010 20:47	950079	10-1562	2	LANL	USE	S
EXS02170137.wiff	246316005	LER	2/18/2010 21:02	950079	10-1562	2	LANL	USE	S
EXS02170138.wiff	WXCCV	LER	2/18/2010 21:18			1		USE	C
EXS02170139.wiff	XIBLK15	LER	2/18/2010 21:34			1		USE	B
EXS02170140.wiff	WXCCRI	LER	2/18/2010 21:50			1		USE	C

GEL Laboratories LLC
Form GEL-DER

DER Report No.: 793186

Revision No.: 1

DATA EXCEPTION REPORT

Mo. Day Yr. 19-FEB-10	Division: Federal	Quality Criteria: Specifications	Type: Process
Instrument Type: LC-MS/MS	Test / Method: SW846 8321A Modified	Matrix Type: Solid	Client Code: LANL
Batch ID: 944915	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 245377(10-1378), 245396(10-1394), 247033(10-1821) Application Issues: Other			
Specification and Requirements Exception Description:		DER Disposition:	
1. The following samples were extracted out of holding due to prep analyst oversight: 245377001, 245377002, 245377003, 245377004, 245377005, 245377006, 245377007, 245377008, 245377009, 245377010, 245396001, 245396002, 245396003, and 245396004. 2. The LCS(1202023590) did not meet acceptance criteria for the recovery of 4-Amino-2,6-dinitrotoluene at 81.8%. The limits are 84-130%.		1. The samples were extracted within two times the holding period. The data are reported. 2. Both the MS(1202023591) and MSD(1202023592) had passing recoveries for 4-Amino-2,6-dinitrotoluene at 95% and 90.1% respectively. The data are reported.	

Originator's Name:

Lynne Russell

19-FEB-10

Data Validator/Group Leader:

Herbert Maier

19-FEB-10

Metals Analysis

Case Narrative

**Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1394**

Sample Analysis

Sample ID	Client ID
245396001	RE15-10-7928
245396002	RE15-10-7929
245396003	RE15-10-7927
245396004	RE15-10-7930
1202024773	Method Blank (MB) ICP
1202024774	Laboratory Control Sample (LCS)
1202024777	245396001(RE15-10-7928L) Serial Dilution (SD)
1202024775	245396001(RE15-10-7928D) Sample Duplicate (DUP)
1202024776	245396001(RE15-10-7928S) Matrix Spike (MS)
1202024778	245396001(RE15-10-7928SD) Matrix Spike Duplicate (MSD)
1202024764	Method Blank (MB) ICP-MS
1202024765	Laboratory Control Sample (LCS)
1202024768	245396001(RE15-10-7928L) Serial Dilution (SD)
1202024766	245396001(RE15-10-7928D) Sample Duplicate (DUP)
1202024767	245396001(RE15-10-7928S) Matrix Spike (MS)
1202024772	245396001(RE15-10-7928SD) Matrix Spike Duplicate (MSD)
1202025301	Method Blank (MB) CVAA
1202025302	Laboratory Control Sample (LCS)
1202025305	245396001(RE15-10-7928L) Serial Dilution (SD)
1202025303	245396001(RE15-10-7928D) Sample Duplicate (DUP)

1202025304	245396001(RE15-10-7928S) Matrix Spike (MS)
1202025306	245396001(RE15-10-7928SD) Matrix Spike Duplicate (MSD)

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

Method/Analysis Information

Analytical Batch:	945399, 945396 and 945628
Prep Batch :	945398, 945392 and 945627
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.

ICSA/ICSAB Statement

All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements

All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements

All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement

The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement

The following sample was selected as the quality control (QC) sample for this SDG: 245396001.

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 aluminum 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 aluminum, as indicated by the "N" qualifiers.

MS/MSD Relative Percent Difference (RPD) Statement

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

Duplicate Relative Percent Difference (RPD) Statement

The relative percent difference (RPD) obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is 5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the contract required detection limit (RL), a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements with the exception of nickel, uranium, calcium and chromium, as indicated by the "*" qualifiers.

Serial Dilution % Difference Statement

The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information**Holding Time Specifications**

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

Sample Dilutions

Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG were diluted the standard 2x for solids on the ICPMS. The samples 245396002 and 245396003 required dilutions for uranium in order to bring over range concentrations within the linear calibration range of the instrument.

Preparation Information

The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Data Exception (DER) Documentation

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following DERs were generated for this SDG: 791120 and 791123. A copy of each DER 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 Brown Date: 2/19/10

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1394

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245396001

BASIS: Dry Weight

DATE COLLECTED 21-JAN-10

CLIENT ID: RE15-10-7928

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 96.4

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	935000	ug/Kg	N	6880	20200	20200	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-36-0	Antimony	1010	ug/Kg	U	334	1010	1010	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-38-2	Arsenic	0.709	mg/kg	J	0.207	1.04	1.04	2	MS	BAJ	02/15/10 00:51	100214-8	945396
7440-39-3	Barium	18400	ug/Kg		101	506	506	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-41-7	Beryllium	0.360	mg/kg		0.0207	0.104	0.104	2	MS	BAJ	02/14/10 01:04	100213-4	945396
7440-43-9	Cadmium	506	ug/Kg	U	101	506	506	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-70-2	Calcium	328000	ug/Kg	*	8090	25300	25300	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-47-3	Chromium	8030	ug/Kg	*	152	506	506	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-48-4	Cobalt	1800	ug/Kg		152	506	506	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-50-8	Copper	5690	ug/Kg		303	1010	1010	1	P	HSC	02/12/10 00:38	021110-1	945399
7439-89-6	Iron	7680000	ug/Kg		8090	25300	25300	1	P	HSC	02/12/10 00:38	021110-1	945399
7439-92-1	Lead	5490	ug/Kg		253	1010	1010	1	P	HSC	02/12/10 00:38	021110-1	945399
7439-95-4	Magnesium	205000	ug/Kg		8600	30300	30300	1	P	HSC	02/12/10 00:38	021110-1	945399
7439-96-5	Manganese	238000	ug/Kg		202	1010	1010	1	P	HSC	02/12/10 00:38	021110-1	945399
7439-97-6	Mercury	9.91	ug/kg	J	3.96	11.7	11.7	1	AV	ETL	02/10/10 10:51	021010S1-9	945628
7440-02-0	Nickel	2.57	mg/kg	*	0.104	0.415	0.415	2	MS	BAJ	02/14/10 01:04	100213-4	945396
7440-09-7	Potassium	225000	ug/Kg	N	6470	25300	25300	1	P	HSC	02/12/10 00:38	021110-1	945399
7782-49-2	Selenium	1.04	mg/kg	U	0.519	1.04	1.04	2	MS	BAJ	02/15/10 00:51	100214-8	945396
7440-22-4	Silver	396	ug/Kg	J	101	506	506	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-23-5	Sodium	134000	ug/Kg		7080	25300	25300	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-28-0	Thallium	0.207	mg/kg	U	0.0622	0.207	0.207	2	MS	BAJ	02/14/10 15:41	100214-5	945396
7440-61-1	Uranium	1.37	mg/kg	*	0.0137	0.0415	0.0415	2	MS	BAJ	02/14/10 09:00	100213-2	945396
7440-62-2	Vanadium	2860	ug/Kg		101	506	506	1	P	HSC	02/12/10 00:38	021110-1	945399
7440-66-6	Zinc	32700	ug/Kg		334	1010	1010	1	P	HSC	02/12/10 00:38	021110-1	945399

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945396	945392	SW846 3050B	0.5	g	50	mL	02/04/10	FGA
945399	945398	SW846 3050B	0.513	g	50	mL	02/04/10	FGA
945628	945627	SW846 7471A Prep	0.534	g	30	mL	02/09/10	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1394

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245396002

BASIS: Dry Weight

DATE COLLECTED 21-JAN-10

CLIENT ID: RE15-10-7929

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 73

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	10400000	ug/Kg	N	9300	27300	27300	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-36-0	Antimony	1370	ug/Kg	U	451	1370	1370	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-38-2	Arsenic	2.81	mg/kg		0.258	1.29	1.29	2	MS	BAJ	02/15/10 01:07	100214-8	945396
7440-39-3	Barium	157000	ug/Kg		137	684	684	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-41-7	Beryllium	2.06	mg/kg		0.0258	0.129	0.129	2	MS	BAJ	02/14/10 01:35	100213-4	945396
7440-43-9	Cadmium	1600	ug/Kg		137	684	684	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-70-2	Calcium	4070000	ug/Kg	*	10900	34200	34200	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-47-3	Chromium	10800	ug/Kg	*	205	684	684	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-48-4	Cobalt	7190	ug/Kg		205	684	684	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-50-8	Copper	73300	ug/Kg		410	1370	1370	1	P	HSC	02/12/10 01:12	021110-1	945399
7439-89-6	Iron	12500000	ug/Kg		10900	34200	34200	1	P	HSC	02/12/10 01:12	021110-1	945399
7439-92-1	Lead	102000	ug/Kg		342	1370	1370	1	P	HSC	02/12/10 01:12	021110-1	945399
7439-95-4	Magnesium	2150000	ug/Kg		11600	41000	41000	1	P	HSC	02/12/10 01:12	021110-1	945399
7439-96-5	Manganese	419000	ug/Kg		273	1370	1370	1	P	HSC	02/12/10 01:12	021110-1	945399
7439-97-6	Mercury	24.9	ug/kg		5.54	16.3	16.3	1	AV	ETL	02/10/10 11:00	021010S1-9	945628
7440-02-0	Nickel	8.61	mg/kg	*	0.129	0.516	0.516	2	MS	BAJ	02/14/10 01:35	100213-4	945396
7440-09-7	Potassium	1870000	ug/Kg	N	8750	34200	34200	1	P	HSC	02/12/10 01:12	021110-1	945399
7782-49-2	Selenium	0.696	mg/kg	J	0.645	1.29	1.29	2	MS	BAJ	02/15/10 01:07	100214-8	945396
7440-22-4	Silver	748	ug/Kg		137	684	684	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-23-5	Sodium	70000	ug/Kg		9570	34200	34200	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-28-0	Thallium	0.240	mg/kg	J	0.0774	0.258	0.258	2	MS	BAJ	02/14/10 16:04	100214-5	945396
7440-61-1	Uranium	31.8	mg/kg	*	0.17	0.516	0.516	20	MS	BAJ	02/14/10 12:28	100214-3	945396
7440-62-2	Vanadium	24200	ug/Kg		137	684	684	1	P	HSC	02/12/10 01:12	021110-1	945399
7440-66-6	Zinc	41700	ug/Kg		451	1370	1370	1	P	HSC	02/12/10 01:12	021110-1	945399

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945396	945392	SW846 3050B	0.534	g	50	mL	02/04/10	FGA
945399	945398	SW846 3050B	0.504	g	50	mL	02/04/10	FGA
945628	945627	SW846 7471A Prep	0.508	g	30	mL	02/09/10	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1394

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245396003

BASIS: Dry Weight

DATE COLLECTED 21-JAN-10

CLIENT ID: RE15-10-7927

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 76

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7000000	ug/Kg	N	8020	23600	23600	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-36-0	Antimony	778	ug/Kg	J	389	1180	1180	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-38-2	Arsenic	2.43	mg/kg		0.265	1.32	1.32	2	MS	BAJ	02/15/10 01:10	100214-8	945396
7440-39-3	Barium	97600	ug/Kg		118	590	590	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-41-7	Beryllium	5.83	mg/kg		0.0265	0.132	0.132	2	MS	BAJ	02/14/10 01:41	100213-4	945396
7440-43-9	Cadmium	1170	ug/Kg		118	590	590	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-70-2	Calcium	2120000	ug/Kg	*	9440	29500	29500	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-47-3	Chromium	12600	ug/Kg	*	177	590	590	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-48-4	Cobalt	3750	ug/Kg		177	590	590	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-50-8	Copper	526000	ug/Kg		354	1180	1180	1	P	HSC	02/12/10 01:20	021110-1	945399
7439-89-6	Iron	9560000	ug/Kg		9440	29500	29500	1	P	HSC	02/12/10 01:20	021110-1	945399
7439-92-1	Lead	102000	ug/Kg		295	1180	1180	1	P	HSC	02/12/10 01:20	021110-1	945399
7439-95-4	Magnesium	1230000	ug/Kg		10000	35400	35400	1	P	HSC	02/12/10 01:20	021110-1	945399
7439-96-5	Manganese	282000	ug/Kg		236	1180	1180	1	P	HSC	02/12/10 01:20	021110-1	945399
7439-97-6	Mercury	15.3	ug/kg		5.08	15	15	1	AV	ETL	02/10/10 11:01	021010S1-9	945628
7440-02-0	Nickel	7.08	mg/kg	*	0.132	0.529	0.529	2	MS	BAJ	02/14/10 01:41	100213-4	945396
7440-09-7	Potassium	1250000	ug/Kg	N	7550	29500	29500	1	P	HSC	02/12/10 01:20	021110-1	945399
7782-49-2	Selenium	1.32	mg/kg	U	0.662	1.32	1.32	2	MS	BAJ	02/15/10 01:10	100214-8	945396
7440-22-4	Silver	771	ug/Kg		118	590	590	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-23-5	Sodium	63800	ug/Kg		8260	29500	29500	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-28-0	Thallium	0.127	mg/kg	J	0.0794	0.265	0.265	2	MS	BAJ	02/14/10 16:08	100214-5	945396
7440-61-1	Uranium	84.6	mg/kg	*	0.175	0.529	0.529	20	MS	BAJ	02/14/10 12:29	100214-3	945396
7440-62-2	Vanadium	16100	ug/Kg		118	590	590	1	P	HSC	02/12/10 01:20	021110-1	945399
7440-66-6	Zinc	56800	ug/Kg		389	1180	1180	1	P	HSC	02/12/10 01:20	021110-1	945399

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945396	945392	SW846 3050B	0.5	g	50	mL	02/04/10	FGA
945399	945398	SW846 3050B	0.561	g	50	mL	02/04/10	FGA
945628	945627	SW846 7471A Prep	0.531	g	30	mL	02/09/10	TXB3

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1394

CONTRACT: LANL01004

METHOD TYPE: SW846

SAMPLE ID: 245396004

BASIS: Dry Weight

DATE COLLECTED 21-JAN-10

CLIENT ID: RE15-10-7930

LEVEL: Low

DATE RECEIVED 23-JAN-10

MATRIX: SOIL

%SOLIDS: 89

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2300000	ug/Kg	N	7650	22500	22500	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-36-0	Antimony	1130	ug/Kg	U	371	1130	1130	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-38-2	Arsenic	1.37	mg/kg		0.214	1.07	1.07	2	MS	BAJ	02/15/10 01:12	100214-8	945396
7440-39-3	Barium	47300	ug/Kg		113	563	563	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-41-7	Beryllium	0.857	mg/kg		0.0214	0.107	0.107	2	MS	BAJ	02/14/10 01:47	100213-4	945396
7440-43-9	Cadmium	563	ug/Kg	U	113	563	563	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-70-2	Calcium	525000	ug/Kg	*	9000	28100	28100	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-47-3	Chromium	14100	ug/Kg	*	169	563	563	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-48-4	Cobalt	6480	ug/Kg		169	563	563	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-50-8	Copper	44700	ug/Kg		338	1130	1130	1	P	HSC	02/12/10 01:27	021110-1	945399
7439-89-6	Iron	15900000	ug/Kg		9000	28100	28100	1	P	HSC	02/12/10 01:27	021110-1	945399
7439-92-1	Lead	15800	ug/Kg		281	1130	1130	1	P	HSC	02/12/10 01:27	021110-1	945399
7439-95-4	Magnesium	388000	ug/Kg		9560	33800	33800	1	P	HSC	02/12/10 01:27	021110-1	945399
7439-96-5	Manganese	279000	ug/Kg		225	1130	1130	1	P	HSC	02/12/10 01:27	021110-1	945399
7439-97-6	Mercury	11.4	ug/kg	J	3.96	11.6	11.6	1	AV	ETL	02/10/10 11:03	021010S1-9	945628
7440-02-0	Nickel	3.84	mg/kg	*	0.107	0.428	0.428	2	MS	BAJ	02/14/10 01:47	100213-4	945396
7440-09-7	Potassium	508000	ug/Kg	N	7200	28100	28100	1	P	HSC	02/12/10 01:27	021110-1	945399
7782-49-2	Selenium	1.07	mg/kg	U	0.535	1.07	1.07	2	MS	BAJ	02/15/10 01:12	100214-8	945396
7440-22-4	Silver	722	ug/Kg		113	563	563	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-23-5	Sodium	222000	ug/Kg		7880	28100	28100	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-28-0	Thallium	0.214	mg/kg	U	0.0642	0.214	0.214	2	MS	BAJ	02/14/10 16:13	100214-5	945396
7440-61-1	Uranium	8.68	mg/kg	*	0.0141	0.0428	0.0428	2	MS	BAJ	02/14/10 09:15	100213-2	945396
7440-62-2	Vanadium	4510	ug/Kg		113	563	563	1	P	HSC	02/12/10 01:27	021110-1	945399
7440-66-6	Zinc	33800	ug/Kg		371	1130	1130	1	P	HSC	02/12/10 01:27	021110-1	945399

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
945396	945392	SW846 3050B	0.528	g	50	mL	02/04/10	FGA
945399	945398	SW846 3050B	0.502	g	50	mL	02/04/10	FGA
945628	945627	SW846 7471A Prep	0.582	g	30	mL	02/09/10	TXB3

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICV01										
	Mercury	5.23	ug/L	5	ug/L	104.6	90.0 – 110.0	AV	10-FEB-10 09:01	021010S1-9
	Aluminum	5000	ug/L	5000	ug/L	99.9	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Antimony	520	ug/L	500	ug/L	104.1	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Barium	513	ug/L	500	ug/L	102.7	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Cadmium	490	ug/L	500	ug/L	98	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Calcium	5050	ug/L	5000	ug/L	101	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Chromium	491	ug/L	500	ug/L	98.1	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Cobalt	513	ug/L	500	ug/L	102.6	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Copper	510	ug/L	500	ug/L	102	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Iron	5200	ug/L	5000	ug/L	104	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Lead	500	ug/L	500	ug/L	100	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Magnesium	5450	ug/L	5000	ug/L	109	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Manganese	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Potassium	2500	ug/L	2500	ug/L	100	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Silver	265	ug/L	250	ug/L	106.1	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Sodium	2500	ug/L	2500	ug/L	99.9	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Vanadium	520	ug/L	500	ug/L	104	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Zinc	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	11-FEB-10 08:54	021110-1
	Beryllium	50.8	ug/L	50	ug/L	101.6	90.0 – 110.0	MS	13-FEB-10 21:36	100213-4
	Nickel	49.3	ug/L	50	ug/L	98.6	90.0 – 110.0	MS	13-FEB-10 21:36	100213-4
	Uranium	53.1	ug/L	50	ug/L	106.2	90.0 – 110.0	MS	14-FEB-10 08:10	100213-2
	Uranium	53	ug/L	50	ug/L	106	90.0 – 110.0	MS	14-FEB-10 12:12	100214-3
	Thallium	54.9	ug/L	50	ug/L	109.7	90.0 – 110.0	MS	14-FEB-10 13:20	100214-5
	Arsenic	49.9	ug/L	50	ug/L	99.7	90.0 – 110.0	MS	15-FEB-10 00:29	100214-8
	Selenium	50.3	ug/L	50	ug/L	100.6	90.0 – 110.0	MS	15-FEB-10 00:29	100214-8
CCV01										
	Mercury	5.07	ug/L	5	ug/L	101.3	80.0 – 120.0	AV	10-FEB-10 09:06	021010S1-9
	Aluminum	4990	ug/L	5000	ug/L	99.7	90.0 – 110.0	P	11-FEB-10 09:39	021110-1
	Antimony	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	11-FEB-10 09:39	021110-1
	Barium	499	ug/L	500	ug/L	99.7	90.0 – 110.0	P	11-FEB-10 09:39	021110-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Cadmium	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	11-FEB-10 09:39	021110-1
	Calcium	5020	ug/L	5000	ug/L	100.4	90.0 – 110.0	P	11-FEB-10 09:39	021110-1
	Chromium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	11-FEB-10 09:39	021110-1
	Cobalt	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	11-FEB-10 09:39	021110-1
	Copper	499	ug/L	500	ug/L	99.7	90.0 – 110.0	P	11-FEB-10 09:39	021110-1
	Iron	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	11-FEB-10 09:39	021110-1
	Lead	488	ug/L	500	ug/L	97.5	90.0 – 110.0	P	11-FEB-10 09:39	021110-1
	Magnesium	5170	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	11-FEB-10 09:39	021110-1
	Manganese	490	ug/L	500	ug/L	97.9	90.0 – 110.0	P	11-FEB-10 09:39	021110-1
	Potassium	5190	ug/L	5000	ug/L	103.7	90.0 – 110.0	P	11-FEB-10 09:39	021110-1
	Silver	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	11-FEB-10 09:39	021110-1
	Sodium	9910	ug/L	10000	ug/L	99.1	90.0 – 110.0	P	11-FEB-10 09:39	021110-1
	Vanadium	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	11-FEB-10 09:39	021110-1
	Zinc	493	ug/L	500	ug/L	98.5	90.0 – 110.0	P	11-FEB-10 09:39	021110-1
	Beryllium	52.2	ug/L	50	ug/L	104.3	90.0 – 110.0	MS	13-FEB-10 22:07	100213-4
	Nickel	52.5	ug/L	50	ug/L	104.9	90.0 – 110.0	MS	13-FEB-10 22:07	100213-4
	Uranium	50.5	ug/L	50	ug/L	101.1	90.0 – 110.0	MS	14-FEB-10 08:19	100213-2
	Uranium	48.6	ug/L	50	ug/L	97.2	90.0 – 110.0	MS	14-FEB-10 12:21	100214-3
	Thallium	52.6	ug/L	50	ug/L	105.2	90.0 – 110.0	MS	14-FEB-10 13:42	100214-5
	Arsenic	48.6	ug/L	50	ug/L	97.2	90.0 – 110.0	MS	15-FEB-10 00:41	100214-8
	Selenium	50.3	ug/L	50	ug/L	100.5	90.0 – 110.0	MS	15-FEB-10 00:41	100214-8
CCV02										
	Mercury	5.04	ug/L	5	ug/L	100.8	80.0 – 120.0	AV	10-FEB-10 09:26	021010S1-9
	Aluminum	4810	ug/L	5000	ug/L	96.1	90.0 – 110.0	P	11-FEB-10 10:04	021110-1
	Antimony	500	ug/L	500	ug/L	99.9	90.0 – 110.0	P	11-FEB-10 10:04	021110-1
	Barium	495	ug/L	500	ug/L	99	90.0 – 110.0	P	11-FEB-10 10:04	021110-1
	Cadmium	490	ug/L	500	ug/L	98	90.0 – 110.0	P	11-FEB-10 10:04	021110-1
	Calcium	4920	ug/L	5000	ug/L	98.3	90.0 – 110.0	P	11-FEB-10 10:04	021110-1
	Chromium	491	ug/L	500	ug/L	98.2	90.0 – 110.0	P	11-FEB-10 10:04	021110-1
	Cobalt	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	11-FEB-10 10:04	021110-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Copper	494	ug/L	500	ug/L	98.9	90.0 - 110.0	P	11-FEB-10 10:04	021110-1
	Iron	4970	ug/L	5000	ug/L	99.3	90.0 - 110.0	P	11-FEB-10 10:04	021110-1
	Lead	486	ug/L	500	ug/L	97.1	90.0 - 110.0	P	11-FEB-10 10:04	021110-1
	Magnesium	5070	ug/L	5000	ug/L	101.5	90.0 - 110.0	P	11-FEB-10 10:04	021110-1
	Manganese	490	ug/L	500	ug/L	98	90.0 - 110.0	P	11-FEB-10 10:04	021110-1
	Potassium	4840	ug/L	5000	ug/L	96.9	90.0 - 110.0	P	11-FEB-10 10:04	021110-1
	Silver	493	ug/L	500	ug/L	98.6	90.0 - 110.0	P	11-FEB-10 10:04	021110-1
	Sodium	9490	ug/L	10000	ug/L	94.9	90.0 - 110.0	P	11-FEB-10 10:04	021110-1
	Vanadium	497	ug/L	500	ug/L	99.5	90.0 - 110.0	P	11-FEB-10 10:04	021110-1
	Zinc	488	ug/L	500	ug/L	97.7	90.0 - 110.0	P	11-FEB-10 10:04	021110-1
	Beryllium	53.4	ug/L	50	ug/L	106.8	90.0 - 110.0	MS	13-FEB-10 22:25	100213-4
	Nickel	52.9	ug/L	50	ug/L	105.7	90.0 - 110.0	MS	13-FEB-10 22:25	100213-4
	Uranium	51.6	ug/L	50	ug/L	103.1	90.0 - 110.0	MS	14-FEB-10 08:36	100213-2
	Uranium	49.7	ug/L	50	ug/L	99.4	90.0 - 110.0	MS	14-FEB-10 12:31	100214-3
	Thallium	53.5	ug/L	50	ug/L	107	90.0 - 110.0	MS	14-FEB-10 14:25	100214-5
	Arsenic	49.6	ug/L	50	ug/L	99.3	90.0 - 110.0	MS	15-FEB-10 01:02	100214-8
	Selenium	50.3	ug/L	50	ug/L	100.6	90.0 - 110.0	MS	15-FEB-10 01:02	100214-8
CCV03	Mercury	5.04	ug/L	5	ug/L	100.8	80.0 - 120.0	AV	10-FEB-10 09:46	021010S1-9
	Aluminum	4940	ug/L	5000	ug/L	98.8	90.0 - 110.0	P	11-FEB-10 11:23	021110-1
	Antimony	504	ug/L	500	ug/L	100.7	90.0 - 110.0	P	11-FEB-10 11:23	021110-1
	Barium	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	11-FEB-10 11:23	021110-1
	Cadmium	489	ug/L	500	ug/L	97.7	90.0 - 110.0	P	11-FEB-10 11:23	021110-1
	Calcium	5050	ug/L	5000	ug/L	101	90.0 - 110.0	P	11-FEB-10 11:23	021110-1
	Chromium	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	11-FEB-10 11:23	021110-1
	Cobalt	502	ug/L	500	ug/L	100.3	90.0 - 110.0	P	11-FEB-10 11:23	021110-1
	Copper	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	11-FEB-10 11:23	021110-1
	Iron	5110	ug/L	5000	ug/L	102.1	90.0 - 110.0	P	11-FEB-10 11:23	021110-1
	Lead	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	11-FEB-10 11:23	021110-1
	Magnesium	5240	ug/L	5000	ug/L	104.9	90.0 - 110.0	P	11-FEB-10 11:23	021110-1

METALS

-2a-

Initial and Continuing Calibration Verification

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Manganese	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	11-FEB-10 11:23	021110-1
	Potassium	4980	ug/L	5000	ug/L	99.7	90.0 - 110.0	P	11-FEB-10 11:23	021110-1
	Silver	492	ug/L	500	ug/L	98.3	90.0 - 110.0	P	11-FEB-10 11:23	021110-1
	Sodium	9820	ug/L	10000	ug/L	98.2	90.0 - 110.0	P	11-FEB-10 11:23	021110-1
	Vanadium	496	ug/L	500	ug/L	99.1	90.0 - 110.0	P	11-FEB-10 11:23	021110-1
	Zinc	487	ug/L	500	ug/L	97.4	90.0 - 110.0	P	11-FEB-10 11:23	021110-1
	Beryllium	53.4	ug/L	50	ug/L	106.7	90.0 - 110.0	MS	13-FEB-10 23:20	100213-4
	Nickel	52.2	ug/L	50	ug/L	104.4	90.0 - 110.0	MS	13-FEB-10 23:20	100213-4
	Uranium	53	ug/L	50	ug/L	106	90.0 - 110.0	MS	14-FEB-10 08:53	100213-2
	Thallium	52.3	ug/L	50	ug/L	104.6	90.0 - 110.0	MS	14-FEB-10 15:05	100214-5
	Arsenic	50	ug/L	50	ug/L	100.1	90.0 - 110.0	MS	15-FEB-10 01:14	100214-8
	Selenium	50.7	ug/L	50	ug/L	101.4	90.0 - 110.0	MS	15-FEB-10 01:14	100214-8
CCV04	Mercury	5.04	ug/L	5	ug/L	100.8	80.0 - 120.0	AV	10-FEB-10 10:06	021010S1-9
	Aluminum	4940	ug/L	5000	ug/L	98.7	90.0 - 110.0	P	11-FEB-10 11:57	021110-1
	Antimony	503	ug/L	500	ug/L	100.7	90.0 - 110.0	P	11-FEB-10 11:57	021110-1
	Barium	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	11-FEB-10 11:57	021110-1
	Cadmium	489	ug/L	500	ug/L	97.9	90.0 - 110.0	P	11-FEB-10 11:57	021110-1
	Calcium	4990	ug/L	5000	ug/L	99.9	90.0 - 110.0	P	11-FEB-10 11:57	021110-1
	Chromium	493	ug/L	500	ug/L	98.5	90.0 - 110.0	P	11-FEB-10 11:57	021110-1
	Cobalt	505	ug/L	500	ug/L	101.1	90.0 - 110.0	P	11-FEB-10 11:57	021110-1
	Copper	499	ug/L	500	ug/L	99.7	90.0 - 110.0	P	11-FEB-10 11:57	021110-1
	Iron	5050	ug/L	5000	ug/L	101.1	90.0 - 110.0	P	11-FEB-10 11:57	021110-1
	Lead	490	ug/L	500	ug/L	98	90.0 - 110.0	P	11-FEB-10 11:57	021110-1
	Magnesium	5240	ug/L	5000	ug/L	104.8	90.0 - 110.0	P	11-FEB-10 11:57	021110-1
	Manganese	496	ug/L	500	ug/L	99.1	90.0 - 110.0	P	11-FEB-10 11:57	021110-1
	Potassium	4910	ug/L	5000	ug/L	98.1	90.0 - 110.0	P	11-FEB-10 11:57	021110-1
	Silver	496	ug/L	500	ug/L	99.2	90.0 - 110.0	P	11-FEB-10 11:57	021110-1
	Sodium	9900	ug/L	10000	ug/L	99	90.0 - 110.0	P	11-FEB-10 11:57	021110-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	11-FEB-10 11:57	021110-1

METALS

-2a-

Initial and Continuing Calibration Verification

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Zinc	490	ug/L	500	ug/L	98.1	90.0 - 110.0	P	11-FEB-10 11:57	021110-1
	Beryllium	52.5	ug/L	50	ug/L	104.9	90.0 - 110.0	MS	14-FEB-10 00:15	100213-4
	Nickel	51.3	ug/L	50	ug/L	102.6	90.0 - 110.0	MS	14-FEB-10 00:15	100213-4
	Uranium	52	ug/L	50	ug/L	104	90.0 - 110.0	MS	14-FEB-10 09:08	100213-2
	Thallium	51.8	ug/L	50	ug/L	103.6	90.0 - 110.0	MS	14-FEB-10 15:32	100214-5
CCV05										
	Mercury	5.02	ug/L	5	ug/L	100.3	80.0 - 120.0	AV	10-FEB-10 10:26	021010S1-9
	Aluminum	4970	ug/L	5000	ug/L	99.3	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Antimony	506	ug/L	500	ug/L	101.1	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Barium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Cadmium	489	ug/L	500	ug/L	97.8	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Calcium	5020	ug/L	5000	ug/L	100.4	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Chromium	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Cobalt	505	ug/L	500	ug/L	101.1	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Copper	496	ug/L	500	ug/L	99.3	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Iron	5080	ug/L	5000	ug/L	101.7	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Lead	491	ug/L	500	ug/L	98.2	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Magnesium	5240	ug/L	5000	ug/L	104.7	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Manganese	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Potassium	4970	ug/L	5000	ug/L	99.3	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Silver	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Sodium	9860	ug/L	10000	ug/L	98.6	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Vanadium	498	ug/L	500	ug/L	99.5	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Zinc	489	ug/L	500	ug/L	97.7	90.0 - 110.0	P	11-FEB-10 12:53	021110-1
	Beryllium	54.1	ug/L	50	ug/L	108.2	90.0 - 110.0	MS	14-FEB-10 00:52	100213-4
	Nickel	52	ug/L	50	ug/L	104.1	90.0 - 110.0	MS	14-FEB-10 00:52	100213-4
	Uranium	52.4	ug/L	50	ug/L	104.8	90.0 - 110.0	MS	14-FEB-10 09:17	100213-2
	Thallium	52.5	ug/L	50	ug/L	105	90.0 - 110.0	MS	14-FEB-10 16:17	100214-5
CCV06										
	Mercury	4.93	ug/L	5	ug/L	98.6	80.0 - 120.0	AV	10-FEB-10 10:46	021010S1-9

METALS

-2a-

Initial and Continuing Calibration Verification

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Aluminum	4990	ug/L	5000	ug/L	99.9	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Antimony	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Barium	502	ug/L	500	ug/L	100.3	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Cadmium	490	ug/L	500	ug/L	97.9	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Calcium	5040	ug/L	5000	ug/L	100.8	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Chromium	491	ug/L	500	ug/L	98.1	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Cobalt	510	ug/L	500	ug/L	102	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Copper	501	ug/L	500	ug/L	100.2	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Iron	5100	ug/L	5000	ug/L	101.9	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Lead	489	ug/L	500	ug/L	97.8	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Magnesium	5190	ug/L	5000	ug/L	103.7	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Manganese	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Potassium	4970	ug/L	5000	ug/L	99.5	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Silver	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Sodium	9920	ug/L	10000	ug/L	99.2	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Vanadium	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Zinc	492	ug/L	500	ug/L	98.3	90.0 - 110.0	P	11-FEB-10 13:39	021110-1
	Beryllium	54.8	ug/L	50	ug/L	109.5	90.0 - 110.0	MS	14-FEB-10 01:53	100213-4
	Nickel	52.2	ug/L	50	ug/L	104.4	90.0 - 110.0	MS	14-FEB-10 01:53	100213-4
CCV07	Mercury	4.02	ug/L	5	ug/L	80.4	80.0 - 120.0	AV	10-FEB-10 11:06	021010S1-9
	Aluminum	5040	ug/L	5000	ug/L	100.8	90.0 - 110.0	P	11-FEB-10 14:59	021110-1
	Antimony	508	ug/L	500	ug/L	101.5	90.0 - 110.0	P	11-FEB-10 14:59	021110-1
	Barium	512	ug/L	500	ug/L	102.3	90.0 - 110.0	P	11-FEB-10 14:59	021110-1
	Cadmium	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	11-FEB-10 14:59	021110-1
	Calcium	5020	ug/L	5000	ug/L	100.5	90.0 - 110.0	P	11-FEB-10 14:59	021110-1
	Chromium	499	ug/L	500	ug/L	99.9	90.0 - 110.0	P	11-FEB-10 14:59	021110-1
	Cobalt	520	ug/L	500	ug/L	104.1	90.0 - 110.0	P	11-FEB-10 14:59	021110-1
	Copper	510	ug/L	500	ug/L	102.1	90.0 - 110.0	P	11-FEB-10 14:59	021110-1
	Iron	5040	ug/L	5000	ug/L	100.7	90.0 - 110.0	P	11-FEB-10 14:59	021110-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Lead	492	ug/L	500	ug/L	98.4	90.0 - 110.0	P	11-FEB-10 14:59	021110-1
	Magnesium	5170	ug/L	5000	ug/L	103.3	90.0 - 110.0	P	11-FEB-10 14:59	021110-1
	Manganese	503	ug/L	500	ug/L	100.7	90.0 - 110.0	P	11-FEB-10 14:59	021110-1
	Potassium	4960	ug/L	5000	ug/L	99.2	90.0 - 110.0	P	11-FEB-10 14:59	021110-1
	Silver	505	ug/L	500	ug/L	101	90.0 - 110.0	P	11-FEB-10 14:59	021110-1
	Sodium	9950	ug/L	10000	ug/L	99.5	90.0 - 110.0	P	11-FEB-10 14:59	021110-1
	Vanadium	506	ug/L	500	ug/L	101.1	90.0 - 110.0	P	11-FEB-10 14:59	021110-1
	Zinc	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	11-FEB-10 14:59	021110-1
CCV08	Aluminum	4990	ug/L	5000	ug/L	99.7	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
	Antimony	512	ug/L	500	ug/L	102.4	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
	Barium	511	ug/L	500	ug/L	102.2	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
	Cadmium	498	ug/L	500	ug/L	99.5	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
	Calcium	5020	ug/L	5000	ug/L	100.4	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
	Chromium	495	ug/L	500	ug/L	99.1	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
	Cobalt	521	ug/L	500	ug/L	104.3	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
	Copper	506	ug/L	500	ug/L	101.3	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
	Lead	497	ug/L	500	ug/L	99.4	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
	Magnesium	5160	ug/L	5000	ug/L	103.3	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
	Manganese	509	ug/L	500	ug/L	101.9	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
	Potassium	4940	ug/L	5000	ug/L	98.7	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
	Silver	503	ug/L	500	ug/L	100.6	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
	Sodium	9680	ug/L	10000	ug/L	96.8	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
	Vanadium	503	ug/L	500	ug/L	100.5	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
	Zinc	502	ug/L	500	ug/L	100.3	90.0 - 110.0	P	11-FEB-10 16:06	021110-1
CCV09	Aluminum	5030	ug/L	5000	ug/L	100.5	90.0 - 110.0	P	11-FEB-10 16:26	021110-1
	Antimony	519	ug/L	500	ug/L	103.8	90.0 - 110.0	P	11-FEB-10 16:26	021110-1
	Barium	513	ug/L	500	ug/L	102.5	90.0 - 110.0	P	11-FEB-10 16:26	021110-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Cadmium	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	11-FEB-10 16:26	021110-1
	Calcium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	11-FEB-10 16:26	021110-1
	Chromium	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	11-FEB-10 16:26	021110-1
	Cobalt	523	ug/L	500	ug/L	104.6	90.0 – 110.0	P	11-FEB-10 16:26	021110-1
	Copper	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	11-FEB-10 16:26	021110-1
	Iron	5060	ug/L	5000	ug/L	101.2	90.0 – 110.0	P	11-FEB-10 16:26	021110-1
	Lead	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	11-FEB-10 16:26	021110-1
	Magnesium	5160	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	11-FEB-10 16:26	021110-1
	Manganese	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	11-FEB-10 16:26	021110-1
	Potassium	4990	ug/L	5000	ug/L	99.9	90.0 – 110.0	P	11-FEB-10 16:26	021110-1
	Silver	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	11-FEB-10 16:26	021110-1
	Sodium	9840	ug/L	10000	ug/L	98.5	90.0 – 110.0	P	11-FEB-10 16:26	021110-1
	Vanadium	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	11-FEB-10 16:26	021110-1
	Zinc	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	11-FEB-10 16:26	021110-1
CCV10	Aluminum	4960	ug/L	5000	ug/L	99.1	90.0 – 110.0	P	11-FEB-10 17:35	021110-1
	Antimony	511	ug/L	500	ug/L	102.3	90.0 – 110.0	P	11-FEB-10 17:35	021110-1
	Barium	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	11-FEB-10 17:35	021110-1
	Cadmium	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	11-FEB-10 17:35	021110-1
	Calcium	4990	ug/L	5000	ug/L	99.8	90.0 – 110.0	P	11-FEB-10 17:35	021110-1
	Chromium	491	ug/L	500	ug/L	98.1	90.0 – 110.0	P	11-FEB-10 17:35	021110-1
	Cobalt	516	ug/L	500	ug/L	103.1	90.0 – 110.0	P	11-FEB-10 17:35	021110-1
	Copper	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	11-FEB-10 17:35	021110-1
	Iron	4970	ug/L	5000	ug/L	99.4	90.0 – 110.0	P	11-FEB-10 17:35	021110-1
	Lead	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	11-FEB-10 17:35	021110-1
	Magnesium	5150	ug/L	5000	ug/L	103	90.0 – 110.0	P	11-FEB-10 17:35	021110-1
	Manganese	500	ug/L	500	ug/L	99.9	90.0 – 110.0	P	11-FEB-10 17:35	021110-1
	Potassium	4870	ug/L	5000	ug/L	97.5	90.0 – 110.0	P	11-FEB-10 17:35	021110-1
	Silver	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	11-FEB-10 17:35	021110-1
	Sodium	9630	ug/L	10000	ug/L	96.3	90.0 – 110.0	P	11-FEB-10 17:35	021110-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Vanadium	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	11-FEB-10 17:35	021110-1
	Zinc	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	11-FEB-10 17:35	021110-1
CCV11										
	Aluminum	4970	ug/L	5000	ug/L	99.4	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
	Antimony	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
	Barium	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
	Cadmium	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
	Calcium	5030	ug/L	5000	ug/L	100.7	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
	Chromium	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
	Cobalt	518	ug/L	500	ug/L	103.7	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
	Copper	505	ug/L	500	ug/L	101	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
	Iron	4990	ug/L	5000	ug/L	99.8	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
	Lead	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
	Magnesium	5200	ug/L	5000	ug/L	104	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
	Manganese	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
	Potassium	4880	ug/L	5000	ug/L	97.6	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
	Silver	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
	Sodium	9560	ug/L	10000	ug/L	95.6	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
	Vanadium	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
	Zinc	500	ug/L	500	ug/L	100	90.0 – 110.0	P	11-FEB-10 18:43	021110-1
CCV12										
	Aluminum	4990	ug/L	5000	ug/L	99.7	90.0 – 110.0	P	11-FEB-10 19:44	021110-1
	Antimony	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	11-FEB-10 19:44	021110-1
	Barium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	11-FEB-10 19:44	021110-1
	Cadmium	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	11-FEB-10 19:44	021110-1
	Calcium	5070	ug/L	5000	ug/L	101.3	90.0 – 110.0	P	11-FEB-10 19:44	021110-1
	Chromium	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	11-FEB-10 19:44	021110-1
	Cobalt	515	ug/L	500	ug/L	103	90.0 – 110.0	P	11-FEB-10 19:44	021110-1
	Copper	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	11-FEB-10 19:44	021110-1
	Iron	5170	ug/L	5000	ug/L	103.4	90.0 – 110.0	P	11-FEB-10 19:44	021110-1

METALS

-2a-

Initial and Continuing Calibration Verification

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Lead	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	11-FEB-10 19:44	021110-1
	Magnesium	5270	ug/L	5000	ug/L	105.4	90.0 – 110.0	P	11-FEB-10 19:44	021110-1
	Manganese	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	11-FEB-10 19:44	021110-1
	Potassium	4880	ug/L	5000	ug/L	97.7	90.0 – 110.0	P	11-FEB-10 19:44	021110-1
	Silver	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	11-FEB-10 19:44	021110-1
	Sodium	10200	ug/L	10000	ug/L	102.3	90.0 – 110.0	P	11-FEB-10 19:44	021110-1
	Vanadium	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	11-FEB-10 19:44	021110-1
	Zinc	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	11-FEB-10 19:44	021110-1
CCV13	Aluminum	4810	ug/L	5000	ug/L	96.2	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
	Antimony	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
	Barium	502	ug/L	500	ug/L	100.5	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
	Cadmium	489	ug/L	500	ug/L	97.9	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
	Calcium	5000	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
	Chromium	486	ug/L	500	ug/L	97.3	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
	Cobalt	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
	Copper	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
	Iron	5050	ug/L	5000	ug/L	100.9	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
	Lead	489	ug/L	500	ug/L	97.9	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
	Magnesium	5160	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
	Manganese	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
	Potassium	4680	ug/L	5000	ug/L	93.7	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
	Silver	493	ug/L	500	ug/L	98.7	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
	Sodium	9630	ug/L	10000	ug/L	96.3	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
	Vanadium	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
	Zinc	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	11-FEB-10 20:48	021110-1
CCV14	Aluminum	5030	ug/L	5000	ug/L	100.6	90.0 – 110.0	P	11-FEB-10 21:50	021110-1
	Antimony	509	ug/L	500	ug/L	101.7	90.0 – 110.0	P	11-FEB-10 21:50	021110-1
	Barium	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	11-FEB-10 21:50	021110-1

METALS

-2a-

Initial and Continuing Calibration Verification

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Cadmium	490	ug/L	500	ug/L	98	90.0 - 110.0	P	11-FEB-10 21:50	021110-1
	Calcium	5050	ug/L	5000	ug/L	100.9	90.0 - 110.0	P	11-FEB-10 21:50	021110-1
	Chromium	488	ug/L	500	ug/L	97.7	90.0 - 110.0	P	11-FEB-10 21:50	021110-1
	Cobalt	511	ug/L	500	ug/L	102.3	90.0 - 110.0	P	11-FEB-10 21:50	021110-1
	Copper	499	ug/L	500	ug/L	99.8	90.0 - 110.0	P	11-FEB-10 21:50	021110-1
	Iron	5050	ug/L	5000	ug/L	100.9	90.0 - 110.0	P	11-FEB-10 21:50	021110-1
	Lead	490	ug/L	500	ug/L	97.9	90.0 - 110.0	P	11-FEB-10 21:50	021110-1
	Magnesium	5250	ug/L	5000	ug/L	105	90.0 - 110.0	P	11-FEB-10 21:50	021110-1
	Manganese	502	ug/L	500	ug/L	100.5	90.0 - 110.0	P	11-FEB-10 21:50	021110-1
	Potassium	4860	ug/L	5000	ug/L	97.2	90.0 - 110.0	P	11-FEB-10 21:50	021110-1
	Silver	495	ug/L	500	ug/L	99.1	90.0 - 110.0	P	11-FEB-10 21:50	021110-1
	Sodium	9800	ug/L	10000	ug/L	98	90.0 - 110.0	P	11-FEB-10 21:50	021110-1
	Vanadium	494	ug/L	500	ug/L	98.9	90.0 - 110.0	P	11-FEB-10 21:50	021110-1
	Zinc	494	ug/L	500	ug/L	98.8	90.0 - 110.0	P	11-FEB-10 21:50	021110-1
CCV15	Aluminum	5020	ug/L	5000	ug/L	100.4	90.0 - 110.0	P	11-FEB-10 23:07	021110-1
	Antimony	502	ug/L	500	ug/L	100.4	90.0 - 110.0	P	11-FEB-10 23:07	021110-1
	Barium	504	ug/L	500	ug/L	100.8	90.0 - 110.0	P	11-FEB-10 23:07	021110-1
	Cadmium	490	ug/L	500	ug/L	98	90.0 - 110.0	P	11-FEB-10 23:07	021110-1
	Calcium	5030	ug/L	5000	ug/L	100.7	90.0 - 110.0	P	11-FEB-10 23:07	021110-1
	Chromium	488	ug/L	500	ug/L	97.5	90.0 - 110.0	P	11-FEB-10 23:07	021110-1
	Cobalt	513	ug/L	500	ug/L	102.5	90.0 - 110.0	P	11-FEB-10 23:07	021110-1
	Copper	498	ug/L	500	ug/L	99.6	90.0 - 110.0	P	11-FEB-10 23:07	021110-1
	Iron	5020	ug/L	5000	ug/L	100.3	90.0 - 110.0	P	11-FEB-10 23:07	021110-1
	Lead	489	ug/L	500	ug/L	97.7	90.0 - 110.0	P	11-FEB-10 23:07	021110-1
	Magnesium	5230	ug/L	5000	ug/L	104.5	90.0 - 110.0	P	11-FEB-10 23:07	021110-1
	Manganese	499	ug/L	500	ug/L	99.7	90.0 - 110.0	P	11-FEB-10 23:07	021110-1
	Potassium	4830	ug/L	5000	ug/L	96.6	90.0 - 110.0	P	11-FEB-10 23:07	021110-1
	Silver	494	ug/L	500	ug/L	98.9	90.0 - 110.0	P	11-FEB-10 23:07	021110-1
	Sodium	9710	ug/L	10000	ug/L	97.1	90.0 - 110.0	P	11-FEB-10 23:07	021110-1

METALS

-2a-

Initial and Continuing Calibration Verification

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Vanadium	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	11-FEB-10 23:07	021110-1
	Zinc	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	11-FEB-10 23:07	021110-1
CCV16										
	Aluminum	5060	ug/L	5000	ug/L	101.3	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
	Antimony	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
	Barium	510	ug/L	500	ug/L	102	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
	Cadmium	495	ug/L	500	ug/L	99.1	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
	Calcium	5060	ug/L	5000	ug/L	101.1	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
	Chromium	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
	Cobalt	518	ug/L	500	ug/L	103.5	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
	Copper	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
	Iron	5050	ug/L	5000	ug/L	101	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
	Lead	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
	Magnesium	5210	ug/L	5000	ug/L	104.2	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
	Manganese	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
	Potassium	4850	ug/L	5000	ug/L	96.9	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
	Silver	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
	Sodium	9900	ug/L	10000	ug/L	99	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
	Vanadium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
	Zinc	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	12-FEB-10 00:24	021110-1
CCV17										
	Aluminum	5270	ug/L	5000	ug/L	105.4	90.0 – 110.0	P	12-FEB-10 01:34	021110-1
	Antimony	525	ug/L	500	ug/L	105.1	90.0 – 110.0	P	12-FEB-10 01:34	021110-1
	Barium	525	ug/L	500	ug/L	104.9	90.0 – 110.0	P	12-FEB-10 01:34	021110-1
	Cadmium	510	ug/L	500	ug/L	102	90.0 – 110.0	P	12-FEB-10 01:34	021110-1
	Calcium	5240	ug/L	5000	ug/L	104.8	90.0 – 110.0	P	12-FEB-10 01:34	021110-1
	Chromium	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	12-FEB-10 01:34	021110-1
	Cobalt	534	ug/L	500	ug/L	106.7	90.0 – 110.0	P	12-FEB-10 01:34	021110-1
	Copper	522	ug/L	500	ug/L	104.3	90.0 – 110.0	P	12-FEB-10 01:34	021110-1
	Iron	5160	ug/L	5000	ug/L	103.1	90.0 – 110.0	P	12-FEB-10 01:34	021110-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Lead	509	ug/L	500	ug/L	101.7	90.0 – 110.0	P	12-FEB-10 01:34	021110-1
	Magnesium	5440	ug/L	5000	ug/L	108.7	90.0 – 110.0	P	12-FEB-10 01:34	021110-1
	Manganese	521	ug/L	500	ug/L	104.3	90.0 – 110.0	P	12-FEB-10 01:34	021110-1
	Potassium	4990	ug/L	5000	ug/L	99.9	90.0 – 110.0	P	12-FEB-10 01:34	021110-1
	Silver	516	ug/L	500	ug/L	103.2	90.0 – 110.0	P	12-FEB-10 01:34	021110-1
	Sodium	9900	ug/L	10000	ug/L	99	90.0 – 110.0	P	12-FEB-10 01:34	021110-1
	Vanadium	515	ug/L	500	ug/L	102.9	90.0 – 110.0	P	12-FEB-10 01:34	021110-1
	Zinc	515	ug/L	500	ug/L	103	90.0 – 110.0	P	12-FEB-10 01:34	021110-1

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: HG3,ICPMS4,ICPMS5,OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Advisory Limits (%R)</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
CRDL01										
	Mercury	.17	ug/L	.2	ug/L	85	70.0 – 130.0	AV	10-FEB-10 09:04	021010S1-9
	Nickel	2.32	ug/L	2	ug/L	116.1	70.0 – 130.0	MS	13-FEB-10 21:49	100213-4
	Beryllium	.592	ug/L	.5	ug/L	118.4	70.0 – 130.0	MS	13-FEB-10 21:49	100213-4
	Uranium	.253	ug/L	.2	ug/L	126.5	70.0 – 130.0	MS	14-FEB-10 08:13	100213-2
	Uranium	.254	ug/L	.2	ug/L	127	70.0 – 130.0	MS	14-FEB-10 12:16	100214-3
	Thallium	1.21	ug/L	1	ug/L	121.4	70.0 – 130.0	MS	14-FEB-10 13:29	100214-5
	Arsenic	5.61	ug/L	5	ug/L	112.1	70.0 – 130.0	MS	15-FEB-10 00:34	100214-8
	Selenium	5.8	ug/L	5	ug/L	116.1	70.0 – 130.0	MS	15-FEB-10 00:34	100214-8
PQL01										
	Silver	5.44	ug/L	5	ug/L	108.8	70.0 – 130.0	P	11-FEB-10 09:08	021110-1
	Sodium	304	ug/L	300	ug/L	101.2	70.0 – 130.0	P	11-FEB-10 09:08	021110-1
	Antimony	9.09	ug/L	10	ug/L	91	70.0 – 130.0	P	11-FEB-10 09:08	021110-1
	Barium	5.16	ug/L	5	ug/L	103.2	70.0 – 130.0	P	11-FEB-10 09:08	021110-1
	Manganese	10.5	ug/L	10	ug/L	105.4	70.0 – 130.0	P	11-FEB-10 09:08	021110-1
	Magnesium	365	ug/L	300	ug/L	121.7	70.0 – 130.0	P	11-FEB-10 09:08	021110-1
	Lead	10.3	ug/L	10	ug/L	102.6	70.0 – 130.0	P	11-FEB-10 09:08	021110-1
	Iron	86.7	ug/L	100	ug/L	86.7	70.0 – 130.0	P	11-FEB-10 09:08	021110-1
	Aluminum	196	ug/L	200	ug/L	98.1	70.0 – 130.0	P	11-FEB-10 09:08	021110-1
	Potassium	143	ug/L	150	ug/L	95	70.0 – 130.0	P	11-FEB-10 09:08	021110-1
	Cadmium	5.19	ug/L	5	ug/L	103.7	70.0 – 130.0	P	11-FEB-10 09:08	021110-1
	Chromium	5.14	ug/L	5	ug/L	102.7	70.0 – 130.0	P	11-FEB-10 09:08	021110-1
	Cobalt	5.1	ug/L	5	ug/L	102	70.0 – 130.0	P	11-FEB-10 09:08	021110-1
	Copper	10.7	ug/L	10	ug/L	106.5	70.0 – 130.0	P	11-FEB-10 09:08	021110-1
	Vanadium	5.31	ug/L	5	ug/L	106.2	70.0 – 130.0	P	11-FEB-10 09:08	021110-1
	Zinc	10.5	ug/L	10	ug/L	104.6	70.0 – 130.0	P	11-FEB-10 09:08	021110-1
	Calcium	201	ug/L	200	ug/L	100.7	70.0 – 130.0	P	11-FEB-10 09:08	021110-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
ICB01										
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	10-FEB-10 09:03	021010S1-9
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 09:01	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 09:01	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 09:01	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 09:01	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 09:01	021110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 09:01	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 09:01	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 09:01	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 09:01	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 09:01	021110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 09:01	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 09:01	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 09:01	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 09:01	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 09:01	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 09:01	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 09:01	021110-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	13-FEB-10 21:42	100213-4
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	13-FEB-10 21:42	100213-4
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	14-FEB-10 08:12	100213-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	14-FEB-10 12:14	100214-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-FEB-10 13:24	100214-5
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	15-FEB-10 00:32	100214-8
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	15-FEB-10 00:32	100214-8
CCB01										
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	10-FEB-10 09:08	021010S1-9
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 09:46	021110-1
	Antimony	3.47	+/-10	J	3.3	10.0	SOL	P	11-FEB-10 09:46	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 09:46	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 09:46	021110-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 09:46	021110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 09:46	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 09:46	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 09:46	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 09:46	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 09:46	021110-1
	Magnesium	92.13	+/-300	J	85.0	300	SOL	P	11-FEB-10 09:46	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 09:46	021110-1
	Potassium	120.39	+/-250	J	64.0	250	SOL	P	11-FEB-10 09:46	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 09:46	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 09:46	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 09:46	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 09:46	021110-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	13-FEB-10 22:13	100213-4
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	13-FEB-10 22:13	100213-4
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	14-FEB-10 08:20	100213-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	14-FEB-10 12:22	100214-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-FEB-10 13:47	100214-5
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	15-FEB-10 00:43	100214-8
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	15-FEB-10 00:43	100214-8
CCB02	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	10-FEB-10 09:28	021010S1-9
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 10:11	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 10:11	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 10:11	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 10:11	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 10:11	021110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 10:11	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 10:11	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 10:11	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 10:11	021110-1

Metals
--3a--
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 10:11	021110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 10:11	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 10:11	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 10:11	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 10:11	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 10:11	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 10:11	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 10:11	021110-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	13-FEB-10 22:31	100213-4
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	13-FEB-10 22:31	100213-4
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	14-FEB-10 08:37	100213-2
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	14-FEB-10 12:33	100214-3
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-FEB-10 14:29	100214-5
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	15-FEB-10 01:05	100214-8
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	15-FEB-10 01:05	100214-8
CCB03	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	10-FEB-10 09:48	021010S1-9
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 11:30	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 11:30	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 11:30	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 11:30	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 11:30	021110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 11:30	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 11:30	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 11:30	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 11:30	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 11:30	021110-1
	Magnesium	108.47	+/-300	J	85.0	300	SOL	P	11-FEB-10 11:30	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 11:30	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 11:30	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 11:30	021110-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 11:30	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 11:30	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 11:30	021110-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	13-FEB-10 23:26	100213-4
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	13-FEB-10 23:26	100213-4
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	14-FEB-10 08:55	100213-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-FEB-10 15:10	100214-5
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	15-FEB-10 01:17	100214-8
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	15-FEB-10 01:17	100214-8
CCB04	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	10-FEB-10 10:08	021010S1-9
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 12:04	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 12:04	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 12:04	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 12:04	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 12:04	021110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 12:04	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 12:04	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 12:04	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 12:04	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 12:04	021110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 12:04	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 12:04	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 12:04	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 12:04	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 12:04	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 12:04	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 12:04	021110-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	14-FEB-10 00:21	100213-4
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-FEB-10 00:21	100213-4
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	14-FEB-10 09:10	100213-2

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
CCB05	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-FEB-10 15:37	100214-5
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	10-FEB-10 10:28	021010S1-9
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 13:00	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 13:00	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 13:00	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 13:00	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 13:00	021110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 13:00	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 13:00	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 13:00	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 13:00	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 13:00	021110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 13:00	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 13:00	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 13:00	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 13:00	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 13:00	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 13:00	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 13:00	021110-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	14-FEB-10 00:58	100213-4
CCB06	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-FEB-10 00:58	100213-4
	Uranium	0.066	+/-2	U	0.066	0.2	SOL	MS	14-FEB-10 09:19	100213-2
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	14-FEB-10 16:22	100214-5
	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	10-FEB-10 10:48	021010S1-9
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 13:46	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 13:46	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 13:46	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 13:46	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 13:46	021110-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result ug/L</u>	<u>Acceptance</u>	<u>Conc Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis Date/Time</u>	<u>Run</u>
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 13:46	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 13:46	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 13:46	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 13:46	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 13:46	021110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 13:46	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 13:46	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 13:46	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 13:46	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 13:46	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 13:46	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 13:46	021110-1
	Beryllium	0.1	+/-5	U	0.1	0.5	SOL	MS	14-FEB-10 02:00	100213-4
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	14-FEB-10 02:00	100213-4
CCB07	Mercury	0.068	+/-2	U	0.068	0.2	SOL	AV	10-FEB-10 11:08	021010S1-9
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 15:06	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 15:06	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 15:06	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 15:06	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 15:06	021110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 15:06	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 15:06	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 15:06	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 15:06	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 15:06	021110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 15:06	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 15:06	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 15:06	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 15:06	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 15:06	021110-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
CCB08	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 15:06	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 15:06	021110-1
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 16:13	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 16:13	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 16:13	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 16:13	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 16:13	021110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 16:13	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 16:13	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 16:13	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 16:13	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 16:13	021110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 16:13	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 16:13	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 16:13	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 16:13	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 16:13	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 16:13	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 16:13	021110-1
CCB09	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 16:33	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 16:33	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 16:33	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 16:33	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 16:33	021110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 16:33	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 16:33	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 16:33	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 16:33	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 16:33	021110-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Magnesium	127.2	+/-300	J	85.0	300	SOL	P	11-FEB-10 16:33	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 16:33	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 16:33	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 16:33	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 16:33	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 16:33	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 16:33	021110-1
CCB10	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 17:42	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 17:42	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 17:42	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 17:42	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 17:42	021110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 17:42	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 17:42	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 17:42	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 17:42	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 17:42	021110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 17:42	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 17:42	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 17:42	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 17:42	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 17:42	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 17:42	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 17:42	021110-1
CCB11	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 18:50	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 18:50	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 18:50	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 18:50	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 18:50	021110-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 18:50	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 18:50	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 18:50	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 18:50	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 18:50	021110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 18:50	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 18:50	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 18:50	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 18:50	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 18:50	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 18:50	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 18:50	021110-1
CCB12	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 19:51	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 19:51	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 19:51	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 19:51	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 19:51	021110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 19:51	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 19:51	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 19:51	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 19:51	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 19:51	021110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 19:51	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 19:51	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 19:51	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 19:51	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 19:51	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 19:51	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 19:51	021110-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
CCB13										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 20:55	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 20:55	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 20:55	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 20:55	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 20:55	021110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 20:55	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 20:55	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 20:55	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 20:55	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 20:55	021110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 20:55	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 20:55	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 20:55	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 20:55	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 20:55	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 20:55	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 20:55	021110-1
CCB14										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 21:57	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 21:57	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 21:57	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 21:57	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 21:57	021110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 21:57	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 21:57	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 21:57	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 21:57	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 21:57	021110-1
	Magnesium	127.05	+/-300	J	85.0	300	SOL	P	11-FEB-10 21:57	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 21:57	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 21:57	021110-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
CCB15	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 21:57	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 21:57	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 21:57	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 21:57	021110-1
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-FEB-10 23:14	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 23:14	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 23:14	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 23:14	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 23:14	021110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 23:14	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-FEB-10 23:14	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-FEB-10 23:14	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-FEB-10 23:14	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-FEB-10 23:14	021110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-FEB-10 23:14	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-FEB-10 23:14	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-FEB-10 23:14	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 23:14	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-FEB-10 23:14	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-FEB-10 23:14	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-FEB-10 23:14	021110-1
CCB16	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	12-FEB-10 00:31	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	12-FEB-10 00:31	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	12-FEB-10 00:31	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	12-FEB-10 00:31	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	12-FEB-10 00:31	021110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	12-FEB-10 00:31	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	12-FEB-10 00:31	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	12-FEB-10 00:31	021110-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u> <u>ug/L</u>	<u>Acceptance</u>	<u>Conc</u> <u>Qual</u>	<u>MDL</u>	<u>RDL</u>	<u>Matrix</u>	<u>M</u>	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u>
CCB17	Iron	80.0	+/-250	U	80.0	250	SOL	P	12-FEB-10 00:31	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	12-FEB-10 00:31	021110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	12-FEB-10 00:31	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	12-FEB-10 00:31	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	12-FEB-10 00:31	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	12-FEB-10 00:31	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	12-FEB-10 00:31	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	12-FEB-10 00:31	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	12-FEB-10 00:31	021110-1
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	12-FEB-10 01:41	021110-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	12-FEB-10 01:41	021110-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	12-FEB-10 01:41	021110-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	12-FEB-10 01:41	021110-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	12-FEB-10 01:41	021110-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	12-FEB-10 01:41	021110-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	12-FEB-10 01:41	021110-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	12-FEB-10 01:41	021110-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	12-FEB-10 01:41	021110-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	12-FEB-10 01:41	021110-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	12-FEB-10 01:41	021110-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	12-FEB-10 01:41	021110-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	12-FEB-10 01:41	021110-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	12-FEB-10 01:41	021110-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	12-FEB-10 01:41	021110-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	12-FEB-10 01:41	021110-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	12-FEB-10 01:41	021110-1

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 10-1394

Contract: LANL01004

Matrix: SOIL

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Acceptance Window</u>	<u>Conc Qual</u>	<u>M</u>	<u>MDL</u>	<u>RDL</u>
1202024764	Arsenic	0.187	mg/kg	+/-0.936	U	MS	0.187	0.936
	Beryllium	0.0187	mg/kg	+/-0.0936	U	MS	0.0187	0.0936
	Nickel	0.0936	mg/kg	+/-0.375	U	MS	0.0936	0.375
	Thallium	0.0562	mg/kg	+/-0.187	U	MS	0.0562	0.187
	Uranium	0.0124	mg/kg	+/-0.0375	U	MS	0.0124	0.0375
	Selenium	0.468	mg/kg	+/-0.936	U	MS	0.468	0.936
1202024773	Calcium	7630	ug/Kg	+/-23900	U	P	7630	23900
	Chromium	143	ug/Kg	+/-477	U	P	143	477
	Cobalt	143	ug/Kg	+/-477	U	P	143	477
	Copper	286	ug/Kg	+/-954	U	P	286	954
	Iron	7630	ug/Kg	+/-23900	U	P	7630	23900
	Lead	265	ug/Kg	+/-954	J	P	239	954
	Magnesium	8110	ug/Kg	+/-28600	U	P	8110	28600
	Manganese	191	ug/Kg	+/-954	U	P	191	954
	Barium	95.4	ug/Kg	+/-477	U	P	95.4	477
	Antimony	315	ug/Kg	+/-954	U	P	315	954
	Aluminum	6490	ug/Kg	+/-19100	U	P	6490	19100
	Cadmium	95.4	ug/Kg	+/-477	U	P	95.4	477
	Potassium	6110	ug/Kg	+/-23900	U	P	6110	23900
	Silver	95.4	ug/Kg	+/-477	U	P	95.4	477
	Sodium	6680	ug/Kg	+/-23900	U	P	6680	23900
	Vanadium	95.4	ug/Kg	+/-477	U	P	95.4	477
	Zinc	315	ug/Kg	+/-954	U	P	315	954
1202025301	Mercury	3.93	ug/kg	+/-11.6	U	AV	3.93	11.6

METALS
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Interference Check Sample

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: OPTIMA3

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01									
	Aluminum	532000	ug/L	500000	ug/L	106	80.0 – 120.0	11-FEB-10 09:14	021110-1
	Antimony	-1.13	ug/L					11-FEB-10 09:14	021110-1
	Barium	0.324	ug/L					11-FEB-10 09:14	021110-1
	Cadmium	-1.46	ug/L					11-FEB-10 09:14	021110-1
	Calcium	492000	ug/L	500000	ug/L	98.4	80.0 – 120.0	11-FEB-10 09:14	021110-1
	Chromium	1.62	ug/L					11-FEB-10 09:14	021110-1
	Cobalt	-1.46	ug/L					11-FEB-10 09:14	021110-1
	Copper	2.03	ug/L					11-FEB-10 09:14	021110-1
	Iron	189000	ug/L	200000	ug/L	94.8	80.0 – 120.0	11-FEB-10 09:14	021110-1
	Lead	0.191	ug/L					11-FEB-10 09:14	021110-1
	Magnesium	495000	ug/L	500000	ug/L	99	80.0 – 120.0	11-FEB-10 09:14	021110-1
	Manganese	-2.29	ug/L					11-FEB-10 09:14	021110-1
	Potassium	-180.0	ug/L					11-FEB-10 09:14	021110-1
	Silver	4.34	ug/L					11-FEB-10 09:14	021110-1
	Sodium	27.3	ug/L					11-FEB-10 09:14	021110-1
	Vanadium	-2.41	ug/L					11-FEB-10 09:14	021110-1
	Zinc	-1.31	ug/L					11-FEB-10 09:14	021110-1
ICSAB01									
	Aluminum	511000	ug/L	500000	ug/L	102	80.0 – 120.0	11-FEB-10 09:20	021110-1
	Antimony	516	ug/L	500	ug/L	103	80.0 – 120.0	11-FEB-10 09:20	021110-1
	Barium	483	ug/L	500	ug/L	96.7	80.0 – 120.0	11-FEB-10 09:20	021110-1
	Cadmium	449	ug/L	500	ug/L	89.8	80.0 – 120.0	11-FEB-10 09:20	021110-1
	Calcium	471000	ug/L	500000	ug/L	94.3	80.0 – 120.0	11-FEB-10 09:20	021110-1
	Chromium	478	ug/L	500	ug/L	95.7	80.0 – 120.0	11-FEB-10 09:20	021110-1
	Cobalt	441	ug/L	500	ug/L	88.1	80.0 – 120.0	11-FEB-10 09:20	021110-1
	Copper	546	ug/L	500	ug/L	109	80.0 – 120.0	11-FEB-10 09:20	021110-1
	Iron	183000	ug/L	200000	ug/L	91.6	80.0 – 120.0	11-FEB-10 09:20	021110-1
	Lead	451	ug/L	500	ug/L	90.1	80.0 – 120.0	11-FEB-10 09:20	021110-1
	Magnesium	481000	ug/L	500000	ug/L	96.2	80.0 – 120.0	11-FEB-10 09:20	021110-1

METALS

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Interference Check Sample

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

ICS:

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
	Manganese	468	ug/L	500	ug/L	93.5	80.0 – 120.0	11-FEB-10 09:20	021110-1
	Potassium	5140	ug/L	5000	ug/L	103	80.0 – 120.0	11-FEB-10 09:20	021110-1
	Silver	271	ug/L	250	ug/L	109	80.0 – 120.0	11-FEB-10 09:20	021110-1
	Sodium	5260	ug/L	5000	ug/L	105	80.0 – 120.0	11-FEB-10 09:20	021110-1
	Vanadium	498	ug/L	500	ug/L	99.6	80.0 – 120.0	11-FEB-10 09:20	021110-1
	Zinc	483	ug/L	500	ug/L	96.6	80.0 – 120.0	11-FEB-10 09:20	021110-1

METALS
-4-
Interference Check Sample

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS4

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Uranium	0.003	ug/L					14-FEB-10 08:15	100213-2
JCSAB01	Uranium	19.0	ug/L	20	ug/L	94.9	80.0 - 120.0	14-FEB-10 08:17	100213-2

METALS
-4-
Interference Check Sample

SDG No: 10-1394**Contract:** LANL01004**Lab Code:** GEL**ICS:** O2Si**Instrument:** ICPMS4

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Uranium	0.007	ug/L					14-FEB-10 12:17	100214-3
ICSAB01	Uranium	18.6	ug/L	20	ug/L	92.9	80.0 – 120.0	14-FEB-10 12:19	100214-3

METALS

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Interference Check Sample

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS5

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Beryllium	0.112	ug/L					13-FEB-10 21:55	100213-4
	Nickel	3.3	ug/L					13-FEB-10 21:55	100213-4
ICSAB01	Beryllium	19.0	ug/L	20	ug/L	94.8	80.0 - 120.0	13-FEB-10 22:01	100213-4
	Nickel	23.1	ug/L	23.31	ug/L	99.2	80.0 - 120.0	13-FEB-10 22:01	100213-4

METALS

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Interference Check Sample

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS5

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Thallium	-0.029	ug/L					14-FEB-10 13:33	100214-5
ICSAB01	Thallium	22.8	ug/L	20	ug/L	114	80.0 - 120.0	14-FEB-10 13:38	100214-5

METALS
-4-
Interference Check Sample

SDG No: 10-1394

Contract: LANL01004

Lab Code: GEL

ICS: O2Si

Instrument: ICPMS5

<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True Value</u>	<u>Units</u>	<u>% Recovery</u>	<u>Acceptance Window (%R)</u>	<u>Analysis Date/Time</u>	<u>Run Number</u>
ICSA01	Arsenic	0.099	ug/L					15-FEB-10 00:36	100214-8
	Selenium	~1.78	ug/L					15-FEB-10 00:36	100214-8
ICSAB01	Arsenic	21.0	ug/L	20	ug/L	105	80.0 - 120.0	15-FEB-10 00:39	100214-8
	Selenium	18.4	ug/L	20	ug/L	92.1	80.0 - 120.0	15-FEB-10 00:39	100214-8

METALS

-5a-

Matrix Spike Summary

SDG NO. 10-1394 Client ID RE15-10-7928S

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 96.4

Sample ID: 245396001 Spike ID: 1202024767

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/kg	75-125	6.93		0.709	J	7.59	82		MS
Beryllium	mg/kg	75-125	4.86		0.36		4.74	94.9		MS
Nickel	mg/kg	75-125	6.39		2.57		4.74	80.5		MS
Selenium	mg/kg	75-125	1.71		0.519	U	1.9	77.4		MS
Thallium	mg/kg	75-125	8.96		0.0622	U	9.48	93.8		MS
Uranium	mg/kg	75-125	5.88		1.37		4.74	95.2		MS

METALS

-5a-

Matrix Spike Duplicate Summary

SDG NO. 10-1394 Client ID RE15-10-7928SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 96.4

Sample ID: 245396001 Spike ID: 1202024772

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/kg	75-125	7.64		0.709	J	7.95	87.2		MS
Beryllium	mg/kg	75-125	5.18		0.36		4.97	97		MS
Nickel	mg/kg	75-125	7.11		2.57		4.97	91.5		MS
Selenium	mg/kg	75-125	1.98		0.519	U	1.99	87.4		MS
Thallium	mg/kg	75-125	9.83		0.0622	U	9.94	98.3		MS
Uranium	mg/kg	75-125	6.3		1.37		4.97	99.2		MS

METALS

-5a-

Matrix Spike Summary

SDG NO. 10-1394

Client ID RE15-10-7928S

Contract: LANL01004

Level: Low

Matrix: SOIL

% Solids: 96.4

Sample ID: 245396001

Spike ID: 1202024776

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	ug/Kg	75-125	47300		334	U	50900	93.1		P
Barium	ug/Kg	75-125	68400		18400		50900	98.4		P
Cadmium	ug/Kg	75-125	46900		101	U	50900	92.3		P
Calcium	ug/Kg	75-125	796000		328000		509000	91.9		P
Chromium	ug/Kg	75-125	59100		8030		50900	100		P
Cobalt	ug/Kg	75-125	50700		1800		50900	96.1		P
Copper	ug/Kg	75-125	59300		5690		50900	105		P
Iron	ug/Kg		9730000		7680000		509000	404	N/A	P
Lead	ug/Kg	75-125	55100		5490		50900	97.4		P
Magnesium	ug/Kg	75-125	768000		205000		509000	111		P
Manganese	ug/Kg		336000		238000		50900	192	N/A	P
Potassium	ug/Kg	75-125	911000		225000		509000	135	N	P
Silver	ug/Kg	75-125	50000		396	J	50900	97.6		P
Sodium	ug/Kg	75-125	715000		134000		509000	114		P
Vanadium	ug/Kg	75-125	51100		2860		50900	94.8		P
Zinc	ug/Kg	75-125	85500		32700		50900	104		P
Aluminum	ug/Kg	75-125	2070000		935000		509000	224	N	P

METALS

-5a-

Matrix Spike Duplicate Summary

SDG NO. 10-1394 Client ID RE15-10-7928SD

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 96.4

Sample ID: 245396001 Spike ID: 1202024778

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Vanadium	ug/Kg	75-125	49000		2860		49500	93.3		P
Zinc	ug/Kg	75-125	82400		32700		49500	101		P
Aluminum	ug/Kg	75-125	2050000		935000		495000	225	N	P
Antimony	ug/Kg	75-125	46000		334	U	49500	93		P
Barium	ug/Kg	75-125	64200		18400		49500	92.5		P
Cadmium	ug/Kg	75-125	45400		101	U	49500	91.6		P
Calcium	ug/Kg	75-125	805000		328000		495000	96.4		P
Chromium	ug/Kg	75-125	57400		8030		49500	99.7		P
Cobalt	ug/Kg	75-125	48700		1800		49500	94.7		P
Copper	ug/Kg	75-125	56600		5690		49500	103		P
Iron	ug/Kg		8960000		7680000		495000	259	N/A	P
Lead	ug/Kg	75-125	53500		5490		49500	97		P
Magnesium	ug/Kg	75-125	721000		205000		495000	104		P
Manganese	ug/Kg		289000		238000		49500	102	N/A	P
Potassium	ug/Kg	75-125	827000		225000		495000	121		P
Silver	ug/Kg	75-125	48300		396	J	49500	96.7		P
Sodium	ug/Kg	75-125	690000		134000		495000	112		P

METALS
-5a-

Matrix Spike Summary

SDG NO. 10-1394 Client ID RE15-10-7928S

Contract: LANL01004 Level: Low

Matrix: SOIL % Solids: 96.4

Sample ID: 245396001 Spike ID: 1202025304

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	129		9.91	J	115	103		AV

METALS

-5a-

Matrix Spike Duplicate Summary

SDG NO. 10-1394 **Client ID** RE15-10-7928SD**Contract:** LANL01004 **Level:** Low**Matrix:** SOIL **% Solids:** 96.4**Sample ID:** 245396001 **Spike ID:** 1202025306

<u>Analyte</u>	<u>Units</u>	<u>Acceptance Limit</u>	<u>Spiked Result</u>	<u>C</u>	<u>Sample Result</u>	<u>C</u>	<u>Spike Added</u>	<u>% Recovery</u>	<u>Qual</u>	<u>M</u>
Mercury	ug/kg	75-125	128		9.91	J	116	102		AV

Metals

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Duplicate Sample Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7928D

Sample ID: 245396001

Duplicate ID: 1202024766

Percent Solids for Dup: 96.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/- .912	0.709 J		0.625 J		12.6		MS
Beryllium	mg/kg	+/- .0912	0.36		0.312		14.3		MS
Nickel	mg/kg	+/- 20%	2.57		2.01		24.6	*	MS
Selenium	mg/kg		0.519 U		0.456 U				MS
Thallium	mg/kg		0.0622 U		0.0547 U				MS
Uranium	mg/kg	+/- 20%	1.37		0.994		31.8	*	MS

Metals

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Duplicate Sample Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7928SD

Sample ID: 1202024767

Duplicate ID: 1202024772

Percent Solids for Dup: 96.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/-20	6.93		7.64		9.69		MS
Beryllium	mg/kg	+/-20	4.86		5.18		6.3		MS
Nickel	mg/kg	+/-20	6.39		7.11		10.8		MS
Selenium	mg/kg	+/-20	1.71		1.98		14.6		MS
Thallium	mg/kg	+/-20	8.96		9.83		9.23		MS
Uranium	mg/kg	+/-20	5.88		6.3		6.79		MS

Metals

-6-

Duplicate Sample Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7928D

Sample ID: 245396001

Duplicate ID: 1202024775

Percent Solids for Dup: 96.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20%	935000		907000		3.1		P
Antimony	ug/Kg		334 U		316 U				P
Barium	ug/Kg	+/-20%	18400		15300		18.1		P
Cadmium	ug/Kg		101 U		95.7 U				P
Calcium	ug/Kg	+/-20%	328000		246000		28.7	*	P
Chromium	ug/Kg	+/-20%	8030		19100		81.7	*	P
Cobalt	ug/Kg	+/-479	1800		1640		9.21		P
Copper	ug/Kg	+/-20%	5690		5590		1.73		P
Iron	ug/Kg	+/-20%	7680000		8050000		4.73		P
Lead	ug/Kg	+/-20%	5490		5630		2.48		P
Magnesium	ug/Kg	+/-20%	205000		187000		9.44		P
Manganese	ug/Kg	+/-20%	238000		251000		5.22		P
Potassium	ug/Kg	+/-20%	225000		220000		2.25		P
Silver	ug/Kg	+/-479	396 J		296 J		29		P
Sodium	ug/Kg	+/-20%	134000		139000		3.95		P
Vanadium	ug/Kg	+/-20%	2860		2950		3.41		P
Zinc	ug/Kg	+/-20%	32700		37100		12.6		P

Metals

-6-

Duplicate Sample Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7928SD

Sample ID: 1202024776

Duplicate ID: 1202024778

Percent Solids for Dup: 96.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/-20	2070000		2050000		1.13		P
Antimony	ug/Kg	+/-20	47300		46000		2.8		P
Barium	ug/Kg	+/-20	68400		64200		6.46		P
Cadmium	ug/Kg	+/-20	46900		45400		3.41		P
Calcium	ug/Kg	+/-20	796000		805000		1.22		P
Chromium	ug/Kg	+/-20	59100		57400		2.89		P
Cobalt	ug/Kg	+/-20	50700		48700		4.02		P
Copper	ug/Kg	+/-20	59300		56600		4.66		P
Iron	ug/Kg	+/-20	9730000		8960000		8.23		P
Lead	ug/Kg	+/-20	55100		53500		2.83		P
Magnesium	ug/Kg	+/-20	768000		721000		6.29		P
Manganese	ug/Kg	+/-20	336000		289000		15		P
Potassium	ug/Kg	+/-20	911000		827000		9.72		P
Silver	ug/Kg	+/-20	50000		48300		3.56		P
Sodium	ug/Kg	+/-20	715000		690000		3.48		P
Vanadium	ug/Kg	+/-20	51100		49000		4.08		P
Zinc	ug/Kg	+/-20	85500		82400		3.67		P

Metals

-6-

Duplicate Sample Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7928D

Sample ID: 245396001

Duplicate ID: 1202025303

Percent Solids for Dup: 96.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-10.9	9.91 J		10.9		9.87		AV

Metals

-6-

Duplicate Sample Summary

SDG No.: 10-1394

Contract: LANL01004

Lab Code: GEL

Matrix: SOLID

Level: Low

Client ID: RE15-10-7928SD

Sample ID: 1202025304

Duplicate ID: 1202025306

Percent Solids for Dup: 96.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-20	129		128		.797		AV

METALS

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Laboratory Control Sample Summary

SDG NO. 10-1394

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202024765								
	Arsenic	mg/kg	104	103		99.5	78-123	MS
	Beryllium	mg/kg	77.6	77.5		99.9	84-116	MS
	Nickel	mg/kg	134	134		99.9	78-123	MS
	Selenium	mg/kg	286	275		96.1	77-123	MS
	Thallium	mg/kg	121	133		110	78-122	MS
	Uranium	mg/kg	2.13	2.1		98.6	73-127	MS

METALS

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Laboratory Control Sample Summary

SDG NO. 10-1394

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202024774								
	Aluminum	ug/Kg	10500000	8500000		81	56-144	P
	Antimony	ug/Kg	173000	126000		72.7	71-130	P
	Barium	ug/Kg	198000	177000		89.5	80-120	P
	Cadmium	ug/Kg	60700	50200		82.6	81-120	P
	Calcium	ug/Kg	9870000	9020000		91.4	83-117	P
	Chromium	ug/Kg	236000	200000		84.9	80-120	P
	Cobalt	ug/Kg	91200	81600		89.5	81-120	P
	Copper	ug/Kg	174000	163000		94	81-118	P
	Iron	ug/Kg	18000000	17100000		95.1	51-149	P
	Lead	ug/Kg	86000	87900		102	79-121	P
	Magnesium	ug/Kg	4000000	3620000		90.5	79-122	P
	Manganese	ug/Kg	558000	492000		88.1	81-119	P
	Potassium	ug/Kg	4300000	3770000		87.6	74-127	P
	Silver	ug/Kg	30100	28400		94.5	66-134	P
	Sodium	ug/Kg	1020000	928000		90.9	74-127	P
	Vanadium	ug/Kg	115000	108000		93.8	79-121	P
	Zinc	ug/Kg	594000	512000		86.3	80-121	P

METALS

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Laboratory Control Sample Summary

SDG NO. 10-1394

Contract: LANL01004

Aqueous LCS Source:

Solid LCS Source: ERA

<u>Sample ID</u>	<u>Analyte</u>	<u>Units</u>	<u>True Value</u>	<u>Result</u>	<u>C</u>	<u>% Recovery</u>	<u>Acceptance Limit</u>	<u>M</u>
1202025302	Mercury	ug/kg	5150	5020		97.5	71.6-128.3	AV

METALS

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Serial Dilution Sample Summary

SDG NO. 10-1394 Client ID RE15-10-7928L

Contract: LANL01004

Matrix: SOLID Level: Low

Sample ID: 245396001 Serial Dilution ID: 1202024768

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	3.42	J	5	U	100			MS
Beryllium	1.73		1.83	J	5.78			MS
Nickel	12.4		12.7		2.42			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.3	U	1.5	U				MS
Uranium	6.6		6.9		4.55		10	MS

METALS

-9-

Serial Dilution Sample Summary

SDG NO. 10-1394 Client ID RE15-10-7928L

Contract: LANL01004

Matrix: SOLID Level: Low

Sample ID: 245396001 Serial Dilution ID: 1202024777

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	9250		9350		1.08		10	P
Antimony	3.3	U	16.5	U				P
Barium	182		191		4.67		10	P
Cadmium	1	U	5	U				P
Calcium	3250		3400		4.62			P
Chromium	79.4		80		.756		10	P
Cobalt	17.8		20.1	J	12.9			P
Copper	56.2		53.5		4.8			P
Iron	75900		80000		5.4		10	P
Lead	54.3		57		4.97			P
Magnesium	2030		2310		13.8			P
Manganese	2360		2500		5.93		10	P
Potassium	2230		2150		3.81			P
Silver	3.92	J	5	U	100			P
Sodium	1320		1570		18.6			P
Vanadium	28.2		28.1		.355			P
Zinc	323		331		2.48		10	P

METALS

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Serial Dilution Sample Summary

SDG NO. 10-1394 **Client ID** RE15-10-7928L**Contract:** LANL01004**Matrix:** SOLID **Level:** Low**Sample ID:** 245396001 **Serial Dilution ID:** 1202025305

<u>Analyte</u>	<u>Initial Value ug/L</u>	<u>C</u>	<u>Serial Value ug/L</u>	<u>C</u>	<u>% Difference</u>	<u>Qual</u>	<u>Acceptance Limit</u>	<u>M</u>
Mercury	.17	J	.34	U	100			AV

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-1394

Method Type: P

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number	945398						
1202024773	MB for batch 945398	MB	S	04-FEB-10	.524g	50mL	
1202024774	LCS for batch 945398	LCS	S	04-FEB-10	.502g	50mL	
1202024776	RE15-10-7928S	MS	S	04-FEB-10	.51g	50mL	
1202024778	RE15-10-7928SD	MSD	S	04-FEB-10	.524g	50mL	
1202024775	RE15-10-7928D	DUP	S	04-FEB-10	.542g	50mL	
245396001	RE15-10-7928	SAMPLE	S	04-FEB-10	.513g	50mL	
245396002	RE15-10-7929	SAMPLE	S	04-FEB-10	.504g	50mL	
245396003	RE15-10-7927	SAMPLE	S	04-FEB-10	.561g	50mL	
245396004	RE15-10-7930	SAMPLE	S	04-FEB-10	.502g	50mL	

SW846

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 10-1394

Method Type: MS

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number 945392							
1202024764	MB for batch 945392	MB	S	04-FEB-10	.534g	50mL	
1202024765	LCS for batch 945392	LCS	S	04-FEB-10	.516g	50mL	
1202024767	RE15-10-7928S	MS	S	04-FEB-10	.547g	50mL	
1202024772	RE15-10-7928SD	MSD	S	04-FEB-10	.522g	50mL	
1202024766	RE15-10-7928D	DUP	S	04-FEB-10	.569g	50mL	
245396001	RE15-10-7928	SAMPLE	S	04-FEB-10	.5g	50mL	
245396002	RE15-10-7929	SAMPLE	S	04-FEB-10	.534g	50mL	
245396003	RE15-10-7927	SAMPLE	S	04-FEB-10	.5g	50mL	
245396004	RE15-10-7930	SAMPLE	S	04-FEB-10	.528g	50mL	

SW846

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-1394

Method Type: AV

Contract: LANL01004

Lab Code: GEL

<u>Sample ID</u>	<u>Client ID</u>	<u>Sample Type</u>	<u>Matrix</u>	<u>Prep Date</u>	<u>Initial Sample Size</u>	<u>Final Sample Volume</u>	<u>Percent Solids</u>
Batch Number	945627						
1202025301	MB for batch 945627	MB	S	09-FEB-10	.519g	30mL	
1202025302	LCS for batch 945627	LCS	S	09-FEB-10	.202g	30mL	
1202025304	RE15-10-7928S	MS	S	09-FEB-10	.54g	30mL	
1202025306	RE15-10-7928SD	MSD	S	09-FEB-10	.538g	30mL	
1202025303	RE15-10-7928D	DUP	S	09-FEB-10	.572g	30mL	
245396001	RE15-10-7928	SAMPLE	S	09-FEB-10	.534g	30mL	
245396002	RE15-10-7929	SAMPLE	S	09-FEB-10	.508g	30mL	
245396003	RE15-10-7927	SAMPLE	S	09-FEB-10	.531g	30mL	
245396004	RE15-10-7930	SAMPLE	S	09-FEB-10	.582g	30mL	

SW846

Metals
-14-
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS5

Start Date: 13-FEB-10

End Date: 14-FEB-10

Client Sdg: 10-1394

Method MS

Data File: 100213-4

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	21:18					X											X								
S10	1	21:24					X											X								
S100	1	21:30					X											X								
ICV01	1	21:36					X											X								
ICB01	1	21:42					X											X								
CRDL01	1	21:49					X											X								
ICSA01	1	21:55					X											X								
ICSAB01	1	22:01					X											X								
CCV01	1	22:07					X											X								
CCB01	1	22:13					X											X								
LR01	1	22:19					X											X								
CCV02	1	22:25					X											X								
CCB02	1	22:31					X											X								
1202024764	2	22:37					X											X								
1202024765	40	22:44					X											X								
ZZZZZZ	2	22:50																								
ZZZZZZ	2	22:56																								
ZZZZZZ	2	23:02																								
ZZZZZZ	2	23:08																								
ZZZZZZ	2	23:14																								
CCV03	1	23:20					X											X								
CCB03	1	23:26					X											X								
ZZZZZZ	2	23:32																								
ZZZZZZ	2	23:39																								
ZZZZZZ	2	23:45																								
ZZZZZZ	2	23:51																								
ZZZZZZ	2	23:57																								
ZZZZZZ	2	00:03																								
ZZZZZZ	2	00:09																								
CCV04	1	00:15					X											X								
CCB04	1	00:21					X											X								
ZZZZZZ	2	00:28																								
ZZZZZZ	2	00:34																								
ZZZZZZ	2	00:40																								
ZZZZZZ	2	00:46																								
CCV05	1	00:52					X											X								
CCB05	1	00:58					X											X								
245396001	2	01:04					X											X								
1202024766	2	01:11					X											X								
1202024767	2	01:17					X											X								

Metals
-14-
Analysis Run Log

[illegible]

Metals
-14-
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS5

Start Date: 14-FEB-10

End Date: 15-FEB-10

Client Sdg: 10-1394

Method: MS

Data File: 100214-5

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	13:07																					X			
S10	1	13:11																					X			
S100	1	13:15																					X			
ICV01	1	13:20																					X			
ICB01	1	13:24																					X			
CRDL01	1	13:29																					X			
ICSA01	1	13:33																					X			
ICSAB01	1	13:38																					X			
CCV01	1	13:42																					X			
CCB01	1	13:47																					X			
1202024764	2	13:53																					X			
1202024765	40	13:58																					X			
ZZZZZZ	2	14:02																								
ZZZZZZ	2	14:07																								
ZZZZZZ	2	14:11																								
ZZZZZZ	2	14:16																								
ZZZZZZ	2	14:20																								
CCV02	1	14:25																					X			
CCB02	1	14:29																					X			
ZZZZZZ	2	14:34																								
ZZZZZZ	2	14:38																								
ZZZZZZ	2	14:42																								
ZZZZZZ	2	14:47																								
ZZZZZZ	2	14:51																								
ZZZZZZ	2	14:56																								
ZZZZZZ	2	15:01																								
CCV03	1	15:05																					X			
CCB03	1	15:10																					X			
ZZZZZZ	2	15:14																								
ZZZZZZ	2	15:19																								
ZZZZZZ	2	15:23																								
ZZZZZZ	2	15:28																								
CCV04	1	15:32																					X			
CCB04	1	15:37																					X			
245396001	2	15:41																					X			
1202024766	2	15:46																					X			
1202024767	2	15:50																					X			
1202024772	2	15:55																					X			
1202024768	10	15:59																					X			
245396002	2	16:04																					X			

[illegible]

Metals
-14-
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS5

Start Date: 14-FEB-10

End Date: 15-FEB-10

Client Sdg: 10-1394

Method MS

Data File: 100214-8

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	00:22			X															X						
S10	1	00:25			X															X						
S100	1	00:27			X															X						
ICV01	1	00:29			X															X						
ICB01	1	00:32			X															X						
CRDL01	1	00:34			X															X						
ICSA01	1	00:36			X															X						
ICSAB01	1	00:39			X															X						
CCV01	1	00:41			X															X						
CCB01	1	00:43			X															X						
1202024764	2	00:46			X															X						
1202024765	40	00:48			X															X						
245396001	2	00:51			X															X						
1202024766	2	00:53			X															X						
1202024767	2	00:55			X															X						
1202024772	2	00:58			X															X						
1202024768	10	01:00			X															X						
CCV02	1	01:02			X															X						
CCB02	1	01:05			X															X						
245396002	2	01:07			X															X						
245396003	2	01:10			X															X						
245396004	2	01:12			X															X						
CCV03	1	01:14			X															X						
CCB03	1	01:17			X															X						

Metals
-14-
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: OPTIMA3

Start Date: 11-FEB-10

End Date: 12-FEB-10

Client Sdg: 10-1394

Method P

Data File: 021110-1

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	08:21	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S0.1	1	08:28		X		X		X		X	X	X		X		X			X		X				X	X
S0.5	1	08:34	X	X		X		X	X	X	X	X		X	X	X			X		X				X	X
SCAL	1	08:41	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S10	1	08:48	X						X				X		X							X				
ICV01	1	08:54	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICB01	1	09:01	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
PQL01	1	09:08	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSA01	1	09:14	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSAB01	1	09:20	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR01	1	09:26	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR02	1	09:33	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV01	1	09:39	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB01	1	09:46	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR03	1	09:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV02	1	10:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB02	1	10:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZ	1	10:22																								
ZZZZZ	1	10:28																								
ZZZZZ	1	10:35																								
ZZZZZ	1	10:42																								
ZZZZZ	1	10:49																								
ZZZZZ	1	10:56																								
ZZZZZ	1	11:03																								
ZZZZZ	1	11:10																								
ZZZZZ	5	11:17																								
CCV03	1	11:23	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB03	1	11:30	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZ	1	11:44																								
ZZZZZ	1	11:51																								
CCV04	1	11:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB04	1	12:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZ	1	12:11																								
ZZZZZ	1	12:18																								
ZZZZZ	1	12:25																								
ZZZZZ	1	12:32																								
ZZZZZ	1	12:39																								
ZZZZZ	5	12:46																								
CCV05	1	12:53	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB05	1	13:00	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X

SW846

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	5	17:55																								
ZZZZZZ	1	18:02																								
ZZZZZZ	1	18:09																								
ZZZZZZ	1	18:16																								
ZZZZZZ	1	18:23																								
ZZZZZZ	1	18:29																								
ZZZZZZ	1	18:36																								
CCV11	1	18:43	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB11	1	18:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	18:57																								
ZZZZZZ	1	19:04																								
ZZZZZZ	1	19:10																								
ZZZZZZ	1	19:17																								
ZZZZZZ	1	19:24																								
ZZZZZZ	1	19:31																								
ZZZZZZ	5	19:37																								
CCV12	1	19:44	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB12	1	19:51	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	19:58																								
ZZZZZZ	1	20:05																								
ZZZZZZ	1	20:12																								
ZZZZZZ	1	20:19																								
ZZZZZZ	1	20:26																								
ZZZZZZ	1	20:34																								
ZZZZZZ	1	20:41																								
CCV13	1	20:48	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB13	1	20:55	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	21:02																								
ZZZZZZ	1	21:08																								
ZZZZZZ	1	21:15																								
ZZZZZZ	1	21:22																								
ZZZZZZ	1	21:29																								
ZZZZZZ	1	21:36																								
ZZZZZZ	1	21:43																								
CCV14	1	21:50	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB14	1	21:57	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
I202024773	1	22:04	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
I202024774	1	22:11	X	X		X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	22:17																								
ZZZZZZ	1	22:24																								

Samp No.	D/F	Run Time																		
ZZZZZZ	1	22:31																		
ZZZZZZ	1	22:38																		
ZZZZZZ	1	22:45																		
ZZZZZZ	1	22:52																		
ZZZZZZ	1	22:59																		
CCV15	1	23:07	X	X		X		X	X	X	X	X	X	X	X		X		X	X
CCB15	1	23:14	X	X		X		X	X	X	X	X	X	X	X		X		X	X
ZZZZZZ	1	23:21																		
ZZZZZZ	1	23:27																		
ZZZZZZ	1	23:35																		
ZZZZZZ	1	23:42																		
ZZZZZZ	1	23:49																		
ZZZZZZ	1	23:56																		
ZZZZZZ	1	00:02																		
ZZZZZZ	1	00:10																		
ZZZZZZ	1	00:17																		
CCV16	1	00:24	X	X		X		X	X	X	X	X	X	X	X		X		X	X
CCB16	1	00:31	X	X		X		X	X	X	X	X	X	X	X		X		X	X
245396001	1	00:38	X	X		X		X	X	X	X	X	X	X	X		X		X	X
1202024775	1	00:45	X	X		X		X	X	X	X	X	X	X	X		X		X	X
1202024776	1	00:52	X	X		X		X	X	X	X	X	X	X	X		X		X	X
1202024778	1	00:59	X	X		X		X	X	X	X	X	X	X	X		X		X	X
1202024777	5	01:06	X	X		X		X	X	X	X	X	X	X	X		X		X	X
245396002	1	01:12	X	X		X		X	X	X	X	X	X	X	X		X		X	X
245396003	1	01:20	X	X		X		X	X	X	X	X	X	X	X		X		X	X
245396004	1	01:27	X	X		X		X	X	X	X	X	X	X	X		X		X	X
CCV17	1	01:34	X	X		X		X	X	X	X	X	X	X	X		X		X	X
CCB17	1	01:41	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: HG3

Start Date: 10-FEB-10

End Date: 10-FEB-10

Client Sdg: 10-1394

Method: AV

Data File: 021010S1-9

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Ti	U	V	Zn
S0.0	1	08:51															X									
S0.2	1	08:53															X									
S0.5	1	08:54															X									
S2.0	1	08:56															X									
S5.0	1	08:58															X									
S10.0	1	08:59															X									
ICV01	1	09:01															X									
ICB01	1	09:03															X									
CRDL01	1	09:04															X									
CCV01	1	09:06															X									
CCB01	1	09:08															X									
ZZZZZZ	1	09:09																								
ZZZZZZ	10	09:11																								
ZZZZZZ	1	09:13																								
ZZZZZZ	1	09:14																								
ZZZZZZ	1	09:16																								
ZZZZZZ	1	09:18																								
ZZZZZZ	1	09:19																								
ZZZZZZ	1	09:21																								
ZZZZZZ	1	09:23																								
ZZZZZZ	1	09:24																								
CCV02	1	09:26															X									
CCB02	1	09:28															X									
ZZZZZZ	1	09:29																								
ZZZZZZ	1	09:31																								
ZZZZZZ	5	09:33																								
ZZZZZZ	1	09:34																								
ZZZZZZ	1	09:36																								
ZZZZZZ	1	09:38																								
ZZZZZZ	1	09:39																								
ZZZZZZ	1	09:41																								
ZZZZZZ	10	09:43																								
ZZZZZZ	1	09:44																								
CCV03	1	09:46															X									
CCB03	1	09:48															X									
ZZZZZZ	1	09:49																								
ZZZZZZ	1	09:51																								
ZZZZZZ	1	09:53																								
ZZZZZZ	1	09:54																								
ZZZZZZ	1	09:56																								

SW846

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
ZZZZZZ	1	11:05																								
CCV07	1	11:06															X									
CCB07	1	11:08															X									

Metals
-14-
Analysis Run Log

Contract: LANL01004

Lab Code: GEL

Inst Name: ICPMS4

Start Date: 13-FEB-10

End Date: 14-FEB-10

Client Sdg: 10-1394

Method MS

Data File: 100213-2

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	08:05																						X		
S10	1	08:07																						X		
S100	1	08:08																						X		
ICV01	1	08:10																						X		
ICB01	1	08:12																						X		
CRDL01	1	08:13																						X		
ICSA01	1	08:15																						X		
ICSAB01	1	08:17																						X		
CCV01	1	08:19																						X		
CCB01	1	08:20																						X		
1202024764	2	08:22																						X		
1202024765	40	08:24																						X		
ZZZZZZ	2	08:25																								
ZZZZZZ	2	08:27																								
ZZZZZZ	2	08:29																								
ZZZZZZ	2	08:30																								
ZZZZZZ	2	08:32																								
ZZZZZZ	2	08:34																								
CCV02	1	08:36																						X		
CCB02	1	08:37																						X		
ZZZZZZ	2	08:39																								
ZZZZZZ	2	08:41																								
ZZZZZZ	2	08:42																								
ZZZZZZ	2	08:44																								
ZZZZZZ	2	08:46																								
ZZZZZZ	2	08:48																								
ZZZZZZ	2	08:49																								
ZZZZZZ	2	08:51																								
CCV03	1	08:53																						X		
CCB03	1	08:55																						X		
ZZZZZZ	2	08:56																								
ZZZZZZ	2	08:58																								
245396001	2	09:00																						X		
1202024766	2	09:01																						X		
1202024767	2	09:03																						X		
1202024772	2	09:05																						X		
1202024768	10	09:07																						X		
CCV04	1	09:08																						X		
CCB04	1	09:10																						X		
ZZZZZZ	2	09:12																								

Samp No.	D/F	Run Time
ZZZZZ	2	09:14
245396004	2	09:15
CCV05	1	09:17
CCB05	1	09:19

Metals
-14-
Analysis Run Log

Contract: LANL01004**Lab Code:** GEL**Inst Name:** JCPMS4**Start Date:** 14-FEB-10**End Date:** 15-FEB-10**Client Sdg:** 10-1394**Method:** MS**Data File:** 100214-3

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	12:07																						X		
S10	1	12:09																						X		
S100	1	12:11																						X		
ICV01	1	12:12																						X		
ICB01	1	12:14																						X		
CRDL01	1	12:16																						X		
ICSA01	1	12:17																						X		
ICSAB01	1	12:19																						X		
CCV01	1	12:21																						X		
CCB01	1	12:22																						X		
ZZZZZZ	2	12:24																								
ZZZZZZ	40	12:26																								
245396002	20	12:28																						X		
245396003	20	12:29																						X		
CCV02	1	12:31																						X		
CCB02	1	12:33																						X		

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 10-1394

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP/MS	<u>Analyte</u>	<u>Wavelength</u> (nm)	<u>MDL</u>	<u>RDL</u>
			<u>ug/L</u>	<u>ug/L</u>
SOLID	Aluminum		15.0	50
	Antimony		0.5	3
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Uranium		0.066	.2
	Vanadium		2.0	10
	Zinc		2.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 10-1394

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 15-JUN-09

	<u>Analyte</u>	<u>Wavelength</u> <u>(nm)</u>	<u>MDL</u> <u>ug/L</u>	<u>RDL</u> <u>ug/L</u>
MERCURY				
SOLID	Mercury		0.068	.2

METALS
--10--
Instrument Detection Limits

SDG NO. 10-1394

Contract: LANL01004

Lab Code: GEL

MDL Effective Date: 01-JUL-09

ICP	<u>Analyte</u>	<u>Wavelength</u> <u>(nm)</u>	<u>MDL</u>	<u>RDL</u>
			<u>ug/L</u>	<u>ug/L</u>
SOLID	Aluminum	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: 10-1394

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: GELGEL Job No: **10-1394**

Contract: LANL01004

Instrument: OPTIMA3

Effective Dates: **01-FEB-10**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	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

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Interelement Correction Factors

Lab Code: GEL

GEL Job No: 10-1394

Contract: LANL01004

Instrument: OPTIMA3

Effective Dates: 01-FEB-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

GEL Job No: 10-1394

Contract: LANI.01004

Instrument: OPTIMA3

Effective Dates: 01-FEB-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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: 10-1394

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

GEL Job No: 10-1394

Contract: LANL01004

Instrument: OPTIMA3

Effective Dates: 01-FEB-10

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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
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Linear Ranges

SDG NO. 10-1394

Contract: LANL01004

Lab Code: GEL

Instrument ID ICPMS5

<u>Analyte</u>	<u>Integration Time (msec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	1	50000	ug/L	01-FEB-10
Antimony	1000	250	ug/L	01-FEB-10
Arsenic	1000	1000	ug/L	01-FEB-10
Barium	1000	1000	ug/L	01-FEB-10
Beryllium	1000	1000	ug/L	01-FEB-10
Cadmium	1000	1000	ug/L	01-FEB-10
Calcium	500	50000	ug/L	01-FEB-10
Chromium	1000	1000	ug/L	01-FEB-10
Cobalt	1000	1000	ug/L	01-FEB-10
Copper	1000	1000	ug/L	01-FEB-10
Iron	500	50000	ug/L	01-FEB-10
Magnesium	1	50000	ug/L	01-FEB-10
Manganese	1000	1000	ug/L	01-FEB-10
Nickel	1000	1000	ug/L	01-FEB-10
Potassium	1	50000	ug/L	01-FEB-10
Selenium	1000	500	ug/L	01-FEB-10
Silver	1000	250	ug/L	01-FEB-10
Sodium	1	50000	ug/L	01-FEB-10
Thallium	1000	500	ug/L	01-FEB-10
Uranium	1000	5000	ug/L	01-FEB-10
Vanadium	1000	100	ug/L	01-FEB-10
Zinc	1000	2500	ug/L	01-FEB-10
Lead	1000	5000	ug/L	01-FEB-10

METALS
-12-
Linear Ranges

SDG NO. 10-1394

Contract: LANL01004

Lab Code: GEL

Instrument ID OPTIMA3

<u>Analyte</u>	<u>Integration Time (sec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	20	500000	ug/L	01-FEB-10
Antimony	20	10000	ug/L	01-FEB-10
Arsenic	20	10000	ug/L	01-FEB-10
Barium	20	15000	ug/L	01-FEB-10
Beryllium	20	3000	ug/L	01-FEB-10
Cadmium	20	10000	ug/L	01-FEB-10
Calcium	20	500000	ug/L	01-FEB-10
Chromium	20	25000	ug/L	01-FEB-10
Cobalt	20	10000	ug/L	01-FEB-10
Copper	20	20000	ug/L	01-FEB-10
Iron	20	500000	ug/L	01-FEB-10
Lead	20	25000	ug/L	01-FEB-10
Magnesium	20	500000	ug/L	01-FEB-10
Manganese	20	10000	ug/L	01-FEB-10
Nickel	20	10000	ug/L	01-FEB-10
Potassium	20	300000	ug/L	01-FEB-10
Selenium	20	10000	ug/L	01-FEB-10
Silver	20	1000	ug/L	01-FEB-10
Sodium	20	500000	ug/L	01-FEB-10
Thallium	20	10000	ug/L	01-FEB-10
Uranium	20	15000	ug/L	01-FEB-10
Vanadium	20	10000	ug/L	01-FEB-10
Zinc	20	15000	ug/L	01-FEB-10

METALS
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Linear Ranges

SDG NO. 10-1394

Contract: LANL01004

Lab Code: GEL

Instrument ID ICPMS4

<u>Analyte</u>	<u>Integration Time (msec)</u>	<u>LDR</u>	<u>Units</u>	<u>Effective Date</u>
Aluminum	1	50000	ug/L	01-FEB-10
Antimony	1000	250	ug/L	01-FEB-10
Arsenic	1000	1000	ug/L	01-FEB-10
Barium	1000	1000	ug/L	01-FEB-10
Beryllium	1000	1000	ug/L	01-FEB-10
Cadmium	1000	1000	ug/L	01-FEB-10
Calcium	500	50000	ug/L	01-FEB-10
Chromium	1000	1000	ug/L	01-FEB-10
Cobalt	1000	1000	ug/L	01-FEB-10
Copper	1000	1000	ug/L	01-FEB-10
Iron	500	50000	ug/L	01-FEB-10
Lead	1000	5000	ug/L	01-FEB-10
Magnesium	1	50000	ug/L	01-FEB-10
Manganese	1000	1000	ug/L	01-FEB-10
Nickel	1000	1000	ug/L	01-FEB-10
Potassium	1	50000	ug/L	01-FEB-10
Selenium	1000	500	ug/L	01-FEB-10
Silver	1000	250	ug/L	01-FEB-10
Sodium	1	50000	ug/L	01-FEB-10
Thallium	1000	500	ug/L	01-FEB-10
Uranium	1000	5000	ug/L	01-FEB-10
Vanadium	1000	100	ug/L	01-FEB-10
Zinc	1000	2500	ug/L	01-FEB-10

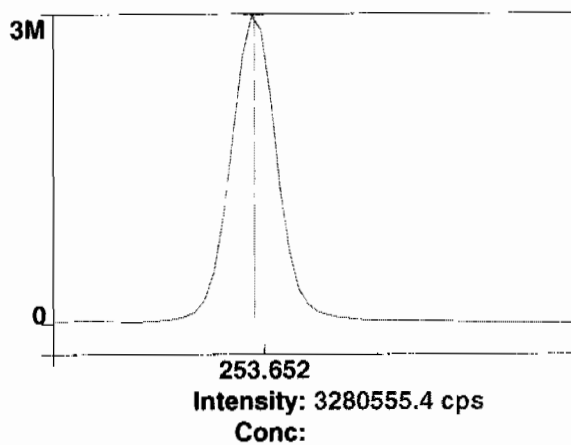
Raw Data

Method: Hg_ReAlign
Result: 021910

Sample ID: Hg_ReAlign

Hg 253.652

Rep: 1



1

2/11/2010 08:16:36 Hg ReAlign... Actual peak offset (nm): -0.009
Drift (nm): 0.000 Slit adjustment: -3

Analysis Begun

Start Time: 2/11/2010 08:21:47 Plasma On Time: 2/8/2010 05:57:09
Logged In Analyst: Optima3 Technique: ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601 Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\021110.sif
Batch ID:
Results Data Set: 021110
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded

Method Name: General Eng.2AX
IEC File: 011110.iec
Method Description:

Method Last Saved: 2/10/2010 09:09:46
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153 Radial	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 317.933 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1

Sample ID: S0

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/11/2010 08:21:51

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: S0

Net

Corrected

Calib.

Analysis

Repl#	Analyte	Intensity	Intensity	Conc. Units	Time
1	Sc Radial	4743.3	4743.3	98.7 %	08:23:44
1	Y RADIAL	4948.6	4948.6	98.96 %	08:23:44
1	Al 396.153Radial†	-158.5	-160.6	[0.00] ug/L	08:23:44
1	Ca 317.933Radial†	16.8	17.0	[0.00] ug/L	08:24:04
1	Fe 238.204 Radial†	11.9	12.0	[0.00] ug/L	08:24:04
1	K 766.490 Radial†	2824.3	2862.1	[0.00] ug/L	08:23:44
1	Mg 279.077 IEC†	1.7	1.7	[0.00] ug/L	08:24:04
1	Na 589.592 Radial†	-1072.2	-1086.6	[0.00] ug/L	08:23:44
1	Sr 421.552†	-1.9	-1.9	[0.00] ug/L	08:23:44
1	Sc 361.383	858652.8	858652.8	99.601 %	08:25:00
1	Y 371.029	711640.1	711640.1	99.585 %	08:25:00
1	Ag 328.068†	210.9	211.7	[0.00] ug/L	08:25:00
1	As 188.979†	-37.6	-37.8	[0.00] ug/L	08:25:21
1	B 249.677†	-554.0	-556.3	[0.00] ug/L	08:25:21
1	Ba 233.527†	-3.0	-3.0	[0.00] ug/L	08:25:21
1	Be 313.107†	-4312.4	-4329.7	[0.00] ug/L	08:25:00
1	Cd 226.502†	-217.4	-218.3	[0.00] ug/L	08:25:21
1	Co 228.616†	-68.5	-68.8	[0.00] ug/L	08:25:21
1	Cr 267.716†	70.9	71.1	[0.00] ug/L	08:25:21
1	Cu 324.752†	5817.9	5841.2	[0.00] ug/L	08:25:00
1	Mn 257.610†	462.6	464.5	[0.00] ug/L	08:25:21
1	Mo 202.031†	15.3	15.4	[0.00] ug/L	08:25:21
1	Ni 231.604†	106.3	106.7	[0.00] ug/L	08:25:21
1	P 214.914†	228.5	229.5	[0.00] ug/L	08:25:21
1	Pb 220.353†	-66.3	-66.6	[0.00] ug/L	08:25:21
1	S 181.975 Axial†	39.5	39.7	[0.00] ug/L	08:25:21
1	Sb 206.836†	48.0	48.2	[0.00] ug/L	08:25:21
1	Se 196.026†	-19.7	-19.8	[0.00] ug/L	08:25:21
1	Si 251.611†	564.3	566.5	[0.00] ug/L	08:25:21
1	Sn 189.927†	1.1	1.1	[0.00] ug/L	08:25:21
1	Ti 334.940†	-1245.2	-1250.2	[0.00] ug/L	08:25:00
1	Tl 190.801†	-32.7	-32.8	[0.00] ug/L	08:25:21
1	U 409.014†	-2877.1	-2888.7	[0.00] ug/L	08:25:00
1	V 292.402†	-1591.1	-1597.5	[0.00] ug/L	08:25:00
1	Zn 213.857†	709.5	712.4	[0.00] ug/L	08:25:21
1	SiO2†	561.0	563.3	[0.00] ug/L	08:26:17
2	Sc Radial	4842.9	4842.9	101 %	08:24:09
2	Y RADIAL	5035.0	5035.0	100.7 %	08:24:09
2	Al 396.153Radial†	-151.1	-150.0	[0.00] ug/L	08:24:09
2	Ca 317.933Radial†	17.6	17.5	[0.00] ug/L	08:24:29
2	Fe 238.204 Radial†	12.8	12.7	[0.00] ug/L	08:24:29
2	K 766.490 Radial†	2875.3	2854.0	[0.00] ug/L	08:24:09
2	Mg 279.077 IEC†	-0.9	-0.8	[0.00] ug/L	08:24:29
2	Na 589.592 Radial†	-1052.7	-1044.8	[0.00] ug/L	08:24:09
2	Sr 421.552†	-6.5	-6.5	[0.00] ug/L	08:24:09
2	Sc 361.383	858338.4	858338.4	99.564 %	08:25:26
2	Y 371.029	711249.1	711249.1	99.531 %	08:25:26
2	Ag 328.068†	240.3	241.3	[0.00] ug/L	08:25:26
2	As 188.979†	-40.6	-40.8	[0.00] ug/L	08:25:46
2	B 249.677†	-518.0	-520.3	[0.00] ug/L	08:25:46
2	Ba 233.527†	-17.7	-17.8	[0.00] ug/L	08:25:46
2	Be 313.107†	-4336.6	-4355.6	[0.00] ug/L	08:25:26
2	Cd 226.502†	-214.0	-214.9	[0.00] ug/L	08:25:46
2	Co 228.616†	-77.5	-77.9	[0.00] ug/L	08:25:46
2	Cr 267.716†	59.8	60.0	[0.00] ug/L	08:25:46
2	Cu 324.752†	5781.8	5807.1	[0.00] ug/L	08:25:26
2	Mn 257.610†	446.9	448.8	[0.00] ug/L	08:25:46
2	Mo 202.031†	16.5	16.6	[0.00] ug/L	08:25:46
2	Ni 231.604†	113.5	114.0	[0.00] ug/L	08:25:46
2	P 214.914†	232.1	233.1	[0.00] ug/L	08:25:46
2	Pb 220.353†	-54.8	-55.0	[0.00] ug/L	08:25:46
2	S 181.975 Axial†	34.4	34.6	[0.00] ug/L	08:25:46
2	Sb 206.836†	35.5	35.7	[0.00] ug/L	08:25:46
2	Se 196.026†	-26.4	-26.5	[0.00] ug/L	08:25:46
2	Si 251.611†	557.7	560.1	[0.00] ug/L	08:25:46
2	Sn 189.927†	12.1	12.2	[0.00] ug/L	08:25:46
2	Ti 334.940†	-1286.7	-1292.3	[0.00] ug/L	08:25:26
2	Tl 190.801†	-33.0	-33.2	[0.00] ug/L	08:25:46
2	U 409.014†	-2986.6	-2999.7	[0.00] ug/L	08:25:26
2	V 292.402†	-1476.9	-1483.4	[0.00] ug/L	08:25:26

2	Zn 213.857†	711.5	714.7	[0.00]	ug/L	08:25:46
2	SiO2†	597.8	600.4	[0.00]	ug/L	08:26:22
3	Sc Radial	4834.5	4834.5	101	%	08:24:34
3	Y RADIAL	5018.4	5018.4	100.4	%	08:24:34
3	Al 396.153Radial†	-145.0	-144.2	[0.00]	ug/L	08:24:34
3	Ca 317.933Radial†	15.7	15.7	[0.00]	ug/L	08:24:54
3	Fe 238.204 Radial†	9.8	9.7	[0.00]	ug/L	08:24:54
3	K 766.490 Radial†	2776.8	2760.9	[0.00]	ug/L	08:24:34
3	Mg 279.077 IEC†	0.3	0.3	[0.00]	ug/L	08:24:54
3	Na 589.592 Radial†	-1110.4	-1104.1	[0.00]	ug/L	08:24:34
3	Sr 421.552†	14.8	14.8	[0.00]	ug/L	08:24:34
3	Sc 361.383	869291.9	869291.9	100.83	%	08:25:52
3	Y 371.029	720919.8	720919.8	100.88	%	08:25:52
3	Ag 328.068†	235.2	233.3	[0.00]	ug/L	08:25:52
3	As 188.979†	-23.2	-23.0	[0.00]	ug/L	08:26:12
3	B 249.677†	-545.1	-540.6	[0.00]	ug/L	08:26:12
3	Ba 233.527†	-14.1	-13.9	[0.00]	ug/L	08:26:12
3	Be 313.107†	-4367.1	-4330.9	[0.00]	ug/L	08:25:52
3	Cd 226.502†	-204.2	-202.5	[0.00]	ug/L	08:26:12
3	Co 228.616†	-75.1	-74.5	[0.00]	ug/L	08:26:12
3	Cr 267.716†	69.7	69.2	[0.00]	ug/L	08:26:12
3	Cu 324.752†	5862.4	5813.9	[0.00]	ug/L	08:25:52
3	Mn 257.610†	446.1	442.4	[0.00]	ug/L	08:26:12
3	Mo 202.031†	14.8	14.7	[0.00]	ug/L	08:26:12
3	Ni 231.604†	104.3	103.4	[0.00]	ug/L	08:26:12
3	P 214.914†	223.5	221.7	[0.00]	ug/L	08:26:12
3	Pb 220.353†	-64.1	-63.6	[0.00]	ug/L	08:26:12
3	S 181.975 Axial†	44.2	43.8	[0.00]	ug/L	08:26:12
3	Sb 206.836†	42.9	42.6	[0.00]	ug/L	08:26:12
3	Se 196.026†	-20.3	-20.1	[0.00]	ug/L	08:26:12
3	Si 251.611†	564.8	560.2	[0.00]	ug/L	08:26:12
3	Sn 189.927†	12.9	12.8	[0.00]	ug/L	08:26:12
3	Ti 334.940†	-1378.5	-1367.1	[0.00]	ug/L	08:25:52
3	Tl 190.801†	-36.9	-36.6	[0.00]	ug/L	08:26:12
3	U 409.014†	-3077.3	-3051.8	[0.00]	ug/L	08:25:52
3	V 292.402†	-1596.3	-1583.1	[0.00]	ug/L	08:25:52
3	Zn 213.857†	718.7	712.7	[0.00]	ug/L	08:26:12
3	SiO2†	590.6	585.7	[0.00]	ug/L	08:26:27

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	862094.4	6235.22	0.72%	100.00	%
Sc Radial	4806.9	55.24	1.15%	100	%
Y 371.029	714603.0	5474.01	0.77%	100.00	%
Y RADIAL	5000.7	45.86	0.92%	100.0	%
Ag 328.068†	228.8	15.31	6.69%	[0.00]	ug/L
Al 396.153Radial†	-151.6	8.33	5.49%	[0.00]	ug/L
As 188.979†	-33.9	9.53	28.16%	[0.00]	ug/L
B 249.677†	-539.0	18.02	3.34%	[0.00]	ug/L
Ba 233.527†	-11.6	7.66	66.14%	[0.00]	ug/L
Be 313.107†	-4338.7	14.61	0.34%	[0.00]	ug/L
Ca 317.933Radial†	16.7	0.94	5.63%	[0.00]	ug/L
Cd 226.502†	-211.9	8.32	3.93%	[0.00]	ug/L
Co 228.616†	-73.7	4.60	6.24%	[0.00]	ug/L
Cr 267.716†	66.8	5.94	8.89%	[0.00]	ug/L
Cu 324.752†	5820.7	18.09	0.31%	[0.00]	ug/L
Fe 238.204 Radial†	11.5	1.57	13.67%	[0.00]	ug/L
K 766.490 Radial†	2825.7	56.23	1.99%	[0.00]	ug/L
Mg 279.077 IEC†	0.4	1.30	313.61%	[0.00]	ug/L
Mn 257.610†	451.9	11.35	2.51%	[0.00]	ug/L
Mo 202.031†	15.5	0.94	6.08%	[0.00]	ug/L
Na 589.592 Radial†	-1078.5	30.44	2.82%	[0.00]	ug/L
Ni 231.604†	108.0	5.41	5.01%	[0.00]	ug/L
P 214.914†	228.1	5.81	2.55%	[0.00]	ug/L
Pb 220.353†	-61.7	6.02	9.76%	[0.00]	ug/L
S 181.975 Axial†	39.3	4.63	11.76%	[0.00]	ug/L
Sb 206.836†	42.2	6.25	14.84%	[0.00]	ug/L
Se 196.026†	-22.1	3.78	17.07%	[0.00]	ug/L
Si 251.611†	562.3	3.70	0.66%	[0.00]	ug/L

Sn 189.927†	8.7	6.56	75.55%	[0.00] ug/L
Sr 421.552†	2.1	11.18	531.03%	[0.00] ug/L
Ti 334.940†	-1303.2	59.20	4.54%	[0.00] ug/L
Tl 190.801†	-34.2	2.10	6.14%	[0.00] ug/L
U 409.014†	-2980.0	83.33	2.80%	[0.00] ug/L
V 292.402†	-1554.6	62.14	4.00%	[0.00] ug/L
Zn 213.857†	713.3	1.23	0.17%	[0.00] ug/L
SiO2†	583.1	18.69	3.20%	[0.00] ug/L

Sequence No.: 2

Sample ID: S0.1

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 2

Date Collected: 2/11/2010 08:28:39

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Analysis Time
1	Sc Radial	4697.2	4697.2	97.7 %	08:30:36
1	Y RADIAL	4924.7	4924.7	98.48 %	08:30:36
1	K 766.490 Radial†	8419.1	5790.1	[1000] ug/L	08:30:31
1	Sr 421.552†	14106.6	14434.0	[100] ug/L	08:30:36
1	Sc 361.383	843091.5	843091.5	97.796 %	08:31:03
1	Y 371.029	696143.0	696143.0	97.417 %	08:31:03
1	Ag 328.068†	20987.8	21232.1	[100] ug/L	08:31:03
1	As 188.979†	194.9	233.2	[100] ug/L	08:31:23
1	B 249.677†	3337.5	3951.7	[100] ug/L	08:31:03
1	Ba 233.527†	12126.5	12411.4	[100] ug/L	08:31:03
1	Be 313.107†	255128.9	265218.1	[100] ug/L	08:31:03
1	Cd 226.502†	8154.7	8550.4	[100] ug/L	08:31:03
1	Co 228.616†	4501.8	4677.0	[100] ug/L	08:31:23
1	Cr 267.716†	8496.4	8621.1	[100] ug/L	08:31:03
1	Cu 324.752†	37658.7	32686.8	[100] ug/L	08:31:03
1	Mn 257.610†	86804.4	88309.1	[100] ug/L	08:31:03
1	Mo 202.031†	1312.4	1326.5	[100] ug/L	08:31:23
1	Ni 231.604†	3858.2	3837.2	[100] ug/L	08:31:23
1	P 214.914†	1004.2	798.7	[500] ug/L	08:31:23
1	Pb 220.353†	734.4	812.6	[100] ug/L	08:31:23
1	S 181.975 Axial†	173.5	138.0	[200] ug/L	08:31:23
1	Sb 206.836†	307.5	272.3	[100] ug/L	08:31:23
1	Se 196.026†	113.4	138.0	[100] ug/L	08:31:23
1	Si 251.611†	15051.6	14828.5	[500] ug/L	08:31:03
1	Sn 189.927†	530.8	534.1	[100] ug/L	08:31:23
1	Ti 334.940†	59742.6	62392.4	[100] ug/L	08:31:03
1	Tl 190.801†	267.2	307.4	[100] ug/L	08:31:23
1	U 409.014†	349.1	3337.0	[100] ug/L	08:31:03
1	V 292.402†	11820.6	13641.7	[100] ug/L	08:31:03
1	Zn 213.857†	10728.8	10257.3	[100] ug/L	08:31:03
1	SiO2†	15259.3	15020.1	[1069.5] ug/L	08:32:20
2	Sc Radial	4770.0	4770.0	99.2 %	08:30:46
2	Y RADIAL	4972.7	4972.7	99.44 %	08:30:46
2	K 766.490 Radial†	8395.9	5635.1	[1000] ug/L	08:30:41
2	Sr 421.552†	14289.0	14397.3	[100] ug/L	08:30:46
2	Sc 361.383	841728.5	841728.5	97.638 %	08:31:29
2	Y 371.029	693980.4	693980.4	97.114 %	08:31:29
2	Ag 328.068†	20918.8	21196.1	[100] ug/L	08:31:29
2	As 188.979†	191.4	229.9	[100] ug/L	08:31:49
2	B 249.677†	3358.3	3978.6	[100] ug/L	08:31:29
2	Ba 233.527†	12115.8	12420.6	[100] ug/L	08:31:29
2	Be 313.107†	254704.9	265206.3	[100] ug/L	08:31:29
2	Cd 226.502†	8061.2	8468.2	[100] ug/L	08:31:29
2	Co 228.616†	4524.9	4708.1	[100] ug/L	08:31:49
2	Cr 267.716†	8472.0	8610.2	[100] ug/L	08:31:29
2	Cu 324.752†	37682.1	32773.1	[100] ug/L	08:31:29
2	Mn 257.610†	86821.9	88470.7	[100] ug/L	08:31:29
2	Mo 202.031†	1330.8	1347.5	[100] ug/L	08:31:49
2	Ni 231.604†	3893.5	3879.7	[100] ug/L	08:31:49
2	P 214.914†	1009.6	805.9	[500] ug/L	08:31:49
2	Pb 220.353†	737.3	816.8	[100] ug/L	08:31:49
2	S 181.975 Axial†	168.2	132.9	[200] ug/L	08:31:49
2	Sb 206.836†	312.2	277.6	[100] ug/L	08:31:49
2	Se 196.026†	110.6	135.3	[100] ug/L	08:31:49
2	Si 251.611†	15081.3	14883.9	[500] ug/L	08:31:29
2	Sn 189.927†	535.9	540.2	[100] ug/L	08:31:49
2	Ti 334.940†	59954.2	62708.0	[100] ug/L	08:31:29
2	Tl 190.801†	271.5	312.3	[100] ug/L	08:31:49
2	U 409.014†	527.8	3520.6	[100] ug/L	08:31:29

2	V 292.402†	11734.5	13573.0	[100]	ug/L	08:31:29
2	Zn 213.857†	10700.6	10246.2	[100]	ug/L	08:31:29
2	SiO2†	15136.0	14919.1	[1069.5]	ug/L	08:32:25
3	Sc Radial	4757.9	4757.9	99.0	%	08:30:57
3	Y RADIAL	4960.8	4960.8	99.20	%	08:30:57
3	K 766.490 Radial†	8337.2	5597.4	[1000]	ug/L	08:30:52
3	Sr 421.552†	14181.2	14325.1	[100]	ug/L	08:30:57
3	Sc 361.383	857711.3	857711.3	99.492	%	08:31:54
3	Y 371.029	708311.9	708311.9	99.120	%	08:31:54
3	Ag 328.068†	21304.0	21184.0	[100]	ug/L	08:31:54
3	As 188.979†	185.7	220.5	[100]	ug/L	08:32:15
3	B 249.677†	3475.9	4032.7	[100]	ug/L	08:31:54
3	Ba 233.527†	12344.0	12418.7	[100]	ug/L	08:31:54
3	Be 313.107†	259560.0	265225.1	[100]	ug/L	08:31:54
3	Cd 226.502†	8214.9	8468.8	[100]	ug/L	08:31:54
3	Co 228.616†	4492.9	4589.6	[100]	ug/L	08:32:15
3	Cr 267.716†	8624.8	8602.1	[100]	ug/L	08:31:54
3	Cu 324.752†	38368.9	32744.2	[100]	ug/L	08:31:54
3	Mn 257.610†	88164.5	88163.1	[100]	ug/L	08:31:54
3	Mo 202.031†	1319.1	1310.3	[100]	ug/L	08:32:15
3	Ni 231.604†	3850.0	3761.7	[100]	ug/L	08:32:15
3	P 214.914†	1005.0	782.0	[500]	ug/L	08:32:15
3	Pb 220.353†	740.2	805.7	[100]	ug/L	08:32:15
3	S 181.975 Axial†	171.3	132.8	[200]	ug/L	08:32:15
3	Sb 206.836†	307.2	266.6	[100]	ug/L	08:32:15
3	Se 196.026†	128.8	151.6	[100]	ug/L	08:32:15
3	Si 251.611†	15274.8	14790.6	[500]	ug/L	08:31:54
3	Sn 189.927†	537.8	531.8	[100]	ug/L	08:32:15
3	Ti 334.940†	60885.2	62499.6	[100]	ug/L	08:31:54
3	Tl 190.801†	274.4	310.0	[100]	ug/L	08:32:15
3	U 409.014†	511.9	3494.6	[100]	ug/L	08:31:54
3	V 292.402†	12083.6	13700.0	[100]	ug/L	08:31:54
3	Zn 213.857†	10828.2	10170.3	[100]	ug/L	08:31:54
3	SiO2†	15035.8	14529.5	[1069.5]	ug/L	08:32:30

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	847510.4	8860.47	1.05%	98.308 %
Sc Radial	4741.7	39.05	0.82%	98.6 %
Y 371.029	699478.4	7726.06	1.10%	97.884 %
Y RADIAL	4952.7	24.96	0.50%	99.04 %
Ag 328.068†	21204.1	24.98	0.12%	[100] ug/L
As 188.979†	227.9	6.57	2.88%	[100] ug/L
B 249.677†	3987.7	41.26	1.03%	[100] ug/L
Ba 233.527†	12416.9	4.85	0.04%	[100] ug/L
Be 313.107†	265216.5	9.52	0.00%	[100] ug/L
Cd 226.502†	8495.8	47.31	0.56%	[100] ug/L
Co 228.616†	4658.2	61.45	1.32%	[100] ug/L
Cr 267.716†	8611.2	9.54	0.11%	[100] ug/L
Cu 324.752†	32734.7	43.94	0.13%	[100] ug/L
K 766.490 Radial†	5674.2	102.16	1.80%	[1000] ug/L
Mn 257.610†	88314.3	153.88	0.17%	[100] ug/L
Mo 202.031†	1328.1	18.64	1.40%	[100] ug/L
Ni 231.604†	3826.2	59.74	1.56%	[100] ug/L
P 214.914†	795.6	12.26	1.54%	[500] ug/L
Pb 220.353†	811.7	5.63	0.69%	[100] ug/L
S 181.975 Axial†	134.6	2.99	2.22%	[200] ug/L
Sb 206.836†	272.2	5.48	2.01%	[100] ug/L
Se 196.026†	141.6	8.69	6.14%	[100] ug/L
Si 251.611†	14834.4	46.93	0.32%	[500] ug/L
Sn 189.927†	535.4	4.34	0.81%	[100] ug/L
Sr 421.552†	14385.5	55.40	0.39%	[100] ug/L
Ti 334.940†	62533.3	160.47	0.26%	[100] ug/L
Tl 190.801†	309.9	2.44	0.79%	[100] ug/L
U 409.014†	3450.7	99.33	2.88%	[100] ug/L
V 292.402†	13638.2	63.57	0.47%	[100] ug/L
Zn 213.857†	10224.6	47.36	0.46%	[100] ug/L
SiO2†	14822.9	259.04	1.75%	[1069.5] ug/L

Sequence No.: 3
 Sample ID: S0.5
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 3
 Date Collected: 2/11/2010 08:34:41
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Analysis Time
1	Sc Radial	4775.5	4775.5	99.3	%	08:36:34
1	Y RADIAL	4918.1	4918.1	98.35	%	08:36:34
1	Al 396.153Radial†	5173.8	5359.4	[5000]	ug/L	08:36:34
1	Ca 317.933Radial†	3032.3	3035.5	[5000]	ug/L	08:36:54
1	K 766.490 Radial†	31229.5	28609.1	[5000]	ug/L	08:36:34
1	Mg 279.077 IEC†	147.4	148.0	[5000]	ug/L	08:36:54
1	Sr 421.552†	72038.7	72510.1	[500]	ug/L	08:36:34
1	Sc 361.383	867807.9	867807.9	100.66	%	08:37:51
1	Y 371.029	707253.6	707253.6	98.972	%	08:37:51
1	Ag 328.068†	104951.0	104031.3	[500]	ug/L	08:37:56
1	As 188.979†	1075.9	1102.7	[500]	ug/L	08:38:16
1	B 249.677†	20164.1	20570.4	[500]	ug/L	08:37:56
1	Ba 233.527†	60905.4	60516.0	[500]	ug/L	08:37:56
1	Be 313.107†	1337671.9	1333203.6	[500]	ug/L	08:37:51
1	Cd 226.502†	41754.0	41691.0	[500]	ug/L	08:37:56
1	Co 228.616†	23152.6	23073.9	[500]	ug/L	08:37:56
1	Cr 267.716†	42883.4	42534.3	[500]	ug/L	08:37:56
1	Cu 324.752†	168304.3	161375.5	[500]	ug/L	08:37:56
1	Mn 257.610†	436371.5	433046.6	[500]	ug/L	08:37:51
1	Mo 202.031†	6633.2	6574.0	[500]	ug/L	08:38:16
1	Ni 231.604†	19401.1	19165.4	[500]	ug/L	08:37:56
1	P 214.914†	4235.9	3979.9	[2500]	ug/L	08:38:16
1	Pb 220.353†	3922.5	3958.4	[500]	ug/L	08:38:16
1	S 181.975 Axial†	718.0	673.9	[1000]	ug/L	08:38:16
1	Sb 206.836†	1456.3	1404.6	[500]	ug/L	08:38:16
1	Se 196.026†	724.3	741.7	[500]	ug/L	08:38:16
1	Si 251.611†	74231.4	73180.4	[2500]	ug/L	08:37:56
1	Sn 189.927†	2684.8	2658.4	[500]	ug/L	08:38:16
1	Ti 334.940†	302340.0	301652.6	[500]	ug/L	08:37:56
1	Tl 190.801†	1527.2	1551.3	[500]	ug/L	08:38:16
1	U 409.014†	14256.5	17142.7	[500]	ug/L	08:37:56
1	V 292.402†	66738.6	67853.8	[500]	ug/L	08:37:56
1	Zn 213.857†	51323.6	50272.4	[500]	ug/L	08:37:56
1	SiO2†	75000.0	73923.1	[5347.5]	ug/L	08:39:24
2	Sc Radial	4760.1	4760.1	99.0	%	08:36:59
2	Y RADIAL	4955.6	4955.6	99.10	%	08:36:59
2	Al 396.153Radial†	5216.3	5419.2	[5000]	ug/L	08:36:59
2	Ca 317.933Radial†	3024.1	3037.1	[5000]	ug/L	08:37:19
2	K 766.490 Radial†	31196.0	28677.0	[5000]	ug/L	08:36:59
2	Mg 279.077 IEC†	140.7	141.7	[5000]	ug/L	08:37:19
2	Sr 421.552†	71809.8	72513.7	[500]	ug/L	08:36:59
2	Sc 361.383	874027.1	874027.1	101.38	%	08:38:22
2	Y 371.029	713257.3	713257.3	99.812	%	08:38:22
2	Ag 328.068†	105300.4	103634.0	[500]	ug/L	08:38:27
2	As 188.979†	1073.3	1092.5	[500]	ug/L	08:38:47
2	B 249.677†	20291.9	20553.9	[500]	ug/L	08:38:27
2	Ba 233.527†	61086.4	60264.0	[500]	ug/L	08:38:27
2	Be 313.107†	1340300.8	1326340.9	[500]	ug/L	08:38:22
2	Cd 226.502†	41829.2	41470.0	[500]	ug/L	08:38:27
2	Co 228.616†	23238.4	22994.9	[500]	ug/L	08:38:27
2	Cr 267.716†	42880.0	42227.8	[500]	ug/L	08:38:27
2	Cu 324.752†	169024.2	160895.9	[500]	ug/L	08:38:27
2	Mn 257.610†	437207.3	430786.4	[500]	ug/L	08:38:22
2	Mo 202.031†	6579.5	6474.1	[500]	ug/L	08:38:47
2	Ni 231.604†	19438.2	19064.8	[500]	ug/L	08:38:27
2	P 214.914†	4208.9	3923.3	[2500]	ug/L	08:38:47
2	Pb 220.353†	3928.4	3936.5	[500]	ug/L	08:38:47
2	S 181.975 Axial†	712.8	663.8	[1000]	ug/L	08:38:47
2	Sb 206.836†	1435.7	1373.9	[500]	ug/L	08:38:47

2	Se 196.026†	716.2	728.6	[500]	ug/L	08:38:47
2	Si 251.611†	74403.2	72825.1	[2500]	ug/L	08:38:27
2	Sn 189.927†	2674.2	2629.0	[500]	ug/L	08:38:47
2	Ti 334.940†	303013.8	300180.0	[500]	ug/L	08:38:27
2	Tl 190.801†	1515.4	1528.9	[500]	ug/L	08:38:47
2	U 409.014†	14162.6	16949.3	[500]	ug/L	08:38:27
2	V 292.402†	66891.9	67533.3	[500]	ug/L	08:38:27
2	Zn 213.857†	51403.5	49988.5	[500]	ug/L	08:38:27
2	SiO2†	73924.8	72332.4	[5347.5]	ug/L	08:39:29
3	Sc Radial	4764.3	4764.3	99.1	%	08:37:24
3	Y RADIAL	4912.6	4912.6	98.24	%	08:37:24
3	Al 396.153Radial†	5214.9	5413.1	[5000]	ug/L	08:37:24
3	Ca 317.933Radial†	3031.1	3041.5	[5000]	ug/L	08:37:44
3	K 766.490 Radial†	31082.4	28534.7	[5000]	ug/L	08:37:24
3	Mg 279.077 IEC†	148.1	149.0	[5000]	ug/L	08:37:44
3	Sr 421.552†	71533.5	72171.1	[500]	ug/L	08:37:24
3	Sc 361.383	867676.4	867676.4	100.65	%	08:38:53
3	Y 371.029	709037.9	709037.9	99.221	%	08:38:53
3	Ag 328.068†	106402.4	105489.1	[500]	ug/L	08:38:58
3	As 188.979†	1067.1	1094.1	[500]	ug/L	08:39:18
3	B 249.677†	20536.8	20943.7	[500]	ug/L	08:38:58
3	Ba 233.527†	61737.6	61352.0	[500]	ug/L	08:38:58
3	Be 313.107†	1334189.2	1329944.7	[500]	ug/L	08:38:53
3	Cd 226.502†	42310.5	42250.2	[500]	ug/L	08:38:58
3	Co 228.616†	23441.9	23364.8	[500]	ug/L	08:38:58
3	Cr 267.716†	43382.0	43036.1	[500]	ug/L	08:38:58
3	Cu 324.752†	171172.5	164250.5	[500]	ug/L	08:38:58
3	Mn 257.610†	433515.4	430274.6	[500]	ug/L	08:38:53
3	Mo 202.031†	6604.8	6546.8	[500]	ug/L	08:39:18
3	Ni 231.604†	19593.1	19359.1	[500]	ug/L	08:38:58
3	P 214.914†	4204.9	3949.8	[2500]	ug/L	08:39:18
3	Pb 220.353†	3916.1	3952.6	[500]	ug/L	08:39:18
3	S 181.975 Axial†	711.9	668.0	[1000]	ug/L	08:39:18
3	Sb 206.836†	1438.7	1387.2	[500]	ug/L	08:39:18
3	Se 196.026†	709.4	727.0	[500]	ug/L	08:39:18
3	Si 251.611†	75276.2	74229.6	[2500]	ug/L	08:38:58
3	Sn 189.927†	2666.4	2640.6	[500]	ug/L	08:39:18
3	Ti 334.940†	306373.0	305705.2	[500]	ug/L	08:38:58
3	Tl 190.801†	1527.0	1551.4	[500]	ug/L	08:39:18
3	U 409.014†	14289.9	17178.0	[500]	ug/L	08:38:58
3	V 292.402†	67706.6	68825.6	[500]	ug/L	08:38:58
3	Zn 213.857†	51838.6	50791.9	[500]	ug/L	08:38:58
3	SiO2†	74542.2	73479.5	[5347.5]	ug/L	08:39:34

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib
Sc 361.383	869837.1	3629.19	0.42%	100.90	%
Sc Radial	4766.6	7.97	0.17%	99.2	%
Y 371.029	709849.6	3083.04	0.43%	99.335	%
Y RADIAL	4928.8	23.43	0.48%	98.56	%
Ag 328.068†	104384.8	976.78	0.94%	[500]	ug/L
Al 396.153Radial†	5397.2	32.88	0.61%	[5000]	ug/L
As 188.979†	1096.4	5.49	0.50%	[500]	ug/L
B 249.677†	20689.3	220.47	1.07%	[500]	ug/L
Ba 233.527†	60710.7	569.54	0.94%	[500]	ug/L
Be 313.107†	1329829.7	3432.75	0.26%	[500]	ug/L
Ca 317.933Radial†	3038.1	3.10	0.10%	[5000]	ug/L
Cd 226.502†	41803.7	402.13	0.96%	[500]	ug/L
Co 228.616†	23144.5	194.83	0.84%	[500]	ug/L
Cr 267.716†	42599.4	408.09	0.96%	[500]	ug/L
Cu 324.752†	162174.0	1814.28	1.12%	[500]	ug/L
K 766.490 Radial†	28606.9	71.20	0.25%	[5000]	ug/L
Mg 279.077 IEC†	146.2	3.95	2.70%	[5000]	ug/L
Mn 257.610†	431369.2	1475.05	0.34%	[500]	ug/L
Mo 202.031†	6531.6	51.63	0.79%	[500]	ug/L
Ni 231.604†	19196.4	149.57	0.78%	[500]	ug/L
P 214.914†	3951.0	28.29	0.72%	[2500]	ug/L
Pb 220.353†	3949.2	11.37	0.29%	[500]	ug/L
S 181.975 Axial†	668.5	5.09	0.76%	[1000]	ug/L

Sb 206.836†	1388.6	15.36	1.11%	[500]	ug/L
Se 196.026†	732.4	8.07	1.10%	[500]	ug/L
Si 251.611†	73411.7	730.27	0.99%	[2500]	ug/L
Sn 189.927†	2642.7	14.81	0.56%	[500]	ug/L
Sr 421.552†	72398.3	196.74	0.27%	[500]	ug/L
Ti 334.940†	302512.6	2861.20	0.95%	[500]	ug/L
Tl 190.801†	1543.9	12.97	0.84%	[500]	ug/L
U 409.014†	17090.0	123.10	0.72%	[500]	ug/L
V 292.402†	68070.9	672.97	0.99%	[500]	ug/L
Zn 213.857†	50350.9	407.40	0.81%	[500]	ug/L
SiO2†	73245.0	820.85	1.12%	[5347.5]	ug/L

Sequence No.: 4
 Sample ID: SCAL
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 4
 Date Collected: 2/11/2010 08:41:46
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib.	Analysis Time
1	Sc Radial	4754.8	4754.8	98.9	%	08:43:39
1	Y RADIAL	4929.2	4929.2	98.57	%	08:43:39
1	Al 396.153Radial†	10311.1	10575.8	[10000]	ug/L	08:43:39
1	Ca 317.933Radial†	6019.7	6069.0	[10000]	ug/L	08:43:39
1	Fe 238.204 Radial†	1090.5	1091.0	[10000]	ug/L	08:43:59
1	K 766.490 Radial†	58560.2	56376.6	[10000]	ug/L	08:43:39
1	Mg 279.077 IEC†	284.9	287.6	[10000]	ug/L	08:43:59
1	Na 589.592 Radial†	30863.2	32280.1	[10000]	ug/L	08:43:39
1	Sr 421.552†	140324.3	141860.9	[1000]	ug/L	08:43:39
1	Sc 361.383	845480.5	845480.5	98.073	%	08:45:02
1	Y 371.029	692547.9	692547.9	96.914	%	08:45:02
1	Ag 328.068†	209232.3	213115.0	[1000]	ug/L	08:45:02
1	As 188.979†	2138.2	2214.1	[1000]	ug/L	08:45:23
1	B 249.677†	40784.7	42125.2	[1000]	ug/L	08:45:02
1	Ba 233.527†	120350.2	122726.7	[1000]	ug/L	08:45:02
1	Be 313.107†	2642600.6	2698867.0	[1000]	ug/L	08:44:57
1	Cd 226.502†	82431.4	84263.1	[1000]	ug/L	08:45:02
1	Co 228.616†	44705.9	45658.1	[1000]	ug/L	08:45:23
1	Cr 267.716†	84442.5	86035.1	[1000]	ug/L	08:45:02
1	Cu 324.752†	330508.8	331182.7	[1000]	ug/L	08:45:02
1	Mn 257.610†	858191.6	874603.3	[1000]	ug/L	08:44:57
1	Mo 202.031†	13191.9	13435.6	[1000]	ug/L	08:45:23
1	Ni 231.604†	37999.6	38638.3	[1000]	ug/L	08:45:02
1	P 214.914†	8146.2	8078.2	[5000]	ug/L	08:45:23
1	Pb 220.353†	7872.9	8089.3	[1000]	ug/L	08:45:23
1	S 181.975 Axial†	1394.2	1382.2	[2000]	ug/L	08:45:23
1	Sb 206.836†	2882.5	2897.0	[1000]	ug/L	08:45:23
1	Se 196.026†	1435.4	1485.8	[1000]	ug/L	08:45:23
1	Si 251.611†	147800.1	150142.2	[5000]	ug/L	08:45:02
1	Sn 189.927†	5325.6	5421.6	[1000]	ug/L	08:45:23
1	Ti 334.940†	606347.9	619566.0	[1000]	ug/L	08:45:02
1	Tl 190.801†	3041.0	3134.9	[1000]	ug/L	08:45:23
1	U 409.014†	31065.3	34655.8	[1000]	ug/L	08:45:02
1	V 292.402†	133962.9	138149.9	[1000]	ug/L	08:45:02
1	Zn 213.857†	100276.7	101533.9	[1000]	ug/L	08:45:02
1	SiO2†	149487.5	151841.8	[10695]	ug/L	08:46:31
2	Sc Radial	4707.6	4707.6	97.9	%	08:44:04
2	Y RADIAL	4893.2	4893.2	97.85	%	08:44:04
2	Al 396.153Radial†	10292.8	10661.4	[10000]	ug/L	08:44:04
2	Ca 317.933Radial†	6027.4	6137.8	[10000]	ug/L	08:44:04
2	Fe 238.204 Radial†	1092.1	1103.6	[10000]	ug/L	08:44:24
2	K 766.490 Radial†	58258.3	56661.2	[10000]	ug/L	08:44:04
2	Mg 279.077 IEC†	282.6	288.1	[10000]	ug/L	08:44:24
2	Na 589.592 Radial†	30526.8	32249.1	[10000]	ug/L	08:44:04
2	Sr 421.552†	139526.7	142467.1	[1000]	ug/L	08:44:04
2	Sc 361.383	847483.2	847483.2	98.305	%	08:45:34
2	Y 371.029	695071.3	695071.3	97.267	%	08:45:34
2	Ag 328.068†	209668.9	213055.0	[1000]	ug/L	08:45:34
2	As 188.979†	2125.7	2196.2	[1000]	ug/L	08:45:54
2	B 249.677†	40934.7	42179.5	[1000]	ug/L	08:45:34
2	Ba 233.527†	120220.8	122305.1	[1000]	ug/L	08:45:34
2	Be 313.107†	2630315.5	2680002.7	[1000]	ug/L	08:45:29
2	Cd 226.502†	82319.2	83950.3	[1000]	ug/L	08:45:34
2	Co 228.616†	44605.9	45448.6	[1000]	ug/L	08:45:54
2	Cr 267.716†	84523.5	85913.9	[1000]	ug/L	08:45:34
2	Cu 324.752†	331081.1	330968.4	[1000]	ug/L	08:45:34
2	Mn 257.610†	852182.1	866422.4	[1000]	ug/L	08:45:29
2	Mo 202.031†	13166.6	13378.0	[1000]	ug/L	08:45:54
2	Ni 231.604†	38034.5	38582.2	[1000]	ug/L	08:45:34

2	P 214.914†	8123.0	8034.9	[5000]	ug/L	08:45:54
2	Pb 220.353†	7796.1	7992.3	[1000]	ug/L	08:45:54
2	S 181.975 Axial†	1391.5	1376.2	[2000]	ug/L	08:45:54
2	Sb 206.836†	2877.9	2885.4	[1000]	ug/L	08:45:54
2	Se 196.026†	1440.6	1487.6	[1000]	ug/L	08:45:54
2	Si 251.611†	147930.3	149918.4	[5000]	ug/L	08:45:34
2	Sn 189.927†	5315.4	5398.4	[1000]	ug/L	08:45:54
2	Ti 334.940†	606881.9	618648.1	[1000]	ug/L	08:45:34
2	Tl 190.801†	3034.3	3120.8	[1000]	ug/L	08:45:54
2	U 409.014†	30966.8	34480.8	[1000]	ug/L	08:45:34
2	V 292.402†	133992.3	137857.1	[1000]	ug/L	08:45:34
2	Zn 213.857†	100200.0	101214.3	[1000]	ug/L	08:45:34
2	SiO2†	148244.7	150217.4	[10695]	ug/L	08:46:36
3	Sc Radial	4726.0	4726.0	98.3	%	08:44:30
3	Y RADIAL	4894.5	4894.5	97.88	%	08:44:30
3	Al 396.153Radial†	10324.4	10652.6	[10000]	ug/L	08:44:30
3	Ca 317.933Radial†	6007.8	6093.9	[10000]	ug/L	08:44:30
3	Fe 238.204 Radial†	1093.8	1101.0	[10000]	ug/L	08:44:50
3	K 766.490 Radial†	58317.7	56489.9	[10000]	ug/L	08:44:30
3	Mg 279.077 IEC†	286.3	290.8	[10000]	ug/L	08:44:50
3	Na 589.592 Radial†	30496.2	32096.5	[10000]	ug/L	08:44:30
3	Sr 421.552†	139363.7	141746.0	[1000]	ug/L	08:44:30
3	Sc 361.383	842372.6	842372.6	97.712	%	08:46:06
3	Y 371.029	690532.3	690532.3	96.632	%	08:46:06
3	Ag 328.068†	208493.8	213146.4	[1000]	ug/L	08:46:06
3	As 188.979†	2124.1	2207.7	[1000]	ug/L	08:46:26
3	B 249.677†	40860.3	42356.0	[1000]	ug/L	08:46:06
3	Ba 233.527†	120205.6	123031.5	[1000]	ug/L	08:46:06
3	Be 313.107†	2629476.4	2695377.0	[1000]	ug/L	08:46:00
3	Cd 226.502†	82334.1	84473.6	[1000]	ug/L	08:46:06
3	Co 228.616†	44708.7	45829.2	[1000]	ug/L	08:46:26
3	Cr 267.716†	84347.2	86255.2	[1000]	ug/L	08:46:06
3	Cu 324.752†	328978.7	330860.1	[1000]	ug/L	08:46:06
3	Mn 257.610†	851417.5	870899.2	[1000]	ug/L	08:46:00
3	Mo 202.031†	13173.1	13466.0	[1000]	ug/L	08:46:26
3	Ni 231.604†	37963.9	38744.7	[1000]	ug/L	08:46:06
3	P 214.914†	8131.1	8093.4	[5000]	ug/L	08:46:26
3	Pb 220.353†	7807.9	8052.4	[1000]	ug/L	08:46:26
3	S 181.975 Axial†	1389.6	1382.8	[2000]	ug/L	08:46:26
3	Sb 206.836†	2872.5	2897.6	[1000]	ug/L	08:46:26
3	Se 196.026†	1440.2	1496.0	[1000]	ug/L	08:46:26
3	Si 251.611†	147526.0	150417.7	[5000]	ug/L	08:46:06
3	Sn 189.927†	5308.9	5424.5	[1000]	ug/L	08:46:26
3	Ti 334.940†	604327.6	619779.4	[1000]	ug/L	08:46:06
3	Tl 190.801†	3026.4	3131.5	[1000]	ug/L	08:46:26
3	U 409.014†	30851.3	34553.6	[1000]	ug/L	08:46:06
3	V 292.402†	133616.4	138299.3	[1000]	ug/L	08:46:06
3	Zn 213.857†	100180.6	101812.8	[1000]	ug/L	08:46:06
3	SiO2†	147502.0	150372.2	[10695]	ug/L	08:46:41

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc. Units
Sc 361.383	845112.1	2575.15	0.30%	98.030 %
Sc Radial	4729.5	23.76	0.50%	98.4 %
Y 371.029	692717.2	2274.22	0.33%	96.937 %
Y RADIAL	4905.6	20.43	0.42%	98.10 %
Ag 328.068†	213105.4	46.42	0.02%	[1000] ug/L
Al 396.153Radial†	10630.0	47.11	0.44%	[10000] ug/L
As 188.979†	2206.0	9.07	0.41%	[1000] ug/L
B 249.677†	42220.2	120.67	0.29%	[1000] ug/L
Ba 233.527†	122687.8	364.75	0.30%	[1000] ug/L
Be 313.107†	2691415.6	10036.70	0.37%	[1000] ug/L
Ca 317.933Radial†	6100.2	34.82	0.57%	[10000] ug/L
Cd 226.502†	84229.0	263.30	0.31%	[1000] ug/L
Co 228.616†	45645.3	190.60	0.42%	[1000] ug/L
Cr 267.716†	86068.1	173.02	0.20%	[1000] ug/L
Cu 324.752†	331003.7	164.17	0.05%	[1000] ug/L
Fe 238.204 Radial†	1098.5	6.65	0.60%	[10000] ug/L
K 766.490 Radial†	56509.2	143.28	0.25%	[10000] ug/L

Mg 279.077 IEC†	288.8	1.73	0.60%	[10000]	ug/L
Mn 257.610†	870641.7	4096.52	0.47%	[1000]	ug/L
Mo 202.031†	13426.5	44.68	0.33%	[1000]	ug/L
Na 589.592 Radial†	32208.6	98.29	0.31%	[10000]	ug/L
Ni 231.604†	38655.1	82.53	0.21%	[1000]	ug/L
P 214.914†	8068.8	30.34	0.38%	[5000]	ug/L
Pb 220.353†	8044.7	48.99	0.61%	[1000]	ug/L
S 181.975 Axial†	1380.4	3.67	0.27%	[2000]	ug/L
Sb 206.836†	2893.3	6.89	0.24%	[1000]	ug/L
Se 196.026†	1489.8	5.47	0.37%	[1000]	ug/L
Si 251.611†	150159.4	250.07	0.17%	[5000]	ug/L
Sn 189.927†	5414.8	14.32	0.26%	[1000]	ug/L
Sr 421.552†	142024.7	387.43	0.27%	[1000]	ug/L
Ti 334.940†	619331.2	601.10	0.10%	[1000]	ug/L
Tl 190.801†	3129.1	7.36	0.24%	[1000]	ug/L
U 409.014†	34563.4	87.91	0.25%	[1000]	ug/L
V 292.402†	138102.1	224.94	0.16%	[1000]	ug/L
Zn 213.857†	101520.3	299.50	0.30%	[1000]	ug/L
SiO2†	150810.5	896.53	0.59%	[10695]	ug/L

Sequence No.: 5

Sample ID: S10

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 5

Date Collected: 2/11/2010 08:48:53

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Analysis Time
1	Sc Radial	4695.4	4695.4	97.7 %	08:51:07
1	Y RADIAL	4853.4	4853.4	97.05 %	08:51:07
1	Al 396.153Radial†	52499.6	53897.9	[50000] ug/L	08:50:46
1	Ca 317.933Radial†	29421.5	30103.4	[50000] ug/L	08:50:46
1	Fe 238.204 Radial†	2152.2	2191.8	[20000] ug/L	08:51:07
1	Mg 279.077 IEC†	1379.4	1411.7	[50000] ug/L	08:51:07
1	Na 589.592 Radial†	63880.6	66476.2	[20000] ug/L	08:50:46
1	Sc 361.383	861192.5	861192.5	99.895 %	08:52:04
1	Y 371.029	701296.9	701296.9	98.138 %	08:52:04
2	Sc Radial	4646.8	4646.8	96.7 %	08:51:32
2	Y RADIAL	4806.8	4806.8	96.12 %	08:51:32
2	Al 396.153Radial†	52103.7	54050.3	[50000] ug/L	08:51:12
2	Ca 317.933Radial†	29244.8	30235.6	[50000] ug/L	08:51:12
2	Fe 238.204 Radial†	2139.5	2201.7	[20000] ug/L	08:51:32
2	Mg 279.077 IEC†	1362.4	1409.0	[50000] ug/L	08:51:32
2	Na 589.592 Radial†	63493.3	66759.2	[20000] ug/L	08:51:12
2	Sc 361.383	847329.2	847329.2	98.287 %	08:52:09
2	Y 371.029	690150.1	690150.1	96.578 %	08:52:09
3	Sc Radial	4671.9	4671.9	97.2 %	08:51:57
3	Y RADIAL	4842.7	4842.7	96.84 %	08:51:57
3	Al 396.153Radial†	52096.6	53753.9	[50000] ug/L	08:51:37
3	Ca 317.933Radial†	29286.2	30115.9	[50000] ug/L	08:51:37
3	Fe 238.204 Radial†	2151.0	2201.7	[20000] ug/L	08:51:57
3	Mg 279.077 IEC†	1366.9	1406.0	[50000] ug/L	08:51:57
3	Na 589.592 Radial†	63513.3	66427.5	[20000] ug/L	08:51:37
3	Sc 361.383	854367.2	854367.2	99.104 %	08:52:15
3	Y 371.029	695943.9	695943.9	97.389 %	08:52:15

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib. Conc. Units
Sc 361.383	854296.3	6931.89	0.81%	99.095 %
Sc Radial	4671.4	24.29	0.52%	97.2 %
Y 371.029	695797.0	5574.82	0.80%	97.368 %
Y RADIAL	4834.3	24.41	0.51%	96.67 %
Al 396.153Radial†	53900.7	148.22	0.27%	[50000] ug/L
Ca 317.933Radial†	30151.6	72.95	0.24%	[50000] ug/L
Fe 238.204 Radial†	2198.4	5.71	0.26%	[20000] ug/L
Mg 279.077 IEC†	1408.9	2.86	0.20%	[50000] ug/L
Na 589.592 Radial†	66554.3	179.12	0.27%	[20000] ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	212.2	0.00000	0.999967	
Al 396.153Radial	3	Lin Thru 0	0.0	1.077	0.00000	0.999996	
As 188.979	3	Lin Thru 0	0.0	2.204	0.00000	0.999993	
B 249.677	3	Lin Thru 0	0.0	42.03	0.00000	0.999958	
Ba 233.527	3	Lin Thru 0	0.0	122.4	0.00000	0.999991	
Be 313.107	3	Lin Thru 0	0.0	2685	0.00000	0.999988	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.6033	0.00000	0.999997	
Cd 226.502	3	Lin Thru 0	0.0	84.11	0.00000	0.999995	
Co 228.616	3	Lin Thru 0	0.0	45.78	0.00000	0.999983	
Cr 267.716	3	Lin Thru 0	0.0	85.90	0.00000	0.999992	
Cu 324.752	3	Lin Thru 0	0.0	329.7	0.00000	0.999967	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.1099	0.00000	1.000000	
K 766.490 Radial	3	Lin Thru 0	0.0	5.665	0.00000	0.999988	

Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0282	0.00000	0.999982
Mn 257.610	3	Lin Thru 0	0.0	869.2	0.00000	0.999992
Mo 202.031	3	Lin Thru 0	0.0	13.35	0.00000	0.999941
Na 589.592 Radia	2	Lin Thru 0	0.0	3.306	0.00000	0.999916
Ni 231.604	3	Lin Thru 0	0.0	38.60	0.00000	0.999996
P 214.914	3	Lin Thru 0	0.0	1.607	0.00000	0.999965
Pb 220.353	3	Lin Thru 0	0.0	8.016	0.00000	0.999973
S 181.975 Axial	3	Lin Thru 0	0.0	0.6858	0.00000	0.999919
Sb 206.836	3	Lin Thru 0	0.0	2.869	0.00000	0.999859
Se 196.026	3	Lin Thru 0	0.0	1.484	0.00000	0.999969
Si 251.611	3	Lin Thru 0	0.0	29.90	0.00000	0.999960
Sn 189.927	3	Lin Thru 0	0.0	5.389	0.00000	0.999954
Sr 421.552	3	Lin Thru 0	0.0	142.6	0.00000	0.999970
Ti 334.940	3	Lin Thru 0	0.0	616.5	0.00000	0.999956
Tl 190.801	3	Lin Thru 0	0.0	3.121	0.00000	0.999986
U 409.014	3	Lin Thru 0	0.0	34.49	0.00000	0.999990
V 292.402	3	Lin Thru 0	0.0	137.7	0.00000	0.999984
Zn 213.857	3	Lin Thru 0	0.0	101.4	0.00000	0.999995
SiO2	3	Lin Thru 0	0.0	14.02	0.00000	0.999934

Sequence No.: 6

Sample ID: ICV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 9

Date Collected: 2/11/2010 08:54:26

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4905.6	4905.6	102 %		08:56:19
1	Y RADIAL	5074.8	5074.8	101.5 %		08:56:19
1	Al 396.153Radial†	5302.9	5347.8	4937.0 ug/L	4937.0 ppb	08:56:19
1	Ca 317.933Radial†	3082.5	3003.8	4978.6 ug/L	4978.6 ppb	08:56:39
1	Fe 238.204 Radial†	588.6	565.2	5158.2 ug/L	5158.2 ppb	08:56:39
1	K 766.490 Radial†	17137.1	13966.5	2461.9 ug/L	2461.9 ppb	08:56:19
1	Mg 279.077 IEC†	155.9	152.3	5398.3 ug/L	5398.3 ppb	08:56:39
1	Na 589.592 Radial†	7253.3	8185.8	2475.8 ug/L	2475.8 ppb	08:56:19
1	Sr 421.552†	76953.4	75402.4	528.77 ug/L	528.77 ppb	08:56:19
1	Sc 361.383	873788.1	873788.1	101.36 %		08:57:36
1	Y 371.029	717234.1	717234.1	100.37 %		08:57:36
1	Ag 328.068†	56636.5	55649.7	265.54 ug/L	265.54 ppb	08:57:36
1	As 188.979†	1022.6	1042.8	477.49 ug/L	477.49 ppb	08:57:56
1	B 249.677†	21580.4	21830.7	517.05 ug/L	517.05 ppb	08:57:36
1	Ba 233.527†	63501.3	62663.0	513.04 ug/L	513.04 ppb	08:57:36
1	Be 313.107†	707030.2	701906.9	262.60 ug/L	262.60 ppb	08:57:36
1	Cd 226.502†	41562.2	41217.8	489.92 ug/L	489.92 ppb	08:57:56
1	Co 228.616†	23689.4	23446.0	512.28 ug/L	512.28 ppb	08:57:56
1	Cr 267.716†	42742.3	42103.5	490.80 ug/L	490.80 ppb	08:57:36
1	Cu 324.752†	176399.1	168217.7	510.28 ug/L	510.28 ppb	08:57:36
1	Mn 257.610†	455363.7	448817.8	516.66 ug/L	516.66 ppb	08:57:36
1	Mo 202.031†	7358.7	7244.6	542.99 ug/L	542.99 ppb	08:57:56
1	Ni 231.604†	19796.8	19423.8	502.90 ug/L	502.90 ppb	08:57:56
1	P 214.914†	4305.1	4019.4	2402.0 ug/L	2402.0 ppb	08:57:56
1	Pb 220.353†	3992.1	4000.4	500.75 ug/L	500.75 ppb	08:57:56
1	S 181.975 Axial†	1769.3	1706.2	2487.1 ug/L	2487.1 ppb	08:57:56
1	Sb 206.836†	1509.3	1446.9	523.82 ug/L	523.82 ppb	08:57:56
1	Se 196.026†	3817.3	3788.3	2570.7 ug/L	2570.7 ppb	08:57:56
1	Si 251.611†	148189.5	145644.1	4864.9 ug/L	4864.9 ppb	08:57:36
1	Sn 189.927†	2959.8	2911.5	541.14 ug/L	541.14 ppb	08:57:56
1	Ti 334.940†	320077.4	317097.1	514.15 ug/L	514.15 ppb	08:57:36
1	Tl 190.801†	1634.7	1647.1	531.33 ug/L	531.33 ppb	08:57:56
1	U 409.014†	14498.9	17284.9	499.52 ug/L	499.52 ppb	08:57:36
1	V 292.402†	70050.0	70667.2	520.45 ug/L	520.45 ppb	08:57:36
1	Zn 213.857†	53831.7	52398.0	512.27 ug/L	512.27 ppb	08:57:36
1	SiO2†	145824.7	143290.0	10206 ug/L	10206 ppb	08:58:54
2	Sc Radial	4811.9	4811.9	100 %		08:56:44
2	Y RADIAL	4975.9	4975.9	99.50 %		08:56:44
2	Al 396.153Radial†	5291.0	5437.1	5020.0 ug/L	5020.0 ppb	08:56:44
2	Ca 317.933Radial†	3050.9	3031.0	5023.7 ug/L	5023.7 ppb	08:57:04
2	Fe 238.204 Radial†	577.7	565.6	5161.6 ug/L	5161.6 ppb	08:57:04
2	K 766.490 Radial†	17103.1	14259.5	2513.6 ug/L	2513.6 ppb	08:56:44
2	Mg 279.077 IEC†	152.7	152.1	5391.7 ug/L	5391.7 ppb	08:57:04
2	Na 589.592 Radial†	7234.7	8305.6	2512.0 ug/L	2512.0 ppb	08:56:44
2	Sr 421.552†	76606.4	76524.0	536.64 ug/L	536.64 ppb	08:56:44
2	Sc 361.383	874400.4	874400.4	101.43 %		08:58:02
2	Y 371.029	716650.7	716650.7	100.29 %		08:58:02
2	Ag 328.068†	56642.2	55616.2	265.39 ug/L	265.39 ppb	08:58:02
2	As 188.979†	1029.0	1048.4	480.04 ug/L	480.04 ppb	08:58:22
2	B 249.677†	21625.1	21859.8	517.75 ug/L	517.75 ppb	08:58:02
2	Ba 233.527†	63717.7	62832.5	514.42 ug/L	514.42 ppb	08:58:02
2	Be 313.107†	708671.1	703036.1	263.03 ug/L	263.03 ppb	08:58:02
2	Cd 226.502†	41421.0	41049.9	487.93 ug/L	487.93 ppb	08:58:22
2	Co 228.616†	23660.7	23401.4	511.30 ug/L	511.30 ppb	08:58:22
2	Cr 267.716†	42839.7	42170.0	491.57 ug/L	491.57 ppb	08:58:02
2	Cu 324.752†	176507.0	168202.2	510.24 ug/L	510.24 ppb	08:58:02
2	Mn 257.610†	456480.6	449604.3	517.57 ug/L	517.57 ppb	08:58:02
2	Mo 202.031†	7331.5	7212.8	540.61 ug/L	540.61 ppb	08:58:22
2	Ni 231.604†	19758.4	19372.3	501.57 ug/L	501.57 ppb	08:58:22

2	P 214.914†	4308.7	4020.0	2402.4 ug/L	2402.4 ppb	08:58:22
2	Pb 220.353†	3972.4	3978.2	498.00 ug/L	498.00 ppb	08:58:22
2	S 181.975 Axial†	1774.7	1710.3	2493.1 ug/L	2493.1 ppb	08:58:22
2	Sb 206.836†	1488.2	1425.1	516.11 ug/L	516.11 ppb	08:58:22
2	Se 196.026†	3809.7	3778.2	2564.0 ug/L	2564.0 ppb	08:58:22
2	Si 251.611†	148461.9	145810.2	4870.5 ug/L	4870.5 ppb	08:58:02
2	Sn 189.927†	2945.4	2895.2	538.14 ug/L	538.14 ppb	08:58:22
2	Ti 334.940†	320677.0	317467.1	514.76 ug/L	514.76 ppb	08:58:02
2	Tl 190.801†	1622.3	1633.7	527.05 ug/L	527.05 ppb	08:58:22
2	U 409.014†	14225.6	17005.4	491.41 ug/L	491.41 ppb	08:58:02
2	V 292.402†	70052.8	70621.6	520.07 ug/L	520.07 ppb	08:58:02
2	Zn 213.857†	53923.1	52451.0	512.80 ug/L	512.80 ppb	08:58:02
2	SiO2†	147354.2	144697.2	10307 ug/L	10307 ppb	08:58:59
3	Sc Radial	4748.9	4748.9	98.8 %		08:57:09
3	Y RADIAL	4894.7	4894.7	97.88 %		08:57:09
3	Al 396.153Radial†	5232.4	5447.8	5029.8 ug/L	5029.8 ppb	08:57:09
3	Ca 317.933Radial†	3082.4	3103.3	5143.5 ug/L	5143.5 ppb	08:57:29
3	Fe 238.204 Radial†	583.7	579.3	5286.2 ug/L	5286.2 ppb	08:57:29
3	K 766.490 Radial†	16918.7	14299.5	2520.6 ug/L	2520.6 ppb	08:57:09
3	Mg 279.077 IEC†	155.2	156.7	5554.2 ug/L	5554.2 ppb	08:57:29
3	Na 589.592 Radial†	7120.5	8285.9	2506.1 ug/L	2506.1 ppb	08:57:09
3	Sr 421.552†	75948.0	76872.9	539.08 ug/L	539.08 ppb	08:57:09
3	Sc 361.383	869718.4	869718.4	100.88 %		08:58:28
3	Y 371.029	712306.4	712306.4	99.679 %		08:58:28
3	Ag 328.068†	56276.0	55553.9	265.13 ug/L	265.13 ppb	08:58:28
3	As 188.979†	1024.1	1049.0	480.31 ug/L	480.31 ppb	08:58:48
3	B 249.677†	21376.6	21728.2	514.59 ug/L	514.59 ppb	08:58:28
3	Ba 233.527†	63178.6	62636.4	512.82 ug/L	512.82 ppb	08:58:28
3	Be 313.107†	700526.7	698724.5	261.42 ug/L	261.42 ppb	08:58:28
3	Cd 226.502†	41512.2	41360.2	491.61 ug/L	491.61 ppb	08:58:48
3	Co 228.616†	23706.4	23572.3	515.04 ug/L	515.04 ppb	08:58:48
3	Cr 267.716†	42447.0	42008.1	489.68 ug/L	489.68 ppb	08:58:28
3	Cu 324.752†	175323.2	167965.5	509.52 ug/L	509.52 ppb	08:58:28
3	Mn 257.610†	453146.5	448722.3	516.56 ug/L	516.56 ppb	08:58:28
3	Mo 202.031†	7356.9	7276.8	545.42 ug/L	545.42 ppb	08:58:48
3	Ni 231.604†	19792.0	19510.5	505.14 ug/L	505.14 ppb	08:58:48
3	P 214.914†	4302.8	4037.0	2413.1 ug/L	2413.1 ppb	08:58:48
3	Pb 220.353†	3982.1	4008.9	501.83 ug/L	501.83 ppb	08:58:48
3	S 181.975 Axial†	1779.6	1724.6	2514.0 ug/L	2514.0 ppb	08:58:48
3	Sb 206.836†	1495.1	1439.8	521.41 ug/L	521.41 ppb	08:58:48
3	Se 196.026†	3808.7	3797.5	2577.4 ug/L	2577.4 ppb	08:58:48
3	Si 251.611†	147504.4	145649.0	4865.0 ug/L	4865.0 ppb	08:58:28
3	Sn 189.927†	2952.3	2917.8	542.33 ug/L	542.33 ppb	08:58:48
3	Ti 334.940†	318577.8	317088.3	514.14 ug/L	514.14 ppb	08:58:28
3	Tl 190.801†	1644.0	1663.8	536.68 ug/L	536.68 ppb	08:58:48
3	U 409.014†	14423.0	17276.6	499.27 ug/L	499.27 ppb	08:58:28
3	V 292.402†	69539.9	70484.9	519.15 ug/L	519.15 ppb	08:58:28
3	Zn 213.857†	53523.5	52341.0	511.67 ug/L	511.67 ppb	08:58:28
3	SiO2†	146121.4	144257.4	10275 ug/L	10275 ppb	08:59:04

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	872635.6	101.22 %	0.295			0.29%
Sc Radial	4822.2	100 %	1.6			1.64%
Y 371.029	715397.0	100.11 %	0.377			0.38%
Y RADIAL	4981.8	99.62 %	1.803			1.81%
Ag 328.068†	55606.6	265.35 ug/L	0.210	265.35 ppb	0.210	0.08%
QC value within limits for Ag 328.068 Recovery = 106.14%						
Al 396.153Radial†	5410.9	4995.6 ug/L	50.98	4995.6 ppb	50.98	1.02%
QC value within limits for Al 396.153Radial Recovery = 99.91%						
As 188.979†	1046.7	479.28 ug/L	1.556	479.28 ppb	1.556	0.32%
QC value within limits for As 188.979 Recovery = 95.86%						
B 249.677†	21806.2	516.46 ug/L	1.661	516.46 ppb	1.661	0.32%
QC value within limits for B 249.677 Recovery = 103.29%						
Ba 233.527†	62710.6	513.43 ug/L	0.868	513.43 ppb	0.868	0.17%
QC value within limits for Ba 233.527 Recovery = 102.69%						
Be 313.107†	701222.5	262.35 ug/L	0.833	262.35 ppb	0.833	0.32%
QC value within limits for Be 313.107 Recovery = 104.94%						
Ca 317.933Radial†	3046.0	5048.6 ug/L	85.23	5048.6 ppb	85.23	1.69%

QC value within limits for Ca 317.933 Radial Recovery = 100.97%							
Cd 226.502†	41209.3	489.82 ug/L	1.842	489.82 ppb	1.842	0.38%	
QC value within limits for Cd 226.502 Recovery = 97.96%							
Co 228.616†	23473.2	512.88 ug/L	1.941	512.88 ppb	1.941	0.38%	
QC value within limits for Co 228.616 Recovery = 102.58%							
Cr 267.716†	42093.9	490.68 ug/L	0.948	490.68 ppb	0.948	0.19%	
QC value within limits for Cr 267.716 Recovery = 98.14%							
Cu 324.752†	168128.5	510.01 ug/L	0.426	510.01 ppb	0.426	0.08%	
QC value within limits for Cu 324.752 Recovery = 102.00%							
Fe 238.204 Radial†	570.0	5202.0 ug/L	72.97	5202.0 ppb	72.97	1.40%	
QC value within limits for Fe 238.204 Radial Recovery = 104.04%							
K 766.490 Radial†	14175.2	2498.7 ug/L	32.06	2498.7 ppb	32.06	1.28%	
QC value within limits for K 766.490 Radial Recovery = 99.95%							
Mg 279.077 IEC†	153.7	5448.0 ug/L	91.98	5448.0 ppb	91.98	1.69%	
QC value within limits for Mg 279.077 IEC Recovery = 108.96%							
Mn 257.610†	449048.1	516.93 ug/L	0.555	516.93 ppb	0.555	0.11%	
QC value within limits for Mn 257.610 Recovery = 103.39%							
Mo 202.031†	7244.8	543.01 ug/L	2.403	543.01 ppb	2.403	0.44%	
QC value within limits for Mo 202.031 Recovery = 108.60%							
Na 589.592 Radial†	8259.1	2498.0 ug/L	19.43	2498.0 ppb	19.43	0.78%	
QC value within limits for Na 589.592 Radial Recovery = 99.92%							
Ni 231.604†	19435.5	503.20 ug/L	1.808	503.20 ppb	1.808	0.36%	
QC value within limits for Ni 231.604 Recovery = 100.64%							
P 214.914†	4025.5	2405.9 ug/L	6.28	2405.9 ppb	6.28	0.26%	
QC value within limits for P 214.914 Recovery = 96.23%							
Pb 220.353†	3995.8	500.20 ug/L	1.976	500.20 ppb	1.976	0.40%	
QC value within limits for Pb 220.353 Recovery = 100.04%							
S 181.975 Axial†	1713.7	2498.1 ug/L	14.09	2498.1 ppb	14.09	0.56%	
QC value within limits for S 181.975 Axial Recovery = 99.92%							
Sb 206.836†	1437.3	520.45 ug/L	3.943	520.45 ppb	3.943	0.76%	
QC value within limits for Sb 206.836 Recovery = 104.09%							
Se 196.026†	3788.0	2570.7 ug/L	6.70	2570.7 ppb	6.70	0.26%	
QC value within limits for Se 196.026 Recovery = 102.83%							
Si 251.611†	145701.1	4866.8 ug/L	3.19	4866.8 ppb	3.19	0.07%	
QC value within limits for Si 251.611 Recovery = 97.34%							
Sn 189.927†	2908.2	540.54 ug/L	2.164	540.54 ppb	2.164	0.40%	
QC value within limits for Sn 189.927 Recovery = 108.11%							
Sr 421.552†	76266.4	534.83 ug/L	5.388	534.83 ppb	5.388	1.01%	
QC value within limits for Sr 421.552 Recovery = 106.97%							
Ti 334.940†	317217.5	514.35 ug/L	0.353	514.35 ppb	0.353	0.07%	
QC value within limits for Ti 334.940 Recovery = 102.87%							
Tl 190.801†	1648.2	531.69 ug/L	4.824	531.69 ppb	4.824	0.91%	
QC value within limits for Tl 190.801 Recovery = 106.34%							
U 409.014†	17189.0	496.73 ug/L	4.609	496.73 ppb	4.609	0.93%	
QC value within limits for U 409.014 Recovery = 99.35%							
V 292.402†	70591.2	519.89 ug/L	0.671	519.89 ppb	0.671	0.13%	
QC value within limits for V 292.402 Recovery = 103.98%							
Zn 213.857†	52396.7	512.24 ug/L	0.563	512.24 ppb	0.563	0.11%	
QC value within limits for Zn 213.857 Recovery = 102.45%							
SiO2†	144081.5	10263 ug/L	51.4	10263 ppb	51.4	0.50%	
QC value within limits for SiO2 Recovery = 95.96%							

All analyte(s) passed QC.

Sequence No.: 7

Sample ID: ICB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 10

Date Collected: 2/11/2010 09:01:15

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4463.4	4463.4	92.9 %		09:03:28
1	Y RADIAL	4975.7	4975.7	99.50 %		09:03:08
1	Al 396.153Radial†	-156.5	-16.9	-15.754 ug/L	-15.754 ppb	09:03:08
1	Ca 317.933Radial†	11.9	-3.9	-6.4667 ug/L	-6.4667 ppb	09:03:28
1	Fe 238.204 Radial†	10.6	-0.1	-0.8067 ug/L	-0.8067 ppb	09:03:28
1	K 766.490 Radial†	2826.0	217.8	38.456 ug/L	38.456 ppb	09:03:08
1	Mg 279.077 IEC†	0.2	-0.2	-6.2996 ug/L	-6.2996 ppb	09:03:28
1	Na 589.592 Radial†	-1053.8	-56.3	-17.043 ug/L	-17.043 ppb	09:03:08
1	Sr 421.552†	-24.9	-28.9	-0.2027 ug/L	-0.2027 ppb	09:03:08
1	Sc 361.383	857807.6	857807.6	99.503 %		09:04:25
1	Y 371.029	712009.8	712009.8	99.637 %		09:04:25
1	Ag 328.068†	317.2	90.0	0.4255 ug/L	0.4255 ppb	09:04:25
1	As 188.979†	-27.3	6.4	2.9004 ug/L	2.9004 ppb	09:04:45
1	B 249.677†	-220.3	317.7	7.5577 ug/L	7.5577 ppb	09:04:45
1	Ba 233.527†	-9.1	2.4	0.0201 ug/L	0.0201 ppb	09:04:45
1	Be 313.107†	-4212.6	105.0	0.0392 ug/L	0.0392 ppb	09:04:25
1	Cd 226.502†	-191.9	19.1	0.2266 ug/L	0.2266 ppb	09:04:45
1	Co 228.616†	-69.7	3.6	0.0807 ug/L	0.0807 ppb	09:04:45
1	Cr 267.716†	73.5	7.1	0.0833 ug/L	0.0833 ppb	09:04:45
1	Cu 324.752†	5711.7	-80.5	-0.2432 ug/L	-0.2432 ppb	09:04:25
1	Mn 257.610†	467.4	17.8	0.0207 ug/L	0.0207 ppb	09:04:45
1	Mo 202.031†	24.4	9.0	0.6720 ug/L	0.6720 ppb	09:04:45
1	Ni 231.604†	118.2	10.8	0.2797 ug/L	0.2797 ppb	09:04:45
1	P 214.914†	238.1	11.2	7.0228 ug/L	7.0228 ppb	09:04:45
1	Pb 220.353†	-52.2	9.2	1.1474 ug/L	1.1474 ppb	09:04:45
1	S 181.975 Axial†	38.2	-0.9	-1.3462 ug/L	-1.3462 ppb	09:04:45
1	Sb 206.836†	42.0	0.0	0.0608 ug/L	0.0608 ppb	09:04:45
1	Se 196.026†	-11.6	10.4	7.0202 ug/L	7.0202 ppb	09:04:45
1	Si 251.611†	592.7	33.4	1.1087 ug/L	1.1087 ppb	09:04:45
1	Sn 189.927†	18.7	10.1	1.8668 ug/L	1.8668 ppb	09:04:45
1	Ti 334.940†	-1285.2	11.5	0.0191 ug/L	0.0191 ppb	09:04:25
1	Tl 190.801†	-32.7	1.3	0.4275 ug/L	0.4275 ppb	09:04:45
1	U 409.014†	-3025.0	-60.0	-1.7407 ug/L	-1.7407 ppb	09:04:25
1	V 292.402†	-1534.5	12.5	0.0969 ug/L	0.0969 ppb	09:04:25
1	Zn 213.857†	734.2	24.6	0.2411 ug/L	0.2411 ppb	09:04:45
1	SiO2†	597.5	17.4	1.2203 ug/L	1.2203 ppb	09:05:41
2	Sc Radial	4447.0	4447.0	92.5 %		09:03:53
2	Y RADIAL	5012.0	5012.0	100.2 %		09:03:33
2	Al 396.153Radial†	-160.5	-21.9	-20.358 ug/L	-20.358 ppb	09:03:33
2	Ca 317.933Radial†	8.4	-7.6	-12.558 ug/L	-12.558 ppb	09:03:53
2	Fe 238.204 Radial†	11.4	0.8	7.5755 ug/L	7.5755 ppb	09:03:53
2	K 766.490 Radial†	2879.4	286.8	50.636 ug/L	50.636 ppb	09:03:33
2	Mg 279.077 IEC†	2.9	2.8	98.302 ug/L	98.302 ppb	09:03:53
2	Na 589.592 Radial†	-1083.3	-92.5	-27.971 ug/L	-27.971 ppb	09:03:33
2	Sr 421.552†	7.8	6.4	0.0448 ug/L	0.0448 ppb	09:03:33
2	Sc 361.383	852551.0	852551.0	98.893 %		09:04:50
2	Y 371.029	706796.0	706796.0	98.908 %		09:04:50
2	Ag 328.068†	303.4	78.0	0.3677 ug/L	0.3677 ppb	09:04:50
2	As 188.979†	-27.4	6.2	2.8015 ug/L	2.8015 ppb	09:05:10
2	B 249.677†	-267.0	269.1	6.4009 ug/L	6.4009 ppb	09:05:10
2	Ba 233.527†	-2.6	8.9	0.0730 ug/L	0.0730 ppb	09:05:10
2	Be 313.107†	-4306.5	-16.0	-0.0057 ug/L	-0.0057 ppb	09:04:50
2	Cd 226.502†	-200.8	8.9	0.1051 ug/L	0.1051 ppb	09:05:10
2	Co 228.616†	-76.7	-3.9	-0.0842 ug/L	-0.0842 ppb	09:05:10
2	Cr 267.716†	55.4	-10.8	-0.1268 ug/L	-0.1268 ppb	09:05:10
2	Cu 324.752†	5786.9	30.9	0.0926 ug/L	0.0926 ppb	09:04:50
2	Mn 257.610†	465.2	18.5	0.0180 ug/L	0.0180 ppb	09:05:10
2	Mo 202.031†	17.5	2.1	0.1589 ug/L	0.1589 ppb	09:05:10
2	Ni 231.604†	99.4	-7.5	-0.1939 ug/L	-0.1939 ppb	09:05:10

2	P 214.914†	221.7	-3.9	-2.4313 ug/L	-2.4313 ppb	09:05:10
2	Pb 220.353†	-56.7	4.4	0.5401 ug/L	0.5401 ppb	09:05:10
2	S 181.975 Axial†	40.0	1.1	1.6221 ug/L	1.6221 ppb	09:05:10
2	Sb 206.836†	31.7	-10.0	-3.5083 ug/L	-3.5083 ppb	09:05:10
2	Se 196.026†	-16.2	5.7	3.8786 ug/L	3.8786 ppb	09:05:10
2	Si 251.611†	585.5	29.8	0.9939 ug/L	0.9939 ppb	09:05:10
2	Sn 189.927†	5.5	-3.1	-0.5828 ug/L	-0.5828 ppb	09:05:10
2	Ti 334.940†	-1211.4	78.2	0.1160 ug/L	0.1160 ppb	09:04:50
2	Tl 190.801†	-27.7	6.2	1.9824 ug/L	1.9824 ppb	09:05:10
2	U 409.014†	-2853.3	94.8	2.7475 ug/L	2.7475 ppb	09:04:50
2	V 292.402†	-1545.4	-8.0	-0.0500 ug/L	-0.0500 ppb	09:04:50
2	Zn 213.857†	713.3	8.1	0.0796 ug/L	0.0796 ppb	09:05:10
2	SiO2†	598.4	21.9	1.5600 ug/L	1.5600 ppb	09:05:46
3	Sc Radial	4475.5	4475.5	93.1 %		09:04:18
3	Y RADIAL	5015.8	5015.8	100.3 %		09:03:58
3	Al 396.153Radial†	-137.6	3.8	3.5080 ug/L	3.5080 ppb	09:03:58
3	Ca 317.933Radial†	18.6	3.2	5.3351 ug/L	5.3351 ppb	09:04:18
3	Fe 238.204 Radial†	12.0	1.4	12.650 ug/L	12.650 ppb	09:04:18
3	K 766.490 Radial†	2880.9	268.5	47.410 ug/L	47.410 ppb	09:03:58
3	Mg 279.077 IEC†	1.0	0.6	22.919 ug/L	22.919 ppb	09:04:18
3	Na 589.592 Radial†	-1130.6	-135.8	-41.067 ug/L	-41.067 ppb	09:03:58
3	Sr 421.552†	-25.0	-28.9	-0.2030 ug/L	-0.2030 ppb	09:03:58
3	Sc 361.383	861208.5	861208.5	99.897 %		09:05:15
3	Y 371.029	713423.0	713423.0	99.835 %		09:05:15
3	Ag 328.068†	278.9	50.4	0.2438 ug/L	0.2438 ppb	09:05:15
3	As 188.979†	-15.0	18.9	8.5754 ug/L	8.5754 ppb	09:05:36
3	B 249.677†	-286.4	252.4	6.0010 ug/L	6.0010 ppb	09:05:36
3	Ba 233.527†	2.0	13.6	0.1121 ug/L	0.1121 ppb	09:05:36
3	Be 313.107†	-4302.7	31.6	0.0116 ug/L	0.0116 ppb	09:05:15
3	Cd 226.502†	-200.1	11.6	0.1370 ug/L	0.1370 ppb	09:05:36
3	Co 228.616†	-61.8	11.9	0.2603 ug/L	0.2603 ppb	09:05:36
3	Cr 267.716†	73.8	7.1	0.0838 ug/L	0.0838 ppb	09:05:36
3	Cu 324.752†	5825.9	11.2	0.0349 ug/L	0.0349 ppb	09:05:15
3	Mn 257.610†	475.0	23.6	0.0275 ug/L	0.0275 ppb	09:05:36
3	Mo 202.031†	18.9	3.4	0.2523 ug/L	0.2523 ppb	09:05:36
3	Ni 231.604†	112.3	4.4	0.1144 ug/L	0.1144 ppb	09:05:36
3	P 214.914†	228.8	1.0	0.6167 ug/L	0.6167 ppb	09:05:36
3	Pb 220.353†	-60.4	1.3	0.1626 ug/L	0.1626 ppb	09:05:36
3	S 181.975 Axial†	44.2	4.9	7.1398 ug/L	7.1398 ppb	09:05:36
3	Sb 206.836†	38.4	-3.7	-1.2850 ug/L	-1.2850 ppb	09:05:36
3	Se 196.026†	-15.1	7.0	4.7421 ug/L	4.7421 ppb	09:05:36
3	Si 251.611†	586.3	24.6	0.8199 ug/L	0.8199 ppb	09:05:36
3	Sn 189.927†	12.2	3.5	0.6598 ug/L	0.6598 ppb	09:05:36
3	Ti 334.940†	-1333.3	-31.5	-0.0520 ug/L	-0.0520 ppb	09:05:15
3	Tl 190.801†	-25.1	9.1	2.9150 ug/L	2.9150 ppb	09:05:36
3	U 409.014†	-2998.1	-21.1	-0.6147 ug/L	-0.6147 ppb	09:05:15
3	V 292.402†	-1496.3	56.8	0.4134 ug/L	0.4134 ppb	09:05:15
3	Zn 213.857†	712.6	0.1	-0.0016 ug/L	-0.0016 ppb	09:05:36
3	SiO2†	614.9	32.4	2.3073 ug/L	2.3073 ppb	09:05:51

Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	857189.0	99.431 %		0.5059			0.51%
Sc Radial	4462.0	92.8 %		0.30			0.32%
Y 371.029	710743.0	99.460 %		0.4884			0.49%
Y RADIAL	5001.2	100.0 %		0.44			0.44%
Ag 328.068†	72.8	0.3457 ug/L		0.09286	0.3457 ppb	0.09286	26.86%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	-11.7	-10.868 ug/L		12.6609	-10.868 ppb	12.6609	116.50%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	10.5	4.7591 ug/L		3.30538	4.7591 ppb	3.30538	69.45%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	279.7	6.6532 ug/L		0.80844	6.6532 ppb	0.80844	12.15%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	8.3	0.0684 ug/L		0.04618	0.0684 ppb	0.04618	67.55%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	40.2	0.0151 ug/L		0.02261	0.0151 ppb	0.02261	150.21%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	-2.8	-4.5632 ug/L		9.09720	-4.5632 ppb	9.09720	199.36%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated							
Cd	226.502†	13.2	0.1563 ug/L	0.06300	0.1563 ppb	0.06300	40.32%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co	228.616†	3.9	0.0856 ug/L	0.17231	0.0856 ppb	0.17231	201.24%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr	267.716†	1.1	0.0135 ug/L	0.12144	0.0135 ppb	0.12144	902.69%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	-12.8	-0.0386 ug/L	0.17956	-0.0386 ppb	0.17956	465.74%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	0.7	6.4729 ug/L	6.79576	6.4729 ppb	6.79576	104.99%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	257.7	45.501 ug/L	6.3105	45.501 ppb	6.3105	13.87%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	1.1	38.307 ug/L	53.9719	38.307 ppb	53.9719	140.89%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	20.0	0.0221 ug/L	0.00489	0.0221 ppb	0.00489	22.17%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	4.8	0.3611 ug/L	0.27332	0.3611 ppb	0.27332	75.69%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	-94.9	-28.694 ug/L	12.0284	-28.694 ppb	12.0284	41.92%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	2.6	0.0667 ug/L	0.24039	0.0667 ppb	0.24039	360.32%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	2.8	1.7361 ug/L	4.82541	1.7361 ppb	4.82541	277.95%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	5.0	0.6167 ug/L	0.49687	0.6167 ppb	0.49687	80.57%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	1.7	2.4719 ug/L	4.30637	2.4719 ppb	4.30637	174.21%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	-4.6	-1.5775 ug/L	1.80244	-1.5775 ppb	1.80244	114.26%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	7.7	5.2136 ug/L	1.62300	5.2136 ppb	1.62300	31.13%
QC value within limits for Se 196.026 Recovery = Not calculated							
Si	251.611†	29.3	0.9742 ug/L	0.14539	0.9742 ppb	0.14539	14.92%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	3.5	0.6479 ug/L	1.22488	0.6479 ppb	1.22488	189.05%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	-17.2	-0.1203 ug/L	0.14301	-0.1203 ppb	0.14301	118.85%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	19.4	0.0277 ug/L	0.08430	0.0277 ppb	0.08430	304.33%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	5.5	1.7750 ug/L	1.25664	1.7750 ppb	1.25664	70.80%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	4.5	0.1307 ug/L	2.33507	0.1307 ppb	2.33507	>999.9%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	20.4	0.1534 ug/L	0.23680	0.1534 ppb	0.23680	154.34%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	10.9	0.1064 ug/L	0.12355	0.1064 ppb	0.12355	116.12%
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†		23.9	1.6959 ug/L	0.55610	1.6959 ppb	0.55610	32.79%
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: 2/11/2010 09:08:03

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4822.5	4822.5	100 %		09:09:56
1	Y RADIAL	5023.6	5023.6	100.5 %		09:09:56
1	Al 396.153Radial†	60.8	212.2	196.44 ug/L	196.44 ppb	09:09:56
1	Ca 317.933Radial†	140.1	122.9	203.75 ug/L	203.75 ppb	09:10:16
1	Fe 238.204 Radial†	22.7	11.2	101.69 ug/L	101.69 ppb	09:10:16
1	K 766.490 Radial†	3634.0	796.6	140.40 ug/L	140.40 ppb	09:09:56
1	Mg 279.077 IEC†	10.4	9.9	351.66 ug/L	351.66 ppb	09:10:16
1	Na 589.592 Radial†	-48.1	1030.5	311.68 ug/L	311.68 ppb	09:09:56
1	Sr 421.552†	720.1	715.6	5.0172 ug/L	5.0172 ppb	09:09:56
1	Sc 361.383	845854.5	845854.5	98.116 %		09:11:13
1	Y 371.029	711995.2	711995.2	99.635 %		09:11:13
1	Ag 328.068†	1392.8	1190.8	5.6181 ug/L	5.6181 ppb	09:11:13
1	As 188.979†	38.4	73.0	33.161 ug/L	33.161 ppb	09:11:33
1	B 249.677†	1668.3	2239.4	53.244 ug/L	53.244 ppb	09:11:13
1	Ba 233.527†	607.3	630.6	5.1636 ug/L	5.1636 ppb	09:11:33
1	Be 313.107†	8856.1	13364.9	4.9893 ug/L	4.9893 ppb	09:11:13
1	Cd 226.502†	217.7	433.8	5.1609 ug/L	5.1609 ppb	09:11:33
1	Co 228.616†	159.1	235.9	5.1655 ug/L	5.1655 ppb	09:11:33
1	Cr 267.716†	478.1	420.5	4.8831 ug/L	4.8831 ppb	09:11:33
1	Cu 324.752†	9191.8	3547.5	10.737 ug/L	10.737 ppb	09:11:13
1	Mn 257.610†	9505.9	9236.5	10.622 ug/L	10.622 ppb	09:11:13
1	Mo 202.031†	154.9	142.3	10.670 ug/L	10.670 ppb	09:11:33
1	Ni 231.604†	298.0	195.7	5.0674 ug/L	5.0674 ppb	09:11:33
1	P 214.914†	465.2	246.1	151.07 ug/L	151.07 ppb	09:11:33
1	Pb 220.353†	24.8	87.0	10.907 ug/L	10.907 ppb	09:11:33
1	S 181.975 Axial†	105.7	68.4	99.701 ug/L	99.701 ppb	09:11:33
1	Sb 206.836†	68.4	27.6	10.005 ug/L	10.005 ppb	09:11:33
1	Se 196.026†	30.6	53.3	36.307 ug/L	36.307 ppb	09:11:33
1	Si 251.611†	3421.7	2925.2	97.711 ug/L	97.711 ppb	09:11:33
1	Sn 189.927†	69.3	62.0	11.534 ug/L	11.534 ppb	09:11:33
1	Ti 334.940†	1750.6	3087.4	4.9811 ug/L	4.9811 ppb	09:11:13
1	Tl 190.801†	36.1	71.0	22.819 ug/L	22.819 ppb	09:11:33
1	U 409.014†	-1119.5	1839.1	53.304 ug/L	53.304 ppb	09:11:13
1	V 292.402†	-876.1	661.7	5.0428 ug/L	5.0428 ppb	09:11:13
1	Zn 213.857†	1733.3	1053.3	10.330 ug/L	10.330 ppb	09:11:33
1	SiO2†	3516.5	3000.9	213.77 ug/L	213.77 ppb	09:12:29
2	Sc Radial	4686.9	4686.9	97.5 %		09:10:21
2	Y RADIAL	4883.4	4883.4	97.65 %		09:10:21
2	Al 396.153Radial†	45.9	198.7	183.91 ug/L	183.91 ppb	09:10:21
2	Ca 317.933Radial†	135.0	121.8	201.83 ug/L	201.83 ppb	09:10:41
2	Fe 238.204 Radial†	21.2	10.3	93.435 ug/L	93.435 ppb	09:10:41
2	K 766.490 Radial†	3692.7	961.6	169.54 ug/L	169.54 ppb	09:10:21
2	Mg 279.077 IEC†	10.7	10.6	375.58 ug/L	375.58 ppb	09:10:41
2	Na 589.592 Radial†	-66.5	1010.3	305.56 ug/L	305.56 ppb	09:10:21
2	Sr 421.552†	705.2	721.2	5.0561 ug/L	5.0561 ppb	09:10:21
2	Sc 361.383	843797.3	843797.3	97.878 %		09:11:38
2	Y 371.029	708306.1	708306.1	99.119 %		09:11:38
2	Ag 328.068†	1414.5	1216.4	5.7439 ug/L	5.7439 ppb	09:11:38
2	As 188.979†	36.6	71.2	32.359 ug/L	32.359 ppb	09:11:58
2	B 249.677†	1656.1	2231.0	53.046 ug/L	53.046 ppb	09:11:38
2	Ba 233.527†	605.4	630.1	5.1602 ug/L	5.1602 ppb	09:11:58
2	Be 313.107†	8754.4	13282.9	4.9592 ug/L	4.9592 ppb	09:11:38
2	Cd 226.502†	222.3	439.0	5.2221 ug/L	5.2221 ppb	09:11:58
2	Co 228.616†	155.9	233.0	5.0992 ug/L	5.0992 ppb	09:11:58
2	Cr 267.716†	511.4	455.8	5.2970 ug/L	5.2970 ppb	09:11:58
2	Cu 324.752†	9154.0	3531.8	10.693 ug/L	10.693 ppb	09:11:38
2	Mn 257.610†	9361.9	9113.0	10.479 ug/L	10.479 ppb	09:11:38
2	Mo 202.031†	142.1	129.7	9.7192 ug/L	9.7192 ppb	09:11:58
2	Ni 231.604†	313.3	212.1	5.4916 ug/L	5.4916 ppb	09:11:58

2	P 214.914†	470.4	252.5	155.07 ug/L	155.07 ppb	09:11:58
2	Pb 220.353†	11.7	73.7	9.2442 ug/L	9.2442 ppb	09:11:58
2	S 181.975 Axial†	106.5	69.5	101.24 ug/L	101.24 ppb	09:11:58
2	Sb 206.836†	54.4	13.4	5.0308 ug/L	5.0308 ppb	09:11:58
2	Se 196.026†	29.1	51.9	35.283 ug/L	35.283 ppb	09:11:58
2	Si 251.611†	3426.7	2938.7	98.177 ug/L	98.177 ppb	09:11:58
2	Sn 189.927†	64.1	56.8	10.576 ug/L	10.576 ppb	09:11:58
2	Ti 334.940†	1840.2	3183.3	5.1376 ug/L	5.1376 ppb	09:11:38
2	Tl 190.801†	31.2	66.0	21.222 ug/L	21.222 ppb	09:11:58
2	U 409.014†	-1373.8	1576.5	45.691 ug/L	45.691 ppb	09:11:38
2	V 292.402†	-815.8	721.2	5.4482 ug/L	5.4482 ppb	09:11:38
2	Zn 213.857†	1742.6	1067.1	10.464 ug/L	10.464 ppb	09:11:58
2	SiO2†	3498.1	2990.8	213.07 ug/L	213.07 ppb	09:12:34
3	Sc Radial	4965.1	4965.1	103 %		09:10:46
3	Y RADIAL	5174.6	5174.6	103.5 %		09:10:46
3	Al 396.153Radial†	76.0	225.2	208.49 ug/L	208.49 ppb	09:10:46
3	Ca 317.933Radial†	141.0	119.8	198.50 ug/L	198.50 ppb	09:11:06
3	Fe 238.204 Radial†	19.2	7.1	64.842 ug/L	64.842 ppb	09:11:06
3	K 766.490 Radial†	3608.1	667.5	117.63 ug/L	117.63 ppb	09:10:46
3	Mg 279.077 IEC†	11.2	10.4	368.05 ug/L	368.05 ppb	09:11:06
3	Na 589.592 Radial†	-110.4	971.7	293.88 ug/L	293.88 ppb	09:10:46
3	Sr 421.552†	768.4	741.9	5.2013 ug/L	5.2013 ppb	09:10:46
3	Sc 361.383	838794.7	838794.7	97.297 %		09:12:04
3	Y 371.029	701118.5	701118.5	98.113 %		09:12:04
3	Ag 328.068†	1246.7	1052.6	4.9594 ug/L	4.9594 ppb	09:12:04
3	As 188.979†	33.1	67.9	30.824 ug/L	30.824 ppb	09:12:24
3	B 249.677†	1601.6	2185.1	51.959 ug/L	51.959 ppb	09:12:04
3	Ba 233.527†	601.2	629.5	5.1542 ug/L	5.1542 ppb	09:12:24
3	Be 313.107†	8736.0	13317.4	4.9714 ug/L	4.9714 ppb	09:12:04
3	Cd 226.502†	217.1	435.0	5.1785 ug/L	5.1785 ppb	09:12:24
3	Co 228.616†	152.0	229.9	5.0349 ug/L	5.0349 ppb	09:12:24
3	Cr 267.716†	502.8	450.0	5.2278 ug/L	5.2278 ppb	09:12:24
3	Cu 324.752†	9046.5	3477.1	10.524 ug/L	10.524 ppb	09:12:04
3	Mn 257.610†	9345.5	9153.2	10.522 ug/L	10.522 ppb	09:12:04
3	Mo 202.031†	146.5	135.1	10.122 ug/L	10.122 ppb	09:12:24
3	Ni 231.604†	312.8	213.4	5.5264 ug/L	5.5264 ppb	09:12:24
3	P 214.914†	473.4	258.4	158.79 ug/L	158.79 ppb	09:12:24
3	Pb 220.353†	22.3	84.6	10.621 ug/L	10.621 ppb	09:12:24
3	S 181.975 Axial†	107.8	71.5	104.16 ug/L	104.16 ppb	09:12:24
3	Sb 206.836†	74.3	34.2	12.248 ug/L	12.248 ppb	09:12:24
3	Se 196.026†	28.1	51.0	34.616 ug/L	34.616 ppb	09:12:24
3	Si 251.611†	3427.0	2959.9	98.881 ug/L	98.881 ppb	09:12:24
3	Sn 189.927†	46.9	39.6	7.3719 ug/L	7.3719 ppb	09:12:24
3	Ti 334.940†	1667.1	3016.6	4.8658 ug/L	4.8658 ppb	09:12:04
3	Tl 190.801†	24.2	59.1	18.988 ug/L	18.988 ppb	09:12:24
3	U 409.014†	-1242.4	1703.2	49.367 ug/L	49.367 ppb	09:12:04
3	V 292.402†	-814.4	717.6	5.4397 ug/L	5.4397 ppb	09:12:04
3	Zn 213.857†	1742.7	1077.9	10.574 ug/L	10.574 ppb	09:12:24
3	SiO2†	3544.6	3059.9	217.99 ug/L	217.99 ppb	09:12:39

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	842815.5	97.764 %	0.4212			0.43%
Sc Radial	4824.8	100 %	2.9			2.88%
Y 371.029	707139.9	98.956 %	0.7740			0.78%
Y RADIAL	5027.2	100.5 %	2.91			2.90%
Ag 328.068†	1153.3	5.4405 ug/L	0.42133	5.4405 ppb	0.42133	7.74%
QC value within limits for Ag 328.068 Recovery = 108.81%						
Al 396.153Radial†	212.0	196.28 ug/L	12.289	196.28 ppb	12.289	6.26%
QC value within limits for Al 396.153Radial Recovery = 98.14%						
As 188.979†	70.7	32.115 ug/L	1.1878	32.115 ppb	1.1878	3.70%
QC value within limits for As 188.979 Recovery = 107.05%						
B 249.677†	2218.5	52.750 ug/L	0.6922	52.750 ppb	0.6922	1.31%
QC value within limits for B 249.677 Recovery = 105.50%						
Ba 233.527†	630.1	5.1594 ug/L	0.00474	5.1594 ppb	0.00474	0.09%
QC value within limits for Ba 233.527 Recovery = 103.19%						
Be 313.107†	13321.7	4.9733 ug/L	0.01517	4.9733 ppb	0.01517	0.31%
QC value within limits for Be 313.107 Recovery = 99.47%						
Ca 317.933Radial†	121.5	201.36 ug/L	2.655	201.36 ppb	2.655	1.32%

QC value within limits for Ca 317.933 Radial Recovery = 100.68%							
Cd	226.502†	436.0	5.1872 ug/L	0.03152	5.1872 ppb	0.03152	0.61%
QC value within limits for Cd 226.502 Recovery = 103.74%							
Co	228.616†	232.9	5.0999 ug/L	0.06531	5.0999 ppb	0.06531	1.28%
QC value within limits for Co 228.616 Recovery = 102.00%							
Cr	267.716†	442.1	5.1360 ug/L	0.22170	5.1360 ppb	0.22170	4.32%
QC value within limits for Cr 267.716 Recovery = 102.72%							
Cu	324.752†	3518.8	10.651 ug/L	0.1127	10.651 ppb	0.1127	1.06%
QC value within limits for Cu 324.752 Recovery = 106.51%							
Fe	238.204 Radial†	9.5	86.655 ug/L	19.3364	86.655 ppb	19.3364	22.31%
QC value within limits for Fe 238.204 Radial Recovery = 86.66%							
K	766.490 Radial†	808.5	142.52 ug/L	26.020	142.52 ppb	26.020	18.26%
QC value within limits for K 766.490 Radial Recovery = 95.01%							
Mg	279.077 IEC†	10.3	365.10 ug/L	12.231	365.10 ppb	12.231	3.35%
QC value within limits for Mg 279.077 IEC Recovery = 121.70%							
Mn	257.610†	9167.6	10.541 ug/L	0.0738	10.541 ppb	0.0738	0.70%
QC value within limits for Mn 257.610 Recovery = 105.41%							
Mo	202.031†	135.7	10.170 ug/L	0.4772	10.170 ppb	0.4772	4.69%
QC value within limits for Mo 202.031 Recovery = 101.70%							
Na	589.592 Radial†	1004.2	303.71 ug/L	9.044	303.71 ppb	9.044	2.98%
QC value within limits for Na 589.592 Radial Recovery = 101.24%							
Ni	231.604†	207.1	5.3618 ug/L	0.25553	5.3618 ppb	0.25553	4.77%
QC value within limits for Ni 231.604 Recovery = 107.24%							
P	214.914†	252.3	154.98 ug/L	3.862	154.98 ppb	3.862	2.49%
QC value within limits for P 214.914 Recovery = 103.32%							
Pb	220.353†	81.8	10.257 ug/L	0.8890	10.257 ppb	0.8890	8.67%
QC value within limits for Pb 220.353 Recovery = 102.57%							
S	181.975 Axial†	69.8	101.70 ug/L	2.262	101.70 ppb	2.262	2.22%
QC value within limits for S 181.975 Axial Recovery = 101.70%							
Sb	206.836†	25.1	9.0946 ug/L	3.69377	9.0946 ppb	3.69377	40.61%
QC value within limits for Sb 206.836 Recovery = 90.95%							
Se	196.026†	52.1	35.402 ug/L	0.8518	35.402 ppb	0.8518	2.41%
QC value within limits for Se 196.026 Recovery = 118.01%							
Si	251.611†	2941.3	98.256 ug/L	0.5889	98.256 ppb	0.5889	0.60%
QC value within limits for Si 251.611 Recovery = 98.26%							
Sn	189.927†	52.8	9.8272 ug/L	2.17961	9.8272 ppb	2.17961	22.18%
QC value within limits for Sn 189.927 Recovery = 98.27%							
Sr	421.552†	726.2	5.0915 ug/L	0.09704	5.0915 ppb	0.09704	1.91%
QC value within limits for Sr 421.552 Recovery = 101.83%							
Ti	334.940†	3095.8	4.9948 ug/L	0.13641	4.9948 ppb	0.13641	2.73%
QC value within limits for Ti 334.940 Recovery = 99.90%							
Tl	190.801†	65.4	21.010 ug/L	1.9247	21.010 ppb	1.9247	9.16%
QC value within limits for Tl 190.801 Recovery = 105.05%							
U	409.014†	1706.3	49.454 ug/L	3.8076	49.454 ppb	3.8076	7.70%
QC value within limits for U 409.014 Recovery = 98.91%							
V	292.402†	700.2	5.3102 ug/L	0.23160	5.3102 ppb	0.23160	4.36%
QC value within limits for V 292.402 Recovery = 106.20%							
Zn	213.857†	1066.1	10.456 ug/L	0.1226	10.456 ppb	0.1226	1.17%
QC value within limits for Zn 213.857 Recovery = 104.56%							
SiO2†		3017.2	214.94 ug/L	2.662	214.94 ppb	2.662	1.24%
QC value within limits for SiO2 Recovery = 100.91%							

All analyte(s) passed QC.

Sequence No.: 9

Sample ID: IC5A

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 13

Date Collected: 2/11/2010 09:14:51

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: IC5A

Rep#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4326.5	4326.5	90.0 %		09:16:49
1	Y RADIAL	4511.2	4511.2	90.21 %		09:16:49
1	Al 396.153Radial†	503296.9	559331.5	519120 ug/L	519120 ppb	09:16:44
1	Ca 317.933Radial†	262031.1	291108.8	482490 ug/L	482490 ppb	09:16:44
1	Fe 238.204 Radial†	18673.8	20735.8	188670 ug/L	188670 ppb	09:16:49
1	K 766.490 Radial†	2498.4	-49.8	-170.18 ug/L	-170.18 ppb	09:16:44
1	Mg 279.077 IEC†	12536.8	13928.4	493450 ug/L	493450 ppb	09:16:49
1	Na 589.592 Radial†	-877.7	103.4	31.258 ug/L	31.258 ppb	09:16:49
1	Sr 421.552†	499.4	552.7	0.2735 ug/L	0.2735 ppb	09:16:49
1	Sc 361.383	756661.2	756661.2	87.770 %		09:17:16
1	Y 371.029	614842.6	614842.6	86.040 %		09:17:16
1	Ag 328.068†	-9783.5	-11375.5	3.5636 ug/L	3.5636 ppb	09:17:16
1	As 188.979†	-79.7	-57.0	18.184 ug/L	18.184 ppb	09:17:36
1	B 249.677†	428.7	1027.5	-6.1975 ug/L	-6.1975 ppb	09:17:16
1	Ba 233.527†	-574.5	-642.9	0.5243 ug/L	0.5243 ppb	09:17:36
1	Be 313.107†	-4762.2	-1087.1	-0.4615 ug/L	-0.4615 ppb	09:17:16
1	Cd 226.502†	1149.7	1521.8	-1.3855 ug/L	-1.3855 ppb	09:17:36
1	Co 228.616†	-17.9	53.3	-1.5563 ug/L	-1.5563 ppb	09:17:36
1	Cr 267.716†	-103.9	-185.2	1.5172 ug/L	1.5172 ppb	09:17:36
1	Cu 324.752†	2878.3	-2541.3	2.2550 ug/L	2.2550 ppb	09:17:16
1	Mn 257.610†	-120.4	-589.1	-2.2279 ug/L	-2.2279 ppb	09:17:16
1	Mo 202.031†	-219.4	-265.5	0.5037 ug/L	0.5037 ppb	09:17:36
1	Ni 231.604†	217.6	139.9	3.6229 ug/L	3.6229 ppb	09:17:36
1	P 214.914†	176.6	-26.9	-38.446 ug/L	-38.446 ppb	09:17:36
1	Pb 220.353†	-784.0	-831.5	-1.7906 ug/L	-1.7906 ppb	09:17:36
1	S 181.975 Axial†	48.9	16.3	-73.463 ug/L	-73.463 ppb	09:17:36
1	Sb 206.836†	74.6	42.8	-2.6229 ug/L	-2.6229 ppb	09:17:36
1	Se 196.026†	-908.7	-1013.2	-57.581 ug/L	-57.581 ppb	09:17:36
1	Si 251.611†	419.3	-84.6	-2.5834 ug/L	-2.5834 ppb	09:17:36
1	Sn 189.927†	-350.6	-408.1	0.7610 ug/L	0.7610 ppb	09:17:36
1	Ti 334.940†	-14629.1	-15364.3	-0.5425 ug/L	-0.5425 ppb	09:17:16
1	Tl 190.801†	-75.8	-52.1	-16.947 ug/L	-16.947 ppb	09:17:36
1	U 409.014†	-1407.2	1376.7	18.417 ug/L	18.417 ppb	09:17:16
1	V 292.402†	548.1	2179.1	-2.2965 ug/L	-2.2965 ppb	09:17:36
1	Zn 213.857†	3040.2	2750.6	-1.1107 ug/L	-1.1107 ppb	09:17:36
1	SiO2†	425.3	-98.5	-6.4871 ug/L	-6.4871 ppb	09:18:33
2	Sc Radial	4271.5	4271.5	88.9 %		09:16:59
2	Y RADIAL	4476.6	4476.6	89.52 %		09:16:59
2	Al 396.153Radial†	512980.6	577434.4	535930 ug/L	535930 ppb	09:16:54
2	Ca 317.933Radial†	265619.6	298898.4	495400 ug/L	495400 ppb	09:16:54
2	Fe 238.204 Radial†	18581.2	20898.9	190150 ug/L	190150 ppb	09:16:59
2	K 766.490 Radial†	2359.4	-170.5	-195.80 ug/L	-195.80 ppb	09:16:54
2	Mg 279.077 IEC†	12452.8	14013.4	496460 ug/L	496460 ppb	09:16:59
2	Na 589.592 Radial†	-912.1	52.0	15.737 ug/L	15.737 ppb	09:16:59
2	Sr 421.552†	480.6	538.7	0.0789 ug/L	0.0789 ppb	09:16:59
2	Sc 361.383	754714.5	754714.5	87.544 %		09:17:42
2	Y 371.029	615095.6	615095.6	86.075 %		09:17:42
2	Ag 328.068†	-9621.7	-11219.5	4.6281 ug/L	4.6281 ppb	09:17:42
2	As 188.979†	-90.1	-69.1	13.027 ug/L	13.027 ppb	09:18:02
2	B 249.677†	264.3	841.0	-10.877 ug/L	-10.877 ppb	09:17:42
2	Ba 233.527†	-619.6	-696.2	0.1342 ug/L	0.1342 ppb	09:18:02
2	Be 313.107†	-4764.6	-1103.8	-0.4669 ug/L	-0.4669 ppb	09:17:42
2	Cd 226.502†	1162.9	1540.2	-1.3211 ug/L	-1.3211 ppb	09:18:02
2	Co 228.616†	-17.6	53.6	-1.5760 ug/L	-1.5760 ppb	09:18:02
2	Cr 267.716†	-112.5	-195.2	1.4311 ug/L	1.4311 ppb	09:18:02
2	Cu 324.752†	2755.3	-2673.4	1.9361 ug/L	1.9361 ppb	09:17:42
2	Mn 257.610†	-225.9	-710.0	-2.3435 ug/L	-2.3435 ppb	09:17:42
2	Mo 202.031†	-239.3	-288.8	-0.9757 ug/L	-0.9757 ppb	09:18:02
2	Ni 231.604†	194.4	114.0	2.9532 ug/L	2.9532 ppb	09:18:02

2	P 214.914†	170.5	-33.3	-39.381 ug/L	-39.381 ppb	09:18:02
2	Pb 220.353†	-772.0	-820.1	3.3215 ug/L	3.3215 ppb	09:18:02
2	S 181.975 Axial†	56.3	25.0	-64.046 ug/L	-64.046 ppb	09:18:02
2	Sb 206.836†	83.8	53.5	0.5867 ug/L	0.5867 ppb	09:18:02
2	Se 196.026†	-902.9	-1009.2	-49.581 ug/L	-49.581 ppb	09:18:02
2	Si 251.611†	461.2	-35.5	-0.9207 ug/L	-0.9207 ppb	09:18:02
2	Sn 189.927†	-353.7	-412.8	1.8855 ug/L	1.8855 ppb	09:18:02
2	Ti 334.940†	-14406.9	-15153.5	1.2878 ug/L	1.2878 ppb	09:17:42
2	Tl 190.801†	-66.8	-42.1	-13.742 ug/L	-13.742 ppb	09:18:02
2	U 409.014†	-1586.2	1168.1	12.200 ug/L	12.200 ppb	09:17:42
2	V 292.402†	513.6	2141.3	-2.7653 ug/L	-2.7653 ppb	09:18:02
2	Zn 213.857†	3036.5	2755.3	-1.2816 ug/L	-1.2816 ppb	09:18:02
2	SiO2†	470.7	-45.5	-2.6559 ug/L	-2.6559 ppb	09:18:38
3	Sc Radial	4258.1	4258.1	88.6 %		09:17:10
3	Y RADIAL	4456.2	4456.2	89.11 %		09:17:10
3	Al 396.153Radial†	515024.4	581552.3	539750 ug/L	539750 ppb	09:17:05
3	Ca 317.933Radial†	266059.5	300332.5	497780 ug/L	497780 ppb	09:17:05
3	Fe 238.204 Radial†	18473.9	20843.3	189650 ug/L	189650 ppb	09:17:10
3	K 766.490 Radial†	2466.4	-41.5	-173.82 ug/L	-173.82 ppb	09:17:05
3	Mg 279.077 IEC†	12393.1	13990.0	495630 ug/L	495630 ppb	09:17:10
3	Na 589.592 Radial†	-853.2	115.4	34.896 ug/L	34.896 ppb	09:17:10
3	Sr 421.552†	465.5	523.4	-0.0465 ug/L	-0.0465 ppb	09:17:10
3	Sc 361.383	755768.5	755768.5	87.667 %		09:18:07
3	Y 371.029	616708.1	616708.1	86.301 %		09:18:07
3	Ag 328.068†	-9560.5	-11134.3	4.8227 ug/L	4.8227 ppb	09:18:07
3	As 188.979†	-82.9	-60.7	16.730 ug/L	16.730 ppb	09:18:27
3	B 249.677†	288.5	868.1	-10.149 ug/L	-10.149 ppb	09:18:07
3	Ba 233.527†	-599.8	-672.6	0.3123 ug/L	0.3123 ppb	09:18:27
3	Be 313.107†	-4606.8	-916.2	-0.3960 ug/L	-0.3960 ppb	09:18:07
3	Cd 226.502†	1135.0	1506.6	-1.6662 ug/L	-1.6662 ppb	09:18:27
3	Co 228.616†	-5.3	67.6	-1.2588 ug/L	-1.2588 ppb	09:18:27
3	Cr 267.716†	-75.9	-153.4	1.9061 ug/L	1.9061 ppb	09:18:27
3	Cu 324.752†	2758.9	-2673.7	1.9044 ug/L	1.9044 ppb	09:18:07
3	Mn 257.610†	-175.5	-652.0	-2.2927 ug/L	-2.2927 ppb	09:18:07
3	Mo 202.031†	-216.1	-262.0	1.0217 ug/L	1.0217 ppb	09:18:27
3	Ni 231.604†	231.6	156.1	4.0441 ug/L	4.0441 ppb	09:18:27
3	P 214.914†	203.6	4.1	-14.688 ug/L	-14.688 ppb	09:18:27
3	Pb 220.353†	-809.6	-861.7	-0.9582 ug/L	-0.9582 ppb	09:18:27
3	S 181.975 Axial†	44.6	11.5	-84.346 ug/L	-84.346 ppb	09:18:27
3	Sb 206.836†	79.1	48.1	-1.3410 ug/L	-1.3410 ppb	09:18:27
3	Se 196.026†	-919.7	-1027.0	-63.050 ug/L	-63.050 ppb	09:18:27
3	Si 251.611†	454.2	-44.2	-1.2364 ug/L	-1.2364 ppb	09:18:27
3	Sn 189.927†	-345.5	-402.8	4.0886 ug/L	4.0886 ppb	09:18:27
3	Ti 334.940†	-14189.3	-14882.3	2.1109 ug/L	2.1109 ppb	09:18:07
3	Tl 190.801†	-60.0	-34.2	-11.215 ug/L	-11.215 ppb	09:18:27
3	U 409.014†	-1365.7	1422.3	19.625 ug/L	19.625 ppb	09:18:07
3	V 292.402†	574.2	2209.6	-2.1700 ug/L	-2.1700 ppb	09:18:27
3	Zn 213.857†	3012.1	2722.6	-1.5360 ug/L	-1.5360 ppb	09:18:27
3	SiO2†	481.6	-33.8	-1.8752 ug/L	-1.8752 ppb	09:18:43

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	755714.7	87.660 %	0.1130			0.13%
Sc Radial	4285.4	89.2 %	0.75			0.85%
Y 371.029	615548.8	86.139 %	0.1416			0.16%
Y RADIAL	4481.4	89.62 %	0.556			0.62%
Ag 328.068†	-11243.1	4.3381 ug/L	0.67777	4.3381 ppb	0.67777	15.62%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	572772.7	531600 ug/L	10971.3	531600 ppb	10971.3	2.06%
QC value within limits for Al 396.153Radial Recovery = 106.32%						
As 188.979†	-62.2	15.980 ug/L	2.6589	15.980 ppb	2.6589	16.64%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	912.2	-9.0743 ug/L	2.51784	-9.0743 ppb	2.51784	27.75%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-670.6	0.3236 ug/L	0.19527	0.3236 ppb	0.19527	60.34%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-1035.7	-0.4415 ug/L	0.03944	-0.4415 ppb	0.03944	8.93%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	296779.9	491890 ug/L	8226.5	491890 ppb	8226.5	1.67%

QC value within limits for Ca 317.933 Radial Recovery = 98.38%

Cd 226.502†	1522.9	-1.4576 ug/L	0.18350	-1.4576 ppb	0.18350	12.59%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	58.2	-1.4637 ug/L	0.17773	-1.4637 ppb	0.17773	12.14%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-178.0	1.6181 ug/L	0.25308	1.6181 ppb	0.25308	15.64%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-2629.5	2.0318 ug/L	0.19389	2.0318 ppb	0.19389	9.54%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	20826.0	189490 ug/L	754.5	189490 ppb	754.5	0.40%
QC value within limits for Fe 238.204 Radial Recovery = 94.74%						
K 766.490 Radial†	-87.3	-179.93 ug/L	13.858	-179.93 ppb	13.858	7.70%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	13977.3	495180 ug/L	1554.3	495180 ppb	1554.3	0.31%
QC value within limits for Mg 279.077 IEC Recovery = 99.04%						
Mn 257.610†	-650.4	-2.2880 ug/L	0.05795	-2.2880 ppb	0.05795	2.53%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-272.1	0.1832 ug/L	1.03653	0.1832 ppb	1.03653	565.70%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	90.3	27.297 ug/L	10.1754	27.297 ppb	10.1754	37.28%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	136.7	3.5401 ug/L	0.55015	3.5401 ppb	0.55015	15.54%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-18.7	-30.838 ug/L	13.9943	-30.838 ppb	13.9943	45.38%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-837.8	0.1909 ug/L	2.74297	0.1909 ppb	2.74297	>999.9%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	17.6	-73.952 ug/L	10.1589	-73.952 ppb	10.1589	13.74%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	48.2	-1.1258 ug/L	1.61558	-1.1258 ppb	1.61558	143.51%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-1016.5	-56.738 ug/L	6.7740	-56.738 ppb	6.7740	11.94%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	-54.7	-1.5802 ug/L	0.88305	-1.5802 ppb	0.88305	55.88%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-407.9	2.2451 ug/L	1.69268	2.2451 ppb	1.69268	75.40%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	538.3	0.1020 ug/L	0.16126	0.1020 ppb	0.16126	158.13%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	-15133.3	0.9521 ug/L	1.35820	0.9521 ppb	1.35820	142.66%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-42.8	-13.968 ug/L	2.8728	-13.968 ppb	2.8728	20.57%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	1322.4	16.747 ug/L	3.9841	16.747 ppb	3.9841	23.79%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	2176.7	-2.4106 ug/L	0.31365	-2.4106 ppb	0.31365	13.01%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	2742.8	-1.3094 ug/L	0.21398	-1.3094 ppb	0.21398	16.34%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	-59.3	-3.6728 ug/L	2.46839	-3.6728 ppb	2.46839	67.21%
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: 2/11/2010 09:20:55

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4396.9	4396.9	91.5 %		09:22:52
1	Y RADIAL	4610.6	4610.6	92.20 %		09:22:52
1	Al 396.153Radial†	506685.4	554079.7	514230 ug/L	514230 ppb	09:22:47
1	Ca 317.933Radial†	261800.7	286194.0	474350 ug/L	474350 ppb	09:22:47
1	Fe 238.204 Radial†	18412.4	20117.6	183060 ug/L	183060 ppb	09:22:52
1	K 766.490 Radial†	30129.7	30113.2	5154.1 ug/L	5154.1 ppb	09:22:47
1	Mg 279.077 IEC†	12405.8	13562.1	480480 ug/L	480480 ppb	09:22:52
1	Na 589.592 Radial†	14834.9	17296.5	5231.3 ug/L	5231.3 ppb	09:22:52
1	Sr 421.552†	66068.1	72226.1	502.99 ug/L	502.99 ppb	09:22:47
1	Sc 361.383	772772.6	772772.6	89.639 %		09:23:20
1	Y 371.029	628033.3	628033.3	87.886 %		09:23:20
1	Ag 328.068†	40946.5	45450.6	271.13 ug/L	271.13 ppb	09:23:20
1	As 188.979†	891.5	1028.4	512.59 ug/L	512.59 ppb	09:23:40
1	B 249.677†	19385.3	22165.0	496.31 ug/L	496.31 ppb	09:23:20
1	Ba 233.527†	52316.8	58375.5	483.43 ug/L	483.43 ppb	09:23:20
1	Be 313.107†	574171.6	644876.5	241.29 ug/L	241.29 ppb	09:23:20
1	Cd 226.502†	35085.2	39352.5	449.33 ug/L	449.33 ppb	09:23:40
1	Co 228.616†	18112.6	20279.9	440.41 ug/L	440.41 ppb	09:23:40
1	Cr 267.716†	36591.2	40753.8	478.53 ug/L	478.53 ppb	09:23:20
1	Cu 324.752†	163531.5	176612.7	545.16 ug/L	545.16 ppb	09:23:20
1	Mn 257.610†	366154.8	408025.3	467.87 ug/L	467.87 ppb	09:23:20
1	Mo 202.031†	5497.6	6117.5	477.98 ug/L	477.98 ppb	09:23:40
1	Ni 231.604†	15356.6	17023.6	440.76 ug/L	440.76 ppb	09:23:40
1	P 214.914†	3739.4	3943.6	2332.2 ug/L	2332.2 ppb	09:23:40
1	Pb 220.353†	2446.7	2791.2	450.35 ug/L	450.35 ppb	09:23:40
1	S 181.975 Axial†	1625.7	1774.2	2490.8 ug/L	2490.8 ppb	09:23:40
1	Sb 206.836†	1370.0	1486.2	518.08 ug/L	518.08 ppb	09:23:40
1	Se 196.026†	2363.9	2659.3	2399.9 ug/L	2399.9 ppb	09:23:40
1	Si 251.611†	137825.4	153193.9	5118.5 ug/L	5118.5 ppb	09:23:20
1	Sn 189.927†	1983.7	2204.3	484.24 ug/L	484.24 ppb	09:23:40
1	Ti 334.940†	266479.3	298583.8	508.25 ug/L	508.25 ppb	09:23:20
1	Tl 190.801†	1155.1	1322.8	427.27 ug/L	427.27 ppb	09:23:40
1	U 409.014†	13233.0	17742.6	492.55 ug/L	492.55 ppb	09:23:20
1	V 292.402†	61400.5	70052.2	498.13 ug/L	498.13 ppb	09:23:20
1	Zn 213.857†	47401.4	52167.1	483.73 ug/L	483.73 ppb	09:23:20
1	SiO2†	137069.3	152329.4	10853 ug/L	10853 ppb	09:24:38
2	Sc Radial	4421.7	4421.7	92.0 %		09:23:03
2	Y RADIAL	4650.4	4650.4	93.00 %		09:23:03
2	Al 396.153Radial†	505026.4	549169.2	509670 ug/L	509670 ppb	09:22:58
2	Ca 317.933Radial†	260692.2	283383.5	469690 ug/L	469690 ppb	09:22:58
2	Fe 238.204 Radial†	18454.7	20050.7	182450 ug/L	182450 ppb	09:23:03
2	K 766.490 Radial†	30107.0	29903.9	5118.7 ug/L	5118.7 ppb	09:22:58
2	Mg 279.077 IEC†	12417.0	13498.2	478220 ug/L	478220 ppb	09:23:03
2	Na 589.592 Radial†	14964.9	17346.9	5246.6 ug/L	5246.6 ppb	09:23:03
2	Sr 421.552†	65690.1	71410.0	497.30 ug/L	497.30 ppb	09:22:58
2	Sc 361.383	764739.9	764739.9	88.707 %		09:23:46
2	Y 371.029	621595.5	621595.5	86.985 %		09:23:46
2	Ag 328.068†	40590.0	45528.5	271.35 ug/L	271.35 ppb	09:23:46
2	As 188.979†	889.2	1036.2	515.99 ug/L	515.99 ppb	09:24:06
2	B 249.677†	19258.0	22248.6	498.39 ug/L	498.39 ppb	09:23:46
2	Ba 233.527†	51845.8	58457.6	484.08 ug/L	484.08 ppb	09:23:46
2	Be 313.107†	566394.6	642837.6	240.54 ug/L	240.54 ppb	09:23:46
2	Cd 226.502†	35086.9	39765.5	454.31 ug/L	454.31 ppb	09:24:06
2	Co 228.616†	18134.0	20516.3	445.59 ug/L	445.59 ppb	09:24:06
2	Cr 267.716†	36251.6	40799.8	479.05 ug/L	479.05 ppb	09:23:46
2	Cu 324.752†	162008.2	176811.7	545.73 ug/L	545.73 ppb	09:23:46
2	Mn 257.610†	362408.4	408092.5	467.98 ug/L	467.98 ppb	09:23:46
2	Mo 202.031†	5494.0	6177.9	482.40 ug/L	482.40 ppb	09:24:06
2	Ni 231.604†	15385.0	17235.5	446.25 ug/L	446.25 ppb	09:24:06

2	P 214.914†	3735.3	3982.7	2355.8 ug/L	2355.8 ppb	09:24:06
2	Pb 220.353†	2463.6	2839.0	455.32 ug/L	455.32 ppb	09:24:06
2	S 181.975 Axial†	1635.9	1804.8	2536.2 ug/L	2536.2 ppb	09:24:06
2	Sb 206.836†	1363.5	1494.9	521.30 ug/L	521.30 ppb	09:24:06
2	Se 196.026†	2372.3	2696.4	2422.8 ug/L	2422.8 ppb	09:24:06
2	Si 251.611†	136413.4	153217.1	5119.2 ug/L	5119.2 ppb	09:23:46
2	Sn 189.927†	1955.7	2196.0	481.97 ug/L	481.97 ppb	09:24:06
2	Ti 334.940†	264346.3	299301.9	508.98 ug/L	508.98 ppb	09:23:46
2	Tl 190.801†	1161.7	1343.8	433.96 ug/L	433.96 ppb	09:24:06
2	U 409.014†	13093.8	17740.8	492.56 ug/L	492.56 ppb	09:23:46
2	V 292.402†	60740.6	70027.7	498.06 ug/L	498.06 ppb	09:23:46
2	Zn 213.857†	46852.4	52103.7	483.16 ug/L	483.16 ppb	09:23:46
2	SiO2†	136656.7	153470.5	10935 ug/L	10935 ppb	09:24:43
3	Sc Radial	4483.7	4483.7	93.3 %		09:23:13
3	Y RADIAL	4690.0	4690.0	93.79 %		09:23:13
3	Al 396.153Radial†	512382.5	549473.1	509950 ug/L	509950 ppb	09:23:08
3	Ca 317.933Radial†	264386.7	283430.3	469770 ug/L	469770 ppb	09:23:08
3	Fe 238.204 Radial†	18884.1	20234.0	184110 ug/L	184110 ppb	09:23:13
3	K 766.490 Radial†	30633.6	30016.3	5138.5 ug/L	5138.5 ppb	09:23:08
3	Mg 279.077 IEC†	12744.8	13663.2	484060 ug/L	484060 ppb	09:23:13
3	Na 589.592 Radial†	15367.6	17554.0	5309.2 ug/L	5309.2 ppb	09:23:13
3	Sr 421.552†	66790.6	71603.6	498.66 ug/L	498.66 ppb	09:23:08
3	Sc 361.383	773931.5	773931.5	89.773 %		09:24:12
3	Y 371.029	628740.5	628740.5	87.985 %		09:24:12
3	Ag 328.068†	41068.9	45518.5	271.87 ug/L	271.87 ppb	09:24:12
3	As 188.979†	889.9	1025.2	511.37 ug/L	511.37 ppb	09:24:32
3	B 249.677†	19510.9	22272.5	498.71 ug/L	498.71 ppb	09:24:12
3	Ba 233.527†	52312.7	58283.5	482.70 ug/L	482.70 ppb	09:24:12
3	Be 313.107†	573158.4	642788.7	240.52 ug/L	240.52 ppb	09:24:12
3	Cd 226.502†	34724.6	38892.2	443.75 ug/L	443.75 ppb	09:24:32
3	Co 228.616†	17941.8	20059.3	435.56 ug/L	435.56 ppb	09:24:32
3	Cr 267.716†	36580.1	40680.3	477.69 ug/L	477.69 ppb	09:24:12
3	Cu 324.752†	164653.0	177588.8	548.17 ug/L	548.17 ppb	09:24:12
3	Mn 257.610†	366043.8	407290.0	466.98 ug/L	466.98 ppb	09:24:12
3	Mo 202.031†	5447.0	6052.0	473.10 ug/L	473.10 ppb	09:24:32
3	Ni 231.604†	15217.0	16842.4	436.07 ug/L	436.07 ppb	09:24:32
3	P 214.914†	3695.9	3888.9	2295.6 ug/L	2295.6 ppb	09:24:32
3	Pb 220.353†	2426.8	2765.0	445.97 ug/L	445.97 ppb	09:24:32
3	S 181.975 Axial†	1615.7	1760.4	2471.4 ug/L	2471.4 ppb	09:24:32
3	Sb 206.836†	1350.7	1462.4	509.61 ug/L	509.61 ppb	09:24:32
3	Se 196.026†	2320.9	2607.4	2368.2 ug/L	2368.2 ppb	09:24:32
3	Si 251.611†	138009.6	153168.8	5117.7 ug/L	5117.7 ppb	09:24:12
3	Sn 189.927†	1937.3	2149.4	473.35 ug/L	473.35 ppb	09:24:32
3	Ti 334.940†	266979.3	298695.6	507.53 ug/L	507.53 ppb	09:24:12
3	Tl 190.801†	1132.8	1296.0	418.69 ug/L	418.69 ppb	09:24:32
3	U 409.014†	13256.7	17746.9	492.55 ug/L	492.55 ppb	09:24:12
3	V 292.402†	61377.1	69923.5	497.04 ug/L	497.04 ppb	09:24:12
3	Zn 213.857†	47365.2	52047.6	482.41 ug/L	482.41 ppb	09:24:12
3	SiO2†	136694.3	151682.8	10807 ug/L	10807 ppb	09:24:48

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	770481.4	89.373 %	0.5807			0.65%
Sc Radial	4434.1	92.2 %	0.93			1.01%
Y 371.029	626123.1	87.618 %	0.5509			0.63%
Y RADIAL	4650.4	92.99 %	0.794			0.85%
Ag 328.068†	45499.2	271.45 ug/L	0.377	271.45 ppb	0.377	0.14%
QC value within limits for Ag 328.068 Recovery = 108.58%						
Al 396.153Radial†	550907.4	511280 ug/L	2553.8	511280 ppb	2553.8	0.50%
QC value within limits for Al 396.153Radial Recovery = 102.26%						
As 188.979†	1029.9	513.31 ug/L	2.393	513.31 ppb	2.393	0.47%
QC value within limits for As 188.979 Recovery = 102.66%						
B 249.677†	22228.7	497.80 ug/L	1.301	497.80 ppb	1.301	0.26%
QC value within limits for B 249.677 Recovery = 99.56%						
Ba 233.527†	58372.2	483.40 ug/L	0.687	483.40 ppb	0.687	0.14%
QC value within limits for Ba 233.527 Recovery = 96.68%						
Be 313.107†	643500.9	240.78 ug/L	0.443	240.78 ppb	0.443	0.18%
QC value within limits for Be 313.107 Recovery = 96.31%						
Ca 317.933Radial†	284335.9	471270 ug/L	2667.3	471270 ppb	2667.3	0.57%

QC value within limits for Ca 317.933 Radial Recovery = 94.25%							
Cd 226.502†	39336.8	449.13 ug/L	5.284	449.13 ppb	5.284	1.18%	
QC value within limits for Cd 226.502 Recovery = 89.83%							
Co 228.616†	20285.2	440.52 ug/L	5.014	440.52 ppb	5.014	1.14%	
QC value within limits for Co 228.616 Recovery = 88.10%							
Cr 267.716†	40744.7	478.42 ug/L	0.686	478.42 ppb	0.686	0.14%	
QC value within limits for Cr 267.716 Recovery = 95.68%							
Cu 324.752†	177004.4	546.35 ug/L	1.603	546.35 ppb	1.603	0.29%	
QC value within limits for Cu 324.752 Recovery = 109.27%							
Fe 238.204 Radial†	20134.1	183210 ug/L	843.7	183210 ppb	843.7	0.46%	
QC value within limits for Fe 238.204 Radial Recovery = 91.60%							
K 766.490 Radial†	30011.2	5137.1 ug/L	17.75	5137.1 ppb	17.75	0.35%	
QC value within limits for K 766.490 Radial Recovery = 102.74%							
Mg 279.077 IEC†	13574.5	480920 ug/L	2948.0	480920 ppb	2948.0	0.61%	
QC value within limits for Mg 279.077 IEC Recovery = 96.18%							
Mn 257.610†	407802.6	467.61 ug/L	0.547	467.61 ppb	0.547	0.12%	
QC value within limits for Mn 257.610 Recovery = 93.52%							
Mo 202.031†	6115.8	477.83 ug/L	4.651	477.83 ppb	4.651	0.97%	
QC value within limits for Mo 202.031 Recovery = 95.57%							
Na 589.592 Radial†	17399.2	5262.4 ug/L	41.27	5262.4 ppb	41.27	0.78%	
QC value within limits for Na 589.592 Radial Recovery = 105.25%							
Ni 231.604†	17033.9	441.03 ug/L	5.094	441.03 ppb	5.094	1.15%	
QC value within limits for Ni 231.604 Recovery = 88.21%							
P 214.914†	3938.4	2327.9 ug/L	30.33	2327.9 ppb	30.33	1.30%	
QC value within limits for P 214.914 Recovery = 93.12%							
Pb 220.353†	2798.4	450.55 ug/L	4.678	450.55 ppb	4.678	1.04%	
QC value within limits for Pb 220.353 Recovery = 90.11%							
S 181.975 Axial†	1779.8	2499.5 ug/L	33.27	2499.5 ppb	33.27	1.33%	
QC value within limits for S 181.975 Axial Recovery = 99.98%							
Sb 206.836†	1481.2	516.33 ug/L	6.036	516.33 ppb	6.036	1.17%	
QC value within limits for Sb 206.836 Recovery = 103.27%							
Se 196.026†	2654.4	2397.0 ug/L	27.43	2397.0 ppb	27.43	1.14%	
QC value within limits for Se 196.026 Recovery = 95.88%							
Si 251.611†	153193.2	5118.5 ug/L	0.75	5118.5 ppb	0.75	0.01%	
QC value within limits for Si 251.611 Recovery = 102.37%							
Sn 189.927†	2183.2	479.85 ug/L	5.743	479.85 ppb	5.743	1.20%	
QC value within limits for Sn 189.927 Recovery = 95.97%							
Sr 421.552†	71746.5	499.65 ug/L	2.971	499.65 ppb	2.971	0.59%	
QC value within limits for Sr 421.552 Recovery = 99.93%							
Ti 334.940†	298860.4	508.25 ug/L	0.725	508.25 ppb	0.725	0.14%	
QC value within limits for Ti 334.940 Recovery = 101.65%							
Tl 190.801†	1320.9	426.64 ug/L	7.653	426.64 ppb	7.653	1.79%	
QC value within limits for Tl 190.801 Recovery = 85.33%							
U 409.014†	17743.4	492.55 ug/L	0.008	492.55 ppb	0.008	0.00%	
QC value within limits for U 409.014 Recovery = 98.51%							
V 292.402†	70001.2	497.74 ug/L	0.609	497.74 ppb	0.609	0.12%	
QC value within limits for V 292.402 Recovery = 99.55%							
Zn 213.857†	52106.1	483.10 ug/L	0.658	483.10 ppb	0.658	0.14%	
QC value within limits for Zn 213.857 Recovery = 96.62%							
SiO2†	152494.3	10865 ug/L	64.4	10865 ppb	64.4	0.59%	
QC value within limits for SiO2 Recovery = 101.59%							
All analyte(s) passed QC.							

Sequence No.: 11
 Sample ID: LR1
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 15
 Date Collected: 2/11/2010 09:26:58
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4347.3	4347.3	90.4 %			09:28:57
1	Y RADIAL	4521.2	4521.2	90.41 %			09:28:57
1	Al 396.153Radial†	489004.3	540851.8	501970 ug/L		501970 ppb	09:28:52
1	Ca 317.933Radial†	256021.7	283070.7	469170 ug/L		469170 ppb	09:28:52
1	Fe 238.204 Radial†	43293.2	47858.6	435450 ug/L		435450 ppb	09:28:57
1	K 766.490 Radial†	3051.6	548.5	-258.43 ug/L		-258.43 ppb	09:28:52
1	Mg 279.077 IEC†	12226.8	13519.0	478680 ug/L		478680 ppb	09:28:57
1	Na 589.592 Radial†	1519647.4	1681377.9	508530 ug/L		508530 ppb	09:28:52
1	Sr 421.552†	733.2	808.6	2.1678 ug/L		2.1678 ppb	09:28:57
1	Sc 361.383	750316.7	750316.7	87.034 %			09:29:25
1	Y 371.029	611296.0	611296.0	85.543 %			09:29:25
1	Ag 328.068†	-22360.4	-25920.3	7.6759 ug/L		7.6759 ppb	09:29:25
1	As 188.979†	-189.1	-183.4	18.724 ug/L		18.724 ppb	09:29:45
1	B 249.677†	1106.7	1810.6	-27.660 ug/L		-27.660 ppb	09:29:25
1	Ba 233.527†	-1542.6	-1760.8	-1.0734 ug/L		-1.0734 ppb	09:29:45
1	Be 313.107†	-10095.0	-7260.1	-2.7412 ug/L		-2.7412 ppb	09:29:25
1	Cd 226.502†	3076.9	3747.2	2.1814 ug/L		2.1814 ppb	09:29:45
1	Co 228.616†	201.4	305.2	0.3152 ug/L		0.3152 ppb	09:29:45
1	Cr 267.716†	-14.1	-82.9	2.2310 ug/L		2.2310 ppb	09:29:45
1	Cu 324.752†	169.3	-5626.3	-1.4253 ug/L		-1.4253 ppb	09:29:25
1	Mn 257.610†	-22883.6	-26744.6	-7.3534 ug/L		-7.3534 ppb	09:29:25
1	Mo 202.031†	-431.2	-511.0	1.1160 ug/L		1.1160 ppb	09:29:45
1	Ni 231.604†	343.0	286.1	7.4087 ug/L		7.4087 ppb	09:29:45
1	P 214.914†	571.1	428.1	43.527 ug/L		43.527 ppb	09:29:45
1	Pb 220.353†	-484.2	-494.6	12.703 ug/L		12.703 ppb	09:29:45
1	S 181.975 Axial†	87.6	61.3	-4.6955 ug/L		-4.6955 ppb	09:29:45
1	Sb 206.836†	83.5	53.8	-1.4746 ug/L		-1.4746 ppb	09:29:45
1	Se 196.026†	-2120.9	-2414.7	-207.36 ug/L		-207.36 ppb	09:29:45
1	Si 251.611†	-139.3	-722.4	-23.691 ug/L		-23.691 ppb	09:29:45
1	Sn 189.927†	-351.0	-411.9	2.1771 ug/L		2.1771 ppb	09:29:45
1	Ti 334.940†	-9901.0	-10072.8	1.5803 ug/L		1.5803 ppb	09:29:25
1	Tl 190.801†	-75.4	-52.5	-17.178 ug/L		-17.178 ppb	09:29:45
1	U 409.014†	398970.0	461386.2	13329 ug/L		13329 ppb	09:29:25
1	V 292.402†	1819.1	3644.8	-2.6158 ug/L		-2.6158 ppb	09:29:45
1	Zn 213.857†	5754.2	5898.2	-7.0000 ug/L		-7.0000 ppb	09:29:45
1	SiO2†	-561.3	-1228.1	-86.557 ug/L		-86.557 ppb	09:30:42
2	Sc Radial	4319.7	4319.7	89.9 %			09:29:07
2	Y RADIAL	4515.1	4515.1	90.29 %			09:29:07
2	Al 396.153Radial†	488967.7	544267.8	505140 ug/L		505140 ppb	09:29:02
2	Ca 317.933Radial†	253798.3	282406.3	468070 ug/L		468070 ppb	09:29:02
2	Fe 238.204 Radial†	42961.6	47795.6	434870 ug/L		434870 ppb	09:29:07
2	K 766.490 Radial†	2851.4	347.3	-293.37 ug/L		-293.37 ppb	09:29:02
2	Mg 279.077 IEC†	12150.8	13520.8	478750 ug/L		478750 ppb	09:29:07
2	Na 589.592 Radial†	1508482.9	1679696.5	508020 ug/L		508020 ppb	09:29:02
2	Sr 421.552†	684.7	759.8	1.8337 ug/L		1.8337 ppb	09:29:07
2	Sc 361.383	752895.9	752895.9	87.333 %			09:29:51
2	Y 371.029	613943.5	613943.5	85.914 %			09:29:51
2	Ag 328.068†	-21490.2	-24835.8	12.608 ug/L		12.608 ppb	09:29:51
2	As 188.979†	-177.3	-169.2	25.061 ug/L		25.061 ppb	09:30:11
2	B 249.677†	1167.2	1875.5	-26.019 ug/L		-26.019 ppb	09:29:51
2	Ba 233.527†	-1648.7	-1876.2	-2.0328 ug/L		-2.0328 ppb	09:30:11
2	Be 313.107†	-8181.7	-5029.6	-1.9109 ug/L		-1.9109 ppb	09:29:51
2	Cd 226.502†	3019.0	3668.8	1.3074 ug/L		1.3074 ppb	09:30:11
2	Co 228.616†	168.2	266.3	-0.5350 ug/L		-0.5350 ppb	09:30:11
2	Cr 267.716†	-39.9	-112.5	1.8767 ug/L		1.8767 ppb	09:30:11
2	Cu 324.752†	3630.1	-1664.2	10.564 ug/L		10.564 ppb	09:29:51
2	Mn 257.610†	-19761.1	-23079.0	-3.1954 ug/L		-3.1954 ppb	09:29:51
2	Mo 202.031†	-475.4	-559.9	-2.6030 ug/L		-2.6030 ppb	09:30:11
2	Ni 231.604†	289.6	223.5	5.7879 ug/L		5.7879 ppb	09:30:11

2	P 214.914†	562.6	416.1	34.892 ug/L	34.892 ppb	09:30:11
2	Pb 220.353†	-547.2	-564.9	4.6358 ug/L	4.6358 ppb	09:30:11
2	S 181.975 Axial†	83.4	56.2	-12.737 ug/L	-12.737 ppb	09:30:11
2	Sb 206.836†	88.3	59.0	0.1380 ug/L	0.1380 ppb	09:30:11
2	Se 196.026†	-2116.4	-2401.3	-200.06 ug/L	-200.06 ppb	09:30:11
2	Si 251.611†	-519.1	-1156.6	-38.171 ug/L	-38.171 ppb	09:30:11
2	Sn 189.927†	-362.9	-424.2	-0.2790 ug/L	-0.2790 ppb	09:30:11
2	Ti 334.940†	-10032.5	-10184.4	1.2469 ug/L	1.2469 ppb	09:29:51
2	Tl 190.801†	-87.3	-65.8	-21.418 ug/L	-21.418 ppb	09:30:11
2	U 409.014†	400317.4	461358.7	13328 ug/L	13328 ppb	09:29:51
2	V 292.402†	1851.8	3675.1	-2.3640 ug/L	-2.3640 ppb	09:30:11
2	Zn 213.857†	5420.0	5492.9	-10.919 ug/L	-10.919 ppb	09:30:11
2	SiO2†	-492.8	-1147.4	-80.702 ug/L	-80.702 ppb	09:30:47
3	Sc Radial	4286.5	4286.5	89.2 %		09:29:18
3	Y RADIAL	4491.7	4491.7	89.82 %		09:29:18
3	Al 396.153Radial†	487236.0	546543.4	507260 ug/L	507260 ppb	09:29:13
3	Ca 317.933Radial†	253808.7	284607.1	471720 ug/L	471720 ppb	09:29:13
3	Fe 238.204 Radial†	42617.9	47780.7	434740 ug/L	434740 ppb	09:29:18
3	K 766.490 Radial†	2862.5	384.4	-288.63 ug/L	-288.63 ppb	09:29:13
3	Mg 279.077 IEC†	12064.9	13529.3	479050 ug/L	479050 ppb	09:29:18
3	Na 589.592 Radial†	1501252.5	1684599.7	509510 ug/L	509510 ppb	09:29:13
3	Sr 421.552†	701.9	785.0	1.9830 ug/L	1.9830 ppb	09:29:18
3	Sc 361.383	749846.5	749846.5	86.980 %		09:30:16
3	Y 371.029	610956.0	610956.0	85.496 %		09:30:16
3	Ag 328.068†	-22316.8	-25886.3	7.5572 ug/L	7.5572 ppb	09:30:16
3	As 188.979†	-185.0	-178.8	20.672 ug/L	20.672 ppb	09:30:36
3	B 249.677†	1074.6	1774.5	-28.401 ug/L	-28.401 ppb	09:30:16
3	Ba 233.527†	-1700.5	-1943.5	-2.5842 ug/L	-2.5842 ppb	09:30:36
3	Be 313.107†	-10036.7	-7200.5	-2.7212 ug/L	-2.7212 ppb	09:30:16
3	Cd 226.502†	3001.2	3662.4	1.2484 ug/L	1.2484 ppb	09:30:36
3	Co 228.616†	168.0	266.8	-0.5205 ug/L	-0.5205 ppb	09:30:36
3	Cr 267.716†	-29.3	-100.5	2.0096 ug/L	2.0096 ppb	09:30:36
3	Cu 324.752†	314.4	-5459.3	-0.9628 ug/L	-0.9628 ppb	09:30:16
3	Mn 257.610†	-22476.5	-26293.0	-6.9189 ug/L	-6.9189 ppb	09:30:16
3	Mo 202.031†	-477.8	-564.8	-2.9394 ug/L	-2.9394 ppb	09:30:36
3	Ni 231.604†	305.9	243.7	6.3100 ug/L	6.3100 ppb	09:30:36
3	P 214.914†	553.6	408.4	33.018 ug/L	33.018 ppb	09:30:36
3	Pb 220.353†	-569.0	-592.5	1.7311 ug/L	1.7311 ppb	09:30:36
3	S 181.975 Axial†	84.3	57.5	-11.185 ug/L	-11.185 ppb	09:30:36
3	Sb 206.836†	80.0	49.8	-3.0915 ug/L	-3.0915 ppb	09:30:36
3	Se 196.026†	-2111.2	-2405.2	-203.04 ug/L	-203.04 ppb	09:30:36
3	Si 251.611†	-476.2	-1109.7	-36.598 ug/L	-36.598 ppb	09:30:36
3	Sn 189.927†	-356.7	-418.8	1.2746 ug/L	1.2746 ppb	09:30:36
3	Ti 334.940†	-10401.3	-10655.1	0.9425 ug/L	0.9425 ppb	09:30:16
3	Tl 190.801†	-109.3	-91.4	-29.659 ug/L	-29.659 ppb	09:30:36
3	U 409.014†	399065.3	461783.3	13341 ug/L	13341 ppb	09:30:16
3	V 292.402†	1948.4	3794.7	-1.4509 ug/L	-1.4509 ppb	09:30:36
3	Zn 213.857†	5409.8	5506.3	-10.754 ug/L	-10.754 ppb	09:30:36
3	SiO2†	-505.8	-1164.7	-81.925 ug/L	-81.925 ppb	09:30:52

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	751019.7	87.116 %	0.1904			0.22%
Sc Radial	4317.8	89.8 %	0.63			0.71%
Y 371.029	612065.1	85.651 %	0.2289			0.27%
Y RADIAL	4509.3	90.17 %	0.312			0.35%
Ag 328.068†	-25547.5	9.2805 ug/L	2.88268	9.2805 ppb	2.88268	31.06%
Al 396.153Radial†	543887.7	504790 ug/L	2659.0	504790 ppb	2659.0	0.53%
QC value within limits for Al 396.153Radial Recovery = 100.96%						
As 188.979†	-177.1	21.486 ug/L	3.2460	21.486 ppb	3.2460	15.11%
B 249.677†	1820.2	-27.360 ug/L	1.2190	-27.360 ppb	1.2190	4.46%
Ba 233.527†	-1860.2	-1.8968 ug/L	0.76456	-1.8968 ppb	0.76456	40.31%
Be 313.107†	-6496.7	-2.4578 ug/L	0.47372	-2.4578 ppb	0.47372	19.27%
Ca 317.933Radial†	283361.4	469650 ug/L	1871.0	469650 ppb	1871.0	0.40%
QC value within limits for Ca 317.933Radial Recovery = 93.93%						
Cd 226.502†	3692.8	1.5791 ug/L	0.52249	1.5791 ppb	0.52249	33.09%
Co 228.616†	279.4	-0.2468 ug/L	0.48674	-0.2468 ppb	0.48674	197.25%
Cr 267.716†	-98.6	2.0391 ug/L	0.17900	2.0391 ppb	0.17900	8.78%
Cu 324.752†	-4249.9	2.7252 ug/L	6.79225	2.7252 ppb	6.79225	249.24%

Fe 238.204 Radial†	47811.6	435020 ug/L	376.2	435020 ppb	376.2	0.09%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 87.00%						
K 766.490 Radial†	426.7	-280.15 ug/L	18.953	-280.15 ppb	18.953	6.77%
Mg 279.077 IEC†	13523.0	478830 ug/L	196.1	478830 ppb	196.1	0.04%
QC value within limits for Mg 279.077 IEC Recovery = 95.77%						
Mn 257.610†	-25372.2	-5.8226 ug/L	2.28557	-5.8226 ppb	2.28557	39.25%
Mo 202.031†	-545.3	-1.4755 ug/L	2.25058	-1.4755 ppb	2.25058	152.53%
Na 589.592 Radial†	1681891.4	508690 ug/L	753.6	508690 ppb	753.6	0.15%
QC value within limits for Na 589.592 Radial Recovery = 101.74%						
Ni 231.604†	251.1	6.5022 ug/L	0.82734	6.5022 ppb	0.82734	12.72%
P 214.914†	417.5	37.146 ug/L	5.6054	37.146 ppb	5.6054	15.09%
Pb 220.353†	-550.6	6.3566 ug/L	5.68472	6.3566 ppb	5.68472	89.43%
S 181.975 Axial†	58.3	-9.5392 ug/L	4.26602	-9.5392 ppb	4.26602	44.72%
Sb 206.836†	54.2	-1.4761 ug/L	1.61473	-1.4761 ppb	1.61473	109.39%
Se 196.026†	-2407.1	-203.49 ug/L	3.672	-203.49 ppb	3.672	1.80%
Si 251.611†	-996.2	-32.820 ug/L	7.9450	-32.820 ppb	7.9450	24.21%
Sn 189.927†	-418.3	1.0575 ug/L	1.24235	1.0575 ppb	1.24235	117.48%
Sr 421.552†	784.5	1.9948 ug/L	0.16737	1.9948 ppb	0.16737	8.39%
Ti 334.940†	-10304.1	1.2566 ug/L	0.31902	1.2566 ppb	0.31902	25.39%
Tl 190.801†	-69.9	-22.752 ug/L	6.3461	-22.752 ppb	6.3461	27.89%
U 409.014†	461509.4	13333 ug/L	6.9	13333 ppb	6.9	0.05%
QC value less than the lower limit for U 409.014 Recovery = 88.88%						
V 292.402†	3704.8	-2.1435 ug/L	0.61293	-2.1435 ppb	0.61293	28.59%
Zn 213.857†	5632.5	-9.5576 ug/L	2.21654	-9.5576 ppb	2.21654	23.19%
SiO2†	-1180.0	-83.062 ug/L	3.0883	-83.062 ppb	3.0883	3.72%

QC Failed. Continue with analysis.

Sequence No.: 12

Sample ID: LR2

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 16

Date Collected: 2/11/2010 09:33:02

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4650.9	4650.9	96.8 %		09:35:00
1	Y RADIAL	4783.5	4783.5	95.66 %		09:35:00
1	Al 396.153Radial†	333.6	496.4	0.7108 ug/L	0.7108 ppb	09:35:00
1	Ca 317.933Radial†	23.7	7.8	12.862 ug/L	12.862 ppb	09:35:20
1	Fe 238.204 Radial†	-14.4	-26.3	36.152 ug/L	36.152 ppb	09:35:20
1	K 766.490 Radial†	1611190.8	1662413.1	293430 ug/L	293430 ppb	09:34:55
1	Mg 279.077 IEC†	-5.0	-5.6	-98.127 ug/L	-98.127 ppb	09:35:20
1	Na 589.592 Radial†	-585.2	473.6	143.25 ug/L	143.25 ppb	09:35:00
1	Sr 421.552†	1340172.7	1385127.1	9714.1 ug/L	9714.1 ppb	09:34:55
1	Sc 361.383	830480.9	830480.9	96.333 %		09:36:38
1	Y 371.029	671491.8	671491.8	93.967 %		09:36:38
1	Ag 328.068†	-6762.9	-7249.1	5.4086 ug/L	5.4086 ppb	09:36:43
1	As 188.979†	20200.0	21002.8	9593.7 ug/L	9593.7 ppb	09:36:43
1	B 249.677†	196689.0	204715.3	4843.9 ug/L	4843.9 ppb	09:36:38
1	Ba 233.527†	1600343.8	1661274.8	13589 ug/L	13589 ppb	09:36:38
1	Be 313.107†	7265166.3	7546064.4	2833.5 ug/L	2833.5 ppb	09:36:31
1	Cd 226.502†	755144.3	784101.9	9328.1 ug/L	9328.1 ppb	09:36:38
1	Co 228.616†	406593.6	422144.9	9218.3 ug/L	9218.3 ppb	09:36:43
1	Cr 267.716†	1932202.1	2005687.5	23364 ug/L	23364 ppb	09:36:38
1	Cu 324.752†	6365638.9	6602135.7	20027 ug/L	20027 ppb	09:36:31
1	Mn 257.610†	7763667.0	8058750.7	9271.7 ug/L	9271.7 ppb	09:36:31
1	Mo 202.031†	122028.6	126658.3	9485.1 ug/L	9485.1 ppb	09:36:43
1	Ni 231.604†	344682.0	357694.9	9261.2 ug/L	9261.2 ppb	09:36:43
1	P 214.914†	26983.0	27782.1	13404 ug/L	13404 ppb	09:36:43
1	Pb 220.353†	180598.4	187534.9	23407 ug/L	23407 ppb	09:36:43
1	S 181.975 Axial†	33933.7	35186.1	51309 ug/L	51309 ppb	09:36:43
1	Sb 206.836†	28522.8	29566.4	10656 ug/L	10656 ppb	09:36:43
1	Se 196.026†	14083.5	14641.8	9893.2 ug/L	9893.2 ppb	09:36:43
1	Si 251.611†	1364633.1	1416017.6	47247 ug/L	47247 ppb	09:36:38
1	Sn 189.927†	51351.7	53297.8	9890.8 ug/L	9890.8 ppb	09:36:43
1	Ti 334.940†	5971468.8	6200084.9	10048 ug/L	10048 ppb	09:36:31
1	Tl 190.801†	27850.2	28944.6	9344.2 ug/L	9344.2 ppb	09:36:43
1	U 409.014†	-1666.1	1250.5	-15.966 ug/L	-15.966 ppb	09:36:43
1	V 292.402†	1299912.8	1350950.5	9925.7 ug/L	9925.7 ppb	09:36:38
1	Zn 213.857†	1324301.5	1373999.8	13469 ug/L	13469 ppb	09:36:38
1	SiO2†	1387661.4	1439901.6	102450 ug/L	102450 ppb	09:37:29
2	Sc Radial	4697.1	4697.1	97.7 %		09:35:31
2	Y RADIAL	4897.2	4897.2	97.93 %		09:35:31
2	Al 396.153Radial†	338.3	497.8	0.4691 ug/L	0.4691 ppb	09:35:31
2	Ca 317.933Radial†	31.7	15.7	26.032 ug/L	26.032 ppb	09:35:51
2	Fe 238.204 Radial†	-16.6	-28.4	17.783 ug/L	17.783 ppb	09:35:51
2	K 766.490 Radial†	1593050.7	1627452.8	287260 ug/L	287260 ppb	09:35:26
2	Mg 279.077 IEC†	-5.5	-6.1	-114.98 ug/L	-114.98 ppb	09:35:51
2	Na 589.592 Radial†	-558.2	507.3	153.44 ug/L	153.44 ppb	09:35:31
2	Sr 421.552†	1321540.4	1352421.2	9484.7 ug/L	9484.7 ppb	09:35:26
2	Sc 361.383	843181.2	843181.2	97.806 %		09:36:57
2	Y 371.029	682273.7	682273.7	95.476 %		09:36:57
2	Ag 328.068†	-6938.2	-7322.6	4.9778 ug/L	4.9778 ppb	09:37:03
2	As 188.979†	20654.0	21151.2	9659.4 ug/L	9659.4 ppb	09:37:03
2	B 249.677†	200176.9	205206.0	4855.5 ug/L	4855.5 ppb	09:36:57
2	Ba 233.527†	1620078.9	1656430.0	13549 ug/L	13549 ppb	09:36:57
2	Be 313.107†	7256909.8	7424026.1	2787.6 ug/L	2787.6 ppb	09:36:51
2	Cd 226.502†	764766.7	782132.8	9304.7 ug/L	9304.7 ppb	09:36:57
2	Co 228.616†	413805.0	423160.7	9240.9 ug/L	9240.9 ppb	09:37:03
2	Cr 267.716†	1954235.5	1998003.6	23275 ug/L	23275 ppb	09:36:57
2	Cu 324.752†	6350118.1	6486735.0	19677 ug/L	19677 ppb	09:36:51
2	Mn 257.610†	7738091.4	7911210.3	9102.0 ug/L	9102.0 ppb	09:36:51
2	Mo 202.031†	124307.1	127079.8	9516.7 ug/L	9516.7 ppb	09:37:03
2	Ni 231.604†	350664.5	358422.1	9280.0 ug/L	9280.0 ppb	09:37:03

2	P 214.914†	27516.2	27905.4	13550 ug/L	13550 ppb	09:37:03
2	Pb 220.353†	183977.4	188165.8	23486 ug/L	23486 ppb	09:37:03
2	S 181.975 Axial†	34674.3	35412.7	51639 ug/L	51639 ppb	09:37:03
2	Sb 206.836†	29160.7	29772.7	10729 ug/L	10729 ppb	09:37:03
2	Se 196.026†	14370.3	14714.7	9942.4 ug/L	9942.4 ppb	09:37:03
2	Si 251.611†	1385670.7	1416190.0	47252 ug/L	47252 ppb	09:36:57
2	Sn 189.927†	52228.9	53391.7	9908.2 ug/L	9908.2 ppb	09:37:03
2	Ti 334.940†	5953376.9	6088218.5	9866.4 ug/L	9866.4 ppb	09:36:51
2	Tl 190.801†	28344.1	29014.1	9364.1 ug/L	9364.1 ppb	09:37:03
2	U 409.014†	-1704.1	1237.7	-16.135 ug/L	-16.135 ppb	09:37:03
2	V 292.402†	1317190.3	1348290.4	9907.1 ug/L	9907.1 ppb	09:36:57
2	Zn 213.857†	1340432.9	1369786.5	13428 ug/L	13428 ppb	09:36:57
2	SiO2†	1381582.9	1411989.6	100460 ug/L	100460 ppb	09:37:35
3	Sc Radial	4719.4	4719.4	98.2 %		09:36:01
3	Y RADIAL	4867.3	4867.3	97.33 %		09:36:01
3	Al 396.153Radial†	379.3	537.9	37.057 ug/L	37.057 ppb	09:36:01
3	Ca 317.933Radial†	30.1	13.9	23.111 ug/L	23.111 ppb	09:36:21
3	Fe 238.204 Radial†	-15.3	-27.1	30.834 ug/L	30.834 ppb	09:36:21
3	K 766.490 Radial†	1634353.5	1661813.6	293330 ug/L	293330 ppb	09:35:56
3	Mg 279.077 IEC†	-7.0	-7.5	-165.80 ug/L	-165.80 ppb	09:36:21
3	Na 589.592 Radial†	-523.3	545.5	164.99 ug/L	164.99 ppb	09:36:01
3	Sr 421.552†	1365024.9	1390317.7	9750.5 ug/L	9750.5 ppb	09:35:56
3	Sc 361.383	838614.3	838614.3	97.276 %		09:37:17
3	Y 371.029	678129.6	678129.6	94.896 %		09:37:17
3	Ag 328.068†	-6966.0	-7389.9	4.6620 ug/L	4.6620 ppb	09:37:22
3	As 188.979†	20579.2	21189.3	9677.8 ug/L	9677.8 ppb	09:37:22
3	B 249.677†	199331.9	205452.0	4861.3 ug/L	4861.3 ppb	09:37:17
3	Ba 233.527†	1612295.6	1657449.3	13557 ug/L	13557 ppb	09:37:17
3	Be 313.107†	7301723.8	7510501.0	2820.1 ug/L	2820.1 ppb	09:37:11
3	Cd 226.502†	760235.1	781732.6	9300.0 ug/L	9300.0 ppb	09:37:17
3	Co 228.616†	412652.0	424279.4	9265.1 ug/L	9265.1 ppb	09:37:22
3	Cr 267.716†	1944080.4	1998445.3	23280 ug/L	23280 ppb	09:37:17
3	Cu 324.752†	6411990.8	6585697.2	19978 ug/L	19978 ppb	09:37:11
3	Mn 257.610†	7803218.9	8021246.7	9228.6 ug/L	9228.6 ppb	09:37:11
3	Mo 202.031†	123822.2	127273.6	9531.2 ug/L	9531.2 ppb	09:37:22
3	Ni 231.604†	349393.8	359068.3	9296.7 ug/L	9296.7 ppb	09:37:22
3	P 214.914†	27410.8	27950.2	13519 ug/L	13519 ppb	09:37:22
3	Pb 220.353†	183260.8	188453.6	23521 ug/L	23521 ppb	09:37:22
3	S 181.975 Axial†	34522.5	35449.7	51693 ug/L	51693 ppb	09:37:22
3	Sb 206.836†	29057.7	29829.2	10749 ug/L	10749 ppb	09:37:22
3	Se 196.026†	14316.1	14739.1	9958.9 ug/L	9958.9 ppb	09:37:22
3	Si 251.611†	1378793.9	1416836.0	47274 ug/L	47274 ppb	09:37:17
3	Sn 189.927†	52112.1	53562.5	9939.9 ug/L	9939.9 ppb	09:37:22
3	Ti 334.940†	6003889.3	6173293.3	10004 ug/L	10004 ppb	09:37:11
3	Tl 190.801†	28160.2	28982.8	9355.7 ug/L	9355.7 ppb	09:37:22
3	U 409.014†	-1709.0	1223.2	-16.569 ug/L	-16.569 ppb	09:37:22
3	V 292.402†	1309937.5	1348168.6	9906.2 ug/L	9906.2 ppb	09:37:17
3	Zn 213.857†	1334404.9	1371053.2	13440 ug/L	13440 ppb	09:37:17
3	SiO2†	1364075.6	1401684.8	99725 ug/L	99725 ppb	09:37:41

Mean Data: LR2

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	837425.5	97.138 %		0.7462			0.77%
Sc Radial	4689.2	97.6 %		0.73			0.75%
Y 371.029	677298.4	94.780 %		0.7611			0.80%
Y RADIAL	4849.3	96.97 %		1.178			1.21%
Ag 328.068†	-7320.5	5.0161 ug/L		0.37476	5.0161 ppb	0.37476	7.47%
Al 396.153Radial†	510.7	12.746 ug/L		21.0546	12.746 ppb	21.0546	165.19%
As 188.979†	21114.4	9643.6 ug/L		44.20	9643.6 ppb	44.20	0.46%
QC value within limits for As 188.979 Recovery = 96.44%							
B 249.677†	205124.4	4853.5 ug/L		8.86	4853.5 ppb	8.86	0.18%
QC value within limits for B 249.677 Recovery = 97.07%							
Ba 233.527†	1658384.7	13565 ug/L		20.9	13565 ppb	20.9	0.15%
QC value within limits for Ba 233.527 Recovery = 90.43%							
Be 313.107†	7493530.5	2813.8 ug/L		23.59	2813.8 ppb	23.59	0.84%
QC value within limits for Be 313.107 Recovery = 93.79%							
Ca 317.933Radial†	12.5	20.668 ug/L		6.9165	20.668 ppb	6.9165	33.46%
Cd 226.502†	782655.8	9310.9 ug/L		15.07	9310.9 ppb	15.07	0.16%
QC value within limits for Cd 226.502 Recovery = 93.11%							

Co 228.616†	423195.0	9241.4 ug/L	23.43	9241.4 ppb	23.43	0.25%
QC value within limits for Co 228.616 Recovery = 92.41%						
Cr 267.716†	2000712.1	23306 ug/L	50.2	23306 ppb	50.2	0.22%
QC value within limits for Cr 267.716 Recovery = 93.22%						
Cu 324.752†	6558189.3	19894 ug/L	189.4	19894 ppb	189.4	0.95%
QC value within limits for Cu 324.752 Recovery = 99.47%						
Fe 238.204 Radial†	-27.3	28.256 ug/L	9.4518	28.256 ppb	9.4518	33.45%
K 766.490 Radial†	1650559.8	291340 ug/L	3532.7	291340 ppb	3532.7	1.21%
QC value within limits for K 766.490 Radial Recovery = 97.11%						
Mg 279.077 IEC†	-6.4	-126.30 ug/L	35.229	-126.30 ppb	35.229	27.89%
Mn 257.610†	7997069.2	9200.8 ug/L	88.23	9200.8 ppb	88.23	0.96%
QC value within limits for Mn 257.610 Recovery = 92.01%						
Mo 202.031†	127003.9	9511.0 ug/L	23.56	9511.0 ppb	23.56	0.25%
QC value within limits for Mo 202.031 Recovery = 95.11%						
Na 589.592 Radial†	508.8	153.89 ug/L	10.878	153.89 ppb	10.878	7.07%
Ni 231.604†	358395.1	9279.3 ug/L	17.79	9279.3 ppb	17.79	0.19%
QC value within limits for Ni 231.604 Recovery = 92.79%						
P 214.914†	27879.2	13491 ug/L	77.1	13491 ppb	77.1	0.57%
QC value less than the lower limit for P 214.914 Recovery = 89.94%						
Pb 220.353†	188051.4	23471 ug/L	58.7	23471 ppb	58.7	0.25%
QC value within limits for Pb 220.353 Recovery = 93.88%						
S 181.975 Axial†	35349.5	51547 ug/L	208.1	51547 ppb	208.1	0.40%
QC value within limits for S 181.975 Axial Recovery = 103.09%						
Sb 206.836†	29722.7	10711 ug/L	49.2	10711 ppb	49.2	0.46%
QC value within limits for Sb 206.836 Recovery = 107.11%						
Se 196.026†	14698.5	9931.5 ug/L	34.17	9931.5 ppb	34.17	0.34%
QC value within limits for Se 196.026 Recovery = 99.31%						
Si 251.611†	1416347.9	47258 ug/L	14.2	47258 ppb	14.2	0.03%
QC value within limits for Si 251.611 Recovery = 94.52%						
Sn 189.927†	53417.3	9913.0 ug/L	24.90	9913.0 ppb	24.90	0.25%
QC value within limits for Sn 189.927 Recovery = 99.13%						
Sr 421.552†	1375955.3	9649.8 ug/L	144.09	9649.8 ppb	144.09	1.49%
QC value within limits for Sr 421.552 Recovery = 96.50%						
Ti 334.940†	6153865.6	9972.9 ug/L	94.72	9972.9 ppb	94.72	0.95%
QC value within limits for Ti 334.940 Recovery = 99.73%						
Tl 190.801†	28980.5	9354.6 ug/L	9.99	9354.6 ppb	9.99	0.11%
QC value within limits for Tl 190.801 Recovery = 93.55%						
U 409.014†	1237.2	-16.223 ug/L	0.3110	-16.223 ppb	0.3110	1.92%
V 292.402†	1349136.5	9913.0 ug/L	11.01	9913.0 ppb	11.01	0.11%
QC value within limits for V 292.402 Recovery = 99.13%						
Zn 213.857†	1371613.1	13446 ug/L	21.2	13446 ppb	21.2	0.16%
QC value less than the lower limit for Zn 213.857 Recovery = 89.64%						
SiO2†	1417858.7	100880 ug/L	1411.1	100880 ppb	1411.1	1.40%
QC value within limits for SiO2 Recovery = 94.28%						

QC Failed. Continue with analysis.

Sequence No.: 13
 Sample ID: CCV
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 7
 Date Collected: 2/11/2010 09:39:50
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4670.4	4670.4	97.2 %		09:41:42
1	Y RADIAL	4823.4	4823.4	96.46 %		09:41:42
1	Al 396.153Radial†	5123.5	5424.7	5011.1 ug/L	5011.1 ppb	09:41:42
1	Ca 317.933Radial†	3015.0	3086.3	5115.4 ug/L	5115.4 ppb	09:42:02
1	Fe 238.204 Radial†	565.0	570.1	5202.1 ug/L	5202.1 ppb	09:42:02
1	K 766.490 Radial†	31539.8	29635.5	5224.9 ug/L	5224.9 ppb	09:41:42
1	Mg 279.077 IEC†	144.2	148.0	5243.8 ug/L	5243.8 ppb	09:42:02
1	Na 589.592 Radial†	30750.2	32727.1	9898.3 ug/L	9898.3 ppb	09:41:42
1	Sr 421.552†	71023.6	73096.4	512.60 ug/L	512.60 ppb	09:41:42
1	Sc 361.383	861497.2	861497.2	99.931 %		09:43:00
1	Y 371.029	702306.5	702306.5	98.279 %		09:43:00
1	Ag 328.068†	105494.3	105338.6	499.61 ug/L	499.61 ppb	09:43:05
1	As 188.979†	1102.8	1137.5	520.44 ug/L	520.44 ppb	09:43:25
1	B 249.677†	21775.9	22330.0	528.94 ug/L	528.94 ppb	09:43:05
1	Ba 233.527†	61166.3	61220.3	501.22 ug/L	501.22 ppb	09:43:05
1	Be 313.107†	1303101.7	1308343.7	488.45 ug/L	488.45 ppb	09:43:00
1	Cd 226.502†	41552.9	41793.6	496.76 ug/L	496.76 ppb	09:43:05
1	Co 228.616†	23177.2	23267.0	508.27 ug/L	508.27 ppb	09:43:05
1	Cr 267.716†	42798.2	42761.1	498.43 ug/L	498.43 ppb	09:43:05
1	Cu 324.752†	171474.0	165772.1	502.86 ug/L	502.86 ppb	09:43:05
1	Mn 257.610†	425443.4	425286.4	489.60 ug/L	489.60 ppb	09:43:00
1	Mo 202.031†	6534.4	6523.4	488.99 ug/L	488.99 ppb	09:43:25
1	Ni 231.604†	19280.3	19185.6	496.73 ug/L	496.73 ppb	09:43:05
1	P 214.914†	4111.5	3886.3	2320.2 ug/L	2320.2 ppb	09:43:25
1	Pb 220.353†	3850.2	3914.5	489.93 ug/L	489.93 ppb	09:43:25
1	S 181.975 Axial†	717.2	678.4	988.26 ug/L	988.26 ppb	09:43:25
1	Sb 206.836†	1459.7	1418.6	512.05 ug/L	512.05 ppb	09:43:25
1	Se 196.026†	717.2	739.8	516.83 ug/L	516.83 ppb	09:43:25
1	Si 251.611†	75036.2	74526.0	2486.8 ug/L	2486.8 ppb	09:43:05
1	Sn 189.927†	2646.0	2639.1	490.62 ug/L	490.62 ppb	09:43:25
1	Ti 334.940†	305681.5	307196.6	498.12 ug/L	498.12 ppb	09:43:05
1	Tl 190.801†	1506.2	1541.5	497.27 ug/L	497.27 ppb	09:43:25
1	U 409.014†	14331.4	17321.4	500.56 ug/L	500.56 ppb	09:43:05
1	V 292.402†	66956.5	68557.5	504.38 ug/L	504.38 ppb	09:43:05
1	Zn 213.857†	51424.0	50746.4	496.01 ug/L	496.01 ppb	09:43:05
1	SiO2†	74219.5	73687.8	5243.0 ug/L	5243.0 ppb	09:44:33
2	Sc Radial	4885.8	4885.8	102 %		09:42:08
2	Y RADIAL	5063.3	5063.3	101.3 %		09:42:08
2	Al 396.153Radial†	5273.5	5340.0	4932.5 ug/L	4932.5 ppb	09:42:08
2	Ca 317.933Radial†	3042.0	2976.2	4932.8 ug/L	4932.8 ppb	09:42:28
2	Fe 238.204 Radial†	571.6	550.9	5027.6 ug/L	5027.6 ppb	09:42:28
2	K 766.490 Radial†	32442.3	29092.8	5129.2 ug/L	5129.2 ppb	09:42:08
2	Mg 279.077 IEC†	147.0	144.2	5111.5 ug/L	5111.5 ppb	09:42:28
2	Na 589.592 Radial†	31888.4	32451.9	9815.1 ug/L	9815.1 ppb	09:42:08
2	Sr 421.552†	73180.6	71996.8	504.89 ug/L	504.89 ppb	09:42:08
2	Sc 361.383	864633.3	864633.3	100.29 %		09:43:31
2	Y 371.029	705630.1	705630.1	98.744 %		09:43:31
2	Ag 328.068†	104840.4	104303.7	494.67 ug/L	494.67 ppb	09:43:36
2	As 188.979†	1105.7	1136.3	519.84 ug/L	519.84 ppb	09:43:56
2	B 249.677†	21597.8	22073.4	522.87 ug/L	522.87 ppb	09:43:36
2	Ba 233.527†	60847.9	60680.8	496.80 ug/L	496.80 ppb	09:43:36
2	Be 313.107†	1314109.6	1314589.5	490.76 ug/L	490.76 ppb	09:43:31
2	Cd 226.502†	41341.7	41432.2	492.48 ug/L	492.48 ppb	09:43:36
2	Co 228.616†	23086.0	23091.9	504.45 ug/L	504.45 ppb	09:43:36
2	Cr 267.716†	42557.5	42365.8	493.82 ug/L	493.82 ppb	09:43:36
2	Cu 324.752†	170015.5	163695.5	496.56 ug/L	496.56 ppb	09:43:36
2	Mn 257.610†	427958.4	426249.9	490.69 ug/L	490.69 ppb	09:43:31
2	Mo 202.031†	6526.9	6492.2	486.63 ug/L	486.63 ppb	09:43:56
2	Ni 231.604†	19245.0	19080.5	494.01 ug/L	494.01 ppb	09:43:36

2	P 214.914†	4117.3	3877.1	2315.8 ug/L	2315.8 ppb	09:43:56
2	Pb 220.353†	3853.2	3903.6	488.56 ug/L	488.56 ppb	09:43:56
2	S 181.975 Axial†	715.0	673.6	981.29 ug/L	981.29 ppb	09:43:56
2	Sb 206.836†	1453.1	1406.7	507.80 ug/L	507.80 ppb	09:43:56
2	Se 196.026†	705.8	725.9	506.87 ug/L	506.87 ppb	09:43:56
2	Si 251.611†	74374.4	73593.8	2455.6 ug/L	2455.6 ppb	09:43:36
2	Sn 189.927†	2633.2	2616.7	486.44 ug/L	486.44 ppb	09:43:56
2	Ti 334.940†	303051.3	303464.6	492.06 ug/L	492.06 ppb	09:43:36
2	Tl 190.801†	1510.8	1540.5	496.95 ug/L	496.95 ppb	09:43:56
2	U 409.014†	14033.6	16972.5	490.47 ug/L	490.47 ppb	09:43:36
2	V 292.402†	66533.7	67893.0	499.53 ug/L	499.53 ppb	09:43:36
2	Zn 213.857†	51089.5	50226.2	490.93 ug/L	490.93 ppb	09:43:36
2	SiO2†	74415.2	73613.6	5237.8 ug/L	5237.8 ppb	09:44:38
3	Sc Radial	4806.3	4806.3	100.0 %		09:42:33
3	Y RADIAL	4987.4	4987.4	99.73 %		09:42:33
3	Al 396.153Radial†	5274.4	5426.7	5013.0 ug/L	5013.0 ppb	09:42:33
3	Ca 317.933Radial†	3039.9	3023.5	5011.3 ug/L	5011.3 ppb	09:42:53
3	Fe 238.204 Radial†	566.3	554.9	5063.6 ug/L	5063.6 ppb	09:42:53
3	K 766.490 Radial†	32341.8	29519.9	5204.5 ug/L	5204.5 ppb	09:42:33
3	Mg 279.077 IEC†	145.5	145.1	5142.1 ug/L	5142.1 ppb	09:42:53
3	Na 589.592 Radial†	32007.4	33089.7	10008 ug/L	10008 ppb	09:42:33
3	Sr 421.552†	73573.8	73580.3	515.99 ug/L	515.99 ppb	09:42:33
3	Sc 361.383	866646.2	866646.2	100.53 %		09:44:02
3	Y 371.029	705779.0	705779.0	98.765 %		09:44:02
3	Ag 328.068†	105067.1	104286.4	494.59 ug/L	494.59 ppb	09:44:07
3	As 188.979†	1098.0	1126.1	515.24 ug/L	515.24 ppb	09:44:27
3	B 249.677†	21681.5	22106.7	523.65 ug/L	523.65 ppb	09:44:07
3	Ba 233.527†	61108.1	60798.7	497.76 ug/L	497.76 ppb	09:44:07
3	Be 313.107†	1304278.6	1301767.0	485.98 ug/L	485.98 ppb	09:44:02
3	Cd 226.502†	41405.1	41399.5	492.09 ug/L	492.09 ppb	09:44:07
3	Co 228.616†	23181.2	23133.1	505.35 ug/L	505.35 ppb	09:44:07
3	Cr 267.716†	42560.1	42269.8	492.70 ug/L	492.70 ppb	09:44:07
3	Cu 324.752†	170405.3	163689.6	496.54 ug/L	496.54 ppb	09:44:07
3	Mn 257.610†	427104.0	424408.9	488.58 ug/L	488.58 ppb	09:44:02
3	Mo 202.031†	6540.3	6490.4	486.50 ug/L	486.50 ppb	09:44:27
3	Ni 231.604†	19295.9	19086.5	494.17 ug/L	494.17 ppb	09:44:07
3	P 214.914†	4134.2	3884.4	2320.4 ug/L	2320.4 ppb	09:44:27
3	Pb 220.353†	3830.3	3871.9	484.63 ug/L	484.63 ppb	09:44:27
3	S 181.975 Axial†	703.2	660.1	961.69 ug/L	961.69 ppb	09:44:27
3	Sb 206.836†	1440.7	1390.9	502.33 ug/L	502.33 ppb	09:44:27
3	Se 196.026†	715.8	734.1	512.54 ug/L	512.54 ppb	09:44:27
3	Si 251.611†	74658.3	73703.9	2459.3 ug/L	2459.3 ppb	09:44:07
3	Sn 189.927†	2648.3	2625.7	488.11 ug/L	488.11 ppb	09:44:27
3	Ti 334.940†	304012.2	303718.7	492.47 ug/L	492.47 ppb	09:44:07
3	Tl 190.801†	1513.4	1539.6	496.66 ug/L	496.66 ppb	09:44:27
3	U 409.014†	14198.9	17104.4	494.29 ug/L	494.29 ppb	09:44:07
3	V 292.402†	66536.1	67741.3	498.43 ug/L	498.43 ppb	09:44:07
3	Zn 213.857†	51169.4	50187.4	490.54 ug/L	490.54 ppb	09:44:07
3	SiO2†	73541.8	72572.5	5163.5 ug/L	5163.5 ppb	09:44:43

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	864258.9	100.25 %	0.301			0.30%
Sc Radial	4787.5	99.6 %	2.27			2.27%
Y 371.029	704571.9	98.596 %	0.2747			0.28%
Y RADIAL	4958.0	99.15 %	2.452			2.47%
Ag 328.068†	104642.9	496.29 ug/L	2.877	496.29 ppb	2.877	0.58%
QC value within limits for Ag 328.068 Recovery = 99.26%						
Al 396.153Radial†	5397.1	4985.5 ug/L	45.91	4985.5 ppb	45.91	0.92%
QC value within limits for Al 396.153Radial Recovery = 99.71%						
As 188.979†	1133.3	518.51 ug/L	2.850	518.51 ppb	2.850	0.55%
QC value within limits for As 188.979 Recovery = 103.70%						
B 249.677†	22170.0	525.15 ug/L	3.299	525.15 ppb	3.299	0.63%
QC value within limits for B 249.677 Recovery = 105.03%						
Ba 233.527†	60899.9	498.60 ug/L	2.325	498.60 ppb	2.325	0.47%
QC value within limits for Ba 233.527 Recovery = 99.72%						
Be 313.107†	1308233.4	488.40 ug/L	2.388	488.40 ppb	2.388	0.49%
QC value within limits for Be 313.107 Recovery = 97.68%						
Ca 317.933Radial†	3028.7	5019.8 ug/L	91.58	5019.8 ppb	91.58	1.82%

QC value within limits for Ca 317.933 Radial Recovery = 100.40%									
Cd	226.502†	41541.8	493.78 ug/L	2.593	493.78 ppb	2.593	0.53%		
QC value within limits for Cd 226.502 Recovery = 98.76%									
Co	228.616†	23164.0	506.03 ug/L	1.994	506.03 ppb	1.994	0.39%		
QC value within limits for Co 228.616 Recovery = 101.21%									
Cr	267.716†	42465.5	494.98 ug/L	3.036	494.98 ppb	3.036	0.61%		
QC value within limits for Cr 267.716 Recovery = 99.00%									
Cu	324.752†	164385.7	498.66 ug/L	3.644	498.66 ppb	3.644	0.73%		
QC value within limits for Cu 324.752 Recovery = 99.73%									
Fe	238.204 Radial†	558.6	5097.8 ug/L	92.12	5097.8 ppb	92.12	1.81%		
QC value within limits for Fe 238.204 Radial Recovery = 101.96%									
K	766.490 Radial†	29416.1	5186.2 ug/L	50.41	5186.2 ppb	50.41	0.97%		
QC value within limits for K 766.490 Radial Recovery = 103.72%									
Mg	279.077 IEC†	145.8	5165.8 ug/L	69.27	5165.8 ppb	69.27	1.34%		
QC value within limits for Mg 279.077 IEC Recovery = 103.32%									
Mn	257.610†	425315.0	489.62 ug/L	1.058	489.62 ppb	1.058	0.22%		
QC value within limits for Mn 257.610 Recovery = 97.92%									
Mo	202.031†	6502.0	487.37 ug/L	1.399	487.37 ppb	1.399	0.29%		
QC value within limits for Mo 202.031 Recovery = 97.47%									
Na	589.592 Radial†	32756.2	9907.1 ug/L	96.74	9907.1 ppb	96.74	0.98%		
QC value within limits for Na 589.592 Radial Recovery = 99.07%									
Ni	231.604†	19117.5	494.97 ug/L	1.528	494.97 ppb	1.528	0.31%		
QC value within limits for Ni 231.604 Recovery = 98.99%									
P	214.914†	3882.6	2318.8 ug/L	2.58	2318.8 ppb	2.58	0.11%		
QC value within limits for P 214.914 Recovery = 92.75%									
Pb	220.353†	3896.7	487.70 ug/L	2.753	487.70 ppb	2.753	0.56%		
QC value within limits for Pb 220.353 Recovery = 97.54%									
S	181.975 Axial†	670.7	977.08 ug/L	13.777	977.08 ppb	13.777	1.41%		
QC value within limits for S 181.975 Axial Recovery = 97.71%									
Sb	206.836†	1405.4	507.39 ug/L	4.872	507.39 ppb	4.872	0.96%		
QC value within limits for Sb 206.836 Recovery = 101.48%									
Se	196.026†	733.3	512.08 ug/L	4.996	512.08 ppb	4.996	0.98%		
QC value within limits for Se 196.026 Recovery = 102.42%									
Si	251.611†	73941.2	2467.2 ug/L	17.02	2467.2 ppb	17.02	0.69%		
QC value within limits for Si 251.611 Recovery = 98.69%									
Sn	189.927†	2627.2	488.39 ug/L	2.107	488.39 ppb	2.107	0.43%		
QC value within limits for Sn 189.927 Recovery = 97.68%									
Sr	421.552†	72891.2	511.16 ug/L	5.691	511.16 ppb	5.691	1.11%		
QC value within limits for Sr 421.552 Recovery = 102.23%									
Ti	334.940†	304793.3	494.22 ug/L	3.385	494.22 ppb	3.385	0.68%		
QC value within limits for Ti 334.940 Recovery = 98.84%									
Tl	190.801†	1540.5	496.96 ug/L	0.305	496.96 ppb	0.305	0.06%		
QC value within limits for Tl 190.801 Recovery = 99.39%									
U	409.014†	17132.8	495.11 ug/L	5.093	495.11 ppb	5.093	1.03%		
QC value within limits for U 409.014 Recovery = 99.02%									
V	292.402†	68063.9	500.78 ug/L	3.165	500.78 ppb	3.165	0.63%		
QC value within limits for V 292.402 Recovery = 100.16%									
Zn	213.857†	50386.6	492.50 ug/L	3.051	492.50 ppb	3.051	0.62%		
QC value within limits for Zn 213.857 Recovery = 98.50%									
SiO2†		73291.3	5214.7 ug/L	44.46	5214.7 ppb	44.46	0.85%		
QC value within limits for SiO2 Recovery = 97.52%									
All analyte(s) passed QC.									

Sequence No.: 14
 Sample ID: CCB
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 8
 Date Collected: 2/11/2010 09:46:54
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4734.7	4734.7	98.5 %		09:48:47
1	Y RADIAL	4964.3	4964.3	99.27 %		09:48:47
1	Al 396.153Radial†	-150.8	-1.5	-1.4646 ug/L	-1.4646 ppb	09:48:47
1	Ca 317.933Radial†	16.3	-0.2	-0.2671 ug/L	-0.2671 ppb	09:49:07
1	Fe 238.204 Radial†	13.4	2.2	19.695 ug/L	19.695 ppb	09:49:07
1	K 766.490 Radial†	3573.3	802.1	141.56 ug/L	141.56 ppb	09:48:47
1	Mg 279.077 IEC†	2.9	2.5	89.003 ug/L	89.003 ppb	09:49:07
1	Na 589.592 Radial†	-923.5	140.9	42.627 ug/L	42.627 ppb	09:48:47
1	Sr 421.552†	14.6	12.7	0.0891 ug/L	0.0891 ppb	09:48:47
1	Sc 361.383	859259.9	859259.9	99.671 %		09:50:03
1	Y 371.029	711240.7	711240.7	99.529 %		09:50:03
1	Ag 328.068†	295.5	67.7	0.3243 ug/L	0.3243 ppb	09:50:03
1	As 188.979†	-10.2	23.7	10.734 ug/L	10.734 ppb	09:50:23
1	B 249.677†	398.8	939.1	22.338 ug/L	22.338 ppb	09:50:23
1	Ba 233.527†	-5.1	6.4	0.0524 ug/L	0.0524 ppb	09:50:23
1	Be 313.107†	-4186.5	138.4	0.0516 ug/L	0.0516 ppb	09:50:03
1	Cd 226.502†	-173.0	38.3	0.4537 ug/L	0.4537 ppb	09:50:23
1	Co 228.616†	-65.0	8.5	0.1893 ug/L	0.1893 ppb	09:50:23
1	Cr 267.716†	87.0	20.5	0.2382 ug/L	0.2382 ppb	09:50:23
1	Cu 324.752†	5846.5	45.1	0.1379 ug/L	0.1379 ppb	09:50:03
1	Mn 257.610†	465.9	15.6	0.0162 ug/L	0.0162 ppb	09:50:23
1	Mo 202.031†	43.0	27.6	2.0667 ug/L	2.0667 ppb	09:50:23
1	Ni 231.604†	114.3	6.7	0.1731 ug/L	0.1731 ppb	09:50:23
1	P 214.914†	224.2	-3.1	-1.9524 ug/L	-1.9524 ppb	09:50:23
1	Pb 220.353†	-34.1	27.5	3.4373 ug/L	3.4373 ppb	09:50:23
1	S 181.975 Axial†	43.3	4.1	5.9263 ug/L	5.9263 ppb	09:50:23
1	Sb 206.836†	53.8	11.8	4.2181 ug/L	4.2181 ppb	09:50:23
1	Se 196.026†	-15.9	6.2	4.2299 ug/L	4.2299 ppb	09:50:23
1	Si 251.611†	629.8	69.6	2.3014 ug/L	2.3014 ppb	09:50:23
1	Sn 189.927†	31.9	23.4	4.3362 ug/L	4.3362 ppb	09:50:23
1	Ti 334.940†	-1288.0	11.0	0.0105 ug/L	0.0105 ppb	09:50:03
1	Tl 190.801†	-26.8	7.4	2.3554 ug/L	2.3554 ppb	09:50:23
1	U 409.014†	-2976.1	-5.9	-0.1744 ug/L	-0.1744 ppb	09:50:03
1	V 292.402†	-1594.5	-45.1	-0.3003 ug/L	-0.3003 ppb	09:50:03
1	Zn 213.857†	722.7	11.9	0.1128 ug/L	0.1128 ppb	09:50:23
1	SiO2†	668.2	87.2	6.1665 ug/L	6.1665 ppb	09:51:19
2	Sc Radial	4851.7	4851.7	101 %		09:49:12
2	Y RADIAL	5095.2	5095.2	101.9 %		09:49:12
2	Al 396.153Radial†	-115.2	37.5	34.701 ug/L	34.701 ppb	09:49:12
2	Ca 317.933Radial†	20.4	3.5	5.7726 ug/L	5.7726 ppb	09:49:32
2	Fe 238.204 Radial†	9.9	-1.7	-15.375 ug/L	-15.375 ppb	09:49:32
2	K 766.490 Radial†	3498.8	640.8	113.10 ug/L	113.10 ppb	09:49:12
2	Mg 279.077 IEC†	1.1	0.6	22.595 ug/L	22.595 ppb	09:49:32
2	Na 589.592 Radial†	-919.4	167.6	50.696 ug/L	50.696 ppb	09:49:12
2	Sr 421.552†	-17.5	-19.4	-0.1361 ug/L	-0.1361 ppb	09:49:12
2	Sc 361.383	850504.8	850504.8	98.656 %		09:50:29
2	Y 371.029	704312.6	704312.6	98.560 %		09:50:29
2	Ag 328.068†	269.4	44.3	0.2043 ug/L	0.2043 ppb	09:50:29
2	As 188.979†	-5.5	28.3	12.834 ug/L	12.834 ppb	09:50:49
2	B 249.677†	398.0	942.4	22.422 ug/L	22.422 ppb	09:50:49
2	Ba 233.527†	5.5	17.2	0.1409 ug/L	0.1409 ppb	09:50:49
2	Be 313.107†	-4196.2	85.3	0.0320 ug/L	0.0320 ppb	09:50:29
2	Cd 226.502†	-160.9	48.8	0.5818 ug/L	0.5818 ppb	09:50:49
2	Co 228.616†	-66.1	6.7	0.1493 ug/L	0.1493 ppb	09:50:49
2	Cr 267.716†	89.3	23.7	0.2759 ug/L	0.2759 ppb	09:50:49
2	Cu 324.752†	5914.7	174.6	0.5279 ug/L	0.5279 ppb	09:50:29
2	Mn 257.610†	480.8	35.5	0.0384 ug/L	0.0384 ppb	09:50:49
2	Mo 202.031†	33.8	18.7	1.3991 ug/L	1.3991 ppb	09:50:49
2	Ni 231.604†	104.7	-1.9	-0.0499 ug/L	-0.0499 ppb	09:50:49

2	P 214.914†	217.6	-7.5	-4.7167 ug/L	-4.7167 ppb	09:50:49
2	Pb 220.353†	-72.0	-11.2	-1.3885 ug/L	-1.3885 ppb	09:50:49
2	S 181.975 Axial†	40.6	1.8	2.6265 ug/L	2.6265 ppb	09:50:49
2	Sb 206.836†	55.3	13.9	4.9567 ug/L	4.9567 ppb	09:50:49
2	Se 196.026†	-11.7	10.2	6.8372 ug/L	6.8372 ppb	09:50:49
2	Si 251.611†	635.7	82.1	2.7283 ug/L	2.7283 ppb	09:50:49
2	Sn 189.927†	31.9	23.7	4.3979 ug/L	4.3979 ppb	09:50:49
2	Ti 334.940†	-1236.2	50.2	0.0794 ug/L	0.0794 ppb	09:50:29
2	Tl 190.801†	-15.5	18.5	5.9356 ug/L	5.9356 ppb	09:50:49
2	U 409.014†	-2878.5	62.4	1.8098 ug/L	1.8098 ppb	09:50:29
2	V 292.402†	-1456.7	78.1	0.5928 ug/L	0.5928 ppb	09:50:29
2	Zn 213.857†	720.1	16.6	0.1658 ug/L	0.1658 ppb	09:50:49
2	SiO2†	636.8	62.4	4.4121 ug/L	4.4121 ppb	09:51:25
3	Sc Radial	4898.6	4898.6	102 %		09:49:37
3	Y RADIAL	5106.9	5106.9	102.1 %		09:49:37
3	Al 396.153Radial†	-161.5	-6.9	-6.4540 ug/L	-6.4540 ppb	09:49:37
3	Ca 317.933Radial†	17.4	0.4	0.6105 ug/L	0.6105 ppb	09:49:57
3	Fe 238.204 Radial†	9.8	-1.8	-16.496 ug/L	-16.496 ppb	09:49:57
3	K 766.490 Radial†	3494.7	603.6	106.52 ug/L	106.52 ppb	09:49:37
3	Mg 279.077 IEC†	5.2	4.6	164.80 ug/L	164.80 ppb	09:49:57
3	Na 589.592 Radial†	-899.8	195.5	59.140 ug/L	59.140 ppb	09:49:37
3	Sr 421.552†	-13.1	-15.0	-0.1052 ug/L	-0.1052 ppb	09:49:37
3	Sc 361.383	860144.3	860144.3	99.774 %		09:50:54
3	Y 371.029	710750.2	710750.2	99.461 %		09:50:54
3	Ag 328.068†	277.0	48.8	0.2220 ug/L	0.2220 ppb	09:50:54
3	As 188.979†	-12.7	21.1	9.5787 ug/L	9.5787 ppb	09:51:14
3	B 249.677†	366.7	906.6	21.570 ug/L	21.570 ppb	09:51:14
3	Ba 233.527†	-6.7	4.9	0.0413 ug/L	0.0413 ppb	09:51:14
3	Be 313.107†	-4270.9	58.2	0.0219 ug/L	0.0219 ppb	09:50:54
3	Cd 226.502†	-176.5	35.0	0.4193 ug/L	0.4193 ppb	09:51:14
3	Co 228.616†	-61.1	12.5	0.2766 ug/L	0.2766 ppb	09:51:14
3	Cr 267.716†	65.6	-1.1	-0.0145 ug/L	-0.0145 ppb	09:51:14
3	Cu 324.752†	5926.2	118.9	0.3561 ug/L	0.3561 ppb	09:50:54
3	Mn 257.610†	480.0	29.2	0.0252 ug/L	0.0252 ppb	09:51:14
3	Mo 202.031†	35.4	20.0	1.4940 ug/L	1.4940 ppb	09:51:14
3	Ni 231.604†	120.4	12.6	0.3272 ug/L	0.3272 ppb	09:51:14
3	P 214.914†	228.5	0.9	0.5462 ug/L	0.5462 ppb	09:51:14
3	Pb 220.353†	-48.2	13.5	1.6824 ug/L	1.6824 ppb	09:51:14
3	S 181.975 Axial†	45.2	5.9	8.6472 ug/L	8.6472 ppb	09:51:14
3	Sb 206.836†	45.3	3.3	1.2402 ug/L	1.2402 ppb	09:51:14
3	Se 196.026†	-18.1	3.9	2.5947 ug/L	2.5947 ppb	09:51:14
3	Si 251.611†	625.1	64.3	2.1319 ug/L	2.1319 ppb	09:51:14
3	Sn 189.927†	33.5	24.9	4.6269 ug/L	4.6269 ppb	09:51:14
3	Ti 334.940†	-1241.1	59.3	0.0798 ug/L	0.0798 ppb	09:50:54
3	Tl 190.801†	-33.1	1.1	0.3403 ug/L	0.3403 ppb	09:51:14
3	U 409.014†	-2737.0	236.9	6.8701 ug/L	6.8701 ppb	09:50:54
3	V 292.402†	-1447.1	104.3	0.7969 ug/L	0.7969 ppb	09:50:54
3	Zn 213.857†	729.7	18.2	0.1790 ug/L	0.1790 ppb	09:51:14
3	SiO2†	623.0	41.2	2.9005 ug/L	2.9005 ppb	09:51:30

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	856636.3	99.367 %		0.6181			0.62%
Sc Radial	4828.3	100 %		1.8			1.75%
Y 371.029	708767.8	99.183 %		0.5410			0.55%
Y RADIAL	5055.5	101.1 %		1.58			1.57%
Ag 328.068†	53.6	0.2502 ug/L		0.06479	0.2502 ppb	0.06479	25.90%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	9.7	8.9274 ug/L		22.45943	8.9274 ppb	22.45943	251.58%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	24.4	11.049 ug/L		1.6506	11.049 ppb	1.6506	14.94%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	929.4	22.110 ug/L		0.4696	22.110 ppb	0.4696	2.12%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	9.5	0.0782 ug/L		0.05461	0.0782 ppb	0.05461	69.83%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	93.9	0.0351 ug/L		0.01510	0.0351 ppb	0.01510	42.98%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	1.2	2.0386 ug/L		3.26333	2.0386 ppb	3.26333	160.07%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated									
Cd	226.502†	40.7	0.4849 ug/L	0.08560	0.4849 ppb	0.08560	17.65%		
QC value within limits for Cd 226.502 Recovery = Not calculated									
Co	228.616†	9.2	0.2051 ug/L	0.06510	0.2051 ppb	0.06510	31.74%		
QC value within limits for Co 228.616 Recovery = Not calculated									
Cr	267.716†	14.4	0.1666 ug/L	0.15791	0.1666 ppb	0.15791	94.81%		
QC value within limits for Cr 267.716 Recovery = Not calculated									
Cu	324.752†	112.9	0.3406 ug/L	0.19547	0.3406 ppb	0.19547	57.39%		
QC value within limits for Cu 324.752 Recovery = Not calculated									
Fe	238.204 Radial†	-0.4	-4.0589 ug/L	20.57911	-4.0589 ppb	20.57911	507.02%		
QC value within limits for Fe 238.204 Radial Recovery = Not calculated									
K	766.490 Radial†	682.2	120.39 ug/L	18.626	120.39 ppb	18.626	15.47%		
QC value within limits for K 766.490 Radial Recovery = Not calculated									
Mg	279.077 IEC†	2.6	92.132 ug/L	71.1522	92.132 ppb	71.1522	77.23%		
QC value within limits for Mg 279.077 IEC Recovery = Not calculated									
Mn	257.610†	26.7	0.0266 ug/L	0.01114	0.0266 ppb	0.01114	41.91%		
QC value within limits for Mn 257.610 Recovery = Not calculated									
Mo	202.031†	22.1	1.6533 ug/L	0.36118	1.6533 ppb	0.36118	21.85%		
QC value within limits for Mo 202.031 Recovery = Not calculated									
Na	589.592 Radial†	168.0	50.821 ug/L	8.2576	50.821 ppb	8.2576	16.25%		
QC value within limits for Na 589.592 Radial Recovery = Not calculated									
Ni	231.604†	5.8	0.1501 ug/L	0.18956	0.1501 ppb	0.18956	126.26%		
QC value within limits for Ni 231.604 Recovery = Not calculated									
P	214.914†	-3.2	-2.0410 ug/L	2.63255	-2.0410 ppb	2.63255	128.99%		
QC value within limits for P 214.914 Recovery = Not calculated									
Pb	220.353†	9.9	1.2437 ug/L	2.44260	1.2437 ppb	2.44260	196.39%		
QC value within limits for Pb 220.353 Recovery = Not calculated									
S	181.975 Axial†	3.9	5.7333 ug/L	3.01498	5.7333 ppb	3.01498	52.59%		
QC value within limits for S 181.975 Axial Recovery = Not calculated									
Sb	206.836†	9.7	3.4717 ug/L	1.96747	3.4717 ppb	1.96747	56.67%		
QC value within limits for Sb 206.836 Recovery = Not calculated									
Se	196.026†	6.8	4.5540 ug/L	2.13969	4.5540 ppb	2.13969	46.99%		
QC value within limits for Se 196.026 Recovery = Not calculated									
Si	251.611†	72.0	2.3872 ug/L	0.30731	2.3872 ppb	0.30731	12.87%		
QC value within limits for Si 251.611 Recovery = Not calculated									
Sn	189.927†	24.0	4.4537 ug/L	0.15317	4.4537 ppb	0.15317	3.44%		
QC value within limits for Sn 189.927 Recovery = Not calculated									
Sr	421.552†	-7.2	-0.0508 ug/L	0.12207	-0.0508 ppb	0.12207	240.45%		
QC value within limits for Sr 421.552 Recovery = Not calculated									
Ti	334.940†	40.2	0.0566 ug/L	0.03991	0.0566 ppb	0.03991	70.53%		
QC value within limits for Ti 334.940 Recovery = Not calculated									
Tl	190.801†	9.0	2.8771 ug/L	2.83391	2.8771 ppb	2.83391	98.50%		
QC value within limits for Tl 190.801 Recovery = Not calculated									
U	409.014†	97.8	2.8352 ug/L	3.63242	2.8352 ppb	3.63242	128.12%		
QC value within limits for U 409.014 Recovery = Not calculated									
V	292.402†	45.7	0.3632 ug/L	0.58355	0.3632 ppb	0.58355	160.68%		
QC value within limits for V 292.402 Recovery = Not calculated									
Zn	213.857†	15.5	0.1525 ug/L	0.03500	0.1525 ppb	0.03500	22.95%		
QC value within limits for Zn 213.857 Recovery = Not calculated									
SiO2†	63.6	4.4930 ug/L	1.63450	4.4930 ppb	1.63450	36.38%			
QC value within limits for SiO2 Recovery = Not calculated									
All analyte(s) passed QC.									

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Analysis Begun

Start Time: 2/11/2010 09:57:43

Plasma On Time: 2/8/2010 05:57:09

Logged In Analyst: Optima3

Technique: ICP Continuous

Spectrometer Model: Optima 5300 DV, S/N 077C7090601 Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\021110.sif

Batch ID:

Results Data Set: 021110

Results Library: C:\pe\Optima3\Results\Results.mdb

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Method Loaded

Method Name: General Eng.2AX

Method Last Saved: 2/11/2010 08:26:30

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: 37

Sample ID: LR1

Date Collected: 2/11/2010 09:57:45

Analyst: HSC

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4740.4	4740.4	98.6 %		09:59:38
1	Y RADIAL	4954.0	4954.0	99.07 %		09:59:38
1	Al 396.153Radial†	-161.0	-11.7	-9.5398 ug/L	-9.5398 ppb	09:59:38

1	Ca 317.933Radial†	13.8	-2.7	-4.5259 ug/L	-4.5259 ppb	09:59:58
1	Fe 238.204 Radial†	40798.3	41359.2	376310 ug/L	376310 ppb	09:59:38
1	K 766.490 Radial†	2921.2	136.5	24.135 ug/L	24.135 ppb	09:59:38
1	Mg 279.077 IEC†	12.9	12.6	53.575 ug/L	53.575 ppb	09:59:58
1	Na 589.592 Radial†	-991.0	73.6	22.272 ug/L	22.272 ppb	09:59:38
1	Sr 421.552†	83.8	82.8	0.5809 ug/L	0.5809 ppb	09:59:38
1	Sc 361.383	841857.2	841857.2	97.653 %		10:00:56
1	Y 371.029	690958.1	690958.1	96.691 %		10:00:56
1	Ag 328.068†	-22044.7	-22803.4	11.385 ug/L	11.385 ppb	10:00:56
1	As 188.979†	-193.9	-164.7	13.504 ug/L	13.504 ppb	10:01:16
1	B 249.677†	1489.3	2064.1	-12.024 ug/L	-12.024 ppb	10:00:56
1	Ba 233.527†	-1870.2	-1903.6	-4.0237 ug/L	-4.0237 ppb	10:00:56
1	Be 313.107†	-8962.5	-4839.3	-1.7921 ug/L	-1.7921 ppb	10:00:56
1	Cd 226.502†	2605.3	2879.8	-2.6405 ug/L	-2.6405 ppb	10:00:56
1	Co 228.616†	221.9	300.9	1.0590 ug/L	1.0590 ppb	10:01:16
1	Cr 267.716†	-206.6	-278.3	0.0691 ug/L	0.0691 ppb	10:00:56
1	Cu 324.752†	363.0	-5449.0	-2.2683 ug/L	-2.2683 ppb	10:00:56
1	Mn 257.610†	-32822.7	-34063.6	-2.0423 ug/L	-2.0423 ppb	10:00:56
1	Mo 202.031†	-337.5	-361.1	2.1689 ug/L	2.1689 ppb	10:00:56
1	Ni 231.604†	222.7	120.0	3.1056 ug/L	3.1056 ppb	10:01:16
1	P 214.914†	742.4	532.2	31.347 ug/L	31.347 ppb	10:01:16
1	Pb 220.353†	208.6	275.3	-1.6678 ug/L	-1.6678 ppb	10:01:16
1	S 181.975 Axial†	53.4	15.4	22.398 ug/L	22.398 ppb	10:01:16
1	Sb 206.836†	32.5	-8.9	-7.8066 ug/L	-7.8066 ppb	10:01:16
1	Se 196.026†	-1827.5	-1849.3	-33.554 ug/L	-33.554 ppb	10:01:16
1	Si 251.611†	-790.8	-1372.1	-45.561 ug/L	-45.561 ppb	10:00:56
1	Sn 189.927†	-9.2	-18.1	2.9662 ug/L	2.9662 ppb	10:01:16
1	Ti 334.940†	1468.4	2806.9	0.0292 ug/L	0.0292 ppb	10:00:56
1	Tl 190.801†	-59.4	-26.6	-8.7646 ug/L	-8.7646 ppb	10:01:16
1	U 409.014†	341229.2	352411.9	10176 ug/L	10176 ppb	10:00:56
1	V 292.402†	2962.3	4588.2	-2.3071 ug/L	-2.3071 ppb	10:00:56
1	Zn 213.857†	4255.8	3644.9	-20.354 ug/L	-20.354 ppb	10:01:16
1	SiO2†	-781.0	-1382.9	-97.911 ug/L	-97.911 ppb	10:02:13
2	Sc Radial	4799.6	4799.6	99.8 %		10:00:04
2	Y RADIAL	4986.2	4986.2	99.71 %		10:00:04
2	Al 396.153Radial†	-155.5	-4.2	-2.5135 ug/L	-2.5135 ppb	10:00:04
2	Ca 317.933Radial†	10.9	-5.7	-9.5149 ug/L	-9.5149 ppb	10:00:24
2	Fe 238.204 Radial†	40906.3	40957.3	372650 ug/L	372650 ppb	10:00:04
2	K 766.490 Radial†	2915.1	93.9	16.624 ug/L	16.624 ppb	10:00:04
2	Mg 279.077 IEC†	13.9	13.5	87.007 ug/L	87.007 ppb	10:00:24
2	Na 589.592 Radial†	-1103.9	-27.1	-8.1850 ug/L	-8.1850 ppb	10:00:04
2	Sr 421.552†	90.7	88.7	0.6220 ug/L	0.6220 ppb	10:00:04
2	Sc 361.383	851531.7	851531.7	98.775 %		10:01:22
2	Y 371.029	698630.5	698630.5	97.765 %		10:01:22
2	Ag 328.068†	-22367.3	-22873.5	9.7911 ug/L	9.7911 ppb	10:01:22
2	As 188.979†	-185.5	-153.9	17.566 ug/L	17.566 ppb	10:01:42
2	B 249.677†	1539.8	2097.9	-10.624 ug/L	-10.624 ppb	10:01:22
2	Ba 233.527†	-1889.9	-1901.8	-4.1196 ug/L	-4.1196 ppb	10:01:22
2	Be 313.107†	-9012.3	-4785.4	-1.7717 ug/L	-1.7717 ppb	10:01:22
2	Cd 226.502†	2595.3	2839.4	-2.7352 ug/L	-2.7352 ppb	10:01:22
2	Co 228.616†	191.4	267.5	0.3810 ug/L	0.3810 ppb	10:01:42
2	Cr 267.716†	-220.3	-289.8	-0.1494 ug/L	-0.1494 ppb	10:01:22
2	Cu 324.752†	326.7	-5490.0	-2.6060 ug/L	-2.6060 ppb	10:01:22
2	Mn 257.610†	-33186.7	-34050.3	-2.3894 ug/L	-2.3894 ppb	10:01:22
2	Mo 202.031†	-348.8	-368.6	1.3235 ug/L	1.3235 ppb	10:01:22
2	Ni 231.604†	271.9	167.3	4.3309 ug/L	4.3309 ppb	10:01:42
2	P 214.914†	758.9	540.3	39.344 ug/L	39.344 ppb	10:01:42
2	Pb 220.353†	209.9	274.2	-1.4575 ug/L	-1.4575 ppb	10:01:42
2	S 181.975 Axial†	50.2	11.5	16.709 ug/L	16.709 ppb	10:01:42
2	Sb 206.836†	20.6	-21.3	-12.080 ug/L	-12.080 ppb	10:01:42
2	Se 196.026†	-1866.2	-1867.2	-57.422 ug/L	-57.422 ppb	10:01:42
2	Si 251.611†	-781.2	-1353.2	-44.923 ug/L	-44.923 ppb	10:01:22
2	Sn 189.927†	-2.4	-11.1	4.2059 ug/L	4.2059 ppb	10:01:42
2	Ti 334.940†	1586.6	2909.5	0.1768 ug/L	0.1768 ppb	10:01:22
2	Tl 190.801†	-46.6	-13.0	-4.4054 ug/L	-4.4054 ppb	10:01:42
2	U 409.014†	346369.6	353646.1	10212 ug/L	10212 ppb	10:01:22
2	V 292.402†	3008.2	4600.1	-1.6264 ug/L	-1.6264 ppb	10:01:22
2	Zn 213.857†	4300.7	3640.8	-19.854 ug/L	-19.854 ppb	10:01:42
2	SiO2†	-743.7	-1336.1	-94.555 ug/L	-94.555 ppb	10:02:19
3	Sc Radial	4766.9	4766.9	99.2 %		10:00:29
3	Y RADIAL	4992.1	4992.1	99.83 %		10:00:29

3	Al 396.153Radial†	-148.2	2.2	3.2739 ug/L	3.2739 ppb	10:00:29
3	Ca 317.933Radial†	11.0	-5.6	-9.2419 ug/L	-9.2419 ppb	10:00:49
3	Fe 238.204 Radial†	40736.1	41066.8	373650 ug/L	373650 ppb	10:00:29
3	K 766.490 Radial†	2797.3	-4.9	-0.8049 ug/L	-0.8049 ppb	10:00:29
3	Mg 279.077 IEC†	12.3	12.0	34.252 ug/L	34.252 ppb	10:00:49
3	Na 589.592 Radial†	-1089.5	-20.1	-6.0932 ug/L	-6.0932 ppb	10:00:29
3	Sr 421.552†	131.8	130.8	0.9172 ug/L	0.9172 ppb	10:00:29
3	Sc 361.383	853653.1	853653.1	99.021 %		10:01:48
3	Y 371.029	701510.8	701510.8	98.168 %		10:01:48
3	Ag 328.068†	-22423.9	-22874.4	10.117 ug/L	10.117 ppb	10:01:48
3	As 188.979†	-209.9	-178.1	6.8005 ug/L	6.8005 ppb	10:02:08
3	B 249.677†	1519.7	2073.8	-11.362 ug/L	-11.362 ppb	10:01:48
3	Ba 233.527†	-1904.9	-1912.1	-4.1757 ug/L	-4.1757 ppb	10:01:48
3	Be 313.107†	-8926.7	-4676.3	-1.7310 ug/L	-1.7310 ppb	10:01:48
3	Cd 226.502†	2606.6	2844.3	-2.7796 ug/L	-2.7796 ppb	10:01:48
3	Co 228.616†	201.1	276.8	0.5733 ug/L	0.5733 ppb	10:02:08
3	Cr 267.716†	-229.8	-298.8	-0.2376 ug/L	-0.2376 ppb	10:01:48
3	Cu 324.752†	309.1	-5508.5	-2.6116 ug/L	-2.6116 ppb	10:01:48
3	Mn 257.610†	-33209.7	-33990.0	-2.2195 ug/L	-2.2195 ppb	10:01:48
3	Mo 202.031†	-328.7	-347.5	2.9804 ug/L	2.9804 ppb	10:01:48
3	Ni 231.604†	248.6	143.0	3.7011 ug/L	3.7011 ppb	10:02:08
3	P 214.914†	737.6	516.9	23.984 ug/L	23.984 ppb	10:02:08
3	Pb 220.353†	231.0	295.0	1.0487 ug/L	1.0487 ppb	10:02:08
3	S 181.975 Axial†	45.6	6.7	9.7874 ug/L	9.7874 ppb	10:02:08
3	Sb 206.836†	35.1	-6.7	-6.9963 ug/L	-6.9963 ppb	10:02:08
3	Se 196.026†	-1853.1	-1849.3	-42.132 ug/L	-42.132 ppb	10:02:08
3	Si 251.611†	-842.4	-1413.0	-46.942 ug/L	-46.942 ppb	10:01:48
3	Sn 189.927†	-4.1	-12.8	3.9007 ug/L	3.9007 ppb	10:02:08
3	Ti 334.940†	1591.6	2910.5	0.1812 ug/L	0.1812 ppb	10:01:48
3	Tl 190.801†	-50.7	-17.0	-5.6701 ug/L	-5.6701 ppb	10:02:08
3	U 409.014†	347355.3	353770.1	10216 ug/L	10216 ppb	10:01:48
3	V 292.402†	2901.2	4484.6	-2.5827 ug/L	-2.5827 ppb	10:01:48
3	Zn 213.857†	4272.2	3601.2	-20.390 ug/L	-20.390 ppb	10:02:08
3	SiO2†	-805.2	-1396.3	-98.891 ug/L	-98.891 ppb	10:02:24

Mean Data: LR1

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	849014.0	98.483 %	0.7294			0.74%
Sc Radial	4768.9	99.2 %	0.62			0.62%
Y 371.029	697033.1	97.541 %	0.7633			0.78%
Y RADIAL	4977.4	99.54 %	0.410			0.41%
Ag 328.068†	-22850.5	10.431 ug/L	0.8418	10.431 ppb	0.8418	8.07%
Al 396.153Radial†	-4.6	-2.9265 ug/L	6.41681	-2.9265 ppb	6.41681	219.27%
As 188.979†	-165.6	12.624 ug/L	5.4366	12.624 ppb	5.4366	43.07%
B 249.677†	2078.6	-11.337 ug/L	0.7005	-11.337 ppb	0.7005	6.18%
Ba 233.527†	-1905.8	-4.1063 ug/L	0.07691	-4.1063 ppb	0.07691	1.87%
Be 313.107†	-4767.0	-1.7649 ug/L	0.03110	-1.7649 ppb	0.03110	1.76%
Ca 317.933Radial†	-4.7	-7.7609 ug/L	2.80494	-7.7609 ppb	2.80494	36.14%
Cd 226.502†	2854.5	-2.7184 ug/L	0.07108	-2.7184 ppb	0.07108	2.61%
Co 228.616†	281.7	0.6711 ug/L	0.34944	0.6711 ppb	0.34944	52.07%
Cr 267.716†	-289.0	-0.1060 ug/L	0.15789	-0.1060 ppb	0.15789	148.95%
Cu 324.752†	-5482.5	-2.4953 ug/L	0.19663	-2.4953 ppb	0.19663	7.88%
Fe 238.204 Radial†	41127.8	374210 ug/L	1890.5	374210 ppb	1890.5	0.51%
K 766.490 Radial†	75.2	13.318 ug/L	12.7946	13.318 ppb	12.7946	96.07%
Mg 279.077 IEC†	12.7	58.278 ug/L	26.6898	58.278 ppb	26.6898	45.80%
Mn 257.610†	-34034.6	-2.2171 ug/L	0.17356	-2.2171 ppb	0.17356	7.83%
Mo 202.031†	-359.1	2.1576 ug/L	0.82852	2.1576 ppb	0.82852	38.40%
Na 589.592 Radial†	8.8	2.6645 ug/L	17.01254	2.6645 ppb	17.01254	638.49%
Ni 231.604†	143.4	3.7125 ug/L	0.61273	3.7125 ppb	0.61273	16.50%
P 214.914†	529.8	31.558 ug/L	7.6824	31.558 ppb	7.6824	24.34%
Pb 220.353†	281.5	-0.6922 ug/L	1.51134	-0.6922 ppb	1.51134	218.34%
S 181.975 Axial†	11.2	16.298 ug/L	6.3151	16.298 ppb	6.3151	38.75%
Sb 206.836†	-12.3	-8.9610 ug/L	2.73143	-8.9610 ppb	2.73143	30.48%
Se 196.026†	-1855.3	-44.369 ug/L	12.0904	-44.369 ppb	12.0904	27.25%
Si 251.611†	-1379.4	-45.809 ug/L	1.0318	-45.809 ppb	1.0318	2.25%
Sn 189.927†	-14.0	3.6909 ug/L	0.64592	3.6909 ppb	0.64592	17.50%
Sr 421.552†	100.8	0.7067 ug/L	0.18347	0.7067 ppb	0.18347	25.96%
Ti 334.940†	2875.6	0.1291 ug/L	0.08649	0.1291 ppb	0.08649	67.02%
Tl 190.801†	-18.9	-6.2800 ug/L	2.24271	-6.2800 ppb	2.24271	35.71%

U 409.014†	353276.0	10201 ug/L	22.0	10201 ppb	22.0	0.22%
V 292.402†	4557.6	-2.1721 ug/L	0.49225	-2.1721 ppb	0.49225	22.66%
Zn 213.857†	3629.0	-20.200 ug/L	0.2995	-20.200 ppb	0.2995	1.48%
SiO2†	-1371.8	-97.119 ug/L	2.2742	-97.119 ppb	2.2742	2.34%

Sequence No.: 2

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/11/2010 10:04:36

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5033.7	5033.7	105 %		10:06:28
1	Y RADIAL	5190.7	5190.7	103.8 %		10:06:28
1	Al 396.153Radial†	5070.4	4993.5	4611.1 ug/L	4611.1 ppb	10:06:28
1	Ca 317.933Radial†	2993.3	2841.7	4709.9 ug/L	4709.9 ppb	10:06:48
1	Fe 238.204 Radial†	557.9	521.3	4757.9 ug/L	4757.9 ppb	10:06:48
1	K 766.490 Radial†	30624.0	26418.4	4657.4 ug/L	4657.4 ppb	10:06:28
1	Mg 279.077 IEC†	143.2	136.3	4831.5 ug/L	4831.5 ppb	10:06:48
1	Na 589.592 Radial†	30619.8	30318.6	9169.8 ug/L	9169.8 ppb	10:06:28
1	Sr 421.552†	70551.5	67370.3	472.44 ug/L	472.44 ppb	10:06:28
1	Sc 361.383	875140.1	875140.1	101.51 %		10:07:45
1	Y 371.029	712431.5	712431.5	99.696 %		10:07:45
1	Ag 328.068†	104626.9	102838.5	487.65 ug/L	487.65 ppb	10:07:51
1	As 188.979†	1069.7	1087.7	497.65 ug/L	497.65 ppb	10:08:11
1	B 249.677†	20615.4	20847.1	493.76 ug/L	493.76 ppb	10:07:51
1	Ba 233.527†	60826.3	59931.1	490.66 ug/L	490.66 ppb	10:07:51
1	Be 313.107†	1320921.4	1305569.2	487.38 ug/L	487.38 ppb	10:07:45
1	Cd 226.502†	41286.4	40882.9	485.97 ug/L	485.97 ppb	10:07:51
1	Co 228.616†	23107.5	22836.7	498.89 ug/L	498.89 ppb	10:07:51
1	Cr 267.716†	42485.5	41785.4	487.05 ug/L	487.05 ppb	10:07:51
1	Cu 324.752†	169439.3	161092.7	488.65 ug/L	488.65 ppb	10:07:51
1	Mn 257.610†	431681.5	424794.6	489.01 ug/L	489.01 ppb	10:07:45
1	Mo 202.031†	6556.9	6443.6	482.97 ug/L	482.97 ppb	10:08:11
1	Ni 231.604†	19213.2	18818.8	487.23 ug/L	487.23 ppb	10:07:51
1	P 214.914†	4153.9	3863.9	2309.3 ug/L	2309.3 ppb	10:08:11
1	Pb 220.353†	3864.4	3868.5	484.13 ug/L	484.13 ppb	10:08:11
1	S 181.975 Axial†	711.3	661.4	963.56 ug/L	963.56 ppb	10:08:11
1	Sb 206.836†	1435.4	1371.8	495.53 ug/L	495.53 ppb	10:08:11
1	Se 196.026†	706.7	718.3	500.84 ug/L	500.84 ppb	10:08:11
1	Si 251.611†	74142.6	72475.1	2418.3 ug/L	2418.3 ppb	10:07:51
1	Sn 189.927†	2645.9	2597.7	482.87 ug/L	482.87 ppb	10:08:11
1	Ti 334.940†	302446.2	299240.8	485.20 ug/L	485.20 ppb	10:07:51
1	Tl 190.801†	1517.2	1528.8	493.16 ug/L	493.16 ppb	10:08:11
1	U 409.014†	14048.8	16819.4	486.08 ug/L	486.08 ppb	10:07:51
1	V 292.402†	66425.6	66990.0	492.95 ug/L	492.95 ppb	10:07:51
1	Zn 213.857†	50993.4	49519.9	484.06 ug/L	484.06 ppb	10:07:51
1	SiO2†	73971.9	72286.1	5143.2 ug/L	5143.2 ppb	10:09:18
2	Sc Radial	4797.7	4797.7	99.8 %		10:06:53
2	Y RADIAL	4973.1	4973.1	99.45 %		10:06:53
2	Al 396.153Radial†	5127.7	5289.1	4885.3 ug/L	4885.3 ppb	10:06:53
2	Ca 317.933Radial†	3041.8	3030.9	5023.6 ug/L	5023.6 ppb	10:07:13
2	Fe 238.204 Radial†	568.3	557.9	5091.2 ug/L	5091.2 ppb	10:07:13
2	K 766.490 Radial†	30671.4	27904.5	4919.5 ug/L	4919.5 ppb	10:06:53
2	Mg 279.077 IEC†	145.2	145.1	5140.9 ug/L	5140.9 ppb	10:07:13
2	Na 589.592 Radial†	30730.1	31867.5	9638.3 ug/L	9638.3 ppb	10:06:53
2	Sr 421.552†	71251.9	71386.3	500.61 ug/L	500.61 ppb	10:06:53
2	Sc 361.383	859789.1	859789.1	99.733 %		10:08:16
2	Y 371.029	700429.0	700429.0	98.017 %		10:08:16
2	Ag 328.068†	104789.7	104841.9	497.22 ug/L	497.22 ppb	10:08:22
2	As 188.979†	1044.9	1081.5	495.02 ug/L	495.02 ppb	10:08:42
2	B 249.677†	20530.3	21124.4	500.28 ug/L	500.28 ppb	10:08:22
2	Ba 233.527†	60771.1	60945.6	498.97 ug/L	498.97 ppb	10:08:22
2	Be 313.107†	1298645.1	1306465.7	487.74 ug/L	487.74 ppb	10:08:16
2	Cd 226.502†	41169.2	41491.5	493.18 ug/L	493.18 ppb	10:08:22
2	Co 228.616†	23068.0	23203.5	506.89 ug/L	506.89 ppb	10:08:22
2	Cr 267.716†	42432.0	42479.0	495.14 ug/L	495.14 ppb	10:08:22
2	Cu 324.752†	169837.7	164472.4	498.92 ug/L	498.92 ppb	10:08:22
2	Mn 257.610†	426224.0	426914.9	491.46 ug/L	491.46 ppb	10:08:16
2	Mo 202.031†	6481.1	6482.9	485.95 ug/L	485.95 ppb	10:08:42
2	Ni 231.604†	19164.1	19107.5	494.71 ug/L	494.71 ppb	10:08:22

2	P 214.914†	4110.0	3893.0	2325.2 ug/L	2325.2 ppb	10:08:42
2	Pb 220.353†	3838.0	3910.0	489.34 ug/L	489.34 ppb	10:08:42
2	S 181.975 Axial†	701.2	663.7	966.96 ug/L	966.96 ppb	10:08:42
2	Sb 206.836†	1435.5	1397.2	504.49 ug/L	504.49 ppb	10:08:42
2	Se 196.026†	701.7	725.7	506.93 ug/L	506.93 ppb	10:08:42
2	Si 251.611†	74186.3	73822.9	2463.3 ug/L	2463.3 ppb	10:08:22
2	Sn 189.927†	2622.8	2621.1	487.27 ug/L	487.27 ppb	10:08:42
2	Ti 334.940†	302992.5	305108.0	494.73 ug/L	494.73 ppb	10:08:22
2	Tl 190.801†	1504.8	1543.0	497.77 ug/L	497.77 ppb	10:08:42
2	U 409.014†	14225.0	17243.2	498.31 ug/L	498.31 ppb	10:08:22
2	V 292.402†	66351.4	68083.9	500.91 ug/L	500.91 ppb	10:08:22
2	Zn 213.857†	50879.3	50302.5	491.67 ug/L	491.67 ppb	10:08:22
2	SiO2†	74527.3	74144.0	5275.6 ug/L	5275.6 ppb	10:09:23
3	Sc Radial	4817.1	4817.1	100 %		10:07:18
3	Y RADIAL	5011.0	5011.0	100.2 %		10:07:18
3	Al 396.153Radial†	5190.0	5330.6	4924.0 ug/L	4924.0 ppb	10:07:18
3	Ca 317.933Radial†	3050.1	3026.9	5016.9 ug/L	5016.9 ppb	10:07:38
3	Fe 238.204 Radial†	565.9	553.2	5048.6 ug/L	5048.6 ppb	10:07:38
3	K 766.490 Radial†	30992.2	28101.0	4954.2 ug/L	4954.2 ppb	10:07:18
3	Mg 279.077 IEC†	148.9	148.1	5249.6 ug/L	5249.6 ppb	10:07:38
3	Na 589.592 Radial†	30969.3	31982.3	9673.0 ug/L	9673.0 ppb	10:07:18
3	Sr 421.552†	71857.6	71703.5	502.83 ug/L	502.83 ppb	10:07:18
3	Sc 361.383	868044.0	868044.0	100.69 %		10:08:47
3	Y 371.029	707440.4	707440.4	98.998 %		10:08:47
3	Ag 328.068†	105006.1	104057.6	493.51 ug/L	493.51 ppb	10:08:53
3	As 188.979†	1050.2	1076.9	492.88 ug/L	492.88 ppb	10:09:13
3	B 249.677†	20753.2	21150.0	500.90 ug/L	500.90 ppb	10:08:53
3	Ba 233.527†	60917.8	60511.8	495.42 ug/L	495.42 ppb	10:08:53
3	Be 313.107†	1312769.6	1308110.5	488.34 ug/L	488.34 ppb	10:08:47
3	Cd 226.502†	41368.6	41297.0	490.87 ug/L	490.87 ppb	10:08:53
3	Co 228.616†	23144.3	23059.4	503.74 ug/L	503.74 ppb	10:08:53
3	Cr 267.716†	42512.9	42154.7	491.36 ug/L	491.36 ppb	10:08:53
3	Cu 324.752†	170360.9	163372.5	495.58 ug/L	495.58 ppb	10:08:53
3	Mn 257.610†	428585.8	425196.4	489.48 ug/L	489.48 ppb	10:08:47
3	Mo 202.031†	6504.1	6443.9	483.02 ug/L	483.02 ppb	10:09:13
3	Ni 231.604†	19280.9	19040.7	492.98 ug/L	492.98 ppb	10:08:53
3	P 214.914†	4111.0	3854.8	2302.0 ug/L	2302.0 ppb	10:09:13
3	Pb 220.353†	3826.2	3861.7	483.33 ug/L	483.33 ppb	10:09:13
3	S 181.975 Axial†	706.5	662.3	964.86 ug/L	964.86 ppb	10:09:13
3	Sb 206.836†	1433.2	1381.3	498.78 ug/L	498.78 ppb	10:09:13
3	Se 196.026†	701.2	718.5	501.93 ug/L	501.93 ppb	10:09:13
3	Si 251.611†	74462.0	73389.3	2448.8 ug/L	2448.8 ppb	10:08:53
3	Sn 189.927†	2613.2	2586.6	480.85 ug/L	480.85 ppb	10:09:13
3	Ti 334.940†	303715.2	302936.7	491.20 ug/L	491.20 ppb	10:08:53
3	Tl 190.801†	1498.8	1522.7	491.24 ug/L	491.24 ppb	10:09:13
3	U 409.014†	14120.1	17003.4	491.37 ug/L	491.37 ppb	10:08:53
3	V 292.402†	66675.1	67772.7	498.61 ug/L	498.61 ppb	10:08:53
3	Zn 213.857†	51123.1	50059.5	489.29 ug/L	489.29 ppb	10:08:53
3	SiO2†	74434.3	73341.0	5218.4 ug/L	5218.4 ppb	10:09:28

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	867657.7	100.65 %	0.891			0.89%
Sc Radial	4882.8	102 %	2.7			2.68%
Y 371.029	706766.9	98.903 %	0.8438			0.85%
Y RADIAL	5058.3	101.2 %	2.32			2.30%
Ag 328.068†	103912.7	492.79 ug/L	4.825	492.79 ppb	4.825	0.98%
QC value within limits for Ag 328.068 Recovery = 98.56%						
Al 396.153Radial†	5204.4	4806.8 ug/L	170.56	4806.8 ppb	170.56	3.55%
QC value within limits for Al 396.153Radial Recovery = 96.14%						
As 188.979†	1082.0	495.18 ug/L	2.391	495.18 ppb	2.391	0.48%
QC value within limits for As 188.979 Recovery = 99.04%						
B 249.677†	21040.5	498.31 ug/L	3.957	498.31 ppb	3.957	0.79%
QC value within limits for B 249.677 Recovery = 99.66%						
Ba 233.527†	60462.8	495.02 ug/L	4.171	495.02 ppb	4.171	0.84%
QC value within limits for Ba 233.527 Recovery = 99.00%						
Be 313.107†	1306715.2	487.82 ug/L	0.485	487.82 ppb	0.485	0.10%
QC value within limits for Be 313.107 Recovery = 97.56%						
Ca 317.933Radial†	2966.5	4916.8 ug/L	179.19	4916.8 ppb	179.19	3.64%

QC value within limits for Ca 317.933 Radial Recovery = 98.34%					
Cd 226.502†	41223.8	490.01 ug/L	3.681	490.01 ppb	3.681 0.75%
QC value within limits for Cd 226.502 Recovery = 98.00%					
Co 228.616†	23033.2	503.17 ug/L	4.028	503.17 ppb	4.028 0.80%
QC value within limits for Co 228.616 Recovery = 100.63%					
Cr 267.716†	42139.7	491.18 ug/L	4.046	491.18 ppb	4.046 0.82%
QC value within limits for Cr 267.716 Recovery = 98.24%					
Cu 324.752†	162979.2	494.38 ug/L	5.235	494.38 ppb	5.235 1.06%
QC value within limits for Cu 324.752 Recovery = 98.88%					
Fe 238.204 Radial†	544.1	4965.9 ug/L	181.36	4965.9 ppb	181.36 3.65%
QC value within limits for Fe 238.204 Radial Recovery = 99.32%					
K 766.490 Radial†	27474.6	4843.7 ug/L	162.23	4843.7 ppb	162.23 3.35%
QC value within limits for K 766.490 Radial Recovery = 96.87%					
Mg 279.077 IEC†	143.2	5074.0 ug/L	216.91	5074.0 ppb	216.91 4.27%
QC value within limits for Mg 279.077 IEC Recovery = 101.48%					
Mn 257.610†	425635.3	489.98 ug/L	1.305	489.98 ppb	1.305 0.27%
QC value within limits for Mn 257.610 Recovery = 98.00%					
Mo 202.031†	6456.8	483.98 ug/L	1.703	483.98 ppb	1.703 0.35%
QC value within limits for Mo 202.031 Recovery = 96.80%					
Na 589.592 Radial†	31389.5	9493.7 ug/L	281.03	9493.7 ppb	281.03 2.96%
QC value within limits for Na 589.592 Radial Recovery = 94.94%					
Ni 231.604†	18989.0	491.64 ug/L	3.913	491.64 ppb	3.913 0.80%
QC value within limits for Ni 231.604 Recovery = 98.33%					
P 214.914†	3870.6	2312.2 ug/L	11.83	2312.2 ppb	11.83 0.51%
QC value within limits for P 214.914 Recovery = 92.49%					
Pb 220.353†	3880.1	485.60 ug/L	3.263	485.60 ppb	3.263 0.67%
QC value within limits for Pb 220.353 Recovery = 97.12%					
S 181.975 Axial†	662.5	965.13 ug/L	1.712	965.13 ppb	1.712 0.18%
QC value within limits for S 181.975 Axial Recovery = 96.51%					
Sb 206.836†	1383.4	499.60 ug/L	4.536	499.60 ppb	4.536 0.91%
QC value within limits for Sb 206.836 Recovery = 99.92%					
Se 196.026†	720.8	503.24 ug/L	3.244	503.24 ppb	3.244 0.64%
QC value within limits for Se 196.026 Recovery = 100.65%					
Si 251.611†	73229.1	2443.5 ug/L	23.00	2443.5 ppb	23.00 0.94%
QC value within limits for Si 251.611 Recovery = 97.74%					
Sn 189.927†	2601.8	483.66 ug/L	3.280	483.66 ppb	3.280 0.68%
QC value within limits for Sn 189.927 Recovery = 96.73%					
Sr 421.552†	70153.4	491.96 ug/L	16.938	491.96 ppb	16.938 3.44%
QC value within limits for Sr 421.552 Recovery = 98.39%					
Ti 334.940†	302428.5	490.38 ug/L	4.816	490.38 ppb	4.816 0.98%
QC value within limits for Ti 334.940 Recovery = 98.08%					
Tl 190.801†	1531.5	494.05 ug/L	3.354	494.05 ppb	3.354 0.68%
QC value within limits for Tl 190.801 Recovery = 98.81%					
U 409.014†	17022.0	491.92 ug/L	6.134	491.92 ppb	6.134 1.25%
QC value within limits for U 409.014 Recovery = 98.38%					
V 292.402†	67615.5	497.49 ug/L	4.093	497.49 ppb	4.093 0.82%
QC value within limits for V 292.402 Recovery = 99.50%					
Zn 213.857†	49960.6	488.34 ug/L	3.893	488.34 ppb	3.893 0.80%
QC value within limits for Zn 213.857 Recovery = 97.67%					
SiO2†	73257.0	5212.4 ug/L	66.43	5212.4 ppb	66.43 1.27%
QC value within limits for SiO2 Recovery = 97.47%					

All analyte(s) passed QC.

Sequence No.: 3

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/11/2010 10:11:39

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4887.7	4887.7	102 %		10:13:31
1	Y RADIAL	5083.6	5083.6	101.7 %		10:13:31
1	Al 396.153Radial†	-139.2	14.7	13.593 ug/L	13.593 ppb	10:13:51
1	Ca 317.933Radial†	16.5	-0.5	-0.8146 ug/L	-0.8146 ppb	10:13:51
1	Fe 238.204 Radial†	9.7	-1.9	-17.279 ug/L	-17.279 ppb	10:13:51
1	K 766.490 Radial†	2989.4	114.3	20.154 ug/L	20.154 ppb	10:13:31
1	Mg 279.077 IEC†	1.5	1.1	39.318 ug/L	39.318 ppb	10:13:51
1	Na 589.592 Radial†	-915.7	177.9	53.818 ug/L	53.818 ppb	10:13:31
1	Sr 421.552†	22.2	19.7	0.1382 ug/L	0.1382 ppb	10:13:31
1	Sc 361.383	857373.3	857373.3	99.452 %		10:14:48
1	Y 371.029	709211.7	709211.7	99.246 %		10:14:48
1	Ag 328.068†	260.0	32.7	0.1462 ug/L	0.1462 ppb	10:14:48
1	As 188.979†	-17.5	16.3	7.3951 ug/L	7.3951 ppb	10:15:08
1	B 249.677†	38.1	577.3	13.736 ug/L	13.736 ppb	10:15:08
1	Ba 233.527†	-3.5	8.1	0.0666 ug/L	0.0666 ppb	10:15:08
1	Be 313.107†	-4234.6	80.8	0.0305 ug/L	0.0305 ppb	10:14:48
1	Cd 226.502†	-196.1	14.8	0.1783 ug/L	0.1783 ppb	10:15:08
1	Co 228.616†	-64.7	8.7	0.1907 ug/L	0.1907 ppb	10:15:08
1	Cr 267.716†	87.8	21.5	0.2492 ug/L	0.2492 ppb	10:15:08
1	Cu 324.752†	5832.5	43.9	0.1294 ug/L	0.1294 ppb	10:14:48
1	Mn 257.610†	461.4	12.0	0.0105 ug/L	0.0105 ppb	10:15:08
1	Mo 202.031†	23.2	7.8	0.5830 ug/L	0.5830 ppb	10:15:08
1	Ni 231.604†	106.9	-0.6	-0.0147 ug/L	-0.0147 ppb	10:15:08
1	P 214.914†	221.8	-5.1	-3.1474 ug/L	-3.1474 ppb	10:15:08
1	Pb 220.353†	-69.6	-8.2	-1.0227 ug/L	-1.0227 ppb	10:15:08
1	S 181.975 Axial†	46.5	7.5	10.878 ug/L	10.878 ppb	10:15:08
1	Sb 206.836†	42.6	0.6	0.2593 ug/L	0.2593 ppb	10:15:08
1	Se 196.026†	-21.1	0.9	0.5784 ug/L	0.5784 ppb	10:15:08
1	Si 251.611†	580.8	21.7	0.7192 ug/L	0.7192 ppb	10:15:08
1	Sn 189.927†	16.0	7.4	1.3691 ug/L	1.3691 ppb	10:15:08
1	Ti 334.940†	-1188.8	107.8	0.1692 ug/L	0.1692 ppb	10:14:48
1	Tl 190.801†	-26.1	8.0	2.5607 ug/L	2.5607 ppb	10:15:08
1	U 409.014†	-2789.8	174.9	5.0727 ug/L	5.0727 ppb	10:14:48
1	V 292.402†	-1471.7	74.8	0.5643 ug/L	0.5643 ppb	10:14:48
1	Zn 213.857†	707.6	-1.8	-0.0150 ug/L	-0.0150 ppb	10:15:08
1	SiO2†	598.8	19.0	1.3373 ug/L	1.3373 ppb	10:16:04
2	Sc Radial	4935.7	4935.7	103 %		10:13:56
2	Y RADIAL	5173.6	5173.6	103.5 %		10:13:56
2	Al 396.153Radial†	-153.8	1.8	1.6952 ug/L	1.6952 ppb	10:14:16
2	Ca 317.933Radial†	13.4	-3.7	-6.1155 ug/L	-6.1155 ppb	10:14:16
2	Fe 238.204 Radial†	10.2	-1.6	-14.151 ug/L	-14.151 ppb	10:14:16
2	K 766.490 Radial†	3003.4	99.3	17.522 ug/L	17.522 ppb	10:13:56
2	Mg 279.077 IEC†	0.7	0.2	8.7505 ug/L	8.7505 ppb	10:14:16
2	Na 589.592 Radial†	-963.3	140.3	42.445 ug/L	42.445 ppb	10:13:56
2	Sr 421.552†	-18.9	-20.5	-0.1438 ug/L	-0.1438 ppb	10:13:56
2	Sc 361.383	861043.1	861043.1	99.878 %		10:15:13
2	Y 371.029	712178.9	712178.9	99.661 %		10:15:13
2	Ag 328.068†	235.4	6.9	0.0295 ug/L	0.0295 ppb	10:15:13
2	As 188.979†	-11.8	22.1	10.023 ug/L	10.023 ppb	10:15:33
2	B 249.677†	17.6	556.6	13.244 ug/L	13.244 ppb	10:15:33
2	Ba 233.527†	-17.7	-6.1	-0.0490 ug/L	-0.0490 ppb	10:15:33
2	Be 313.107†	-4216.1	117.5	0.0440 ug/L	0.0440 ppb	10:15:13
2	Cd 226.502†	-177.9	33.8	0.4028 ug/L	0.4028 ppb	10:15:33
2	Co 228.616†	-62.8	10.8	0.2365 ug/L	0.2365 ppb	10:15:33
2	Cr 267.716†	80.5	13.8	0.1606 ug/L	0.1606 ppb	10:15:33
2	Cu 324.752†	5893.9	80.3	0.2424 ug/L	0.2424 ppb	10:15:13
2	Mn 257.610†	443.1	-8.2	-0.0112 ug/L	-0.0112 ppb	10:15:33
2	Mo 202.031†	21.1	5.6	0.4198 ug/L	0.4198 ppb	10:15:33
2	Ni 231.604†	100.0	-7.9	-0.2043 ug/L	-0.2043 ppb	10:15:33

2	P 214.914†	216.6	-11.2	-7.0124 ug/L	-7.0124 ppb	10:15:33
2	Pb 220.353†	-75.1	-13.4	-1.6734 ug/L	-1.6734 ppb	10:15:33
2	S 181.975 Axial†	35.2	-4.1	-5.9630 ug/L	-5.9630 ppb	10:15:33
2	Sb 206.836†	40.8	-1.3	-0.4062 ug/L	-0.4062 ppb	10:15:33
2	Se 196.026†	-16.3	5.8	3.8379 ug/L	3.8379 ppb	10:15:33
2	Si 251.611†	591.9	30.3	1.0096 ug/L	1.0096 ppb	10:15:33
2	Sn 189.927†	16.1	7.5	1.3854 ug/L	1.3854 ppb	10:15:33
2	Ti 334.940†	-1249.0	52.7	0.0835 ug/L	0.0835 ppb	10:15:13
2	Tl 190.801†	-32.4	1.8	0.5744 ug/L	0.5744 ppb	10:15:33
2	U 409.014†	-2942.4	34.0	0.9879 ug/L	0.9879 ppb	10:15:13
2	V 292.402†	-1461.7	91.1	0.6718 ug/L	0.6718 ppb	10:15:13
2	Zn 213.857†	705.7	-6.7	-0.0630 ug/L	-0.0630 ppb	10:15:33
2	SiO2†	582.0	-0.5	-0.0443 ug/L	-0.0443 ppb	10:16:09
3	Sc Radial	4780.6	4780.6	99.5 %		10:14:21
3	Y RADIAL	5061.5	5061.5	101.2 %		10:14:21
3	Al 396.153Radial†	-146.5	4.3	3.9252 ug/L	3.9252 ppb	10:14:41
3	Ca 317.933Radial†	12.6	-4.0	-6.6076 ug/L	-6.6076 ppb	10:14:41
3	Fe 238.204 Radial†	10.1	-1.4	-12.453 ug/L	-12.453 ppb	10:14:41
3	K 766.490 Radial†	2938.7	129.2	22.794 ug/L	22.794 ppb	10:14:21
3	Mg 279.077 IEC†	1.3	0.9	31.312 ug/L	31.312 ppb	10:14:41
3	Na 589.592 Radial†	-1013.4	59.5	17.997 ug/L	17.997 ppb	10:14:21
3	Sr 421.552†	27.6	25.6	0.1799 ug/L	0.1799 ppb	10:14:21
3	Sc 361.383	856303.6	856303.6	99.328 %		10:15:39
3	Y 371.029	709481.5	709481.5	99.283 %		10:15:39
3	Ag 328.068†	336.5	110.0	0.5151 ug/L	0.5151 ppb	10:15:39
3	As 188.979†	-23.5	10.2	4.6390 ug/L	4.6390 ppb	10:15:59
3	B 249.677†	19.1	558.3	13.282 ug/L	13.282 ppb	10:15:59
3	Ba 233.527†	1.2	12.8	0.1059 ug/L	0.1059 ppb	10:15:59
3	Be 313.107†	-4122.9	187.9	0.0703 ug/L	0.0703 ppb	10:15:39
3	Cd 226.502†	-194.4	16.2	0.1941 ug/L	0.1941 ppb	10:15:59
3	Co 228.616†	-62.7	10.6	0.2333 ug/L	0.2333 ppb	10:15:59
3	Cr 267.716†	71.1	4.8	0.0552 ug/L	0.0552 ppb	10:15:59
3	Cu 324.752†	5747.4	-34.4	-0.1067 ug/L	-0.1067 ppb	10:15:39
3	Mn 257.610†	454.6	5.8	0.0041 ug/L	0.0041 ppb	10:15:59
3	Mo 202.031†	31.2	15.9	1.1913 ug/L	1.1913 ppb	10:15:59
3	Ni 231.604†	112.5	5.3	0.1366 ug/L	0.1366 ppb	10:15:59
3	P 214.914†	233.0	6.5	4.0950 ug/L	4.0950 ppb	10:15:59
3	Pb 220.353†	-58.4	2.9	0.3671 ug/L	0.3671 ppb	10:15:59
3	S 181.975 Axial†	44.5	5.4	7.8993 ug/L	7.8993 ppb	10:15:59
3	Sb 206.836†	49.7	7.9	2.8047 ug/L	2.8047 ppb	10:15:59
3	Se 196.026†	-15.9	6.1	4.0634 ug/L	4.0634 ppb	10:15:59
3	Si 251.611†	580.8	22.5	0.7377 ug/L	0.7377 ppb	10:15:59
3	Sn 189.927†	19.3	10.7	1.9885 ug/L	1.9885 ppb	10:15:59
3	Ti 334.940†	-1211.8	83.2	0.1302 ug/L	0.1302 ppb	10:15:39
3	Tl 190.801†	-20.3	13.8	4.4177 ug/L	4.4177 ppb	10:15:59
3	U 409.014†	-2863.7	97.0	2.8130 ug/L	2.8130 ppb	10:15:39
3	V 292.402†	-1430.7	114.3	0.8545 ug/L	0.8545 ppb	10:15:39
3	Zn 213.857†	717.6	9.2	0.0921 ug/L	0.0921 ppb	10:15:59
3	SiO2†	599.0	19.9	1.3879 ug/L	1.3879 ppb	10:16:14

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	858240.0	99.553 %	0.2883			0.29%
Sc Radial	4868.0	101 %	1.7			1.63%
Y 371.029	710290.7	99.397 %	0.2296			0.23%
Y RADIAL	5106.2	102.1 %	1.19			1.16%
Ag 328.068†	49.8	0.2303 ug/L	0.25348	0.2303 ppb	0.25348	110.07%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	6.9	6.4043 ug/L	6.32427	6.4043 ppb	6.32427	98.75%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	16.2	7.3523 ug/L	2.69211	7.3523 ppb	2.69211	36.62%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	564.1	13.421 ug/L	0.2739	13.421 ppb	0.2739	2.04%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	4.9	0.0412 ug/L	0.08052	0.0412 ppb	0.08052	195.61%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	128.7	0.0483 ug/L	0.02025	0.0483 ppb	0.02025	41.98%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-2.7	-4.5126 ug/L	3.21196	-4.5126 ppb	3.21196	71.18%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated				
Cd 226.502†	21.6	0.2584 ug/L	0.12529	0.2584 ppb 0.12529 48.48%
QC value within limits for Cd 226.502 Recovery = Not calculated				
Co 228.616†	10.0	0.2202 ug/L	0.02557	0.2202 ppb 0.02557 11.61%
QC value within limits for Co 228.616 Recovery = Not calculated				
Cr 267.716†	13.4	0.1550 ug/L	0.09711	0.1550 ppb 0.09711 62.64%
QC value within limits for Cr 267.716 Recovery = Not calculated				
Cu 324.752†	29.9	0.0883 ug/L	0.17812	0.0883 ppb 0.17812 201.61%
QC value within limits for Cu 324.752 Recovery = Not calculated				
Fe 238.204 Radial†	-1.6	-14.628 ug/L	2.4482	-14.628 ppb 2.4482 16.74%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated				
K 766.490 Radial†	114.3	20.157 ug/L	2.6362	20.157 ppb 2.6362 13.08%
QC value within limits for K 766.490 Radial Recovery = Not calculated				
Mg 279.077 IEC†	0.7	26.460 ug/L	15.8507	26.460 ppb 15.8507 59.90%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated				
Mn 257.610†	3.2	0.0011 ug/L	0.01115	0.0011 ppb 0.01115 982.24%
QC value within limits for Mn 257.610 Recovery = Not calculated				
Mo 202.031†	9.8	0.7314 ug/L	0.40658	0.7314 ppb 0.40658 55.59%
QC value within limits for Mo 202.031 Recovery = Not calculated				
Na 589.592 Radial†	125.9	38.087 ug/L	18.3042	38.087 ppb 18.3042 48.06%
QC value within limits for Na 589.592 Radial Recovery = Not calculated				
Ni 231.604†	-1.1	-0.0275 ug/L	0.17083	-0.0275 ppb 0.17083 621.78%
QC value within limits for Ni 231.604 Recovery = Not calculated				
P 214.914†	-3.3	-2.0216 ug/L	5.63861	-2.0216 ppb 5.63861 278.92%
QC value within limits for P 214.914 Recovery = Not calculated				
Pb 220.353†	-6.3	-0.7763 ug/L	1.04230	-0.7763 ppb 1.04230 134.26%
QC value within limits for Pb 220.353 Recovery = Not calculated				
S 181.975 Axial†	2.9	4.2715 ug/L	8.98759	4.2715 ppb 8.98759 210.41%
QC value within limits for S 181.975 Axial Recovery = Not calculated				
Sb 206.836†	2.4	0.8860 ug/L	1.69471	0.8860 ppb 1.69471 191.29%
QC value within limits for Sb 206.836 Recovery = Not calculated				
Se 196.026†	4.3	2.8266 ug/L	1.95027	2.8266 ppb 1.95027 69.00%
QC value within limits for Se 196.026 Recovery = Not calculated				
Si 251.611†	24.8	0.8222 ug/L	0.16257	0.8222 ppb 0.16257 19.77%
QC value within limits for Si 251.611 Recovery = Not calculated				
Sn 189.927†	8.5	1.5810 ug/L	0.35302	1.5810 ppb 0.35302 22.33%
QC value within limits for Sn 189.927 Recovery = Not calculated				
Sr 421.552†	8.3	0.0581 ug/L	0.17606	0.0581 ppb 0.17606 302.94%
QC value within limits for Sr 421.552 Recovery = Not calculated				
Ti 334.940†	81.2	0.1276 ug/L	0.04293	0.1276 ppb 0.04293 33.63%
QC value within limits for Ti 334.940 Recovery = Not calculated				
Tl 190.801†	7.9	2.5176 ug/L	1.92203	2.5176 ppb 1.92203 76.34%
QC value within limits for Tl 190.801 Recovery = Not calculated				
U 409.014†	102.0	2.9579 ug/L	2.04626	2.9579 ppb 2.04626 69.18%
QC value within limits for U 409.014 Recovery = Not calculated				
V 292.402†	93.4	0.6969 ug/L	0.14672	0.6969 ppb 0.14672 21.05%
QC value within limits for V 292.402 Recovery = Not calculated				
Zn 213.857†	0.3	0.0047 ug/L	0.07938	0.0047 ppb 0.07938 >999.9%
QC value within limits for Zn 213.857 Recovery = Not calculated				
SiO2†	12.8	0.8936 ug/L	0.81267	0.8936 ppb 0.81267 90.94%
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: 2/11/2010 11:23:51

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4828.3	4828.3	100 %		11:25:43
1	Y RADIAL	5053.5	5053.5	101.1 %		11:25:43
1	Al 396.153Radial†	5185.0	5313.7	4908.2 ug/L	4908.2 ppb	11:25:43
1	Ca 317.933Radial†	3061.8	3031.5	5024.5 ug/L	5024.5 ppb	11:26:03
1	Fe 238.204 Radial†	574.7	560.7	5116.6 ug/L	5116.6 ppb	11:26:03
1	K 766.490 Radial†	31120.6	28157.1	4964.0 ug/L	4964.0 ppb	11:25:43
1	Mg 279.077 IEC†	146.9	145.8	5168.7 ug/L	5168.7 ppb	11:26:03
1	Na 589.592 Radial†	31358.4	32297.9	9768.5 ug/L	9768.5 ppb	11:25:43
1	Sr 421.552†	72440.0	72116.9	505.73 ug/L	505.73 ppb	11:25:43
1	Sc 361.383	873372.0	873372.0	101.31 %		11:27:01
1	Y 371.029	713104.8	713104.8	99.790 %		11:27:01
1	Ag 328.068†	104829.8	103247.4	489.69 ug/L	489.69 ppb	11:27:06
1	As 188.979†	1061.7	1081.8	495.10 ug/L	495.10 ppb	11:27:26
1	B 249.677†	22865.4	23109.2	547.51 ug/L	547.51 ppb	11:27:06
1	Ba 233.527†	60836.9	60062.9	491.75 ug/L	491.75 ppb	11:27:06
1	Be 313.107†	1332646.8	1319777.3	492.68 ug/L	492.68 ppb	11:27:01
1	Cd 226.502†	41148.7	40829.3	485.30 ug/L	485.30 ppb	11:27:06
1	Co 228.616†	23051.6	22827.6	498.69 ug/L	498.69 ppb	11:27:06
1	Cr 267.716†	42494.2	41878.7	488.14 ug/L	488.14 ppb	11:27:06
1	Cu 324.752†	169724.5	161712.2	490.55 ug/L	490.55 ppb	11:27:06
1	Mn 257.610†	434299.2	428239.3	492.99 ug/L	492.99 ppb	11:27:01
1	Mo 202.031†	6561.1	6460.8	484.29 ug/L	484.29 ppb	11:27:26
1	Ni 231.604†	19238.2	18881.7	488.86 ug/L	488.86 ppb	11:27:06
1	P 214.914†	4150.1	3868.4	2311.5 ug/L	2311.5 ppb	11:27:26
1	Pb 220.353†	3893.0	3904.4	488.65 ug/L	488.65 ppb	11:27:26
1	S 181.975 Axial†	711.9	663.4	966.46 ug/L	966.46 ppb	11:27:26
1	Sb 206.836†	1443.9	1383.1	499.46 ug/L	499.46 ppb	11:27:26
1	Se 196.026†	721.0	733.8	512.50 ug/L	512.50 ppb	11:27:26
1	Si 251.611†	74121.6	72602.2	2422.5 ug/L	2422.5 ppb	11:27:06
1	Sn 189.927†	2633.4	2590.7	481.61 ug/L	481.61 ppb	11:27:26
1	Ti 334.940†	302699.2	300093.7	486.60 ug/L	486.60 ppb	11:27:06
1	Tl 190.801†	1518.2	1532.8	494.48 ug/L	494.48 ppb	11:27:26
1	U 409.014†	14342.1	17136.9	495.24 ug/L	495.24 ppb	11:27:06
1	V 292.402†	66423.3	67120.2	493.89 ug/L	493.89 ppb	11:27:06
1	Zn 213.857†	50984.6	49612.9	484.91 ug/L	484.91 ppb	11:27:06
1	SiO2†	74354.2	72810.9	5180.6 ug/L	5180.6 ppb	11:28:33
2	Sc Radial	4762.6	4762.6	99.1 %		11:26:08
2	Y RADIAL	4925.2	4925.2	98.49 %		11:26:08
2	Al 396.153Radial†	5174.9	5374.5	4964.1 ug/L	4964.1 ppb	11:26:08
2	Ca 317.933Radial†	3057.3	3069.0	5086.7 ug/L	5086.7 ppb	11:26:28
2	Fe 238.204 Radial†	566.1	559.9	5109.2 ug/L	5109.2 ppb	11:26:28
2	K 766.490 Radial†	30888.5	28349.8	4998.0 ug/L	4998.0 ppb	11:26:08
2	Mg 279.077 IEC†	148.7	149.6	5302.8 ug/L	5302.8 ppb	11:26:28
2	Na 589.592 Radial†	31158.5	32526.6	9837.6 ug/L	9837.6 ppb	11:26:08
2	Sr 421.552†	71741.8	72406.4	507.76 ug/L	507.76 ppb	11:26:08
2	Sc 361.383	861194.4	861194.4	99.896 %		11:27:32
2	Y 371.029	703870.3	703870.3	98.498 %		11:27:32
2	Ag 328.068†	104530.9	104411.3	495.20 ug/L	495.20 ppb	11:27:37
2	As 188.979†	1067.7	1102.7	504.57 ug/L	504.57 ppb	11:27:57
2	B 249.677†	22872.7	23435.6	555.27 ug/L	555.27 ppb	11:27:37
2	Ba 233.527†	60700.0	60775.1	497.57 ug/L	497.57 ppb	11:27:37
2	Be 313.107†	1315447.9	1321161.2	493.21 ug/L	493.21 ppb	11:27:32
2	Cd 226.502†	41134.3	41389.2	491.96 ug/L	491.96 ppb	11:27:37
2	Co 228.616†	22966.8	23064.5	503.88 ug/L	503.88 ppb	11:27:37
2	Cr 267.716†	42501.3	42479.0	495.14 ug/L	495.14 ppb	11:27:37
2	Cu 324.752†	169103.5	163459.5	495.85 ug/L	495.85 ppb	11:27:37
2	Mn 257.610†	428755.6	428751.7	493.57 ug/L	493.57 ppb	11:27:32
2	Mo 202.031†	6628.6	6620.0	496.22 ug/L	496.22 ppb	11:27:57
2	Ni 231.604†	19144.5	19056.5	493.39 ug/L	493.39 ppb	11:27:37

2	P 214.914†	4202.5	3978.8	2379.3 ug/L	2379.3 ppb	11:27:57
2	Pb 220.353†	3925.2	3991.0	499.49 ug/L	499.49 ppb	11:27:57
2	S 181.975 Axial†	709.5	670.9	977.39 ug/L	977.39 ppb	11:27:57
2	Sb 206.836†	1450.4	1409.7	509.17 ug/L	509.17 ppb	11:27:57
2	Se 196.026†	727.7	750.6	523.80 ug/L	523.80 ppb	11:27:57
2	Si 251.611†	73992.2	73507.2	2452.6 ug/L	2452.6 ppb	11:27:37
2	Sn 189.927†	2664.2	2658.3	494.17 ug/L	494.17 ppb	11:27:57
2	Ti 334.940†	301943.1	303561.8	492.22 ug/L	492.22 ppb	11:27:37
2	Tl 190.801†	1515.8	1551.6	500.52 ug/L	500.52 ppb	11:27:57
2	U 409.014†	14022.8	17017.5	491.76 ug/L	491.76 ppb	11:27:37
2	V 292.402†	66186.1	67809.9	499.05 ug/L	499.05 ppb	11:27:37
2	Zn 213.857†	50873.4	50213.4	490.80 ug/L	490.80 ppb	11:27:37
2	SiO2†	74670.5	74165.4	5276.9 ug/L	5276.9 ppb	11:28:38
3	Sc Radial	4825.2	4825.2	100 %		11:26:33
3	Y RADIAL	5028.7	5028.7	100.6 %		11:26:33
3	Al 396.153Radial†	5226.9	5358.6	4949.7 ug/L	4949.7 ppb	11:26:33
3	Ca 317.933Radial†	3065.6	3037.2	5033.9 ug/L	5033.9 ppb	11:26:54
3	Fe 238.204 Radial†	571.8	558.1	5093.3 ug/L	5093.3 ppb	11:26:54
3	K 766.490 Radial†	31227.3	28282.8	4986.2 ug/L	4986.2 ppb	11:26:33
3	Mg 279.077 IEC†	149.5	148.5	5263.3 ug/L	5263.3 ppb	11:26:54
3	Na 589.592 Radial†	31627.8	32586.0	9855.6 ug/L	9855.6 ppb	11:26:33
3	Sr 421.552†	72870.4	72591.1	509.06 ug/L	509.06 ppb	11:26:33
3	Sc 361.383	870385.3	870385.3	100.96 %		11:28:03
3	Y 371.029	709166.2	709166.2	99.239 %		11:28:03
3	Ag 328.068†	104482.3	103258.2	489.73 ug/L	489.73 ppb	11:28:08
3	As 188.979†	1055.5	1079.4	493.96 ug/L	493.96 ppb	11:28:28
3	B 249.677†	22912.5	23233.3	550.46 ug/L	550.46 ppb	11:28:08
3	Ba 233.527†	60704.1	60137.4	492.35 ug/L	492.35 ppb	11:28:08
3	Be 313.107†	1328694.1	1320376.3	492.90 ug/L	492.90 ppb	11:28:03
3	Cd 226.502†	41279.1	41097.8	488.50 ug/L	488.50 ppb	11:28:08
3	Co 228.616†	23136.4	22989.8	502.24 ug/L	502.24 ppb	11:28:08
3	Cr 267.716†	42479.2	42007.8	489.64 ug/L	489.64 ppb	11:28:08
3	Cu 324.752†	168864.0	161434.7	489.70 ug/L	489.70 ppb	11:28:08
3	Mn 257.610†	434328.2	429739.1	494.71 ug/L	494.71 ppb	11:28:03
3	Mo 202.031†	6595.0	6516.6	488.47 ug/L	488.47 ppb	11:28:28
3	Ni 231.604†	19220.3	18929.2	490.09 ug/L	490.09 ppb	11:28:08
3	P 214.914†	4160.9	3893.2	2327.1 ug/L	2327.1 ppb	11:28:28
3	Pb 220.353†	3875.6	3900.4	488.17 ug/L	488.17 ppb	11:28:28
3	S 181.975 Axial†	716.3	670.2	976.33 ug/L	976.33 ppb	11:28:28
3	Sb 206.836†	1446.5	1390.6	502.20 ug/L	502.20 ppb	11:28:28
3	Se 196.026†	719.2	734.5	512.88 ug/L	512.88 ppb	11:28:28
3	Si 251.611†	73946.4	72679.8	2425.0 ug/L	2425.0 ppb	11:28:08
3	Sn 189.927†	2645.6	2611.7	485.51 ug/L	485.51 ppb	11:28:28
3	Ti 334.940†	301882.4	300310.0	486.94 ug/L	486.94 ppb	11:28:08
3	Tl 190.801†	1504.5	1524.4	491.77 ug/L	491.77 ppb	11:28:28
3	U 409.014†	14354.5	17197.8	497.00 ug/L	497.00 ppb	11:28:08
3	V 292.402†	66191.4	67115.5	493.92 ug/L	493.92 ppb	11:28:08
3	Zn 213.857†	50864.3	49666.6	485.44 ug/L	485.44 ppb	11:28:08
3	SiO2†	74094.3	72805.3	5180.1 ug/L	5180.1 ppb	11:28:44

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	868317.2	100.72 %	0.736			0.73%
Sc Radial	4805.4	100.0 %	0.77			0.77%
Y 371.029	708713.8	99.176 %	0.6484			0.65%
Y RADIAL	5002.5	100.0 %	1.36			1.36%
Ag 328.068†	103639.0	491.54 ug/L	3.166	491.54 ppb	3.166	0.64%
QC value within limits for Ag 328.068 Recovery = 98.31%						
Al 396.153Radial†	5348.9	4940.7 ug/L	29.04	4940.7 ppb	29.04	0.59%
QC value within limits for Al 396.153Radial Recovery = 98.81%						
As 188.979†	1088.0	497.88 ug/L	5.824	497.88 ppb	5.824	1.17%
QC value within limits for As 188.979 Recovery = 99.58%						
B 249.677†	23259.4	551.08 ug/L	3.913	551.08 ppb	3.913	0.71%
QC value greater than the upper limit for B 249.677 Recovery = 110.22%						
Ba 233.527†	60325.1	493.89 ug/L	3.203	493.89 ppb	3.203	0.65%
QC value within limits for Ba 233.527 Recovery = 98.78%						
Be 313.107†	1320438.3	492.93 ug/L	0.265	492.93 ppb	0.265	0.05%
QC value within limits for Be 313.107 Recovery = 98.59%						
Ca 317.933Radial†	3045.9	5048.4 ug/L	33.50	5048.4 ppb	33.50	0.66%

QC value within limits for Ca 317.933 Radial Recovery = 100.97%

Cd 226.502†	41105.4	488.58 ug/L	3.331	488.58 ppb	3.331	0.68%
QC value within limits for Cd 226.502 Recovery = 97.72%						
Co 228.616†	22960.6	501.60 ug/L	2.653	501.60 ppb	2.653	0.53%
QC value within limits for Co 228.616 Recovery = 100.32%						
Cr 267.716†	42121.8	490.98 ug/L	3.683	490.98 ppb	3.683	0.75%
QC value within limits for Cr 267.716 Recovery = 98.20%						
Cu 324.752†	162202.1	492.03 ug/L	3.331	492.03 ppb	3.331	0.68%
QC value within limits for Cu 324.752 Recovery = 98.41%						
Fe 238.204 Radial†	559.6	5106.4 ug/L	11.95	5106.4 ppb	11.95	0.23%
QC value within limits for Fe 238.204 Radial Recovery = 102.13%						
K 766.490 Radial†	28263.3	4982.7 ug/L	17.24	4982.7 ppb	17.24	0.35%
QC value within limits for K 766.490 Radial Recovery = 99.65%						
Mg 279.077 IEC†	148.0	5244.9 ug/L	68.91	5244.9 ppb	68.91	1.31%
QC value within limits for Mg 279.077 IEC Recovery = 104.90%						
Mn 257.610†	428910.0	493.76 ug/L	0.874	493.76 ppb	0.874	0.18%
QC value within limits for Mn 257.610 Recovery = 98.75%						
Mo 202.031†	6532.5	489.66 ug/L	6.050	489.66 ppb	6.050	1.24%
QC value within limits for Mo 202.031 Recovery = 97.93%						
Na 589.592 Radial†	32470.2	9820.6 ug/L	46.01	9820.6 ppb	46.01	0.47%
QC value within limits for Na 589.592 Radial Recovery = 98.21%						
Ni 231.604†	18955.8	490.78 ug/L	2.339	490.78 ppb	2.339	0.48%
QC value within limits for Ni 231.604 Recovery = 98.16%						
P 214.914†	3913.5	2339.3 ug/L	35.51	2339.3 ppb	35.51	1.52%
QC value within limits for P 214.914 Recovery = 93.57%						
Pb 220.353†	3931.9	492.10 ug/L	6.402	492.10 ppb	6.402	1.30%
QC value within limits for Pb 220.353 Recovery = 98.42%						
S 181.975 Axial†	668.2	973.39 ug/L	6.025	973.39 ppb	6.025	0.62%
QC value within limits for S 181.975 Axial Recovery = 97.34%						
Sb 206.836†	1394.5	503.61 ug/L	5.009	503.61 ppb	5.009	0.99%
QC value within limits for Sb 206.836 Recovery = 100.72%						
Se 196.026†	739.6	516.39 ug/L	6.416	516.39 ppb	6.416	1.24%
QC value within limits for Se 196.026 Recovery = 103.28%						
Si 251.611†	72929.7	2433.4 ug/L	16.71	2433.4 ppb	16.71	0.69%
QC value within limits for Si 251.611 Recovery = 97.34%						
Sn 189.927†	2620.2	487.10 ug/L	6.428	487.10 ppb	6.428	1.32%
QC value within limits for Sn 189.927 Recovery = 97.42%						
Sr 421.552†	72371.5	507.51 ug/L	1.676	507.51 ppb	1.676	0.33%
QC value within limits for Sr 421.552 Recovery = 101.50%						
Ti 334.940†	301321.8	488.58 ug/L	3.151	488.58 ppb	3.151	0.64%
QC value within limits for Ti 334.940 Recovery = 97.72%						
Tl 190.801†	1536.3	495.59 ug/L	4.477	495.59 ppb	4.477	0.90%
QC value within limits for Tl 190.801 Recovery = 99.12%						
U 409.014†	17117.4	494.67 ug/L	2.667	494.67 ppb	2.667	0.54%
QC value within limits for U 409.014 Recovery = 98.93%						
V 292.402†	67348.6	495.62 ug/L	2.973	495.62 ppb	2.973	0.60%
QC value within limits for V 292.402 Recovery = 99.12%						
Zn 213.857†	49831.0	487.05 ug/L	3.259	487.05 ppb	3.259	0.67%
QC value within limits for Zn 213.857 Recovery = 97.41%						
SiO2†	73260.6	5212.5 ug/L	55.74	5212.5 ppb	55.74	1.07%
QC value within limits for SiO2 Recovery = 97.48%						

QC Failed. Continue with analysis.

Sequence No.: 11

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/11/2010 11:30:53

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4937.2	4937.2	103 %		11:32:46
1	Y RADIAL	5172.4	5172.4	103.4 %		11:32:46
1	Al 396.153Radial†	-147.6	7.8	7.2517 ug/L	7.2517 ppb	11:33:06
1	Ca 317.933Radial†	20.4	3.1	5.2039 ug/L	5.2039 ppb	11:33:06
1	Fe 238.204 Radial†	12.5	0.7	6.4065 ug/L	6.4065 ppb	11:33:06
1	K 766.490 Radial†	2878.3	-23.4	-4.1430 ug/L	-4.1430 ppb	11:32:46
1	Mg 279.077 IEC†	2.1	1.6	57.919 ug/L	57.919 ppb	11:33:06
1	Na 589.592 Radial†	-967.4	136.7	41.337 ug/L	41.337 ppb	11:32:46
1	Sr 421.552†	4.2	2.0	0.0142 ug/L	0.0142 ppb	11:32:46
1	Sc 361.383	864522.7	864522.7	100.28 %		11:34:03
1	Y 371.029	716030.2	716030.2	100.20 %		11:34:03
1	Ag 328.068†	351.5	121.7	0.5768 ug/L	0.5768 ppb	11:34:03
1	As 188.979†	-23.8	10.1	4.5992 ug/L	4.5992 ppb	11:34:23
1	B 249.677†	2037.7	2571.0	61.163 ug/L	61.163 ppb	11:34:03
1	Ba 233.527†	-9.8	1.9	0.0166 ug/L	0.0166 ppb	11:34:23
1	Be 313.107†	-4302.3	48.5	0.0181 ug/L	0.0181 ppb	11:34:03
1	Cd 226.502†	-204.6	7.9	0.0938 ug/L	0.0938 ppb	11:34:23
1	Co 228.616†	-66.3	7.6	0.1678 ug/L	0.1678 ppb	11:34:23
1	Cr 267.716†	72.9	5.9	0.0691 ug/L	0.0691 ppb	11:34:23
1	Cu 324.752†	5955.1	117.6	0.3563 ug/L	0.3563 ppb	11:34:03
1	Mn 257.610†	450.3	-2.9	-0.0051 ug/L	-0.0051 ppb	11:34:23
1	Mo 202.031†	23.3	7.7	0.5770 ug/L	0.5770 ppb	11:34:23
1	Ni 231.604†	122.2	13.8	0.3579 ug/L	0.3579 ppb	11:34:23
1	P 214.914†	223.5	-5.2	-3.2925 ug/L	-3.2925 ppb	11:34:23
1	Pb 220.353†	-51.8	10.0	1.2538 ug/L	1.2538 ppb	11:34:23
1	S 181.975 Axial†	44.0	4.5	6.5563 ug/L	6.5563 ppb	11:34:23
1	Sb 206.836†	36.8	-5.5	-1.8812 ug/L	-1.8812 ppb	11:34:23
1	Se 196.026†	-18.9	3.2	2.1962 ug/L	2.1962 ppb	11:34:23
1	Si 251.611†	551.2	-12.6	-0.4297 ug/L	-0.4297 ppb	11:34:23
1	Sn 189.927†	14.3	5.6	1.0426 ug/L	1.0426 ppb	11:34:23
1	Ti 334.940†	-1309.7	-2.9	-0.0093 ug/L	-0.0093 ppb	11:34:03
1	Tl 190.801†	-23.3	11.0	3.5275 ug/L	3.5275 ppb	11:34:23
1	U 409.014†	-2941.7	46.6	1.3496 ug/L	1.3496 ppb	11:34:03
1	V 292.402†	-1481.7	77.1	0.5706 ug/L	0.5706 ppb	11:34:03
1	Zn 213.857†	749.2	33.8	0.3297 ug/L	0.3297 ppb	11:34:23
1	SiO2†	573.5	-11.2	-0.8180 ug/L	-0.8180 ppb	11:35:19
2	Sc Radial	4929.8	4929.8	103 %		11:33:11
2	Y RADIAL	5097.9	5097.9	101.9 %		11:33:11
2	Al 396.153Radial†	-144.1	11.1	10.276 ug/L	10.276 ppb	11:33:31
2	Ca 317.933Radial†	20.9	3.7	6.1384 ug/L	6.1384 ppb	11:33:31
2	Fe 238.204 Radial†	10.3	-1.4	-12.938 ug/L	-12.938 ppb	11:33:31
2	K 766.490 Radial†	2925.6	27.0	4.7477 ug/L	4.7477 ppb	11:33:11
2	Mg 279.077 IEC†	3.2	2.7	95.257 ug/L	95.257 ppb	11:33:31
2	Na 589.592 Radial†	-964.7	137.9	41.705 ug/L	41.705 ppb	11:33:11
2	Sr 421.552†	15.0	12.5	0.0877 ug/L	0.0877 ppb	11:33:11
2	Sc 361.383	862469.3	862469.3	100.04 %		11:34:28
2	Y 371.029	713778.4	713778.4	99.885 %		11:34:28
2	Ag 328.068†	267.4	38.5	0.1767 ug/L	0.1767 ppb	11:34:28
2	As 188.979†	-28.7	5.2	2.3475 ug/L	2.3475 ppb	11:34:48
2	B 249.677†	2011.8	2550.0	60.665 ug/L	60.665 ppb	11:34:28
2	Ba 233.527†	-7.5	4.1	0.0351 ug/L	0.0351 ppb	11:34:48
2	Be 313.107†	-4199.6	141.0	0.0527 ug/L	0.0527 ppb	11:34:28
2	Cd 226.502†	-177.7	34.3	0.4099 ug/L	0.4099 ppb	11:34:48
2	Co 228.616†	-64.3	9.4	0.2076 ug/L	0.2076 ppb	11:34:48
2	Cr 267.716†	67.7	0.9	0.0093 ug/L	0.0093 ppb	11:34:48
2	Cu 324.752†	5892.4	69.1	0.2066 ug/L	0.2066 ppb	11:34:28
2	Mn 257.610†	479.6	27.5	0.0264 ug/L	0.0264 ppb	11:34:48
2	Mo 202.031†	26.9	11.3	0.8479 ug/L	0.8479 ppb	11:34:48
2	Ni 231.604†	97.9	-10.1	-0.2630 ug/L	-0.2630 ppb	11:34:48

2	P 214.914†	226.0	-2.2	-1.3741 ug/L	-1.3741 ppb	11:34:48
2	Pb 220.353†	-71.3	-9.6	-1.1898 ug/L	-1.1898 ppb	11:34:48
2	S 181.975 Axial†	45.9	6.5	9.5141 ug/L	9.5141 ppb	11:34:48
2	Sb 206.836†	46.8	4.7	1.6745 ug/L	1.6745 ppb	11:34:48
2	Se 196.026†	-12.5	9.6	6.4469 ug/L	6.4469 ppb	11:34:48
2	Si 251.611†	558.3	-4.2	-0.1510 ug/L	-0.1510 ppb	11:34:48
2	Sn 189.927†	18.6	9.9	1.8436 ug/L	1.8436 ppb	11:34:48
2	Ti 334.940†	-1238.3	65.4	0.0971 ug/L	0.0971 ppb	11:34:28
2	Tl 190.801†	-22.2	12.0	3.8314 ug/L	3.8314 ppb	11:34:48
2	U 409.014†	-2826.0	155.3	4.5041 ug/L	4.5041 ppb	11:34:28
2	V 292.402†	-1439.5	115.8	0.8649 ug/L	0.8649 ppb	11:34:28
2	Zn 213.857†	755.8	42.2	0.4199 ug/L	0.4199 ppb	11:34:48
2	SiO2†	576.7	-6.7	-0.5029 ug/L	-0.5029 ppb	11:35:24
3	Sc Radial	4866.7	4866.7	101 %		11:33:36
3	Y RADIAL	5074.7	5074.7	101.5 %		11:33:36
3	Al 396.153Radial†	-138.6	14.7	13.640 ug/L	13.640 ppb	11:33:56
3	Ca 317.933Radial†	21.9	4.9	8.2040 ug/L	8.2040 ppb	11:33:56
3	Fe 238.204 Radial†	12.3	0.7	6.1455 ug/L	6.1455 ppb	11:33:56
3	K 766.490 Radial†	2778.8	-81.0	-14.316 ug/L	-14.316 ppb	11:33:36
3	Mg 279.077 IEC†	5.3	4.9	172.22 ug/L	172.22 ppb	11:33:56
3	Na 589.592 Radial†	-1014.5	76.5	23.125 ug/L	23.125 ppb	11:33:36
3	Sr 421.552†	10.4	8.1	0.0570 ug/L	0.0570 ppb	11:33:36
3	Sc 361.383	857245.8	857245.8	99.438 %		11:34:53
3	Y 371.029	708885.4	708885.4	99.200 %		11:34:53
3	Ag 328.068†	235.7	8.3	0.0423 ug/L	0.0423 ppb	11:34:53
3	As 188.979†	-30.5	3.2	1.4520 ug/L	1.4520 ppb	11:35:13
3	B 249.677†	2009.3	2559.7	60.893 ug/L	60.893 ppb	11:34:53
3	Ba 233.527†	4.4	16.1	0.1323 ug/L	0.1323 ppb	11:35:13
3	Be 313.107†	-4201.1	113.8	0.0424 ug/L	0.0424 ppb	11:34:53
3	Cd 226.502†	-188.4	22.4	0.2659 ug/L	0.2659 ppb	11:35:13
3	Co 228.616†	-72.1	1.2	0.0277 ug/L	0.0277 ppb	11:35:13
3	Cr 267.716†	68.7	2.4	0.0280 ug/L	0.0280 ppb	11:35:13
3	Cu 324.752†	5827.9	40.2	0.1218 ug/L	0.1218 ppb	11:34:53
3	Mn 257.610†	484.4	35.2	0.0341 ug/L	0.0341 ppb	11:35:13
3	Mo 202.031†	23.0	7.6	0.5689 ug/L	0.5689 ppb	11:35:13
3	Ni 231.604†	89.2	-18.3	-0.4744 ug/L	-0.4744 ppb	11:35:13
3	P 214.914†	225.9	-0.9	-0.5751 ug/L	-0.5751 ppb	11:35:13
3	Pb 220.353†	-76.0	-14.7	-1.8261 ug/L	-1.8261 ppb	11:35:13
3	S 181.975 Axial†	38.6	-0.5	-0.7679 ug/L	-0.7679 ppb	11:35:13
3	Sb 206.836†	40.7	-1.2	-0.4006 ug/L	-0.4006 ppb	11:35:13
3	Se 196.026†	-18.8	3.2	2.1685 ug/L	2.1685 ppb	11:35:13
3	Si 251.611†	565.8	6.7	0.2179 ug/L	0.2179 ppb	11:35:13
3	Sn 189.927†	7.5	-1.2	-0.2145 ug/L	-0.2145 ppb	11:35:13
3	Ti 334.940†	-1290.1	5.8	-0.0038 ug/L	-0.0038 ppb	11:34:53
3	Tl 190.801†	-31.4	2.6	0.8376 ug/L	0.8376 ppb	11:35:13
3	U 409.014†	-2940.4	23.1	0.6679 ug/L	0.6679 ppb	11:34:53
3	V 292.402†	-1481.1	65.2	0.4850 ug/L	0.4850 ppb	11:34:53
3	Zn 213.857†	760.6	51.6	0.5113 ug/L	0.5113 ppb	11:35:13
3	SiO2†	617.5	37.8	2.6843 ug/L	2.6843 ppb	11:35:29

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	861412.6	99.921 %	0.4352			0.44%
Sc Radial	4911.3	102 %	0.8			0.79%
Y 371.029	712898.0	99.761 %	0.5112			0.51%
Y RADIAL	5115.0	102.3 %	1.02			1.00%
Ag 328.068†	56.2	0.2653 ug/L	0.27805	0.2653 ppb	0.27805	104.82%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	11.2	10.389 ug/L	3.1957	10.389 ppb	3.1957	30.76%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	6.2	2.7996 ug/L	1.62157	2.7996 ppb	1.62157	57.92%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	2560.2	60.907 ug/L	0.2493	60.907 ppb	0.2493	0.41%
QC value greater than the upper limit for B 249.677 Recovery = Not calculated						
Ba 233.527†	7.3	0.0613 ug/L	0.06216	0.0613 ppb	0.06216	101.35%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	101.1	0.0377 ug/L	0.01781	0.0377 ppb	0.01781	47.18%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	3.9	6.5155 ug/L	1.53515	6.5155 ppb	1.53515	23.56%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated									
Cd	226.502†	21.5	0.2565 ug/L	0.15823	0.2565 ppb	0.15823	61.68%		
QC value within limits for Cd 226.502 Recovery = Not calculated									
Co	228.616†	6.1	0.1344 ug/L	0.09448	0.1344 ppb	0.09448	70.30%		
QC value within limits for Co 228.616 Recovery = Not calculated									
Cr	267.716†	3.0	0.0355 ug/L	0.03060	0.0355 ppb	0.03060	86.27%		
QC value within limits for Cr 267.716 Recovery = Not calculated									
Cu	324.752†	75.6	0.2282 ug/L	0.11873	0.2282 ppb	0.11873	52.02%		
QC value within limits for Cu 324.752 Recovery = Not calculated									
Fe	238.204 Radial†	-0.0	-0.1285 ug/L	11.09372	-0.1285 ppb	11.09372	>999.9%		
QC value within limits for Fe 238.204 Radial Recovery = Not calculated									
K	766.490 Radial†	-25.8	-4.5704 ug/L	9.53904	-4.5704 ppb	9.53904	208.71%		
QC value within limits for K 766.490 Radial Recovery = Not calculated									
Mg	279.077 IEC†	3.1	108.47 ug/L	58.285	108.47 ppb	58.285	53.74%		
QC value within limits for Mg 279.077 IEC Recovery = Not calculated									
Mn	257.610†	19.9	0.0185 ug/L	0.02076	0.0185 ppb	0.02076	112.27%		
QC value within limits for Mn 257.610 Recovery = Not calculated									
Mo	202.031†	8.9	0.6646 ug/L	0.15877	0.6646 ppb	0.15877	23.89%		
QC value within limits for Mo 202.031 Recovery = Not calculated									
Na	589.592 Radial†	117.0	35.389 ug/L	10.6226	35.389 ppb	10.6226	30.02%		
QC value within limits for Na 589.592 Radial Recovery = Not calculated									
Ni	231.604†	-4.9	-0.1265 ug/L	0.43260	-0.1265 ppb	0.43260	342.00%		
QC value within limits for Ni 231.604 Recovery = Not calculated									
P	214.914†	-2.8	-1.7472 ug/L	1.39662	-1.7472 ppb	1.39662	79.93%		
QC value within limits for P 214.914 Recovery = Not calculated									
Pb	220.353†	-4.7	-0.5874 ug/L	1.62590	-0.5874 ppb	1.62590	276.81%		
QC value within limits for Pb 220.353 Recovery = Not calculated									
S	181.975 Axial†	3.5	5.1008 ug/L	5.29327	5.1008 ppb	5.29327	103.77%		
QC value within limits for S 181.975 Axial Recovery = Not calculated									
Sb	206.836†	-0.7	-0.2024 ug/L	1.78611	-0.2024 ppb	1.78611	882.30%		
QC value within limits for Sb 206.836 Recovery = Not calculated									
Se	196.026†	5.3	3.6039 ug/L	2.46220	3.6039 ppb	2.46220	68.32%		
QC value within limits for Se 196.026 Recovery = Not calculated									
Si	251.611†	-3.4	-0.1209 ug/L	0.32486	-0.1209 ppb	0.32486	268.66%		
QC value within limits for Si 251.611 Recovery = Not calculated									
Sn	189.927†	4.8	0.8906 ug/L	1.03745	0.8906 ppb	1.03745	116.49%		
QC value within limits for Sn 189.927 Recovery = Not calculated									
Sr	421.552†	7.6	0.0530 ug/L	0.03696	0.0530 ppb	0.03696	69.77%		
QC value within limits for Sr 421.552 Recovery = Not calculated									
Ti	334.940†	22.8	0.0280 ug/L	0.05992	0.0280 ppb	0.05992	214.01%		
QC value within limits for Ti 334.940 Recovery = Not calculated									
Tl	190.801†	8.5	2.7322 ug/L	1.64777	2.7322 ppb	1.64777	60.31%		
QC value within limits for Tl 190.801 Recovery = Not calculated									
U	409.014†	75.0	2.1739 ug/L	2.04663	2.1739 ppb	2.04663	94.15%		
QC value within limits for U 409.014 Recovery = Not calculated									
V	292.402†	86.0	0.6402 ug/L	0.19925	0.6402 ppb	0.19925	31.13%		
QC value within limits for V 292.402 Recovery = Not calculated									
Zn	213.857†	42.6	0.4203 ug/L	0.09078	0.4203 ppb	0.09078	21.60%		
QC value within limits for Zn 213.857 Recovery = Not calculated									
SiO2†		6.6	0.4545 ug/L	1.93751	0.4545 ppb	1.93751	426.31%		
QC value within limits for SiO2 Recovery = Not calculated									

QC Failed. Continue with analysis.

Sequence No.: 3

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/11/2010 11:57:47

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4863.6	4863.6	101 %		11:59:40
1	Y RADIAL	5063.0	5063.0	101.2 %		11:59:40
1	Al 396.153Radial†	5272.9	5363.0	4954.1 ug/L	4954.1 ppb	11:59:40
1	Ca 317.933Radial†	3065.9	3013.5	4994.6 ug/L	4994.6 ppb	12:00:00
1	Fe 238.204 Radial†	571.4	553.2	5048.5 ug/L	5048.5 ppb	12:00:00
1	K 766.490 Radial†	31053.2	27865.6	4912.5 ug/L	4912.5 ppb	11:59:40
1	Mg 279.077 IEC†	150.0	147.8	5237.9 ug/L	5237.9 ppb	12:00:00
1	Na 589.592 Radial†	31966.2	32672.1	9881.6 ug/L	9881.6 ppb	11:59:40
1	Sr 421.552†	73656.0	72795.3	510.49 ug/L	510.49 ppb	11:59:40
1	Sc 361.383	865780.2	865780.2	100.43 %		12:00:57
1	Y 371.029	704855.3	704855.3	98.636 %		12:00:57
1	Ag 328.068†	104469.3	103795.8	492.26 ug/L	492.26 ppb	12:01:03
1	As 188.979†	1038.1	1067.6	488.65 ug/L	488.65 ppb	12:01:23
1	B 249.677†	21482.5	21930.1	519.46 ug/L	519.46 ppb	12:01:03
1	Ba 233.527†	60644.3	60397.7	494.48 ug/L	494.48 ppb	12:01:03
1	Be 313.107†	1313026.3	1311775.1	489.71 ug/L	489.71 ppb	12:00:57
1	Cd 226.502†	40937.1	40974.7	487.04 ug/L	487.04 ppb	12:01:03
1	Co 228.616†	22997.1	22972.9	501.85 ug/L	501.85 ppb	12:01:03
1	Cr 267.716†	42220.4	41973.9	489.25 ug/L	489.25 ppb	12:01:03
1	Cu 324.752†	169875.2	163331.3	495.45 ug/L	495.45 ppb	12:01:03
1	Mn 257.610†	429898.4	427616.3	492.26 ug/L	492.26 ppb	12:00:57
1	Mo 202.031†	6482.8	6439.6	482.70 ug/L	482.70 ppb	12:01:23
1	Ni 231.604†	19102.2	18912.9	489.67 ug/L	489.67 ppb	12:01:03
1	P 214.914†	4094.5	3849.0	2298.4 ug/L	2298.4 ppb	12:01:23
1	Pb 220.353†	3821.4	3866.8	483.97 ug/L	483.97 ppb	12:01:23
1	S 181.975 Axial†	703.8	661.4	963.56 ug/L	963.56 ppb	12:01:23
1	Sb 206.836†	1419.9	1371.7	495.40 ug/L	495.40 ppb	12:01:23
1	Se 196.026†	699.1	718.3	501.80 ug/L	501.80 ppb	12:01:23
1	Si 251.611†	74136.2	73258.3	2444.5 ug/L	2444.5 ppb	12:01:03
1	Sn 189.927†	2598.8	2579.1	479.45 ug/L	479.45 ppb	12:01:23
1	Ti 334.940†	303081.9	303094.7	491.45 ug/L	491.45 ppb	12:01:03
1	Tl 190.801†	1490.6	1518.5	489.90 ug/L	489.90 ppb	12:01:23
1	U 409.014†	14191.1	17110.7	494.48 ug/L	494.48 ppb	12:01:03
1	V 292.402†	66124.7	67397.9	495.89 ug/L	495.89 ppb	12:01:03
1	Zn 213.857†	50782.0	49852.6	487.27 ug/L	487.27 ppb	12:01:03
1	SiO2†	74764.1	73862.6	5255.6 ug/L	5255.6 ppb	12:02:30
2	Sc Radial	4864.4	4864.4	101 %		12:00:05
2	Y RADIAL	5042.3	5042.3	100.8 %		12:00:05
2	Al 396.153Radial†	5221.6	5311.4	4906.0 ug/L	4906.0 ppb	12:00:05
2	Ca 317.933Radial†	3055.3	3002.4	4976.3 ug/L	4976.3 ppb	12:00:25
2	Fe 238.204 Radial†	570.3	552.1	5038.3 ug/L	5038.3 ppb	12:00:25
2	K 766.490 Radial†	31030.4	27837.6	4907.6 ug/L	4907.6 ppb	12:00:05
2	Mg 279.077 IEC†	149.0	146.8	5202.8 ug/L	5202.8 ppb	12:00:25
2	Na 589.592 Radial†	31972.6	32672.8	9881.9 ug/L	9881.9 ppb	12:00:05
2	Sr 421.552†	73355.0	72485.0	508.31 ug/L	508.31 ppb	12:00:05
2	Sc 361.383	864784.3	864784.3	100.31 %		12:01:28
2	Y 371.029	703923.4	703923.4	98.506 %		12:01:28
2	Ag 328.068†	104641.1	104086.8	493.63 ug/L	493.63 ppb	12:01:34
2	As 188.979†	1052.0	1082.6	495.47 ug/L	495.47 ppb	12:01:54
2	B 249.677†	21546.5	22018.5	521.57 ug/L	521.57 ppb	12:01:34
2	Ba 233.527†	60673.4	60496.3	495.29 ug/L	495.29 ppb	12:01:34
2	Be 313.107†	1314706.7	1314956.0	490.89 ug/L	490.89 ppb	12:01:28
2	Cd 226.502†	40864.1	40948.9	486.73 ug/L	486.73 ppb	12:01:34
2	Co 228.616†	22946.7	22949.0	501.34 ug/L	501.34 ppb	12:01:34
2	Cr 267.716†	42172.0	41974.0	489.25 ug/L	489.25 ppb	12:01:34
2	Cu 324.752†	169790.6	163441.7	495.79 ug/L	495.79 ppb	12:01:34
2	Mn 257.610†	430196.1	428406.0	493.17 ug/L	493.17 ppb	12:01:28
2	Mo 202.031†	6529.7	6493.8	486.76 ug/L	486.76 ppb	12:01:54
2	Ni 231.604†	19066.5	18899.1	489.31 ug/L	489.31 ppb	12:01:34

2	P 214.914†	4144.9	3903.9	2332.5 ug/L	2332.5 ppb	12:01:54
2	Pb 220.353†	3859.0	3908.7	489.19 ug/L	489.19 ppb	12:01:54
2	S 181.975 Axial†	702.6	661.1	963.04 ug/L	963.04 ppb	12:01:54
2	Sb 206.836†	1428.4	1381.8	499.01 ug/L	499.01 ppb	12:01:54
2	Se 196.026†	710.4	730.3	509.85 ug/L	509.85 ppb	12:01:54
2	Si 251.611†	74130.0	73337.2	2447.0 ug/L	2447.0 ppb	12:01:34
2	Sn 189.927†	2597.4	2580.6	479.74 ug/L	479.74 ppb	12:01:54
2	Ti 334.940†	302855.7	303216.8	491.65 ug/L	491.65 ppb	12:01:34
2	Tl 190.801†	1519.4	1548.9	499.65 ug/L	499.65 ppb	12:01:54
2	U 409.014†	14189.6	17125.5	494.91 ug/L	494.91 ppb	12:01:34
2	V 292.402†	66189.7	67538.5	496.97 ug/L	496.97 ppb	12:01:34
2	Zn 213.857†	50708.1	49837.1	487.13 ug/L	487.13 ppb	12:01:34
2	SiO2†	72948.2	72138.2	5132.5 ug/L	5132.5 ppb	12:02:35
3	Sc Radial	4881.5	4881.5	102 %		12:00:30
3	Y RADIAL	5076.4	5076.4	101.5 %		12:00:30
3	Al 396.153Radial†	5284.4	5355.3	4946.2 ug/L	4946.2 ppb	12:00:30
3	Ca 317.933Radial†	3085.8	3022.0	5008.7 ug/L	5008.7 ppb	12:00:50
3	Fe 238.204 Radial†	576.1	555.8	5072.5 ug/L	5072.5 ppb	12:00:50
3	K 766.490 Radial†	31093.2	27792.5	4899.6 ug/L	4899.6 ppb	12:00:30
3	Mg 279.077 IEC†	151.8	149.1	5283.8 ug/L	5283.8 ppb	12:00:50
3	Na 589.592 Radial†	32246.6	32832.5	9930.2 ug/L	9930.2 ppb	12:00:30
3	Sr 421.552†	74049.8	72916.6	511.34 ug/L	511.34 ppb	12:00:30
3	Sc 361.383	846229.6	846229.6	98.160 %		12:01:59
3	Y 371.029	688392.1	688392.1	96.332 %		12:01:59
3	Ag 328.068†	104067.2	105789.5	501.69 ug/L	501.69 ppb	12:02:05
3	As 188.979†	1048.0	1101.5	504.11 ug/L	504.11 ppb	12:02:25
3	B 249.677†	21430.2	22371.0	529.92 ug/L	529.92 ppb	12:02:05
3	Ba 233.527†	60435.3	61579.9	504.16 ug/L	504.16 ppb	12:02:05
3	Be 313.107†	1303086.4	1331854.9	497.21 ug/L	497.21 ppb	12:01:59
3	Cd 226.502†	40625.8	41599.4	494.47 ug/L	494.47 ppb	12:02:05
3	Co 228.616†	22966.7	23471.0	512.74 ug/L	512.74 ppb	12:02:05
3	Cr 267.716†	42103.4	42825.9	499.18 ug/L	499.18 ppb	12:02:05
3	Cu 324.752†	168984.1	166331.4	504.55 ug/L	504.55 ppb	12:02:05
3	Mn 257.610†	427731.1	435298.2	501.10 ug/L	501.10 ppb	12:01:59
3	Mo 202.031†	6540.3	6647.4	498.26 ug/L	498.26 ppb	12:02:25
3	Ni 231.604†	18990.4	19238.4	498.09 ug/L	498.09 ppb	12:02:05
3	P 214.914†	4123.6	3972.8	2373.8 ug/L	2373.8 ppb	12:02:25
3	Pb 220.353†	3839.7	3973.4	497.29 ug/L	497.29 ppb	12:02:25
3	S 181.975 Axial†	696.5	670.3	976.45 ug/L	976.45 ppb	12:02:25
3	Sb 206.836†	1442.5	1427.4	515.39 ug/L	515.39 ppb	12:02:25
3	Se 196.026†	705.5	740.8	517.12 ug/L	517.12 ppb	12:02:25
3	Si 251.611†	73755.9	74576.4	2488.3 ug/L	2488.3 ppb	12:02:05
3	Sn 189.927†	2626.9	2667.5	495.87 ug/L	495.87 ppb	12:02:25
3	Ti 334.940†	301978.5	308943.1	500.93 ug/L	500.93 ppb	12:02:05
3	Tl 190.801†	1501.9	1564.3	504.64 ug/L	504.64 ppb	12:02:25
3	U 409.014†	14209.4	17455.9	504.47 ug/L	504.47 ppb	12:02:05
3	V 292.402†	65720.7	68507.4	504.17 ug/L	504.17 ppb	12:02:05
3	Zn 213.857†	50591.3	50826.5	496.81 ug/L	496.81 ppb	12:02:05
3	SiO2†	73409.4	74202.6	5279.5 ug/L	5279.5 ppb	12:02:40

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	858931.4	99.633 %	1.2773			1.28%
Sc Radial	4869.8	101 %	0.2			0.21%
Y 371.029	699057.0	97.825 %	1.2941			1.32%
Y RADIAL	5060.6	101.2 %	0.34			0.34%
Ag 328.068†	104557.4	495.86 ug/L	5.092	495.86 ppb	5.092	1.03%
QC value within limits for Ag 328.068 Recovery = 99.17%						
Al 396.153Radial†	5343.2	4935.4 ug/L	25.77	4935.4 ppb	25.77	0.52%
QC value within limits for Al 396.153Radial Recovery = 98.71%						
As 188.979†	1083.9	496.08 ug/L	7.748	496.08 ppb	7.748	1.56%
QC value within limits for As 188.979 Recovery = 99.22%						
B 249.677†	22106.5	523.65 ug/L	5.529	523.65 ppb	5.529	1.06%
QC value within limits for B 249.677 Recovery = 104.73%						
Ba 233.527†	60824.6	497.98 ug/L	5.367	497.98 ppb	5.367	1.08%
QC value within limits for Ba 233.527 Recovery = 99.60%						
Be 313.107†	1319528.6	492.60 ug/L	4.032	492.60 ppb	4.032	0.82%
QC value within limits for Be 313.107 Recovery = 98.52%						
Ca 317.933Radial†	3012.6	4993.2 ug/L	16.24	4993.2 ppb	16.24	0.33%

QC value within limits for Ca 317.933 Radial Recovery = 99.86%

Cd 226.502†	41174.3	489.41 ug/L	4.382	489.41 ppb	4.382	0.90%
QC value within limits for Cd 226.502 Recovery = 97.88%						
Co 228.616†	23131.0	505.31 ug/L	6.444	505.31 ppb	6.444	1.28%
QC value within limits for Co 228.616 Recovery = 101.06%						
Cr 267.716†	42257.9	492.56 ug/L	5.731	492.56 ppb	5.731	1.16%
QC value within limits for Cr 267.716 Recovery = 98.51%						
Cu 324.752†	164368.1	498.60 ug/L	5.158	498.60 ppb	5.158	1.03%
QC value within limits for Cu 324.752 Recovery = 99.72%						
Fe 238.204 Radial†	553.7	5053.1 ug/L	17.54	5053.1 ppb	17.54	0.35%
QC value within limits for Fe 238.204 Radial Recovery = 101.06%						
K 766.490 Radial†	27831.9	4906.6 ug/L	6.53	4906.6 ppb	6.53	0.13%
QC value within limits for K 766.490 Radial Recovery = 98.13%						
Mg 279.077 IEC†	147.9	5241.5 ug/L	40.63	5241.5 ppb	40.63	0.78%
QC value within limits for Mg 279.077 IEC Recovery = 104.83%						
Mn 257.610†	430440.2	495.51 ug/L	4.862	495.51 ppb	4.862	0.98%
QC value within limits for Mn 257.610 Recovery = 99.10%						
Mo 202.031†	6527.0	489.24 ug/L	8.073	489.24 ppb	8.073	1.65%
QC value within limits for Mo 202.031 Recovery = 97.85%						
Na 589.592 Radial†	32725.8	9897.9 ug/L	27.94	9897.9 ppb	27.94	0.28%
QC value within limits for Na 589.592 Radial Recovery = 98.98%						
Ni 231.604†	19016.8	492.36 ug/L	4.971	492.36 ppb	4.971	1.01%
QC value within limits for Ni 231.604 Recovery = 98.47%						
P 214.914†	3908.6	2334.9 ug/L	37.74	2334.9 ppb	37.74	1.62%
QC value within limits for P 214.914 Recovery = 93.40%						
Pb 220.353†	3916.3	490.15 ug/L	6.711	490.15 ppb	6.711	1.37%
QC value within limits for Pb 220.353 Recovery = 98.03%						
S 181.975 Axial†	664.2	967.68 ug/L	7.600	967.68 ppb	7.600	0.79%
QC value within limits for S 181.975 Axial Recovery = 96.77%						
Sb 206.836†	1393.6	503.27 ug/L	10.651	503.27 ppb	10.651	2.12%
QC value within limits for Sb 206.836 Recovery = 100.65%						
Se 196.026†	729.8	509.59 ug/L	7.663	509.59 ppb	7.663	1.50%
QC value within limits for Se 196.026 Recovery = 101.92%						
Si 251.611†	73723.9	2459.9 ug/L	24.63	2459.9 ppb	24.63	1.00%
QC value within limits for Si 251.611 Recovery = 98.40%						
Sn 189.927†	2609.1	485.02 ug/L	9.395	485.02 ppb	9.395	1.94%
QC value within limits for Sn 189.927 Recovery = 97.00%						
Sr 421.552†	72732.3	510.05 ug/L	1.561	510.05 ppb	1.561	0.31%
QC value within limits for Sr 421.552 Recovery = 102.01%						
Ti 334.940†	305084.9	494.68 ug/L	5.415	494.68 ppb	5.415	1.09%
QC value within limits for Ti 334.940 Recovery = 98.94%						
Tl 190.801†	1543.9	498.07 ug/L	7.494	498.07 ppb	7.494	1.50%
QC value within limits for Tl 190.801 Recovery = 99.61%						
U 409.014†	17230.7	497.96 ug/L	5.644	497.96 ppb	5.644	1.13%
QC value within limits for U 409.014 Recovery = 99.59%						
V 292.402†	67814.6	499.01 ug/L	4.502	499.01 ppb	4.502	0.90%
QC value within limits for V 292.402 Recovery = 99.80%						
Zn 213.857†	50172.1	490.40 ug/L	5.551	490.40 ppb	5.551	1.13%
QC value within limits for Zn 213.857 Recovery = 98.08%						
SiO2†	73401.1	5222.5 ug/L	78.86	5222.5 ppb	78.86	1.51%
QC value within limits for SiO2 Recovery = 97.66%						

All analyte(s) passed QC.

Sequence No.: 4

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/11/2010 12:04:50

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Rep#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4952.7	4952.7	103 %		12:06:43
1	Y RADIAL	5184.7	5184.7	103.7 %		12:06:43
1	Al 396.153Radial†	-140.8	15.0	13.887 ug/L	13.887 ppb	12:07:04
1	Ca 317.933Radial†	26.3	8.8	14.648 ug/L	14.648 ppb	12:07:04
1	Fe 238.204 Radial†	11.9	0.1	1.0274 ug/L	1.0274 ppb	12:07:04
1	K 766.490 Radial†	2818.4	-90.3	-15.956 ug/L	-15.956 ppb	12:06:43
1	Mg 279.077 IEC†	3.0	2.5	88.527 ug/L	88.527 ppb	12:07:04
1	Na 589.592 Radial†	-990.1	117.6	35.556 ug/L	35.556 ppb	12:06:43
1	Sr 421.552†	32.1	29.1	0.2037 ug/L	0.2037 ppb	12:06:43
1	Sc 361.383	850678.4	850678.4	98.676 %		12:08:00
1	Y 371.029	703357.8	703357.8	98.426 %		12:08:00
1	Ag 328.068†	284.5	59.6	0.2781 ug/L	0.2781 ppb	12:08:00
1	As 188.979†	-23.1	10.5	4.7624 ug/L	4.7624 ppb	12:08:20
1	B 249.677†	882.5	1433.4	34.099 ug/L	34.099 ppb	12:08:00
1	Ba 233.527†	-14.9	-3.5	-0.0276 ug/L	-0.0276 ppb	12:08:20
1	Be 313.107†	-4192.5	90.0	0.0343 ug/L	0.0343 ppb	12:08:00
1	Cd 226.502†	-194.0	15.3	0.1824 ug/L	0.1824 ppb	12:08:20
1	Co 228.616†	-59.7	13.2	0.2880 ug/L	0.2880 ppb	12:08:20
1	Cr 267.716†	74.7	8.9	0.1020 ug/L	0.1020 ppb	12:08:20
1	Cu 324.752†	5873.5	131.6	0.3963 ug/L	0.3963 ppb	12:08:00
1	Mn 257.610†	494.8	49.6	0.0535 ug/L	0.0535 ppb	12:08:20
1	Mo 202.031†	15.2	-0.1	-0.0071 ug/L	-0.0071 ppb	12:08:20
1	Ni 231.604†	103.5	-3.2	-0.0823 ug/L	-0.0823 ppb	12:08:20
1	P 214.914†	227.8	2.8	1.6550 ug/L	1.6550 ppb	12:08:20
1	Pb 220.353†	-53.2	7.8	0.9778 ug/L	0.9778 ppb	12:08:20
1	S 181.975 Axial†	32.8	-6.1	-8.9045 ug/L	-8.9045 ppb	12:08:20
1	Sb 206.836†	48.2	6.7	2.3436 ug/L	2.3436 ppb	12:08:20
1	Se 196.026†	-17.8	4.1	2.7571 ug/L	2.7571 ppb	12:08:20
1	Si 251.611†	535.5	-19.6	-0.6563 ug/L	-0.6563 ppb	12:08:20
1	Sn 189.927†	12.9	4.4	0.8125 ug/L	0.8125 ppb	12:08:20
1	Ti 334.940†	-1066.4	222.5	0.3531 ug/L	0.3531 ppb	12:08:00
1	Tl 190.801†	-30.3	3.5	1.1327 ug/L	1.1327 ppb	12:08:20
1	U 409.014†	-2750.8	192.3	5.5754 ug/L	5.5754 ppb	12:08:00
1	V 292.402†	-1470.6	64.3	0.4787 ug/L	0.4787 ppb	12:08:00
1	Zn 213.857†	763.6	60.5	0.5972 ug/L	0.5972 ppb	12:08:20
1	SiO2†	547.7	-28.1	-2.0064 ug/L	-2.0064 ppb	12:09:16
2	Sc Radial	4884.6	4884.6	102 %		12:07:09
2	Y RADIAL	5089.2	5089.2	101.8 %		12:07:09
2	Al 396.153Radial†	-144.1	9.8	9.0326 ug/L	9.0326 ppb	12:07:29
2	Ca 317.933Radial†	24.0	6.9	11.493 ug/L	11.493 ppb	12:07:29
2	Fe 238.204 Radial†	10.1	-1.5	-13.969 ug/L	-13.969 ppb	12:07:29
2	K 766.490 Radial†	2882.9	11.3	1.9838 ug/L	1.9838 ppb	12:07:09
2	Mg 279.077 IEC†	2.3	1.9	66.818 ug/L	66.818 ppb	12:07:29
2	Na 589.592 Radial†	-989.5	104.8	31.688 ug/L	31.688 ppb	12:07:09
2	Sr 421.552†	64.1	61.0	0.4278 ug/L	0.4278 ppb	12:07:09
2	Sc 361.383	854144.5	854144.5	99.078 %		12:08:26
2	Y 371.029	706080.3	706080.3	98.807 %		12:08:26
2	Ag 328.068†	259.7	33.4	0.1510 ug/L	0.1510 ppb	12:08:26
2	As 188.979†	-25.8	7.9	3.5587 ug/L	3.5587 ppb	12:08:46
2	B 249.677†	924.6	1472.3	35.026 ug/L	35.026 ppb	12:08:26
2	Ba 233.527†	-9.3	2.2	0.0182 ug/L	0.0182 ppb	12:08:46
2	Be 313.107†	-4188.9	110.8	0.0415 ug/L	0.0415 ppb	12:08:26
2	Cd 226.502†	-195.4	14.7	0.1764 ug/L	0.1764 ppb	12:08:46
2	Co 228.616†	-59.7	13.5	0.2965 ug/L	0.2965 ppb	12:08:46
2	Cr 267.716†	82.0	16.0	0.1853 ug/L	0.1853 ppb	12:08:46
2	Cu 324.752†	5724.6	-42.9	-0.1325 ug/L	-0.1325 ppb	12:08:26
2	Mn 257.610†	470.5	22.9	0.0223 ug/L	0.0223 ppb	12:08:46
2	Mo 202.031†	25.7	10.4	0.7758 ug/L	0.7758 ppb	12:08:46
2	Ni 231.604†	101.7	-5.4	-0.1402 ug/L	-0.1402 ppb	12:08:46

2	P 214.914†	224.5	-1.5	-0.8906 ug/L	-0.8906 ppb	12:08:46
2	Pb 220.353†	-60.4	0.8	0.1045 ug/L	0.1045 ppb	12:08:46
2	S 181.975 Axial†	39.9	1.0	1.3920 ug/L	1.3920 ppb	12:08:46
2	Sb 206.836†	46.1	4.4	1.5566 ug/L	1.5566 ppb	12:08:46
2	Se 196.026†	-15.8	6.2	4.1072 ug/L	4.1072 ppb	12:08:46
2	Si 251.611†	553.5	-3.6	-0.1290 ug/L	-0.1290 ppb	12:08:46
2	Sn 189.927†	14.8	6.3	1.1642 ug/L	1.1642 ppb	12:08:46
2	Ti 334.940†	-1231.8	59.9	0.0919 ug/L	0.0919 ppb	12:08:26
2	Tl 190.801†	-29.0	4.9	1.5666 ug/L	1.5666 ppb	12:08:46
2	U 409.014†	-2853.0	100.5	2.9164 ug/L	2.9164 ppb	12:08:26
2	V 292.402†	-1505.9	34.7	0.2721 ug/L	0.2721 ppb	12:08:26
2	Zn 213.857†	776.5	70.5	0.6983 ug/L	0.6983 ppb	12:08:46
2	SiO2†	573.1	-4.7	-0.3547 ug/L	-0.3547 ppb	12:09:21
3	Sc Radial	4949.7	4949.7	103 %		12:07:34
3	Y RADIAL	5151.5	5151.5	103.0 %		12:07:34
3	Al 396.153Radial†	-143.9	11.9	11.030 ug/L	11.030 ppb	12:07:54
3	Ca 317.933Radial†	19.5	2.2	3.6841 ug/L	3.6841 ppb	12:07:54
3	Fe 238.204 Radial†	10.4	-1.4	-12.958 ug/L	-12.958 ppb	12:07:54
3	K 766.490 Radial†	2843.5	-64.2	-11.350 ug/L	-11.350 ppb	12:07:34
3	Mg 279.077 IEC†	2.6	2.1	74.351 ug/L	74.351 ppb	12:07:54
3	Na 589.592 Radial†	-1005.4	102.1	30.891 ug/L	30.891 ppb	12:07:34
3	Sr 421.552†	22.3	19.6	0.1374 ug/L	0.1374 ppb	12:07:34
3	Sc 361.383	851001.9	851001.9	98.713 %		12:08:51
3	Y 371.029	701869.4	701869.4	98.218 %		12:08:51
3	Ag 328.068†	202.9	-23.3	-0.1159 ug/L	-0.1159 ppb	12:08:51
3	As 188.979†	-23.8	9.7	4.4032 ug/L	4.4032 ppb	12:09:11
3	B 249.677†	896.5	1447.2	34.430 ug/L	34.430 ppb	12:08:51
3	Ba 233.527†	-17.8	-6.5	-0.0517 ug/L	-0.0517 ppb	12:09:11
3	Be 313.107†	-4258.4	24.8	0.0097 ug/L	0.0097 ppb	12:08:51
3	Cd 226.502†	-190.1	19.3	0.2322 ug/L	0.2322 ppb	12:09:11
3	Co 228.616†	-68.4	4.5	0.0964 ug/L	0.0964 ppb	12:09:11
3	Cr 267.716†	63.0	-2.9	-0.0354 ug/L	-0.0354 ppb	12:09:11
3	Cu 324.752†	5761.0	15.4	0.0429 ug/L	0.0429 ppb	12:08:51
3	Mn 257.610†	465.3	19.4	0.0180 ug/L	0.0180 ppb	12:09:11
3	Mo 202.031†	10.6	-4.8	-0.3577 ug/L	-0.3577 ppb	12:09:11
3	Ni 231.604†	123.2	16.8	0.4357 ug/L	0.4357 ppb	12:09:11
3	P 214.914†	231.3	6.2	3.9035 ug/L	3.9035 ppb	12:09:11
3	Pb 220.353†	-57.4	3.6	0.4533 ug/L	0.4533 ppb	12:09:11
3	S 181.975 Axial†	38.9	0.1	0.0794 ug/L	0.0794 ppb	12:09:11
3	Sb 206.836†	41.4	-0.2	-0.0400 ug/L	-0.0400 ppb	12:09:11
3	Se 196.026†	-6.9	15.1	10.123 ug/L	10.123 ppb	12:09:11
3	Si 251.611†	535.6	-19.7	-0.6530 ug/L	-0.6530 ppb	12:09:11
3	Sn 189.927†	16.9	8.5	1.5697 ug/L	1.5697 ppb	12:09:11
3	Ti 334.940†	-1154.7	133.4	0.2083 ug/L	0.2083 ppb	12:08:51
3	Tl 190.801†	-38.7	-5.0	-1.6100 ug/L	-1.6100 ppb	12:09:11
3	U 409.014†	-2750.2	194.0	5.6283 ug/L	5.6283 ppb	12:08:51
3	V 292.402†	-1441.6	94.2	0.6932 ug/L	0.6932 ppb	12:08:51
3	Zn 213.857†	765.0	61.8	0.6083 ug/L	0.6083 ppb	12:09:11
3	SiO2†	555.8	-20.1	-1.4224 ug/L	-1.4224 ppb	12:09:27

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	851941.6	98.822 %	0.2221			0.22%
Sc Radial	4929.0	103 %	0.8			0.78%
Y 371.029	703769.1	98.484 %	0.2988			0.30%
Y RADIAL	5141.8	102.8 %	0.97			0.94%
Ag 328.068†	23.2	0.1044 ug/L	0.20113	0.1044 ppb	0.20113	192.64%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	12.2	11.317 ug/L	2.4398	11.317 ppb	2.4398	21.56%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	9.3	4.2415 ug/L	0.61795	4.2415 ppb	0.61795	14.57%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	1450.9	34.518 ug/L	0.4700	34.518 ppb	0.4700	1.36%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-2.6	-0.0204 ug/L	0.03550	-0.0204 ppb	0.03550	174.21%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	75.2	0.0285 ug/L	0.01666	0.0285 ppb	0.01666	58.40%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	6.0	9.9418 ug/L	5.64420	9.9418 ppb	5.64420	56.77%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated									
Cd 226.502†	16.4	0.1970 ug/L	0.03065	0.1970 ppb	0.03065	15.56%			
QC value within limits for Cd 226.502 Recovery = Not calculated									
Co 228.616†	10.4	0.2269 ug/L	0.11316	0.2269 ppb	0.11316	49.86%			
QC value within limits for Co 228.616 Recovery = Not calculated									
Cr 267.716†	7.3	0.0840 ug/L	0.11146	0.0840 ppb	0.11146	132.73%			
QC value within limits for Cr 267.716 Recovery = Not calculated									
Cu 324.752†	34.7	0.1022 ug/L	0.26931	0.1022 ppb	0.26931	263.39%			
QC value within limits for Cu 324.752 Recovery = Not calculated									
Fe 238.204 Radial†	-0.9	-8.6331 ug/L	8.38145	-8.6331 ppb	8.38145	97.09%			
QC value within limits for Fe 238.204 Radial Recovery = Not calculated									
K 766.490 Radial†	-47.7	-8.4407 ug/L	9.31702	-8.4407 ppb	9.31702	110.38%			
QC value within limits for K 766.490 Radial Recovery = Not calculated									
Mg 279.077 IEC†	2.2	76.565 ug/L	11.0227	76.565 ppb	11.0227	14.40%			
QC value within limits for Mg 279.077 IEC Recovery = Not calculated									
Mn 257.610†	30.7	0.0313 ug/L	0.01938	0.0313 ppb	0.01938	61.94%			
QC value within limits for Mn 257.610 Recovery = Not calculated									
Mo 202.031†	1.8	0.1370 ug/L	0.58036	0.1370 ppb	0.58036	423.56%			
QC value within limits for Mo 202.031 Recovery = Not calculated									
Na 589.592 Radial†	108.2	32.712 ug/L	2.4953	32.712 ppb	2.4953	7.63%			
QC value within limits for Na 589.592 Radial Recovery = Not calculated									
Ni 231.604†	2.7	0.0711 ug/L	0.31708	0.0711 ppb	0.31708	446.23%			
QC value within limits for Ni 231.604 Recovery = Not calculated									
P 214.914†	2.5	1.5559 ug/L	2.39858	1.5559 ppb	2.39858	154.16%			
QC value within limits for P 214.914 Recovery = Not calculated									
Pb 220.353†	4.1	0.5119 ug/L	0.43955	0.5119 ppb	0.43955	85.87%			
QC value within limits for Pb 220.353 Recovery = Not calculated									
S 181.975 Axial†	-1.7	-2.4777 ug/L	5.60430	-2.4777 ppb	5.60430	226.19%			
QC value within limits for S 181.975 Axial Recovery = Not calculated									
Sb 206.836†	3.6	1.2867 ug/L	1.21454	1.2867 ppb	1.21454	94.39%			
QC value within limits for Sb 206.836 Recovery = Not calculated									
Se 196.026†	8.4	5.6624 ug/L	3.92140	5.6624 ppb	3.92140	69.25%			
QC value within limits for Se 196.026 Recovery = Not calculated									
Si 251.611†	-14.3	-0.4794 ug/L	0.30344	-0.4794 ppb	0.30344	63.29%			
QC value within limits for Si 251.611 Recovery = Not calculated									
Sn 189.927†	6.4	1.1822 ug/L	0.37893	1.1822 ppb	0.37893	32.05%			
QC value within limits for Sn 189.927 Recovery = Not calculated									
Sr 421.552†	36.6	0.2563 ug/L	0.15219	0.2563 ppb	0.15219	59.38%			
QC value within limits for Sr 421.552 Recovery = Not calculated									
Ti 334.940†	138.6	0.2178 ug/L	0.13086	0.2178 ppb	0.13086	60.09%			
QC value within limits for Ti 334.940 Recovery = Not calculated									
Tl 190.801†	1.1	0.3631 ug/L	1.72245	0.3631 ppb	1.72245	474.34%			
QC value within limits for Tl 190.801 Recovery = Not calculated									
U 409.014†	162.3	4.7067 ug/L	1.55071	4.7067 ppb	1.55071	32.95%			
QC value within limits for U 409.014 Recovery = Not calculated									
V 292.402†	64.4	0.4813 ug/L	0.21059	0.4813 ppb	0.21059	43.75%			
QC value within limits for V 292.402 Recovery = Not calculated									
Zn 213.857†	64.3	0.6346 ug/L	0.05545	0.6346 ppb	0.05545	8.74%			
QC value within limits for Zn 213.857 Recovery = Not calculated									
SiO2†	-17.6	-1.2612 ug/L	0.83758	-1.2612 ppb	0.83758	66.41%			
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: 2/11/2010 12:53:04

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4837.9	4837.9	101 %		12:54:57
1	Y RADIAL	5017.8	5017.8	100.3 %		12:54:57
1	Al 396.153Radial†	5274.7	5392.5	4981.2 ug/L	4981.2 ppb	12:54:57
1	Ca 317.933Radial†	3065.4	3029.1	5020.5 ug/L	5020.5 ppb	12:55:17
1	Fe 238.204 Radial†	576.3	561.1	5120.5 ug/L	5120.5 ppb	12:55:17
1	K 766.490 Radial†	31192.3	28166.6	4965.7 ug/L	4965.7 ppb	12:54:57
1	Mg 279.077 IEC†	150.4	149.0	5282.2 ug/L	5282.2 ppb	12:55:17
1	Na 589.592 Radial†	31816.2	32690.7	9887.3 ug/L	9887.3 ppb	12:54:57
1	Sr 421.552†	73457.9	72984.8	511.82 ug/L	511.82 ppb	12:54:57
1	Sc 361.383	868818.6	868818.6	100.78 %		12:56:14
1	Y 371.029	706341.6	706341.6	98.844 %		12:56:14
1	Ag 328.068†	103196.2	102168.7	484.60 ug/L	484.60 ppb	12:56:20
1	As 188.979†	1057.3	1083.0	495.59 ug/L	495.59 ppb	12:56:40
1	B 249.677†	21059.0	21435.0	507.69 ug/L	507.69 ppb	12:56:20
1	Ba 233.527†	60094.6	59641.1	488.29 ug/L	488.29 ppb	12:56:20
1	Be 313.107†	1325883.0	1319960.0	492.74 ug/L	492.74 ppb	12:56:14
1	Cd 226.502†	40531.4	40429.7	480.54 ug/L	480.54 ppb	12:56:20
1	Co 228.616†	22814.5	22711.7	496.17 ug/L	496.17 ppb	12:56:20
1	Cr 267.716†	41797.6	41407.3	482.65 ug/L	482.65 ppb	12:56:20
1	Cu 324.752†	167171.2	160056.6	485.53 ug/L	485.53 ppb	12:56:20
1	Mn 257.610†	435580.9	431757.9	497.03 ug/L	497.03 ppb	12:56:14
1	Mo 202.031†	6579.6	6513.1	488.21 ug/L	488.21 ppb	12:56:40
1	Ni 231.604†	18915.2	18660.8	483.14 ug/L	483.14 ppb	12:56:20
1	P 214.914†	4176.7	3916.3	2342.4 ug/L	2342.4 ppb	12:56:40
1	Pb 220.353†	3889.5	3921.1	490.76 ug/L	490.76 ppb	12:56:40
1	S 181.975 Axial†	715.3	670.4	976.69 ug/L	976.69 ppb	12:56:40
1	Sb 206.836†	1455.6	1402.2	506.26 ug/L	506.26 ppb	12:56:40
1	Se 196.026†	724.6	741.1	517.45 ug/L	517.45 ppb	12:56:40
1	Si 251.611†	73289.1	72159.6	2407.6 ug/L	2407.6 ppb	12:56:20
1	Sn 189.927†	2650.0	2620.8	487.20 ug/L	487.20 ppb	12:56:40
1	Ti 334.940†	299376.6	298362.8	483.78 ug/L	483.78 ppb	12:56:20
1	Tl 190.801†	1529.3	1551.7	500.54 ug/L	500.54 ppb	12:56:40
1	U 409.014†	13997.9	16869.6	487.50 ug/L	487.50 ppb	12:56:20
1	V 292.402†	65379.8	66428.4	488.91 ug/L	488.91 ppb	12:56:20
1	Zn 213.857†	50226.3	49124.3	480.13 ug/L	480.13 ppb	12:56:20
1	SiO2†	74473.5	73314.0	5216.3 ug/L	5216.3 ppb	12:57:47
2	Sc Radial	4811.3	4811.3	100 %		12:55:22
2	Y RADIAL	5012.3	5012.3	100.2 %		12:55:22
2	Al 396.153Radial†	5241.2	5388.0	4977.1 ug/L	4977.1 ppb	12:55:22
2	Ca 317.933Radial†	3093.3	3073.8	5094.6 ug/L	5094.6 ppb	12:55:42
2	Fe 238.204 Radial†	574.8	562.8	5136.0 ug/L	5136.0 ppb	12:55:42
2	K 766.490 Radial†	31082.1	28228.2	4976.5 ug/L	4976.5 ppb	12:55:22
2	Mg 279.077 IEC†	151.6	151.1	5354.7 ug/L	5354.7 ppb	12:55:42
2	Na 589.592 Radial†	31591.0	32640.9	9872.2 ug/L	9872.2 ppb	12:55:22
2	Sr 421.552†	73056.5	72988.1	511.84 ug/L	511.84 ppb	12:55:22
2	Sc 361.383	869935.0	869935.0	100.91 %		12:56:45
2	Y 371.029	707378.5	707378.5	98.989 %		12:56:45
2	Ag 328.068†	106246.4	105060.1	498.26 ug/L	498.26 ppb	12:56:51
2	As 188.979†	1055.6	1080.0	494.34 ug/L	494.34 ppb	12:57:11
2	B 249.677†	21912.3	22253.8	527.13 ug/L	527.13 ppb	12:56:51
2	Ba 233.527†	61719.2	61174.6	500.84 ug/L	500.84 ppb	12:56:51
2	Be 313.107†	1326025.6	1318412.9	492.19 ug/L	492.19 ppb	12:56:45
2	Cd 226.502†	41567.2	41404.4	492.14 ug/L	492.14 ppb	12:56:51
2	Co 228.616†	23446.2	23308.6	509.18 ug/L	509.18 ppb	12:56:51
2	Cr 267.716†	42876.6	42423.3	494.49 ug/L	494.49 ppb	12:56:51
2	Cu 324.752†	172710.7	165333.3	501.53 ug/L	501.53 ppb	12:56:51
2	Mn 257.610†	435993.6	431612.2	496.86 ug/L	496.86 ppb	12:56:45
2	Mo 202.031†	6563.2	6488.5	486.37 ug/L	486.37 ppb	12:57:11
2	Ni 231.604†	19385.2	19102.5	494.58 ug/L	494.58 ppb	12:56:51

2	P 214.914†	4175.4	3909.7	2335.0 ug/L	2335.0 ppb	12:57:11
2	Pb 220.353†	3873.5	3900.3	488.15 ug/L	488.15 ppb	12:57:11
2	S 181.975 Axial†	718.3	672.5	979.65 ug/L	979.65 ppb	12:57:11
2	Sb 206.836†	1443.4	1388.3	501.33 ug/L	501.33 ppb	12:57:11
2	Se 196.026†	713.2	728.9	509.24 ug/L	509.24 ppb	12:57:11
2	Si 251.611†	75301.3	74060.4	2471.2 ug/L	2471.2 ppb	12:56:51
2	Sn 189.927†	2634.7	2602.3	483.78 ug/L	483.78 ppb	12:57:11
2	Ti 334.940†	307990.4	306517.7	497.00 ug/L	497.00 ppb	12:56:51
2	Tl 190.801†	1527.4	1547.8	499.33 ug/L	499.33 ppb	12:57:11
2	U 409.014†	14702.9	17550.4	507.21 ug/L	507.21 ppb	12:56:51
2	V 292.402†	67186.8	68135.9	501.30 ug/L	501.30 ppb	12:56:51
2	Zn 213.857†	51523.6	50346.0	492.09 ug/L	492.09 ppb	12:56:51
2	SiO2†	74498.7	73244.1	5211.4 ug/L	5211.4 ppb	12:57:52
3	Sc Radial	4939.1	4939.1	103 %		12:55:47
3	Y RADIAL	5135.1	5135.1	102.7 %		12:55:47
3	Al 396.153Radial†	5339.9	5348.6	4940.2 ug/L	4940.2 ppb	12:55:47
3	Ca 317.933Radial†	3086.8	2987.4	4951.5 ug/L	4951.5 ppb	12:56:07
3	Fe 238.204 Radial†	573.8	547.0	4991.9 ug/L	4991.9 ppb	12:56:07
3	K 766.490 Radial†	31771.0	28094.7	4953.0 ug/L	4953.0 ppb	12:55:47
3	Mg 279.077 IEC†	147.4	143.1	5070.6 ug/L	5070.6 ppb	12:56:07
3	Na 589.592 Radial†	32218.7	32434.7	9809.8 ug/L	9809.8 ppb	12:55:47
3	Sr 421.552†	74536.5	72538.9	508.69 ug/L	508.69 ppb	12:55:47
3	Sc 361.383	857830.8	857830.8	99.505 %		12:57:16
3	Y 371.029	697229.1	697229.1	97.569 %		12:57:16
3	Ag 328.068†	105007.3	105300.4	499.35 ug/L	499.35 ppb	12:57:22
3	As 188.979†	1060.9	1100.1	503.43 ug/L	503.43 ppb	12:57:42
3	B 249.677†	21554.1	22200.2	525.88 ug/L	525.88 ppb	12:57:22
3	Ba 233.527†	61004.2	61318.9	502.02 ug/L	502.02 ppb	12:57:22
3	Be 313.107†	1307439.3	1318276.1	492.15 ug/L	492.15 ppb	12:57:16
3	Cd 226.502†	41171.3	41587.8	494.34 ug/L	494.34 ppb	12:57:22
3	Co 228.616†	23181.0	23369.9	510.53 ug/L	510.53 ppb	12:57:22
3	Cr 267.716†	42400.0	42543.9	495.89 ug/L	495.89 ppb	12:57:22
3	Cu 324.752†	170509.4	165536.1	502.13 ug/L	502.13 ppb	12:57:22
3	Mn 257.610†	429959.0	431644.1	496.90 ug/L	496.90 ppb	12:57:16
3	Mo 202.031†	6557.4	6574.4	492.79 ug/L	492.79 ppb	12:57:42
3	Ni 231.604†	19176.7	19164.0	496.17 ug/L	496.17 ppb	12:57:22
3	P 214.914†	4164.3	3957.0	2364.5 ug/L	2364.5 ppb	12:57:42
3	Pb 220.353†	3870.6	3951.5	494.56 ug/L	494.56 ppb	12:57:42
3	S 181.975 Axial†	713.1	677.3	986.73 ug/L	986.73 ppb	12:57:42
3	Sb 206.836†	1444.5	1409.6	508.98 ug/L	508.98 ppb	12:57:42
3	Se 196.026†	708.9	734.6	512.62 ug/L	512.62 ppb	12:57:42
3	Si 251.611†	74405.0	74212.5	2476.2 ug/L	2476.2 ppb	12:57:22
3	Sn 189.927†	2631.7	2636.1	490.04 ug/L	490.04 ppb	12:57:42
3	Ti 334.940†	304414.8	307230.9	498.16 ug/L	498.16 ppb	12:57:22
3	Tl 190.801†	1510.5	1552.2	500.75 ug/L	500.75 ppb	12:57:42
3	U 409.014†	14397.7	17449.3	504.29 ug/L	504.29 ppb	12:57:22
3	V 292.402†	66407.6	68292.3	502.54 ug/L	502.54 ppb	12:57:22
3	Zn 213.857†	50925.6	50465.4	493.28 ug/L	493.28 ppb	12:57:22
3	SiO2†	74841.4	74630.2	5310.1 ug/L	5310.1 ppb	12:57:57

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	865528.2	100.40 %	0.776			0.77%
Sc Radial	4862.8	101 %	1.4			1.39%
Y 371.029	703649.7	98.467 %	0.7815			0.79%
Y RADIAL	5055.1	101.1 %	1.39			1.37%
Ag 328.068†	104176.4	494.07 ug/L	8.221	494.07 ppb	8.221	1.66%
QC value within limits for Ag 328.068 Recovery = 98.81%						
Al 396.153Radial†	5376.4	4966.2 ug/L	22.59	4966.2 ppb	22.59	0.45%
QC value within limits for Al 396.153Radial Recovery = 99.32%						
As 188.979†	1087.7	497.79 ug/L	4.923	497.79 ppb	4.923	0.99%
QC value within limits for As 188.979 Recovery = 99.56%						
B 249.677†	21963.0	520.23 ug/L	10.879	520.23 ppb	10.879	2.09%
QC value within limits for B 249.677 Recovery = 104.05%						
Ba 233.527†	60711.5	497.05 ug/L	7.609	497.05 ppb	7.609	1.53%
QC value within limits for Ba 233.527 Recovery = 99.41%						
Be 313.107†	1318883.0	492.36 ug/L	0.330	492.36 ppb	0.330	0.07%
QC value within limits for Be 313.107 Recovery = 98.47%						
Ca 317.933Radial†	3030.1	5022.2 ug/L	71.56	5022.2 ppb	71.56	1.42%

QC value within limits for Ca 317.933 Radial Recovery = 100.44%

Cd 226.502†	41140.6	489.01 ug/L	7.412	489.01 ppb	7.412	1.52%
QC value within limits for Cd 226.502 Recovery = 97.80%						
Co 228.616†	23130.1	505.29 ug/L	7.929	505.29 ppb	7.929	1.57%
QC value within limits for Co 228.616 Recovery = 101.06%						
Cr 267.716†	42124.9	491.01 ug/L	7.274	491.01 ppb	7.274	1.48%
QC value within limits for Cr 267.716 Recovery = 98.20%						
Cu 324.752†	163642.0	496.40 ug/L	9.416	496.40 ppb	9.416	1.90%
QC value within limits for Cu 324.752 Recovery = 99.28%						
Fe 238.204 Radial†	557.0	5082.8 ug/L	79.12	5082.8 ppb	79.12	1.56%
QC value within limits for Fe 238.204 Radial Recovery = 101.66%						
K 766.490 Radial†	28163.2	4965.1 ug/L	11.76	4965.1 ppb	11.76	0.24%
QC value within limits for K 766.490 Radial Recovery = 99.30%						
Mg 279.077 IEC†	147.7	5235.8 ug/L	147.63	5235.8 ppb	147.63	2.82%
QC value within limits for Mg 279.077 IEC Recovery = 104.72%						
Mn 257.610†	431671.4	496.93 ug/L	0.089	496.93 ppb	0.089	0.02%
QC value within limits for Mn 257.610 Recovery = 99.39%						
Mo 202.031†	6525.4	489.12 ug/L	3.307	489.12 ppb	3.307	0.68%
QC value within limits for Mo 202.031 Recovery = 97.82%						
Na 589.592 Radial†	32588.7	9856.4 ug/L	41.06	9856.4 ppb	41.06	0.42%
QC value within limits for Na 589.592 Radial Recovery = 98.56%						
Ni 231.604†	18975.8	491.30 ug/L	7.107	491.30 ppb	7.107	1.45%
QC value within limits for Ni 231.604 Recovery = 98.26%						
P 214.914†	3927.7	2347.3 ug/L	15.32	2347.3 ppb	15.32	0.65%
QC value within limits for P 214.914 Recovery = 93.89%						
Pb 220.353†	3924.3	491.15 ug/L	3.222	491.15 ppb	3.222	0.66%
QC value within limits for Pb 220.353 Recovery = 98.23%						
S 181.975 Axial†	673.4	981.02 ug/L	5.160	981.02 ppb	5.160	0.53%
QC value within limits for S 181.975 Axial Recovery = 98.10%						
Sb 206.836†	1400.0	505.52 ug/L	3.879	505.52 ppb	3.879	0.77%
QC value within limits for Sb 206.836 Recovery = 101.10%						
Se 196.026†	734.9	513.10 ug/L	4.127	513.10 ppb	4.127	0.80%
QC value within limits for Se 196.026 Recovery = 102.62%						
Si 251.611†	73477.5	2451.7 ug/L	38.25	2451.7 ppb	38.25	1.56%
QC value within limits for Si 251.611 Recovery = 98.07%						
Sn 189.927†	2619.7	487.00 ug/L	3.136	487.00 ppb	3.136	0.64%
QC value within limits for Sn 189.927 Recovery = 97.40%						
Sr 421.552†	72837.3	510.78 ug/L	1.812	510.78 ppb	1.812	0.35%
QC value within limits for Sr 421.552 Recovery = 102.16%						
Ti 334.940†	304037.1	492.98 ug/L	7.988	492.98 ppb	7.988	1.62%
QC value within limits for Ti 334.940 Recovery = 98.60%						
Tl 190.801†	1550.6	500.20 ug/L	0.767	500.20 ppb	0.767	0.15%
QC value within limits for Tl 190.801 Recovery = 100.04%						
U 409.014†	17289.8	499.67 ug/L	10.639	499.67 ppb	10.639	2.13%
QC value within limits for U 409.014 Recovery = 99.93%						
V 292.402†	67618.9	497.59 ug/L	7.537	497.59 ppb	7.537	1.51%
QC value within limits for V 292.402 Recovery = 99.52%						
Zn 213.857†	49978.6	488.50 ug/L	7.270	488.50 ppb	7.270	1.49%
QC value within limits for Zn 213.857 Recovery = 97.70%						
SiO2†	73729.4	5246.0 ug/L	55.61	5246.0 ppb	55.61	1.06%
QC value within limits for SiO2 Recovery = 98.10%						

All analyte(s) passed QC.

Sequence No.: 12
 Sample ID: CCB
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 8
 Date Collected: 2/11/2010 13:00:07
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4548.3	4548.3	94.6 %		13:02:00
1	Y RADIAL	4743.9	4743.9	94.87 %		13:02:00
1	Al 396.153Radial†	-139.3	4.3	4.0280 ug/L	4.0280 ppb	13:02:20
1	Ca 317.933Radial†	23.9	8.6	14.252 ug/L	14.252 ppb	13:02:20
1	Fe 238.204 Radial†	11.6	0.8	7.0309 ug/L	7.0309 ppb	13:02:20
1	K 766.490 Radial†	2723.3	52.5	9.2430 ug/L	9.2430 ppb	13:02:00
1	Mg 279.077 IEC†	3.7	3.5	125.24 ug/L	125.24 ppb	13:02:20
1	Na 589.592 Radial†	-923.1	103.0	31.145 ug/L	31.145 ppb	13:02:00
1	Sr 421.552†	-13.6	-16.4	-0.1153 ug/L	-0.1153 ppb	13:02:00
1	Sc 361.383	847002.2	847002.2	98.249 %		13:03:17
1	Y 371.029	698147.9	698147.9	97.697 %		13:03:17
1	Ag 328.068†	298.3	74.9	0.3573 ug/L	0.3573 ppb	13:03:17
1	As 188.979†	-24.6	8.8	4.0094 ug/L	4.0094 ppb	13:03:37
1	B 249.677†	694.4	1245.8	29.635 ug/L	29.635 ppb	13:03:17
1	Ba 233.527†	-9.1	2.4	0.0205 ug/L	0.0205 ppb	13:03:37
1	Be 313.107†	-4286.8	-24.5	-0.0093 ug/L	-0.0093 ppb	13:03:17
1	Cd 226.502†	-178.7	30.0	0.3557 ug/L	0.3557 ppb	13:03:37
1	Co 228.616†	-55.4	17.3	0.3773 ug/L	0.3773 ppb	13:03:37
1	Cr 267.716†	68.3	2.8	0.0334 ug/L	0.0334 ppb	13:03:37
1	Cu 324.752†	5795.8	78.4	0.2386 ug/L	0.2386 ppb	13:03:17
1	Mn 257.610†	493.2	50.1	0.0532 ug/L	0.0532 ppb	13:03:37
1	Mo 202.031†	11.5	-3.8	-0.2874 ug/L	-0.2874 ppb	13:03:37
1	Ni 231.604†	90.9	-15.5	-0.4024 ug/L	-0.4024 ppb	13:03:37
1	P 214.914†	233.9	10.0	6.1762 ug/L	6.1762 ppb	13:03:37
1	Pb 220.353†	-54.0	6.8	0.8449 ug/L	0.8449 ppb	13:03:37
1	S 181.975 Axial†	35.6	-3.1	-4.4745 ug/L	-4.4745 ppb	13:03:37
1	Sb 206.836†	45.0	3.7	1.2850 ug/L	1.2850 ppb	13:03:37
1	Se 196.026†	-20.5	1.2	0.8373 ug/L	0.8373 ppb	13:03:37
1	Si 251.611†	526.3	-26.6	-0.8846 ug/L	-0.8846 ppb	13:03:37
1	Sn 189.927†	10.9	2.4	0.4489 ug/L	0.4489 ppb	13:03:37
1	Ti 334.940†	-1321.7	-42.0	-0.0761 ug/L	-0.0761 ppb	13:03:17
1	Tl 190.801†	-33.7	-0.1	-0.0453 ug/L	-0.0453 ppb	13:03:37
1	U 409.014†	-2959.8	-32.5	-0.9428 ug/L	-0.9428 ppb	13:03:17
1	V 292.402†	-1470.8	57.6	0.4142 ug/L	0.4142 ppb	13:03:17
1	Zn 213.857†	754.4	54.6	0.5400 ug/L	0.5400 ppb	13:03:37
1	SiO2†	563.6	-9.5	-0.6720 ug/L	-0.6720 ppb	13:04:33
2	Sc Radial	4884.9	4884.9	102 %		13:02:25
2	Y RADIAL	5114.2	5114.2	102.3 %		13:02:25
2	Al 396.153Radial†	-144.6	9.3	8.6095 ug/L	8.6095 ppb	13:02:45
2	Ca 317.933Radial†	22.9	5.9	9.7348 ug/L	9.7348 ppb	13:02:45
2	Fe 238.204 Radial†	8.8	-2.9	-26.064 ug/L	-26.064 ppb	13:02:45
2	K 766.490 Radial†	2719.8	-149.3	-26.382 ug/L	-26.382 ppb	13:02:25
2	Mg 279.077 IEC†	-0.6	-1.0	-34.444 ug/L	-34.444 ppb	13:02:45
2	Na 589.592 Radial†	-910.4	182.6	55.232 ug/L	55.232 ppb	13:02:25
2	Sr 421.552†	1.0	-1.2	-0.0082 ug/L	-0.0082 ppb	13:02:25
2	Sc 361.383	853156.3	853156.3	98.963 %		13:03:42
2	Y 371.029	702857.6	702857.6	98.356 %		13:03:42
2	Ag 328.068†	266.1	40.1	0.1804 ug/L	0.1804 ppb	13:03:42
2	As 188.979†	-29.0	4.6	2.0800 ug/L	2.0800 ppb	13:04:02
2	B 249.677†	680.4	1226.5	29.183 ug/L	29.183 ppb	13:03:42
2	Ba 233.527†	-7.2	4.3	0.0353 ug/L	0.0353 ppb	13:04:02
2	Be 313.107†	-4348.3	-55.2	-0.0202 ug/L	-0.0202 ppb	13:03:42
2	Cd 226.502†	-179.7	30.3	0.3633 ug/L	0.3633 ppb	13:04:02
2	Co 228.616†	-69.3	3.7	0.0805 ug/L	0.0805 ppb	13:04:02
2	Cr 267.716†	83.1	17.2	0.1992 ug/L	0.1992 ppb	13:04:02
2	Cu 324.752†	5831.0	71.4	0.2141 ug/L	0.2141 ppb	13:03:42
2	Mn 257.610†	500.8	54.1	0.0611 ug/L	0.0611 ppb	13:04:02
2	Mo 202.031†	19.2	3.8	0.2847 ug/L	0.2847 ppb	13:04:02
2	Ni 231.604†	116.8	10.0	0.2599 ug/L	0.2599 ppb	13:04:02

2	P 214.914†	233.6	8.0	4.9772 ug/L	4.9772 ppb	13:04:02
2	Pb 220.353†	-53.8	7.3	0.9178 ug/L	0.9178 ppb	13:04:02
2	S 181.975 Axial†	39.1	0.2	0.2567 ug/L	0.2567 ppb	13:04:02
2	Sb 206.836†	32.8	-9.0	-3.1010 ug/L	-3.1010 ppb	13:04:02
2	Se 196.026†	-9.0	13.1	8.7217 ug/L	8.7217 ppb	13:04:02
2	Si 251.611†	544.4	-12.2	-0.4120 ug/L	-0.4120 ppb	13:04:02
2	Sn 189.927†	17.0	8.5	1.5735 ug/L	1.5735 ppb	13:04:02
2	Ti 334.940†	-1194.3	96.4	0.1595 ug/L	0.1595 ppb	13:03:42
2	Tl 190.801†	-33.6	0.3	0.0814 ug/L	0.0814 ppb	13:04:02
2	U 409.014†	-2885.0	64.8	1.8822 ug/L	1.8822 ppb	13:03:42
2	V 292.402†	-1478.4	60.8	0.4520 ug/L	0.4520 ppb	13:03:42
2	Zn 213.857†	734.2	28.6	0.2844 ug/L	0.2844 ppb	13:04:02
2	SiO2†	573.3	-3.8	-0.2803 ug/L	-0.2803 ppb	13:04:38
3	Sc Radial	4790.8	4790.8	99.7 %		13:02:50
3	Y RADIAL	5005.5	5005.5	100.1 %		13:02:50
3	Al 396.153Radial†	-142.2	8.9	8.2874 ug/L	8.2874 ppb	13:03:10
3	Ca 317.933Radial†	25.4	8.7	14.487 ug/L	14.487 ppb	13:03:10
3	Fe 238.204 Radial†	9.3	-2.2	-19.960 ug/L	-19.960 ppb	13:03:10
3	K 766.490 Radial†	2799.8	-16.5	-2.9244 ug/L	-2.9244 ppb	13:02:50
3	Mg 279.077 IEC†	1.0	0.6	19.738 ug/L	19.738 ppb	13:03:10
3	Na 589.592 Radial†	-957.5	117.8	35.639 ug/L	35.639 ppb	13:02:50
3	Sr 421.552†	1.1	-1.0	-0.0069 ug/L	-0.0069 ppb	13:02:50
3	Sc 361.383	853117.9	853117.9	98.959 %		13:04:07
3	Y 371.029	703548.6	703548.6	98.453 %		13:04:07
3	Ag 328.068†	274.7	48.8	0.2197 ug/L	0.2197 ppb	13:04:07
3	As 188.979†	-27.6	5.9	2.6852 ug/L	2.6852 ppb	13:04:27
3	B 249.677†	663.8	1209.8	28.784 ug/L	28.784 ppb	13:04:07
3	Ba 233.527†	-14.5	-3.0	-0.0248 ug/L	-0.0248 ppb	13:04:27
3	Be 313.107†	-4356.7	-63.8	-0.0236 ug/L	-0.0236 ppb	13:04:07
3	Cd 226.502†	-181.3	28.7	0.3443 ug/L	0.3443 ppb	13:04:27
3	Co 228.616†	-65.5	7.6	0.1644 ug/L	0.1644 ppb	13:04:27
3	Cr 267.716†	74.2	8.2	0.0935 ug/L	0.0935 ppb	13:04:27
3	Cu 324.752†	5863.5	104.5	0.3131 ug/L	0.3131 ppb	13:04:07
3	Mn 257.610†	491.9	45.1	0.0492 ug/L	0.0492 ppb	13:04:27
3	Mo 202.031†	12.4	-3.0	-0.2287 ug/L	-0.2287 ppb	13:04:27
3	Ni 231.604†	98.2	-8.8	-0.2278 ug/L	-0.2278 ppb	13:04:27
3	P 214.914†	235.4	9.8	6.0982 ug/L	6.0982 ppb	13:04:27
3	Pb 220.353†	-62.0	-0.9	-0.1097 ug/L	-0.1097 ppb	13:04:27
3	S 181.975 Axial†	44.8	5.9	8.6415 ug/L	8.6415 ppb	13:04:27
3	Sb 206.836†	34.3	-7.5	-2.5735 ug/L	-2.5735 ppb	13:04:27
3	Se 196.026†	-10.1	11.9	7.9259 ug/L	7.9259 ppb	13:04:27
3	Si 251.611†	512.1	-44.8	-1.4962 ug/L	-1.4962 ppb	13:04:27
3	Sn 189.927†	18.5	10.0	1.8651 ug/L	1.8651 ppb	13:04:27
3	Ti 334.940†	-1232.5	57.7	0.0917 ug/L	0.0917 ppb	13:04:07
3	Tl 190.801†	-30.9	3.0	0.9621 ug/L	0.9621 ppb	13:04:27
3	U 409.014†	-2779.6	171.2	4.9652 ug/L	4.9652 ppb	13:04:07
3	V 292.402†	-1510.0	28.7	0.2181 ug/L	0.2181 ppb	13:04:07
3	Zn 213.857†	745.4	40.0	0.3988 ug/L	0.3988 ppb	13:04:27
3	SiO2†	546.1	-31.3	-2.2239 ug/L	-2.2239 ppb	13:04:43

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	851092.1	98.724 %	0.4109			0.42%
Sc Radial	4741.3	98.6 %	3.61			3.66%
Y 371.029	701518.0	98.169 %	0.4113			0.42%
Y RADIAL	4954.6	99.08 %	3.806			3.84%
Ag 328.068†	54.6	0.2525 ug/L	0.09292	0.2525 ppb	0.09292	36.80%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	7.5	6.9750 ug/L	2.55723	6.9750 ppb	2.55723	36.66%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	6.5	2.9249 ug/L	0.98678	2.9249 ppb	0.98678	33.74%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	1227.4	29.201 ug/L	0.4258	29.201 ppb	0.4258	1.46%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	1.2	0.0103 ug/L	0.03130	0.0103 ppb	0.03130	303.42%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-47.8	-0.0177 ug/L	0.00746	-0.0177 ppb	0.00746	42.21%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	7.7	12.824 ug/L	2.6783	12.824 ppb	2.6783	20.88%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated							
Cd	226.502†	29.7	0.3544 ug/L	0.00956	0.3544 ppb	0.00956	2.70%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co	228.616†	9.5	0.2074 ug/L	0.15299	0.2074 ppb	0.15299	73.76%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr	267.716†	9.4	0.1087 ug/L	0.08394	0.1087 ppb	0.08394	77.25%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	84.7	0.2553 ug/L	0.05154	0.2553 ppb	0.05154	20.19%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	-1.4	-12.998 ug/L	17.6119	-12.998 ppb	17.6119	135.50%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	-37.8	-6.6879 ug/L	18.10839	-6.6879 ppb	18.10839	270.76%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	1.0	36.844 ug/L	81.2036	36.844 ppb	81.2036	220.40%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	49.8	0.0545 ug/L	0.00609	0.0545 ppb	0.00609	11.17%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	-1.0	-0.0771 ug/L	0.31472	-0.0771 ppb	0.31472	408.17%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	134.5	40.672 ug/L	12.8082	40.672 ppb	12.8082	31.49%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	-4.8	-0.1234 ug/L	0.34324	-0.1234 ppb	0.34324	278.06%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	9.3	5.7505 ug/L	0.67086	5.7505 ppb	0.67086	11.67%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	4.4	0.5510 ug/L	0.57339	0.5510 ppb	0.57339	104.06%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	1.0	1.4746 ug/L	6.64232	1.4746 ppb	6.64232	450.46%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	-4.3	-1.4632 ug/L	2.39454	-1.4632 ppb	2.39454	163.66%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	8.7	5.8283 ug/L	4.34060	5.8283 ppb	4.34060	74.47%
QC value within limits for Se 196.026 Recovery = Not calculated							
Si	251.611†	-27.9	-0.9309 ug/L	0.54361	-0.9309 ppb	0.54361	58.39%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	7.0	1.2959 ug/L	0.74781	1.2959 ppb	0.74781	57.71%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	-6.2	-0.0435 ug/L	0.06225	-0.0435 ppb	0.06225	143.23%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	37.4	0.0584 ug/L	0.12128	0.0584 ppb	0.12128	207.69%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	1.0	0.3327 ug/L	0.54872	0.3327 ppb	0.54872	164.91%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	67.8	1.9682 ug/L	2.95493	1.9682 ppb	2.95493	150.13%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	49.1	0.3615 ug/L	0.12557	0.3615 ppb	0.12557	34.74%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	41.1	0.4077 ug/L	0.12804	0.4077 ppb	0.12804	31.40%
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†		-14.9	-1.0587 ug/L	1.02790	-1.0587 ppb	1.02790	97.09%
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: 2/11/2010 13:39:38

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4812.3	4812.3	100 %		13:41:31
1	Y RADIAL	5017.3	5017.3	100.3 %		13:41:31
1	Al 396.153Radial†	5264.3	5410.0	4997.5 ug/L	4997.5 ppb	13:41:31
1	Ca 317.933Radial†	3040.0	3019.9	5005.3 ug/L	5005.3 ppb	13:41:51
1	Fe 238.204 Radial†	567.4	555.3	5067.6 ug/L	5067.6 ppb	13:41:51
1	K 766.490 Radial†	31070.8	28210.6	4973.4 ug/L	4973.4 ppb	13:41:31
1	Mg 279.077 IEC†	149.7	149.1	5285.1 ug/L	5285.1 ppb	13:41:51
1	Na 589.592 Radial†	31729.1	32772.2	9911.9 ug/L	9911.9 ppb	13:41:31
1	Sr 421.552†	73574.0	73490.0	515.36 ug/L	515.36 ppb	13:41:31
1	Sc 361.383	852595.3	852595.3	98.898 %		13:42:48
1	Y 371.029	689759.4	689759.4	96.523 %		13:42:48
1	Ag 328.068†	104866.7	105806.3	501.75 ug/L	501.75 ppb	13:42:53
1	As 188.979†	1035.7	1081.1	494.88 ug/L	494.88 ppb	13:43:13
1	B 249.677†	20739.6	21509.7	509.43 ug/L	509.43 ppb	13:42:53
1	Ba 233.527†	61059.4	61751.3	505.55 ug/L	505.55 ppb	13:42:53
1	Be 313.107†	1299347.2	1318162.4	492.11 ug/L	492.11 ppb	13:42:48
1	Cd 226.502†	40857.8	41524.9	493.58 ug/L	493.58 ppb	13:42:53
1	Co 228.616†	23184.9	23516.9	513.72 ug/L	513.72 ppb	13:42:53
1	Cr 267.716†	41996.2	42397.3	494.19 ug/L	494.19 ppb	13:42:53
1	Cu 324.752†	170932.2	167015.9	506.63 ug/L	506.63 ppb	13:42:53
1	Mn 257.610†	429793.8	434130.4	499.76 ug/L	499.76 ppb	13:42:48
1	Mo 202.031†	6428.4	6484.4	486.06 ug/L	486.06 ppb	13:43:13
1	Ni 231.604†	19001.9	19105.5	494.65 ug/L	494.65 ppb	13:42:53
1	P 214.914†	4116.5	3934.3	2349.3 ug/L	2349.3 ppb	13:43:13
1	Pb 220.353†	3795.7	3899.7	488.08 ug/L	488.08 ppb	13:43:13
1	S 181.975 Axial†	696.2	664.6	968.24 ug/L	968.24 ppb	13:43:13
1	Sb 206.836†	1422.2	1395.9	503.96 ug/L	503.96 ppb	13:43:13
1	Se 196.026†	700.8	730.7	510.24 ug/L	510.24 ppb	13:43:13
1	Si 251.611†	74636.5	74905.8	2499.5 ug/L	2499.5 ppb	13:42:53
1	Sn 189.927†	2584.4	2604.5	484.19 ug/L	484.19 ppb	13:43:13
1	Ti 334.940†	305255.6	309959.8	502.58 ug/L	502.58 ppb	13:42:53
1	Tl 190.801†	1512.4	1563.4	504.38 ug/L	504.38 ppb	13:43:13
1	U 409.014†	14229.2	17367.8	501.92 ug/L	501.92 ppb	13:42:53
1	V 292.402†	65755.0	68042.2	500.61 ug/L	500.61 ppb	13:42:53
1	Zn 213.857†	50866.6	50720.1	495.78 ug/L	495.78 ppb	13:42:53
1	SiO2†	74829.2	75079.8	5342.4 ug/L	5342.4 ppb	13:44:21
2	Sc Radial	4831.8	4831.8	101 %		13:41:56
2	Y RADIAL	5022.3	5022.3	100.4 %		13:41:56
2	Al 396.153Radial†	5251.2	5375.7	4965.7 ug/L	4965.7 ppb	13:41:56
2	Ca 317.933Radial†	3051.3	3018.9	5003.6 ug/L	5003.6 ppb	13:42:16
2	Fe 238.204 Radial†	570.4	556.0	5073.8 ug/L	5073.8 ppb	13:42:16
2	K 766.490 Radial†	31107.8	28121.9	4957.8 ug/L	4957.8 ppb	13:41:56
2	Mg 279.077 IEC†	144.2	143.1	5070.2 ug/L	5070.2 ppb	13:42:16
2	Na 589.592 Radial†	31857.7	32772.1	9911.9 ug/L	9911.9 ppb	13:41:56
2	Sr 421.552†	73844.7	73462.1	515.16 ug/L	515.16 ppb	13:41:56
2	Sc 361.383	861113.8	861113.8	99.886 %		13:43:19
2	Y 371.029	697366.9	697366.9	97.588 %		13:43:19
2	Ag 328.068†	105212.6	105103.6	498.44 ug/L	498.44 ppb	13:43:24
2	As 188.979†	1046.4	1081.4	495.02 ug/L	495.02 ppb	13:43:44
2	B 249.677†	20785.0	21347.7	505.58 ug/L	505.58 ppb	13:43:24
2	Ba 233.527†	61445.8	61527.4	503.71 ug/L	503.71 ppb	13:43:24
2	Be 313.107†	1309585.4	1315415.4	491.08 ug/L	491.08 ppb	13:43:19
2	Cd 226.502†	41094.2	41352.9	491.53 ug/L	491.53 ppb	13:43:24
2	Co 228.616†	23340.1	23440.4	512.05 ug/L	512.05 ppb	13:43:24
2	Cr 267.716†	42265.8	42247.1	492.44 ug/L	492.44 ppb	13:43:24
2	Cu 324.752†	171252.4	165626.7	502.42 ug/L	502.42 ppb	13:43:24
2	Mn 257.610†	431649.3	431689.0	496.96 ug/L	496.96 ppb	13:43:19
2	Mo 202.031†	6480.2	6472.0	485.13 ug/L	485.13 ppb	13:43:44
2	Ni 231.604†	19128.8	19042.5	493.02 ug/L	493.02 ppb	13:43:24

2	P 214.914†	4157.9	3934.5	2350.3 ug/L	2350.3 ppb	13:43:44
2	Pb 220.353†	3838.5	3904.6	488.68 ug/L	488.68 ppb	13:43:44
2	S 181.975 Axial†	707.4	668.9	974.41 ug/L	974.41 ppb	13:43:44
2	Sb 206.836†	1420.2	1379.7	498.30 ug/L	498.30 ppb	13:43:44
2	Se 196.026†	704.0	726.9	507.68 ug/L	507.68 ppb	13:43:44
2	Si 251.611†	74996.0	74519.1	2486.6 ug/L	2486.6 ppb	13:43:24
2	Sn 189.927†	2606.8	2601.0	483.53 ug/L	483.53 ppb	13:43:44
2	Ti 334.940†	306340.1	307992.2	499.41 ug/L	499.41 ppb	13:43:24
2	Tl 190.801†	1506.5	1542.4	497.62 ug/L	497.62 ppb	13:43:44
2	U 409.014†	14259.4	17255.7	498.68 ug/L	498.68 ppb	13:43:24
2	V 292.402†	66127.2	67757.1	498.52 ug/L	498.52 ppb	13:43:24
2	Zn 213.857†	51066.3	50411.2	492.75 ug/L	492.75 ppb	13:43:24
2	SiO2†	73633.8	73134.5	5203.6 ug/L	5203.6 ppb	13:44:26
3	Sc Radial	4734.2	4734.2	98.5 %		13:42:21
3	Y RADIAL	4890.0	4890.0	97.79 %		13:42:21
3	Al 396.153Radial†	5197.4	5428.9	5015.0 ug/L	5015.0 ppb	13:42:21
3	Ca 317.933Radial†	3054.8	3085.0	5113.2 ug/L	5113.2 ppb	13:42:41
3	Fe 238.204 Radial†	566.7	563.9	5146.2 ug/L	5146.2 ppb	13:42:41
3	K 766.490 Radial†	30646.3	28291.6	4987.7 ug/L	4987.7 ppb	13:42:21
3	Mg 279.077 IEC†	145.0	146.8	5201.7 ug/L	5201.7 ppb	13:42:41
3	Na 589.592 Radial†	31331.0	32890.9	9947.8 ug/L	9947.8 ppb	13:42:21
3	Sr 421.552†	72815.8	73932.6	518.46 ug/L	518.46 ppb	13:42:21
3	Sc 361.383	860146.3	860146.3	99.774 %		13:43:50
3	Y 371.029	695624.9	695624.9	97.344 %		13:43:50
3	Ag 328.068†	103414.9	103420.4	490.51 ug/L	490.51 ppb	13:43:55
3	As 188.979†	1039.1	1075.4	492.21 ug/L	492.21 ppb	13:44:16
3	B 249.677†	20576.8	21162.5	501.18 ug/L	501.18 ppb	13:43:55
3	Ba 233.527†	60397.6	60546.0	495.69 ug/L	495.69 ppb	13:43:55
3	Be 313.107†	1312530.2	1319841.6	492.71 ug/L	492.71 ppb	13:43:50
3	Cd 226.502†	40397.4	40700.8	483.77 ug/L	483.77 ppb	13:43:55
3	Co 228.616†	22961.5	23087.2	504.35 ug/L	504.35 ppb	13:43:55
3	Cr 267.716†	41594.9	41622.4	485.16 ug/L	485.16 ppb	13:43:55
3	Cu 324.752†	168463.3	163024.1	494.53 ug/L	494.53 ppb	13:43:55
3	Mn 257.610†	433802.6	434333.2	500.00 ug/L	500.00 ppb	13:43:50
3	Mo 202.031†	6488.3	6487.4	486.29 ug/L	486.29 ppb	13:44:16
3	Ni 231.604†	18820.9	18755.5	485.59 ug/L	485.59 ppb	13:43:55
3	P 214.914†	4140.9	3922.2	2344.2 ug/L	2344.2 ppb	13:44:16
3	Pb 220.353†	3843.9	3914.3	489.91 ug/L	489.91 ppb	13:44:16
3	S 181.975 Axial†	709.1	671.4	978.03 ug/L	978.03 ppb	13:44:16
3	Sb 206.836†	1435.7	1396.8	504.29 ug/L	504.29 ppb	13:44:16
3	Se 196.026†	714.8	738.6	515.81 ug/L	515.81 ppb	13:44:16
3	Si 251.611†	73817.3	73422.2	2449.9 ug/L	2449.9 ppb	13:43:55
3	Sn 189.927†	2605.9	2603.2	483.95 ug/L	483.95 ppb	13:44:16
3	Ti 334.940†	301248.8	303234.2	491.70 ug/L	491.70 ppb	13:43:55
3	Tl 190.801†	1506.4	1544.0	498.13 ug/L	498.13 ppb	13:44:16
3	U 409.014†	13927.8	16939.4	489.51 ug/L	489.51 ppb	13:43:55
3	V 292.402†	65054.3	66756.3	491.25 ug/L	491.25 ppb	13:43:55
3	Zn 213.857†	50366.7	49767.5	486.45 ug/L	486.45 ppb	13:43:55
3	SiO2†	74022.0	73606.5	5237.3 ug/L	5237.3 ppb	13:44:31

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	857951.8	99.519 %	0.5410			0.54%
Sc Radial	4792.7	99.7 %	1.07			1.08%
Y 371.029	694250.4	97.152 %	0.5577			0.57%
Y RADIAL	4976.5	99.52 %	1.500			1.51%
Ag 328.068†	104776.8	496.90 ug/L	5.778	496.90 ppb	5.778	1.16%
QC value within limits for Ag 328.068 Recovery = 99.38%						
Al 396.153Radial†	5404.9	4992.8 ug/L	25.00	4992.8 ppb	25.00	0.50%
QC value within limits for Al 396.153Radial Recovery = 99.86%						
As 188.979†	1079.3	494.03 ug/L	1.585	494.03 ppb	1.585	0.32%
QC value within limits for As 188.979 Recovery = 98.81%						
B 249.677†	21340.0	505.39 ug/L	4.126	505.39 ppb	4.126	0.82%
QC value within limits for B 249.677 Recovery = 101.08%						
Ba 233.527†	61274.9	501.65 ug/L	5.245	501.65 ppb	5.245	1.05%
QC value within limits for Ba 233.527 Recovery = 100.33%						
Be 313.107†	1317806.5	491.97 ug/L	0.825	491.97 ppb	0.825	0.17%
QC value within limits for Be 313.107 Recovery = 98.39%						
Ca 317.933Radial†	3041.3	5040.7 ug/L	62.83	5040.7 ppb	62.83	1.25%

QC value within limits for Ca 317.933 Radial Recovery = 100.81%							
Cd 226.502†	41192.8	489.63 ug/L	5.177	489.63 ppb	5.177	1.06%	
QC value within limits for Cd 226.502 Recovery = 97.93%							
Co 228.616†	23348.1	510.04 ug/L	4.996	510.04 ppb	4.996	0.98%	
QC value within limits for Co 228.616 Recovery = 102.01%							
Cr 267.716†	42088.9	490.59 ug/L	4.788	490.59 ppb	4.788	0.98%	
QC value within limits for Cr 267.716 Recovery = 98.12%							
Cu 324.752†	165222.2	501.19 ug/L	6.141	501.19 ppb	6.141	1.23%	
QC value within limits for Cu 324.752 Recovery = 100.24%							
Fe 238.204 Radial†	558.4	5095.9 ug/L	43.73	5095.9 ppb	43.73	0.86%	
QC value within limits for Fe 238.204 Radial Recovery = 101.92%							
K 766.490 Radial†	28208.0	4972.9 ug/L	14.95	4972.9 ppb	14.95	0.30%	
QC value within limits for K 766.490 Radial Recovery = 99.46%							
Mg 279.077 IEC†	146.3	5185.7 ug/L	108.37	5185.7 ppb	108.37	2.09%	
QC value within limits for Mg 279.077 IEC Recovery = 103.71%							
Mn 257.610†	433384.2	498.91 ug/L	1.691	498.91 ppb	1.691	0.34%	
QC value within limits for Mn 257.610 Recovery = 99.78%							
Mo 202.031†	6481.3	485.83 ug/L	0.615	485.83 ppb	0.615	0.13%	
QC value within limits for Mo 202.031 Recovery = 97.17%							
Na 589.592 Radial†	32811.8	9923.9 ug/L	20.73	9923.9 ppb	20.73	0.21%	
QC value within limits for Na 589.592 Radial Recovery = 99.24%							
Ni 231.604†	18967.9	491.09 ug/L	4.830	491.09 ppb	4.830	0.98%	
QC value within limits for Ni 231.604 Recovery = 98.22%							
P 214.914†	3930.3	2347.9 ug/L	3.31	2347.9 ppb	3.31	0.14%	
QC value within limits for P 214.914 Recovery = 93.92%							
Pb 220.353†	3906.2	488.89 ug/L	0.933	488.89 ppb	0.933	0.19%	
QC value within limits for Pb 220.353 Recovery = 97.78%							
S 181.975 Axial†	668.3	973.56 ug/L	4.949	973.56 ppb	4.949	0.51%	
QC value within limits for S 181.975 Axial Recovery = 97.36%							
Sb 206.836†	1390.8	502.18 ug/L	3.370	502.18 ppb	3.370	0.67%	
QC value within limits for Sb 206.836 Recovery = 100.44%							
Se 196.026†	732.0	511.24 ug/L	4.158	511.24 ppb	4.158	0.81%	
QC value within limits for Se 196.026 Recovery = 102.25%							
Si 251.611†	74282.4	2478.7 ug/L	25.75	2478.7 ppb	25.75	1.04%	
QC value within limits for Si 251.611 Recovery = 99.15%							
Sn 189.927†	2602.9	483.89 ug/L	0.330	483.89 ppb	0.330	0.07%	
QC value within limits for Sn 189.927 Recovery = 96.78%							
Sr 421.552†	73628.2	516.33 ug/L	1.851	516.33 ppb	1.851	0.36%	
QC value within limits for Sr 421.552 Recovery = 103.27%							
Ti 334.940†	307062.1	497.90 ug/L	5.595	497.90 ppb	5.595	1.12%	
QC value within limits for Ti 334.940 Recovery = 99.58%							
Tl 190.801†	1550.0	500.04 ug/L	3.765	500.04 ppb	3.765	0.75%	
QC value within limits for Tl 190.801 Recovery = 100.01%							
U 409.014†	17187.6	496.71 ug/L	6.436	496.71 ppb	6.436	1.30%	
QC value within limits for U 409.014 Recovery = 99.34%							
V 292.402†	67518.5	496.80 ug/L	4.912	496.80 ppb	4.912	0.99%	
QC value within limits for V 292.402 Recovery = 99.36%							
Zn 213.857†	50299.6	491.66 ug/L	4.762	491.66 ppb	4.762	0.97%	
QC value within limits for Zn 213.857 Recovery = 98.33%							
SiO2†	73940.3	5261.1 ug/L	72.37	5261.1 ppb	72.37	1.38%	
QC value within limits for SiO2 Recovery = 98.38%							
All analyte(s) passed QC.							

Sequence No.: 19

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/11/2010 13:46:41

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Rep#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4874.5	4874.5	101 %		13:48:34
1	Y RADIAL	5064.1	5064.1	101.3 %		13:48:34
1	Al 396.153Radial†	-166.8	-12.9	-12.005 ug/L	-12.005 ppb	13:48:34
1	Ca 317.933Radial†	26.4	9.4	15.527 ug/L	15.527 ppb	13:48:54
1	Fe 238.204 Radial†	10.8	-0.9	-7.9116 ug/L	-7.9116 ppb	13:48:54
1	K 766.490 Radial†	2847.0	-18.2	-3.2495 ug/L	-3.2495 ppb	13:48:34
1	Mg 279.077 IEC†	1.4	0.9	32.877 ug/L	32.877 ppb	13:48:54
1	Na 589.592 Radial†	-863.1	227.4	68.768 ug/L	68.768 ppb	13:48:34
1	Sr 421.552†	-9.0	-11.0	-0.0774 ug/L	-0.0774 ppb	13:48:34
1	Sc 361.383	832976.5	832976.5	96.622 %		13:49:51
1	Y 371.029	682037.9	682037.9	95.443 %		13:49:51
1	Ag 328.068†	258.2	38.5	0.1764 ug/L	0.1764 ppb	13:49:51
1	As 188.979†	-35.5	-2.8	-1.2900 ug/L	-1.2900 ppb	13:50:11
1	B 249.677†	62.3	603.5	14.359 ug/L	14.359 ppb	13:50:11
1	Ba 233.527†	-16.5	-5.5	-0.0449 ug/L	-0.0449 ppb	13:50:11
1	Be 313.107†	-4119.6	75.1	0.0279 ug/L	0.0279 ppb	13:49:51
1	Cd 226.502†	-192.4	12.8	0.1527 ug/L	0.1527 ppb	13:50:11
1	Co 228.616†	-63.7	7.8	0.1706 ug/L	0.1706 ppb	13:50:11
1	Cr 267.716†	74.2	10.0	0.1157 ug/L	0.1157 ppb	13:50:11
1	Cu 324.752†	5623.0	-1.2	-0.0054 ug/L	-0.0054 ppb	13:49:51
1	Mn 257.610†	488.1	53.3	0.0592 ug/L	0.0592 ppb	13:50:11
1	Mo 202.031†	18.5	3.6	0.2705 ug/L	0.2705 ppb	13:50:11
1	Ni 231.604†	83.1	-22.0	-0.5711 ug/L	-0.5711 ppb	13:50:11
1	P 214.914†	224.5	4.2	2.6473 ug/L	2.6473 ppb	13:50:11
1	Pb 220.353†	-59.5	0.1	0.0174 ug/L	0.0174 ppb	13:50:11
1	S 181.975 Axial†	43.3	5.5	8.0487 ug/L	8.0487 ppb	13:50:11
1	Sb 206.836†	46.9	6.4	2.2505 ug/L	2.2505 ppb	13:50:11
1	Se 196.026†	-18.0	3.4	2.2925 ug/L	2.2925 ppb	13:50:11
1	Si 251.611†	538.0	-5.5	-0.1872 ug/L	-0.1872 ppb	13:50:11
1	Sn 189.927†	8.7	0.3	0.0618 ug/L	0.0618 ppb	13:50:11
1	Ti 334.940†	-1270.2	-11.4	-0.0203 ug/L	-0.0203 ppb	13:49:51
1	Tl 190.801†	-38.2	-5.3	-1.7045 ug/L	-1.7045 ppb	13:50:11
1	U 409.014†	-2791.0	91.5	2.6548 ug/L	2.6548 ppb	13:49:51
1	V 292.402†	-1494.0	8.4	0.0718 ug/L	0.0718 ppb	13:49:51
1	Zn 213.857†	744.4	57.2	0.5692 ug/L	0.5692 ppb	13:50:11
1	SiO2†	575.5	12.5	0.8848 ug/L	0.8848 ppb	13:51:07
2	Sc Radial	4847.5	4847.5	101 %		13:48:59
2	Y RADIAL	5075.6	5075.6	101.5 %		13:48:59
2	Al 396.153Radial†	-145.6	7.2	6.6259 ug/L	6.6259 ppb	13:48:59
2	Ca 317.933Radial†	26.0	9.1	15.116 ug/L	15.116 ppb	13:49:19
2	Fe 238.204 Radial†	12.5	0.9	8.1458 ug/L	8.1458 ppb	13:49:19
2	K 766.490 Radial†	2722.1	-126.4	-22.332 ug/L	-22.332 ppb	13:48:59
2	Mg 279.077 IEC†	3.6	3.2	113.13 ug/L	113.13 ppb	13:49:19
2	Na 589.592 Radial†	-906.2	179.9	54.413 ug/L	54.413 ppb	13:48:59
2	Sr 421.552†	13.4	11.2	0.0782 ug/L	0.0782 ppb	13:48:59
2	Sc 361.383	848163.2	848163.2	98.384 %		13:50:16
2	Y 371.029	695647.6	695647.6	97.347 %		13:50:16
2	Ag 328.068†	192.4	-33.2	-0.1570 ug/L	-0.1570 ppb	13:50:16
2	As 188.979†	-24.4	9.0	4.1041 ug/L	4.1041 ppb	13:50:36
2	B 249.677†	66.5	606.7	14.431 ug/L	14.431 ppb	13:50:36
2	Ba 233.527†	-15.7	-4.4	-0.0343 ug/L	-0.0343 ppb	13:50:36
2	Be 313.107†	-4165.2	105.1	0.0389 ug/L	0.0389 ppb	13:50:16
2	Cd 226.502†	-185.6	23.2	0.2762 ug/L	0.2762 ppb	13:50:36
2	Co 228.616†	-70.9	1.7	0.0390 ug/L	0.0390 ppb	13:50:36
2	Cr 267.716†	72.7	7.1	0.0814 ug/L	0.0814 ppb	13:50:36
2	Cu 324.752†	5525.7	-204.3	-0.6228 ug/L	-0.6228 ppb	13:50:16
2	Mn 257.610†	492.3	48.4	0.0519 ug/L	0.0519 ppb	13:50:36
2	Mo 202.031†	26.8	11.7	0.8800 ug/L	0.8800 ppb	13:50:36
2	Ni 231.604†	79.4	-27.4	-0.7086 ug/L	-0.7086 ppb	13:50:36

2	P 214.914†	235.9	11.7	7.4195 ug/L	7.4195 ppb	13:50:36
2	Pb 220.353†	-43.6	17.4	2.1700 ug/L	2.1700 ppb	13:50:36
2	S 181.975 Axial†	36.3	-2.5	-3.6299 ug/L	-3.6299 ppb	13:50:36
2	Sb 206.836†	43.7	2.3	0.8571 ug/L	0.8571 ppb	13:50:36
2	Se 196.026†	-13.8	8.0	5.4522 ug/L	5.4522 ppb	13:50:36
2	Si 251.611†	540.5	-12.9	-0.4410 ug/L	-0.4410 ppb	13:50:36
2	Sn 189.927†	20.5	12.2	2.2582 ug/L	2.2582 ppb	13:50:36
2	Ti 334.940†	-1335.4	-54.1	-0.0978 ug/L	-0.0978 ppb	13:50:16
2	Tl 190.801†	-28.6	5.1	1.6350 ug/L	1.6350 ppb	13:50:36
2	U 409.014†	-2721.6	213.7	6.1957 ug/L	6.1957 ppb	13:50:16
2	V 292.402†	-1462.3	68.4	0.5218 ug/L	0.5218 ppb	13:50:16
2	Zn 213.857†	765.5	64.8	0.6437 ug/L	0.6437 ppb	13:50:36
2	SiO2†	569.3	-4.4	-0.3402 ug/L	-0.3402 ppb	13:51:12
3	Sc Radial	4980.3	4980.3	104 %		13:49:24
3	Y RADIAL	5191.0	5191.0	103.8 %		13:49:24
3	Al 396.153Radial†	-157.1	-0.0	-0.0682 ug/L	-0.0682 ppb	13:49:24
3	Ca 317.933Radial†	21.6	4.1	6.7953 ug/L	6.7953 ppb	13:49:44
3	Fe 238.204 Radial†	10.0	-1.9	-16.921 ug/L	-16.921 ppb	13:49:44
3	K 766.490 Radial†	2769.5	-152.6	-26.974 ug/L	-26.974 ppb	13:49:24
3	Mg 279.077 IEC†	1.5	1.0	35.623 ug/L	35.623 ppb	13:49:44
3	Na 589.592 Radial†	-841.7	266.1	80.470 ug/L	80.470 ppb	13:49:24
3	Sr 421.552†	-7.1	-9.0	-0.0631 ug/L	-0.0631 ppb	13:49:24
3	Sc 361.383	851237.6	851237.6	98.741 %		13:50:42
3	Y 371.029	697709.8	697709.8	97.636 %		13:50:42
3	Ag 328.068†	203.8	-22.4	-0.1059 ug/L	-0.1059 ppb	13:50:42
3	As 188.979†	-27.3	6.2	2.8281 ug/L	2.8281 ppb	13:51:02
3	B 249.677†	48.6	588.2	13.996 ug/L	13.996 ppb	13:51:02
3	Ba 233.527†	-7.3	4.2	0.0360 ug/L	0.0360 ppb	13:51:02
3	Be 313.107†	-4222.6	62.3	0.0234 ug/L	0.0234 ppb	13:50:42
3	Cd 226.502†	-206.5	2.8	0.0340 ug/L	0.0340 ppb	13:51:02
3	Co 228.616†	-68.7	4.2	0.0933 ug/L	0.0933 ppb	13:51:02
3	Cr 267.716†	72.6	6.8	0.0806 ug/L	0.0806 ppb	13:51:02
3	Cu 324.752†	5564.8	-185.0	-0.5612 ug/L	-0.5612 ppb	13:50:42
3	Mn 257.610†	492.0	46.4	0.0502 ug/L	0.0502 ppb	13:51:02
3	Mo 202.031†	28.8	13.6	1.0180 ug/L	1.0180 ppb	13:51:02
3	Ni 231.604†	88.0	-18.8	-0.4883 ug/L	-0.4883 ppb	13:51:02
3	P 214.914†	230.4	5.2	3.4251 ug/L	3.4251 ppb	13:51:02
3	Pb 220.353†	-47.7	13.4	1.6819 ug/L	1.6819 ppb	13:51:02
3	S 181.975 Axial†	33.9	-5.0	-7.2357 ug/L	-7.2357 ppb	13:51:02
3	Sb 206.836†	39.8	-1.9	-0.5664 ug/L	-0.5664 ppb	13:51:02
3	Se 196.026†	-18.7	3.1	2.0674 ug/L	2.0674 ppb	13:51:02
3	Si 251.611†	544.8	-10.6	-0.3661 ug/L	-0.3661 ppb	13:51:02
3	Sn 189.927†	27.5	19.2	3.5660 ug/L	3.5660 ppb	13:51:02
3	Ti 334.940†	-1245.0	42.3	0.0673 ug/L	0.0673 ppb	13:50:42
3	Tl 190.801†	-23.5	10.4	3.3198 ug/L	3.3198 ppb	13:51:02
3	U 409.014†	-2996.5	-54.7	-1.5842 ug/L	-1.5842 ppb	13:50:42
3	V 292.402†	-1394.4	142.5	1.0490 ug/L	1.0490 ppb	13:50:42
3	Zn 213.857†	755.8	52.2	0.5210 ug/L	0.5210 ppb	13:51:02
3	SiO2†	579.8	4.0	0.2589 ug/L	0.2589 ppb	13:51:17

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	844125.8	97.916 %	1.1341			1.16%
Sc Radial	4900.8	102 %	1.5			1.43%
Y 371.029	691798.4	96.809 %	1.1916			1.23%
Y RADIAL	5110.2	102.2 %	1.40			1.37%
Ag 328.068†	-5.7	-0.0288 ug/L	0.17960	-0.0288 ppb	0.17960	622.82%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-1.9	-1.8156 ug/L	9.43731	-1.8156 ppb	9.43731	519.79%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	4.2	1.8807 ug/L	2.81909	1.8807 ppb	2.81909	149.89%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	599.5	14.262 ug/L	0.2331	14.262 ppb	0.2331	1.63%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-1.9	-0.0144 ug/L	0.04397	-0.0144 ppb	0.04397	304.96%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	80.8	0.0301 ug/L	0.00800	0.0301 ppb	0.00800	26.61%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	7.5	12.479 ug/L	4.9268	12.479 ppb	4.9268	39.48%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated							
Cd	226.502†	12.9	0.1543 ug/L	0.12111	0.1543 ppb	0.12111	78.49%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co	228.616†	4.5	0.1010 ug/L	0.06616	0.1010 ppb	0.06616	65.51%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr	267.716†	8.0	0.0926 ug/L	0.02004	0.0926 ppb	0.02004	21.64%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	-130.1	-0.3964 ug/L	0.34006	-0.3964 ppb	0.34006	85.78%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	-0.6	-5.5622 ug/L	12.69730	-5.5622 ppb	12.69730	228.28%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	-99.1	-17.519 ug/L	12.5736	-17.519 ppb	12.5736	71.77%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	1.7	60.545 ug/L	45.5643	60.545 ppb	45.5643	75.26%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	49.4	0.0538 ug/L	0.00475	0.0538 ppb	0.00475	8.84%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	9.7	0.7228 ug/L	0.39774	0.7228 ppb	0.39774	55.02%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	224.4	67.884 ug/L	13.0513	67.884 ppb	13.0513	19.23%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	-22.7	-0.5894 ug/L	0.11128	-0.5894 ppb	0.11128	18.88%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	7.1	4.4973 ug/L	2.56043	4.4973 ppb	2.56043	56.93%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	10.3	1.2898 ug/L	1.12860	1.2898 ppb	1.12860	87.50%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	-0.6	-0.9390 ug/L	7.98962	-0.9390 ppb	7.98962	850.90%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	2.3	0.8471 ug/L	1.40844	0.8471 ppb	1.40844	166.27%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	4.9	3.2707 ug/L	1.89256	3.2707 ppb	1.89256	57.86%
QC value within limits for Se 196.026 Recovery = Not calculated							
Si	251.611†	-9.6	-0.3314 ug/L	0.13040	-0.3314 ppb	0.13040	39.34%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	10.6	1.9620 ug/L	1.77078	1.9620 ppb	1.77078	90.25%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	-2.9	-0.0207 ug/L	0.08597	-0.0207 ppb	0.08597	414.38%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	-7.8	-0.0169 ug/L	0.08260	-0.0169 ppb	0.08260	487.66%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	3.4	1.0834 ug/L	2.55714	1.0834 ppb	2.55714	236.03%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	83.5	2.4221 ug/L	3.89514	2.4221 ppb	3.89514	160.82%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	73.1	0.5476 ug/L	0.48909	0.5476 ppb	0.48909	89.32%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	58.1	0.5780 ug/L	0.06183	0.5780 ppb	0.06183	10.70%
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†		4.0	0.2678 ug/L	0.61252	0.2678 ppb	0.61252	228.69%
QC value within limits for SiO2 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 2

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/11/2010 14:59:41

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4896.9	4896.9	102 %		15:01:33
1	Y RADIAL	5064.3	5064.3	101.3 %		15:01:33
1	Al 396.153Radial†	5362.8	5415.8	5002.8 ug/L	5002.8 ppb	15:01:33
1	Ca 317.933Radial†	3076.8	3003.5	4978.2 ug/L	4978.2 ppb	15:01:53
1	Fe 238.204 Radial†	567.7	545.8	4981.4 ug/L	4981.4 ppb	15:01:53
1	K 766.490 Radial†	31444.5	28040.8	4943.4 ug/L	4943.4 ppb	15:01:33
1	Mg 279.077 IEC†	144.9	141.8	5026.7 ug/L	5026.7 ppb	15:01:53
1	Na 589.592 Radial†	32560.6	33040.7	9993.1 ug/L	9993.1 ppb	15:01:33
1	Sr 421.552†	75675.9	74282.9	520.92 ug/L	520.92 ppb	15:01:33
1	Sc 361.383	855266.4	855266.4	99.208 %		15:02:50
1	Y 371.029	690506.7	690506.7	96.628 %		15:02:50
1	Ag 328.068†	105333.1	105945.2	502.39 ug/L	502.39 ppb	15:02:55
1	As 188.979†	1043.7	1085.9	497.05 ug/L	497.05 ppb	15:03:15
1	B 249.677†	20778.5	21483.5	508.80 ug/L	508.80 ppb	15:02:55
1	Ba 233.527†	61683.7	62187.7	509.11 ug/L	509.11 ppb	15:02:55
1	Be 313.107†	1311373.8	1326181.8	495.10 ug/L	495.10 ppb	15:02:50
1	Cd 226.502†	41257.9	41799.2	496.85 ug/L	496.85 ppb	15:02:55
1	Co 228.616†	23451.2	23712.1	517.98 ug/L	517.98 ppb	15:02:55
1	Cr 267.716†	42320.1	42591.2	496.45 ug/L	496.45 ppb	15:02:55
1	Cu 324.752†	171769.0	167319.6	507.55 ug/L	507.55 ppb	15:02:55
1	Mn 257.610†	435123.8	438145.7	504.38 ug/L	504.38 ppb	15:02:50
1	Mo 202.031†	6473.5	6509.6	487.94 ug/L	487.94 ppb	15:03:15
1	Ni 231.604†	19245.0	19290.6	499.45 ug/L	499.45 ppb	15:02:55
1	P 214.914†	4150.0	3955.0	2362.1 ug/L	2362.1 ppb	15:03:15
1	Pb 220.353†	3807.0	3899.2	488.02 ug/L	488.02 ppb	15:03:15
1	S 181.975 Axial†	705.5	671.8	978.66 ug/L	978.66 ppb	15:03:15
1	Sb 206.836†	1426.2	1395.5	503.86 ug/L	503.86 ppb	15:03:15
1	Se 196.026†	699.5	727.2	507.58 ug/L	507.58 ppb	15:03:15
1	Si 251.611†	75576.4	75617.5	2523.3 ug/L	2523.3 ppb	15:02:55
1	Sn 189.927†	2594.2	2606.2	484.49 ug/L	484.49 ppb	15:03:15
1	Ti 334.940†	307425.7	311183.2	504.58 ug/L	504.58 ppb	15:02:55
1	Tl 190.801†	1509.1	1555.4	501.82 ug/L	501.82 ppb	15:03:15
1	U 409.014†	14058.7	17151.0	495.64 ug/L	495.64 ppb	15:02:55
1	V 292.402†	66247.2	68330.7	502.73 ug/L	502.73 ppb	15:02:55
1	Zn 213.857†	51389.5	51086.5	499.38 ug/L	499.38 ppb	15:02:55
1	SiO2†	74555.9	74568.0	5305.8 ug/L	5305.8 ppb	15:04:23
2	Sc Radial	4831.8	4831.8	101 %		15:01:58
2	Y RADIAL	5051.5	5051.5	101.0 %		15:01:58
2	Al 396.153Radial†	5389.0	5512.8	5092.5 ug/L	5092.5 ppb	15:01:58
2	Ca 317.933Radial†	3110.2	3077.4	5100.6 ug/L	5100.6 ppb	15:02:18
2	Fe 238.204 Radial†	572.2	557.7	5090.2 ug/L	5090.2 ppb	15:02:18
2	K 766.490 Radial†	31116.0	28130.1	4959.2 ug/L	4959.2 ppb	15:01:58
2	Mg 279.077 IEC†	150.7	149.5	5297.6 ug/L	5297.6 ppb	15:02:18
2	Na 589.592 Radial†	31875.7	32790.0	9917.3 ug/L	9917.3 ppb	15:01:58
2	Sr 421.552†	74806.6	74419.1	521.87 ug/L	521.87 ppb	15:01:58
2	Sc 361.383	844722.4	844722.4	97.985 %		15:03:21
2	Y 371.029	682760.1	682760.1	95.544 %		15:03:21
2	Ag 328.068†	104784.6	106710.7	506.05 ug/L	506.05 ppb	15:03:26
2	As 188.979†	1057.1	1112.7	509.26 ug/L	509.26 ppb	15:03:47
2	B 249.677†	20588.7	21551.2	510.39 ug/L	510.39 ppb	15:03:26
2	Ba 233.527†	61277.4	62549.2	512.08 ug/L	512.08 ppb	15:03:26
2	Be 313.107†	1295669.2	1326653.8	495.29 ug/L	495.29 ppb	15:03:21
2	Cd 226.502†	40938.2	41992.0	499.14 ug/L	499.14 ppb	15:03:26
2	Co 228.616†	23279.8	23832.3	520.62 ug/L	520.62 ppb	15:03:26
2	Cr 267.716†	42080.8	42879.5	499.81 ug/L	499.81 ppb	15:03:26
2	Cu 324.752†	170708.1	168398.0	510.82 ug/L	510.82 ppb	15:03:26
2	Mn 257.610†	428929.0	437298.2	503.40 ug/L	503.40 ppb	15:03:21
2	Mo 202.031†	6474.5	6592.1	494.12 ug/L	494.12 ppb	15:03:47
2	Ni 231.604†	19121.0	19406.2	502.44 ug/L	502.44 ppb	15:03:26

2	P 214.914†	4157.0	4014.4	2398.5 ug/L	2398.5 ppb	15:03:47
2	Pb 220.353†	3816.0	3956.2	495.16 ug/L	495.16 ppb	15:03:47
2	S 181.975 Axial†	702.0	677.1	986.38 ug/L	986.38 ppb	15:03:47
2	Sb 206.836†	1428.1	1415.3	511.03 ug/L	511.03 ppb	15:03:47
2	Se 196.026†	701.8	738.3	515.47 ug/L	515.47 ppb	15:03:47
2	Si 251.611†	74822.9	75799.4	2529.3 ug/L	2529.3 ppb	15:03:26
2	Sn 189.927†	2609.1	2654.1	493.39 ug/L	493.39 ppb	15:03:47
2	Ti 334.940†	305426.0	313010.3	507.54 ug/L	507.54 ppb	15:03:26
2	Tl 190.801†	1502.3	1567.3	505.65 ug/L	505.65 ppb	15:03:47
2	U 409.014†	14046.2	17315.1	500.38 ug/L	500.38 ppb	15:03:26
2	V 292.402†	65892.7	68802.5	506.23 ug/L	506.23 ppb	15:03:26
2	Zn 213.857†	51083.3	51420.6	502.64 ug/L	502.64 ppb	15:03:26
2	SiO2†	74890.6	75847.6	5396.9 ug/L	5396.9 ppb	15:04:28
3	Sc Radial	4861.1	4861.1	101 %		15:02:23
3	Y RADIAL	5095.8	5095.8	101.9 %		15:02:23
3	Al 396.153Radial†	5342.4	5434.4	5019.9 ug/L	5019.9 ppb	15:02:23
3	Ca 317.933Radial†	3064.7	3013.9	4995.3 ug/L	4995.3 ppb	15:02:43
3	Fe 238.204 Radial†	570.0	552.1	5039.4 ug/L	5039.4 ppb	15:02:43
3	K 766.490 Radial†	31421.8	28245.8	4979.6 ug/L	4979.6 ppb	15:02:23
3	Mg 279.077 IEC†	148.1	146.0	5174.3 ug/L	5174.3 ppb	15:02:43
3	Na 589.592 Radial†	32126.6	32846.9	9934.5 ug/L	9934.5 ppb	15:02:23
3	Sr 421.552†	75217.1	74376.3	521.58 ug/L	521.58 ppb	15:02:23
3	Sc 361.383	854008.1	854008.1	99.062 %		15:03:52
3	Y 371.029	691507.2	691507.2	96.768 %		15:03:52
3	Ag 328.068†	106127.9	106904.0	506.95 ug/L	506.95 ppb	15:03:57
3	As 188.979†	1056.6	1100.4	503.69 ug/L	503.69 ppb	15:04:18
3	B 249.677†	21061.8	21800.3	516.32 ug/L	516.32 ppb	15:03:57
3	Ba 233.527†	62128.7	62728.5	513.54 ug/L	513.54 ppb	15:03:57
3	Be 313.107†	1313718.8	1330496.6	496.72 ug/L	496.72 ppb	15:03:52
3	Cd 226.502†	41590.7	42196.4	501.57 ug/L	501.57 ppb	15:03:57
3	Co 228.616†	23635.8	23933.3	522.81 ug/L	522.81 ppb	15:03:57
3	Cr 267.716†	42682.2	43019.6	501.44 ug/L	501.44 ppb	15:03:57
3	Cu 324.752†	173224.8	169044.3	512.78 ug/L	512.78 ppb	15:03:57
3	Mn 257.610†	432964.7	436612.4	502.62 ug/L	502.62 ppb	15:03:52
3	Mo 202.031†	6524.6	6570.9	492.53 ug/L	492.53 ppb	15:04:18
3	Ni 231.604†	19378.9	19454.4	503.69 ug/L	503.69 ppb	15:03:57
3	P 214.914†	4194.6	4006.3	2393.0 ug/L	2393.0 ppb	15:04:18
3	Pb 220.353†	3840.2	3938.3	492.91 ug/L	492.91 ppb	15:04:18
3	S 181.975 Axial†	715.7	683.1	995.16 ug/L	995.16 ppb	15:04:18
3	Sb 206.836†	1436.0	1407.5	508.21 ug/L	508.21 ppb	15:04:18
3	Se 196.026†	726.4	755.4	526.83 ug/L	526.83 ppb	15:04:18
3	Si 251.611†	76128.3	76286.8	2545.6 ug/L	2545.6 ppb	15:03:57
3	Sn 189.927†	2616.6	2632.6	489.40 ug/L	489.40 ppb	15:04:18
3	Ti 334.940†	309943.9	314181.8	509.43 ug/L	509.43 ppb	15:03:57
3	Tl 190.801†	1530.4	1579.1	509.42 ug/L	509.42 ppb	15:04:18
3	U 409.014†	14182.3	17296.7	499.85 ug/L	499.85 ppb	15:03:57
3	V 292.402†	66801.0	68988.1	507.56 ug/L	507.56 ppb	15:03:57
3	Zn 213.857†	51777.5	51554.5	503.95 ug/L	503.95 ppb	15:03:57
3	SiO2†	75058.2	75185.8	5349.7 ug/L	5349.7 ppb	15:04:33

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	851332.3	98.752 %	0.6680			0.68%
Sc Radial	4863.3	101 %	0.7			0.67%
Y 371.029	688258.0	96.313 %	0.6700			0.70%
Y RADIAL	5070.6	101.4 %	0.46			0.45%
Ag 328.068†	106520.0	505.13 ug/L	2.411	505.13 ppb	2.411	0.48%
QC value within limits for Ag 328.068 Recovery = 101.03%						
Al 396.153Radial†	5454.3	5038.4 ug/L	47.64	5038.4 ppb	47.64	0.95%
QC value within limits for Al 396.153Radial Recovery = 100.77%						
As 188.979†	1099.7	503.33 ug/L	6.113	503.33 ppb	6.113	1.21%
QC value within limits for As 188.979 Recovery = 100.67%						
B 249.677†	21611.6	511.84 ug/L	3.960	511.84 ppb	3.960	0.77%
QC value within limits for B 249.677 Recovery = 102.37%						
Ba 233.527†	62488.5	511.58 ug/L	2.256	511.58 ppb	2.256	0.44%
QC value within limits for Ba 233.527 Recovery = 102.32%						
Be 313.107†	132777.4	495.70 ug/L	0.886	495.70 ppb	0.886	0.18%
QC value within limits for Be 313.107 Recovery = 99.14%						
Ca 317.933Radial†	3031.6	5024.7 ug/L	66.33	5024.7 ppb	66.33	1.32%

QC value within limits for Ca 317.933 Radial Recovery = 100.49%							
Cd	226.502†	41995.9	499.19 ug/L	2.360	499.19 ppb	2.360	0.47%
QC value within limits for Cd 226.502 Recovery = 99.84%							
Co	228.616†	23825.9	520.47 ug/L	2.419	520.47 ppb	2.419	0.46%
QC value within limits for Co 228.616 Recovery = 104.09%							
Cr	267.716†	42830.1	499.23 ug/L	2.546	499.23 ppb	2.546	0.51%
QC value within limits for Cr 267.716 Recovery = 99.85%							
Cu	324.752†	168253.9	510.38 ug/L	2.644	510.38 ppb	2.644	0.52%
QC value within limits for Cu 324.752 Recovery = 102.08%							
Fe	238.204 Radial†	551.9	5037.0 ug/L	54.44	5037.0 ppb	54.44	1.08%
QC value within limits for Fe 238.204 Radial Recovery = 100.74%							
K	766.490 Radial†	28138.9	4960.7 ug/L	18.14	4960.7 ppb	18.14	0.37%
QC value within limits for K 766.490 Radial Recovery = 99.21%							
Mg	279.077 IEC†	145.8	5166.2 ug/L	135.63	5166.2 ppb	135.63	2.63%
QC value within limits for Mg 279.077 IEC Recovery = 103.32%							
Mn	257.610†	437352.1	503.47 ug/L	0.884	503.47 ppb	0.884	0.18%
QC value within limits for Mn 257.610 Recovery = 100.69%							
Mo	202.031†	6557.5	491.53 ug/L	3.213	491.53 ppb	3.213	0.65%
QC value within limits for Mo 202.031 Recovery = 98.31%							
Na	589.592 Radial†	32892.5	9948.3 ug/L	39.75	9948.3 ppb	39.75	0.40%
QC value within limits for Na 589.592 Radial Recovery = 99.48%							
Ni	231.604†	19383.8	501.86 ug/L	2.179	501.86 ppb	2.179	0.43%
QC value within limits for Ni 231.604 Recovery = 100.37%							
P	214.914†	3991.9	2384.5 ug/L	19.59	2384.5 ppb	19.59	0.82%
QC value within limits for P 214.914 Recovery = 95.38%							
Pb	220.353†	3931.2	492.03 ug/L	3.647	492.03 ppb	3.647	0.74%
QC value within limits for Pb 220.353 Recovery = 98.41%							
S	181.975 Axial†	677.3	986.73 ug/L	8.255	986.73 ppb	8.255	0.84%
QC value within limits for S 181.975 Axial Recovery = 98.67%							
Sb	206.836†	1406.1	507.70 ug/L	3.610	507.70 ppb	3.610	0.71%
QC value within limits for Sb 206.836 Recovery = 101.54%							
Se	196.026†	740.3	516.63 ug/L	9.677	516.63 ppb	9.677	1.87%
QC value within limits for Se 196.026 Recovery = 103.33%							
Si	251.611†	75901.2	2532.7 ug/L	11.56	2532.7 ppb	11.56	0.46%
QC value within limits for Si 251.611 Recovery = 101.31%							
Sn	189.927†	2631.0	489.09 ug/L	4.460	489.09 ppb	4.460	0.91%
QC value within limits for Sn 189.927 Recovery = 97.82%							
Sr	421.552†	74359.5	521.46 ug/L	0.488	521.46 ppb	0.488	0.09%
QC value within limits for Sr 421.552 Recovery = 104.29%							
Ti	334.940†	312791.8	507.19 ug/L	2.444	507.19 ppb	2.444	0.48%
QC value within limits for Ti 334.940 Recovery = 101.44%							
Tl	190.801†	1567.3	505.63 ug/L	3.799	505.63 ppb	3.799	0.75%
QC value within limits for Tl 190.801 Recovery = 101.13%							
U	409.014†	17254.2	498.63 ug/L	2.597	498.63 ppb	2.597	0.52%
QC value within limits for U 409.014 Recovery = 99.73%							
V	292.402†	68707.1	505.51 ug/L	2.498	505.51 ppb	2.498	0.49%
QC value within limits for V 292.402 Recovery = 101.10%							
Zn	213.857†	51353.9	501.99 ug/L	2.355	501.99 ppb	2.355	0.47%
QC value within limits for Zn 213.857 Recovery = 100.40%							
SiO2†		75200.5	5350.8 ug/L	45.56	5350.8 ppb	45.56	0.85%
QC value within limits for SiO2 Recovery = 100.06%							

All analyte(s) passed QC.

Sequence No.: 3

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/11/2010 15:06:43

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4794.0	4794.0	99.7 %			15:08:36
1	Y RADIAL	5035.1	5035.1	100.7 %			15:08:36
1	Al 396.153Radial†	-145.2	6.0	5.5428 ug/L		5.5428 ppb	15:08:56
1	Ca 317.933Radial†	24.3	7.6	12.669 ug/L		12.669 ppb	15:08:56
1	Fe 238.204 Radial†	9.1	-2.3	-21.361 ug/L		-21.361 ppb	15:08:56
1	K 766.490 Radial†	2777.9	-40.3	-7.1527 ug/L		-7.1527 ppb	15:08:36
1	Mg 279.077 IEC†	4.7	4.3	152.14 ug/L		152.14 ppb	15:08:56
1	Na 589.592 Radial†	-843.1	233.2	70.516 ug/L		70.516 ppb	15:08:36
1	Sr 421.552†	4.6	2.5	0.0172 ug/L		0.0172 ppb	15:08:36
1	Sc 361.383	838391.8	838391.8	97.251 %			15:09:53
1	Y 371.029	685807.8	685807.8	95.970 %			15:09:53
1	Ag 328.068†	302.1	81.8	0.3787 ug/L		0.3787 ppb	15:09:53
1	As 188.979†	-24.1	9.1	4.1108 ug/L		4.1108 ppb	15:10:13
1	B 249.677†	-17.6	521.0	12.396 ug/L		12.396 ppb	15:10:13
1	Ba 233.527†	3.5	15.2	0.1227 ug/L		0.1227 ppb	15:10:13
1	Be 313.107†	-4135.9	85.9	0.0316 ug/L		0.0316 ppb	15:09:53
1	Cd 226.502†	-163.7	43.5	0.5196 ug/L		0.5196 ppb	15:10:13
1	Co 228.616†	-62.2	9.7	0.2140 ug/L		0.2140 ppb	15:10:13
1	Cr 267.716†	100.5	36.6	0.4262 ug/L		0.4262 ppb	15:10:13
1	Cu 324.752†	5755.3	97.2	0.2948 ug/L		0.2948 ppb	15:09:53
1	Mn 257.610†	791.9	362.4	0.4087 ug/L		0.4087 ppb	15:10:13
1	Mo 202.031†	23.8	8.9	0.6649 ug/L		0.6649 ppb	15:10:13
1	Ni 231.604†	117.6	12.9	0.3344 ug/L		0.3344 ppb	15:10:13
1	P 214.914†	227.9	6.3	3.9073 ug/L		3.9073 ppb	15:10:13
1	Pb 220.353†	-53.4	6.8	0.8586 ug/L		0.8586 ppb	15:10:13
1	S 181.975 Axial†	37.6	-0.7	-1.0104 ug/L		-1.0104 ppb	15:10:13
1	Sb 206.836†	44.6	3.7	1.3246 ug/L		1.3246 ppb	15:10:13
1	Se 196.026†	-22.5	-1.0	-0.7575 ug/L		-0.7575 ppb	15:10:13
1	Si 251.611†	628.9	84.4	2.8152 ug/L		2.8152 ppb	15:10:13
1	Sn 189.927†	18.0	9.8	1.8216 ug/L		1.8216 ppb	15:10:13
1	Ti 334.940†	-1361.6	-96.9	-0.1673 ug/L		-0.1673 ppb	15:09:53
1	Tl 190.801†	-30.1	3.3	1.0561 ug/L		1.0561 ppb	15:10:13
1	U 409.014†	-2955.8	-59.3	-1.7194 ug/L		-1.7194 ppb	15:09:53
1	V 292.402†	-1541.4	-30.3	-0.2081 ug/L		-0.2081 ppb	15:09:53
1	Zn 213.857†	812.4	122.1	1.2054 ug/L		1.2054 ppb	15:10:13
1	SiO2†	607.8	41.8	2.9645 ug/L		2.9645 ppb	15:11:09
2	Sc Radial	4926.1	4926.1	102 %			15:09:01
2	Y RADIAL	5152.4	5152.4	103.0 %			15:09:01
2	Al 396.153Radial†	-127.4	27.3	25.250 ug/L		25.250 ppb	15:09:21
2	Ca 317.933Radial†	24.1	6.8	11.280 ug/L		11.280 ppb	15:09:21
2	Fe 238.204 Radial†	12.1	0.4	3.3027 ug/L		3.3027 ppb	15:09:21
2	K 766.490 Radial†	2880.4	-15.0	-2.6793 ug/L		-2.6793 ppb	15:09:01
2	Mg 279.077 IEC†	0.7	0.2	8.0343 ug/L		8.0343 ppb	15:09:21
2	Na 589.592 Radial†	-899.9	200.4	60.618 ug/L		60.618 ppb	15:09:01
2	Sr 421.552†	3.6	1.4	0.0101 ug/L		0.0101 ppb	15:09:01
2	Sc 361.383	847669.0	847669.0	98.327 %			15:10:18
2	Y 371.029	693856.3	693856.3	97.097 %			15:10:18
2	Ag 328.068†	282.6	58.6	0.2791 ug/L		0.2791 ppb	15:10:18
2	As 188.979†	-31.7	1.6	0.7413 ug/L		0.7413 ppb	15:10:39
2	B 249.677†	-19.9	518.8	12.341 ug/L		12.341 ppb	15:10:39
2	Ba 233.527†	-14.6	-3.2	-0.0253 ug/L		-0.0253 ppb	15:10:39
2	Be 313.107†	-4136.7	131.7	0.0491 ug/L		0.0491 ppb	15:10:18
2	Cd 226.502†	-184.0	24.8	0.2937 ug/L		0.2937 ppb	15:10:39
2	Co 228.616†	-75.5	-3.1	-0.0649 ug/L		-0.0649 ppb	15:10:39
2	Cr 267.716†	67.8	2.2	0.0261 ug/L		0.0261 ppb	15:10:39
2	Cu 324.752†	5648.7	-75.9	-0.2296 ug/L		-0.2296 ppb	15:10:18
2	Mn 257.610†	548.6	106.0	0.1220 ug/L		0.1220 ppb	15:10:39
2	Mo 202.031†	27.7	12.6	0.9463 ug/L		0.9463 ppb	15:10:39
2	Ni 231.604†	88.2	-18.3	-0.4739 ug/L		-0.4739 ppb	15:10:39

2	P 214.914†	230.5	6.4	4.0139 ug/L	4.0139 ppb	15:10:39
2	Pb 220.353†	-48.3	12.6	1.5837 ug/L	1.5837 ppb	15:10:39
2	S 181.975 Axial†	37.2	-1.5	-2.1995 ug/L	-2.1995 ppb	15:10:39
2	Sb 206.836†	33.7	-7.8	-2.7173 ug/L	-2.7173 ppb	15:10:39
2	Se 196.026†	-8.0	14.0	9.4572 ug/L	9.4572 ppb	15:10:39
2	Si 251.611†	606.5	54.6	1.8141 ug/L	1.8141 ppb	15:10:39
2	Sn 189.927†	7.1	-1.4	-0.2669 ug/L	-0.2669 ppb	15:10:39
2	Ti 334.940†	-1276.1	5.3	0.0097 ug/L	0.0097 ppb	15:10:18
2	Tl 190.801†	-35.4	-1.9	-0.5931 ug/L	-0.5931 ppb	15:10:39
2	U 409.014†	-2947.9	-18.0	-0.5234 ug/L	-0.5234 ppb	15:10:18
2	V 292.402†	-1472.4	57.2	0.4275 ug/L	0.4275 ppb	15:10:18
2	Zn 213.857†	773.7	73.7	0.7295 ug/L	0.7295 ppb	15:10:39
2	SiO2†	601.4	28.5	2.0085 ug/L	2.0085 ppb	15:11:14
3	Sc Radial	4803.6	4803.6	99.9 %		15:09:26
3	Y RADIAL	5048.4	5048.4	101.0 %		15:09:26
3	Al 396.153Radial†	-141.3	10.2	9.4508 ug/L	9.4508 ppb	15:09:47
3	Ca 317.933Radial†	29.8	13.1	21.673 ug/L	21.673 ppb	15:09:47
3	Fe 238.204 Radial†	9.0	-2.5	-22.492 ug/L	-22.492 ppb	15:09:47
3	K 766.490 Radial†	2877.2	53.5	9.4037 ug/L	9.4037 ppb	15:09:26
3	Mg 279.077 IEC†	1.0	0.5	19.175 ug/L	19.175 ppb	15:09:47
3	Na 589.592 Radial†	-861.3	216.6	65.512 ug/L	65.512 ppb	15:09:26
3	Sr 421.552†	2.1	0.0	0.0001 ug/L	0.0001 ppb	15:09:26
3	Sc 361.383	839553.0	839553.0	97.385 %		15:10:44
3	Y 371.029	688242.3	688242.3	96.311 %		15:10:44
3	Ag 328.068†	291.8	70.8	0.3211 ug/L	0.3211 ppb	15:10:44
3	As 188.979†	-22.2	11.1	5.0377 ug/L	5.0377 ppb	15:11:04
3	B 249.677†	-54.6	482.9	11.492 ug/L	11.492 ppb	15:11:04
3	Ba 233.527†	-2.2	9.3	0.0744 ug/L	0.0744 ppb	15:11:04
3	Be 313.107†	-4146.9	80.5	0.0300 ug/L	0.0300 ppb	15:10:44
3	Cd 226.502†	-192.1	14.7	0.1774 ug/L	0.1774 ppb	15:11:04
3	Co 228.616†	-67.9	4.0	0.0875 ug/L	0.0875 ppb	15:11:04
3	Cr 267.716†	71.3	6.4	0.0723 ug/L	0.0723 ppb	15:11:04
3	Cu 324.752†	5642.7	-26.5	-0.0837 ug/L	-0.0837 ppb	15:10:44
3	Mn 257.610†	557.9	121.0	0.1362 ug/L	0.1362 ppb	15:11:04
3	Mo 202.031†	18.4	3.4	0.2496 ug/L	0.2496 ppb	15:11:04
3	Ni 231.604†	90.5	-15.1	-0.3902 ug/L	-0.3902 ppb	15:11:04
3	P 214.914†	246.5	25.0	15.602 ug/L	15.602 ppb	15:11:04
3	Pb 220.353†	-65.2	-5.2	-0.6436 ug/L	-0.6436 ppb	15:11:04
3	S 181.975 Axial†	36.9	-1.5	-2.1417 ug/L	-2.1417 ppb	15:11:04
3	Sb 206.836†	39.1	-2.0	-0.6724 ug/L	-0.6724 ppb	15:11:04
3	Se 196.026†	-14.8	6.9	4.5869 ug/L	4.5869 ppb	15:11:04
3	Si 251.611†	590.8	44.4	1.4808 ug/L	1.4808 ppb	15:11:04
3	Sn 189.927†	10.5	2.1	0.3867 ug/L	0.3867 ppb	15:11:04
3	Ti 334.940†	-1257.1	12.4	0.0197 ug/L	0.0197 ppb	15:10:44
3	Tl 190.801†	-36.3	-3.1	-0.9954 ug/L	-0.9954 ppb	15:11:04
3	U 409.014†	-2772.5	133.1	3.8629 ug/L	3.8629 ppb	15:10:44
3	V 292.402†	-1567.9	-55.3	-0.3872 ug/L	-0.3872 ppb	15:10:44
3	Zn 213.857†	786.0	93.8	0.9314 ug/L	0.9314 ppb	15:11:04
3	SiO2†	580.5	13.0	0.9174 ug/L	0.9174 ppb	15:11:19

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	841871.3	97.654 %	0.5863			0.60%
Sc Radial	4841.2	101 %	1.5			1.52%
Y 371.029	689302.1	96.459 %	0.5776			0.60%
Y RADIAL	5078.6	101.6 %	1.28			1.27%
Ag 328.068†	70.4	0.3263 ug/L	0.04999	0.3263 ppb	0.04999	15.32%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	14.5	13.415 ug/L	10.4347	13.415 ppb	10.4347	77.79%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	7.3	3.2966 ug/L	2.26096	3.2966 ppb	2.26096	68.58%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	507.5	12.076 ug/L	0.5068	12.076 ppb	0.5068	4.20%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	7.1	0.0573 ug/L	0.07550	0.0573 ppb	0.07550	131.82%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	99.3	0.0369 ug/L	0.01055	0.0369 ppb	0.01055	28.59%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	9.2	15.207 ug/L	5.6425	15.207 ppb	5.6425	37.10%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated							
Cd	226.502†	27.7	0.3302 ug/L	0.17401	0.3302 ppb	0.17401	52.69%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co	228.616†	3.5	0.0789 ug/L	0.13964	0.0789 ppb	0.13964	177.06%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr	267.716†	15.1	0.1749 ug/L	0.21886	0.1749 ppb	0.21886	125.17%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	-1.7	-0.0062 ug/L	0.27070	-0.0062 ppb	0.27070	>999.9%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	-1.5	-13.517 ug/L	14.5771	-13.517 ppb	14.5771	107.84%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	-0.6	-0.1428 ug/L	8.56471	-0.1428 ppb	8.56471	>999.9%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	1.7	59.784 ug/L	80.1792	59.784 ppb	80.1792	134.11%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	196.5	0.2223 ug/L	0.16158	0.2223 ppb	0.16158	72.70%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	8.3	0.6203 ug/L	0.35046	0.6203 ppb	0.35046	56.50%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	216.7	65.549 ug/L	4.9491	65.549 ppb	4.9491	7.55%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	-6.8	-0.1766 ug/L	0.44452	-0.1766 ppb	0.44452	251.76%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	12.6	7.8411 ug/L	6.72145	7.8411 ppb	6.72145	85.72%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	4.8	0.5996 ug/L	1.13603	0.5996 ppb	1.13603	189.48%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	-1.2	-1.7839 ug/L	0.67046	-1.7839 ppb	0.67046	37.58%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	-2.0	-0.6884 ug/L	2.02099	-0.6884 ppb	2.02099	293.59%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	6.6	4.4289 ug/L	5.10917	4.4289 ppb	5.10917	115.36%
QC value within limits for Se 196.026 Recovery = Not calculated							
Si	251.611†	61.1	2.0367 ug/L	0.69447	2.0367 ppb	0.69447	34.10%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	3.5	0.6471 ug/L	1.06835	0.6471 ppb	1.06835	165.10%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	1.3	0.0091 ug/L	0.00859	0.0091 ppb	0.00859	94.06%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	-26.4	-0.0459 ug/L	0.10520	-0.0459 ppb	0.10520	228.97%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	-0.6	-0.1775 ug/L	1.08708	-0.1775 ppb	1.08708	612.45%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	18.6	0.5400 ug/L	2.93919	0.5400 ppb	2.93919	544.27%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	-9.5	-0.0559 ug/L	0.42814	-0.0559 ppb	0.42814	765.28%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	96.5	0.9555 ug/L	0.23884	0.9555 ppb	0.23884	25.00%
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†		27.8	1.9635 ug/L	1.02431	1.9635 ppb	1.02431	52.17%
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: 2/11/2010 16:06:37

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4839.5	4839.5	101 %		16:08:29
1	Y RADIAL	5039.7	5039.7	100.8 %		16:08:29
1	Al 396.153Radial†	5231.8	5348.1	4940.2 ug/L	4940.2 ppb	16:08:29
1	Ca 317.933Radial†	3087.0	3049.5	5054.3 ug/L	5054.3 ppb	16:08:49
1	Fe 238.204 Radial†	567.8	552.5	5042.4 ug/L	5042.4 ppb	16:08:49
1	K 766.490 Radial†	30672.3	27639.8	4872.8 ug/L	4872.8 ppb	16:08:29
1	Mg 279.077 IEC†	150.4	148.9	5278.3 ug/L	5278.3 ppb	16:08:49
1	Na 589.592 Radial†	30733.4	31604.6	9558.8 ug/L	9558.8 ppb	16:08:29
1	Sr 421.552†	72707.2	72214.9	506.42 ug/L	506.42 ppb	16:08:29
1	Sc 361.383	863412.4	863412.4	100.15 %		16:09:46
1	Y 371.029	695489.8	695489.8	97.325 %		16:09:46
1	Ag 328.068†	105550.3	105160.4	498.70 ug/L	498.70 ppb	16:09:51
1	As 188.979†	1051.5	1083.7	496.07 ug/L	496.07 ppb	16:10:12
1	B 249.677†	20410.0	20917.9	495.34 ug/L	495.34 ppb	16:09:51
1	Ba 233.527†	61843.8	61760.9	505.62 ug/L	505.62 ppb	16:09:51
1	Be 313.107†	1332668.0	1334972.4	498.37 ug/L	498.37 ppb	16:09:46
1	Cd 226.502†	41343.1	41491.9	493.19 ug/L	493.19 ppb	16:09:51
1	Co 228.616†	23614.9	23652.5	516.68 ug/L	516.68 ppb	16:09:51
1	Cr 267.716†	42246.5	42115.2	490.90 ug/L	490.90 ppb	16:09:51
1	Cu 324.752†	171407.0	165324.6	501.50 ug/L	501.50 ppb	16:09:51
1	Mn 257.610†	441033.5	439908.4	506.40 ug/L	506.40 ppb	16:09:46
1	Mo 202.031†	6488.6	6463.2	484.46 ug/L	484.46 ppb	16:10:12
1	Ni 231.604†	19281.9	19144.4	495.66 ug/L	495.66 ppb	16:09:51
1	P 214.914†	4180.7	3946.2	2357.8 ug/L	2357.8 ppb	16:10:12
1	Pb 220.353†	3830.9	3886.8	486.46 ug/L	486.46 ppb	16:10:12
1	S 181.975 Axial†	713.8	673.4	980.97 ug/L	980.97 ppb	16:10:12
1	Sb 206.836†	1430.2	1385.9	500.39 ug/L	500.39 ppb	16:10:12
1	Se 196.026†	685.1	706.2	493.64 ug/L	493.64 ppb	16:10:12
1	Si 251.611†	75450.3	74772.8	2495.1 ug/L	2495.1 ppb	16:09:51
1	Sn 189.927†	2598.2	2585.6	480.67 ug/L	480.67 ppb	16:10:12
1	Ti 334.940†	307843.4	308676.7	500.51 ug/L	500.51 ppb	16:09:51
1	Tl 190.801†	1521.2	1553.1	501.07 ug/L	501.07 ppb	16:10:12
1	U 409.014†	14053.2	17011.8	491.61 ug/L	491.61 ppb	16:09:51
1	V 292.402†	66158.5	67612.1	497.45 ug/L	497.45 ppb	16:09:51
1	Zn 213.857†	51667.1	50874.9	497.31 ug/L	497.31 ppb	16:09:51
1	SiO2†	75160.3	74462.4	5298.4 ug/L	5298.4 ppb	16:11:19
2	Sc Radial	4920.7	4920.7	102 %		16:08:54
2	Y RADIAL	5089.7	5089.7	101.8 %		16:08:54
2	Al 396.153Radial†	5368.2	5395.6	4983.6 ug/L	4983.6 ppb	16:08:54
2	Ca 317.933Radial†	3088.7	3000.5	4973.2 ug/L	4973.2 ppb	16:09:14
2	Fe 238.204 Radial†	567.1	542.5	4951.5 ug/L	4951.5 ppb	16:09:14
2	K 766.490 Radial†	31705.8	28146.6	4962.2 ug/L	4962.2 ppb	16:08:54
2	Mg 279.077 IEC†	145.7	141.9	5028.3 ug/L	5028.3 ppb	16:09:14
2	Na 589.592 Radial†	31767.7	32111.3	9712.0 ug/L	9712.0 ppb	16:08:54
2	Sr 421.552†	75008.3	73270.9	513.82 ug/L	513.82 ppb	16:08:54
2	Sc 361.383	846133.9	846133.9	98.149 %		16:10:17
2	Y 371.029	682588.1	682588.1	95.520 %		16:10:17
2	Ag 328.068†	103780.6	105509.4	500.33 ug/L	500.33 ppb	16:10:22
2	As 188.979†	1072.6	1126.7	515.52 ug/L	515.52 ppb	16:10:43
2	B 249.677†	20021.1	20937.8	495.82 ug/L	495.82 ppb	16:10:22
2	Ba 233.527†	61141.7	62306.6	510.08 ug/L	510.08 ppb	16:10:22
2	Be 313.107†	1314584.2	1343719.7	501.63 ug/L	501.63 ppb	16:10:17
2	Cd 226.502†	40712.7	41692.6	495.59 ug/L	495.59 ppb	16:10:22
2	Co 228.616†	23293.1	23806.2	520.07 ug/L	520.07 ppb	16:10:22
2	Cr 267.716†	41622.9	42341.2	493.54 ug/L	493.54 ppb	16:10:22
2	Cu 324.752†	168700.8	166062.2	503.74 ug/L	503.74 ppb	16:10:22
2	Mn 257.610†	435057.5	442812.0	509.75 ug/L	509.75 ppb	16:10:17
2	Mo 202.031†	6541.8	6649.7	498.42 ug/L	498.42 ppb	16:10:43
2	Ni 231.604†	18975.9	19225.8	497.77 ug/L	497.77 ppb	16:10:22

2	P 214.914†	4235.7	4087.5	2445.5 ug/L	2445.5 ppb	16:10:43
2	Pb 220.353†	3888.0	4023.1	503.51 ug/L	503.51 ppb	16:10:43
2	S 181.975 Axial†	715.4	689.5	1004.5 ug/L	1004.5 ppb	16:10:43
2	Sb 206.836†	1445.1	1430.2	516.43 ug/L	516.43 ppb	16:10:43
2	Se 196.026†	715.7	751.3	523.78 ug/L	523.78 ppb	16:10:43
2	Si 251.611†	74199.1	75036.4	2503.7 ug/L	2503.7 ppb	16:10:22
2	Sn 189.927†	2652.3	2693.7	500.72 ug/L	500.72 ppb	16:10:43
2	Ti 334.940†	303314.9	310339.4	503.22 ug/L	503.22 ppb	16:10:22
2	Tl 190.801†	1539.6	1602.9	517.04 ug/L	517.04 ppb	16:10:43
2	U 409.014†	13719.5	16958.3	490.07 ug/L	490.07 ppb	16:10:22
2	V 292.402†	65406.0	68194.4	501.88 ug/L	501.88 ppb	16:10:22
2	Zn 213.857†	50850.9	51096.8	499.50 ug/L	499.50 ppb	16:10:22
2	SiO2†	75240.9	76077.1	5413.2 ug/L	5413.2 ppb	16:11:24
3	Sc Radial	4863.9	4863.9	101 %		16:09:19
3	Y RADIAL	5060.8	5060.8	101.2 %		16:09:19
3	Al 396.153Radial†	5365.5	5454.2	5037.9 ug/L	5037.9 ppb	16:09:19
3	Ca 317.933Radial†	3092.9	3040.0	5038.6 ug/L	5038.6 ppb	16:09:39
3	Fe 238.204 Radial†	569.6	551.5	5033.2 ug/L	5033.2 ppb	16:09:39
3	K 766.490 Radial†	31394.7	28201.0	4971.8 ug/L	4971.8 ppb	16:09:19
3	Mg 279.077 IEC†	148.4	146.3	5183.6 ug/L	5183.6 ppb	16:09:39
3	Na 589.592 Radial†	31542.7	32251.5	9754.4 ug/L	9754.4 ppb	16:09:19
3	Sr 421.552†	74407.8	73533.6	515.66 ug/L	515.66 ppb	16:09:19
3	Sc 361.383	844359.2	844359.2	97.943 %		16:10:48
3	Y 371.029	680157.7	680157.7	95.180 %		16:10:48
3	Ag 328.068†	105462.5	107448.9	509.51 ug/L	509.51 ppb	16:10:54
3	As 188.979†	1070.6	1127.0	515.76 ug/L	515.76 ppb	16:11:14
3	B 249.677†	20423.5	21391.5	506.58 ug/L	506.58 ppb	16:10:54
3	Ba 233.527†	61895.3	63206.9	517.45 ug/L	517.45 ppb	16:10:54
3	Be 313.107†	1316527.6	1348519.1	503.44 ug/L	503.44 ppb	16:10:48
3	Cd 226.502†	41310.4	42390.0	503.88 ug/L	503.88 ppb	16:10:54
3	Co 228.616†	23562.8	24131.4	527.15 ug/L	527.15 ppb	16:10:54
3	Cr 267.716†	42209.0	43028.8	501.55 ug/L	501.55 ppb	16:10:54
3	Cu 324.752†	171604.5	169388.2	513.82 ug/L	513.82 ppb	16:10:54
3	Mn 257.610†	436277.1	444988.9	512.25 ug/L	512.25 ppb	16:10:48
3	Mo 202.031†	6538.5	6660.3	499.22 ug/L	499.22 ppb	16:11:14
3	Ni 231.604†	19245.0	19541.2	505.93 ug/L	505.93 ppb	16:10:54
3	P 214.914†	4199.5	4059.6	2426.0 ug/L	2426.0 ppb	16:11:14
3	Pb 220.353†	3864.2	4007.1	501.52 ug/L	501.52 ppb	16:11:14
3	S 181.975 Axial†	716.0	691.7	1007.7 ug/L	1007.7 ppb	16:11:14
3	Sb 206.836†	1450.7	1439.0	519.44 ug/L	519.44 ppb	16:11:14
3	Se 196.026†	699.2	736.0	513.71 ug/L	513.71 ppb	16:11:14
3	Si 251.611†	75480.7	76503.9	2552.8 ug/L	2552.8 ppb	16:10:54
3	Sn 189.927†	2622.7	2669.1	496.16 ug/L	496.16 ppb	16:11:14
3	Ti 334.940†	307975.6	315747.6	511.98 ug/L	511.98 ppb	16:10:54
3	Tl 190.801†	1527.2	1593.4	514.06 ug/L	514.06 ppb	16:11:14
3	U 409.014†	14217.3	17496.0	505.63 ug/L	505.63 ppb	16:10:54
3	V 292.402†	66189.6	69134.5	508.73 ug/L	508.73 ppb	16:10:54
3	Zn 213.857†	51588.3	51958.7	507.93 ug/L	507.93 ppb	16:10:54
3	SiO2†	74095.5	75068.7	5341.2 ug/L	5341.2 ppb	16:11:29

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	851301.8	98.748 %	1.2209			1.24%
Sc Radial	4874.7	101 %	0.9			0.85%
Y 371.029	686078.5	96.008 %	1.1532			1.20%
Y RADIAL	5063.4	101.3 %	0.50			0.50%
Ag 328.068†	106039.6	502.85 ug/L	5.829	502.85 ppb	5.829	1.16%
QC value within limits for Ag 328.068 Recovery = 100.57%						
Al 396.153Radial†	5399.3	4987.2 ug/L	48.98	4987.2 ppb	48.98	0.98%
QC value within limits for Al 396.153Radial Recovery = 99.74%						
As 188.979†	1112.5	509.11 ug/L	11.297	509.11 ppb	11.297	2.22%
QC value within limits for As 188.979 Recovery = 101.82%						
B 249.677†	21082.4	499.25 ug/L	6.355	499.25 ppb	6.355	1.27%
QC value within limits for B 249.677 Recovery = 99.85%						
Ba 233.527†	62424.8	511.05 ug/L	5.976	511.05 ppb	5.976	1.17%
QC value within limits for Ba 233.527 Recovery = 102.21%						
Be 313.107†	1342403.7	501.15 ug/L	2.570	501.15 ppb	2.570	0.51%
QC value within limits for Be 313.107 Recovery = 100.23%						
Ca 317.933Radial†	3030.0	5022.0 ug/L	43.02	5022.0 ppb	43.02	0.86%

QC value within limits for Ca 317.933 Radial Recovery = 100.44%							
Cd 226.502†	41858.2	497.55 ug/L	5.608	497.55 ppb	5.608	1.13%	
QC value within limits for Cd 226.502 Recovery = 99.51%							
Co 228.616†	23863.4	521.30 ug/L	5.343	521.30 ppb	5.343	1.02%	
QC value within limits for Co 228.616 Recovery = 104.26%							
Cr 267.716†	42495.1	495.33 ug/L	5.544	495.33 ppb	5.544	1.12%	
QC value within limits for Cr 267.716 Recovery = 99.07%							
Cu 324.752†	166925.0	506.35 ug/L	6.563	506.35 ppb	6.563	1.30%	
QC value within limits for Cu 324.752 Recovery = 101.27%							
Fe 238.204 Radial†	548.8	5009.0 ug/L	50.01	5009.0 ppb	50.01	1.00%	
QC value within limits for Fe 238.204 Radial Recovery = 100.18%							
K 766.490 Radial†	27995.8	4935.6 ug/L	54.59	4935.6 ppb	54.59	1.11%	
QC value within limits for K 766.490 Radial Recovery = 98.71%							
Mg 279.077 IEC†	145.7	5163.4 ug/L	126.21	5163.4 ppb	126.21	2.44%	
QC value within limits for Mg 279.077 IEC Recovery = 103.27%							
Mn 257.610†	442569.7	509.47 ug/L	2.934	509.47 ppb	2.934	0.58%	
QC value within limits for Mn 257.610 Recovery = 101.89%							
Mo 202.031†	6591.0	494.04 ug/L	8.299	494.04 ppb	8.299	1.68%	
QC value within limits for Mo 202.031 Recovery = 98.81%							
Na 589.592 Radial†	31989.2	9675.1 ug/L	102.93	9675.1 ppb	102.93	1.06%	
QC value within limits for Na 589.592 Radial Recovery = 96.75%							
Ni 231.604†	19303.8	499.79 ug/L	5.427	499.79 ppb	5.427	1.09%	
QC value within limits for Ni 231.604 Recovery = 99.96%							
P 214.914†	4031.1	2409.8 ug/L	46.08	2409.8 ppb	46.08	1.91%	
QC value within limits for P 214.914 Recovery = 96.39%							
Pb 220.353†	3972.3	497.16 ug/L	9.323	497.16 ppb	9.323	1.88%	
QC value within limits for Pb 220.353 Recovery = 99.43%							
S 181.975 Axial†	684.8	997.72 ug/L	14.592	997.72 ppb	14.592	1.46%	
QC value within limits for S 181.975 Axial Recovery = 99.77%							
Sb 206.836†	1418.4	512.09 ug/L	10.243	512.09 ppb	10.243	2.00%	
QC value within limits for Sb 206.836 Recovery = 102.42%							
Se 196.026†	731.1	510.38 ug/L	15.345	510.38 ppb	15.345	3.01%	
QC value within limits for Se 196.026 Recovery = 102.08%							
Si 251.611†	75437.7	2517.2 ug/L	31.13	2517.2 ppb	31.13	1.24%	
QC value within limits for Si 251.611 Recovery = 100.69%							
Sn 189.927†	2649.4	492.52 ug/L	10.510	492.52 ppb	10.510	2.13%	
QC value within limits for Sn 189.927 Recovery = 98.50%							
Sr 421.552†	73006.5	511.97 ug/L	4.895	511.97 ppb	4.895	0.96%	
QC value within limits for Sr 421.552 Recovery = 102.39%							
Ti 334.940†	311587.9	505.24 ug/L	5.993	505.24 ppb	5.993	1.19%	
QC value within limits for Ti 334.940 Recovery = 101.05%							
Tl 190.801†	1583.1	510.73 ug/L	8.491	510.73 ppb	8.491	1.66%	
QC value within limits for Tl 190.801 Recovery = 102.15%							
U 409.014†	17155.4	495.77 ug/L	8.573	495.77 ppb	8.573	1.73%	
QC value within limits for U 409.014 Recovery = 99.15%							
V 292.402†	68313.7	502.69 ug/L	5.680	502.69 ppb	5.680	1.13%	
QC value within limits for V 292.402 Recovery = 100.54%							
Zn 213.857†	51310.2	501.58 ug/L	5.603	501.58 ppb	5.603	1.12%	
QC value within limits for Zn 213.857 Recovery = 100.32%							
SiO2†	75202.7	5350.9 ug/L	58.01	5350.9 ppb	58.01	1.08%	
QC value within limits for SiO2 Recovery = 100.06%							
All analyte(s) passed QC.							

Sequence No.: 9

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/11/2010 16:13:39

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4834.9	4834.9	101 %		16:15:32
1	Y RADIAL	5077.2	5077.2	101.5 %		16:15:32
1	Al 396.153Radial†	-146.6	5.8	5.3864 ug/L	5.3864 ppb	16:15:32
1	Ca 317.933Radial†	27.8	11.0	18.172 ug/L	18.172 ppb	16:15:52
1	Fe 238.204 Radial†	10.3	-1.2	-11.010 ug/L	-11.010 ppb	16:15:52
1	K 766.490 Radial†	2824.4	-17.6	-3.1337 ug/L	-3.1337 ppb	16:15:32
1	Mg 279.077 IEC†	2.0	1.6	56.120 ug/L	56.120 ppb	16:15:52
1	Na 589.592 Radial†	-931.7	152.2	46.030 ug/L	46.030 ppb	16:15:32
1	Sr 421.552†	49.6	47.2	0.3307 ug/L	0.3307 ppb	16:15:32
1	Sc 361.383	835341.4	835341.4	96.897 %		16:16:49
1	Y 371.029	684465.2	684465.2	95.783 %		16:16:49
1	Ag 328.068†	206.7	-15.5	-0.0794 ug/L	-0.0794 ppb	16:16:49
1	As 188.979†	-21.0	12.2	5.5376 ug/L	5.5376 ppb	16:17:09
1	B 249.677†	-185.0	348.1	8.2843 ug/L	8.2843 ppb	16:17:09
1	Ba 233.527†	4.4	16.1	0.1307 ug/L	0.1307 ppb	16:17:09
1	Be 313.107†	-4241.9	-39.0	-0.0147 ug/L	-0.0147 ppb	16:16:49
1	Cd 226.502†	-194.2	11.5	0.1382 ug/L	0.1382 ppb	16:17:09
1	Co 228.616†	-81.8	-10.7	-0.2324 ug/L	-0.2324 ppb	16:17:09
1	Cr 267.716†	97.6	33.9	0.3938 ug/L	0.3938 ppb	16:17:09
1	Cu 324.752†	5345.1	-304.5	-0.9250 ug/L	-0.9250 ppb	16:16:49
1	Mn 257.610†	563.6	129.7	0.1459 ug/L	0.1459 ppb	16:17:09
1	Mo 202.031†	19.9	5.0	0.3703 ug/L	0.3703 ppb	16:17:09
1	Ni 231.604†	112.3	7.9	0.2045 ug/L	0.2045 ppb	16:17:09
1	P 214.914†	231.5	10.8	6.9073 ug/L	6.9073 ppb	16:17:09
1	Pb 220.353†	-65.7	-6.1	-0.7553 ug/L	-0.7553 ppb	16:17:09
1	S 181.975 Axial†	38.0	-0.1	-0.2186 ug/L	-0.2186 ppb	16:17:09
1	Sb 206.836†	39.5	-1.4	-0.4831 ug/L	-0.4831 ppb	16:17:09
1	Se 196.026†	-19.4	2.1	1.3617 ug/L	1.3617 ppb	16:17:09
1	Si 251.611†	551.7	7.1	0.2315 ug/L	0.2315 ppb	16:17:09
1	Sn 189.927†	2.3	-6.3	-1.1653 ug/L	-1.1653 ppb	16:17:09
1	Ti 334.940†	-1311.0	-49.8	-0.0838 ug/L	-0.0838 ppb	16:16:49
1	Tl 190.801†	-40.7	-7.8	-2.4993 ug/L	-2.4993 ppb	16:17:09
1	U 409.014†	-2837.1	52.1	1.5119 ug/L	1.5119 ppb	16:16:49
1	V 292.402†	-1553.1	-48.2	-0.3389 ug/L	-0.3389 ppb	16:16:49
1	Zn 213.857†	774.8	86.4	0.8537 ug/L	0.8537 ppb	16:17:09
1	SiO2†	601.5	37.6	2.6750 ug/L	2.6750 ppb	16:18:05
2	Sc Radial	4870.8	4870.8	101 %		16:15:57
2	Y RADIAL	5116.7	5116.7	102.3 %		16:15:57
2	Al 396.153Radial†	-156.8	-3.2	-2.9618 ug/L	-2.9618 ppb	16:15:57
2	Ca 317.933Radial†	27.1	10.0	16.642 ug/L	16.642 ppb	16:16:17
2	Fe 238.204 Radial†	10.9	-0.7	-6.7136 ug/L	-6.7136 ppb	16:16:17
2	K 766.490 Radial†	2874.4	11.0	1.9214 ug/L	1.9214 ppb	16:15:57
2	Mg 279.077 IEC†	2.2	1.8	63.126 ug/L	63.126 ppb	16:16:17
2	Na 589.592 Radial†	-894.6	195.7	59.185 ug/L	59.185 ppb	16:15:57
2	Sr 421.552†	16.8	14.5	0.1016 ug/L	0.1016 ppb	16:15:57
2	Sc 361.383	832104.4	832104.4	96.521 %		16:17:14
2	Y 371.029	681312.8	681312.8	95.341 %		16:17:14
2	Ag 328.068†	198.3	-23.3	-0.1132 ug/L	-0.1132 ppb	16:17:14
2	As 188.979†	-14.8	18.6	8.4345 ug/L	8.4345 ppb	16:17:34
2	B 249.677†	-240.2	290.2	6.9038 ug/L	6.9038 ppb	16:17:34
2	Ba 233.527†	3.1	14.8	0.1216 ug/L	0.1216 ppb	16:17:34
2	Be 313.107†	-3747.4	456.3	0.1725 ug/L	0.1725 ppb	16:17:14
2	Cd 226.502†	-198.0	6.8	0.0818 ug/L	0.0818 ppb	16:17:34
2	Co 228.616†	-66.1	5.2	0.1129 ug/L	0.1129 ppb	16:17:34
2	Cr 267.716†	76.5	12.4	0.1438 ug/L	0.1438 ppb	16:17:34
2	Cu 324.752†	5448.2	-176.2	-0.5368 ug/L	-0.5368 ppb	16:17:14
2	Mn 257.610†	549.0	116.9	0.1312 ug/L	0.1312 ppb	16:17:34
2	Mo 202.031†	18.7	3.8	0.2878 ug/L	0.2878 ppb	16:17:34
2	Ni 231.604†	91.9	-12.8	-0.3310 ug/L	-0.3310 ppb	16:17:34

2	P 214.914†	229.2	9.4	5.9488 ug/L	5.9488 ppb	16:17:34
2	Pb 220.353†	-54.0	5.7	0.7184 ug/L	0.7184 ppb	16:17:34
2	S 181.975 Axial†	38.2	0.2	0.3097 ug/L	0.3097 ppb	16:17:34
2	Sb 206.836†	37.9	-2.9	-1.0201 ug/L	-1.0201 ppb	16:17:34
2	Se 196.026†	-23.7	-2.4	-1.6489 ug/L	-1.6489 ppb	16:17:34
2	Si 251.611†	555.3	13.1	0.4342 ug/L	0.4342 ppb	16:17:34
2	Sn 189.927†	5.5	-3.0	-0.5570 ug/L	-0.5570 ppb	16:17:34
2	Ti 334.940†	-590.8	691.1	1.1164 ug/L	1.1164 ppb	16:17:14
2	Tl 190.801†	-29.1	4.0	1.2979 ug/L	1.2979 ppb	16:17:34
2	U 409.014†	-2757.6	123.1	3.5697 ug/L	3.5697 ppb	16:17:14
2	V 292.402†	-1437.5	65.3	0.4861 ug/L	0.4861 ppb	16:17:14
2	Zn 213.857†	765.8	80.2	0.7950 ug/L	0.7950 ppb	16:17:34
2	SiO2†	592.8	31.1	2.2077 ug/L	2.2077 ppb	16:18:10
3	Sc Radial	4749.1	4749.1	98.8 %		16:16:22
3	Y RADIAL	4939.6	4939.6	98.78 %		16:16:22
3	Al 396.153Radial†	-136.5	13.4	12.445 ug/L	12.445 ppb	16:16:22
3	Ca 317.933Radial†	30.3	14.0	23.220 ug/L	23.220 ppb	16:16:42
3	Fe 238.204 Radial†	9.6	-1.8	-16.165 ug/L	-16.165 ppb	16:16:42
3	K 766.490 Radial†	2881.3	90.7	15.980 ug/L	15.980 ppb	16:16:22
3	Mg 279.077 IEC†	1.8	1.4	50.434 ug/L	50.434 ppb	16:16:42
3	Na 589.592 Radial†	-876.2	191.6	57.954 ug/L	57.954 ppb	16:16:22
3	Sr 421.552†	11.3	9.3	0.0654 ug/L	0.0654 ppb	16:16:22
3	Sc 361.383	834151.2	834151.2	96.759 %		16:17:39
3	Y 371.029	683233.3	683233.3	95.610 %		16:17:39
3	Ag 328.068†	198.0	-24.2	-0.1213 ug/L	-0.1213 ppb	16:17:39
3	As 188.979†	-28.4	4.5	2.0411 ug/L	2.0411 ppb	16:17:59
3	B 249.677†	-238.9	292.1	6.9526 ug/L	6.9526 ppb	16:17:59
3	Ba 233.527†	-20.1	-9.2	-0.0761 ug/L	-0.0761 ppb	16:17:59
3	Be 313.107†	-4119.8	80.9	0.0300 ug/L	0.0300 ppb	16:17:39
3	Cd 226.502†	-208.7	-3.8	-0.0432 ug/L	-0.0432 ppb	16:17:59
3	Co 228.616†	-69.5	1.9	0.0425 ug/L	0.0425 ppb	16:17:59
3	Cr 267.716†	67.2	2.6	0.0296 ug/L	0.0296 ppb	16:17:59
3	Cu 324.752†	5250.2	-394.7	-1.1986 ug/L	-1.1986 ppb	16:17:39
3	Mn 257.610†	518.8	84.2	0.0933 ug/L	0.0933 ppb	16:17:59
3	Mo 202.031†	23.6	8.8	0.6603 ug/L	0.6603 ppb	16:17:59
3	Ni 231.604†	107.9	3.5	0.0899 ug/L	0.0899 ppb	16:17:59
3	P 214.914†	242.1	22.1	14.051 ug/L	14.051 ppb	16:17:59
3	Pb 220.353†	-67.2	-7.8	-0.9610 ug/L	-0.9610 ppb	16:17:59
3	S 181.975 Axial†	34.4	-3.8	-5.5383 ug/L	-5.5383 ppb	16:17:59
3	Sb 206.836†	52.1	11.7	4.1275 ug/L	4.1275 ppb	16:17:59
3	Se 196.026†	-21.9	-0.6	-0.4228 ug/L	-0.4228 ppb	16:17:59
3	Si 251.611†	551.3	7.5	0.2414 ug/L	0.2414 ppb	16:17:59
3	Sn 189.927†	19.5	11.5	2.1293 ug/L	2.1293 ppb	16:17:59
3	Ti 334.940†	-1305.4	-45.9	-0.0759 ug/L	-0.0759 ppb	16:17:39
3	Tl 190.801†	-34.6	-1.5	-0.4919 ug/L	-0.4919 ppb	16:17:59
3	U 409.014†	-2851.8	32.8	0.9518 ug/L	0.9518 ppb	16:17:39
3	V 292.402†	-1531.5	-28.2	-0.1899 ug/L	-0.1899 ppb	16:17:39
3	Zn 213.857†	780.8	93.7	0.9280 ug/L	0.9280 ppb	16:17:59
3	SiO2†	590.7	27.3	1.9315 ug/L	1.9315 ppb	16:18:15

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	833865.7	96.726 %	0.1899			0.20%
Sc Radial	4818.3	100 %	1.3			1.30%
Y 371.029	683003.8	95.578 %	0.2223			0.23%
Y RADIAL	5044.5	100.9 %	1.86			1.84%
Ag 328.068†	-21.0	-0.1047 ug/L	0.02222	-0.1047 ppb	0.02222	21.23%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	5.4	4.9564 ug/L	7.71219	4.9564 ppb	7.71219	155.60%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	11.8	5.3377 ug/L	3.20139	5.3377 ppb	3.20139	59.98%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	310.1	7.3803 ug/L	0.78334	7.3803 ppb	0.78334	10.61%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	7.2	0.0587 ug/L	0.11686	0.0587 ppb	0.11686	198.95%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	166.0	0.0626 ug/L	0.09778	0.0626 ppb	0.09778	156.27%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	11.7	19.345 ug/L	3.4420	19.345 ppb	3.4420	17.79%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated							
Cd	226.502†	4.8	0.0589 ug/L	0.09285	0.0589 ppb	0.09285	157.54%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co	228.616†	-1.2	-0.0257 ug/L	0.18249	-0.0257 ppb	0.18249	710.89%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr	267.716†	16.3	0.1891 ug/L	0.18624	0.1891 ppb	0.18624	98.50%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	-291.8	-0.8868 ug/L	0.33254	-0.8868 ppb	0.33254	37.50%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	-1.2	-11.296 ug/L	4.7324	-11.296 ppb	4.7324	41.89%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	28.0	4.9224 ug/L	9.90373	4.9224 ppb	9.90373	201.20%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	1.6	56.560 ug/L	6.3571	56.560 ppb	6.3571	11.24%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	110.3	0.1234 ug/L	0.02715	0.1234 ppb	0.02715	22.00%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	5.9	0.4395 ug/L	0.19562	0.4395 ppb	0.19562	44.51%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	179.8	54.390 ug/L	7.2658	54.390 ppb	7.2658	13.36%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	-0.5	-0.0122 ug/L	0.28202	-0.0122 ppb	0.28202	>999.9%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	14.1	8.9691 ug/L	4.42718	8.9691 ppb	4.42718	49.36%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	-2.7	-0.3327 ug/L	0.91600	-0.3327 ppb	0.91600	275.36%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	-1.2	-1.8157 ug/L	3.23465	-1.8157 ppb	3.23465	178.15%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	2.5	0.8748 ug/L	2.82969	0.8748 ppb	2.82969	323.48%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	-0.3	-0.2367 ug/L	1.51390	-0.2367 ppb	1.51390	639.68%
QC value within limits for Se 196.026 Recovery = Not calculated							
Si	251.611†	9.2	0.3023 ug/L	0.11430	0.3023 ppb	0.11430	37.80%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	0.7	0.1357 ug/L	1.75315	0.1357 ppb	1.75315	>999.9%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	23.7	0.1659 ug/L	0.14390	0.1659 ppb	0.14390	86.73%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	198.5	0.3189 ug/L	0.69068	0.3189 ppb	0.69068	216.58%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	-1.8	-0.5644 ug/L	1.89964	-0.5644 ppb	1.89964	336.56%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	69.3	2.0111 ug/L	1.37849	2.0111 ppb	1.37849	68.54%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	-3.7	-0.0142 ug/L	0.43969	-0.0142 ppb	0.43969	>999.9%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	86.8	0.8589 ug/L	0.06661	0.8589 ppb	0.06661	7.76%
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†		32.0	2.2714 ug/L	0.37583	2.2714 ppb	0.37583	16.55%
QC value within limits for SiO2 Recovery = Not calculated							

All analyte(s) passed QC.

===== Analysis Begun

Start Time: 2/11/2010 16:26:41

Plasma On Time: 2/8/2010 05:57:09

Logged In Analyst: Optima3

Technique: ICP Continuous

Spectrometer Model: Optima 5300 DV, S/N 077C7090601 Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\021110.sif

Batch ID:

Results Data Set: 021110

Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1

Autosampler Location: 7

Sample ID: CCV

Date Collected: 2/11/2010 16:26:42

Analyst:

Data Type: Original

Initial Sample Wt:

Initial Sample Vol:

Dilution:

Sample Prep Vol:

----- Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4857.9	4857.9	101 %		16:28:34
1	Y RADIAL	5069.8	5069.8	101.4 %		16:28:34
1	Al 396.153Radial†	5318.0	5413.8	5000.4 ug/L	5000.4 ppb	16:28:34
1	Ca 317.933Radial†	3087.1	3038.0	5035.3 ug/L	5035.3 ppb	16:28:54
1	Fe 238.204 Radial†	570.3	552.8	5045.6 ug/L	5045.6 ppb	16:28:54
1	K 766.490 Radial†	31421.1	28265.6	4983.1 ug/L	4983.1 ppb	16:28:34
1	Mg 279.077 IEC†	144.2	142.3	5043.2 ug/L	5043.2 ppb	16:28:54
1	Na 589.592 Radial†	31891.8	32635.5	9870.6 ug/L	9870.6 ppb	16:28:34
1	Sr 421.552†	74719.3	73932.8	518.46 ug/L	518.46 ppb	16:28:34
1	Sc 361.383	843251.6	843251.6	97.814 %		16:29:51
1	Y 371.029	678467.3	678467.3	94.943 %		16:29:51
1	Ag 328.068†	104603.8	106712.4	506.05 ug/L	506.05 ppb	16:29:57
1	As 188.979†	1055.9	1113.4	509.55 ug/L	509.55 ppb	16:30:17
1	B 249.677†	20290.2	21282.6	503.99 ug/L	503.99 ppb	16:29:57
1	Ba 233.527†	61839.0	63232.4	517.66 ug/L	517.66 ppb	16:29:57
1	Be 313.107†	1311684.8	1345333.6	502.25 ug/L	502.25 ppb	16:29:51
1	Cd 226.502†	41414.6	42551.9	505.80 ug/L	505.80 ppb	16:29:57
1	Co 228.616†	23585.2	24186.0	528.35 ug/L	528.35 ppb	16:29:57
1	Cr 267.716†	42147.4	43022.5	501.48 ug/L	501.48 ppb	16:29:57
1	Cu 324.752†	169418.4	167383.4	507.75 ug/L	507.75 ppb	16:29:57
1	Mn 257.610†	435097.3	444367.8	511.54 ug/L	511.54 ppb	16:29:51
1	Mo 202.031†	6531.1	6661.5	499.32 ug/L	499.32 ppb	16:30:17
1	Ni 231.604†	19276.6	19599.4	507.44 ug/L	507.44 ppb	16:29:57
1	P 214.914†	4221.3	4087.5	2444.6 ug/L	2444.6 ppb	16:30:17
1	Pb 220.353†	3867.9	4016.1	502.63 ug/L	502.63 ppb	16:30:17
1	S 181.975 Axial†	717.0	693.7	1010.6 ug/L	1010.6 ppb	16:30:17
1	Sb 206.836†	1449.9	1440.1	519.88 ug/L	519.88 ppb	16:30:17
1	Se 196.026†	705.8	743.7	518.96 ug/L	518.96 ppb	16:30:17
1	Si 251.611†	75093.0	76208.7	2542.9 ug/L	2542.9 ppb	16:29:57
1	Sn 189.927†	2628.0	2678.0	497.83 ug/L	497.83 ppb	16:30:17
1	Ti 334.940†	305801.7	313938.1	509.06 ug/L	509.06 ppb	16:29:57
1	Tl 190.801†	1525.9	1594.2	514.29 ug/L	514.29 ppb	16:30:17
1	U 409.014†	13736.2	17023.2	491.92 ug/L	491.92 ppb	16:29:57
1	V 292.402†	65857.2	68883.4	506.88 ug/L	506.88 ppb	16:29:57
1	Zn 213.857†	51465.9	51902.6	507.37 ug/L	507.37 ppb	16:29:57
1	SiO2†	74608.2	75692.2	5385.7 ug/L	5385.7 ppb	16:31:24
2	Sc Radial	4822.1	4822.1	100 %		16:28:59
2	Y RADIAL	5029.9	5029.9	100.6 %		16:28:59
2	Al 396.153Radial†	5326.4	5461.2	5044.4 ug/L	5044.4 ppb	16:28:59
2	Ca 317.933Radial†	3089.3	3062.8	5076.4 ug/L	5076.4 ppb	16:29:19
2	Fe 238.204 Radial†	568.7	555.5	5069.8 ug/L	5069.8 ppb	16:29:19
2	K 766.490 Radial†	31173.7	28249.9	4980.3 ug/L	4980.3 ppb	16:28:59
2	Mg 279.077 IEC†	147.0	146.1	5179.5 ug/L	5179.5 ppb	16:29:19
2	Na 589.592 Radial†	31430.1	32409.6	9802.3 ug/L	9802.3 ppb	16:28:59
2	Sr 421.552†	74214.9	73979.0	518.79 ug/L	518.79 ppb	16:28:59
2	Sc 361.383	844701.7	844701.7	97.983 %		16:30:22
2	Y 371.029	679861.8	679861.8	95.138 %		16:30:22

2	Ag 328.068†	104961.9	106894.4	506.90 ug/L	506.90 ppb	16:30:28
2	As 188.979†	1064.1	1119.9	512.50 ug/L	512.50 ppb	16:30:48
2	B 249.677†	20254.6	21210.7	502.28 ug/L	502.28 ppb	16:30:28
2	Ba 233.527†	61565.9	62845.2	514.49 ug/L	514.49 ppb	16:30:28
2	Be 313.107†	1311258.5	1342596.5	501.23 ug/L	501.23 ppb	16:30:22
2	Cd 226.502†	41187.7	42247.6	502.18 ug/L	502.18 ppb	16:30:28
2	Co 228.616†	23480.7	24037.9	525.12 ug/L	525.12 ppb	16:30:28
2	Cr 267.716†	42066.9	42866.2	499.65 ug/L	499.65 ppb	16:30:28
2	Cu 324.752†	170530.4	168221.0	510.28 ug/L	510.28 ppb	16:30:28
2	Mn 257.610†	435363.5	443875.8	510.98 ug/L	510.98 ppb	16:30:22
2	Mo 202.031†	6543.3	6662.5	499.39 ug/L	499.39 ppb	16:30:48
2	Ni 231.604†	19166.7	19453.4	503.66 ug/L	503.66 ppb	16:30:28
2	P 214.914†	4234.5	4093.6	2447.9 ug/L	2447.9 ppb	16:30:48
2	Pb 220.353†	3871.0	4012.4	502.18 ug/L	502.18 ppb	16:30:48
2	S 181.975 Axial†	724.5	700.1	1020.0 ug/L	1020.0 ppb	16:30:48
2	Sb 206.836†	1455.4	1443.3	520.98 ug/L	520.98 ppb	16:30:48
2	Se 196.026†	700.6	737.1	514.61 ug/L	514.61 ppb	16:30:48
2	Si 251.611†	75140.7	76125.6	2540.2 ug/L	2540.2 ppb	16:30:28
2	Sn 189.927†	2642.8	2688.6	499.79 ug/L	499.79 ppb	16:30:48
2	Ti 334.940†	306430.2	314042.9	509.22 ug/L	509.22 ppb	16:30:28
2	Tl 190.801†	1526.5	1592.1	513.62 ug/L	513.62 ppb	16:30:48
2	U 409.014†	14074.6	17344.4	501.24 ug/L	501.24 ppb	16:30:28
2	V 292.402†	65796.3	68705.7	505.61 ug/L	505.61 ppb	16:30:28
2	Zn 213.857†	51332.5	51676.2	505.15 ug/L	505.15 ppb	16:30:28
2	SiO2†	75451.8	76422.3	5437.8 ug/L	5437.8 ppb	16:31:29
3	Sc Radial	4822.9	4822.9	100 %		16:29:24
3	Y RADIAL	5024.6	5024.6	100.5 %		16:29:24
3	Al 396.153Radial†	5317.6	5451.6	5035.8 ug/L	5035.8 ppb	16:29:24
3	Ca 317.933Radial†	3099.3	3072.3	5092.2 ug/L	5092.2 ppb	16:29:44
3	Fe 238.204 Radial†	569.0	555.7	5071.1 ug/L	5071.1 ppb	16:29:44
3	K 766.490 Radial†	31404.4	28474.6	5020.0 ug/L	5020.0 ppb	16:29:24
3	Mg 279.077 IEC†	149.5	148.6	5267.2 ug/L	5267.2 ppb	16:29:44
3	Na 589.592 Radial†	31631.3	32605.0	9861.3 ug/L	9861.3 ppb	16:29:24
3	Sr 421.552†	74401.9	74153.2	520.01 ug/L	520.01 ppb	16:29:24
3	Sc 361.383	847014.9	847014.9	98.251 %		16:30:53
3	Y 371.029	683045.0	683045.0	95.584 %		16:30:53
3	Ag 328.068†	103039.4	104645.1	496.29 ug/L	496.29 ppb	16:30:59
3	As 188.979†	1063.5	1116.3	510.80 ug/L	510.80 ppb	16:31:19
3	B 249.677†	20021.8	20917.3	495.33 ug/L	495.33 ppb	16:30:59
3	Ba 233.527†	60697.0	61789.1	505.85 ug/L	505.85 ppb	16:30:59
3	Be 313.107†	1317194.8	1344983.7	502.09 ug/L	502.09 ppb	16:30:53
3	Cd 226.502†	40606.9	41541.7	493.78 ug/L	493.78 ppb	16:30:59
3	Co 228.616†	23104.3	23589.3	515.33 ug/L	515.33 ppb	16:30:59
3	Cr 267.716†	41480.5	42152.2	491.34 ug/L	491.34 ppb	16:30:59
3	Cu 324.752†	167048.0	164201.2	498.10 ug/L	498.10 ppb	16:30:59
3	Mn 257.610†	435966.1	443275.7	510.28 ug/L	510.28 ppb	16:30:53
3	Mo 202.031†	6493.1	6593.2	494.20 ug/L	494.20 ppb	16:31:19
3	Ni 231.604†	18879.1	19107.2	494.69 ug/L	494.69 ppb	16:30:59
3	P 214.914†	4186.0	4032.5	2412.2 ug/L	2412.2 ppb	16:31:19
3	Pb 220.353†	3865.2	3995.7	500.09 ug/L	500.09 ppb	16:31:19
3	S 181.975 Axial†	715.7	689.1	1003.9 ug/L	1003.9 ppb	16:31:19
3	Sb 206.836†	1447.3	1430.9	516.50 ug/L	516.50 ppb	16:31:19
3	Se 196.026†	696.1	730.6	510.24 ug/L	510.24 ppb	16:31:19
3	Si 251.611†	73836.5	74588.8	2488.8 ug/L	2488.8 ppb	16:30:59
3	Sn 189.927†	2621.2	2659.2	494.34 ug/L	494.34 ppb	16:31:19
3	Ti 334.940†	300835.6	307494.6	498.60 ug/L	498.60 ppb	16:30:59
3	Tl 190.801†	1531.2	1592.7	513.76 ug/L	513.76 ppb	16:31:19
3	U 409.014†	13553.7	16775.0	484.74 ug/L	484.74 ppb	16:30:59
3	V 292.402†	64958.1	67669.2	497.99 ug/L	497.99 ppb	16:30:59
3	Zn 213.857†	50665.2	50854.0	497.11 ug/L	497.11 ppb	16:30:59
3	SiO2†	75487.7	76248.5	5425.5 ug/L	5425.5 ppb	16:31:34

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	844989.4	98.016 %	0.2202			0.22%
Sc Radial	4834.3	101 %	0.4			0.42%
Y 371.029	680458.0	95.222 %	0.3283			0.34%
Y RADIAL	5041.4	100.8 %	0.49			0.49%
Ag 328.068†	106084.0	503.08 ug/L	5.898	503.08 ppb	5.898	1.17%

QC value within limits for Ag 328.068 Recovery = 100.62%							
Al	396.153Radial†	5442.2	5026.9 ug/L	23.32	5026.9 ppb	23.32	0.46%
QC value within limits for Al 396.153Radial Recovery = 100.54%							
As	188.979†	1116.5	510.95 ug/L	1.483	510.95 ppb	1.483	0.29%
QC value within limits for As 188.979 Recovery = 102.19%							
B	249.677†	21136.9	500.53 ug/L	4.586	500.53 ppb	4.586	0.92%
QC value within limits for B 249.677 Recovery = 100.11%							
Ba	233.527†	62622.2	512.67 ug/L	6.111	512.67 ppb	6.111	1.19%
QC value within limits for Ba 233.527 Recovery = 102.53%							
Be	313.107†	1344304.6	501.86 ug/L	0.549	501.86 ppb	0.549	0.11%
QC value within limits for Be 313.107 Recovery = 100.37%							
Ca	317.933Radial†	3057.7	5068.0 ug/L	29.38	5068.0 ppb	29.38	0.58%
QC value within limits for Ca 317.933Radial Recovery = 101.36%							
Cd	226.502†	42113.8	500.58 ug/L	6.167	500.58 ppb	6.167	1.23%
QC value within limits for Cd 226.502 Recovery = 100.12%							
Co	228.616†	23937.7	522.93 ug/L	6.782	522.93 ppb	6.782	1.30%
QC value within limits for Co 228.616 Recovery = 104.59%							
Cr	267.716†	42680.3	497.49 ug/L	5.406	497.49 ppb	5.406	1.09%
QC value within limits for Cr 267.716 Recovery = 99.50%							
Cu	324.752†	166601.9	505.38 ug/L	6.429	505.38 ppb	6.429	1.27%
QC value within limits for Cu 324.752 Recovery = 101.08%							
Fe	238.204 Radial†	554.6	5062.2 ug/L	14.35	5062.2 ppb	14.35	0.28%
QC value within limits for Fe 238.204 Radial Recovery = 101.24%							
K	766.490 Radial†	28330.0	4994.5 ug/L	22.14	4994.5 ppb	22.14	0.44%
QC value within limits for K 766.490 Radial Recovery = 99.89%							
Mg	279.077 IEC†	145.7	5163.3 ug/L	112.90	5163.3 ppb	112.90	2.19%
QC value within limits for Mg 279.077 IEC Recovery = 103.27%							
Mn	257.610†	443839.8	510.93 ug/L	0.633	510.93 ppb	0.633	0.12%
QC value within limits for Mn 257.610 Recovery = 102.19%							
Mo	202.031†	6639.1	497.64 ug/L	2.976	497.64 ppb	2.976	0.60%
QC value within limits for Mo 202.031 Recovery = 99.53%							
Na	589.592 Radial†	32550.0	9844.7 ug/L	37.07	9844.7 ppb	37.07	0.38%
QC value within limits for Na 589.592 Radial Recovery = 98.45%							
Ni	231.604†	19386.6	501.93 ug/L	6.545	501.93 ppb	6.545	1.30%
QC value within limits for Ni 231.604 Recovery = 100.39%							
P	214.914†	4071.2	2434.9 ug/L	19.72	2434.9 ppb	19.72	0.81%
QC value within limits for P 214.914 Recovery = 97.40%							
Pb	220.353†	4008.1	501.63 ug/L	1.355	501.63 ppb	1.355	0.27%
QC value within limits for Pb 220.353 Recovery = 100.33%							
S	181.975 Axial†	694.3	1011.5 ug/L	8.08	1011.5 ppb	8.08	0.80%
QC value within limits for S 181.975 Axial Recovery = 101.15%							
Sb	206.836†	1438.1	519.12 ug/L	2.337	519.12 ppb	2.337	0.45%
QC value within limits for Sb 206.836 Recovery = 103.82%							
Se	196.026†	737.1	514.60 ug/L	4.359	514.60 ppb	4.359	0.85%
QC value within limits for Se 196.026 Recovery = 102.92%							
Si	251.611†	75641.1	2524.0 ug/L	30.48	2524.0 ppb	30.48	1.21%
QC value within limits for Si 251.611 Recovery = 100.96%							
Sn	189.927†	2675.3	497.32 ug/L	2.759	497.32 ppb	2.759	0.55%
QC value within limits for Sn 189.927 Recovery = 99.46%							
Sr	421.552†	74021.7	519.09 ug/L	0.815	519.09 ppb	0.815	0.16%
QC value within limits for Sr 421.552 Recovery = 103.82%							
Ti	334.940†	311825.2	505.63 ug/L	6.083	505.63 ppb	6.083	1.20%
QC value within limits for Ti 334.940 Recovery = 101.13%							
Tl	190.801†	1593.0	513.89 ug/L	0.350	513.89 ppb	0.350	0.07%
QC value within limits for Tl 190.801 Recovery = 102.78%							
U	409.014†	17047.6	492.63 ug/L	8.269	492.63 ppb	8.269	1.68%
QC value within limits for U 409.014 Recovery = 98.53%							
V	292.402†	68419.4	503.49 ug/L	4.807	503.49 ppb	4.807	0.95%
QC value within limits for V 292.402 Recovery = 100.70%							
Zn	213.857†	51477.6	503.21 ug/L	5.396	503.21 ppb	5.396	1.07%
QC value within limits for Zn 213.857 Recovery = 100.64%							
SiO2†		76121.0	5416.3 ug/L	27.23	5416.3 ppb	27.23	0.50%
QC value within limits for SiO2 Recovery = 101.29%							

All analyte(s) passed QC.

Sequence No.: 2

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/11/2010 16:33:44

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4797.5	4797.5	99.8 %		16:35:37
1	Y RADIAL	5016.9	5016.9	100.3 %		16:35:37
1	Al 396.153Radial†	-155.3	-4.0	-3.7127 ug/L	-3.7127 ppb	16:35:37
1	Ca 317.933Radial†	23.4	6.8	11.224 ug/L	11.224 ppb	16:35:57
1	Fe 238.204 Radial†	8.9	-2.6	-23.635 ug/L	-23.635 ppb	16:35:57
1	K 766.490 Radial†	2737.9	-82.5	-14.576 ug/L	-14.576 ppb	16:35:37
1	Mg 279.077 IEC†	3.0	2.6	92.693 ug/L	92.693 ppb	16:35:57
1	Na 589.592 Radial†	-940.8	135.9	41.088 ug/L	41.088 ppb	16:35:37
1	Sr 421.552†	13.0	10.9	0.0767 ug/L	0.0767 ppb	16:35:37
1	Sc 361.383	785054.7	785054.7	91.064 %		16:36:54
1	Y 371.029	639674.3	639674.3	89.515 %		16:36:54
1	Ag 328.068†	286.1	85.4	0.4036 ug/L	0.4036 ppb	16:36:54
1	As 188.979†	-27.6	3.5	1.5915 ug/L	1.5915 ppb	16:37:14
1	B 249.677†	-233.4	282.7	6.7305 ug/L	6.7305 ppb	16:37:14
1	Ba 233.527†	-10.8	-0.3	-0.0040 ug/L	-0.0040 ppb	16:37:14
1	Be 313.107†	-4193.2	-266.0	-0.0997 ug/L	-0.0997 ppb	16:36:54
1	Cd 226.502†	-189.6	3.7	0.0443 ug/L	0.0443 ppb	16:37:14
1	Co 228.616†	-73.8	-7.4	-0.1584 ug/L	-0.1584 ppb	16:37:14
1	Cr 267.716†	77.1	17.9	0.2131 ug/L	0.2131 ppb	16:37:14
1	Cu 324.752†	5258.5	-46.2	-0.1340 ug/L	-0.1340 ppb	16:36:54
1	Mn 257.610†	523.4	122.9	0.1353 ug/L	0.1353 ppb	16:37:14
1	Mo 202.031†	21.4	7.9	0.5927 ug/L	0.5927 ppb	16:37:14
1	Ni 231.604†	109.5	12.3	0.3180 ug/L	0.3180 ppb	16:37:14
1	P 214.914†	237.8	33.1	20.632 ug/L	20.632 ppb	16:37:14
1	Pb 220.353†	-57.5	-1.5	-0.1789 ug/L	-0.1789 ppb	16:37:14
1	S 181.975 Axial†	42.7	7.5	10.991 ug/L	10.991 ppb	16:37:14
1	Sb 206.836†	44.5	6.7	2.3560 ug/L	2.3560 ppb	16:37:14
1	Se 196.026†	-15.1	5.5	3.6344 ug/L	3.6344 ppb	16:37:14
1	Si 251.611†	537.7	28.2	0.9354 ug/L	0.9354 ppb	16:37:14
1	Sn 189.927†	13.6	6.3	1.1657 ug/L	1.1657 ppb	16:37:14
1	Ti 334.940†	-1329.4	-156.7	-0.2543 ug/L	-0.2543 ppb	16:36:54
1	Tl 190.801†	-29.9	1.4	0.4402 ug/L	0.4402 ppb	16:37:14
1	U 409.014†	-3136.1	-463.9	-13.448 ug/L	-13.448 ppb	16:36:54
1	V 292.402†	-1472.8	-62.7	-0.4673 ug/L	-0.4673 ppb	16:36:54
1	Zn 213.857†	762.4	123.9	1.2242 ug/L	1.2242 ppb	16:37:14
1	SiO2†	560.8	32.7	2.3143 ug/L	2.3143 ppb	16:38:10
2	Sc Radial	4996.3	4996.3	104 %		16:36:02
2	Y RADIAL	5249.1	5249.1	105.0 %		16:36:02
2	Al 396.153Radial†	-148.3	8.9	8.2309 ug/L	8.2309 ppb	16:36:02
2	Ca 317.933Radial†	23.1	5.5	9.1639 ug/L	9.1639 ppb	16:36:22
2	Fe 238.204 Radial†	9.9	-2.0	-18.026 ug/L	-18.026 ppb	16:36:22
2	K 766.490 Radial†	2677.6	-249.6	-44.089 ug/L	-44.089 ppb	16:36:02
2	Mg 279.077 IEC†	3.8	3.3	115.93 ug/L	115.93 ppb	16:36:22
2	Na 589.592 Radial†	-874.5	237.1	71.718 ug/L	71.718 ppb	16:36:02
2	Sr 421.552†	10.6	8.1	0.0570 ug/L	0.0570 ppb	16:36:02
2	Sc 361.383	829730.0	829730.0	96.246 %		16:37:19
2	Y 371.029	676808.5	676808.5	94.711 %		16:37:19
2	Ag 328.068†	270.8	52.6	0.2440 ug/L	0.2440 ppb	16:37:19
2	As 188.979†	-20.5	12.6	5.7156 ug/L	5.7156 ppb	16:37:39
2	B 249.677†	-262.9	265.9	6.3300 ug/L	6.3300 ppb	16:37:39
2	Ba 233.527†	-4.9	6.5	0.0523 ug/L	0.0523 ppb	16:37:39
2	Be 313.107†	-4154.2	22.5	0.0084 ug/L	0.0084 ppb	16:37:19
2	Cd 226.502†	-196.8	7.4	0.0894 ug/L	0.0894 ppb	16:37:39
2	Co 228.616†	-81.0	-10.4	-0.2267 ug/L	-0.2267 ppb	16:37:39
2	Cr 267.716†	74.3	10.4	0.1222 ug/L	0.1222 ppb	16:37:39
2	Cu 324.752†	5231.7	-385.0	-1.1668 ug/L	-1.1668 ppb	16:37:19
2	Mn 257.610†	483.0	50.0	0.0510 ug/L	0.0510 ppb	16:37:39
2	Mo 202.031†	20.0	5.3	0.3948 ug/L	0.3948 ppb	16:37:39
2	Ni 231.604†	108.3	4.5	0.1158 ug/L	0.1158 ppb	16:37:39

2	P 214.914†	231.1	12.0	7.7445 ug/L	7.7445 ppb	16:37:39
2	Pb 220.353†	-42.8	17.2	2.1549 ug/L	2.1549 ppb	16:37:39
2	S 181.975 Axial†	42.5	4.8	7.0640 ug/L	7.0640 ppb	16:37:39
2	Sb 206.836†	33.5	-7.4	-2.5417 ug/L	-2.5417 ppb	16:37:39
2	Se 196.026†	-14.5	7.1	4.7251 ug/L	4.7251 ppb	16:37:39
2	Si 251.611†	558.5	18.0	0.5972 ug/L	0.5972 ppb	16:37:39
2	Sn 189.927†	13.3	5.1	0.9492 ug/L	0.9492 ppb	16:37:39
2	Ti 334.940†	-1253.8	0.5	-0.0059 ug/L	-0.0059 ppb	16:37:19
2	Tl 190.801†	-32.7	0.2	0.0603 ug/L	0.0603 ppb	16:37:39
2	U 409.014†	-2986.7	-123.1	-3.5685 ug/L	-3.5685 ppb	16:37:19
2	V 292.402†	-1514.1	-18.5	-0.1308 ug/L	-0.1308 ppb	16:37:19
2	Zn 213.857†	761.7	78.1	0.7742 ug/L	0.7742 ppb	16:37:39
2	SiO2†	506.9	-56.5	-4.0396 ug/L	-4.0396 ppb	16:38:15
3	Sc Radial	4930.9	4930.9	103 %		16:36:27
3	Y RADIAL	5185.3	5185.3	103.7 %		16:36:27
3	Al 396.153Radial†	-164.3	-8.6	-8.0552 ug/L	-8.0552 ppb	16:36:27
3	Ca 317.933Radial†	22.1	4.8	7.9444 ug/L	7.9444 ppb	16:36:47
3	Fe 238.204 Radial†	8.8	-2.9	-26.181 ug/L	-26.181 ppb	16:36:47
3	K 766.490 Radial†	2829.6	-67.2	-11.896 ug/L	-11.896 ppb	16:36:27
3	Mg 279.077 IEC†	5.4	4.9	172.99 ug/L	172.99 ppb	16:36:47
3	Na 589.592 Radial†	-875.6	225.0	68.042 ug/L	68.042 ppb	16:36:27
3	Sr 421.552†	10.2	7.8	0.0548 ug/L	0.0548 ppb	16:36:27
3	Sc 361.383	828758.2	828758.2	96.133 %		16:37:44
3	Y 371.029	677275.2	677275.2	94.776 %		16:37:44
3	Ag 328.068†	225.0	5.3	0.0201 ug/L	0.0201 ppb	16:37:44
3	As 188.979†	-28.8	3.9	1.7545 ug/L	1.7545 ppb	16:38:04
3	B 249.677†	-249.4	279.6	6.6554 ug/L	6.6554 ppb	16:38:04
3	Ba 233.527†	-5.7	5.6	0.0456 ug/L	0.0456 ppb	16:38:04
3	Be 313.107†	-4146.0	26.0	0.0096 ug/L	0.0096 ppb	16:37:44
3	Cd 226.502†	-194.0	10.1	0.1213 ug/L	0.1213 ppb	16:38:04
3	Co 228.616†	-65.2	5.9	0.1322 ug/L	0.1322 ppb	16:38:04
3	Cr 267.716†	89.2	26.1	0.3048 ug/L	0.3048 ppb	16:38:04
3	Cu 324.752†	5239.5	-370.5	-1.1229 ug/L	-1.1229 ppb	16:37:44
3	Mn 257.610†	516.9	85.8	0.0891 ug/L	0.0891 ppb	16:38:04
3	Mo 202.031†	28.1	13.7	1.0249 ug/L	1.0249 ppb	16:38:04
3	Ni 231.604†	92.5	-11.8	-0.3050 ug/L	-0.3050 ppb	16:38:04
3	P 214.914†	251.1	33.2	20.860 ug/L	20.860 ppb	16:38:04
3	Pb 220.353†	-38.8	21.4	2.6716 ug/L	2.6716 ppb	16:38:04
3	S 181.975 Axial†	36.3	-1.6	-2.2683 ug/L	-2.2683 ppb	16:38:04
3	Sb 206.836†	40.1	-0.4	-0.1528 ug/L	-0.1528 ppb	16:38:04
3	Se 196.026†	-19.4	1.9	1.2254 ug/L	1.2254 ppb	16:38:04
3	Si 251.611†	543.8	3.4	0.1003 ug/L	0.1003 ppb	16:38:04
3	Sn 189.927†	-0.1	-8.8	-1.6299 ug/L	-1.6299 ppb	16:38:04
3	Ti 334.940†	-1274.7	-22.7	-0.0483 ug/L	-0.0483 ppb	16:37:44
3	Tl 190.801†	-31.4	1.6	0.5000 ug/L	0.5000 ppb	16:38:04
3	U 409.014†	-3001.2	-141.9	-4.1109 ug/L	-4.1109 ppb	16:37:44
3	V 292.402†	-1465.6	30.1	0.2326 ug/L	0.2326 ppb	16:37:44
3	Zn 213.857†	762.2	79.6	0.7924 ug/L	0.7924 ppb	16:38:04
3	SiO2†	564.7	4.3	0.2771 ug/L	0.2771 ppb	16:38:20

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	814514.3	94.481 %	2.9599			3.13%
Sc Radial	4908.2	102 %	2.1			2.06%
Y 371.029	664586.0	93.001 %	3.0192			3.25%
Y RADIAL	5150.4	103.0 %	2.40			2.33%
Ag 328.068†	47.8	0.2225 ug/L	0.19263	0.2225 ppb	0.19263	86.56%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-1.2	-1.1790 ug/L	8.43354	-1.1790 ppb	8.43354	715.30%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	6.7	3.0205 ug/L	2.33542	3.0205 ppb	2.33542	77.32%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	276.1	6.5720 ug/L	0.21285	6.5720 ppb	0.21285	3.24%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	3.9	0.0313 ug/L	0.03079	0.0313 ppb	0.03079	98.39%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-72.5	-0.0272 ug/L	0.06273	-0.0272 ppb	0.06273	230.38%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	5.7	9.4442 ug/L	1.65784	9.4442 ppb	1.65784	17.55%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated							
Cd 226.502†	7.1	0.0850 ug/L	0.03865	0.0850 ppb	0.03865	45.47%	
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	-4.0	-0.0843 ug/L	0.19061	-0.0843 ppb	0.19061	226.07%	
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	18.1	0.2134 ug/L	0.09133	0.2134 ppb	0.09133	42.81%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-267.2	-0.8079 ug/L	0.58403	-0.8079 ppb	0.58403	72.29%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	-2.5	-22.614 ug/L	4.1725	-22.614 ppb	4.1725	18.45%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	-133.1	-23.520 ug/L	17.8634	-23.520 ppb	17.8634	75.95%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	3.6	127.20 ug/L	41.318	127.20 ppb	41.318	32.48%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	86.2	0.0918 ug/L	0.04220	0.0918 ppb	0.04220	45.98%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	9.0	0.6708 ug/L	0.32221	0.6708 ppb	0.32221	48.03%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	199.3	60.283 ug/L	16.7244	60.283 ppb	16.7244	27.74%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	1.7	0.0430 ug/L	0.31782	0.0430 ppb	0.31782	739.87%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	26.1	16.412 ug/L	7.5073	16.412 ppb	7.5073	45.74%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	12.4	1.5492 ug/L	1.51869	1.5492 ppb	1.51869	98.03%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	3.6	5.2624 ug/L	6.81101	5.2624 ppb	6.81101	129.43%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	-0.4	-0.1128 ug/L	2.44909	-0.1128 ppb	2.44909	>999.9%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	4.8	3.1950 ug/L	1.79074	3.1950 ppb	1.79074	56.05%	
QC value within limits for Se 196.026 Recovery = Not calculated							
Si 251.611†	16.5	0.5443 ug/L	0.42002	0.5443 ppb	0.42002	77.17%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	0.9	0.1617 ug/L	1.55534	0.1617 ppb	1.55534	962.12%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	9.0	0.0628 ug/L	0.01204	0.0628 ppb	0.01204	19.17%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	-59.6	-0.1028 ug/L	0.13291	-0.1028 ppb	0.13291	129.27%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	1.0	0.3335 ug/L	0.23850	0.3335 ppb	0.23850	71.52%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	-242.9	-7.0424 ug/L	5.55398	-7.0424 ppb	5.55398	78.86%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	-17.0	-0.1218 ug/L	0.35004	-0.1218 ppb	0.35004	287.30%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	93.9	0.9303 ug/L	0.25470	0.9303 ppb	0.25470	27.38%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†	-6.5	-0.4827 ug/L	3.24436	-0.4827 ppb	3.24436	672.07%	
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: 1

Date Collected: 2/11/2010 17:35:02

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4883.4	4883.4	102 %		17:36:54
1	Y RADIAL	5090.0	5090.0	101.8 %		17:36:54
1	Al 396.153Radial†	5290.9	5359.6	4951.1 ug/L	4951.1 ppb	17:36:54
1	Ca 317.933Radial†	3076.8	3011.9	4992.0 ug/L	4992.0 ppb	17:37:14
1	Fe 238.204 Radial†	567.9	547.5	4997.1 ug/L	4997.1 ppb	17:37:14
1	K 766.490 Radial†	30889.3	27579.5	4862.1 ug/L	4862.1 ppb	17:36:54
1	Mg 279.077 IEC†	148.9	146.2	5181.2 ug/L	5181.2 ppb	17:37:14
1	Na 589.592 Radial†	31339.6	31927.0	9656.3 ug/L	9656.3 ppb	17:36:54
1	Sr 421.552†	73601.4	72445.9	508.04 ug/L	508.04 ppb	17:36:54
1	Sc 361.383	867650.1	867650.1	100.64 %		17:38:11
1	Y 371.029	699059.3	699059.3	97.825 %		17:38:11
1	Ag 328.068†	104259.4	103363.1	490.19 ug/L	490.19 ppb	17:38:16
1	As 188.979†	1056.3	1083.4	495.82 ug/L	495.82 ppb	17:38:37
1	B 249.677†	20158.7	20568.7	487.07 ug/L	487.07 ppb	17:38:16
1	Ba 233.527†	61238.4	60857.9	498.23 ug/L	498.23 ppb	17:38:16
1	Be 313.107†	1320577.3	1316460.1	491.46 ug/L	491.46 ppb	17:38:11
1	Cd 226.502†	41132.7	41081.3	488.31 ug/L	488.31 ppb	17:38:16
1	Co 228.616†	23336.8	23261.1	508.14 ug/L	508.14 ppb	17:38:16
1	Cr 267.716†	41933.5	41598.2	484.87 ug/L	484.87 ppb	17:38:16
1	Cu 324.752†	169192.7	162288.5	492.29 ug/L	492.29 ppb	17:38:16
1	Mn 257.610†	435775.5	432533.2	497.92 ug/L	497.92 ppb	17:38:11
1	Mo 202.031†	6446.4	6389.6	478.95 ug/L	478.95 ppb	17:38:37
1	Ni 231.604†	19116.7	18886.3	488.98 ug/L	488.98 ppb	17:38:16
1	P 214.914†	4190.9	3936.0	2353.2 ug/L	2353.2 ppb	17:38:37
1	Pb 220.353†	3838.5	3875.7	485.07 ug/L	485.07 ppb	17:38:37
1	S 181.975 Axial†	718.4	674.5	982.63 ug/L	982.63 ppb	17:38:37
1	Sb 206.836†	1444.0	1392.6	502.57 ug/L	502.57 ppb	17:38:37
1	Se 196.026†	711.0	728.6	508.57 ug/L	508.57 ppb	17:38:37
1	Si 251.611†	75299.5	74255.1	2477.8 ug/L	2477.8 ppb	17:38:16
1	Sn 189.927†	2595.3	2570.0	477.78 ug/L	477.78 ppb	17:38:37
1	Ti 334.940†	304143.6	303499.3	492.12 ug/L	492.12 ppb	17:38:16
1	Tl 190.801†	1519.9	1544.4	498.23 ug/L	498.23 ppb	17:38:37
1	U 409.014†	13948.4	16839.2	486.63 ug/L	486.63 ppb	17:38:16
1	V 292.402†	65486.2	66621.5	490.19 ug/L	490.19 ppb	17:38:16
1	Zn 213.857†	51187.1	50146.1	490.19 ug/L	490.19 ppb	17:38:16
1	SiO2†	75433.0	74366.9	5291.7 ug/L	5291.7 ppb	17:39:44
2	Sc Radial	4874.4	4874.4	101 %		17:37:19
2	Y RADIAL	5086.8	5086.8	101.7 %		17:37:19
2	Al 396.153Radial†	5291.6	5369.8	4959.9 ug/L	4959.9 ppb	17:37:19
2	Ca 317.933Radial†	3092.2	3032.7	5026.5 ug/L	5026.5 ppb	17:37:39
2	Fe 238.204 Radial†	567.6	548.2	5003.6 ug/L	5003.6 ppb	17:37:39
2	K 766.490 Radial†	30996.2	27741.0	4890.6 ug/L	4890.6 ppb	17:37:19
2	Mg 279.077 IEC†	151.1	148.6	5267.7 ug/L	5267.7 ppb	17:37:39
2	Na 589.592 Radial†	31287.1	31932.0	9657.8 ug/L	9657.8 ppb	17:37:19
2	Sr 421.552†	73705.2	72681.8	509.69 ug/L	509.69 ppb	17:37:19
2	Sc 361.383	845811.7	845811.7	98.111 %		17:38:42
2	Y 371.029	680468.1	680468.1	95.223 %		17:38:42
2	Ag 328.068†	103771.4	105540.3	500.48 ug/L	500.48 ppb	17:38:47
2	As 188.979†	1063.2	1117.5	511.39 ug/L	511.39 ppb	17:39:08
2	B 249.677†	20110.1	21036.3	498.16 ug/L	498.16 ppb	17:38:47
2	Ba 233.527†	60935.9	62120.6	508.56 ug/L	508.56 ppb	17:38:47
2	Be 313.107†	1288464.0	1317606.9	491.91 ug/L	491.91 ppb	17:38:42
2	Cd 226.502†	40777.5	41774.5	496.55 ug/L	496.55 ppb	17:38:47
2	Co 228.616†	23206.8	23727.3	518.33 ug/L	518.33 ppb	17:38:47
2	Cr 267.716†	41495.0	42227.0	492.20 ug/L	492.20 ppb	17:38:47
2	Cu 324.752†	169070.2	166504.2	505.08 ug/L	505.08 ppb	17:38:47
2	Mn 257.610†	427634.3	435414.8	501.23 ug/L	501.23 ppb	17:38:42
2	Mo 202.031†	6479.7	6588.9	493.87 ug/L	493.87 ppb	17:39:08
2	Ni 231.604†	19011.8	19269.8	498.90 ug/L	498.90 ppb	17:38:47

2	P 214.914†	4198.4	4051.1	2422.5 ug/L	2422.5 ppb	17:39:08
2	Pb 220.353†	3845.6	3981.4	498.28 ug/L	498.28 ppb	17:39:08
2	S 181.975 Axial†	712.6	686.9	1000.7 ug/L	1000.7 ppb	17:39:08
2	Sb 206.836†	1446.7	1432.4	517.02 ug/L	517.02 ppb	17:39:08
2	Se 196.026†	718.7	754.6	526.18 ug/L	526.18 ppb	17:39:08
2	Si 251.611†	75014.4	75896.3	2532.6 ug/L	2532.6 ppb	17:38:47
2	Sn 189.927†	2624.5	2666.3	495.65 ug/L	495.65 ppb	17:39:08
2	Ti 334.940†	303028.2	310164.9	502.92 ug/L	502.92 ppb	17:38:47
2	Tl 190.801†	1526.1	1589.6	512.77 ug/L	512.77 ppb	17:39:08
2	U 409.014†	13886.3	17133.7	495.15 ug/L	495.15 ppb	17:38:47
2	V 292.402†	65108.8	67916.9	499.81 ug/L	499.81 ppb	17:38:47
2	Zn 213.857†	51000.2	51268.8	501.18 ug/L	501.18 ppb	17:38:47
2	SiO2†	74777.4	75633.8	5381.7 ug/L	5381.7 ppb	17:39:49
3	Sc Radial	4927.4	4927.4	103 %		17:37:44
3	Y RADIAL	5146.7	5146.7	102.9 %		17:37:44
3	Al 396.153Radial†	5342.4	5363.3	4954.0 ug/L	4954.0 ppb	17:37:44
3	Ca 317.933Radial†	3081.5	2989.4	4954.7 ug/L	4954.7 ppb	17:38:04
3	Fe 238.204 Radial†	562.3	537.0	4901.8 ug/L	4901.8 ppb	17:38:04
3	K 766.490 Radial†	31221.6	27632.2	4871.4 ug/L	4871.4 ppb	17:37:44
3	Mg 279.077 IEC†	145.2	141.2	5005.4 ug/L	5005.4 ppb	17:38:04
3	Na 589.592 Radial†	31391.6	31702.2	9588.3 ug/L	9588.3 ppb	17:37:44
3	Sr 421.552†	74447.1	72623.9	509.29 ug/L	509.29 ppb	17:37:44
3	Sc 361.383	849007.6	849007.6	98.482 %		17:39:13
3	Y 371.029	683415.1	683415.1	95.636 %		17:39:13
3	Ag 328.068†	104613.5	105997.2	502.60 ug/L	502.60 ppb	17:39:19
3	As 188.979†	1050.4	1100.5	503.66 ug/L	503.66 ppb	17:39:39
3	B 249.677†	20339.5	21192.1	501.88 ug/L	501.88 ppb	17:39:19
3	Ba 233.527†	61206.8	62161.8	508.90 ug/L	508.90 ppb	17:39:19
3	Be 313.107†	1293636.3	1317915.4	492.03 ug/L	492.03 ppb	17:39:13
3	Cd 226.502†	40971.1	41814.6	497.04 ug/L	497.04 ppb	17:39:19
3	Co 228.616†	23388.6	23822.8	520.41 ug/L	520.41 ppb	17:39:19
3	Cr 267.716†	41845.8	42424.1	494.50 ug/L	494.50 ppb	17:39:19
3	Cu 324.752†	170500.1	167307.4	507.51 ug/L	507.51 ppb	17:39:19
3	Mn 257.610†	427973.8	434118.8	499.74 ug/L	499.74 ppb	17:39:13
3	Mo 202.031†	6458.4	6542.4	490.38 ug/L	490.38 ppb	17:39:39
3	Ni 231.604†	19096.7	19283.0	499.25 ug/L	499.25 ppb	17:39:19
3	P 214.914†	4194.5	4031.1	2409.6 ug/L	2409.6 ppb	17:39:39
3	Pb 220.353†	3812.1	3932.6	492.20 ug/L	492.20 ppb	17:39:39
3	S 181.975 Axial†	708.9	680.5	991.31 ug/L	991.31 ppb	17:39:39
3	Sb 206.836†	1446.2	1426.4	514.77 ug/L	514.77 ppb	17:39:39
3	Se 196.026†	699.2	732.1	510.67 ug/L	510.67 ppb	17:39:39
3	Si 251.611†	75460.3	76061.2	2538.1 ug/L	2538.1 ppb	17:39:19
3	Sn 189.927†	2606.2	2637.7	490.32 ug/L	490.32 ppb	17:39:39
3	Ti 334.940†	305245.1	311253.4	504.70 ug/L	504.70 ppb	17:39:19
3	Tl 190.801†	1520.8	1578.4	509.16 ug/L	509.16 ppb	17:39:39
3	U 409.014†	14031.2	17227.5	497.87 ug/L	497.87 ppb	17:39:19
3	V 292.402†	65553.4	68118.5	501.24 ug/L	501.24 ppb	17:39:19
3	Zn 213.857†	51317.7	51395.5	502.44 ug/L	502.44 ppb	17:39:19
3	SiO2†	74501.0	75066.3	5341.3 ug/L	5341.3 ppb	17:39:54

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	854156.5	99.079 %	1.3681			1.38%
Sc Radial	4895.1	102 %	0.6			0.58%
Y 371.029	687647.5	96.228 %	1.3983			1.45%
Y RADIAL	5107.8	102.1 %	0.67			0.66%
Ag 328.068†	104966.9	497.76 ug/L	6.640	497.76 ppb	6.640	1.33%
QC value within limits for Ag 328.068 Recovery = 99.55%						
Al 396.153Radial†	5364.3	4955.0 ug/L	4.48	4955.0 ppb	4.48	0.09%
QC value within limits for Al 396.153Radial Recovery = 99.10%						
As 188.979†	1100.5	503.62 ug/L	7.784	503.62 ppb	7.784	1.55%
QC value within limits for As 188.979 Recovery = 100.72%						
B 249.677†	20932.4	495.70 ug/L	7.706	495.70 ppb	7.706	1.55%
QC value within limits for B 249.677 Recovery = 99.14%						
Ba 233.527†	61713.4	505.23 ug/L	6.065	505.23 ppb	6.065	1.20%
QC value within limits for Ba 233.527 Recovery = 101.05%						
Be 313.107†	1317327.4	491.80 ug/L	0.301	491.80 ppb	0.301	0.06%
QC value within limits for Be 313.107 Recovery = 98.36%						
Ca 317.933Radial†	3011.3	4991.0 ug/L	35.91	4991.0 ppb	35.91	0.72%

QC value within limits for Ca 317.933 Radial Recovery = 99.82%

Cd 226.502† 41556.8 493.97 ug/L 4.909 493.97 ppb 4.909 0.99%

QC value within limits for Cd 226.502 Recovery = 98.79%

Co 228.616† 23603.7 515.63 ug/L 6.569 515.63 ppb 6.569 1.27%

QC value within limits for Co 228.616 Recovery = 103.13%

Cr 267.716† 42083.1 490.52 ug/L 5.027 490.52 ppb 5.027 1.02%

QC value within limits for Cr 267.716 Recovery = 98.10%

Cu 324.752† 165366.7 501.63 ug/L 8.173 501.63 ppb 8.173 1.63%

QC value within limits for Cu 324.752 Recovery = 100.33%

Fe 238.204 Radial† 544.3 4967.5 ug/L 56.99 4967.5 ppb 56.99 1.15%

QC value within limits for Fe 238.204 Radial Recovery = 99.35%

K 766.490 Radial† 27650.9 4874.7 ug/L 14.52 4874.7 ppb 14.52 0.30%

QC value within limits for K 766.490 Radial Recovery = 97.49%

Mg 279.077 IEC† 145.4 5151.4 ug/L 133.69 5151.4 ppb 133.69 2.60%

QC value within limits for Mg 279.077 IEC Recovery = 103.03%

Mn 257.610† 434022.3 499.63 ug/L 1.659 499.63 ppb 1.659 0.33%

QC value within limits for Mn 257.610 Recovery = 99.93%

Mo 202.031† 6506.9 487.73 ug/L 7.808 487.73 ppb 7.808 1.60%

QC value within limits for Mo 202.031 Recovery = 97.55%

Na 589.592 Radial† 31853.8 9634.1 ug/L 39.70 9634.1 ppb 39.70 0.41%

QC value within limits for Na 589.592 Radial Recovery = 96.34%

Ni 231.604† 19146.3 495.71 ug/L 5.834 495.71 ppb 5.834 1.18%

QC value within limits for Ni 231.604 Recovery = 99.14%

P 214.914† 4006.1 2395.1 ug/L 36.84 2395.1 ppb 36.84 1.54%

QC value within limits for P 214.914 Recovery = 95.80%

Pb 220.353† 3929.9 491.85 ug/L 6.615 491.85 ppb 6.615 1.34%

QC value within limits for Pb 220.353 Recovery = 98.37%

S 181.975 Axial† 680.6 991.56 ug/L 9.059 991.56 ppb 9.059 0.91%

QC value within limits for S 181.975 Axial Recovery = 99.16%

Sb 206.836† 1417.1 511.45 ug/L 7.775 511.45 ppb 7.775 1.52%

QC value within limits for Sb 206.836 Recovery = 102.29%

Se 196.026† 738.4 515.14 ug/L 9.618 515.14 ppb 9.618 1.87%

QC value within limits for Se 196.026 Recovery = 103.03%

Si 251.611† 75404.2 2516.2 ug/L 33.31 2516.2 ppb 33.31 1.32%

QC value within limits for Si 251.611 Recovery = 100.65%

Sn 189.927† 2624.7 487.92 ug/L 9.175 487.92 ppb 9.175 1.88%

QC value within limits for Sn 189.927 Recovery = 97.58%

Sr 421.552† 72583.9 509.00 ug/L 0.862 509.00 ppb 0.862 0.17%

QC value within limits for Sr 421.552 Recovery = 101.80%

Ti 334.940† 308305.9 499.91 ug/L 6.807 499.91 ppb 6.807 1.36%

QC value within limits for Ti 334.940 Recovery = 99.98%

Tl 190.801† 1570.8 506.72 ug/L 7.572 506.72 ppb 7.572 1.49%

QC value within limits for Tl 190.801 Recovery = 101.34%

U 409.014† 17066.8 493.22 ug/L 5.868 493.22 ppb 5.868 1.19%

QC value within limits for U 409.014 Recovery = 98.64%

V 292.402† 67552.3 497.08 ug/L 6.009 497.08 ppb 6.009 1.21%

QC value within limits for V 292.402 Recovery = 99.42%

Zn 213.857† 50936.8 497.94 ug/L 6.741 497.94 ppb 6.741 1.35%

QC value within limits for Zn 213.857 Recovery = 99.59%

SiO2† 75022.3 5338.2 ug/L 45.06 5338.2 ppb 45.06 0.84%

QC value within limits for SiO2 Recovery = 99.83%

All analyte(s) passed QC.

Sequence No.: 12
 Sample ID: CCB
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 6
 Date Collected: 2/11/2010 17:42:04
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4864.0	4864.0	101 %		17:43:56
1	Y RADIAL	5099.9	5099.9	102.0 %		17:43:56
1	Al 396.153Radial†	-150.2	3.2	2.9438 ug/L	2.9438 ppb	17:43:56
1	Ca 317.933Radial†	20.1	3.1	5.1674 ug/L	5.1674 ppb	17:44:16
1	Fe 238.204 Radial†	9.1	-2.5	-22.690 ug/L	-22.690 ppb	17:44:16
1	K 766.490 Radial†	2933.8	73.6	12.968 ug/L	12.968 ppb	17:43:56
1	Mg 279.077 IEC†	2.0	1.6	54.973 ug/L	54.973 ppb	17:44:16
1	Na 589.592 Radial†	-851.9	236.7	71.578 ug/L	71.578 ppb	17:43:56
1	Sr 421.552†	-3.0	-5.1	-0.0357 ug/L	-0.0357 ppb	17:43:56
1	Sc 361.383	844454.4	844454.4	97.954 %		17:45:13
1	Y 371.029	688428.9	688428.9	96.337 %		17:45:13
1	Ag 328.068†	272.2	49.1	0.2215 ug/L	0.2215 ppb	17:45:13
1	As 188.979†	-31.4	1.8	0.7938 ug/L	0.7938 ppb	17:45:33
1	B 249.677†	-338.6	193.4	4.6028 ug/L	4.6028 ppb	17:45:33
1	Ba 233.527†	-12.8	-1.5	-0.0129 ug/L	-0.0129 ppb	17:45:33
1	Be 313.107†	-4226.3	24.1	0.0086 ug/L	0.0086 ppb	17:45:13
1	Cd 226.502†	-204.1	3.5	0.0444 ug/L	0.0444 ppb	17:45:33
1	Co 228.616†	-52.1	20.5	0.4491 ug/L	0.4491 ppb	17:45:33
1	Cr 267.716†	79.3	14.1	0.1630 ug/L	0.1630 ppb	17:45:33
1	Cu 324.752†	5448.9	-258.0	-0.7854 ug/L	-0.7854 ppb	17:45:13
1	Mn 257.610†	470.9	28.8	0.0287 ug/L	0.0287 ppb	17:45:33
1	Mo 202.031†	14.7	-0.5	-0.0418 ug/L	-0.0418 ppb	17:45:33
1	Ni 231.604†	102.0	-3.8	-0.0998 ug/L	-0.0998 ppb	17:45:33
1	P 214.914†	237.4	14.3	9.0844 ug/L	9.0844 ppb	17:45:33
1	Pb 220.353†	-56.8	3.7	0.4686 ug/L	0.4686 ppb	17:45:33
1	S 181.975 Axial†	34.9	-3.7	-5.4085 ug/L	-5.4085 ppb	17:45:33
1	Sb 206.836†	39.3	-2.0	-0.6995 ug/L	-0.6995 ppb	17:45:33
1	Se 196.026†	-12.3	9.6	6.4003 ug/L	6.4003 ppb	17:45:33
1	Si 251.611†	549.4	-1.4	-0.0474 ug/L	-0.0474 ppb	17:45:33
1	Sn 189.927†	8.1	-0.5	-0.0841 ug/L	-0.0841 ppb	17:45:33
1	Ti 334.940†	-1386.5	-112.3	-0.1872 ug/L	-0.1872 ppb	17:45:13
1	Tl 190.801†	-42.7	-9.4	-3.0004 ug/L	-3.0004 ppb	17:45:33
1	U 409.014†	-2824.2	96.9	2.8114 ug/L	2.8114 ppb	17:45:13
1	V 292.402†	-1519.9	3.0	0.0308 ug/L	0.0308 ppb	17:45:13
1	Zn 213.857†	727.7	29.7	0.2978 ug/L	0.2978 ppb	17:45:33
1	SiO2†	555.8	-15.8	-1.1229 ug/L	-1.1229 ppb	17:46:29
2	Sc Radial	4887.4	4887.4	102 %		17:44:21
2	Y RADIAL	5145.5	5145.5	102.9 %		17:44:21
2	Al 396.153Radial†	-132.7	21.0	19.504 ug/L	19.504 ppb	17:44:21
2	Ca 317.933Radial†	16.6	-0.4	-0.5969 ug/L	-0.5969 ppb	17:44:41
2	Fe 238.204 Radial†	10.7	-1.0	-9.0168 ug/L	-9.0168 ppb	17:44:41
2	K 766.490 Radial†	2783.2	-88.3	-15.621 ug/L	-15.621 ppb	17:44:21
2	Mg 279.077 IEC†	2.0	1.6	55.174 ug/L	55.174 ppb	17:44:41
2	Na 589.592 Radial†	-849.8	242.7	73.402 ug/L	73.402 ppb	17:44:21
2	Sr 421.552†	18.7	16.2	0.1139 ug/L	0.1139 ppb	17:44:21
2	Sc 361.383	838646.0	838646.0	97.280 %		17:45:38
2	Y 371.029	683833.3	683833.3	95.694 %		17:45:38
2	Ag 328.068†	335.6	116.2	0.5473 ug/L	0.5473 ppb	17:45:38
2	As 188.979†	-29.9	3.1	1.4002 ug/L	1.4002 ppb	17:45:58
2	B 249.677†	-374.7	153.9	3.6616 ug/L	3.6616 ppb	17:45:58
2	Ba 233.527†	-18.5	-7.4	-0.0604 ug/L	-0.0604 ppb	17:45:58
2	Be 313.107†	-4232.1	-11.7	-0.0047 ug/L	-0.0047 ppb	17:45:38
2	Cd 226.502†	-195.1	11.4	0.1354 ug/L	0.1354 ppb	17:45:58
2	Co 228.616†	-67.3	4.5	0.1000 ug/L	0.1000 ppb	17:45:58
2	Cr 267.716†	72.4	7.6	0.0898 ug/L	0.0898 ppb	17:45:58
2	Cu 324.752†	5275.1	-398.1	-1.2067 ug/L	-1.2067 ppb	17:45:38
2	Mn 257.610†	440.5	0.9	-0.0021 ug/L	-0.0021 ppb	17:45:58
2	Mo 202.031†	21.9	7.0	0.5244 ug/L	0.5244 ppb	17:45:58
2	Ni 231.604†	90.7	-14.8	-0.3838 ug/L	-0.3838 ppb	17:45:58

2	P 214.914†	234.1	12.6	8.0900 ug/L	8.0900 ppb	17:45:58
2	Pb 220.353†	-61.1	-1.0	-0.1239 ug/L	-0.1239 ppb	17:45:58
2	S 181.975 Axial†	40.5	2.3	3.3625 ug/L	3.3625 ppb	17:45:58
2	Sb 206.836†	40.3	-0.7	-0.2398 ug/L	-0.2398 ppb	17:45:58
2	Se 196.026†	-29.2	-7.9	-5.3352 ug/L	-5.3352 ppb	17:45:58
2	Si 251.611†	547.6	0.7	0.0165 ug/L	0.0165 ppb	17:45:58
2	Sn 189.927†	9.2	0.8	0.1496 ug/L	0.1496 ppb	17:45:58
2	Ti 334.940†	-1349.4	-83.9	-0.1395 ug/L	-0.1395 ppb	17:45:38
2	Tl 190.801†	-30.1	3.2	1.0352 ug/L	1.0352 ppb	17:45:58
2	U 409.014†	-2993.7	-97.4	-2.8228 ug/L	-2.8228 ppb	17:45:38
2	V 292.402†	-1497.2	15.5	0.1173 ug/L	0.1173 ppb	17:45:38
2	Zn 213.857†	727.4	34.5	0.3461 ug/L	0.3461 ppb	17:45:58
2	SiO2†	569.6	2.4	0.1594 ug/L	0.1594 ppb	17:46:34
3	Sc Radial	4815.3	4815.3	100 %		17:44:46
3	Y RADIAL	5028.0	5028.0	100.5 %		17:44:46
3	Al 396.153Radial†	-139.7	12.1	11.252 ug/L	11.252 ppb	17:44:46
3	Ca 317.933Radial†	19.5	2.8	4.6011 ug/L	4.6011 ppb	17:45:06
3	Fe 238.204 Radial†	7.6	-3.8	-35.006 ug/L	-35.006 ppb	17:45:06
3	K 766.490 Radial†	2871.0	40.4	7.1012 ug/L	7.1012 ppb	17:44:46
3	Mg 279.077 IEC†	2.5	2.1	74.990 ug/L	74.990 ppb	17:45:06
3	Na 589.592 Radial†	-874.3	205.7	62.219 ug/L	62.219 ppb	17:44:46
3	Sr 421.552†	-27.3	-29.4	-0.2062 ug/L	-0.2062 ppb	17:44:46
3	Sc 361.383	838695.6	838695.6	97.286 %		17:46:04
3	Y 371.029	683481.0	683481.0	95.645 %		17:46:04
3	Ag 328.068†	290.2	69.6	0.3139 ug/L	0.3139 ppb	17:46:04
3	As 188.979†	-23.3	9.9	4.4693 ug/L	4.4693 ppb	17:46:24
3	B 249.677†	-376.2	152.4	3.6303 ug/L	3.6303 ppb	17:46:24
3	Ba 233.527†	-22.5	-11.5	-0.0952 ug/L	-0.0952 ppb	17:46:24
3	Be 313.107†	-4293.1	-74.1	-0.0277 ug/L	-0.0277 ppb	17:46:04
3	Cd 226.502†	-185.5	21.2	0.2558 ug/L	0.2558 ppb	17:46:24
3	Co 228.616†	-68.7	3.1	0.0666 ug/L	0.0666 ppb	17:46:24
3	Cr 267.716†	57.9	-7.2	-0.0860 ug/L	-0.0860 ppb	17:46:24
3	Cu 324.752†	5315.2	-357.3	-1.0867 ug/L	-1.0867 ppb	17:46:04
3	Mn 257.610†	457.7	18.5	0.0148 ug/L	0.0148 ppb	17:46:24
3	Mo 202.031†	11.1	-4.1	-0.3120 ug/L	-0.3120 ppb	17:46:24
3	Ni 231.604†	95.7	-9.6	-0.2499 ug/L	-0.2499 ppb	17:46:24
3	P 214.914†	234.9	13.4	8.5848 ug/L	8.5848 ppb	17:46:24
3	Pb 220.353†	-54.6	5.6	0.7013 ug/L	0.7013 ppb	17:46:24
3	S 181.975 Axial†	38.7	0.4	0.6278 ug/L	0.6278 ppb	17:46:24
3	Sb 206.836†	42.2	1.3	0.4079 ug/L	0.4079 ppb	17:46:24
3	Se 196.026†	-18.3	3.4	2.1459 ug/L	2.1459 ppb	17:46:24
3	Si 251.611†	554.1	7.3	0.2469 ug/L	0.2469 ppb	17:46:24
3	Sn 189.927†	-0.4	-9.1	-1.6878 ug/L	-1.6878 ppb	17:46:24
3	Ti 334.940†	-1299.2	-32.3	-0.0587 ug/L	-0.0587 ppb	17:46:04
3	Tl 190.801†	-36.1	-2.9	-0.9291 ug/L	-0.9291 ppb	17:46:24
3	U 409.014†	-2832.5	68.6	1.9920 ug/L	1.9920 ppb	17:46:04
3	V 292.402†	-1522.0	-9.8	-0.0650 ug/L	-0.0650 ppb	17:46:04
3	Zn 213.857†	713.0	19.7	0.2023 ug/L	0.2023 ppb	17:46:24
3	SiO2†	572.4	5.3	0.3839 ug/L	0.3839 ppb	17:46:39

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	840598.7	97.507 %		0.3873			0.40%
Sc Radial	4855.6	101 %		0.8			0.76%
Y 371.029	685247.7	95.892 %		0.3863			0.40%
Y RADIAL	5091.2	101.8 %		1.18			1.16%
Ag 328.068†	78.3	0.3609 ug/L		0.16791	0.3609 ppb	0.16791	46.52%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	12.1	11.233 ug/L		8.2799	11.233 ppb	8.2799	73.71%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	4.9	2.2211 ug/L		1.97047	2.2211 ppb	1.97047	88.72%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	166.5	3.9649 ug/L		0.55267	3.9649 ppb	0.55267	13.94%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	-6.8	-0.0562 ug/L		0.04132	-0.0562 ppb	0.04132	73.58%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	-20.6	-0.0079 ug/L		0.01837	-0.0079 ppb	0.01837	231.33%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	1.8	3.0572 ug/L		3.17716	3.0572 ppb	3.17716	103.92%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated							
Cd 226.502†	12.0	0.1452 ug/L	0.10606	0.1452 ppb	0.10606	73.05%	
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	9.4	0.2052 ug/L	0.21183	0.2052 ppb	0.21183	103.22%	
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	4.8	0.0556 ug/L	0.12796	0.0556 ppb	0.12796	230.13%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-337.8	-1.0263 ug/L	0.21702	-1.0263 ppb	0.21702	21.15%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	-2.4	-22.237 ug/L	13.0005	-22.237 ppb	13.0005	58.46%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	8.6	1.4829 ug/L	15.09979	1.4829 ppb	15.09979	>999.9%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	1.7	61.712 ug/L	11.4994	61.712 ppb	11.4994	18.63%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	16.1	0.0138 ug/L	0.01541	0.0138 ppb	0.01541	111.73%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	0.8	0.0569 ug/L	0.42683	0.0569 ppb	0.42683	750.44%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	228.4	69.066 ug/L	5.9995	69.066 ppb	5.9995	8.69%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	-9.4	-0.2445 ug/L	0.14206	-0.2445 ppb	0.14206	58.10%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	13.4	8.5864 ug/L	0.49718	8.5864 ppb	0.49718	5.79%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	2.8	0.3487 ug/L	0.42548	0.3487 ppb	0.42548	122.03%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-0.3	-0.4727 ug/L	4.48787	-0.4727 ppb	4.48787	949.38%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	-0.5	-0.1771 ug/L	0.55632	-0.1771 ppb	0.55632	314.05%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	1.7	1.0703 ug/L	5.94121	1.0703 ppb	5.94121	555.09%	
QC value within limits for Se 196.026 Recovery = Not calculated							
Si 251.611†	2.2	0.0720 ug/L	0.15481	0.0720 ppb	0.15481	215.02%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-2.9	-0.5408 ug/L	1.00024	-0.5408 ppb	1.00024	184.96%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	-6.1	-0.0426 ug/L	0.16018	-0.0426 ppb	0.16018	375.57%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	-76.2	-0.1285 ug/L	0.06493	-0.1285 ppb	0.06493	50.53%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	-3.0	-0.9647 ug/L	2.01802	-0.9647 ppb	2.01802	209.18%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	22.7	0.6602 ug/L	3.04404	0.6602 ppb	3.04404	461.07%	
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	2.9	0.0277 ug/L	0.09118	0.0277 ppb	0.09118	328.89%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	28.0	0.2821 ug/L	0.07321	0.2821 ppb	0.07321	25.95%	
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†	-2.7	-0.1932 ug/L	0.81291	-0.1932 ppb	0.81291	420.78%	
QC value within limits for SiO2 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 21
 Sample ID: CCV
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 1
 Date Collected: 2/11/2010 18:43:32
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4898.3	4898.3	102 %		18:45:24
1	Y RADIAL	5094.3	5094.3	101.9 %		18:45:24
1	Al 396.153Radial†	5321.6	5374.0	4963.7 ug/L	4963.7 ppb	18:45:24
1	Ca 317.933Radial†	3077.8	3003.6	4978.3 ug/L	4978.3 ppb	18:45:44
1	Fe 238.204 Radial†	562.6	540.6	4934.8 ug/L	4934.8 ppb	18:45:44
1	K 766.490 Radial†	31073.9	27668.6	4877.9 ug/L	4877.9 ppb	18:45:24
1	Mg 279.077 IEC†	148.1	145.0	5137.6 ug/L	5137.6 ppb	18:45:44
1	Na 589.592 Radial†	31287.8	31782.8	9612.7 ug/L	9612.7 ppb	18:45:24
1	Sr 421.552†	73908.0	72527.5	508.61 ug/L	508.61 ppb	18:45:24
1	Sc 361.383	841502.2	841502.2	97.611 %		18:46:41
1	Y 371.029	676715.5	676715.5	94.698 %		18:46:41
1	Ag 328.068†	104884.6	107222.4	508.41 ug/L	508.41 ppb	18:46:46
1	As 188.979†	1044.4	1103.8	505.21 ug/L	505.21 ppb	18:47:06
1	B 249.677†	20354.0	21391.1	506.59 ug/L	506.59 ppb	18:46:46
1	Ba 233.527†	61637.4	63157.3	517.04 ug/L	517.04 ppb	18:46:46
1	Be 313.107†	1306809.0	1343126.3	501.43 ug/L	501.43 ppb	18:46:41
1	Cd 226.502†	41253.9	42475.4	504.90 ug/L	504.90 ppb	18:46:46
1	Co 228.616†	23461.5	24109.4	526.66 ug/L	526.66 ppb	18:46:46
1	Cr 267.716†	41878.3	42836.3	499.30 ug/L	499.30 ppb	18:46:46
1	Cu 324.752†	171278.1	169648.7	514.61 ug/L	514.61 ppb	18:46:46
1	Mn 257.610†	432954.3	443097.1	510.07 ug/L	510.07 ppb	18:46:41
1	Mo 202.031†	6443.2	6585.3	493.60 ug/L	493.60 ppb	18:47:06
1	Ni 231.604†	19201.8	19563.6	506.51 ug/L	506.51 ppb	18:46:46
1	P 214.914†	4172.1	4046.1	2417.5 ug/L	2417.5 ppb	18:47:06
1	Pb 220.353†	3802.8	3957.6	495.32 ug/L	495.32 ppb	18:47:06
1	S 181.975 Axial†	712.2	690.3	1005.6 ug/L	1005.6 ppb	18:47:06
1	Sb 206.836†	1445.0	1438.2	518.99 ug/L	518.99 ppb	18:47:06
1	Se 196.026†	697.8	737.0	514.07 ug/L	514.07 ppb	18:47:06
1	Si 251.611†	76025.4	77323.6	2580.3 ug/L	2580.3 ppb	18:46:46
1	Sn 189.927†	2594.8	2649.6	492.55 ug/L	492.55 ppb	18:47:06
1	Ti 334.940†	306888.3	315701.2	511.90 ug/L	511.90 ppb	18:46:46
1	Tl 190.801†	1499.9	1570.8	506.81 ug/L	506.81 ppb	18:47:06
1	U 409.014†	14009.8	17332.7	500.91 ug/L	500.91 ppb	18:46:46
1	V 292.402†	65688.1	68850.2	506.59 ug/L	506.59 ppb	18:46:46
1	Zn 213.857†	51597.1	52146.4	509.79 ug/L	509.79 ppb	18:46:46
1	SiO2†	74932.5	76183.0	5420.9 ug/L	5420.9 ppb	18:48:14
2	Sc Radial	4871.6	4871.6	101 %		18:45:49
2	Y RADIAL	5050.9	5050.9	101.0 %		18:45:49
2	Al 396.153Radial†	5283.7	5365.1	4955.9 ug/L	4955.9 ppb	18:45:49
2	Ca 317.933Radial†	3092.2	3034.4	5029.3 ug/L	5029.3 ppb	18:46:09
2	Fe 238.204 Radial†	562.1	543.2	4957.7 ug/L	4957.7 ppb	18:46:09
2	K 766.490 Radial†	30985.4	27747.9	4891.9 ug/L	4891.9 ppb	18:45:49
2	Mg 279.077 IEC†	150.7	148.2	5254.0 ug/L	5254.0 ppb	18:46:09
2	Na 589.592 Radial†	30920.3	31587.8	9553.7 ug/L	9553.7 ppb	18:45:49
2	Sr 421.552†	73474.5	72495.9	508.39 ug/L	508.39 ppb	18:45:49
2	Sc 361.383	855235.2	855235.2	99.204 %		18:47:12
2	Y 371.029	687753.9	687753.9	96.243 %		18:47:12
2	Ag 328.068†	104084.4	104690.4	496.45 ug/L	496.45 ppb	18:47:17
2	As 188.979†	1051.1	1093.4	500.39 ug/L	500.39 ppb	18:47:37
2	B 249.677†	20099.2	20799.4	492.54 ug/L	492.54 ppb	18:47:17
2	Ba 233.527†	61148.7	61650.8	504.71 ug/L	504.71 ppb	18:47:17
2	Be 313.107†	1306033.3	1320846.7	493.10 ug/L	493.10 ppb	18:47:12
2	Cd 226.502†	40848.1	41387.6	491.96 ug/L	491.96 ppb	18:47:17
2	Co 228.616†	23316.3	23577.0	515.04 ug/L	515.04 ppb	18:47:17
2	Cr 267.716†	41676.0	41943.5	488.90 ug/L	488.90 ppb	18:47:17
2	Cu 324.752†	169333.5	164870.9	500.12 ug/L	500.12 ppb	18:47:17
2	Mn 257.610†	432295.6	435310.8	501.11 ug/L	501.11 ppb	18:47:12
2	Mo 202.031†	6445.0	6481.2	485.80 ug/L	485.80 ppb	18:47:37
2	Ni 231.604†	19034.1	19078.7	493.96 ug/L	493.96 ppb	18:47:17

2	P 214.914†	4157.9	3963.2	2368.7 ug/L	2368.7 ppb	18:47:37
2	Pb 220.353†	3799.6	3891.8	487.09 ug/L	487.09 ppb	18:47:37
2	S 181.975 Axial†	714.4	680.8	991.80 ug/L	991.80 ppb	18:47:37
2	Sb 206.836†	1434.0	1403.4	506.54 ug/L	506.54 ppb	18:47:37
2	Se 196.026†	698.1	725.8	506.60 ug/L	506.60 ppb	18:47:37
2	Si 251.611†	75242.4	75283.5	2512.2 ug/L	2512.2 ppb	18:47:17
2	Sn 189.927†	2585.1	2597.1	482.81 ug/L	482.81 ppb	18:47:37
2	Ti 334.940†	303903.6	307644.1	498.84 ug/L	498.84 ppb	18:47:17
2	Tl 190.801†	1503.1	1549.3	499.84 ug/L	499.84 ppb	18:47:37
2	U 409.014†	13894.4	16985.8	490.87 ug/L	490.87 ppb	18:47:17
2	V 292.402†	65279.8	67358.0	495.64 ug/L	495.64 ppb	18:47:17
2	Zn 213.857†	50994.7	50690.4	495.52 ug/L	495.52 ppb	18:47:17
2	SiO2†	74233.0	74245.2	5282.8 ug/L	5282.8 ppb	18:48:19
3	Sc Radial	4848.2	4848.2	101 %		18:46:14
3	Y RADIAL	5022.4	5022.4	100.4 %		18:46:14
3	Al 396.153Radial†	5286.8	5393.4	4982.4 ug/L	4982.4 ppb	18:46:14
3	Ca 317.933Radial†	3115.5	3072.3	5092.1 ug/L	5092.1 ppb	18:46:34
3	Fe 238.204 Radial†	572.1	555.7	5071.6 ug/L	5071.6 ppb	18:46:34
3	K 766.490 Radial†	30718.6	27631.5	4871.3 ug/L	4871.3 ppb	18:46:14
3	Mg 279.077 IEC†	148.6	146.9	5207.0 ug/L	5207.0 ppb	18:46:34
3	Na 589.592 Radial†	30664.8	31482.3	9521.8 ug/L	9521.8 ppb	18:46:14
3	Sr 421.552†	73012.9	72389.3	507.64 ug/L	507.64 ppb	18:46:14
3	Sc 361.383	857751.3	857751.3	99.496 %		18:47:43
3	Y 371.029	690942.7	690942.7	96.689 %		18:47:43
3	Ag 328.068†	104252.5	104551.5	495.83 ug/L	495.83 ppb	18:47:48
3	As 188.979†	1036.3	1075.4	492.28 ug/L	492.28 ppb	18:48:08
3	B 249.677†	20125.7	20766.7	491.75 ug/L	491.75 ppb	18:47:48
3	Ba 233.527†	61185.0	61506.4	503.54 ug/L	503.54 ppb	18:47:48
3	Be 313.107†	1312097.7	1323080.0	493.94 ug/L	493.94 ppb	18:47:43
3	Cd 226.502†	40954.4	41373.7	491.78 ug/L	491.78 ppb	18:47:48
3	Co 228.616†	23298.4	23490.1	513.13 ug/L	513.13 ppb	18:47:48
3	Cr 267.716†	41715.2	41859.7	487.92 ug/L	487.92 ppb	18:47:48
3	Cu 324.752†	169932.0	164971.7	500.43 ug/L	500.43 ppb	18:47:48
3	Mn 257.610†	432972.1	434712.4	500.43 ug/L	500.43 ppb	18:47:43
3	Mo 202.031†	6385.2	6402.0	479.89 ug/L	479.89 ppb	18:48:08
3	Ni 231.604†	19095.5	19084.2	494.10 ug/L	494.10 ppb	18:47:48
3	P 214.914†	4137.2	3930.1	2347.9 ug/L	2347.9 ppb	18:48:08
3	Pb 220.353†	3786.2	3867.1	484.00 ug/L	484.00 ppb	18:48:08
3	S 181.975 Axial†	710.8	675.1	983.46 ug/L	983.46 ppb	18:48:08
3	Sb 206.836†	1427.3	1392.4	502.49 ug/L	502.49 ppb	18:48:08
3	Se 196.026†	688.1	713.7	498.80 ug/L	498.80 ppb	18:48:08
3	Si 251.611†	75355.7	75175.0	2508.6 ug/L	2508.6 ppb	18:47:48
3	Sn 189.927†	2560.4	2564.7	476.80 ug/L	476.80 ppb	18:48:08
3	Ti 334.940†	304631.2	307476.8	498.58 ug/L	498.58 ppb	18:47:48
3	Tl 190.801†	1508.9	1550.8	500.30 ug/L	500.30 ppb	18:48:08
3	U 409.014†	13915.5	16966.0	490.29 ug/L	490.29 ppb	18:47:48
3	V 292.402†	65461.8	67347.9	495.47 ug/L	495.47 ppb	18:47:48
3	Zn 213.857†	51024.5	50569.6	494.31 ug/L	494.31 ppb	18:47:48
3	SiO2†	74357.9	74151.3	5276.3 ug/L	5276.3 ppb	18:48:24

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	851496.2	98.771 %	1.0145			1.03%
Sc Radial	4872.7	101 %	0.5			0.51%
Y 371.029	685137.4	95.877 %	1.0447			1.09%
Y RADIAL	5055.9	101.1 %	0.72			0.72%
Ag 328.068†	105488.1	500.23 ug/L	7.089	500.23 ppb	7.089	1.42%
QC value within limits for Ag 328.068 Recovery = 100.05%						
Al 396.153Radial†	5377.5	4967.3 ug/L	13.63	4967.3 ppb	13.63	0.27%
QC value within limits for Al 396.153Radial Recovery = 99.35%						
As 188.979†	1090.8	499.30 ug/L	6.537	499.30 ppb	6.537	1.31%
QC value within limits for As 188.979 Recovery = 99.86%						
B 249.677†	20985.7	496.96 ug/L	8.348	496.96 ppb	8.348	1.68%
QC value within limits for B 249.677 Recovery = 99.39%						
Ba 233.527†	62104.8	508.43 ug/L	7.479	508.43 ppb	7.479	1.47%
QC value within limits for Ba 233.527 Recovery = 101.69%						
Be 313.107†	1329017.6	496.16 ug/L	4.587	496.16 ppb	4.587	0.92%
QC value within limits for Be 313.107 Recovery = 99.23%						
Ca 317.933Radial†	3036.8	5033.2 ug/L	56.98	5033.2 ppb	56.98	1.13%

QC value within limits for Ca 317.933 Radial Recovery = 100.66%							
Cd 226.502†	41745.5	496.21 ug/L	7.525	496.21 ppb	7.525	1.52%	
QC value within limits for Cd 226.502 Recovery = 99.24%							
Co 228.616†	23725.5	518.28 ug/L	7.325	518.28 ppb	7.325	1.41%	
QC value within limits for Co 228.616 Recovery = 103.66%							
Cr 267.716†	42213.1	492.04 ug/L	6.307	492.04 ppb	6.307	1.28%	
QC value within limits for Cr 267.716 Recovery = 98.41%							
Cu 324.752†	166497.1	505.05 ug/L	8.275	505.05 ppb	8.275	1.64%	
QC value within limits for Cu 324.752 Recovery = 101.01%							
Fe 238.204 Radial†	546.5	4988.0 ug/L	73.26	4988.0 ppb	73.26	1.47%	
QC value within limits for Fe 238.204 Radial Recovery = 99.76%							
K 766.490 Radial†	27682.7	4880.4 ug/L	10.51	4880.4 ppb	10.51	0.22%	
QC value within limits for K 766.490 Radial Recovery = 97.61%							
Mg 279.077 IEC†	146.7	5199.5 ug/L	58.54	5199.5 ppb	58.54	1.13%	
QC value within limits for Mg 279.077 IEC Recovery = 103.99%							
Mn 257.610†	437706.8	503.87 ug/L	5.379	503.87 ppb	5.379	1.07%	
QC value within limits for Mn 257.610 Recovery = 100.77%							
Mo 202.031†	6489.5	486.43 ug/L	6.881	486.43 ppb	6.881	1.41%	
QC value within limits for Mo 202.031 Recovery = 97.29%							
Na 589.592 Radial†	31617.6	9562.7 ug/L	46.11	9562.7 ppb	46.11	0.48%	
QC value within limits for Na 589.592 Radial Recovery = 95.63%							
Ni 231.604†	19242.2	498.19 ug/L	7.208	498.19 ppb	7.208	1.45%	
QC value within limits for Ni 231.604 Recovery = 99.64%							
P 214.914†	3979.8	2378.0 ug/L	35.75	2378.0 ppb	35.75	1.50%	
QC value within limits for P 214.914 Recovery = 95.12%							
Pb 220.353†	3905.5	488.80 ug/L	5.851	488.80 ppb	5.851	1.20%	
QC value within limits for Pb 220.353 Recovery = 97.76%							
S 181.975 Axial†	682.0	993.62 ug/L	11.184	993.62 ppb	11.184	1.13%	
QC value within limits for S 181.975 Axial Recovery = 99.36%							
Sb 206.836†	1411.3	509.34 ug/L	8.597	509.34 ppb	8.597	1.69%	
QC value within limits for Sb 206.836 Recovery = 101.87%							
Se 196.026†	725.5	506.49 ug/L	7.637	506.49 ppb	7.637	1.51%	
QC value within limits for Se 196.026 Recovery = 101.30%							
Si 251.611†	75927.4	2533.7 ug/L	40.41	2533.7 ppb	40.41	1.59%	
QC value within limits for Si 251.611 Recovery = 101.35%							
Sn 189.927†	2603.8	484.05 ug/L	7.948	484.05 ppb	7.948	1.64%	
QC value within limits for Sn 189.927 Recovery = 96.81%							
Sr 421.552†	72470.9	508.21 ug/L	0.508	508.21 ppb	0.508	0.10%	
QC value within limits for Sr 421.552 Recovery = 101.64%							
Ti 334.940†	310274.1	503.11 ug/L	7.618	503.11 ppb	7.618	1.51%	
QC value within limits for Ti 334.940 Recovery = 100.62%							
Tl 190.801†	1557.0	502.31 ug/L	3.899	502.31 ppb	3.899	0.78%	
QC value within limits for Tl 190.801 Recovery = 100.46%							
U 409.014†	17094.8	494.02 ug/L	5.971	494.02 ppb	5.971	1.21%	
QC value within limits for U 409.014 Recovery = 98.80%							
V 292.402†	67852.0	499.23 ug/L	6.373	499.23 ppb	6.373	1.28%	
QC value within limits for V 292.402 Recovery = 99.85%							
Zn 213.857†	51135.5	499.87 ug/L	8.608	499.87 ppb	8.608	1.72%	
QC value within limits for Zn 213.857 Recovery = 99.97%							
SiO2†	74859.9	5326.7 ug/L	81.64	5326.7 ppb	81.64	1.53%	
QC value within limits for SiO2 Recovery = 99.61%							
All analyte(s) passed QC.							

Sequence No.: 22

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 6

Date Collected: 2/11/2010 18:50:34

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4915.1	4915.1	102 %		18:52:26
1	Y RADIAL	5137.6	5137.6	102.7 %		18:52:26
1	Al 396.153Radial†	-147.0	7.8	7.2301 ug/L	7.2301 ppb	18:52:26
1	Ca 317.933Radial†	14.7	-2.3	-3.7949 ug/L	-3.7949 ppb	18:52:46
1	Fe 238.204 Radial†	11.3	-0.5	-4.2891 ug/L	-4.2891 ppb	18:52:46
1	K 766.490 Radial†	2739.2	-146.8	-25.934 ug/L	-25.934 ppb	18:52:26
1	Mg 279.077 IEC†	0.7	0.2	8.3574 ug/L	8.3574 ppb	18:52:46
1	Na 589.592 Radial†	-902.8	195.6	59.145 ug/L	59.145 ppb	18:52:26
1	Sr 421.552†	4.5	2.3	0.0164 ug/L	0.0164 ppb	18:52:26
1	Sc 361.383	841871.0	841871.0	97.654 %		18:53:43
1	Y 371.029	686186.9	686186.9	96.024 %		18:53:43
1	Ag 328.068†	202.9	-21.0	-0.1012 ug/L	-0.1012 ppb	18:53:43
1	As 188.979†	-31.9	1.2	0.5610 ug/L	0.5610 ppb	18:54:03
1	B 249.677†	-416.5	112.6	2.6783 ug/L	2.6783 ppb	18:54:03
1	Ba 233.527†	-31.0	-20.2	-0.1641 ug/L	-0.1641 ppb	18:54:03
1	Be 313.107†	-4253.5	-17.0	-0.0063 ug/L	-0.0063 ppb	18:53:43
1	Cd 226.502†	-196.0	11.2	0.1340 ug/L	0.1340 ppb	18:54:03
1	Co 228.616†	-67.7	4.4	0.0965 ug/L	0.0965 ppb	18:54:03
1	Cr 267.716†	79.1	14.2	0.1645 ug/L	0.1645 ppb	18:54:03
1	Cu 324.752†	5353.6	-338.5	-1.0285 ug/L	-1.0285 ppb	18:53:43
1	Mn 257.610†	451.3	10.2	0.0110 ug/L	0.0110 ppb	18:54:03
1	Mo 202.031†	18.7	3.7	0.2732 ug/L	0.2732 ppb	18:54:03
1	Ni 231.604†	91.4	-14.4	-0.3735 ug/L	-0.3735 ppb	18:54:03
1	P 214.914†	237.6	15.3	9.7069 ug/L	9.7069 ppb	18:54:03
1	Pb 220.353†	-57.8	2.6	0.3246 ug/L	0.3246 ppb	18:54:03
1	S 181.975 Axial†	37.7	-0.7	-1.0842 ug/L	-1.0842 ppb	18:54:03
1	Sb 206.836†	39.4	-1.8	-0.6343 ug/L	-0.6343 ppb	18:54:03
1	Se 196.026†	-15.0	6.8	4.5394 ug/L	4.5394 ppb	18:54:03
1	Si 251.611†	562.5	13.8	0.4578 ug/L	0.4578 ppb	18:54:03
1	Sn 189.927†	7.6	-0.9	-0.1755 ug/L	-0.1755 ppb	18:54:03
1	Ti 334.940†	-1260.0	12.9	0.0185 ug/L	0.0185 ppb	18:53:43
1	Tl 190.801†	-35.7	-2.4	-0.7588 ug/L	-0.7588 ppb	18:54:03
1	U 409.014†	-2818.8	93.5	2.7116 ug/L	2.7116 ppb	18:53:43
1	V 292.402†	-1469.4	49.9	0.3724 ug/L	0.3724 ppb	18:53:43
1	Zn 213.857†	725.7	29.9	0.2996 ug/L	0.2996 ppb	18:54:03
1	SiO2†	546.4	-23.6	-1.6935 ug/L	-1.6935 ppb	18:54:59
2	Sc Radial	4891.2	4891.2	102 %		18:52:51
2	Y RADIAL	5119.4	5119.4	102.4 %		18:52:51
2	Al 396.153Radial†	-149.9	4.2	3.9284 ug/L	3.9284 ppb	18:52:51
2	Ca 317.933Radial†	18.9	1.9	3.0853 ug/L	3.0853 ppb	18:53:11
2	Fe 238.204 Radial†	10.3	-1.4	-12.533 ug/L	-12.533 ppb	18:53:11
2	K 766.490 Radial†	2687.1	-184.9	-32.658 ug/L	-32.658 ppb	18:52:51
2	Mg 279.077 IEC†	2.4	2.0	69.586 ug/L	69.586 ppb	18:53:11
2	Na 589.592 Radial†	-915.3	179.0	54.137 ug/L	54.137 ppb	18:52:51
2	Sr 421.552†	22.6	20.1	0.1411 ug/L	0.1411 ppb	18:52:51
2	Sc 361.383	831442.5	831442.5	96.444 %		18:54:08
2	Y 371.029	677260.4	677260.4	94.774 %		18:54:08
2	Ag 328.068†	230.6	10.3	0.0531 ug/L	0.0531 ppb	18:54:08
2	As 188.979†	-17.1	16.2	7.3271 ug/L	7.3271 ppb	18:54:28
2	B 249.677†	-394.2	130.3	3.1026 ug/L	3.1026 ppb	18:54:28
2	Ba 233.527†	-6.4	5.0	0.0415 ug/L	0.0415 ppb	18:54:28
2	Be 313.107†	-4280.9	-100.0	-0.0377 ug/L	-0.0377 ppb	18:54:08
2	Cd 226.502†	-186.4	18.7	0.2213 ug/L	0.2213 ppb	18:54:28
2	Co 228.616†	-73.2	-2.2	-0.0466 ug/L	-0.0466 ppb	18:54:28
2	Cr 267.716†	88.9	25.4	0.2995 ug/L	0.2995 ppb	18:54:28
2	Cu 324.752†	5305.3	-319.9	-0.9664 ug/L	-0.9664 ppb	18:54:08
2	Mn 257.610†	450.3	15.0	0.0132 ug/L	0.0132 ppb	18:54:28
2	Mo 202.031†	15.2	0.2	0.0127 ug/L	0.0127 ppb	18:54:28
2	Ni 231.604†	89.5	-15.2	-0.3946 ug/L	-0.3946 ppb	18:54:28

2	P 214.914†	222.9	3.1	2.1172 ug/L	2.1172 ppb	18:54:28
2	Pb 220.353†	-60.4	-1.0	-0.1168 ug/L	-0.1168 ppb	18:54:28
2	S 181.975 Axial†	41.4	3.6	5.1964 ug/L	5.1964 ppb	18:54:28
2	Sb 206.836†	46.5	6.1	2.1364 ug/L	2.1364 ppb	18:54:28
2	Se 196.026†	-18.9	2.5	1.6554 ug/L	1.6554 ppb	18:54:28
2	Si 251.611†	553.9	12.1	0.4037 ug/L	0.4037 ppb	18:54:28
2	Sn 189.927†	10.0	1.7	0.3146 ug/L	0.3146 ppb	18:54:28
2	Ti 334.940†	-1363.6	-110.7	-0.1813 ug/L	-0.1813 ppb	18:54:08
2	Tl 190.801†	-35.8	-2.9	-0.9449 ug/L	-0.9449 ppb	18:54:28
2	U 409.014†	-3151.6	-287.7	-8.3413 ug/L	-8.3413 ppb	18:54:08
2	V 292.402†	-1434.0	67.8	0.4799 ug/L	0.4799 ppb	18:54:08
2	Zn 213.857†	705.8	18.6	0.1888 ug/L	0.1888 ppb	18:54:28
2	SiO2†	590.9	29.6	2.1092 ug/L	2.1092 ppb	18:55:04
3	Sc Radial	4909.9	4909.9	102 %		18:53:16
3	Y RADIAL	5151.7	5151.7	103.0 %		18:53:16
3	Al 396.153Radial†	-158.7	-3.7	-3.4925 ug/L	-3.4925 ppb	18:53:16
3	Ca 317.933Radial†	14.8	-2.2	-3.7084 ug/L	-3.7084 ppb	18:53:36
3	Fe 238.204 Radial†	9.3	-2.4	-21.859 ug/L	-21.859 ppb	18:53:36
3	K 766.490 Radial†	2818.7	-66.2	-11.701 ug/L	-11.701 ppb	18:53:16
3	Mg 279.077 IEC†	1.9	1.5	51.431 ug/L	51.431 ppb	18:53:36
3	Na 589.592 Radial†	-911.1	186.6	56.425 ug/L	56.425 ppb	18:53:16
3	Sr 421.552†	-2.1	-4.2	-0.0294 ug/L	-0.0294 ppb	18:53:16
3	Sc 361.383	834826.2	834826.2	96.837 %		18:54:33
3	Y 371.029	681258.3	681258.3	95.334 %		18:54:33
3	Ag 328.068†	210.3	-11.6	-0.0623 ug/L	-0.0623 ppb	18:54:33
3	As 188.979†	-27.8	5.1	2.3169 ug/L	2.3169 ppb	18:54:53
3	B 249.677†	-397.9	128.1	3.0510 ug/L	3.0510 ppb	18:54:53
3	Ba 233.527†	-13.4	-2.3	-0.0194 ug/L	-0.0194 ppb	18:54:53
3	Be 313.107†	-4230.8	-30.3	-0.0112 ug/L	-0.0112 ppb	18:54:33
3	Cd 226.502†	-201.4	3.9	0.0487 ug/L	0.0487 ppb	18:54:53
3	Co 228.616†	-64.1	7.5	0.1653 ug/L	0.1653 ppb	18:54:53
3	Cr 267.716†	83.1	19.0	0.2205 ug/L	0.2205 ppb	18:54:53
3	Cu 324.752†	5334.7	-311.8	-0.9473 ug/L	-0.9473 ppb	18:54:33
3	Mn 257.610†	434.1	-3.6	-0.0084 ug/L	-0.0084 ppb	18:54:53
3	Mo 202.031†	20.7	5.9	0.4371 ug/L	0.4371 ppb	18:54:53
3	Ni 231.604†	106.0	1.5	0.0386 ug/L	0.0386 ppb	18:54:53
3	P 214.914†	225.9	5.2	3.4380 ug/L	3.4380 ppb	18:54:53
3	Pb 220.353†	-60.1	-0.3	-0.0402 ug/L	-0.0402 ppb	18:54:53
3	S 181.975 Axial†	36.3	-1.9	-2.7843 ug/L	-2.7843 ppb	18:54:53
3	Sb 206.836†	38.5	-2.4	-0.7876 ug/L	-0.7876 ppb	18:54:53
3	Se 196.026†	-11.5	10.3	6.8501 ug/L	6.8501 ppb	18:54:53
3	Si 251.611†	543.1	-1.5	-0.0543 ug/L	-0.0543 ppb	18:54:53
3	Sn 189.927†	17.5	9.4	1.7400 ug/L	1.7400 ppb	18:54:53
3	Ti 334.940†	-1237.4	25.4	0.0361 ug/L	0.0361 ppb	18:54:33
3	Tl 190.801†	-36.8	-3.9	-1.2348 ug/L	-1.2348 ppb	18:54:53
3	U 409.014†	-2869.7	16.6	0.4847 ug/L	0.4847 ppb	18:54:33
3	V 292.402†	-1506.7	-1.3	0.0018 ug/L	0.0018 ppb	18:54:33
3	Zn 213.857†	714.3	24.4	0.2452 ug/L	0.2452 ppb	18:54:53
3	SiO2†	536.2	-29.4	-2.1068 ug/L	-2.1068 ppb	18:55:09

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	836046.6	96.979 %	0.6171			0.64%
Sc Radial	4905.4	102 %	0.3			0.26%
Y 371.029	681568.5	95.377 %	0.6257			0.66%
Y RADIAL	5136.2	102.7 %	0.32			0.32%
Ag 328.068†	-7.4	-0.0368 ug/L	0.08029	-0.0368 ppb	0.08029	218.11%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	2.8	2.5553 ug/L	5.49160	2.5553 ppb	5.49160	214.91%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	7.5	3.4017 ug/L	3.51107	3.4017 ppb	3.51107	103.22%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	123.7	2.9440 ug/L	0.23149	2.9440 ppb	0.23149	7.86%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-5.8	-0.0473 ug/L	0.10557	-0.0473 ppb	0.10557	223.09%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-49.1	-0.0184 ug/L	0.01688	-0.0184 ppb	0.01688	91.90%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-0.9	-1.4727 ug/L	3.94754	-1.4727 ppb	3.94754	268.05%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated							
Cd	226.502†	11.3	0.1347 ug/L	0.08629	0.1347 ppb	0.08629	64.07%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co	228.616†	3.3	0.0717 ug/L	0.10808	0.0717 ppb	0.10808	150.70%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr	267.716†	19.5	0.2281 ug/L	0.06783	0.2281 ppb	0.06783	29.73%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	-323.4	-0.9807 ug/L	0.04247	-0.9807 ppb	0.04247	4.33%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	-1.4	-12.894 ug/L	8.7907	-12.894 ppb	8.7907	68.18%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	-132.6	-23.431 ug/L	10.7004	-23.431 ppb	10.7004	45.67%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	1.2	43.125 ug/L	31.4483	43.125 ppb	31.4483	72.92%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	7.2	0.0052 ug/L	0.01190	0.0052 ppb	0.01190	226.83%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	3.2	0.2410 ug/L	0.21405	0.2410 ppb	0.21405	88.82%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	187.0	56.569 ug/L	2.5072	56.569 ppb	2.5072	4.43%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	-9.4	-0.2432 ug/L	0.24428	-0.2432 ppb	0.24428	100.45%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	7.8	5.0874 ug/L	4.05476	5.0874 ppb	4.05476	79.70%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	0.4	0.0559 ug/L	0.23589	0.0559 ppb	0.23589	422.17%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	0.3	0.4426 ug/L	4.20376	0.4426 ppb	4.20376	949.71%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	0.6	0.2382 ug/L	1.64573	0.2382 ppb	1.64573	691.00%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	6.5	4.3483 ug/L	2.60263	4.3483 ppb	2.60263	59.85%
QC value within limits for Se 196.026 Recovery = Not calculated							
Si	251.611†	8.1	0.2691 ug/L	0.28137	0.2691 ppb	0.28137	104.57%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	3.4	0.6263 ug/L	0.99508	0.6263 ppb	0.99508	158.87%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	6.1	0.0427 ug/L	0.08826	0.0427 ppb	0.08826	206.72%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	-24.1	-0.0422 ug/L	0.12076	-0.0422 ppb	0.12076	286.14%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	-3.1	-0.9795 ug/L	0.23985	-0.9795 ppb	0.23985	24.49%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	-59.2	-1.7150 ug/L	5.84556	-1.7150 ppb	5.84556	340.85%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	38.8	0.2847 ug/L	0.25081	0.2847 ppb	0.25081	88.10%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	24.3	0.2445 ug/L	0.05540	0.2445 ppb	0.05540	22.65%
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†		-7.8	-0.5637 ug/L	2.32398	-0.5637 ppb	2.32398	412.27%
QC value within limits for SiO2 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 30

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 1

Date Collected: 2/11/2010 19:44:46

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4892.3	4892.3	102 %		19:46:38
1	Y RADIAL	5112.4	5112.4	102.2 %		19:46:38
1	Al 396.153Radial†	5389.9	5447.4	5032.1 ug/L	5032.1 ppb	19:46:38
1	Ca 317.933Radial†	3106.7	3035.7	5031.5 ug/L	5031.5 ppb	19:46:58
1	Fe 238.204 Radial†	582.8	561.1	5121.1 ug/L	5121.1 ppb	19:46:58
1	K 766.490 Radial†	30986.8	27620.3	4869.1 ug/L	4869.1 ppb	19:46:38
1	Mg 279.077 IEC†	151.9	148.9	5276.1 ug/L	5276.1 ppb	19:46:58
1	Na 589.592 Radial†	33473.1	33967.4	10273 ug/L	10273 ppb	19:46:38
1	Sr 421.552†	76828.8	75485.9	529.36 ug/L	529.36 ppb	19:46:38
1	Sc 361.383	844484.5	844484.5	97.957 %		19:47:55
1	Y 371.029	681689.6	681689.6	95.394 %		19:47:55
1	Ag 328.068†	103140.5	105062.5	498.27 ug/L	498.27 ppb	19:48:00
1	As 188.979†	1039.4	1095.0	501.16 ug/L	501.16 ppb	19:48:20
1	B 249.677†	20002.0	20958.2	496.29 ug/L	496.29 ppb	19:48:00
1	Ba 233.527†	60529.7	61803.5	505.97 ug/L	505.97 ppb	19:48:00
1	Be 313.107†	1301198.0	1332670.4	497.51 ug/L	497.51 ppb	19:47:55
1	Cd 226.502†	40393.4	41447.7	492.65 ug/L	492.65 ppb	19:48:00
1	Co 228.616†	23070.9	23625.7	516.11 ug/L	516.11 ppb	19:48:00
1	Cr 267.716†	41389.4	42185.7	491.73 ug/L	491.73 ppb	19:48:00
1	Cu 324.752†	167859.6	165539.2	502.16 ug/L	502.16 ppb	19:48:00
1	Mn 257.610†	428823.2	437313.5	503.43 ug/L	503.43 ppb	19:47:55
1	Mo 202.031†	6419.3	6537.7	490.05 ug/L	490.05 ppb	19:48:20
1	Ni 231.604†	18874.1	19159.7	496.05 ug/L	496.05 ppb	19:48:00
1	P 214.914†	4137.6	3995.8	2388.5 ug/L	2388.5 ppb	19:48:20
1	Pb 220.353†	3795.3	3936.2	492.64 ug/L	492.64 ppb	19:48:20
1	S 181.975 Axial†	700.3	675.5	984.14 ug/L	984.14 ppb	19:48:20
1	Sb 206.836†	1431.4	1419.1	512.14 ug/L	512.14 ppb	19:48:20
1	Se 196.026†	696.6	733.2	512.13 ug/L	512.13 ppb	19:48:20
1	Si 251.611†	74449.7	75439.9	2517.3 ug/L	2517.3 ppb	19:48:00
1	Sn 189.927†	2568.9	2613.8	485.91 ug/L	485.91 ppb	19:48:20
1	Ti 334.940†	301008.1	308588.2	500.37 ug/L	500.37 ppb	19:48:00
1	Tl 190.801†	1493.0	1558.3	502.73 ug/L	502.73 ppb	19:48:20
1	U 409.014†	13492.5	16753.9	484.12 ug/L	484.12 ppb	19:48:00
1	V 292.402†	64755.7	67660.7	497.86 ug/L	497.86 ppb	19:48:00
1	Zn 213.857†	50498.5	50838.3	496.94 ug/L	496.94 ppb	19:48:00
1	SiO2†	75442.2	76432.3	5438.7 ug/L	5438.7 ppb	19:49:28
2	Sc Radial	4782.0	4782.0	99.5 %		19:47:03
2	Y RADIAL	4979.5	4979.5	99.58 %		19:47:03
2	Al 396.153Radial†	5208.0	5386.8	4976.2 ug/L	4976.2 ppb	19:47:03
2	Ca 317.933Radial†	3091.1	3090.4	5122.2 ug/L	5122.2 ppb	19:47:23
2	Fe 238.204 Radial†	582.3	573.8	5236.4 ug/L	5236.4 ppb	19:47:23
2	K 766.490 Radial†	30491.7	27824.8	4905.2 ug/L	4905.2 ppb	19:47:03
2	Mg 279.077 IEC†	147.8	148.2	5251.0 ug/L	5251.0 ppb	19:47:23
2	Na 589.592 Radial†	32580.7	33828.9	10232 ug/L	10232 ppb	19:47:03
2	Sr 421.552†	74747.4	75134.6	526.89 ug/L	526.89 ppb	19:47:03
2	Sc 361.383	856895.4	856895.4	99.397 %		19:48:26
2	Y 371.029	690435.0	690435.0	96.618 %		19:48:26
2	Ag 328.068†	104436.2	104841.1	497.26 ug/L	497.26 ppb	19:48:31
2	As 188.979†	1044.1	1084.3	496.39 ug/L	496.39 ppb	19:48:51
2	B 249.677†	20451.7	21114.8	500.00 ug/L	500.00 ppb	19:48:31
2	Ba 233.527†	61609.6	61995.0	507.54 ug/L	507.54 ppb	19:48:31
2	Be 313.107†	1320688.0	1333039.6	497.65 ug/L	497.65 ppb	19:48:26
2	Cd 226.502†	41209.8	41671.7	495.31 ug/L	495.31 ppb	19:48:31
2	Co 228.616†	23425.5	23641.4	516.43 ug/L	516.43 ppb	19:48:31
2	Cr 267.716†	41989.6	42177.6	491.63 ug/L	491.63 ppb	19:48:31
2	Cu 324.752†	170215.1	165427.1	501.82 ug/L	501.82 ppb	19:48:31
2	Mn 257.610†	436421.0	438617.0	504.94 ug/L	504.94 ppb	19:48:26
2	Mo 202.031†	6405.2	6428.6	481.89 ug/L	481.89 ppb	19:48:51
2	Ni 231.604†	19185.4	19193.8	496.94 ug/L	496.94 ppb	19:48:31

2	P 214.914†	4158.5	3955.6	2363.4 ug/L	2363.4 ppb	19:48:51
2	Pb 220.353†	3773.7	3858.4	482.89 ug/L	482.89 ppb	19:48:51
2	S 181.975 Axial†	705.7	670.6	976.97 ug/L	976.97 ppb	19:48:51
2	Sb 206.836†	1426.4	1392.9	502.77 ug/L	502.77 ppb	19:48:51
2	Se 196.026†	687.9	714.1	499.62 ug/L	499.62 ppb	19:48:51
2	Si 251.611†	75761.2	75658.5	2524.7 ug/L	2524.7 ppb	19:48:31
2	Sn 189.927†	2569.5	2576.4	478.98 ug/L	478.98 ppb	19:48:51
2	Ti 334.940†	305617.9	308775.3	500.68 ug/L	500.68 ppb	19:48:31
2	Tl 190.801†	1491.7	1534.9	495.25 ug/L	495.25 ppb	19:48:51
2	U 409.014†	14066.9	17132.3	495.08 ug/L	495.08 ppb	19:48:31
2	V 292.402†	65675.9	67629.0	497.52 ug/L	497.52 ppb	19:48:31
2	Zn 213.857†	51346.8	50945.1	497.97 ug/L	497.97 ppb	19:48:31
2	SiO2†	75358.0	75232.1	5353.3 ug/L	5353.3 ppb	19:49:33
3	Sc Radial	4857.0	4857.0	101 %		19:47:28
3	Y RADIAL	5072.2	5072.2	101.4 %		19:47:28
3	Al 396.153Radial†	5263.2	5360.5	4951.5 ug/L	4951.5 ppb	19:47:28
3	Ca 317.933Radial†	3091.6	3043.0	5043.5 ug/L	5043.5 ppb	19:47:48
3	Fe 238.204 Radial†	582.0	564.5	5151.4 ug/L	5151.4 ppb	19:47:48
3	K 766.490 Radial†	30787.4	27644.1	4873.3 ug/L	4873.3 ppb	19:47:28
3	Mg 279.077 IEC†	151.1	149.1	5283.6 ug/L	5283.6 ppb	19:47:48
3	Na 589.592 Radial†	32913.7	33652.6	10178 ug/L	10178 ppb	19:47:28
3	Sr 421.552†	75619.1	74836.9	524.80 ug/L	524.80 ppb	19:47:28
3	Sc 361.383	846381.8	846381.8	98.177 %		19:48:57
3	Y 371.029	680808.1	680808.1	95.271 %		19:48:57
3	Ag 328.068†	102802.8	104482.5	495.53 ug/L	495.53 ppb	19:49:02
3	As 188.979†	1031.0	1084.0	496.19 ug/L	496.19 ppb	19:49:22
3	B 249.677†	19986.5	20896.6	494.83 ug/L	494.83 ppb	19:49:02
3	Ba 233.527†	60362.9	61495.1	503.44 ug/L	503.44 ppb	19:49:02
3	Be 313.107†	1301355.3	1329852.9	496.46 ug/L	496.46 ppb	19:48:57
3	Cd 226.502†	40284.5	41244.3	490.23 ug/L	490.23 ppb	19:49:02
3	Co 228.616†	22925.6	23424.9	511.72 ug/L	511.72 ppb	19:49:02
3	Cr 267.716†	41166.6	41864.1	487.98 ug/L	487.98 ppb	19:49:02
3	Cu 324.752†	167352.8	164638.8	499.43 ug/L	499.43 ppb	19:49:02
3	Mn 257.610†	430983.2	438532.3	504.83 ug/L	504.83 ppb	19:48:57
3	Mo 202.031†	6404.5	6507.9	487.82 ug/L	487.82 ppb	19:49:22
3	Ni 231.604†	18742.0	18981.9	491.45 ug/L	491.45 ppb	19:49:02
3	P 214.914†	4117.9	3966.2	2370.6 ug/L	2370.6 ppb	19:49:22
3	Pb 220.353†	3788.3	3920.3	490.64 ug/L	490.64 ppb	19:49:22
3	S 181.975 Axial†	704.0	677.7	987.32 ug/L	987.32 ppb	19:49:22
3	Sb 206.836†	1439.5	1424.0	513.80 ug/L	513.80 ppb	19:49:22
3	Se 196.026†	692.5	727.5	508.37 ug/L	508.37 ppb	19:49:22
3	Si 251.611†	74242.6	75058.6	2504.6 ug/L	2504.6 ppb	19:49:02
3	Sn 189.927†	2564.2	2603.1	483.92 ug/L	483.92 ppb	19:49:22
3	Ti 334.940†	300261.1	307138.4	498.02 ug/L	498.02 ppb	19:49:02
3	Tl 190.801†	1482.5	1544.3	498.24 ug/L	498.24 ppb	19:49:22
3	U 409.014†	13522.0	16753.1	484.10 ug/L	484.10 ppb	19:49:02
3	V 292.402†	64464.8	67216.2	494.60 ug/L	494.60 ppb	19:49:02
3	Zn 213.857†	50386.1	50608.2	494.70 ug/L	494.70 ppb	19:49:02
3	SiO2†	74726.5	75530.7	5374.5 ug/L	5374.5 ppb	19:49:38

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	849253.9	98.511 %	0.7755			0.79%
Sc Radial	4843.8	101 %	1.2			1.16%
Y 371.029	684310.9	95.761 %	0.7447			0.78%
Y RADIAL	5054.7	101.1 %	1.36			1.35%
Ag 328.068†	104795.3	497.02 ug/L	1.383	497.02 ppb	1.383	0.28%
QC value within limits for Ag 328.068 Recovery = 99.40%						
Al 396.153Radial†	5398.2	4986.6 ug/L	41.26	4986.6 ppb	41.26	0.83%
QC value within limits for Al 396.153Radial Recovery = 99.73%						
As 188.979†	1087.8	497.91 ug/L	2.815	497.91 ppb	2.815	0.57%
QC value within limits for As 188.979 Recovery = 99.58%						
B 249.677†	20989.8	497.04 ug/L	2.663	497.04 ppb	2.663	0.54%
QC value within limits for B 249.677 Recovery = 99.41%						
Ba 233.527†	61764.5	505.65 ug/L	2.065	505.65 ppb	2.065	0.41%
QC value within limits for Ba 233.527 Recovery = 101.13%						
Be 313.107†	1331854.3	497.21 ug/L	0.653	497.21 ppb	0.653	0.13%
QC value within limits for Be 313.107 Recovery = 99.44%						
Ca 317.933Radial†	3056.4	5065.7 ug/L	49.26	5065.7 ppb	49.26	0.97%

QC value within limits for Ca 317.933 Radial Recovery = 101.31%

Cd 226.502†	41454.5	492.73 ug/L	2.540	492.73 ppb	2.540	0.52%
QC value within limits for Cd 226.502 Recovery = 98.55%						
Co 228.616†	23564.0	514.75 ug/L	2.630	514.75 ppb	2.630	0.51%
QC value within limits for Co 228.616 Recovery = 102.95%						
Cr 267.716†	42075.8	490.44 ug/L	2.136	490.44 ppb	2.136	0.44%
QC value within limits for Cr 267.716 Recovery = 98.09%						
Cu 324.752†	165201.7	501.14 ug/L	1.488	501.14 ppb	1.488	0.30%
QC value within limits for Cu 324.752 Recovery = 100.23%						
Fe 238.204 Radial†	566.5	5169.6 ug/L	59.79	5169.6 ppb	59.79	1.16%
QC value within limits for Fe 238.204 Radial Recovery = 103.39%						
K 766.490 Radial†	27696.4	4882.5 ug/L	19.73	4882.5 ppb	19.73	0.40%
QC value within limits for K 766.490 Radial Recovery = 97.65%						
Mg 279.077 IEC†	148.7	5270.3 ug/L	17.06	5270.3 ppb	17.06	0.32%
QC value within limits for Mg 279.077 IEC Recovery = 105.41%						
Mn 257.610†	438154.2	504.40 ug/L	0.844	504.40 ppb	0.844	0.17%
QC value within limits for Mn 257.610 Recovery = 100.88%						
Mo 202.031†	6491.4	486.59 ug/L	4.218	486.59 ppb	4.218	0.87%
QC value within limits for Mo 202.031 Recovery = 97.32%						
Na 589.592 Radial†	33816.3	10228 ug/L	47.7	10228 ppb	47.7	0.47%
QC value within limits for Na 589.592 Radial Recovery = 102.28%						
Ni 231.604†	19111.8	494.81 ug/L	2.946	494.81 ppb	2.946	0.60%
QC value within limits for Ni 231.604 Recovery = 98.96%						
P 214.914†	3972.6	2374.2 ug/L	12.95	2374.2 ppb	12.95	0.55%
QC value within limits for P 214.914 Recovery = 94.97%						
Pb 220.353†	3904.9	488.73 ug/L	5.148	488.73 ppb	5.148	1.05%
QC value within limits for Pb 220.353 Recovery = 97.75%						
S 181.975 Axial†	674.6	982.81 ug/L	5.304	982.81 ppb	5.304	0.54%
QC value within limits for S 181.975 Axial Recovery = 98.28%						
Sb 206.836†	1412.0	509.57 ug/L	5.950	509.57 ppb	5.950	1.17%
QC value within limits for Sb 206.836 Recovery = 101.91%						
Se 196.026†	725.0	506.71 ug/L	6.419	506.71 ppb	6.419	1.27%
QC value within limits for Se 196.026 Recovery = 101.34%						
Si 251.611†	75385.7	2515.6 ug/L	10.19	2515.6 ppb	10.19	0.40%
QC value within limits for Si 251.611 Recovery = 100.62%						
Sn 189.927†	2597.7	482.93 ug/L	3.569	482.93 ppb	3.569	0.74%
QC value within limits for Sn 189.927 Recovery = 96.59%						
Sr 421.552†	75152.5	527.02 ug/L	2.278	527.02 ppb	2.278	0.43%
QC value within limits for Sr 421.552 Recovery = 105.40%						
Ti 334.940†	308167.3	499.69 ug/L	1.455	499.69 ppb	1.455	0.29%
QC value within limits for Ti 334.940 Recovery = 99.94%						
Tl 190.801†	1545.8	498.74 ug/L	3.770	498.74 ppb	3.770	0.76%
QC value within limits for Tl 190.801 Recovery = 99.75%						
U 409.014†	16879.8	487.77 ug/L	6.333	487.77 ppb	6.333	1.30%
QC value within limits for U 409.014 Recovery = 97.55%						
V 292.402†	67501.9	496.66 ug/L	1.792	496.66 ppb	1.792	0.36%
QC value within limits for V 292.402 Recovery = 99.33%						
Zn 213.857†	50797.2	496.53 ug/L	1.673	496.53 ppb	1.673	0.34%
QC value within limits for Zn 213.857 Recovery = 99.31%						
SiO2†	75731.7	5388.8 ug/L	44.47	5388.8 ppb	44.47	0.83%
QC value within limits for SiO2 Recovery = 100.77%						

All analyte(s) passed QC.

Sequence No.: 31

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 6

Date Collected: 2/11/2010 19:51:48

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4852.6	4852.6	101 %		19:53:40
1	Y RADIAL	5104.9	5104.9	102.1 %		19:53:40
1	Al 396.153Radial†	-156.8	-3.7	-3.4672 ug/L	-3.4672 ppb	19:53:40
1	Ca 317.933Radial†	13.3	-3.5	-5.7723 ug/L	-5.7723 ppb	19:54:00
1	Fe 238.204 Radial†	11.1	-0.5	-4.3777 ug/L	-4.3777 ppb	19:54:00
1	K 766.490 Radial†	2923.7	70.5	12.423 ug/L	12.423 ppb	19:53:40
1	Mg 279.077 IEC†	4.4	3.9	139.91 ug/L	139.91 ppb	19:54:00
1	Na 589.592 Radial†	-915.0	172.1	52.065 ug/L	52.065 ppb	19:53:40
1	Sr 421.552†	-6.2	-8.2	-0.0577 ug/L	-0.0577 ppb	19:53:40
1	Sc 361.383	845000.9	845000.9	98.017 %		19:54:57
1	Y 371.029	690047.0	690047.0	96.564 %		19:54:57
1	Ag 328.068†	339.3	117.3	0.5487 ug/L	0.5487 ppb	19:54:57
1	As 188.979†	-28.0	5.3	2.4128 ug/L	2.4128 ppb	19:55:17
1	B 249.677†	-298.5	234.5	5.5805 ug/L	5.5805 ppb	19:55:17
1	Ba 233.527†	-12.0	-0.7	-0.0055 ug/L	-0.0055 ppb	19:55:17
1	Be 313.107†	-4157.8	96.8	0.0361 ug/L	0.0361 ppb	19:54:57
1	Cd 226.502†	-196.0	12.0	0.1432 ug/L	0.1432 ppb	19:55:17
1	Co 228.616†	-79.3	-7.1	-0.1547 ug/L	-0.1547 ppb	19:55:17
1	Cr 267.716†	74.4	9.1	0.1043 ug/L	0.1043 ppb	19:55:17
1	Cu 324.752†	5390.6	-321.1	-0.9765 ug/L	-0.9765 ppb	19:54:57
1	Mn 257.610†	508.7	67.1	0.0710 ug/L	0.0710 ppb	19:55:17
1	Mo 202.031†	23.3	8.3	0.6191 ug/L	0.6191 ppb	19:55:17
1	Ni 231.604†	92.1	-14.0	-0.3633 ug/L	-0.3633 ppb	19:55:17
1	P 214.914†	239.6	16.4	10.413 ug/L	10.413 ppb	19:55:17
1	Pb 220.353†	-62.4	-2.0	-0.2437 ug/L	-0.2437 ppb	19:55:17
1	S 181.975 Axial†	39.4	0.9	1.2460 ug/L	1.2460 ppb	19:55:17
1	Sb 206.836†	39.6	-1.7	-0.5625 ug/L	-0.5625 ppb	19:55:17
1	Se 196.026†	-21.7	-0.0	-0.0403 ug/L	-0.0403 ppb	19:55:17
1	Si 251.611†	638.1	88.8	2.9615 ug/L	2.9615 ppb	19:55:17
1	Sn 189.927†	16.1	7.7	1.4322 ug/L	1.4322 ppb	19:55:17
1	Ti 334.940†	-1251.8	26.1	0.0284 ug/L	0.0284 ppb	19:54:57
1	Tl 190.801†	-32.4	1.2	0.3822 ug/L	0.3822 ppb	19:55:17
1	U 409.014†	-2790.5	133.1	3.8593 ug/L	3.8593 ppb	19:54:57
1	V 292.402†	-1514.3	9.7	0.0897 ug/L	0.0897 ppb	19:54:57
1	Zn 213.857†	718.1	19.4	0.1959 ug/L	0.1959 ppb	19:55:17
1	SiO2†	634.2	63.9	4.5404 ug/L	4.5404 ppb	19:56:13
2	Sc Radial	4870.6	4870.6	101 %		19:54:05
2	Y RADIAL	5110.5	5110.5	102.2 %		19:54:05
2	Al 396.153Radial†	-132.3	21.0	19.477 ug/L	19.477 ppb	19:54:05
2	Ca 317.933Radial†	19.5	2.6	4.2675 ug/L	4.2675 ppb	19:54:25
2	Fe 238.204 Radial†	12.6	1.0	8.9535 ug/L	8.9535 ppb	19:54:25
2	K 766.490 Radial†	2956.4	92.0	16.228 ug/L	16.228 ppb	19:54:05
2	Mg 279.077 IEC†	1.4	1.0	35.252 ug/L	35.252 ppb	19:54:25
2	Na 589.592 Radial†	-939.4	151.4	45.801 ug/L	45.801 ppb	19:54:05
2	Sr 421.552†	6.8	4.6	0.0326 ug/L	0.0326 ppb	19:54:05
2	Sc 361.383	846282.8	846282.8	98.166 %		19:55:22
2	Y 371.029	690372.9	690372.9	96.609 %		19:55:22
2	Ag 328.068†	232.9	8.5	0.0439 ug/L	0.0439 ppb	19:55:22
2	As 188.979†	-24.3	9.1	4.1481 ug/L	4.1481 ppb	19:55:42
2	B 249.677†	-293.7	239.8	5.7033 ug/L	5.7033 ppb	19:55:42
2	Ba 233.527†	-8.8	2.6	0.0218 ug/L	0.0218 ppb	19:55:42
2	Be 313.107†	-4166.7	94.1	0.0352 ug/L	0.0352 ppb	19:55:22
2	Cd 226.502†	-202.2	5.9	0.0690 ug/L	0.0690 ppb	19:55:42
2	Co 228.616†	-64.1	8.4	0.1860 ug/L	0.1860 ppb	19:55:42
2	Cr 267.716†	68.4	2.9	0.0342 ug/L	0.0342 ppb	19:55:42
2	Cu 324.752†	5417.8	-301.7	-0.9143 ug/L	-0.9143 ppb	19:55:22
2	Mn 257.610†	481.7	38.8	0.0440 ug/L	0.0440 ppb	19:55:42
2	Mo 202.031†	25.6	10.5	0.7882 ug/L	0.7882 ppb	19:55:42
2	Ni 231.604†	80.0	-26.5	-0.6859 ug/L	-0.6859 ppb	19:55:42

2	P 214.914†	243.5	20.0	12.633 ug/L	12.633 ppb	19:55:42
2	Pb 220.353†	-66.6	-6.1	-0.7606 ug/L	-0.7606 ppb	19:55:42
2	S 181.975 Axial†	38.1	-0.5	-0.7480 ug/L	-0.7480 ppb	19:55:42
2	Sb 206.836†	46.1	4.9	1.7428 ug/L	1.7428 ppb	19:55:42
2	Se 196.026†	-16.5	5.3	3.6098 ug/L	3.6098 ppb	19:55:42
2	Si 251.611†	609.8	58.9	1.9608 ug/L	1.9608 ppb	19:55:42
2	Sn 189.927†	20.3	12.0	2.2248 ug/L	2.2248 ppb	19:55:42
2	Ti 334.940†	-1234.0	46.1	0.0729 ug/L	0.0729 ppb	19:55:22
2	Tl 190.801†	-28.0	5.7	1.8148 ug/L	1.8148 ppb	19:55:42
2	U 409.014†	-2955.9	-31.1	-0.9016 ug/L	-0.9016 ppb	19:55:22
2	V 292.402†	-1517.6	8.7	0.0716 ug/L	0.0716 ppb	19:55:22
2	Zn 213.857†	711.6	11.7	0.1193 ug/L	0.1193 ppb	19:55:42
2	SiO2†	637.5	66.3	4.7055 ug/L	4.7055 ppb	19:56:18
3	Sc Radial	4823.0	4823.0	100 %		19:54:30
3	Y RADIAL	5057.4	5057.4	101.1 %		19:54:30
3	Al 396.153Radial†	-142.5	9.6	8.8790 ug/L	8.8790 ppb	19:54:30
3	Ca 317.933Radial†	17.0	0.3	0.4427 ug/L	0.4427 ppb	19:54:50
3	Fe 238.204 Radial†	12.6	1.1	9.6699 ug/L	9.6699 ppb	19:54:50
3	K 766.490 Radial†	2863.2	27.9	4.9112 ug/L	4.9112 ppb	19:54:30
3	Mg 279.077 IEC†	-0.3	-0.7	-26.259 ug/L	-26.259 ppb	19:54:50
3	Na 589.592 Radial†	-955.9	125.8	38.039 ug/L	38.039 ppb	19:54:30
3	Sr 421.552†	16.6	14.5	0.1015 ug/L	0.1015 ppb	19:54:30
3	Sc 361.383	846616.8	846616.8	98.205 %		19:55:47
3	Y 371.029	689796.8	689796.8	96.529 %		19:55:47
3	Ag 328.068†	217.5	-7.3	-0.0282 ug/L	-0.0282 ppb	19:55:47
3	As 188.979†	-25.1	8.3	3.7642 ug/L	3.7642 ppb	19:56:07
3	B 249.677†	-307.9	225.5	5.3638 ug/L	5.3638 ppb	19:56:07
3	Ba 233.527†	-14.6	-3.3	-0.0260 ug/L	-0.0260 ppb	19:56:07
3	Be 313.107†	-4125.1	138.2	0.0511 ug/L	0.0511 ppb	19:55:47
3	Cd 226.502†	-201.9	6.4	0.0738 ug/L	0.0738 ppb	19:56:07
3	Co 228.616†	-70.2	2.2	0.0507 ug/L	0.0507 ppb	19:56:07
3	Cr 267.716†	71.7	6.3	0.0743 ug/L	0.0743 ppb	19:56:07
3	Cu 324.752†	5375.8	-346.7	-1.0501 ug/L	-1.0501 ppb	19:55:47
3	Mn 257.610†	478.6	35.5	0.0429 ug/L	0.0429 ppb	19:56:07
3	Mo 202.031†	25.7	10.6	0.7942 ug/L	0.7942 ppb	19:56:07
3	Ni 231.604†	84.5	-22.0	-0.5696 ug/L	-0.5696 ppb	19:56:07
3	P 214.914†	244.1	20.5	12.977 ug/L	12.977 ppb	19:56:07
3	Pb 220.353†	-60.1	0.6	0.0728 ug/L	0.0728 ppb	19:56:07
3	S 181.975 Axial†	36.6	-2.1	-3.0922 ug/L	-3.0922 ppb	19:56:07
3	Sb 206.836†	39.0	-2.5	-0.8359 ug/L	-0.8359 ppb	19:56:07
3	Se 196.026†	-16.8	5.1	3.4383 ug/L	3.4383 ppb	19:56:07
3	Si 251.611†	601.2	49.9	1.6596 ug/L	1.6596 ppb	19:56:07
3	Sn 189.927†	13.5	5.1	0.9382 ug/L	0.9382 ppb	19:56:07
3	Ti 334.940†	-1388.3	-110.5	-0.1763 ug/L	-0.1763 ppb	19:55:47
3	Tl 190.801†	-31.7	1.9	0.6171 ug/L	0.6171 ppb	19:56:07
3	U 409.014†	-2987.1	-61.6	-1.7881 ug/L	-1.7881 ppb	19:55:47
3	V 292.402†	-1484.1	43.4	0.3211 ug/L	0.3211 ppb	19:55:47
3	Zn 213.857†	720.5	20.4	0.2048 ug/L	0.2048 ppb	19:56:07
3	SiO2†	674.5	103.7	7.3722 ug/L	7.3722 ppb	19:56:23

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	845966.8	98.129 %		0.0989			0.10%
Sc Radial	4848.7	101 %		0.5			0.50%
Y 371.029	690072.3	96.567 %		0.0404			0.04%
Y RADIAL	5090.9	101.8 %		0.58			0.57%
Ag 328.068†	39.5	0.1881 ug/L		0.31431	0.1881 ppb	0.31431	167.09%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	9.0	8.2962 ug/L		11.48308	8.2962 ppb	11.48308	138.41%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	7.6	3.4417 ug/L		0.91151	3.4417 ppb	0.91151	26.48%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	233.3	5.5492 ug/L		0.17189	5.5492 ppb	0.17189	3.10%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	-0.5	-0.0032 ug/L		0.02400	-0.0032 ppb	0.02400	743.55%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	109.7	0.0408 ug/L		0.00890	0.0408 ppb	0.00890	21.80%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	-0.2	-0.3541 ug/L		5.06709	-0.3541 ppb	5.06709	>999.9%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated									
Cd	226.502†	8.1	0.0953 ug/L	0.04151	0.0953 ppb	0.04151	43.54%		
QC value within limits for Cd 226.502 Recovery = Not calculated									
Co	228.616†	1.2	0.0273 ug/L	0.17156	0.0273 ppb	0.17156	627.74%		
QC value within limits for Co 228.616 Recovery = Not calculated									
Cr	267.716†	6.1	0.0709 ug/L	0.03516	0.0709 ppb	0.03516	49.57%		
QC value within limits for Cr 267.716 Recovery = Not calculated									
Cu	324.752†	-323.2	-0.9803 ug/L	0.06800	-0.9803 ppb	0.06800	6.94%		
QC value within limits for Cu 324.752 Recovery = Not calculated									
Fe	238.204 Radial†	0.5	4.7485 ug/L	7.91170	4.7485 ppb	7.91170	166.61%		
QC value within limits for Fe 238.204 Radial Recovery = Not calculated									
K	766.490 Radial†	63.5	11.188 ug/L	5.7588	11.188 ppb	5.7588	51.47%		
QC value within limits for K 766.490 Radial Recovery = Not calculated									
Mg	279.077 IEC†	1.4	49.635 ug/L	84.0147	49.635 ppb	84.0147	169.26%		
QC value within limits for Mg 279.077 IEC Recovery = Not calculated									
Mn	257.610†	47.1	0.0526 ug/L	0.01593	0.0526 ppb	0.01593	30.25%		
QC value within limits for Mn 257.610 Recovery = Not calculated									
Mo	202.031†	9.8	0.7338 ug/L	0.09940	0.7338 ppb	0.09940	13.54%		
QC value within limits for Mo 202.031 Recovery = Not calculated									
Na	589.592 Radial†	149.8	45.302 ug/L	7.0264	45.302 ppb	7.0264	15.51%		
QC value within limits for Na 589.592 Radial Recovery = Not calculated									
Ni	231.604†	-20.8	-0.5396 ug/L	0.16340	-0.5396 ppb	0.16340	30.28%		
QC value within limits for Ni 231.604 Recovery = Not calculated									
P	214.914†	19.0	12.008 ug/L	1.3913	12.008 ppb	1.3913	11.59%		
QC value within limits for P 214.914 Recovery = Not calculated									
Pb	220.353†	-2.5	-0.3105 ug/L	0.42069	-0.3105 ppb	0.42069	135.47%		
QC value within limits for Pb 220.353 Recovery = Not calculated									
S	181.975 Axial†	-0.6	-0.8647 ug/L	2.17143	-0.8647 ppb	2.17143	251.11%		
QC value within limits for S 181.975 Axial Recovery = Not calculated									
Sb	206.836†	0.2	0.1148 ug/L	1.41654	0.1148 ppb	1.41654	>999.9%		
QC value within limits for Sb 206.836 Recovery = Not calculated									
Se	196.026†	3.4	2.3359 ug/L	2.05969	2.3359 ppb	2.05969	88.17%		
QC value within limits for Se 196.026 Recovery = Not calculated									
Si	251.611†	65.9	2.1940 ug/L	0.68157	2.1940 ppb	0.68157	31.07%		
QC value within limits for Si 251.611 Recovery = Not calculated									
Sn	189.927†	8.3	1.5317 ug/L	0.64906	1.5317 ppb	0.64906	42.37%		
QC value within limits for Sn 189.927 Recovery = Not calculated									
Sr	421.552†	3.6	0.0255 ug/L	0.07988	0.0255 ppb	0.07988	313.83%		
QC value within limits for Sr 421.552 Recovery = Not calculated									
Ti	334.940†	-12.8	-0.0250 ug/L	0.13286	-0.0250 ppb	0.13286	531.34%		
QC value within limits for Ti 334.940 Recovery = Not calculated									
Tl	190.801†	2.9	0.9381 ug/L	0.76833	0.9381 ppb	0.76833	81.91%		
QC value within limits for Tl 190.801 Recovery = Not calculated									
U	409.014†	13.5	0.3899 ug/L	3.03713	0.3899 ppb	3.03713	778.98%		
QC value within limits for U 409.014 Recovery = Not calculated									
V	292.402†	20.6	0.1608 ug/L	0.13913	0.1608 ppb	0.13913	86.52%		
QC value within limits for V 292.402 Recovery = Not calculated									
Zn	213.857†	17.2	0.1733 ug/L	0.04702	0.1733 ppb	0.04702	27.13%		
QC value within limits for Zn 213.857 Recovery = Not calculated									
SiO2†		77.9	5.5394 ug/L	1.58942	5.5394 ppb	1.58942	28.69%		
QC value within limits for SiO2 Recovery = Not calculated									

All analyte(s) passed QC.

Sequence No.: 39

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 1

Date Collected: 2/11/2010 20:48:17

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4899.1	4899.1	102 %		20:50:08
1	Y RADIAL	5112.2	5112.2	102.2 %		20:50:08
1	Al 396.153Radial†	4741.7	4804.0	4435.2 ug/L	4435.2 ppb	20:50:08
1	Ca 317.933Radial†	3076.7	3002.1	4975.8 ug/L	4975.8 ppb	20:50:28
1	Fe 238.204 Radial†	575.5	553.1	5048.0 ug/L	5048.0 ppb	20:50:28
1	K 766.490 Radial†	28090.5	24736.2	4360.5 ug/L	4360.5 ppb	20:50:08
1	Mg 279.077 IEC†	148.4	145.2	5146.0 ug/L	5146.0 ppb	20:50:28
1	Na 589.592 Radial†	29278.3	29805.8	9014.7 ug/L	9014.7 ppb	20:50:08
1	Sr 421.552†	67832.8	66554.1	466.72 ug/L	466.72 ppb	20:50:08
1	Sc 361.383	861325.6	861325.6	99.911 %		20:51:26
1	Y 371.029	693563.4	693563.4	97.056 %		20:51:26
1	Ag 328.068†	103155.4	103018.7	488.58 ug/L	488.58 ppb	20:51:31
1	As 188.979†	1048.5	1083.3	495.78 ug/L	495.78 ppb	20:51:51
1	B 249.677†	19920.9	20477.8	484.90 ug/L	484.90 ppb	20:51:31
1	Ba 233.527†	60792.1	60858.0	498.22 ug/L	498.22 ppb	20:51:31
1	Be 313.107†	1321558.7	1327077.0	495.41 ug/L	495.41 ppb	20:51:26
1	Cd 226.502†	40605.2	40853.3	485.59 ug/L	485.59 ppb	20:51:31
1	Co 228.616†	23104.8	23199.1	506.80 ug/L	506.80 ppb	20:51:31
1	Cr 267.716†	41326.7	41296.8	481.36 ug/L	481.36 ppb	20:51:31
1	Cu 324.752†	167846.7	162175.8	491.95 ug/L	491.95 ppb	20:51:31
1	Mn 257.610†	437080.2	437018.4	503.08 ug/L	503.08 ppb	20:51:26
1	Mo 202.031†	6470.6	6460.9	484.29 ug/L	484.29 ppb	20:51:51
1	Ni 231.604†	18890.5	18799.3	486.72 ug/L	486.72 ppb	20:51:31
1	P 214.914†	4180.3	3956.0	2365.6 ug/L	2365.6 ppb	20:51:51
1	Pb 220.353†	3843.1	3908.2	489.03 ug/L	489.03 ppb	20:51:51
1	S 181.975 Axial†	707.4	668.7	974.26 ug/L	974.26 ppb	20:51:51
1	Sb 206.836†	1426.9	1386.1	500.48 ug/L	500.48 ppb	20:51:51
1	Se 196.026†	707.6	730.3	509.92 ug/L	509.92 ppb	20:51:51
1	Si 251.611†	74533.8	74038.0	2470.5 ug/L	2470.5 ppb	20:51:31
1	Sn 189.927†	2599.4	2593.0	482.04 ug/L	482.04 ppb	20:51:51
1	Ti 334.940†	301561.7	303134.1	491.53 ug/L	491.53 ppb	20:51:31
1	Tl 190.801†	1502.9	1538.4	496.34 ug/L	496.34 ppb	20:51:51
1	U 409.014†	13793.9	16786.2	485.09 ug/L	485.09 ppb	20:51:31
1	V 292.402†	64763.2	66375.7	488.47 ug/L	488.47 ppb	20:51:31
1	Zn 213.857†	50672.7	50004.7	488.80 ug/L	488.80 ppb	20:51:31
1	SiO2†	74868.3	74352.0	5290.5 ug/L	5290.5 ppb	20:52:58
2	Sc Radial	4892.8	4892.8	102 %		20:50:33
2	Y RADIAL	5100.9	5100.9	102.0 %		20:50:33
2	Al 396.153Radial†	5336.7	5394.6	4983.0 ug/L	4983.0 ppb	20:50:33
2	Ca 317.933Radial†	3058.0	2987.6	4951.8 ug/L	4951.8 ppb	20:50:53
2	Fe 238.204 Radial†	566.7	545.2	4976.2 ug/L	4976.2 ppb	20:50:53
2	K 766.490 Radial†	30754.6	27389.0	4828.4 ug/L	4828.4 ppb	20:50:33
2	Mg 279.077 IEC†	149.4	146.4	5188.0 ug/L	5188.0 ppb	20:50:53
2	Na 589.592 Radial†	32180.5	32694.0	9888.3 ug/L	9888.3 ppb	20:50:33
2	Sr 421.552†	75292.6	73968.5	518.72 ug/L	518.72 ppb	20:50:33
2	Sc 361.383	844206.4	844206.4	97.925 %		20:51:57
2	Y 371.029	679202.9	679202.9	95.046 %		20:51:57
2	Ag 328.068†	102741.0	104689.2	496.45 ug/L	496.45 ppb	20:52:02
2	As 188.979†	1053.5	1109.7	507.80 ug/L	507.80 ppb	20:52:22
2	B 249.677†	19810.9	20769.7	491.83 ug/L	491.83 ppb	20:52:02
2	Ba 233.527†	60434.9	61727.1	505.33 ug/L	505.33 ppb	20:52:02
2	Be 313.107†	1289243.1	1320899.8	493.13 ug/L	493.13 ppb	20:51:57
2	Cd 226.502†	40311.7	41377.7	491.84 ug/L	491.84 ppb	20:52:02
2	Co 228.616†	23015.3	23576.7	515.05 ug/L	515.05 ppb	20:52:02
2	Cr 267.716†	41179.5	41985.2	489.39 ug/L	489.39 ppb	20:52:02
2	Cu 324.752†	167315.2	165039.8	500.64 ug/L	500.64 ppb	20:52:02
2	Mn 257.610†	427878.7	436493.2	502.47 ug/L	502.47 ppb	20:51:57
2	Mo 202.031†	6441.8	6562.8	491.91 ug/L	491.91 ppb	20:52:22
2	Ni 231.604†	18780.4	19070.4	493.74 ug/L	493.74 ppb	20:52:02

2	P 214.914†	4164.6	4024.7	2407.0 ug/L	2407.0 ppb	20:52:22
2	Pb 220.353†	3795.0	3937.2	492.78 ug/L	492.78 ppb	20:52:22
2	S 181.975 Axial†	706.4	682.0	993.59 ug/L	993.59 ppb	20:52:22
2	Sb 206.836†	1441.2	1429.6	515.91 ug/L	515.91 ppb	20:52:22
2	Se 196.026†	700.2	737.1	514.29 ug/L	514.29 ppb	20:52:22
2	Si 251.611†	74215.9	75226.2	2510.2 ug/L	2510.2 ppb	20:52:02
2	Sn 189.927†	2592.0	2638.2	490.42 ug/L	490.42 ppb	20:52:22
2	Ti 334.940†	300363.3	308030.9	499.46 ug/L	499.46 ppb	20:52:02
2	Tl 190.801†	1504.6	1570.7	506.68 ug/L	506.68 ppb	20:52:22
2	U 409.014†	13438.4	16703.2	482.67 ug/L	482.67 ppb	20:52:02
2	V 292.402†	64334.6	67252.4	494.94 ug/L	494.94 ppb	20:52:02
2	Zn 213.857†	50349.3	50702.9	495.64 ug/L	495.64 ppb	20:52:02
2	SiO2†	74506.5	75502.1	5372.3 ug/L	5372.3 ppb	20:53:03
3	Sc Radial	4854.5	4854.5	101 %		20:50:58
3	Y RADIAL	5080.4	5080.4	101.6 %		20:50:58
3	Al 396.153Radial†	5329.3	5428.6	5014.9 ug/L	5014.9 ppb	20:50:58
3	Ca 317.933Radial†	3114.8	3067.5	5084.2 ug/L	5084.2 ppb	20:51:18
3	Fe 238.204 Radial†	577.4	560.3	5112.9 ug/L	5112.9 ppb	20:51:18
3	K 766.490 Radial†	30723.3	27596.2	4864.9 ug/L	4864.9 ppb	20:50:58
3	Mg 279.077 IEC†	146.8	144.9	5135.9 ug/L	5135.9 ppb	20:51:18
3	Na 589.592 Radial†	32229.4	32991.7	9978.3 ug/L	9978.3 ppb	20:50:58
3	Sr 421.552†	75312.8	74571.9	522.95 ug/L	522.95 ppb	20:50:58
3	Sc 361.383	856473.5	856473.5	99.348 %		20:52:28
3	Y 371.029	690691.2	690691.2	96.654 %		20:52:28
3	Ag 328.068†	103913.8	104367.0	494.98 ug/L	494.98 ppb	20:52:33
3	As 188.979†	1048.2	1088.9	498.41 ug/L	498.41 ppb	20:52:53
3	B 249.677†	20212.4	20884.1	494.54 ug/L	494.54 ppb	20:52:33
3	Ba 233.527†	61088.1	61500.6	503.49 ug/L	503.49 ppb	20:52:33
3	Be 313.107†	1307337.4	1320255.8	492.88 ug/L	492.88 ppb	20:52:28
3	Cd 226.502†	40820.8	41300.6	490.90 ug/L	490.90 ppb	20:52:33
3	Co 228.616†	23272.4	23498.8	513.33 ug/L	513.33 ppb	20:52:33
3	Cr 267.716†	41705.7	41912.6	488.54 ug/L	488.54 ppb	20:52:33
3	Cu 324.752†	169253.6	164543.7	499.14 ug/L	499.14 ppb	20:52:33
3	Mn 257.610†	431437.4	433816.9	499.41 ug/L	499.41 ppb	20:52:28
3	Mo 202.031†	6442.0	6468.7	484.88 ug/L	484.88 ppb	20:52:53
3	Ni 231.604†	19012.8	19029.6	492.69 ug/L	492.69 ppb	20:52:33
3	P 214.914†	4157.4	3956.6	2364.7 ug/L	2364.7 ppb	20:52:53
3	Pb 220.353†	3799.1	3885.7	486.34 ug/L	486.34 ppb	20:52:53
3	S 181.975 Axial†	700.5	665.8	969.89 ug/L	969.89 ppb	20:52:53
3	Sb 206.836†	1429.6	1396.8	504.20 ug/L	504.20 ppb	20:52:53
3	Se 196.026†	703.8	730.6	510.30 ug/L	510.30 ppb	20:52:53
3	Si 251.611†	75175.7	75106.8	2506.3 ug/L	2506.3 ppb	20:52:33
3	Sn 189.927†	2575.9	2584.1	480.41 ug/L	480.41 ppb	20:52:53
3	Ti 334.940†	303729.6	307026.1	497.85 ug/L	497.85 ppb	20:52:33
3	Tl 190.801†	1501.5	1545.6	498.63 ug/L	498.63 ppb	20:52:53
3	U 409.014†	13906.0	16977.3	490.61 ug/L	490.61 ppb	20:52:33
3	V 292.402†	65415.5	67399.5	495.90 ug/L	495.90 ppb	20:52:33
3	Zn 213.857†	50967.8	50589.0	494.51 ug/L	494.51 ppb	20:52:33
3	SiO2†	75069.8	74979.4	5335.2 ug/L	5335.2 ppb	20:53:09

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	854001.8	99.061 %		1.0235			1.03%
Sc Radial	4882.1	102 %		0.5			0.49%
Y 371.029	687819.2	96.252 %		1.0634			1.10%
Y RADIAL	5097.8	101.9 %		0.32			0.32%
Ag 328.068†	104025.0	493.34 ug/L		4.186	493.34 ppb	4.186	0.85%
QC value within limits for Ag 328.068 Recovery = 98.67%							
Al 396.153Radial†	5209.1	4811.0 ug/L		325.83	4811.0 ppb	325.83	6.77%
QC value within limits for Al 396.153Radial Recovery = 96.22%							
As 188.979†	1094.0	500.66 ug/L		6.322	500.66 ppb	6.322	1.26%
QC value within limits for As 188.979 Recovery = 100.13%							
B 249.677†	20710.5	490.42 ug/L		4.971	490.42 ppb	4.971	1.01%
QC value within limits for B 249.677 Recovery = 98.08%							
Ba 233.527†	61361.9	502.35 ug/L		3.690	502.35 ppb	3.690	0.73%
QC value within limits for Ba 233.527 Recovery = 100.47%							
Be 313.107†	1322744.2	493.81 ug/L		1.394	493.81 ppb	1.394	0.28%
QC value within limits for Be 313.107 Recovery = 98.76%							
Ca 317.933Radial†	3019.1	5003.9 ug/L		70.59	5003.9 ppb	70.59	1.41%

QC value within limits for Ca 317.933 Radial Recovery = 100.08%							
Cd	226.502†	41177.2	489.44 ug/L	3.370	489.44 ppb	3.370	0.69%
QC value within limits for Cd 226.502 Recovery = 97.89%							
Co	228.616†	23424.9	511.73 ug/L	4.353	511.73 ppb	4.353	0.85%
QC value within limits for Co 228.616 Recovery = 102.35%							
Cr	267.716†	41731.6	486.43 ug/L	4.409	486.43 ppb	4.409	0.91%
QC value within limits for Cr 267.716 Recovery = 97.29%							
Cu	324.752†	163919.7	497.24 ug/L	4.642	497.24 ppb	4.642	0.93%
QC value within limits for Cu 324.752 Recovery = 99.45%							
Fe	238.204 Radial†	552.9	5045.7 ug/L	68.38	5045.7 ppb	68.38	1.36%
QC value within limits for Fe 238.204 Radial Recovery = 100.91%							
K	766.490 Radial†	26573.8	4684.6 ug/L	281.29	4684.6 ppb	281.29	6.00%
QC value within limits for K 766.490 Radial Recovery = 93.69%							
Mg	279.077 IEC†	145.5	5156.6 ug/L	27.63	5156.6 ppb	27.63	0.54%
QC value within limits for Mg 279.077 IEC Recovery = 103.13%							
Mn	257.610†	435776.2	501.65 ug/L	1.970	501.65 ppb	1.970	0.39%
QC value within limits for Mn 257.610 Recovery = 100.33%							
Mo	202.031†	6497.5	487.03 ug/L	4.240	487.03 ppb	4.240	0.87%
QC value within limits for Mo 202.031 Recovery = 97.41%							
Na	589.592 Radial†	31830.5	9627.1 ug/L	532.23	9627.1 ppb	532.23	5.53%
QC value within limits for Na 589.592 Radial Recovery = 96.27%							
Ni	231.604†	18966.4	491.05 ug/L	3.783	491.05 ppb	3.783	0.77%
QC value within limits for Ni 231.604 Recovery = 98.21%							
P	214.914†	3979.1	2379.1 ug/L	24.15	2379.1 ppb	24.15	1.01%
QC value within limits for P 214.914 Recovery = 95.16%							
Pb	220.353†	3910.4	489.38 ug/L	3.235	489.38 ppb	3.235	0.66%
QC value within limits for Pb 220.353 Recovery = 97.88%							
S	181.975 Axial†	672.2	979.25 ug/L	12.614	979.25 ppb	12.614	1.29%
QC value within limits for S 181.975 Axial Recovery = 97.92%							
Sb	206.836†	1404.2	506.87 ug/L	8.055	506.87 ppb	8.055	1.59%
QC value within limits for Sb 206.836 Recovery = 101.37%							
Se	196.026†	732.7	511.50 ug/L	2.420	511.50 ppb	2.420	0.47%
QC value within limits for Se 196.026 Recovery = 102.30%							
Si	251.611†	74790.3	2495.6 ug/L	21.85	2495.6 ppb	21.85	0.88%
QC value within limits for Si 251.611 Recovery = 99.83%							
Sn	189.927†	2605.1	484.29 ug/L	5.375	484.29 ppb	5.375	1.11%
QC value within limits for Sn 189.927 Recovery = 96.86%							
Sr	421.552†	71698.2	502.79 ug/L	31.314	502.79 ppb	31.314	6.23%
QC value within limits for Sr 421.552 Recovery = 100.56%							
Ti	334.940†	306063.7	496.28 ug/L	4.194	496.28 ppb	4.194	0.85%
QC value within limits for Ti 334.940 Recovery = 99.26%							
Tl	190.801†	1551.6	500.55 ug/L	5.433	500.55 ppb	5.433	1.09%
QC value within limits for Tl 190.801 Recovery = 100.11%							
U	409.014†	16822.2	486.13 ug/L	4.068	486.13 ppb	4.068	0.84%
QC value within limits for U 409.014 Recovery = 97.23%							
V	292.402†	67009.2	493.10 ug/L	4.043	493.10 ppb	4.043	0.82%
QC value within limits for V 292.402 Recovery = 98.62%							
Zn	213.857†	50432.2	492.98 ug/L	3.667	492.98 ppb	3.667	0.74%
QC value within limits for Zn 213.857 Recovery = 98.60%							
SiO2†		74944.5	5332.7 ug/L	40.98	5332.7 ppb	40.98	0.77%
QC value within limits for SiO2 Recovery = 99.72%							

All analyte(s) passed QC.

Sequence No.: 40
 Sample ID: CCB
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 6
 Date Collected: 2/11/2010 20:55:18
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4905.0	4905.0	102 %		20:57:10
1	Y RADIAL	5153.1	5153.1	103.0 %		20:57:10
1	Al 396.153Radial†	-159.4	-4.6	-4.3047 ug/L	-4.3047 ppb	20:57:10
1	Ca 317.933Radial†	15.9	-1.2	-1.9207 ug/L	-1.9207 ppb	20:57:30
1	Fe 238.204 Radial†	10.3	-1.4	-12.348 ug/L	-12.348 ppb	20:57:30
1	K 766.490 Radial†	2839.9	-42.5	-7.5296 ug/L	-7.5296 ppb	20:57:10
1	Mg 279.077 IEC†	1.4	0.9	33.315 ug/L	33.315 ppb	20:57:30
1	Na 589.592 Radial†	-930.2	167.0	50.498 ug/L	50.498 ppb	20:57:10
1	Sr 421.552†	10.4	8.0	0.0564 ug/L	0.0564 ppb	20:57:10
1	Sc 361.383	839406.7	839406.7	97.368 %		20:58:27
1	Y 371.029	683831.9	683831.9	95.694 %		20:58:27
1	Ag 328.068†	289.4	68.4	0.3199 ug/L	0.3199 ppb	20:58:27
1	As 188.979†	-31.0	2.0	0.9209 ug/L	0.9209 ppb	20:58:47
1	B 249.677†	-405.3	122.8	2.9231 ug/L	2.9231 ppb	20:58:47
1	Ba 233.527†	-3.8	7.7	0.0640 ug/L	0.0640 ppb	20:58:47
1	Be 313.107†	-4149.5	77.1	0.0288 ug/L	0.0288 ppb	20:58:27
1	Cd 226.502†	-207.2	-0.9	-0.0093 ug/L	-0.0093 ppb	20:58:47
1	Co 228.616†	-67.0	4.9	0.1068 ug/L	0.1068 ppb	20:58:47
1	Cr 267.716†	89.2	24.9	0.2897 ug/L	0.2897 ppb	20:58:47
1	Cu 324.752†	5441.8	-231.9	-0.7048 ug/L	-0.7048 ppb	20:58:27
1	Mn 257.610†	526.7	89.0	0.0998 ug/L	0.0998 ppb	20:58:47
1	Mo 202.031†	17.2	2.2	0.1611 ug/L	0.1611 ppb	20:58:47
1	Ni 231.604†	97.8	-7.5	-0.1954 ug/L	-0.1954 ppb	20:58:47
1	P 214.914†	255.3	34.1	21.374 ug/L	21.374 ppb	20:58:47
1	Pb 220.353†	-51.7	8.7	1.0831 ug/L	1.0831 ppb	20:58:47
1	S 181.975 Axial†	34.7	-3.7	-5.3434 ug/L	-5.3434 ppb	20:58:47
1	Sb 206.836†	35.7	-5.5	-1.8771 ug/L	-1.8771 ppb	20:58:47
1	Se 196.026†	-14.6	7.1	4.7275 ug/L	4.7275 ppb	20:58:47
1	Si 251.611†	589.8	43.5	1.4515 ug/L	1.4515 ppb	20:58:47
1	Sn 189.927†	19.8	11.7	2.1643 ug/L	2.1643 ppb	20:58:47
1	Ti 334.940†	-1235.2	34.6	0.0525 ug/L	0.0525 ppb	20:58:27
1	Tl 190.801†	-33.5	-0.2	-0.0505 ug/L	-0.0505 ppb	20:58:47
1	U 409.014†	-2860.1	42.6	1.2366 ug/L	1.2366 ppb	20:58:27
1	V 292.402†	-1424.3	91.8	0.6738 ug/L	0.6738 ppb	20:58:27
1	Zn 213.857†	719.6	25.8	0.2583 ug/L	0.2583 ppb	20:58:47
1	SiO2†	564.4	-3.4	-0.2497 ug/L	-0.2497 ppb	20:59:43
2	Sc Radial	4950.9	4950.9	103 %		20:57:35
2	Y RADIAL	5207.9	5207.9	104.1 %		20:57:35
2	Al 396.153Radial†	-137.8	17.8	16.468 ug/L	16.468 ppb	20:57:35
2	Ca 317.933Radial†	18.8	1.5	2.5348 ug/L	2.5348 ppb	20:57:55
2	Fe 238.204 Radial†	10.0	-1.7	-15.739 ug/L	-15.739 ppb	20:57:55
2	K 766.490 Radial†	2767.1	-139.1	-24.566 ug/L	-24.566 ppb	20:57:35
2	Mg 279.077 IEC†	4.3	3.7	132.02 ug/L	132.02 ppb	20:57:55
2	Na 589.592 Radial†	-946.8	159.3	48.171 ug/L	48.171 ppb	20:57:35
2	Sr 421.552†	-16.4	-18.0	-0.1262 ug/L	-0.1262 ppb	20:57:35
2	Sc 361.383	831406.2	831406.2	96.440 %		20:58:52
2	Y 371.029	676589.7	676589.7	94.680 %		20:58:52
2	Ag 328.068†	242.5	22.6	0.1084 ug/L	0.1084 ppb	20:58:52
2	As 188.979†	-28.4	4.5	2.0204 ug/L	2.0204 ppb	20:59:12
2	B 249.677†	-382.0	143.0	3.4037 ug/L	3.4037 ppb	20:59:12
2	Ba 233.527†	-17.8	-6.8	-0.0553 ug/L	-0.0553 ppb	20:59:12
2	Be 313.107†	-4205.8	-22.4	-0.0087 ug/L	-0.0087 ppb	20:58:52
2	Cd 226.502†	-203.3	1.1	0.0130 ug/L	0.0130 ppb	20:59:12
2	Co 228.616†	-70.2	0.9	0.0221 ug/L	0.0221 ppb	20:59:12
2	Cr 267.716†	61.8	-2.7	-0.0282 ug/L	-0.0282 ppb	20:59:12
2	Cu 324.752†	5342.4	-281.1	-0.8500 ug/L	-0.8500 ppb	20:58:52
2	Mn 257.610†	513.8	80.8	0.0861 ug/L	0.0861 ppb	20:59:12
2	Mo 202.031†	21.4	6.7	0.4973 ug/L	0.4973 ppb	20:59:12
2	Ni 231.604†	70.6	-34.8	-0.9014 ug/L	-0.9014 ppb	20:59:12

2	P 214.914†	226.4	6.7	4.3619 ug/L	4.3619 ppb	20:59:12
2	Pb 220.353†	-52.6	7.2	0.9025 ug/L	0.9025 ppb	20:59:12
2	S 181.975 Axial†	37.2	-0.8	-1.1871 ug/L	-1.1871 ppb	20:59:12
2	Sb 206.836†	38.2	-2.5	-0.8466 ug/L	-0.8466 ppb	20:59:12
2	Se 196.026†	-21.3	-0.0	-0.0521 ug/L	-0.0521 ppb	20:59:12
2	Si 251.611†	570.7	29.5	0.9799 ug/L	0.9799 ppb	20:59:12
2	Sn 189.927†	18.5	10.5	1.9531 ug/L	1.9531 ppb	20:59:12
2	Ti 334.940†	-1349.4	-96.0	-0.1633 ug/L	-0.1633 ppb	20:58:52
2	Tl 190.801†	-39.4	-6.6	-2.1204 ug/L	-2.1204 ppb	20:59:12
2	U 409.014†	-3088.9	-222.9	-6.4602 ug/L	-6.4602 ppb	20:58:52
2	V 292.402†	-1440.2	61.2	0.4445 ug/L	0.4445 ppb	20:58:52
2	Zn 213.857†	706.2	19.0	0.1971 ug/L	0.1971 ppb	20:59:12
2	SiO2†	565.7	3.5	0.2360 ug/L	0.2360 ppb	20:59:48
3	Sc Radial	4675.0	4675.0	97.3 %		20:58:00
3	Y RADIAL	4942.0	4942.0	98.83 %		20:58:00
3	Al 396.153Radial†	-149.4	-2.1	-1.9227 ug/L	-1.9227 ppb	20:58:00
3	Ca 317.933Radial†	12.5	-3.9	-6.4160 ug/L	-6.4160 ppb	20:58:20
3	Fe 238.204 Radial†	12.5	1.4	12.520 ug/L	12.520 ppb	20:58:20
3	K 766.490 Radial†	2803.8	57.2	10.104 ug/L	10.104 ppb	20:58:00
3	Mg 279.077 IEC†	0.3	-0.1	-4.8546 ug/L	-4.8546 ppb	20:58:20
3	Na 589.592 Radial†	-1024.5	25.1	7.5929 ug/L	7.5929 ppb	20:58:00
3	Sr 421.552†	15.1	13.5	0.0945 ug/L	0.0945 ppb	20:58:00
3	Sc 361.383	834150.1	834150.1	96.759 %		20:59:18
3	Y 371.029	681290.2	681290.2	95.338 %		20:59:18
3	Ag 328.068†	295.3	76.4	0.3646 ug/L	0.3646 ppb	20:59:18
3	As 188.979†	-31.3	1.5	0.6920 ug/L	0.6920 ppb	20:59:38
3	B 249.677†	-388.4	137.6	3.2725 ug/L	3.2725 ppb	20:59:38
3	Ba 233.527†	-18.2	-7.2	-0.0584 ug/L	-0.0584 ppb	20:59:38
3	Be 313.107†	-4115.5	85.4	0.0316 ug/L	0.0316 ppb	20:59:18
3	Cd 226.502†	-201.3	3.8	0.0443 ug/L	0.0443 ppb	20:59:38
3	Co 228.616†	-80.6	-9.5	-0.2087 ug/L	-0.2087 ppb	20:59:38
3	Cr 267.716†	72.5	8.2	0.0957 ug/L	0.0957 ppb	20:59:38
3	Cu 324.752†	5247.7	-397.2	-1.2045 ug/L	-1.2045 ppb	20:59:18
3	Mn 257.610†	503.4	68.4	0.0801 ug/L	0.0801 ppb	20:59:38
3	Mo 202.031†	14.8	-0.3	-0.0209 ug/L	-0.0209 ppb	20:59:38
3	Ni 231.604†	111.5	7.3	0.1881 ug/L	0.1881 ppb	20:59:38
3	P 214.914†	235.8	15.6	9.9651 ug/L	9.9651 ppb	20:59:38
3	Pb 220.353†	-51.4	8.6	1.0662 ug/L	1.0662 ppb	20:59:38
3	S 181.975 Axial†	30.7	-7.6	-11.057 ug/L	-11.057 ppb	20:59:38
3	Sb 206.836†	38.7	-2.2	-0.7631 ug/L	-0.7631 ppb	20:59:38
3	Se 196.026†	-8.3	13.5	9.1365 ug/L	9.1365 ppb	20:59:38
3	Si 251.611†	572.7	29.7	0.9926 ug/L	0.9926 ppb	20:59:38
3	Sn 189.927†	9.1	0.7	0.1337 ug/L	0.1337 ppb	20:59:38
3	Ti 334.940†	-1305.9	-46.4	-0.0760 ug/L	-0.0760 ppb	20:59:18
3	Tl 190.801†	-29.2	4.0	1.2826 ug/L	1.2826 ppb	20:59:38
3	U 409.014†	-2870.8	13.0	0.3764 ug/L	0.3764 ppb	20:59:18
3	V 292.402†	-1486.4	18.5	0.1326 ug/L	0.1326 ppb	20:59:18
3	Zn 213.857†	713.7	24.3	0.2384 ug/L	0.2384 ppb	20:59:38
3	SiO2†	583.8	20.3	1.4460 ug/L	1.4460 ppb	20:59:53

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	834987.7	96.856 %	0.4716			0.49%
Sc Radial	4843.7	101 %	3.1			3.05%
Y 371.029	680570.6	95.238 %	0.5142			0.54%
Y RADIAL	5101.0	102.0 %	2.81			2.75%
Ag 328.068†	55.8	0.2643 ug/L	0.13682	0.2643 ppb	0.13682	51.77%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	3.7	3.4135 ug/L	11.36809	3.4135 ppb	11.36809	333.03%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	2.7	1.2111 ug/L	0.71017	1.2111 ppb	0.71017	58.64%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	134.5	3.1997 ug/L	0.24839	3.1997 ppb	0.24839	7.76%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	-2.1	-0.0166 ug/L	0.06982	-0.0166 ppb	0.06982	421.48%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	46.7	0.0173 ug/L	0.02251	0.0173 ppb	0.02251	130.43%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	-1.2	-1.9340 ug/L	4.47543	-1.9340 ppb	4.47543	231.41%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated						
Cd 226.502†	1.3	0.0160 ug/L	0.02689	0.0160 ppb	0.02689	167.88%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-1.2	-0.0266 ug/L	0.16331	-0.0266 ppb	0.16331	613.40%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	10.1	0.1191 ug/L	0.16026	0.1191 ppb	0.16026	134.58%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-303.4	-0.9198 ug/L	0.25707	-0.9198 ppb	0.25707	27.95%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	-0.6	-5.1892 ug/L	15.42983	-5.1892 ppb	15.42983	297.35%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-41.5	-7.3305 ug/L	17.33544	-7.3305 ppb	17.33544	236.48%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	1.5	53.494 ug/L	70.6339	53.494 ppb	70.6339	132.04%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	79.4	0.0887 ug/L	0.01013	0.0887 ppb	0.01013	11.42%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	2.8	0.2125 ug/L	0.26288	0.2125 ppb	0.26288	123.69%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	117.1	35.421 ug/L	24.1275	35.421 ppb	24.1275	68.12%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	-11.7	-0.3029 ug/L	0.55265	-0.3029 ppb	0.55265	182.45%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	18.8	11.900 ug/L	8.6694	11.900 ppb	8.6694	72.85%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	8.1	1.0172 ug/L	0.09972	1.0172 ppb	0.09972	9.80%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-4.0	-5.8625 ug/L	4.95538	-5.8625 ppb	4.95538	84.53%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	-3.4	-1.1623 ug/L	0.62050	-1.1623 ppb	0.62050	53.39%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	6.9	4.6040 ug/L	4.59554	4.6040 ppb	4.59554	99.82%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	34.2	1.1413 ug/L	0.26872	1.1413 ppb	0.26872	23.54%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	7.6	1.4171 ug/L	1.11640	1.4171 ppb	1.11640	78.78%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	1.2	0.0083 ug/L	0.11796	0.0083 ppb	0.11796	>999.9%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	-35.9	-0.0623 ug/L	0.10857	-0.0623 ppb	0.10857	174.41%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-0.9	-0.2961 ug/L	1.71474	-0.2961 ppb	1.71474	579.13%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	-55.7	-1.6157 ug/L	4.21744	-1.6157 ppb	4.21744	261.02%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	57.2	0.4170 ug/L	0.27163	0.4170 ppb	0.27163	65.15%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	23.0	0.2313 ug/L	0.03124	0.2313 ppb	0.03124	13.51%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	6.8	0.4774 ug/L	0.87326	0.4774 ppb	0.87326	182.90%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 48

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 1

Date Collected: 2/11/2010 21:50:27

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4818.4	4818.4	100 %		21:52:19
1	Y RADIAL	5049.0	5049.0	101.0 %		21:52:19
1	Al 396.153Radial†	5324.5	5463.4	5047.3 ug/L	5047.3 ppb	21:52:19
1	Ca 317.933Radial†	3059.4	3035.4	5030.9 ug/L	5030.9 ppb	21:52:39
1	Fe 238.204 Radial†	562.4	549.5	5015.2 ug/L	5015.2 ppb	21:52:39
1	K 766.490 Radial†	30562.5	27664.0	4876.9 ug/L	4876.9 ppb	21:52:19
1	Mg 279.077 IEC†	149.5	148.7	5269.4 ug/L	5269.4 ppb	21:52:39
1	Na 589.592 Radial†	31711.3	32714.3	9894.4 ug/L	9894.4 ppb	21:52:19
1	Sr 421.552†	75172.0	74990.8	525.88 ug/L	525.88 ppb	21:52:19
1	Sc 361.383	856638.5	856638.5	99.367 %		21:53:37
1	Y 371.029	690482.6	690482.6	96.625 %		21:53:37
1	Ag 328.068†	103159.9	103588.1	491.26 ug/L	491.26 ppb	21:53:42
1	As 188.979†	1044.7	1085.2	496.68 ug/L	496.68 ppb	21:54:02
1	B 249.677†	19861.7	20527.2	486.08 ug/L	486.08 ppb	21:53:42
1	Ba 233.527†	60643.2	61041.1	499.72 ug/L	499.72 ppb	21:53:42
1	Be 313.107†	1311744.6	1324437.7	494.43 ug/L	494.43 ppb	21:53:37
1	Cd 226.502†	40465.9	40935.5	486.57 ug/L	486.57 ppb	21:53:42
1	Co 228.616†	23046.1	23266.6	508.26 ug/L	508.26 ppb	21:53:42
1	Cr 267.716†	41380.5	41577.3	484.63 ug/L	484.63 ppb	21:53:42
1	Cu 324.752†	167757.1	163004.8	494.47 ug/L	494.47 ppb	21:53:42
1	Mn 257.610†	433444.6	435753.3	501.62 ug/L	501.62 ppb	21:53:37
1	Mo 202.031†	6420.6	6446.0	483.18 ug/L	483.18 ppb	21:54:02
1	Ni 231.604†	18854.8	18866.9	488.47 ug/L	488.47 ppb	21:53:42
1	P 214.914†	4132.1	3930.4	2349.4 ug/L	2349.4 ppb	21:54:02
1	Pb 220.353†	3798.4	3884.3	486.18 ug/L	486.18 ppb	21:54:02
1	S 181.975 Axial†	696.1	661.2	963.22 ug/L	963.22 ppb	21:54:02
1	Sb 206.836†	1441.4	1408.4	508.20 ug/L	508.20 ppb	21:54:02
1	Se 196.026†	697.3	723.8	505.42 ug/L	505.42 ppb	21:54:02
1	Si 251.611†	74450.8	74362.7	2481.4 ug/L	2481.4 ppb	21:53:42
1	Sn 189.927†	2579.0	2586.7	480.88 ug/L	480.88 ppb	21:54:02
1	Ti 334.940†	301277.3	304499.3	493.74 ug/L	493.74 ppb	21:53:42
1	Tl 190.801†	1515.4	1559.3	503.03 ug/L	503.03 ppb	21:54:02
1	U 409.014†	13711.9	16779.2	484.89 ug/L	484.89 ppb	21:53:42
1	V 292.402†	64692.1	66658.8	490.51 ug/L	490.51 ppb	21:53:42
1	Zn 213.857†	50509.1	50117.5	489.90 ug/L	489.90 ppb	21:53:42
1	SiO2†	75327.3	75224.0	5352.7 ug/L	5352.7 ppb	21:55:10
2	Sc Radial	4837.3	4837.3	101 %		21:52:45
2	Y RADIAL	5085.3	5085.3	101.7 %		21:52:45
2	Al 396.153Radial†	5334.4	5452.5	5036.7 ug/L	5036.7 ppb	21:52:45
2	Ca 317.933Radial†	3097.7	3061.5	5074.3 ug/L	5074.3 ppb	21:53:05
2	Fe 238.204 Radial†	572.3	557.3	5085.9 ug/L	5085.9 ppb	21:53:05
2	K 766.490 Radial†	30649.0	27630.8	4871.1 ug/L	4871.1 ppb	21:52:45
2	Mg 279.077 IEC†	149.1	147.8	5237.7 ug/L	5237.7 ppb	21:53:05
2	Na 589.592 Radial†	31441.4	32322.4	9775.9 ug/L	9775.9 ppb	21:52:45
2	Sr 421.552†	74721.7	74250.3	520.69 ug/L	520.69 ppb	21:52:45
2	Sc 361.383	845413.2	845413.2	98.065 %		21:54:08
2	Y 371.029	681907.2	681907.2	95.425 %		21:54:08
2	Ag 328.068†	103718.3	105536.0	500.50 ug/L	500.50 ppb	21:54:13
2	As 188.979†	1045.4	1099.8	503.39 ug/L	503.39 ppb	21:54:33
2	B 249.677†	19982.0	20915.3	495.28 ug/L	495.28 ppb	21:54:13
2	Ba 233.527†	60852.4	62064.7	508.11 ug/L	508.11 ppb	21:54:13
2	Be 313.107†	1298582.0	1328543.6	495.98 ug/L	495.98 ppb	21:54:08
2	Cd 226.502†	40560.7	41572.9	494.15 ug/L	494.15 ppb	21:54:13
2	Co 228.616†	23091.4	23620.7	516.00 ug/L	516.00 ppb	21:54:13
2	Cr 267.716†	41629.9	42384.5	494.04 ug/L	494.04 ppb	21:54:13
2	Cu 324.752†	169175.5	166692.9	505.66 ug/L	505.66 ppb	21:54:13
2	Mn 257.610†	428152.3	436148.5	502.08 ug/L	502.08 ppb	21:54:08
2	Mo 202.031†	6446.2	6557.8	491.55 ug/L	491.55 ppb	21:54:33
2	Ni 231.604†	18883.4	19148.0	495.75 ug/L	495.75 ppb	21:54:13

2	P 214.914†	4167.3	4021.5	2403.9 ug/L	2403.9 ppb	21:54:33
2	Pb 220.353†	3793.3	3929.9	491.87 ug/L	491.87 ppb	21:54:33
2	S 181.975 Axial†	714.0	688.8	1003.4 ug/L	1003.4 ppb	21:54:33
2	Sb 206.836†	1427.1	1413.1	510.15 ug/L	510.15 ppb	21:54:33
2	Se 196.026†	705.0	741.1	517.31 ug/L	517.31 ppb	21:54:33
2	Si 251.611†	74829.8	75744.0	2527.5 ug/L	2527.5 ppb	21:54:13
2	Sn 189.927†	2591.1	2633.6	489.58 ug/L	489.58 ppb	21:54:33
2	Ti 334.940†	302926.9	310207.2	503.00 ug/L	503.00 ppb	21:54:13
2	Tl 190.801†	1509.2	1573.2	507.50 ug/L	507.50 ppb	21:54:33
2	U 409.014†	13635.4	16884.5	487.91 ug/L	487.91 ppb	21:54:13
2	V 292.402†	65137.0	67976.9	500.18 ug/L	500.18 ppb	21:54:13
2	Zn 213.857†	50776.1	51064.7	499.17 ug/L	499.17 ppb	21:54:13
2	SiO2†	75217.2	76118.2	5416.3 ug/L	5416.3 ppb	21:55:15
3	Sc Radial	4860.5	4860.5	101 %		21:53:10
3	Y RADIAL	5063.8	5063.8	101.3 %		21:53:10
3	Al 396.153Radial†	5328.7	5421.5	5008.3 ug/L	5008.3 ppb	21:53:10
3	Ca 317.933Radial†	3086.8	3036.0	5032.0 ug/L	5032.0 ppb	21:53:30
3	Fe 238.204 Radial†	570.0	552.2	5039.6 ug/L	5039.6 ppb	21:53:30
3	K 766.490 Radial†	30598.2	27435.0	4836.6 ug/L	4836.6 ppb	21:53:10
3	Mg 279.077 IEC†	150.1	148.0	5245.2 ug/L	5245.2 ppb	21:53:30
3	Na 589.592 Radial†	31481.9	32213.0	9742.8 ug/L	9742.8 ppb	21:53:10
3	Sr 421.552†	74631.6	73806.2	517.58 ug/L	517.58 ppb	21:53:10
3	Sc 361.383	857496.4	857496.4	99.467 %		21:54:39
3	Y 371.029	690308.9	690308.9	96.600 %		21:54:39
3	Ag 328.068†	103856.3	104184.4	494.08 ug/L	494.08 ppb	21:54:44
3	As 188.979†	1046.0	1085.5	496.83 ug/L	496.83 ppb	21:55:04
3	B 249.677†	20024.6	20671.0	489.49 ug/L	489.49 ppb	21:54:44
3	Ba 233.527†	60994.7	61333.3	502.12 ug/L	502.12 ppb	21:54:44
3	Be 313.107†	1315302.5	1326694.0	495.28 ug/L	495.28 ppb	21:54:39
3	Cd 226.502†	40689.0	41119.1	488.75 ug/L	488.75 ppb	21:54:44
3	Co 228.616†	23123.5	23321.2	509.46 ug/L	509.46 ppb	21:54:44
3	Cr 267.716†	41600.5	41756.8	486.72 ug/L	486.72 ppb	21:54:44
3	Cu 324.752†	168637.8	163721.3	496.64 ug/L	496.64 ppb	21:54:44
3	Mn 257.610†	435169.2	437050.7	503.12 ug/L	503.12 ppb	21:54:39
3	Mo 202.031†	6458.3	6477.4	485.53 ug/L	485.53 ppb	21:55:04
3	Ni 231.604†	18967.1	18960.8	490.91 ug/L	490.91 ppb	21:54:44
3	P 214.914†	4179.0	3973.3	2375.6 ug/L	2375.6 ppb	21:55:04
3	Pb 220.353†	3839.9	3922.2	490.89 ug/L	490.89 ppb	21:55:04
3	S 181.975 Axial†	708.9	673.3	980.91 ug/L	980.91 ppb	21:55:04
3	Sb 206.836†	1440.5	1406.0	507.51 ug/L	507.51 ppb	21:55:04
3	Se 196.026†	703.2	729.1	509.08 ug/L	509.08 ppb	21:55:04
3	Si 251.611†	74807.6	74646.5	2490.9 ug/L	2490.9 ppb	21:54:44
3	Sn 189.927†	2609.4	2614.7	486.07 ug/L	486.07 ppb	21:55:04
3	Ti 334.940†	302813.4	305740.3	495.75 ug/L	495.75 ppb	21:54:44
3	Tl 190.801†	1519.2	1561.5	503.75 ug/L	503.75 ppb	21:55:04
3	U 409.014†	13822.1	16876.3	487.69 ug/L	487.69 ppb	21:54:44
3	V 292.402†	65050.1	66953.6	492.69 ug/L	492.69 ppb	21:54:44
3	Zn 213.857†	50913.0	50472.8	493.38 ug/L	493.38 ppb	21:54:44
3	SiO2†	75103.9	74923.5	5331.2 ug/L	5331.2 ppb	21:55:20

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	853182.7	98.966 %	0.7821			0.79%
Sc Radial	4838.7	101 %	0.4			0.44%
Y 371.029	687566.2	96.217 %	0.6859			0.71%
Y RADIAL	5066.0	101.3 %	0.37			0.36%
Ag 328.068†	104436.2	495.28 ug/L	4.733	495.28 ppb	4.733	0.96%
QC value within limits for Ag 328.068 Recovery = 99.06%						
Al 396.153Radial†	5445.8	5030.8 ug/L	20.17	5030.8 ppb	20.17	0.40%
QC value within limits for Al 396.153Radial Recovery = 100.62%						
As 188.979†	1090.2	498.97 ug/L	3.833	498.97 ppb	3.833	0.77%
QC value within limits for As 188.979 Recovery = 99.79%						
B 249.677†	20704.5	490.28 ug/L	4.650	490.28 ppb	4.650	0.95%
QC value within limits for B 249.677 Recovery = 98.06%						
Ba 233.527†	61479.7	503.32 ug/L	4.318	503.32 ppb	4.318	0.86%
QC value within limits for Ba 233.527 Recovery = 100.66%						
Be 313.107†	1326558.4	495.23 ug/L	0.776	495.23 ppb	0.776	0.16%
QC value within limits for Be 313.107 Recovery = 99.05%						
Ca 317.933Radial†	3044.3	5045.7 ug/L	24.73	5045.7 ppb	24.73	0.49%

QC value within limits for Ca 317.933 Radial Recovery = 100.91%							
Cd 226.502†	41209.2	489.82 ug/L	3.900	489.82 ppb	3.900	0.80%	
QC value within limits for Cd 226.502 Recovery = 97.96%							
Co 228.616†	23402.8	511.24 ug/L	4.164	511.24 ppb	4.164	0.81%	
QC value within limits for Co 228.616 Recovery = 102.25%							
Cr 267.716†	41906.2	488.47 ug/L	4.942	488.47 ppb	4.942	1.01%	
QC value within limits for Cr 267.716 Recovery = 97.69%							
Cu 324.752†	164473.0	498.92 ug/L	5.933	498.92 ppb	5.933	1.19%	
QC value within limits for Cu 324.752 Recovery = 99.78%							
Fe 238.204 Radial†	553.0	5046.9 ug/L	35.88	5046.9 ppb	35.88	0.71%	
QC value within limits for Fe 238.204 Radial Recovery = 100.94%							
K 766.490 Radial†	27576.6	4861.5 ug/L	21.82	4861.5 ppb	21.82	0.45%	
QC value within limits for K 766.490 Radial Recovery = 97.23%							
Mg 279.077 IEC†	148.2	5250.7 ug/L	16.55	5250.7 ppb	16.55	0.32%	
QC value within limits for Mg 279.077 IEC Recovery = 105.01%							
Mn 257.610†	436317.5	502.27 ug/L	0.766	502.27 ppb	0.766	0.15%	
QC value within limits for Mn 257.610 Recovery = 100.45%							
Mo 202.031†	6493.7	486.75 ug/L	4.322	486.75 ppb	4.322	0.89%	
QC value within limits for Mo 202.031 Recovery = 97.35%							
Na 589.592 Radial†	32416.6	9804.4 ug/L	79.71	9804.4 ppb	79.71	0.81%	
QC value within limits for Na 589.592 Radial Recovery = 98.04%							
Ni 231.604†	18991.9	491.71 ug/L	3.704	491.71 ppb	3.704	0.75%	
QC value within limits for Ni 231.604 Recovery = 98.34%							
P 214.914†	3975.1	2376.3 ug/L	27.26	2376.3 ppb	27.26	1.15%	
QC value within limits for P 214.914 Recovery = 95.05%							
Pb 220.353†	3912.1	489.65 ug/L	3.043	489.65 ppb	3.043	0.62%	
QC value within limits for Pb 220.353 Recovery = 97.93%							
S 181.975 Axial†	674.4	982.52 ug/L	20.162	982.52 ppb	20.162	2.05%	
QC value within limits for S 181.975 Axial Recovery = 98.25%							
Sb 206.836†	1409.2	508.62 ug/L	1.367	508.62 ppb	1.367	0.27%	
QC value within limits for Sb 206.836 Recovery = 101.72%							
Se 196.026†	731.3	510.60 ug/L	6.085	510.60 ppb	6.085	1.19%	
QC value within limits for Se 196.026 Recovery = 102.12%							
Si 251.611†	74917.7	2499.9 ug/L	24.35	2499.9 ppb	24.35	0.97%	
QC value within limits for Si 251.611 Recovery = 100.00%							
Sn 189.927†	2611.7	485.51 ug/L	4.379	485.51 ppb	4.379	0.90%	
QC value within limits for Sn 189.927 Recovery = 97.10%							
Sr 421.552†	74349.1	521.38 ug/L	4.197	521.38 ppb	4.197	0.81%	
QC value within limits for Sr 421.552 Recovery = 104.28%							
Ti 334.940†	306815.6	497.50 ug/L	4.871	497.50 ppb	4.871	0.98%	
QC value within limits for Ti 334.940 Recovery = 99.50%							
Tl 190.801†	1564.6	504.76 ug/L	2.399	504.76 ppb	2.399	0.48%	
QC value within limits for Tl 190.801 Recovery = 100.95%							
U 409.014†	16846.7	486.83 ug/L	1.686	486.83 ppb	1.686	0.35%	
QC value within limits for U 409.014 Recovery = 97.37%							
V 292.402†	67196.4	494.46 ug/L	5.075	494.46 ppb	5.075	1.03%	
QC value within limits for V 292.402 Recovery = 98.89%							
Zn 213.857†	50551.7	494.15 ug/L	4.684	494.15 ppb	4.684	0.95%	
QC value within limits for Zn 213.857 Recovery = 98.83%							
SiO2†	75421.9	5366.7 ug/L	44.23	5366.7 ppb	44.23	0.82%	
QC value within limits for SiO2 Recovery = 100.36%							
All analyte(s) passed QC.							

Sequence No.: 49

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 6

Date Collected: 2/11/2010 21:57:29

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4901.3	4901.3	102 %		21:59:21
1	Y RADIAL	5123.8	5123.8	102.5 %		21:59:21
1	Al 396.153Radial†	-162.2	-7.5	-6.9947 ug/L	-6.9947 ppb	21:59:21
1	Ca 317.933Radial†	20.2	3.1	5.1616 ug/L	5.1616 ppb	21:59:41
1	Fe 238.204 Radial†	11.9	0.2	1.8287 ug/L	1.8287 ppb	21:59:41
1	K 766.490 Radial†	2796.9	-82.6	-14.600 ug/L	-14.600 ppb	21:59:21
1	Mg 279.077 IEC†	3.7	3.2	114.76 ug/L	114.76 ppb	21:59:41
1	Na 589.592 Radial†	-977.5	119.8	36.248 ug/L	36.248 ppb	21:59:21
1	Sr 421.552†	-5.0	-7.0	-0.0493 ug/L	-0.0493 ppb	21:59:21
1	Sc 361.383	826935.4	826935.4	95.922 %		22:00:38
1	Y 371.029	675508.6	675508.6	94.529 %		22:00:38
1	Ag 328.068†	197.1	-23.3	-0.1067 ug/L	-0.1067 ppb	22:00:38
1	As 188.979†	-22.6	10.3	4.6755 ug/L	4.6755 ppb	22:00:58
1	B 249.677†	-421.6	99.5	2.3669 ug/L	2.3669 ppb	22:00:58
1	Ba 233.527†	-1.1	10.4	0.0829 ug/L	0.0829 ppb	22:00:58
1	Be 313.107†	-4153.5	8.6	0.0027 ug/L	0.0027 ppb	22:00:38
1	Cd 226.502†	-193.8	9.8	0.1149 ug/L	0.1149 ppb	22:00:58
1	Co 228.616†	-82.1	-11.8	-0.2581 ug/L	-0.2581 ppb	22:00:58
1	Cr 267.716†	80.0	16.6	0.1947 ug/L	0.1947 ppb	22:00:58
1	Cu 324.752†	5271.1	-325.6	-0.9832 ug/L	-0.9832 ppb	22:00:38
1	Mn 257.610†	518.7	88.9	0.0977 ug/L	0.0977 ppb	22:00:58
1	Mo 202.031†	16.4	1.6	0.1189 ug/L	0.1189 ppb	22:00:58
1	Ni 231.604†	94.8	-9.2	-0.2380 ug/L	-0.2380 ppb	22:00:58
1	P 214.914†	212.0	-7.0	-4.1809 ug/L	-4.1809 ppb	22:00:58
1	Pb 220.353†	-58.1	1.1	0.1406 ug/L	0.1406 ppb	22:00:58
1	S 181.975 Axial†	37.6	-0.2	-0.2305 ug/L	-0.2305 ppb	22:00:58
1	Sb 206.836†	43.8	3.5	1.2338 ug/L	1.2338 ppb	22:00:58
1	Se 196.026†	-26.4	-5.4	-3.6229 ug/L	-3.6229 ppb	22:00:58
1	Si 251.611†	565.7	27.5	0.9180 ug/L	0.9180 ppb	22:00:58
1	Sn 189.927†	12.9	4.8	0.8823 ug/L	0.8823 ppb	22:00:58
1	Ti 334.940†	-1394.7	-150.8	-0.2500 ug/L	-0.2500 ppb	22:00:38
1	Tl 190.801†	-31.2	1.6	0.5219 ug/L	0.5219 ppb	22:00:58
1	U 409.014†	-3111.3	-263.5	-7.6415 ug/L	-7.6415 ppb	22:00:38
1	V 292.402†	-1611.7	-125.6	-0.9231 ug/L	-0.9231 ppb	22:00:38
1	Zn 213.857†	711.8	28.8	0.2866 ug/L	0.2866 ppb	22:00:58
1	SiO2†	564.5	5.4	0.3796 ug/L	0.3796 ppb	22:01:54
2	Sc Radial	4804.1	4804.1	99.9 %		21:59:46
2	Y RADIAL	5034.1	5034.1	100.7 %		21:59:46
2	Al 396.153Radial†	-153.9	-2.4	-2.2158 ug/L	-2.2158 ppb	21:59:46
2	Ca 317.933Radial†	16.1	-0.6	-1.0129 ug/L	-1.0129 ppb	22:00:06
2	Fe 238.204 Radial†	10.7	-0.8	-7.0330 ug/L	-7.0330 ppb	22:00:06
2	K 766.490 Radial†	2799.6	-24.5	-4.3247 ug/L	-4.3247 ppb	21:59:46
2	Mg 279.077 IEC†	6.6	6.1	217.77 ug/L	217.77 ppb	22:00:06
2	Na 589.592 Radial†	-1005.4	72.5	21.935 ug/L	21.935 ppb	21:59:46
2	Sr 421.552†	12.5	10.4	0.0729 ug/L	0.0729 ppb	21:59:46
2	Sc 361.383	834710.7	834710.7	96.824 %		22:01:03
2	Y 371.029	682191.9	682191.9	95.464 %		22:01:03
2	Ag 328.068†	260.2	40.0	0.1882 ug/L	0.1882 ppb	22:01:03
2	As 188.979†	-32.6	0.2	0.0943 ug/L	0.0943 ppb	22:01:23
2	B 249.677†	-422.3	102.9	2.4480 ug/L	2.4480 ppb	22:01:23
2	Ba 233.527†	-9.0	2.3	0.0188 ug/L	0.0188 ppb	22:01:23
2	Be 313.107†	-4152.0	50.5	0.0188 ug/L	0.0188 ppb	22:01:03
2	Cd 226.502†	-197.2	8.3	0.0986 ug/L	0.0986 ppb	22:01:23
2	Co 228.616†	-60.7	11.0	0.2400 ug/L	0.2400 ppb	22:01:23
2	Cr 267.716†	61.3	-3.4	-0.0391 ug/L	-0.0391 ppb	22:01:23
2	Cu 324.752†	5347.8	-297.4	-0.9017 ug/L	-0.9017 ppb	22:01:03
2	Mn 257.610†	567.1	133.8	0.1444 ug/L	0.1444 ppb	22:01:23
2	Mo 202.031†	7.1	-8.2	-0.6172 ug/L	-0.6172 ppb	22:01:23
2	Ni 231.604†	94.3	-10.6	-0.2758 ug/L	-0.2758 ppb	22:01:23

2	P 214.914†	231.7	11.2	7.1477 ug/L	7.1477 ppb	22:01:23
2	Pb 220.353†	-64.8	-5.2	-0.6452 ug/L	-0.6452 ppb	22:01:23
2	S 181.975 Axial†	35.2	-3.0	-4.3060 ug/L	-4.3060 ppb	22:01:23
2	Sb 206.836†	45.1	4.5	1.5356 ug/L	1.5356 ppb	22:01:23
2	Se 196.026†	-17.4	4.1	2.7580 ug/L	2.7580 ppb	22:01:23
2	Si 251.611†	591.5	48.6	1.6333 ug/L	1.6333 ppb	22:01:23
2	Sn 189.927†	4.3	-4.3	-0.7930 ug/L	-0.7930 ppb	22:01:23
2	Ti 334.940†	-1263.4	-1.7	-0.0199 ug/L	-0.0199 ppb	22:01:03
2	Tl 190.801†	-32.8	0.3	0.0924 ug/L	0.0924 ppb	22:01:23
2	U 409.014†	-2944.3	-60.8	-1.7626 ug/L	-1.7626 ppb	22:01:03
2	V 292.402†	-1476.2	30.0	0.2112 ug/L	0.2112 ppb	22:01:03
2	Zn 213.857†	720.9	31.3	0.3127 ug/L	0.3127 ppb	22:01:23
2	SiO2†	527.8	-38.0	-2.6956 ug/L	-2.6956 ppb	22:01:59
3	Sc Radial	4819.3	4819.3	100 %		22:00:11
3	Y RADIAL	5081.5	5081.5	101.6 %		22:00:11
3	Al 396.153Radial†	-145.1	6.9	6.3659 ug/L	6.3659 ppb	22:00:11
3	Ca 317.933Radial†	16.8	0.1	0.1367 ug/L	0.1367 ppb	22:00:31
3	Fe 238.204 Radial†	9.2	-2.3	-20.793 ug/L	-20.793 ppb	22:00:31
3	K 766.490 Radial†	2842.7	9.6	1.6840 ug/L	1.6840 ppb	22:00:11
3	Mg 279.077 IEC†	1.8	1.4	48.625 ug/L	48.625 ppb	22:00:31
3	Na 589.592 Radial†	-923.4	157.5	47.621 ug/L	47.621 ppb	22:00:11
3	Sr 421.552†	35.2	33.0	0.2312 ug/L	0.2312 ppb	22:00:11
3	Sc 361.383	832657.6	832657.6	96.585 %		22:01:29
3	Y 371.029	679926.1	679926.1	95.147 %		22:01:29
3	Ag 328.068†	148.3	-75.2	-0.3588 ug/L	-0.3588 ppb	22:01:29
3	As 188.979†	-27.7	5.2	2.3716 ug/L	2.3716 ppb	22:01:49
3	B 249.677†	-439.1	84.4	2.0103 ug/L	2.0103 ppb	22:01:49
3	Ba 233.527†	-14.4	-3.3	-0.0282 ug/L	-0.0282 ppb	22:01:49
3	Be 313.107†	-4159.6	32.1	0.0122 ug/L	0.0122 ppb	22:01:29
3	Cd 226.502†	-200.8	4.0	0.0482 ug/L	0.0482 ppb	22:01:49
3	Co 228.616†	-64.7	6.7	0.1477 ug/L	0.1477 ppb	22:01:49
3	Cr 267.716†	47.0	-18.1	-0.2095 ug/L	-0.2095 ppb	22:01:49
3	Cu 324.752†	5219.5	-416.7	-1.2624 ug/L	-1.2624 ppb	22:01:29
3	Mn 257.610†	468.2	32.9	0.0338 ug/L	0.0338 ppb	22:01:49
3	Mo 202.031†	19.6	4.7	0.3525 ug/L	0.3525 ppb	22:01:49
3	Ni 231.604†	93.5	-11.2	-0.2894 ug/L	-0.2894 ppb	22:01:49
3	P 214.914†	223.0	2.8	2.0012 ug/L	2.0012 ppb	22:01:49
3	Pb 220.353†	-48.7	11.3	1.4200 ug/L	1.4200 ppb	22:01:49
3	S 181.975 Axial†	39.7	1.7	2.4938 ug/L	2.4938 ppb	22:01:49
3	Sb 206.836†	32.8	-8.2	-2.8484 ug/L	-2.8484 ppb	22:01:49
3	Se 196.026†	-20.5	0.9	0.5645 ug/L	0.5645 ppb	22:01:49
3	Si 251.611†	566.3	24.1	0.8017 ug/L	0.8017 ppb	22:01:49
3	Sn 189.927†	12.5	4.3	0.7934 ug/L	0.7934 ppb	22:01:49
3	Ti 334.940†	-1185.9	75.4	0.1205 ug/L	0.1205 ppb	22:01:29
3	Tl 190.801†	-25.6	7.7	2.4565 ug/L	2.4565 ppb	22:01:49
3	U 409.014†	-3038.4	-165.8	-4.8044 ug/L	-4.8044 ppb	22:01:29
3	V 292.402†	-1539.0	-38.8	-0.2820 ug/L	-0.2820 ppb	22:01:29
3	Zn 213.857†	720.8	33.1	0.3328 ug/L	0.3328 ppb	22:01:49
3	SiO2†	602.3	40.5	2.8802 ug/L	2.8802 ppb	22:02:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	831434.6	96.444 %	0.4674			0.48%
Sc Radial	4841.6	101 %	1.1			1.08%
Y 371.029	679208.8	95.047 %	0.4756			0.50%
Y RADIAL	5079.8	101.6 %	0.90			0.88%
Ag 328.068†	-19.5	-0.0924 ug/L	0.27379	-0.0924 ppb	0.27379	296.23%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	-1.0	-0.9482 ug/L	6.76988	-0.9482 ppb	6.76988	713.97%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	5.3	2.3805 ug/L	2.29063	2.3805 ppb	2.29063	96.22%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	95.6	2.2751 ug/L	0.23289	2.2751 ppb	0.23289	10.24%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	3.1	0.0245 ug/L	0.05577	0.0245 ppb	0.05577	227.22%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	30.4	0.0112 ug/L	0.00811	0.0112 ppb	0.00811	72.29%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	0.9	1.4285 ug/L	3.28372	1.4285 ppb	3.28372	229.87%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated									
Cd	226.502†	7.4	0.0872 ug/L	0.03479	0.0872 ppb	0.03479	39.88%		
QC value within limits for Cd 226.502 Recovery = Not calculated									
Co	228.616†	2.0	0.0432 ug/L	0.26496	0.0432 ppb	0.26496	613.21%		
QC value within limits for Co 228.616 Recovery = Not calculated									
Cr	267.716†	-1.6	-0.0179 ug/L	0.20293	-0.0179 ppb	0.20293	>999.9%		
QC value within limits for Cr 267.716 Recovery = Not calculated									
Cu	324.752†	-346.6	-1.0491 ug/L	0.18917	-1.0491 ppb	0.18917	18.03%		
QC value within limits for Cu 324.752 Recovery = Not calculated									
Fe	238.204 Radial†	-1.0	-8.6658 ug/L	11.39899	-8.6658 ppb	11.39899	131.54%		
QC value within limits for Fe 238.204 Radial Recovery = Not calculated									
K	766.490 Radial†	-32.5	-5.7469 ug/L	8.23470	-5.7469 ppb	8.23470	143.29%		
QC value within limits for K 766.490 Radial Recovery = Not calculated									
Mg	279.077 IEC†	3.6	127.05 ug/L	85.239	127.05 ppb	85.239	67.09%		
QC value within limits for Mg 279.077 IEC Recovery = Not calculated									
Mn	257.610†	85.2	0.0920 ug/L	0.05551	0.0920 ppb	0.05551	60.35%		
QC value within limits for Mn 257.610 Recovery = Not calculated									
Mo	202.031†	-0.6	-0.0486 ug/L	0.50611	-0.0486 ppb	0.50611	>999.9%		
QC value within limits for Mo 202.031 Recovery = Not calculated									
Na	589.592 Radial†	116.6	35.268 ug/L	12.8710	35.268 ppb	12.8710	36.49%		
QC value within limits for Na 589.592 Radial Recovery = Not calculated									
Ni	231.604†	-10.3	-0.2677 ug/L	0.02666	-0.2677 ppb	0.02666	9.96%		
QC value within limits for Ni 231.604 Recovery = Not calculated									
P	214.914†	2.3	1.6560 ug/L	5.67215	1.6560 ppb	5.67215	342.52%		
QC value within limits for P 214.914 Recovery = Not calculated									
Pb	220.353†	2.4	0.3052 ug/L	1.04240	0.3052 ppb	1.04240	341.60%		
QC value within limits for Pb 220.353 Recovery = Not calculated									
S	181.975 Axial†	-0.5	-0.6809 ug/L	3.42218	-0.6809 ppb	3.42218	502.60%		
QC value within limits for S 181.975 Axial Recovery = Not calculated									
Sb	206.836†	-0.1	-0.0264 ug/L	2.44866	-0.0264 ppb	2.44866	>999.9%		
QC value within limits for Sb 206.836 Recovery = Not calculated									
Se	196.026†	-0.1	-0.1001 ug/L	3.24195	-0.1001 ppb	3.24195	>999.9%		
QC value within limits for Se 196.026 Recovery = Not calculated									
Si	251.611†	33.4	1.1177 ug/L	0.45034	1.1177 ppb	0.45034	40.29%		
QC value within limits for Si 251.611 Recovery = Not calculated									
Sn	189.927†	1.6	0.2942 ug/L	0.94265	0.2942 ppb	0.94265	320.38%		
QC value within limits for Sn 189.927 Recovery = Not calculated									
Sr	421.552†	12.1	0.0849 ug/L	0.14067	0.0849 ppb	0.14067	165.62%		
QC value within limits for Sr 421.552 Recovery = Not calculated									
Ti	334.940†	-25.7	-0.0498 ug/L	0.18705	-0.0498 ppb	0.18705	375.59%		
QC value within limits for Ti 334.940 Recovery = Not calculated									
Tl	190.801†	3.2	1.0236 ug/L	1.25933	1.0236 ppb	1.25933	123.03%		
QC value within limits for Tl 190.801 Recovery = Not calculated									
U	409.014†	-163.4	-4.7362 ug/L	2.94000	-4.7362 ppb	2.94000	62.08%		
QC value within limits for U 409.014 Recovery = Not calculated									
V	292.402†	-44.8	-0.3313 ug/L	0.56877	-0.3313 ppb	0.56877	171.68%		
QC value within limits for V 292.402 Recovery = Not calculated									
Zn	213.857†	31.0	0.3107 ug/L	0.02314	0.3107 ppb	0.02314	7.45%		
QC value within limits for Zn 213.857 Recovery = Not calculated									
SiO2†		2.6	0.1881 ug/L	2.79282	0.1881 ppb	2.79282	>999.9%		
QC value within limits for SiO2 Recovery = Not calculated									

All analyte(s) passed QC.

Sequence No.: 50
 Sample ID: 1202024773|945399|1
 Analyst: HSC
 Initial Sample Wt:
 Dilution:

Autosampler Location: 75
 Date Collected: 2/11/2010 22:04:14
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: 1202024773|945399|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4925.9	4925.9	102 %		22:06:08
1	Y RADIAL	5197.0	5197.0	103.9 %		22:06:08
1	Al 396.153Radial†	-141.1	13.9	12.897 ug/L	12.897 ppb	22:06:08
1	Ca 317.933Radial†	40.5	22.8	37.743 ug/L	37.743 ppb	22:06:28
1	Fe 238.204 Radial†	17.1	5.2	47.080 ug/L	47.080 ppb	22:06:28
1	K 766.490 Radial†	2786.8	-106.2	-18.776 ug/L	-18.776 ppb	22:06:08
1	Mg 279.077 IEC†	2.7	2.2	77.576 ug/L	77.576 ppb	22:06:28
1	Na 589.592 Radial†	-904.7	195.7	59.190 ug/L	59.190 ppb	22:06:08
1	Sr 421.552†	17.8	15.2	0.1066 ug/L	0.1066 ppb	22:06:08
1	Sc 361.383	842828.9	842828.9	97.765 %		22:07:24
1	Y 371.029	687233.6	687233.6	96.170 %		22:07:24
1	Ag 328.068†	257.7	34.8	0.1797 ug/L	0.1797 ppb	22:07:24
1	As 188.979†	-29.5	3.7	1.6939 ug/L	1.6939 ppb	22:07:44
1	B 249.677†	-438.1	90.9	2.1544 ug/L	2.1544 ppb	22:07:44
1	Ba 233.527†	7.5	19.3	0.1596 ug/L	0.1596 ppb	22:07:44
1	Be 313.107†	-4128.6	115.8	0.0440 ug/L	0.0440 ppb	22:07:24
1	Cd 226.502†	-206.3	0.9	0.0057 ug/L	0.0057 ppb	22:07:44
1	Co 228.616†	-66.0	6.2	0.1361 ug/L	0.1361 ppb	22:07:44
1	Cr 267.716†	96.6	32.1	0.3744 ug/L	0.3744 ppb	22:07:44
1	Cu 324.752†	5482.9	-212.5	-0.6424 ug/L	-0.6424 ppb	22:07:24
1	Mn 257.610†	1060.3	632.7	0.7294 ug/L	0.7294 ppb	22:07:44
1	Mo 202.031†	24.0	9.0	0.6792 ug/L	0.6792 ppb	22:07:44
1	Ni 231.604†	103.9	-1.8	-0.0464 ug/L	-0.0464 ppb	22:07:44
1	P 214.914†	223.0	0.0	0.1545 ug/L	0.1545 ppb	22:07:44
1	Pb 220.353†	-39.4	21.4	2.6739 ug/L	2.6739 ppb	22:07:44
1	S 181.975 Axial†	53.2	15.0	21.902 ug/L	21.902 ppb	22:07:44
1	Sb 206.836†	36.9	-4.4	-1.4691 ug/L	-1.4691 ppb	22:07:44
1	Se 196.026†	-14.5	7.3	5.0600 ug/L	5.0600 ppb	22:07:44
1	Si 251.611†	807.7	263.9	8.8182 ug/L	8.8182 ppb	22:07:44
1	Sn 189.927†	27.7	19.6	3.6457 ug/L	3.6457 ppb	22:07:44
1	Ti 334.940†	-1047.4	231.9	0.3744 ug/L	0.3744 ppb	22:07:24
1	Tl 190.801†	-36.7	-3.3	-1.0600 ug/L	-1.0600 ppb	22:07:44
1	U 409.014†	-2891.9	22.1	0.6342 ug/L	0.6342 ppb	22:07:24
1	V 292.402†	-1490.4	30.2	0.2240 ug/L	0.2240 ppb	22:07:24
1	Zn 213.857†	924.2	232.1	2.2836 ug/L	2.2836 ppb	22:07:44
1	SiO2†	879.5	316.4	22.554 ug/L	22.554 ppb	22:08:40
2	Sc Radial	4823.0	4823.0	100 %		22:06:33
2	Y RADIAL	5068.3	5068.3	101.4 %		22:06:33
2	Al 396.153Radial†	-158.7	-6.6	-6.1130 ug/L	-6.1130 ppb	22:06:33
2	Ca 317.933Radial†	37.9	21.0	34.838 ug/L	34.838 ppb	22:06:53
2	Fe 238.204 Radial†	16.4	4.9	44.433 ug/L	44.433 ppb	22:06:53
2	K 766.490 Radial†	2819.6	-15.5	-2.7686 ug/L	-2.7686 ppb	22:06:33
2	Mg 279.077 IEC†	2.0	1.5	54.848 ug/L	54.848 ppb	22:06:53
2	Na 589.592 Radial†	-842.5	238.8	72.234 ug/L	72.234 ppb	22:06:33
2	Sr 421.552†	34.5	32.3	0.2265 ug/L	0.2265 ppb	22:06:33
2	Sc 361.383	850774.8	850774.8	98.687 %		22:07:50
2	Y 371.029	694063.8	694063.8	97.126 %		22:07:50
2	Ag 328.068†	294.2	69.3	0.3428 ug/L	0.3428 ppb	22:07:50
2	As 188.979†	-31.6	1.9	0.8615 ug/L	0.8615 ppb	22:08:10
2	B 249.677†	-482.6	50.0	1.1820 ug/L	1.1820 ppb	22:08:10
2	Ba 233.527†	13.3	25.1	0.2082 ug/L	0.2082 ppb	22:08:10
2	Be 313.107†	-4104.0	180.1	0.0678 ug/L	0.0678 ppb	22:07:50
2	Cd 226.502†	-196.1	13.2	0.1526 ug/L	0.1526 ppb	22:08:10
2	Co 228.616†	-65.9	6.9	0.1504 ug/L	0.1504 ppb	22:08:10
2	Cr 267.716†	112.4	47.1	0.5494 ug/L	0.5494 ppb	22:08:10
2	Cu 324.752†	5454.9	-293.3	-0.8888 ug/L	-0.8888 ppb	22:07:50
2	Mn 257.610†	1081.3	643.8	0.7429 ug/L	0.7429 ppb	22:08:10
2	Mo 202.031†	20.0	4.8	0.3607 ug/L	0.3607 ppb	22:08:10
2	Ni 231.604†	99.7	-6.9	-0.1800 ug/L	-0.1800 ppb	22:08:10

2	P 214.914†	235.2	10.3	6.5446 ug/L	6.5446 ppb	22:08:10
2	Pb 220.353†	-43.4	17.8	2.2114 ug/L	2.2114 ppb	22:08:10
2	S 181.975 Axial†	44.4	5.7	8.2411 ug/L	8.2411 ppb	22:08:10
2	Sb 206.836†	37.0	-4.7	-1.5962 ug/L	-1.5962 ppb	22:08:10
2	Se 196.026†	-18.3	3.6	2.5538 ug/L	2.5538 ppb	22:08:10
2	Si 251.611†	802.8	251.2	8.3985 ug/L	8.3985 ppb	22:08:10
2	Sn 189.927†	17.6	9.1	1.7017 ug/L	1.7017 ppb	22:08:10
2	Ti 334.940†	-1099.6	189.0	0.3053 ug/L	0.3053 ppb	22:07:50
2	Tl 190.801†	-32.2	1.6	0.5204 ug/L	0.5204 ppb	22:08:10
2	U 409.014†	-2845.9	96.3	2.7866 ug/L	2.7866 ppb	22:07:50
2	V 292.402†	-1403.7	132.2	0.9647 ug/L	0.9647 ppb	22:07:50
2	Zn 213.857†	942.1	241.4	2.3768 ug/L	2.3768 ppb	22:08:10
2	SiO2†	843.7	271.8	19.380 ug/L	19.380 ppb	22:08:45
3	Sc Radial	4945.8	4945.8	103 %		22:06:58
3	Y RADIAL	5168.6	5168.6	103.4 %		22:06:58
3	Al 396.153Radial†	-152.7	3.1	2.8459 ug/L	2.8459 ppb	22:06:58
3	Ca 317.933Radial†	34.8	17.1	28.389 ug/L	28.389 ppb	22:07:18
3	Fe 238.204 Radial†	14.8	2.9	26.741 ug/L	26.741 ppb	22:07:18
3	K 766.490 Radial†	2694.8	-206.5	-36.490 ug/L	-36.490 ppb	22:06:58
3	Mg 279.077 IEC†	0.5	0.1	2.2320 ug/L	2.2320 ppb	22:07:18
3	Na 589.592 Radial†	-920.8	183.6	55.529 ug/L	55.529 ppb	22:06:58
3	Sr 421.552†	55.3	51.7	0.3622 ug/L	0.3622 ppb	22:06:58
3	Sc 361.383	836082.3	836082.3	96.983 %		22:08:15
3	Y 371.029	681115.2	681115.2	95.314 %		22:08:15
3	Ag 328.068†	241.9	20.7	0.1079 ug/L	0.1079 ppb	22:08:15
3	As 188.979†	-32.9	-0.1	-0.0311 ug/L	-0.0311 ppb	22:08:35
3	B 249.677†	-447.0	78.2	1.8549 ug/L	1.8549 ppb	22:08:35
3	Ba 233.527†	15.2	27.3	0.2259 ug/L	0.2259 ppb	22:08:35
3	Be 313.107†	-4118.9	91.7	0.0351 ug/L	0.0351 ppb	22:08:15
3	Cd 226.502†	-200.6	5.1	0.0578 ug/L	0.0578 ppb	22:08:35
3	Co 228.616†	-69.5	2.0	0.0455 ug/L	0.0455 ppb	22:08:35
3	Cr 267.716†	99.7	36.0	0.4201 ug/L	0.4201 ppb	22:08:35
3	Cu 324.752†	5403.5	-249.1	-0.7557 ug/L	-0.7557 ppb	22:08:15
3	Mn 257.610†	1073.1	654.6	0.7557 ug/L	0.7557 ppb	22:08:35
3	Mo 202.031†	32.3	17.8	1.3350 ug/L	1.3350 ppb	22:08:35
3	Ni 231.604†	94.1	-11.0	-0.2857 ug/L	-0.2857 ppb	22:08:35
3	P 214.914†	236.1	15.4	9.7064 ug/L	9.7064 ppb	22:08:35
3	Pb 220.353†	-33.0	27.7	3.4597 ug/L	3.4597 ppb	22:08:35
3	S 181.975 Axial†	52.6	14.8	21.643 ug/L	21.643 ppb	22:08:35
3	Sb 206.836†	28.9	-12.4	-4.2614 ug/L	-4.2614 ppb	22:08:35
3	Se 196.026†	-27.3	-6.0	-3.9561 ug/L	-3.9561 ppb	22:08:35
3	Si 251.611†	796.4	258.9	8.6429 ug/L	8.6429 ppb	22:08:35
3	Sn 189.927†	16.8	8.6	1.6022 ug/L	1.6022 ppb	22:08:35
3	Ti 334.940†	-1003.4	268.6	0.4379 ug/L	0.4379 ppb	22:08:15
3	Tl 190.801†	-31.3	1.9	0.6095 ug/L	0.6095 ppb	22:08:35
3	U 409.014†	-2795.0	98.1	2.8392 ug/L	2.8392 ppb	22:08:15
3	V 292.402†	-1366.9	145.2	1.0743 ug/L	1.0743 ppb	22:08:15
3	Zn 213.857†	941.3	257.3	2.5375 ug/L	2.5375 ppb	22:08:35
3	SiO2†	836.6	279.5	19.900 ug/L	19.900 ppb	22:08:50

Mean Data: 1202024773|945399|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	843228.7	97.812	%	0.8531				0.87%
Sc Radial	4898.2	102	%	1.4				1.35%
Y 371.029	687470.9	96.203	%	0.9065				0.94%
Y RADIAL	5144.6	102.9	%	1.35				1.31%
Ag 328.068†	41.6	0.2101	ug/L	0.12036	0.2101	ppb	0.12036	57.28%
Al 396.153Radial†	3.5	3.2100	ug/L	9.51028	3.2100	ppb	9.51028	296.27%
As 188.979†	1.8	0.8414	ug/L	0.86270	0.8414	ppb	0.86270	102.53%
B 249.677†	73.0	1.7304	ug/L	0.49801	1.7304	ppb	0.49801	28.78%
Ba 233.527†	23.9	0.1979	ug/L	0.03433	0.1979	ppb	0.03433	17.35%
Be 313.107†	129.2	0.0490	ug/L	0.01688	0.0490	ppb	0.01688	34.48%
Ca 317.933Radial†	20.3	33.657	ug/L	4.7877	33.657	ppb	4.7877	14.23%
Cd 226.502†	6.4	0.0721	ug/L	0.07447	0.0721	ppb	0.07447	103.36%
Co 228.616†	5.0	0.1107	ug/L	0.05692	0.1107	ppb	0.05692	51.43%
Cr 267.716†	38.4	0.4480	ug/L	0.09077	0.4480	ppb	0.09077	20.26%
Cu 324.752†	-251.6	-0.7623	ug/L	0.12337	-0.7623	ppb	0.12337	16.18%
Fe 238.204 Radial†	4.3	39.418	ug/L	11.0578	39.418	ppb	11.0578	28.05%
K 766.490 Radial†	-109.4	-19.345	ug/L	16.8676	-19.345	ppb	16.8676	87.20%

Mg 279.077 IEC†	1.3	44.885 ug/L	38.6474	44.885 ppb	38.6474	86.10%
Mn 257.610†	643.7	0.7426 ug/L	0.01316	0.7426 ppb	0.01316	1.77%
Mo 202.031†	10.5	0.7916 ug/L	0.49679	0.7916 ppb	0.49679	62.76%
Na 589.592 Radial†	206.0	62.318 ug/L	8.7806	62.318 ppb	8.7806	14.09%
Ni 231.604†	-6.6	-0.1707 ug/L	0.11993	-0.1707 ppb	0.11993	70.26%
P 214.914†	8.6	5.4685 ug/L	4.86604	5.4685 ppb	4.86604	88.98%
Pb 220.353†	22.3	2.7817 ug/L	0.63108	2.7817 ppb	0.63108	22.69%
S 181.975 Axial†	11.8	17.262 ug/L	7.8133	17.262 ppb	7.8133	45.26%
Sb 206.836†	-7.2	-2.4422 ug/L	1.57672	-2.4422 ppb	1.57672	64.56%
Se 196.026†	1.6	1.2192 ug/L	4.65383	1.2192 ppb	4.65383	381.71%
Si 251.611†	258.0	8.6199 ug/L	0.21081	8.6199 ppb	0.21081	2.45%
Sn 189.927†	12.5	2.3165 ug/L	1.15216	2.3165 ppb	1.15216	49.74%
Sr 421.552†	33.1	0.2317 ug/L	0.12788	0.2317 ppb	0.12788	55.18%
Ti 334.940†	229.8	0.3725 ug/L	0.06632	0.3725 ppb	0.06632	17.80%
Tl 190.801†	0.1	0.0233 ug/L	0.93923	0.0233 ppb	0.93923	>999.9%
U 409.014†	72.2	2.0867 ug/L	1.25817	2.0867 ppb	1.25817	60.30%
V 292.402†	102.5	0.7543 ug/L	0.46253	0.7543 ppb	0.46253	61.32%
Zn 213.857†	243.6	2.3993 ug/L	0.12840	2.3993 ppb	0.12840	5.35%
SiO2†	289.3	20.611 ug/L	1.7025	20.611 ppb	1.7025	8.26%

Sequence No.: 51

Sample ID: 1202024774|945399|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 76

Date Collected: 2/11/2010 22:11:02

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202024774|945399|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5102.7	5102.7	106 %		22:13:15
1	Y RADIAL	5799.7	5799.7	116.0 %		22:13:15
1	Al 396.153Radial†	97823.5	92304.9	85648 ug/L	85648 ppb	22:12:55
1	Ca 317.933Radial†	58339.8	54941.5	91062 ug/L	91062 ppb	22:12:55
1	Fe 238.204 Radial†	20121.4	18943.6	172380 ug/L	172380 ppb	22:12:55
1	K 766.490 Radial†	231737.2	215479.3	38000 ug/L	38000 ppb	22:12:55
1	Mg 279.077 IEC†	1092.1	1028.4	36273 ug/L	36273 ppb	22:13:15
1	Na 589.592 Radial†	31651.7	30895.5	9344.3 ug/L	9344.3 ppb	22:12:55
1	Sr 421.552†	332071.3	312821.3	2193.2 ug/L	2193.2 ppb	22:12:55
1	Sc 361.383	871117.3	871117.3	101.05 %		22:14:16
1	Y 371.029	762453.1	762453.1	106.70 %		22:14:16
1	Ag 328.068†	48332.4	47603.0	285.85 ug/L	285.85 ppb	22:14:16
1	As 188.979†	1988.8	2002.1	996.93 ug/L	996.93 ppb	22:14:21
1	B 249.677†	56737.9	56689.2	1318.3 ug/L	1318.3 ppb	22:14:16
1	Ba 233.527†	219229.5	216970.4	1779.6 ug/L	1779.6 ppb	22:14:16
1	Be 313.107†	1862305.5	1847354.7	700.98 ug/L	700.98 ppb	22:14:16
1	Cd 226.502†	44258.9	44012.3	506.15 ug/L	506.15 ppb	22:14:21
1	Co 228.616†	38564.5	38238.8	821.85 ug/L	821.85 ppb	22:14:21
1	Cr 267.716†	174222.9	172351.5	2011.5 ug/L	2011.5 ppb	22:14:16
1	Cu 324.752†	549305.6	537795.3	1640.6 ug/L	1640.6 ppb	22:14:16
1	Mn 257.610†	4325880.8	4280622.1	4940.5 ug/L	4940.5 ppb	22:14:16
1	Mo 202.031†	5875.4	5799.0	448.74 ug/L	448.74 ppb	22:14:21
1	Ni 231.604†	44616.9	44046.7	1140.6 ug/L	1140.6 ppb	22:14:21
1	P 214.914†	12237.6	11882.8	6961.6 ug/L	6961.6 ppb	22:14:21
1	Pb 220.353†	7101.0	7089.2	888.05 ug/L	888.05 ppb	22:14:21
1	S 181.975 Axial†	2497.0	2431.8	3530.0 ug/L	3530.0 ppb	22:14:21
1	Sb 206.836†	3668.7	3588.6	1255.0 ug/L	1255.0 ppb	22:14:21
1	Se 196.026†	3087.5	3077.6	2633.0 ug/L	2633.0 ppb	22:14:21
1	Si 251.611†	766990.3	758483.7	25365 ug/L	25365 ppb	22:14:16
1	Sn 189.927†	4977.2	4917.0	929.20 ug/L	929.20 ppb	22:14:21
1	Ti 334.940†	3537886.7	3502545.0	5689.5 ug/L	5689.5 ppb	22:14:16
1	Tl 190.801†	3237.3	3238.0	1102.5 ug/L	1102.5 ppb	22:14:21
1	U 409.014†	-8343.0	-5276.5	-177.14 ug/L	-177.14 ppb	22:14:16
1	V 292.402†	152654.0	152627.5	1083.1 ug/L	1083.1 ppb	22:14:16
1	Zn 213.857†	531425.0	525207.3	5146.1 ug/L	5146.1 ppb	22:14:16
1	SiO2†	769515.6	760962.0	54269 ug/L	54269 ppb	22:14:56
2	Sc Radial	5096.4	5096.4	106 %		22:13:40
2	Y RADIAL	5781.2	5781.2	115.6 %		22:13:40
2	Al 396.153Radial†	95946.3	90647.8	84110 ug/L	84110 ppb	22:13:20
2	Ca 317.933Radial†	57181.8	53916.9	89364 ug/L	89364 ppb	22:13:20
2	Fe 238.204 Radial†	19785.1	18649.8	169710 ug/L	169710 ppb	22:13:20
2	K 766.490 Radial†	226577.5	210881.4	37189 ug/L	37189 ppb	22:13:20
2	Mg 279.077 IEC†	1090.2	1027.9	36257 ug/L	36257 ppb	22:13:40
2	Na 589.592 Radial†	31049.9	30364.6	9183.8 ug/L	9183.8 ppb	22:13:20
2	Sr 421.552†	325221.6	306745.7	2150.6 ug/L	2150.6 ppb	22:13:20
2	Sc 361.383	869436.9	869436.9	100.85 %		22:14:30
2	Y 371.029	762220.2	762220.2	106.66 %		22:14:30
2	Ag 328.068†	48164.9	47529.4	284.62 ug/L	284.62 ppb	22:14:30
2	As 188.979†	1985.4	2002.5	996.47 ug/L	996.47 ppb	22:14:35
2	B 249.677†	56632.2	56693.0	1318.8 ug/L	1318.8 ppb	22:14:30
2	Ba 233.527†	218576.8	216742.5	1777.7 ug/L	1777.7 ppb	22:14:30
2	Be 313.107†	1861908.4	1850523.1	702.15 ug/L	702.15 ppb	22:14:30
2	Cd 226.502†	44267.2	44105.3	507.54 ug/L	507.54 ppb	22:14:35
2	Co 228.616†	38680.3	38427.4	826.01 ug/L	826.01 ppb	22:14:35
2	Cr 267.716†	173867.7	172332.6	2011.2 ug/L	2011.2 ppb	22:14:30
2	Cu 324.752†	548305.2	537853.9	1640.6 ug/L	1640.6 ppb	22:14:30
2	Mn 257.610†	4313354.5	4276475.8	4935.4 ug/L	4935.4 ppb	22:14:30
2	Mo 202.031†	5878.7	5813.5	449.60 ug/L	449.60 ppb	22:14:35
2	Ni 231.604†	44644.7	44159.6	1143.5 ug/L	1143.5 ppb	22:14:35

2	P 214.914†	12234.2	11902.8	6975.7 ug/L	6975.7 ppb	22:14:35
2	Pb 220.353†	7077.5	7079.5	886.74 ug/L	886.74 ppb	22:14:35
2	S 181.975 Axial†	2508.9	2448.4	3554.5 ug/L	3554.5 ppb	22:14:35
2	Sb 206.836†	3719.6	3646.0	1275.0 ug/L	1275.0 ppb	22:14:35
2	Se 196.026†	3103.1	3099.0	2638.8 ug/L	2638.8 ppb	22:14:35
2	Si 251.611†	764417.2	757399.3	25329 ug/L	25329 ppb	22:14:30
2	Sn 189.927†	4929.9	4879.5	921.96 ug/L	921.96 ppb	22:14:35
2	Ti 334.940†	3529904.3	3501396.9	5687.5 ug/L	5687.5 ppb	22:14:30
2	Tl 190.801†	3237.9	3244.7	1104.6 ug/L	1104.6 ppb	22:14:35
2	U 409.014†	-8331.1	-5280.7	-176.96 ug/L	-176.96 ppb	22:14:30
2	V 292.402†	152381.5	152649.3	1083.7 ug/L	1083.7 ppb	22:14:30
2	Zn 213.857†	530307.4	525115.6	5145.6 ug/L	5145.6 ppb	22:14:30
2	SiO2†	763266.8	756237.7	53932 ug/L	53932 ppb	22:15:02
3	Sc Radial	5071.9	5071.9	106 %		22:14:05
3	Y RADIAL	5761.3	5761.3	115.2 %		22:14:05
3	Al 396.153Radial†	98052.2	93081.2	86369 ug/L	86369 ppb	22:13:45
3	Ca 317.933Radial†	58143.8	55089.5	91307 ug/L	91307 ppb	22:13:45
3	Fe 238.204 Radial†	20149.7	19085.6	173680 ug/L	173680 ppb	22:13:45
3	K 766.490 Radial†	231759.3	216825.8	38237 ug/L	38237 ppb	22:13:45
3	Mg 279.077 IEC†	1093.7	1036.2	36547 ug/L	36547 ppb	22:14:05
3	Na 589.592 Radial†	31695.2	31117.9	9411.6 ug/L	9411.6 ppb	22:13:45
3	Sr 421.552†	333678.6	316244.1	2217.2 ug/L	2217.2 ppb	22:13:45
3	Sc 361.383	874667.3	874667.3	101.46 %		22:14:45
3	Y 371.029	766591.4	766591.4	107.28 %		22:14:45
3	Ag 328.068†	48520.0	47593.7	286.24 ug/L	286.24 ppb	22:14:45
3	As 188.979†	1948.0	1953.9	975.40 ug/L	975.40 ppb	22:14:50
3	B 249.677†	57016.8	56736.2	1319.2 ug/L	1319.2 ppb	22:14:45
3	Ba 233.527†	220090.4	216938.3	1779.4 ug/L	1779.4 ppb	22:14:45
3	Be 313.107†	1873244.0	1850655.7	702.21 ug/L	702.21 ppb	22:14:45
3	Cd 226.502†	43686.5	43270.5	497.19 ug/L	497.19 ppb	22:14:50
3	Co 228.616†	38171.0	37696.1	809.96 ug/L	809.96 ppb	22:14:50
3	Cr 267.716†	174942.5	172361.1	2011.6 ug/L	2011.6 ppb	22:14:45
3	Cu 324.752†	552200.1	538441.8	1642.6 ug/L	1642.6 ppb	22:14:45
3	Mn 257.610†	4339916.5	4277080.2	4936.5 ug/L	4936.5 ppb	22:14:45
3	Mo 202.031†	5818.0	5718.8	442.84 ug/L	442.84 ppb	22:14:50
3	Ni 231.604†	43953.4	43213.6	1119.0 ug/L	1119.0 ppb	22:14:50
3	P 214.914†	12066.1	11664.6	6824.3 ug/L	6824.3 ppb	22:14:50
3	Pb 220.353†	7003.5	6964.6	872.52 ug/L	872.52 ppb	22:14:50
3	S 181.975 Axial†	2439.2	2364.8	3432.1 ug/L	3432.1 ppb	22:14:50
3	Sb 206.836†	3687.4	3592.3	1255.7 ug/L	1255.7 ppb	22:14:50
3	Se 196.026†	3037.7	3016.1	2595.8 ug/L	2595.8 ppb	22:14:50
3	Si 251.611†	769497.3	757873.9	25345 ug/L	25345 ppb	22:14:45
3	Sn 189.927†	4874.4	4795.6	906.74 ug/L	906.74 ppb	22:14:50
3	Ti 334.940†	3552595.8	3502832.0	5690.0 ug/L	5690.0 ppb	22:14:45
3	Tl 190.801†	3189.4	3177.7	1083.3 ug/L	1083.3 ppb	22:14:50
3	U 409.014†	-8261.6	-5162.8	-173.99 ug/L	-173.99 ppb	22:14:45
3	V 292.402†	153383.8	152733.6	1083.6 ug/L	1083.6 ppb	22:14:45
3	Zn 213.857†	533431.5	525050.4	5144.5 ug/L	5144.5 ppb	22:14:45
3	SiO2†	771072.2	759405.2	54158 ug/L	54158 ppb	22:15:08

Mean Data: 1202024774|945399|1

Analyte	Mean Corrected	Calib.	Std.Dev.	Sample	Std.Dev.	RSD
	Intensity	Conc. Units		Conc. Units		
Sc 361.383	871740.5	101.12 %	0.310			0.31%
Sc Radial	5090.3	106 %	0.3			0.32%
Y 371.029	763754.9	106.88 %	0.344			0.32%
Y RADIAL	5780.7	115.6 %	0.38			0.33%
Ag 328.068†	47575.4	285.57 ug/L	0.843	285.57 ppb	0.843	0.30%
Al 396.153Radial†	92011.3	85376 ug/L	1153.8	85376 ppb	1153.8	1.35%
As 188.979†	1986.1	989.60 ug/L	12.303	989.60 ppb	12.303	1.24%
B 249.677†	56706.2	1318.7 ug/L	0.47	1318.7 ppb	0.47	0.04%
Ba 233.527†	216883.7	1778.9 ug/L	1.06	1778.9 ppb	1.06	0.06%
Be 313.107†	1849511.1	701.78 ug/L	0.695	701.78 ppb	0.695	0.10%
Ca 317.933Radial†	54649.3	90578 ug/L	1058.4	90578 ppb	1058.4	1.17%
Cd 226.502†	43796.0	503.63 ug/L	5.619	503.63 ppb	5.619	1.12%
Co 228.616†	38120.7	819.27 ug/L	8.330	819.27 ppb	8.330	1.02%
Cr 267.716†	172348.4	2011.4 ug/L	0.21	2011.4 ppb	0.21	0.01%
Cu 324.752†	538030.3	1641.3 ug/L	1.16	1641.3 ppb	1.16	0.07%
Fe 238.204 Radial†	18893.0	171920 ug/L	2022.1	171920 ppb	2022.1	1.18%
K 766.490 Radial†	214395.5	37809 ug/L	549.8	37809 ppb	549.8	1.45%

Mg 279.077 IEC†	1030.8	36359 ug/L	162.9	36359 ppb	162.9	0.45%
Mn 257.610†	4278059.4	4937.5 ug/L	2.65	4937.5 ppb	2.65	0.05%
Mo 202.031†	5777.1	447.06 ug/L	3.682	447.06 ppb	3.682	0.82%
Na 589.592 Radial†	30792.7	9313.2 ug/L	117.05	9313.2 ppb	117.05	1.26%
Ni 231.604†	43806.6	1134.4 ug/L	13.38	1134.4 ppb	13.38	1.18%
P 214.914†	11816.7	6920.5 ug/L	83.61	6920.5 ppb	83.61	1.21%
Pb 220.353†	7044.4	882.44 ug/L	8.611	882.44 ppb	8.611	0.98%
S 181.975 Axial†	2415.0	3505.6 ug/L	64.77	3505.6 ppb	64.77	1.85%
Sb 206.836†	3609.0	1261.9 ug/L	11.34	1261.9 ppb	11.34	0.90%
Se 196.026†	3064.2	2622.5 ug/L	23.35	2622.5 ppb	23.35	0.89%
Si 251.611†	757918.9	25346 ug/L	18.2	25346 ppb	18.2	0.07%
Sn 189.927†	4864.0	919.30 ug/L	11.464	919.30 ppb	11.464	1.25%
Sr 421.552†	311937.0	2187.0 ug/L	33.73	2187.0 ppb	33.73	1.54%
Ti 334.940†	3502258.0	5689.0 ug/L	1.36	5689.0 ppb	1.36	0.02%
Tl 190.801†	3220.1	1096.8 ug/L	11.78	1096.8 ppb	11.78	1.07%
U 409.014†	-5240.0	-176.03 ug/L	1.768	-176.03 ppb	1.768	1.00%
V 292.402†	152670.1	1083.5 ug/L	0.31	1083.5 ppb	0.31	0.03%
Zn 213.857†	525124.4	5145.4 ug/L	0.82	5145.4 ppb	0.82	0.02%
SiO2†	758868.3	54120 ug/L	171.8	54120 ppb	171.8	0.32%

Sequence No.: 59

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 1

Date Collected: 2/11/2010 23:07:01

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4924.2	4924.2	102 %		23:08:53
1	Y RADIAL	5156.4	5156.4	103.1 %		23:08:53
1	Al 396.153Radial†	5392.9	5416.0	5003.4 ug/L	5003.4 ppb	23:08:53
1	Ca 317.933Radial†	3112.8	3022.0	5008.7 ug/L	5008.7 ppb	23:09:13
1	Fe 238.204 Radial†	569.1	544.1	4965.5 ug/L	4965.5 ppb	23:09:13
1	K 766.490 Radial†	30640.2	27084.7	4774.8 ug/L	4774.8 ppb	23:08:53
1	Mg 279.077 IEC†	152.0	148.0	5245.0 ug/L	5245.0 ppb	23:09:13
1	Na 589.592 Radial†	31630.6	31955.7	9665.0 ug/L	9665.0 ppb	23:08:53
1	Sr 421.552†	75228.3	73434.4	514.97 ug/L	514.97 ppb	23:08:53
1	Sc 361.383	859283.8	859283.8	99.674 %		23:10:11
1	Y 371.029	691376.9	691376.9	96.750 %		23:10:11
1	Ag 328.068†	103893.9	104004.9	493.21 ug/L	493.21 ppb	23:10:16
1	As 188.979†	1028.0	1065.3	487.65 ug/L	487.65 ppb	23:10:36
1	B 249.677†	20027.4	20632.0	488.57 ug/L	488.57 ppb	23:10:16
1	Ba 233.527†	61340.4	61552.6	503.91 ug/L	503.91 ppb	23:10:16
1	Be 313.107†	1291489.8	1300052.7	485.36 ug/L	485.36 ppb	23:10:11
1	Cd 226.502†	40861.4	41206.9	489.81 ug/L	489.81 ppb	23:10:16
1	Co 228.616†	23301.3	23451.2	512.29 ug/L	512.29 ppb	23:10:16
1	Cr 267.716†	41680.7	41750.2	486.64 ug/L	486.64 ppb	23:10:16
1	Cu 324.752†	169095.2	163827.6	496.96 ug/L	496.96 ppb	23:10:16
1	Mn 257.610†	428768.2	429718.7	494.67 ug/L	494.67 ppb	23:10:11
1	Mo 202.031†	6400.4	6405.8	480.16 ug/L	480.16 ppb	23:10:36
1	Ni 231.604†	19069.1	19023.5	492.53 ug/L	492.53 ppb	23:10:16
1	P 214.914†	4107.6	3893.0	2325.6 ug/L	2325.6 ppb	23:10:36
1	Pb 220.353†	3795.9	3870.0	484.38 ug/L	484.38 ppb	23:10:36
1	S 181.975 Axial†	693.5	656.4	956.25 ug/L	956.25 ppb	23:10:36
1	Sb 206.836†	1401.3	1363.7	492.53 ug/L	492.53 ppb	23:10:36
1	Se 196.026†	681.6	706.0	493.25 ug/L	493.25 ppb	23:10:36
1	Si 251.611†	75165.0	74848.5	2497.7 ug/L	2497.7 ppb	23:10:16
1	Sn 189.927†	2575.4	2575.1	478.72 ug/L	478.72 ppb	23:10:36
1	Ti 334.940†	304236.4	306534.7	497.04 ug/L	497.04 ppb	23:10:16
1	Tl 190.801†	1497.1	1536.2	495.61 ug/L	495.61 ppb	23:10:36
1	U 409.014†	13918.0	16943.6	489.65 ug/L	489.65 ppb	23:10:16
1	V 292.402†	65269.4	67037.5	493.23 ug/L	493.23 ppb	23:10:16
1	Zn 213.857†	51028.4	50482.1	493.48 ug/L	493.48 ppb	23:10:16
1	SiO2†	75271.4	74934.5	5332.2 ug/L	5332.2 ppb	23:11:43
2	Sc Radial	4791.6	4791.6	99.7 %		23:09:18
2	Y RADIAL	5042.9	5042.9	100.8 %		23:09:18
2	Al 396.153Radial†	5305.4	5473.9	5056.8 ug/L	5056.8 ppb	23:09:18
2	Ca 317.933Radial†	3096.1	3089.3	5120.3 ug/L	5120.3 ppb	23:09:38
2	Fe 238.204 Radial†	570.1	560.5	5114.9 ug/L	5114.9 ppb	23:09:38
2	K 766.490 Radial†	30443.2	27714.8	4885.9 ug/L	4885.9 ppb	23:09:18
2	Mg 279.077 IEC†	149.8	149.9	5312.5 ug/L	5312.5 ppb	23:09:38
2	Na 589.592 Radial†	31076.9	32254.7	9755.4 ug/L	9755.4 ppb	23:09:18
2	Sr 421.552†	74096.6	74331.1	521.26 ug/L	521.26 ppb	23:09:18
2	Sc 361.383	854571.6	854571.6	99.127 %		23:10:42
2	Y 371.029	689536.1	689536.1	96.492 %		23:10:42
2	Ag 328.068†	104206.3	104894.8	497.47 ug/L	497.47 ppb	23:10:47
2	As 188.979†	1044.2	1087.2	497.66 ug/L	497.66 ppb	23:11:07
2	B 249.677†	20097.4	20813.3	492.85 ug/L	492.85 ppb	23:10:47
2	Ba 233.527†	61154.8	61704.8	505.16 ug/L	505.16 ppb	23:10:47
2	Be 313.107†	1304755.0	1320579.5	493.01 ug/L	493.01 ppb	23:10:42
2	Cd 226.502†	40751.0	41321.6	491.15 ug/L	491.15 ppb	23:10:47
2	Co 228.616†	23283.2	23561.9	514.71 ug/L	514.71 ppb	23:10:47
2	Cr 267.716†	41736.6	42037.3	489.99 ug/L	489.99 ppb	23:10:47
2	Cu 324.752†	169565.9	165237.8	501.24 ug/L	501.24 ppb	23:10:47
2	Mn 257.610†	430488.3	433826.0	499.41 ug/L	499.41 ppb	23:10:42
2	Mo 202.031†	6462.7	6504.1	487.53 ug/L	487.53 ppb	23:11:07
2	Ni 231.604†	18966.2	19025.2	492.57 ug/L	492.57 ppb	23:10:47

2	P 214.914†	4143.4	3951.8	2361.3 ug/L	2361.3 ppb	23:11:07
2	Pb 220.353†	3819.5	3914.9	489.99 ug/L	489.99 ppb	23:11:07
2	S 181.975 Axial†	697.8	664.6	968.15 ug/L	968.15 ppb	23:11:07
2	Sb 206.836†	1435.8	1406.3	507.62 ug/L	507.62 ppb	23:11:07
2	Se 196.026†	701.6	729.9	509.88 ug/L	509.88 ppb	23:11:07
2	Si 251.611†	75225.7	75325.6	2513.5 ug/L	2513.5 ppb	23:10:47
2	Sn 189.927†	2599.4	2613.6	485.89 ug/L	485.89 ppb	23:11:07
2	Ti 334.940†	304149.0	308129.6	499.63 ug/L	499.63 ppb	23:10:47
2	Tl 190.801†	1514.2	1561.7	503.80 ug/L	503.80 ppb	23:11:07
2	U 409.014†	13843.2	16945.1	489.67 ug/L	489.67 ppb	23:10:47
2	V 292.402†	65337.1	67466.9	496.43 ug/L	496.43 ppb	23:10:47
2	Zn 213.857†	50992.9	50728.6	495.88 ug/L	495.88 ppb	23:10:47
2	SiO2†	74897.8	74974.0	5334.8 ug/L	5334.8 ppb	23:11:49
3	Sc Radial	4882.3	4882.3	102 %		23:09:44
3	Y RADIAL	5116.5	5116.5	102.3 %		23:09:44
3	Al 396.153Radial†	5344.3	5413.4	5000.7 ug/L	5000.7 ppb	23:09:44
3	Ca 317.933Radial†	3061.8	2997.8	4968.7 ug/L	4968.7 ppb	23:10:04
3	Fe 238.204 Radial†	564.4	544.2	4966.4 ug/L	4966.4 ppb	23:10:04
3	K 766.490 Radial†	30719.2	27419.1	4833.8 ug/L	4833.8 ppb	23:09:44
3	Mg 279.077 IEC†	147.2	144.6	5123.1 ug/L	5123.1 ppb	23:10:04
3	Na 589.592 Radial†	31504.7	32096.6	9707.6 ug/L	9707.6 ppb	23:09:44
3	Sr 421.552†	75082.1	73920.3	518.38 ug/L	518.38 ppb	23:09:44
3	Sc 361.383	860603.4	860603.4	99.827 %		23:11:13
3	Y 371.029	692926.0	692926.0	96.967 %		23:11:13
3	Ag 328.068†	103905.2	103856.5	492.51 ug/L	492.51 ppb	23:11:18
3	As 188.979†	1052.5	1088.2	498.04 ug/L	498.04 ppb	23:11:38
3	B 249.677†	20164.6	20738.6	491.11 ug/L	491.11 ppb	23:11:18
3	Ba 233.527†	61249.4	61367.1	502.39 ug/L	502.39 ppb	23:11:18
3	Be 313.107†	1316912.5	1323532.8	494.10 ug/L	494.10 ppb	23:11:13
3	Cd 226.502†	40848.0	41130.7	488.90 ug/L	488.90 ppb	23:11:18
3	Co 228.616†	23276.2	23390.2	510.97 ug/L	510.97 ppb	23:11:18
3	Cr 267.716†	41711.9	41717.4	486.26 ug/L	486.26 ppb	23:11:18
3	Cu 324.752†	168949.1	163421.1	495.73 ug/L	495.73 ppb	23:11:18
3	Mn 257.610†	435517.7	435820.3	501.70 ug/L	501.70 ppb	23:11:13
3	Mo 202.031†	6480.0	6475.7	485.40 ug/L	485.40 ppb	23:11:38
3	Ni 231.604†	18990.5	18915.3	489.73 ug/L	489.73 ppb	23:11:18
3	P 214.914†	4212.0	3991.2	2387.0 ug/L	2387.0 ppb	23:11:38
3	Pb 220.353†	3856.9	3925.4	491.29 ug/L	491.29 ppb	23:11:38
3	S 181.975 Axial†	713.8	675.7	984.37 ug/L	984.37 ppb	23:11:38
3	Sb 206.836†	1439.8	1400.1	505.44 ug/L	505.44 ppb	23:11:38
3	Se 196.026†	705.9	729.2	508.90 ug/L	508.90 ppb	23:11:38
3	Si 251.611†	75104.6	74672.4	2491.7 ug/L	2491.7 ppb	23:11:18
3	Sn 189.927†	2616.8	2612.6	485.68 ug/L	485.68 ppb	23:11:38
3	Ti 334.940†	303753.6	305583.0	495.50 ug/L	495.50 ppb	23:11:18
3	Tl 190.801†	1520.1	1556.9	502.26 ug/L	502.26 ppb	23:11:38
3	U 409.014†	13755.2	16759.1	484.30 ug/L	484.30 ppb	23:11:18
3	V 292.402†	65138.1	66805.5	491.61 ug/L	491.61 ppb	23:11:18
3	Zn 213.857†	51003.4	50378.5	492.47 ug/L	492.47 ppb	23:11:18
3	SiO2†	74871.3	74417.9	5295.2 ug/L	5295.2 ppb	23:11:54

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	858152.9	99.543 %	0.3678			0.37%
Sc Radial	4866.0	101 %	1.4			1.39%
Y 371.029	691279.7	96.736 %	0.2375			0.25%
Y RADIAL	5105.3	102.1 %	1.15			1.13%
Ag 328.068†	104252.1	494.40 ug/L	2.682	494.40 ppb	2.682	0.54%
QC value within limits for Ag 328.068 Recovery = 98.88%						
Al 396.153Radial†	5434.4	5020.3 ug/L	31.64	5020.3 ppb	31.64	0.63%
QC value within limits for Al 396.153Radial Recovery = 100.41%						
As 188.979†	1080.2	494.45 ug/L	5.894	494.45 ppb	5.894	1.19%
QC value within limits for As 188.979 Recovery = 98.89%						
B 249.677†	20728.0	490.84 ug/L	2.154	490.84 ppb	2.154	0.44%
QC value within limits for B 249.677 Recovery = 98.17%						
Ba 233.527†	61541.5	503.82 ug/L	1.388	503.82 ppb	1.388	0.28%
QC value within limits for Ba 233.527 Recovery = 100.76%						
Be 313.107†	1314721.6	490.82 ug/L	4.764	490.82 ppb	4.764	0.97%
QC value within limits for Be 313.107 Recovery = 98.16%						
Ca 317.933Radial†	3036.4	5032.6 ug/L	78.58	5032.6 ppb	78.58	1.56%

QC value within limits for Ca 317.933 Radial Recovery = 100.65%						
Cd 226.502†	41219.8	489.95 ug/L	1.136	489.95 ppb	1.136	0.23%
QC value within limits for Cd 226.502 Recovery = 97.99%						
Co 228.616†	23467.8	512.65 ug/L	1.898	512.65 ppb	1.898	0.37%
QC value within limits for Co 228.616 Recovery = 102.53%						
Cr 267.716†	41835.0	487.63 ug/L	2.053	487.63 ppb	2.053	0.42%
QC value within limits for Cr 267.716 Recovery = 97.53%						
Cu 324.752†	164162.2	497.98 ug/L	2.896	497.98 ppb	2.896	0.58%
QC value within limits for Cu 324.752 Recovery = 99.60%						
Fe 238.204 Radial†	549.6	5015.6 ug/L	85.99	5015.6 ppb	85.99	1.71%
QC value within limits for Fe 238.204 Radial Recovery = 100.31%						
K 766.490 Radial†	27406.2	4831.5 ug/L	55.61	4831.5 ppb	55.61	1.15%
QC value within limits for K 766.490 Radial Recovery = 96.63%						
Mg 279.077 IEC†	147.5	5226.9 ug/L	96.00	5226.9 ppb	96.00	1.84%
QC value within limits for Mg 279.077 IEC Recovery = 104.54%						
Mn 257.610†	433121.7	498.59 ug/L	3.583	498.59 ppb	3.583	0.72%
QC value within limits for Mn 257.610 Recovery = 99.72%						
Mo 202.031†	6461.9	484.36 ug/L	3.793	484.36 ppb	3.793	0.78%
QC value within limits for Mo 202.031 Recovery = 96.87%						
Na 589.592 Radial†	32102.3	9709.3 ug/L	45.23	9709.3 ppb	45.23	0.47%
QC value within limits for Na 589.592 Radial Recovery = 97.09%						
Ni 231.604†	18988.0	491.61 ug/L	1.630	491.61 ppb	1.630	0.33%
QC value within limits for Ni 231.604 Recovery = 98.32%						
P 214.914†	3945.3	2358.0 ug/L	30.85	2358.0 ppb	30.85	1.31%
QC value within limits for P 214.914 Recovery = 94.32%						
Pb 220.353†	3903.4	488.55 ug/L	3.675	488.55 ppb	3.675	0.75%
QC value within limits for Pb 220.353 Recovery = 97.71%						
S 181.975 Axial†	665.6	969.59 ug/L	14.118	969.59 ppb	14.118	1.46%
QC value within limits for S 181.975 Axial Recovery = 96.96%						
Sb 206.836†	1390.0	501.86 ug/L	8.156	501.86 ppb	8.156	1.63%
QC value within limits for Sb 206.836 Recovery = 100.37%						
Se 196.026†	721.7	504.01 ug/L	9.333	504.01 ppb	9.333	1.85%
QC value within limits for Se 196.026 Recovery = 100.80%						
Si 251.611†	74948.9	2501.0 ug/L	11.28	2501.0 ppb	11.28	0.45%
QC value within limits for Si 251.611 Recovery = 100.04%						
Sn 189.927†	2600.5	483.43 ug/L	4.077	483.43 ppb	4.077	0.84%
QC value within limits for Sn 189.927 Recovery = 96.69%						
Sr 421.552†	73895.3	518.20 ug/L	3.148	518.20 ppb	3.148	0.61%
QC value within limits for Sr 421.552 Recovery = 103.64%						
Ti 334.940†	306749.1	497.39 ug/L	2.088	497.39 ppb	2.088	0.42%
QC value within limits for Ti 334.940 Recovery = 99.48%						
Tl 190.801†	1551.6	500.56 ug/L	4.352	500.56 ppb	4.352	0.87%
QC value within limits for Tl 190.801 Recovery = 100.11%						
U 409.014†	16882.6	487.88 ug/L	3.094	487.88 ppb	3.094	0.63%
QC value within limits for U 409.014 Recovery = 97.58%						
V 292.402†	67103.3	493.76 ug/L	2.452	493.76 ppb	2.452	0.50%
QC value within limits for V 292.402 Recovery = 98.75%						
Zn 213.857†	50529.7	493.94 ug/L	1.750	493.94 ppb	1.750	0.35%
QC value within limits for Zn 213.857 Recovery = 98.79%						
SiO2†	74775.4	5320.7 ug/L	22.15	5320.7 ppb	22.15	0.42%
QC value within limits for SiO2 Recovery = 99.50%						
All analyte(s) passed QC.						

Sequence No.: 60
 Sample ID: CCB
 Analyst:
 Initial Sample Wt:
 Dilution:

Autosampler Location: 6
 Date Collected: 2/11/2010 23:14:04
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4910.1	4910.1	102 %		23:15:56
1	Y RADIAL	5186.0	5186.0	103.7 %		23:15:56
1	Al 396.153Radial†	-113.6	40.3	37.432 ug/L	37.432 ppb	23:15:56
1	Ca 317.933Radial†	19.0	1.9	3.2057 ug/L	3.2057 ppb	23:16:16
1	Fe 238.204 Radial†	14.2	2.4	21.899 ug/L	21.899 ppb	23:16:16
1	K 766.490 Radial†	2842.0	-43.5	-7.6953 ug/L	-7.6953 ppb	23:15:56
1	Mg 279.077 IEC†	1.5	1.1	37.746 ug/L	37.746 ppb	23:16:16
1	Na 589.592 Radial†	-922.7	175.2	52.991 ug/L	52.991 ppb	23:15:56
1	Sr 421.552†	14.8	12.4	0.0866 ug/L	0.0866 ppb	23:15:56
1	Sc 361.383	847886.1	847886.1	98.352 %		23:17:12
1	Y 371.029	690960.9	690960.9	96.692 %		23:17:12
1	Ag 328.068†	200.0	-25.4	-0.1135 ug/L	-0.1135 ppb	23:17:17
1	As 188.979†	-29.0	4.4	1.9971 ug/L	1.9971 ppb	23:17:37
1	B 249.677†	-430.8	101.0	2.3973 ug/L	2.3973 ppb	23:17:37
1	Ba 233.527†	-2.6	9.0	0.0746 ug/L	0.0746 ppb	23:17:37
1	Be 313.107†	-4169.6	99.2	0.0376 ug/L	0.0376 ppb	23:17:17
1	Cd 226.502†	-196.1	12.5	0.1469 ug/L	0.1469 ppb	23:17:37
1	Co 228.616†	-50.0	22.8	0.4986 ug/L	0.4986 ppb	23:17:37
1	Cr 267.716†	79.0	13.6	0.1578 ug/L	0.1578 ppb	23:17:37
1	Cu 324.752†	5358.6	-372.3	-1.1300 ug/L	-1.1300 ppb	23:17:17
1	Mn 257.610†	509.1	65.7	0.0762 ug/L	0.0762 ppb	23:17:37
1	Mo 202.031†	18.6	3.4	0.2558 ug/L	0.2558 ppb	23:17:37
1	Ni 231.604†	98.3	-8.0	-0.2087 ug/L	-0.2087 ppb	23:17:37
1	P 214.914†	229.7	5.5	3.6540 ug/L	3.6540 ppb	23:17:37
1	Pb 220.353†	-61.7	-1.0	-0.1209 ug/L	-0.1209 ppb	23:17:37
1	S 181.975 Axial†	43.3	4.7	6.7752 ug/L	6.7752 ppb	23:17:37
1	Sb 206.836†	43.0	1.6	0.5760 ug/L	0.5760 ppb	23:17:37
1	Se 196.026†	-21.6	0.2	0.1774 ug/L	0.1774 ppb	23:17:37
1	Si 251.611†	569.7	17.0	0.5661 ug/L	0.5661 ppb	23:17:37
1	Sn 189.927†	13.6	5.1	0.9491 ug/L	0.9491 ppb	23:17:37
1	Ti 334.940†	-1118.9	165.6	0.2645 ug/L	0.2645 ppb	23:17:17
1	Tl 190.801†	-23.9	9.9	3.1660 ug/L	3.1660 ppb	23:17:37
1	U 409.014†	-2828.3	104.3	3.0226 ug/L	3.0226 ppb	23:17:12
1	V 292.402†	-1481.2	48.6	0.3598 ug/L	0.3598 ppb	23:17:17
1	Zn 213.857†	720.8	19.6	0.1928 ug/L	0.1928 ppb	23:17:37
1	SiO2†	646.1	73.8	5.2587 ug/L	5.2587 ppb	23:18:43
2	Sc Radial	4765.3	4765.3	99.1 %		23:16:21
2	Y RADIAL	4996.9	4996.9	99.92 %		23:16:21
2	Al 396.153Radial†	-148.5	1.8	1.6431 ug/L	1.6431 ppb	23:16:21
2	Ca 317.933Radial†	14.1	-2.5	-4.0960 ug/L	-4.0960 ppb	23:16:41
2	Fe 238.204 Radial†	10.0	-1.4	-12.298 ug/L	-12.298 ppb	23:16:41
2	K 766.490 Radial†	2881.2	80.7	14.234 ug/L	14.234 ppb	23:16:21
2	Mg 279.077 IEC†	3.2	2.9	101.20 ug/L	101.20 ppb	23:16:41
2	Na 589.592 Radial†	-1018.5	51.1	15.456 ug/L	15.456 ppb	23:16:21
2	Sr 421.552†	60.5	59.0	0.4136 ug/L	0.4136 ppb	23:16:21
2	Sc 361.383	855985.0	855985.0	99.291 %		23:17:43
2	Y 371.029	697938.4	697938.4	97.668 %		23:17:43
2	Ag 328.068†	193.5	-33.9	-0.1662 ug/L	-0.1662 ppb	23:17:48
2	As 188.979†	-24.6	9.1	4.1160 ug/L	4.1160 ppb	23:18:08
2	B 249.677†	-442.1	93.8	2.2327 ug/L	2.2327 ppb	23:18:08
2	Ba 233.527†	7.2	18.8	0.1538 ug/L	0.1538 ppb	23:18:08
2	Be 313.107†	-4176.4	132.5	0.0499 ug/L	0.0499 ppb	23:17:48
2	Cd 226.502†	-200.2	10.3	0.1242 ug/L	0.1242 ppb	23:18:08
2	Co 228.616†	-62.0	11.3	0.2479 ug/L	0.2479 ppb	23:18:08
2	Cr 267.716†	87.8	21.7	0.2507 ug/L	0.2507 ppb	23:18:08
2	Cu 324.752†	5318.6	-464.2	-1.4112 ug/L	-1.4112 ppb	23:17:48
2	Mn 257.610†	531.9	83.9	0.0911 ug/L	0.0911 ppb	23:18:08
2	Mo 202.031†	28.8	13.5	1.0075 ug/L	1.0075 ppb	23:18:08
2	Ni 231.604†	83.7	-23.7	-0.6145 ug/L	-0.6145 ppb	23:18:08

2	P 214.914†	235.4	9.0	5.8885 ug/L	5.8885 ppb	23:18:08
2	Pb 220.353†	-61.6	-0.3	-0.0319 ug/L	-0.0319 ppb	23:18:08
2	S 181.975 Axial†	38.3	-0.7	-1.0710 ug/L	-1.0710 ppb	23:18:08
2	Sb 206.836†	35.1	-6.8	-2.3425 ug/L	-2.3425 ppb	23:18:08
2	Se 196.026†	-22.0	-0.0	-0.0380 ug/L	-0.0380 ppb	23:18:08
2	Si 251.611†	555.8	-2.5	-0.0976 ug/L	-0.0976 ppb	23:18:08
2	Sn 189.927†	16.2	7.6	1.4130 ug/L	1.4130 ppb	23:18:08
2	Ti 334.940†	-1150.5	144.5	0.2235 ug/L	0.2235 ppb	23:17:48
2	Tl 190.801†	-44.7	-10.8	-3.4668 ug/L	-3.4668 ppb	23:18:08
2	U 409.014†	-2811.3	148.7	4.3136 ug/L	4.3136 ppb	23:17:43
2	V 292.402†	-1501.1	42.9	0.3371 ug/L	0.3371 ppb	23:17:48
2	Zn 213.857†	709.0	0.8	0.0159 ug/L	0.0159 ppb	23:18:08
2	SiO2†	617.0	38.3	2.7038 ug/L	2.7038 ppb	23:18:48
3	Sc Radial	4863.8	4863.8	101 %		23:16:46
3	Y RADIAL	5091.4	5091.4	101.8 %		23:16:46
3	Al 396.153Radial†	-140.0	13.2	12.244 ug/L	12.244 ppb	23:16:46
3	Ca 317.933Radial†	17.7	0.8	1.3825 ug/L	1.3825 ppb	23:17:06
3	Fe 238.204 Radial†	10.9	-0.7	-6.2996 ug/L	-6.2996 ppb	23:17:06
3	K 766.490 Radial†	2755.2	-102.7	-18.132 ug/L	-18.132 ppb	23:16:46
3	Mg 279.077 IEC†	3.0	2.6	91.904 ug/L	91.904 ppb	23:17:06
3	Na 589.592 Radial†	-1006.1	84.2	25.458 ug/L	25.458 ppb	23:16:46
3	Sr 421.552†	14.3	12.0	0.0845 ug/L	0.0845 ppb	23:16:46
3	Sc 361.383	859136.2	859136.2	99.657 %		23:18:13
3	Y 371.029	699340.5	699340.5	97.864 %		23:18:13
3	Ag 328.068†	303.9	76.2	0.3490 ug/L	0.3490 ppb	23:18:18
3	As 188.979†	-24.1	9.7	4.3769 ug/L	4.3769 ppb	23:18:38
3	B 249.677†	-392.0	145.7	3.4661 ug/L	3.4661 ppb	23:18:38
3	Ba 233.527†	-20.1	-8.5	-0.0699 ug/L	-0.0699 ppb	23:18:38
3	Be 313.107†	-4225.8	98.3	0.0367 ug/L	0.0367 ppb	23:18:18
3	Cd 226.502†	-190.2	21.1	0.2527 ug/L	0.2527 ppb	23:18:38
3	Co 228.616†	-71.8	1.6	0.0365 ug/L	0.0365 ppb	23:18:38
3	Cr 267.716†	38.7	-27.9	-0.3287 ug/L	-0.3287 ppb	23:18:38
3	Cu 324.752†	5413.3	-388.8	-1.1851 ug/L	-1.1851 ppb	23:18:18
3	Mn 257.610†	578.9	129.0	0.1440 ug/L	0.1440 ppb	23:18:38
3	Mo 202.031†	21.2	5.8	0.4310 ug/L	0.4310 ppb	23:18:38
3	Ni 231.604†	65.9	-41.9	-1.0863 ug/L	-1.0863 ppb	23:18:38
3	P 214.914†	240.9	13.7	8.7718 ug/L	8.7718 ppb	23:18:38
3	Pb 220.353†	-67.9	-6.4	-0.7977 ug/L	-0.7977 ppb	23:18:38
3	S 181.975 Axial†	39.2	-0.0	-0.0295 ug/L	-0.0295 ppb	23:18:38
3	Sb 206.836†	35.4	-6.6	-2.2827 ug/L	-2.2827 ppb	23:18:38
3	Se 196.026†	-18.3	3.8	2.5123 ug/L	2.5123 ppb	23:18:38
3	Si 251.611†	591.3	31.1	1.0349 ug/L	1.0349 ppb	23:18:38
3	Sn 189.927†	15.8	7.1	1.3254 ug/L	1.3254 ppb	23:18:38
3	Ti 334.940†	-1270.1	28.7	0.0352 ug/L	0.0352 ppb	23:18:18
3	Tl 190.801†	-37.2	-3.2	-1.0116 ug/L	-1.0116 ppb	23:18:38
3	U 409.014†	-2641.3	329.7	9.5604 ug/L	9.5604 ppb	23:18:13
3	V 292.402†	-1547.4	1.9	0.0410 ug/L	0.0410 ppb	23:18:18
3	Zn 213.857†	707.5	-3.4	-0.0236 ug/L	-0.0236 ppb	23:18:38
3	SiO2†	653.4	72.5	5.1578 ug/L	5.1578 ppb	23:18:53

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	854335.8	99.100 %		0.6732			0.68%
Sc Radial	4846.4	101 %		1.5			1.53%
Y 371.029	696079.9	97.408 %		0.6281			0.64%
Y RADIAL	5091.4	101.8 %		1.89			1.86%
Ag 328.068†	5.6	0.0231 ug/L		0.28347	0.0231 ppb	0.28347	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	18.5	17.106 ug/L		18.3829	17.106 ppb	18.3829	107.46%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	7.7	3.4967 ug/L		1.30519	3.4967 ppb	1.30519	37.33%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	113.5	2.6987 ug/L		0.66965	2.6987 ppb	0.66965	24.81%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	6.4	0.0528 ug/L		0.11343	0.0528 ppb	0.11343	214.63%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	110.0	0.0414 ug/L		0.00737	0.0414 ppb	0.00737	17.80%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	0.1	0.1640 ug/L		3.80027	0.1640 ppb	3.80027	>999.9%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated									
Cd 226.502†	14.6	0.1746 ug/L	0.06856	0.1746 ppb	0.06856	39.27%			
QC value within limits for Cd 226.502 Recovery = Not calculated									
Co 228.616†	11.9	0.2610 ug/L	0.23137	0.2610 ppb	0.23137	88.64%			
QC value within limits for Co 228.616 Recovery = Not calculated									
Cr 267.716†	2.4	0.0266 ug/L	0.31119	0.0266 ppb	0.31119	>999.9%			
QC value within limits for Cr 267.716 Recovery = Not calculated									
Cu 324.752†	-408.5	-1.2421 ug/L	0.14900	-1.2421 ppb	0.14900	12.00%			
QC value within limits for Cu 324.752 Recovery = Not calculated									
Fe 238.204 Radial†	0.1	1.1005 ug/L	18.26002	1.1005 ppb	18.26002	>999.9%			
QC value within limits for Fe 238.204 Radial Recovery = Not calculated									
K 766.490 Radial†	-21.8	-3.8646 ug/L	16.51960	-3.8646 ppb	16.51960	427.46%			
QC value within limits for K 766.490 Radial Recovery = Not calculated									
Mg 279.077 IEC†	2.2	76.949 ug/L	34.2673	76.949 ppb	34.2673	44.53%			
QC value within limits for Mg 279.077 IEC Recovery = Not calculated									
Mn 257.610†	92.8	0.1038 ug/L	0.03562	0.1038 ppb	0.03562	34.33%			
QC value within limits for Mn 257.610 Recovery = Not calculated									
Mo 202.031†	7.5	0.5648 ug/L	0.39328	0.5648 ppb	0.39328	69.64%			
QC value within limits for Mo 202.031 Recovery = Not calculated									
Na 589.592 Radial†	103.5	31.302 ug/L	19.4382	31.302 ppb	19.4382	62.10%			
QC value within limits for Na 589.592 Radial Recovery = Not calculated									
Ni 231.604†	-24.6	-0.6365 ug/L	0.43919	-0.6365 ppb	0.43919	69.00%			
QC value within limits for Ni 231.604 Recovery = Not calculated									
P 214.914†	9.4	6.1048 ug/L	2.56572	6.1048 ppb	2.56572	42.03%			
QC value within limits for P 214.914 Recovery = Not calculated									
Pb 220.353†	-2.6	-0.3168 ug/L	0.41880	-0.3168 ppb	0.41880	132.19%			
QC value within limits for Pb 220.353 Recovery = Not calculated									
S 181.975 Axial†	1.3	1.8916 ug/L	4.26127	1.8916 ppb	4.26127	225.28%			
QC value within limits for S 181.975 Axial Recovery = Not calculated									
Sb 206.836†	-4.0	-1.3497 ug/L	1.66797	-1.3497 ppb	1.66797	123.58%			
QC value within limits for Sb 206.836 Recovery = Not calculated									
Se 196.026†	1.3	0.8839 ug/L	1.41436	0.8839 ppb	1.41436	160.01%			
QC value within limits for Se 196.026 Recovery = Not calculated									
Si 251.611†	15.2	0.5011 ug/L	0.56903	0.5011 ppb	0.56903	113.55%			
QC value within limits for Si 251.611 Recovery = Not calculated									
Sn 189.927†	6.6	1.2292 ug/L	0.24647	1.2292 ppb	0.24647	20.05%			
QC value within limits for Sn 189.927 Recovery = Not calculated									
Sr 421.552†	27.8	0.1949 ug/L	0.18938	0.1949 ppb	0.18938	97.18%			
QC value within limits for Sr 421.552 Recovery = Not calculated									
Ti 334.940†	112.9	0.1744 ug/L	0.12229	0.1744 ppb	0.12229	70.11%			
QC value within limits for Ti 334.940 Recovery = Not calculated									
Tl 190.801†	-1.4	-0.4375 ug/L	3.35347	-0.4375 ppb	3.35347	766.56%			
QC value within limits for Tl 190.801 Recovery = Not calculated									
U 409.014†	194.2	5.6322 ug/L	3.46261	5.6322 ppb	3.46261	61.48%			
QC value within limits for U 409.014 Recovery = Not calculated									
V 292.402†	31.1	0.2460 ug/L	0.17784	0.2460 ppb	0.17784	72.30%			
QC value within limits for V 292.402 Recovery = Not calculated									
Zn 213.857†	5.7	0.0617 ug/L	0.11523	0.0617 ppb	0.11523	186.80%			
QC value within limits for Zn 213.857 Recovery = Not calculated									
SiO2†	61.5	4.3734 ug/L	1.44680	4.3734 ppb	1.44680	33.08%			
QC value within limits for SiO2 Recovery = Not calculated									

All analyte(s) passed QC.

Sequence No.: 70

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 1

Date Collected: 2/12/2010 00:24:16

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4899.9	4899.9	102 %		00:26:08
1	Y RADIAL	5118.9	5118.9	102.4 %		00:26:08
1	Al 396.153Radial†	5423.3	5472.0	5054.9 ug/L	5054.9 ppb	00:26:08
1	Ca 317.933Radial†	3138.1	3061.8	5074.8 ug/L	5074.8 ppb	00:26:28
1	Fe 238.204 Radial†	579.9	557.4	5087.0 ug/L	5087.0 ppb	00:26:28
1	K 766.490 Radial†	30808.3	27398.1	4830.0 ug/L	4830.0 ppb	00:26:08
1	Mg 279.077 IEC†	151.5	148.2	5253.2 ug/L	5253.2 ppb	00:26:28
1	Na 589.592 Radial†	32251.2	32717.7	9895.4 ug/L	9895.4 ppb	00:26:08
1	Sr 421.552†	76570.0	75115.0	526.76 ug/L	526.76 ppb	00:26:08
1	Sc 361.383	850039.4	850039.4	98.602 %		00:27:25
1	Y 371.029	683944.0	683944.0	95.710 %		00:27:25
1	Ag 328.068†	104216.2	105465.4	500.16 ug/L	500.16 ppb	00:27:30
1	As 188.979†	1069.7	1118.7	511.97 ug/L	511.97 ppb	00:27:50
1	B 249.677†	20138.1	20962.7	496.40 ug/L	496.40 ppb	00:27:30
1	Ba 233.527†	61470.8	62354.2	510.47 ug/L	510.47 ppb	00:27:30
1	Be 313.107†	1316895.7	1339910.1	500.22 ug/L	500.22 ppb	00:27:25
1	Cd 226.502†	40990.0	41783.2	496.65 ug/L	496.65 ppb	00:27:30
1	Co 228.616†	23307.1	23711.3	517.97 ug/L	517.97 ppb	00:27:30
1	Cr 267.716†	41857.3	42384.1	494.04 ug/L	494.04 ppb	00:27:30
1	Cu 324.752†	169616.5	166201.2	504.17 ug/L	504.17 ppb	00:27:30
1	Mn 257.610†	434413.6	440122.4	506.66 ug/L	506.66 ppb	00:27:25
1	Mo 202.031†	6456.2	6532.2	489.64 ug/L	489.64 ppb	00:27:50
1	Ni 231.604†	19087.4	19250.1	498.40 ug/L	498.40 ppb	00:27:30
1	P 214.914†	4189.6	4020.9	2403.8 ug/L	2403.8 ppb	00:27:50
1	Pb 220.353†	3826.2	3942.2	493.40 ug/L	493.40 ppb	00:27:50
1	S 181.975 Axial†	717.1	687.9	1002.1 ug/L	1002.1 ppb	00:27:50
1	Sb 206.836†	1433.1	1411.3	509.46 ug/L	509.46 ppb	00:27:50
1	Se 196.026†	699.9	731.9	511.13 ug/L	511.13 ppb	00:27:50
1	Si 251.611†	75468.7	75976.7	2535.3 ug/L	2535.3 ppb	00:27:30
1	Sn 189.927†	2600.5	2628.7	488.67 ug/L	488.67 ppb	00:27:50
1	Ti 334.940†	305298.3	310931.1	504.17 ug/L	504.17 ppb	00:27:30
1	Tl 190.801†	1514.1	1569.8	506.45 ug/L	506.45 ppb	00:27:50
1	U 409.014†	13707.3	16881.7	487.83 ug/L	487.83 ppb	00:27:30
1	V 292.402†	65369.0	67850.6	499.24 ug/L	499.24 ppb	00:27:30
1	Zn 213.857†	51222.1	51235.3	500.84 ug/L	500.84 ppb	00:27:30
1	SiO2†	74800.7	75278.3	5356.4 ug/L	5356.4 ppb	00:28:58
2	Sc Radial	4854.6	4854.6	101 %		00:26:33
2	Y RADIAL	5068.3	5068.3	101.4 %		00:26:33
2	Al 396.153Radial†	5386.0	5484.7	5066.9 ug/L	5066.9 ppb	00:26:33
2	Ca 317.933Radial†	3127.2	3079.8	5104.5 ug/L	5104.5 ppb	00:26:53
2	Fe 238.204 Radial†	573.4	556.3	5077.3 ug/L	5077.3 ppb	00:26:53
2	K 766.490 Radial†	30655.7	27528.7	4853.0 ug/L	4853.0 ppb	00:26:33
2	Mg 279.077 IEC†	150.1	148.2	5251.5 ug/L	5251.5 ppb	00:26:53
2	Na 589.592 Radial†	32074.2	32837.4	9931.6 ug/L	9931.6 ppb	00:26:33
2	Sr 421.552†	76291.8	75539.7	529.73 ug/L	529.73 ppb	00:26:33
2	Sc 361.383	859242.6	859242.6	99.669 %		00:27:56
2	Y 371.029	691245.9	691245.9	96.731 %		00:27:56
2	Ag 328.068†	105383.6	105504.5	500.34 ug/L	500.34 ppb	00:28:01
2	As 188.979†	1056.3	1093.7	500.62 ug/L	500.62 ppb	00:28:21
2	B 249.677†	20497.3	21104.4	499.77 ug/L	499.77 ppb	00:28:01
2	Ba 233.527†	62134.0	62351.8	510.45 ug/L	510.45 ppb	00:28:01
2	Be 313.107†	1328769.5	1337518.4	499.33 ug/L	499.33 ppb	00:27:56
2	Cd 226.502†	41418.2	41767.5	496.46 ug/L	496.46 ppb	00:28:01
2	Co 228.616†	23587.7	23739.6	518.58 ug/L	518.58 ppb	00:28:01
2	Cr 267.716†	42247.0	42320.4	493.30 ug/L	493.30 ppb	00:28:01
2	Cu 324.752†	171927.6	166677.5	505.61 ug/L	505.61 ppb	00:28:01
2	Mn 257.610†	438787.0	439791.4	506.27 ug/L	506.27 ppb	00:27:56
2	Mo 202.031†	6461.5	6467.4	484.78 ug/L	484.78 ppb	00:28:21
2	Ni 231.604†	19208.6	19164.3	496.17 ug/L	496.17 ppb	00:28:01

2	P 214.914†	4177.6	3963.4	2367.7 ug/L	2367.7 ppb	00:28:21
2	Pb 220.353†	3825.3	3899.7	488.09 ug/L	488.09 ppb	00:28:21
2	S 181.975 Axial†	708.5	671.5	978.21 ug/L	978.21 ppb	00:28:21
2	Sb 206.836†	1431.6	1394.2	503.33 ug/L	503.33 ppb	00:28:21
2	Se 196.026†	701.4	725.9	507.02 ug/L	507.02 ppb	00:28:21
2	Si 251.611†	76576.2	76268.1	2545.1 ug/L	2545.1 ppb	00:28:01
2	Sn 189.927†	2604.0	2604.0	484.09 ug/L	484.09 ppb	00:28:21
2	Ti 334.940†	308937.9	311266.5	504.72 ug/L	504.72 ppb	00:28:01
2	Tl 190.801†	1519.0	1558.3	502.76 ug/L	502.76 ppb	00:28:21
2	U 409.014†	13822.6	16848.6	486.87 ug/L	486.87 ppb	00:28:01
2	V 292.402†	66119.0	67893.0	499.48 ug/L	499.48 ppb	00:28:01
2	Zn 213.857†	51831.0	51289.7	501.39 ug/L	501.39 ppb	00:28:01
2	SiO2†	75701.3	75369.4	5363.1 ug/L	5363.1 ppb	00:29:03
3	Sc Radial	4984.4	4984.4	104 %		00:26:58
3	Y RADIAL	5236.8	5236.8	104.7 %		00:26:58
3	Al 396.153Radial†	5535.7	5490.1	5071.8 ug/L	5071.8 ppb	00:26:58
3	Ca 317.933Radial†	3138.3	3009.9	4988.6 ug/L	4988.6 ppb	00:27:18
3	Fe 238.204 Radial†	578.9	546.8	4990.9 ug/L	4990.9 ppb	00:27:18
3	K 766.490 Radial†	31507.7	27559.9	4858.6 ug/L	4858.6 ppb	00:26:58
3	Mg 279.077 IEC†	150.4	144.6	5126.2 ug/L	5126.2 ppb	00:27:18
3	Na 589.592 Radial†	32704.8	32618.6	9865.4 ug/L	9865.4 ppb	00:26:58
3	Sr 421.552†	78155.6	75370.0	528.54 ug/L	528.54 ppb	00:26:58
3	Sc 361.383	847937.6	847937.6	98.358 %		00:28:27
3	Y 371.029	682156.0	682156.0	95.459 %		00:28:27
3	Ag 328.068†	103425.6	104923.5	497.57 ug/L	497.57 ppb	00:28:32
3	As 188.979†	1048.7	1100.1	503.49 ug/L	503.49 ppb	00:28:52
3	B 249.677†	20015.6	20888.9	494.66 ug/L	494.66 ppb	00:28:32
3	Ba 233.527†	61073.5	62104.8	508.43 ug/L	508.43 ppb	00:28:32
3	Be 313.107†	1310175.9	1336388.7	498.90 ug/L	498.90 ppb	00:28:27
3	Cd 226.502†	40601.4	41491.2	493.19 ug/L	493.19 ppb	00:28:32
3	Co 228.616†	23164.1	23624.6	516.08 ug/L	516.08 ppb	00:28:32
3	Cr 267.716†	41570.7	42197.9	491.86 ug/L	491.86 ppb	00:28:32
3	Cu 324.752†	168680.3	165675.8	502.56 ug/L	502.56 ppb	00:28:32
3	Mn 257.610†	433254.4	440035.9	506.55 ug/L	506.55 ppb	00:28:27
3	Mo 202.031†	6437.0	6528.9	489.38 ug/L	489.38 ppb	00:28:52
3	Ni 231.604†	18940.2	19148.4	495.76 ug/L	495.76 ppb	00:28:32
3	P 214.914†	4164.9	4006.4	2395.1 ug/L	2395.1 ppb	00:28:52
3	Pb 220.353†	3820.2	3945.7	493.85 ug/L	493.85 ppb	00:28:52
3	S 181.975 Axial†	707.1	679.6	990.04 ug/L	990.04 ppb	00:28:52
3	Sb 206.836†	1425.8	1407.4	508.09 ug/L	508.09 ppb	00:28:52
3	Se 196.026†	701.1	734.9	512.85 ug/L	512.85 ppb	00:28:52
3	Si 251.611†	74991.0	75680.8	2525.4 ug/L	2525.4 ppb	00:28:32
3	Sn 189.927†	2588.9	2623.4	487.68 ug/L	487.68 ppb	00:28:52
3	Ti 334.940†	303361.1	309729.1	502.22 ug/L	502.22 ppb	00:28:32
3	Tl 190.801†	1506.8	1566.1	505.27 ug/L	505.27 ppb	00:28:52
3	U 409.014†	13801.5	17011.9	491.62 ug/L	491.62 ppb	00:28:32
3	V 292.402†	65063.4	67704.3	498.20 ug/L	498.20 ppb	00:28:32
3	Zn 213.857†	50901.1	51037.6	498.93 ug/L	498.93 ppb	00:28:32
3	SiO2†	75462.4	76139.1	5417.8 ug/L	5417.8 ppb	00:29:08

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	852406.5	98.876 %	0.6975			0.71%
Sc Radial	4913.0	102 %	1.4			1.34%
Y 371.029	685782.0	95.967 %	0.6739			0.70%
Y RADIAL	5141.4	102.8 %	1.73			1.68%
Ag 328.068†	105297.8	499.36 ug/L	1.552	499.36 ppb	1.552	0.31%
QC value within limits for Ag 328.068 Recovery = 99.87%						
Al 396.153Radial†	5482.3	5064.5 ug/L	8.70	5064.5 ppb	8.70	0.17%
QC value within limits for Al 396.153Radial Recovery = 101.29%						
As 188.979†	1104.2	505.36 ug/L	5.898	505.36 ppb	5.898	1.17%
QC value within limits for As 188.979 Recovery = 101.07%						
B 249.677†	20985.3	496.94 ug/L	2.597	496.94 ppb	2.597	0.52%
QC value within limits for B 249.677 Recovery = 99.39%						
Ba 233.527†	62270.2	509.78 ug/L	1.173	509.78 ppb	1.173	0.23%
QC value within limits for Ba 233.527 Recovery = 101.96%						
Be 313.107†	1337939.1	499.48 ug/L	0.671	499.48 ppb	0.671	0.13%
QC value within limits for Be 313.107 Recovery = 99.90%						
Ca 317.933Radial†	3050.5	5056.0 ug/L	60.18	5056.0 ppb	60.18	1.19%

QC value within limits for Ca 317.933 Radial Recovery = 101.12%							
Cd 226.502†	41680.6	495.43 ug/L	1.948	495.43 ppb	1.948	0.39%	
QC value within limits for Cd 226.502 Recovery = 99.09%							
Co 228.616†	23691.9	517.54 ug/L	1.302	517.54 ppb	1.302	0.25%	
QC value within limits for Co 228.616 Recovery = 103.51%							
Cr 267.716†	42300.8	493.06 ug/L	1.104	493.06 ppb	1.104	0.22%	
QC value within limits for Cr 267.716 Recovery = 98.61%							
Cu 324.752†	166184.8	504.11 ug/L	1.524	504.11 ppb	1.524	0.30%	
QC value within limits for Cu 324.752 Recovery = 100.82%							
Fe 238.204 Radial†	553.5	5051.7 ug/L	52.88	5051.7 ppb	52.88	1.05%	
QC value within limits for Fe 238.204 Radial Recovery = 101.03%							
K 766.490 Radial†	27495.5	4847.2 ug/L	15.17	4847.2 ppb	15.17	0.31%	
QC value within limits for K 766.490 Radial Recovery = 96.94%							
Mg 279.077 IEC†	147.0	5210.3 ug/L	72.81	5210.3 ppb	72.81	1.40%	
QC value within limits for Mg 279.077 IEC Recovery = 104.21%							
Mn 257.610†	439983.2	506.49 ug/L	0.197	506.49 ppb	0.197	0.04%	
QC value within limits for Mn 257.610 Recovery = 101.30%							
Mo 202.031†	6509.5	487.93 ug/L	2.734	487.93 ppb	2.734	0.56%	
QC value within limits for Mo 202.031 Recovery = 97.59%							
Na 589.592 Radial†	32724.6	9897.5 ug/L	33.14	9897.5 ppb	33.14	0.33%	
QC value within limits for Na 589.592 Radial Recovery = 98.98%							
Ni 231.604†	19187.6	496.78 ug/L	1.417	496.78 ppb	1.417	0.29%	
QC value within limits for Ni 231.604 Recovery = 99.36%							
P 214.914†	3996.9	2388.9 ug/L	18.86	2388.9 ppb	18.86	0.79%	
QC value within limits for P 214.914 Recovery = 95.55%							
Pb 220.353†	3929.2	491.78 ug/L	3.205	491.78 ppb	3.205	0.65%	
QC value within limits for Pb 220.353 Recovery = 98.36%							
S 181.975 Axial†	679.7	990.13 ug/L	11.967	990.13 ppb	11.967	1.21%	
QC value within limits for S 181.975 Axial Recovery = 99.01%							
Sb 206.836†	1404.3	506.96 ug/L	3.217	506.96 ppb	3.217	0.63%	
QC value within limits for Sb 206.836 Recovery = 101.39%							
Se 196.026†	730.9	510.33 ug/L	2.993	510.33 ppb	2.993	0.59%	
QC value within limits for Se 196.026 Recovery = 102.07%							
Si 251.611†	75975.2	2535.3 ug/L	9.85	2535.3 ppb	9.85	0.39%	
QC value within limits for Si 251.611 Recovery = 101.41%							
Sn 189.927†	2618.7	486.82 ug/L	2.408	486.82 ppb	2.408	0.49%	
QC value within limits for Sn 189.927 Recovery = 97.36%							
Sr 421.552†	75341.6	528.34 ug/L	1.499	528.34 ppb	1.499	0.28%	
QC value within limits for Sr 421.552 Recovery = 105.67%							
Ti 334.940†	310642.2	503.71 ug/L	1.314	503.71 ppb	1.314	0.26%	
QC value within limits for Ti 334.940 Recovery = 100.74%							
Tl 190.801†	1564.7	504.83 ug/L	1.886	504.83 ppb	1.886	0.37%	
QC value within limits for Tl 190.801 Recovery = 100.97%							
U 409.014†	16914.1	488.77 ug/L	2.512	488.77 ppb	2.512	0.51%	
QC value within limits for U 409.014 Recovery = 97.75%							
V 292.402†	67816.0	498.97 ug/L	0.683	498.97 ppb	0.683	0.14%	
QC value within limits for V 292.402 Recovery = 99.79%							
Zn 213.857†	51187.6	500.39 ug/L	1.295	500.39 ppb	1.295	0.26%	
QC value within limits for Zn 213.857 Recovery = 100.08%							
SiO2†	75595.6	5379.1 ug/L	33.70	5379.1 ppb	33.70	0.63%	
QC value within limits for SiO2 Recovery = 100.59%							

All analyte(s) passed QC.

Sequence No.: 71

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 6

Date Collected: 2/12/2010 00:31:18

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4743.3	4743.3	98.7 %		00:33:10
1	Y RADIAL	5015.5	5015.5	100.3 %		00:33:10
1	Al 396.153Radial†	-151.2	-1.7	-1.5692 ug/L	-1.5692 ppb	00:33:10
1	Ca 317.933Radial†	22.0	5.5	9.1916 ug/L	9.1916 ppb	00:33:30
1	Fe 238.204 Radial†	9.4	-2.0	-18.184 ug/L	-18.184 ppb	00:33:30
1	K 766.490 Radial†	3009.8	224.4	39.600 ug/L	39.600 ppb	00:33:10
1	Mg 279.077 IEC†	3.8	3.5	122.60 ug/L	122.60 ppb	00:33:30
1	Na 589.592 Radial†	-943.0	122.8	37.147 ug/L	37.147 ppb	00:33:10
1	Sr 421.552†	13.0	11.1	0.0774 ug/L	0.0774 ppb	00:33:10
1	Sc 361.383	834507.6	834507.6	96.800 %		00:34:27
1	Y 371.029	680980.2	680980.2	95.295 %		00:34:27
1	Ag 328.068†	292.1	72.9	0.3320 ug/L	0.3320 ppb	00:34:27
1	As 188.979†	-20.5	12.7	5.7747 ug/L	5.7747 ppb	00:34:47
1	B 249.677†	-463.0	60.7	1.4468 ug/L	1.4468 ppb	00:34:47
1	Ba 233.527†	0.5	12.1	0.0979 ug/L	0.0979 ppb	00:34:47
1	Be 313.107†	-4174.8	25.9	0.0106 ug/L	0.0106 ppb	00:34:27
1	Cd 226.502†	-188.0	17.7	0.2127 ug/L	0.2127 ppb	00:34:47
1	Co 228.616†	-54.3	17.6	0.3849 ug/L	0.3849 ppb	00:34:47
1	Cr 267.716†	74.3	9.9	0.1129 ug/L	0.1129 ppb	00:34:47
1	Cu 324.752†	5304.2	-341.1	-1.0387 ug/L	-1.0387 ppb	00:34:27
1	Mn 257.610†	584.6	152.1	0.1682 ug/L	0.1682 ppb	00:34:47
1	Mo 202.031†	19.3	4.4	0.3261 ug/L	0.3261 ppb	00:34:47
1	Ni 231.604†	90.5	-14.5	-0.3762 ug/L	-0.3762 ppb	00:34:47
1	P 214.914†	229.4	8.9	5.7455 ug/L	5.7455 ppb	00:34:47
1	Pb 220.353†	-59.2	0.5	0.0704 ug/L	0.0704 ppb	00:34:47
1	S 181.975 Axial†	33.2	-5.0	-7.2997 ug/L	-7.2997 ppb	00:34:47
1	Sb 206.836†	46.9	6.2	2.1936 ug/L	2.1936 ppb	00:34:47
1	Se 196.026†	-22.0	-0.6	-0.4815 ug/L	-0.4815 ppb	00:34:47
1	Si 251.611†	582.0	39.0	1.3007 ug/L	1.3007 ppb	00:34:47
1	Sn 189.927†	12.2	3.9	0.7283 ug/L	0.7283 ppb	00:34:47
1	Ti 334.940†	-1025.2	244.1	0.3847 ug/L	0.3847 ppb	00:34:27
1	Tl 190.801†	-32.3	0.9	0.2793 ug/L	0.2793 ppb	00:34:47
1	U 409.014†	-2709.6	180.9	5.2481 ug/L	5.2481 ppb	00:34:27
1	V 292.402†	-1544.5	-41.0	-0.2782 ug/L	-0.2782 ppb	00:34:27
1	Zn 213.857†	713.8	24.1	0.2446 ug/L	0.2446 ppb	00:34:47
1	SiO2†	605.2	42.0	2.9905 ug/L	2.9905 ppb	00:35:43
2	Sc Radial	4980.2	4980.2	104 %		00:33:35
2	Y RADIAL	5246.6	5246.6	104.9 %		00:33:35
2	Al 396.153Radial†	-141.5	15.0	13.923 ug/L	13.923 ppb	00:33:35
2	Ca 317.933Radial†	21.6	4.1	6.7969 ug/L	6.7969 ppb	00:33:55
2	Fe 238.204 Radial†	10.9	-0.9	-8.5929 ug/L	-8.5929 ppb	00:33:55
2	K 766.490 Radial†	2890.7	-35.6	-6.3018 ug/L	-6.3018 ppb	00:33:35
2	Mg 279.077 IEC†	1.3	0.8	29.393 ug/L	29.393 ppb	00:33:55
2	Na 589.592 Radial†	-973.2	139.2	42.088 ug/L	42.088 ppb	00:33:35
2	Sr 421.552†	11.0	8.5	0.0595 ug/L	0.0595 ppb	00:33:35
2	Sc 361.383	833949.4	833949.4	96.735 %		00:34:52
2	Y 371.029	679898.8	679898.8	95.144 %		00:34:52
2	Ag 328.068†	296.7	77.9	0.3662 ug/L	0.3662 ppb	00:34:52
2	As 188.979†	-18.3	14.9	6.7776 ug/L	6.7776 ppb	00:35:12
2	B 249.677†	-451.8	72.0	1.7133 ug/L	1.7133 ppb	00:35:12
2	Ba 233.527†	0.0	11.6	0.0953 ug/L	0.0953 ppb	00:35:12
2	Be 313.107†	-4152.3	46.3	0.0176 ug/L	0.0176 ppb	00:34:52
2	Cd 226.502†	-191.0	14.5	0.1729 ug/L	0.1729 ppb	00:35:12
2	Co 228.616†	-62.2	9.4	0.2046 ug/L	0.2046 ppb	00:35:12
2	Cr 267.716†	80.2	16.2	0.1888 ug/L	0.1888 ppb	00:35:12
2	Cu 324.752†	5294.6	-347.5	-1.0539 ug/L	-1.0539 ppb	00:34:52
2	Mn 257.610†	615.2	184.1	0.2098 ug/L	0.2098 ppb	00:35:12
2	Mo 202.031†	14.8	-0.3	-0.0216 ug/L	-0.0216 ppb	00:35:12
2	Ni 231.604†	107.5	3.1	0.0799 ug/L	0.0799 ppb	00:35:12

2	P 214.914†	230.6	10.3	6.6513 ug/L	6.6513 ppb	00:35:12
2	Pb 220.353†	-58.2	1.6	0.2030 ug/L	0.2030 ppb	00:35:12
2	S 181.975 Axial†	39.5	1.5	2.1681 ug/L	2.1681 ppb	00:35:12
2	Sb 206.836†	45.0	4.4	1.5349 ug/L	1.5349 ppb	00:35:12
2	Se 196.026†	-22.8	-1.5	-1.0206 ug/L	-1.0206 ppb	00:35:12
2	Si 251.611†	610.2	68.5	2.2916 ug/L	2.2916 ppb	00:35:12
2	Sn 189.927†	8.7	0.3	0.0630 ug/L	0.0630 ppb	00:35:12
2	Ti 334.940†	-1165.8	98.0	0.1579 ug/L	0.1579 ppb	00:34:52
2	Tl 190.801†	-30.7	2.4	0.7760 ug/L	0.7760 ppb	00:35:12
2	U 409.014†	-2918.3	-36.7	-1.0646 ug/L	-1.0646 ppb	00:34:52
2	V 292.402†	-1465.8	39.3	0.2850 ug/L	0.2850 ppb	00:34:52
2	Zn 213.857†	710.0	20.7	0.2063 ug/L	0.2063 ppb	00:35:12
2	SiO2†	608.8	46.2	3.2946 ug/L	3.2946 ppb	00:35:48
3	Sc Radial	4891.6	4891.6	102 %		00:34:00
3	Y RADIAL	5137.7	5137.7	102.7 %		00:34:00
3	Al 396.153Radial†	-147.4	6.8	6.2473 ug/L	6.2473 ppb	00:34:00
3	Ca 317.933Radial†	23.3	6.2	10.251 ug/L	10.251 ppb	00:34:20
3	Fe 238.204 Radial†	10.2	-1.4	-13.096 ug/L	-13.096 ppb	00:34:20
3	K 766.490 Radial†	2773.3	-100.4	-17.741 ug/L	-17.741 ppb	00:34:00
3	Mg 279.077 IEC†	0.6	0.2	6.0263 ug/L	6.0263 ppb	00:34:20
3	Na 589.592 Radial†	-1043.5	53.1	16.057 ug/L	16.057 ppb	00:34:00
3	Sr 421.552†	16.1	13.7	0.0962 ug/L	0.0962 ppb	00:34:00
3	Sc 361.383	830652.8	830652.8	96.353 %		00:35:17
3	Y 371.029	677127.4	677127.4	94.756 %		00:35:17
3	Ag 328.068†	280.5	62.3	0.2956 ug/L	0.2956 ppb	00:35:17
3	As 188.979†	-27.6	5.3	2.3788 ug/L	2.3788 ppb	00:35:37
3	B 249.677†	-452.8	69.1	1.6470 ug/L	1.6470 ppb	00:35:37
3	Ba 233.527†	-0.4	11.1	0.0904 ug/L	0.0904 ppb	00:35:37
3	Be 313.107†	-4264.5	-87.2	-0.0322 ug/L	-0.0322 ppb	00:35:17
3	Cd 226.502†	-199.4	4.9	0.0580 ug/L	0.0580 ppb	00:35:37
3	Co 228.616†	-84.7	-14.2	-0.3081 ug/L	-0.3081 ppb	00:35:37
3	Cr 267.716†	76.2	12.3	0.1468 ug/L	0.1468 ppb	00:35:37
3	Cu 324.752†	5278.4	-342.6	-1.0350 ug/L	-1.0350 ppb	00:35:17
3	Mn 257.610†	587.0	157.3	0.1795 ug/L	0.1795 ppb	00:35:37
3	Mo 202.031†	29.2	14.8	1.1066 ug/L	1.1066 ppb	00:35:37
3	Ni 231.604†	102.0	-2.2	-0.0563 ug/L	-0.0563 ppb	00:35:37
3	P 214.914†	225.9	6.4	4.2331 ug/L	4.2331 ppb	00:35:37
3	Pb 220.353†	-72.7	-13.7	-1.7090 ug/L	-1.7090 ppb	00:35:37
3	S 181.975 Axial†	41.6	3.8	5.5369 ug/L	5.5369 ppb	00:35:37
3	Sb 206.836†	27.2	-13.9	-4.7896 ug/L	-4.7896 ppb	00:35:37
3	Se 196.026†	-10.0	11.8	7.9017 ug/L	7.9017 ppb	00:35:37
3	Si 251.611†	578.0	37.6	1.2432 ug/L	1.2432 ppb	00:35:37
3	Sn 189.927†	20.0	12.0	2.2328 ug/L	2.2328 ppb	00:35:37
3	Ti 334.940†	-1185.3	73.1	0.1232 ug/L	0.1232 ppb	00:35:17
3	Tl 190.801†	-38.2	-5.4	-1.7419 ug/L	-1.7419 ppb	00:35:37
3	U 409.014†	-3161.6	-301.3	-8.7346 ug/L	-8.7346 ppb	00:35:17
3	V 292.402†	-1513.6	-16.2	-0.1171 ug/L	-0.1171 ppb	00:35:17
3	Zn 213.857†	684.3	-3.1	-0.0268 ug/L	-0.0268 ppb	00:35:37
3	SiO2†	660.9	102.8	7.2998 ug/L	7.2998 ppb	00:35:53

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	833036.6	96.629 %	0.2416			0.25%
Sc Radial	4871.7	101 %	2.5			2.46%
Y 371.029	679335.5	95.065 %	0.2781			0.29%
Y RADIAL	5133.3	102.7 %	2.31			2.25%
Ag 328.068†	71.1	0.3313 ug/L	0.03530	0.3313 ppb	0.03530	10.66%
QC value within limits for Ag 328.068 Recovery = Not calculated						
Al 396.153Radial†	6.7	6.2003 ug/L	7.74616	6.2003 ppb	7.74616	124.93%
QC value within limits for Al 396.153Radial Recovery = Not calculated						
As 188.979†	11.0	4.9770 ug/L	2.30531	4.9770 ppb	2.30531	46.32%
QC value within limits for As 188.979 Recovery = Not calculated						
B 249.677†	67.3	1.6024 ug/L	0.13874	1.6024 ppb	0.13874	8.66%
QC value within limits for B 249.677 Recovery = Not calculated						
Ba 233.527†	11.6	0.0945 ug/L	0.00382	0.0945 ppb	0.00382	4.04%
QC value within limits for Ba 233.527 Recovery = Not calculated						
Be 313.107†	-5.0	-0.0013 ug/L	0.02696	-0.0013 ppb	0.02696	>999.9%
QC value within limits for Be 313.107 Recovery = Not calculated						
Ca 317.933Radial†	5.3	8.7464 ug/L	1.76940	8.7464 ppb	1.76940	20.23%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated

Cd 226.502†	12.3	0.1478 ug/L	0.08034	0.1478 ppb	0.08034	54.34%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	4.3	0.0938 ug/L	0.35954	0.0938 ppb	0.35954	383.41%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	12.8	0.1495 ug/L	0.03799	0.1495 ppb	0.03799	25.41%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-343.7	-1.0425 ug/L	0.00999	-1.0425 ppb	0.00999	0.96%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	-1.5	-13.291 ug/L	4.7985	-13.291 ppb	4.7985	36.10%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	29.5	5.1856 ug/L	30.34753	5.1856 ppb	30.34753	585.23%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	1.5	52.673 ug/L	61.6760	52.673 ppb	61.6760	117.09%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	164.5	0.1858 ug/L	0.02151	0.1858 ppb	0.02151	11.58%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	6.3	0.4704 ug/L	0.57776	0.4704 ppb	0.57776	122.83%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	105.0	31.764 ug/L	13.8249	31.764 ppb	13.8249	43.52%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	-4.5	-0.1175 ug/L	0.23412	-0.1175 ppb	0.23412	199.24%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	8.5	5.5433 ug/L	1.22171	5.5433 ppb	1.22171	22.04%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-3.9	-0.4785 ug/L	1.06766	-0.4785 ppb	1.06766	223.12%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	0.1	0.1351 ug/L	6.65539	0.1351 ppb	6.65539	>999.9%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	-1.1	-0.3537 ug/L	3.85568	-0.3537 ppb	3.85568	>999.9%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	3.2	2.1332 ug/L	5.00293	2.1332 ppb	5.00293	234.53%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	48.4	1.6118 ug/L	0.58938	1.6118 ppb	0.58938	36.57%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	5.4	1.0080 ug/L	1.11160	1.0080 ppb	1.11160	110.27%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	11.1	0.0777 ug/L	0.01837	0.0777 ppb	0.01837	23.63%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	138.4	0.2219 ug/L	0.14206	0.2219 ppb	0.14206	64.02%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-0.7	-0.2289 ug/L	1.33367	-0.2289 ppb	1.33367	582.75%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	-52.4	-1.5170 ug/L	7.00231	-1.5170 ppb	7.00231	461.58%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	-5.9	-0.0368 ug/L	0.29002	-0.0368 ppb	0.29002	789.13%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	13.9	0.1414 ug/L	0.14691	0.1414 ppb	0.14691	103.93%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	63.7	4.5283 ug/L	2.40500	4.5283 ppb	2.40500	53.11%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 72

Sample ID: 245396001|945399|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 93

Date Collected: 2/12/2010 00:38:04

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245396001|945399|1

Rep#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5100.9	5100.9	106 %		00:39:57
1	Y RADIAL	6494.6	6494.6	129.9 %		00:39:57
1	Al 396.153Radial†	10478.4	10026.0	9304.8 ug/L	9304.8 ppb	00:39:57
1	Ca 317.933Radial†	2053.4	1918.3	3179.5 ug/L	3179.5 ppb	00:40:17
1	Fe 238.204 Radial†	8901.4	8376.8	76218 ug/L	76218 ppb	00:39:57
1	K 766.490 Radial†	16451.8	12677.7	2235.3 ug/L	2235.3 ppb	00:39:57
1	Mg 279.077 IEC†	63.3	59.2	2019.8 ug/L	2019.8 ppb	00:40:17
1	Na 589.592 Radial†	3531.3	4406.2	1332.7 ug/L	1332.7 ppb	00:39:57
1	Sr 421.552†	3400.3	3202.1	22.433 ug/L	22.433 ppb	00:39:57
1	Sc 361.383	875356.1	875356.1	101.54 %		00:41:14
1	Y 371.029	858009.2	858009.2	120.07 %		00:41:14
1	Ag 328.068†	-4511.2	-4671.7	4.0506 ug/L	4.0506 ppb	00:41:19
1	As 188.979†	-58.1	-23.3	26.886 ug/L	26.886 ppb	00:41:39
1	B 249.677†	75.7	613.6	2.1527 ug/L	2.1527 ppb	00:41:19
1	Ba 233.527†	22359.6	22032.4	182.34 ug/L	182.34 ppb	00:41:19
1	Be 313.107†	-10339.9	-5844.6	2.9723 ug/L	2.9723 ppb	00:41:19
1	Cd 226.502†	437.2	642.4	-0.2530 ug/L	-0.2530 ppb	00:41:39
1	Co 228.616†	1032.6	1090.7	18.046 ug/L	18.046 ppb	00:41:39
1	Cr 267.716†	6817.9	6647.8	79.034 ug/L	79.034 ppb	00:41:19
1	Cu 324.752†	23352.9	17178.4	56.283 ug/L	56.283 ppb	00:41:19
1	Mn 257.610†	2074023.9	2042150.3	2357.0 ug/L	2357.0 ppb	00:41:14
1	Mo 202.031†	140.3	122.6	15.139 ug/L	15.139 ppb	00:41:39
1	Ni 231.604†	1991.4	1853.2	47.996 ug/L	47.996 ppb	00:41:39
1	P 214.914†	1450.9	1200.8	677.88 ug/L	677.88 ppb	00:41:39
1	Pb 220.353†	423.3	478.6	54.460 ug/L	54.460 ppb	00:41:39
1	S 181.975 Axial†	70.4	30.0	42.009 ug/L	42.009 ppb	00:41:39
1	Sb 206.836†	55.2	12.2	-3.9365 ug/L	-3.9365 ppb	00:41:39
1	Se 196.026†	-401.6	-373.4	-5.6456 ug/L	-5.6456 ppb	00:41:39
1	Si 251.611†	297073.9	292010.9	9767.2 ug/L	9767.2 ppb	00:41:14
1	Sn 189.927†	31.7	22.6	5.9550 ug/L	5.9550 ppb	00:41:39
1	Ti 334.940†	1418576.6	1398388.2	2268.5 ug/L	2268.5 ppb	00:41:14
1	Tl 190.801†	-126.1	-90.0	1.0157 ug/L	1.0157 ppb	00:41:39
1	U 409.014†	-11805.2	-8646.3	-259.58 ug/L	-259.58 ppb	00:41:14
1	V 292.402†	4342.2	5831.0	28.505 ug/L	28.505 ppb	00:41:19
1	Zn 213.857†	35286.9	34039.0	324.03 ug/L	324.03 ppb	00:41:19
1	SiO2†	293185.2	288160.3	20555 ug/L	20555 ppb	00:42:47
2	Sc Radial	4977.4	4977.4	104 %		00:40:22
2	Y RADIAL	6360.9	6360.9	127.2 %		00:40:22
2	Al 396.153Radial†	10075.2	9881.7	9170.9 ug/L	9170.9 ppb	00:40:22
2	Ca 317.933Radial†	2071.4	1983.8	3288.0 ug/L	3288.0 ppb	00:40:42
2	Fe 238.204 Radial†	8597.8	8291.8	75445 ug/L	75445 ppb	00:40:22
2	K 766.490 Radial†	15953.9	12581.8	2218.4 ug/L	2218.4 ppb	00:40:22
2	Mg 279.077 IEC†	64.7	62.1	2122.0 ug/L	2122.0 ppb	00:40:42
2	Na 589.592 Radial†	3377.7	4340.6	1312.8 ug/L	1312.8 ppb	00:40:22
2	Sr 421.552†	3278.5	3164.1	22.166 ug/L	22.166 ppb	00:40:22
2	Sc 361.383	873686.4	873686.4	101.34 %		00:41:45
2	Y 371.029	855666.6	855666.6	119.74 %		00:41:45
2	Ag 328.068†	-4520.0	-4688.8	3.7015 ug/L	3.7015 ppb	00:41:50
2	As 188.979†	-45.8	-11.3	32.212 ug/L	32.212 ppb	00:42:10
2	B 249.677†	50.8	589.1	1.6970 ug/L	1.6970 ppb	00:41:50
2	Ba 233.527†	22116.9	21835.1	180.71 ug/L	180.71 ppb	00:41:50
2	Be 313.107†	-10211.5	-5737.3	3.0198 ug/L	3.0198 ppb	00:41:50
2	Cd 226.502†	450.5	656.4	-0.0067 ug/L	-0.0067 ppb	00:42:10
2	Co 228.616†	1010.1	1070.4	17.605 ug/L	17.605 ppb	00:42:10
2	Cr 267.716†	6857.3	6699.6	79.620 ug/L	79.620 ppb	00:41:50
2	Cu 324.752†	23169.8	17041.7	55.827 ug/L	55.827 ppb	00:41:50
2	Mn 257.610†	2073396.8	2045435.1	2360.7 ug/L	2360.7 ppb	00:41:45
2	Mo 202.031†	131.6	114.3	14.454 ug/L	14.454 ppb	00:42:10
2	Ni 231.604†	1980.4	1846.1	47.814 ug/L	47.814 ppb	00:42:10

2	P 214.914†	1423.6	1176.7	663.52 ug/L	663.52 ppb	00:42:10
2	Pb 220.353†	413.4	469.7	53.396 ug/L	53.396 ppb	00:42:10
2	S 181.975 Axial†	74.7	34.4	48.386 ug/L	48.386 ppb	00:42:10
2	Sb 206.836†	59.7	16.7	-2.3802 ug/L	-2.3802 ppb	00:42:10
2	Se 196.026†	-396.9	-369.5	-5.5613 ug/L	-5.5613 ppb	00:42:10
2	Si 251.611†	297072.3	292568.5	9785.9 ug/L	9785.9 ppb	00:41:45
2	Sn 189.927†	27.2	18.1	5.1346 ug/L	5.1346 ppb	00:42:10
2	Ti 334.940†	1417932.3	1400422.4	2271.8 ug/L	2271.8 ppb	00:41:45
2	Tl 190.801†	-143.7	-107.6	-4.5585 ug/L	-4.5585 ppb	00:42:10
2	U 409.014†	-11746.6	-8610.6	-258.45 ug/L	-258.45 ppb	00:41:45
2	V 292.402†	4164.3	5663.7	27.393 ug/L	27.393 ppb	00:41:50
2	Zn 213.857†	34903.1	33726.7	321.07 ug/L	321.07 ppb	00:41:50
2	SiO2†	297743.6	293210.0	20915 ug/L	20915 ppb	00:42:52
3	Sc Radial	5014.2	5014.2	104 %		00:40:47
3	Y RADIAL	6426.7	6426.7	128.5 %		00:40:47
3	Al 396.153Radial†	10259.0	9986.5	9268.1 ug/L	9268.1 ppb	00:40:47
3	Ca 317.933Radial†	2074.9	1972.5	3269.2 ug/L	3269.2 ppb	00:41:07
3	Fe 238.204 Radial†	8744.1	8371.2	76167 ug/L	76167 ppb	00:40:47
3	K 766.490 Radial†	16154.9	12661.4	2232.4 ug/L	2232.4 ppb	00:40:47
3	Mg 279.077 IEC†	60.0	57.1	1944.1 ug/L	1944.1 ppb	00:41:07
3	Na 589.592 Radial†	3434.2	4370.8	1321.9 ug/L	1321.9 ppb	00:40:47
3	Sr 421.552†	3330.4	3190.6	22.352 ug/L	22.352 ppb	00:40:47
3	Sc 361.383	875128.5	875128.5	101.51 %		00:42:16
3	Y 371.029	858249.7	858249.7	120.10 %		00:42:16
3	Ag 328.068†	-4515.1	-4676.7	4.0056 ug/L	4.0056 ppb	00:42:21
3	As 188.979†	-55.4	-20.7	28.075 ug/L	28.075 ppb	00:42:41
3	B 249.677†	40.2	578.6	1.3284 ug/L	1.3284 ppb	00:42:21
3	Ba 233.527†	22397.8	22075.8	182.70 ug/L	182.70 ppb	00:42:21
3	Be 313.107†	-10486.4	-5991.5	2.9177 ug/L	2.9177 ppb	00:42:21
3	Cd 226.502†	437.0	642.4	-0.2477 ug/L	-0.2477 ppb	00:42:41
3	Co 228.616†	1023.4	1081.9	17.856 ug/L	17.856 ppb	00:42:41
3	Cr 267.716†	6861.9	6692.9	79.557 ug/L	79.557 ppb	00:42:21
3	Cu 324.752†	23456.8	17286.7	56.606 ug/L	56.606 ppb	00:42:21
3	Mn 257.610†	2071434.5	2040130.7	2354.6 ug/L	2354.6 ppb	00:42:16
3	Mo 202.031†	153.4	135.6	16.109 ug/L	16.109 ppb	00:42:41
3	Ni 231.604†	1992.2	1854.5	48.030 ug/L	48.030 ppb	00:42:41
3	P 214.914†	1448.6	1199.0	676.71 ug/L	676.71 ppb	00:42:41
3	Pb 220.353†	428.8	484.1	55.150 ug/L	55.150 ppb	00:42:41
3	S 181.975 Axial†	76.6	36.1	50.896 ug/L	50.896 ppb	00:42:41
3	Sb 206.836†	54.6	11.6	-4.1187 ug/L	-4.1187 ppb	00:42:41
3	Se 196.026†	-402.6	-374.5	-6.5520 ug/L	-6.5520 ppb	00:42:41
3	Si 251.611†	296675.8	291694.9	9756.7 ug/L	9756.7 ppb	00:42:16
3	Sn 189.927†	29.7	20.6	5.6024 ug/L	5.6024 ppb	00:42:41
3	Ti 334.940†	1418240.9	1398420.9	2268.5 ug/L	2268.5 ppb	00:42:16
3	Tl 190.801†	-129.0	-92.8	0.1036 ug/L	0.1036 ppb	00:42:41
3	U 409.014†	-11625.9	-8472.7	-254.54 ug/L	-254.54 ppb	00:42:16
3	V 292.402†	4382.6	5872.0	28.831 ug/L	28.831 ppb	00:42:21
3	Zn 213.857†	35316.9	34077.7	324.42 ug/L	324.42 ppb	00:42:21
3	SiO2†	297469.7	292456.1	20861 ug/L	20861 ppb	00:42:57

Mean Data: 245396001|945399|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	874723.7	101.46 %	0.105			0.10%
Sc Radial	5030.8	105 %	1.3			1.26%
Y 371.029	857308.5	119.97 %	0.200			0.17%
Y RADIAL	6427.4	128.5 %	1.34			1.04%
Ag 328.068†	-4679.1	3.9192 ug/L	0.18987	3.9192 ppb	0.18987	4.84%
Al 396.153Radial†	9964.7	9247.9 ug/L	69.16	9247.9 ppb	69.16	0.75%
As 188.979†	-18.4	29.058 ug/L	2.7958	29.058 ppb	2.7958	9.62%
B 249.677†	593.8	1.7260 ug/L	0.41292	1.7260 ppb	0.41292	23.92%
Ba 233.527†	21981.1	181.92 ug/L	1.062	181.92 ppb	1.062	0.58%
Be 313.107†	-5857.8	2.9699 ug/L	0.05106	2.9699 ppb	0.05106	1.72%
Ca 317.933Radial†	1958.2	3245.6 ug/L	57.99	3245.6 ppb	57.99	1.79%
Cd 226.502†	647.1	-0.1691 ug/L	0.14069	-0.1691 ppb	0.14069	83.18%
Co 228.616†	1081.0	17.836 ug/L	0.2214	17.836 ppb	0.2214	1.24%
Cr 267.716†	6680.1	79.404 ug/L	0.3215	79.404 ppb	0.3215	0.40%
Cu 324.752†	17168.9	56.239 ug/L	0.3916	56.239 ppb	0.3916	0.70%
Fe 238.204 Radial†	8346.6	75943 ug/L	432.3	75943 ppb	432.3	0.57%
K 766.490 Radial†	12640.3	2228.7 ug/L	9.07	2228.7 ppb	9.07	0.41%

Mg 279.077 IEC†	59.5	2028.6 ug/L	89.30	2028.6 ppb	89.30	4.40%
Mn 257.610†	2042572.0	2357.4 ug/L	3.04	2357.4 ppb	3.04	0.13%
Mo 202.031†	124.2	15.234 ug/L	0.8312	15.234 ppb	0.8312	5.46%
Na 589.592 Radial†	4372.5	1322.5 ug/L	9.94	1322.5 ppb	9.94	0.75%
Ni 231.604†	1851.3	47.946 ug/L	0.1163	47.946 ppb	0.1163	0.24%
P 214.914†	1192.2	672.70 ug/L	7.977	672.70 ppb	7.977	1.19%
Pb 220.353†	477.5	54.335 ug/L	0.8837	54.335 ppb	0.8837	1.63%
S 181.975 Axial†	33.5	47.097 ug/L	4.5815	47.097 ppb	4.5815	9.73%
Sb 206.836†	13.5	-3.4785 ug/L	0.95550	-3.4785 ppb	0.95550	27.47%
Se 196.026†	-372.5	-5.9196 ug/L	0.54929	-5.9196 ppb	0.54929	9.28%
Si 251.611†	292091.4	9769.9 ug/L	14.80	9769.9 ppb	14.80	0.15%
Sn 189.927†	20.4	5.5640 ug/L	0.41154	5.5640 ppb	0.41154	7.40%
Sr 421.552†	3185.6	22.317 ug/L	0.1373	22.317 ppb	0.1373	0.62%
Ti 334.940†	1399077.1	2269.6 ug/L	1.89	2269.6 ppb	1.89	0.08%
Tl 190.801†	-96.8	-1.1464 ug/L	2.98994	-1.1464 ppb	2.98994	260.81%
U 409.014†	-8576.6	-257.52 ug/L	2.646	-257.52 ppb	2.646	1.03%
V 292.402†	5788.9	28.243 ug/L	0.7536	28.243 ppb	0.7536	2.67%
Zn 213.857†	33947.8	323.17 ug/L	1.833	323.17 ppb	1.833	0.57%
SiO2†	291275.4	20777 ug/L	194.3	20777 ppb	194.3	0.94%

Sequence No.: 73

Sample ID: 1202024775|945399|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 94

Date Collected: 2/12/2010 00:45:09

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202024775|945399|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5062.2	5062.2	105 %		00:47:02
1	Y RADIAL	6666.7	6666.7	133.3 %		00:47:02
1	Al 396.153Radial†	10714.9	10326.1	9583.2 ug/L	9583.2 ppb	00:47:02
1	Ca 317.933Radial†	1688.9	1587.0	2630.4 ug/L	2630.4 ppb	00:47:22
1	Fe 238.204 Radial†	9901.2	9390.4	85440 ug/L	85440 ppb	00:47:02
1	K 766.490 Radial†	16980.8	13298.7	2345.0 ug/L	2345.0 ppb	00:47:02
1	Mg 279.077 IEC†	60.7	57.2	1937.3 ug/L	1937.3 ppb	00:47:22
1	Na 589.592 Radial†	3978.7	4856.6	1468.9 ug/L	1468.9 ppb	00:47:02
1	Sr 421.552†	3137.0	2976.7	20.856 ug/L	20.856 ppb	00:47:02
1	Sc 361.383	818066.1	818066.1	94.893 %		00:48:19
1	Y 371.029	837450.8	837450.8	117.19 %		00:48:19
1	Ag 328.068†	-5099.8	-5603.0	2.8482 ug/L	2.8482 ppb	00:48:24
1	As 188.979†	-54.0	-23.1	34.494 ug/L	34.494 ppb	00:48:45
1	B 249.677†	14.7	554.5	-0.7553 ug/L	-0.7553 ppb	00:48:24
1	Ba 233.527†	18961.2	19993.2	165.98 ug/L	165.98 ppb	00:48:24
1	Be 313.107†	-12885.2	-9239.9	3.1023 ug/L	3.1023 ppb	00:48:24
1	Cd 226.502†	548.1	789.5	0.5694 ug/L	0.5694 ppb	00:48:45
1	Co 228.616†	1031.1	1160.3	18.089 ug/L	18.089 ppb	00:48:45
1	Cr 267.716†	16787.1	17623.8	207.03 ug/L	207.03 ppb	00:48:24
1	Cu 324.752†	23137.6	18562.1	60.998 ug/L	60.998 ppb	00:48:24
1	Mn 257.610†	2164972.0	2281038.7	2632.7 ug/L	2632.7 ppb	00:48:19
1	Mo 202.031†	176.2	170.2	19.408 ug/L	19.408 ppb	00:48:45
1	Ni 231.604†	3973.7	4079.6	105.67 ug/L	105.67 ppb	00:48:45
1	P 214.914†	1032.1	859.6	457.36 ug/L	457.36 ppb	00:48:45
1	Pb 220.353†	443.6	529.2	59.947 ug/L	59.947 ppb	00:48:45
1	S 181.975 Axial†	63.0	27.1	37.651 ug/L	37.651 ppb	00:48:45
1	Sb 206.836†	67.2	28.6	-0.2078 ug/L	-0.2078 ppb	00:48:45
1	Se 196.026†	-440.8	-442.4	-22.416 ug/L	-22.416 ppb	00:48:45
1	Si 251.611†	321328.5	338060.1	11307 ug/L	11307 ppb	00:48:24
1	Sn 189.927†	28.3	21.1	5.7542 ug/L	5.7542 ppb	00:48:45
1	Ti 334.940†	1685135.5	1777132.5	2882.7 ug/L	2882.7 ppb	00:48:19
1	Tl 190.801†	-158.0	-132.3	-6.1292 ug/L	-6.1292 ppb	00:48:45
1	U 409.014†	-12757.7	-10464.2	-313.63 ug/L	-313.63 ppb	00:48:19
1	V 292.402†	4777.1	6588.8	31.915 ug/L	31.915 ppb	00:48:24
1	Zn 213.857†	40353.4	41811.9	398.96 ug/L	398.96 ppb	00:48:24
1	SiO2†	326290.3	343268.1	24486 ug/L	24486 ppb	00:49:52
2	Sc Radial	5154.9	5154.9	107 %		00:47:27
2	Y RADIAL	6820.7	6820.7	136.4 %		00:47:27
2	Al 396.153Radial†	11073.1	10477.1	9723.4 ug/L	9723.4 ppb	00:47:27
2	Ca 317.933Radial†	1679.3	1549.3	2567.8 ug/L	2567.8 ppb	00:47:47
2	Fe 238.204 Radial†	10157.5	9460.2	86076 ug/L	86076 ppb	00:47:27
2	K 766.490 Radial†	17406.0	13405.2	2363.8 ug/L	2363.8 ppb	00:47:27
2	Mg 279.077 IEC†	62.5	57.9	1961.0 ug/L	1961.0 ppb	00:47:47
2	Na 589.592 Radial†	4103.0	4904.5	1483.3 ug/L	1483.3 ppb	00:47:27
2	Sr 421.552†	3255.1	3033.2	21.253 ug/L	21.253 ppb	00:47:27
2	Sc 361.383	875412.7	875412.7	101.54 %		00:48:50
2	Y 371.029	890689.4	890689.4	124.64 %		00:48:50
2	Ag 328.068†	-5117.1	-5268.1	4.6195 ug/L	4.6195 ppb	00:48:55
2	As 188.979†	-57.3	-22.6	34.395 ug/L	34.395 ppb	00:49:16
2	B 249.677†	62.0	600.1	0.2311 ug/L	0.2311 ppb	00:48:55
2	Ba 233.527†	18705.6	18432.6	153.25 ug/L	153.25 ppb	00:48:55
2	Be 313.107†	-12831.0	-8297.1	3.3284 ug/L	3.3284 ppb	00:48:55
2	Cd 226.502†	535.5	739.3	-0.0949 ug/L	-0.0949 ppb	00:49:16
2	Co 228.616†	1018.2	1076.4	16.362 ug/L	16.362 ppb	00:49:16
2	Cr 267.716†	16541.5	16223.1	190.72 ug/L	190.72 ppb	00:48:55
2	Cu 324.752†	22891.7	16722.7	55.443 ug/L	55.443 ppb	00:48:55
2	Mn 257.610†	2270624.1	2235627.4	2580.5 ug/L	2580.5 ppb	00:48:50
2	Mo 202.031†	172.4	154.2	18.263 ug/L	18.263 ppb	00:49:16
2	Ni 231.604†	3983.8	3815.1	98.824 ug/L	98.824 ppb	00:49:16

2	P 214.914†	1033.3	789.5	414.40 ug/L	414.40 ppb	00:49:16
2	Pb 220.353†	448.4	503.3	56.681 ug/L	56.681 ppb	00:49:16
2	S 181.975 Axial†	71.5	31.0	43.439 ug/L	43.439 ppb	00:49:16
2	Sb 206.836†	51.6	8.7	-6.9890 ug/L	-6.9890 ppb	00:49:16
2	Se 196.026†	-444.4	-415.5	-2.2735 ug/L	-2.2735 ppb	00:49:16
2	Si 251.611†	318829.9	313417.1	10483 ug/L	10483 ppb	00:48:55
2	Sn 189.927†	43.2	33.8	8.1186 ug/L	8.1186 ppb	00:49:16
2	Ti 334.940†	1768767.0	1743160.5	2827.6 ug/L	2827.6 ppb	00:48:50
2	Tl 190.801†	-145.5	-109.0	0.6212 ug/L	0.6212 ppb	00:49:16
2	U 409.014†	-13113.6	-9934.1	-298.29 ug/L	-298.29 ppb	00:48:50
2	V 292.402†	4771.3	6253.4	29.463 ug/L	29.463 ppb	00:48:55
2	Zn 213.857†	40298.5	38972.2	370.90 ug/L	370.90 ppb	00:48:55
2	SiO2†	329276.2	323683.5	23089 ug/L	23089 ppb	00:49:57
3	Sc Radial	5362.7	5362.7	112 %		00:47:52
3	Y RADIAL	7012.7	7012.7	140.2 %		00:47:52
3	Al 396.153Radial†	10782.3	9816.4	9110.1 ug/L	9110.1 ppb	00:47:52
3	Ca 317.933Radial†	1708.8	1515.0	2511.0 ug/L	2511.0 ppb	00:48:12
3	Fe 238.204 Radial†	9927.1	8886.8	80858 ug/L	80858 ppb	00:47:52
3	K 766.490 Radial†	17059.6	12465.9	2198.0 ug/L	2198.0 ppb	00:47:52
3	Mg 279.077 IEC†	64.6	57.4	1951.6 ug/L	1951.6 ppb	00:48:12
3	Na 589.592 Radial†	3992.7	4657.4	1408.6 ug/L	1408.6 ppb	00:47:52
3	Sr 421.552†	3156.9	2827.6	19.812 ug/L	19.812 ppb	00:47:52
3	Sc 361.383	849701.3	849701.3	98.562 %		00:49:21
3	Y 371.029	871028.0	871028.0	121.89 %		00:49:21
3	Ag 328.068†	-5189.6	-5494.1	1.8110 ug/L	1.8110 ppb	00:49:26
3	As 188.979†	-51.8	-18.7	35.689 ug/L	35.689 ppb	00:49:47
3	B 249.677†	109.1	649.7	2.2566 ug/L	2.2566 ppb	00:49:26
3	Ba 233.527†	19176.6	19467.9	161.55 ug/L	161.55 ppb	00:49:26
3	Be 313.107†	-13239.7	-9094.1	3.2291 ug/L	3.2291 ppb	00:49:26
3	Cd 226.502†	536.8	756.5	0.6477 ug/L	0.6477 ppb	00:49:47
3	Co 228.616†	1026.5	1115.2	17.103 ug/L	17.103 ppb	00:49:47
3	Cr 267.716†	16954.3	17134.8	201.24 ug/L	201.24 ppb	00:49:26
3	Cu 324.752†	23381.1	17901.4	58.751 ug/L	58.751 ppb	00:49:26
3	Mn 257.610†	2271766.6	2304448.9	2659.2 ug/L	2659.2 ppb	00:49:21
3	Mo 202.031†	175.2	162.2	18.457 ug/L	18.457 ppb	00:49:47
3	Ni 231.604†	3965.2	3915.0	101.41 ug/L	101.41 ppb	00:49:47
3	P 214.914†	1016.6	803.3	426.32 ug/L	426.32 ppb	00:49:47
3	Pb 220.353†	457.9	526.3	59.916 ug/L	59.916 ppb	00:49:47
3	S 181.975 Axial†	67.9	29.6	41.384 ug/L	41.384 ppb	00:49:47
3	Sb 206.836†	62.5	21.3	-2.8317 ug/L	-2.8317 ppb	00:49:47
3	Se 196.026†	-444.8	-429.2	-28.325 ug/L	-28.325 ppb	00:49:47
3	Si 251.611†	326134.7	330329.2	11049 ug/L	11049 ppb	00:49:26
3	Sn 189.927†	32.3	24.1	6.2086 ug/L	6.2086 ppb	00:49:47
3	Ti 334.940†	1769690.5	1796804.9	2914.6 ug/L	2914.6 ppb	00:49:21
3	Tl 190.801†	-148.9	-116.9	-0.8016 ug/L	-0.8016 ppb	00:49:47
3	U 409.014†	-13249.6	-10462.8	-313.05 ug/L	-313.05 ppb	00:49:21
3	V 292.402†	4785.4	6409.8	31.242 ug/L	31.242 ppb	00:49:26
3	Zn 213.857†	41223.1	41111.1	392.76 ug/L	392.76 ppb	00:49:26
3	SiO2†	327128.4	331316.5	23633 ug/L	23633 ppb	00:50:03

Mean Data: 1202024775|945399|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	847726.7	98.333 %	3.3319			3.39%
Sc Radial	5193.3	108 %	3.2			2.96%
Y 371.029	866389.4	121.24 %	3.767			3.11%
Y RADIAL	6833.4	136.6 %	3.47			2.54%
Ag 328.068†	-5455.1	3.0929 ug/L	1.42014	3.0929 ppb	1.42014	45.92%
Al 396.153Radial†	10206.5	9472.2 ug/L	321.35	9472.2 ppb	321.35	3.39%
As 188.979†	-21.4	34.859 ug/L	0.7205	34.859 ppb	0.7205	2.07%
B 249.677†	601.5	0.5775 ug/L	1.53552	0.5775 ppb	1.53552	265.90%
Ba 233.527†	19297.9	160.26 ug/L	6.463	160.26 ppb	6.463	4.03%
Be 313.107†	-8877.0	3.2199 ug/L	0.11332	3.2199 ppb	0.11332	3.52%
Ca 317.933Radial†	1550.4	2569.7 ug/L	59.69	2569.7 ppb	59.69	2.32%
Cd 226.502†	761.8	0.3741 ug/L	0.40798	0.3741 ppb	0.40798	109.07%
Co 228.616†	1117.3	17.185 ug/L	0.8665	17.185 ppb	0.8665	5.04%
Cr 267.716†	16993.9	199.66 ug/L	8.266	199.66 ppb	8.266	4.14%
Cu 324.752†	17728.7	58.398 ug/L	2.7942	58.398 ppb	2.7942	4.78%
Fe 238.204 Radial†	9245.8	84125 ug/L	2846.6	84125 ppb	2846.6	3.38%
K 766.490 Radial†	13056.6	2302.3 ug/L	90.77	2302.3 ppb	90.77	3.94%

Mg 279.077 IEC†	57.5	1950.0 ug/L	11.92	1950.0 ppb	11.92	0.61%
Mn 257.610†	2273705.0	2624.2 ug/L	40.03	2624.2 ppb	40.03	1.53%
Mo 202.031†	162.2	18.709 ug/L	0.6129	18.709 ppb	0.6129	3.28%
Na 589.592 Radial†	4806.2	1453.6 ug/L	39.63	1453.6 ppb	39.63	2.73%
Ni 231.604†	3936.6	101.97 ug/L	3.459	101.97 ppb	3.459	3.39%
P 214.914†	817.5	432.69 ug/L	22.177	432.69 ppb	22.177	5.13%
Pb 220.353†	519.6	58.848 ug/L	1.8765	58.848 ppb	1.8765	3.19%
S 181.975 Axial†	29.2	40.825 ug/L	2.9341	40.825 ppb	2.9341	7.19%
Sb 206.836†	19.5	-3.3428 ug/L	3.41938	-3.3428 ppb	3.41938	102.29%
Se 196.026†	-429.0	-17.672 ug/L	13.6586	-17.672 ppb	13.6586	77.29%
Si 251.611†	327268.8	10947 ug/L	421.6	10947 ppb	421.6	3.85%
Sn 189.927†	26.3	6.6938 ug/L	1.25463	6.6938 ppb	1.25463	18.74%
Sr 421.552†	2945.8	20.641 ug/L	0.7445	20.641 ppb	0.7445	3.61%
Ti 334.940†	1772366.0	2874.9 ug/L	44.02	2874.9 ppb	44.02	1.53%
Tl 190.801†	-119.4	-2.1032 ug/L	3.55843	-2.1032 ppb	3.55843	169.19%
U 409.014†	-10287.0	-308.32 ug/L	8.693	-308.32 ppb	8.693	2.82%
V 292.402†	6417.3	30.874 ug/L	1.2667	30.874 ppb	1.2667	4.10%
Zn 213.857†	40631.7	387.54 ug/L	14.740	387.54 ppb	14.740	3.80%
SiO2†	332756.0	23736 ug/L	704.1	23736 ppb	704.1	2.97%

Sequence No.: 74

Sample ID: 1202024776|945399|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 95

Date Collected: 2/12/2010 00:52:14

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202024776|945399|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5059.4	5059.4	105 %		00:54:07
1	Y RADIAL	7111.8	7111.8	142.2 %		00:54:07
1	Al 396.153Radial†	23107.1	22105.7	20493 ug/L	20493 ppb	00:54:07
1	Ca 317.933Radial†	5035.4	4767.5	7901.8 ug/L	7901.8 ppb	00:54:07
1	Fe 238.204 Radial†	11162.6	10594.1	96407 ug/L	96407 ppb	00:54:07
1	K 766.490 Radial†	56873.7	51210.1	9032.3 ug/L	9032.3 ppb	00:54:07
1	Mg 279.077 IEC†	227.6	215.9	7555.0 ug/L	7555.0 ppb	00:54:27
1	Na 589.592 Radial†	23669.1	23566.6	7127.7 ug/L	7127.7 ppb	00:54:07
1	Sr 421.552†	80054.7	76058.0	533.35 ug/L	533.35 ppb	00:54:07
1	Sc 361.383	861795.0	861795.0	99.965 %		00:55:26
1	Y 371.029	926146.9	926146.9	129.60 %		00:55:26
1	Ag 328.068†	97765.7	97570.9	494.11 ug/L	494.11 ppb	00:55:26
1	As 188.979†	993.8	1028.0	516.32 ug/L	516.32 ppb	00:55:46
1	B 249.677†	20286.3	20832.4	478.49 ug/L	478.49 ppb	00:55:26
1	Ba 233.527†	82266.4	82306.5	676.24 ug/L	676.24 ppb	00:55:26
1	Be 313.107†	1294462.2	1299250.5	491.39 ug/L	491.39 ppb	00:55:26
1	Cd 226.502†	39737.4	39963.1	465.54 ug/L	465.54 ppb	00:55:46
1	Co 228.616†	23244.9	23326.7	502.44 ug/L	502.44 ppb	00:55:46
1	Cr 267.716†	49907.8	49858.4	582.99 ug/L	582.99 ppb	00:55:26
1	Cu 324.752†	197188.0	191435.7	585.73 ug/L	585.73 ppb	00:55:26
1	Mn 257.610†	2876270.1	2876817.3	3319.0 ug/L	3319.0 ppb	00:55:26
1	Mo 202.031†	6436.7	6423.4	488.61 ug/L	488.61 ppb	00:55:46
1	Ni 231.604†	20998.3	20897.6	541.08 ug/L	541.08 ppb	00:55:46
1	P 214.914†	1886.0	1658.6	848.88 ug/L	848.88 ppb	00:55:46
1	Pb 220.353†	4358.2	4421.4	547.74 ug/L	547.74 ppb	00:55:46
1	S 181.975 Axial†	3441.3	3403.2	4958.7 ug/L	4958.7 ppb	00:55:46
1	Sb 206.836†	1373.1	1331.4	470.99 ug/L	470.99 ppb	00:55:46
1	Se 196.026†	236.7	258.9	487.18 ug/L	487.18 ppb	00:55:46
1	Si 251.611†	634020.0	633678.0	21190 ug/L	21190 ppb	00:55:26
1	Sn 189.927†	2663.0	2655.3	495.58 ug/L	495.58 ppb	00:55:46
1	Ti 334.940†	2025378.7	2027385.5	3288.5 ug/L	3288.5 ppb	00:55:26
1	Tl 190.801†	1346.2	1380.8	482.40 ug/L	482.40 ppb	00:55:46
1	U 409.014†	2661.5	5642.5	151.32 ug/L	151.32 ppb	00:55:26
1	V 292.402†	69227.5	70806.1	503.73 ug/L	503.73 ppb	00:55:26
1	Zn 213.857†	88203.4	87520.8	844.77 ug/L	844.77 ppb	00:55:26
1	SiO2†	644002.6	643643.2	45899 ug/L	45899 ppb	00:56:46
2	Sc Radial	5060.1	5060.1	105 %		00:54:32
2	Y RADIAL	7087.7	7087.7	141.7 %		00:54:32
2	Al 396.153Radial†	22774.9	21786.8	20198 ug/L	20198 ppb	00:54:32
2	Ca 317.933Radial†	4936.4	4672.7	7744.7 ug/L	7744.7 ppb	00:54:32
2	Fe 238.204 Radial†	10971.0	10410.5	94736 ug/L	94736 ppb	00:54:32
2	K 766.490 Radial†	55793.9	50176.2	8849.9 ug/L	8849.9 ppb	00:54:32
2	Mg 279.077 IEC†	231.1	219.1	7671.6 ug/L	7671.6 ppb	00:54:52
2	Na 589.592 Radial†	23007.4	22934.6	6936.6 ug/L	6936.6 ppb	00:54:32
2	Sr 421.552†	78504.9	74574.3	522.94 ug/L	522.94 ppb	00:54:32
2	Sc 361.383	866522.8	866522.8	100.51 %		00:55:53
2	Y 371.029	931181.4	931181.4	130.31 %		00:55:53
2	Ag 328.068†	97615.7	96888.1	490.31 ug/L	490.31 ppb	00:55:53
2	As 188.979†	990.9	1019.7	512.01 ug/L	512.01 ppb	00:56:13
2	B 249.677†	20238.8	20674.4	475.02 ug/L	475.02 ppb	00:55:53
2	Ba 233.527†	82090.1	81682.2	671.08 ug/L	671.08 ppb	00:55:53
2	Be 313.107†	1293940.4	1291666.4	488.51 ug/L	488.51 ppb	00:55:53
2	Cd 226.502†	39591.1	39600.7	461.40 ug/L	461.40 ppb	00:56:13
2	Co 228.616†	23163.6	23119.0	497.96 ug/L	497.96 ppb	00:56:13
2	Cr 267.716†	49880.8	49559.1	579.47 ug/L	579.47 ppb	00:55:53
2	Cu 324.752†	196773.7	189947.4	581.13 ug/L	581.13 ppb	00:55:53
2	Mn 257.610†	2868961.9	2853848.1	3292.4 ug/L	3292.4 ppb	00:55:53
2	Mo 202.031†	6414.7	6366.4	484.21 ug/L	484.21 ppb	00:56:13
2	Ni 231.604†	20907.4	20692.5	535.77 ug/L	535.77 ppb	00:56:13

2	P 214.914†	1884.8	1647.1	843.86 ug/L	843.86 ppb	00:56:13
2	Pb 220.353†	4318.3	4358.0	539.92 ug/L	539.92 ppb	00:56:13
2	S 181.975 Axial†	3433.9	3377.0	4920.6 ug/L	4920.6 ppb	00:56:13
2	Sb 206.836†	1365.5	1316.4	465.67 ug/L	465.67 ppb	00:56:13
2	Se 196.026†	238.2	259.1	481.90 ug/L	481.90 ppb	00:56:13
2	Si 251.611†	632664.4	628868.9	21029 ug/L	21029 ppb	00:55:53
2	Sn 189.927†	2646.0	2623.8	489.68 ug/L	489.68 ppb	00:56:13
2	Ti 334.940†	2021790.9	2012761.7	3264.7 ug/L	3264.7 ppb	00:55:53
2	Tl 190.801†	1335.8	1363.2	476.44 ug/L	476.44 ppb	00:56:13
2	U 409.014†	2666.6	5633.0	151.25 ug/L	151.25 ppb	00:55:53
2	V 292.402†	69179.5	70380.6	500.85 ug/L	500.85 ppb	00:55:53
2	Zn 213.857†	87970.1	86807.3	838.03 ug/L	838.03 ppb	00:55:53
2	SiO2†	629424.5	625624.7	44614 ug/L	44614 ppb	00:56:52
3	Sc Radial	5008.0	5008.0	104 %		00:54:57
3	Y RADIAL	7015.1	7015.1	140.3 %		00:54:57
3	Al 396.153Radial†	22819.5	22054.7	20446 ug/L	20446 ppb	00:54:57
3	Ca 317.933Radial†	4933.7	4718.9	7821.3 ug/L	7821.3 ppb	00:54:57
3	Fe 238.204 Radial†	10989.3	10536.5	95882 ug/L	95882 ppb	00:54:57
3	K 766.490 Radial†	56038.1	50962.1	8988.6 ug/L	8988.6 ppb	00:54:57
3	Mg 279.077 IEC†	221.6	212.3	7430.1 ug/L	7430.1 ppb	00:55:17
3	Na 589.592 Radial†	23030.5	23184.1	7012.0 ug/L	7012.0 ppb	00:54:57
3	Sr 421.552†	78584.3	75426.4	528.92 ug/L	528.92 ppb	00:54:57
3	Sc 361.383	872776.3	872776.3	101.24 %		00:56:21
3	Y 371.029	939318.1	939318.1	131.45 %		00:56:21
3	Ag 328.068†	98383.8	96950.9	491.00 ug/L	491.00 ppb	00:56:21
3	As 188.979†	989.7	1011.5	508.55 ug/L	508.55 ppb	00:56:41
3	B 249.677†	20551.9	20839.4	478.77 ug/L	478.77 ppb	00:56:21
3	Ba 233.527†	82739.2	81738.2	671.58 ug/L	671.58 ppb	00:56:21
3	Be 313.107†	1308048.9	1296378.4	490.27 ug/L	490.27 ppb	00:56:21
3	Cd 226.502†	39544.6	39272.5	457.38 ug/L	457.38 ppb	00:56:41
3	Co 228.616†	23170.0	22960.2	494.47 ug/L	494.47 ppb	00:56:41
3	Cr 267.716†	50281.0	49598.8	579.95 ug/L	579.95 ppb	00:56:21
3	Cu 324.752†	198605.6	190354.1	582.42 ug/L	582.42 ppb	00:56:21
3	Mn 257.610†	2892576.3	2856722.2	3295.9 ug/L	3295.9 ppb	00:56:21
3	Mo 202.031†	6403.5	6309.6	480.05 ug/L	480.05 ppb	00:56:41
3	Ni 231.604†	20887.4	20523.7	531.40 ug/L	531.40 ppb	00:56:41
3	P 214.914†	1888.2	1637.0	836.40 ug/L	836.40 ppb	00:56:41
3	Pb 220.353†	4318.9	4327.7	536.08 ug/L	536.08 ppb	00:56:41
3	S 181.975 Axial†	3428.7	3347.4	4877.3 ug/L	4877.3 ppb	00:56:41
3	Sb 206.836†	1358.6	1299.8	459.70 ug/L	459.70 ppb	00:56:41
3	Se 196.026†	226.5	245.9	476.66 ug/L	476.66 ppb	00:56:41
3	Si 251.611†	638176.1	629803.2	21060 ug/L	21060 ppb	00:56:21
3	Sn 189.927†	2644.2	2603.2	485.89 ug/L	485.89 ppb	00:56:41
3	Ti 334.940†	2037570.2	2013935.6	3266.7 ug/L	3266.7 ppb	00:56:21
3	Tl 190.801†	1342.1	1359.9	475.42 ug/L	475.42 ppb	00:56:41
3	U 409.014†	2741.5	5688.0	152.71 ug/L	152.71 ppb	00:56:21
3	V 292.402†	69774.1	70474.8	501.30 ug/L	501.30 ppb	00:56:21
3	Zn 213.857†	88749.2	86949.8	839.29 ug/L	839.29 ppb	00:56:21
3	SiO2†	636250.6	627880.4	44775 ug/L	44775 ppb	00:56:57

Mean Data: 1202024776|945399|1

Analyte	Mean Corrected	Conc. Units	Calib.	Std.Dev.	Conc. Units	Std.Dev.	RSD
Sc 361.383	867031.4	100.57 %		0.639			0.64%
Sc Radial	5042.5	105 %		0.6			0.59%
Y 371.029	932215.4	130.45 %		0.930			0.71%
Y RADIAL	7071.5	141.4 %		1.01			0.71%
Ag 328.068†	97136.6	491.81 ug/L		2.021	491.81 ppb	2.021	0.41%
Al 396.153Radial†	21982.4	20379 ug/L		158.9	20379 ppb	158.9	0.78%
As 188.979†	1019.7	512.29 ug/L		3.893	512.29 ppb	3.893	0.76%
B 249.677†	20782.0	477.42 ug/L		2.090	477.42 ppb	2.090	0.44%
Ba 233.527†	81909.0	672.97 ug/L		2.845	672.97 ppb	2.845	0.42%
Be 313.107†	1295765.1	490.06 ug/L		1.451	490.06 ppb	1.451	0.30%
Ca 317.933Radial†	4719.7	7822.6 ug/L		78.54	7822.6 ppb	78.54	1.00%
Cd 226.502†	39612.1	461.44 ug/L		4.081	461.44 ppb	4.081	0.88%
Co 228.616†	23135.3	498.29 ug/L		3.997	498.29 ppb	3.997	0.80%
Cr 267.716†	49672.1	580.80 ug/L		1.908	580.80 ppb	1.908	0.33%
Cu 324.752†	190579.1	583.09 ug/L		2.374	583.09 ppb	2.374	0.41%
Fe 238.204 Radial†	10513.7	95675 ug/L		854.5	95675 ppb	854.5	0.89%
K 766.490 Radial†	50782.8	8956.9 ug/L		95.21	8956.9 ppb	95.21	1.06%

Mg 279.077 IEC†	215.8	7552.3 ug/L	120.77	7552.3 ppb	120.77	1.60%
Mn 257.610†	2862462.5	3302.5 ug/L	14.47	3302.5 ppb	14.47	0.44%
Mo 202.031†	6366.4	484.29 ug/L	4.281	484.29 ppb	4.281	0.88%
Na 589.592 Radial†	23228.4	7025.4 ug/L	96.26	7025.4 ppb	96.26	1.37%
Ni 231.604†	20704.6	536.09 ug/L	4.847	536.09 ppb	4.847	0.90%
P 214.914†	1647.6	843.04 ug/L	6.280	843.04 ppb	6.280	0.74%
Pb 220.353†	4369.0	541.24 ug/L	5.944	541.24 ppb	5.944	1.10%
S 181.975 Axial†	3375.9	4918.9 ug/L	40.72	4918.9 ppb	40.72	0.83%
Sb 206.836†	1315.9	465.46 ug/L	5.648	465.46 ppb	5.648	1.21%
Se 196.026†	254.6	481.92 ug/L	5.260	481.92 ppb	5.260	1.09%
Si 251.611†	630783.3	21093 ug/L	85.3	21093 ppb	85.3	0.40%
Sn 189.927†	2627.4	490.38 ug/L	4.884	490.38 ppb	4.884	1.00%
Sr 421.552†	75352.9	528.40 ug/L	5.221	528.40 ppb	5.221	0.99%
Ti 334.940†	2018027.6	3273.3 ug/L	13.19	3273.3 ppb	13.19	0.40%
Tl 190.801†	1368.0	478.08 ug/L	3.769	478.08 ppb	3.769	0.79%
U 409.014†	5654.5	151.76 ug/L	0.824	151.76 ppb	0.824	0.54%
V 292.402†	70553.8	501.96 ug/L	1.548	501.96 ppb	1.548	0.31%
Zn 213.857†	87092.6	840.69 ug/L	3.588	840.69 ppb	3.588	0.43%
SiO2†	632382.8	45096 ug/L	700.2	45096 ppb	700.2	1.55%

Sequence No.: 75
 Sample ID: 1202024778|945399|1
 Analyst: HSC
 Initial Sample Wt:
 Dilution:

Autosampler Location: 96
 Date Collected: 2/12/2010 00:59:09
 Data Type: Original
 Initial Sample Vol:
 Sample Prep Vol:

Replicate Data: 1202024778|945399|1

Rep#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4946.0	4946.0	103 %		01:01:02
1	Y RADIAL	6871.4	6871.4	137.4 %		01:01:02
1	Al 396.153Radial†	22819.5	22329.2	20701 ug/L	20701 ppb	01:01:02
1	Ca 317.933Radial†	5072.1	4912.7	8142.5 ug/L	8142.5 ppb	01:01:02
1	Fe 238.204 Radial†	10262.7	9962.6	90660 ug/L	90660 ppb	01:01:02
1	K 766.490 Radial†	51612.3	47335.0	8348.4 ug/L	8348.4 ppb	01:01:02
1	Mg 279.077 IEC†	212.2	205.8	7204.3 ug/L	7204.3 ppb	01:01:22
1	Na 589.592 Radial†	22607.3	23050.0	6971.4 ug/L	6971.4 ppb	01:01:02
1	Sr 421.552†	77344.6	75167.0	527.10 ug/L	527.10 ppb	01:01:02
1	Sc 361.383	857285.6	857285.6	99.442 %		01:02:21
1	Y 371.029	910522.5	910522.5	127.42 %		01:02:21
1	Ag 328.068†	96391.4	96703.3	488.03 ug/L	488.03 ppb	01:02:21
1	As 188.979†	983.5	1022.9	512.42 ug/L	512.42 ppb	01:02:41
1	B 249.677†	20039.1	20690.6	476.08 ug/L	476.08 ppb	01:02:21
1	Ba 233.527†	78619.4	79072.0	649.63 ug/L	649.63 ppb	01:02:21
1	Be 313.107†	1279941.2	1291459.5	488.42 ug/L	488.42 ppb	01:02:21
1	Cd 226.502†	38975.2	39405.7	459.50 ug/L	459.50 ppb	01:02:41
1	Co 228.616†	22704.2	22905.3	493.35 ug/L	493.35 ppb	01:02:41
1	Cr 267.716†	49428.0	49638.5	580.30 ug/L	580.30 ppb	01:02:21
1	Cu 324.752†	191815.2	187070.5	572.18 ug/L	572.18 ppb	01:02:21
1	Mn 257.610†	2521250.5	2534941.2	2925.2 ug/L	2925.2 ppb	01:02:21
1	Mo 202.031†	6299.8	6319.6	480.40 ug/L	480.40 ppb	01:02:41
1	Ni 231.604†	20449.3	20456.0	529.65 ug/L	529.65 ppb	01:02:41
1	P 214.914†	2074.1	1857.7	980.01 ug/L	980.01 ppb	01:02:41
1	Pb 220.353†	4278.6	4364.3	541.21 ug/L	541.21 ppb	01:02:41
1	S 181.975 Axial†	3378.7	3358.3	4893.3 ug/L	4893.3 ppb	01:02:41
1	Sb 206.836†	1359.7	1325.2	468.68 ug/L	468.68 ppb	01:02:41
1	Se 196.026†	250.8	274.4	479.05 ug/L	479.05 ppb	01:02:41
1	Si 251.611†	608299.2	611149.1	20436 ug/L	20436 ppb	01:02:21
1	Sn 189.927†	2611.2	2617.2	488.45 ug/L	488.45 ppb	01:02:41
1	Ti 334.940†	1995380.3	2007876.2	3256.9 ug/L	3256.9 ppb	01:02:21
1	Tl 190.801†	1332.4	1374.0	478.13 ug/L	478.13 ppb	01:02:41
1	U 409.014†	2946.6	5943.2	160.71 ug/L	160.71 ppb	01:02:21
1	V 292.402†	67622.6	69556.5	495.43 ug/L	495.43 ppb	01:02:21
1	Zn 213.857†	86547.4	86319.6	833.87 ug/L	833.87 ppb	01:02:21
1	SiO2†	618838.0	621726.2	44336 ug/L	44336 ppb	01:03:41
2	Sc Radial	5007.6	5007.6	104 %		01:01:27
2	Y RADIAL	6937.1	6937.1	138.7 %		01:01:27
2	Al 396.153Radial†	23146.7	22370.6	20740 ug/L	20740 ppb	01:01:27
2	Ca 317.933Radial†	5128.9	4906.7	8132.5 ug/L	8132.5 ppb	01:01:27
2	Fe 238.204 Radial†	10398.9	9970.6	90734 ug/L	90734 ppb	01:01:27
2	K 766.490 Radial†	52421.9	47495.2	8376.7 ug/L	8376.7 ppb	01:01:27
2	Mg 279.077 IEC†	217.5	208.4	7295.8 ug/L	7295.8 ppb	01:01:47
2	Na 589.592 Radial†	22823.4	22987.2	6952.4 ug/L	6952.4 ppb	01:01:27
2	Sr 421.552†	78561.6	75410.9	528.81 ug/L	528.81 ppb	01:01:27
2	Sc 361.383	864215.4	864215.4	100.25 %		01:02:48
2	Y 371.029	918000.3	918000.3	128.46 %		01:02:48
2	Ag 328.068†	97118.4	96651.3	487.80 ug/L	487.80 ppb	01:02:48
2	As 188.979†	983.4	1014.9	508.78 ug/L	508.78 ppb	01:03:08
2	B 249.677†	20291.0	20780.2	478.21 ug/L	478.21 ppb	01:02:48
2	Ba 233.527†	78992.3	78810.0	647.49 ug/L	647.49 ppb	01:02:48
2	Be 313.107†	1289301.1	1290475.5	488.05 ug/L	488.05 ppb	01:02:48
2	Cd 226.502†	39011.3	39127.4	456.18 ug/L	456.18 ppb	01:03:08
2	Co 228.616†	22712.2	22730.2	489.52 ug/L	489.52 ppb	01:03:08
2	Cr 267.716†	49724.6	49535.8	579.10 ug/L	579.10 ppb	01:02:48
2	Cu 324.752†	193420.3	187124.9	572.34 ug/L	572.34 ppb	01:02:48
2	Mn 257.610†	2536490.9	2529813.8	2919.3 ug/L	2919.3 ppb	01:02:48
2	Mo 202.031†	6295.6	6264.6	476.28 ug/L	476.28 ppb	01:03:08
2	Ni 231.604†	20457.3	20299.0	525.58 ug/L	525.58 ppb	01:03:08

2	P 214.914†	2076.3	1843.1	970.81 ug/L	970.81 ppb	01:03:08
2	Pb 220.353†	4297.5	4348.7	539.25 ug/L	539.25 ppb	01:03:08
2	S 181.975 Axial†	3369.5	3321.8	4840.1 ug/L	4840.1 ppb	01:03:08
2	Sb 206.836†	1348.2	1302.8	460.71 ug/L	460.71 ppb	01:03:08
2	Se 196.026†	253.7	275.2	479.81 ug/L	479.81 ppb	01:03:08
2	Si 251.611†	613073.3	611006.4	20432 ug/L	20432 ppb	01:02:48
2	Sn 189.927†	2607.7	2592.7	483.90 ug/L	483.90 ppb	01:03:08
2	Ti 334.940†	2010237.8	2006607.4	3254.8 ug/L	3254.8 ppb	01:02:48
2	Tl 190.801†	1322.4	1353.3	471.46 ug/L	471.46 ppb	01:03:08
2	U 409.014†	3229.2	6201.3	168.19 ug/L	168.19 ppb	01:02:48
2	V 292.402†	68114.5	69502.0	494.98 ug/L	494.98 ppb	01:02:48
2	Zn 213.857†	87079.8	86152.8	832.24 ug/L	832.24 ppb	01:02:48
2	SiO2†	612143.8	610058.3	43504 ug/L	43504 ppb	01:03:47
3	Sc Radial	4921.4	4921.4	102 %		01:01:52
3	Y RADIAL	6768.1	6768.1	135.3 %		01:01:52
3	Al 396.153Radial†	22673.8	22297.8	20672 ug/L	20672 ppb	01:01:52
3	Ca 317.933Radial†	5041.5	4907.5	8133.8 ug/L	8133.8 ppb	01:01:52
3	Fe 238.204 Radial†	10160.9	9913.0	90209 ug/L	90209 ppb	01:01:52
3	K 766.490 Radial†	51221.7	47204.1	8325.3 ug/L	8325.3 ppb	01:01:52
3	Mg 279.077 IEC†	215.6	210.2	7358.8 ug/L	7358.8 ppb	01:02:12
3	Na 589.592 Radial†	22559.9	23113.4	6990.6 ug/L	6990.6 ppb	01:01:52
3	Sr 421.552†	76901.2	75109.6	526.69 ug/L	526.69 ppb	01:01:52
3	Sc 361.383	861394.2	861394.2	99.919 %		01:03:16
3	Y 371.029	915973.0	915973.0	128.18 %		01:03:16
3	Ag 328.068†	96679.0	96528.8	487.05 ug/L	487.05 ppb	01:03:16
3	As 188.979†	992.3	1027.0	514.11 ug/L	514.11 ppb	01:03:36
3	B 249.677†	20082.1	20637.4	474.89 ug/L	474.89 ppb	01:03:16
3	Ba 233.527†	78728.2	78803.8	647.42 ug/L	647.42 ppb	01:03:16
3	Be 313.107†	1285580.4	1290964.1	488.22 ug/L	488.22 ppb	01:03:16
3	Cd 226.502†	39107.6	39351.3	458.90 ug/L	458.90 ppb	01:03:36
3	Co 228.616†	22774.6	22866.8	492.53 ug/L	492.53 ppb	01:03:36
3	Cr 267.716†	49622.9	49596.5	579.80 ug/L	579.80 ppb	01:03:16
3	Cu 324.752†	192342.8	186678.4	570.96 ug/L	570.96 ppb	01:03:16
3	Mn 257.610†	2526194.2	2527795.7	2916.9 ug/L	2916.9 ppb	01:03:16
3	Mo 202.031†	6316.0	6305.6	479.31 ug/L	479.31 ppb	01:03:36
3	Ni 231.604†	20496.8	20405.4	528.34 ug/L	528.34 ppb	01:03:36
3	P 214.914†	2083.2	1856.9	980.07 ug/L	980.07 ppb	01:03:36
3	Pb 220.353†	4299.9	4365.1	541.34 ug/L	541.34 ppb	01:03:36
3	S 181.975 Axial†	3390.2	3353.6	4886.5 ug/L	4886.5 ppb	01:03:36
3	Sb 206.836†	1357.6	1316.5	465.64 ug/L	465.64 ppb	01:03:36
3	Se 196.026†	251.7	274.0	477.38 ug/L	477.38 ppb	01:03:36
3	Si 251.611†	609787.3	609720.7	20388 ug/L	20388 ppb	01:03:16
3	Sn 189.927†	2611.5	2604.9	486.16 ug/L	486.16 ppb	01:03:36
3	Ti 334.940†	2000503.6	2003432.9	3249.7 ug/L	3249.7 ppb	01:03:16
3	Tl 190.801†	1323.9	1359.2	473.29 ug/L	473.29 ppb	01:03:36
3	U 409.014†	2930.3	5912.7	159.87 ug/L	159.87 ppb	01:03:16
3	V 292.402†	67880.3	69490.2	495.00 ug/L	495.00 ppb	01:03:16
3	Zn 213.857†	86757.2	86114.4	831.93 ug/L	831.93 ppb	01:03:16
3	SiO2†	613443.3	613358.8	43739 ug/L	43739 ppb	01:03:52

Mean Data: 1202024778|945399|1

Analyte	Mean Corrected	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample	Std.Dev.	RSD
Sc 361.383	860965.0	99.869 %		0.4042				0.40%
Sc Radial	4958.3	103 %		0.9				0.90%
Y 371.029	914831.9	128.02 %		0.541				0.42%
Y RADIAL	6858.9	137.2 %		1.70				1.24%
Ag 328.068†	96627.8	487.63 ug/L		0.510	487.63 ppb		0.510	0.10%
Al 396.153Radial†	22332.5	20704 ug/L		34.0	20704 ppb		34.0	0.16%
As 188.979†	1021.6	511.77 ug/L		2.722	511.77 ppb		2.722	0.53%
B 249.677†	20702.7	476.39 ug/L		1.682	476.39 ppb		1.682	0.35%
Ba 233.527†	78895.3	648.18 ug/L		1.254	648.18 ppb		1.254	0.19%
Be 313.107†	1290966.4	488.23 ug/L		0.186	488.23 ppb		0.186	0.04%
Ca 317.933Radial†	4908.9	8136.2 ug/L		5.44	8136.2 ppb		5.44	0.07%
Cd 226.502†	39294.8	458.20 ug/L		1.767	458.20 ppb		1.767	0.39%
Co 228.616†	22834.1	491.80 ug/L		2.017	491.80 ppb		2.017	0.41%
Cr 267.716†	49590.3	579.73 ug/L		0.602	579.73 ppb		0.602	0.10%
Cu 324.752†	186957.9	571.83 ug/L		0.752	571.83 ppb		0.752	0.13%
Fe 238.204 Radial†	9948.7	90534 ug/L		284.2	90534 ppb		284.2	0.31%
K 766.490 Radial†	47344.8	8350.1 ug/L		25.75	8350.1 ppb		25.75	0.31%

Mg 279.077 IEC†	208.1	7286.3 ug/L	77.71	7286.3 ppb	77.71	1.07%
Mn 257.610†	2530850.2	2920.4 ug/L	4.26	2920.4 ppb	4.26	0.15%
Mo 202.031†	6296.6	478.67 ug/L	2.132	478.67 ppb	2.132	0.45%
Na 589.592 Radial†	23050.2	6971.5 ug/L	19.09	6971.5 ppb	19.09	0.27%
Ni 231.604†	20386.8	527.86 ug/L	2.074	527.86 ppb	2.074	0.39%
P 214.914†	1852.5	976.96 ug/L	5.332	976.96 ppb	5.332	0.55%
Pb 220.353†	4359.4	540.60 ug/L	1.169	540.60 ppb	1.169	0.22%
S 181.975 Axial†	3344.6	4873.3 ug/L	28.95	4873.3 ppb	28.95	0.59%
Sb 206.836†	1314.8	465.01 ug/L	4.021	465.01 ppb	4.021	0.86%
Se 196.026†	274.5	478.75 ug/L	1.245	478.75 ppb	1.245	0.26%
Si 251.611†	610625.4	20419 ug/L	26.3	20419 ppb	26.3	0.13%
Sn 189.927†	2604.9	486.17 ug/L	2.275	486.17 ppb	2.275	0.47%
Sr 421.552†	75229.2	527.53 ug/L	1.122	527.53 ppb	1.122	0.21%
Ti 334.940†	2005972.2	3253.8 ug/L	3.72	3253.8 ppb	3.72	0.11%
Tl 190.801†	1362.2	474.29 ug/L	3.447	474.29 ppb	3.447	0.73%
U 409.014†	6019.1	162.92 ug/L	4.577	162.92 ppb	4.577	2.81%
V 292.402†	69516.2	495.14 ug/L	0.251	495.14 ppb	0.251	0.05%
Zn 213.857†	86195.6	832.68 ug/L	1.045	832.68 ppb	1.045	0.13%
SiO2†	615047.7	43860 ug/L	429.0	43860 ppb	429.0	0.98%

Sequence No.: 76

Sample ID: 1202024777|945399|5

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 97

Date Collected: 2/12/2010 01:06:04

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 1202024777|945399|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5082.6	5082.6	106 %		01:07:57
1	Y RADIAL	5618.8	5618.8	112.4 %		01:07:57
1	Al 396.153Radial†	1917.2	1964.8	1823.5 ug/L	1823.5 ppb	01:07:57
1	Ca 317.933Radial†	441.5	400.9	664.43 ug/L	664.43 ppb	01:08:18
1	Fe 238.204 Radial†	1816.4	1706.4	15526 ug/L	15526 ppb	01:08:18
1	K 766.490 Radial†	5396.1	2277.7	401.52 ug/L	401.52 ppb	01:07:57
1	Mg 279.077 IEC†	14.7	13.5	461.02 ug/L	461.02 ppb	01:08:18
1	Na 589.592 Radial†	-41.7	1039.1	314.27 ug/L	314.27 ppb	01:07:57
1	Sr 421.552†	729.6	687.9	4.8193 ug/L	4.8193 ppb	01:07:57
1	Sc 361.383	831996.6	831996.6	96.509 %		01:09:14
1	Y 371.029	705697.1	705697.1	98.754 %		01:09:14
1	Ag 328.068†	-713.1	-967.7	0.7477 ug/L	0.7477 ppb	01:09:14
1	As 188.979†	-26.2	6.7	10.761 ug/L	10.761 ppb	01:09:35
1	B 249.677†	-370.6	155.1	1.1533 ug/L	1.1533 ppb	01:09:14
1	Ba 233.527†	4431.9	4603.9	38.089 ug/L	38.089 ppb	01:09:14
1	Be 313.107†	-5477.4	-1336.8	0.5731 ug/L	0.5731 ppb	01:09:14
1	Cd 226.502†	-72.5	136.7	0.0189 ug/L	0.0189 ppb	01:09:35
1	Co 228.616†	156.6	235.9	3.9589 ug/L	3.9589 ppb	01:09:35
1	Cr 267.716†	1371.7	1354.5	16.103 ug/L	16.103 ppb	01:09:35
1	Cu 324.752†	8780.1	3277.0	10.790 ug/L	10.790 ppb	01:09:14
1	Mn 257.610†	419840.1	434576.0	501.50 ug/L	501.50 ppb	01:09:14
1	Mo 202.031†	53.2	39.6	4.1750 ug/L	4.1750 ppb	01:09:35
1	Ni 231.604†	489.2	398.9	10.331 ug/L	10.331 ppb	01:09:35
1	P 214.914†	466.4	255.2	144.78 ug/L	144.78 ppb	01:09:35
1	Pb 220.353†	34.8	97.8	11.123 ug/L	11.123 ppb	01:09:35
1	S 181.975 Axial†	51.4	13.9	19.952 ug/L	19.952 ppb	01:09:35
1	Sb 206.836†	26.2	-15.0	-6.8957 ug/L	-6.8957 ppb	01:09:35
1	Se 196.026†	-98.5	-79.9	-3.7427 ug/L	-3.7427 ppb	01:09:35
1	Si 251.611†	58955.5	60526.0	2024.5 ug/L	2024.5 ppb	01:09:14
1	Sn 189.927†	14.4	6.3	1.5250 ug/L	1.5250 ppb	01:09:35
1	Ti 334.940†	279450.9	290863.3	471.83 ug/L	471.83 ppb	01:09:14
1	Tl 190.801†	-45.0	-12.4	2.2855 ug/L	2.2855 ppb	01:09:35
1	U 409.014†	-4532.8	-1716.7	-51.583 ug/L	-51.583 ppb	01:09:14
1	V 292.402†	-372.8	1168.4	5.6740 ug/L	5.6740 ppb	01:09:14
1	Zn 213.857†	7475.8	7033.0	66.981 ug/L	66.981 ppb	01:09:14
1	SiO2†	59159.6	60716.6	4331.0 ug/L	4331.0 ppb	01:10:31
2	Sc Radial	4998.8	4998.8	104 %		01:08:23
2	Y RADIAL	5469.0	5469.0	109.4 %		01:08:23
2	Al 396.153Radial†	1926.5	2004.1	1859.9 ug/L	1859.9 ppb	01:08:23
2	Ca 317.933Radial†	435.9	402.4	666.98 ug/L	666.98 ppb	01:08:43
2	Fe 238.204 Radial†	1803.8	1723.1	15678 ug/L	15678 ppb	01:08:43
2	K 766.490 Radial†	5438.0	2403.6	423.75 ug/L	423.75 ppb	01:08:23
2	Mg 279.077 IEC†	13.1	12.2	416.79 ug/L	416.79 ppb	01:08:43
2	Na 589.592 Radial†	-68.8	1012.3	306.18 ug/L	306.18 ppb	01:08:23
2	Sr 421.552†	688.4	659.9	4.6231 ug/L	4.6231 ppb	01:08:23
2	Sc 361.383	839775.0	839775.0	97.411 %		01:09:40
2	Y 371.029	712714.4	712714.4	99.736 %		01:09:40
2	Ag 328.068†	-745.7	-994.3	0.6710 ug/L	0.6710 ppb	01:09:40
2	As 188.979†	-39.1	-6.2	4.9169 ug/L	4.9169 ppb	01:10:00
2	B 249.677†	-321.1	209.4	2.4204 ug/L	2.4204 ppb	01:09:40
2	Ba 233.527†	4473.4	4603.8	38.093 ug/L	38.093 ppb	01:09:40
2	Be 313.107†	-5533.6	-1342.0	0.5679 ug/L	0.5679 ppb	01:09:40
2	Cd 226.502†	-72.7	137.2	0.0094 ug/L	0.0094 ppb	01:10:00
2	Co 228.616†	161.8	239.8	4.0439 ug/L	4.0439 ppb	01:10:00
2	Cr 267.716†	1366.2	1335.7	15.886 ug/L	15.886 ppb	01:10:00
2	Cu 324.752†	8795.7	3208.7	10.590 ug/L	10.590 ppb	01:09:40
2	Mn 257.610†	421419.3	432167.9	498.75 ug/L	498.75 ppb	01:09:40
2	Mo 202.031†	45.4	31.1	3.5537 ug/L	3.5537 ppb	01:10:00
2	Ni 231.604†	486.0	390.9	10.124 ug/L	10.124 ppb	01:10:00

2	P 214.914†	468.6	252.9	143.31 ug/L	143.31 ppb	01:10:00
2	Pb 220.353†	36.0	98.6	11.217 ug/L	11.217 ppb	01:10:00
2	S 181.975 Axial†	44.9	6.7	9.4938 ug/L	9.4938 ppb	01:10:00
2	Sb 206.836†	42.0	0.9	-1.3688 ug/L	-1.3688 ppb	01:10:00
2	Se 196.026†	-93.8	-74.1	0.6382 ug/L	0.6382 ppb	01:10:00
2	Si 251.611†	59247.3	60259.7	2015.6 ug/L	2015.6 ppb	01:09:40
2	Sn 189.927†	9.0	0.6	0.4736 ug/L	0.4736 ppb	01:10:00
2	Ti 334.940†	281194.3	289971.1	470.39 ug/L	470.39 ppb	01:09:40
2	Tl 190.801†	-42.6	-9.5	3.2012 ug/L	3.2012 ppb	01:10:00
2	U 409.014†	-4498.7	-1638.2	-49.325 ug/L	-49.325 ppb	01:09:40
2	V 292.402†	-404.7	1139.2	5.4363 ug/L	5.4363 ppb	01:09:40
2	Zn 213.857†	7435.0	6919.3	65.838 ug/L	65.838 ppb	01:09:40
2	SiO2†	59546.5	60546.0	4318.8 ug/L	4318.8 ppb	01:10:36
3	Sc Radial	4748.5	4748.5	98.8 %		01:08:48
3	Y RADIAL	5239.5	5239.5	104.8 %		01:08:48
3	Al 396.153Radial†	1910.5	2085.6	1935.6 ug/L	1935.6 ppb	01:08:48
3	Ca 317.933Radial†	439.6	428.3	709.82 ug/L	709.82 ppb	01:09:08
3	Fe 238.204 Radial†	1825.5	1836.4	16709 ug/L	16709 ppb	01:09:08
3	K 766.490 Radial†	5378.2	2618.6	461.68 ug/L	461.68 ppb	01:08:48
3	Mg 279.077 IEC†	15.1	14.9	509.19 ug/L	509.19 ppb	01:09:08
3	Na 589.592 Radial†	-28.8	1049.4	317.39 ug/L	317.39 ppb	01:08:48
3	Sr 421.552†	677.0	683.3	4.7865 ug/L	4.7865 ppb	01:08:48
3	Sc 361.383	844045.3	844045.3	97.906 %		01:10:05
3	Y 371.029	715315.4	715315.4	100.10 %		01:10:05
3	Ag 328.068†	-717.4	-961.5	1.1746 ug/L	1.1746 ppb	01:10:05
3	As 188.979†	-27.6	5.6	10.543 ug/L	10.543 ppb	01:10:26
3	B 249.677†	-283.1	249.9	3.2171 ug/L	3.2171 ppb	01:10:05
3	Ba 233.527†	4490.6	4598.2	38.080 ug/L	38.080 ppb	01:10:05
3	Be 313.107†	-5573.7	-1354.2	0.5634 ug/L	0.5634 ppb	01:10:05
3	Cd 226.502†	-75.2	135.1	-0.1225 ug/L	-0.1225 ppb	01:10:26
3	Co 228.616†	163.6	240.8	4.0471 ug/L	4.0471 ppb	01:10:26
3	Cr 267.716†	1387.9	1350.8	16.082 ug/L	16.082 ppb	01:10:26
3	Cu 324.752†	8826.7	3194.7	10.602 ug/L	10.602 ppb	01:10:05
3	Mn 257.610†	424318.5	432940.2	499.73 ug/L	499.73 ppb	01:10:05
3	Mo 202.031†	32.4	17.6	2.6228 ug/L	2.6228 ppb	01:10:26
3	Ni 231.604†	476.2	378.4	9.8004 ug/L	9.8004 ppb	01:10:26
3	P 214.914†	470.5	252.5	142.22 ug/L	142.22 ppb	01:10:26
3	Pb 220.353†	41.7	104.3	11.839 ug/L	11.839 ppb	01:10:26
3	S 181.975 Axial†	49.0	10.7	15.227 ug/L	15.227 ppb	01:10:26
3	Sb 206.836†	34.2	-7.2	-4.2100 ug/L	-4.2100 ppb	01:10:26
3	Se 196.026†	-96.1	-76.1	2.6438 ug/L	2.6438 ppb	01:10:26
3	Si 251.611†	59664.9	60378.5	2019.6 ug/L	2019.6 ppb	01:10:05
3	Sn 189.927†	19.8	11.6	2.5378 ug/L	2.5378 ppb	01:10:26
3	Ti 334.940†	282641.4	289988.6	470.42 ug/L	470.42 ppb	01:10:05
3	Tl 190.801†	-51.2	-18.1	0.4521 ug/L	0.4521 ppb	01:10:26
3	U 409.014†	-4516.4	-1632.9	-49.288 ug/L	-49.288 ppb	01:10:05
3	V 292.402†	-344.4	1202.9	5.7359 ug/L	5.7359 ppb	01:10:05
3	Zn 213.857†	7480.4	6927.1	65.763 ug/L	65.763 ppb	01:10:05
3	SiO2†	60340.7	61047.9	4354.6 ug/L	4354.6 ppb	01:10:41

Mean Data: 1202024777|945399|5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	838605.7	97.275	%	0.7086			0.73%
Sc Radial	4943.3	103	%	3.6			3.52%
Y 371.029	711242.3	99.530	%	0.6962			0.70%
Y RADIAL	5442.4	108.8	%	3.82			3.51%
Ag 328.068†	-974.5	0.8645	ug/L	0.27133	0.8645 ppb	0.27133	31.39%
Al 396.153Radial†	2018.2	1873.0	ug/L	57.22	1873.0 ppb	57.22	3.05%
As 188.979†	2.0	8.7400	ug/L	3.31275	8.7400 ppb	3.31275	37.90%
B 249.677†	204.8	2.2636	ug/L	1.04083	2.2636 ppb	1.04083	45.98%
Ba 233.527†	4602.0	38.088	ug/L	0.0069	38.088 ppb	0.0069	0.02%
Be 313.107†	-1344.3	0.5681	ug/L	0.00485	0.5681 ppb	0.00485	0.85%
Ca 317.933Radial†	410.5	680.41	ug/L	25.500	680.41 ppb	25.500	3.75%
Cd 226.502†	136.4	-0.0314	ug/L	0.07901	-0.0314 ppb	0.07901	251.56%
Co 228.616†	238.9	4.0166	ug/L	0.05004	4.0166 ppb	0.05004	1.25%
Cr 267.716†	1347.0	16.024	ug/L	0.1200	16.024 ppb	0.1200	0.75%
Cu 324.752†	3226.8	10.661	ug/L	0.1123	10.661 ppb	0.1123	1.05%
Fe 238.204 Radial†	1755.3	15971	ug/L	643.8	15971 ppb	643.8	4.03%
K 766.490 Radial†	2433.3	428.98	ug/L	30.419	428.98 ppb	30.419	7.09%

Mg 279.077 IEC†	13.5	462.33 ug/L	46.214	462.33 ppb	46.214	10.00%
Mn 257.610†	433228.0	499.99 ug/L	1.395	499.99 ppb	1.395	0.28%
Mo 202.031†	29.4	3.4505 ug/L	0.78123	3.4505 ppb	0.78123	22.64%
Na 589.592 Radial†	1033.6	312.62 ug/L	5.787	312.62 ppb	5.787	1.85%
Ni 231.604†	389.4	10.085 ug/L	0.2676	10.085 ppb	0.2676	2.65%
P 214.914†	253.5	143.44 ug/L	1.284	143.44 ppb	1.284	0.89%
Pb 220.353†	100.3	11.393 ug/L	0.3891	11.393 ppb	0.3891	3.42%
S 181.975 Axial†	10.5	14.891 ug/L	5.2370	14.891 ppb	5.2370	35.17%
Sb 206.836†	-7.1	-4.1581 ug/L	2.76381	-4.1581 ppb	2.76381	66.47%
Se 196.026†	-76.7	-0.1536 ug/L	3.26607	-0.1536 ppb	3.26607	>999.9%
Si 251.611†	60388.1	2019.9 ug/L	4.46	2019.9 ppb	4.46	0.22%
Sn 189.927†	6.1	1.5121 ug/L	1.03218	1.5121 ppb	1.03218	68.26%
Sr 421.552†	677.0	4.7430 ug/L	0.10508	4.7430 ppb	0.10508	2.22%
Ti 334.940†	290274.3	470.88 ug/L	0.826	470.88 ppb	0.826	0.18%
Tl 190.801†	-13.3	1.9796 ug/L	1.39983	1.9796 ppb	1.39983	70.71%
U 409.014†	-1662.6	-50.066 ug/L	1.3141	-50.066 ppb	1.3141	2.62%
V 292.402†	1170.2	5.6154 ug/L	0.15817	5.6154 ppb	0.15817	2.82%
Zn 213.857†	6959.8	66.194 ug/L	0.6826	66.194 ppb	0.6826	1.03%
SiO2†	60770.1	4334.8 ug/L	18.22	4334.8 ppb	18.22	0.42%

Sequence No.: 77

Sample ID: 245396002|945399|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 98

Date Collected: 2/12/2010 01:12:53

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245396002|945399|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4996.9	4996.9	104 %		01:15:07
1	Y RADIAL	5786.5	5786.5	115.7 %		01:15:07
1	Al 396.153Radial†	84374.3	81317.8	75472 ug/L	75472 ppb	01:14:47
1	Ca 317.933Radial†	18557.9	17835.6	29561 ug/L	29561 ppb	01:14:47
1	Fe 238.204 Radial†	10382.6	9976.4	90773 ug/L	90773 ppb	01:14:47
1	K 766.490 Radial†	82425.9	76466.2	13487 ug/L	13487 ppb	01:14:47
1	Mg 279.077 IEC†	465.6	447.4	15763 ug/L	15763 ppb	01:15:07
1	Na 589.592 Radial†	611.5	1666.7	504.10 ug/L	504.10 ppb	01:14:47
1	Sr 421.552†	41841.5	40248.5	282.05 ug/L	282.05 ppb	01:14:47
1	Sc 361.383	851087.9	851087.9	98.723 %		01:16:05
1	Y 371.029	760276.9	760276.9	106.39 %		01:16:05
1	Ag 328.068†	-5227.9	-5524.3	4.9625 ug/L	4.9625 ppb	01:16:10
1	As 188.979†	-23.3	10.3	54.586 ug/L	54.586 ppb	01:16:30
1	B 249.677†	919.8	1470.8	20.076 ug/L	20.076 ppb	01:16:10
1	Ba 233.527†	138628.4	140432.8	1150.1 ug/L	1150.1 ppb	01:16:10
1	Be 313.107†	12576.1	17077.4	13.866 ug/L	13.866 ppb	01:16:10
1	Cd 226.502†	1554.5	1786.5	11.915 ug/L	11.915 ppb	01:16:30
1	Co 228.616†	2658.9	2767.0	52.716 ug/L	52.716 ppb	01:16:30
1	Cr 267.716†	6654.5	6673.8	79.719 ug/L	79.719 ppb	01:16:10
1	Cu 324.752†	178825.0	175316.9	536.60 ug/L	536.60 ppb	01:16:10
1	Mn 257.610†	2624435.8	2657923.8	3066.3 ug/L	3066.3 ppb	01:16:05
1	Mo 202.031†	-9.6	-25.3	5.5050 ug/L	5.5050 ppb	01:16:30
1	Ni 231.604†	2702.6	2629.5	68.085 ug/L	68.085 ppb	01:16:30
1	P 214.914†	2027.5	1825.6	976.01 ug/L	976.01 ppb	01:16:30
1	Pb 220.353†	5805.5	5942.3	748.98 ug/L	748.98 ppb	01:16:30
1	S 181.975 Axial†	908.6	881.0	1270.5 ug/L	1270.5 ppb	01:16:30
1	Sb 206.836†	75.0	33.9	-1.8317 ug/L	-1.8317 ppb	01:16:30
1	Se 196.026†	-463.3	-447.1	-6.2905 ug/L	-6.2905 ppb	01:16:30
1	Si 251.611†	813348.2	823304.4	27538 ug/L	27538 ppb	01:16:05
1	Sn 189.927†	-68.3	-77.9	-8.4308 ug/L	-8.4308 ppb	01:16:30
1	Ti 334.940†	2010955.4	2038264.8	3308.6 ug/L	3308.6 ppb	01:16:05
1	Tl 190.801†	-167.1	-135.0	-1.8503 ug/L	-1.8503 ppb	01:16:30
1	U 409.014†	-1635.1	1323.8	27.864 ug/L	27.864 ppb	01:16:05
1	V 292.402†	24757.7	26632.5	177.01 ug/L	177.01 ppb	01:16:10
1	Zn 213.857†	32737.9	32448.0	305.38 ug/L	305.38 ppb	01:16:10
1	SiO2†	830117.9	840270.1	59938 ug/L	59938 ppb	01:17:38
2	Sc Radial	4973.0	4973.0	103 %		01:15:32
2	Y RADIAL	5780.7	5780.7	115.6 %		01:15:32
2	Al 396.153Radial†	86481.4	83744.8	77725 ug/L	77725 ppb	01:15:12
2	Ca 317.933Radial†	18926.3	18277.5	30294 ug/L	30294 ppb	01:15:12
2	Fe 238.204 Radial†	10642.3	10275.4	93494 ug/L	93494 ppb	01:15:12
2	K 766.490 Radial†	84501.3	78853.5	13908 ug/L	13908 ppb	01:15:12
2	Mg 279.077 IEC†	462.4	446.6	15730 ug/L	15730 ppb	01:15:32
2	Na 589.592 Radial†	684.1	1739.7	526.18 ug/L	526.18 ppb	01:15:12
2	Sr 421.552†	43072.1	41631.5	291.74 ug/L	291.74 ppb	01:15:12
2	Sc 361.383	855156.5	855156.5	99.195 %		01:16:36
2	Y 371.029	764457.3	764457.3	106.98 %		01:16:36
2	Ag 328.068†	-5268.4	-5540.0	5.8004 ug/L	5.8004 ppb	01:16:41
2	As 188.979†	-19.2	14.5	57.121 ug/L	57.121 ppb	01:17:01
2	B 249.677†	1043.8	1591.3	22.502 ug/L	22.502 ppb	01:16:41
2	Ba 233.527†	139747.8	140893.2	1153.9 ug/L	1153.9 ppb	01:16:41
2	Be 313.107†	12439.7	16879.3	13.792 ug/L	13.792 ppb	01:16:41
2	Cd 226.502†	1550.2	1774.7	11.493 ug/L	11.493 ppb	01:17:01
2	Co 228.616†	2664.6	2759.9	52.524 ug/L	52.524 ppb	01:17:01
2	Cr 267.716†	6606.8	6593.6	78.838 ug/L	78.838 ppb	01:16:41
2	Cu 324.752†	180190.2	175831.4	538.31 ug/L	538.31 ppb	01:16:41
2	Mn 257.610†	2637076.5	2658019.3	3066.7 ug/L	3066.7 ppb	01:16:36
2	Mo 202.031†	-22.6	-38.4	4.7449 ug/L	4.7449 ppb	01:17:01
2	Ni 231.604†	2681.7	2595.4	67.203 ug/L	67.203 ppb	01:17:01

2	P 214.914†	2038.1	1826.6	974.68 ug/L	974.68 ppb	01:17:01
2	Pb 220.353†	5837.3	5946.4	749.72 ug/L	749.72 ppb	01:17:01
2	S 181.975 Axial†	904.5	872.5	1257.8 ug/L	1257.8 ppb	01:17:01
2	Sb 206.836†	73.3	31.7	-2.6405 ug/L	-2.6405 ppb	01:17:01
2	Se 196.026†	-466.8	-448.5	1.6164 ug/L	1.6164 ppb	01:17:01
2	Si 251.611†	817177.2	823244.7	27536 ug/L	27536 ppb	01:16:36
2	Sn 189.927†	-52.9	-62.0	-5.3248 ug/L	-5.3248 ppb	01:17:01
2	Ti 334.940†	2020346.9	2038041.2	3308.3 ug/L	3308.3 ppb	01:16:36
2	Tl 190.801†	-166.3	-133.4	-1.3355 ug/L	-1.3355 ppb	01:17:01
2	U 409.014†	-1512.9	1454.9	31.356 ug/L	31.356 ppb	01:16:36
2	V 292.402†	25086.2	26844.4	178.15 ug/L	178.15 ppb	01:16:41
2	Zn 213.857†	33037.9	32592.7	306.40 ug/L	306.40 ppb	01:16:41
2	SiO2†	826507.8	832630.2	59393 ug/L	59393 ppb	01:17:44
3	Sc Radial	5034.9	5034.9	105 %		01:15:57
3	Y RADIAL	5816.7	5816.7	116.3 %		01:15:57
3	Al 396.153Radial†	85389.8	81674.8	75804 ug/L	75804 ppb	01:15:37
3	Ca 317.933Radial†	18661.5	17799.8	29502 ug/L	29502 ppb	01:15:37
3	Fe 238.204 Radial†	10472.0	9986.3	90863 ug/L	90863 ppb	01:15:37
3	K 766.490 Radial†	83595.3	76984.3	13578 ug/L	13578 ppb	01:15:37
3	Mg 279.077 IEC†	466.8	445.3	15687 ug/L	15687 ppb	01:15:57
3	Na 589.592 Radial†	622.2	1672.5	505.85 ug/L	505.85 ppb	01:15:37
3	Sr 421.552†	42406.8	40484.4	283.70 ug/L	283.70 ppb	01:15:37
3	Sc 361.383	859603.0	859603.0	99.711 %		01:17:07
3	Y 371.029	768697.2	768697.2	107.57 %		01:17:07
3	Ag 328.068†	-5141.8	-5385.5	5.6437 ug/L	5.6437 ppb	01:17:12
3	As 188.979†	-33.6	0.2	50.008 ug/L	50.008 ppb	01:17:32
3	B 249.677†	986.8	1528.7	21.441 ug/L	21.441 ppb	01:17:12
3	Ba 233.527†	139087.2	139501.9	1142.5 ug/L	1142.5 ppb	01:17:12
3	Be 313.107†	12614.8	16990.1	13.834 ug/L	13.834 ppb	01:17:12
3	Cd 226.502†	1552.9	1769.3	11.701 ug/L	11.701 ppb	01:17:32
3	Co 228.616†	2676.8	2758.3	52.521 ug/L	52.521 ppb	01:17:32
3	Cr 267.716†	6609.6	6562.0	78.417 ug/L	78.417 ppb	01:17:12
3	Cu 324.752†	179380.6	174079.8	532.86 ug/L	532.86 ppb	01:17:12
3	Mn 257.610†	2650977.6	2658209.1	3066.6 ug/L	3066.6 ppb	01:17:07
3	Mo 202.031†	-14.6	-30.2	5.1415 ug/L	5.1415 ppb	01:17:32
3	Ni 231.604†	2697.8	2597.6	67.259 ug/L	67.259 ppb	01:17:32
3	P 214.914†	2034.8	1812.6	968.69 ug/L	968.69 ppb	01:17:32
3	Pb 220.353†	5832.4	5911.1	745.14 ug/L	745.14 ppb	01:17:32
3	S 181.975 Axial†	902.6	865.8	1248.4 ug/L	1248.4 ppb	01:17:32
3	Sb 206.836†	80.2	38.3	-0.2688 ug/L	-0.2688 ppb	01:17:32
3	Se 196.026†	-462.5	-441.8	-2.3782 ug/L	-2.3782 ppb	01:17:32
3	Si 251.611†	822212.2	824033.0	27563 ug/L	27563 ppb	01:17:07
3	Sn 189.927†	-54.0	-62.9	-5.6572 ug/L	-5.6572 ppb	01:17:32
3	Ti 334.940†	2031170.5	2038360.7	3308.8 ug/L	3308.8 ppb	01:17:07
3	Tl 190.801†	-175.4	-141.7	-3.9914 ug/L	-3.9914 ppb	01:17:32
3	U 409.014†	-1621.6	1353.7	28.724 ug/L	28.724 ppb	01:17:07
3	V 292.402†	24883.5	26510.2	176.11 ug/L	176.11 ppb	01:17:12
3	Zn 213.857†	32892.6	32274.7	303.66 ug/L	303.66 ppb	01:17:12
3	SiO2†	826407.8	828219.8	59079 ug/L	59079 ppb	01:17:50

Mean Data: 245396002|945399|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	855282.4	99.210 %	0.4940			0.50%
Sc Radial	5001.6	104 %	0.6			0.62%
Y 371.029	764477.1	106.98 %	0.589			0.55%
Y RADIAL	5794.6	115.9 %	0.39			0.33%
Ag 328.068†	-5483.2	5.4689 ug/L	0.44549	5.4689 ppb	0.44549	8.15%
Al 396.153Radial†	82245.8	76333 ug/L	1216.2	76333 ppb	1216.2	1.59%
As 188.979†	8.3	53.905 ug/L	3.6049	53.905 ppb	3.6049	6.69%
B 249.677†	1530.3	21.339 ug/L	1.2161	21.339 ppb	1.2161	5.70%
Ba 233.527†	140276.0	1148.8 ug/L	5.83	1148.8 ppb	5.83	0.51%
Be 313.107†	16982.3	13.831 ug/L	0.0374	13.831 ppb	0.0374	0.27%
Ca 317.933Radial†	17971.0	29786 ug/L	441.0	29786 ppb	441.0	1.48%
Cd 226.502†	1776.8	11.703 ug/L	0.2108	11.703 ppb	0.2108	1.80%
Co 228.616†	2761.7	52.587 ug/L	0.1119	52.587 ppb	0.1119	0.21%
Cr 267.716†	6609.8	78.991 ug/L	0.6643	78.991 ppb	0.6643	0.84%
Cu 324.752†	175076.0	535.92 ug/L	2.789	535.92 ppb	2.789	0.52%
Fe 238.204 Radial†	10079.4	91710 ug/L	1545.5	91710 ppb	1545.5	1.69%
K 766.490 Radial†	77434.7	13657 ug/L	221.5	13657 ppb	221.5	1.62%

Mg 279.077 IEC†	446.4	15727 ug/L	38.2	15727 ppb	38.2	0.24%
Mn 257.610†	2658050.8	3066.5 ug/L	0.21	3066.5 ppb	0.21	0.01%
Mo 202.031†	-31.3	5.1305 ug/L	0.38019	5.1305 ppb	0.38019	7.41%
Na 589.592 Radial†	1693.0	512.04 ug/L	12.277	512.04 ppb	12.277	2.40%
Ni 231.604†	2607.5	67.516 ug/L	0.4943	67.516 ppb	0.4943	0.73%
P 214.914†	1821.6	973.13 ug/L	3.901	973.13 ppb	3.901	0.40%
Pb 220.353†	5933.2	747.95 ug/L	2.455	747.95 ppb	2.455	0.33%
S 181.975 Axial†	873.1	1258.9 ug/L	11.13	1258.9 ppb	11.13	0.88%
Sb 206.836†	34.6	-1.5803 ug/L	1.20568	-1.5803 ppb	1.20568	76.29%
Se 196.026†	-445.8	-2.3508 ug/L	3.95353	-2.3508 ppb	3.95353	168.18%
Si 251.611†	823527.4	27546 ug/L	14.7	27546 ppb	14.7	0.05%
Sn 189.927†	-67.6	-6.4710 ug/L	1.70542	-6.4710 ppb	1.70542	26.35%
Sr 421.552†	40788.1	285.83 ug/L	5.185	285.83 ppb	5.185	1.81%
Ti 334.940†	2038222.2	3308.6 ug/L	0.21	3308.6 ppb	0.21	0.01%
Tl 190.801†	-136.7	-2.3924 ug/L	1.40848	-2.3924 ppb	1.40848	58.87%
U 409.014†	1377.5	29.315 ug/L	1.8196	29.315 ppb	1.8196	6.21%
V 292.402†	26662.3	177.09 ug/L	1.023	177.09 ppb	1.023	0.58%
Zn 213.857†	32438.5	305.15 ug/L	1.383	305.15 ppb	1.383	0.45%
SiO2†	833706.7	59470 ug/L	434.9	59470 ppb	434.9	0.73%

Sequence No.: 78

Sample ID: 245396003|945399|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 99

Date Collected: 2/12/2010 01:20:02

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245396003|945399|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4924.5	4924.5	102 %		01:21:56
1	Y RADIAL	5794.9	5794.9	115.9 %		01:21:56
1	Al 396.153Radial†	65219.0	63813.0	59225 ug/L	59225 ppb	01:21:56
1	Ca 317.933Radial†	11108.6	10826.6	17944 ug/L	17944 ppb	01:21:56
1	Fe 238.204 Radial†	9117.7	8888.5	80874 ug/L	80874 ppb	01:21:56
1	K 766.490 Radial†	64212.0	59852.7	10558 ug/L	10558 ppb	01:21:56
1	Mg 279.077 IEC†	304.5	296.8	10434 ug/L	10434 ppb	01:22:16
1	Na 589.592 Radial†	690.9	1752.9	530.16 ug/L	530.16 ppb	01:21:56
1	Sr 421.552†	23595.2	23029.6	161.38 ug/L	161.38 ppb	01:21:56
1	Sc 361.383	852812.4	852812.4	98.923 %		01:23:14
1	Y 371.029	764760.0	764760.0	107.02 %		01:23:14
1	Ag 328.068†	-4090.9	-4364.2	6.7179 ug/L	6.7179 ppb	01:23:19
1	As 188.979†	-18.4	15.3	47.832 ug/L	47.832 ppb	01:23:39
1	B 249.677†	573.6	1118.9	13.375 ug/L	13.375 ppb	01:23:19
1	Ba 233.527†	100745.1	101853.2	834.60 ug/L	834.60 ppb	01:23:19
1	Be 313.107†	149657.4	155625.0	63.720 ug/L	63.720 ppb	01:23:19
1	Cd 226.502†	1289.8	1515.7	9.8101 ug/L	9.8101 ppb	01:23:39
1	Co 228.616†	1651.6	1743.3	31.960 ug/L	31.960 ppb	01:23:39
1	Cr 267.716†	9049.9	9081.7	107.33 ug/L	107.33 ppb	01:23:19
1	Cu 324.752†	1460859.4	1470938.7	4466.1 ug/L	4466.1 ppb	01:23:14
1	Mn 257.610†	2048090.6	2069930.1	2389.1 ug/L	2389.1 ppb	01:23:14
1	Mo 202.031†	52.4	37.4	9.2927 ug/L	9.2927 ppb	01:23:39
1	Ni 231.604†	3169.8	3096.3	80.192 ug/L	80.192 ppb	01:23:39
1	P 214.914†	2742.1	2543.9	646.60 ug/L	646.60 ppb	01:23:39
1	Pb 220.353†	6753.6	6888.9	862.06 ug/L	862.06 ppb	01:23:39
1	S 181.975 Axial†	590.8	557.9	802.48 ug/L	802.48 ppb	01:23:39
1	Sb 206.836†	93.8	52.7	8.4090 ug/L	8.4090 ppb	01:23:39
1	Se 196.026†	-430.5	-413.1	-15.789 ug/L	-15.789 ppb	01:23:39
1	Si 251.611†	722468.4	729769.5	24410 ug/L	24410 ppb	01:23:14
1	Sn 189.927†	135.7	128.5	27.940 ug/L	27.940 ppb	01:23:39
1	Ti 334.940†	1544696.6	1562812.2	2536.1 ug/L	2536.1 ppb	01:23:14
1	Tl 190.801†	-136.2	-103.5	-1.2096 ug/L	-1.2096 ppb	01:23:39
1	U 409.014†	13279.4	16404.0	466.20 ug/L	466.20 ppb	01:23:14
1	V 292.402†	19077.6	20839.9	137.99 ug/L	137.99 ppb	01:23:19
1	Zn 213.857†	51246.3	51090.9	485.39 ug/L	485.39 ppb	01:23:19
1	SiO2†	730188.2	737552.4	52611 ug/L	52611 ppb	01:24:48
2	Sc Radial	4969.2	4969.2	103 %		01:22:21
2	Y RADIAL	5819.6	5819.6	116.4 %		01:22:21
2	Al 396.153Radial†	66215.6	64204.1	59588 ug/L	59588 ppb	01:22:21
2	Ca 317.933Radial†	11221.0	10837.8	17963 ug/L	17963 ppb	01:22:21
2	Fe 238.204 Radial†	9248.3	8934.7	81294 ug/L	81294 ppb	01:22:21
2	K 766.490 Radial†	65264.9	60307.1	10638 ug/L	10638 ppb	01:22:21
2	Mg 279.077 IEC†	308.8	298.3	10488 ug/L	10488 ppb	01:22:41
2	Na 589.592 Radial†	772.6	1825.9	552.23 ug/L	552.23 ppb	01:22:21
2	Sr 421.552†	23910.8	23127.5	162.06 ug/L	162.06 ppb	01:22:21
2	Sc 361.383	855411.3	855411.3	99.225 %		01:23:45
2	Y 371.029	767554.3	767554.3	107.41 %		01:23:45
2	Ag 328.068†	-4206.2	-4467.8	6.3640 ug/L	6.3640 ppb	01:23:50
2	As 188.979†	-38.9	-5.3	38.567 ug/L	38.567 ppb	01:24:10
2	B 249.677†	534.5	1077.7	12.329 ug/L	12.329 ppb	01:23:50
2	Ba 233.527†	100176.8	100971.1	827.41 ug/L	827.41 ppb	01:23:50
2	Be 313.107†	149046.6	154549.8	63.315 ug/L	63.315 ppb	01:23:50
2	Cd 226.502†	1328.4	1550.7	10.183 ug/L	10.183 ppb	01:24:10
2	Co 228.616†	1656.5	1743.2	31.954 ug/L	31.954 ppb	01:24:10
2	Cr 267.716†	9048.5	9052.4	106.99 ug/L	106.99 ppb	01:23:50
2	Cu 324.752†	1461091.9	1466686.3	4453.2 ug/L	4453.2 ppb	01:23:45
2	Mn 257.610†	2055362.7	2070968.8	2390.3 ug/L	2390.3 ppb	01:23:45
2	Mo 202.031†	53.0	37.9	9.3625 ug/L	9.3625 ppb	01:24:10
2	Ni 231.604†	3183.3	3100.1	80.291 ug/L	80.291 ppb	01:24:10

2	P 214.914†	2786.1	2579.8	671.27 ug/L	671.27 ppb	01:24:10
2	Pb 220.353†	6870.4	6985.8	874.20 ug/L	874.20 ppb	01:24:10
2	S 181.975 Axial†	600.1	565.5	813.40 ug/L	813.40 ppb	01:24:10
2	Sb 206.836†	92.0	50.5	7.6613 ug/L	7.6613 ppb	01:24:10
2	Se 196.026†	-416.1	-397.2	-3.7038 ug/L	-3.7038 ppb	01:24:10
2	Si 251.611†	724262.9	729359.1	24396 ug/L	24396 ppb	01:23:45
2	Sn 189.927†	141.8	134.2	29.002 ug/L	29.002 ppb	01:24:10
2	Ti 334.940†	1548127.8	1561526.1	2534.0 ug/L	2534.0 ppb	01:23:45
2	Tl 190.801†	-139.4	-106.3	-2.1130 ug/L	-2.1130 ppb	01:24:10
2	U 409.014†	13346.6	16430.9	466.94 ug/L	466.94 ppb	01:23:45
2	V 292.402†	18905.2	20607.5	136.25 ug/L	136.25 ppb	01:23:50
2	Zn 213.857†	51001.7	50686.9	481.35 ug/L	481.35 ppb	01:23:50
2	SiO2†	735656.0	740820.3	52844 ug/L	52844 ppb	01:24:54
3	Sc Radial	5008.1	5008.1	104 %		01:22:46
3	Y RADIAL	5881.3	5881.3	117.6 %		01:22:46
3	Al 396.153Radial†	66441.9	63924.7	59329 ug/L	59329 ppb	01:22:46
3	Ca 317.933Radial†	11281.6	10811.7	17920 ug/L	17920 ppb	01:22:46
3	Fe 238.204 Radial†	9271.5	8887.6	80866 ug/L	80866 ppb	01:22:46
3	K 766.490 Radial†	65316.1	59866.9	10561 ug/L	10561 ppb	01:22:46
3	Mg 279.077 IEC†	307.7	294.9	10368 ug/L	10368 ppb	01:23:06
3	Na 589.592 Radial†	736.4	1785.4	539.98 ug/L	539.98 ppb	01:22:46
3	Sr 421.552†	24089.7	23120.0	162.01 ug/L	162.01 ppb	01:22:46
3	Sc 361.383	866415.6	866415.6	100.50 %		01:24:16
3	Y 371.029	775859.3	775859.3	108.57 %		01:24:16
3	Ag 328.068†	-4190.7	-4398.6	6.5398 ug/L	6.5398 ppb	01:24:21
3	As 188.979†	-23.8	10.2	45.487 ug/L	45.487 ppb	01:24:41
3	B 249.677†	501.9	1038.4	11.465 ug/L	11.465 ppb	01:24:21
3	Ba 233.527†	100739.2	100248.3	821.49 ug/L	821.49 ppb	01:24:21
3	Be 313.107†	149521.7	153114.6	62.778 ug/L	62.778 ppb	01:24:21
3	Cd 226.502†	1306.3	1511.7	9.7625 ug/L	9.7625 ppb	01:24:41
3	Co 228.616†	1650.1	1715.6	31.357 ug/L	31.357 ppb	01:24:41
3	Cr 267.716†	8999.9	8888.3	105.07 ug/L	105.07 ppb	01:24:21
3	Cu 324.752†	1481915.6	1468703.8	4459.3 ug/L	4459.3 ppb	01:24:16
3	Mn 257.610†	2081243.5	2070411.4	2389.6 ug/L	2389.6 ppb	01:24:16
3	Mo 202.031†	55.0	39.1	9.4223 ug/L	9.4223 ppb	01:24:41
3	Ni 231.604†	3157.2	3033.4	78.564 ug/L	78.564 ppb	01:24:41
3	P 214.914†	2774.1	2532.1	640.66 ug/L	640.66 ppb	01:24:41
3	Pb 220.353†	6856.0	6883.5	861.43 ug/L	861.43 ppb	01:24:41
3	S 181.975 Axial†	598.0	555.7	799.18 ug/L	799.18 ppb	01:24:41
3	Sb 206.836†	81.9	39.4	3.7228 ug/L	3.7228 ppb	01:24:41
3	Se 196.026†	-418.5	-394.3	-3.1536 ug/L	-3.1536 ppb	01:24:41
3	Si 251.611†	734344.2	730119.4	24421 ug/L	24421 ppb	01:24:16
3	Sn 189.927†	122.6	113.3	25.113 ug/L	25.113 ppb	01:24:41
3	Ti 334.940†	1567511.2	1560996.4	2533.2 ug/L	2533.2 ppb	01:24:16
3	Tl 190.801†	-127.3	-92.5	2.3227 ug/L	2.3227 ppb	01:24:41
3	U 409.014†	13594.9	16507.1	469.20 ug/L	469.20 ppb	01:24:16
3	V 292.402†	19005.4	20465.2	135.28 ug/L	135.28 ppb	01:24:21
3	Zn 213.857†	51323.0	50353.8	478.13 ug/L	478.13 ppb	01:24:21
3	SiO2†	728047.6	723833.4	51632 ug/L	51632 ppb	01:25:00

Mean Data: 245396003|945399|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	858213.1	99.550 %	0.8377			0.84%
Sc Radial	4967.3	103 %	0.9			0.84%
Y 371.029	769391.2	107.67 %	0.808			0.75%
Y RADIAL	5831.9	116.6 %	0.89			0.76%
Ag 328.068†	-4410.2	6.5406 ug/L	0.17696	6.5406 ppb	0.17696	2.71%
Al 396.153Radial†	63980.6	59381 ug/L	187.0	59381 ppb	187.0	0.31%
As 188.979†	6.7	43.962 ug/L	4.8174	43.962 ppb	4.8174	10.96%
B 249.677†	1078.3	12.390 ug/L	0.9568	12.390 ppb	0.9568	7.72%
Ba 233.527†	101024.2	827.83 ug/L	6.567	827.83 ppb	6.567	0.79%
Be 313.107†	154429.8	63.271 ug/L	0.4724	63.271 ppb	0.4724	0.75%
Ca 317.933Radial†	10825.4	17942 ug/L	21.6	17942 ppb	21.6	0.12%
Cd 226.502†	1526.0	9.9186 ug/L	0.23027	9.9186 ppb	0.23027	2.32%
Co 228.616†	1734.0	31.757 ug/L	0.3467	31.757 ppb	0.3467	1.09%
Cr 267.716†	9007.4	106.46 ug/L	1.218	106.46 ppb	1.218	1.14%
Cu 324.752†	1468776.2	4459.5 ug/L	6.44	4459.5 ppb	6.44	0.14%
Fe 238.204 Radial†	8903.6	81011 ug/L	245.1	81011 ppb	245.1	0.30%
K 766.490 Radial†	60008.9	10586 ug/L	45.6	10586 ppb	45.6	0.43%

Mg 279.077 IEC†	296.7	10430 ug/L	60.1	10430 ppb	60.1	0.58%
Mn 257.610†	2070436.8	2389.6 ug/L	0.62	2389.6 ppb	0.62	0.03%
Mo 202.031†	38.1	9.3592 ug/L	0.06487	9.3592 ppb	0.06487	0.69%
Na 589.592 Radial†	1788.0	540.79 ug/L	11.058	540.79 ppb	11.058	2.04%
Ni 231.604†	3076.6	79.682 ug/L	0.9699	79.682 ppb	0.9699	1.22%
P 214.914†	2551.9	652.84 ug/L	16.233	652.84 ppb	16.233	2.49%
Pb 220.353†	6919.4	865.90 ug/L	7.198	865.90 ppb	7.198	0.83%
S 181.975 Axial†	559.7	805.02 ug/L	7.438	805.02 ppb	7.438	0.92%
Sb 206.836†	47.5	6.5977 ug/L	2.51761	6.5977 ppb	2.51761	38.16%
Se 196.026†	-401.5	-7.5489 ug/L	7.14166	-7.5489 ppb	7.14166	94.61%
Si 251.611†	729749.3	24409 ug/L	12.7	24409 ppb	12.7	0.05%
Sn 189.927†	125.4	27.352 ug/L	2.0099	27.352 ppb	2.0099	7.35%
Sr 421.552†	23092.4	161.82 ug/L	0.382	161.82 ppb	0.382	0.24%
Ti 334.940†	1561778.2	2534.4 ug/L	1.51	2534.4 ppb	1.51	0.06%
Tl 190.801†	-100.8	-0.3333 ug/L	2.34409	-0.3333 ppb	2.34409	703.30%
U 409.014†	16447.3	467.45 ug/L	1.562	467.45 ppb	1.562	0.33%
V 292.402†	20637.5	136.51 ug/L	1.373	136.51 ppb	1.373	1.01%
Zn 213.857†	50710.5	481.62 ug/L	3.633	481.62 ppb	3.633	0.75%
SiO2†	734068.7	52362 ug/L	642.9	52362 ppb	642.9	1.23%

Sequence No.: 79

Sample ID: 245396004|945399|1

Analyst: HSC

Initial Sample Wt:

Dilution:

Autosampler Location: 100

Date Collected: 2/12/2010 01:27:11

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: 245396004|945399|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	5006.2	5006.2	104 %		01:29:04
1	Y RADIAL	6285.3	6285.3	125.7 %		01:29:04
1	Al 396.153Radial†	22848.0	22090.1	20502 ug/L	20502 ppb	01:29:04
1	Ca 317.933Radial†	2952.9	2818.7	4671.8 ug/L	4671.8 ppb	01:29:24
1	Fe 238.204 Radial†	16138.1	15484.2	140890 ug/L	140890 ppb	01:29:04
1	K 766.490 Radial†	29594.6	25590.9	4514.0 ug/L	4514.0 ppb	01:29:04
1	Mg 279.077 IEC†	108.2	103.5	3521.7 ug/L	3521.7 ppb	01:29:24
1	Na 589.592 Radial†	5679.0	6531.4	1975.4 ug/L	1975.4 ppb	01:29:04
1	Sr 421.552†	6784.0	6511.9	45.634 ug/L	45.634 ppb	01:29:04
1	Sc 361.383	854374.0	854374.0	99.104 %		01:30:22
1	Y 371.029	825925.9	825925.9	115.58 %		01:30:22
1	Ag 328.068†	-8391.5	-8696.1	6.8984 ug/L	6.8984 ppb	01:30:27
1	As 188.979†	-56.2	-22.9	37.722 ug/L	37.722 ppb	01:30:47
1	B 249.677†	589.3	1133.6	3.9083 ug/L	3.9083 ppb	01:30:27
1	Ba 233.527†	50562.9	51031.4	421.18 ug/L	421.18 ppb	01:30:27
1	Be 313.107†	1647.6	6001.2	6.1965 ug/L	6.1965 ppb	01:30:27
1	Cd 226.502†	1020.7	1241.9	0.2306 ug/L	0.2306 ppb	01:30:47
1	Co 228.616†	2812.4	2911.5	58.064 ug/L	58.064 ppb	01:30:47
1	Cr 267.716†	10432.8	10460.3	124.66 ug/L	124.66 ppb	01:30:27
1	Cu 324.752†	132744.8	128123.6	396.20 ug/L	396.20 ppb	01:30:27
1	Mn 257.610†	2123190.0	2141923.9	2478.1 ug/L	2478.1 ppb	01:30:22
1	Mo 202.031†	79.9	65.1	15.868 ug/L	15.868 ppb	01:30:47
1	Ni 231.604†	2975.9	2894.8	74.957 ug/L	74.957 ppb	01:30:47
1	P 214.914†	1136.3	918.4	386.01 ug/L	386.01 ppb	01:30:47
1	Pb 220.353†	1144.6	1216.6	142.57 ug/L	142.57 ppb	01:30:47
1	S 181.975 Axial†	176.3	138.5	198.17 ug/L	198.17 ppb	01:30:47
1	Sb 206.836†	40.0	-1.8	-8.1277 ug/L	-8.1277 ppb	01:30:47
1	Se 196.026†	-708.8	-693.1	-12.359 ug/L	-12.359 ppb	01:30:47
1	Si 251.611†	427667.6	430969.9	14415 ug/L	14415 ppb	01:30:22
1	Sn 189.927†	28.6	20.2	6.8226 ug/L	6.8226 ppb	01:30:47
1	Ti 334.940†	1064829.6	1075754.9	1745.2 ug/L	1745.2 ppb	01:30:22
1	Tl 190.801†	-134.0	-101.0	-6.4939 ug/L	-6.4939 ppb	01:30:47
1	U 409.014†	-8082.7	-5175.7	-166.41 ug/L	-166.41 ppb	01:30:22
1	V 292.402†	7006.7	8624.6	40.074 ug/L	40.074 ppb	01:30:27
1	Zn 213.857†	33109.7	32695.6	300.47 ug/L	300.47 ppb	01:30:27
1	SiO2†	430607.6	433915.6	30952 ug/L	30952 ppb	01:31:55
2	Sc Radial	5062.2	5062.2	105 %		01:29:29
2	Y RADIAL	6311.4	6311.4	126.2 %		01:29:29
2	Al 396.153Radial†	23020.8	22011.4	20429 ug/L	20429 ppb	01:29:29
2	Ca 317.933Radial†	2954.1	2788.4	4621.6 ug/L	4621.6 ppb	01:29:49
2	Fe 238.204 Radial†	16294.1	15460.9	140670 ug/L	140670 ppb	01:29:29
2	K 766.490 Radial†	29740.3	25414.8	4482.9 ug/L	4482.9 ppb	01:29:29
2	Mg 279.077 IEC†	104.3	98.6	3346.7 ug/L	3346.7 ppb	01:29:49
2	Na 589.592 Radial†	5723.5	6513.4	1970.0 ug/L	1970.0 ppb	01:29:29
2	Sr 421.552†	6777.9	6434.0	45.088 ug/L	45.088 ppb	01:29:29
2	Sc 361.383	870626.5	870626.5	100.99 %		01:30:53
2	Y 371.029	838910.0	838910.0	117.40 %		01:30:53
2	Ag 328.068†	-8668.2	-8812.1	6.2734 ug/L	6.2734 ppb	01:30:58
2	As 188.979†	-61.4	-26.9	35.854 ug/L	35.854 ppb	01:31:18
2	B 249.677†	685.7	1218.0	5.9538 ug/L	5.9538 ppb	01:30:58
2	Ba 233.527†	50924.2	50436.7	416.32 ug/L	416.32 ppb	01:30:58
2	Be 313.107†	1696.0	6018.1	6.2091 ug/L	6.2091 ppb	01:30:58
2	Cd 226.502†	1011.5	1213.5	-0.0851 ug/L	-0.0851 ppb	01:31:18
2	Co 228.616†	2819.4	2865.5	57.056 ug/L	57.056 ppb	01:31:18
2	Cr 267.716†	10581.2	10410.7	124.08 ug/L	124.08 ppb	01:30:58
2	Cu 324.752†	134497.1	127358.3	393.87 ug/L	393.87 ppb	01:30:58
2	Mn 257.610†	2167356.7	2145664.7	2482.4 ug/L	2482.4 ppb	01:30:53
2	Mo 202.031†	81.5	65.2	15.858 ug/L	15.858 ppb	01:31:18
2	Ni 231.604†	2974.1	2836.9	73.458 ug/L	73.458 ppb	01:31:18

2	P 214.914†	1115.7	876.7	360.66 ug/L	360.66 ppb	01:31:18
2	Pb 220.353†	1133.2	1183.8	138.48 ug/L	138.48 ppb	01:31:18
2	S 181.975 Axial†	175.7	134.6	192.47 ug/L	192.47 ppb	01:31:18
2	Sb 206.836†	51.0	8.4	-4.5997 ug/L	-4.5997 ppb	01:31:18
2	Se 196.026†	-704.4	-675.4	-1.1000 ug/L	-1.1000 ppb	01:31:18
2	Si 251.611†	437438.9	432589.7	14469 ug/L	14469 ppb	01:30:53
2	Sn 189.927†	22.6	13.7	5.6061 ug/L	5.6061 ppb	01:31:18
2	Ti 334.940†	1086825.5	1077477.8	1748.0 ug/L	1748.0 ppb	01:30:53
2	Tl 190.801†	-120.8	-85.4	-1.4526 ug/L	-1.4526 ppb	01:31:18
2	U 409.014†	-8046.2	-4987.3	-160.92 ug/L	-160.92 ppb	01:30:53
2	V 292.402†	7026.2	8512.0	39.291 ug/L	39.291 ppb	01:30:58
2	Zn 213.857†	33400.2	32359.6	297.20 ug/L	297.20 ppb	01:30:58
2	SiO2†	429635.2	424841.7	30305 ug/L	30305 ppb	01:32:00
3	Sc Radial	4934.7	4934.7	103 %		01:29:54
3	Y RADIAL	6199.0	6199.0	124.0 %		01:29:54
3	Al 396.153Radial†	22540.1	22108.1	20518 ug/L	20518 ppb	01:29:54
3	Ca 317.933Radial†	2931.8	2839.2	4705.8 ug/L	4705.8 ppb	01:30:14
3	Fe 238.204 Radial†	15921.8	15498.1	141010 ug/L	141010 ppb	01:29:54
3	K 766.490 Radial†	29289.0	25704.9	4534.1 ug/L	4534.1 ppb	01:29:54
3	Mg 279.077 IEC†	105.2	102.0	3469.2 ug/L	3469.2 ppb	01:30:14
3	Na 589.592 Radial†	5601.2	6534.7	1976.4 ug/L	1976.4 ppb	01:29:54
3	Sr 421.552†	6623.1	6449.5	45.196 ug/L	45.196 ppb	01:29:54
3	Sc 361.383	866185.8	866185.8	100.47 %		01:31:24
3	Y 371.029	834370.0	834370.0	116.76 %		01:31:24
3	Ag 328.068†	-8690.0	-8877.8	6.0866 ug/L	6.0866 ppb	01:31:29
3	As 188.979†	-65.2	-31.0	34.062 ug/L	34.062 ppb	01:31:49
3	B 249.677†	701.7	1237.5	6.3594 ug/L	6.3594 ppb	01:31:29
3	Ba 233.527†	51661.7	51429.3	424.44 ug/L	424.44 ppb	01:31:29
3	Be 313.107†	1606.4	5937.5	6.1746 ug/L	6.1746 ppb	01:31:29
3	Cd 226.502†	1010.1	1217.2	-0.0759 ug/L	-0.0759 ppb	01:31:49
3	Co 228.616†	2831.4	2891.8	57.635 ug/L	57.635 ppb	01:31:49
3	Cr 267.716†	10679.0	10561.8	125.85 ug/L	125.85 ppb	01:31:29
3	Cu 324.752†	136566.2	130100.4	402.20 ug/L	402.20 ppb	01:31:29
3	Mn 257.610†	2152939.5	2142318.1	2478.6 ug/L	2478.6 ppb	01:31:24
3	Mo 202.031†	101.1	85.1	17.372 ug/L	17.372 ppb	01:31:49
3	Ni 231.604†	2982.0	2859.9	74.053 ug/L	74.053 ppb	01:31:49
3	P 214.914†	1102.9	869.6	354.33 ug/L	354.33 ppb	01:31:49
3	Pb 220.353†	1150.8	1207.1	141.37 ug/L	141.37 ppb	01:31:49
3	S 181.975 Axial†	180.9	140.7	201.37 ug/L	201.37 ppb	01:31:49
3	Sb 206.836†	43.6	1.3	-7.0201 ug/L	-7.0201 ppb	01:31:49
3	Se 196.026†	-715.0	-689.5	-9.5128 ug/L	-9.5128 ppb	01:31:49
3	Si 251.611†	434094.4	431481.6	14432 ug/L	14432 ppb	01:31:24
3	Sn 189.927†	28.3	19.5	6.7010 ug/L	6.7010 ppb	01:31:49
3	Ti 334.940†	1080052.6	1076254.1	1746.0 ug/L	1746.0 ppb	01:31:24
3	Tl 190.801†	-119.0	-84.2	-1.1212 ug/L	-1.1212 ppb	01:31:49
3	U 409.014†	-8113.3	-5095.0	-164.09 ug/L	-164.09 ppb	01:31:24
3	V 292.402†	7231.3	8751.8	41.002 ug/L	41.002 ppb	01:31:29
3	Zn 213.857†	33825.1	32952.1	302.98 ug/L	302.98 ppb	01:31:29
3	SiO2†	429982.3	427368.1	30485 ug/L	30485 ppb	01:32:06

Mean Data: 245396004|945399|1

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	863728.8	100.19 %	0.974			0.97%
Sc Radial	5001.0	104 %	1.3			1.28%
Y 371.029	833068.6	116.58 %	0.922			0.79%
Y RADIAL	6265.2	125.3 %	1.18			0.94%
Ag 328.068†	-8795.3	6.4195 ug/L	0.42516	6.4195 ppb	0.42516	6.62%
Al 396.153Radial†	22069.8	20483 ug/L	47.7	20483 ppb	47.7	0.23%
As 188.979†	-27.0	35.879 ug/L	1.8305	35.879 ppb	1.8305	5.10%
B 249.677†	1196.4	5.4072 ug/L	1.31379	5.4072 ppb	1.31379	24.30%
Ba 233.527†	50965.8	420.65 ug/L	4.087	420.65 ppb	4.087	0.97%
Be 313.107†	5985.6	6.1934 ug/L	0.01747	6.1934 ppb	0.01747	0.28%
Ca 317.933Radial†	2815.4	4666.4 ug/L	42.35	4666.4 ppb	42.35	0.91%
Cd 226.502†	1224.2	0.0232 ug/L	0.17965	0.0232 ppb	0.17965	774.01%
Co 228.616†	2889.6	57.585 ug/L	0.5062	57.585 ppb	0.5062	0.88%
Cr 267.716†	10477.6	124.86 ug/L	0.901	124.86 ppb	0.901	0.72%
Cu 324.752†	128527.4	397.42 ug/L	4.301	397.42 ppb	4.301	1.08%
Fe 238.204 Radial†	15481.0	140860 ug/L	171.1	140860 ppb	171.1	0.12%
K 766.490 Radial†	25570.2	4510.3 ug/L	25.79	4510.3 ppb	25.79	0.57%

Mg 279.077 IEC†	101.4	3445.9 ug/L	89.80	3445.9 ppb	89.80	2.61%
Mn 257.610†	2143302.3	2479.7 ug/L	2.35	2479.7 ppb	2.35	0.09%
Mo 202.031†	71.8	16.366 ug/L	0.8716	16.366 ppb	0.8716	5.33%
Na 589.592 Radial†	6526.5	1973.9 ug/L	3.47	1973.9 ppb	3.47	0.18%
Ni 231.604†	2863.9	74.156 ug/L	0.7544	74.156 ppb	0.7544	1.02%
P 214.914†	888.3	367.00 ug/L	16.767	367.00 ppb	16.767	4.57%
Pb 220.353†	1202.5	140.80 ug/L	2.102	140.80 ppb	2.102	1.49%
S 181.975 Axial†	138.0	197.34 ug/L	4.510	197.34 ppb	4.510	2.29%
Sb 206.836†	2.6	-6.5825 ug/L	1.80428	-6.5825 ppb	1.80428	27.41%
Se 196.026†	-686.0	-7.6571 ug/L	5.85421	-7.6571 ppb	5.85421	76.45%
Si 251.611†	431680.4	14439 ug/L	27.7	14439 ppb	27.7	0.19%
Sn 189.927†	17.8	6.3766 ug/L	0.66999	6.3766 ppb	0.66999	10.51%
Sr 421.552†	6465.1	45.306 ug/L	0.2891	45.306 ppb	0.2891	0.64%
Ti 334.940†	1076495.6	1746.4 ug/L	1.44	1746.4 ppb	1.44	0.08%
Tl 190.801†	-90.2	-3.0226 ug/L	3.01086	-3.0226 ppb	3.01086	99.61%
U 409.014†	-5086.0	-163.81 ug/L	2.755	-163.81 ppb	2.755	1.68%
V 292.402†	8629.5	40.123 ug/L	0.8565	40.123 ppb	0.8565	2.13%
Zn 213.857†	32669.1	300.22 ug/L	2.898	300.22 ppb	2.898	0.97%
SiO2†	428708.5	30580 ug/L	334.1	30580 ppb	334.1	1.09%

Sequence No.: 80

Sample ID: CCV

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 7

Date Collected: 2/12/2010 01:34:18

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc. Units	Calib. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4756.4	4756.4	98.9	%		01:36:11
1	Y RADIAL	4971.0	4971.0	99.41	%		01:36:11
1	Al 396.153Radial†	5504.8	5714.8	5279.4	ug/L	5279.4 ppb	01:36:11
1	Ca 317.933Radial†	3219.3	3236.7	5364.7	ug/L	5364.7 ppb	01:36:31
1	Fe 238.204 Radial†	582.2	576.9	5265.3	ug/L	5265.3 ppb	01:36:31
1	K 766.490 Radial†	30932.2	28435.0	5012.9	ug/L	5012.9 ppb	01:36:11
1	Mg 279.077 IEC†	157.0	158.2	5607.6	ug/L	5607.6 ppb	01:36:31
1	Na 589.592 Radial†	31581.2	32995.1	9979.3	ug/L	9979.3 ppb	01:36:11
1	Sr 421.552†	76403.2	77212.6	541.46	ug/L	541.46 ppb	01:36:11
1	Sc 361.383	852407.6	852407.6	98.876	%		01:37:28
1	Y 371.029	686323.3	686323.3	96.043	%		01:37:28
1	Ag 328.068†	108338.8	109341.1	518.53	ug/L	518.53 ppb	01:37:33
1	As 188.979†	1096.2	1142.5	522.93	ug/L	522.93 ppb	01:37:53
1	B 249.677†	20935.0	21711.9	514.14	ug/L	514.14 ppb	01:37:33
1	Ba 233.527†	63636.7	64371.5	526.99	ug/L	526.99 ppb	01:37:33
1	Be 313.107†	1357001.1	1376760.9	513.98	ug/L	513.98 ppb	01:37:28
1	Cd 226.502†	42397.4	43091.1	512.20	ug/L	512.20 ppb	01:37:33
1	Co 228.616†	24167.8	24516.2	535.55	ug/L	535.55 ppb	01:37:33
1	Cr 267.716†	43368.1	43794.2	510.47	ug/L	510.47 ppb	01:37:33
1	Cu 324.752†	176859.9	173049.0	524.93	ug/L	524.93 ppb	01:37:33
1	Mn 257.610†	448092.8	452733.0	521.17	ug/L	521.17 ppb	01:37:28
1	Mo 202.031†	6706.5	6767.1	507.25	ug/L	507.25 ppb	01:37:53
1	Ni 231.604†	19778.6	19895.4	515.10	ug/L	515.10 ppb	01:37:33
1	P 214.914†	4332.6	4153.7	2482.4	ug/L	2482.4 ppb	01:37:53
1	Pb 220.353†	3982.4	4089.4	511.83	ug/L	511.83 ppb	01:37:53
1	S 181.975 Axial†	749.2	718.3	1046.5	ug/L	1046.5 ppb	01:37:53
1	Sb 206.836†	1483.2	1457.9	526.31	ug/L	526.31 ppb	01:37:53
1	Se 196.026†	732.8	763.3	532.91	ug/L	532.91 ppb	01:37:53
1	Si 251.611†	78346.9	78675.0	2625.3	ug/L	2625.3 ppb	01:37:33
1	Sn 189.927†	2688.4	2710.2	503.85	ug/L	503.85 ppb	01:37:53
1	Ti 334.940†	316936.9	321841.7	521.86	ug/L	521.86 ppb	01:37:33
1	Tl 190.801†	1570.7	1622.7	523.52	ug/L	523.52 ppb	01:37:53
1	U 409.014†	14633.7	17780.0	513.82	ug/L	513.82 ppb	01:37:33
1	V 292.402†	67965.5	70292.5	517.23	ug/L	517.23 ppb	01:37:33
1	Zn 213.857†	53114.5	53004.8	518.14	ug/L	518.14 ppb	01:37:33
1	SiO2†	76723.1	77011.8	5479.6	ug/L	5479.6 ppb	01:39:01
2	Sc Radial	4946.7	4946.7	103	%		01:36:36
2	Y RADIAL	5185.5	5185.5	103.7	%		01:36:36
2	Al 396.153Radial†	5698.1	5688.6	5255.1	ug/L	5255.1 ppb	01:36:36
2	Ca 317.933Radial†	3227.2	3119.3	5170.0	ug/L	5170.0 ppb	01:36:56
2	Fe 238.204 Radial†	590.2	562.1	5130.3	ug/L	5130.3 ppb	01:36:56
2	K 766.490 Radial†	31900.1	28172.8	4966.7	ug/L	4966.7 ppb	01:36:36
2	Mg 279.077 IEC†	155.6	150.8	5344.2	ug/L	5344.2 ppb	01:36:56
2	Na 589.592 Radial†	32490.3	32650.5	9875.1	ug/L	9875.1 ppb	01:36:36
2	Sr 421.552†	79168.2	76928.5	539.47	ug/L	539.47 ppb	01:36:36
2	Sc 361.383	857714.1	857714.1	99.492	%		01:37:59
2	Y 371.029	689968.2	689968.2	96.553	%		01:37:59
2	Ag 328.068†	108910.4	109237.8	518.00	ug/L	518.00 ppb	01:38:04
2	As 188.979†	1094.7	1134.1	519.08	ug/L	519.08 ppb	01:38:24
2	B 249.677†	21217.0	21864.4	517.79	ug/L	517.79 ppb	01:38:04
2	Ba 233.527†	64044.7	64383.3	527.08	ug/L	527.08 ppb	01:38:04
2	Be 313.107†	1367925.0	1379249.6	514.91	ug/L	514.91 ppb	01:37:59
2	Cd 226.502†	42668.8	43098.6	512.30	ug/L	512.30 ppb	01:38:04
2	Co 228.616†	24402.9	24601.2	537.41	ug/L	537.41 ppb	01:38:04
2	Cr 267.716†	43653.3	43809.4	510.65	ug/L	510.65 ppb	01:38:04
2	Cu 324.752†	177745.9	172832.9	524.27	ug/L	524.27 ppb	01:38:04
2	Mn 257.610†	452472.0	454330.8	523.00	ug/L	523.00 ppb	01:37:59
2	Mo 202.031†	6735.4	6754.2	506.27	ug/L	506.27 ppb	01:38:24
2	Ni 231.604†	19837.2	19830.5	513.42	ug/L	513.42 ppb	01:38:04

2	P 214.914†	4325.2	4119.3	2461.1 ug/L	2461.1 ppb	01:38:24
2	Pb 220.353†	3981.3	4063.4	508.59 ug/L	508.59 ppb	01:38:24
2	S 181.975 Axial†	737.5	702.0	1022.6 ug/L	1022.6 ppb	01:38:24
2	Sb 206.836†	1498.3	1463.8	528.34 ug/L	528.34 ppb	01:38:24
2	Se 196.026†	736.4	762.2	531.76 ug/L	531.76 ppb	01:38:24
2	Si 251.611†	78757.0	78596.9	2622.7 ug/L	2622.7 ppb	01:38:04
2	Sn 189.927†	2700.8	2705.9	503.03 ug/L	503.03 ppb	01:38:24
2	Ti 334.940†	318755.5	321686.6	521.61 ug/L	521.61 ppb	01:38:04
2	Tl 190.801†	1582.3	1624.6	524.11 ug/L	524.11 ppb	01:38:24
2	U 409.014†	14637.9	17692.7	511.30 ug/L	511.30 ppb	01:38:04
2	V 292.402†	68351.9	70255.6	516.96 ug/L	516.96 ppb	01:38:04
2	Zn 213.857†	53432.8	52992.4	518.05 ug/L	518.05 ppb	01:38:04
2	SiO2†	76832.4	76641.6	5453.2 ug/L	5453.2 ppb	01:39:06
3	Sc Radial	4923.6	4923.6	102 %		01:37:01
3	Y RADIAL	5191.8	5191.8	103.8 %		01:37:01
3	Al 396.153Radial†	5690.2	5706.9	5272.4 ug/L	5272.4 ppb	01:37:01
3	Ca 317.933Radial†	3222.2	3129.2	5186.4 ug/L	5186.4 ppb	01:37:21
3	Fe 238.204 Radial†	580.8	555.5	5070.2 ug/L	5070.2 ppb	01:37:21
3	K 766.490 Radial†	31935.8	28353.3	4998.5 ug/L	4998.5 ppb	01:37:01
3	Mg 279.077 IEC†	155.2	151.1	5353.8 ug/L	5353.8 ppb	01:37:21
3	Na 589.592 Radial†	32204.0	32519.3	9835.4 ug/L	9835.4 ppb	01:37:01
3	Sr 421.552†	79059.1	77183.5	541.26 ug/L	541.26 ppb	01:37:01
3	Sc 361.383	859212.3	859212.3	99.666 %		01:38:30
3	Y 371.029	691785.8	691785.8	96.807 %		01:38:30
3	Ag 328.068†	107614.6	107746.8	510.94 ug/L	510.94 ppb	01:38:35
3	As 188.979†	1096.7	1134.2	519.06 ug/L	519.06 ppb	01:38:55
3	B 249.677†	20975.7	21585.1	511.18 ug/L	511.18 ppb	01:38:35
3	Ba 233.527†	63300.7	63524.6	520.05 ug/L	520.05 ppb	01:38:35
3	Be 313.107†	1367641.8	1376567.9	513.89 ug/L	513.89 ppb	01:38:30
3	Cd 226.502†	42150.9	42504.2	505.23 ug/L	505.23 ppb	01:38:35
3	Co 228.616†	24005.4	24159.7	527.77 ug/L	527.77 ppb	01:38:35
3	Cr 267.716†	43164.3	43242.3	504.04 ug/L	504.04 ppb	01:38:35
3	Cu 324.752†	175265.9	170033.0	515.78 ug/L	515.78 ppb	01:38:35
3	Mn 257.610†	450478.8	451537.9	519.78 ug/L	519.78 ppb	01:38:30
3	Mo 202.031†	6682.2	6689.1	501.39 ug/L	501.39 ppb	01:38:55
3	Ni 231.604†	19663.5	19621.4	508.01 ug/L	508.01 ppb	01:38:35
3	P 214.914†	4305.6	4092.0	2445.9 ug/L	2445.9 ppb	01:38:55
3	Pb 220.353†	3960.1	4035.1	505.07 ug/L	505.07 ppb	01:38:55
3	S 181.975 Axial†	736.1	699.2	1018.6 ug/L	1018.6 ppb	01:38:55
3	Sb 206.836†	1480.7	1443.6	521.13 ug/L	521.13 ppb	01:38:55
3	Se 196.026†	716.6	741.2	517.35 ug/L	517.35 ppb	01:38:55
3	Si 251.611†	77624.4	77322.5	2580.2 ug/L	2580.2 ppb	01:38:35
3	Sn 189.927†	2689.6	2689.9	500.05 ug/L	500.05 ppb	01:38:55
3	Ti 334.940†	314987.6	317347.3	514.58 ug/L	514.58 ppb	01:38:35
3	Tl 190.801†	1569.0	1608.5	518.93 ug/L	518.93 ppb	01:38:55
3	U 409.014†	14208.5	17236.2	498.09 ug/L	498.09 ppb	01:38:35
3	V 292.402†	67518.8	69299.9	509.94 ug/L	509.94 ppb	01:38:35
3	Zn 213.857†	52639.8	52103.1	509.33 ug/L	509.33 ppb	01:38:35
3	SiO2†	78233.9	77913.2	5544.1 ug/L	5544.1 ppb	01:39:11

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	856444.7	99.345 %	0.4148			0.42%
Sc Radial	4875.6	101 %	2.2			2.13%
Y 371.029	689359.1	96.467 %	0.3893			0.40%
Y RADIAL	5116.1	102.3 %	2.51			2.46%
Ag 328.068†	108775.2	515.82 ug/L	4.239	515.82 ppb	4.239	0.82%
QC value within limits for Ag 328.068 Recovery = 103.16%						
Al 396.153Radial†	5703.4	5269.0 ug/L	12.50	5269.0 ppb	12.50	0.24%
QC value within limits for Al 396.153Radial Recovery = 105.38%						
As 188.979†	1137.0	520.36 ug/L	2.230	520.36 ppb	2.230	0.43%
QC value within limits for As 188.979 Recovery = 104.07%						
B 249.677†	21720.5	514.37 ug/L	3.310	514.37 ppb	3.310	0.64%
QC value within limits for B 249.677 Recovery = 102.87%						
Ba 233.527†	64093.1	524.71 ug/L	4.033	524.71 ppb	4.033	0.77%
QC value within limits for Ba 233.527 Recovery = 104.94%						
Be 313.107†	1377526.1	514.26 ug/L	0.562	514.26 ppb	0.562	0.11%
QC value within limits for Be 313.107 Recovery = 102.85%						
Ca 317.933Radial†	3161.7	5240.4 ug/L	107.98	5240.4 ppb	107.98	2.06%

QC value within limits for Ca 317.933 Radial Recovery = 104.81%									
Cd	226.502†	42898.0	509.91 ug/L	4.051	509.91 ppb	4.051	0.79%		
QC value within limits for Cd 226.502 Recovery = 101.98%									
Co	228.616†	24425.7	533.58 ug/L	5.115	533.58 ppb	5.115	0.96%		
QC value within limits for Co 228.616 Recovery = 106.72%									
Cr	267.716†	43615.3	508.38 ug/L	3.765	508.38 ppb	3.765	0.74%		
QC value within limits for Cr 267.716 Recovery = 101.68%									
Cu	324.752†	171971.7	521.66 ug/L	5.103	521.66 ppb	5.103	0.98%		
QC value within limits for Cu 324.752 Recovery = 104.33%									
Fe	238.204 Radial†	564.8	5155.3 ug/L	99.90	5155.3 ppb	99.90	1.94%		
QC value within limits for Fe 238.204 Radial Recovery = 103.11%									
K	766.490 Radial†	28320.4	4992.7 ug/L	23.64	4992.7 ppb	23.64	0.47%		
QC value within limits for K 766.490 Radial Recovery = 99.85%									
Mg	279.077 IEC†	153.4	5435.2 ug/L	149.36	5435.2 ppb	149.36	2.75%		
QC value within limits for Mg 279.077 IEC Recovery = 108.70%									
Mn	257.610†	452867.2	521.32 ug/L	1.615	521.32 ppb	1.615	0.31%		
QC value within limits for Mn 257.610 Recovery = 104.26%									
Mo	202.031†	6736.8	504.97 ug/L	3.140	504.97 ppb	3.140	0.62%		
QC value within limits for Mo 202.031 Recovery = 100.99%									
Na	589.592 Radial†	32721.6	9896.6 ug/L	74.33	9896.6 ppb	74.33	0.75%		
QC value within limits for Na 589.592 Radial Recovery = 98.97%									
Ni	231.604†	19782.4	512.18 ug/L	3.706	512.18 ppb	3.706	0.72%		
QC value within limits for Ni 231.604 Recovery = 102.44%									
P	214.914†	4121.7	2463.1 ug/L	18.32	2463.1 ppb	18.32	0.74%		
QC value within limits for P 214.914 Recovery = 98.53%									
Pb	220.353†	4062.6	508.50 ug/L	3.382	508.50 ppb	3.382	0.67%		
QC value within limits for Pb 220.353 Recovery = 101.70%									
S	181.975 Axial†	706.5	1029.2 ug/L	15.07	1029.2 ppb	15.07	1.46%		
QC value within limits for S 181.975 Axial Recovery = 102.92%									
Sb	206.836†	1455.1	525.26 ug/L	3.720	525.26 ppb	3.720	0.71%		
QC value within limits for Sb 206.836 Recovery = 105.05%									
Se	196.026†	755.6	527.34 ug/L	8.666	527.34 ppb	8.666	1.64%		
QC value within limits for Se 196.026 Recovery = 105.47%									
Si	251.611†	78198.1	2609.4 ug/L	25.36	2609.4 ppb	25.36	0.97%		
QC value within limits for Si 251.611 Recovery = 104.38%									
Sn	189.927†	2702.0	502.31 ug/L	1.998	502.31 ppb	1.998	0.40%		
QC value within limits for Sn 189.927 Recovery = 100.46%									
Sr	421.552†	77108.2	540.73 ug/L	1.095	540.73 ppb	1.095	0.20%		
QC value within limits for Sr 421.552 Recovery = 108.15%									
Ti	334.940†	320291.9	519.35 ug/L	4.134	519.35 ppb	4.134	0.80%		
QC value within limits for Ti 334.940 Recovery = 103.87%									
Tl	190.801†	1618.6	522.19 ug/L	2.835	522.19 ppb	2.835	0.54%		
QC value within limits for Tl 190.801 Recovery = 104.44%									
U	409.014†	17569.6	507.74 ug/L	8.451	507.74 ppb	8.451	1.66%		
QC value within limits for U 409.014 Recovery = 101.55%									
V	292.402†	69949.4	514.71 ug/L	4.131	514.71 ppb	4.131	0.80%		
QC value within limits for V 292.402 Recovery = 102.94%									
Zn	213.857†	52700.1	515.17 ug/L	5.060	515.17 ppb	5.060	0.98%		
QC value within limits for Zn 213.857 Recovery = 103.03%									
SiO2†		77188.9	5492.3 ug/L	46.73	5492.3 ppb	46.73	0.85%		
QC value within limits for SiO2 Recovery = 102.71%									
All analyte(s) passed QC.									

Sequence No.: 81

Sample ID: CCB

Analyst:

Initial Sample Wt:

Dilution:

Autosampler Location: 8

Date Collected: 2/12/2010 01:41:21

Data Type: Original

Initial Sample Vol:

Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc. Units	Sample Conc. Units	Analysis Time
1	Sc Radial	4883.1	4883.1	102 %		01:43:14
1	Y RADIAL	5169.7	5169.7	103.4 %		01:43:14
1	Al 396.153Radial†	-150.3	3.7	3.3936 ug/L	3.3936 ppb	01:43:14
1	Ca 317.933Radial†	29.8	12.6	20.882 ug/L	20.882 ppb	01:43:34
1	Fe 238.204 Radial†	10.6	-1.0	-9.1606 ug/L	-9.1606 ppb	01:43:34
1	K 766.490 Radial†	2867.5	-3.0	-0.5464 ug/L	-0.5464 ppb	01:43:14
1	Mg 279.077 IEC†	1.5	1.0	36.806 ug/L	36.806 ppb	01:43:34
1	Na 589.592 Radial†	-972.7	121.0	36.598 ug/L	36.598 ppb	01:43:14
1	Sr 421.552†	4.9	2.7	0.0188 ug/L	0.0188 ppb	01:43:14
1	Sc 361.383	839106.1	839106.1	97.333 %		01:44:31
1	Y 371.029	683676.4	683676.4	95.672 %		01:44:31
1	Ag 328.068†	198.3	-25.1	-0.1214 ug/L	-0.1214 ppb	01:44:31
1	As 188.979†	-25.2	7.9	3.6004 ug/L	3.6004 ppb	01:44:51
1	B 249.677†	-385.7	142.8	3.3976 ug/L	3.3976 ppb	01:44:51
1	Ba 233.527†	-9.9	1.4	0.0117 ug/L	0.0117 ppb	01:44:51
1	Be 313.107†	-4220.2	2.9	0.0012 ug/L	0.0012 ppb	01:44:31
1	Cd 226.502†	-194.0	12.6	0.1511 ug/L	0.1511 ppb	01:44:51
1	Co 228.616†	-55.8	16.4	0.3589 ug/L	0.3589 ppb	01:44:51
1	Cr 267.716†	70.1	5.2	0.0609 ug/L	0.0609 ppb	01:44:51
1	Cu 324.752†	5369.3	-304.3	-0.9238 ug/L	-0.9238 ppb	01:44:31
1	Mn 257.610†	551.9	115.1	0.1300 ug/L	0.1300 ppb	01:44:51
1	Mo 202.031†	19.9	4.9	0.3675 ug/L	0.3675 ppb	01:44:51
1	Ni 231.604†	107.5	2.4	0.0631 ug/L	0.0631 ppb	01:44:51
1	P 214.914†	224.2	2.3	1.6245 ug/L	1.6245 ppb	01:44:51
1	Pb 220.353†	-50.5	9.8	1.2278 ug/L	1.2278 ppb	01:44:51
1	S 181.975 Axial†	40.5	2.3	3.3468 ug/L	3.3468 ppb	01:44:51
1	Sb 206.836†	46.3	5.4	1.9060 ug/L	1.9060 ppb	01:44:51
1	Se 196.026†	-18.3	3.3	2.2183 ug/L	2.2183 ppb	01:44:51
1	Si 251.611†	584.5	38.2	1.2739 ug/L	1.2739 ppb	01:44:51
1	Sn 189.927†	14.0	5.7	1.0603 ug/L	1.0603 ppb	01:44:51
1	Ti 334.940†	-1235.0	34.4	0.0554 ug/L	0.0554 ppb	01:44:31
1	Tl 190.801†	-35.9	-2.7	-0.8583 ug/L	-0.8583 ppb	01:44:51
1	U 409.014†	-2883.8	17.3	0.5017 ug/L	0.5017 ppb	01:44:31
1	V 292.402†	-1494.4	19.3	0.1483 ug/L	0.1483 ppb	01:44:31
1	Zn 213.857†	786.1	94.4	0.9331 ug/L	0.9331 ppb	01:44:51
1	SiO2†	657.8	92.7	6.6033 ug/L	6.6033 ppb	01:45:47
2	Sc Radial	4822.5	4822.5	100 %		01:43:39
2	Y RADIAL	5099.4	5099.4	102.0 %		01:43:39
2	Al 396.153Radial†	-162.2	-10.1	-9.3929 ug/L	-9.3929 ppb	01:43:39
2	Ca 317.933Radial†	27.7	10.9	18.076 ug/L	18.076 ppb	01:43:59
2	Fe 238.204 Radial†	13.3	1.7	15.834 ug/L	15.834 ppb	01:43:59
2	K 766.490 Radial†	2778.4	-56.2	-9.9410 ug/L	-9.9410 ppb	01:43:39
2	Mg 279.077 IEC†	1.0	0.6	19.750 ug/L	19.750 ppb	01:43:59
2	Na 589.592 Radial†	-1004.0	77.7	23.512 ug/L	23.512 ppb	01:43:39
2	Sr 421.552†	-13.8	-15.9	-0.1115 ug/L	-0.1115 ppb	01:43:39
2	Sc 361.383	829336.9	829336.9	96.200 %		01:44:56
2	Y 371.029	675028.0	675028.0	94.462 %		01:44:56
2	Ag 328.068†	211.2	-9.2	-0.0365 ug/L	-0.0365 ppb	01:44:56
2	As 188.979†	-26.6	6.2	2.8450 ug/L	2.8450 ppb	01:45:16
2	B 249.677†	-389.2	134.5	3.1959 ug/L	3.1959 ppb	01:45:16
2	Ba 233.527†	-1.7	9.8	0.0814 ug/L	0.0814 ppb	01:45:16
2	Be 313.107†	-4093.4	83.7	0.0337 ug/L	0.0337 ppb	01:44:56
2	Cd 226.502†	-194.8	9.4	0.1106 ug/L	0.1106 ppb	01:45:16
2	Co 228.616†	-66.5	4.6	0.0993 ug/L	0.0993 ppb	01:45:16
2	Cr 267.716†	76.3	12.5	0.1467 ug/L	0.1467 ppb	01:45:16
2	Cu 324.752†	5476.6	-127.8	-0.3865 ug/L	-0.3865 ppb	01:44:56
2	Mn 257.610†	640.9	214.3	0.2473 ug/L	0.2473 ppb	01:45:16
2	Mo 202.031†	23.1	8.5	0.6387 ug/L	0.6387 ppb	01:45:16
2	Ni 231.604†	112.8	9.2	0.2392 ug/L	0.2392 ppb	01:45:16

2	P 214.914†	218.0	-1.5	-0.8585 ug/L	-0.8585 ppb	01:45:16
2	Pb 220.353†	-50.9	8.8	1.0937 ug/L	1.0937 ppb	01:45:16
2	S 181.975 Axial†	39.1	1.3	1.8449 ug/L	1.8449 ppb	01:45:16
2	Sb 206.836†	41.9	1.4	0.4910 ug/L	0.4910 ppb	01:45:16
2	Se 196.026†	-20.8	0.5	0.3841 ug/L	0.3841 ppb	01:45:16
2	Si 251.611†	593.2	54.4	1.8112 ug/L	1.8112 ppb	01:45:16
2	Sn 189.927†	9.3	1.0	0.1886 ug/L	0.1886 ppb	01:45:16
2	Ti 334.940†	-604.8	674.5	1.0951 ug/L	1.0951 ppb	01:44:56
2	Tl 190.801†	-40.1	-7.5	-2.3819 ug/L	-2.3819 ppb	01:45:16
2	U 409.014†	-2885.9	-19.8	-0.5760 ug/L	-0.5760 ppb	01:44:56
2	V 292.402†	-1447.5	50.0	0.3675 ug/L	0.3675 ppb	01:44:56
2	Zn 213.857†	781.0	98.6	0.9697 ug/L	0.9697 ppb	01:45:16
2	SiO2†	554.3	-7.0	-0.5142 ug/L	-0.5142 ppb	01:45:52
3	Sc Radial	4988.3	4988.3	104 %		01:44:04
3	Y RADIAL	5298.5	5298.5	106.0 %		01:44:04
3	Al 396.153Radial†	-141.0	15.7	14.506 ug/L	14.506 ppb	01:44:04
3	Ca 317.933Radial†	28.6	10.9	18.054 ug/L	18.054 ppb	01:44:24
3	Fe 238.204 Radial†	9.7	-2.2	-19.571 ug/L	-19.571 ppb	01:44:24
3	K 766.490 Radial†	2759.6	-166.4	-29.397 ug/L	-29.397 ppb	01:44:04
3	Mg 279.077 IEC†	2.1	1.6	58.332 ug/L	58.332 ppb	01:44:24
3	Na 589.592 Radial†	-983.7	130.6	39.506 ug/L	39.506 ppb	01:44:04
3	Sr 421.552†	9.0	6.6	0.0462 ug/L	0.0462 ppb	01:44:04
3	Sc 361.383	851437.6	851437.6	98.764 %		01:45:22
3	Y 371.029	693797.1	693797.1	97.088 %		01:45:22
3	Ag 328.068†	319.8	95.0	0.4397 ug/L	0.4397 ppb	01:45:22
3	As 188.979†	-22.9	10.7	4.8610 ug/L	4.8610 ppb	01:45:42
3	B 249.677†	-416.0	117.8	2.8048 ug/L	2.8048 ppb	01:45:42
3	Ba 233.527†	2.3	13.9	0.1140 ug/L	0.1140 ppb	01:45:42
3	Be 313.107†	-4229.8	55.9	0.0209 ug/L	0.0209 ppb	01:45:22
3	Cd 226.502†	-192.0	17.5	0.2107 ug/L	0.2107 ppb	01:45:42
3	Co 228.616†	-65.2	7.7	0.1695 ug/L	0.1695 ppb	01:45:42
3	Cr 267.716†	80.3	14.5	0.1680 ug/L	0.1680 ppb	01:45:42
3	Cu 324.752†	5355.8	-397.9	-1.2100 ug/L	-1.2100 ppb	01:45:22
3	Mn 257.610†	623.1	179.0	0.2016 ug/L	0.2016 ppb	01:45:42
3	Mo 202.031†	25.8	10.6	0.7937 ug/L	0.7937 ppb	01:45:42
3	Ni 231.604†	103.3	-3.4	-0.0880 ug/L	-0.0880 ppb	01:45:42
3	P 214.914†	225.3	0.0	0.2881 ug/L	0.2881 ppb	01:45:42
3	Pb 220.353†	-44.5	16.7	2.0921 ug/L	2.0921 ppb	01:45:42
3	S 181.975 Axial†	39.0	0.2	0.2795 ug/L	0.2795 ppb	01:45:42
3	Sb 206.836†	36.6	-5.1	-1.7443 ug/L	-1.7443 ppb	01:45:42
3	Se 196.026†	-17.2	4.7	3.0780 ug/L	3.0780 ppb	01:45:42
3	Si 251.611†	614.0	59.4	1.9761 ug/L	1.9761 ppb	01:45:42
3	Sn 189.927†	13.8	5.3	0.9833 ug/L	0.9833 ppb	01:45:42
3	Ti 334.940†	-1261.9	25.5	0.0374 ug/L	0.0374 ppb	01:45:22
3	Tl 190.801†	-37.3	-3.6	-1.1438 ug/L	-1.1438 ppb	01:45:42
3	U 409.014†	-2819.1	125.7	3.6467 ug/L	3.6467 ppb	01:45:22
3	V 292.402†	-1473.5	62.7	0.4773 ug/L	0.4773 ppb	01:45:22
3	Zn 213.857†	769.3	65.7	0.6534 ug/L	0.6534 ppb	01:45:42
3	SiO2†	651.6	76.6	5.4434 ug/L	5.4434 ppb	01:45:57

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
Sc 361.383	839960.2	97.433 %		1.2847			1.32%
Sc Radial	4898.0	102 %		1.7			1.71%
Y 371.029	684167.1	95.741 %		1.3146			1.37%
Y RADIAL	5189.2	103.8 %		2.02			1.95%
Ag 328.068†	20.2	0.0940 ug/L		0.30244	0.0940 ppb	0.30244	321.90%
QC value within limits for Ag 328.068 Recovery = Not calculated							
Al 396.153Radial†	3.1	2.8355 ug/L		11.95904	2.8355 ppb	11.95904	421.77%
QC value within limits for Al 396.153Radial Recovery = Not calculated							
As 188.979†	8.3	3.7688 ug/L		1.01849	3.7688 ppb	1.01849	27.02%
QC value within limits for As 188.979 Recovery = Not calculated							
B 249.677†	131.7	3.1328 ug/L		0.30137	3.1328 ppb	0.30137	9.62%
QC value within limits for B 249.677 Recovery = Not calculated							
Ba 233.527†	8.4	0.0690 ug/L		0.05226	0.0690 ppb	0.05226	75.71%
QC value within limits for Ba 233.527 Recovery = Not calculated							
Be 313.107†	47.5	0.0186 ug/L		0.01635	0.0186 ppb	0.01635	87.92%
QC value within limits for Be 313.107 Recovery = Not calculated							
Ca 317.933Radial†	11.5	19.004 ug/L		1.6263	19.004 ppb	1.6263	8.56%

QC value within limits for Ca 317.933 Radial Recovery = Not calculated							
Cd	226.502†	13.2	0.1575 ug/L	0.05035	0.1575 ppb	0.05035	31.98%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co	228.616†	9.6	0.2092 ug/L	0.13427	0.2092 ppb	0.13427	64.17%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr	267.716†	10.8	0.1252 ug/L	0.05672	0.1252 ppb	0.05672	45.31%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu	324.752†	-276.7	-0.8401 ug/L	0.41811	-0.8401 ppb	0.41811	49.77%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe	238.204 Radial†	-0.5	-4.2992 ug/L	18.19605	-4.2992 ppb	18.19605	423.25%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K	766.490 Radial†	-75.2	-13.295 ug/L	14.7146	-13.295 ppb	14.7146	110.68%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg	279.077 IEC†	1.1	38.296 ug/L	19.3342	38.296 ppb	19.3342	50.49%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn	257.610†	169.5	0.1930 ug/L	0.05913	0.1930 ppb	0.05913	30.64%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo	202.031†	8.0	0.6000 ug/L	0.21571	0.6000 ppb	0.21571	35.95%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na	589.592 Radial†	109.8	33.206 ug/L	8.5195	33.206 ppb	8.5195	25.66%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni	231.604†	2.8	0.0714 ug/L	0.16375	0.0714 ppb	0.16375	229.30%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P	214.914†	0.3	0.3513 ug/L	1.24270	0.3513 ppb	1.24270	353.70%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb	220.353†	11.8	1.4712 ug/L	0.54187	1.4712 ppb	0.54187	36.83%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S	181.975 Axial†	1.3	1.8237 ug/L	1.53375	1.8237 ppb	1.53375	84.10%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb	206.836†	0.6	0.2176 ug/L	1.84043	0.2176 ppb	1.84043	845.98%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se	196.026†	2.8	1.8934 ug/L	1.37601	1.8934 ppb	1.37601	72.67%
QC value within limits for Se 196.026 Recovery = Not calculated							
Si	251.611†	50.7	1.6871 ug/L	0.36718	1.6871 ppb	0.36718	21.76%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn	189.927†	4.0	0.7441 ug/L	0.48262	0.7441 ppb	0.48262	64.86%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr	421.552†	-2.2	-0.0155 ug/L	0.08425	-0.0155 ppb	0.08425	543.16%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti	334.940†	244.8	0.3959 ug/L	0.60554	0.3959 ppb	0.60554	152.94%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl	190.801†	-4.6	-1.4613 ug/L	0.80994	-1.4613 ppb	0.80994	55.42%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U	409.014†	41.1	1.1908 ug/L	2.19405	1.1908 ppb	2.19405	184.25%
QC value within limits for U 409.014 Recovery = Not calculated							
V	292.402†	44.0	0.3310 ug/L	0.16755	0.3310 ppb	0.16755	50.61%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn	213.857†	86.2	0.8521 ug/L	0.17303	0.8521 ppb	0.17303	20.31%
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†		54.1	3.8442 ug/L	3.81874	3.8442 ppb	3.81874	99.34%
QC value within limits for SiO2 Recovery = Not calculated							

All analyte(s) passed QC.

Daily Performance Report

Sample ID: Sample

Sample Date/Time: Saturday, February 13, 2010 14:53:47

Sample Description:

Method File: c:\elandata\Method\daily2.mth

Dataset File: c:\elandata\Dataset\100125\Sample.320

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	1166.8	1166.848	36.468	3.1
Mg	24.0	14132.2	14132.187	94.630	0.7
Co	58.9	44494.4	44494.392	551.949	1.2
Rh	102.9	86899.9	86899.920	746.363	0.9
In	114.9	120318.0	120317.952	320.860	0.3
Pb	208.0	48341.3	48341.261	540.347	1.1
[> Ba	137.9	96325.0	96324.966	554.527	0.6
[Ba++	69.0	1075.7	0.011	0.000	3.4
[> Ce	139.9	112930.2	112930.212	483.271	0.4
[CeO	155.9	2573.6	0.023	0.000	1.7
Bkgd	220.0	2.2	2.200	0.570	25.9

Current Optimization File Data

Current Value	Description
0.91	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	920.7
Co	59	17	4.8	30244.0
In	115	17	5.5	86185.9

ICPMS #4 TUNING REPORT

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	603	2060	0.705
Be	9.0	9.0	2045	2045	0.720
Mg	24.0	24.0	5678	2065	0.711
Mg	25.0	25.0	5941	2080	0.701
Mg	26.0	26.0	6157	2085	0.699
Co	58.9	59.0	14186	2140	0.662
Rh	102.9	102.9	24867	2230	0.676
In	114.9	114.9	27777	2255	0.695
Ce	139.9	139.9	33853	2310	0.661
Pb	206.0	205.9	49924	2500	0.612
Pb	207.0	206.9	50101	2375	0.618
Pb	208.0	208.0	50436	2570	0.602
U	238.1	238.1	57689	2510	0.645

ICPMS#4 - Summary Report

Sample ID: Blank

Sample Date/Time: Sunday, February 14, 2010 08:05:31

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\Blank.263

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		120939	
[	U	238	ug/L		85	

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175				
[U	238				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Sunday, February 14, 2010 08:07:12

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\Standard 1.264

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		120452	120451.584
[U 238	10.000	ug/L	1.369	106575	0.884

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175					
[U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Sunday, February 14, 2010 08:08:51

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\Standard 2.265

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		119160	119160.470
[	U 238	99.981	ug/L	0.915	1033879	8.676

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175					
[	U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Sunday, February 14, 2010 08:10:31

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 1.266

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		120216	120216.293
[	U 238	53.119	ug/L	0.871	554180	4.609

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175			99.4		
[	U 238	106.237				

QC Out Of Limits

Measurement Type Analyte MassOut 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: Sunday, February 14, 2010 08:12:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 2.267

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		120057	120056.629
[	U 238	0.034	ug/L	4.300	443	0.003

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		99.3			
[	U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Sunday, February 14, 2010 08:13:55

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 3.268

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		120363	120363.465
[	U	238	0.253 ug/L	2.259	2732	0.022

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		99.5		
[	U	238	126.715			

QC Out Of Limits

Measurement Type Analyte MassOut 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: Sunday, February 14, 2010 08:15:36

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 4.269

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		109018	109018.173
[U 238	0.003	ug/L	36.509	105	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175		90.1			
[U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Sunday, February 14, 2010 08:17:18

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 5.270

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		109090	109090.042
[	U 238	18.980	ug/L	0.783	179740	1.647

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175			90.2		
[	U 238	94.898				

QC Out Of Limits

Measurement Type Analyte MassOut 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: Sunday, February 14, 2010 08:19:00

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.271

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		114745	114744.826
[U 238	50.523	ug/L	1.377	503091	4.384

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175			94.9		
[U 238	101.046				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, February 14, 2010 08:20:43

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.272

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		115784	115784.474
[	U 238	0.023	ug/L	12.028	310	0.002

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175			95.7		
[U 238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202024764

Sample Date/Time: Sunday, February 14, 2010 08:22:25

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\1202024764.273

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		116658	116657.884
[U 238	0.010	ug/L	4.378	186	0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175			96.5		
[U 238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202024765

Sample Date/Time: Sunday, February 14, 2010 08:24:06

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 945396|40|ba|

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\1202024765.274

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		116711	116711.326
[U 238	0.542	ug/L	0.914	5571	0.047

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175			96.5		
[U 238					

QC Out Of Limits

Measurement Type Analyte MassOut 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: Sunday, February 14, 2010 08:36:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.281

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		118497	118497.313
[U	238	51.547	ug/L	1.004	530134	4.473

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu	175			98.0		
[U	238	103.094				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, February 14, 2010 08:37:49

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.282

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		117315	117314.584
[U 238	0.022	ug/L	8.419	308	0.002

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175			97.0		
[U 238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Sunday, February 14, 2010 08:53:16

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.291

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		114476	114476.326
[U 238	52.974	ug/L	0.901	526317	4.597

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175			94.7		
[U 238	105.949				

QC Out Of Limits

Measurement Type Analyte MassOut 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: Sunday, February 14, 2010 08:55:00

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.292

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		115729	115728.689
[	U 238	0.027	ug/L	9.495	351	0.002

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		95.7			
[	U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 245396001

Sample Date/Time: Sunday, February 14, 2010 09:00:11

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945396[2]baj

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\245396001.295

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		124792	124791.951
[	U	238	ug/L	0.722	71555	0.573

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		103.2		
[	U	238				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202024766

Sample Date/Time: Sunday, February 14, 2010 09:01:55

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\1202024766.296

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		129791	129791.232
[U	238	5.450	ug/L	0.112	61470	0.473

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		107.3			
[U	238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202024767

Sample Date/Time: Sunday, February 14, 2010 09:03:40

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\1202024767.297

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		130203	130203.294
[U 238	31.023	ug/L	1.415	350609	2.692

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175		107.7			
[U 238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202024772

Sample Date/Time: Sunday, February 14, 2010 09:05:24

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\1202024772.298

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		131423	131422.754
[	U	238	31.687 ug/L	0.549	361469	2.750

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		108.7		
[U	238				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202024768

Sample Date/Time: Sunday, February 14, 2010 09:07:07

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 945396|10|bej

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\1202024768.299

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		124341	124341.410
[	U	238	1.382 ug/L	2.932	14993	0.120

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		102.8		
[U	238				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Sunday, February 14, 2010 09:08:50

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.300

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		120453	120453.221
[	U 238	51.977	ug/L	0.469	543378	4.510

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175			99.6		
[U 238	103.954				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, February 14, 2010 09:10:33

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.301

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		119893	119892.584
[	U 238	0.033	ug/L	1.492	429	0.003

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175			99.1		
[U 238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 245396004

Sample Date/Time: Sunday, February 14, 2010 09:15:46

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945396[2]baj

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\245396004.304

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		127361	127360.809
[	U	238	40.587 ug/L	0.945	448654	3.522

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		105.3		
[U	238				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Sunday, February 14, 2010 09:17:29

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 6.305

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		120801	120800.825
[	U 238	52.377	ug/L	1.279	549112	4.545

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175			99.9		
[	U 238	104.753				

QC Out Of Limits

Measurement Type Analyte MassOut 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: Sunday, February 14, 2010 09:19:13

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100213\QC Std 7.306

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		115277	115277.427
[	U 238	0.039	ug/L	6.103	470	0.003

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		95.3			
[	U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Daily Performance Report

Sample ID: Sample

Sample Date/Time: Sunday, February 14, 2010 11:49:04

Sample Description:

Method File: c:\elandata\Method\daily2.mth

Dataset File: c:\elandata\Dataset\100125\Sample.321

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		986.0		986.034		34.874		3.5
Mg	24.0		13418.5		13418.499		79.034		0.6
Co	58.9		38979.9		38979.912		400.608		1.0
Rh	102.9		74548.4		74548.448		1240.322		1.7
In	114.9		105307.6		105307.552		1177.038		1.1
Pb	208.0		40241.8		40241.803		341.801		0.8
> Ba	137.9		82380.5		82380.509		887.487		1.1
[Ba++	69.0		950.4		0.012		0.000		2.1
> Ce	139.9		95752.0		95752.031		488.241		0.5
[CeO	155.9		2093.3		0.022		0.000		1.8
Bkgd	220.0		2.5		2.500		1.275		51.0

Current Optimization File Data

Current Value	Description
0.91	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	4.0	788.4
Co	59	17	4.5	24374.1
In	115	17	5.3	67998.1

ICPMS #4 TUNING REPORT

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	605	2060	0.699
Be	9.0	9.0	2037	2045	0.748
Mg	24.0	24.0	5688	2065	0.693
Mg	25.0	25.0	5939	2080	0.680
Mg	26.0	26.0	6156	2085	0.672
Co	58.9	58.9	14184	2140	0.650
Rh	102.9	102.9	24872	2230	0.664
In	114.9	114.9	27783	2255	0.689
Ce	139.9	139.9	33858	2310	0.649
Pb	206.0	206.0	49937	2500	0.613
Pb	207.0	207.0	50113	2375	0.619
Pb	208.0	208.0	50448	2570	0.602
U	238.1	238.0	57683	2510	0.651

ICPMS#4 - Summary Report

Sample ID: Blank

Sample Date/Time: Sunday, February 14, 2010 12:07:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100214\Blank.001

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		106823	
[U 238		ug/L		77	

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Simple Linear	
U	238Simple Linear	

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175					
[U 238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Sunday, February 14, 2010 12:09:24

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100214\Standard 1.002

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		107418	107418.129
[	U 238	10.000	ug/L	0.507	103442	0.962

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175					
[U 238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Sunday, February 14, 2010 12:11:03

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100214\Standard 2.003

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		107288	107288.105
[	U 238	99.969	ug/L	1.063	1000590	9.326

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175					
[U 238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Sunday, February 14, 2010 12:12:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 1.004

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		105511	105510.624
[	U 238	53.016	ug/L	1.970	521925	4.946

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175			98.8		
[	U 238	106.033				

QC Out Of Limits

Measurement Type Analyte MassOut 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: Sunday, February 14, 2010 12:14:25

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 2.005

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		105846	105845.726
[	U	238	0.040 ug/L	2.120	467	0.004

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		99.1		
[	U	238				

QC Out Of Limits

Measurement Type Analyte

MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Sunday, February 14, 2010 12:16:07

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 3.006

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		105491	105491.464
[	U	238	0.254 ug/L	2.791	2570	0.024

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		98.8		
[	U	238	126.756			

QC Out Of Limits

Measurement Type Analyte

MassOut 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: Sunday, February 14, 2010 12:17:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 4.007

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		94710	94710.191
[	U 238	0.007	ug/L	56.956	130	0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		88.7			
[	U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Sunday, February 14, 2010 12:19:29

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 5.008

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		94551	94551.171
[	U	238	18.580 ug/L	1.014	163938	1.733

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		88.5		
[	U	238	92.900			

QC Out Of Limits

Measurement Type: Analyte MassOut 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: Sunday, February 14, 2010 12:21:11

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 6.009

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		99251	99251.246
[U	238	48.602	ug/L	0.716	450052	4.534

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			92.9		
[U	238	97.203				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, February 14, 2010 12:22:55

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 7.010

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		99191	99190.828
[	U 238	0.030	ug/L	5.899	352	0.003

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		92.9			
[	U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 245396002

Sample Date/Time: Sunday, February 14, 2010 12:28:01

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945396|20|baj

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100214\245396002.013

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		102115	102115.038
[	U 238	12.314	ug/L	1.876	117367	1.149

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		95.6			
[	U 238					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 245396003

Sample Date/Time: Sunday, February 14, 2010 12:29:47

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945396[20]baj

Method File: c:\elandata\Method\only no lrs.mth

Dataset File: C:\elandata\Dataset\100214\245396003.014

Concentration Results

Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu 175		ug/L		102259	102259.058
[U 238	31.953	ug/L	0.474	304874	2.981

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[> Lu 175			95.7		
[U 238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Sunday, February 14, 2010 12:31:31

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\w only no lrs.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 6.015

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu 175		ug/L		101207	101207.252
[	U 238	49.696	ug/L	0.523	469261	4.636

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu 175		94.7			
[U 238	99.392				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, February 14, 2010 12:33:14

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\lu only no lrs.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 7.016

Concentration Results

	Analyte Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175	ug/L		101908	101908.319
[	U	238	0.037 ug/L	6.504	422	0.003

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Lu	175		95.4		
[	U	238				

QC Out Of Limits

Measurement Type Analyte MassOut 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: Saturday, February 13, 2010 10:14:49

Sample Description:

Method File: c:\elandata\Method\Daily2.mth

Dataset File: c:\elandata\Dataset\default\Sample.480

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		5702.1		5702.138		98.108		1.7
Mg	24.0		53382.2		53382.156		369.934		0.7
Co	58.9		126956.1		126956.090		1481.192		1.2
Rh	102.9		234012.5		234012.506		651.114		0.3
In	114.9		304048.2		304048.187		1620.031		0.5
Pb	208.0		236889.8		236889.778		1242.706		0.5
[> Ba	137.9		270555.9		270555.908		489.635		0.2
[Ba++	69.0		5659.3		0.021		0.000		1.5
[> Ce	139.9		338733.5		338733.542		1728.021		0.5
[CeO	155.9		7831.6		0.023		0.000		1.3
Bkgd	220.0		13.8		13.800		1.304		9.4

Current Optimization File Data

Current Value	Description
0.87	Nebulizer Gas Flow
5.25	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	9	5.5	5355.3
Co	59	9	5.8	129010.6
In	115	9	6.0	301212.4

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	585	2072	0.621
Be	9.0	9.0	2053	2088	0.617
Mg	24.0	24.0	5687	2100	0.581
Mg	25.0	25.0	5939	2100	0.585
Mg	26.0	25.9	6157	2100	0.592
Co	58.9	58.9	14168	2125	0.589
Rh	102.9	102.9	24868	2180	0.582
In	114.9	114.9	27782	2200	0.579
Ce	139.9	139.9	33866	2220	0.587
Pb	206.0	206.0	49948	2305	0.611
Pb	207.0	207.0	50159	2240	0.650
Pb	208.0	208.0	50451	2265	0.716
U	238.1	238.1	57726	2275	0.762

ICPMS#5 - Summary Report

Sample ID: Blank

Sample Date/Time: Saturday, February 13, 2010 21:18:26

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\Blank.669

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7		ug/L		28	
Be	9		ug/L		11	
B	11		ug/L		218	
Na	23		ug/L		5668	
Mg	24		ug/L		1667	
Al	27		ug/L		2334	
P	31		ug/L		5020	
K	39		ug/L		545950	
Ca	43		ug/L		397	
> Sc	45		ug/L		671245	
Ti	47		ug/L		425	
V	51		ug/L		-3142	
Cr	52		ug/L		4046	
Cr	53		ug/L		135661	
Mn	55		ug/L		1538	
Fe	57		ug/L		6419	
Co	59		ug/L		57	
Ni	60		ug/L		239	
Cu	63		ug/L		264	
Cu	65		ug/L		218	
Zn	66		ug/L		440	
Zn	67		ug/L		13272	
Zn	68		ug/L		1416	
> Ge	74		ug/L		567423	
As	75		ug/L		-1201	
Se	77		ug/L		11968	
Se	82		ug/L		19	
Kr	83		ug/L		142	
Sr	88		ug/L		134	
Y	89		ug/L		69	
Mo	98		ug/L		91	
Ag	107		ug/L		29	
Cd	111		ug/L		24	
Cd	114		ug/L		39	
> In	115		ug/L		367737	
Sn	120		ug/L		177	
Sb	121		ug/L		308	
Sb	123		ug/L		248	
Ba	135		ug/L		32	
Ba	137		ug/L		35	
Ho	165		ug/L		22	
> Lu	175		ug/L		539773	
Tl	205		ug/L		6144	
Pb	208		ug/L		509	
Bi	209		ug/L		109	
Th	232		ug/L		292	
U	238		ug/L		52	

Sample ID: Blank

Report Date/Time: Saturday, February 13, 2010 21:21:10

Page 1

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Simple Linear	
Be	9Simple Linear	
B	11Simple Linear	
Na	23Simple Linear	
Mg	24Simple Linear	
Al	27Simple Linear	
P	31Simple Linear	
K	39Simple Linear	
Ca	43Simple Linear	
Sc	45Linear Thru Zero	
Ti	47Simple Linear	
V	51Simple Linear	
Cr	52Simple Linear	
Cr	53Simple Linear	
Mn	55Linear Thru Zero	
Fe	57Simple Linear	
Co	59Simple Linear	
Ni	60Simple Linear	
Cu	63Simple Linear	
Cu	65Simple Linear	
Zn	66Simple Linear	
Zn	67Simple Linear	
Zn	68Simple Linear	
Ge	74Simple Linear	
As	75Simple Linear	
Se	77Simple Linear	
Se	82Simple Linear	
Kr	83Simple Linear	
Sr	88Simple Linear	
Y	89Simple Linear	
Mo	98Simple Linear	
Ag	107Simple Linear	
Cd	111Simple Linear	
Cd	114Simple Linear	
In	115Simple Linear	
Sn	120Simple Linear	
Sb	121Simple Linear	
Sb	123Simple Linear	
Ba	135Simple Linear	
Ba	137Simple Linear	
Ho	165Simple Linear	
Lu	175Linear Thru Zero	
Tl	205Simple Linear	
Pb	208Linear Thru Zero	
Bi	209Simple Linear	
Th	232Simple Linear	
U	238Simple Linear	

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					
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: Saturday, February 13, 2010 21:24:33

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\Standard 1.670

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	10.000	ug/L	0.640	14962	0.021
Be	9	10.000	ug/L	2.865	3445	0.005
B	11	20.000	ug/L	1.341	6415	0.009
Na	23	1000.000	ug/L	12.538	2714803	3.752
Mg	24	1000.000	ug/L	6.149	1927364	2.667
Al	27	1000.000	ug/L	7.664	3002254	4.154
P	31	1000.000	ug/L	2.680	200617	0.270
K	39	1000.000	ug/L	10.316	5467461	6.757
Ca	43	1000.000	ug/L	2.557	13890	0.019
> Sc	45		ug/L		722059	722058.748
Ti	47	10.000	ug/L	1.564	7545	0.010
V	51	10.000	ug/L	11.437	86054	0.124
Cr	52	10.000	ug/L	2.420	70801	0.092
Cr	53		ug/L		171184	0.035
Mn	55	10.000	ug/L	1.021	114906	0.157
Fe	57	1000.000	ug/L	3.124	237518	0.319
Co	59	10.000	ug/L	0.627	89415	0.124
Ni	60	10.000	ug/L	2.535	20208	0.028
Cu	63		ug/L		50208	0.069
Cu	65	10.000	ug/L	0.738	25274	0.035
Zn	66	10.000	ug/L	2.708	15957	0.026
Zn	67		ug/L		20533	0.011
Zn	68		ug/L		13264	0.020
> Ge	74		ug/L		590845	590844.852
As	75	10.000	ug/L	4.313	16106	0.029
Se	77		ug/L		15598	0.005
Se	82	10.000	ug/L	6.250	1807	0.003
Kr	83		ug/L		134	-0.000
Sr	88	10.000	ug/L	0.215	218852	0.576
Y	89		ug/L		87	0.000
Mo	98	10.000	ug/L	1.474	50662	0.133
Ag	107	10.000	ug/L	1.217	89924	0.237
Cd	111	10.000	ug/L	1.536	20892	0.055
Cd	114		ug/L		49737	0.131
> In	115		ug/L		380035	380034.775
Sn	120	10.000	ug/L	0.844	88101	0.231
Sb	121	10.000	ug/L	2.656	74679	0.196
Sb	123		ug/L		57841	0.152
Ba	135		ug/L		21531	0.038
Ba	137	10.000	ug/L	1.470	37631	0.067
Ho	165		ug/L		22	-0.000
> Lu	175		ug/L		562654	562654.032
Tl	205	10.000	ug/L	0.538	227370	0.393
Pb	208	10.000	ug/L	0.886	423568	0.752
Bi	209		ug/L		168	0.000
Th	232	10.000	ug/L	1.590	514770	0.914
U	238	10.000	ug/L	3.243	518224	0.921

Sample ID: Standard 1

Report Date/Time: Saturday, February 13, 2010 21:27:14

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
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 % Dil	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: Saturday, February 13, 2010 21:30:37

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\Standard 2.671

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	100.005	ug/L	2.782	147936	0.208
Be	9	99.989	ug/L	3.774	33440	0.047
B	11	200.025	ug/L	5.278	61881	0.087
Na	23	9991.545	ug/L	14.490	24567228	34.566
Mg	24	9999.255	ug/L	14.336	18791885	26.474
Al	27	9986.941	ug/L	4.842	26091092	36.690
P	31	9989.282	ug/L	2.458	1740090	2.439
K	39	10005.992	ug/L	6.356	51701761	71.917
Ca	43	9998.719	ug/L	2.339	131368	0.184
> Sc	45		ug/L		711409	711408.564
Ti	47	99.967	ug/L	2.510	68000	0.095
V	51	99.859	ug/L	3.299	767280	1.084
Cr	52	99.921	ug/L	2.601	610639	0.853
Cr	53		ug/L		215571	0.101
Mn	55	99.905	ug/L	2.583	1019304	1.431
Fe	57	9981.265	ug/L	3.488	1915713	2.685
Co	59	99.926	ug/L	2.460	818493	1.151
Ni	60	99.951	ug/L	3.416	187468	0.263
Cu	63		ug/L		456620	0.642
Cu	65	99.928	ug/L	3.021	230176	0.323
Zn	66	99.984	ug/L	2.117	147685	0.258
Zn	67		ug/L		41257	0.049
Zn	68		ug/L		108369	0.188
> Ge	74		ug/L		570112	570112.266
As	75	99.928	ug/L	2.222	154892	0.274
Se	77		ug/L		23403	0.020
Se	82	99.942	ug/L	1.950	16316	0.029
Kr	83		ug/L		144	0.000
Sr	88	99.833	ug/L	1.332	1790547	4.923
Y	89		ug/L		260	0.001
Mo	98	99.982	ug/L	1.621	475583	1.308
Ag	107	99.919	ug/L	0.755	795202	2.187
Cd	111	99.987	ug/L	1.813	197155	0.542
Cd	114		ug/L		456423	1.255
> In	115		ug/L		363669	363668.737
Sn	120	99.962	ug/L	0.773	810031	2.227
Sb	121	99.947	ug/L	1.584	675652	1.857
Sb	123		ug/L		526117	1.446
Ba	135		ug/L		204043	0.362
Ba	137	99.944	ug/L	1.068	356739	0.632
Ho	165		ug/L		26	0.000
> Lu	175		ug/L		564141	564140.999
Tl	205	99.824	ug/L	0.498	1887608	3.335
Pb	208	99.817	ug/L	0.875	3580653	6.346
Bi	209		ug/L		451	0.001
Th	232	99.700	ug/L	0.536	3957704	7.015
U	238	99.724	ug/L	1.750	4060767	7.198

Sample ID: Standard 2

Report Date/Time: Saturday, February 13, 2010 21:33:18

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

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					
|	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: Saturday, February 13, 2010 21:36:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 1.672

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	50.691	ug/L	0.938	76440	0.105
Be	9	50.809	ug/L	1.449	17333	0.024
B	11	107.388	ug/L	1.197	33981	0.047
Na	23	5247.519	ug/L	11.430	13169342	18.154
Mg	24	5586.764	ug/L	3.962	10725543	14.791
Al	27	4961.494	ug/L	0.326	13217279	18.228
P	31	5149.066	ug/L	2.580	917027	1.257
K	39	4602.180	ug/L	16.997	24564799	33.078
Ca	43	4716.999	ug/L	3.356	63382	0.087
> Sc	45		ug/L		724988	724987.763
Ti	47	49.238	ug/L	1.951	34381	0.047
V	51	50.226	ug/L	0.507	391800	0.545
Cr	52	51.587	ug/L	1.739	323486	0.440
Cr	53		ug/L		181824	0.049
Mn	55	51.605	ug/L	1.148	537595	0.739
Fe	57	5211.186	ug/L	0.764	1023095	1.402
Co	59	49.449	ug/L	2.327	412965	0.570
Ni	60	49.273	ug/L	0.699	94354	0.130
Cu	63		ug/L		228813	0.315
Cu	65	48.604	ug/L	2.184	114264	0.157
Zn	66	51.487	ug/L	1.002	75816	0.133
Zn	67		ug/L		30124	0.030
Zn	68		ug/L		56303	0.097
> Ge	74		ug/L		566682	566681.541
As	75	48.295	ug/L	2.887	73801	0.132
Se	77		ug/L		17700	0.010
Se	82	49.718	ug/L	0.692	8078	0.014
Kr	83		ug/L		145	0.000
Sr	88	53.134	ug/L	2.697	961501	2.620
Y	89		ug/L		120	0.000
Mo	98	48.768	ug/L	1.055	234138	0.638
Ag	107	50.106	ug/L	1.267	402374	1.096
Cd	111	49.769	ug/L	0.352	99035	0.270
Cd	114		ug/L		231708	0.631
> In	115		ug/L		366964	366964.013
Sn	120	50.392	ug/L	0.996	412130	1.123
Sb	121	50.136	ug/L	1.106	342129	0.932
Sb	123		ug/L		264363	0.720
Ba	135		ug/L		102432	0.181
Ba	137	49.889	ug/L	1.406	178947	0.316
Ho	165		ug/L		49	0.000
> Lu	175		ug/L		566855	566855.335
Tl	205	53.647	ug/L	1.139	1022211	1.792
Pb	208	53.782	ug/L	0.844	1938783	3.419
Bi	209		ug/L		516	0.001
Th	232	49.234	ug/L	2.324	1963723	3.464
U	238	50.446	ug/L	1.979	2063910	3.641

Sample ID: QC Std 1

Report Date/Time: Saturday, February 13, 2010 21:39:32

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
Li	7	101.382					
Be	9	101.617					
B	11	107.388					
Na	23	104.950					
Mg	24	111.735					
Al	27	98.247					
P	31	102.981					
K	39	92.044					
Ca	43	94.340					
> Sc	45		108.0				
Ti	47	98.477					
V	51	100.452					
Cr	52	103.174					
Cr	53						
Mn	55	103.210					
Fe	57	104.224					
Co	59	98.897					
Ni	60	98.547					
Cu	63						
Cu	65	97.208					
Zn	66	102.973					
Zn	67						
Zn	68						
> Ge	74		99.9				
As	75	96.591					
Se	77						
Se	82	99.437					
Kr	83						
Sr	88	106.268					
Y	89						
Mo	98	97.536					
Ag	107	100.213					
Cd	111	99.538					
Cd	114						
> In	115		99.8				
Sn	120	100.784					
Sb	121	100.271					
Sb	123						
Ba	135						
Ba	137	99.777					
Ho	165						
> Lu	175		105.0				
Tl	205	107.294					
Pb	208	107.565					
Bi	209						
Th	232	98.467					
U	238	100.892					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	Mg	24	ICV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Saturday, February 13, 2010 21:42:57

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 2.673

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.007	ug/L	99.527	38	0.000
Be	9	0.021	ug/L	73.867	18	0.000
B	11	4.022	ug/L	15.783	1402	0.002
Na	23	-0.308	ug/L	132.172	5001	-0.001
Mg	24	-0.753	ug/L	42.621	333	-0.002
Al	27	-0.004	ug/L	22296.463	2334	-0.000
P	31	-1.693	ug/L	34.509	4782	-0.000
K	39	-15.779	ug/L	48.215	473757	-0.113
Ca	43	-2.746	ug/L	45.238	366	-0.000
> Sc	45		ug/L		676996	676995.729
Ti	47	-0.041	ug/L	86.039	403	-0.000
V	51	0.312	ug/L	173.298	-856	0.003
Cr	52	0.068	ug/L	205.929	4474	0.001
Cr	53		ug/L		112260	-0.036
Mn	55	-0.009	ug/L	89.017	1467	-0.000
Fe	57	-0.947	ug/L	65.144	6301	-0.000
Co	59	0.001	ug/L	69.572	69	0.000
Ni	60	-0.003	ug/L	97.876	235	-0.000
Cu	63		ug/L		308	0.000
Cu	65	0.008	ug/L	193.788	236	0.000
Zn	66	-0.032	ug/L	31.209	381	-0.000
Zn	67		ug/L		12108	-0.001
Zn	68		ug/L		1323	-0.000
> Ge	74		ug/L		550629	550629.118
As	75	0.614	ug/L	79.495	-246	0.002
Se	77		ug/L		9369	-0.004
Se	82	-0.047	ug/L	185.873	11	-0.000
Kr	83		ug/L		150	0.000
Sr	88	0.001	ug/L	111.779	148	0.000
Y	89		ug/L		60	-0.000
Mo	98	0.031	ug/L	16.654	234	0.000
Ag	107	0.002	ug/L	127.409	42	0.000
Cd	111	-0.001	ug/L	180.510	22	-0.000
Cd	114		ug/L		42	0.000
> In	115		ug/L		359145	359144.535
Sn	120	0.002	ug/L	90.245	191	0.000
Sb	121	0.466	ug/L	12.832	3413	0.009
Sb	123		ug/L		2678	0.007
Ba	135		ug/L		36	0.000
Ba	137	0.001	ug/L	134.911	39	0.000
Ho	165		ug/L		20	-0.000
> Lu	175		ug/L		535235	535235.466
Tl	205	0.466	ug/L	18.861	14426	0.016
Pb	208	0.001	ug/L	72.468	547	0.000
Bi	209		ug/L		107	-0.000
Th	232	0.026	ug/L	21.650	1261	0.002
U	238	0.007	ug/L	56.495	313	0.000

Sample ID: QC Std 2

Report Date/Time: Saturday, February 13, 2010 21:45:41

Page 1

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

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		100.9				
|	Ti	47						
|	V	51						
|	Cr	52						
|	Cr	53						
|	Mn	55						
|	Fe	57						
|	Co	59						
|	Ni	60						
|	Cu	63						
|	Cu	65						
[	Zn	66						
|	Zn	67						
|	Zn	68						
>	Ge	74		97.0				
|	As	75						
|	Se	77						
|	Se	82						
|	Kr	83						
[	Sr	88						
|	Y	89						
|	Mo	98						
|	Ag	107						
|	Cd	111						
|	Cd	114						
>	In	115		97.7				
|	Sn	120						
|	Sb	121						
|	Sb	123						
[	Ba	135						
|	Ba	137						
|	Ho	165						
>	Lu	175		99.2				
|	Tl	205						
|	Pb	208						
|	Bi	209						
|	Th	232						
|	U	238						

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Saturday, February 13, 2010 21:49:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 3.674

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Li	7	11.673	ug/L	0.380	17749	0.024
|	Be	9	0.592	ug/L	4.324	216	0.000
|	B	11	18.075	ug/L	4.576	5954	0.008
|	Na	23	306.811	ug/L	11.312	779829	1.061
|	Mg	24	18.882	ug/L	16.525	38386	0.050
|	Al	27	44.741	ug/L	6.992	122525	0.164
|	P	31	66.860	ug/L	4.661	17373	0.016
|	K	39	252.119	ug/L	6.920	1917091	1.812
|	Ca	43	218.561	ug/L	1.332	3370	0.004
>	Sc	45		ug/L		730122	730121.875
|	Ti	47	9.546	ug/L	3.108	7082	0.009
|	V	51	11.777	ug/L	12.622	89745	0.128
|	Cr	52	11.903	ug/L	2.005	78544	0.102
|	Cr	53		ug/L		164465	0.023
|	Mn	55	6.147	ug/L	1.488	65952	0.088
|	Fe	57	130.519	ug/L	2.612	32611	0.035
|	Co	59	1.163	ug/L	2.552	9839	0.013
|	Ni	60	2.321	ug/L	1.225	4723	0.006
|	Cu	63		ug/L		6047	0.008
|	Cu	65	1.193	ug/L	4.445	3053	0.004
[	Zn	66	11.864	ug/L	0.834	18052	0.031
|	Zn	67		ug/L		21230	0.014
|	Zn	68		ug/L		14194	0.022
>	Ge	74		ug/L		574471	574471.454
|	As	75	6.195	ug/L	0.199	8537	0.017
|	Se	77		ug/L		13964	0.003
|	Se	82	5.685	ug/L	3.826	954	0.002
|	Kr	83		ug/L		142	-0.000
[	Sr	88	12.981	ug/L	0.451	238554	0.640
|	Y	89		ug/L		71	0.000
|	Mo	98	0.591	ug/L	0.844	2969	0.008
|	Ag	107	1.122	ug/L	0.704	9169	0.025
|	Cd	111	1.176	ug/L	2.184	2398	0.006
|	Cd	114		ug/L		5516	0.015
>	In	115		ug/L		372423	372423.179
|	Sn	120	5.852	ug/L	1.612	48725	0.130
|	Sb	121	3.845	ug/L	1.556	26913	0.071
|	Sb	123		ug/L		20875	0.055
[	Ba	135		ug/L		4691	0.008
|	Ba	137	2.248	ug/L	2.314	8068	0.014
|	Ho	165		ug/L		24	0.000
>	Lu	175		ug/L		564825	564824.912
|	Tl	205	1.512	ug/L	3.217	34936	0.050
|	Pb	208	2.646	ug/L	2.233	95513	0.168
|	Bi	209		ug/L		152	0.000
|	Th	232	1.511	ug/L	2.985	60319	0.106
	U	238	0.316	ug/L	2.703	12942	0.023

Sample ID: QC Std 3

Report Date/Time: Saturday, February 13, 2010 21:51:47

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7	116.729				
Be	9	118.392				
B	11	120.502				
Na	23	122.724				
Mg	24	125.881				
Al	27	149.138				
P	31	133.719				
K	39	84.040				
Ca	43	109.280				
> Sc	45		108.8			
Ti	47	95.460				
V	51	117.771				
Cr	52	119.032				
Cr	53					
Mn	55	122.949				
Fe	57	130.519				
Co	59	116.322				
Ni	60	116.058				
Cu	63					
Cu	65	119.275				
Zn	66	118.638				
Zn	67					
Zn	68					
> Ge	74		101.2			
As	75	123.908				
Se	77					
Se	82	113.705				
Kr	83					
Sr	88	129.812				
Y	89					
Mo	98	118.155				
Ag	107	112.153				
Cd	111	117.590				
Cd	114					
> In	115		101.3			
Sn	120	117.043				
Sb	121	128.161				
Sb	123					
Ba	135					
Ba	137	112.409				
Ho	165					
> Lu	175		104.6			
Tl	205	151.153				
Pb	208	132.286				
Bi	209					
Th	232	151.073				
U	238	158.081				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Al	27	CRDL is out of limits
QC Std 3	P	31	CRDL is out of limits
QC Std 3	Fe	57	CRDL is out of limits
QC Std 3	Ti	205	CRDL is out of limits
QC Std 3	Pb	208	CRDL is out of limits
QC Std 3	Th	232	CRDL is out of limits
QC Std 3	U	238	CRDL is out of limits

Sample ID: QC Std 3

Report Date/Time: Saturday, February 13, 2010 21:51:47

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QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Saturday, February 13, 2010 21:55:10

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 4.675

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.059	ug/L	24.495	98	0.000
Be	9	0.112	ug/L	7.039	42	0.000
B	11	1.590	ug/L	13.443	608	0.001
Na	23	93317.904	ug/L	7.539	193643462	322.834
Mg	24	89137.725	ug/L	2.724	141413891	235.997
Al	27	94794.558	ug/L	6.525	208630602	348.257
P	31	113356.411	ug/L	2.743	16596156	27.683
K	39	96009.151	ug/L	4.536	414027700	690.053
Ca	43	90875.295	ug/L	2.329	1002653	1.673
Sc	45		ug/L		599183	599182.839
Ti	47	1752.174	ug/L	3.723	997546	1.665
V	51	0.337	ug/L	240.455	-686	0.004
Cr	52	2.732	ug/L	4.939	17586	0.023
Cr	53		ug/L		108109	-0.022
Mn	55	6.275	ug/L	3.650	55206	0.090
Fe	57	100471.753	ug/L	3.501	16188145	27.023
Co	59	0.359	ug/L	4.348	2530	0.004
Ni	60	3.302	ug/L	0.496	5424	0.009
Cu	63		ug/L		9945	0.016
Cu	65	3.392	ug/L	3.870	6768	0.011
Zn	66	4.331	ug/L	3.584	5802	0.011
Zn	67		ug/L		15384	0.008
Zn	68		ug/L		2498	0.003
Ge	74		ug/L		485027	485027.018
As	75	0.886	ug/L	43.559	149	0.002
Se	77		ug/L		11850	0.003
Se	82	-1.548	ug/L	11.714	-198	-0.000
Kr	83		ug/L		410	0.001
Sr	88	3.262	ug/L	1.832	52958	0.161
Y	89		ug/L		707	0.002
Mo	98	1885.283	ug/L	2.317	8097772	24.655
Ag	107	0.140	ug/L	2.588	1031	0.003
Cd	111	0.557	ug/L	20.719	1013	0.003
Cd	114		ug/L		12859	0.039
In	115		ug/L		328473	328473.290
Sn	120	0.289	ug/L	2.558	2272	0.006
Sb	121	0.257	ug/L	25.341	1839	0.005
Sb	123		ug/L		1439	0.004
Ba	135		ug/L		1471	0.003
Ba	137	0.728	ug/L	2.549	2418	0.005
Ho	165		ug/L		10789	0.021
Lu	175		ug/L		517841	517840.674
Tl	205	0.055	ug/L	63.600	6836	0.002
Pb	208	0.248	ug/L	0.223	8667	0.016
Bi	209		ug/L		6205	0.012
Th	232	0.043	ug/L	30.228	1846	0.003
U	238	0.004	ug/L	15.410	196	0.000

Sample ID: QC Std 4

Report Date/Time: Saturday, February 13, 2010 21:57:53

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

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	93.318				
Mg	24	89.138				
Al	27	94.795				
P	31	113.356				
K	39	96.009				
Ca	43	90.875				
> Sc	45		89.3			
Ti	47	87.609				
V	51					
Cr	52	82.787				
Cr	53					
Mn	55	108.192				
Fe	57	100.472				
Co	59	152.931				
Ni	60	99.745				
Cu	63					
Cu	65	101.566				
Zn	66	115.181				
Zn	67					
Zn	68					
> Ge	74		85.5			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88	110.209				
Y	89					
Mo	98	94.264				
Ag	107					
Cd	111	125.500				
Cd	114					
> In	115		89.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137	91.222				
Ho	165					
> Lu	175		95.9			
Tl	205					
Pb	208	131.444				
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: Saturday, February 13, 2010 22:01:17

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 5.676

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[	Li	7	18.909	ug/L	2.717	23284	0.039
|	Be	9	18.960	ug/L	2.878	5284	0.009
|	B	11	18.435	ug/L	5.295	4919	0.008
|	Na	23	90235.674	ug/L	10.304	184553024	312.171
|	Mg	24	88979.725	ug/L	8.889	139331491	235.579
|	Al	27	94786.212	ug/L	9.617	205882880	348.227
|	P	31	111558.803	ug/L	3.007	16122157	27.244
|	K	39	93124.461	ug/L	2.667	396449101	669.320
|	Ca	43	89947.153	ug/L	1.346	980258	1.656
>	Sc	45		ug/L		591746	591745.687
|	Ti	47	1757.134	ug/L	2.940	988178	1.670
|	V	51	22.897	ug/L	6.207	144195	0.249
|	Cr	52	24.100	ug/L	2.401	125227	0.206
|	Cr	53		ug/L		118400	-0.002
|	Mn	55	28.305	ug/L	0.179	241280	0.405
|	Fe	57	101635.542	ug/L	1.266	16179960	27.336
|	Co	59	21.317	ug/L	2.887	145293	0.246
|	Ni	60	23.118	ug/L	2.076	36239	0.061
|	Cu	63		ug/L		84935	0.143
|	Cu	65	22.748	ug/L	0.744	43749	0.074
|	Zn	66	22.967	ug/L	1.194	29819	0.059
|	Zn	67		ug/L		19030	0.015
|	Zn	68		ug/L		20127	0.038
>	Ge	74		ug/L		496122	496121.584
|	As	75	21.569	ug/L	0.944	28274	0.059
|	Se	77		ug/L		13504	0.006
|	Se	82	19.189	ug/L	1.568	2740	0.005
|	Kr	83		ug/L		397	0.001
|	Sr	88	25.996	ug/L	0.186	420031	1.282
|	Y	89		ug/L		732	0.002
|	Mo	98	1915.214	ug/L	2.131	8202926	25.046
|	Ag	107	20.025	ug/L	0.841	143562	0.438
|	Cd	111	20.091	ug/L	0.761	35699	0.109
|	Cd	114		ug/L		95127	0.290
>	In	115		ug/L		327543	327543.107
|	Sn	120	21.728	ug/L	1.856	158694	0.484
|	Sb	121	22.094	ug/L	1.517	134724	0.411
|	Sb	123		ug/L		104879	0.320
|	Ba	135		ug/L		38870	0.075
|	Ba	137	20.930	ug/L	1.398	69036	0.132
|	Ho	165		ug/L		10615	0.020
>	Lu	175		ug/L		521130	521129.946
|	Tl	205	21.732	ug/L	3.713	384154	0.726
|	Pb	208	22.767	ug/L	0.850	754788	1.448
|	Bi	209		ug/L		6814	0.013
|	Th	232	25.274	ug/L	1.926	926962	1.778
	U	238	25.767	ug/L	2.650	969132	1.860

Sample ID: QC Std 5

Report Date/Time: Saturday, February 13, 2010 22:04:00

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	94.547				
Be	9	94.800				
B	11	92.174				
Na	23	90.236				
Mg	24	88.980				
Al	27	94.786				
P	31	111.559				
K	39	93.124				
Ca	43	89.947				
> Sc	45		88.2			
Ti	47	87.857				
V	51	114.484				
Cr	52	103.432				
Cr	53					
Mn	55	109.711				
Fe	57	101.636				
Co	59	105.347				
Ni	60	99.175				
Cu	63					
Cu	65	97.464				
Zn	66	96.662				
Zn	67					
Zn	68					
> Ge	74		87.4			
As	75	107.847				
Se	77					
Se	82	95.947				
Kr	83					
Sr	88	113.223				
Y	89					
Mo	98	95.761				
Ag	107	100.127				
Cd	111	98.274				
Cd	114					
> In	115		89.1			
Sn	120	108.638				
Sb	121	110.468				
Sb	123					
Ba	135					
Ba	137	100.636				
Ho	165					
> Lu	175		96.5			
Tl	205	108.660				
Pb	208	112.769				
Bi	209					
Th	232	126.370				
U	238	128.836				

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

Sample ID: QC Std 5

Report Date/Time: Saturday, February 13, 2010 22:04:00

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ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Saturday, February 13, 2010 22:07:24

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 6.677

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	51.926	ug/L	1.551	66634	0.108
Be	9	52.148	ug/L	3.113	15133	0.025
B	11	98.412	ug/L	2.813	26514	0.043
Na	23	4737.267	ug/L	10.183	10108823	16.389
Mg	24	4562.269	ug/L	10.279	7445172	12.079
Al	27	4878.252	ug/L	6.130	11052221	17.922
P	31	4928.621	ug/L	5.669	746591	1.204
K	39	4456.220	ug/L	6.193	20270322	32.029
Ca	43	4752.472	ug/L	2.602	54338	0.087
> Sc	45		ug/L		617130	617129.936
Ti	47	50.678	ug/L	6.534	30071	0.048
V	51	52.708	ug/L	6.548	349701	0.572
Cr	52	53.124	ug/L	7.474	283064	0.453
Cr	53		ug/L		152192	0.045
Mn	55	54.431	ug/L	3.146	482304	0.780
Fe	57	5600.766	ug/L	2.345	935149	1.506
Co	59	52.524	ug/L	2.957	373165	0.605
Ni	60	52.466	ug/L	5.081	85425	0.138
Cu	63		ug/L		208837	0.338
Cu	65	53.079	ug/L	5.463	106087	0.172
Zn	66	51.433	ug/L	4.135	69811	0.133
Zn	67		ug/L		25076	0.025
Zn	68		ug/L		51953	0.097
> Ge	74		ug/L		522710	522710.478
As	75	49.417	ug/L	2.784	69640	0.135
Se	77		ug/L		15330	0.008
Se	82	51.198	ug/L	6.284	7663	0.015
Kr	83		ug/L		139	0.000
Sr	88	53.488	ug/L	1.479	923521	2.638
Y	89		ug/L		117	0.000
Mo	98	49.278	ug/L	1.565	225673	0.644
Ag	107	51.703	ug/L	1.436	396088	1.131
Cd	111	50.637	ug/L	1.897	96128	0.275
Cd	114		ug/L		228244	0.652
> In	115		ug/L		350071	350071.357
Sn	120	51.336	ug/L	0.440	400523	1.144
Sb	121	51.594	ug/L	1.745	335890	0.959
Sb	123		ug/L		263192	0.751
Ba	135		ug/L		101969	0.182
Ba	137	50.395	ug/L	1.523	178561	0.319
Ho	165		ug/L		49	0.000
> Lu	175		ug/L		560004	560003.788
Tl	205	53.280	ug/L	1.442	1003101	1.780
Pb	208	55.205	ug/L	1.703	1965844	3.510
Bi	209		ug/L		516	0.001
Th	232	52.158	ug/L	0.872	2055328	3.670
U	238	53.639	ug/L	0.356	2168267	3.872

Sample ID: QC Std 6

Report Date/Time: Saturday, February 13, 2010 22:10:07

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
Li	7	103.851					
Be	9	104.296					
B	11	98.412					
Na	23	94.745					
Mg	24	91.245					
Al	27	96.599					
P	31	98.572					
K	39	89.124					
Ca	43	95.049					
> Sc	45		91.9				
Ti	47	101.357					
V	51	105.417					
Cr	52	106.249					
Cr	53						
Mn	55	108.863					
Fe	57	112.015					
Co	59	105.048					
Ni	60	104.932					
Cu	63						
Cu	65	106.158					
Zn	66	102.867					
Zn	67						
Zn	68						
> Ge	74		92.1				
As	75	98.834					
Se	77						
Se	82	102.396					
Kr	83						
Sr	88	106.976					
Y	89						
Mo	98	98.556					
Ag	107	103.406					
Cd	111	101.274					
Cd	114						
> In	115		95.2				
Sn	120	102.673					
Sb	121	103.189					
Sb	123						
Ba	135						
Ba	137	100.790					
Ho	165						
> Lu	175		103.7				
Tl	205	106.559					
Pb	208	110.409					
Bi	209						
Th	232	104.315					
U	238	107.277					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	K	39	CCV is out of limits (+/- 10%)
QC Std 6	Fe	57	CCV is out of limits (+/- 10%)
QC Std 6	Pb	208	CCV is out of limits (+/- 10%)

QC Action

Sample ID: QC Std 6

Report Date/Time: Saturday, February 13, 2010 22:10:07

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QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Saturday, February 13, 2010 22:13:32

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 7.678

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.016	ug/L	26.196	44	0.000
Be	9	0.013	ug/L	157.181	14	0.000
B	11	2.928	ug/L	22.313	942	0.001
Na	23	-0.299	ug/L	427.436	4334	-0.001
Mg	24	-0.720	ug/L	52.264	333	-0.002
Al	27	0.586	ug/L	160.907	3334	0.002
P	31	-3.750	ug/L	48.899	3867	-0.001
K	39	-7.678	ug/L	129.773	446565	-0.055
Ca	43	-1.457	ug/L	7.438	333	-0.000
> Sc	45		ug/L		589742	589742.229
Ti	47	-0.000	ug/L	4322.762	373	-0.000
V	51	0.311	ug/L	228.076	-744	0.003
Cr	52	-0.396	ug/L	9.142	1563	-0.003
Cr	53		ug/L		101436	-0.030
Mn	55	-0.004	ug/L	149.549	1317	-0.000
Fe	57	1.973	ug/L	58.138	5951	0.001
Co	59	0.001	ug/L	195.799	57	0.000
Ni	60	0.008	ug/L	119.737	222	0.000
Cu	63		ug/L		285	0.000
Cu	65	0.020	ug/L	13.003	230	0.000
Zn	66	-0.025	ug/L	53.027	365	-0.000
Zn	67		ug/L		10853	-0.002
Zn	68		ug/L		1176	-0.000
> Ge	74		ug/L		514176	514176.168
As	75	0.530	ug/L	87.073	-347	0.001
Se	77		ug/L		8550	-0.004
Se	82	0.055	ug/L	164.990	26	0.000
Kr	83		ug/L		134	0.000
Sr	88	0.000	ug/L	131.174	132	0.000
Y	89		ug/L		58	-0.000
Mo	98	0.073	ug/L	8.519	412	0.001
Ag	107	0.003	ug/L	25.365	49	0.000
Cd	111	0.004	ug/L	41.378	30	0.000
Cd	114		ug/L		49	0.000
> In	115		ug/L		343494	343494.248
Sn	120	0.005	ug/L	26.344	205	0.000
Sb	121	0.200	ug/L	16.801	1564	0.004
Sb	123		ug/L		1171	0.003
Ba	135		ug/L		35	0.000
Ba	137	0.001	ug/L	240.211	38	0.000
Ho	165		ug/L		23	0.000
> Lu	175		ug/L		542407	542407.080
Tl	205	0.625	ug/L	16.740	17534	0.021
Pb	208	-0.001	ug/L	82.033	483	-0.000
Bi	209		ug/L		112	0.000
Th	232	0.030	ug/L	16.996	1426	0.002
U	238	0.005	ug/L	18.367	232	0.000

Sample ID: QC Std 7

Report Date/Time: Saturday, February 13, 2010 22:16:16

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		87.9			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
L Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		90.6			
As	75					
Se	77					
Se	82					
L Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		93.4			
Sn	120					
Sb	121					
L Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.5			
Tl	205					
Pb	208					
Bi	209					
Th	232					
L U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 10

Sample Date/Time: Saturday, February 13, 2010 22:19:39

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 10.679

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	995.144	ug/L	2.311	1082542	2.069
Be	9	1045.913	ug/L	0.338	257388	0.492
B	11	1.293	ug/L	9.094	463	0.001
Na	23	53897.448	ug/L	1.782	97593560	186.458
Mg	24	51622.289	ug/L	5.225	71558836	136.673
Al	27	49242.558	ug/L	8.190	94796407	180.908
P	31	29661.730	ug/L	1.721	3795316	7.244
K	39	46408.941	ug/L	8.306	175165565	333.558
Ca	43	47883.549	ug/L	2.336	461560	0.882
Sc	45		ug/L		523379	523379.050
Ti	47	41.577	ug/L	4.660	21019	0.040
V	51	943.408	ug/L	0.913	5356943	10.239
Cr	52	933.792	ug/L	1.383	4174203	7.968
Cr	53		ug/L		635646	1.013
Mn	55	956.393	ug/L	2.716	7172554	13.700
Fe	57	53919.702	ug/L	0.428	7595536	14.503
Co	59	922.981	ug/L	1.465	5564290	10.630
Ni	60	901.680	ug/L	1.704	1243021	2.375
Cu	63		ug/L		3047158	5.825
Cu	65	897.551	ug/L	1.288	1520029	2.904
Zn	66	2453.911	ug/L	2.257	2873072	6.340
Zn	67		ug/L		455036	0.981
Zn	68		ug/L		1767166	3.897
Ge	74		ug/L		453137	453136.680
As	75	882.943	ug/L	1.484	1095459	2.420
Se	77		ug/L		53333	0.097
Se	82	493.912	ug/L	0.683	64026	0.141
Kr	83		ug/L		221	0.000
Sr	88	986.080	ug/L	2.935	15083968	48.629
Y	89		ug/L		630	0.002
Mo	98	977.926	ug/L	3.213	3967090	12.789
Ag	107	222.367	ug/L	2.030	1509428	4.866
Cd	111	878.921	ug/L	1.339	1478090	4.765
Cd	114		ug/L		3768424	12.149
In	115		ug/L		310191	310191.243
Sn	120	997.614	ug/L	3.226	6894169	22.225
Sb	121	247.876	ug/L	1.405	1428907	4.606
Sb	123		ug/L		1138385	3.669
Ba	135		ug/L		1542078	3.040
Ba	137	940.129	ug/L	2.485	3017080	5.948
Ho	165		ug/L		438	0.001
Lu	175		ug/L		507275	507275.466
Tl	205	503.421	ug/L	3.682	8535436	16.816
Pb	208	5060.836	ug/L	2.002	163215152	321.766
Bi	209		ug/L		5061	0.010
Th	232	2659.548	ug/L	2.876	94920490	187.129
U	238	5465.410	ug/L	1.495	200111009	394.499

Sample ID: QC Std 10

Report Date/Time: Saturday, February 13, 2010 22:22:21

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
Li	7	99.514					
Be	9	104.591					
B	11						
Na	23	107.795					
Mg	24	103.245					
Al	27	98.485					
P	31	118.647					
K	39	92.818					
Ca	43	95.767					
> Sc	45		78.0				
Ti	47						
V	51	94.341					
Cr	52	93.379					
Cr	53						
Mn	55	95.639					
Fe	57	107.839					
Co	59	92.298					
Ni	60	90.168					
Cu	63						
Cu	65	89.755					
Zn	66	98.156					
Zn	67						
Zn	68						
> Ge	74		79.9				
As	75	88.294					
Se	77						
Se	82	98.782					
Kr	83						
Sr	88	98.608					
Y	89						
Mo	98	97.793					
Ag	107	88.947					
Cd	111	87.892					
Cd	114						
> In	115		84.4				
Sn	120	99.761					
Sb	121	99.151					
Sb	123						
Ba	135						
Ba	137	94.013					
Ho	165						
> Lu	175		94.0				
Tl	205	100.684					
Pb	208	101.217					
Bi	209						
Th	232	106.382					
U	238	109.308					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 10	P		31LRS is out of limits (+/- 10%)
Sc 45 Int Std for QC	Sc	45	
QC Std 10	Cu		65LRS is out of limits (+/- 10%)
Ge 74 Int Std for QC	Ge	74	
QC Std 10	As		75LRS is out of limits (+/- 10%)
QC Std 10	Ag		107LRS is out of limits (+/- 10%)
QC Std 10	Cd		111LRS is out of limits (+/- 10%)

Sample ID: QC Std 10

Report Date/Time: Saturday, February 13, 2010 22:22:21

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QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 11

Sample Date/Time: Saturday, February 13, 2010 22:25:44

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 11.680

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	52.601	ug/L	3.257	69730	0.109
Be	9	53.380	ug/L	0.902	16008	0.025
B	11	99.553	ug/L	4.287	27709	0.043
Na	23	5446.344	ug/L	16.213	12019637	18.842
Mg	24	4760.099	ug/L	10.276	8036763	12.603
Al	27	4680.210	ug/L	10.054	10966355	17.194
P	31	4995.333	ug/L	3.737	782406	1.220
K	39	4869.224	ug/L	6.442	22819865	34.997
Ca	43	4873.658	ug/L	3.249	57567	0.090
Sc	45		ug/L		637406	637405.935
Ti	47	51.686	ug/L	0.987	31709	0.049
V	51	51.647	ug/L	2.372	354339	0.561
Cr	52	53.556	ug/L	2.645	295152	0.457
Cr	53		ug/L		162034	0.052
Mn	55	54.432	ug/L	3.500	498426	0.780
Fe	57	5562.990	ug/L	2.286	959778	1.496
Co	59	52.181	ug/L	1.610	383143	0.601
Ni	60	52.856	ug/L	1.650	88968	0.139
Cu	63		ug/L		215647	0.338
Cu	65	52.150	ug/L	2.190	107773	0.169
Zn	66	52.078	ug/L	1.815	71897	0.135
Zn	67		ug/L		28196	0.030
Zn	68		ug/L		54000	0.099
Ge	74		ug/L		531395	531395.454
As	75	50.302	ug/L	2.744	72110	0.138
Se	77		ug/L		15048	0.007
Se	82	51.334	ug/L	0.324	7820	0.015
Kr	83		ug/L		154	0.000
Sr	88	55.464	ug/L	2.277	946187	2.735
Y	89		ug/L		119	0.000
Mo	98	51.034	ug/L	1.136	230965	0.667
Ag	107	52.704	ug/L	2.033	398954	1.153
Cd	111	52.969	ug/L	1.075	99364	0.287
Cd	114		ug/L		228803	0.661
In	115		ug/L		345950	345949.710
Sn	120	52.645	ug/L	0.969	405878	1.173
Sb	121	53.134	ug/L	1.642	341801	0.987
Sb	123		ug/L		266948	0.771
Ba	135		ug/L		101386	0.185
Ba	137	51.200	ug/L	0.771	177676	0.324
Ho	165		ug/L		49	0.000
Lu	175		ug/L		548422	548422.033
Tl	205	57.472	ug/L	1.793	1058947	1.920
Pb	208	56.331	ug/L	1.875	1964395	3.582
Bi	209		ug/L		486	0.001
Th	232	54.885	ug/L	1.488	2117924	3.862
U	238	56.198	ug/L	2.414	2224228	4.056

Sample ID: QC Std 11

Report Date/Time: Saturday, February 13, 2010 22:28:26

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7	105.201				
Be	9	106.760				
B	11	99.553				
Na	23	108.927				
Mg	24	95.202				
Al	27	92.677				
P	31	99.907				
K	39	97.384				
Ca	43	97.473				
> Sc	45		95.0			
Ti	47	103.372				
V	51	103.295				
Cr	52	107.111				
Cr	53					
Mn	55	108.864				
Fe	57	111.260				
Co	59	104.362				
Ni	60	105.712				
Cu	63					
Cu	65	104.300				
Zn	66	104.155				
Zn	67					
Zn	68					
> Ge	74		93.7			
As	75	100.605				
Se	77					
Se	82	102.668				
Kr	83					
Sr	88	110.929				
Y	89					
Mo	98	102.068				
Ag	107	105.408				
Cd	111	105.938				
Cd	114					
> In	115		94.1			
Sn	120	105.290				
Sb	121	106.268				
Sb	123					
Ba	135					
Ba	137	102.401				
Ho	165					
> Lu	175		101.6			
Tl	205	114.944				
Pb	208	112.663				
Bi	209					
Th	232	109.770				
U	238	112.395				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 11	Fe	57	CCV is out of limits (+/- 10%)
QC Std 11	Sr	88	CCV is out of limits (+/- 10%)
QC Std 11	Tl	205	CCV is out of limits (+/- 10%)
QC Std 11	Pb	208	CCV is out of limits (+/- 10%)
QC Std 11	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 12

Sample Date/Time: Saturday, February 13, 2010 22:31:51

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 12.681

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.076	ug/L	20.226	120	0.000
Be	9	0.041	ug/L	14.015	22	0.000
B	11	2.777	ug/L	25.588	918	0.001
Na	23	1.086	ug/L	110.186	7335	0.004
Mg	24	0.533	ug/L	246.710	2334	0.001
Al	27	0.716	ug/L	37.088	3667	0.003
P	31	-2.243	ug/L	148.736	4162	-0.001
K	39	-3.165	ug/L	205.412	474777	-0.023
Ca	43	-2.425	ug/L	107.258	328	-0.000
> Sc	45		ug/L		600577	600576.785
Ti	47	-0.024	ug/L	124.532	366	-0.000
V	51	0.125	ug/L	249.295	-2004	0.001
Cr	52	-0.215	ug/L	19.227	2520	-0.002
Cr	53		ug/L		102041	-0.032
Mn	55	0.005	ug/L	41.738	1417	0.000
Fe	57	-0.139	ug/L	1002.951	5720	-0.000
Co	59	0.018	ug/L	13.254	174	0.000
Ni	60	0.029	ug/L	54.981	259	0.000
Cu	63		ug/L		434	0.000
Cu	65	0.055	ug/L	24.994	302	0.000
Zn	66	0.022	ug/L	64.930	436	0.000
Zn	67		ug/L		11618	-0.001
Zn	68		ug/L		1333	0.000
> Ge	74		ug/L		523265	523265.161
As	75	0.607	ug/L	23.393	-238	0.002
Se	77		ug/L		7836	-0.006
Se	82	0.111	ug/L	75.736	34	0.000
Kr	83		ug/L		135	0.000
Sr	88	0.018	ug/L	11.035	426	0.001
Y	89		ug/L		54	-0.000
Mo	98	0.124	ug/L	11.916	641	0.002
Ag	107	0.008	ug/L	30.341	91	0.000
Cd	111	0.015	ug/L	44.104	50	0.000
Cd	114		ug/L		107	0.000
> In	115		ug/L		343852	343852.089
Sn	120	0.049	ug/L	7.704	544	0.001
Sb	121	0.674	ug/L	8.690	4593	0.013
Sb	123		ug/L		3550	0.010
Ba	135		ug/L		58	0.000
Ba	137	0.016	ug/L	13.509	88	0.000
Ho	165		ug/L		24	0.000
> Lu	175		ug/L		542552	542551.888
Tl	205	1.052	ug/L	8.972	25247	0.035
Pb	208	0.076	ug/L	4.872	3134	0.005
Bi	209		ug/L		105	-0.000
Th	232	0.099	ug/L	3.074	4056	0.007
U	238	0.114	ug/L	2.759	4508	0.008

Sample ID: QC Std 12

Report Date/Time: Saturday, February 13, 2010 22:34:35

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

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		92.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		93.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.5			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 12	Tl	205	CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1202024764

Sample Date/Time: Saturday, February 13, 2010 22:37:58

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\1202024764.682

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[Li	7	0.043	ug/L	9.202	84	0.000
| Be	9	0.013	ug/L	84.634	15	0.000
| B	11	0.877	ug/L	17.938	451	0.000
| Na	23	17.079	ug/L	36.540	43069	0.059
| Mg	24	2.396	ug/L	35.360	5668	0.006
| Al	27	8.565	ug/L	9.282	22351	0.031
| P	31	34.968	ug/L	22.420	10240	0.009
| K	39	-13.009	ug/L	25.939	460644	-0.094
| Ca	43	10.009	ug/L	41.470	496	0.000
> Sc	45		ug/L		640168	640167.908
| Ti	47	0.544	ug/L	4.826	736	0.001
| V	51	1.326	ug/L	46.993	6222	0.014
| Cr	52	0.611	ug/L	6.169	7199	0.005
| Cr	53		ug/L		92727	-0.057
| Mn	55	0.529	ug/L	2.666	6322	0.008
| Fe	57	64.473	ug/L	2.142	17222	0.017
| Co	59	0.017	ug/L	4.674	177	0.000
| Ni	60	0.245	ug/L	11.842	640	0.001
| Cu	63		ug/L		1028	0.001
| Cu	65	0.188	ug/L	5.408	597	0.001
[Zn	66	1.230	ug/L	0.608	2063	0.003
| Zn	67		ug/L		10512	-0.003
| Zn	68		ug/L		2475	0.002
> Ge	74		ug/L		521731	521730.700
| As	75	0.446	ug/L	76.223	-466	0.001
| Se	77		ug/L		7183	-0.007
| Se	82	0.251	ug/L	66.736	55	0.000
| Kr	83		ug/L		123	-0.000
[Sr	88	0.063	ug/L	4.487	1231	0.003
| Y	89		ug/L		174	0.000
| Mo	98	0.232	ug/L	18.667	1159	0.003
| Ag	107	0.014	ug/L	13.267	136	0.000
| Cd	111	0.032	ug/L	36.493	84	0.000
| Cd	114		ug/L		94	0.000
> In	115		ug/L		354103	354103.386
| Sn	120	0.762	ug/L	0.357	6184	0.017
| Sb	121	0.074	ug/L	16.010	785	0.001
| Sb	123		ug/L		651	0.001
[Ba	135		ug/L		2152	0.004
| Ba	137	1.070	ug/L	5.731	3796	0.007
| Ho	165		ug/L		31	0.000
> Lu	175		ug/L		555879	555879.322
| Tl	205	0.681	ug/L	12.276	18990	0.023
| Pb	208	0.062	ug/L	0.973	2701	0.004
| Bi	209		ug/L		318	0.000
| Th	232	0.153	ug/L	20.439	6310	0.011
| U	238	0.053	ug/L	13.858	2167	0.004

Sample ID: 1202024764

Report Date/Time: Saturday, February 13, 2010 22:40:40

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

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		95.4			
|	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		91.9			
|	As	75					
|	Se	77					
|	Se	82					
|	Kr	83					
|	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		96.3			
|	Sn	120					
|	Sb	121					
|	Sb	123					
|	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175		103.0			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
|	U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202024765

Sample Date/Time: Saturday, February 13, 2010 22:44:03

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 945396|40|baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\1202024765.683

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	2.650	ug/L	0.603	3626	0.006
Be	9	19.993	ug/L	3.420	6148	0.009
B	11	37.704	ug/L	6.902	10875	0.016
Na	23	289.224	ug/L	5.206	658509	1.001
Mg	24	1139.322	ug/L	13.271	1970270	3.016
Al	27	3179.383	ug/L	18.098	7614502	11.680
P	31	209.959	ug/L	7.051	38339	0.051
K	39	1142.771	ug/L	8.796	5890769	8.214
Ca	43	2356.030	ug/L	2.974	28706	0.043
> Sc	45		ug/L		653177	653177.471
Ti	47	129.678	ug/L	4.683	80844	0.123
V	51	33.711	ug/L	10.376	235513	0.366
Cr	52	60.904	ug/L	3.281	343210	0.520
Cr	53		ug/L		162439	0.047
Mn	55	139.781	ug/L	3.854	1308535	2.002
Fe	57	4845.521	ug/L	2.506	857164	1.303
Co	59	24.870	ug/L	2.662	187093	0.286
Ni	60	34.535	ug/L	3.449	59619	0.091
Cu	63		ug/L		187920	0.287
Cu	65	44.945	ug/L	3.491	95164	0.145
Zn	66	151.591	ug/L	0.744	212122	0.392
Zn	67		ug/L		47367	0.064
Zn	68		ug/L		152328	0.279
> Ge	74		ug/L		540598	540598.414
As	75	28.681	ug/L	3.921	41331	0.079
Se	77		ug/L		17566	0.011
Se	82	74.938	ug/L	2.049	11603	0.021
Kr	83		ug/L		151	0.000
Sr	88	59.507	ug/L	1.231	1064580	2.935
Y	89		ug/L		63916	0.176
Mo	98	12.317	ug/L	1.889	58511	0.161
Ag	107	5.578	ug/L	2.718	44305	0.122
Cd	111	14.895	ug/L	2.426	29313	0.081
Cd	114		ug/L		69894	0.193
> In	115		ug/L		362757	362757.302
Sn	120	8.257	ug/L	1.538	66896	0.184
Sb	121	14.355	ug/L	2.716	97040	0.267
Sb	123		ug/L		75966	0.209
Ba	135		ug/L		103714	0.182
Ba	137	50.161	ug/L	2.204	180579	0.317
Ho	165		ug/L		4208	0.007
> Lu	175		ug/L		569051	569051.494
Tl	205	37.175	ug/L	3.216	712832	1.242
Pb	208	26.104	ug/L	1.813	944734	1.660
Bi	209		ug/L		8596	0.015
Th	232	4.983	ug/L	2.540	199746	0.351
U	238	0.725	ug/L	1.787	29822	0.052

Sample ID: 1202024765

Report Date/Time: Saturday, February 13, 2010 22:46:46

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

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		97.3			
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		95.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		98.6			
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 MassOut of Limits Message
 Ti 47 Upper, S, EEETi 47Sample 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: Saturday, February 13, 2010 23:20:43

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 8.689

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	53.744	ug/L	0.913	63659	0.112
Be	9	53.351	ug/L	2.947	14291	0.025
B	11	98.426	ug/L	2.167	24488	0.043
Na	23	5650.851	ug/L	8.347	11127210	19.549
Mg	24	5098.246	ug/L	12.274	7705472	13.498
Al	27	5146.097	ug/L	5.610	10779289	18.906
P	31	4909.849	ug/L	2.850	686913	1.199
K	39	4135.906	ug/L	14.291	17355635	29.726
Ca	43	4849.863	ug/L	0.729	51195	0.089
> Sc	45		ug/L		569579	569579.332
Ti	47	49.343	ug/L	2.759	27054	0.047
V	51	51.323	ug/L	2.156	314512	0.557
Cr	52	51.403	ug/L	2.139	253205	0.439
Cr	53		ug/L		130955	0.028
Mn	55	53.016	ug/L	2.766	433667	0.759
Fe	57	5483.217	ug/L	2.094	845290	1.475
Co	59	51.718	ug/L	3.003	339223	0.596
Ni	60	52.203	ug/L	1.588	78511	0.138
Cu	63		ug/L		188940	0.331
Cu	65	51.023	ug/L	0.253	94224	0.165
Zn	66	52.315	ug/L	2.224	63455	0.135
Zn	67		ug/L		22441	0.025
Zn	68		ug/L		46102	0.096
> Ge	74		ug/L		467035	467035.108
As	75	49.329	ug/L	4.596	62085	0.135
Se	77		ug/L		12690	0.006
Se	82	50.754	ug/L	2.621	6797	0.015
Kr	83		ug/L		124	0.000
Sr	88	52.045	ug/L	0.945	833804	2.567
Y	89		ug/L		200	0.000
Mo	98	47.832	ug/L	3.407	203271	0.626
Ag	107	50.572	ug/L	1.678	359487	1.107
Cd	111	50.400	ug/L	1.725	88789	0.273
Cd	114		ug/L		210184	0.647
> In	115		ug/L		324856	324855.727
Sn	120	51.652	ug/L	1.330	373951	1.151
Sb	121	52.236	ug/L	2.090	315616	0.971
Sb	123		ug/L		249028	0.766
Ba	135		ug/L		96285	0.170
Ba	137	46.637	ug/L	1.343	167137	0.295
Ho	165		ug/L		53	0.000
> Lu	175		ug/L		566308	566308.188
Tl	205	54.269	ug/L	0.881	1033039	1.813
Pb	208	55.262	ug/L	0.054	1990280	3.514
Bi	209		ug/L		565	0.001
Th	232	53.655	ug/L	1.698	2138167	3.775
U	238	55.979	ug/L	1.992	2288148	4.041

Sample ID: QC Std 8

Report Date/Time: Saturday, February 13, 2010 23:23:27

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	107.488				
Be	9	106.702				
B	11	98.426				
Na	23	113.017				
Mg	24	101.965				
Al	27	101.903				
P	31	98.197				
K	39	82.718				
Ca	43	96.997				
> Sc	45		84.9			
Ti	47	98.687				
V	51	102.646				
Cr	52	102.805				
Cr	53					
Mn	55	106.032				
Fe	57	109.664				
Co	59	103.436				
Ni	60	104.406				
Cu	63					
Cu	65	102.046				
Zn	66	104.629				
Zn	67					
Zn	68					
> Ge	74		82.3			
As	75	98.657				
Se	77					
Se	82	101.508				
Kr	83					
Sr	88	104.091				
Y	89					
Mo	98	95.664				
Ag	107	101.143				
Cd	111	100.801				
Cd	114					
> In	115		88.3			
Sn	120	103.304				
Sb	121	104.471				
Sb	123					
Ba	135					
Ba	137	93.275				
Ho	165					
> Lu	175		104.9			
Tl	205	108.538				
Pb	208	110.524				
Bi	209					
Th	232	107.310				
U	238	111.957				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Na	23	CCV is out of limits (+/- 10%)
QC Std 8	K	39	CCV is out of limits (+/- 10%)
QC Std 8	Pb	208	CCV is out of limits (+/- 10%)
QC Std 8	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Saturday, February 13, 2010 23:26:52

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 9.690

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.057	ug/L	25.166	86	0.000
Be	9	0.026	ug/L	34.523	16	0.000
B	11	2.848	ug/L	28.212	843	0.001
Na	23	2.005	ug/L	63.820	8336	0.007
Mg	24	-0.704	ug/L	57.698	333	-0.002
Al	27	-0.442	ug/L	115.109	1000	-0.002
P	31	-1.124	ug/L	21.528	3894	-0.000
K	39	-2.420	ug/L	266.077	430052	-0.017
Ca	43	0.074	ug/L	2964.805	320	0.000
> Sc	45		ug/L		540594	540593.814
Ti	47	0.030	ug/L	191.056	358	0.000
V	51	0.263	ug/L	311.998	-1013	0.003
Cr	52	-0.291	ug/L	16.186	1914	-0.002
Cr	53		ug/L		86613	-0.042
Mn	55	-0.002	ug/L	264.717	1221	-0.000
Fe	57	-1.077	ug/L	97.780	5012	-0.000
Co	59	0.003	ug/L	93.610	62	0.000
Ni	60	0.005	ug/L	377.718	199	0.000
Cu	63		ug/L		269	0.000
Cu	65	0.004	ug/L	169.880	182	0.000
Zn	66	-0.030	ug/L	16.330	325	-0.000
Zn	67		ug/L		9823	-0.002
Zn	68		ug/L		1104	-0.000
> Ge	74		ug/L		464650	464649.704
As	75	0.230	ug/L	120.574	-689	0.001
Se	77		ug/L		6384	-0.007
Se	82	-0.023	ug/L	480.553	13	-0.000
Kr	83		ug/L		135	0.000
Sr	88	0.001	ug/L	105.494	131	0.000
Y	89		ug/L		67	0.000
Mo	98	0.025	ug/L	12.940	184	0.000
Ag	107	0.002	ug/L	38.222	39	0.000
Cd	111	0.005	ug/L	127.201	30	0.000
Cd	114		ug/L		53	0.000
> In	115		ug/L		318576	318576.178
Sn	120	0.006	ug/L	33.194	197	0.000
Sb	121	0.146	ug/L	25.656	1132	0.003
Sb	123		ug/L		885	0.002
Ba	135		ug/L		33	0.000
Ba	137	0.003	ug/L	60.243	43	0.000
Ho	165		ug/L		17	-0.000
> Lu	175		ug/L		536622	536621.954
Tl	205	0.324	ug/L	20.326	11913	0.011
Pb	208	0.006	ug/L	7.135	707	0.000
Bi	209		ug/L		106	-0.000
Th	232	0.026	ug/L	12.689	1284	0.002
U	238	0.006	ug/L	21.752	285	0.000

Sample ID: QC Std 9

Report Date/Time: Saturday, February 13, 2010 23:29:36

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

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		80.5			
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		81.9			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		86.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		99.4			
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: QC Std 8

Sample Date/Time: Sunday, February 14, 2010 00:15:48

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 8.698

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	51.805	ug/L	2.331	68542	0.108
Be	9	52.447	ug/L	6.088	15679	0.025
B	11	99.580	ug/L	6.141	27632	0.043
Na	23	5169.814	ug/L	17.374	11365726	17.885
Mg	24	5169.081	ug/L	9.218	8702302	13.685
Al	27	5165.208	ug/L	15.415	12030483	18.976
P	31	5096.720	ug/L	4.430	796070	1.245
K	39	4362.207	ug/L	4.046	20467435	31.353
Ca	43	4848.489	ug/L	2.603	57156	0.089
> Sc	45		ug/L		636561	636560.847
Ti	47	47.986	ug/L	2.590	29409	0.046
V	51	52.201	ug/L	9.137	356640	0.567
Cr	52	52.352	ug/L	3.745	287889	0.447
Cr	53		ug/L		139417	0.017
Mn	55	52.311	ug/L	4.229	477822	0.749
Fe	57	5421.362	ug/L	5.621	932682	1.458
Co	59	51.375	ug/L	4.724	376191	0.592
Ni	60	51.296	ug/L	4.355	86133	0.135
Cu	63		ug/L		208849	0.328
Cu	65	50.755	ug/L	2.568	104675	0.164
Zn	66	53.249	ug/L	4.201	70172	0.138
Zn	67		ug/L		24734	0.025
Zn	68		ug/L		51266	0.099
> Ge	74		ug/L		507767	507767.391
As	75	49.226	ug/L	3.567	67360	0.135
Se	77		ug/L		12665	0.004
Se	82	51.729	ug/L	3.054	7524	0.015
Kr	83		ug/L		131	0.000
Sr	88	54.221	ug/L	3.280	900273	2.674
Y	89		ug/L		192	0.000
Mo	98	49.667	ug/L	2.427	218814	0.650
Ag	107	51.896	ug/L	0.601	382483	1.136
Cd	111	51.165	ug/L	2.734	93422	0.277
Cd	114		ug/L		217699	0.646
> In	115		ug/L		336800	336799.998
Sn	120	52.323	ug/L	3.801	392534	1.166
Sb	121	52.384	ug/L	2.285	328014	0.973
Sb	123		ug/L		256560	0.761
Ba	135		ug/L		98015	0.179
Ba	137	49.627	ug/L	1.730	172296	0.314
Ho	165		ug/L		46	0.000
> Lu	175		ug/L		548742	548741.522
Tl	205	54.527	ug/L	1.397	1005606	1.821
Pb	208	55.885	ug/L	1.910	1949964	3.553
Bi	209		ug/L		557	0.001
Th	232	53.982	ug/L	1.782	2084209	3.798
U	238	55.353	ug/L	3.041	2191893	3.995

Sample ID: QC Std 8

Report Date/Time: Sunday, February 14, 2010 00:18:31

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
Li	7	103.611				
Be	9	104.893				
B	11	99.580				
Na	23	103.396				
Mg	24	103.382				
Al	27	102.281				
P	31	101.934				
K	39	87.244				
Ca	43	96.970				
> Sc	45		94.8			
Ti	47	95.972				
V	51	104.401				
Cr	52	104.703				
Cr	53					
Mn	55	104.621				
Fe	57	108.427				
Co	59	102.750				
Ni	60	102.591				
Cu	63					
Cu	65	101.511				
Zn	66	106.498				
Zn	67					
Zn	68					
> Ge	74		89.5			
As	75	98.452				
Se	77					
Se	82	103.459				
Kr	83					
Sr	88	108.441				
Y	89					
Mo	98	99.334				
Ag	107	103.791				
Cd	111	102.330				
Cd	114					
> In	115		91.6			
Sn	120	104.646				
Sb	121	104.769				
Sb	123					
Ba	135					
Ba	137	99.255				
Ho	165					
> Lu	175		101.7			
Tl	205	109.055				
Pb	208	111.770				
Bi	209					
Th	232	107.964				
U	238	110.707				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	K	39	CCV is out of limits (+/- 10%)
QC Std 8	Pb	208	CCV is out of limits (+/- 10%)
QC Std 8	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Sunday, February 14, 2010 00:21:57

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 9.699

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.067	ug/L	15.742	103	0.000
Be	9	0.032	ug/L	41.990	18	0.000
B	11	2.827	ug/L	22.186	878	0.001
Na	23	0.952	ug/L	292.493	6669	0.003
Mg	24	-0.271	ug/L	247.066	1000	-0.001
Al	27	0.018	ug/L	7190.784	2000	0.000
P	31	-2.180	ug/L	104.454	3934	-0.001
K	39	-6.006	ug/L	64.992	436231	-0.043
Ca	43	-0.132	ug/L	931.633	333	-0.000
> Sc	45		ug/L		566467	566466.726
Ti	47	-0.014	ug/L	216.676	351	-0.000
V	51	0.379	ug/L	108.184	-330	0.004
Cr	52	-0.104	ug/L	17.770	2910	-0.001
Cr	53		ug/L		85844	-0.051
Mn	55	0.008	ug/L	99.744	1367	0.000
Fe	57	-1.004	ug/L	59.070	5264	-0.000
Co	59	0.003	ug/L	32.275	71	0.000
Ni	60	0.017	ug/L	63.782	227	0.000
Cu	63		ug/L		251	0.000
Cu	65	0.011	ug/L	79.351	204	0.000
Zn	66	-0.025	ug/L	38.145	340	-0.000
Zn	67		ug/L		10163	-0.002
Zn	68		ug/L		1079	-0.000
> Ge	74		ug/L		478555	478554.724
As	75	0.265	ug/L	156.246	-667	0.001
Se	77		ug/L		5891	-0.009
Se	82	-0.089	ug/L	189.641	4	-0.000
Kr	83		ug/L		139	0.000
Sr	88	0.003	ug/L	33.613	160	0.000
Y	89		ug/L		84	0.000
Mo	98	0.025	ug/L	31.832	184	0.000
Ag	107	0.003	ug/L	46.573	45	0.000
Cd	111	0.003	ug/L	75.805	25	0.000
Cd	114		ug/L		37	0.000
> In	115		ug/L		320956	320956.259
Sn	120	0.007	ug/L	16.506	202	0.000
Sb	121	0.159	ug/L	20.237	1216	0.003
Sb	123		ug/L		966	0.002
Ba	135		ug/L		36	0.000
Ba	137	0.004	ug/L	51.260	47	0.000
Ho	165		ug/L		18	-0.000
> Lu	175		ug/L		523170	523170.258
Tl	205	0.208	ug/L	35.775	9583	0.007
Pb	208	0.005	ug/L	30.752	660	0.000
Bi	209		ug/L		111	0.000
Th	232	0.026	ug/L	23.831	1221	0.002
U	238	0.005	ug/L	15.440	256	0.000

Sample ID: QC Std 9

Report Date/Time: Sunday, February 14, 2010 00:24:41

Page 1

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		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		84.3			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		87.3			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.9			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Sunday, February 14, 2010 00:52:34

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 8.704

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	54.130	ug/L	0.630	70550	0.113
Be	9	54.119	ug/L	1.198	15958	0.025
B	11	101.728	ug/L	6.852	27825	0.044
Na	23	5889.872	ug/L	7.804	12770027	20.376
Mg	24	5637.305	ug/L	8.015	9350094	14.925
Al	27	5742.408	ug/L	8.817	13217279	21.097
P	31	5225.248	ug/L	1.085	804281	1.276
K	39	4703.333	ug/L	4.563	21692120	33.805
Ca	43	4901.273	ug/L	3.855	56914	0.090
> Sc	45		ug/L		626653	626652.734
Ti	47	48.829	ug/L	1.168	29470	0.046
V	51	52.382	ug/L	1.776	353299	0.569
Cr	52	53.477	ug/L	0.583	289723	0.456
Cr	53		ug/L		141976	0.024
Mn	55	54.442	ug/L	0.573	490117	0.780
Fe	57	5564.200	ug/L	3.582	943643	1.497
Co	59	51.373	ug/L	2.515	370781	0.592
Ni	60	52.027	ug/L	2.387	86100	0.137
Cu	63		ug/L		208951	0.333
Cu	65	51.969	ug/L	1.254	105585	0.168
Zn	66	53.298	ug/L	1.690	70482	0.138
Zn	67		ug/L		24444	0.025
Zn	68		ug/L		51650	0.099
> Ge	74		ug/L		509019	509018.688
As	75	50.127	ug/L	0.553	68842	0.137
Se	77		ug/L		12517	0.003
Se	82	51.042	ug/L	2.497	7449	0.015
Kr	83		ug/L		131	0.000
Sr	88	54.536	ug/L	0.653	906265	2.689
Y	89		ug/L		198	0.000
Mo	98	49.025	ug/L	0.786	216090	0.641
Ag	107	51.715	ug/L	0.793	381328	1.132
Cd	111	51.419	ug/L	0.805	93944	0.279
Cd	114		ug/L		217613	0.646
> In	115		ug/L		336925	336925.437
Sn	120	51.170	ug/L	1.662	384231	1.140
Sb	121	51.873	ug/L	0.819	325024	0.964
Sb	123		ug/L		254639	0.755
Ba	135		ug/L		97870	0.181
Ba	137	50.233	ug/L	1.434	171711	0.318
Ho	165		ug/L		52	0.000
> Lu	175		ug/L		540243	540243.289
Tl	205	55.456	ug/L	1.359	1006833	1.852
Pb	208	56.756	ug/L	0.727	1949906	3.609
Bi	209		ug/L		540	0.001
Th	232	54.998	ug/L	2.740	2090505	3.870
U	238	56.204	ug/L	1.324	2191593	4.057

Sample ID: QC Std 8

Report Date/Time: Sunday, February 14, 2010 00:55:17

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7	108.260				
Be	9	108.239				
B	11	101.728				
Na	23	117.797				
Mg	24	112.746				
Al	27	113.711				
P	31	104.505				
K	39	94.067				
Ca	43	98.025				
> Sc	45		93.4			
Ti	47	97.657				
V	51	104.765				
Cr	52	106.955				
Cr	53					
Mn	55	108.885				
Fe	57	111.284				
Co	59	102.746				
Ni	60	104.054				
Cu	63					
Cu	65	103.938				
Zn	66	106.597				
Zn	67					
Zn	68					
> Ge	74		89.7			
As	75	100.254				
Se	77					
Se	82	102.085				
Kr	83					
Sr	88	109.071				
Y	89					
Mo	98	98.050				
Ag	107	103.431				
Cd	111	102.838				
Cd	114					
> In	115		91.6			
Sn	120	102.340				
Sb	121	103.746				
Sb	123					
Ba	135					
Ba	137	100.465				
Ho	165					
> Lu	175		100.1			
Tl	205	110.912				
Pb	208	113.512				
Bi	209					
Th	232	109.996				
U	238	112.409				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Na	23	CCV is out of limits (+/- 10%)
QC Std 8	Mg	24	CCV is out of limits (+/- 10%)
QC Std 8	Al	27	CCV is out of limits (+/- 10%)
QC Std 8	Fe	57	CCV is out of limits (+/- 10%)
QC Std 8	Ti	205	CCV is out of limits (+/- 10%)
QC Std 8	Pb	208	CCV is out of limits (+/- 10%)
QC Std 8	U	238	CCV is out of limits (+/- 10%)

Sample ID: QC Std 8

Report Date/Time: Sunday, February 14, 2010 00:55:17

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QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Sunday, February 14, 2010 00:58:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 9.705

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.048	ug/L	17.672	83	0.000
Be	9	0.022	ug/L	31.127	16	0.000
B	11	2.969	ug/L	21.653	949	0.001
Na	23	1.483	ug/L	34.786	8002	0.005
Mg	24	-0.511	ug/L	72.465	667	-0.001
Al	27	0.906	ug/L	154.825	4001	0.003
P	31	-2.969	ug/L	89.775	3980	-0.001
K	39	2.780	ug/L	373.775	491704	0.020
Ca	43	-2.552	ug/L	83.493	321	-0.000
> Sc	45		ug/L		589771	589770.653
Ti	47	-0.065	ug/L	76.790	337	-0.000
V	51	-0.143	ug/L	437.351	-3683	-0.002
Cr	52	-0.055	ug/L	68.013	3276	-0.000
Cr	53		ug/L		88347	-0.052
Mn	55	0.001	ug/L	914.683	1361	0.000
Fe	57	-0.163	ug/L	1231.821	5612	-0.000
Co	59	0.004	ug/L	29.555	78	0.000
Ni	60	0.017	ug/L	166.908	236	0.000
Cu	63		ug/L		265	0.000
Cu	65	0.004	ug/L	169.334	198	0.000
Zn	66	-0.002	ug/L	2003.225	376	-0.000
Zn	67		ug/L		10253	-0.002
Zn	68		ug/L		1080	-0.000
> Ge	74		ug/L		487505	487504.916
As	75	0.294	ug/L	55.001	-638	0.001
Se	77		ug/L		5982	-0.009
Se	82	0.078	ug/L	44.106	28	0.000
Kr	83		ug/L		126	0.000
Sr	88	0.005	ug/L	18.574	196	0.000
Y	89		ug/L		74	0.000
Mo	98	0.027	ug/L	18.178	195	0.000
Ag	107	0.005	ug/L	41.806	58	0.000
Cd	111	0.001	ug/L	801.635	23	0.000
Cd	114		ug/L		58	0.000
> In	115		ug/L		322248	322247.988
Sn	120	0.011	ug/L	29.764	234	0.000
Sb	121	0.188	ug/L	20.387	1397	0.003
Sb	123		ug/L		1053	0.003
Ba	135		ug/L		36	0.000
Ba	137	0.007	ug/L	61.804	57	0.000
Ho	165		ug/L		27	0.000
> Lu	175		ug/L		524505	524504.774
Tl	205	0.207	ug/L	43.220	9600	0.007
Pb	208	0.005	ug/L	24.580	667	0.000
Bi	209		ug/L		115	0.000
Th	232	0.029	ug/L	19.892	1371	0.002
U	238	0.008	ug/L	18.134	345	0.001

Sample ID: QC Std 9

Report Date/Time: Sunday, February 14, 2010 01:01:26

Page 1

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

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			87.9			
|	Ti	47						
|	V	51						
|	Cr	52						
|	Cr	53						
|	Mn	55						
|	Fe	57						
|	Co	59						
|	Ni	60						
|	Cu	63						
|	Cu	65						
|	Zn	66						
|	Zn	67						
|	Zn	68						
>	Ge	74			85.9			
|	As	75						
|	Se	77						
|	Se	82						
|	Kr	83						
|	Sr	88						
|	Y	89						
|	Mo	98						
|	Ag	107						
|	Cd	111						
|	Cd	114						
>	In	115			87.6			
|	Sn	120						
|	Sb	121						
|	Sb	123						
|	Ba	135						
|	Ba	137						
|	Ho	165						
>	Lu	175			97.2			
|	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: 245396001

Sample Date/Time: Sunday, February 14, 2010 01:04:51

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\245396001.706

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	22.786	ug/L	0.757	28357	0.047
Be	9	1.733	ug/L	2.024	497	0.001
B	11	1.935	ug/L	4.005	696	0.001
Na	23	1347.492	ug/L	2.682	2792522	4.662
Mg	24	1024.179	ug/L	5.907	1622278	2.712
Al	27	7099.108	ug/L	11.303	15600069	26.081
P	31	228.120	ug/L	4.520	37793	0.056
K	39	1663.327	ug/L	8.904	7632472	11.955
Ca	43	1260.372	ug/L	1.530	14230	0.023
> Sc	45		ug/L		598017	598017.281
Ti	47	521.074	ug/L	4.343	296383	0.495
V	51	10.351	ug/L	5.095	64376	0.112
Cr	52	9.186	ug/L	2.263	50476	0.078
Cr	53		ug/L		68274	-0.088
Mn	55	1158.219	ug/L	1.241	9921839	16.591
Fe	57	26723.995	ug/L	1.568	4303612	7.188
Co	59	14.275	ug/L	2.973	98383	0.164
Ni	60	12.379	ug/L	3.294	19716	0.033
Cu	63		ug/L		136944	0.229
Cu	65	35.661	ug/L	0.217	69201	0.115
Zn	66	95.501	ug/L	2.394	109078	0.247
Zn	67		ug/L		25024	0.033
Zn	68		ug/L		80281	0.180
> Ge	74		ug/L		440823	440822.862
As	75	3.877	ug/L	2.211	3751	0.011
Se	77		ug/L		3814	-0.012
Se	82	0.532	ug/L	33.302	82	0.000
Kr	83		ug/L		228	0.000
Sr	88	12.474	ug/L	0.628	189218	0.615
Y	89		ug/L		1331081	4.330
Mo	98	4.906	ug/L	2.699	19797	0.064
Ag	107	0.347	ug/L	3.060	2361	0.008
Cd	111	1.357	ug/L	11.965	2281	0.007
Cd	114		ug/L		806	0.003
> In	115		ug/L		307416	307416.301
Sn	120	8.434	ug/L	1.171	57905	0.188
Sb	121	0.606	ug/L	7.410	3720	0.011
Sb	123		ug/L		2807	0.008
Ba	135		ug/L		204898	0.360
Ba	137	99.726	ug/L	1.545	358688	0.631
Ho	165		ug/L		105174	0.185
> Lu	175		ug/L		568502	568501.609
Tl	205	0.277	ug/L	11.840	11738	0.009
Pb	208	32.481	ug/L	1.547	1174395	2.065
Bi	209		ug/L		5268	0.009
Th	232	25.419	ug/L	1.543	1016957	1.789
U	238	9.494	ug/L	3.398	389585	0.685

Sample ID: 245396001

Report Date/Time: Sunday, February 14, 2010 01:07:35

Page 1

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

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		89.1			
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		77.7			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		83.6			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		105.3			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte

Ti 47 Upper, S, EEE Ti

Mn 55 Upper, S, EEI Mn

Mass Out of Limits Message

47 Sample is out of limits (over linear range)

55 Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

Sample ID: 245396001

Report Date/Time: Sunday, February 14, 2010 01:07:35

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ICPMS#5 - Summary Report

Sample ID: 1202024766

Sample Date/Time: Sunday, February 14, 2010 01:11:00

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 945396[2]baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\1202024766.707

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	24.026	ug/L	0.432	29489	0.050
Be	9	1.709	ug/L	3.423	484	0.001
B	11	1.676	ug/L	1.474	620	0.001
Na	23	1301.581	ug/L	11.075	2661204	4.503
Mg	24	1060.365	ug/L	1.936	1657605	2.807
Al	27	6727.639	ug/L	4.643	14575806	24.716
P	31	223.811	ug/L	0.836	36649	0.055
K	39	1645.676	ug/L	5.852	7457979	11.828
Ca	43	1270.855	ug/L	1.690	14151	0.023
> Sc	45		ug/L		589873	589872.645
Ti	47	539.021	ug/L	0.449	302486	0.512
V	51	10.305	ug/L	5.017	63187	0.112
Cr	52	10.406	ug/L	2.799	55923	0.089
Cr	53		ug/L		67113	-0.088
Mn	55	954.902	ug/L	1.259	8070347	13.678
Fe	57	31986.761	ug/L	0.703	5080762	8.603
Co	59	8.845	ug/L	1.578	60137	0.102
Ni	60	10.999	ug/L	1.023	17299	0.029
Cu	63		ug/L		99755	0.169
Cu	65	26.119	ug/L	1.213	50042	0.085
Zn	66	101.234	ug/L	1.767	113747	0.262
Zn	67		ug/L		25361	0.035
Zn	68		ug/L		81971	0.187
> Ge	74		ug/L		433745	433745.450
As	75	3.981	ug/L	2.372	3813	0.011
Se	77		ug/L		3771	-0.012
Se	82	0.762	ug/L	19.959	109	0.000
Kr	83		ug/L		208	0.000
Sr	88	12.677	ug/L	3.294	191325	0.625
Y	89		ug/L		1371015	4.482
Mo	98	4.907	ug/L	3.631	19705	0.064
Ag	107	0.374	ug/L	1.830	2530	0.008
Cd	111	1.430	ug/L	0.996	2392	0.008
Cd	114		ug/L		850	0.003
> In	115		ug/L		305944	305943.762
Sn	120	4.910	ug/L	0.910	33610	0.109
Sb	121	0.501	ug/L	5.050	3105	0.009
Sb	123		ug/L		2453	0.007
Ba	135		ug/L		151561	0.264
Ba	137	72.958	ug/L	2.663	265386	0.462
Ho	165		ug/L		110252	0.192
> Lu	175		ug/L		574931	574930.639
Tl	205	0.093	ug/L	3.120	8333	0.003
Pb	208	26.040	ug/L	1.608	952215	1.656
Bi	209		ug/L		5659	0.010
Th	232	26.559	ug/L	1.229	1074629	1.869
U	238	7.774	ug/L	1.531	322633	0.561

Sample ID: 1202024766

Report Date/Time: Sunday, February 14, 2010 01:13:44

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		87.9			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		76.4			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		83.2			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		106.5			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type Analyte

Ti 47 Upper, S, EEE Ti

Mass Out of Limits Message

47 Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

Sample ID: 1202024766

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ICPMS#5 - Summary Report

Sample ID: 1202024767

Sample Date/Time: Sunday, February 14, 2010 01:17:08

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\1202024767.708

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	51.064	ug/L	2.022	61413	0.106
Be	9	25.632	ug/L	3.048	6978	0.012
B	11	45.905	ug/L	3.300	11693	0.020
Na	23	2842.224	ug/L	5.487	5689563	9.833
Mg	24	2477.694	ug/L	4.805	3795056	6.560
Al	27	8950.891	ug/L	9.369	19013255	32.884
P	31	1099.858	ug/L	3.589	159625	0.269
K	39	3148.755	ug/L	7.641	13552324	22.631
Ca	43	2332.388	ug/L	2.619	25172	0.043
Sc	45		ug/L		578286	578286.239
Ti	47	664.856	ug/L	2.994	365652	0.632
V	51	34.612	ug/L	1.515	214522	0.376
Cr	52	35.325	ug/L	2.437	177778	0.301
Cr	53		ug/L		79223	-0.065
Mn	55	1047.606	ug/L	2.783	8678221	15.006
Fe	57	32501.197	ug/L	0.271	5060693	8.742
Co	59	32.712	ug/L	0.877	217909	0.377
Ni	60	33.676	ug/L	1.737	51498	0.089
Cu	63		ug/L		223020	0.385
Cu	65	60.353	ug/L	2.102	113118	0.195
Zn	66	142.967	ug/L	3.422	156761	0.369
Zn	67		ug/L		31404	0.051
Zn	68		ug/L		112147	0.262
Ge	74		ug/L		423683	423682.615
As	75	39.802	ug/L	2.714	45299	0.109
Se	77		ug/L		4333	-0.011
Se	82	8.684	ug/L	3.570	1066	0.002
Kr	83		ug/L		237	0.000
Sr	88	40.436	ug/L	2.546	607231	1.994
Y	89		ug/L		1485618	4.879
Mo	98	27.363	ug/L	2.512	109030	0.358
Ag	107	23.933	ug/L	1.898	159484	0.524
Cd	111	6.651	ug/L	1.234	10999	0.036
Cd	114		ug/L		19271	0.063
In	115		ug/L		304481	304480.730
Sn	120	29.485	ug/L	0.804	200148	0.657
Sb	121	81.385	ug/L	1.043	460692	1.512
Sb	123		ug/L		366715	1.204
Ba	135		ug/L		200267	0.350
Ba	137	95.216	ug/L	0.922	344381	0.602
Ho	165		ug/L		123762	0.216
Lu	175		ug/L		571638	571637.818
Tl	205	51.646	ug/L	2.353	992556	1.725
Pb	208	120.181	ug/L	1.725	4368006	7.641
Bi	209		ug/L		6729	0.012
Th	232	50.952	ug/L	2.574	2049357	3.585
U	238	38.720	ug/L	1.928	1597552	2.795

Sample ID: 1202024767

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		86.2			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
L Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		74.7			
As	75					
Se	77					
Se	82					
L Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		82.8			
Sn	120					
Sb	121					
L Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		105.9			
Tl	205					
Pb	208					
Bi	209					
Th	232					
L U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1202024772

Sample Date/Time: Sunday, February 14, 2010 01:23:15

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\1202024772.709

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	51.362	ug/L	1.916	62554	0.107
Be	9	26.052	ug/L	2.919	7181	0.012
B	11	50.165	ug/L	3.929	12924	0.022
Na	23	2489.804	ug/L	13.983	5046372	8.613
Mg	24	2553.220	ug/L	7.265	3960701	6.760
Al	27	10305.697	ug/L	16.024	22144308	37.861
P	31	1132.250	ug/L	4.863	166178	0.277
K	39	2814.158	ug/L	2.992	12321176	20.226
Ca	43	2342.795	ug/L	5.033	25589	0.043
> Sc	45		ug/L		585693	585693.230
Ti	47	657.082	ug/L	2.098	365948	0.624
V	51	36.193	ug/L	3.423	227195	0.393
Cr	52	36.194	ug/L	1.441	184372	0.309
Cr	53		ug/L		79484	-0.066
Mn	55	1074.965	ug/L	2.491	9016022	15.398
Fe	57	36553.739	ug/L	3.859	5760124	9.832
Co	59	31.720	ug/L	3.435	213891	0.365
Ni	60	35.797	ug/L	4.727	55388	0.094
Cu	63		ug/L		204576	0.349
Cu	65	52.995	ug/L	2.706	100583	0.171
Zn	66	143.957	ug/L	2.536	159919	0.372
Zn	67		ug/L		31780	0.051
Zn	68		ug/L		115568	0.267
> Ge	74		ug/L		429195	429195.181
As	75	40.898	ug/L	0.919	47192	0.112
Se	77		ug/L		4274	-0.011
Se	82	8.812	ug/L	3.947	1096	0.003
Kr	83		ug/L		255	0.000
Sr	88	41.033	ug/L	2.718	611652	2.024
Y	89		ug/L		1500927	4.966
Mo	98	29.364	ug/L	3.590	116107	0.384
Ag	107	25.669	ug/L	1.834	169807	0.562
Cd	111	6.823	ug/L	1.282	11202	0.037
Cd	114		ug/L		20486	0.068
> In	115		ug/L		302339	302339.283
Sn	120	31.927	ug/L	1.597	215163	0.711
Sb	121	90.403	ug/L	3.066	507862	1.680
Sb	123		ug/L		403141	1.333
Ba	135		ug/L		228602	0.402
Ba	137	110.836	ug/L	1.287	399205	0.701
Ho	165		ug/L		124812	0.219
> Lu	175		ug/L		569276	569276.401
Tl	205	53.852	ug/L	1.295	1030553	1.799
Pb	208	124.415	ug/L	0.850	4503558	7.910
Bi	209		ug/L		6694	0.012
Th	232	52.801	ug/L	1.351	2115216	3.715
U	238	39.943	ug/L	1.309	1641326	2.883

Sample ID: 1202024772

Report Date/Time: Sunday, February 14, 2010 01:25:58

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

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		75.6			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		82.2			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		105.5			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 1202024768

Sample Date/Time: Sunday, February 14, 2010 01:29:22

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 945396|10|ba|

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\1202024768.710

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	4.814	ug/L	4.215	5421	0.010
Be	9	0.366	ug/L	11.016	102	0.000
B	11	1.891	ug/L	20.544	617	0.001
Na	23	274.415	ug/L	3.053	516859	0.949
Mg	24	286.816	ug/L	6.467	410833	0.759
Al	27	1513.457	ug/L	5.499	3002254	5.560
P	31	59.631	ug/L	4.780	11889	0.015
K	39	319.486	ug/L	2.190	1677728	2.296
Ca	43	250.926	ug/L	4.306	2812	0.005
> Sc	45		ug/L		539595	539595.348
Ti	47	106.263	ug/L	2.822	54810	0.101
V	51	1.546	ug/L	26.757	6542	0.017
Cr	52	1.315	ug/L	5.578	9306	0.011
Cr	53		ug/L		78815	-0.056
Mn	55	237.873	ug/L	2.985	1839310	3.407
Fe	57	6016.957	ug/L	1.509	878305	1.618
Co	59	2.924	ug/L	0.504	18216	0.034
Ni	60	2.540	ug/L	1.860	3801	0.007
Cu	63		ug/L		26003	0.048
Cu	65	7.169	ug/L	1.681	12690	0.023
Zn	66	19.131	ug/L	3.053	21704	0.049
Zn	67		ug/L		13627	0.008
Zn	68		ug/L		16300	0.035
> Ge	74		ug/L		432551	432551.396
As	75	1.102	ug/L	19.021	391	0.003
Se	77		ug/L		4746	-0.010
Se	82	0.049	ug/L	605.375	21	0.000
Kr	83		ug/L		133	0.000
Sr	88	2.325	ug/L	2.753	35085	0.115
Y	89		ug/L		264477	0.867
Mo	98	0.899	ug/L	2.164	3662	0.012
Ag	107	0.066	ug/L	9.232	467	0.001
Cd	111	0.257	ug/L	5.818	444	0.001
Cd	114		ug/L		197	0.001
> In	115		ug/L		305016	305015.748
Sn	120	1.597	ug/L	1.103	11000	0.036
Sb	121	0.106	ug/L	9.035	853	0.002
Sb	123		ug/L		628	0.001
Ba	135		ug/L		39746	0.072
Ba	137	19.811	ug/L	1.940	69391	0.125
Ho	165		ug/L		20182	0.036
> Lu	175		ug/L		553401	553400.791
Tl	205	0.011	ug/L	330.136	6503	0.000
Pb	208	6.677	ug/L	1.090	235427	0.425
Bi	209		ug/L		1123	0.002
Th	232	5.520	ug/L	2.642	215190	0.388
U	238	1.915	ug/L	2.887	76543	0.138

Sample ID: 1202024768

Report Date/Time: Sunday, February 14, 2010 01:32:05

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

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		80.4			
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		76.2			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		82.9			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		102.5			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEE	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: 245396002

Sample Date/Time: Sunday, February 14, 2010 01:35:30

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945396[2]baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\245396002.711

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	54.425	ug/L	0.342	71053	0.113
Be	9	7.972	ug/L	1.528	2364	0.004
B	11	18.393	ug/L	1.599	5209	0.008
Na	23	514.315	ug/L	6.267	1121805	1.779
Mg	24	9832.094	ug/L	4.278	16330867	26.031
Al	27	68996.512	ug/L	4.186	159171607	253.480
P	31	588.252	ug/L	3.076	94830	0.144
K	39	8678.507	ug/L	7.531	39706952	62.376
Ca	43	14493.341	ug/L	4.198	167755	0.267
> Sc	45		ug/L		627705	627704.554
Ti	47	1180.693	ug/L	1.304	704523	1.122
V	51	76.623	ug/L	2.364	518881	0.832
Cr	52	40.258	ug/L	1.869	219346	0.344
Cr	53		ug/L		87154	-0.063
Mn	55	1151.038	ug/L	2.055	10347637	16.488
Fe	57	42774.073	ug/L	2.942	7224758	11.505
Co	59	21.869	ug/L	3.398	158137	0.252
Ni	60	33.346	ug/L	3.862	55327	0.088
Cu	63		ug/L		1132956	1.805
Cu	65	290.501	ug/L	1.327	590154	0.940
Zn	66	176.691	ug/L	1.031	193839	0.456
Zn	67		ug/L		40578	0.072
Zn	68		ug/L		146591	0.343
> Ge	74		ug/L		423944	423943.810
As	75	11.288	ug/L	1.582	12214	0.031
Se	77		ug/L		3701	-0.012
Se	82	-0.342	ug/L	73.257	-27	-0.000
Kr	83		ug/L		314	0.000
Sr	88	144.717	ug/L	0.926	2144686	7.137
Y	89		ug/L		810190	2.696
Mo	98	2.376	ug/L	1.578	9411	0.031
Ag	107	0.965	ug/L	2.169	6369	0.021
Cd	111	6.967	ug/L	2.831	11367	0.038
Cd	114		ug/L		22112	0.073
> In	115		ug/L		300529	300529.200
Sn	120	1.946	ug/L	1.880	13169	0.043
Sb	121	1.212	ug/L	1.899	7019	0.023
Sb	123		ug/L		5501	0.018
Ba	135		ug/L		971547	1.787
Ba	137	463.185	ug/L	3.316	1593403	2.930
Ho	165		ug/L		61025	0.112
> Lu	175		ug/L		544038	544038.236
Tl	205	0.876	ug/L	1.841	22111	0.029
Pb	208	408.443	ug/L	2.205	14123194	25.969
Bi	209		ug/L		38046	0.070
Th	232	38.176	ug/L	2.136	1461122	2.686
U	238	140.346	ug/L	3.372	5508230	10.130

Sample ID: 245396002

Report Date/Time: Sunday, February 14, 2010 01:38:13

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
Li	7					
Be	9					
B	11					
Na	23					
Mg	24					
Al	27					
P	31					
K	39					
Ca	43					
> Sc	45		93.5			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
L Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		74.7			
As	75					
Se	77					
Se	82					
L Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		81.7			
Sn	120					
Sb	121					
L Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		100.8			
Tl	205					
Pb	208					
Bi	209					
Th	232					
L U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	Sample is out of limits (over linear range)
Ti 47 Upper, S, EEE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EEE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 245396003

Sample Date/Time: Sunday, February 14, 2010 01:41:38

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945396|2|ba|

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\245396003.712

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	43.403	ug/L	1.191	51701	0.090
Be	9	22.014	ug/L	4.386	5934	0.010
B	11	12.035	ug/L	1.934	3173	0.005
Na	23	456.403	ug/L	10.894	907761	1.579
Mg	24	6366.931	ug/L	6.542	9654764	16.857
Al	27	50374.129	ug/L	4.188	105983561	185.065
P	31	502.271	ug/L	2.382	74521	0.123
K	39	6090.976	ug/L	6.335	25547133	43.778
Ca	43	7436.542	ug/L	3.049	78716	0.137
> Sc	45		ug/L		572798	572798.174
Ti	47	693.682	ug/L	4.502	377595	0.659
V	51	47.984	ug/L	3.617	295412	0.521
Cr	52	28.456	ug/L	3.133	142459	0.243
Cr	53		ug/L		68986	-0.082
Mn	55	818.870	ug/L	3.883	6715117	11.730
Fe	57	28246.581	ug/L	3.422	4354516	7.597
Co	59	14.161	ug/L	1.637	93447	0.163
Ni	60	26.760	ug/L	1.624	40568	0.070
Cu	63		ug/L		6123401	10.692
Cu	65	1771.636	ug/L	3.993	3281483	5.733
Zn	66	224.594	ug/L	2.109	233054	0.580
Zn	67		ug/L		44143	0.087
Zn	68		ug/L		170837	0.423
> Ge	74		ug/L		401312	401311.978
As	75	9.388	ug/L	4.006	9466	0.026
Se	77		ug/L		3054	-0.013
Se	82	-0.166	ug/L	51.447	-5	-0.000
Kr	83		ug/L		228	0.000
Sr	88	75.820	ug/L	4.927	1083956	3.739
Y	89		ug/L		638188	2.201
Mo	98	3.072	ug/L	2.544	11724	0.040
Ag	107	1.858	ug/L	5.076	11809	0.041
Cd	111	5.464	ug/L	1.063	8614	0.030
Cd	114		ug/L		17499	0.060
> In	115		ug/L		290120	290120.464
Sn	120	5.381	ug/L	1.952	34909	0.120
Sb	121	2.716	ug/L	2.778	14878	0.050
Sb	123		ug/L		11535	0.039
Ba	135		ug/L		639928	1.199
Ba	137	322.549	ug/L	3.607	1089335	2.041
Ho	165		ug/L		48689	0.091
> Lu	175		ug/L		534084	534083.500
Tl	205	0.411	ug/L	5.955	13406	0.014
Pb	208	460.270	ug/L	3.934	15618811	29.264
Bi	209		ug/L		28174	0.053
Th	232	29.374	ug/L	4.216	1103310	2.067
U	238	365.900	ug/L	3.602	14097425	26.411

Sample ID: 245396003

Report Date/Time: Sunday, February 14, 2010 01:44:22

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

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		85.3			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
L Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		70.7			
As	75					
Se	77					
Se	82					
L Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		78.9			
Sn	120					
Sb	121					
L Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		98.9			
Tl	205					
Pb	208					
Bi	209					
Th	232					
L U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEEAl		27	Sample is out of limits (over linear range)
Ti 47 Upper, S, EEE Ti		47	Sample is out of limits (over linear range)
Cu 65 Upper, S, EEE Cu		65	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: 245396004

Sample Date/Time: Sunday, February 14, 2010 01:47:47

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\245396004.713

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	17.248	ug/L	3.365	20050	0.036
Be	9	4.006	ug/L	4.014	1061	0.002
B	11	4.132	ug/L	5.610	1181	0.002
Na	23	1669.685	ug/L	7.749	3226676	5.776
Mg	24	1936.873	ug/L	14.425	2863300	5.128
Al	27	15089.687	ug/L	7.072	31034538	55.437
P	31	227.492	ug/L	3.855	35203	0.056
K	39	2573.460	ug/L	5.428	10799205	18.496
Ca	43	2408.207	ug/L	1.068	25101	0.044
> Sc	45		ug/L		558845	558845.058
Ti	47	444.499	ug/L	1.041	236340	0.422
V	51	15.876	ug/L	4.905	93585	0.172
Cr	52	22.215	ug/L	3.455	109217	0.190
Cr	53		ug/L		66003	-0.084
Mn	55	784.701	ug/L	2.051	6279803	11.240
Fe	57	31227.708	ug/L	2.715	4696332	8.399
Co	59	32.468	ug/L	2.072	208955	0.374
Ni	60	17.962	ug/L	2.189	26628	0.047
Cu	63		ug/L		805095	1.440
Cu	65	229.987	ug/L	1.108	415972	0.744
Zn	66	125.700	ug/L	1.582	132348	0.325
Zn	67		ug/L		26746	0.042
Zn	68		ug/L		93960	0.229
> Ge	74		ug/L		406690	406689.676
As	75	6.754	ug/L	3.886	6664	0.019
Se	77		ug/L		3098	-0.013
Se	82	0.430	ug/L	41.828	64	0.000
Kr	83		ug/L		205	0.000
Sr	88	23.019	ug/L	0.781	333955	1.135
Y	89		ug/L		1176730	4.001
Mo	98	4.816	ug/L	1.523	18595	0.063
Ag	107	0.415	ug/L	1.929	2695	0.009
Cd	111	1.949	ug/L	5.271	3126	0.011
Cd	114		ug/L		3335	0.011
> In	115		ug/L		294105	294105.206
Sn	120	4.324	ug/L	0.863	28476	0.096
Sb	121	1.039	ug/L	2.687	5921	0.019
Sb	123		ug/L		4668	0.015
Ba	135		ug/L		236941	0.412
Ba	137	111.437	ug/L	0.966	405491	0.705
Ho	165		ug/L		89636	0.156
> Lu	175		ug/L		575078	575078.270
Tl	205	-0.009	ug/L	72.936	6381	-0.000
Pb	208	74.022	ug/L	0.969	2706917	4.706
Bi	209		ug/L		8889	0.015
Th	232	29.035	ug/L	0.122	1175148	2.043
U	238	47.455	ug/L	1.071	1969845	3.425

Sample ID: 245396004

Report Date/Time: Sunday, February 14, 2010 01:50:31

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

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		83.3			
Ti	47					
V	51					
Cr	52					
Cr	53					
Mn	55					
Fe	57					
Co	59					
Ni	60					
Cu	63					
L Cu	65					
Zn	66					
Zn	67					
Zn	68					
> Ge	74		71.7			
As	75					
Se	77					
Se	82					
L Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		80.0			
Sn	120					
Sb	121					
L Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		106.5			
Tl	205					
Pb	208					
Bi	209					
Th	232					
L U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Ti 47 Upper, S, EEETi		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 6

Sample Date/Time: Sunday, February 14, 2010 01:53:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 6.714

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	54.801	ug/L	1.895	61744	0.114
Be	9	54.772	ug/L	1.919	13962	0.026
B	11	101.773	ug/L	3.259	24078	0.044
Na	23	5573.191	ug/L	8.638	10449179	19.280
Mg	24	5317.720	ug/L	12.587	7631523	14.079
Al	27	5309.108	ug/L	9.776	10573823	19.505
P	31	5049.882	ug/L	3.882	672246	1.233
K	39	4455.979	ug/L	6.934	17791868	32.027
Ca	43	4773.885	ug/L	2.510	47940	0.088
> Sc	45		ug/L		541737	541737.377
Ti	47	49.296	ug/L	2.810	25722	0.047
V	51	50.682	ug/L	5.552	295534	0.550
Cr	52	51.689	ug/L	3.163	242234	0.441
Cr	53		ug/L		117380	0.015
Mn	55	53.136	ug/L	2.837	413641	0.761
Fe	57	5518.620	ug/L	2.404	809394	1.484
Co	59	51.475	ug/L	2.290	321236	0.593
Ni	60	52.178	ug/L	4.481	74666	0.137
Cu	63		ug/L		179904	0.332
Cu	65	51.030	ug/L	0.862	89635	0.165
Zn	66	52.305	ug/L	3.425	59509	0.135
Zn	67		ug/L		20683	0.024
Zn	68		ug/L		43591	0.097
> Ge	74		ug/L		437823	437822.738
As	75	49.648	ug/L	2.443	58646	0.136
Se	77		ug/L		10638	0.003
Se	82	50.587	ug/L	4.137	6351	0.014
Kr	83		ug/L		118	0.000
Sr	88	53.002	ug/L	1.251	799794	2.614
Y	89		ug/L		210	0.000
Mo	98	48.018	ug/L	3.664	192124	0.628
Ag	107	50.920	ug/L	2.337	340868	1.114
Cd	111	50.921	ug/L	2.759	84457	0.276
Cd	114		ug/L		197113	0.644
> In	115		ug/L		305932	305932.292
Sn	120	52.312	ug/L	0.429	356663	1.165
Sb	121	52.919	ug/L	2.490	301044	0.983
Sb	123		ug/L		236354	0.772
Ba	135		ug/L		91718	0.168
Ba	137	46.706	ug/L	1.990	161663	0.295
Ho	165		ug/L		57	0.000
> Lu	175		ug/L		547055	547055.108
Tl	205	55.930	ug/L	1.042	1028207	1.868
Pb	208	56.610	ug/L	1.406	1969324	3.599
Bi	209		ug/L		539	0.001
Th	232	56.389	ug/L	0.581	2170756	3.968
U	238	58.188	ug/L	2.078	2297494	4.200

Sample ID: QC Std 6

Report Date/Time: Sunday, February 14, 2010 01:56:39

Page 1

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
Li	7	109.602				
Be	9	109.543				
B	11	101.773				
Na	23	111.464				
Mg	24	106.354				
Al	27	105.131				
P	31	100.998				
K	39	89.120				
Ca	43	95.478				
> Sc	45		80.7			
Ti	47	98.591				
V	51	101.364				
Cr	52	103.377				
Cr	53					
Mn	55	106.272				
Fe	57	110.372				
Co	59	102.949				
Ni	60	104.356				
Cu	63					
Cu	65	102.060				
Zn	66	104.610				
Zn	67					
Zn	68					
> Ge	74		77.2			
As	75	99.297				
Se	77					
Se	82	101.174				
Kr	83					
Sr	88	106.004				
Y	89					
Mo	98	96.037				
Ag	107	101.841				
Cd	111	101.841				
Cd	114					
> In	115		83.2			
Sn	120	104.625				
Sb	121	105.837				
Sb	123					
Ba	135					
Ba	137	93.412				
Ho	165					
> Lu	175		101.3			
Tl	205	111.860				
Pb	208	113.221				
Bi	209					
Th	232	112.778				
U	238	116.377				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Na	23	CCV is out of limits (+/- 10%)
QC Std 6	K	39	CCV is out of limits (+/- 10%)
QC Std 6	Fe	57	CCV is out of limits (+/- 10%)
Ge 74 Int Std for QC	Ge	74	
QC Std 6	Tl	205	CCV is out of limits (+/- 10%)
QC Std 6	Pb	208	CCV is out of limits (+/- 10%)
QC Std 6	Th	232	CCV is out of limits (+/- 10%)

QC Std 6

U

238CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, February 14, 2010 02:00:04

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\6020 2.mth

Dataset File: c:\elandata\Dataset\100211\QC Std 7.715

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	0.038	ug/L	30.107	64	0.000
Be	9	0.022	ug/L	45.495	15	0.000
B	11	2.933	ug/L	16.677	858	0.001
Na	23	-0.638	ug/L	57.589	3334	-0.002
Mg	24	-0.938	ug/L	0.000	0	-0.002
Al	27	0.735	ug/L	101.457	3334	0.003
P	31	-1.059	ug/L	130.415	3878	-0.000
K	39	1.212	ug/L	580.202	440699	0.009
Ca	43	-4.471	ug/L	80.950	273	-0.000
> Sc	45		ug/L		536716	536716.031
Ti	47	-0.049	ug/L	91.198	315	-0.000
V	51	-0.165	ug/L	194.601	-3482	-0.002
Cr	52	-0.443	ug/L	1.900	1208	-0.004
Cr	53		ug/L		78905	-0.055
Mn	55	0.014	ug/L	36.175	1341	0.000
Fe	57	-2.976	ug/L	41.400	4699	-0.001
Co	59	0.005	ug/L	28.933	75	0.000
Ni	60	0.004	ug/L	92.274	196	0.000
Cu	63		ug/L		352	0.000
Cu	65	0.040	ug/L	30.290	245	0.000
Zn	66	0.012	ug/L	182.939	356	0.000
Zn	67		ug/L		9357	-0.002
Zn	68		ug/L		1060	-0.000
> Ge	74		ug/L		441681	441680.565
As	75	0.237	ug/L	113.503	-649	0.001
Se	77		ug/L		5277	-0.009
Se	82	0.084	ug/L	79.283	26	0.000
Kr	83		ug/L		112	0.000
Sr	88	0.005	ug/L	26.690	187	0.000
Y	89		ug/L		67	0.000
Mo	98	0.020	ug/L	28.947	154	0.000
Ag	107	0.005	ug/L	9.196	60	0.000
Cd	111	0.005	ug/L	67.106	28	0.000
Cd	114		ug/L		54	0.000
> In	115		ug/L		303359	303358.833
Sn	120	0.010	ug/L	19.392	212	0.000
Sb	121	0.182	ug/L	14.806	1279	0.003
Sb	123		ug/L		943	0.002
Ba	135		ug/L		40	0.000
Ba	137	0.006	ug/L	26.300	53	0.000
Ho	165		ug/L		19	-0.000
> Lu	175		ug/L		519339	519338.733
Tl	205	0.163	ug/L	74.574	8726	0.005
Pb	208	0.008	ug/L	39.984	742	0.000
Bi	209		ug/L		108	0.000
Th	232	0.032	ug/L	25.183	1436	0.002
U	238	0.011	ug/L	12.629	468	0.001

Sample ID: QC Std 7

Report Date/Time: Sunday, February 14, 2010 02:02:48

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	0.9999
P	31Linear Thru Zero	0.9999
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	0.9998
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	0.9999
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	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9996
U	238Linear Thru Zero	0.9996

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		77.8			
As	75					
Se	77					
Se	82					
Kr	83					
Sr	88					
Y	89					
Mo	98					
Ag	107					
Cd	111					
Cd	114					
> In	115		82.5			
Sn	120					
Sb	121					
Sb	123					
Ba	135					
Ba	137					
Ho	165					
> Lu	175		96.2			
Tl	205					
Pb	208					
Bi	209					
Th	232					
U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for QC Sc		45	
Ge 74 Int Std for QC Ge		74	

QC Action

QC Action Line: Continue

ICPMS #5 Daily Performance Report

Sample ID: Sample

Sample Date/Time: Sunday, February 14, 2010 12:01:59

Sample Description:

Method File: c:\elandata\Method\Daily2.mth

Dataset File: c:\elandata\Dataset\default\Sample.489

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	6564.3	6564.308	53.878	0.8
Mg	24.0	64931.2	64931.236	553.347	0.9
Co	58.9	147429.7	147429.657	849.123	0.6
Rh	102.9	266980.2	266980.180	2193.601	0.8
In	114.9	352729.2	352729.211	1815.331	0.5
Pb	208.0	267033.7	267033.669	1120.035	0.4
[> Ba	137.9	306000.5	306000.518	953.815	0.3
[Ba++	69.0	6645.3	0.022	0.000	1.1
[> Ce	139.9	374052.9	374052.914	4523.980	1.2
[CeO	155.9	10146.6	0.027	0.001	2.4
Bkgd	220.0	17.5	17.500	3.791	21.7

Current Optimization File Data

Current Value	Description
0.89	Nebulizer Gas Flow
5.75	Lens Voltage
1450.00	ICP RF Power
-1718.75	Analog Stage Voltage
1200.00	Pulse Stage Voltage
275.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	9	5.5	7930.2
Co	59	9	5.8	158826.0
In	115	9	6.0	318341.2

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	589	2072	0.633
Be	9.0	9.0	2048	2088	0.630
Mg	24.0	24.0	5683	2100	0.573
Mg	25.0	25.0	5947	2100	0.618
Mg	26.0	26.0	6165	2100	0.608
Co	58.9	58.9	14188	2125	0.600
Rh	102.9	102.9	24878	2180	0.589
In	114.9	114.9	27792	2200	0.593
Ce	139.9	139.9	33864	2220	0.593
Pb	206.0	206.0	49948	2305	0.610
Pb	207.0	207.0	50147	2240	0.634
Pb	208.0	208.0	50451	2265	0.717
U	238.1	238.1	57726	2275	0.743

ICPMS#5 - Summary Report

Sample ID: Blank

Sample Date/Time: Sunday, February 14, 2010 13:07:01

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100214\Blank.010

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		643704	
[	Tl	205		ug/L		2746	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175					
[Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Sunday, February 14, 2010 13:11:30

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100214\Standard 1.011

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		630720	630720.059
[	Tl	205	10.000	ug/L	0.922	258942	0.406

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
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 % Dil	Duplicate Rel. % Difference
[>	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: Sunday, February 14, 2010 13:15:57

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\Tl only.mth

Dataset File: C:\elandata\Dataset\100214\Standard 2.012

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		624041	624041.076
[	Tl	205	99.789	ug/L	0.647	2091458	3.347

Calibration

Analyte	MassCurve Type	Correlation Coefficient
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
[>	Lu	175						
[Tl	205						

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Sunday, February 14, 2010 13:20:25

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 1.013

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		625803	625803.426
[TI	205	54.854	ug/L	0.259	1154112	1.840

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
TI	205Linear Thru Zero	0.9998

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[> Lu	175			97.2		
[TI	205	109.708				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Sunday, February 14, 2010 13:24:54

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 2.014

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		646860	646859.779
[	Tl	205	0.065	ug/L	7.718	4174	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
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 % Di	Duplicate Rel. % Difference
[>	Lu	175		100.5			
[	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: QC Std 3

Sample Date/Time: Sunday, February 14, 2010 13:29:24

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 3.015

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		641283	641283.085
[	Tl	205	1.214	ug/L	2.273	28849	0.041

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
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 % Di	Duplicate Rel.	% Difference
[>	Lu	175			99.6			
[	Tl	205	121.408					

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: Sunday, February 14, 2010 13:33:53

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\1 only.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 4.016

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		573532	573531.864
[	Tl	205	-0.029	ug/L	9.522	1885	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
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
[>	Lu	175			89.1			
[	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: QC Std 5

Sample Date/Time: Sunday, February 14, 2010 13:38:22

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 5.017

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		568551	568551.112
[	Tl	205	22.803	ug/L	0.703	437294	0.765

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
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 % Di	Duplicate	Rel. % Difference
[>	Lu	175			88.3			
[	Tl	205	114.017					

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: Sunday, February 14, 2010 13:42:52

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\11 only.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 6.018

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		639915	639914.816
[	Tl	205	52.608	ug/L	1.010	1131924	1.765

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175			99.4		
[	Tl	205	105.216				

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, February 14, 2010 13:47:23

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 7.019

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		653474	653473.721
[	TI	205	0.072	ug/L	4.591	4369	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
TI	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		101.5			
[	TI	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: 1202024764

Sample Date/Time: Sunday, February 14, 2010 13:53:36

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 945396|2|ba|

Method File: c:\elandata\Method\1 only.mth

Dataset File: C:\elandata\Dataset\100214\1202024764.020

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		647879	647878.906
[	Tl	205	-0.003	ug/L	53.816	2695	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
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
[>	Lu	175			100.6			
[	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: 1202024765

Sample Date/Time: Sunday, February 14, 2010 13:58:04

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 945396|40|baj

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100214\1202024765.021

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		650681	650680.917
[	Tl	205	34.239	ug/L	1.772	750022	1.148

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std	% Recovery	Int Std	% Recovery	Spike	% Recovery	Dilution	% Dil	Duplicate	Rel. % Difference
[>	Lu	175					101.1					
[	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: QC Std 6

Sample Date/Time: Sunday, February 14, 2010 14:25:00

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\Tl only.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 6.027

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		641411	641411.020
[	Tl	205	53.504	ug/L	1.302	1153695	1.795

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175			99.6		
[Tl	205	107.007				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, February 14, 2010 14:29:31

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 7.028

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		643449	643448.876
[	Tl	205	0.036	ug/L	5.398	3516	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
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 % Di	Duplicate Rel. % Difference
[>	Lu	175		100.0			
[	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 6

Sample Date/Time: Sunday, February 14, 2010 15:05:29

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 6.036

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		633400	633400.223
[	Tl	205	52.315	ug/L	2.061	1114077	1.755

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
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 % Di	Duplicate Rel.	% Difference
[>	Lu	175			98.4			
[	Tl	205	104.629					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Sunday, February 14, 2010 15:10:00

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\Tl only.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 7.037

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		656727	656726.523
[	Tl	205	0.036	ug/L	2.454	3598	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		102.0			
[	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: Sunday, February 14, 2010 15:32:31

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 8.042

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		639984	639984.240
[	Tl	205	51.822	ug/L	0.598	1115177	1.738

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
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
[>	Lu	175			99.4			
[	Tl	205	103.645					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Sunday, February 14, 2010 15:37:02

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\Tl only.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 9.043

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		647145	647145.233
[	Tl	205	0.037	ug/L	17.045	3555	0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
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
[>	Lu	175		100.5			
[Tl	205					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 245396001

Sample Date/Time: Sunday, February 14, 2010 15:41:34

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\Tl only.mth

Dataset File: C:\elandata\Dataset\100214\245396001.044

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		678427	678426.652
[	TI	205	0.297	ug/L	5.616	9654	0.010

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
TI	205Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Lu	175			105.4		
[TI	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202024766

Sample Date/Time: Sunday, February 14, 2010 15:46:06

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100214\1202024766.045

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		679762	679761.919
[	Tl	205	0.150	ug/L	3.297	6320	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
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 % Di	Duplicate Rel. % Difference
[>	Lu	175			105.6		
[	Tl	205					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202024767

Sample Date/Time: Sunday, February 14, 2010 15:50:36

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\l only.mth

Dataset File: C:\elandata\Dataset\100214\1202024767.046

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		680104	680104.441
[	TI	205	47.246	ug/L	0.573	1080680	1.585

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
TI	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate	Rel. % Difference
[>	Lu	175			105.7			
[	TI	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: 1202024772

Sample Date/Time: Sunday, February 14, 2010 15:55:06

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100214\1202024772.047

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		683995	683995.187
[TI	205	49.448	ug/L	1.637	1137341	1.659

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
TI	205Linear Thru Zero	0.9998

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[> Lu	175		106.3			
[TI	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202024768

Sample Date/Time: Sunday, February 14, 2010 15:59:36

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 945396|10|baj

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100214\1202024768.048

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		642843	642843.369
[	Tl	205	0.104	ug/L	1.309	4977	0.003

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
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
[>	Lu	175		99.9			
[Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 245396002

Sample Date/Time: Sunday, February 14, 2010 16:04:06

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100214\245396002.049

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		637241	637240.667
[	Tl	205	0.928	ug/L	1.119	22565	0.031

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution %	Duplicate Rel. % Difference
[>	Lu	175			99.0		
[	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: 245396003

Sample Date/Time: Sunday, February 14, 2010 16:08:37

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100214\245396003.050

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		642191	642190.563
[	TI	205	0.479	ug/L	2.077	13068	0.016

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
TI	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175			99.8		
[TI	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 245396004

Sample Date/Time: Sunday, February 14, 2010 16:13:09

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100214\245396004.051

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		674512	674511.868
[	Tl	205	0.118	ug/L	6.510	5536	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Lu	175		104.8			
[Tl	205					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Sunday, February 14, 2010 16:17:40

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 8.052

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Lu	175		ug/L		633297	633296.555
[TI	205	52.520	ug/L	0.502	1118322	1.762

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
TI	205Linear Thru Zero	0.9998

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[> Lu	175			98.4		
[TI	205	105.039				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Sunday, February 14, 2010 16:22:11

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\I only.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 9.053

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		645077	645076.791
[	Tl	205	0.062	ug/L	4.901	4094	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
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
[>	Lu	175		100.2				
[	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: Blank

Sample Date/Time: Monday, February 15, 2010 00:22:42

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\Blank.167

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Ge	74		ug/L		794114	
|	As	75		ug/L		-409	
|	Se	77		ug/L		12306	
|	Se	82		ug/L		53	
|	Kr	83		ug/L		179	

Sample ID: Blank

Report Date/Time: Monday, February 15, 2010 00:23:07

Page 1

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
[Kr	83					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1

Sample Date/Time: Monday, February 15, 2010 00:25:04

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\Standard 1.168

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		798811	798811.177
|	As	75	10.000	ug/L	4.386	22916	0.029
|	Se	77		ug/L		17399	0.006
|	Se	82	10.000	ug/L	2.286	2592	0.003
[	Kr	83		ug/L		158	-0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate	Rel. % Difference
[>	Ge	74						
|	As	75						
|	Se	77						
|	Se	82						
[Kr	83						

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2

Sample Date/Time: Monday, February 15, 2010 00:27:23

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\Standard 2.169

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		778699	778699.459
|	As	75	100.028	ug/L	2.357	233500	0.300
|	Se	77		ug/L		32804	0.027
|	Se	82	99.981	ug/L	4.000	24318	0.031
[	Kr	83		ug/L		200	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
[Kr	83					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Monday, February 15, 2010 00:29:43

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 1.170

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		782859	782859.113
|	As	75	49.856	ug/L	1.445	116854	0.150
|	Se	77		ug/L		24461	0.016
|	Se	82	50.297	ug/L	1.296	12332	0.016
|	Kr	83		ug/L		177	-0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
[>	Ge	74					98.6
|	As	75	99.712				
|	Se	77					
|	Se	82	100.595				
	Kr	83					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Monday, February 15, 2010 00:32:05

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 2.171

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Ge	74		ug/L		799119	799119.116
|	As	75	0.013	ug/L	1754.092	-374	0.000
|	Se	77		ug/L		12246	-0.000
|	Se	82	-0.045	ug/L	30.740	42	-0.000
|	Kr	83		ug/L		177	-0.000

Sample ID: QC Std 2

Report Date/Time: Monday, February 15, 2010 00:32:30

Page 1

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	Ge	74			100.6		
|	As	75					
|	Se	77					
|	Se	82					
	Kr	83					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Monday, February 15, 2010 00:34:28

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 3.172

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		802483	802482.961
|	As	75	5.605	ug/L	1.647	13097	0.017
|	Se	77		ug/L		15559	0.004
|	Se	82	5.803	ug/L	1.208	1507	0.002
[	Kr	83		ug/L		165	-0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	Ge	74			101.1		
|	As	75	112.091				
|	Se	77					
|	Se	82	116.069				
	Kr	83					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Monday, February 15, 2010 00:36:49

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 4.173

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		672900	672899.960
|	As	75	0.099	ug/L	309.336	-142	0.000
|	Se	77		ug/L		19820	0.014
|	Se	82	-1.775	ug/L	6.545	-327	-0.001
[	Kr	83		ug/L		668	0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Ge	74			84.7		
|	As	75					
|	Se	77					
|	Se	82					
[Kr	83					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 5

Sample Date/Time: Monday, February 15, 2010 00:39:10

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 5.174

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		656624	656624.472
|	As	75	20.983	ug/L	2.241	41043	0.063
|	Se	77		ug/L		21546	0.017
|	Se	82	18.411	ug/L	3.214	3814	0.006
[	Kr	83		ug/L		664	0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	Ge	74			82.7			
|	As	75	104.915					
|	Se	77						
|	Se	82	92.053					
[Kr	83						

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, February 15, 2010 00:41:33

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 6.175

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		741047	741047.095
|	As	75	48.618	ug/L	1.433	107848	0.146
|	Se	77		ug/L		22294	0.015
|	Se	82	50.255	ug/L	0.987	11665	0.016
[	Kr	83		ug/L		165	-0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Ge	74			93.3		
|	As	75	97.236				
|	Se	77					
|	Se	82	100.509				
	Kr	83					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7

Sample Date/Time: Monday, February 15, 2010 00:43:56

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 7.176

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		762821	762821.341
|	As	75	-0.134	ug/L	228.863	-696	-0.000
|	Se	77		ug/L		12353	0.001
|	Se	82	-0.019	ug/L	384.739	47	-0.000
|	Kr	83		ug/L		169	-0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	Ge	74			96.1			
|	As	75						
|	Se	77						
|	Se	82						
	Kr	83						

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202024764

Sample Date/Time: Monday, February 15, 2010 00:46:18

Sample Type:

Sample Description: LANL 6020 MB

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\1202024764.177

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		750857	750856.953
|	As	75	-0.081	ug/L	194.439	-567	-0.000
|	Se	77		ug/L		11110	-0.001
|	Se	82	0.311	ug/L	34.822	123	0.000
[	Kr	83		ug/L		140	-0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	Ge	74			94.6			
|	As	75						
|	Se	77						
|	Se	82						
	Kr	83						

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202024765

Sample Date/Time: Monday, February 15, 2010 00:48:39

Sample Type:

Sample Description: LANL 6020 LCS

Number of Replicates: 3

Batch ID: 945396|40|ba|

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\1202024765.178

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		762351	762350.886
|	As	75	26.687	ug/L	1.251	60722	0.080
|	Se	77		ug/L		27217	0.020
|	Se	82	70.892	ug/L	1.898	16908	0.022
|	Kr	83		ug/L		177	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	Ge	74					96.0
|	As	75					
|	Se	77					
|	Se	82					
	Kr	83					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 245396001

Sample Date/Time: Monday, February 15, 2010 00:51:01

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\245396001.179

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		737205	737205.253
|	As	75	3.418	ug/L	9.608	7185	0.010
|	Se	77		ug/L		9657	-0.002
|	Se	82	1.150	ug/L	2.694	314	0.000
[	Kr	83		ug/L		404	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
>	Ge	74					92.8
|	As	75					
|	Se	77					
|	Se	82					
|	Kr	83					

QC Out Of Limits

Measurement Type: Analyte

MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202024766

Sample Date/Time: Monday, February 15, 2010 00:53:25

Sample Type:

Sample Description: LANL 6020 DUP

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\1202024766.180

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		736990	736990.133
|	As	75	3.430	ug/L	2.174	7212	0.010
|	Se	77		ug/L		9053	-0.003
|	Se	82	1.698	ug/L	8.576	440	0.001
[	Kr	83		ug/L		392	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	Ge	74					92.8
|	As	75					
|	Se	77					
|	Se	82					
L	Kr	83					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202024767

Sample Date/Time: Monday, February 15, 2010 00:55:48

Sample Type:

Sample Description: LANL 6020 MS

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\1202024767.181

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		714725	714724.804
|	As	75	36.551	ug/L	1.463	78108	0.110
|	Se	77		ug/L		9489	-0.002
|	Se	82	9.001	ug/L	0.755	2055	0.003
[	Kr	83		ug/L		416	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	Ge	74			90.0			
|	As	75						
|	Se	77						
|	Se	82						
[Kr	83						

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202024772

Sample Date/Time: Monday, February 15, 2010 00:58:10

Sample Type:

Sample Description: LANL 6020 MSD

Number of Replicates: 3

Batch ID: 945396|2|ba|

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\1202024772.182

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		704416	704415.926
|	As	75	38.433	ug/L	1.743	80965	0.115
|	Se	77		ug/L		9047	-0.003
|	Se	82	9.944	ug/L	2.527	2233	0.003
[	Kr	83		ug/L		420	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Ge	74					88.7
|	As	75					
|	Se	77					
|	Se	82					
|	Kr	83					

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: 1202024768

Sample Date/Time: Monday, February 15, 2010 01:00:32

Sample Type:

Sample Description: LANL 6020 SDILT

Number of Replicates: 3

Batch ID: 945396|10|baj

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\1202024768.183

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Ge	74		ug/L		703426	703425.515
|	As	75	0.954	ug/L	11.835	1657	0.003
|	Se	77		ug/L		10205	-0.001
|	Se	82	1.533	ug/L	7.056	383	0.000
	Kr	83		ug/L		195	0.000

Sample ID: 1202024768

Report Date/Time: Monday, February 15, 2010 01:00:56

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Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Ge	74			88.6		
|	As	75					
|	Se	77					
|	Se	82					
	Kr	83					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Monday, February 15, 2010 01:02:55

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 8.184

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		722711	722710.659
|	As	75	49.639	ug/L	2.292	107412	0.149
|	Se	77		ug/L		20508	0.013
|	Se	82	50.319	ug/L	1.283	11390	0.016
|	Kr	83		ug/L		158	-0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Ge	74			91.0		
|	As	75	99.278				
|	Se	77					
|	Se	82	100.638				
	Kr	83					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Monday, February 15, 2010 01:05:18

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 9.185

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		733667	733667.038
|	As	75	-0.050	ug/L	447.734	-484	-0.000
|	Se	77		ug/L		10791	-0.001
|	Se	82	0.332	ug/L	52.714	125	0.000
[	Kr	83		ug/L		168	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Ge	74			92.4		
|	As	75					
|	Se	77					
|	Se	82					
L	Kr	83					

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: 245396002

Sample Date/Time: Monday, February 15, 2010 01:07:42

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\245396002.186

Concentration Results

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[> Ge	74		ug/L		685075	685075.099
| As	75	10.902	ug/L	1.921	22085	0.033
| Se	77		ug/L		7956	-0.004
| Se	82	2.695	ug/L	9.626	622	0.001
[Kr	83		ug/L		563	0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
[>	Ge	74			86.3		
|	As	75					
|	Se	77					
|	Se	82					
	Kr	83					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 245396003

Sample Date/Time: Monday, February 15, 2010 01:10:05

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\245396003.187

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		663070	663069.590
|	As	75	9.190	ug/L	2.207	17967	0.028
|	Se	77		ug/L		6688	-0.005
|	Se	82	2.447	ug/L	4.720	550	0.001
[	Kr	83		ug/L		407	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Dil	Duplicate Rel. % Difference
[>	Ge	74			83.5		
|	As	75					
|	Se	77					
|	Se	82					
[Kr	83					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 245396004

Sample Date/Time: Monday, February 15, 2010 01:12:30

Sample Type:

Sample Description: LANL 6020

Number of Replicates: 3

Batch ID: 945396|2|baj

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\245396004.188

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		671913	671912.994
|	As	75	6.425	ug/L	1.400	12620	0.019
|	Se	77		ug/L		6478	-0.006
|	Se	82	2.331	ug/L	2.653	534	0.001
[	Kr	83		ug/L		349	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Ge	74			84.6		
|	As	75					
|	Se	77					
|	Se	82					
[Kr	83					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
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QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Monday, February 15, 2010 01:14:53

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 6.189

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		699895	699894.979
|	As	75	50.034	ug/L	1.984	104844	0.150
|	Se	77		ug/L		18013	0.010
|	Se	82	50.681	ug/L	1.546	11111	0.016
[	Kr	83		ug/L		148	-0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
[>	Ge	74					88.1
|	As	75	100.068				
|	Se	77					
|	Se	82	101.361				
|	Kr	83					

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 15, 2010 01:17:16

Sample Type:

Sample Description:

Number of Replicates: 3

Batch ID:

Method File: c:\elandata\Method\as and se.mth

Dataset File: C:\elandata\Dataset\100214\QC Std 7.190

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Ge	74		ug/L		709125	709124.679
|	As	75	0.181	ug/L	166.153	23	0.001
|	Se	77		ug/L		8953	-0.003
|	Se	82	0.419	ug/L	18.773	140	0.000
[	Kr	83		ug/L		161	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel.	% Difference
[>	Ge	74			89.3			
|	As	75						
|	Se	77						
|	Se	82						
|	Kr	83						

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

=====
Analysis BegunLogged In Analyst: Administrator
Spectrometer Model: FIMS-100, S/N B050-9550Technique: AA FIMS-MHS
Autosampler Model: S10Sample Information File: C:\data-AA\Administrator\Sample Information\021010S1.sif
Batch ID:
Results Data Set: 021010S1
Results Library: C:\data-AA\Administrator\Results\Results.mdb=====
Method Loaded

Method Name: SOIL

Method Last Saved: 1/4/2010 13:53:20

Method Description: 7471A, ILM04 ANALYST JXL

Sequence No.: 1

Autosampler Location: 1

Sample ID: Calib Blank

Date Collected: 2/10/2010 08:50:00

Analyst:

Data Type: Original

Replicate Data: Calib Blank

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1		[0.00]	0.0003	0.0003	0.0003	08:50:51	Yes
2		[0.00]	0.0004	0.0013	0.0004	08:51:20	Yes
Mean:		[0.00]	0.0003				
SD:		0.00	0.0000				
%RSD:		0.00	14.85				

Auto-zero performed.

Sequence No.: 2

Autosampler Location: 2

Sample ID: S0.2

Date Collected: 2/10/2010 08:51:39

Analyst:

Data Type: Original

Replicate Data: S0.2

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1		[0.2]	0.0024	0.0111	0.0027	08:52:30	Yes
2		[0.2]	0.0023	0.0094	0.0026	08:53:00	Yes
Mean:		[0.2]	0.0023				
SD:		0.0	0.0001				
%RSD:		0.0	3.93				

Standard number 1 applied. [0.2]
Correlation Coef.: 1.000000 Slope: 0.01161 Intercept: 0.00000

Sequence No.: 3

Autosampler Location: 3

Sample ID: S0.5

Date Collected: 2/10/2010 08:53:19

Analyst:

Data Type: Original

Replicate Data: S0.5

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1		[0.5]	0.0057	0.0243	0.0061	08:54:09	Yes
2		[0.5]	0.0057	0.0233	0.0060	08:54:39	Yes
Mean:		[0.5]	0.0057				
SD:		0.0	0.0001				
%RSD:		0.0	1.03				

Standard number 2 applied. [0.5]
Correlation Coef.: 0.999969 Slope: 0.01141 Intercept: 0.00002

Sequence No.: 4

Autosampler Location: 4

Sample ID: S2.0

Date Collected: 2/10/2010 08:54:59

Analyst:

Data Type: Original

Replicate Data: S2.0

Repl #	SampleConc ug/L	StdndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.0]	0.0231	0.0954	0.0234	08:55:50	Yes
2		[2.0]	0.0229	0.0944	0.0232	08:56:20	Yes
Mean:		[2.0]	0.0230				
SD:		0.0	0.0002				
%RSD:		0.0	0.70				

Standard number 3 applied. [2.0]
Correlation Coef.: 0.999997 Slope: 0.01149 Intercept: -0.00000

Sequence No.: 5

Sample ID: S5.0

Analyst:

Autosampler Location: 5

Date Collected: 2/10/2010 08:56:40

Data Type: Original

Replicate Data: S5.0

Repl #	SampleConc ug/L	StdndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.0]	0.0565	0.2345	0.0568	08:57:32	Yes
2		[5.0]	0.0560	0.2313	0.0563	08:58:01	Yes
Mean:		[5.0]	0.0562				
SD:		0.0	0.0003				
%RSD:		0.0	0.59				

Standard number 4 applied. [5.0]
Correlation Coef.: 0.999961 Slope: 0.01125 Intercept: 0.00013

Sequence No.: 6

Sample ID: S10.0

Analyst:

Autosampler Location: 6

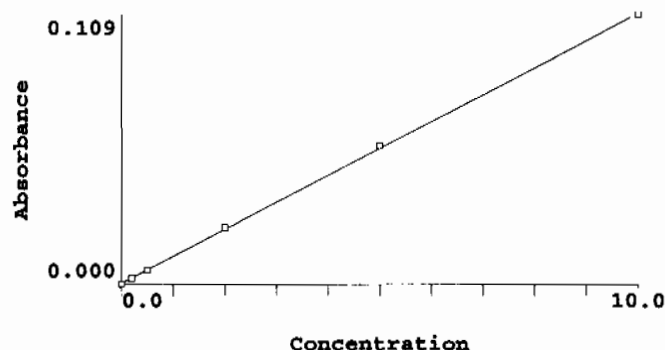
Date Collected: 2/10/2010 08:58:22

Data Type: Original

Replicate Data: S10.0

Repl #	SampleConc ug/L	StdndConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.0]	0.1100	0.4525	0.1103	08:59:12	Yes
2		[10.0]	0.1089	0.4493	0.1092	08:59:42	Yes
Mean:		[10.0]	0.1094				
SD:		0.0	0.0008				
%RSD:		0.0	0.71				

Standard number 5 applied. [10.0]
Correlation Coef.: 0.999887 Slope: 0.01096 Intercept: 0.00046

-----
Calibration data for Hg 253.7

Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib Blank	0.0000	0	-0.042	0.00	14.8
S0.2	0.0023	0.2	0.170	0.00	3.9
S0.5	0.0057	0.5	0.479	0.00	1.0
S2.0	0.0230	2.0	2.056	0.00	0.7

S5.0 0.0562 5.0 5.090 0.00 0.6
S10.0 0.1094 10.0 9.945 0.00 0.7
Correlation Coef.: 0.999887 Slope: 0.01096 Intercept: 0.00046

Sequence No.: 7

Autosampler Location: 9

Sample ID: ICV

Date Collected: 2/10/2010 09:00:01

Analyst:

Data Type: Original

Replicate Data: ICV

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.248	5.248	0.0580	0.2383	0.0583	09:00:52	Yes
2	5.207	5.207	0.0575	0.2344	0.0578	09:01:22	Yes
Mean:	5.228	5.228	0.0577				
SD:	0.030	0.030	0.0003				
%RSD:	0.566	0.566	0.56				

QC value within limits for Hg 253.7 Recovery = 104.55%

All analyte(s) passed QC.

Sequence No.: 8

Autosampler Location: 10

Sample ID: ICB

Date Collected: 2/10/2010 09:01:41

Analyst:

Data Type: Original

Replicate Data: ICB

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.028	-0.028	0.0001	0.0010	0.0005	09:02:33	Yes
2	-0.031	-0.031	0.0001	0.0010	0.0004	09:03:03	Yes
Mean:	-0.030	-0.030	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	7.743	7.743	19.45				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 9

Autosampler Location: 11

Sample ID: CRDL

Date Collected: 2/10/2010 09:03:23

Analyst:

Data Type: Original

Replicate Data: CRDL

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.171	0.171	0.0023	0.0103	0.0026	09:04:14	Yes
2	0.168	0.168	0.0023	0.0101	0.0026	09:04:44	Yes
Mean:	0.170	0.170	0.0023				
SD:	0.002	0.002	0.0000				
%RSD:	1.222	1.222	0.98				

QC value within limits for Hg 253.7 Recovery = 84.87%

All analyte(s) passed QC.

Sequence No.: 10

Autosampler Location: 7

Sample ID: CCV

Date Collected: 2/10/2010 09:05:04

Analyst:

Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StdConc ug/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.071	5.071	0.0560	0.2297	0.0563	09:05:55	Yes
2	5.062	5.062	0.0559	0.2309	0.0562	09:06:25	Yes
Mean:	5.066	5.066	0.0560				
SD:	0.006	0.006	0.0001				
%RSD:	0.124	0.124	0.12				

QC value within limits for Hg 253.7 Recovery = 101.32%

All analyte(s) passed QC.

Sequence No.: 11

Sample ID: CCB

Analyst:

Autosampler Location: 8

Date Collected: 2/10/2010 09:06:44

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.029	-0.029	0.0001	0.0015	0.0005	09:07:34	Yes
2	-0.024	-0.024	0.0002	0.0022	0.0005	09:08:04	Yes
Mean:	-0.027	-0.027	0.0002				
SD:	0.004	0.004	0.0000				
%RSD:	14.23	14.23	25.29				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 12

Sample ID: 1202037073|950546|1

Analyst: JXL

Autosampler Location: 12

Date Collected: 2/10/2010 09:08:23

Data Type: Original

Replicate Data: 1202037073|950546|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.029	-0.029	0.0001	0.0023	0.0005	09:09:14	Yes
2	-0.024	-0.024	0.0002	0.0028	0.0005	09:09:44	Yes
Mean:	-0.027	-0.027	0.0002				
SD:	0.003	0.003	0.0000				
%RSD:	12.04	12.04	21.14				

Sequence No.: 13

Sample ID: 1202037074|950546|10

Analyst: JXL

Autosampler Location: 13

Date Collected: 2/10/2010 09:10:04

Data Type: Original

Replicate Data: 1202037074|950546|10

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	3.567	3.567	0.0395	0.1631	0.0399	09:10:56	Yes
2	3.525	3.525	0.0391	0.1620	0.0394	09:11:26	Yes
Mean:	3.546	3.546	0.0393				
SD:	0.030	0.030	0.0003				
%RSD:	0.843	0.843	0.83				

Sequence No.: 14

Sample ID: 245910001|950546|1

Analyst: JXL

Autosampler Location: 14

Date Collected: 2/10/2010 09:11:46

Data Type: Original

Replicate Data: 245910001|950546|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.425	0.425	0.0051	0.0236	0.0054	09:12:36	Yes
2	0.422	0.422	0.0051	0.0228	0.0054	09:13:06	Yes
Mean:	0.424	0.424	0.0051				
SD:	0.002	0.002	0.0000				
%RSD:	0.516	0.516	0.47				

Sequence No.: 15

Sample ID: 245910002|950546|1

Analyst: JXL

Autosampler Location: 15

Date Collected: 2/10/2010 09:13:25

Data Type: Original

Replicate Data: 245910002|950546|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
------	------------	---------	---------	------	------	------	------

Replicate Data: 245913001|950546|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.053	0.053	0.0010	0.0053	0.0014	09:22:33	Yes
2	0.057	0.057	0.0011	0.0055	0.0014	09:23:03	Yes
Mean:	0.055	0.055	0.0011				
SD:	0.003	0.003	0.0000				
%RSD:	5.084	5.084	2.90				

Sequence No.: 21

Autosampler Location: 21

Sample ID: 1202037075|950546|1

Date Collected: 2/10/2010 09:23:23

Analyst: JXL

Data Type: Original

Replicate Data: 1202037075|950546|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.073	0.073	0.0013	0.0070	0.0016	09:24:14	Yes
2	0.075	0.075	0.0013	0.0076	0.0016	09:24:44	Yes
Mean:	0.074	0.074	0.0013				
SD:	0.001	0.001	0.0000				
%RSD:	1.353	1.353	0.87				

Sequence No.: 22

Autosampler Location: 7

Sample ID: CCV

Date Collected: 2/10/2010 09:25:03

Analyst:

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.059	5.059	0.0559	0.2322	0.0562	09:25:54	Yes
2	5.022	5.022	0.0555	0.2308	0.0558	09:26:24	Yes
Mean:	5.041	5.041	0.0557				
SD:	0.026	0.026	0.0003				
%RSD:	0.518	0.518	0.51				

QC value within limits for Hg 253.7 Recovery = 100.82%
All analyte(s) passed QC.

Sequence No.: 23

Autosampler Location: 8

Sample ID: CCB

Date Collected: 2/10/2010 09:26:43

Analyst:

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.029	-0.029	0.0001	0.0028	0.0005	09:27:34	Yes
2	-0.022	-0.022	0.0002	0.0043	0.0005	09:28:04	Yes
Mean:	-0.025	-0.025	0.0002				
SD:	0.005	0.005	0.0001				
%RSD:	20.69	20.69	32.62				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 24

Autosampler Location: 22

Sample ID: 1202037076|950546|1

Date Collected: 2/10/2010 09:28:23

Analyst: JXL

Data Type: Original

Replicate Data: 1202037076|950546|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.134	2.134	0.0238	0.0991	0.0242	09:29:15	Yes
2	2.148	2.148	0.0240	0.0995	0.0243	09:29:45	Yes

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.016	0.016	0.0006	0.0041	0.0009	09:37:39	Yes
2	0.016	0.016	0.0006	0.0038	0.0009	09:38:09	Yes
Mean:	0.016	0.016	0.0006				
SD:	0.000	0.000	0.0000				
%RSD:	1.593	1.593	0.44				

Sequence No.: 30

Autosampler Location: 28

Sample ID: 245913005|950546|1

Date Collected: 2/10/2010 09:38:28

Analyst: JXL

Data Type: Original

Replicate Data: 245913005|950546|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.179	0.179	0.0024	0.0113	0.0027	09:39:19	Yes
2	0.175	0.175	0.0024	0.0114	0.0027	09:39:49	Yes
Mean:	0.177	0.177	0.0024				
SD:	0.003	0.003	0.0000				
%RSD:	1.737	1.737	1.41				

Sequence No.: 31

Autosampler Location: 29

Sample ID: 1202037079|950549|1

Date Collected: 2/10/2010 09:40:08

Analyst: JXL

Data Type: Original

Replicate Data: 1202037079|950549|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.039	-0.039	0.0000	0.0013	0.0003	09:40:59	Yes
2	-0.037	-0.037	0.0001	0.0011	0.0004	09:41:28	Yes
Mean:	-0.038	-0.038	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	4.954	4.954	53.16				

Sequence No.: 32

Autosampler Location: 30

Sample ID: 1202037080|950549|10

Date Collected: 2/10/2010 09:41:48

Analyst: JXL

Data Type: Original

Replicate Data: 1202037080|950549|10

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	3.626	3.626	0.0402	0.1670	0.0405	09:42:38	Yes
2	3.608	3.608	0.0400	0.1650	0.0403	09:43:08	Yes
Mean:	3.617	3.617	0.0401				
SD:	0.013	0.013	0.0001				
%RSD:	0.346	0.346	0.34				

Sequence No.: 33

Autosampler Location: 31

Sample ID: 245915001|950549|1

Date Collected: 2/10/2010 09:43:27

Analyst: JXL

Data Type: Original

Replicate Data: 245915001|950549|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.320	0.320	0.0040	0.0176	0.0043	09:44:17	Yes
2	0.321	0.321	0.0040	0.0181	0.0043	09:44:47	Yes
Mean:	0.321	0.321	0.0040				
SD:	0.001	0.001	0.0000				
%RSD:	0.400	0.400	0.35				

Sequence No.: 34

Autosampler Location: 7

Sample ID: CCV

Date Collected: 2/10/2010 09:45:06

Analyst:

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.032	5.032	0.0556	0.2317	0.0559	09:45:56	Yes
2	5.045	5.045	0.0557	0.2313	0.0560	09:46:26	Yes
Mean:	5.038	5.038	0.0557				
SD:	0.009	0.009	0.0001				
%RSD:	0.188	0.188	0.19				

QC value within limits for Hg 253.7 Recovery = 100.77%
All analyte(s) passed QC.

Sequence No.: 35

Autosampler Location: 8

Sample ID: CCB

Date Collected: 2/10/2010 09:46:45

Analyst:

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.040	-0.040	0.0000	0.0012	0.0003	09:47:36	Yes
2	-0.033	-0.033	0.0001	0.0018	0.0004	09:48:05	Yes
Mean:	-0.036	-0.036	0.0001				
SD:	0.005	0.005	0.0001				
%RSD:	14.00	14.00	91.62				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 36

Autosampler Location: 32

Sample ID: 245915002|950549|1

Date Collected: 2/10/2010 09:48:25

Analyst: JXL

Data Type: Original

Replicate Data: 245915002|950549|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.112	0.112	0.0017	0.0083	0.0020	09:49:16	Yes
2	0.118	0.118	0.0017	0.0086	0.0021	09:49:46	Yes
Mean:	0.115	0.115	0.0017				
SD:	0.005	0.005	0.0001				
%RSD:	3.996	3.996	2.93				

Sequence No.: 37

Autosampler Location: 33

Sample ID: 245915003|950549|1

Date Collected: 2/10/2010 09:50:05

Analyst: JXL

Data Type: Original

Replicate Data: 245915003|950549|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.293	0.293	0.0037	0.0166	0.0040	09:50:56	Yes
2	0.289	0.289	0.0036	0.0164	0.0039	09:51:26	Yes
Mean:	0.291	0.291	0.0036				
SD:	0.003	0.003	0.0000				
%RSD:	0.996	0.996	0.87				

Sequence No.: 38

Autosampler Location: 34

Sample ID: 245915004|950549|1

Date Collected: 2/10/2010 09:51:45

Analyst: JXL

Data Type: Original

Replicate Data: 245915004|950549|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.161	0.161	0.0022	0.0106	0.0025	09:52:37	Yes

Replicate Data: 1202037082|950549|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.259	2.259	0.0252	0.1063	0.0255	10:01:04	Yes
2	2.272	2.272	0.0253	0.1068	0.0257	10:01:34	Yes
Mean:	2.265	2.265	0.0253				
SD:	0.009	0.009	0.0001				
%RSD:	0.392	0.392	0.39				

Sequence No.: 44

Autosampler Location: 40

Sample ID: 1202037084|950549|1

Date Collected: 2/10/2010 10:01:53

Analyst: JXL

Data Type: Original

Replicate Data: 1202037084|950549|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.217	2.217	0.0247	0.1037	0.0251	10:02:45	Yes
2	2.197	2.197	0.0245	0.1026	0.0248	10:03:14	Yes
Mean:	2.207	2.207	0.0246				
SD:	0.014	0.014	0.0002				
%RSD:	0.649	0.649	0.64				

Sequence No.: 45

Autosampler Location: 41

Sample ID: 1202037083|950549|5

Date Collected: 2/10/2010 10:03:34

Analyst: JXL

Data Type: Original

Replicate Data: 1202037083|950549|5

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.010	-0.010	0.0004	0.0029	0.0007	10:04:24	Yes
2	-0.009	-0.009	0.0004	0.0025	0.0007	10:04:54	Yes
Mean:	-0.009	-0.009	0.0004				
SD:	0.001	0.001	0.0000				
%RSD:	6.870	6.870	1.93				

Sequence No.: 46

Autosampler Location: 7

Sample ID: CCV

Date Collected: 2/10/2010 10:05:14

Analyst:

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.036	5.036	0.0556	0.2333	0.0559	10:06:04	Yes
2	5.040	5.040	0.0557	0.2322	0.0560	10:06:34	Yes
Mean:	5.038	5.038	0.0557				
SD:	0.003	0.003	0.0000				
%RSD:	0.065	0.065	0.06				

QC value within limits for Hg 253.7 Recovery = 100.76%
All analyte(s) passed QC.

Sequence No.: 47

Autosampler Location: 8

Sample ID: CCB

Date Collected: 2/10/2010 10:06:53

Analyst:

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.038	-0.038	0.0000	0.0011	0.0004	10:07:44	Yes
2	-0.038	-0.038	0.0000	0.0015	0.0004	10:08:14	Yes
Mean:	-0.038	-0.038	0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	0.142	0.142	1.47				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 48
Sample ID: 245921002|950549|1
Analyst: JXL

Autosampler Location: 42
Date Collected: 2/10/2010 10:08:33
Data Type: Original

Replicate Data: 245921002|950549|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.171	0.171	0.0023	0.0107	0.0026	10:09:25	Yes
2	0.167	0.167	0.0023	0.0108	0.0026	10:09:54	Yes
Mean:	0.169	0.169	0.0023				
SD:	0.003	0.003	0.0000				
%RSD:	1.717	1.717	1.38				

Sequence No.: 49
Sample ID: 245921003|950549|1
Analyst: JXL

Autosampler Location: 43
Date Collected: 2/10/2010 10:10:14
Data Type: Original

Replicate Data: 245921003|950549|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.136	0.136	0.0019	0.0092	0.0023	10:11:05	Yes
2	0.133	0.133	0.0019	0.0095	0.0022	10:11:35	Yes
Mean:	0.134	0.134	0.0019				
SD:	0.002	0.002	0.0000				
%RSD:	1.504	1.504	1.15				

Sequence No.: 50
Sample ID: 245921004|950549|1
Analyst: JXL

Autosampler Location: 44
Date Collected: 2/10/2010 10:11:54
Data Type: Original

Replicate Data: 245921004|950549|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.208	0.208	0.0027	0.0124	0.0030	10:12:45	Yes
2	0.206	0.206	0.0027	0.0121	0.0030	10:13:15	Yes
Mean:	0.207	0.207	0.0027				
SD:	0.001	0.001	0.0000				
%RSD:	0.502	0.502	0.42				

Sequence No.: 51
Sample ID: 245921005|950549|1
Analyst: JXL

Autosampler Location: 45
Date Collected: 2/10/2010 10:13:35
Data Type: Original

Replicate Data: 245921005|950549|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.194	0.194	0.0026	0.0119	0.0029	10:14:26	Yes
2	0.198	0.198	0.0026	0.0123	0.0029	10:14:56	Yes
Mean:	0.196	0.196	0.0026				
SD:	0.003	0.003	0.0000				
%RSD:	1.390	1.390	1.15				

Sequence No.: 52
Sample ID: 1202025301|945628|1
Analyst: JXL

Autosampler Location: 46
Date Collected: 2/10/2010 10:15:15
Data Type: Original

Replicate Data: 1202025301|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored

1	-0.041	-0.041	0.0000	0.0014	0.0003	10:16:06	Yes
2	-0.043	-0.043	-0.0000	0.0011	0.0003	10:16:36	Yes
Mean:	-0.042	-0.042	-0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	3.477	3.477	>999.9%				

Sequence No.: 53

Autosampler Location: 47

Sample ID: 1202025302|945628|10

Date Collected: 2/10/2010 10:16:56

Analyst: JXL

Data Type: Original

Replicate Data: 1202025302|945628|10

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	3.378	3.378	0.0375	0.1574	0.0378	10:17:48	Yes
2	3.381	3.381	0.0375	0.1568	0.0378	10:18:18	Yes
Mean:	3.380	3.380	0.0375				
SD:	0.002	0.002	0.0000				
%RSD:	0.058	0.058	0.06				

Sequence No.: 54

Autosampler Location: 48

Sample ID: 245394001|945628|1

Date Collected: 2/10/2010 10:18:38

Analyst: JXL

Data Type: Original

Replicate Data: 245394001|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.190	0.190	0.0025	0.0118	0.0029	10:19:29	Yes
2	0.188	0.188	0.0025	0.0121	0.0028	10:19:59	Yes
Mean:	0.189	0.189	0.0025				
SD:	0.001	0.001	0.0000				
%RSD:	0.685	0.685	0.56				

Sequence No.: 55

Autosampler Location: 49

Sample ID: 245394002|945628|1

Date Collected: 2/10/2010 10:20:19

Analyst: JXL

Data Type: Original

Replicate Data: 245394002|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.135	0.135	0.0019	0.0094	0.0023	10:21:11	Yes
2	0.135	0.135	0.0019	0.0096	0.0023	10:21:41	Yes
Mean:	0.135	0.135	0.0019				
SD:	0.000	0.000	0.0000				
%RSD:	0.085	0.085	0.06				

Sequence No.: 56

Autosampler Location: 50

Sample ID: 245394003|945628|1

Date Collected: 2/10/2010 10:22:01

Analyst: JXL

Data Type: Original

Replicate Data: 245394003|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.202	0.202	0.0027	0.0123	0.0030	10:22:52	Yes
2	0.203	0.203	0.0027	0.0123	0.0030	10:23:22	Yes
Mean:	0.203	0.203	0.0027				
SD:	0.001	0.001	0.0000				
%RSD:	0.340	0.340	0.28				

Sequence No.: 57

Autosampler Location: 51

Sample ID: 245394004|945628|1

Date Collected: 2/10/2010 10:23:42

Analyst: JXL

Data Type: Original

Replicate Data: 245394004|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.052	0.052	0.0010	0.0053	0.0013	10:24:32	Yes
2	0.047	0.047	0.0010	0.0052	0.0013	10:25:02	Yes
Mean:	0.050	0.050	0.0010				
SD:	0.003	0.003	0.0000				
%RSD:	6.928	6.928	3.76				

Sequence No.: 58

Autosampler Location: 7

Sample ID: CCV

Date Collected: 2/10/2010 10:25:22

Analyst:

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	5.013	5.013	0.0554	0.2332	0.0557	10:26:13	Yes
2	5.018	5.018	0.0554	0.2321	0.0557	10:26:43	Yes
Mean:	5.016	5.016	0.0554				
SD:	0.003	0.003	0.0000				
%RSD:	0.064	0.064	0.06				

QC value within limits for Hg 253.7 Recovery = 100.31%
All analyte(s) passed QC.

Sequence No.: 59

Autosampler Location: 8

Sample ID: CCB

Date Collected: 2/10/2010 10:27:01

Analyst:

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.039	-0.039	0.0000	0.0014	0.0003	10:27:52	Yes
2	-0.041	-0.041	0.0000	0.0015	0.0003	10:28:22	Yes
Mean:	-0.040	-0.040	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	3.624	3.624	108.53				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 60

Autosampler Location: 52

Sample ID: 245394005|945628|1

Date Collected: 2/10/2010 10:28:41

Analyst: JXL

Data Type: Original

Replicate Data: 245394005|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.102	0.102	0.0016	0.0082	0.0019	10:29:32	Yes
2	0.102	0.102	0.0016	0.0078	0.0019	10:30:02	Yes
Mean:	0.102	0.102	0.0016				
SD:	0.000	0.000	0.0000				
%RSD:	0.082	0.082	0.06				

Sequence No.: 61

Autosampler Location: 53

Sample ID: 245394006|945628|1

Date Collected: 2/10/2010 10:30:21

Analyst: JXL

Data Type: Original

Replicate Data: 245394006|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.116	0.116	0.0017	0.0085	0.0020	10:31:12	Yes
2	0.116	0.116	0.0017	0.0088	0.0020	10:31:42	Yes
Mean:	0.116	0.116	0.0017				

#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.062	0.062	0.0011	0.0062	0.0015	10:39:34	Yes
2	0.063	0.063	0.0011	0.0063	0.0015	10:40:04	Yes
Mean:	0.063	0.063	0.0011				
SD:	0.001	0.001	0.0000				
%RSD:	1.645	1.645	0.99				

Sequence No.: 67

Autosampler Location: 59

Sample ID: 245394012|945628|1

Date Collected: 2/10/2010 10:40:24

Analyst: JXL

Data Type: Original

Replicate Data: 245394012|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.239	0.239	0.0031	0.0146	0.0034	10:41:16	Yes
2	0.241	0.241	0.0031	0.0147	0.0034	10:41:45	Yes
Mean:	0.240	0.240	0.0031				
SD:	0.001	0.001	0.0000				
%RSD:	0.364	0.364	0.31				

Sequence No.: 68

Autosampler Location: 60

Sample ID: 245394013|945628|1

Date Collected: 2/10/2010 10:42:05

Analyst: JXL

Data Type: Original

Replicate Data: 245394013|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.359	0.359	0.0044	0.0198	0.0047	10:42:57	Yes
2	0.356	0.356	0.0044	0.0198	0.0047	10:43:27	Yes
Mean:	0.357	0.357	0.0044				
SD:	0.002	0.002	0.0000				
%RSD:	0.452	0.452	0.41				

Sequence No.: 69

Autosampler Location: 61

Sample ID: 245394014|945628|1

Date Collected: 2/10/2010 10:43:47

Analyst: JXL

Data Type: Original

Replicate Data: 245394014|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.081	0.081	0.0013	0.0069	0.0017	10:44:38	Yes
2	0.083	0.083	0.0014	0.0075	0.0017	10:45:08	Yes
Mean:	0.082	0.082	0.0014				
SD:	0.001	0.001	0.0000				
%RSD:	1.641	1.641	1.09				

Sequence No.: 70

Autosampler Location: 7

Sample ID: CCV

Date Collected: 2/10/2010 10:45:28

Analyst:

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	4.906	4.906	0.0542	0.2292	0.0545	10:46:19	Yes
2	4.951	4.951	0.0547	0.2318	0.0550	10:46:49	Yes
Mean:	4.929	4.929	0.0545				
SD:	0.032	0.032	0.0003				
%RSD:	0.641	0.641	0.64				

QC value within limits for Hg 253.7 Recovery = 98.58%
All analyte(s) passed QC.

Sequence No.: 71

Autosampler Location: 8

Sample ID: CCB
Analyst:

Date Collected: 2/10/2010 10:47:08
Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.041	-0.041	0.0000	0.0013	0.0003	10:47:59	Yes
2	-0.040	-0.040	0.0000	0.0017	0.0003	10:48:29	Yes
Mean:	-0.041	-0.041	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	2.451	2.451	100.14				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

=====

Sequence No.: 72
Sample ID: 245394015|945628|1
Analyst: JXL

Autosampler Location: 62
Date Collected: 2/10/2010 10:48:48
Data Type: Original

Replicate Data: 245394015|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.101	0.101	0.0016	0.0078	0.0019	10:49:40	Yes
2	0.105	0.105	0.0016	0.0085	0.0019	10:50:10	Yes
Mean:	0.103	0.103	0.0016				
SD:	0.003	0.003	0.0000				
%RSD:	2.458	2.458	1.75				

=====

Sequence No.: 73
Sample ID: 245396001|945628|1
Analyst: JXL

Autosampler Location: 63
Date Collected: 2/10/2010 10:50:29
Data Type: Original

Replicate Data: 245396001|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.169	0.169	0.0023	0.0110	0.0026	10:51:21	Yes
2	0.172	0.172	0.0023	0.0116	0.0027	10:51:51	Yes
Mean:	0.170	0.170	0.0023				
SD:	0.002	0.002	0.0000				
%RSD:	1.307	1.307	1.05				

=====

Sequence No.: 74
Sample ID: 1202025303|945628|1
Analyst: JXL

Autosampler Location: 64
Date Collected: 2/10/2010 10:52:11
Data Type: Original

Replicate Data: 1202025303|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.198	0.198	0.0026	0.0124	0.0029	10:53:01	Yes
2	0.204	0.204	0.0027	0.0131	0.0030	10:53:31	Yes
Mean:	0.201	0.201	0.0027				
SD:	0.004	0.004	0.0000				
%RSD:	2.008	2.008	1.66				

=====

Sequence No.: 75
Sample ID: 1202025304|945628|1
Analyst: JXL

Autosampler Location: 65
Date Collected: 2/10/2010 10:53:51
Data Type: Original

Replicate Data: 1202025304|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.236	2.236	0.0250	0.1052	0.0253	10:54:43	Yes
2	2.239	2.239	0.0250	0.1050	0.0253	10:55:13	Yes

Mean: 2.238 2.238 0.0250
SD: 0.002 0.002 0.0000
%RSD: 0.086 0.086 0.08

Sequence No.: 76

Sample ID: 1202025306|945628|1

Analyst: JXL

Autosampler Location: 66

Date Collected: 2/10/2010 10:55:32

Data Type: Original

Replicate Data: 1202025306|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.212	2.212	0.0247	0.1043	0.0250	10:56:24	Yes
2	2.211	2.211	0.0247	0.1044	0.0250	10:56:54	Yes
Mean:	2.212	2.212	0.0247				
SD:	0.001	0.001	0.0000				
%RSD:	0.030	0.030	0.03				

Sequence No.: 77

Sample ID: 1202025305|945628|5

Analyst: JXL

Autosampler Location: 67

Date Collected: 2/10/2010 10:57:14

Data Type: Original

Replicate Data: 1202025305|945628|5

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.001	0.001	0.0005	0.0035	0.0008	10:58:04	Yes
2	0.001	0.001	0.0005	0.0036	0.0008	10:58:34	Yes
Mean:	0.001	0.001	0.0005				
SD:	0.000	0.000	0.0000				
%RSD:	17.74	17.74	0.42				

Sequence No.: 78

Sample ID: 245396002|945628|1

Analyst: JXL

Autosampler Location: 68

Date Collected: 2/10/2010 10:58:54

Data Type: Original

Replicate Data: 245396002|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.302	0.302	0.0038	0.0172	0.0041	10:59:46	Yes
2	0.309	0.309	0.0038	0.0179	0.0042	11:00:15	Yes
Mean:	0.306	0.306	0.0038				
SD:	0.005	0.005	0.0001				
%RSD:	1.600	1.600	1.41				

Sequence No.: 79

Sample ID: 245396003|945628|1

Analyst: JXL

Autosampler Location: 69

Date Collected: 2/10/2010 11:00:35

Data Type: Original

Replicate Data: 245396003|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.205	0.205	0.0027	0.0123	0.0030	11:01:26	Yes
2	0.205	0.205	0.0027	0.0128	0.0030	11:01:56	Yes
Mean:	0.205	0.205	0.0027				
SD:	0.000	0.000	0.0000				
%RSD:	0.006	0.006	0.01				

Sequence No.: 80

Sample ID: 245396004|945628|1

Analyst: JXL

Autosampler Location: 70

Date Collected: 2/10/2010 11:02:16

Data Type: Original

Replicate Data: 245396004|945628|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	0.192	0.192	0.0026	0.0119	0.0029	11:03:07	Yes
2	0.198	0.198	0.0026	0.0124	0.0029	11:03:37	Yes
Mean:	0.195	0.195	0.0026				
SD:	0.004	0.004	0.0000				
%RSD:	2.208	2.208	1.82				

Sequence No.: 81

Autosampler Location: 71

Sample ID: 1202037458|950741|1

Date Collected: 2/10/2010 11:03:56

Analyst: JXL

Data Type: Original

Replicate Data: 1202037458|950741|1

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.045	-0.045	-0.0000	0.0011	0.0003	11:04:48	Yes
2	-0.039	-0.039	0.0000	0.0019	0.0003	11:05:18	Yes
Mean:	-0.042	-0.042	-0.0000				
SD:	0.004	0.004	0.0000				
%RSD:	9.471	9.471	696.05				

Sequence No.: 82

Autosampler Location: 7

Sample ID: CCV

Date Collected: 2/10/2010 11:05:38

Analyst:

Data Type: Original

Replicate Data: CCV

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	4.053	4.053	0.0449	0.2377	0.0452	11:06:29	Yes
2	3.983	3.983	0.0441	0.2366	0.0444	11:06:59	Yes
Mean:	4.018	4.018	0.0445				
SD:	0.050	0.050	0.0005				
%RSD:	1.236	1.236	1.22				

QC value within limits for Hg 253.7 Recovery = 80.36%
All analyte(s) passed QC.

Sequence No.: 83

Autosampler Location: 8

Sample ID: CCB

Date Collected: 2/10/2010 11:07:17

Analyst:

Data Type: Original

Replicate Data: CCB

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	-0.046	-0.046	-0.0001	0.0012	0.0003	11:08:08	Yes
2	-0.050	-0.050	-0.0001	0.0010	0.0002	11:08:38	Yes
Mean:	-0.048	-0.048	-0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	5.174	5.174	38.40				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 84

Autosampler Location: 72

Sample ID: 1202037459|950741|10

Date Collected: 2/10/2010 11:08:58

Analyst: JXL

Data Type: Original

Replicate Data: 1202037459|950741|10

Repl	SampleConc	StdConc	BlkCorr	Peak	Peak	Time	Peak
#	ug/L	ug/L	Signal	Area	Height		Stored
1	2.903	2.903	0.0323	0.1710	0.0326	11:09:50	Yes
2	2.926	2.926	0.0325	0.1678	0.0328	11:10:19	Yes
Mean:	2.914	2.914	0.0324				
SD:	0.016	0.016	0.0002				
%RSD:	0.557	0.557	0.55				

Miscellaneous

Prep LogBook

Analyst: FGA Verified by: _____

Batch: 945392

Lab SOP: GL-MA-E-009 REV# 19

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Type	Sample Id	Lot. Id	Spike Amount	Spike Units
MB	1202024764		SW846 3050B	04-FEB-2010 13:30	LCS	1202024765	U1062540-MS	.516	g
LCS	1202024765		SW846 3050B	04-FEB-2010 13:30	MS	1202024767	U1091015-A	.5	mL
SAMPLE	245383001		SW846 3050B	04-FEB-2010 13:30	MS	1202024767	U1091015-B	.5	mL
SAMPLE	245383002		SW846 3050B	04-FEB-2010 13:30	MSD	1202024772	U1091015-A	.5	mL
SAMPLE	245383003		SW846 3050B	04-FEB-2010 13:30	MSD	1202024772	U1091015-B	.5	mL
SAMPLE	245383004		SW846 3050B	04-FEB-2010 13:30					
SAMPLE	245383005		SW846 3050B	04-FEB-2010 13:30					
SAMPLE	245385001		SW846 3050B	04-FEB-2010 13:30					
SAMPLE	245385002		SW846 3050B	04-FEB-2010 13:30					
SAMPLE	245385003		SW846 3050B	04-FEB-2010 13:30					
SAMPLE	245385004		SW846 3050B	04-FEB-2010 13:30					
SAMPLE	245385005		SW846 3050B	04-FEB-2010 13:30					
SAMPLE	245385006		SW846 3050B	04-FEB-2010 13:30					
SAMPLE	245385007		SW846 3050B	04-FEB-2010 13:30					
SAMPLE	245385008		SW846 3050B	04-FEB-2010 13:30					
SAMPLE	245385009		SW846 3050B	04-FEB-2010 13:30					
SAMPLE	245385010		SW846 3050B	04-FEB-2010 13:30					
SAMPLE	245385011		SW846 3050B	04-FEB-2010 13:30					
SAMPLE	245396001		SW846 3050B	04-FEB-2010 13:30					
DUP	1202024766	245396001	SW846 3050B	04-FEB-2010 13:30					
MS	1202024767	245396001	SW846 3050B	04-FEB-2010 13:30					
MSD	1202024772	245396001	SW846 3050B	04-FEB-2010 13:30					
SDILT	1202024768	245396001	SW846 3050B	04-FEB-2010 13:30					
SAMPLE	245396002		SW846 3050B	04-FEB-2010 13:30					
SAMPLE	245396003		SW846 3050B	04-FEB-2010 13:30					
SAMPLE	245396004		SW846 3050B	04-FEB-2010 13:30					

Reagent/Solvent Lot ID Amount Description

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Prep LogBook

1203655-02	1.5 mL	Hydrogen Peroxide 30%	Comments	Brown,medium soil.
1264396	5 mL	Nitric Acid CONC.		

Prep LogBook

Analyst: FGA
 Batch: 945398
 Lab SOP: GL-MA-E-009 REV# 19

Verified by: _____

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Type	Sample Id	Lot. Id	Prep Factor	Spike Amount	Spike Units
MB	1202024773		SW846 3050B	04-FEB-2010 13:30	LCS	1202024774	U1062540-1	95.41985	.502	g
LCS	1202024774		SW846 3050B	04-FEB-2010 13:30	MS	1202024776	U1100120-01	99.60159	.25	mL
SAMPLE	245383001		SW846 3050B	04-FEB-2010 13:30	MS	1202024776	U1100120-06	97.08738	.25	mL
SAMPLE	245383002		SW846 3050B	04-FEB-2010 13:30	MSD	1202024778	U1100120-01	98.61933	.25	mL
SAMPLE	245383003		SW846 3050B	04-FEB-2010 13:30	MSD	1202024778	U1100120-06	100	.25	mL
SAMPLE	245383004		SW846 3050B	04-FEB-2010 13:30				94.16196		
SAMPLE	245383005		SW846 3050B	04-FEB-2010 13:30				97.08738		
SAMPLE	245385001		SW846 3050B	04-FEB-2010 13:30				90.41591		
SAMPLE	245385002		SW846 3050B	04-FEB-2010 13:30				99.8004		
SAMPLE	245385003		SW846 3050B	04-FEB-2010 13:30				89.44544		
SAMPLE	245385004		SW846 3050B	04-FEB-2010 13:30				96.15385		
SAMPLE	245385005		SW846 3050B	04-FEB-2010 13:30				92.76438		
SAMPLE	245385006		SW846 3050B	04-FEB-2010 13:30				97.08738		
SAMPLE	245385007		SW846 3050B	04-FEB-2010 13:30				98.4252		
SAMPLE	245385008		SW846 3050B	04-FEB-2010 13:30				100		
SAMPLE	245385009		SW846 3050B	04-FEB-2010 13:30				95.2381		
SAMPLE	245385010		SW846 3050B	04-FEB-2010 13:30				100		
SAMPLE	245385011		SW846 3050B	04-FEB-2010 13:30				93.10987		
SAMPLE	245396001		SW846 3050B	04-FEB-2010 13:30				97.46589		
DUP	1202024775	245396001	SW846 3050B	04-FEB-2010 13:30				92.25092		
MS	1202024776	245396001	SW846 3050B	04-FEB-2010 13:30				98.03922		
MSD	1202024778	245396001	SW846 3050B	04-FEB-2010 13:30				95.41985		
SDILT	1202024777	245396001	SW846 3050B	04-FEB-2010 13:30				97.46589		
SAMPLE	245396002		SW846 3050B	04-FEB-2010 13:30				99.20635		
SAMPLE	245396003		SW846 3050B	04-FEB-2010 13:30				89.12656		
SAMPLE	245396004		SW846 3050B	04-FEB-2010 13:30				99.60159		

Reagent/Solvent Lot ID Amount Description

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Prep LogBook

100202 1264396	10 mL 1.25 mL	HYDROCHLORIC ACID Nitric Acid CONC.	Comments. Brown, medium soil.
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Prep LogBook

Analyst: TXB3
Batch: 945627
Lab SOP: GL-MA-E-010 REV# 23

Verified by: _____

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Spike Amount	Spike Units
MB	1202025301		SW846 7471A Prep	09-FEB-2010 13:50	0.519 g	30 mL	57.80347	.202	g
LCS	1202025302		SW846 7471A Prep	09-FEB-2010 13:50	0.202 g	30 mL	148.51485	.3	mL
SAMPLE	245394001		SW846 7471A Prep	09-FEB-2010 13:50	0.591 g	30 mL	50.76142	.3	mL
SAMPLE	245394002		SW846 7471A Prep	09-FEB-2010 13:50	0.524 g	30 mL	57.25191	.3	mL
SAMPLE	245394003		SW846 7471A Prep	09-FEB-2010 13:50	0.524 g	30 mL	57.25191	.3	mL
SAMPLE	245394004		SW846 7471A Prep	09-FEB-2010 13:50	0.52 g	30 mL	57.69231	.3	mL
SAMPLE	245394005		SW846 7471A Prep	09-FEB-2010 13:50	0.585 g	30 mL	51.28205	.3	mL
SAMPLE	245394006		SW846 7471A Prep	09-FEB-2010 13:50	0.538 g	30 mL	55.76208	.3	mL
SAMPLE	245394007		SW846 7471A Prep	09-FEB-2010 13:50	0.538 g	30 mL	55.76208	.3	mL
SAMPLE	245394008		SW846 7471A Prep	09-FEB-2010 13:50	0.526 g	30 mL	57.03422	.3	mL
SAMPLE	245394009		SW846 7471A Prep	09-FEB-2010 13:50	0.568 g	30 mL	52.8169	.3	mL
SAMPLE	245394010		SW846 7471A Prep	09-FEB-2010 13:50	0.588 g	30 mL	51.02041	.3	mL
SAMPLE	245394011		SW846 7471A Prep	09-FEB-2010 13:50	0.531 g	30 mL	56.49718	.3	mL
SAMPLE	245394012		SW846 7471A Prep	09-FEB-2010 13:50	0.508 g	30 mL	59.05512	.3	mL
SAMPLE	245394013		SW846 7471A Prep	09-FEB-2010 13:50	0.553 g	30 mL	54.24955	.3	mL
SAMPLE	245394014		SW846 7471A Prep	09-FEB-2010 13:50	0.6 g	30 mL	50	.3	mL
SAMPLE	245394015		SW846 7471A Prep	09-FEB-2010 13:50	0.542 g	30 mL	55.35055	.3	mL
SAMPLE	245396001		SW846 7471A Prep	09-FEB-2010 13:50	0.534 g	30 mL	56.17978	.3	mL
DUP	1202025303	245396001	SW846 7471A Prep	09-FEB-2010 13:50	0.572 g	30 mL	52.44755	.3	mL
MS	1202025304	245396001	SW846 7471A Prep	09-FEB-2010 13:50	0.54 g	30 mL	55.55556	.3	mL
MSD	1202025306	245396001	SW846 7471A Prep	09-FEB-2010 13:50	0.538 g	30 mL	55.76208	.3	mL
SDILT	1202025305	245396001	SW846 7471A Prep	09-FEB-2010 13:50	0.534 g	30 mL	56.17978	.3	mL
SAMPLE	245396002		SW846 7471A Prep	09-FEB-2010 13:50	0.508 g	30 mL	59.05512	.3	mL
SAMPLE	245396003		SW846 7471A Prep	09-FEB-2010 13:50	0.531 g	30 mL	56.49718	.3	mL
SAMPLE	245396004		SW846 7471A Prep	09-FEB-2010 13:50	0.582 g	30 mL	51.54639	.3	mL

Reagent/Solvent Lot ID Amount Description
1264796-A 1.125 mL Hydrochloric Acid Conc.
1257474-1 .375 mL NITRIC ACID
1264984-C 7.5 mL 5% KMnO4 solution
1255532-C 2 mL Hg reducing agent

Comments: Sample 245396001 is a dry powdery brown soil.
Digestion Start Date: 09-FEB-10 13:50
Digestion End Date: 09-FEB-10 14:20

Prep LogBook

WHG100209-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG100209-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5
WHG100209-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG100209-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG100209-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG100209-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

DATA EXCEPTION REPORT

Mo.Day Yr. 15-FEB-10	Division: Industrial	Quality Criteria: Specifications	Type: Process
Instrument Type: ICP/MS	Test / Method: SW846 3050B/6020	Matrix Type: Solid	Client Code: LANL
Batch ID: 945396	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 245383(10-1381-1),245385(10-1383),245396(10-1394)			
Application Issues: Failed RPD for DUP			
Specification and Requirements Exception Description:		DER Disposition:	
1. Failed RPD for DUP: QC 1202024766DUP		The sample and sample duplicate % RPD failed outside the control limits for Ni and U due to possible sample non-homogeneity and/or matrix interference. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.	

Originator's Name:

Elizabeth Janssen 18-FEB-10

Data Validator/Group Leader:

Samantha Jacobs 18-FEB-10

DATA EXCEPTION REPORT

Mo. Day Yr. 15-FEB-10	Division: Industrial	Quality Criteria: Specifications	Type: Process
Instrument Type: ICP	Test / Method: SW846 3050B/6010B	Matrix Type: Solid	Client Code: LANL
Batch ID: 945399	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 245383(10-1381-1),245385(10-1383),245396(10-1394) Application Issues: Failed Recovery for MS/PS Failed RPD for DUP Failed Recovery for MSD/PSD			
Specification and Requirements Exception Description: 1. Failed Recovery for MS/PS: QC 1202024776MS 2. Failed RPD for DUP: QC 1202024775DUP 3. Failed Recovery for MSD/PSD: QC 1202024778MSD		DER Disposition: 1. The matrix spike recovery failed outside of the control limits for aluminum 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. 2. The sample and sample duplicate % RPD failed outside the control limits for calcium and chromium due to possible sample non-homogeneity and/or matrix interference. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 3. The matrix spike duplicate recovery failed outside of the control limits for aluminum due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.	

Originator's Name:

Helen Camello 16-FEB-10

Data Validator/Group Leader:

Eric Lawson 16-FEB-10

Standard Logbook

Serial ID: UHG1167639-01 **Opened:** 13-AUG-09 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 13-AUG-09 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 13-AUG-10 **Lot Number :** 15-37HG
Employee: Bryan Davis **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG1167641-02 **Opened:** 13-AUG-09 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 13-AUG-09 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 13-AUG-10 **Lot Number :** 4905530
Employee: Bryan Davis **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI031809A **Opened:** 18-MAR-09 **Catalog Number :** 540
Name: METALSOILSRM **Received:** 18-MAR-09 **Lot Number :** D061-540
Type: Source Material **Expires:** 10-OCT-10
Employee: Jamie Johnson
Supplier: ERA
Description: Metals LCS Soil SRM
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

Standard Logbook

Serial ID: UI062540-I **Opened:** 12-JUN-09 **Amount :** 80 g
Name: ICP SOIL SRM **Received:** 12-JUN-09 **Lot Number :** D062-540
Type: Source Material **Expires:** 31-JAN-12
Employee: Bryan Davis
Supplier: ERA
Description: Metals Soil LCS SRM ICP/Hg
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10500 mg/kg	Antimony	173 mg/kg
Arsenic	104 mg/kg	Barium	198 mg/kg
Beryllium	77.6 mg/kg	Boron	141 mg/kg
Cadmium	60.7 mg/kg	Calcium	9870 mg/kg
Chromium	236 mg/kg	Cobalt	91.2 mg/kg
Copper	174 mg/kg	Iron	18000 mg/kg
Lead	86 mg/kg	Magnesium	4000 mg/kg
Manganese	558 mg/kg	Mercury	8.46 mg/kg
Molybdenum	48.6 mg/kg	Nickel	134 mg/kg
Phosphorous	736 mg/kg	Potassium	4300 mg/kg
Selenium	286 mg/kg	Silica	2591 mg/kg
Silicon	1211 mg/kg	Silver	30.1 mg/kg
Sodium	1020 mg/kg	Strontium	227 mg/kg
Sulfur	385 mg/kg	Thallium	121 mg/kg
Tin	104 mg/kg	Titanium	462 mg/kg
Vanadium	115 mg/kg	Zinc	594 mg/kg

Serial ID: UI062540-MS **Opened:** 12-JUN-09 **Lot Number :** D062-540
Name: ICPMS SOIL SRM **Received:** 12-JUN-09
Type: Source Material **Expires:** 31-JAN-12
Employee: Bryan Davis
Supplier: ERA
Description: Metals Soil LCS SRM ICPMS
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10500 mg/kg	Antimony	67.4 mg/kg
Arsenic	104 mg/kg	Barium	198 mg/kg
Beryllium	77.6 mg/kg	Boron	141 mg/kg
Cadmium	60.6 mg/kg	Calcium	9870 mg/kg
Chromium	236 mg/kg	Cobalt	91.2 mg/kg
Copper	174 mg/kg	Iron	18000 mg/kg
Lead	86 mg/kg	Lithium	10.6 mg/kg
Magnesium	4000 mg/kg	Manganese	558 mg/kg
Mercury	8.46 mg/kg	Molybdenum	48.6 mg/kg
Nickel	134 mg/kg	Phosphorous	755 mg/kg
Potassium	4300 mg/kg	Selenium	286 mg/kg
Silver	30.1 mg/kg	Sodium	1020 mg/kg

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Strontium	227 mg/kg	Thallium	121 mg/kg
Thorium	9.84 mg/kg	Tin	104 mg/kg
Titanium	462 mg/kg	Uranium	2.13 mg/kg
Uranium-235	.0153 mg/kg	Uranium-238	2.11 mg/kg
Vanadium	92.4 mg/kg	Zinc	594 mg/kg
Zirconium	10.6 mg/kg		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L +/- 0.5% IN 5% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: O2SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L

Standard Logbook

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 St **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L

Standard Logbook

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: 02sj
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

Standard Logbook

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 :** H2O/tr HF
Supplier: ENVIRONMENTAL EXPRESS
Description: SILICON 1000mg/L H2O/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI091212-60 **Opened:** 12-DEC-09 **Amount :** .5 mL
Name: ICPMS High Range Standard **Received:** 12-DEC-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 12-DEC-10 **Lot Number :** 1018064
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Serial ID: UI091212-61 **Opened:** 12-DEC-09 **Amount :** .5 mL
Name: ICPMS High Range Standard **Received:** 12-DEC-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 12-DEC-10 **Lot Number :** 1018064
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Standard Logbook

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: 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: Q2SI
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: Q2SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI091217-08 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 17-DEC-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018211
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: Q2SI
Description: ICPMS ICV/CCV Soln C - 10ppm

Standard Logbook

Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI091217-12 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 17-DEC-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018212
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

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: UI100120-01 **Opened:** 20-JAN-10 **Lot Number :** 1018095
Name: METALSPIKE-1 **Received:** 20-JAN-10
Type: Source Material **Expires:** 20-JAN-11
Employee: Bryan Davis
Supplier: OS2I

Standard Logbook

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: UI100120-06 **Opened:** 20-JAN-10 **Lot Number :** 1018096

Name: METALSPIKE-2 **Received:** 20-JAN-10

Type: Source Material **Expires:** 20-JAN-11

Employee: Bryan Davis

Supplier: OS2I

Description: Metals Spike Mix II

Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: 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

Standard Logbook

Serial ID: UI100210-48 **Opened:** 11-FEB-10 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 10-FEB-10 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 11-FEB-11 **Lot Number :** 1018807
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI100211-40 **Opened:** 11-FEB-10 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 10-FEB-10 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 11-FEB-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

Serial ID: UI100211-41 **Opened:** 11-FEB-10 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 10-FEB-10 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 11-FEB-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

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UMS090303-01 **Opened:** 03-MAR-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 03-MAR-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 14-81JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

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

Standard Logbook

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: IHG100209-01 **Opened:** 09-FEB-10 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 09-FEB-10 **Pipet Id :** Minou1
Type: Intermediate **Expires:** 10-FEB-10 **Solvent :** 1mL HNO3 + TypeI 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: IHG100209-02 **Opened:** 09-FEB-10 **Pipet Id :** Minou1
Name: MHGINTER2 **Received:** 09-FEB-10 **Solvent :** 2% HNO3-1257474
Type: Intermediate **Expires:** 10-FEB-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

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: WHG100209-07 **Opened:** 09-FEB-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS0.2CRA **Received:** 09-FEB-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 16-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.
IHG100209-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG100209-08 **Opened:** 09-FEB-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS0.5 **Received:** 09-FEB-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 16-FEB-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100209-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG100209-09 **Opened:** 09-FEB-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS2.0 **Received:** 09-FEB-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 16-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.
IHG100209-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG100209-10 **Opened:** 09-FEB-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS5.0CCV **Received:** 09-FEB-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 16-FEB-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL

Description: Mercury Working 1st Source CAL S 5.0/CCV

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100209-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG100209-11 **Opened:** 09-FEB-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS10.0 **Received:** 09-FEB-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 16-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.
IHG100209-01	Mercury	200 ug/L	1.5 mL	30 mL	10 ug/L

Serial ID: WHG100209-12 **Opened:** 09-FEB-10 **Pipet Id :** Hg1289245
Name: MHGWORKS5.0ICV **Received:** 09-FEB-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 16-FEB-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL

Description: Mercury Working 2nd Source S 5.0/ICV

Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
IHG100209-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG100209-14 **Opened:** 09-FEB-10 **Pipet Id :** Hg1289245
Name: MHGSOILMSSPIKE **Received:** 09-FEB-10 **Solvent :** 2% HNO3-1257474
Type: Working **Expires:** 16-FEB-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL

Description: Mercury soil working intermediate standard for MS

Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI100211-42 **Opened:** 11-FEB-10 **Balance Id :** 216
Name: TRACE ICP 0.1 PPM STD. **Received:** 02-NOV-09 **Pipet Id :** 3581809
Type: Working **Expires:** 12-FEB-10 **Solvent :** 3%HCL and 1%HNO3 -1266496
Employee: Helen Camello
Supplier: GEL

Description: TRACE ICP 0.1 PPM CALIBRATION STD.

Comments: None

Parent Material	Analyte	Parent Conc.	Allquot	Final Vol.	Final Conc.
WI100211-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI100211-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI100211-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI100211-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100211-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100211-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI100211-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100211-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI100211-43 **Opened:** 11-FEB-10 **Balance Id :** 216
Name: TRACE ICP 0.5/CCV STD. **Received:** 02-NOV-09 **Pipet Id :** 3581809
Type: Working **Expires:** 12-FEB-10 **Solvent :** 3%HCL and 1%HNO3 -1266496
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090828-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L
UI091015-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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: WI100211-44 **Opened:** 11-FEB-10 **Balance Id :** 216
Name: TRACE ICP SCAL 1.0 **Received:** 02-NOV-09 **Pipet Id :** 3581809
Type: Working **Expires:** 12-FEB-10 **Solvent :** 3%HCL and 1 %HNO3-1266496
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
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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: WI100211-45 **Opened:** 11-FEB-10 **Balance Id :** 216
Name: TRACE ICP S-10 STD **Received:** 22-APR-09 **Pipet Id :** 3581809
Type: Working **Expires:** 12-FEB-10 **Solvent :** 3%HCL and 1%HNO3 -1266496
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

Serial ID: WI100211-46 **Opened:** 11-FEB-10 **Balance Id :** 216
Name: ICP TRACE ICV **Received:** 25-SEP-09 **Pipet Id :** 3581809
Type: Working **Expires:** 12-FEB-10 **Solvent :** 3%HCL AND 1%HNO3-1266496
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI091102-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI091102-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI100211-47 **Opened:** 11-FEB-10 **Balance Id :** 216
Name: PQL Working Standard **Received:** 30-JUN-09 **Pipet Id :** 3581809
Type: Working **Expires:** 12-FEB-10 **Solvent :** 3%HCL & 1%HNO3-1266496
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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: WMS100213-04 **Opened:** 13-FEB-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 13-FEB-10 **Balance Id :** 4025216
Type: Working **Expires:** 14-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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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: WMS100213-04A **Opened:** 13-FEB-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 13-FEB-10 **Pipet Id :** 3541598
Type: Working **Expires:** 14-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.
WMS100213-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100213-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100213-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100213-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100213-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100213-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100213-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100213-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100213-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100213-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100213-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100213-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS100213-05 **Opened:** 13-FEB-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 13-FEB-10 **Pipet Id :** 3541598
Type: Working **Expires:** 14-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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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: WMS100213-06 **Opened:** 13-FEB-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 13-FEB-10 **Pipet Id :** 3820544
Type: Working **Expires:** 14-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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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: WMS100213-07 **Opened:** 13-FEB-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 13-FEB-10 **Lot Number :** 1010773
Type: Working **Expires:** 14-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: WMS100213-08 **Opened:** 13-FEB-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 13-FEB-10 **Pipet Id :** 1758088
Type: Working **Expires:** 14-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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS100213-70 **Opened:** 13-FEB-10 **Balance Id :** 40245216
Name: ICPMS LINEAR RANGE ST **Received:** 13-FEB-10 **Pipet Id :** 1758088
Type: Working **Expires:** 14-FEB-10 **Solvent :** 2%HNO3/1%HCl - 1266278
Employee: Paul Boyd
Supplier: Q2SI
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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Alliquot	Final Vol.	Final Conc.
UI091212-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI091212-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: WMS100214-04 **Opened:** 14-FEB-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 14-FEB-10 **Balance Id :** 4025216
Type: Working **Expires:** 15-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.	Alliquot	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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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: WMS100214-04A **Opened:** 14-FEB-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 14-FEB-10 **Pipet Id :** 3541598
Type: Working **Expires:** 15-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.
WMS100214-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100214-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100214-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100214-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100214-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100214-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100214-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100214-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100214-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100214-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100214-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100214-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS100214-05 **Opened:** 14-FEB-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 14-FEB-10 **Pipet Id :** 3541598
Type: Working **Expires:** 15-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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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: WMS100214-06 **Opened:** 14-FEB-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 14-FEB-10 **Pipet Id :** 3820544
Type: Working **Expres:** 15-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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
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: WMS100214-07 **Opened:** 14-FEB-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 14-FEB-10 **Lot Number :** 1010773
Type: Working **Expires:** 15-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: WMS100214-08 **Opened:** 14-FEB-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 14-FEB-10 **Pipet Id :** 1758088
Type: Working **Expires:** 15-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

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L
UI100126-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI100126-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI100126-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI100126-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: 100202 **Opened:** 02-FEB-10 **Lot Number :** 200930201
Name: I-HCL **Received:** 02-FEB-10
Type: Reagent/Solvent **Expires:** 02-FEB-11
Employee: Francena Armstrong
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Standard Logbook

Serial ID: 1156689-A Opened: 20-JUL-09 Lot Number : 41226920
Name: B-KMnO4(VWR)-MER Received: 20-JUL-09
Type: Reagent/Solvent Expires: 20-JUL-10
Employee: Tara Griffin Verified: 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Serial ID: 1203655-02 Opened: 15-OCT-09 Lot Number : ZU74081198 mL
Name: B-H2O2 Received: 15-OCT-09
Type: Reagent/Solvent Expires: 15-OCT-10
Employee: Francena Armstrong
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%
Comments: None

Serial ID: 1228372-A Opened: 12-NOV-09 Lot Number : 49215936
Name: B-NH2OH.HCl-MER Received: 12-NOV-09
Type: Reagent/Solvent Expires: 12-NOV-10
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxylamine Hydrochloride
Comments: None

Serial ID: 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

Standard Logbook

Serial ID: 1255532-C **Opened:** 15-JAN-10 **Balance Id :** BAL-002
Name: B-NaCl.NH2OH.HCl-MER **Received:** 15-JAN-10
Type: Reagent/Solvent **Expires:** 15-JUL-10
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1228372-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 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: 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
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1264796-A **Opened:** 04-FEB-10 **Lot Number :** 200930201
Name: B-HCl-MER **Received:** 04-FEB-10
Type: Reagent/Solvent **Expires:** 04-FEB-11
Employee: Tara Griffin
Supplier: Aristar
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 1264984-C **Opened:** 04-FEB-10 **Balance Id :** BAL-002
Name: B-KMnO4-MER **Received:** 04-FEB-10
Type: Reagent/Solvent **Expires:** 20-JUL-10
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1156689-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

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

Serial ID: 1266496 Opened: 08-FEB-10 Amount : 20 L
 Name: B-ICP-RINSE SOLN Received: 20-JAN-10 Lot Number : H04040+G34050
 Type: Reagent/Solvent Expires: 14-FEB-10 Solvent : 3%HCL+1%HNO3
 Employee: Helen Camello
 Supplier: GEL
 Description: 3%HCL+1%HNO3 RINSE SOLN.
 Comments: None

General Chemistry Analysis

Case Narrative

**General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1394**

Method/Analysis Information

Product:	Cyanide, Total		
Analytical Batch:	944845	Method:	SW9012A Cyanide and Total
Prep Batch :	944844	Method:	SSW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
245396001	RE15-10-7928
245396002	RE15-10-7929
245396003	RE15-10-7927
245396004	RE15-10-7930
1202023418	Method Blank (MB)
1202023419	245377002(RE15-10-7876) Sample Duplicate (DUP)
1202023420	245377003(RE15-10-7878) Sample Duplicate (DUP)
1202023421	245377002(RE15-10-7876) Matrix Spike (MS)
1202023422	245377003(RE15-10-7878) Matrix Spike (MS)
1202023423	245377002(RE15-10-7876) Matrix Spike Duplicate (MSD)
1202023424	245377003(RE15-10-7878) Matrix Spike Duplicate (MSD)
1202023425	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: 245377002 (RE15-10-7876) and 245377003 (RE15-10-7878).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement

The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement

The RPDs between the spike and spike duplicate met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement

The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times

All samples in this SDG met the specified holding time.

Sample Preservation/Integrity

All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions

The following sample in this sample group was diluted due to high concentration: 1202023425 (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:  Date: 17Feb10

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: 10-1394 GEL Work Order: 245396

The Qualifiers in this report are defined as follows:

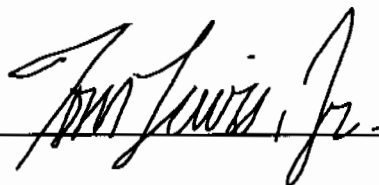
- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

A handwritten signature in black ink, appearing to read "Tom Lewis, Jr.", is written over a horizontal line.

GEL LABORATORIES LLC

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

Certificate of Analysis

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

Report Date: February 10, 2010

Client SDG: 10-1394

Client Sample ID: RE15-10-7928
Sample ID: 245396001
Matrix: R
Collect Date: 21-JAN-10 12:00
Receive Date: 23-JAN-10
Collector: Client
Moisture: 3.61%

Project: LANL01004
Client ID: LANL010

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

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	J	78.3	70.5	259	ug/kg	1	AXC2	02/03/10	1056	944845	1
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The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/02/10	1533	944844

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 10, 2010

Client SDG: 10-1394

Client Sample ID: RE15-10-7929
Sample ID: 245396002
Matrix: R
Collect Date: 21-JAN-10 12:00
Receive Date: 23-JAN-10
Collector: Client
Moisture: 27.4%

Project: LANL01004
Client ID: LANL010

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

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	J	232	80.8	297	ug/kg	1	AXC2	02/03/10	1057	944845	1
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The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/02/10	1533	944844

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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 10, 2010

Client SDG: 10-1394

Client Sample ID: RE15-10-7927
Sample ID: 245396003
Matrix: R
Collect Date: 21-JAN-10 12:00
Receive Date: 23-JAN-10
Collector: Client
Moisture: 24.4%

Project: LANL01004
Client ID: LANL010

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

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	J	141	86.5	318	ug/kg	1	AXC2	02/03/10	1058	944845	1
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The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/02/10	1533	944844

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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 10, 2010

Client SDG: 10-1394

Client Sample ID: RE15-10-7930
Sample ID: 245396004
Matrix: R
Collect Date: 21-JAN-10 12:00
Receive Date: 23-JAN-10
Collector: Client
Moisture: 11.5%

Project: LANL01004
Client ID: LANL010

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

SW9012A Cyanide, Total "Dry Weight Corrected"

Cyanide, Total	J	206	75.3	277	ug/kg	1	AXC2	02/03/10	1102	944845	1
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The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	02/02/10	1533	944844

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

Quality Control Summary

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QC Summary

Report Date: February 10, 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: 245396

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Flow Injection Analysis											
Batch	944845										
QC1202023419	245377002	DUP									
Cyanide, Total		J	75.5	J	94.6	ug/kg	22.4	^	(+/-257)	AXC2	02/03/10 10:40
QC1202023420	245377003	DUP									
Cyanide, Total		J	78.5	J	81.9	ug/kg	4.23	^	(+/-242)		02/03/10 10:44
QC1202023425	LCS										
Cyanide, Total		67900			92000	ug/kg		135	(32%-157%)		02/03/10 10:29
QC1202023418	MB										
Cyanide, Total				U	250	ug/kg					02/03/10 10:28
QC1202023421	245377002	MS									
Cyanide, Total		5250	J	75.5	5460	ug/kg		103	(26%-158%)		02/03/10 10:41
QC1202023422	245377003	MS									
Cyanide, Total		5230	J	78.5	5760	ug/kg		109	(26%-158%)		02/03/10 10:45
QC1202023423	245377002	MSD									
Cyanide, Total		4770	J	75.5	5100	ug/kg	6.68	105	(0%-30%)		02/03/10 10:42
QC1202023424	245377003	MSD									
Cyanide, Total		4670	J	78.5	5090	ug/kg	12.2	107	(0%-30%)		02/03/10 10:45

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

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QC Summary

Workorder: 245396

Page 2 of 2

Parname	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: 10-FEB-2010 16:48

GEL Laboratories LLC

Contract: LANL01004

SDG #: 10-1394

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	03-FEB-2010 10:07:27	OM_2-3-2010_09-58-47	154	150	103	(90%-110%)	Yes
CCV	03-FEB-2010 10:21:55	OM_2-3-2010_09-58-47	94.9	100	94.9	(90%-110%)	Yes
CCV	03-FEB-2010 10:34:24	OM_2-3-2010_09-58-47	95.1	100	95.1	(90%-110%)	Yes
CCV	03-FEB-2010 10:46:46	OM_2-3-2010_09-58-47	94.7	100	94.7	(90%-110%)	Yes
CCV	03-FEB-2010 10:59:15	OM_2-3-2010_09-58-47	95.1	100	95.1	(90%-110%)	Yes
CCV	03-FEB-2010 11:09:04	OM_2-3-2010_09-58-47	95.6	100	95.6	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	03-FEB-2010 10:09:17	OM_2-3-2010_09-58-47	0.701	10	Yes
CCB	03-FEB-2010 10:23:45	OM_2-3-2010_09-58-47	0.634	10	Yes
CCB	03-FEB-2010 10:36:14	OM_2-3-2010_09-58-47	0.127	10	Yes
CCB	03-FEB-2010 10:48:37	OM_2-3-2010_09-58-47	0.239	10	Yes
CCB	03-FEB-2010 11:01:05	OM_2-3-2010_09-58-47	0.399	10	Yes
CCB	03-FEB-2010 11:10:54	OM_2-3-2010_09-58-47	0.332	10	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5
 Batch: 944844
 Lab SOP: GL-GC-E-067 REV# 1.3

Verified by: _____

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Spike Amount	Spike Units
MB	1202023418		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.5 g	25 mL	50	.25	g
LCS	1202023425		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.25 g	25 mL	100	.025	mL
SAMPLE	245374001		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.55 g	25 mL	45.45455	.025	mL
SAMPLE	245374002		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.53 g	25 mL	47.16981	.025	mL
SAMPLE	245374003		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.54 g	25 mL	46.2963	.025	mL
SAMPLE	245374004		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.53 g	25 mL	47.16981	.025	mL
SAMPLE	245374005		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.5 g	25 mL	50	.025	mL
SAMPLE	245374006		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.56 g	25 mL	44.64286	.025	mL
SAMPLE	245374007		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.51 g	25 mL	49.01961	.025	mL
SAMPLE	245377002		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.5 g	25 mL	50	.025	mL
DUP	1202023419	245377002	SW846 9010B Prep	02-FEB-2010 15:33	>12	0.51 g	25 mL	49.01961	.025	mL
MS	1202023421	245377002	SW846 9010B Prep	02-FEB-2010 15:33	>12	0.5 g	25 mL	50	.025	mL
MSD	1202023423	245377002	SW846 9010B Prep	02-FEB-2010 15:33	>12	0.55 g	25 mL	45.45455	.025	mL
SAMPLE	245377003		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.5 g	25 mL	50	.025	mL
DUP	1202023420	245377003	SW846 9010B Prep	02-FEB-2010 15:33	>12	0.54 g	25 mL	46.2963	.025	mL
MS	1202023422	245377003	SW846 9010B Prep	02-FEB-2010 15:33	>12	0.5 g	25 mL	50	.025	mL
MSD	1202023424	245377003	SW846 9010B Prep	02-FEB-2010 15:33	>12	0.56 g	25 mL	44.64286	.025	mL
SAMPLE	245377004		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.57 g	25 mL	43.85965	.025	mL
SAMPLE	245377005		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.56 g	25 mL	44.64286	.025	mL
SAMPLE	245377006		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.5 g	25 mL	50	.025	mL
SAMPLE	245377007		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.51 g	25 mL	49.01961	.025	mL
SAMPLE	245377008		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.54 g	25 mL	46.2963	.025	mL
SAMPLE	245377009		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.54 g	25 mL	46.2963	.025	mL
SAMPLE	245377010		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.53 g	25 mL	47.16981	.025	mL
SAMPLE	245396001		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.5 g	25 mL	50	.025	mL
SAMPLE	245396002		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.58 g	25 mL	43.10345	.025	mL
SAMPLE	245396003		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.52 g	25 mL	48.07692	.025	mL
SAMPLE	245396004		SW846 9010B Prep	02-FEB-2010 15:33	>12	0.51 g	25 mL	49.01961	.025	mL

Prep LogBook

Reagent/Solvent Lot ID	Amount	Description	Comments
091211-C	25 mL	0.25N Sodium Hydroxide Solution	
WCN100202-07	.0375 mL	150 ppb CN Distilled ICV Standard	
1176724-C	1.25 mL	0.8N H3NO3S	
1260189-C	2.5 mL	50% H2SO4 CN Prep	
1176778-C	1 mL	51% MgCl2 Soln	
1238142-C	1.25 mL	Bismuth Nitrate Solution	

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	2/3/2010 10:00:18	OM_2-3-2010_09-58-47
150 ppb		1	axc2	2/3/2010 10:01:10	OM_2-3-2010_09-58-47
100 ppb		1	axc2	2/3/2010 10:02:02	OM_2-3-2010_09-58-47
50 ppb		1	axc2	2/3/2010 10:02:55	OM_2-3-2010_09-58-47
10 ppb		1	axc2	2/3/2010 10:03:48	OM_2-3-2010_09-58-47
CRDL 5.0 ppb		1	axc2	2/3/2010 10:04:42	OM_2-3-2010_09-58-47
ICAL-00		1	axc2	2/3/2010 10:05:36	OM_2-3-2010_09-58-47
ICV		1	axc2	2/3/2010 10:07:27	OM_2-3-2010_09-58-47
ICB		1	axc2	2/3/2010 10:09:17	OM_2-3-2010_09-58-47
CRDL		1	axc2	2/3/2010 10:11:07	OM_2-3-2010_09-58-47
245313004*	944843	1	axc2	2/3/2010 10:12:56	OM_2-3-2010_09-58-47
245313005	944843	1	axc2	2/3/2010 10:13:50	OM_2-3-2010_09-58-47
245313006	944843	1	axc2	2/3/2010 10:14:45	OM_2-3-2010_09-58-47
245313007	944843	1	axc2	2/3/2010 10:15:39	OM_2-3-2010_09-58-47
245313008	944843	1	axc2	2/3/2010 10:16:33	OM_2-3-2010_09-58-47
245313009	944843	1	axc2	2/3/2010 10:17:27	OM_2-3-2010_09-58-47
245313010	944843	1	axc2	2/3/2010 10:18:21	OM_2-3-2010_09-58-47
245313011	944843	1	axc2	2/3/2010 10:19:15	OM_2-3-2010_09-58-47
245313012	944843	1	axc2	2/3/2010 10:20:09	OM_2-3-2010_09-58-47
245313013	944843	1	axc2	2/3/2010 10:21:03	OM_2-3-2010_09-58-47
CCV		1	axc2	2/3/2010 10:21:55	OM_2-3-2010_09-58-47
CCB		1	axc2	2/3/2010 10:23:45	OM_2-3-2010_09-58-47
245313004	944843	1	axc2	2/3/2010 10:25:33	OM_2-3-2010_09-58-47
245313014	944843	1	axc2	2/3/2010 10:26:27	OM_2-3-2010_09-58-47
245377001	944843	1	axc2	2/3/2010 10:27:20	OM_2-3-2010_09-58-47
1202023418	944845	1	axc2	2/3/2010 10:28:14	OM_2-3-2010_09-58-47
1202023425	944845	25	axc2	2/3/2010 10:29:07	OM_2-3-2010_09-58-47
245374001	944845	1	axc2	2/3/2010 10:30:00	OM_2-3-2010_09-58-47
245374002	944845	1	axc2	2/3/2010 10:30:53	OM_2-3-2010_09-58-47
245374003	944845	1	axc2	2/3/2010 10:31:46	OM_2-3-2010_09-58-47
245374004	944845	1	axc2	2/3/2010 10:32:39	OM_2-3-2010_09-58-47
245374005	944845	1	axc2	2/3/2010 10:33:32	OM_2-3-2010_09-58-47
CCV		1	axc2	2/3/2010 10:34:24	OM_2-3-2010_09-58-47
CCB		1	axc2	2/3/2010 10:36:14	OM_2-3-2010_09-58-47
245374006	944845	1	axc2	2/3/2010 10:38:03	OM_2-3-2010_09-58-47
245374007	944845	1	axc2	2/3/2010 10:38:55	OM_2-3-2010_09-58-47
245377002	944845	1	axc2	2/3/2010 10:39:47	OM_2-3-2010_09-58-47
1202023419	944845	1	axc2	2/3/2010 10:40:39	OM_2-3-2010_09-58-47
1202023421	944845	1	axc2	2/3/2010 10:41:31	OM_2-3-2010_09-58-47
1202023423	944845	1	axc2	2/3/2010 10:42:23	OM_2-3-2010_09-58-47
245377003	944845	1	axc2	2/3/2010 10:43:15	OM_2-3-2010_09-58-47
1202023420	944845	1	axc2	2/3/2010 10:44:07	OM_2-3-2010_09-58-47
1202023422	944845	1	axc2	2/3/2010 10:45:00	OM_2-3-2010_09-58-47
1202023424	944845	1	axc2	2/3/2010 10:45:54	OM_2-3-2010_09-58-47
CCV		1	axc2	2/3/2010 10:46:46	OM_2-3-2010_09-58-47
CCB		1	axc2	2/3/2010 10:48:37	OM_2-3-2010_09-58-47
245377004	944845	1	axc2	2/3/2010 10:50:27	OM_2-3-2010_09-58-47
245377005	944845	1	axc2	2/3/2010 10:51:21	OM_2-3-2010_09-58-47
245377006	944845	1	axc2	2/3/2010 10:52:14	OM_2-3-2010_09-58-47
245377007	944845	1	axc2	2/3/2010 10:53:07	OM_2-3-2010_09-58-47
245377008	944845	1	axc2	2/3/2010 10:54:00	OM_2-3-2010_09-58-47
245377009	944845	1	axc2	2/3/2010 10:54:52	OM_2-3-2010_09-58-47
245377010	944845	1	axc2	2/3/2010 10:55:45	OM_2-3-2010_09-58-47
245396001	944845	1	axc2	2/3/2010 10:56:38	OM_2-3-2010_09-58-47
245396002	944845	1	axc2	2/3/2010 10:57:30	OM_2-3-2010_09-58-47
245396003	944845	1	axc2	2/3/2010 10:58:23	OM_2-3-2010_09-58-47
CCV		1	axc2	2/3/2010 10:59:15	OM_2-3-2010_09-58-47
CCB		1	axc2	2/3/2010 11:01:05	OM_2-3-2010_09-58-47

245396004	944845	1	axc2	2/3/2010	11:02:53	OM_2-3-2010_09-58-47
1202030428	947857	1	axc2	2/3/2010	11:03:45	OM_2-3-2010_09-58-47
1202030430	947857	250	axc2	2/3/2010	11:04:38	OM_2-3-2010_09-58-47
245875004	947857	1	axc2	2/3/2010	11:05:32	OM_2-3-2010_09-58-47
1202030429	947857	1	axc2	2/3/2010	11:06:26	OM_2-3-2010_09-58-47
245875006	947857	1	axc2	2/3/2010	11:07:18	OM_2-3-2010_09-58-47
245875008	947857	1	axc2	2/3/2010	11:08:12	OM_2-3-2010_09-58-47
CCV		1	axc2	2/3/2010	11:09:04	OM_2-3-2010_09-58-47
CCB		1	axc2	2/3/2010	11:10:54	OM_2-3-2010_09-58-47

Author: axc2

Date : 2/3/2010

Original Run Filename: OM_2-3-2010_09-58-47.OMN created 2/3/2010 09:58:47
 Original Run Author's Signature: [axc2]
 Current Run Filename: OM_2-3-2010_09-58-47.OMN last modified 2/3/2010 11:12:02
 Current Run Author's Signature: [axc2]
 Description: GL-GC-E-102 EPA 420.4, 9066
 LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE		Detection Time	ADF	MDF	Description
			Conc. (ug/L)	Area (Vs)				
WCN100203-01	1	S1	200	8.01	2/3/2010@10:00:18			200 ppb
WCN100203-02	1	S2	150	5.91	2/3/2010@10:01:10			150 ppb
WCN100203-03	1	S3	100	3.57	2/3/2010@10:02:02			100 ppb
WCN100203-04	1	S4	50.0	1.92	2/3/2010@10:02:55			50 ppb
WCN100203-05	1	S5	10.0	0.472	2/3/2010@10:03:48			10 ppb
WCN100203-06	1	S6	5.00	0.281	2/3/2010@10:04:42			CRDL 5.0 ppb
WCN100203-08	1	S7	0.00	0.0606	2/3/2010@10:05:36			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
Result:			0.99850 > 0.99500					
Message			Pass					
Action			Continue					
WCN100203-07	1	S8	154	6.07	2/3/2010@10:07:27			ICV
Known Conc:			150					
DQM Test: > + Percent Relative Difference								
Result:			3.0 < 10.0					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			3.0 < 10.0					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN100203-08	1	S7	0.701	0.0233	2/3/2010@10:09:17			ICB/CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			0.701 < 5.01					
Message			ICB/CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.701 > -5.01					
Message			ICB/CCB Passed					
Action			Continue					
WCN100203-06	1	S6	7.11	0.275	2/3/2010@10:11:07			CRDL
Known Conc:			5.00					
DQM Test: > + Concentration Limit								
Result:			7.11 < 7.50					
Message			CRDL Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			7.11 > 2.50					
Message			Pass					
Action			None					
245313004[944843]	1	90	403	15.9	2/3/2010@10:12:56			
245313005	1	91	1.84	0.0679	2/3/2010@10:13:50			
245313006	1	92	2.26	0.0845	2/3/2010@10:14:45			
245313007	1	93	2.03	0.0754	2/3/2010@10:15:39			
245313008	1	94	4.27	0.164	2/3/2010@10:16:33			
245313009	1	95	2.54	0.0954	2/3/2010@10:17:27			
245313010	1	96	1.43	0.0518	2/3/2010@10:18:21			
245313011	1	97	4.56	0.175	2/3/2010@10:19:15			
245313012	1	98	2.07	0.0769	2/3/2010@10:20:09			
245313013	1	99	6.52	0.252	2/3/2010@10:21:03			
WCN100203-03	1	S3	94.9	3.73	2/3/2010@10:21:55			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					
WCN100203-08	1	S7	0.634	0.0206	2/3/2010@10:23:45			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			0.634 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.634 > -5.00					
Message			CCB Passed					
Action			Continue					
245313004	1	90	1.91	0.0710	2/3/2010@10:25:33			
245313014	1	100	1.40	0.0506	2/3/2010@10:26:27			
245377001	1	101	1.32	0.0475	2/3/2010@10:27:20			
1202023418|944845|MB	1	1	1.19	0.0424	2/3/2010@10:28:14			
1202023425||LCS	1	2	36.8	1.44	2/3/2010@10:29:07		25.00	
245374001	1	3	1.52	0.0553	2/3/2010@10:30:00			
245374002	1	4	1.80	0.0664	2/3/2010@10:30:53			
245374003	1	5	2.24	0.0839	2/3/2010@10:31:46			
245374004	1	6	1.53	0.0558	2/3/2010@10:32:39			
245374005	1	7	1.73	0.0637	2/3/2010@10:33:32			
WCN100203-03	1	S3	95.1	3.73	2/3/2010@10:34:24			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			-4.9 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-4.9 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN100203-08	1	S7	0.127	7.16e-4	2/3/2010@10:36:14			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			0.127 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			0.127 > -5.00					
Message			CCB Passed					
Action			Continue					
245374006	1	8	1.57	0.0573	2/3/2010@10:38:03			
245374007	1	9	1.65	0.0605	2/3/2010@10:38:55			
245377002	1	10	1.44	0.0524	2/3/2010@10:39:47			
1202023419|DUP	1	11	1.84	0.0679	2/3/2010@10:40:39			
1202023421|MS	1	12	104	4.09	2/3/2010@10:41:31			
1202023423|MSD	1	13	107	4.19	2/3/2010@10:42:23			
245377003	1	14	1.50	0.0547	2/3/2010@10:43:15			
1202023420|DUP	1	15	1.69	0.0622	2/3/2010@10:44:07			
1202023422|MS	1	16	110	4.31	2/3/2010@10:45:00			
1202023424|MSD	1	17	109	4.29	2/3/2010@10:45:54			
WCN100203-03	1	S3	94.7	3.72	2/3/2010@10:46:46			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					
WCN100203-08	1	S7	0.239	0.00510	2/3/2010@10:48:37			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								

		Result:	0.239 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.239 > -5.00					
		Message	CCB Passed					
		Action	Continue					
245377004	1	18	1.63	0.0599	2/3/2010@10:50:27			
245377005	1	19	1.81	0.0668	2/3/2010@10:51:21			
245377006	1	20	1.69	0.0623	2/3/2010@10:52:14			
245377007	1	21	1.94	0.0720	2/3/2010@10:53:07			
245377008	1	22	1.31	0.0471	2/3/2010@10:54:00			
245377009	1	23	2.11	0.0788	2/3/2010@10:54:52			
245377010	1	24	2.50	0.0938	2/3/2010@10:55:45			
245396001	1	25	1.51	0.0551	2/3/2010@10:56:38			
245396002	1	26	3.90	0.149	2/3/2010@10:57:30			
245396003	1	27	2.22	0.0829	2/3/2010@10:58:23			
WCN100203-03	1	S3	95.1	3.73	2/3/2010@10:59:15			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-4.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-4.9 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100203-08	1	S7	0.399	0.0114	2/3/2010@11:01:05			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.399 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.399 > -5.00					
		Message	CCB Passed					
		Action	Continue					
245396004	1	28	3.72	0.142	2/3/2010@11:02:53			
1202030428|947857|MB	1	29	0.112	1.18e-4	2/3/2010@11:03:45			
1202030430|LCS	1	30	25.7	1.00	2/3/2010@11:04:38		250.00	
245875004	1	31	0.587	0.0188	2/3/2010@11:05:32			
1202030429|DUP	1	32	0.112	1.37e-4	2/3/2010@11:06:26			
245875006	1	33	0.267	0.00621	2/3/2010@11:07:18			
245875008	1	34	2.76	0.104	2/3/2010@11:08:12			
WCN100203-03	1	S3	95.6	3.76	2/3/2010@11:09:04			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	-4.4 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	-4.4 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN100203-08	1	S7	0.332	0.00875	2/3/2010@11:10:54			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	0.332 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	0.332 > -5.00					
		Message	CCB Passed					
		Action	Continue					

Analyte Properties Table for OM_2-3-2010_09-58-47.OMN

Property	Channel 1
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TCYANIDE	
Concentration Units	ug/L
Calibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View

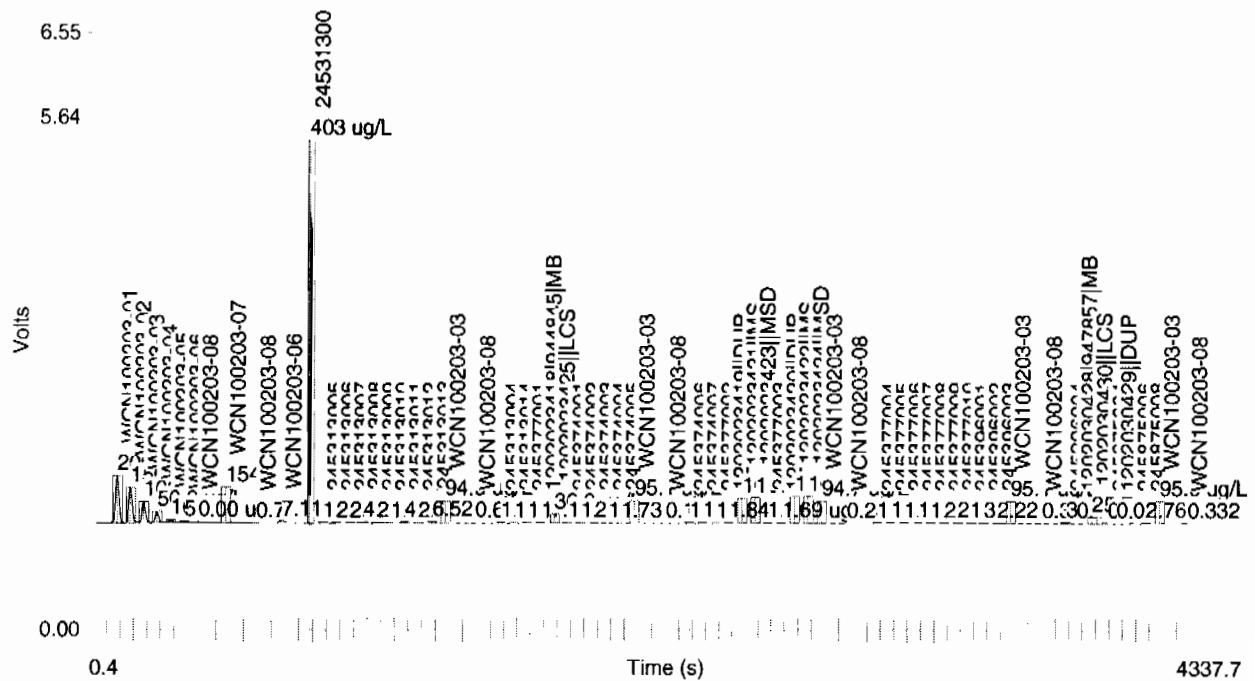
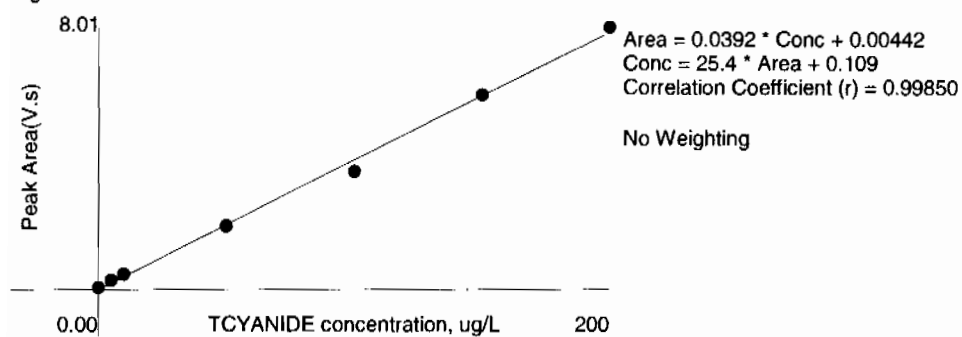


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	8.01	0.513	-2.1	2/3/2010	10:01:21
2	150	1	5.91	0.383	-0.4	2/3/2010	10:02:13
3	100	1	3.57	0.230	9.1	2/3/2010	10:03:05
4	50.0	1	1.92	0.125	2.3	2/3/2010	10:03:58
5	10.0	1	0.472	0.0303	-19.0	2/3/2010	10:04:52
6	5.00	1	0.281	0.0171	-40.2	2/3/2010	10:05:45
7	0.00	1	0.0606	0.0124		2/3/2010	10:06:39

Figure 1: TCYANIDE



RADIOLOGICAL ANALYSIS

**Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1394**

Method/Analysis Information

Product: Dry Weight-Percent Moisture
Analytical Method: Dry Soil Prep
Analytical Batch Number: 944890

Sample ID	Client ID
245396001	RE15-10-7928
245396002	RE15-10-7929
245396003	RE15-10-7927
245396004	RE15-10-7930
1202023534	245385001(RE15-10-7303) 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: 245385001 (RE15-10-7303). The QC was from LANL work order 245385.

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:	944974
Prep Batch Number:	944890

Sample ID	Client ID
245396001	RE15-10-7928
245396002	RE15-10-7929
245396003	RE15-10-7927
245396004	RE15-10-7930
1202023746	Method Blank (MB)
1202023747	245396001(RE15-10-7928) Sample Duplicate (DUP)
1202023748	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 1202023746 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 245396001 (RE15-10-7928). The QC was from LANL work order 245396.

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

Sample 245396003 (RE15-10-7927) was given additional clean-up steps and recounted in order to remove suspected interferences.

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: 944976
Prep Batch Number: 944890

Sample ID	Client ID
245396001	RE15-10-7928
245396002	RE15-10-7929
245396003	RE15-10-7927
245396004	RE15-10-7930
1202023751	Method Blank (MB)
1202023752	245396001(RE15-10-7928) Sample Duplicate (DUP)
1202023753	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 1202023751 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 245396001 (RE15-10-7928). The QC was from LANL work order 245396.

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:	944978
Prep Batch Number:	944890

Sample ID	Client ID
245396001	RE15-10-7928
245396004	RE15-10-7930
1202023754	Method Blank (MB)
1202023755	245396001(RE15-10-7928) Sample Duplicate (DUP)
1202023756	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 1202023754 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 245396001 (RE15-10-7928). The QC was from LANL work order 245396.

QC Information

All of the QC samples met the required acceptance limits.

CSU

The U235 and U238 blank results 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.

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: 949620
Prep Batch Number: 944890

Sample ID	Client ID
245396002	RE15-10-7929
245396003	RE15-10-7927
1202034525	Method Blank (MB)
1202034526	245396002(RE15-10-7929) Sample Duplicate (DUP)
1202034527	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 1202034525 (MB) was changed to 1.0 per client request.

Designated QC

The following sample was used for QC: 245396002 (RE15-10-7929). The QC was from LANL work order 245396.

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

Samples were reprepared to verify activity.

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:	944962
Prep Batch Number:	944890

Sample ID	Client ID
245396001	RE15-10-7928
245396002	RE15-10-7929
245396003	RE15-10-7927
245396004	RE15-10-7930
1202023707	Method Blank (MB)
1202023708	245385005(RE15-10-7301) Sample Duplicate (DUP)
1202023709	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 February 2009, March 2009, August 2009, November 2009, December 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: 245385005 (RE15-10-7301). The QC was from LANL work order 245385.

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.

Additional Comments

Additional comments were not required for this sample set.

Blank Decision Level

The blank result is less than the decision level.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
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UI	Data rejected due to high peak-width.	Cesium-137	1202023708	RE15-10-7301(245385005DUP)
UI	Data rejected due to interference.	Bismuth-211	245396001	RE15-10-7928
			245396002	RE15-10-7929
			245396003	RE15-10-7927
			245396004	RE15-10-7930
			1202023708	RE15-10-7301(245385005DUP)
		Cadmium-109	245396001	RE15-10-7928
			245396002	RE15-10-7929
			245396004	RE15-10-7930
			1202023708	RE15-10-7301(245385005DUP)
		Mercury-203	1202023708	RE15-10-7301(245385005DUP)
		Radium-224	245396001	RE15-10-7928
			245396002	RE15-10-7929
			245396003	RE15-10-7927
			245396004	RE15-10-7930
			1202023708	RE15-10-7301(245385005DUP)
UI	Data rejected due to low abundance.	Cesium-134	245396001	RE15-10-7928
			245396002	RE15-10-7929
			245396003	RE15-10-7927
			245396004	RE15-10-7930
		Strontium-85	245396001	RE15-10-7928
			245396002	RE15-10-7929
			245396003	RE15-10-7927
			245396004	RE15-10-7930
			1202023708	RE15-10-7301(245385005DUP)

Method/Analysis Information

Product: H3
Analytical Method: GL-RAD-A-002

Analytical Batch Number: 948401

Sample ID	Client ID
245396001	RE15-10-7928
245396002	RE15-10-7929
245396003	RE15-10-7927
245396004	RE15-10-7930
1202031679	Method Blank (MB)
1202031680	245396002(RE15-10-7929) Sample Duplicate (DUP)
1202031681	Laboratory Control Sample (LCS)

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 18.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met. The initial Calibration was performed in August 2009.

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: 245396002 (RE15-10-7929). The QC was from LANL work order 245396.

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.

Additional Comments

Additional comments were not required for this sample set.

Blank Decision Level

The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

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:

John J. Amato 3/17/2010

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: 10-1394 GEL Work Order: 245396

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: February 17, 2010

Client Sample ID: RE15-10-7928
Sample ID: 245396001
Matrix: R
Collect Date: 21-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 3.61%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
<i>"As Received"</i>												
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.0168	0.0232	+/-0.00521	0.050	pCi/g		CXM2	02/11/10	2103	944974	2
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0028	0.0229	+/-0.00199	0.050	pCi/g		CXM2	02/12/10	1251	944976	3
Plutonium-239/240	U	0.0126	0.0172	+/-0.00546	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		0.863	0.134	+/-0.0897	0.100	pCi/g		CXM2	02/01/10	1309	944978	4
Uranium-235/236	U	0.0267	0.083	+/-0.0233	0.100	pCi/g						
Uranium-238		1.19	0.0775	+/-0.114	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0193	0.157	+/-0.0494	0.200	pCi/g		MXR1	02/04/10	2255	944962	5
Bismuth-211	UI	4.03	0.216	+/-0.279		pCi/g						
Bismuth-214		1.18	0.0751	+/-0.0832	0.200	pCi/g						
Cadmium-109	UI	4.31	0.766	+/-0.405		pCi/g						
Cerium-139	U	-0.024	0.0337	+/-0.0101	0.050	pCi/g						
Cesium-134	UI	0.106	0.0553	+/-0.0217	0.100	pCi/g						
Cesium-137	U	0.00594	0.0405	+/-0.012	0.100	pCi/g						
Cobalt-60	U	0.00777	0.0406	+/-0.0121	0.100	pCi/g						
Europium-152	U	-0.0887	0.101	+/-0.0419	0.200	pCi/g						
Lanthanum-140	U	-0.0817	0.0792	+/-0.0268		pCi/g						
Lead-212		1.85	0.0629	+/-0.128	0.100	pCi/g						
Lead-214		1.40	0.0754	+/-0.104	0.100	pCi/g						
Mercury-203	U	0.0377	0.0459	+/-0.0154	0.100	pCi/g						
Potassium-40		39.6	0.337	+/-1.91	1.00	pCi/g						
Radium-223	U	0.323	0.756	+/-0.249		pCi/g						
Radium-224	UI	5.04	0.715	+/-0.529		pCi/g						
Radium-226		1.18	0.0751	+/-0.0832		pCi/g						
Radium-228		1.78	0.138	+/-0.150	0.500	pCi/g						
Ruthenium-106	U	-0.0524	0.338	+/-0.102	0.800	pCi/g						

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

Report Date: February 17, 2010

Client Sample ID: RE15-10-7928
Sample ID: 245396001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Sodium-22	U	-0.0217	0.0478	+/-0.0149	0.080	pCi/g						
Strontium-85	UI	0.131	0.0474	+/-0.0153		pCi/g						
Thallium-208		0.605	0.0366	+/-0.0421	0.080	pCi/g						
Thorium-227	U	0.140	0.442	+/-0.132		pCi/g						
Thorium-231	U	0.323	0.756	+/-0.249		pCi/g						
Thorium-234		2.06	1.30	+/-0.588	2.00	pCi/g						
Tin-113	U	-0.0238	0.0465	+/-0.0142	0.100	pCi/g						
Uranium-235	U	0.069	0.249	+/-0.0744	0.500	pCi/g						
Yttrium-88	U	0.0133	0.0335	+/-0.0106	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		2960	212	+/-233	250	pCi/L		KXK2	02/06/10	1138	948401	6

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
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	86.1	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	80.1	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	84.1	(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.

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

Report Date: February 17, 2010

Client Sample ID: RE15-10-7928
Sample ID: 245396001
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC).
Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 17, 2010

Client Sample ID: RE15-10-7929
Sample ID: 245396002
Matrix: R
Collect Date: 21-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 27.4%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
<i>"As Received"</i>												
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00347	0.021	+/-0.00754	0.050	pCi/g		CXM2	02/04/10	1450	944974	2
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00625	0.0341	+/-0.00626	0.050	pCi/g		CXM2	02/04/10	1450	944976	3
Plutonium-239/240		0.0333	0.0256	+/-0.00905	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		3.02	0.207	+/-0.293	0.100	pCi/g		CXM2	02/10/10	1057	949620	4
Uranium-235/236		0.138	0.134	+/-0.0413	0.100	pCi/g						
Uranium-238		11.1	0.142	+/-0.940	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.263	0.398	+/-0.131	0.200	pCi/g		MXR1	02/05/10	1859	944962	7
Bismuth-211	UI	4.39	0.446	+/-0.390		pCi/g						
Bismuth-214		1.34	0.157	+/-0.131	0.200	pCi/g						
Cadmium-109	UI	2.59	2.15	+/-0.799		pCi/g						
Cerium-139	U	-0.0279	0.0652	+/-0.020	0.050	pCi/g						
Cesium-134	UI	0.150	0.125	+/-0.0325	0.100	pCi/g						
Cesium-137		0.435	0.0796	+/-0.065	0.100	pCi/g						
Cobalt-60	U	0.0132	0.0917	+/-0.027	0.100	pCi/g						
Europium-152	U	-0.00485	0.211	+/-0.0744	0.200	pCi/g						
Lanthanum-140	U	-0.134	0.148	+/-0.0587		pCi/g						
Lead-212		1.87	0.114	+/-0.121	0.100	pCi/g						
Lead-214		1.53	0.156	+/-0.141	0.100	pCi/g						
Mercury-203	U	0.0461	0.0947	+/-0.0276	0.100	pCi/g						
Potassium-40		25.6	0.716	+/-1.53	1.00	pCi/g						
Radium-223	U	-0.0223	1.44	+/-0.443		pCi/g						
Radium-224	UI	4.62	1.30	+/-0.780		pCi/g						
Radium-226		1.34	0.157	+/-0.131		pCi/g						
Radium-228		1.80	0.266	+/-0.218	0.500	pCi/g						
Ruthenium-106	U	-0.327	0.658	+/-0.213	0.800	pCi/g						
Sodium-22	U	-0.00298	0.0929	+/-0.0282	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: February 17, 2010

Client Sample ID: RE15-10-7929
Sample ID: 245396002

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Strontium-85	UI	0.104	0.103	+/-0.0292		pCi/g						
Thallium-208		0.453	0.0752	+/-0.0636	0.080	pCi/g						
Thorium-227	U	-0.355	0.860	+/-0.272		pCi/g						
Thorium-231	U	-0.0223	1.44	+/-0.443		pCi/g						
Thorium-234		13.6	3.07	+/-1.99	2.00	pCi/g						
Tin-113	U	-0.00635	0.0945	+/-0.0295	0.100	pCi/g						
Uranium-235	U	0.265	0.467	+/-0.230	0.500	pCi/g						
Yttrium-88	U	-0.00688	0.0674	+/-0.0218	0.100	pCi/g						
Rad Liquid Scintillation Analysis												
<i>H3 "As Received"</i>												
Tritium		977	212	+/-105	250	pCi/L		KXK2	02/06/10	1316	948401	8

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 EML HASL-300, U-02-RC Modified
6	DOE EML HASL-300, U-02-RC Modified
7	DOE HASL 300, 4.5.2.3/Ga-01-R
8	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	87.1	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	51.0	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	78.7	(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

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Certificate of Analysis

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

Report Date: February 17, 2010

Client Sample ID: RE15-10-7929 Project: LANL01004
Sample ID: 245396002 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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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
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: February 17, 2010

Client Sample ID: RE15-10-7927
Sample ID: 245396003
Matrix: R
Collect Date: 21-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 24.4%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
<i>"As Received"</i>												
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00919	0.0219	+/-0.00453	0.050	pCi/g		CXM2	02/16/10	1433	944974	2
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.0137	0.032	+/-0.00762	0.050	pCi/g		CXM2	02/04/10	1450	944976	3
Plutonium-239/240		0.0352	0.0241	+/-0.00854	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		8.62	0.255	+/-0.783	0.100	pCi/g		CXM2	02/10/10	1057	949620	4
Uranium-235/236		1.01	0.165	+/-0.146	0.100	pCi/g						
Uranium-238		43.6	0.176	+/-3.70	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.231	0.306	+/-0.0921	0.200	pCi/g		MXR1	02/05/10	1900	944962	6
Bismuth-211	UI	3.32	0.295	+/-0.265		pCi/g						
Bismuth-214		0.954	0.101	+/-0.0812	0.200	pCi/g						
Cadmium-109	U	-2.58	1.84	+/-0.812		pCi/g						
Cerium-139	U	-0.00713	0.0498	+/-0.0162	0.050	pCi/g						
Cesium-134	UI	0.108	0.0704	+/-0.0258	0.100	pCi/g						
Cesium-137		0.523	0.0604	+/-0.0429	0.100	pCi/g						
Cobalt-60	U	-0.0169	0.0472	+/-0.015	0.100	pCi/g						
Europium-152	U	-0.0665	0.141	+/-0.052	0.200	pCi/g						
Lanthanum-140	U	-0.14	0.103	+/-0.0381		pCi/g						
Lead-212		1.53	0.0894	+/-0.111	0.100	pCi/g						
Lead-214		1.16	0.103	+/-0.0971	0.100	pCi/g						
Mercury-203	U	0.0222	0.0655	+/-0.0193	0.100	pCi/g						
Potassium-40		24.7	0.440	+/-1.30	1.00	pCi/g						
Radium-223	U	0.373	1.02	+/-0.331		pCi/g						
Radium-224	UI	3.79	1.02	+/-0.577		pCi/g						
Radium-226		0.954	0.101	+/-0.0812		pCi/g						
Radium-228		1.38	0.187	+/-0.157	0.500	pCi/g						
Ruthenium-106	U	0.000502	0.474	+/-0.140	0.800	pCi/g						
Sodium-22	U	-0.0181	0.0525	+/-0.0164	0.080	pCi/g						

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

Report Date: February 17, 2010

Client Sample ID: RE15-10-7927
Sample ID: 245396003
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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Rad Gamma Spec Analysis

GAMMA SPEC "Dry Weight Corrected"

Strontium-85	UI	0.120	0.0639	+/-0.0196		pCi/g						
Thallium-208		0.443	0.0518	+/-0.0426	0.080	pCi/g						
Thorium-227	U	-0.332	0.595	+/-0.186		pCi/g						
Thorium-231	U	0.373	1.02	+/-0.331		pCi/g						
Thorium-234		34.2	2.38	+/-3.28	2.00	pCi/g						
Tin-113	U	0.00196	0.0651	+/-0.0191	0.100	pCi/g						
Uranium-235		0.927	0.356	+/-0.192	0.500	pCi/g						
Yttrium-88	U	-0.00146	0.0391	+/-0.012	0.100	pCi/g						

Rad Liquid Scintillation Analysis

H3 "As Received"

Tritium		1890	211	+/-162	250	pCi/L	KXK2	02/06/10	1454	948401	7	
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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 EML HASL-300, U-02-RC Modified
6	DOE HASL 300, 4.5.2.3/Ga-01-R
7	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	81.4	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	57.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	60.1	(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.

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: February 17, 2010

Client Sample ID: RE15-10-7927 Project: LANL01004
Sample ID: 245396003 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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BD Results are either below the MDC or tracer recovery is low

C Analyte has been confirmed by GC/MS analysis

D Results are reported from a diluted aliquot of the sample

E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range

E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria

E Organics--Concentration of the target analyte exceeds the instrument calibration range

F Estimated Value

H Analytical holding time was exceeded

J Value is estimated

M M if above MDC and less than LLD

M Matrix Related Failure

N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC).

Quantitation is based on nearest internal standard response factor

N/A RPD or %Recovery limits do not apply.

ND Analyte concentration is not detected above the detection limit

NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%

R Sample results are rejected

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

UI Gamma Spectroscopy--Uncertain identification

X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

Y QC Samples were not spiked with this compound

Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.

^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

d 5-day BOD--The 2:1 depletion requirement was not met for this sample

h Preparation or preservation holding time was exceeded

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: February 17, 2010

Client Sample ID: RE15-10-7930
Sample ID: 245396004
Matrix: R
Collect Date: 21-JAN-10
Receive Date: 23-JAN-10
Collector: Client
Moisture: 11.5%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
<i>"As Received"</i>												
Rad Alpha Spec Analysis												
<i>AM241 "Dry Weight Corrected"</i>												
Americium-241	U	0.00203	0.0204	+/-0.00538	0.050	pCi/g		CXM2	02/04/10	1450	944974	2
<i>ISOPU "Dry Weight Corrected"</i>												
Plutonium-238	U	0.00137	0.0225	+/-0.00138	0.050	pCi/g		CXM2	02/04/10	1450	944976	3
Plutonium-239/240	U	0.00687	0.0169	+/-0.00414	0.050	pCi/g						
<i>ISOU "Dry Weight Corrected"</i>												
Uranium-233/234		1.60	0.138	+/-0.145	0.100	pCi/g		CXM2	02/01/10	1309	944978	4
Uranium-235/236	U	0.077	0.0856	+/-0.0213	0.100	pCi/g						
Uranium-238		4.97	0.080	+/-0.394	0.100	pCi/g						
Rad Gamma Spec Analysis												
<i>GAMMA SPEC "Dry Weight Corrected"</i>												
Americium-241	U	0.0442	0.225	+/-0.0732	0.200	pCi/g		MXR1	02/05/10	1914	944962	5
Bismuth-211	UI	3.49	0.315	+/-0.244		pCi/g						
Bismuth-214		1.13	0.112	+/-0.0914	0.200	pCi/g						
Cadmium-109	UI	2.51	1.35	+/-0.443		pCi/g						
Cerium-139	U	-0.00221	0.0494	+/-0.0148	0.050	pCi/g						
Cesium-134	UI	0.0907	0.0889	+/-0.0316	0.100	pCi/g						
Cesium-137		0.0918	0.0632	+/-0.0403	0.100	pCi/g						
Cobalt-60	U	-0.00333	0.063	+/-0.0193	0.100	pCi/g						
Europium-152	U	-0.0602	0.161	+/-0.0649	0.200	pCi/g						
Lanthanum-140	U	-0.00694	0.124	+/-0.0385		pCi/g						
Lead-212		1.71	0.0916	+/-0.0837	0.100	pCi/g						
Lead-214		1.21	0.110	+/-0.0905	0.100	pCi/g						
Mercury-203	U	0.00404	0.0673	+/-0.0222	0.100	pCi/g						
Potassium-40		38.3	0.528	+/-1.67	1.00	pCi/g						
Radium-223	U	0.0488	1.07	+/-0.356		pCi/g						
Radium-224	UI	3.69	1.04	+/-0.497		pCi/g						
Radium-226		1.13	0.112	+/-0.0914		pCi/g						
Radium-228		1.54	0.218	+/-0.169	0.500	pCi/g						
Ruthenium-106	U	0.174	0.517	+/-0.150	0.800	pCi/g						
Sodium-22	U	0.0018	0.0753	+/-0.0226	0.080	pCi/g						

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

Report Date: February 17, 2010

Client Sample ID: RE15-10-7930
Sample ID: 245396004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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Rad Gamma Spec Analysis

GAMMA SPEC "Dry Weight Corrected"

Strontium-85	U	0.0983	0.0706	+/-0.0207		pCi/g						
Thallium-208		0.505	0.0561	+/-0.0404	0.080	pCi/g						
Thorium-227	U	-0.0474	0.623	+/-0.180		pCi/g						
Thorium-231	U	0.0488	1.07	+/-0.356		pCi/g						
Thorium-234		4.77	1.95	+/-0.970	2.00	pCi/g						
Tin-113	U	0.0106	0.0698	+/-0.0202	0.100	pCi/g						
Uranium-235	U	-0.0464	0.358	+/-0.107	0.500	pCi/g						
Yttrium-88	U	-0.0062	0.0481	+/-0.0156	0.100	pCi/g						

Rad Liquid Scintillation Analysis

H3 "As Received"

Tritium		2710	211	+/-215	250	pCi/L	KXK2	02/06/10	1632	948401	6
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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
6	GL-RAD-A-002

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	85.8	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	86.1	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	79.8	(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

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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: February 17, 2010

Client Sample ID: RE15-10-7930
Sample ID: 245396004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
-----------	-----------	--------	----	-----	----	-------	----	---------	------	------	-------	------

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.
UJ 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

GEL LABORATORIES LLC

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QC Summary

Report Date: February 17, 2010

Page 1 of 7

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico
Contact: Ms. Joylene Valdez
Workorder: 245396

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	944974										
QC1202023747	245396001	DUP									
Americium-241	U	0.0168	U	-0.000549	pCi/g	1.34		(0-1)	CXM2	02/04/10	14:50
	TPU:	+/-0.00521		+/-0.00126							
	Yield:	86.1		89.1							
QC1202023748	LCS										
Americium-241	33.2			31.9	pCi/g		96.3	(75%-125%)			
	TPU:			+/-2.23							
	Yield:			92.6							
QC1202023746	MB										
Americium-241	U	-0.00392	U	-0.00392	pCi/g						
	TPU:	+/-0.00283		+/-0.00283							
	Yield:	93.0									
Batch	944976										
QC1202023752	245396001	DUP									
Plutonium-238	U	0.0028	U	-0.00494	pCi/g	0.367		(0-1)	CXM2	02/04/10	14:50
	TPU:	+/-0.00199		+/-0.00855							
	Yield:	80.1		67.1							
Plutonium-239/240	U	0.0126	U	0.0115	pCi/g	0.0491		(0-1)			
	TPU:	+/-0.00546		+/-0.00549							
	Yield:	80.1		67.1							
QC1202023753	LCS										
Plutonium-238				7.05	pCi/g			(75%-125%)			
	TPU:			+/-0.540							
	Yield:			90.2							
Plutonium-239/240	41.8			38.4	pCi/g		91.9	(75%-125%)			
	TPU:			+/-2.42							
	Yield:			90.2							
QC1202023751	MB										
Plutonium-238	U	-0.00333	U	-0.00333	pCi/g						
	TPU:	+/-0.00289		+/-0.00289							
	Yield:	87.6									
Plutonium-239/240	U	0.00167	U	0.00167	pCi/g						
	TPU:	+/-0.00373		+/-0.00373							
	Yield:	87.6									
Batch	944978										
QC1202023755	245396001	DUP									
Uranium-233/234		0.863		0.892	pCi/g	0.0875		(0-1)	CXM2	02/01/10	13:09
	TPU:	+/-0.0897		+/-0.0787							
	Yield:	84.1		87.0							
Uranium-235/236	U	0.0267		0.0672	pCi/g	0.510		(0-1)			
	TPU:	+/-0.0233		+/-0.0164							
	Yield:	84.1		87.0							
Uranium-238		1.19		1.07	pCi/g	0.306		(0-1)			
	TPU:	+/-0.114		+/-0.091							

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QC Summary

Workorder: 245396

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Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	944978										
QC1202023756 Uranium-233/234	LCS	Yield:	84.1	87.0							
				5.72	pCi/g		(75%-125%)			02/01/1013:09	
		TPU:		+/-0.504							
		Yield:		92.6							
Uranium-235/236				0.336	pCi/g		(75%-125%)				
		TPU:		+/-0.0817							
		Yield:		92.6							
				5.31	pCi/g		92.3 (75%-125%)				
Uranium-238	5.75	TPU:		+/-0.473							
		Yield:		92.6							
				0.00601	pCi/g					01/30/1012:24	
		TPU:		+/-0.00681							
Uranium-233/234	MB	Yield:		94.2							
				0.012	pCi/g						
		TPU:		+/-0.00496							
		Yield:		94.2							
Uranium-235/236				0.0113	pCi/g						
		TPU:		+/-0.00541							
		Yield:		94.2							
				3.02	pCi/g	0.338		(0-1) CXM2		02/10/1010:57	
QC1202034526 Uranium-233/234	245396002 DUP	TPU:		+/-0.293							
		Yield:		78.7							
				0.138	pCi/g	0.719		(0-1)			
		TPU:		+/-0.0413							
Uranium-235/236		Yield:		78.7							
				11.1	pCi/g	0.483		(0-1)			
		TPU:		+/-0.940							
		Yield:		78.7							
Uranium-238				6.95	pCi/g		(75%-125%)			02/10/1010:57	
		TPU:		+/-0.768							
		Yield:		93.8							
				0.502	pCi/g		(75%-125%)				
QC1202034527 Uranium-233/234	LCS	TPU:		+/-0.157							
		Yield:		93.8							
				5.88	pCi/g		102 (75%-125%)				
		TPU:		+/-0.674							
Uranium-235/236		Yield:		93.8							
				0.00994	pCi/g					02/10/1012:57	
		TPU:		+/-0.00806							
		Yield:		85.7							
Uranium-233/234	MB			0.00	pCi/g						
		TPU:		+/-0.00497							
		Yield:		85.7							
				0.00397	pCi/g						
Uranium-235/236				0.00397	pCi/g						
		TPU:		+/-0.00397							
		Yield:		85.7							
				0.00397	pCi/g						
Uranium-238				0.00397	pCi/g						
		TPU:		+/-0.00397							
		Yield:		85.7							
				0.00397	pCi/g						

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QC Summary

Workorder: 245396

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Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	949620										
		TPU:		+/-0.00636							
		Yield:		85.7							
Rad Gamma Spec											
Batch	944962										
QC1202023708 245385005 DUP											
Americium-241	U	-0.0559	U	0.0201	pCi/g	0.303		(0-1)	MXR1	02/06/10	13:03
	TPU:	+/-0.0448		+/-0.0807							
Bismuth-211	UI	4.22	UI	4.70	pCi/g	0.343		(0-1)			
	TPU:	+/-0.325		+/-0.383							
Bismuth-214		1.36		1.40	pCi/g	0.0999		(0-1)			
	TPU:	+/-0.0967		+/-0.124							
Cadmium-109	UI	4.26	UI	2.84	pCi/g	0.778		(0-1)			
	TPU:	+/-0.392		+/-0.522							
Cerium-139	U	-0.0095	U	-0.0244	pCi/g	0.274		(0-1)			
	TPU:	+/-0.00982		+/-0.0174							
Cesium-134	UI	0.148	U	0.0431	pCi/g	1.05		(0-1)			
	TPU:	+/-0.0247		+/-0.0252							
Cesium-137	U	0.0241	UI	0.101	pCi/g	0.751		(0-1)			
	TPU:	+/-0.0187		+/-0.0327							
Cobalt-60	U	0.00943	U	0.00977	pCi/g	0.00523		(0-1)			
	TPU:	+/-0.0138		+/-0.0189							
Europium-152	U	-0.0183	U	-0.119	pCi/g	0.454		(0-1)			
	TPU:	+/-0.0355		+/-0.0749							
Lanthanum-140	U	0.0198	U	0.037	pCi/g	0.0741		(0-1)			
	TPU:	+/-0.0496		+/-0.0671							
Lead-212		1.93		2.06	pCi/g	0.209		(0-1)			
	TPU:	+/-0.142		+/-0.150							
Lead-214		1.47		1.64	pCi/g	0.326		(0-1)			
	TPU:	+/-0.119		+/-0.140							
Mercury-203	U	0.0432	UI	0.110	pCi/g	0.586		(0-1)			
	TPU:	+/-0.0175		+/-0.0392							
Potassium-40		21.4		22.7	pCi/g	0.270		(0-1)			
	TPU:	+/-1.08		+/-1.28							
Radium-223	U	0.669	U	-0.112	pCi/g	0.578		(0-1)			
	TPU:	+/-0.269		+/-0.407							
Radium-224	UI	5.15	UI	5.87	pCi/g	0.256		(0-1)			
	TPU:	+/-0.637		+/-0.768							
Radium-226		1.36		1.40	pCi/g	0.0999		(0-1)			
	TPU:	+/-0.0967		+/-0.124							
Radium-228		1.81		1.90	pCi/g	0.118		(0-1)			
	TPU:	+/-0.158		+/-0.210							
Ruthenium-106	U	-0.0752	U	-0.228	pCi/g	0.275		(0-1)			
	TPU:	+/-0.109		+/-0.169							
Sodium-22	U	-0.00141	U	-0.0105	pCi/g	0.120		(0-1)			
	TPU:	+/-0.0148		+/-0.0231							
Strontium-85	U	0.0412	UI	0.173	pCi/g	1.58		(0-1)			
	TPU:	+/-0.0138		+/-0.028							
Thallium-208		0.579		0.597	pCi/g	0.0959		(0-1)			
	TPU:	+/-0.0451		+/-0.0529							
Thorium-227	U	-0.00696	U	0.000557	pCi/g	0.0113		(0-1)			

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QC Summary

Workorder: 245396

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Parname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	944962										
Thorium-231		TPU:	+/-0.126	+/-0.208							
		U	0.669	-0.112	pCi/g	0.578		(0-1)			
Thorium-234		TPU:	+/-0.269	+/-0.407							
			2.16	1.28	pCi/g	0.288		(0-1)			
Tin-113		TPU:	+/-0.651	+/-0.871							
		U	-0.0211	0.0326	pCi/g	0.665		(0-1)			
Uranium-235		TPU:	+/-0.015	+/-0.0254							
			0.252	-0.0494	pCi/g	0.732		(0-1)			
Yttrium-88		TPU:	+/-0.0845	+/-0.121							
		U	-0.0203	0.0249	pCi/g	0.749		(0-1)			
		TPU:	+/-0.0136	+/-0.0166							
QC1202023709	LCS										
Americium-241	15.9			13.4	pCi/g		84.4	(75%-125%)		02/04/10	21:14
		TPU:		+/-0.706							
Bismuth-211				2.13	pCi/g						
		TPU:		+/-0.396							
Bismuth-214				0.697	pCi/g						
		TPU:		+/-0.138							
Cadmium-109				29.1	pCi/g						
		TPU:		+/-2.21							
Cerium-139			U	0.037	pCi/g						
		TPU:		+/-0.024							
Cesium-134			U	0.0421	pCi/g						
		TPU:		+/-0.0517							
Cesium-137	5.56			5.62	pCi/g		101	(75%-125%)			
		TPU:		+/-0.278							
Cobalt-60	6.42			6.50	pCi/g		101	(75%-125%)			
		TPU:		+/-0.330							
Europium-152			U	-0.0881	pCi/g						
		TPU:		+/-0.113							
Lanthanum-140			U	0.00676	pCi/g						
		TPU:		+/-0.0443							
Lead-212				0.917	pCi/g						
		TPU:		+/-0.135							
Lead-214				0.742	pCi/g						
		TPU:		+/-0.139							
Mercury-203			U	0.0358	pCi/g						
		TPU:		+/-0.0354							
Potassium-40			U	0.720	pCi/g						
		TPU:		+/-0.326							
Radium-223			U	-0.103	pCi/g						
		TPU:		+/-0.611							
Radium-224				7.18	pCi/g						
		TPU:		+/-0.895							
Radium-226				0.697	pCi/g						
		TPU:		+/-0.138							
Radium-228			U	0.556	pCi/g						
		TPU:		+/-0.420							
Ruthenium-106			U	-0.48	pCi/g						
		TPU:		+/-0.313							
Sodium-22			U	-0.0214	pCi/g						

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QC Summary

Workorder: 245396

Page 5 of 7

Parname	NOM	Sample Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec									
Batch	944962								
		TPU:	+/-0.0273						
Strontium-85		U	0.0733	pCi/g					
		TPU:	+/-0.0408						
Thallium-208			0.276	pCi/g					
		TPU:	+/-0.0625						
Thorium-227		U	0.279	pCi/g					
		TPU:	+/-0.358						
Thorium-231		U	-0.103	pCi/g					
		TPU:	+/-0.611						
Thorium-234		U	1.48	pCi/g					
		TPU:	+/-1.26						
Tin-113		U	-0.0146	pCi/g					
		TPU:	+/-0.0461						
Uranium-235		U	-0.153	pCi/g					
		TPU:	+/-0.164						
Yttrium-88		U	0.014	pCi/g					
		TPU:	+/-0.0248						
QC1202023707 MB									
Americium-241		U	0.0214	pCi/g					02/05/1019:15
		TPU:	+/-0.0197						
Bismuth-211		U	0.014	pCi/g					
		TPU:	+/-0.0511						
Bismuth-214		U	-0.00703	pCi/g					
		TPU:	+/-0.0203						
Cadmium-109		U	-0.17	pCi/g					
		TPU:	+/-0.131						
Cerium-139		U	-0.0014	pCi/g					
		TPU:	+/-0.00572						
Cesium-134		U	-0.0186	pCi/g					
		TPU:	+/-0.0092						
Cesium-137		U	-0.00668	pCi/g					
		TPU:	+/-0.00919						
Cobalt-60		U	0.000209	pCi/g					
		TPU:	+/-0.00881						
Europium-152		U	-0.0123	pCi/g					
		TPU:	+/-0.0219						
Lanthanum-140		U	0.00102	pCi/g					
		TPU:	+/-0.0155						
Lead-212		U	-0.00479	pCi/g					
		TPU:	+/-0.0142						
Lead-214		U	-0.0115	pCi/g					
		TPU:	+/-0.0175						
Mercury-203		U	0.0122	pCi/g					
		TPU:	+/-0.00795						
Potassium-40		U	-0.00805	pCi/g					
		TPU:	+/-0.107						
Radium-223		U	0.183	pCi/g					
		TPU:	+/-0.148						
Radium-224		U	-0.441	pCi/g					
		TPU:	+/-0.136						
Radium-226		U	-0.00703	pCi/g					

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QC Summary

Workorder: 245396

Page 6 of 7

Parname	NOM	Sample Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
Rad Gamma Spec										
Batch	944962									
Radium-228	TPU:		+/-0.0203							
		U	-0.0458	pCi/g						
Ruthenium-106	TPU:		+/-0.0297							
		U	-0.134	pCi/g						
Sodium-22	TPU:		+/-0.0741							
		U	-0.00253	pCi/g						
Strontium-85	TPU:		+/-0.00949							
		U	-0.0377	pCi/g						
Thallium-208	TPU:		+/-0.0144							
		U	-0.0197	pCi/g						
Thorium-227	TPU:		+/-0.00989							
		U	0.0225	pCi/g						
Thorium-231	TPU:		+/-0.0736							
		U	0.183	pCi/g						
Thorium-234	TPU:		+/-0.148							
		U	-0.283	pCi/g						
Tin-113	TPU:		+/-0.214							
		U	0.0013	pCi/g						
Uranium-235	TPU:		+/-0.00969							
		U	0.0295	pCi/g						
Yttrium-88	TPU:		+/-0.0479							
		U	7.01E-05	pCi/g						
	TPU:		+/-0.00823							
Rad Liquid Scintillation										
Batch	948401									
QC1202031680	245396002	DUP								
Tritium			977	917	pCi/L	0.145		(0-1) KXX2	02/06/10	19:48
		TPU:	+/-105	+/-101						
QC1202031681	LCS									
Tritium		5570		6210	pCi/L		112 (75%-125%)		02/06/10	21:27
		TPU:		+/-451						
QC1202031679	MB									
Tritium			U	41.6	pCi/L				02/06/10	18:10
		TPU:		+/-62.6						

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
- 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

GEL LABORATORIES LLC

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QC Summary

Workorder: 245396

Page 7 of 7

Parmname	NOM	Sample Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time
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									
II	Analytical holding time was exceeded									
J	Value is estimated									
M	M if above MDC and less than LLD									
M	Matrix Related Failure									
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor									
N/A	RPD or %Recovery limits do not apply.									
ND	Analyte concentration is not detected above the detection limit									
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%									
R	Sample results are rejected									
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.									
UI	Gamma Spectroscopy--Uncertain identification									
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Y	QC Samples were not spiked with this compound									
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.									
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.									
d	5-day BOD--The 2:1 depletion requirement was not met for this sample									
h	Preparation or preservation holding time was exceeded									

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

** Indicates analyte is a surrogate compound.

^ 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.

For PS, PSD, and SDII.T 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#

944974

Product:

Am

Date:

2/17/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10 ⁶ MDA/ MDC, error is 150% or less of sample activity. If greater 10 ⁶ MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits.	✓		
Instrument big check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 8 ⁶ MDA/ MDC, then RPD is 100% or less. If greater 8 ⁶ 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.	✓		
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms.	✓		
All line cuts 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 labeled.	✓		
QC data entered into QC database and batch is in REVIEW	✓		
HA 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 RIEMP, results above MDC have been verified by historical results, recent or 6-2 analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 9/13/2010

Primary Review Performed By:

D. Quade 2/17/10

Secondary Review Performed By:

J. C. 2/17/10

2/20
LANC

Am/Cm Que Sheet

25-JAN-10

Batch #: 944974 Analyst: CXM2 First Client Due Date: 20-FEB-10 Internal Due Date: 09-FEB-10
 Tracer(s): Am241/Cm244 Tracer Code: 445-96-2-55 Expiration Date: 5/11/10
 LCS Isotope(s): Am241/Cm244 LCS Code(s): 0244-B Expiration Date: 4/30/20
 Spike Isotope(s): Am241/Cm244 Spike Code(s): CMM Expiration Date: 1/29/10
 Prep Date: 1/29/10 Initials: CMM Pipet ID: 297058 Balance ID: 5040272
 Comments: Vol: 0.1mL Vol(s): 0.103g / — # 5RM Vol(s): — / — Witness: NG 1/28/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Aliquot (g) / (l)	Am/Cm Det #
245385001-1	RE15-10-7303	SAMPLE		.05 pCi/g	SOIL	LANL010	15-JAN-10	1	1	1.258	211
245385002-1	RE15-10-7305	SAMPLE		.05 pCi/g	SOIL	LANL010	15-JAN-10	2	2	1.257	212
245385003-1	RE15-10-7306	SAMPLE		.05 pCi/g	SOIL	LANL010	15-JAN-10	3	3	1.236	213
245385004-1	RE15-10-7307	SAMPLE		.05 pCi/g	SOIL	LANL010	15-JAN-10	4	4	1.256	214
245385005-1	RE15-10-7301	SAMPLE		.05 pCi/g	SOIL	LANL010	15-JAN-10	5	5	1.254	215
245385006-1	RE15-10-7304	SAMPLE		.05 pCi/g	SOIL	LANL010	15-JAN-10	6	6	1.254	216
245385007-1	RE15-10-7300	SAMPLE		.05 pCi/g	SOIL	LANL010	15-JAN-10	7	7	1.234	217
245385008-1	RE15-10-7302	SAMPLE		.05 pCi/g	SOIL	LANL010	15-JAN-10	8	8	1.259	218
245385009-1	RE15-10-7311	SAMPLE		.05 pCi/g	SOIL	LANL010	15-JAN-10	9	9	1.273	219
245385010-1	RE15-10-7310	SAMPLE		.05 pCi/g	SOIL	LANL010	15-JAN-10	10	10	1.265	220
245385011-1	RE15-10-7323	SAMPLE		.05 pCi/g	SOIL	LANL010	15-JAN-10	11	11	1.255	221
245396001-1	RE15-10-7928	SAMPLE		.05 pCi/g	SOIL	LANL010	21-JAN-10	12	12	1.264	222
245396002-1	RE15-10-7929	SAMPLE		.05 pCi/g	SOIL	LANL010	21-JAN-10	13	13	1.263	223
245396003-1	RE15-10-7927	SAMPLE		.05 pCi/g	SOIL	LANL010	21-JAN-10	14	14	1.266	224
245396004-1	RE15-10-7930	SAMPLE		.05 pCi/g	SOIL	LANL010	21-JAN-10	15	15	1.260	225
1202023746-1	MB for batch 944974	MB		.05 pCi/g	SOIL	QC ACCOUNT		16	16	1.2	68
1202023747-1	RE15-10-7928(245396001DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	21-JAN-10	17	17	1.262	69
1202023748-1	LCS for batch 944974	LCS		.05 pCi/g	SOIL	QC ACCOUNT		18	18	0.103	70

Choose SOP Used: GL-RAD-A-011
 GL-RAD-A-036

Solid Sample Dissolution by: LEACH or DIGESTION

Circle One

Data Reviewed By: [Signature] 2/17/10

Blank Correction Report

Batch ID 944974

GEL Sample ID	Client sample ID	Parameter	Alliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202023747	DUP	Americium-241	1.26 g	-0.000549	0.00126	0.0201	-0.00311111	pCi/g	NO
1202023748	LCS	Americium-241	0.103 g	31.9	2.23	0.215	-0.03805825	pCi/g	NO
1202023746	MB	Americium-241	1.00 g	-0.00392	0.00283	0.026	-0.00392	pCi/g	NO
245385001	RE15-10-7303	Americium-241	1.26 g	-0.00266	0.00293	0.0211	-0.00311111	pCi/g	NO
245385002	RE15-10-7305	Americium-241	1.26 g	0.00452	0.00269	0.0237	-0.00311111	pCi/g	NO
245385003	RE15-10-7306	Americium-241	1.28 g	0.0026	0.00195	0.0219	-0.0030625	pCi/g	NO
245385004	RE15-10-7307	Americium-241	1.26 g	-0.000975	0.00215	0.0225	-0.00311111	pCi/g	NO
245385005	RE15-10-7301	Americium-241	1.25 g	0.00199	0.00291	0.0223	-0.003136	pCi/g	NO
245385006	RE15-10-7304	Americium-241	1.25 g	-0.00164	0.00302	0.0229	-0.003136	pCi/g	NO
245385007	RE15-10-7300	Americium-241	1.27 g	0.00157	0.00224	0.0221	-0.00308661	pCi/g	NO
245385008	RE15-10-7302	Americium-241	1.26 g	0.0028	0.00387	0.0221	-0.00311111	pCi/g	NO
245385009	RE15-10-7311	Americium-241	1.27 g	0.00426	0.00255	0.0226	-0.00308661	pCi/g	NO
245385010	RE15-10-7310	Americium-241	1.27 g	0.000978	0.00139	0.0208	-0.00308661	pCi/g	NO
245385011	RE15-10-7323	Americium-241	1.26 g	0.00444	0.00265	0.0234	-0.00311111	pCi/g	NO
245396001	RE15-10-7928	Americium-241	1.26 g	0.0168	0.00521	0.0232	-0.00311111	pCi/g	NO
245396002	RE15-10-7929	Americium-241	1.26 g	0.00347	0.00754	0.021	-0.00311111	pCi/g	NO
245396003	RE15-10-7927	Americium-241	1.27 g	0.00919	0.00453	0.0219	-0.00308661	pCi/g	NO
245396004	RE15-10-7930	Americium-241	1.26 g	0.00203	0.00538	0.0204	-0.00311111	pCi/g	NO

2/17/16

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944974 SAMPLE ID : S0245396001_AM SAMPLE QTY : 1.264 G SAMPLE DATE : 21-JAN-2010 00:00:00 ANALYST : CXM2 % YIELD : 86.105	CHAMBER : 228 DETECTOR SIN : 79421 AVERAGE %EFFICIENCY : 37.1363 COUNT DATE : 11-FEB-2010 21:03:14 ELAPSED LIVE TIME(SEC) : 43200.00	LIB FILE : ENV_ALPHA_AM BKG FILE : B228.CNF:78 BKG DATE : 7-FEB-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W228.CNF:28 CAL DATE : 29-JAN-2010
---	--	---

TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.5113E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3157E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3157E+01 pCi/G
---	---	---

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5481.105	79.407	12.000	10.834	0.000	2.8409	99.94000	1.68E-02	5.21E-03	9.49E-03	2.32E-02	5.10E-03
AM243	5270.000	5283.855	44.124	670.000	0.000	0.000	0.0000	99.78000	1.04E+00	7.64E-02	0.00E+00	4.20E-03	4.02E-02
CM-242	6102.000	6085.990	0.000	0.000	0.000	0.000	4.3413	100.0000	0.00E+00	1.70E-03	1.45E-02	3.32E-02	1.70E-03
CM-3/4	5795.020	5730.995	59.012	4.000	3.280	0.720	5.1799	100.0000	5.09E-03	3.31E-03	1.73E-02	3.88E-02	3.30E-03
CM-5/6	5386.000	5380.616	0.000	15.000	0.000	0.000	14.2480	86.09000	2.70E-02	7.16E-03	5.53E-02	1.15E-01	6.96E-03
CM-247	4946.000	4898.372	178.900	4.000	4.000	0.000	13.7917	79.30000	7.81E-03	3.93E-03	5.81E-02	1.21E-01	3.90E-03
CM-248	5078.600	5056.887	0.000	14.000	14.000	0.000	19.5080	91.00000	2.38E-02	6.54E-03	7.16E-02	1.48E-01	6.36E-03

NOTES:

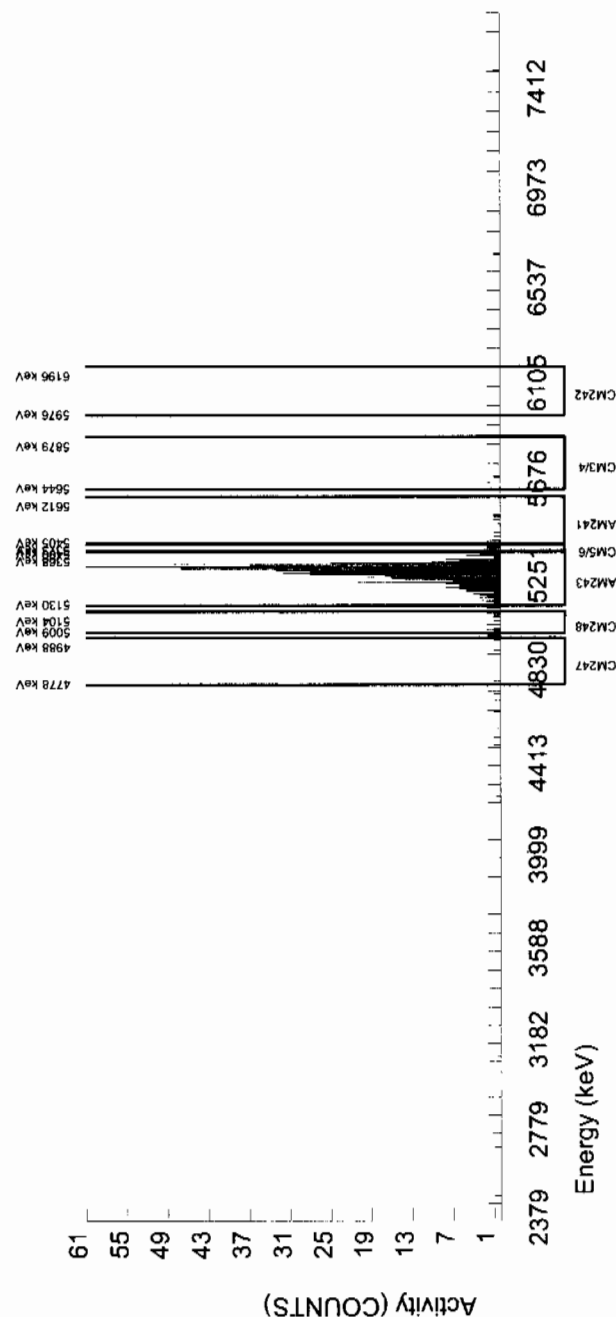
* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

[AM-241]



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944974 SAMPLE ID : S0245396002_AM SAMPLE QTY : 1.263 G SAMPLE DATE : 21-JAN-2010 00:00:00 ANALYST : CXM2 % YIELD : 87.056	CHAMBER : 065 DETECTOR S/N : 68551 AVERAGE %EFFICIENCY : 31.0643 COUNT DATE : 4-FEB-2010 14:50:48 ELAPSED LIVE TIME(SEC) : 59999.99	LIB FILE : ENV_ALPHA_AM BKG FILE : B065_CNF:1940 BKG DATE : 31-JAN-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W065_CNF:305 CAL DATE : 11-JAN-2010
---	---	---

TRACER ID : 445-96-2-SS NUCLIDE : AM243 NOMINAL : 2.9166E+00 dpm RESULTS : 2.5390E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3157E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : AM-241 NOMINAL : 3.3157E+01 pCi/G
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NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5453.680	81.689	19.000	2.630	15.000	2.8409	99.94000	3.47E-03	7.54E-03	8.72E-03	2.10E-02	7.54E-03
AM243	5270.000	5248.061	39.373	792.000	1.000	5.000	2.2361	99.78000	1.04E+00	7.36E-02	6.88E-03	1.73E-02	3.73E-02
CM-242	6102.000	6034.151	43.893	5.000	1.000	4.000	4.3413	100.0000	1.41E-03	4.22E-03	1.33E-02	3.02E-02	4.22E-03
CM-3/4	5795.020	5708.138	63.299	14.000	-1.000	15.000	5.1799	100.0000	-1.32E-03	7.11E-03	1.59E-02	3.54E-02	7.11E-03
CM-5/6	5386.000	5389.454	14.021	3.000	-1.000	4.000	14.2480	86.09000	-1.53E-03	4.05E-03	5.08E-02	1.06E-01	4.05E-03
CM-247	4946.000	4882.081	4.877	7.000	4.000	3.000	13.7917	79.30000	6.65E-03	5.27E-03	5.34E-02	1.11E-01	5.26E-03
CM-248	5078.600	5067.139	53.647	10.000	9.000	1.000	19.5080	91.00000	1.30E-02	4.87E-03	6.58E-02	1.35E-01	4.81E-03

NOTES:

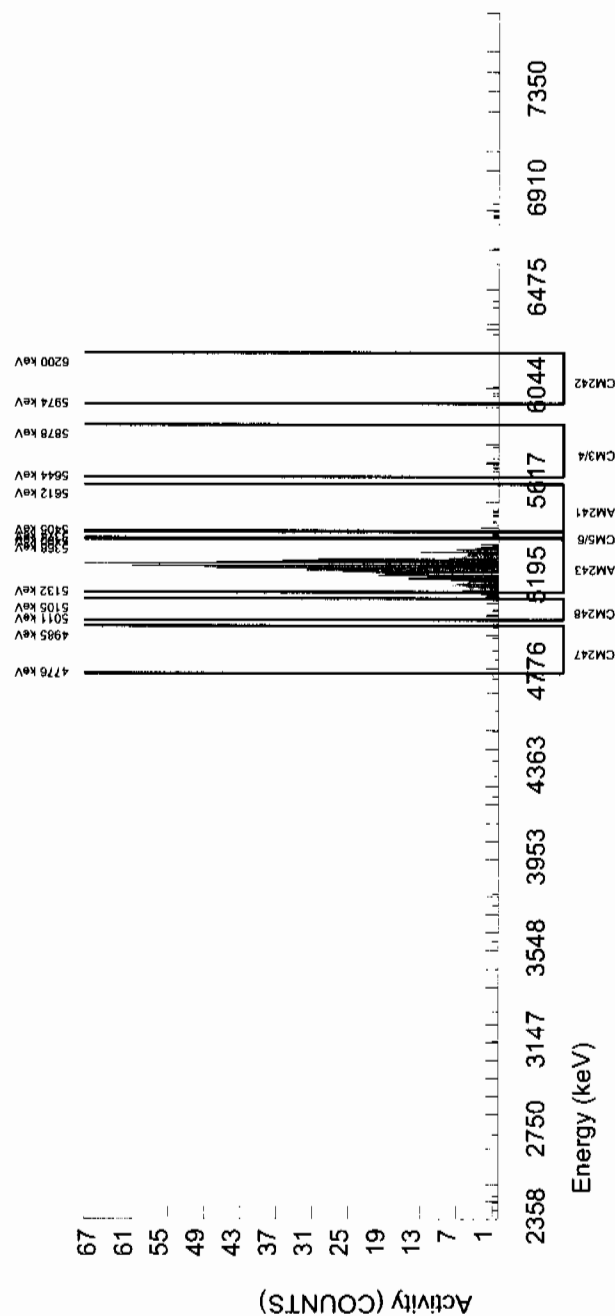
* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

□AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER	: 944974
SAMPLE ID	: S0245396003_AM
SAMPLE QTY	: 1.266 G
SAMPLE DATE	: 21-JAN-2010 00:00
ANALYST	: CXM2
% YIELD	: 81.438

CHAMBER : 112
DETECTOR S/N : 78261
AVERAGE %EFFICIENCY : 31.8150
COUNT DATE : 16-FEB-2010 14:33:43
ELAPSED LIVE TIME(SEC) : 59099.99

LIB FILE : ENV_ALPHA_AM
BKG FILE : B112.CNF:687
BKG DATE : 14-FEB-2010
BKG LIVE TIME(SEC) : 60000.00
EFF FILE : W112.CNF:221
CAL DATE : 15-FEB-2010

TRACER	:	445-96-2-SS
ID	:	AM243
NUCLIDE	:	2.9166E+00 dpm
NOMINAL	:	2.3752E+00 dpm
RESULTS	:	

MS/MSD
ID : 0244-B
NUCLIDE : AM-241
NOMINAL : 3.3157E+01 pCi/G

LCS/LCSD	
ID	: 0244-B
NUCLIDE	: AM-241
NOMINAL	: 3.3157E+01 pCi/g

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5506.654	7.202	10.000	6.688	2.000	2.8409	99.94000	9.19E-03	4.53E-03	9.08E-03	2.19E-02	4.49E-03
AM243	5270.000	5262.583	46.581	756.000	754.000	2.000	1.4142	99.78000	1.04E+00	7.41E-02	4.53E-03	1.28E-02	3.79E-02
CM-242	6102.000	6057.108	44.031	12.000	12.000	0.000	4.3413	100.0000	1.85E-02	5.45E-03	1.39E-02	3.15E-02	5.34E-03
CM-3/4	5795.020	5727.314	82.750	9.000	9.000	0.000	5.1799	100.0000	1.24E-02	4.20E-03	1.65E-02	3.68E-02	4.13E-03
CM-5/6	5386.000	5380.336	0.000	3.000	3.000	0.000	14.2480	86.09000	4.79E-03	2.78E-03	5.29E-02	1.10E-01	2.76E-03
CM-247	4946.000	4895.001	7.202	12.000	10.000	2.000	13.7917	79.30000	1.73E-02	6.57E-03	5.56E-02	1.16E-01	6.48E-03
CM-248	5078.600	5059.343	0.000	23.000	23.000	0.000	19.5080	91.00000	3.47E-02	7.54E-03	6.85E-02	1.41E-01	7.24E-03

NOTES:

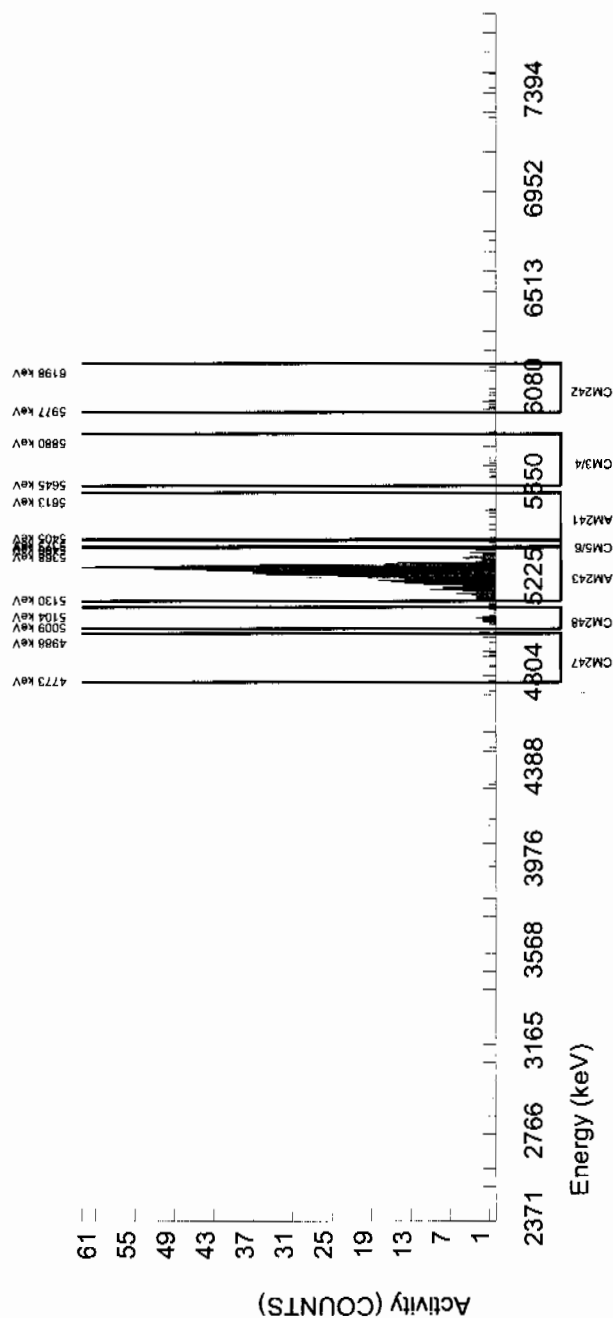
* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of AM243 calculated as $\sqrt{\text{BKG AREA}}$.

* Corrections made to the following net area due to tracer impurity:

☐ AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944974	CHAMBER : 067	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S0245396004_AM	DETECTOR S/N : 46-089B4	BKG FILE : B067.CNF;1099
SAMPLE QTY : 1.260 G	AVERAGE %EFFICIENCY : 32.5269	BKG DATE : 31-JAN-2010
SAMPLE DATE : 21-JAN-2010 00:00:00	COUNT DATE : 4-FEB-2010 14:50:48	BKG LIVE TIME(SEC) : 60000.00
ANALYST : CXM2	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W067.CNF;287
% YIELD : 85.782		CAL DATE : 11-JAN-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-SS	ID : 0244-B	ID : 0244-B
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 2.9166E+00 dpm	NOMINAL : 3.3157E+01 pCi/G	NOMINAL : 3.3157E+01 pCi/G
RESULTS : 2.5019E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5505.612	7.330	11.000	1.587	8.000	2.8409	99.94000	2.03E-03	5.38E-03	8.47E-03	2.04E-02	5.38E-03
AM243	5270.000	5287.340	52.886	814.000	812.000	2.000	1.4142	99.78000	1.04E+00	7.30E-02	4.22E-03	1.19E-02	3.67E-02
CM-242	6102.000	6104.394	149.714	5.000	0.000	5.000	4.3413	100.0000	6.51E-10	4.32E-03	1.29E-02	2.94E-02	4.32E-03
CM-3/4	5795.020	5727.071	27.448	10.000	6.000	4.000	5.1799	100.0000	7.70E-03	4.82E-03	1.54E-02	3.44E-02	4.80E-03
CM-5/6	5386.000	5377.975	0.000	16.000	16.000	0.000	14.2480	86.09000	2.38E-02	6.13E-03	4.93E-02	1.03E-01	5.95E-03
CM-247	4946.000	4905.681	0.000	9.000	3.000	6.000	13.7917	79.30000	4.85E-03	6.26E-03	5.18E-02	1.08E-01	6.26E-03
CM-248	5078.600	5083.153	0.000	9.000	9.000	0.000	19.5080	91.00000	1.27E-02	4.29E-03	6.39E-02	1.32E-01	4.22E-03

NOTES:

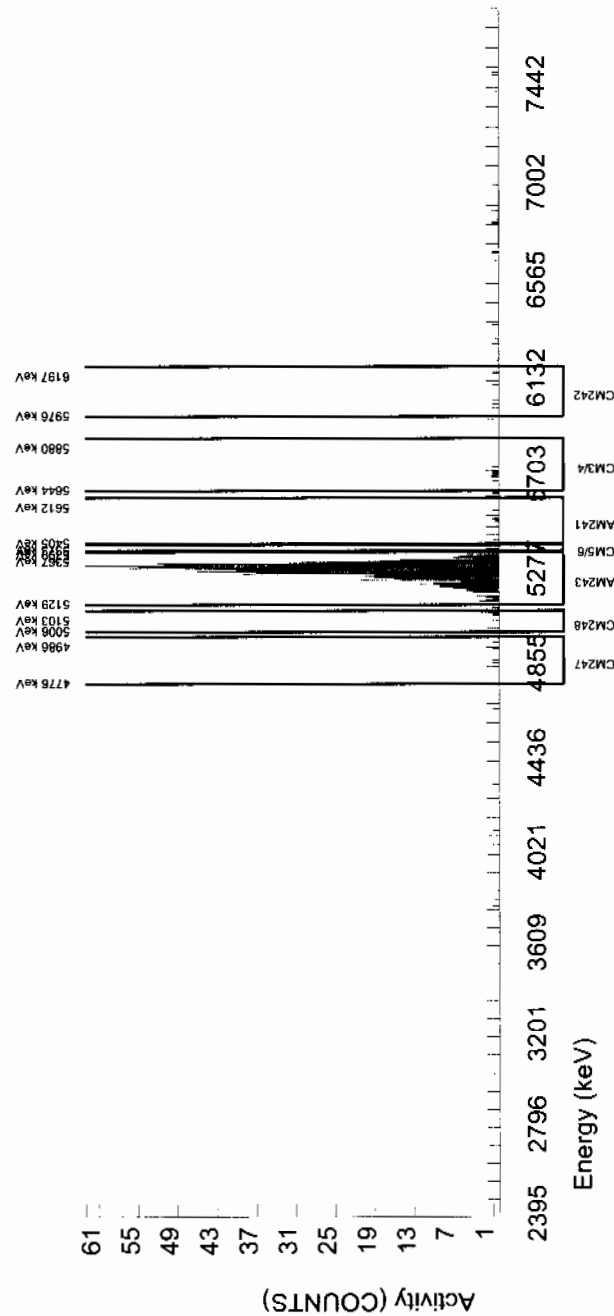
* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

☐AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944974	CHAMBER : 068	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S1202023746_AM	DETECTOR S/N : 78794	BKG FILE : B068.CNF:1092
SAMPLE QTY : 1.000 G	AVERAGE %EFFICIENCY : 29.6665	BKG DATE : 31-JAN-2010
SAMPLE DATE : 28-JAN-2010 00:00:00	COUNT DATE : 4-FEB-2010 14:50:48	BKG LIVE TIME(SEC) : 60000.00
ANALYST : CXM2	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W068.CNF:278
% YIELD : 93.011		CAL DATE : 11-JAN-2010

TRACER	MS/MSD	LCS/LCSD
ID : 445-96-2-SS	ID : 0244-B	ID : 0244-B
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 2.9166E+00 dpm	NOMINAL : 3.3156E+01 pCi/g	NOMINAL : 3.3156E+01 pCi/g
RESULTS : 2.7127E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/g	TPU 1-SIGMA	DLC pCi/g	MDC pCi/g	UNC pCi/g
AM-241	5479.150	5526.751	4.978	1.000	-2.397	2.000	2.8409	99.94000	-3.92E-03	2.83E-03	1.08E-02	2.60E-02	2.83E-03
AM243	5270.000	5279.481	37.614	805.000	803.000	2.000	1.4142	99.78000	1.31E+00	9.23E-02	5.38E-03	1.52E-02	4.65E-02
CM-242	6102.000	6049.030	4.978	3.000	3.000	0.000	4.3413	100.0000	5.07E-03	2.94E-03	1.65E-02	3.74E-02	2.92E-03
CM-3/4	5795.020	5745.459	109.506	8.000	3.000	5.000	5.1799	100.0000	4.90E-03	5.90E-03	1.97E-02	4.38E-02	5.89E-03
CM-5/6	5386.000	5385.070	0.000	2.000	2.000	0.000	14.2480	86.09000	3.79E-03	2.69E-03	6.29E-02	1.31E-01	2.68E-03
CM-247	4946.000	4851.663	124.439	2.000	1.000	1.000	13.7917	79.30000	2.06E-03	3.57E-03	6.60E-02	1.38E-01	3.57E-03
CM-248	5078.600	5087.969	4.978	3.000	3.000	0.000	19.5080	91.00000	5.38E-03	3.12E-03	8.14E-02	1.68E-01	3.11E-03

NOTES:

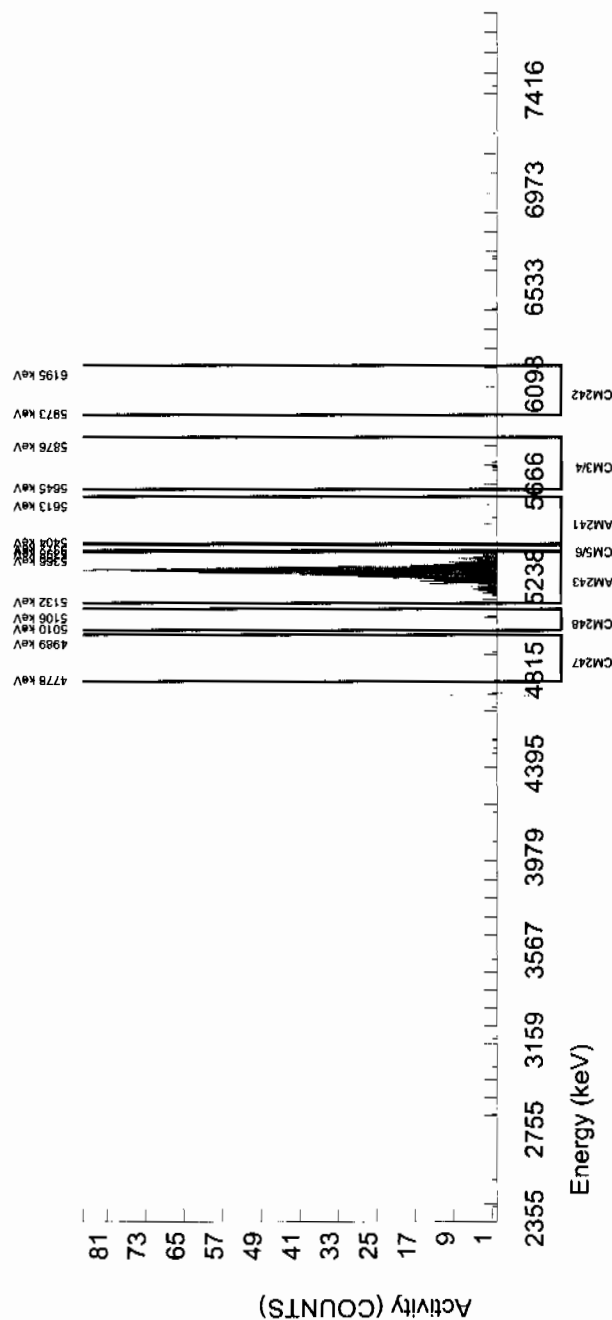
* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

☐AM-241



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944974	CHAMBER : 069	LIB FILE : ENV_ALPHA_AM
SAMPLE ID : S1202023747_AM	DETECTOR S/N : 78795	BKG FILE : B069.CNF:1094
SAMPLE QTY : 1.262 G	AVERAGE %EFFICIENCY : 31.8131	BKG DATE : 31-JAN-2010
SAMPLE DATE : 21-JAN-2010 00:00:00	COUNT DATE : 4-FEB-2010 14:50:48	BKG LIVE TIME(SEC) : 60000.00
ANALYST : CXM2	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W069.CNF:285
% YIELD : 89.111		CAL DATE : 11-JAN-2010

TRACER ID : 445-96-2-SS	MS/MSD ID : 0244-B	LCS/LCSD ID : 0244-B
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 2.9166E+00 dpm	NOMINAL : 3.3157E+01 pCi/G	NOMINAL : 3.3157E+01 pCi/G
RESULTS : 2.5990E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5499.589	4.929	1.000	-0.436	0.000	2.8409	99.94000	-5.49E-04	1.26E-03	8.33E-03	2.01E-02	1.26E-03
AM243	5270.000	5272.348	32.789	825.000	825.000	0.000	0.0000	99.78000	1.04E+00	7.25E-02	0.00E+00	3.42E-03	3.62E-02
CM-242	6102.000	6035.825	14.787	2.000	2.000	0.000	4.3413	100.0000	2.68E-03	1.90E-03	1.27E-02	2.88E-02	1.90E-03
CM-3/4	5795.020	5779.915	123.224	7.000	4.000	3.000	5.1799	100.0000	5.04E-03	4.00E-03	1.52E-02	3.38E-02	3.99E-03
CM-5/6	5386.000	5385.153	0.000	0.000	0.000	0.000	14.2480	86.09000	0.00E+00	1.47E-03	4.85E-02	1.01E-01	1.46E-03
CM-247	4946.000	4828.649	71.316	8.000	3.000	5.000	13.7917	79.30000	4.76E-03	5.73E-03	5.09E-02	1.06E-01	5.72E-03
CM-248	5078.600	5066.337	11.860	10.000	10.000	0.000	19.5080	91.00000	1.38E-02	4.45E-03	6.28E-02	1.29E-01	4.38E-03

NOTES:

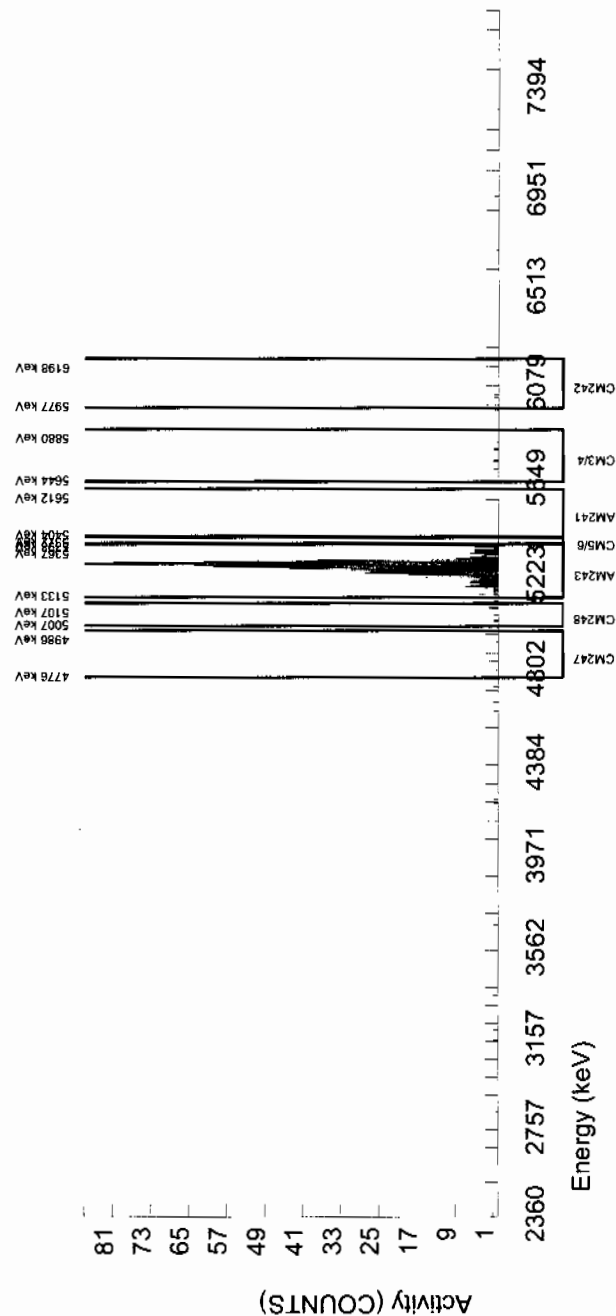
* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

[AM-241]



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944974	CHAMBER : 070	LIB FILE : ENV ALPHA_AM
SAMPLE ID : S1202023748_AM	DETECTOR S/N : 46-089B2	BKG FILE : B070.CNF:1104
SAMPLE QTY : 0.103 G	AVERAGE %EFFICIENCY : 34.9911	BKG DATE : 31-JAN-2010
SAMPLE DATE : 28-JAN-2010 00:00:00	COUNT DATE : 4-FEB-2010 14:50:48	BKG LIVE TIME(SEC) : 60000.00
ANALYST : CXM2	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W070.CNF:290
% YIELD : 92.606		CAL DATE : 11-JAN-2010

TRACER ID : 445-96-2-SS	MS/MSD ID : 0244-B	LCS/LCSD ID : 0244-B
NUCLIDE : AM243	NUCLIDE : AM-241	NUCLIDE : AM-241
NOMINAL : 2.9166E+00 dpm	NOMINAL : 3.3156E+01 pCi/G	NOMINAL : 3.3156E+01 pCi/G
RESULTS : 2.7009E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
AM-241	5479.150	5500.270	59.569	2370.000	2364.359	4.000	2.8409	99.94000	3.19E+01	2.23E+00	8.93E-02	2.15E-01	6.58E-01
AM243	5270.000	5277.920	61.064	945.000	943.000	2.000	1.4142	99.78000	1.28E+01	9.48E-01	4.45E-02	1.26E-01	4.16E-01
CM-242	6102.000	6081.222	7.266	11.000	8.000	3.000	4.3413	100.0000	1.12E-01	5.28E-02	1.36E-01	3.09E-01	5.22E-02
CM-3/4	5795.020	5735.847	69.258	11.000	1.000	10.000	5.1799	100.0000	1.35E-02	6.19E-02	1.63E-01	3.62E-01	6.19E-02
CM-5/6	5386.000	5386.388	0.000	67.000	66.000	1.000	14.2480	86.09000	1.03E+00	1.47E-01	5.20E-01	1.08E+00	1.29E-01
CM-247	4946.000	4882.688	103.887	15.000	11.000	4.000	13.7917	79.30000	1.87E-01	7.52E-02	5.46E-01	1.14E+00	7.42E-02
CM-248	5078.600	5064.042	41.740	16.000	14.000	2.000	19.5080	91.00000	2.08E-01	6.44E-02	6.73E-01	1.39E+00	6.29E-02

NOTES:

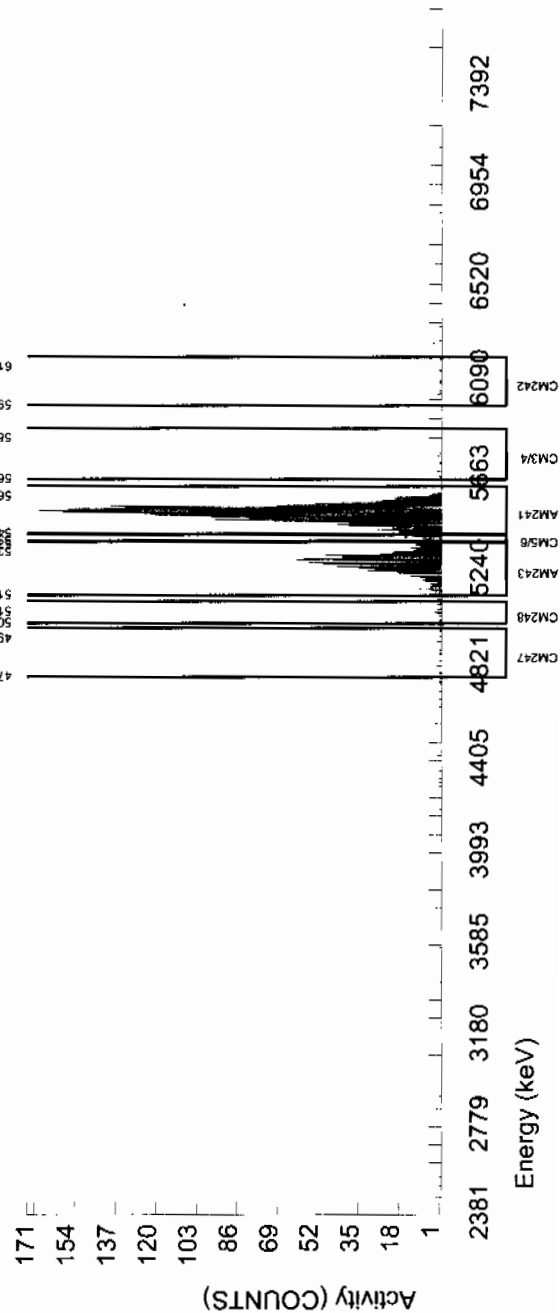
* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of AM243 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

□AM-241



Radiochemistry Batch Checklist, Rev10

Batch# 944976 Product: Pu Date: 2/15/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 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%.	✓		Case narrative
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.	✓		
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 initiated 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: Jop L. M. - 2/15/10

Secondary Review Performed By: [Signature] 2/16/10

2/9 2/20

LANL

Plutonium Que Sheet

25-JAN-10

Batch #: 944976 Analyst: CXM2 First Client Due Date: 20-FEB-10 Internal Due Date: 09-FEB-10
 Tracer Isotope(s): Pu-242/Pu-238 Tracer Code: 1374-A Expiration Date: 12/8/10 Vol: 0.1mL
 LCS Isotope(s): Pu-239/Pu-238 LCS Code: 0244-B Expiration Date: 4/30/20 Vol: 0.103g # SEM
 Spike Isotope(s): Pu-239/Pu-238 Spike Code: Expiration Date: Vol:
 Prep Date: 1/28/10 Initials: CMM Pipet ID: ZAT1058 Balance ID: 50410272 Witness: No 1/28/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry	Aliquot (g/mL)	Pu Det #
245385001-1	RE15-10-7303	SAMPLE	.05 pCi/g		SOIL	LANL010	15-JAN-10	1	1	1.258	221	-
245385002-1	RE15-10-7305	SAMPLE	.05 pCi/g		SOIL	LANL010	15-JAN-10	2	2	1.257	222	-
245385003-1	RE15-10-7306	SAMPLE	.05 pCi/g		SOIL	LANL010	15-JAN-10	3	3	1.276	223	-
245385004-1	RE15-10-7307	SAMPLE	.05 pCi/g		SOIL	LANL010	15-JAN-10	4	4	1.256	224	-
245385005-1	RE15-10-7301	SAMPLE	.05 pCi/g		SOIL	LANL010	15-JAN-10	5	5	1.254	225	-
245385006-1	RE15-10-7304	SAMPLE	.05 pCi/g		SOIL	LANL010	15-JAN-10	6	6	1.254	241	-
245385007-1	RE15-10-7300	SAMPLE	.05 pCi/g		SOIL	LANL010	15-JAN-10	7	7	1.274	242	-
245385008-1	RE15-10-7302	SAMPLE	.05 pCi/g		SOIL	LANL010	15-JAN-10	8	8	1.259	243	-
245385009-1	RE15-10-7311	SAMPLE	.05 pCi/g		SOIL	LANL010	15-JAN-10	9	9	1.273	244	-
245385010-1	RE15-10-7310	SAMPLE	.05 pCi/g		SOIL	LANL010	15-JAN-10	10	10	1.265	252	-
245385011-1	RE15-10-7323	SAMPLE	.05 pCi/g		SOIL	LANL010	15-JAN-10	11	11	1.255	111	-
245396001-1	RE15-10-7928	SAMPLE	.05 pCi/g		SOIL	LANL010	21-JAN-10	12	12	1.264	112	-
245396002-1	RE15-10-7929	SAMPLE	.05 pCi/g		SOIL	LANL010	21-JAN-10	13	13	1.263	73	-
245396003-1	RE15-10-7927	SAMPLE	.05 pCi/g		SOIL	LANL010	21-JAN-10	14	14	1.266	74	-
245396004-1	RE15-10-7930	SAMPLE	.05 pCi/g		SOIL	LANL010	21-JAN-10	15	15	1.260	75	-
1202023751-1	MB for batch 944976	MB	.05 pCi/g		SOIL	QC ACCOUNT		16	16	1	76	-
1202023752-1	RE15-10-7928(245396001DUP)	DUP	.05 pCi/g		SOIL	QC ACCOUNT	21-JAN-10	17	17	1.262	71	-
1202023753-1	LCS for batch 944976	LCS	.05 pCi/g		SOIL	QC ACCOUNT		18	18	0.103	72	-

Choose SOP Used: GL-RAD-A-011, GL-RAD-A-036, GL-RAD-A-045, GL-RAD-A-043

GEL Laboratories LLC., Radiochemistry Division

Solid Sample Dissolution by: LEACH or DIGESTION
 Circle One LEACH ^{1/28/10}

Data Reviewed By: Joe AL-2/15/10

Blank Correction Report

Batch ID 944976

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202023752	DUP	Plutonium-238	1.26 g	-0.00494	0.00855	0.0269	-.00264286	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0115	0.00549	0.0202	.001325397	pCi/g	NO
1202023753	LCS	Plutonium-238	0.103 g	7.05	0.540	0.246	-.03233010	pCi/g	NO
		Plutonium-239/240	0.103 g	38.4	2.42	0.185	.016213592	pCi/g	NO
1202023751	MB	Plutonium-238	1.00 g	-0.00333	0.00289	0.0272	-.00333	pCi/g	NO
		Plutonium-239/240	1.00 g	0.00167	0.00373	0.0205	.00167	pCi/g	YES
245385001	RE15-10-7303	Plutonium-238	1.26 g	0.00	0.00366	0.0244	-.00264286	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00	0.00299	0.0184	.001325397	pCi/g	YES
245385002	RE15-10-7305	Plutonium-238	1.26 g	0.00425	0.00246	0.0231	-.00264286	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00142	0.00245	0.0174	.001325397	pCi/g	YES
245385003	RE15-10-7306	Plutonium-238	1.28 g	0.00	0.0017	0.0277	-.00260156	pCi/g	NO
		Plutonium-239/240	1.28 g	0.00847	0.00382	0.0208	.001304688	pCi/g	NO
245385004	RE15-10-7307	Plutonium-238	1.26 g	0.0121	0.00451	0.022	-.00264286	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00134	0.00233	0.0165	.001325397	pCi/g	YES
245385005	RE15-10-7301	Plutonium-238	1.25 g	0.00522	0.00321	0.0213	-.002664	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00912	0.00394	0.016	.001336	pCi/g	NO
245385006	RE15-10-7304	Plutonium-238	1.25 g	0.00433	0.00251	0.0236	-.002664	pCi/g	NO
		Plutonium-239/240	1.25 g	-0.00289	0.0025	0.0178	.001336	pCi/g	YES
245385007	RE15-10-7300	Plutonium-238	1.27 g	0.0199	0.0064	0.0325	-.00262205	pCi/g	NO
		Plutonium-239/240	1.27 g	0.00796	0.00401	0.0245	.001314961	pCi/g	NO
245385008	RE15-10-7302	Plutonium-238	1.26 g	0.00158	0.00159	0.0259	-.00264286	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0095	0.00451	0.0195	.001325397	pCi/g	NO
245385009	RE15-10-7311	Plutonium-238	1.27 g	0.0102	0.00363	0.0207	-.00262205	pCi/g	NO
		Plutonium-239/240	1.27 g	0.00254	0.00311	0.0156	.001314961	pCi/g	YES
245385010	RE15-10-7310	Plutonium-238	1.27 g	0.00241	0.00241	0.0394	-.00262205	pCi/g	NO
		Plutonium-239/240	1.27 g	0.0145	0.00687	0.0286	.001314961	pCi/g	NO
245385011	RE15-10-7323	Plutonium-238	1.26 g	0.00573	0.00454	0.0234	-.00264286	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00716	0.00323	0.0176	.001325397	pCi/g	NO
245396001	RE15-10-7928	Plutonium-238	1.26 g	0.0028	0.00199	0.0229	-.00264286	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0126	0.00546	0.0172	.001325397	pCi/g	NO
245396002	RE15-10-7929	Plutonium-238	1.26 g	0.00625	0.00626	0.0341	-.00264286	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0333	0.00905	0.0256	.001325397	pCi/g	NO
245396003	RE15-10-7927	Plutonium-238	1.27 g	0.0137	0.00762	0.032	-.00262205	pCi/g	NO
		Plutonium-239/240	1.27 g	0.0352	0.00854	0.0241	.001314961	pCi/g	NO
245396004	RE15-10-7930	Plutonium-238	1.26 g	0.00137	0.00138	0.0225	-.00264286	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00687	0.00414	0.0169	.001325397	pCi/g	NO

GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944976	CHAMBER : 112	LIB FILE : ENV_ALPHA_PU
SAMPLE ID : S0245396001_PU	DETECTOR S/N : 78261	BKG FILE : B112.CNF;685
SAMPLE QTY : 1.264 G	AVERAGE %EFFICIENCY : 31.8150	BKG DATE : 7-FEB-2010
SAMPLE DATE : 21-JAN-2010 00:00:00	COUNT DATE : 12-FEB-2010 12:51:26	BKG LIVE TIME(SEC) : 60000.00
ANALYST : CXM2	ELAPSED LIVE TIME(SEC) : 60000.00	EFF FILE : W112.CNF;221
% YIELD : 80.124		CAL DATE : 15-FEB-2010

TRACER ID : 1374-A	MS/MSD ID : 0244-B	LCS/LCSD ID : 0244-B
NUCLIDE : PU242	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 3.3854E+00 dpm	NOMINAL : 4.1778E+01 pCi/G	NOMINAL : 4.1778E+01 pCi/G
RESULTS : 2.7125E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

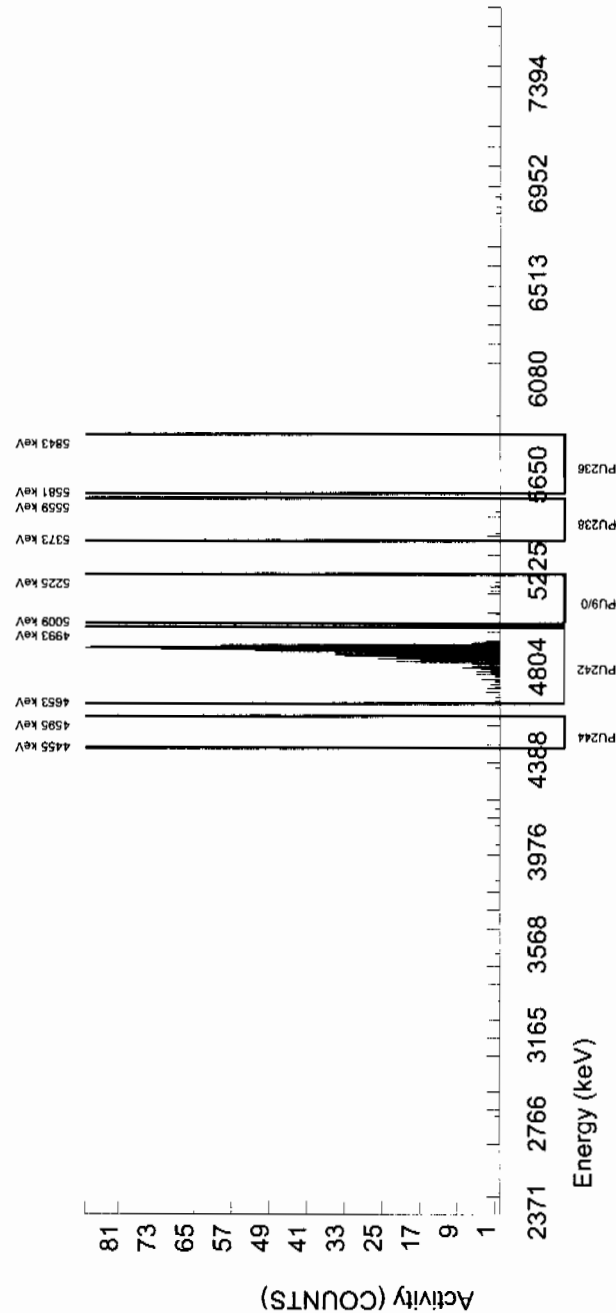
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5711.562	0.000	0.000	0.000	0.000	2.6925	100.0000	0.00E+00	1.42E-03	8.76E-03	2.13E-02	1.42E-03
PU-238	5499.000	5458.243	93.170	2.000	2.000	0.000	2.9312	99.900000	2.80E-03	1.99E-03	9.54E-03	2.29E-02	1.98E-03
PU-9/0	5155.000	5155.415	24.416	12.000	9.000	3.000	2.0604	99.900000	1.26E-02	5.46E-03	6.71E-03	1.72E-02	5.42E-03
PU242	4890.000	4883.725	38.373	865.000	863.000	2.000	1.4142	100.0000	1.21E+00	7.55E-02	4.60E-03	1.30E-02	4.12E-02
PU-244	4589.000	4525.266	117.689	2.000	2.000	0.000	3.7241	99.900000	2.80E-03	1.98E-03	1.21E-02	2.80E-02	1.98E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944976 SAMPLE ID : S0245396002_PU SAMPLE QTY : 1.263 G SAMPLE DATE : 21-JAN-2010 00:00:00 ANALYST : CXM2 % YIELD : 51.041	CHAMBER : 073 DETECTOR S/N : 78775 AVERAGE %EFFICIENCY : 33.5654 COUNT DATE : 4-FEB-2010 14:50:50 ELAPSED LIVE TIME(SEC) : 59999.99	LIB FILE : ENV_ALPHA_PU BKG FILE : B073.CNF:1097 BKG DATE : 31-JAN-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W073.CNF:283 CAL DATE : 11-JAN-2010
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TRACER ID : 1374-A NUCLIDE : PU242 NOMINAL : 3.3854E+00 dpm RESULTS : 1.7280E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G
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NUCLIDE ACTIVITY SUMMARY

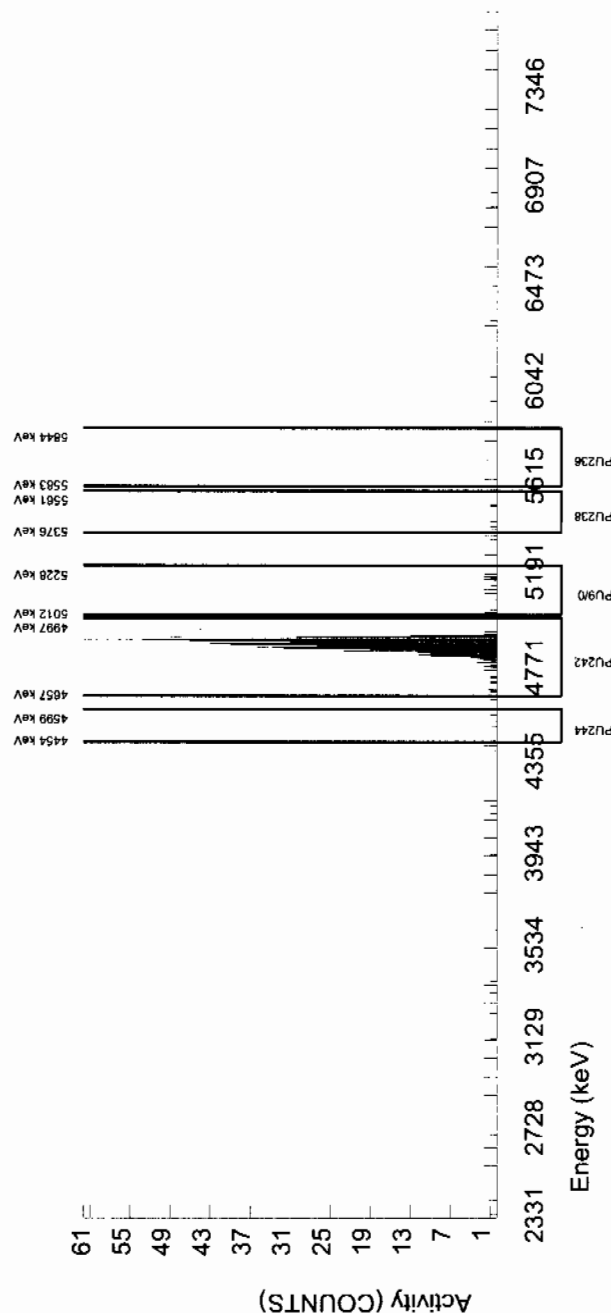
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5713.089	0.000	0.000	0.000	0.000	2.6925	100.0000	0.00E+00	2.11E-03	1.30E-02	3.17E-02	2.10E-03
PU-238	5499.000	5436.830	113.710	6.000	3.000	3.000	2.9312	99.900000	6.25E-03	6.26E-03	1.42E-02	3.41E-02	6.25E-03
PU-9/0	5155.000	5131.634	59.224	17.000	16.000	1.000	2.0604	99.900000	3.33E-02	9.05E-03	9.99E-03	2.56E-02	8.84E-03
PU242	4890.000	4886.485	49.481	586.000	580.000	6.000	2.4495	100.0000	1.21E+00	8.62E-02	1.19E-02	2.94E-02	5.07E-02
PU-244	4589.000	4518.671	113.710	4.000	3.000	1.000	3.7241	99.900000	6.25E-03	4.67E-03	1.81E-02	4.18E-02	4.66E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944976 SAMPLE ID : S0245396003_PU SAMPLE QTY : 1.266 G SAMPLE DATE : 21-JAN-2010 00:00:00 ANALYST : CXM2 % YIELD : 57.436	CHAMBER : 074 DETECTOR S/N : 78266 AVERAGE %EFFICIENCY : 31.6797 COUNT DATE : 4-FEB-2010 14:50:50 ELAPSED LIVE TIME(SEC) : 59999.99	LIB FILE : ENV_ALPHA_PU BKG FILE : B074.CNF;1119 BKG DATE : 31-JAN-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W074.CNF;330 CAL DATE : 11-JAN-2010
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TRACER ID : 1374-A NUCLIDE : PU242 NOMINAL : 3.3854E+00 dpm RESULTS : 1.9445E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G
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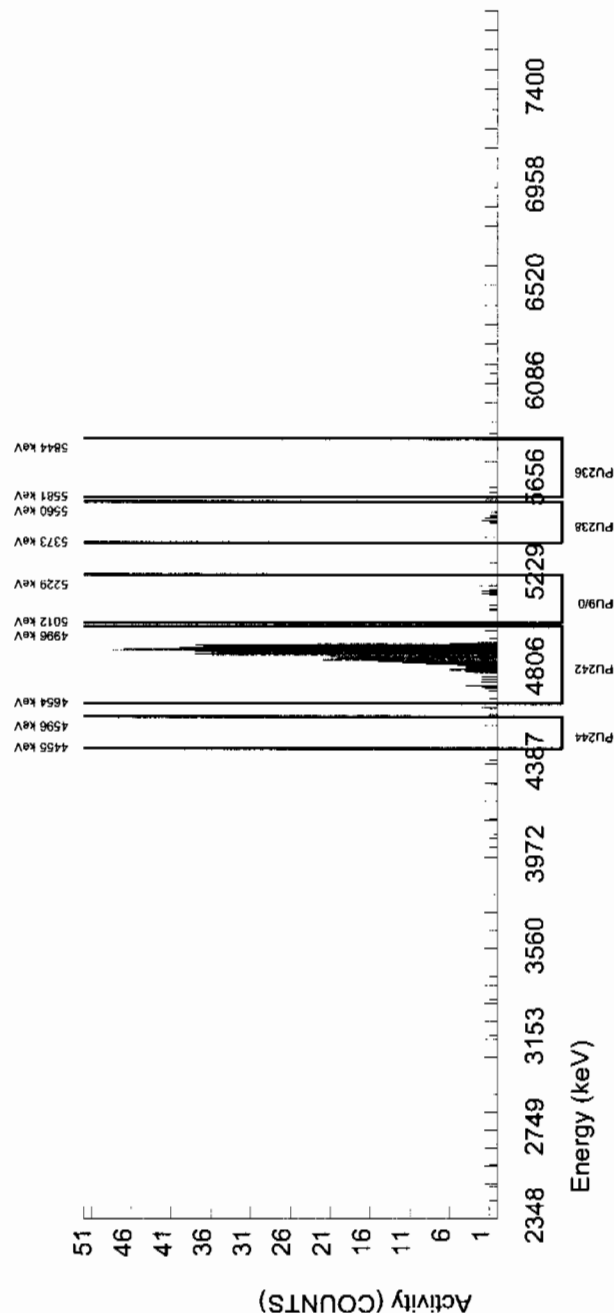
NUCLIDE ACTIVITY SUMMARY									
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G
PU-236	5749.000	5618.469	24.898	2.000	0.000	2.000	2.6925	100.0000	0.00E+00
PU-238	5499.000	5486.791	44.610	11.000	7.000	4.000	2.9312	99.900000	1.37E-02
PU-9/0	5155.000	5136.216	64.673	18.000	18.000	0.000	2.0604	99.900000	3.52E-02
PU242	4890.000	4877.657	51.943	617.000	616.000	1.000	1.0000	100.0000	1.20E+00
PU-244	4589.000	4525.787	0.000	0.000	-1.000	1.000	3.7241	99.900000	-1.96E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

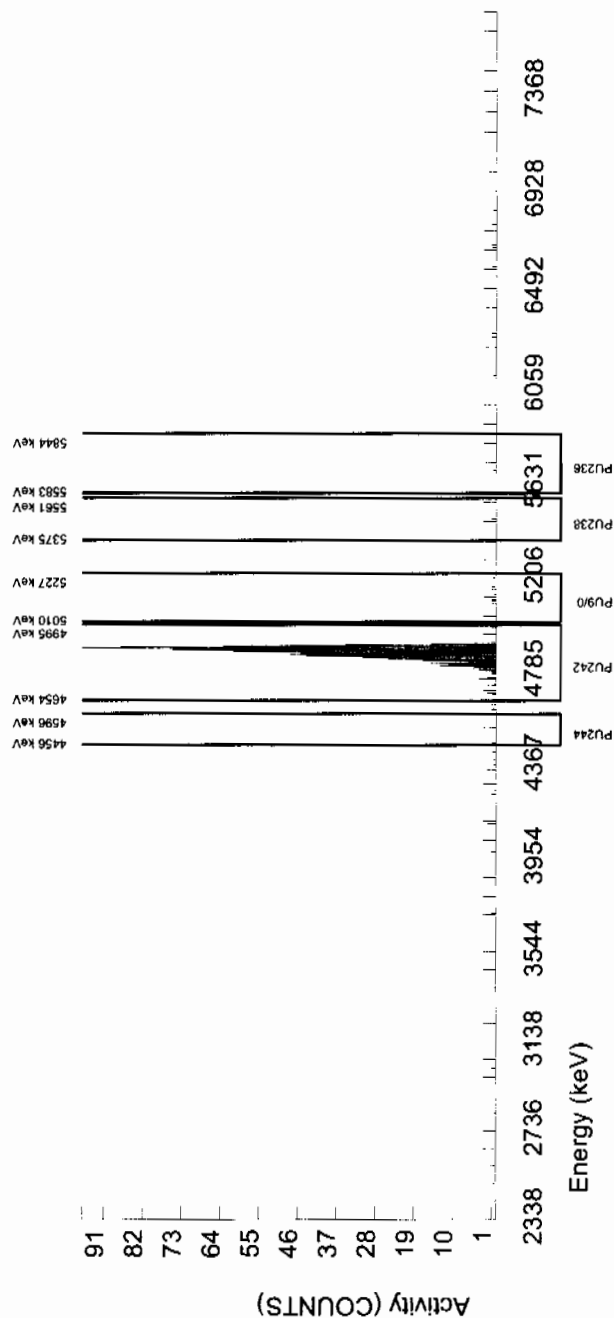
BATCH NUMBER : 944976 SAMPLE ID : S0245396004_PU SAMPLE QTY : 1.260 G SAMPLE DATE : 21-JAN-2010 00:00:00 ANALYST : CXM2 % YIELD : 86.053		CHAMBER : 075 DETECTOR S/N : 80010 AVERAGE %EFFICIENCY : 30.2754 COUNT DATE : 4-FEB-2010 14:50:50 ELAPSED LIVE TIME(SEC) : 59999.99	LIB FILE : ENV_ALPHA_PU BKG FILE : B075.CNF:1100 BKG DATE : 31-JAN-2010 BKG LIVE TIME(SEC) : 59999.99 EFF FILE : W075.CNF:288 CAL DATE : 12-JAN-2010
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TRACER ID : 1374-A NUCLIDE : PU242 NOMINAL : 3.3854E+00 dpm RESULTS : 2.9133E+00 dpm	MS/MSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G	LCS/LCSD ID : 0244-B NUCLIDE : PU-9/0 NOMINAL : 4.1778E+01 pCi/G
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NUCLIDE ACTIVITY SUMMARY									
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G
PU-236	5749.000	5687.500	108.962	3.000	2.000	1.000	2.6925	100.0000	2.77E-03
PU-238	5499.000	5476.078	4.953	1.000	1.000	0.000	2.9312	99.90000	1.37E-03
PU-9/0	5155.000	5132.413	74.292	7.000	5.000	2.000	2.0604	99.90000	6.87E-03
PU242	4890.000	4873.699	41.480	889.000	882.000	7.000	2.6458	100.0000	1.21E+00
PU-244	4589.000	4471.199	4.953	1.000	0.000	1.000	3.7241	99.90000	0.00E+00

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * Sg of PU242 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER	: 944976
SAMPLE ID	: S1202023751_PU
SAMPLE QTY	: 1.000 G
SAMPLE DATE	: 28-JAN-2010 00:00
ANALYST	: CXM2
% YIELD	: 87.635

CHAMBER : 076
DETECTOR S/N : 78779
AVERAGE %EFFICIENCY : 30.8747
COUNT DATE : 4-FEB-2010 14:50:50
ELAPSED LIVE TIME(SEC) : 59999.99

LIB FILE : ENV_ALPHA_PU
BKG FILE : B076.CNF;1103
3KG DATE : 31-JAN-2010
TIME(SEC) : 59999.99
EFF FILE : W076.CNF;293
CAL DATE : 11-JAN-2010

TRACER	:	1374-A
ID	:	PU242
NUCLIDE	:	3.3854E+00 dpm
NOMINAL	:	2.9668E+00 dpm
RESULTS	:	

MS/MSD
ID : 0244-B
NUCLIDE : PU-9/0
NOMINAL : 4.1778E+01 pCi/G

LCS/LCSD ID	NUCLIDE	NOMINAL
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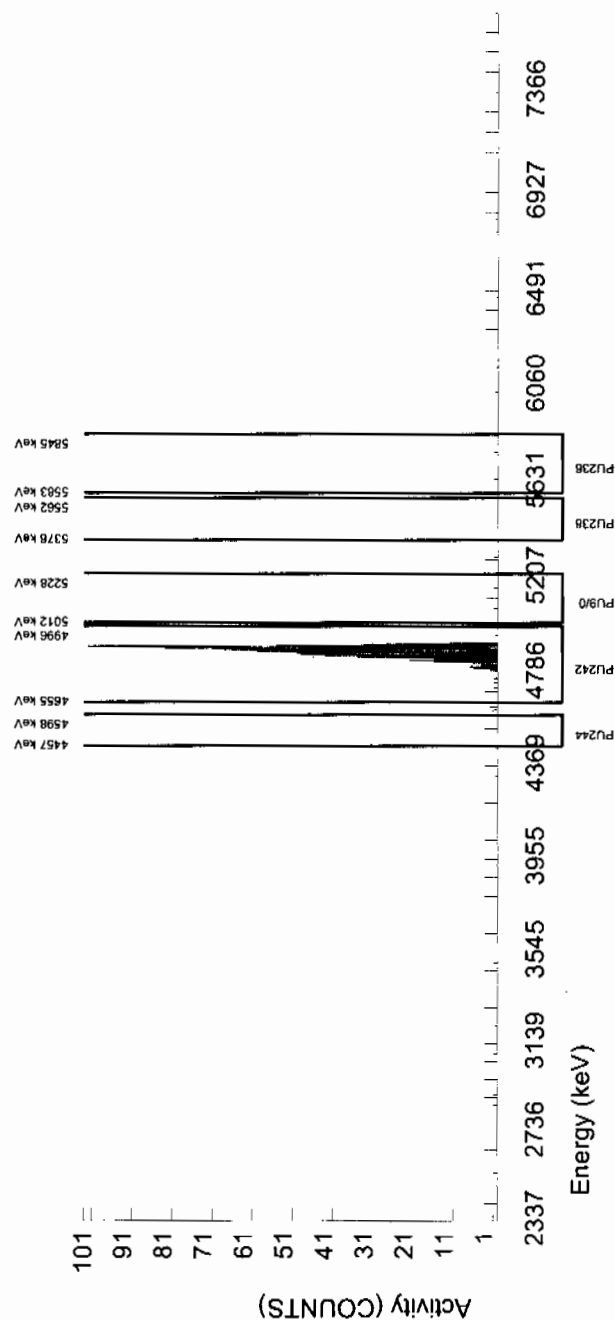
NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	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-236	5749.000	5738.023	134.016	3.000	2.000	1.000	2.6925	100.0000	3.35E-03	3.35E-03	1.04E-02	2.54E-02	3.35E-03
PU-238	5499.000	5469.033	0.000	0.000	-2.000	2.000	2.9312	99.900000	-3.33E-03	2.89E-03	1.14E-02	2.72E-02	2.89E-03
PU-9/0	5155.000	5125.831	89.344	3.000	1.000	2.000	2.0604	99.900000	1.67E-03	3.73E-03	7.99E-03	2.05E-02	3.73E-03
PU242	4890.000	4887.292	34.040	920.000	916.000	4.000	2.0000	100.0000	1.52E+00	9.38E-02	7.75E-03	2.00E-02	5.06E-02
PU-244	4589.000	4496.928	98.651	3.000	3.000	0.000	3.7241	99.900000	5.00E-03	2.90E-03	1.44E-02	3.34E-02	2.89E-03

NOTES:

* Sg calculated via blank population.
(Sg updated 10-FEB-2010)

* Sg of PU242 calculated as $\sqrt{\text{BKG AREA}}$.



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944976	CHAMBER : 071	LIB FILE : ENV_ALPHA_PU
SAMPLE ID : S1202023752_PU	DETECTOR S/N : 64259	BKG FILE : B071.CNF;1097
SAMPLE QTY : 1.262 G	AVERAGE %EFFICIENCY : 32.3636	BKG DATE : 31-JAN-2010
SAMPLE DATE : 21-JAN-2010 00:00:00	COUNT DATE : 4-FEB-2010 14:50:50	BKG LIVE TIME(SEC) : 59999.99
ANALYST : CXM2	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W071.CNF;284
% YIELD : 67.083		CAL DATE : 11-JAN-2010

TRACER ID : 1374-A	MS/MSD ID : 0244-B	LCS/LCSD ID : 0244-B
NUCLIDE : PU242	NUCLIDE : PU-9/0	NUCLIDE : PU-9/0
NOMINAL : 3.3854E+00 dpm	NOMINAL : 4.1778E+01 pCi/G	NOMINAL : 4.1778E+01 pCi/G
RESULTS : 2.2711E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

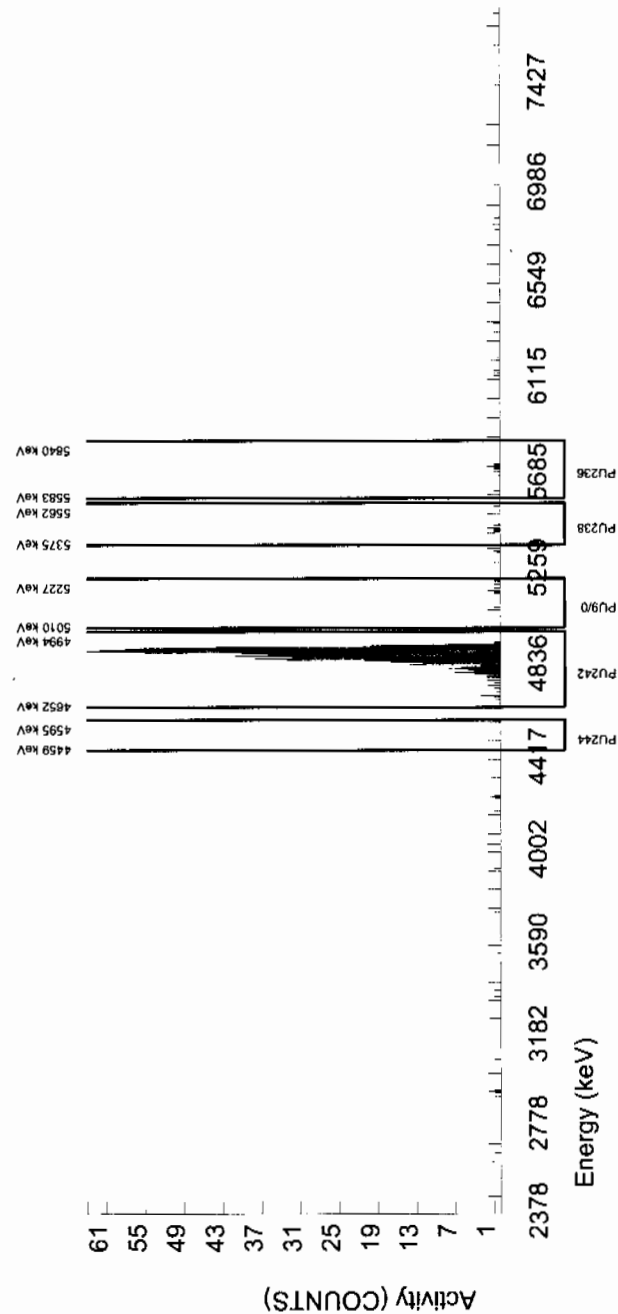
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5710.606	9.962	10.000	10.000	0.000	2.6925	100.0000	1.66E-02	5.33E-03	1.03E-02	2.51E-02	5.25E-03
PU-238	5499.000	5452.172	74.716	12.000	-3.000	15.000	2.9312	99.900000	-4.94E-03	8.55E-03	1.12E-02	2.69E-02	8.55E-03
PU-9/0	5155.000	5169.606	0.000	9.000	7.000	2.000	2.0604	99.900000	1.15E-02	5.49E-03	7.89E-03	2.02E-02	5.46E-03
PU242	4890.000	4892.663	57.524	736.000	735.000	1.000	1.0000	100.0000	1.21E+00	7.93E-02	3.82E-03	1.21E-02	4.46E-02
PU-244	4589.000	4531.809	0.000	2.000	0.000	2.000	3.7241	99.900000	0.00E+00	3.29E-03	1.43E-02	3.30E-02	3.29E-03

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU242 calculated as sqrt(BKG AREA).



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER :	944976
SAMPLE ID :	S1202023753_PU
SAMPLE QTY :	0.103 G
SAMPLE DATE :	28-JAN-2010 00:00:00
ANALYST :	CXM2
% YIELD :	90.165

CHAMBER	:	072
DETECTOR S/N	:	45-149AA3
AVERAGE %EFFICIENCY	:	32.2361
COUNT DATE	:	4-FEB-2011
ELAPSED LIVE TIME(SEC)	:	59999.99

LIB FILE	:	ENV_ALPHA_PU
BKG FILE	:	B072.CNF;1095
BKG DATE	:	31-JAN-2010
BKG LIVE TIME(SEC)	:	59999.99
EFF FILE	:	W072.CNF;275
CAL DATE	:	11-JAN-2010

TRACER	ID	: 1374-A
	NUCLIDE	: PU242
	NOMINAL	: 3.3854E+00 dpm
	RESULTS	: 3.0525E+00 dpm

MS/MSD
ID : 0244-B
NUCLIDE : PU-9/0
NOMINAL : 4.1778E+01 pCi/G

LCS/LCSD ID : 0244-B
NUCLIDE : PU-9/0
NOMINAL : 4.1778E+01 pCi/G

NUCLIDE ACTIVITY SUMMARY

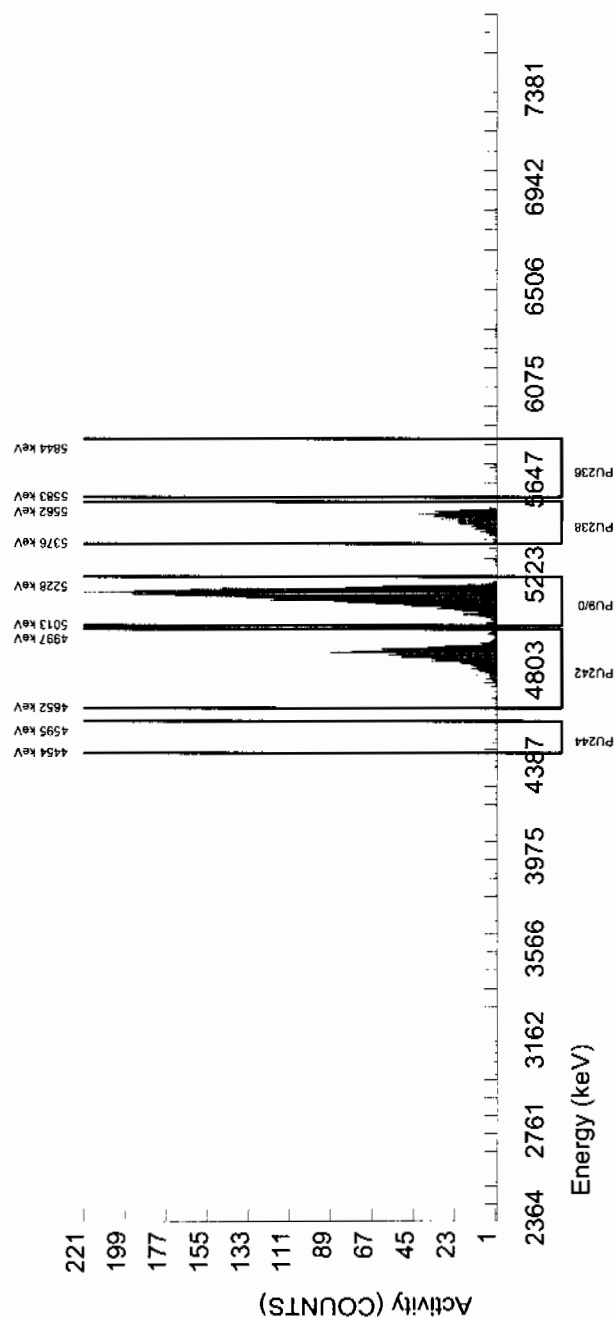
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-236	5749.000	5716.566	5.732	13.000	8.000	5.000	2.6925	100.0000	1.21E-01	6.46E-02	9.42E-02	2.29E-01	6.42E-02
PU-238	5499.000	5489.340	57.844	485.000	468.000	17.000	2.9312	99.900000	7.05E+00	5.40E-01	1.03E-01	2.46E-01	3.38E-01
PU-9/0	5155.000	5146.485	53.610	2553.000	2551.000	2.000	2.0604	99.900000	3.84E+01	2.42E+00	7.22E-02	1.85E-01	7.61E-01
PU242	4890.000	4884.325	44.235	987.000	984.000	3.000	1.7321	100.0000	1.48E+01	1.00E+00	6.06E-02	1.62E-01	4.73E-01
PU-244	4589.000	4522.413	28.380	9.000	9.000	0.000	3.7241	99.900000	1.36E-01	4.59E-02	1.30E-01	3.02E-01	4.52E-02

NOTES:

* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of PU242 calculated as $\sqrt{\text{BKG AREA}}$.



Radiochemistry Batch Checklist, Rev10

Batch# 944978 Product: U Date: 2/5/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 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 RDU/ 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%.	✓		case narrative
Or meets the client's contract acceptance criteria.	✓		case narrative
Method blank is less than the RDU/ 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.	✓		
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 REMF, 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:

S. P. M. - 2/5/10

Secondary Review Performed By:

[Signature] 2/6/10

2/10

LANL

Uranium Que Sheet

25-JAN-10

Batch #: 944978 Analyst: CXM2 First Client Due Date: 20-FEB-10 Internal Due Date: 09-FEB-10
 Tracer Isotope: U-232 U-236 Tracer Code: 1283-H Expiration Date: 12/4/10 Vol: 0.1039
 LCS Isotope: U-238 LCS Code: 0244-A Expiration Date: 10/31/20 Vol: 0.1039
 Spike Isotope: U-238 Spike Code: Expiration Date: Vol:
 Prep Date: 1/27/10 Initials: CMM Pipet ID: 2431058 Balance ID: 5040232

Witness: 118 1/27/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet Weight	Aliquot	Det #
245385001-1	RE15-10-7303	SAMPLE		.1 pCi/g	SOIL	LANL010	15-JAN-10	1	21	0.511	171	123
245385002-1	RE15-10-7305	SAMPLE		.1 pCi/g	SOIL	LANL010	15-JAN-10	2	22	0.518	124	124
245385003-1	RE15-10-7306	SAMPLE		.1 pCi/g	SOIL	LANL010	15-JAN-10	3	23	0.503	125	125
245385004-1	RE15-10-7307	SAMPLE		.1 pCi/g	SOIL	LANL010	15-JAN-10	4	24	0.510	126	126
245385005-1	RE15-10-7301	SAMPLE		.1 pCi/g	SOIL	LANL010	15-JAN-10	5	25	0.501	127	127
245385006-1	RE15-10-7304	SAMPLE		.1 pCi/g	SOIL	LANL010	15-JAN-10	6	26	0.502	128	128
245385007-1	RE15-10-7300	SAMPLE		.1 pCi/g	SOIL	LANL010	15-JAN-10	7	27	0.505	129	129
245385008-1	RE15-10-7302	SAMPLE		.1 pCi/g	SOIL	LANL010	15-JAN-10	8	28	0.512	130	130
245385009-1	RE15-10-7311	SAMPLE		.1 pCi/g	SOIL	LANL010	15-JAN-10	9	29	0.507	131	131
245385010-1	RE15-10-7310	SAMPLE		.1 pCi/g	SOIL	LANL010	15-JAN-10	10	30	0.505	132	132
245385011-1	RE15-10-7323	SAMPLE		.1 pCi/g	SOIL	LANL010	15-JAN-10	11	31	0.508	133	133
245396001-1	RE15-10-7928	SAMPLE		.1 pCi/g	SOIL	LANL010	21-JAN-10	12	32	0.507	134	134
245396002-1	RE15-10-7929	SAMPLE		.1 pCi/g	SOIL	LANL010	21-JAN-10	13	33	0.500	137	137
245396003-1	RE15-10-7932	SAMPLE		.1 pCi/g	SOIL	LANL010	21-JAN-10	14	34	0.509	138	138
245396004-1	RE15-10-7930	SAMPLE		.1 pCi/g	SOIL	LANL010	21-JAN-10	15	35	0.508	139	139
1202023754-1	MB for batch 944978	MB		.1 pCi/g	SOIL	QC ACCOUNT	21-JAN-10	16	36	1	7	7
1202023755-1	RE15-10-7928(245396001DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	21-JAN-10	17	37	0.500	171	171
1202023756-1	LCS for batch 944978	LCS		.1 pCi/g	SOIL	QC ACCOUNT	21-JAN-10	18	38	0.103	172	172

Choose SOP used: GL-RAD-A-011

Solid Sample Dissolution by: LEACH or DIGESTION
 Circle One

Data Reviewed By: J. del ML-2/5/10

Blank Correction Report

Batch ID 944978

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202023755	DUP	Uranium-233/234	0.500 g	0.892	0.0787	0.0842	.01202	pCi/g	NO
		Uranium-235/236	0.500 g	0.0672	0.0164	0.0523	.024	pCi/g	YES
		Uranium-238	0.500 g	1.07	0.091	0.0488	.0226	pCi/g	NO
1202023756	LCS	Uranium-233/234	0.103 g	5.72	0.504	0.382	.058349515	pCi/g	NO
		Uranium-235/236	0.103 g	0.336	0.0817	0.237	.116504854	pCi/g	YES
		Uranium-238	0.103 g	5.31	0.473	0.222	.109708738	pCi/g	NO
1202023754	MB	Uranium-233/234	1.00 g	0.00601	0.00681	0.050	.00601	pCi/g	YES
		Uranium-235/236	1.00 g	0.012	0.00496	0.031	.012	pCi/g	YES
		Uranium-238	1.00 g	0.0113	0.00541	0.029	.0113	pCi/g	YES
245385001	RE15-10-7303	Uranium-233/234	0.511 g	1.10	0.109	0.173	.011761252	pCi/g	NO
		Uranium-235/236	0.511 g	0.0696	0.0246	0.106	.023483366	pCi/g	YES
		Uranium-238	0.511 g	1.26	0.122	0.0996	.022113503	pCi/g	NO
245385002	RE15-10-7305	Uranium-233/234	0.518 g	1.24	0.116	0.137	.011602317	pCi/g	NO
		Uranium-235/236	0.518 g	0.0764	0.0225	0.085	.023166023	pCi/g	YES
		Uranium-238	0.518 g	1.25	0.117	0.0794	.021814672	pCi/g	NO
245385003	RE15-10-7306	Uranium-233/234	0.503 g	2.92	0.265	0.214	.011948310	pCi/g	NO
		Uranium-235/236	0.503 g	0.231	0.0478	0.133	.023856859	pCi/g	NO
		Uranium-238	0.503 g	3.57	0.314	0.124	.022465209	pCi/g	NO
245385004	RE15-10-7307	Uranium-233/234	0.510 g	1.22	0.114	0.132	.011784314	pCi/g	NO
		Uranium-235/236	0.510 g	0.0634	0.0189	0.0822	.023529412	pCi/g	YES
		Uranium-238	0.510 g	1.13	0.107	0.0768	.022156863	pCi/g	NO
245385005	RE15-10-7301	Uranium-233/234	0.501 g	1.66	0.155	0.167	.011996008	pCi/g	NO
		Uranium-235/236	0.501 g	0.0931	0.0258	0.104	.023952096	pCi/g	YES
		Uranium-238	0.501 g	2.03	0.182	0.0967	.022554890	pCi/g	NO
245385006	RE15-10-7304	Uranium-233/234	0.502 g	1.82	0.164	0.158	.011972112	pCi/g	NO
		Uranium-235/236	0.502 g	0.114	0.0294	0.0982	.023904382	pCi/g	YES
		Uranium-238	0.502 g	3.03	0.254	0.0918	.022509960	pCi/g	NO
245385007	RE15-10-7300	Uranium-233/234	0.505 g	3.10	0.260	0.162	.011900990	pCi/g	NO
		Uranium-235/236	0.505 g	0.142	0.032	0.101	.023762376	pCi/g	NO
		Uranium-238	0.505 g	3.85	0.316	0.0939	.022376238	pCi/g	NO
245385008	RE15-10-7302	Uranium-233/234	0.512 g	4.08	0.324	0.140	.011738281	pCi/g	NO
		Uranium-235/236	0.512 g	0.223	0.0388	0.0869	.0234375	pCi/g	NO
		Uranium-238	0.512 g	4.84	0.379	0.0812	.022070313	pCi/g	NO
245385009	RE15-10-7311	Uranium-233/234	0.507 g	1.17	0.111	0.137	.011854043	pCi/g	NO
		Uranium-235/236	0.507 g	0.0821	0.022	0.0852	.023668639	pCi/g	YES
		Uranium-238	0.507 g	1.33	0.123	0.0796	.022287968	pCi/g	NO
245385010	RE15-10-7310	Uranium-233/234	0.505 g	3.54	0.292	0.159	.011900990	pCi/g	NO
		Uranium-235/236	0.505 g	0.153	0.0331	0.099	.023762376	pCi/g	NO
		Uranium-238	0.505 g	4.37	0.353	0.0925	.022376238	pCi/g	NO
245385011	RE15-10-7323	Uranium-233/234	0.508 g	1.22	0.114	0.133	.011830709	pCi/g	NO
		Uranium-235/236	0.508 g	0.0741	0.0205	0.0824	.023622047	pCi/g	YES

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
245385011	RE15-10-7323	Uranium-238	0.508 g	1.43	0.129	0.077	.022244094	pCi/g	NO
245396001	RE15-10-7928	Uranium-233/234	0.507 g	0.863	0.0897	0.134	.011854043	pCi/g	NO
		Uranium-235/236	0.507 g	0.0267	0.0233	0.083	.023668639	pCi/g	YES
		Uranium-238	0.507 g	1.19	0.114	0.0775	.022287968	pCi/g	NO
245396004	RE15-10-7930	Uranium-233/234	0.508 g	1.60	0.145	0.138	.011830709	pCi/g	NO
		Uranium-235/236	0.508 g	0.077	0.0213	0.0856	.023622047	pCi/g	YES
		Uranium-238	0.508 g	4.97	0.394	0.080	.022244094	pCi/g	NO

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944978
SAMPLE ID : S0245396001_UU
SAMPLE QTY : 0.507 G
SAMPLE DATE : 21-JAN-2010 00:00:00
ANALYST : CXM2
% YIELD : 84.119

CHAMBER : 134
DETECTOR S/N : 76230
AVERAGE %EFFICIENCY : 24.4853
COUNT DATE : 1-FEB-2010 13:09:04
ELAPSED LIVE TIME(SEC) : 60000.00

LIB FILE : ENV_ALPHA_UU
BKG FILE : B134_CNF:429
BKG DATE : 31-JAN-2010
BKG LIVE TIME(SEC) : 60000.00
EFF FILE : W134_CNF:125
CAL DATE : 18-JAN-2010

TRACER
ID : 1283-H
NUCLIDE : U232
NOMINAL : 4.5070E+00 dpm
RESULTS : 3.7913E+00 dpm

MS/MSD
ID : 0244-A
NUCLIDE : U-238
NOMINAL : 5.7500E+00 pCi/g

LCS/LCSD
ID : 0244-A
NUCLIDE : U-238
NOMINAL : 5.7500E+00 pCi/g

NUCLIDE ACTIVITY SUMMARY

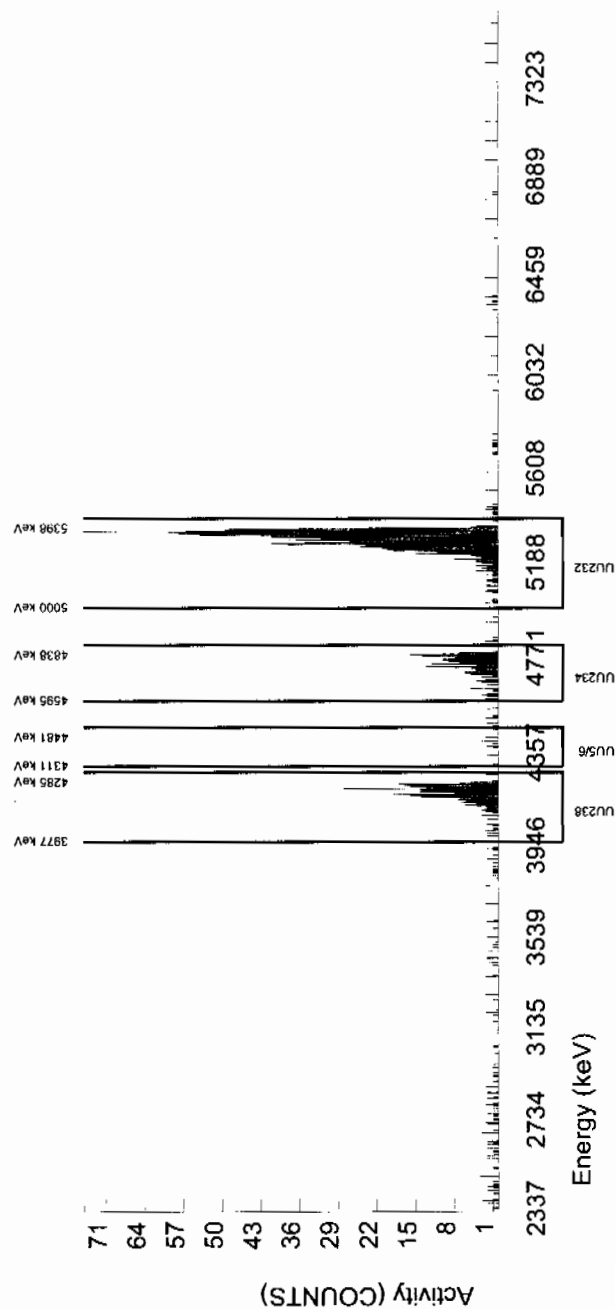
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/g	TPU 1-SIGMA	DLC pCi/g	MDC pCi/g	UNC pCi/g
U232	5302.100	5302.147	68.841	940.000	928.000	12.000	3.4641	100.0000	4.00E+00	3.17E-01	3.48E-02	8.12E-02	1.33E-01
U-3/4	4763.020	4753.610	62.331	214.000	200.061	13.000	6.0782	100.0000	8.63E-01	8.97E-02	6.10E-02	1.34E-01	6.49E-02
U-235	4391.000	4405.925	33.392	12.000	5.000	7.000	2.7628	80.90000	2.67E-02	2.33E-02	3.43E-02	8.30E-02	2.32E-02
U-238	4184.730	4188.906	56.209	293.000	276.000	17.000	3.2810	100.0000	1.19E+00	1.14E-01	3.29E-02	7.75E-02	7.59E-02

NOTES:

* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:
U-3/4

GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

Alpha Spectroscopy Software Version 2.1
effective date: 01-Feb-2010

BATCH NUMBER : 944978
 SAMPLE ID : S0245396004_UU
 SAMPLE QTY : 0.508 G
 SAMPLE DATE : 21-JAN-2010 00:00:00
 ANALYST : CXM2
 % YIELD : 79.827
 CHAMBER : 139
 DETECTOR S/N : 76231
 AVERAGE %EFFICIENCY : 24.9676
 COUNT DATE : 1-FEB-2010 13:09:18
 ELAPSED LIVE TIME(SEC) : 60000.00
 LIB FILE : ENV_ALPHA_UU
 BKG FILE : B139_CNF:392
 BKG DATE : 31-JAN-2010
 BKG LIVE TIME(SEC) : 60000.00
 EFF FILE : W139_CNF:102
 CAL DATE : 18-JAN-2010

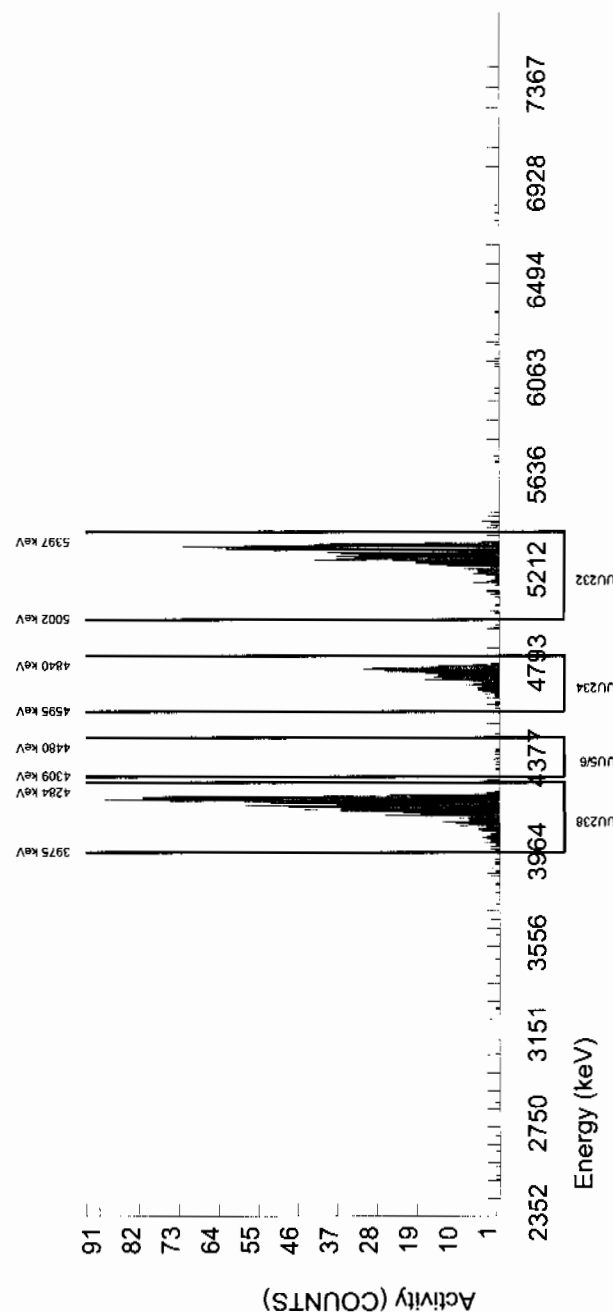
TRACER ID : 1283-H
 NUCLEIDE : U232
 NOMINAL : 4.5070E+00 dpm
 RESULTS : 3.5978E+00 dpm
 MS/MSD ID : 0244-A
 NUCLEIDE : U-238
 NOMINAL : 5.7500E+00 pCi/G
 LCS/LCSD ID : 0244-A
 NUCLEIDE : U-238
 NOMINAL : 5.7500E+00 pCi/G

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5299.863	71.971	902.000	898.000	4.000	2.0000	100.0000	4.00E+00	3.23E-01	2.07E-02	5.35E-02	1.34E-01
U-3/4	4763.020	4758.625	29.121	362.000	360.092	1.000	6.0782	100.0000	1.60E+00	1.45E-01	6.29E-02	1.38E-01	8.47E-02
U-235	4391.000	4404.421	0.000	14.000	14.000	0.000	2.7628	80.90000	7.70E-02	2.13E-02	3.53E-02	8.56E-02	2.06E-02
U-238	4184.730	4184.892	49.018	1117.000	1117.000	0.000	3.2810	100.0000	4.97E+00	3.94E-01	3.40E-02	8.00E-02	1.49E-01

NOTES:

- * Sg calculated via blank population.
(Sg updated 5-JAN-2010)
- * Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
□ U-3/4



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944978	CHAMBER : 007	LIB FILE : ENV ALPHA UU
SAMPLE ID : S1202023754_UU	DETECTOR S/N : 67607	BKG FILE : B007.CNF:1105
SAMPLE QTY : 1.000 G	AVERAGE %EFFICIENCY : 29.6523	BKG DATE : 25-JAN-2010
SAMPLE DATE : 27-JAN-2010 00:00:00	COUNT DATE : 30-JAN-2010 12:24:55	BKG LIVE TIME(SEC) : 59999.99
ANALYST : CXM2	ELAPSED LIVE TIME(SEC) : 59999.99	EFF FILE : W007.CNF:310
% YIELD : 94.156		CAL DATE : 4-JAN-2010

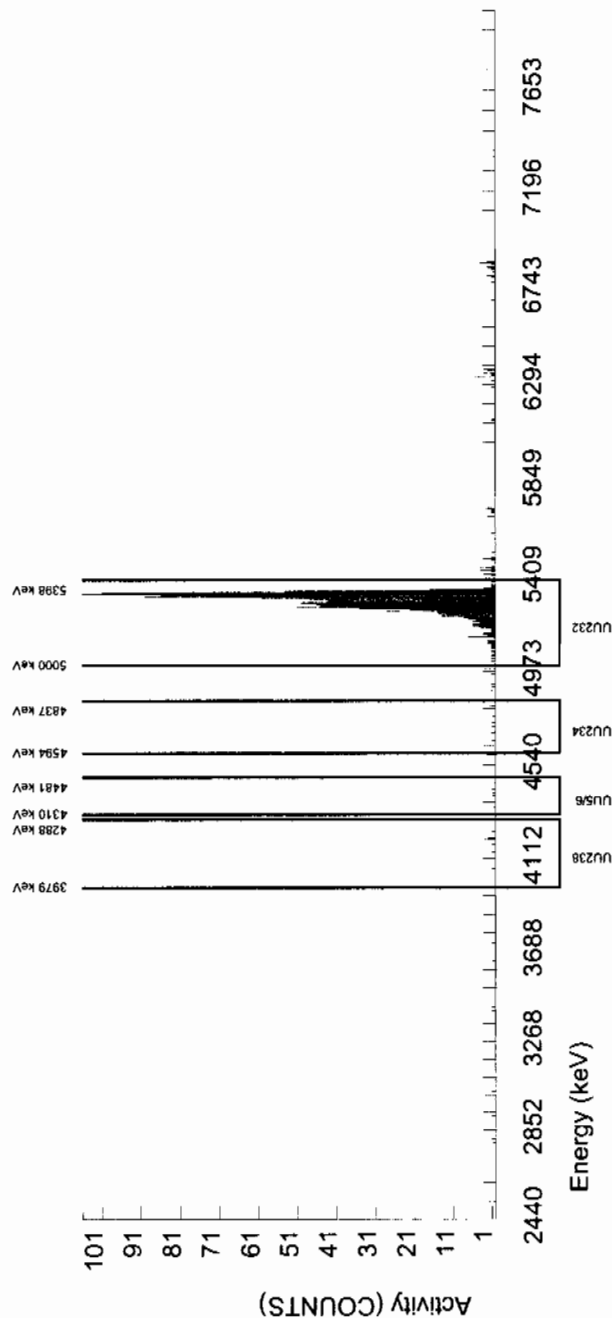
TRACER ID : 1283-H	MS/MSD ID : 0244-A	LCS/LCSD ID : 0244-A
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.5063E+00 dpm	NOMINAL : 5.7500E+00 pCi/G	NOMINAL : 5.7500E+00 pCi/G
RESULTS : 4.2430E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5302.484	38.655	1267.000	1258.000	9.000	3.0000	100.0000	2.03E+00	1.53E-01	1.13E-02	2.69E-02	5.76E-02
U-3/4	4763.020	4742.347	7.522	12.000	3.727	7.000	6.0782	100.0000	6.01E-03	6.81E-03	2.28E-02	5.00E-02	6.79E-03
U-235	4391.000	4377.360	117.784	6.000	6.000	0.000	2.7628	80.900000	1.20E-02	4.96E-03	1.28E-02	3.10E-02	4.89E-03
U-238	4184.730	4176.557	15.363	9.000	7.000	2.000	3.2810	100.0000	1.13E-02	5.41E-03	1.23E-02	2.90E-02	5.35E-03

NOTES:

- * Sg calculated via blank population.
(Sg updated 5-JAN-2010)
- * Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
☐ U-3/4



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944978
SAMPLE ID : S1202023755_UU
SAMPLE QTY : 0.500 G
SAMPLE DATE : 21-JAN-2010 00:00:00
ANALYST : CXM2
% YIELD : 86.956

```
CHAMBER : 171
DETECTOR S/N : 78260
AVERAGE %EFFICIENCY : 38.1329
COUNT DATE : 1-FEB-2010 13:09:44
ELAPSED LIVE TIME(SEC) : 60000.00
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LIB FILE      : ENV_ALPHA_UU
BKG FILE      : B171.CNF:173
BKG DATE      : 31-JAN-2010
BKG LIVE TIME(SEC) : 60000.00
EFF FILE      : W171.CNF:72
CAL DATE      : 21-JAN-2010
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TRACER

ID : 1283-H
NUCLIDE : U232
NOMINAL : 4.5070E+00 dpm
RESULTS : 3.9192E+00 dpm

MS/MSD	iD	: 0244-A
	NUCLIDE	: U-238
	NOMINAL	: 5.7500E

LCS/LCSD	ID	NUCLIDE	NOMINAL
1	1	137	137
2	2	137	137
3	3	137	137
4	4	137	137
5	5	137	137
6	6	137	137
7	7	137	137
8	8	137	137
9	9	137	137
10	10	137	137
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99	99	137	137

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/g	TPU 1-SIGMA	DLCL pCi/g	MDC pCi/g	UNC pCi/g
U232	5302.100	5302.079	63.554	1498.000	1494.000	4.000	2.0000	100.0000	4.06E+00	2.98E-01	1.26E-02	3.26E-02	1.05E-01
U-3/4	4763.020	4758.214	50.356	331.000	328.489	1.000	6.0782	100.0000	8.92E-01	7.87E-02	3.84E-02	8.42E-02	4.94E-02
U-235	4391.000	4408.902	123.064	21.000	20.000	1.000	2.7628	80.900000	6.72E-02	1.64E-02	2.16E-02	5.23E-02	1.58E-02
U-238	4184.730	4187.049	58.944	394.000	392.000	2.000	3.2810	100.0000	1.07E+00	9.10E-02	2.07E-02	4.88E-02	5.41E-02

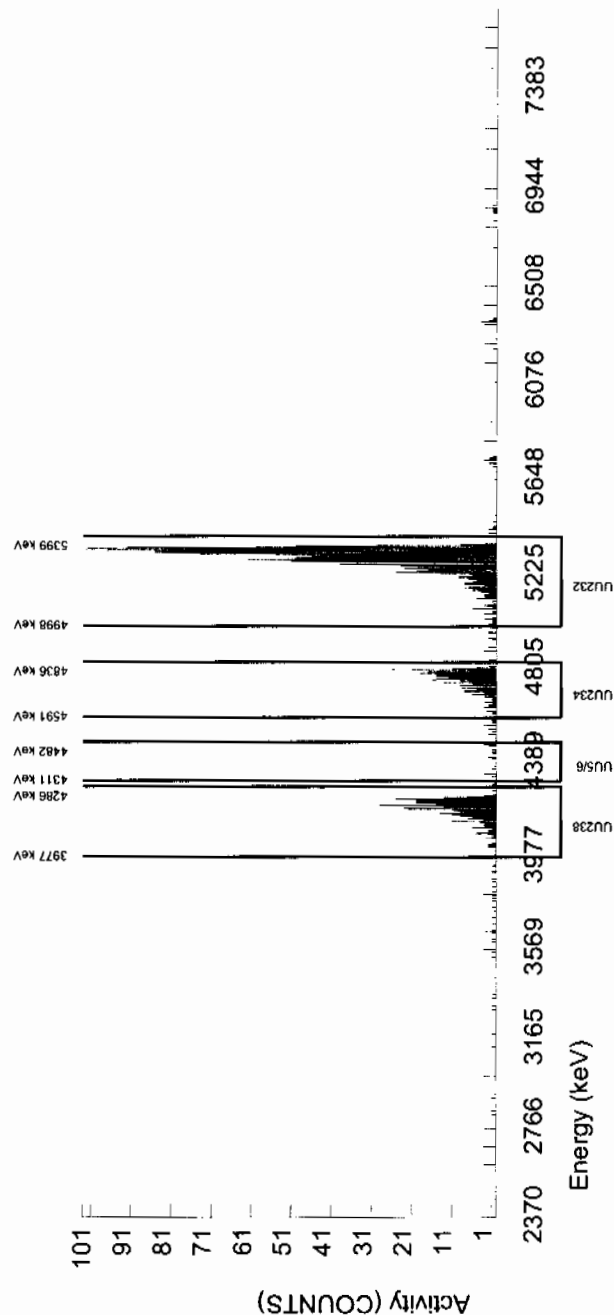
NOTES:

* Sg calculated via blank population.

Sg calculated via BIRK P
(Sg updated 5-JAN-2010)

* Sg of U232 calculated as $\sqrt{\text{BKG AREA}}$.

* Corrections made to the following net area due to tracer impurity:



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 944978 SAMPLE ID : S1202023756_UU SAMPLE QTY : 0.103 G SAMPLE DATE : 27-JAN-2010 00:00:00 ANALYST : CXM2 % YIELD : 92.563	CHAMBER : 172 DETECTOR S/N : 78772 AVERAGE %EFFICIENCY : 38.2928 COUNT DATE : 1-FEB-2010 13:09:47 ELAPSED LIVE TIME(SEC) : 60000.00	LIB FILE : ENV_ALPHA_UU BKG FILE : B172.CNF:171 BKG DATE : 31-JAN-2010 BKG LIVE TIME(SEC) : 60000.00 EFF FILE : W172.CNF:65 CAL DATE : 21-JAN-2010
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TRACER ID : 1283-H NUCLIDE : U232 NOMINAL : 4.5063E+00 dpm RESULTS : 4.1712E+00 dpm	MS/MSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G	LCS/LCSD ID : 0244-A NUCLIDE : U-238 NOMINAL : 5.7500E+00 pCi/G
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NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5301.603	50.403	1601.000	1597.000	4.000	2.0000	100.0000	1.97E+01	1.56E+00	5.74E-02	1.48E-01	4.94E-01
U-3/4	4763.020	4756.994	36.129	465.000	463.384	0.000	6.0782	100.0000	5.72E+00	5.04E-01	1.74E-01	3.82E-01	2.66E-01
U-235	4391.000	4402.122	70.953	24.000	22.000	2.000	2.7628	80.90000	3.36E-01	8.17E-02	9.80E-02	2.37E-01	7.78E-02
U-238	4184.730	4184.575	59.811	430.000	430.000	0.000	3.2810	100.0000	5.31E+00	4.73E-01	9.42E-02	2.22E-01	2.56E-01

NOTES:

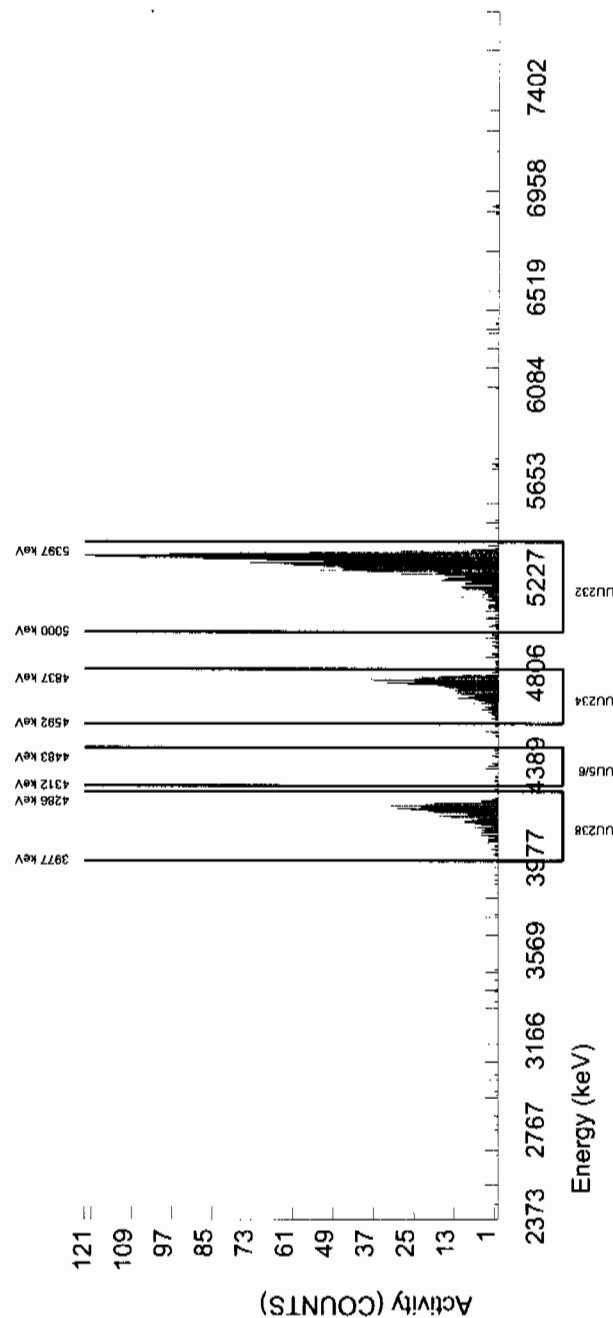
* Sg calculated via blank population.

(Sg updated 5-JAN-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area
due to tracer impurity:

□ U-3/4



Radiochemistry Batch Checklist, Rev10

Batch#

949620

Product:

U

Date:

2/11/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 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 big 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.	✓		
Smears Taken for Radioactive batches.			MA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms.	✓		
All line cuts initiated and dated.	✓		
No transcription errors are apparent.			MA
Aux data is correct.			MA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly stored.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			MA
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			MA
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			MA
Aliquot Correction completed if required.			MA
Review sample historical results if available (if REMF, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADcheckrev10, revised 1/13/2010

Primary Review Performed By:

Denise Green 2/11/10

Secondary Review Performed By:

2/16/10

2/20

LAUL

Uranium Que Sheet

05-FEB-10

Batch #: 949620 Analyst: CXM2 First Client Due Date: 20-FEB-10 Internal Due Date: 14-FEB-10
 Tracer Isotope: U-232/U-236 Tracer Code: 1283-H Expiration Date: 12/9/10 Vol: 0.1mL
 LCS Isotope: U-238 LCS Code: 0244-A Expiration Date: 10/31/20 Vol: 0.104g # SRM
 Spike Isotope: U-238 Spike Code: — Expiration Date: — Vol: —
 Prep Date: 2/5/10 Initials: CMA Pipet ID: 50410272 Balance ID: 50410272

Witness: NO 2/5/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Alliquot (g)	U Det #
245396002-3	REIS-10-7929	SAMPLE		.1 pCi/g	SOIL	LANL010	21-JAN-10	1	1	0.501	127
245396003-2	REIS-10-7927	SAMPLE		.1 pCi/g	SOIL	LANL010	21-JAN-10	2	2	0.504	128
1202034525-1	MB for batch 949620	MB		UCF pCi/g to pCi	SOIL	QC ACCOUNT		3	3	1.0	142
1202034526-3	REIS-10-7929(245396002DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	21-JAN-10	4	4	0.506	129
1202034527-1	LCS for batch 949620	LCS		UCF pCi/g to pCi	SOIL	QC ACCOUNT		5	5	0.104	130

Choose SOP used: GL-RAD-A-011

Solid Sample Dissolution by: LEACH OF DIGESTION
 Circle One

Data Reviewed By: DL 2/11/10

Blank Correction Report

Batch ID 949620

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202034526	DUP	Uranium-233/234	0.506 g	3.45	0.343	0.240	.019644269	pCi/g	NO
		Uranium-235/236	0.506 g	0.294	0.0671	0.155	0	pCi/g	NO
		Uranium-238	0.506 g	13.1	1.14	0.165	.007845850	pCi/g	NO
1202034527	LCS	Uranium-233/234	0.104 g	6.95	0.768	0.822	.095576923	pCi/g	NO
		Uranium-235/236	0.104 g	0.502	0.157	0.532	0	pCi/g	NO
		Uranium-238	0.104 g	5.88	0.674	0.566	.038173077	pCi/g	NO
1202034525	MB	Uranium-233/234	1.00 g	0.00994	0.00806	0.0892	.00994	pCi/g	YES
		Uranium-235/236	1.00 g	0.00	0.00497	0.0578	0	pCi/g	NO
		Uranium-238	1.00 g	0.00397	0.00636	0.0614	.00397	pCi/g	YES
245396002	RE15-10-7929	Uranium-233/234	0.501 g	3.02	0.293	0.207	.019840319	pCi/g	NO
		Uranium-235/236	0.501 g	0.138	0.0413	0.134	0	pCi/g	NO
		Uranium-238	0.501 g	11.1	0.940	0.142	.007924152	pCi/g	NO
245396003	RE15-10-7927	Uranium-233/234	0.504 g	8.62	0.783	0.255	.019722222	pCi/g	NO
		Uranium-235/236	0.504 g	1.01	0.146	0.165	0	pCi/g	NO
		Uranium-238	0.504 g	43.6	3.70	0.176	.007876984	pCi/g	NO

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 949620	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S0245396002_UU	BKG FILE : B127.CNF;453
SAMPLE QTY : 0.501 G	BKG DATE : 7-FEB-2010
SAMPLE DATE : 21-JAN-2010 00:00:00	BKG LIVE TIME(SEC) : 60000.00
ANALYST : CXM2	EFF FILE : W127.CNF;123
% YIELD : 78.720	CAL DATE : 18-JAN-2010

TRACER	LCS/LCSD
ID : 1283-H	ID : 0244-A
NUCLIDE : U232	NUCLIDE : U-238
NOMINAL : 4.5070E+00 dpm	NOMINAL : 5.7500E+00 pCi/G
RESULTS : 3.5479E+00 dpm	

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5308.333	29.980	436.000	436.000	0.000	0.0000	100.0000	4.05E+00	3.77E-01	0.00E+00	2.52E-02	1.94E-01
U-3/4	4763.020	4763.988	35.932	326.000	325.054	0.505	4.8416	100.0000	3.02E+00	2.93E-01	9.08E-02	2.07E-01	1.68E-01
U-235	4391.000	4398.240	9.921	12.000	12.000	0.000	2.2152	80.90000	1.38E-01	4.13E-02	5.13E-02	1.34E-01	3.98E-02
U-238	4184.730	4192.368	42.708	1193.000	1193.000	0.000	3.1208	100.0000	1.11E+01	9.40E-01	5.85E-02	1.42E-01	3.21E-01

NOTES:

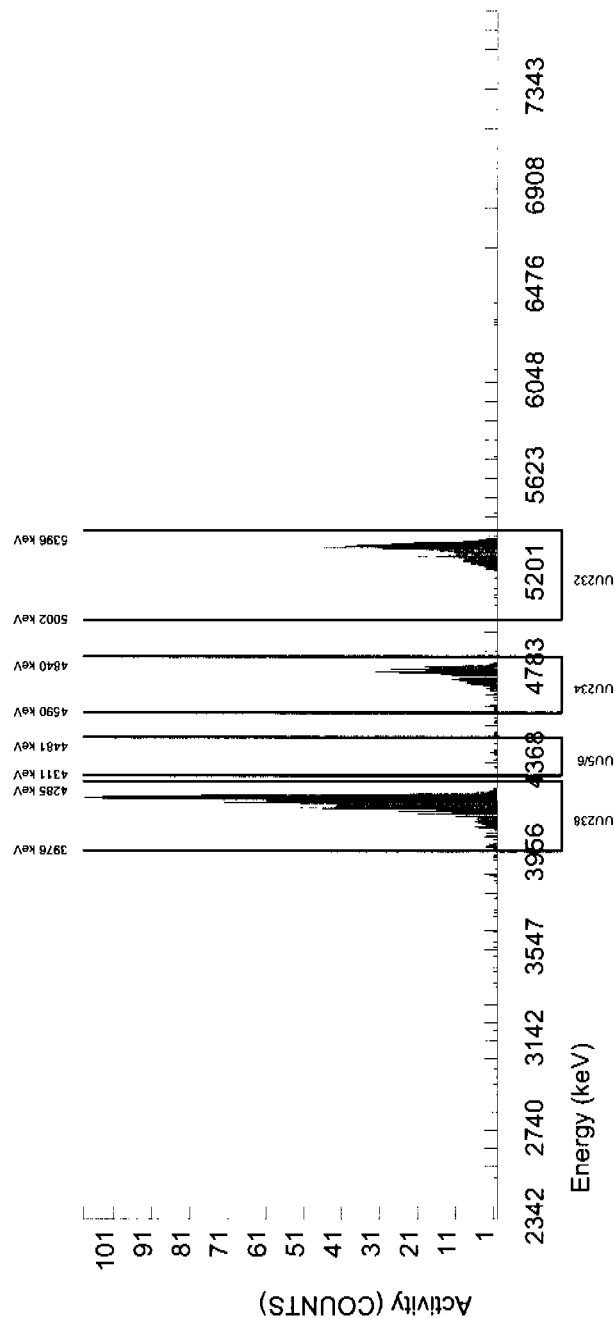
* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

U-3/4



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 949620	CHAMBER : 128	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S0245396003_UU	DETECTOR S/N : 75549	BKG FILE : B128.CNF:459
SAMPLE QTY : 0.504 G	AVERAGE %EFFICIENCY : 25.6524	BKG DATE : 7-FEB-2010
SAMPLE DATE : 21-JAN-2010 00:00:00	COUNT DATE : 10-FEB-2010 10:57:03	BKG LIVE TIME(SEC) : 60000.00
ANALYST : CXM2	ELAPSED LIVE TIME(SEC) : 30300.00	EFF FILE : W128.CNF:133
% YIELD : 60.149		CAL DATE : 18-JAN-2010

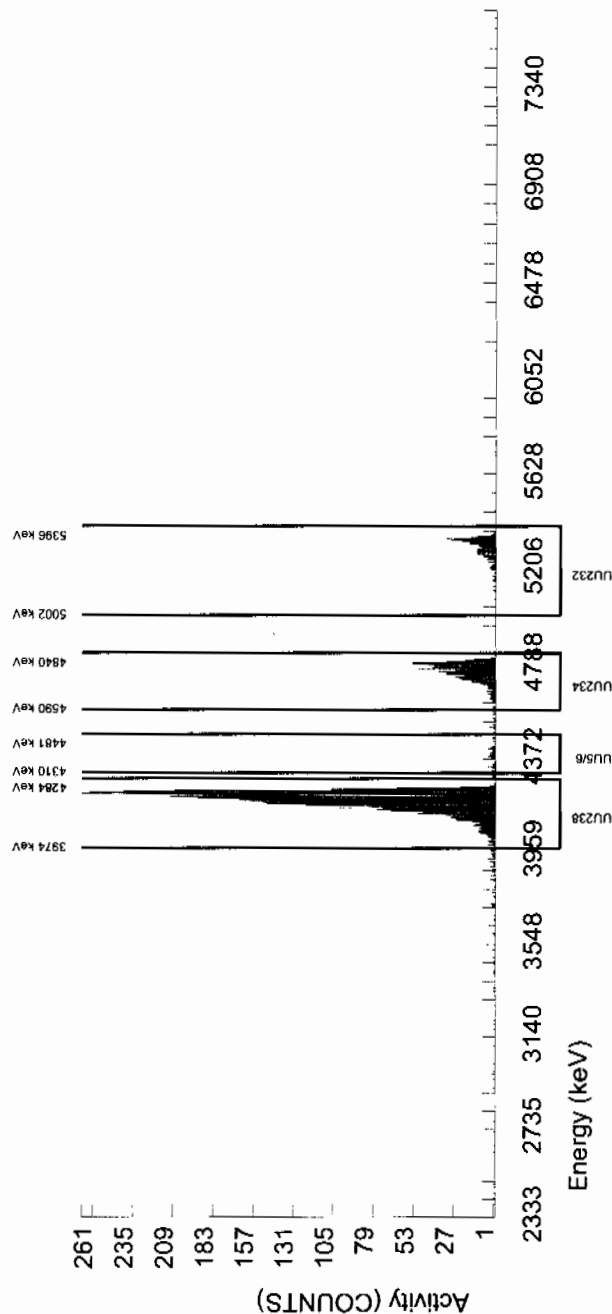
TRACER	MS/MSD	LCS/LCSD
ID : 1283-H	ID : 0244-A	ID : 0244-A
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.5070E+00 dpm	NOMINAL : 5.7500E+00 pCi/G	NOMINAL : 5.7500E+00 pCi/G
RESULTS : 2.7109E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5304.296	30.828	352.000	350.990	1.010	1.0050	100.0000	4.03E+00	3.98E-01	2.33E-02	7.76E-02	2.15E-01
U-3/4	4763.020	4762.934	58.899	753.000	751.635	1.010	4.8416	100.0000	8.62E+00	7.83E-01	1.12E-01	2.55E-01	3.15E-01
U-235	4391.000	4394.125	86.417	71.000	71.000	0.000	2.2152	80.900000	1.01E+00	1.46E-01	6.34E-02	1.65E-01	1.19E-01
U-238	4184.730	4191.230	66.332	3805.000	3805.000	0.000	3.1208	100.0000	4.36E+01	3.70E+00	7.22E-02	1.76E-01	7.08E-01

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
□ U-3/4



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 949620				CHAMBER : 142				LIB FILE : ENV_ALPHA_UU					
SAMPLE ID : S1202034525_UU				DETECTOR S/N : 64261				BKG FILE : B142.CNF;392					
SAMPLE QTY : 1.000 G				AVERAGE %EFFICIENCY : 25.9552				BKG DATE : 7-FEB-2010					
SAMPLE DATE : 5-FEB-2010 00:00:00.				COUNT DATE : 10-FEB-2010 12:57:31				BKG LIVE TIME(SEC) : 60000.00					
ANALYST : CXM2				ELAPSED LIVE TIME(SEC) : 30300.00				EFF FILE : W142.CNF;109					
% YIELD : 85.690								CAL DATE : 18-JAN-2010					
TRACER				MS/MSD				LCS/LCSD					
ID : 1283-H				ID : 0244-A				ID : 0244-A					
NUCLIDE : U232				NUCLIDE : U-238				NUCLIDE : U-238					
NOMINAL : 4.5052E+00 dpm				NOMINAL : 5.7500E+00 pCi/g				NOMINAL : 5.7500E+00 pCi/g					
RESULTS : 3.8605E+00 dpm													
NUCLIDE ACTIVITY SUMMARY													
NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/g	TPU 1-SIGMA	DLC pCi/g	MDC pCi/g	UNC pCi/g
U232	5302.100	5310.248	45.927	513.000	505.930	7.070	2.6589	100.0000	2.03E+00	1.82E-01	2.15E-02	5.39E-02	9.12E-02
U-3/4	4763.020	4764.324	0.000	4.000	2.478	1.010	4.8416	100.0000	9.94E-03	8.06E-03	3.92E-02	8.92E-02	8.02E-03
U-235	4391.000	4395.807	0.000	0.000	0.000	0.000	2.2152	80.900000	0.00E+00	4.97E-03	2.22E-02	5.78E-02	4.96E-03
U-238	4184.730	4125.892	99.384	2.000	0.990	1.010	3.1208	100.0000	3.97E-03	6.36E-03	2.53E-02	6.14E-02	6.35E-03

NOTES:

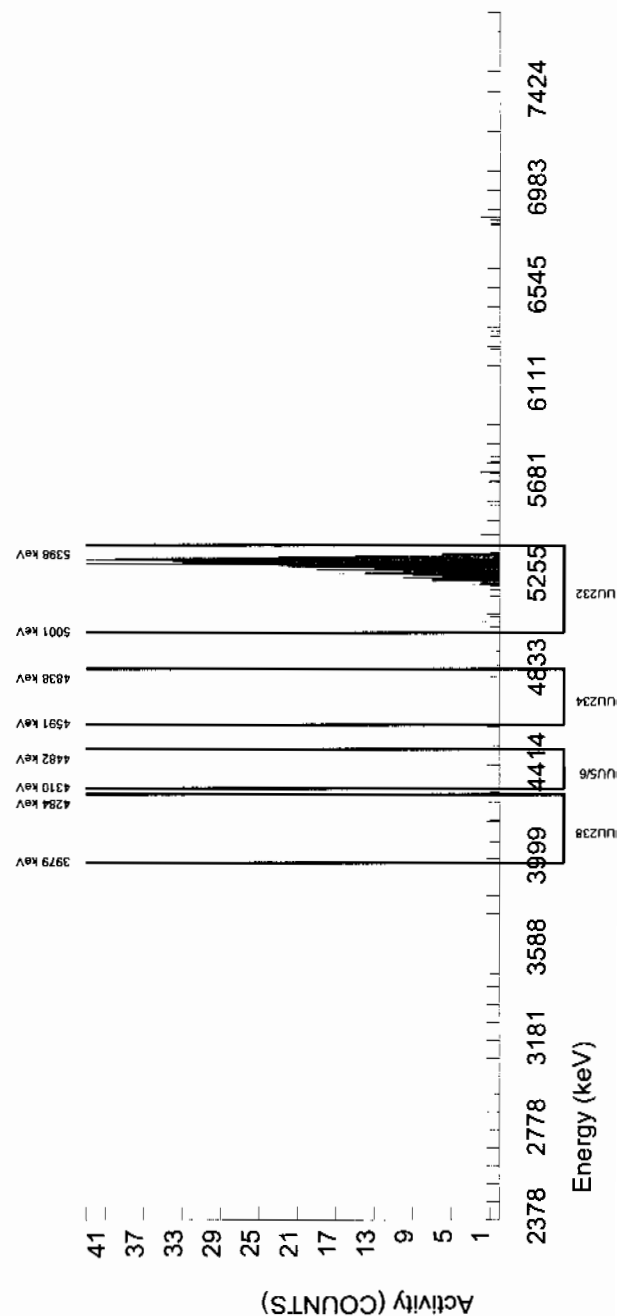
* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

U-3/4



GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 949620	CHAMBER : 129	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S1202034526_UU	DETECTOR S/N : 76227	BKG FILE : B129.CNF:448
SAMPLE QTY : 0.506 G	AVERAGE %EFFICIENCY : 26.4183	BKG DATE : 7-FEB-2010
SAMPLE DATE : 21-JAN-2010 00:00:00	COUNT DATE : 10-FEB-2010 10:57:07	BKG LIVE TIME(SEC) : 60000.00
ANALYST : CXM2	ELAPSED LIVE TIME(SEC) : 30300.00	EFF FILE : W129.CNF:128
% YIELD : 61.816		CAL DATE : 18-JAN-2010

TRACER ID : 1283-H	MS/MSD ID : 0244-A	LCS/LCSD ID : 0244-A
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.5071E+00 dpm	NOMINAL : 5.7500E+00 pCi/G	NOMINAL : 5.7500E+00 pCi/G
RESULTS : 2.7861E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5297.754	38.608	373.000	371.485	1.515	1.2309	100.0000	4.01E+00	3.91E-01	2.68E-02	8.29E-02	2.09E-01
U-3/4	4763.020	4757.642	39.265	321.000	319.614	1.010	4.8416	100.0000	3.45E+00	3.43E-01	1.05E-01	2.40E-01	1.93E-01
U-235	4391.000	4406.142	76.087	22.000	22.000	0.000	2.2152	80.90000	2.94E-01	6.71E-02	5.96E-02	1.55E-01	6.26E-02
U-238	4184.730	4187.721	39.813	1213.000	1213.000	0.000	3.1208	100.0000	1.31E+01	1.14E+00	6.80E-02	1.65E-01	3.76E-01

NOTES:

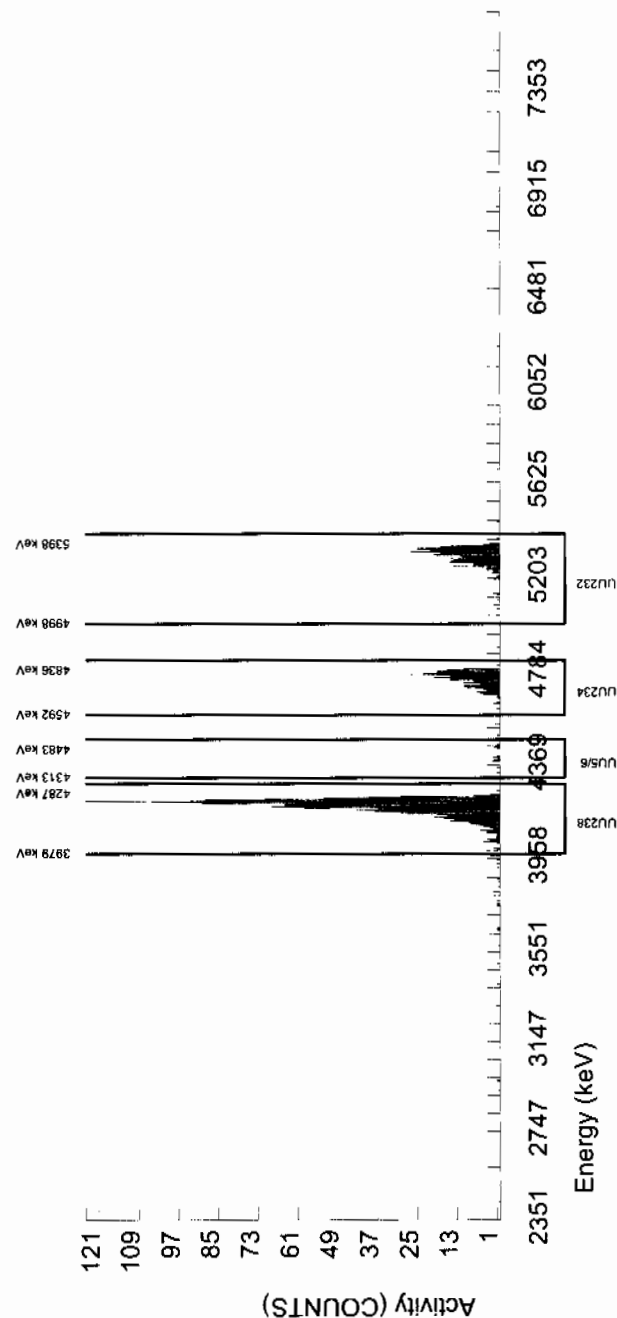
* Sg calculated via blank population.

(Sg updated 10-FEB-2010)

* Sg of U232 calculated as sqrt(BKG AREA).

* Corrections made to the following net area due to tracer impurity:

U-3/4



GEL Laboratories LLC ALPHA SPECTROSCOPY REPORT

BATCH NUMBER : 949620	CHAMBER : 130	LIB FILE : ENV_ALPHA_UU
SAMPLE ID : S1202034527_UU	DETECTOR S/N : 76228	BKG FILE : B130.CNF.448
SAMPLE QTY : 0.104 G	AVERAGE %EFFICIENCY : 24.7378	BKG DATE : 7-FEB-2010
SAMPLE DATE : 5-FEB-2010 00:00:00.	COUNT DATE : 10-FEB-2010 10:57:09	BKG LIVE TIME(SEC) : 60000.00
ANALYST : CXM2	ELAPSED LIVE TIME(SEC) : 30300.00	EFF FILE : W130.CNF.130
% YIELD : 93.827		CAL DATE : 18-JAN-2010

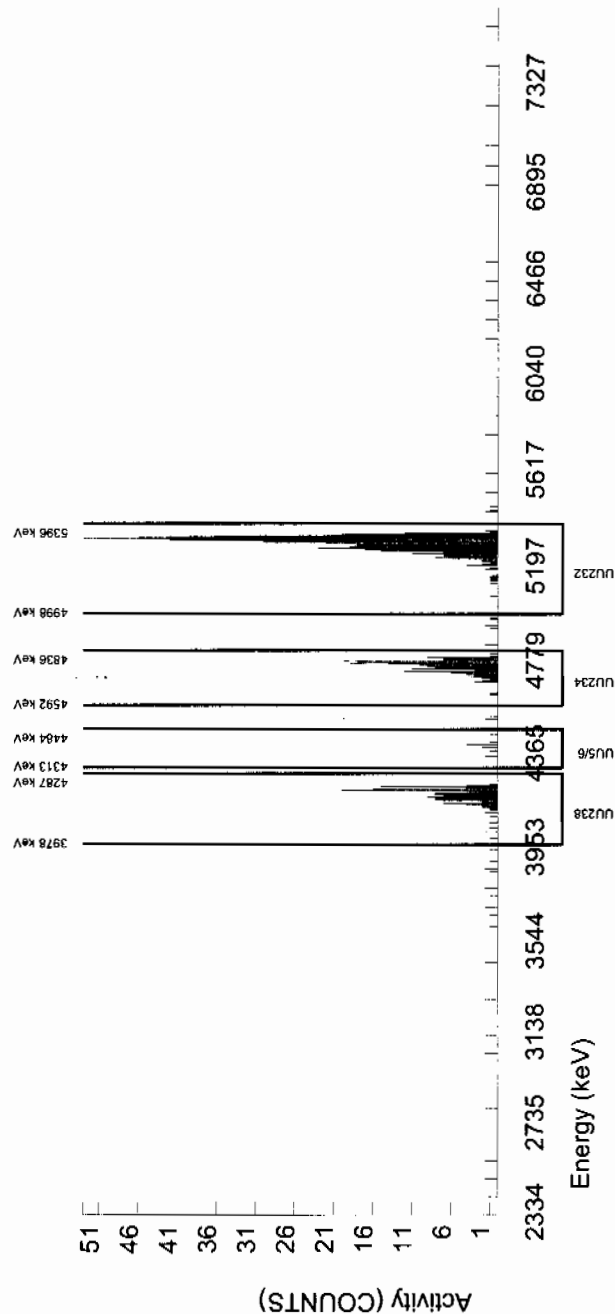
TRACER ID : 1283-H	MS/MSD ID : 0244-A	LCS/LCSD ID : 0244-A
NUCLIDE : U232	NUCLIDE : U-238	NUCLIDE : U-238
NOMINAL : 4.5052E+00 dpm	NOMINAL : 5.7500E+00 pCi/G	NOMINAL : 5.7500E+00 pCi/G
RESULTS : 4.2271E+00 dpm		

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	LIBRARY ENERGY	PEAK ENERGY	PEAK FWHM	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U232	5302.100	5312.007	34.721	529.000	527.990	1.010	1.0050	100.0000	1.95E+01	1.83E+00	7.49E-02	2.50E-01	8.50E-01
U-3/4	4763.020	4767.303	49.769	189.000	187.961	0.505	4.8416	100.0000	6.95E+00	7.68E-01	3.61E-01	8.22E-01	5.08E-01
U-235	4391.000	4415.824	4.987	11.000	11.000	0.000	2.2152	80.90000	5.02E-01	1.57E-01	2.04E-01	5.32E-01	1.51E-01
U-238	4184.730	4194.872	20.001	159.000	159.000	0.000	3.1208	100.0000	5.88E+00	6.74E-01	2.33E-01	5.66E-01	4.66E-01

NOTES:

- * Sg calculated via blank population.
(Sg updated 10-FEB-2010)
- * Sg of U232 calculated as sqrt(BKG AREA).
- * Corrections made to the following net area due to tracer impurity:
U-3/4



Radiochemistry Batch Checklist, Rev10

Batch# 944962 Product: Gamma Solid Date: 02/11/10
LANL

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 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%.			N/A
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.	✓		
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 stasused.	✓		
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 REMF, 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: g. kate 2/11/10

Secondary Review Performed By: A. Enlow 2/12/10

2/20

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	YIELD	Parmname	Result	MDA	RDL
944962	245385001	SAMPLE	04-FEB-10		Cerium-139	-2.46E-05	0.05586	0.050
					Cesium-134	0.09177	0.1174	0.100
944962	245385002	SAMPLE	04-FEB-10		Americium-241	0.161	0.271	0.200
					Cerium-139	-0.00237	0.06962	0.050
					Europium-152	-0.1887	0.2146	0.200
					Mercury-203	0.04482	0.1011	0.100
					Sodium-22	0.02729	0.09971	0.080
					Thorium-234	1.876	2.303	2.00
944962	245385003	SAMPLE	04-FEB-10		Americium-241	0.1329	0.2104	0.200
					Cerium-139	-0.02931	0.05136	0.050
944962	245385004	SAMPLE	04-FEB-10		Americium-241	-0.1076	0.2706	0.200
					Cerium-139	-0.00151	0.05476	0.050
					Thorium-234	0.9359	2.393	2.00
944962	245385005	SAMPLE	04-FEB-10					
944962	245385006	SAMPLE	04-FEB-10					
944962	245385007	SAMPLE	04-FEB-10					
944962	245385008	SAMPLE	04-FEB-10					
944962	245385009	SAMPLE	04-FEB-10		Americium-241	0.1655	0.2068	0.200
944962	245385010	SAMPLE	04-FEB-10					
944962	245385011	SAMPLE	04-FEB-10					
944962	245396001	SAMPLE	04-FEB-10					
944962	245396002	SAMPLE	05-FEB-10		Americium-241	0.263	0.3976	0.200
					Cerium-139	-0.02788	0.06524	0.050
					Europium-152	-0.00485	0.2111	0.200
					Sodium-22	-0.00298	0.09291	0.080
944962	245396003	SAMPLE	05-FEB-10		Americium-241	0.2305	0.3057	0.200
944962	245396004	SAMPLE	05-FEB-10		Americium-241	0.04417	0.2249	0.200
944962	1202023707	MB	05-FEB-10					
944962	1202023708	DUP	06-FEB-10		Americium-241	0.02005	0.2424	0.200
					Cerium-139	-0.02442	0.05649	0.050
					Thorium-234	1.278	2.189	2.00
944962	1202023709	LCS	04-FEB-10		Cerium-139	0.03703	0.08914	0.050
					Cesium-134	0.0421	0.1797	0.100
					Europium-152	-0.0881	0.3268	0.200
					Mercury-203	0.03583	0.1261	0.100
					Potassium-40	0.7197	1.281	1.00
					Radium-228	0.5555	0.7306	0.500
					Ruthenium-106	-0.4804	1.015	0.800
					Sodium-22	-0.0214	0.08625	0.080
					Thorium-234	1.478	4.161	2.00
					Tin-113	-0.01456	0.1547	0.100
					Uranium-235	-0.1534	0.5832	0.500

GEL QUALS

Batch ID: 944962

Report run on: February 11, 2010 11:13 AM

Samp Id	Parname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
245385001-1 04-FEB-2010 20:27	Bismuth-211	UI	UI	UI	Data rejected due to interference.		5.233			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.612			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.171			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1112			
245385002-1 04-FEB-2010 20:27	Bismuth-211	UI	UI	UI	Data rejected due to interference.		5.538			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		6.771			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1352		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.473			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1355			
245385003-1 04-FEB-2010 20:28	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.588			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.554			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1434		.1	.1
	Mercury-203	UI	UI	UI	Data rejected due to interference.		.0662		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.404			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.0899			
245385004-1 04-FEB-2010 20:48	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.577			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.358			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1213		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.514			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.08523			

GEL QUALS

Batch ID: 944962

Report run on: February 11, 2010 11:13 AM

Samp Id	Parname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
245385005-1 04-FEB-2010 22:52	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.215			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.262			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1481		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.149			
245385006-1 04-FEB-2010 22:53	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.285			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.551			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1003		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.439			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1177			
245385007-1 04-FEB-2010 22:53	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.68			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.358			
	Mercury-203	UI	UI	UI	Data rejected due to interference.		.05735		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.598			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.0689			
245385008-1 04-FEB-2010 22:54	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.357			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1796		.1	.1
	Mercury-203	UI	UI	UI	Data rejected due to interference.		.09337		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.89			
	Cadmium-109	VI	UI	UI	Data rejected due to interference. <i>data rejected due to interference.</i>		3.805			
245385009-1 04-FEB-2010 22:54	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.373			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.859			

GEL QUALS

Batch ID: 944962

Report run on: February 11, 2010 11:13 AM

Samp Id	Parmname	Cofa	Edd	Qual Comments	Auto	Result	MDA	Uncert	SQL
245385009-1 04-FEB-2010 22:54	Cesium-134	UI	UI	Data rejected due to low abundance.		.1024		.1	.1
	Radium-224	UI	UI	Data rejected due to interference.		5.271			
	Strontium-85	UI	UI	Data rejected due to low abundance.		.1074			
245385010-1 04-FEB-2010 22:54	Bismuth-211	UI	UI	Data rejected due to interference.		4.751			
	Cadmium-109	UI	UI	Data rejected due to interference.		4.218			
	Cesium-134	UI	UI	Data rejected due to low abundance.		.0958		.1	.1
	Radium-224	UI	UI	Data rejected due to interference.		4.966			
	Strontium-85	UI	UI	Data rejected due to low abundance.		.104			
245385011-1 04-FEB-2010 22:55	Bismuth-211	UI	UI	Data rejected due to interference.		4.166			
	Cadmium-109	UI	UI	Data rejected due to interference.		4.426			
	Radium-224	UI	UI	Data rejected due to interference.		5.326			
245396001-1 04-FEB-2010 22:55	Bismuth-211	UI	UI	Data rejected due to interference.		4.034			
	Cadmium-109	UI	UI	Data rejected due to interference.		4.308			
	Cesium-134	UI	UI	Data rejected due to low abundance.		.1059		.1	.1
	Radium-224	UI	UI	Data rejected due to interference.		5.04			
	Strontium-85	UI	UI	Data rejected due to low abundance.		.1308			
245396002-1 05-FEB-2010 18:59	Bismuth-211	UI	UI	Data rejected due to interference.		4.391			
	Cadmium-109	UI	UI	Data rejected due to interference.		2.593			
	Cesium-134	UI	UI	Data rejected due to low abundance.		.1498		.1	.1
	Radium-224	UI	UI	Data rejected due to interference.		4.62			

GEL QUALS

Batch ID: 944962

Report run on: February 11, 2010 11:13 AM

Samp Id	Parname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
245396002-1 05-FEB-2010 18:59	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1038			
245396003-1 05-FEB-2010 19:00	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.322			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1081		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.785			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1197			
245396004-1 05-FEB-2010 19:14	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.488			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.509			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09067		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.692			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09829			
1202023708-1 DUP 05-FEB-2010 13:03	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.701			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.841			
	Cesium-137	UI	UI	UI	Data rejected due to high peak-width.		.1012		.1	.1
	Mercury-203	UI	UI	UI	Data rejected due to interference.		.1097		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.969			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1732			

Gamma Review Report based on Result > MDA for Batch:944962

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue	
245385001	15-JAN-10 12:00	04-FEB-10 20:27	20.4	SAMPLE	LOAD	1	LANL	LANL010041GEL	N	RGSP	
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment	
Actinium-228	nr	1.747	0.1989	pCi/g	0.2909	N	911.6	3 1.876	IDENTIFIED	9.785	☐
Americium-243	int	0.4498	0.04129	pCi/g	0.08089	N	74.83	1 1.217	IDENTIFIED	8.25	☐
Annihilation Rad. HE		0.0988	0.04057	pCi/g	0.04748	N	511.3	1 1.581	IDENTIFIED	40.83	☐
Bismuth-211	int	5.233	0.3586	pCi/g	0.3753	Y	352.1	4 1.221	IDENTIFIED	5.181	☐ ui
Bismuth-212	nr	1.244	0.3162	pCi/g	0.5044	N	727.4	1 0.9044	IDENTIFIED	24.88	☐
Bismuth-214	✓	1.599	0.1199	pCi/g	0.1346	0.200	609.5	4 1.528	IDENTIFIED	5.426	☐
Bromine-77		62.81	27.15	pCi/g	0	N	0	11 0	SHORT_HLIF	0	☐
Cadmium-109	int	4.612	0.6049	pCi/g	1.208	Y	87.34	3 1.373	IDENTIFIED	12.25	☐ ui
Cerium-143		8045	1654	pCi/g	0	N	0	11 0	SHORT_HLIF	0	☐
Gross Gamma		10.06	1.716	pCi/g	4.156	N	0				☐
Krypton-85	HE	20.53	4.554	pCi/g	15.89	N	0	11 0	NOT_IDENTI	0	☐
Lead-212	✓	1.993	0.1171	pCi/g	0.1053	0.100	238.8	4 1.076	IDENTIFIED	3.412	☐
Lead-214	✓	1.82	0.1335	pCi/g	0.1308	0.100	352.1	4 1.221	IDENTIFIED	5.181	☐
Lutetium-177	la nr	7.575	1.473	pCi/g	4.093	N	0	11 0	FAIL_ABUND	0	☐
Neptunium-237	int nr	1.321	0.2204	pCi/g	0.3485	N	87.34	3 1.373	IDENTIFIED	12.25	☐
Niobium-97	HE	5.16E+06	9.80E+06	pCi/g	0	N	0	11 0	SHORT_HLIF	0	☐
Polonium-212	nr	1.993	0.1171	pCi/g	0.1053	N	238.8	4 1.076	IDENTIFIED	3.412	☐
Polonium-214	nr	1.82	0.1335	pCi/g	0.1308	N	352.1	4 1.221	IDENTIFIED	5.181	☐
Polonium-216	nr	1.993	0.1171	pCi/g	0.1053	N	238.8	4 1.076	IDENTIFIED	3.412	☐
Polonium-218	nr	1.82	0.1335	pCi/g	0.1308	N	352.1	4 1.221	IDENTIFIED	5.181	☐
Potassium-40	✓	21.46	1.232	pCi/g	0.4483	1.00	1461	1 1.942	IDENTIFIED	3.812	☐
Radium-224	int	5.171	0.7684	pCi/g	1.199	Y	241.6	1 1.662	IDENTIFIED	14.25	☐ ui
Radium-226	✓	1.599	0.1199	pCi/g	0.1346	Y	609.5	4 1.528	IDENTIFIED	5.426	☐
Radium-228	✓	1.747	0.1989	pCi/g	0.2909	0.500	911.6	3 1.876	IDENTIFIED	9.785	☐
Sodium-24	HE	7.71E+07	1.36E+08	pCi/g	0	N	0	11 0	SHORT_HLIF	0	☐
Strontium-85	la	0.1112	0.02467	pCi/g	0.08607	Y	0	11 0	NOT_IDENTI	0	☐ ui Data rejected due to low abundance.
Technetium-99m		5.24E+21	0	pCi/g	0	N	0	11 0	SHORT_HLIF	0	☐
Thallium-200	HE	4299	7389	pCi/g	0	N	0	11 0	SHORT_HLIF	0	☐
Thallium-208	✓	0.6342	0.05542	pCi/g	0.07313	0.080	583.3	1 1.172	IDENTIFIED	7.315	☐
Thorium-228	nr	2.034	0.1195	pCi/g	0.1075	N	238.8	4 1.076	IDENTIFIED	3.412	☐
Thorium-230	nr	1.599	0.1199	pCi/g	0.1346	N	609.5	4 1.528	IDENTIFIED	5.426	☐
Thorium-232	nr	1.747	0.1989	pCi/g	0.2909	N	911.6	3 1.876	IDENTIFIED	9.785	☐
Tin-126	int nr	0.4498	0.05899	pCi/g	0.118	N	87.34	3 1.373	IDENTIFIED	12.25	☐
Titanium-44	la nr	0.481	0.03265	pCi/g	0.08189	N	0	11 0	FAIL_ABUND	0	☐
Total Uranium		3.0792	2.31E-06	ug/g	2.6056	N	0				☐
Uranium-234	nr	1.599	0.1199	pCi/g	0.1346	N	609.5	4 1.528	IDENTIFIED	5.426	☐
Zirconium-97	HE	3.72E+08	2.00E+08	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	
245385002	15-JAN-10 12:00	04-FEB-10 20:27	20.4	SAMPLE	LOAD	1	LANL	LANL010041GEL	N	RGSP	

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb	Act	Rpt	Err(%)	Qual	Qual Comment
Actinium-228 nr	2.365	0.2736	pCi/g	0.2777	N	911.9 3	1.636	IDENTIFIED	9.968				
Americium-243 int nr	0.5674	0.05605	pCi/g	0.105	N	74.92 1	1.492	IDENTIFIED	9.134				
Annihilation Rad. HE	0.1385	0.03948	pCi/g	0.06516	N	510.9 1	2.131	IDENTIFIED	28.34				
Bismuth-211 int	5.538	0.3491	pCi/g	0.4508	Y	351.9 4	1.384	IDENTIFIED	5.452			ui	
Bismuth-212 la nr	1.712	0.2952	pCi/g	0.8871	N	0 15 0		FAIL_ABUND	0				
Bismuth-214 ✓	1.708	0.1228	pCi/g	0.1472	0.200	609.3 4	1.411	IDENTIFIED	5.999				
Bromine-77 HE	12.39	33.26	pCi/g	0	N	0 15 0		SHORT_HLIF	0				
Cadmium-109 int	6.771	0.8371	pCi/g	1.352	Y	87.24 3	1.763	IDENTIFIED	11.58			ui	
Cadmium-115 HE	8.585	38.86	pCi/g	0	N	0 15 0		SHORT_HLIF	0				
Cerium-143	18610	2737	pCi/g	0	N	0 15 0		SHORT_HLIF	0				
Cesium-134 la	0.1352	0.03427	pCi/g	0.1246	0.100	0 15 0		FAIL_ABUND	0			ui	Data rejected due to low abundance.
Gross Gamma	11.48	1.832	pCi/g	5.526	N	0							
Iodine-123 HE	3.15E+09	3.10E+09	pCi/g	0	N	0 15 0		SHORT_HLIF	0				
Iodine-133 HE	2.19E+05	2.75E+05	pCi/g	0	N	0 15 0		SHORT_HLIF	0				
Krypton-85 HE	25.02	5.744	pCi/g	18.92	N	0 15 0		NOT_IDENTI	0				
Lead-212 ✓	2.231	0.1134	pCi/g	0.1202	0.100	238.6 4	1.277	IDENTIFIED	3.544				
Lead-214 ✓	1.927	0.1314	pCi/g	0.1571	0.100	351.9 4	1.384	IDENTIFIED	5.452				
Lutetium-177 la nr	9.513	1.875	pCi/g	4.646	N	0 15 0		FAIL_ABUND	0				
Neptunium-237 int nr	1.939	0.3123	pCi/g	0.3918	N	87.24 3	1.763	IDENTIFIED	11.58				
Niobium-95m la nr	0.8878	0.114	pCi/g	0.3743	N	0 15 0		NOT_IDENTI	0				
Polonium-212 nr	2.231	0.1134	pCi/g	0.1202	N	238.6 4	1.277	IDENTIFIED	3.544				
Polonium-214 nr	1.927	0.1314	pCi/g	0.1571	N	351.9 4	1.384	IDENTIFIED	5.452				
Polonium-216 nr	2.231	0.1134	pCi/g	0.1202	N	238.6 4	1.277	IDENTIFIED	3.544				
Polonium-218 nr	1.927	0.1314	pCi/g	0.1571	N	351.9 4	1.384	IDENTIFIED	5.452				
Potassium-40 ✓	23.79	1.281	pCi/g	0.76	1.00	1461 1	2.092	IDENTIFIED	3.975				
Promethium-149 HE	306.2	307.4	pCi/g	0	N	0 15 0		SHORT_HLIF	0				
Radium-224 int	5.473	0.8698	pCi/g	1.367	Y	241.6 1	1.72	IDENTIFIED	15.63			ui	
Radium-226 ✓	1.708	0.1228	pCi/g	0.1472	Y	609.3 4	1.411	IDENTIFIED	5.999				
Radium-228 ✓	2.365	0.2736	pCi/g	0.2777	0.500	911.9 3	1.636	IDENTIFIED	9.968				
Strontium-85 la	0.1355	0.03112	pCi/g	0.1025	Y	0 15 0		NOT_IDENTI	0			ui	Data rejected due to low abundance.
Thallium-200 HE	15620	8589	pCi/g	0	N	0 15 0		SHORT_HLIF	0				
Thallium-208 ✓	0.6296	0.05174	pCi/g	0.07764	0.080	583.3 1	1.655	IDENTIFIED	7.473				
Thorium-228 nr	2.276	0.1157	pCi/g	0.1227	N	238.6 4	1.277	IDENTIFIED	3.544				
Thorium-230 nr	1.708	0.1228	pCi/g	0.1472	N	609.3 4	1.411	IDENTIFIED	5.999				
Thorium-232 nr	2.365	0.2736	pCi/g	0.2777	N	911.9 3	1.636	IDENTIFIED	9.968				
Tin-126 int nr	0.6604	0.08164	pCi/g	0.1323	N	87.24 3	1.763	IDENTIFIED	11.58				
Titanium-44 la nr	0.5298	0.03886	pCi/g	0.1067	N	0 15 0		FAIL_ABUND	0				
Total Uranium	5.5352	3.56E-06	ug/g	3.4288	N	0							
Uranium-234 nr	1.708	0.1228	pCi/g	0.1472	N	609.3 4	1.411	IDENTIFIED	5.999				
Zirconium-97	9.61E+08	2.48E+08	pCi/g	0	N	0 15 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		
245385003	15-JAN-10 12:00	04-FEB-10 20:28	20.4	SAMPLE	LOAD	1	LANL	LANL01004	UGEL	N	RGSP		
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb	Act	Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	1.772	0.1705	pCi/g	0.1979	N	911.9	3	1.681	IDENTIFIED	7.419	□	
Americium-243	int nr	0.3545	0.03582	pCi/g	0.085	N	74.96	1	1.003	IDENTIFIED	9.261	□	

Annihilation Rad.	0.1428	0.03715	pCi/g	0.0448	N	511.4	1	1.772	IDENTIFIED	25.6	<input type="checkbox"/>	
Barium-137m	0.158	0.02925	pCi/g	0.06072	N	661.9	2	1.311	IDENTIFIED	17.82	<input type="checkbox"/>	
Bismuth-211 int	4.588	0.3305	pCi/g	0.328	Y	352.1	4	1.166	IDENTIFIED	5.385	<input type="checkbox"/>	ui
Bismuth-212 nr	1.191	0.2543	pCi/g	0.4593	N	728.1	1	0.922	IDENTIFIED	20.59	<input type="checkbox"/>	
Bismuth-214 ✓	1.345	0.1149	pCi/g	0.1103	0.200	609.8	4	1.311	IDENTIFIED	6.476	<input type="checkbox"/>	
Cadmium-109 int	2.554	0.5291	pCi/g	1.573	Y	87	3	1.235	IDENTIFIED	20.19	<input type="checkbox"/>	ui
Cerium-143	6957	1314	pCi/g	0	N	0	11	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134 la	0.1434	0.02834	pCi/g	0.09605	0.100	0	11	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Cesium-137 ✓	0.167	0.03092	pCi/g	0.06419	0.100	661.9	2	1.311	IDENTIFIED	17.82	<input type="checkbox"/>	
Gross Gamma	10.09	1.407	pCi/g	4.386	N		0				<input type="checkbox"/>	
Iodine-123 HE	5.31E+08	2.23E+09	pCi/g	0	N	0	11	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-135	1.66E+21	0	pCi/g	0	N	0	11	0	SHORT_HLIF	0	<input type="checkbox"/>	
Krypton-85 HE	16.59	4.395	pCi/g	14.44	N	0	11	0	NOT_IDENTI	0	<input type="checkbox"/>	
Lead-212 ✓	1.867	0.1154	pCi/g	0.08622	0.100	238.7	4	1.153	IDENTIFIED	3.146	<input type="checkbox"/>	
Lead-214 ✓	1.596	0.1223	pCi/g	0.11	0.100	352.1	4	1.166	IDENTIFIED	5.385	<input type="checkbox"/>	
Lutetium-177 HE	5.672	1.213	pCi/g	3.571	N	0	11	0	FAIL_ABUND	0	<input type="checkbox"/>	
Mercury-203 int	0.0862	0.02802	pCi/g	0.06355	0.100	277.9	1	1.531	IDENTIFIED	32.11	<input type="checkbox"/>	ui
Neptunium-237 int nr	0.7314	0.1693	pCi/g	0.3236	N	87	3	1.235	IDENTIFIED	20.19	<input type="checkbox"/>	
Polonium-212 nr	1.867	0.1154	pCi/g	0.08622	N	238.7	4	1.153	IDENTIFIED	3.146	<input type="checkbox"/>	
Polonium-214 nr	1.596	0.1223	pCi/g	0.11	N	352.1	4	1.166	IDENTIFIED	5.385	<input type="checkbox"/>	
Polonium-216 nr	1.867	0.1154	pCi/g	0.08622	N	238.7	4	1.153	IDENTIFIED	3.146	<input type="checkbox"/>	
Polonium-218 nr	1.596	0.1223	pCi/g	0.11	N	352.1	4	1.166	IDENTIFIED	5.385	<input type="checkbox"/>	
Potassium-40 ✓	21.64	1.221	pCi/g	0.5103	1.00	1462	1	1.955	IDENTIFIED	3.582	<input type="checkbox"/>	
Promethium-149 HE	212.3	220.9	pCi/g	0	N	0	11	0	SHORT_HLIF	0	<input type="checkbox"/>	
Radium-224 int	5.404	0.648	pCi/g	0.9809	Y	241.8	1	1.738	IDENTIFIED	10.97	<input type="checkbox"/>	ui
Radium-226 ✓	1.345	0.1149	pCi/g	0.1103	Y	609.8	4	1.311	IDENTIFIED	6.476	<input type="checkbox"/>	
Radium-228 ✓	1.772	0.1705	pCi/g	0.1979	0.500	911.9	3	1.681	IDENTIFIED	7.419	<input type="checkbox"/>	
Strontium-85 la	0.0899	0.02381	pCi/g	0.07823	Y	0	11	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-200 HE	733.8	6231	pCi/g	0	N	0	11	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-208 ✓	0.5273	0.04944	pCi/g	0.05745	0.080	583.7	1	1.602	IDENTIFIED	7.841	<input type="checkbox"/>	
Thorium-228 nr	1.905	0.1177	pCi/g	0.08798	N	238.7	4	1.153	IDENTIFIED	3.146	<input type="checkbox"/>	
Thorium-230 nr	1.345	0.1149	pCi/g	0.1103	N	609.8	4	1.311	IDENTIFIED	6.476	<input type="checkbox"/>	
Thorium-232 nr	1.772	0.1705	pCi/g	0.1979	N	911.9	3	1.681	IDENTIFIED	7.419	<input type="checkbox"/>	
Thorium-234 ✓	4.574	0.9512	pCi/g	1.801	2.00	63.48	2	0.8083	IDENTIFIED	18.89	<input type="checkbox"/>	
Tin-126 int nr	0.2491	0.0516	pCi/g	0.1442	N	87	3	1.235	IDENTIFIED	20.19	<input type="checkbox"/>	
Titanium-44 la nr	0.3701	0.02772	pCi/g	0.0802	N	0	11	0	FAIL_ABUND	0	<input type="checkbox"/>	
Total Uranium	13.703	2.83E-06	ug/g	2.6824	N		0				<input type="checkbox"/>	
Uranium-234 nr	1.345	0.1149	pCi/g	0.1103	N	609.8	4	1.311	IDENTIFIED	6.476	<input type="checkbox"/>	
Uranium-238 nr	4.574	0.9512	pCi/g	1.801	N	63.48	2	0.8083	IDENTIFIED	18.89	<input type="checkbox"/>	
Zirconium-97 HE	2.31E+08	1.61E+08	pCi/g	0	N	0	11	0	SHORT_HLIF	0	<input type="checkbox"/>	

*** = 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
245385004	15-JAN-10 12:00	04-FEB-10 20:48	20.4	SAMPLE	LOAD	1	LANL	LANL010041GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 nr	1.903	0.1831	pCi/g	0.1905	N	911.7	3	1.936	IDENTIFIED	7.782 <input type="checkbox"/>
Americium-243 int nr	0.3283	0.03929	pCi/g	0.1109	N	74.85	1	1.086	IDENTIFIED	11.29 <input type="checkbox"/>
Annihilation Rad. HE	0.05011	0.03019	pCi/g	0.04698	N	510.9	1	0.9542	IDENTIFIED	60.16 <input type="checkbox"/>

Bismuth-211	int	4.577	0.2991	pCi/g	0.3405	Y	351.7	4	1.277	IDENTIFIED	5.702	<input type="checkbox"/>	ui
Bismuth-212	nr	1.241	0.2361	pCi/g	0.4946	N	727.7	1	1.562	IDENTIFIED	18.56	<input type="checkbox"/>	
Bismuth-214	✓	1.472	0.1055	pCi/g	0.1097	0.200	609.4	4	1.738	IDENTIFIED	5.988	<input type="checkbox"/>	
Bromine-77	HE	13.51	24.04	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cadmium-109	int	4.358	0.5451	pCi/g	1.21	Y	87.32	3	1.388	IDENTIFIED	11.69	<input type="checkbox"/>	ui
Cadmium-115	HE	18.55	26.92	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cerium-143		15600	2298	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134	la	0.1213	0.03486	pCi/g	0.09726	0.100	0	14	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Gross Gamma		9.559	1.31	pCi/g	3.835	N	0					<input type="checkbox"/>	
Iodine-133	HE	1.37E+05	1.98E+05	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-135		1.88E+21	0	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>	
Krypton-85	HE	15.73	4.204	pCi/g	14.15	N	0	14	0	NOT_IDENTI	0	<input type="checkbox"/>	
Lead-212	✓	1.854	0.09054	pCi/g	0.09874	0.100	238.6	4	1.327	IDENTIFIED	3.289	<input type="checkbox"/>	
Lead-214	✓	1.592	0.112	pCi/g	0.1187	0.100	351.7	4	1.277	IDENTIFIED	5.702	<input type="checkbox"/>	
Lutetium-177	HE	6.18	1.472	pCi/g	3.768	N	0	14	0	FAIL_ABUND	0	<input type="checkbox"/>	
Neptunium-237	int nr	1.248	0.2024	pCi/g	0.3517	N	87.32	3	1.388	IDENTIFIED	11.69	<input type="checkbox"/>	
Niobium-95m	la nr	0.5957	0.09022	pCi/g	0.2971	N	0	14	0	NOT_IDENTI	0	<input type="checkbox"/>	
Polonium-212	nr	1.854	0.09054	pCi/g	0.09874	N	238.6	4	1.327	IDENTIFIED	3.289	<input type="checkbox"/>	
Polonium-214	nr	1.592	0.112	pCi/g	0.1187	N	351.7	4	1.277	IDENTIFIED	5.702	<input type="checkbox"/>	
Polonium-216	nr	1.854	0.09054	pCi/g	0.09874	N	238.6	4	1.327	IDENTIFIED	3.289	<input type="checkbox"/>	
Polonium-218	nr	1.592	0.112	pCi/g	0.1187	N	351.7	4	1.277	IDENTIFIED	5.702	<input type="checkbox"/>	
Potassium-40	✓	20.67	1.086	pCi/g	0.673	1.00	1461	1	1.908	IDENTIFIED	3.706	<input type="checkbox"/>	
Promethium-149	HE	267.8	246.1	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>	
Radium-224	int	4.514	0.6445	pCi/g	1.123	Y	241.7	1	1.798	IDENTIFIED	13.99	<input type="checkbox"/>	ui
Radium-226	✓	1.472	0.1055	pCi/g	0.1097	Y	609.4	4	1.738	IDENTIFIED	5.988	<input type="checkbox"/>	
Radium-228	✓	1.903	0.1831	pCi/g	0.1905	0.500	911.7	3	1.936	IDENTIFIED	7.782	<input type="checkbox"/>	
Sodium-24	HE	1.66E+08	1.12E+08	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>	
Strontium-85	la	0.08523	0.02278	pCi/g	0.07666	Y	0	14	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-208	✓	0.5744	0.04973	pCi/g	0.05946	0.080	583.3	1	1.502	IDENTIFIED	7.961	<input type="checkbox"/>	
Thorium-228	nr	1.892	0.0924	pCi/g	0.1008	N	238.6	4	1.327	IDENTIFIED	3.289	<input type="checkbox"/>	
Thorium-230	nr	1.472	0.1055	pCi/g	0.1097	N	609.4	4	1.738	IDENTIFIED	5.988	<input type="checkbox"/>	
Thorium-232	nr	1.903	0.1831	pCi/g	0.1905	N	911.7	3	1.936	IDENTIFIED	7.782	<input type="checkbox"/>	
Tin-126	int nr	0.425	0.05316	pCi/g	0.1185	N	87.32	3	1.388	IDENTIFIED	11.69	<input type="checkbox"/>	
Titanium-44	la nr	0.479	0.03634	pCi/g	0.09458	N	0	14	0	FAIL_ABUND	0	<input type="checkbox"/>	
Uranium-234	nr	1.472	0.1055	pCi/g	0.1097	N	609.4	4	1.738	IDENTIFIED	5.988	<input type="checkbox"/>	
Zirconium-97		4.62E+08	1.77E+08	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>	

*** = 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
245385005	15-JAN-10 12:00	04-FEB-10 22:52	20.5	SAMPLE	LOAD	1	LANL	LANL010041GEL	N	RCSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	nr	1.81	0.1577	pCi/g	0.1425	N	911.6	3 1.541	IDENTIFIED	6.239 <input type="checkbox"/>
Americium-243	int nr	0.4434	0.02982	pCi/g	0.05265	N	74.85	1 0.9792	IDENTIFIED	5.366 <input type="checkbox"/>
Annihilation Rad.		0.1083	0.02922	pCi/g	0.033	N	510.8	1 1.921	IDENTIFIED	26.45 <input type="checkbox"/>
Bismuth-211	int	4.215	0.3246	pCi/g	0.2145	Y	352.1	4 1.181	IDENTIFIED	4.011 <input type="checkbox"/> ui
Bismuth-212	la nr	0.9886	0.1788	pCi/g	0.5103	N	0	13 0	FAIL_ABUND	0 <input type="checkbox"/>
Bismuth-214	✓	1.356	0.09669	pCi/g	0.07718	0.200	609.6	4 1.211	IDENTIFIED	4.348 <input type="checkbox"/>
Bromine-77	HE	8.393	16.6	pCi/g	0	N	0	13 0	SHORT_HLIF	0 <input type="checkbox"/>

Cadmium-109	int	4.262	0.392	pCi/g	0.6925	Y	87.27	3	1.108	IDENTIFIED	7.907	<input type="checkbox"/>	ui
Cadmium-115	HE	10.11	19.5	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cerium-143		5656	1063	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134	1a	0.1481	0.02471	pCi/g	0.0692	0.100	0	13	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Gold-195	1a nr	0.4225	0.07341	pCi/g	0.2589	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Gross Gamma		10.14	1.372	pCi/g	4.004	N		0				<input type="checkbox"/>	
Iodine-123	HE	3.12E+08	1.76E+09	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-133	HE	31590	1.51E+05	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Iodine-135		3.41E+20	0	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Lead-212	✓	1.934	0.1424	pCi/g	0.06115	0.100	238.7	4	0.9499	IDENTIFIED	2.283	<input type="checkbox"/>	
Lead-214	✓	1.466	0.1192	pCi/g	0.07477	0.100	352.1	4	1.181	IDENTIFIED	4.011	<input type="checkbox"/>	
Lutetium-177	1a nr	6.344	0.9468	pCi/g	2.433	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Neptunium-237	int nr	1.22	0.1687	pCi/g	0.2005	N	87.27	3	1.108	IDENTIFIED	7.907	<input type="checkbox"/>	
Polonium-212	nr	1.934	0.1424	pCi/g	0.06115	N	238.7	4	0.9499	IDENTIFIED	2.283	<input type="checkbox"/>	
Polonium-214	nr	1.466	0.1192	pCi/g	0.07477	N	352.1	4	1.181	IDENTIFIED	4.011	<input type="checkbox"/>	
Polonium-216	nr	1.934	0.1424	pCi/g	0.06115	N	238.7	4	0.9499	IDENTIFIED	2.283	<input type="checkbox"/>	
Polonium-218	nr	1.466	0.1192	pCi/g	0.07477	N	352.1	4	1.181	IDENTIFIED	4.011	<input type="checkbox"/>	
Potassium-40	✓	21.41	1.078	pCi/g	0.3445	1.00	1462	1	1.78	IDENTIFIED	2.579	<input type="checkbox"/>	
Radium-224	int	5.149	0.6367	pCi/g	0.6961	Y	241.7	1	1.766	IDENTIFIED	10.38	<input type="checkbox"/>	ui
Radium-226	✓	1.356	0.09669	pCi/g	0.07718	Y	609.6	4	1.211	IDENTIFIED	4.348	<input type="checkbox"/>	
Radium-228	✓	1.81	0.1577	pCi/g	0.1425	0.500	911.6	3	1.541	IDENTIFIED	6.239	<input type="checkbox"/>	
Thallium-200	HE	1332	5012	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-208	✓	0.5786	0.04505	pCi/g	0.03751	0.080	583.5	1	1.268	IDENTIFIED	5.61	<input type="checkbox"/>	
Thorium-228	nr	1.973	0.1454	pCi/g	0.06241	N	238.7	4	0.9499	IDENTIFIED	2.283	<input type="checkbox"/>	
Thorium-230	nr	1.356	0.09669	pCi/g	0.07717	N	609.6	4	1.211	IDENTIFIED	4.348	<input type="checkbox"/>	
Thorium-232	nr	1.81	0.1577	pCi/g	0.1425	N	911.6	3	1.541	IDENTIFIED	6.239	<input type="checkbox"/>	
Thorium-234	✓	2.156	0.6511	pCi/g	1.184	2.00	63.57	2	1.031	IDENTIFIED	28.92	<input type="checkbox"/>	
Tin-126	int nr	0.4155	0.03822	pCi/g	0.06774	N	87.27	3	1.108	IDENTIFIED	7.907	<input type="checkbox"/>	
Titanium-44	1a nr	0.4431	0.02417	pCi/g	0.04678	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>	
Total Uranium		6.53	1.94E-06	ug/g	1.763	N		0				<input type="checkbox"/>	
Uranium-234	nr	1.356	0.09669	pCi/g	0.07717	N	609.6	4	1.211	IDENTIFIED	4.348	<input type="checkbox"/>	
Uranium-235	✓	0.252	0.08451	pCi/g	0.2187	0.500	143.9	1	0.8328	IDENTIFIED	32.35	<input type="checkbox"/>	
Uranium-238	HE	2.156	0.6511	pCi/g	1.184	N	63.57	2	1.031	IDENTIFIED	28.92	<input type="checkbox"/>	
Zirconium-97		3.56E+08	1.28E+08	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>	

*** = 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		
245385006	15-JAN-10 12:00	04-FEB-10 22:53	20.5	SAMPLE	LOAD	1	LANL	LANL010041GEL		N	RGSP		
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb	Act	Rpt	Err(%)	Qual	Qual Comment
Actinium-228	nr	2.024	0.164	pCi/g	0.15	N	911.7	3	1.535	IDENTIFIED	5.584	☐	
Americium-243	int nr	0.4117	0.03469	pCi/g	0.0675	N	74.87	1	1.536	IDENTIFIED	7.541	☐	
Annihilation Rad.		0.1614	0.0289	pCi/g	0.0359	N	510.8	1	2.307	IDENTIFIED	17.66	☐	
Barium-137m	HE	0.07546	0.01962	pCi/g	0.0502	N	662	2	1.389	IDENTIFIED	25.82	☐	
Bismuth-211	int	4.285	0.2185	pCi/g	0.2689	Y	351.9	4	1.409	IDENTIFIED	3.997	☐ ui	
Bismuth-212	1a nr	1.387	0.2103	pCi/g	0.5199	N	0	14	0	FAIL_ABUND	0	☐	
Bismuth-214		1.274	0.07821	pCi/g	0.08634	0.200	609.5	4	1.576	IDENTIFIED	4.694	☐	
Bromine-77	HE	9.74	18.56	pCi/g	0	N	0	14	0	SHORT_HLIF	0	☐	
Cadmium-109	int	4.551	0.4587	pCi/g	0.9207	Y	87.36	3	1.466	IDENTIFIED	9.097	☐ ui	

Cadmium-115	HE	9.233	22.34	pCi/g 0	N	0	14	0	SHORT_HLIF 0	<input type="checkbox"/>	
Cerium-143		18210	2398	pCi/g 0	N	0	14	0	SHORT_HLIF 0	<input type="checkbox"/>	
Cesium-134	la	0.1003	0.02339	pCi/g 0.06825	0.100	0	14	0	FAIL_ABUND 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Cesium-137	✓	0.07977	0.02074	pCi/g 0.05307	0.100	662	2	1.389	IDENTIFIED 25.82	<input type="checkbox"/>	
Gross Gamma		10.04	1.487	pCi/g 4.035	N		0			<input type="checkbox"/>	
Iodine-133	HE	78520	1.75E+05	pCi/g 0	N	0	14	0	SHORT_HLIF 0	<input type="checkbox"/>	
Krypton-85	la nr	21.69	3.345	pCi/g 11.17	N	0	14	0	NOT_IDENTI 0	<input type="checkbox"/>	
Lead-212	✓	1.893	0.08237	pCi/g 0.06888	0.100	238.6	4	1.368	IDENTIFIED 2.382	<input type="checkbox"/>	
Lead-214	✓	1.49	0.08537	pCi/g 0.09036	0.100	351.9	4	1.409	IDENTIFIED 3.997	<input type="checkbox"/>	
Lutetium-177	HE	4.448	0.9694	pCi/g 2.819	N	0	14	0	FAIL_ABUND 0	<input type="checkbox"/>	
Neptunium-237	int nr	1.303	0.188	pCi/g 0.2667	N	87.36	3	1.466	IDENTIFIED 9.097	<input type="checkbox"/>	
Niobium-95m	la nr	0.6192	0.07032	pCi/g 0.2249	N	0	14	0	NOT_IDENTI 0	<input type="checkbox"/>	
Niobium-97	HE	4.74E+06	8.97E+06	pCi/g 0	N	0	14	0	SHORT_HLIF 0	<input type="checkbox"/>	
Polonium-212	nr	1.893	0.08237	pCi/g 0.06888	N	238.6	4	1.368	IDENTIFIED 2.382	<input type="checkbox"/>	
Polonium-214	nr	1.49	0.08537	pCi/g 0.09036	N	351.9	4	1.409	IDENTIFIED 3.997	<input type="checkbox"/>	
Polonium-216	nr	1.893	0.08237	pCi/g 0.06888	N	238.6	4	1.368	IDENTIFIED 2.382	<input type="checkbox"/>	
Polonium-218	nr	1.49	0.08537	pCi/g 0.09036	N	351.9	4	1.409	IDENTIFIED 3.997	<input type="checkbox"/>	
Potassium-40	✓	22.46	0.9978	pCi/g 0.4327	1.00	1462	1	2.098	IDENTIFIED 2.562	<input type="checkbox"/>	
Promethium-149	HE	359.8	195.5	pCi/g 0	N	0	14	0	SHORT_HLIF 0	<input type="checkbox"/>	
Radium-224	int	4.439	0.497	pCi/g 0.7834	Y	241.6	1	1.711	IDENTIFIED 10.82	<input type="checkbox"/>	ui
Radium-226	✓	1.274	0.07821	pCi/g 0.08634	Y	609.5	4	1.576	IDENTIFIED 4.694	<input type="checkbox"/>	
Radium-228	✓	2.024	0.164	pCi/g 0.15	0.500	911.7	3	1.535	IDENTIFIED 5.584	<input type="checkbox"/>	
Strontium-85	la	0.1177	0.01815	pCi/g 0.06058	Y	0	14	0	NOT_IDENTI 0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-208	✓	0.5517	0.03841	pCi/g 0.04279	0.080	583.2	1	1.516	IDENTIFIED 6.065	<input type="checkbox"/>	
Thorium-228	nr	1.932	0.08407	pCi/g 0.0703	N	238.6	4	1.368	IDENTIFIED 2.382	<input type="checkbox"/>	
Thorium-230	nr	1.274	0.07821	pCi/g 0.08634	N	609.5	4	1.576	IDENTIFIED 4.694	<input type="checkbox"/>	
Thorium-232	nr	2.024	0.164	pCi/g 0.15	N	911.7	3	1.535	IDENTIFIED 5.584	<input type="checkbox"/>	
Thorium-234	✓	3.518	0.8757	pCi/g 1.448	2.00	62.88	2	1.484	IDENTIFIED 23.36	<input type="checkbox"/>	
Tin-126	int nr	0.4438	0.04473	pCi/g 0.09008	N	87.36	3	1.466	IDENTIFIED 9.097	<input type="checkbox"/>	
Titanium-44	la nr	0.4321	0.02587	pCi/g 0.06481	N	0	14	0	FAIL_ABUND 0	<input type="checkbox"/>	
Total Uranium		10.53	2.61E-06	ug/g 2.1566	N		0			<input type="checkbox"/>	
Uranium-234	nr	1.274	0.07821	pCi/g 0.08634	N	609.5	4	1.576	IDENTIFIED 4.694	<input type="checkbox"/>	
Uranium-238	nr	3.518	0.8757	pCi/g 1.448	N	62.88	2	1.484	IDENTIFIED 23.36	<input type="checkbox"/>	
Zirconium-97		1.04E+09	1.71E+08	pCi/g 0	N	0	14	0	SHORT_HLIF 0	<input type="checkbox"/>	

*** = 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
245385007	15-JAN-10 12:00	04-FEB-10 22:53	20.5	SAMPLE	LOAD	I	LANL	LANL01004IGEL	N	RCSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	nr	1.71	0.1617	pCi/g 0.1461	N	911.4	3	1.562	IDENTIFIED 7.359	<input type="checkbox"/>
Americium-243	int nr	0.3692	0.02954	pCi/g 0.06103	N	74.87	1	0.8482	IDENTIFIED 6.841	<input type="checkbox"/>
Annihilation Rad.		0.109	0.02694	pCi/g 0.03536	N	510.8	1	1.882	IDENTIFIED 24.24	<input type="checkbox"/>
Barium-137m		0.1057	0.02129	pCi/g 0.04348	N	662.1	2	1.313	IDENTIFIED 19.66	<input type="checkbox"/>
Bismuth-211	int	4.68	0.3163	pCi/g 0.229	Y	352	4	1.147	IDENTIFIED 3.991	<input type="checkbox"/> ui
Bismuth-212	la nr	0.9791	0.2203	pCi/g 0.4929	N	0	16	0	FAIL_ABUND 0	<input type="checkbox"/>
Bismuth-214	✓	1.371	0.09392	pCi/g 0.07851	0.200	609.4	4	1.333	IDENTIFIED 4.357	<input type="checkbox"/>
Bromine-77	HE	11.01	17.43	pCi/g 0	N	0	16	0	SHORT_HLIF 0	<input type="checkbox"/>
Cadmium-109	int	4.358	0.437	pCi/g 0.8066	Y	87.26	3	1.158	IDENTIFIED 8.816	<input type="checkbox"/> ui

Cerium-141	int nr	0.1798	0.04094	pCi/g	0.07457	N	143.9	2	1.016	IDENTIFIED	22.35	<input type="checkbox"/>
Cerium-143		6289	1144	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>
Cesium-135	HE	0.2185	0.06289	pCi/g	0.1938	N	0	16	0	NOT_IDENTI	0	<input type="checkbox"/>
Cesium-137	✓	0.1117	0.02251	pCi/g	0.04596	0.100	662.1	2	1.313	IDENTIFIED	19.66	<input type="checkbox"/>
Gold-195	HE	0.2818	0.08431	pCi/g	0.2789	N	0	16	0	FAIL_ABUND	0	<input type="checkbox"/>
Gross Gamma		10.07	1.255	pCi/g	3.66	N		0				<input type="checkbox"/>
Iodine-123	HE	2.20E+08	1.74E+09	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>
Iodine-133	HE	20980	1.46E+05	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>
Krypton-85	HE	12.7	2.95	pCi/g	9.633	N	0	16	0	NOT_IDENTI	0	<input type="checkbox"/>
Lead-212	✓	1.791	0.1145	pCi/g	0.06346	0.100	238.6	4	0.9421	IDENTIFIED	2.421	<input type="checkbox"/>
Lead-214	✓	1.628	0.1179	pCi/g	0.07983	0.100	352	4	1.147	IDENTIFIED	3.991	<input type="checkbox"/>
Lutetium-177	la nr	5.526	0.9342	pCi/g	2.489	N	0	16	0	FAIL_ABUND	0	<input type="checkbox"/>
Mercury-203	int	0.05735	0.02363	pCi/g	0.04674	0.100	277.8	1	0.9552	IDENTIFIED	40.75	<input type="checkbox"/> ui
Neptunium-237	int nr	1.248	0.1795	pCi/g	0.2346	N	87.26	3	1.158	IDENTIFIED	8.816	<input type="checkbox"/>
Niobium-97	HE	2.55E+06	7.99E+06	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>
Polonium-212	nr	1.791	0.1145	pCi/g	0.06346	N	238.6	4	0.9421	IDENTIFIED	2.421	<input type="checkbox"/>
Polonium-214	nr	1.628	0.1179	pCi/g	0.07983	N	352	4	1.147	IDENTIFIED	3.991	<input type="checkbox"/>
Polonium-216	nr	1.791	0.1145	pCi/g	0.06346	N	238.6	4	0.9421	IDENTIFIED	2.421	<input type="checkbox"/>
Polonium-218	nr	1.628	0.1179	pCi/g	0.07983	N	352	4	1.147	IDENTIFIED	3.991	<input type="checkbox"/>
Potassium-40	✓	21.83	1.137	pCi/g	0.419	1.00	1461	1	1.931	IDENTIFIED	2.792	<input type="checkbox"/>
Promethium-149	HE	189.8	191.9	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>
Radium-224	int	5.698	0.6068	pCi/g	0.7222	Y	241.7	1	1.909	IDENTIFIED	9.109	<input type="checkbox"/> ui
Radium-226	✓	1.371	0.09392	pCi/g	0.07851	Y	609.4	4	1.333	IDENTIFIED	4.357	<input type="checkbox"/>
Radium-228	✓	1.71	0.1617	pCi/g	0.1461	0.500	911.4	3	1.562	IDENTIFIED	7.359	<input type="checkbox"/>
Sodium-24	HE	5.75E+07	1.05E+08	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>
Strontium-85	la	0.0689	0.016	pCi/g	0.05226	Y	0	16	0	NOT_IDENTI	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Technetium-99m		6.77E+21	0	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208	✓	0.5406	0.04175	pCi/g	0.04266	0.080	583.3	1	1.254	IDENTIFIED	5.923	<input type="checkbox"/>
Thorium-228	nr	1.828	0.1169	pCi/g	0.06477	N	238.6	4	0.9421	IDENTIFIED	2.421	<input type="checkbox"/>
Thorium-230	nr	1.371	0.09392	pCi/g	0.07851	N	609.4	4	1.333	IDENTIFIED	4.357	<input type="checkbox"/>
Thorium-232	nr	1.71	0.1617	pCi/g	0.1461	N	911.4	3	1.562	IDENTIFIED	7.359	<input type="checkbox"/>
Thorium-234	✓	3.166	0.7771	pCi/g	1.406	2.00	63.37	2	0.6825	IDENTIFIED	22.94	<input type="checkbox"/>
Tin-126	int nr	0.4249	0.04261	pCi/g	0.079	N	87.26	3	1.158	IDENTIFIED	8.816	<input type="checkbox"/>
Titanium-44	la nr	0.3856	0.02385	pCi/g	0.05385	N	0	16	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium		9.6656	2.31E-06	ug/g	2.0935	N		0				<input type="checkbox"/>
Uranium-234	nr	1.371	0.09392	pCi/g	0.07851	N	609.4	4	1.333	IDENTIFIED	4.357	<input type="checkbox"/>
Uranium-235	✓	0.5347	0.1283	pCi/g	0.2197	0.500	143.9	2	1.016	IDENTIFIED	22.35	<input type="checkbox"/>
Uranium-238	nr	3.166	0.7771	pCi/g	1.406	N	63.37	2	0.6825	IDENTIFIED	22.94	<input type="checkbox"/>
Zirconium-97		4.79E+08	1.35E+08	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>

*** = 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
245385008	15-JAN-10 12:00	04-FEB-10 22:54	20.5	SAMPLE	LOAD	1	LANL	LANL010041GEL		N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy	*** FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	nr	1.761	0.1736	pCi/g	0.2289	N	910.5	3	1.414	IDENTIFIED	8.058 <input type="checkbox"/>
Americium-243	int nr	0.4267	0.02984	pCi/g	0.04717	N	74.84	1	0.9444	IDENTIFIED	5.008 <input type="checkbox"/>
Annihilation Rad.		0.1126	0.03276	pCi/g	0.04501	N	510.5	1	1.139	IDENTIFIED	28.74 <input type="checkbox"/>
Barium-137m	ll	0.1243	0.02285	pCi/g	0.06372	N	661.2	2	1.287	IDENTIFIED	17.9 <input type="checkbox"/>

Bismuth-210	nr	1.837	0.3397	pCi/g	0.6799	N	46.51	3	0.9444	IDENTIFIED	17.68	<input type="checkbox"/>
Bismuth-211	int	4.357	0.2877	pCi/g	0.2739	Y	351.7	4	1.114	IDENTIFIED	4.675	<input type="checkbox"/> ui
Bismuth-212	HE	0.8846	0.2464	pCi/g	0.6733	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>
Bismuth-214	✓	1.268	0.1002	pCi/g	0.1105	0.200	609	4	1.351	IDENTIFIED	6.041	<input type="checkbox"/>
Bromine-77	HE	37.93	22.63	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>
Cadmium-109	int	3.805	0.3906	pCi/g	0.7607	Y	87.15	3	1.222	IDENTIFIED	9.034	<input type="checkbox"/> ui
Cadmium-115	HE	4.704	26.16	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>
Cerium-143		8427	1453	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>
Cesium-134	la	0.1796	0.03703	pCi/g	0.09356	0.100	0	13	0	FAIL_ABUND	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Cesium-137	✓	0.1314	0.02416	pCi/g	0.06735	0.100	661.2	2	1.287	IDENTIFIED	17.9	<input type="checkbox"/>
Gross Gamma		9.724	1.294	pCi/g	4.425	N	0					<input type="checkbox"/>
Iodine-133	HE	1.27E+05	2.08E+05	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>
Iodine-135		1.67E+21	0	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>
Lead-210	nr	1.837	0.3397	pCi/g	0.6799	N	46.51	3	0.9444	IDENTIFIED	17.68	<input type="checkbox"/>
Lead-212	✓	1.719	0.09961	pCi/g	0.07456	0.100	238.5	4	1.009	IDENTIFIED	2.861	<input type="checkbox"/>
Lead-214	✓	1.516	0.1076	pCi/g	0.09552	0.100	351.7	4	1.114	IDENTIFIED	4.675	<input type="checkbox"/>
Lutetium-177	HE	5.25	1.221	pCi/g	2.891	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>
Mercury-203	int	0.09337	0.03184	pCi/g	0.05896	0.100	277.8	1	1.074	IDENTIFIED	33.78	<input type="checkbox"/> ui
Neptunium-237	int nr	1.089	0.1586	pCi/g	0.2168	N	87.15	3	1.222	IDENTIFIED	9.034	<input type="checkbox"/>
Niobium-95	HE	0.08988	0.02365	pCi/g	0.0867	N	0	13	0	NOT_IDENTI	0	<input type="checkbox"/>
Polonium-210	nr	1.837	0.3378	pCi/g	0.6799	N	46.51	3	0.9444	IDENTIFIED	17.68	<input type="checkbox"/>
Polonium-212	nr	1.719	0.09961	pCi/g	0.07456	N	238.5	4	1.009	IDENTIFIED	2.861	<input type="checkbox"/>
Polonium-214	nr	1.516	0.1076	pCi/g	0.09552	N	351.7	4	1.114	IDENTIFIED	4.675	<input type="checkbox"/>
Polonium-216	nr	1.719	0.09961	pCi/g	0.07456	N	238.5	4	1.009	IDENTIFIED	2.861	<input type="checkbox"/>
Polonium-218	nr	1.516	0.1076	pCi/g	0.09552	N	351.7	4	1.114	IDENTIFIED	4.675	<input type="checkbox"/>
Potassium-40	✓	22.75	1.241	pCi/g	0.4727	1.00	1460	1	1.876	IDENTIFIED	3.171	<input type="checkbox"/>
Protactinium-234m	HE	9.083	2.6	pCi/g	8.078	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>
Radium-224	int	4.89	0.4691	pCi/g	0.8491	Y	241.6	1	1.649	IDENTIFIED	8.46	<input type="checkbox"/> ui
Radium-226	✓	1.268	0.1002	pCi/g	0.1105	Y	609	4	1.351	IDENTIFIED	6.041	<input type="checkbox"/>
Radium-228	✓	1.761	0.1736	pCi/g	0.2289	0.500	910.5	3	1.414	IDENTIFIED	8.058	<input type="checkbox"/>
Technetium-99m		2.21E+22	0	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208	✓	0.5387	0.04758	pCi/g	0.05716	0.080	582.8	1	1.266	IDENTIFIED	7.459	<input type="checkbox"/>
Thorium-228	nr	1.754	0.1017	pCi/g	0.07609	N	238.5	4	1.009	IDENTIFIED	2.861	<input type="checkbox"/>
Thorium-230	nr	1.268	0.1002	pCi/g	0.1105	N	609	4	1.351	IDENTIFIED	6.041	<input type="checkbox"/>
Thorium-232	nr	1.761	0.1736	pCi/g	0.2289	N	910.5	3	1.414	IDENTIFIED	8.058	<input type="checkbox"/>
Thorium-234	✓	3.523	0.5362	pCi/g	0.7856	2.00	63.3	2	1.006	IDENTIFIED	12.03	<input type="checkbox"/>
Tin-126	int nr	0.371	0.03809	pCi/g	0.07407	N	87.15	3	1.222	IDENTIFIED	9.034	<input type="checkbox"/>
Titanium-44	la nr	0.3994	0.02423	pCi/g	0.04801	N	0	13	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium		10.589	1.60E-06	ug/g	1.1709	N	0					<input type="checkbox"/>
Uranium-234	nr	1.268	0.1002	pCi/g	0.1105	N	609	4	1.351	IDENTIFIED	6.041	<input type="checkbox"/>
Uranium-238	nr	3.523	0.5362	pCi/g	0.7856	N	63.3	2	1.006	IDENTIFIED	12.03	<input type="checkbox"/>
Zirconium-97		5.60E+08	1.89E+08	pCi/g	0	N	0	13	0	SHORT_HLIF	0	<input type="checkbox"/>

*** = 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	
245385009	15-JAN-10 12:00	04-FEB-10 22:54	20.5	SAMPLE	LOAD	1	LANL	LANL01004IGEL	N	RCSP	
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228	nr	1.968	0.171	pCi/g	0.1702	N	911.5	3	1.71	IDENTIFIED	6.596 <input type="checkbox"/>

Americium-243	int nr	0.5372	0.04372	pCi/g	0.07368	N	74.8	1	1.617	IDENTIFIED	7.105	<input type="checkbox"/>
Annihilation Rad.		0.1068	0.02851	pCi/g	0.03698	N	510.6	1	2.094	IDENTIFIED	26.54	<input type="checkbox"/>
Bismuth-211	int	4.373	0.2518	pCi/g	0.2632	Y	351.8	4	1.535	IDENTIFIED	4.792	<input type="checkbox"/> ui
Bismuth-212	la nr	1.427	0.2234	pCi/g	0.5233	N	0	15	0	FAIL_ABUND	0	<input type="checkbox"/>
Bismuth-214	✓	1.197	0.08321	pCi/g	0.09161	0.200	609.4	4	1.547	IDENTIFIED	5.733	<input type="checkbox"/>
Bromine-77	HE	2.673	19.64	pCi/g	0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>
Cadmium-109	int	4.859	0.5167	pCi/g	0.948	Y	87.23	3	1.635	IDENTIFIED	9.661	<input type="checkbox"/> ui
Cerium-143		15940	2194	pCi/g	0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>
Cesium-134	la	0.1024	0.02954	pCi/g	0.07603	0.100	0	15	0	FAIL_ABUND	0	<input checked="" type="checkbox"/> ui Data rejected due to low abundance.
Cesium-135	HE	0.3635	0.07354	pCi/g	0.2381	N	0	15	0	NOT_IDENTI	0	<input type="checkbox"/>
Gross Gamma		10.41	1.333	pCi/g	3.694	N	0					<input type="checkbox"/>
Iodine-135		2.10E+19	0	pCi/g	0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>
Krypton-85	la nr	19.79	3.309	pCi/g	11.16	N	0	15	0	NOT_IDENTI	0	<input type="checkbox"/>
Lead-212	✓	1.936	0.08402	pCi/g	0.07243	0.100	238.5	4	1.315	IDENTIFIED	2.412	<input type="checkbox"/>
Lead-214	✓	1.521	0.09616	pCi/g	0.09173	0.100	351.8	4	1.535	IDENTIFIED	4.792	<input type="checkbox"/>
Lutetium-177	HE	5.012	1.107	pCi/g	2.911	N	0	15	0	FAIL_ABUND	0	<input type="checkbox"/>
Neptunium-237	int nr	1.391	0.2061	pCi/g	0.2755	N	87.23	3	1.635	IDENTIFIED	9.661	<input type="checkbox"/>
Niobium-95	HE	0.09008	0.02179	pCi/g	0.07038	N	0	15	0	NOT_IDENTI	0	<input type="checkbox"/>
Niobium-95m	la nr	0.4804	0.06997	pCi/g	0.2181	N	0	15	0	NOT_IDENTI	0	<input type="checkbox"/>
Polonium-212	nr	1.936	0.08402	pCi/g	0.07243	N	238.5	4	1.315	IDENTIFIED	2.412	<input type="checkbox"/>
Polonium-214	nr	1.521	0.09616	pCi/g	0.09173	N	351.8	4	1.535	IDENTIFIED	4.792	<input type="checkbox"/>
Polonium-216	nr	1.936	0.08402	pCi/g	0.07243	N	238.5	4	1.315	IDENTIFIED	2.412	<input type="checkbox"/>
Polonium-218	nr	1.521	0.09616	pCi/g	0.09173	N	351.8	4	1.535	IDENTIFIED	4.792	<input type="checkbox"/>
Potassium-40	✓	22.19	1.018	pCi/g	0.4334	1.00	1461	1	2.052	IDENTIFIED	2.677	<input type="checkbox"/>
Radium-224	int	5.271	0.571	pCi/g	0.8238	Y	241.6	1	1.947	IDENTIFIED	10.45	<input type="checkbox"/> ui
Radium-226	✓	1.197	0.08321	pCi/g	0.09161	Y	609.4	4	1.547	IDENTIFIED	5.733	<input type="checkbox"/>
Radium-228	✓	1.968	0.171	pCi/g	0.1702	0.500	911.5	3	1.71	IDENTIFIED	6.596	<input type="checkbox"/>
Sodium-24	HE	3.25E+07	1.26E+08	pCi/g	0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>
Strontium-85	la	0.1074	0.01795	pCi/g	0.06055	Y	0	15	0	NOT_IDENTI	0	<input checked="" type="checkbox"/> ui Data rejected due to low abundance.
Thallium-200	HE	5655	5702	pCi/g	0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208	✓	0.6801	0.04227	pCi/g	0.0467	0.080	583.3	1	1.631	IDENTIFIED	5.203	<input type="checkbox"/>
Thorium-228	nr	1.976	0.08575	pCi/g	0.07392	N	238.5	4	1.315	IDENTIFIED	2.412	<input type="checkbox"/>
Thorium-230	nr	1.197	0.08321	pCi/g	0.09161	N	609.4	4	1.547	IDENTIFIED	5.733	<input type="checkbox"/>
Thorium-232	nr	1.968	0.171	pCi/g	0.1702	N	911.5	3	1.71	IDENTIFIED	6.596	<input type="checkbox"/>
Thorium-234	✓	2.423	0.7365	pCi/g	1.666	2.00	63.27	2	1.208	IDENTIFIED	29.11	<input type="checkbox"/>
Tin-126	int nr	0.4738	0.05038	pCi/g	0.09283	N	87.23	3	1.635	IDENTIFIED	9.661	<input type="checkbox"/>
Titanium-44	la nr	0.4515	0.02747	pCi/g	0.06971	N	0	15	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium		7.3288	2.19E-06	ug/g	2.4802	N	0					<input type="checkbox"/>
Uranium-234	nr	1.197	0.08321	pCi/g	0.09161	N	609.4	4	1.547	IDENTIFIED	5.733	<input type="checkbox"/>
Uranium-238	HE	2.423	0.7365	pCi/g	1.666	N	63.27	2	1.208	IDENTIFIED	29.11	<input type="checkbox"/>
Zirconium-97		1.01E+09	1.74E+08	pCi/g	0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>

*** = 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
245385010	15-JAN-10 12:00	04-FEB-10 22:54	20.5	SAMPLE	LOAD	I	LANL	LANL010041GEL	N	RCSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228	nr	1.797	0.1599	pCi/g	0.137	N	911.8	3	1.621	IDENTIFIED 6.459 <input type="checkbox"/>
Americium-243	int nr	0.4256	0.02962	pCi/g	0.05955	N	74.98	1	1.082	IDENTIFIED 5.669 <input type="checkbox"/>

Annihilation Rad.		0.142	0.02918	pCi/g	0.03295	N	511.3	1	1.903	IDENTIFIED	20.02	<input type="checkbox"/>
Barium-137m	ul	0.1977	0.03086	pCi/g	0.0458	N	662.1	2	1.342	IDENTIFIED	14.78	<input type="checkbox"/>
Beryllium-7	HE	0.4337	0.168	pCi/g	0.3842	N	477.9	1	1.113	IDENTIFIED	38.43	<input type="checkbox"/>
Bismuth-211	int	4.751	0.278	pCi/g	0.2636	Y	352.1	4	1.229	IDENTIFIED	3.372	<input type="checkbox"/> ui
Bismuth-212	nr	1.28	0.1878	pCi/g	0.3419	N	727.9	1	1.152	IDENTIFIED	13.53	<input type="checkbox"/>
Bismuth-214	✓	1.394	0.09951	pCi/g	0.07945	0.200	609.7	4	1.465	IDENTIFIED	4.473	<input type="checkbox"/>
Bromine-77	HE	21.62	18.06	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>
Cadmium-109	int	4.218	0.4472	pCi/g	0.8688	Y	87.3	3	1.278	IDENTIFIED	9.511	<input type="checkbox"/> ui
Cadmium-115	HE	18.52	21.15	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>
Cerium-143		8296	1367	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>
Cesium-134	la	0.0958	0.02802	pCi/g	0.07133	0.100	0	16	0	FAIL_ABUND	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Cesium-137	✓	0.209	0.03262	pCi/g	0.04842	0.100	662.1	2	1.342	IDENTIFIED	14.78	<input type="checkbox"/>
Gold-195	HE	0.3817	0.1098	pCi/g	0.2882	N	0	16	0	FAIL_ABUND	0	<input type="checkbox"/>
Gross Gamma		10.87	1.353	pCi/g	4.662	N	0					<input type="checkbox"/>
Iodine-133	HE	93620	1.63E+05	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>
Krypton-85	la nr	19.17	3.181	pCi/g	10.47	N	0	16	0	NOT_IDENTI	0	<input type="checkbox"/>
Lead-212	✓	1.854	0.1086	pCi/g	0.06902	0.100	238.7	4	1.128	IDENTIFIED	2.45	<input type="checkbox"/>
Lead-214	✓	1.653	0.1059	pCi/g	0.08475	0.100	352.1	4	1.229	IDENTIFIED	3.372	<input type="checkbox"/>
Lutetium-177	HE	4.607	1.044	pCi/g	2.686	N	0	16	0	FAIL_ABUND	0	<input type="checkbox"/>
Neptunium-237	ul	1.208	0.1786	pCi/g	0.2512	N	87.3	3	1.278	IDENTIFIED	9.511	<input type="checkbox"/>
Niobium-97	HE	6.84E+06	7.47E+06	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>
Polonium-212	nr	1.854	0.1086	pCi/g	0.06902	N	238.7	4	1.128	IDENTIFIED	2.45	<input type="checkbox"/>
Polonium-214	nr	1.653	0.1059	pCi/g	0.08475	N	352.1	4	1.229	IDENTIFIED	3.372	<input type="checkbox"/>
Polonium-216	nr	1.854	0.1086	pCi/g	0.06902	N	238.7	4	1.128	IDENTIFIED	2.45	<input type="checkbox"/>
Polonium-218	nr	1.653	0.1059	pCi/g	0.08475	N	352.1	4	1.229	IDENTIFIED	3.372	<input type="checkbox"/>
Potassium-40	✓	23.53	1.19	pCi/g	0.3872	1.00	1462	1	1.784	IDENTIFIED	2.562	<input type="checkbox"/>
Protactinium-234m	HE	9.358	2.255	pCi/g	6.799	N	0	16	0	FAIL_ABUND	0	<input type="checkbox"/>
Radium-224	int	4.966	0.5296	pCi/g	0.7852	Y	241.7	1	1.602	IDENTIFIED	9.505	<input type="checkbox"/> ui
Radium-226	✓	1.394	0.09951	pCi/g	0.07945	Y	609.7	4	1.465	IDENTIFIED	4.473	<input type="checkbox"/>
Radium-228	✓	1.797	0.1599	pCi/g	0.137	0.500	911.8	3	1.621	IDENTIFIED	6.459	<input type="checkbox"/>
Strontium-85	la	0.104	0.01726	pCi/g	0.05678	Y	0	16	0	NOT_IDENTI	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Technetium-99m		1.93E+22	0	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-200	HE	3531	5259	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208	✓	0.5813	0.04356	pCi/g	0.04342	0.080	583.7	1	1.398	IDENTIFIED	5.449	<input type="checkbox"/>
Thorium-228	nr	1.893	0.1108	pCi/g	0.07044	N	238.7	4	1.128	IDENTIFIED	2.45	<input type="checkbox"/>
Thorium-230	nr	1.394	0.09951	pCi/g	0.07945	N	609.7	4	1.465	IDENTIFIED	4.473	<input type="checkbox"/>
Thorium-232	nr	1.797	0.1599	pCi/g	0.137	N	911.8	3	1.621	IDENTIFIED	6.459	<input type="checkbox"/>
Thorium-234	✓	4.121	0.7803	pCi/g	1.272	2.00	63.67	2	0.9318	IDENTIFIED	16.82	<input type="checkbox"/>
Tin-126	int nr	0.4112	0.0436	pCi/g	0.08496	N	87.3	3	1.278	IDENTIFIED	9.511	<input type="checkbox"/>
Titanium-44	la nr	0.4139	0.02464	pCi/g	0.06001	N	0	16	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium		12.356	2.32E-06	ug/g	1.8945	N	0					<input type="checkbox"/>
Uranium-231	HE	4.09	1.222	pCi/g	3.081	N	0	16	0	FAIL_ABUND	0	<input type="checkbox"/>
Uranium-234	nr	1.394	0.09951	pCi/g	0.07945	N	609.7	4	1.465	IDENTIFIED	4.473	<input type="checkbox"/>
Uranium-238	nr	4.121	0.7803	pCi/g	1.272	N	63.67	2	0.9318	IDENTIFIED	16.82	<input type="checkbox"/>
Zirconium-97	HE	1.39E+08	1.46E+08	pCi/g	0	N	0	16	0	SHORT_HLIF	0	<input type="checkbox"/>

*** = 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
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245385011	15-JAN-10 12:00	04-FEB-10 22:55	20.5	SAMPLE	LOAD	1	LANL	LANL010041GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy	*** FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 nr	2.053	0.1743	pCi/g	0.1872	N	910.9	3 1.389	IDENTIFIED 6.315	□	
Americium-243 int nr	0.428	0.02385	pCi/g	0.03316	N	74.89	1 0.821	IDENTIFIED 3.609	□	
Annihilation Rad.	0.174	0.03118	pCi/g	0.03372	N	510.6	1 1.461	IDENTIFIED 17.26	□	
Bismuth-210 HE	0.8529	0.2387	pCi/g	0.4614	N	46.65	3 0.6159	IDENTIFIED 27.58	□	
Bismuth-211 int	4.166	0.2575	pCi/g	0.2361	Y	351.7	4 1.078	IDENTIFIED 4.227	□ ui	
Bismuth-212 nr	1.129	0.2087	pCi/g	0.3822	N	727	1 1.367	IDENTIFIED 17.5	□	
Bismuth-214 ✓	1.461	0.1149	pCi/g	0.08814	0.200	609	4 1.229	IDENTIFIED 5.194	□	
Cadmium-109 int	4.426	0.3279	pCi/g	0.5415	Y	87.22	3 1.015	IDENTIFIED 5.748	□ ui	
Cadmium-115 HE	12.97	23.09	pCi/g	0	N	0	10 0	SHORT_HLIF 0	□	
Cerium-143	4324	925	pCi/g	0	N	0	10 0	SHORT_HLIF 0	□	
Curium-243 HE	0.146	0.03773	pCi/g	0.07926	N	0	10 0	FAIL_ABUND 0	□	
Europium-155 HE	0.1633	0.0422	pCi/g	0.08511	N	104.9	1 1.454	IDENTIFIED 25.32	□	
Gold-195 HE	0.3512	0.09251	pCi/g	0.1947	N	0	10 0	FAIL_ABUND 0	□	
Gross Gamma	10.21	1.198	pCi/g	3.764	N	0			□	
Iodine-135	6.37E+20	0	pCi/g	0	N	0	10 0	SHORT_HLIF 0	□	
Lead-210 HE	0.8529	0.2387	pCi/g	0.4614	N	46.65	3 0.6159	IDENTIFIED 27.58	□	
Lead-212 ✓	1.902	0.104	pCi/g	0.0599	0.100	238.5	4 0.8682	IDENTIFIED 2.279	□	
Lead-214 ✓	1.449	0.09723	pCi/g	0.08237	0.100	351.7	4 1.078	IDENTIFIED 4.227	□	
Lutetium-177 la nr	5.659	0.9297	pCi/g	2.47	N	0	10 0	FAIL_ABUND 0	□	
Neptunium-237 int nr	1.267	0.161	pCi/g	0.1498	N	87.22	3 1.015	IDENTIFIED 5.748	□	
Polonium-210 HE	0.8529	0.2381	pCi/g	0.4614	N	46.65	3 0.6159	IDENTIFIED 27.58	□	
Polonium-212 nr	1.902	0.104	pCi/g	0.0599	N	238.5	4 0.8682	IDENTIFIED 2.279	□	
Polonium-214 nr	1.449	0.09723	pCi/g	0.08237	N	351.7	4 1.078	IDENTIFIED 4.227	□	
Polonium-216 nr	1.902	0.104	pCi/g	0.0599	N	238.5	4 0.8682	IDENTIFIED 2.279	□	
Polonium-218 nr	1.449	0.09723	pCi/g	0.08237	N	351.7	4 1.078	IDENTIFIED 4.227	□	
Potassium-40 ✓	21.83	1.155	pCi/g	0.3773	1.00	1460	1 2.109	IDENTIFIED 3.129	□	
Radium-224 int	5.326	0.6012	pCi/g	0.6836	Y	241.3	1 1.71	IDENTIFIED 10.38	□ ui	
Radium-226 ✓	1.461	0.1149	pCi/g	0.08814	Y	609	4 1.229	IDENTIFIED 5.194	□	
Radium-228 ✓	2.053	0.1743	pCi/g	0.1872	0.500	910.9	3 1.389	IDENTIFIED 6.315	□	
Rhenium-188 HE	0.2044	0.08192	pCi/g	0.1756	N	154	1 1.478	IDENTIFIED 39.82	□	
Sodium-24 HE	2.87E+07	1.31E+08	pCi/g	0	N	0	10 0	SHORT_HLIF 0	□	
Technetium-99m	3.05E+21	0	pCi/g	0	N	0	10 0	SHORT_HLIF 0	□	
Thallium-208 ✓	0.65	0.05306	pCi/g	0.05082	0.080	583	1 1.322	IDENTIFIED 6.081	□	
Thorium-228 nr	1.942	0.1062	pCi/g	0.06114	N	238.5	4 0.8682	IDENTIFIED 2.279	□	
Thorium-230 nr	1.461	0.1149	pCi/g	0.08814	N	609	4 1.229	IDENTIFIED 5.194	□	
Thorium-232 nr	2.053	0.1743	pCi/g	0.1872	N	910.9	3 1.389	IDENTIFIED 6.315	□	
Thorium-234 ✓	1.542	0.3276	pCi/g	0.5486	2.00	63.38	2 0.9076	IDENTIFIED 19.32	□	
Tin-126 int nr	0.4316	0.03197	pCi/g	0.05121	N	87.22	3 1.015	IDENTIFIED 5.748	□	
Titanium-44 la nr	0.4455	0.02249	pCi/g	0.0301	N	0	10 0	FAIL_ABUND 0	□	
Total Uranium	4.6317	9.75E-07	ug/g	0.81798	N	0			□	
Uranium-234 nr	1.461	0.1149	pCi/g	0.08814	N	609	4 1.229	IDENTIFIED 5.194	□	
Uranium-238 nr	1.542	0.3276	pCi/g	0.5486	N	63.38	2 0.9076	IDENTIFIED 19.32	□	
Zirconium-97	4.89E+08	1.59E+08	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
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245396001	21-JAN-10 12:00	04-FEB-10 22:55	14.5	SAMPLE	LOAD	1	LANL	LANL010041GEL	N	RGSP	
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 nr	1.778	0.1502	pCi/g	0.1382	N	911.3 3	2.077	IDENTIFIED	5.245	□	
Americium-243 int nr	0.3887	0.0285	pCi/g	0.05687	N	74.79 1	1.224	IDENTIFIED	6.092	□	
Annihilation Rad.	0.1102	0.02174	pCi/g	0.02952	N	510.8 1	2.216	IDENTIFIED	19.08	□	
Bismuth-211 int	4.034	0.2787	pCi/g	0.2164	Y	352 4	1.471	IDENTIFIED	3.731	□	ui
Bismuth-212 la nr	1.178	0.1707	pCi/g	0.4241	N	0 14 0		FAIL_ABUND	0	□	
Bismuth-214 ✓	1.183	0.08319	pCi/g	0.07511	0.200	609.4 4	1.627	IDENTIFIED	3.957	□	
Cadmium-109 int	4.308	0.405	pCi/g	0.7656	Y	87.17 3	1.398	IDENTIFIED	8.142	□	ui
Cerium-143	628.7	88.81	pCi/g	0	N	0 14 0		SHORT_HLIF	0	□	
Cesium-134 la	0.1059	0.02174	pCi/g	0.05531	0.100	0 14 0		FAIL_ABUND	0	□	UI Data rejected due to low abundance.
Cesium-135 HE	0.2119	0.06354	pCi/g	0.19	N	0 14 0		NOT_IDENTI	0	□	
Gross Gamma	11.31	1.17	pCi/g	2.148	N	0				□	
Krypton-85 la nr	25.67	2.995	pCi/g	9.307	N	0 14 0		NOT_IDENTI	0	□	
Lead-212 ✓	1.852	0.1283	pCi/g	0.06289	0.100	238.6 4	1.284	IDENTIFIED	2.077	□	
Lead-214 ✓	1.403	0.1036	pCi/g	0.07539	0.100	352 4	1.471	IDENTIFIED	3.731	□	
Lutetium-177 la nr	2.744	0.4933	pCi/g	1.302	N	0 14 0		FAIL_ABUND	0	□	
Neptunium-237 int nr	1.245	0.1737	pCi/g	0.2243	N	87.17 3	1.398	IDENTIFIED	8.142	□	
Niobium-95 HE	0.06448	0.01659	pCi/g	0.05044	N	0 14 0		NOT_IDENTI	0	□	
Niobium-95m la nr	0.2766	0.05241	pCi/g	0.1572	N	0 14 0		NOT_IDENTI	0	□	
Niobium-97 HE	25040	16680	pCi/g	0	N	0 14 0		SHORT_HLIF	0	□	
Polonium-212 nr	1.852	0.1283	pCi/g	0.06289	N	238.6 4	1.284	IDENTIFIED	2.077	□	
Polonium-214 nr	1.403	0.1036	pCi/g	0.07539	N	352 4	1.471	IDENTIFIED	3.731	□	
Polonium-216 nr	1.852	0.1283	pCi/g	0.06289	N	238.6 4	1.284	IDENTIFIED	2.077	□	
Polonium-218 nr	1.403	0.1036	pCi/g	0.07539	N	352 4	1.471	IDENTIFIED	3.731	□	
Potassium-40 ✓	39.64	1.908	pCi/g	0.3371	1.00	1461 1	2.631	IDENTIFIED	1.477	□	
Protactinium-234m HE	6.804	1.659	pCi/g	5.608	N	0 14 0		NOT_IDENTI	0	□	
Radium-224 int	5.04	0.5291	pCi/g	0.7149	Y	241.6 1	1.804	IDENTIFIED	8.42	□	ui
Radium-226 ✓	1.183	0.08319	pCi/g	0.07511	Y	609.4 4	1.627	IDENTIFIED	3.957	□	
Radium-228 ✓	1.778	0.1502	pCi/g	0.1382	0.500	911.3 3	2.077	IDENTIFIED	5.245	□	
Strontium-85 la	0.1308	0.01526	pCi/g	0.04741	Y	0 14 0		NOT_IDENTI	0	□	UI Data rejected due to low abundance.
Thallium-200 HE	75.28	99.99	pCi/g	0	N	0 14 0		SHORT_HLIF	0	□	
Thallium-208 ✓	0.6051	0.04213	pCi/g	0.03657	0.080	583.2 1	1.778	IDENTIFIED	4.368	□	
Thorium-228 nr	1.879	0.1301	pCi/g	0.06381	N	238.6 4	1.284	IDENTIFIED	2.077	□	
Thorium-230 nr	1.183	0.08319	pCi/g	0.07511	N	609.4 4	1.627	IDENTIFIED	3.957	□	
Thorium-232 nr	1.778	0.1502	pCi/g	0.1382	N	911.3 3	2.077	IDENTIFIED	5.245	□	
Thorium-234 ✓	2.056	0.588	pCi/g	1.301	2.00	63.24 2	1.099	IDENTIFIED	27.24	□	
Tin-126 int nr	0.4239	0.03984	pCi/g	0.07563	N	87.17 3	1.398	IDENTIFIED	8.142	□	
Titanium-44 la nr	0.3905	0.02256	pCi/g	0.05145	N	0 14 0		FAIL_ABUND	0	□	
Total Uranium	6.1491	1.75E-06	ug/g	1.9376	N	0				□	
Uranium-234 nr	1.183	0.08319	pCi/g	0.07511	N	609.4 4	1.627	IDENTIFIED	3.957	□	
Uranium-238 HE	2.056	0.588	pCi/g	1.301	N	63.24 2	1.099	IDENTIFIED	27.24	□	
Zirconium-97	2.46E+06	3.96E+05	pCi/g	0	N	0 14 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 Quas	Zero?	queue
245396002	21-JAN-10 12:00	05-FEB-10 18:59	15.3	SAMPLE	LOAD	1	LANL	LANL010041GEL	N	RGSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 nr	1.802	0.2177	pCi/g	0.266	N	911.6 3	1.548	IDENTIFIED 10.6	☐	
Americium-243 int nr	0.4243	0.05663	pCi/g	0.1327	N	74.9 1	1.19	IDENTIFIED 12.68	☐	
Annihilation Rad. HE	0.1351	0.0563	pCi/g	0.06741	N	511.4 1	1.966	IDENTIFIED 41.47	☐	
Barium-137m	0.4111	0.06148	pCi/g	0.07534	N	662.3 2	1.616	IDENTIFIED 14.38	☐	
Bismuth-211 int	4.391	0.3899	pCi/g	0.4462	Y	352.5 4	1.376	IDENTIFIED 7.631	☐ ui	
Bismuth-214 ✓	1.343	0.1308	pCi/g	0.1568	0.200	609.7 4	1.491	IDENTIFIED 8.4	☐	
Cadmium-109 int	2.593	0.7993	pCi/g	2.151	Y	87.21 3	1.458	IDENTIFIED 30.47	☐ ui	
Cerium-143	442.6	122.6	pCi/g	0	N	0 9 0	SHORT_HLIF	0	☐	
Cesium-134 la	0.1498	0.03248	pCi/g	0.125	0.100	0 9 0	NOT_IDENTI	0	☐ UI	Data rejected due to low abundance.
Cesium-137 ✓	0.4346	0.065	pCi/g	0.07964	0.100	662.3 2	1.616	IDENTIFIED 14.38	☐	
Gross Gamma	10.89	1.788	pCi/g	4.623	N	0			☐	
Krypton-85 HE	20.2	5.689	pCi/g	20.04	N	0 9 0	NOT_IDENTI	0	☐	
Lead-212 ✓	1.87	0.121	pCi/g	0.1139	0.100	239.1 4	1.178	IDENTIFIED 4.026	☐	
Lead-214 ✓	1.527	0.1414	pCi/g	0.1556	0.100	352.5 4	1.376	IDENTIFIED 7.631	☐	
Neptunium-237 HE	0.7481	0.2432	pCi/g	0.6187	N	87.21 3	1.458	IDENTIFIED 30.47	☐	
Polonium-212 nr	1.87	0.121	pCi/g	0.1139	N	239.1 4	1.178	IDENTIFIED 4.026	☐	
Polonium-214 nr	1.527	0.1414	pCi/g	0.1556	N	352.5 4	1.376	IDENTIFIED 7.631	☐	
Polonium-216 nr	1.87	0.121	pCi/g	0.1139	N	239.1 4	1.178	IDENTIFIED 4.026	☐	
Polonium-218 nr	1.527	0.1414	pCi/g	0.1556	N	352.5 4	1.376	IDENTIFIED 7.631	☐	
Potassium-40 ✓	25.6	1.528	pCi/g	0.7156	1.00	1461 1	1.78	IDENTIFIED 3.982	☐	
Protactinium-234m la nr	31.68	5.027	pCi/g	15.94	N	0 9 0	FAIL_ABUND	0	☐	
Radium-224 int	4.62	0.7804	pCi/g	1.297	Y	241.9 1	1.519	IDENTIFIED 16.27	☐ ui	
Radium-226 ✓	1.343	0.1308	pCi/g	0.1568	Y	609.7 4	1.491	IDENTIFIED 8.4	☐	
Radium-228 ✓	1.802	0.2177	pCi/g	0.266	0.500	911.6 3	1.548	IDENTIFIED 10.6	☐	
Sodium-24 HE	2.67E+05	5.07E+05	pCi/g	0	N	0 9 0	SHORT_HLIF	0	☐	
Strontium-85 la	0.1038	0.02922	pCi/g	0.103	Y	0 9 0	NOT_IDENTI	0	☐ UI	Data rejected due to low abundance.
Thallium-200 HE	228.3	364.5	pCi/g	0	N	0 9 0	SHORT_HLIF	0	☐	
Thallium-208 ✓	0.4531	0.0636	pCi/g	0.07519	0.080	583.7 1	1.437	IDENTIFIED 13.28	☐	
Thorium-228 nr	1.899	0.1228	pCi/g	0.1157	N	239.1 4	1.178	IDENTIFIED 4.026	☐	
Thorium-230 nr	1.343	0.1308	pCi/g	0.1568	N	609.7 4	1.491	IDENTIFIED 8.4	☐	
Thorium-232 nr	1.802	0.2177	pCi/g	0.266	N	911.6 3	1.548	IDENTIFIED 10.6	☐	
Thorium-234 ✓	13.57	1.993	pCi/g	3.071	2.00	63.39 2	1.165	IDENTIFIED 11.77	☐	
Tin-126 HE	0.2548	0.07854	pCi/g	0.2288	N	87.21 3	1.458	IDENTIFIED 30.47	☐	
Titanium-44 la nr	0.428	0.04097	pCi/g	0.1111	N	0 9 0	FAIL_ABUND	0	☐	
Total Uranium	40.488	5.93E-06	ug/g	4.5721	N	0			☐	
Uranium-234 nr	1.343	0.1308	pCi/g	0.1568	N	609.7 4	1.491	IDENTIFIED 8.4	☐	
Uranium-238 nr	13.57	1.993	pCi/g	3.071	N	63.39 2	1.165	IDENTIFIED 11.77	☐	
Zirconium-97	3.36E+06	1.67E+06	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
245396003	21-JAN-10 12:00	05-FEB-10 19:00	15.3	SAMPLE	LOAD	1	LANL	LANL010041GEL	N	RGSP
Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act Rpt Err(%)	Qual	Qual Comment
Actinium-228 nr	1.381	0.1567	pCi/g	0.1868	N	911.5 3	1.911	IDENTIFIED 9.217	☐	
Americium-243 int nr	0.3375	0.04198	pCi/g	0.1049	N	74.82 1	1.171	IDENTIFIED 11.75	☐	
Annihilation Rad.	0.1508	0.0306	pCi/g	0.03939	N	510.6 1	1.963	IDENTIFIED 19.66	☐	
Barium-137m	0.4945	0.0406	pCi/g	0.05712	N	661.7 2	1.617	IDENTIFIED 6.292	☐	

Bismuth-211 int	3.322	0.2654	pCi/g 0.2954	Y	351.9	4	1.354	IDENTIFIED	5.478	<input type="checkbox"/>	ui
Bismuth-212 nr	1.259	0.1978	pCi/g 0.3935	N	727.5	1	1.812	IDENTIFIED	14.53	<input type="checkbox"/>	
Bismuth-214 ✓	0.9535	0.08121	pCi/g 0.1006	0.200	609.3	4	1.715	IDENTIFIED	6.225	<input type="checkbox"/>	
Cerium-141 HE	0.1486	0.03496	pCi/g 0.1162	N	0	15	0	NOT_IDENTI	0	<input type="checkbox"/>	
Cerium-143	738.2	125.5	pCi/g 0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>	
Cesium-134 la	0.1081	0.02578	pCi/g 0.07035	0.100	0	15	0	FAIL_ABUND	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Cesium-137 ✓	0.5227	0.04294	pCi/g 0.06038	0.100	661.7	2	1.617	IDENTIFIED	6.292	<input type="checkbox"/>	
Gadolinium-153 la nr	0.4193	0.06495	pCi/g 0.1705	N	0	15	0	FAIL_ABUND	0	<input type="checkbox"/>	
Gold-195 la nr	1.221	0.1891	pCi/g 0.5037	N	0	15	0	FAIL_ABUND	0	<input type="checkbox"/>	
Gross Gamma	13.19	1.808	pCi/g 3.79	N	0					<input type="checkbox"/>	
Krypton-85 la nr	23.29	3.81	pCi/g 12.44	N	0	15	0	NOT_IDENTI	0	<input type="checkbox"/>	
Lead-212 ✓	1.528	0.1112	pCi/g 0.08941	0.100	238.7	4	1.233	IDENTIFIED	3.043	<input type="checkbox"/>	
Lead-214 ✓	1.156	0.09713	pCi/g 0.1029	0.100	351.9	4	1.354	IDENTIFIED	5.478	<input type="checkbox"/>	
Lutetium-177 HE	2.035	0.7033	pCi/g 1.905	N	209.3	1	1.132	IDENTIFIED	34.09	<input type="checkbox"/>	
Niobium-95 la nr	0.2269	0.02793	pCi/g 0.09028	N	0	15	0	NOT_IDENTI	0	<input type="checkbox"/>	
Niobium-97	1.82E+05	64130	pCi/g 0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>	
Polonium-212 nr	1.528	0.1112	pCi/g 0.08941	N	238.7	4	1.233	IDENTIFIED	3.043	<input type="checkbox"/>	
Polonium-214 nr	1.156	0.09713	pCi/g 0.1029	N	351.9	4	1.354	IDENTIFIED	5.478	<input type="checkbox"/>	
Polonium-216 nr	1.528	0.1112	pCi/g 0.08941	N	238.7	4	1.233	IDENTIFIED	3.043	<input type="checkbox"/>	
Polonium-218 nr ^{at 4/12/10}	1.156	0.09713	pCi/g 0.1029	N	351.9	4	1.354	IDENTIFIED	5.478	<input type="checkbox"/>	
Potassium-40 FV	24.72	1.304	pCi/g 0.44	1.00	1461	1	2.595	IDENTIFIED	2.617	<input type="checkbox"/>	
Protactinium-234m la nr	47.7	4.587	pCi/g 12.46	N	0	15	0	FAIL_ABUND	0	<input type="checkbox"/>	
Radium-224 int	3.785	0.5767	pCi/g 1.016	Y	241.7	1	1.715	IDENTIFIED	13.88	<input type="checkbox"/>	ui
Radium-226 ✓	0.9535	0.08121	pCi/g 0.1006	Y	609.3	4	1.715	IDENTIFIED	6.225	<input type="checkbox"/>	
Radium-228 ✓	1.381	0.1567	pCi/g 0.1868	0.500	911.5	3	1.911	IDENTIFIED	9.217	<input type="checkbox"/>	
Rhenium-183 HE	0.2346	0.07586	pCi/g 0.2029	N	0	15	0	FAIL_ABUND	0	<input type="checkbox"/>	
Strontium-85 la	0.1197	0.01957	pCi/g 0.0639	Y	0	15	0	NOT_IDENTI	0	<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Technetium-99m	1.10E+16	0	pCi/g 0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>	
Thallium-208 ✓	0.4431	0.04256	pCi/g 0.05175	0.080	583.2	1	1.626	IDENTIFIED	7.929	<input type="checkbox"/>	
Thorium-228 nr	1.552	0.1129	pCi/g 0.09078	N	238.7	4	1.233	IDENTIFIED	3.043	<input type="checkbox"/>	
Thorium-230 nr	0.9535	0.08121	pCi/g 0.1006	N	609.3	4	1.715	IDENTIFIED	6.225	<input type="checkbox"/>	
Thorium-232 nr	1.381	0.1567	pCi/g 0.1868	N	911.5	3	1.911	IDENTIFIED	9.217	<input type="checkbox"/>	
Thorium-234 ✓	34.24	3.283	pCi/g 2.38	2.00	63.18	2	0.9993	IDENTIFIED	4.028	<input type="checkbox"/>	
Titanium-44 la nr	0.3081	0.02749	pCi/g 0.07758	N	0	15	0	FAIL_ABUND	0	<input type="checkbox"/>	
Total Uranium	102.28	9.77E-06	ug/g 3.5438	N	0					<input type="checkbox"/>	
Tungsten-181 HE	1.073	0.22	pCi/g 0.7385	N	0	15	0	NOT_IDENTI	0	<input type="checkbox"/>	
Uranium-231 HE	4.152	1.399	pCi/g 1.857	N	94.43	1	1.258	IDENTIFIED	33.39	<input type="checkbox"/>	
Uranium-234 nr	0.9535	0.08121	pCi/g 0.1006	N	609.3	4	1.715	IDENTIFIED	6.225	<input type="checkbox"/>	
Uranium-235 ✓	0.9269	0.1924	pCi/g 0.3561	0.500	143.9	1	1.417	IDENTIFIED	18.79	<input type="checkbox"/>	
Uranium-238 nr	34.24	3.283	pCi/g 2.38	N	63.18	2	0.9993	IDENTIFIED	4.028	<input type="checkbox"/>	
Zirconium-97	6.50E+06	1.11E+06	pCi/g 0	N	0	15	0	SHORT_HLIF	0	<input type="checkbox"/>	

*** = 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
245396004	21-JAN-10 12:00	05-FEB-10 19:14	15.3	SAMPLE	LOAD	I	LANL	LANL01004IGEL	N	RCSP

Name	Result	Uncert.	Units	MDA	RDL	Energy ***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Actinium-228 nr	1.541	0.1687	pCi/g	0.2182	N	911.7	3	1.732	IDENTIFIED	9.24	<input type="checkbox"/>
Americium-243 int nr	0.3813	0.04034	pCi/g	0.08824	N	74.93	1	1.536	IDENTIFIED	9.89	<input type="checkbox"/>

Annihilation Rad.		0.1525	0.03133	pCi/g	0.04515	N	510.8	1	2.398	IDENTIFIED	20.34	<input type="checkbox"/>
Barium-137m	HE	0.08684	0.03811	pCi/g	0.05976	N	662.3	2	1.582	IDENTIFIED	43.79	<input type="checkbox"/>
Bismuth-211	int	3.488	0.2438	pCi/g	0.3149	Y	351.8	4	1.453	IDENTIFIED	6.232	<input type="checkbox"/> ui
Bismuth-212	la nr	1.421	0.228	pCi/g	0.6415	N	0	14	0	FAIL_ABUND	0	<input type="checkbox"/>
Bismuth-214	✓	1.127	0.09143	pCi/g	0.112	0.200	609.5	4	1.617	IDENTIFIED	7.085	<input type="checkbox"/>
Cadmium-109	int	2.509	0.4428	pCi/g	1.349	Y	87.39	3	1.521	IDENTIFIED	17.11	<input type="checkbox"/> ui
Cerium-143		846.1	130.3	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>
Cesium-134	la	0.09067	0.03164	pCi/g	0.08894	0.100	0	14	0	FAIL_ABUND	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Cesium-135	int nr	0.7078	0.1195	pCi/g	0.2291	N	269.7	1	2.318	IDENTIFIED	16.45	<input type="checkbox"/>
Cesium-137	✓	0.0918	0.04029	pCi/g	0.06318	0.100	662.3	2	1.582	IDENTIFIED	43.79	<input type="checkbox"/>
Gold-195	HE	0.4715	0.1212	pCi/g	0.4087	N	0	14	0	FAIL_ABUND	0	<input type="checkbox"/>
Gross Gamma		10.39	1.562	pCi/g	3.867	N	0					<input type="checkbox"/>
Iodine-135	HE	4.60E+15	4.51E+15	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>
Krypton-85	HE	19.13	4.024	pCi/g	13.75	N	0	14	0	NOT_IDENTI	0	<input type="checkbox"/>
Lead-212	✓	1.709	0.0837	pCi/g	0.09158	0.100	238.5	4	1.585	IDENTIFIED	3.274	<input type="checkbox"/>
Lead-214	✓	1.213	0.09053	pCi/g	0.1098	0.100	351.8	4	1.453	IDENTIFIED	6.232	<input type="checkbox"/>
Neptunium-237	int nr	0.724	0.148	pCi/g	0.4026	N	87.39	3	1.521	IDENTIFIED	17.11	<input type="checkbox"/>
Niobium-95m	la nr	0.6085	0.07701	pCi/g	0.2637	N	0	14	0	NOT_IDENTI	0	<input type="checkbox"/>
Polonium-212	nr	1.709	0.0837	pCi/g	0.09158	N	238.5	4	1.585	IDENTIFIED	3.274	<input type="checkbox"/>
Polonium-214	nr	1.213	0.09053	pCi/g	0.1098	N	351.8	4	1.453	IDENTIFIED	6.232	<input type="checkbox"/>
Polonium-216	nr	1.709	0.0837	pCi/g	0.09158	N	238.5	4	1.585	IDENTIFIED	3.274	<input type="checkbox"/>
Polonium-218	nr	1.213	0.09053	pCi/g	0.1098	N	351.8	4	1.453	IDENTIFIED	6.232	<input type="checkbox"/>
Potassium-40	✓	38.25	1.673	pCi/g	0.5282	1.00	1462	1	2.009	IDENTIFIED	2.442	<input type="checkbox"/>
Protactinium-234m	HE	10.58	2.551	pCi/g	9.655	N	0	14	0	NOT_IDENTI	0	<input type="checkbox"/>
Radium-224	int	3.692	0.4972	pCi/g	1.041	Y	241.7	1	1.704	IDENTIFIED	13.15	<input type="checkbox"/> ui
Radium-226	✓	1.127	0.09143	pCi/g	0.112	Y	609.5	4	1.617	IDENTIFIED	7.085	<input type="checkbox"/>
Radium-228	✓	1.541	0.1687	pCi/g	0.2182	0.500	911.7	3	1.732	IDENTIFIED	9.24	<input type="checkbox"/>
Sodium-24	HE	1.89E+05	3.66E+05	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>
Strontium-85	la	0.09829	0.02067	pCi/g	0.07061	Y	0	14	0	NOT_IDENTI	0	<input checked="" type="checkbox"/> UI Data rejected due to low abundance.
Technetium-99m		1.91E+16	0	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>
Thallium-208	✓	0.5046	0.04039	pCi/g	0.05613	0.080	583.4	1	1.419	IDENTIFIED	7.238	<input type="checkbox"/>
Thorium-228	nr	1.735	0.08498	pCi/g	0.09299	N	238.5	4	1.585	IDENTIFIED	3.274	<input type="checkbox"/>
Thorium-230	nr	1.127	0.09142	pCi/g	0.112	N	609.5	4	1.617	IDENTIFIED	7.085	<input type="checkbox"/>
Thorium-232	nr	1.541	0.1687	pCi/g	0.2182	N	911.7	3	1.732	IDENTIFIED	9.24	<input type="checkbox"/>
Thorium-234	✓	4.766	0.9702	pCi/g	1.946	2.00	63.25	2	1.144	IDENTIFIED	18.45	<input type="checkbox"/>
Tin-126	int nr	0.2466	0.04351	pCi/g	0.1469	N	87.39	3	1.521	IDENTIFIED	17.11	<input type="checkbox"/>
Titanium-44	la nr	0.3154	0.02441	pCi/g	0.07824	N	0	14	0	FAIL_ABUND	0	<input type="checkbox"/>
Total Uranium		14.159	2.89E-06	ug/g	2.8974	N	0					<input type="checkbox"/>
Tungsten-181	HE	0.7235	0.1959	pCi/g	0.6312	N	0	14	0	NOT_IDENTI	0	<input type="checkbox"/>
Uranium-234	nr	1.127	0.09142	pCi/g	0.112	N	609.5	4	1.617	IDENTIFIED	7.085	<input type="checkbox"/>
Uranium-238	nr	4.766	0.9702	pCi/g	1.946	N	63.25	2	1.144	IDENTIFIED	18.45	<input type="checkbox"/>
Zirconium-97		2.49E+06	1.15E+06	pCi/g	0	N	0	14	0	SHORT_HLIF	0	<input type="checkbox"/>

*** = Number of isotopes identified with a skyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue				
1202023707		05-FEB-10 19:15	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	28.69	20.69	pCi/g	0	N	0	2	0	SHORT_HLIF	0		<input type="checkbox"/>	

Thallium-200 HE 2.644 3.768 pCi/g 0 N 0 2 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
1202023708	15-JAN-10 12:00	06-FEB-10 13:03	22	DUP	LOAD	1		LANL01004|GEL	N	RCSP

Name	Result	Uncert.	Units	MDA	RDI	Energy	***	FWHM	Comb	Act	Rpt	Err(%)	Qual	Qual Comment
Actinium-228 nr	1.897	0.2104	pCi/g	0.2245	N	911.4	3	2.087	IDENTIFIED	8.896			<input type="checkbox"/>	
Americium-243 int nr	0.4658	0.04067	pCi/g	0.0904	N	74.75	1	1.077	IDENTIFIED	7.721			<input type="checkbox"/>	
Annihilation Rad.	0.1501	0.03748	pCi/g	0.049	N	511	1	1.794	IDENTIFIED	24.46			<input type="checkbox"/>	
Barium-137m HE	0.09577	0.03094	pCi/g	0.06478	N	661.8	2	3.087	IDENTIFIED	31.87			<input type="checkbox"/>	
Bismuth-211 int	4.701	0.3831	pCi/g	0.3457	Y	351.9	4	1.428	IDENTIFIED	5.706			<input type="checkbox"/>	ui
Bismuth-212 HE	1.191	0.3344	pCi/g	0.713	N	0	10	0	FAIL_ABUND	0			<input type="checkbox"/>	
Bismuth-214 ✓	1.4	0.1236	pCi/g	0.1185	0.200	609.3	4	1.681	IDENTIFIED	6.649			<input type="checkbox"/>	
Cadmium-109 int	2.841	0.5216	pCi/g	1.403	Y	87.23	3	1.152	IDENTIFIED	17.75			<input type="checkbox"/>	ui
Cadmium-115 HE	28.46	50.58	pCi/g	0	N	0	10	0	SHORT_HLIF	0			<input type="checkbox"/>	
Cerium-143	35720	5676	pCi/g	0	N	0	10	0	SHORT_HLIF	0			<input type="checkbox"/>	
Cesium-137 pw	0.1012	0.03271	pCi/g	0.06848	0.100	661.8	2	3.087	IDENTIFIED	31.87			<input checked="" type="checkbox"/>	UI Data rejected due to high peak-width.
Gross Gamma	10	1.641	pCi/g	3.199	N	0							<input type="checkbox"/>	
Krypton-85 la nr	31.41	5.069	pCi/g	16.21	N	0	10	0	NOT_IDENTI	0			<input type="checkbox"/>	
Lead-212 ✓	2.056	0.1495	pCi/g	0.1017	0.100	238.6	4	1.258	IDENTIFIED	3.032			<input type="checkbox"/>	
Lead-214 ✓	1.635	0.1399	pCi/g	0.1205	0.100	351.9	4	1.428	IDENTIFIED	5.706			<input type="checkbox"/>	
Lutetium-177 HE	5.141	1.729	pCi/g	4.637	N	0	10	0	FAIL_ABUND	0			<input type="checkbox"/>	
Mercury-203 int	0.1097	0.03918	pCi/g	0.07959	0.100	278.6	1	1.216	IDENTIFIED	35			<input type="checkbox"/>	ui
Neptunium-237 int nr	0.8115	0.1709	pCi/g	0.4278	N	87.23	3	1.152	IDENTIFIED	17.75			<input type="checkbox"/>	
Polonium-212 nr	2.056	0.1495	pCi/g	0.1017	N	238.6	4	1.258	IDENTIFIED	3.032			<input type="checkbox"/>	
Polonium-214 nr	1.635	0.1399	pCi/g	0.1205	N	351.9	4	1.428	IDENTIFIED	5.706			<input type="checkbox"/>	
Polonium-216 nr	2.056	0.1495	pCi/g	0.1017	N	238.6	4	1.258	IDENTIFIED	3.032			<input type="checkbox"/>	
Polonium-218 nr	1.635	0.1399	pCi/g	0.1205	N	351.9	4	1.428	IDENTIFIED	5.706			<input type="checkbox"/>	
Potassium-40 ✓	22.68	1.277	pCi/g	0.5324	1.00	1461	1	2.381	IDENTIFIED	3.274			<input type="checkbox"/>	
Promethium-149	992.8	467.8	pCi/g	0	N	0	10	0	SHORT_HLIF	0			<input type="checkbox"/>	
Radium-224 int	5.869	0.7677	pCi/g	1.157	Y	241.6	1	1.886	IDENTIFIED	11.48			<input type="checkbox"/>	ui
Radium-226 ✓	1.4	0.1236	pCi/g	0.1185	Y	609.3	4	1.681	IDENTIFIED	6.649			<input type="checkbox"/>	
Radium-228 ✓	1.897	0.2104	pCi/g	0.2245	0.500	911.4	3	2.087	IDENTIFIED	8.896			<input type="checkbox"/>	
Sodium-24 HE	4.08E+08	9.32E+08	pCi/g	0	N	0	10	0	SHORT_HLIF	0			<input type="checkbox"/>	
Strontium-85 la	0.1732	0.02796	pCi/g	0.08938	Y	0	10	0	NOT_IDENTI	0			<input checked="" type="checkbox"/>	UI Data rejected due to low abundance.
Thallium-208 ✓	0.5974	0.05292	pCi/g	0.06327	0.080	583.3	1	1.821	IDENTIFIED	7.005			<input type="checkbox"/>	
Thorium-228 nr	2.102	0.1528	pCi/g	0.104	N	238.6	4	1.258	IDENTIFIED	3.032			<input type="checkbox"/>	
Thorium-230 nr	1.4	0.1236	pCi/g	0.1184	N	609.3	4	1.681	IDENTIFIED	6.649			<input type="checkbox"/>	
Thorium-232 nr	1.897	0.2104	pCi/g	0.2245	N	911.4	3	2.087	IDENTIFIED	8.896			<input type="checkbox"/>	
Tin-126 int nr	0.2763	0.05074	pCi/g	0.1373	N	87.23	3	1.152	IDENTIFIED	17.75			<input type="checkbox"/>	
Titanium-44 la nr	0.452	0.03204	pCi/g	0.08236	N	0	10	0	FAIL_ABUND	0			<input type="checkbox"/>	
Total Uranium	3.7789	2.59E-06	ug/g	3.2598	N	0							<input type="checkbox"/>	
Uranium-234 nr	1.4	0.1236	pCi/g	0.1184	N	609.3	4	1.681	IDENTIFIED	6.649			<input type="checkbox"/>	
Zirconium-97	5.08E+09	1.12E+09	pCi/g	0	N	0	10	0	SHORT_HLIF	0			<input type="checkbox"/>	

*** = 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
1202023709		04-FEB-10 21:14	0	LCS	LOAD	1		GEL	N	RCSP

Name	Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Americium-241 ✓	13.42	0.7063	pCi/g	0.6258	0.200	59.52	1	1.301	IDENTIFIED	3.272	□	
Annihilation Rad. HE	0.1351	0.06608	pCi/g	0.09776	N	511.1	1	1.767	IDENTIFIED	48.72	□	
Barium-137m	5.317	0.2624	pCi/g	0.1195	N	662	2	1.725	IDENTIFIED	2.751	□	
Bismuth-211	2.132	0.3962	pCi/g	0.6813	Y	351.9	4	1.204	IDENTIFIED	18.02	□	
Bismuth-214	0.6969	0.1384	pCi/g	0.3519	0.200	0	11	0	FAIL_ABUND	0	□	
Cadmium-109	29.1	2.208	pCi/g	2.415	Y	88.02	2	1.322	IDENTIFIED	5.933	□	
Cesium-137 ✓	5.621	0.2777	pCi/g	0.1264	0.100	662	2	1.725	IDENTIFIED	2.751	□	
Cobalt-57	0.2547	0.04248	pCi/g	0.06539	N	122.2	1	1.314	IDENTIFIED	16.09	□	
Cobalt-60 ✓	6.499	0.3301	pCi/g	0.07216	0.100	1333	1	2.11	IDENTIFIED	2.762	□	
Gross Gamma	25.48	3.756	pCi/g	3.426	N	0					□	
Iodine-123 HE	843.4	1610	pCi/g	0	N	0	11	0	SHORT_HLIF	0	□	
Iodine-133 HE	27.7	41.68	pCi/g	0	N	0	11	0	SHORT_HLIF	0	□	
Lead-212	0.9169	0.135	pCi/g	0.1872	0.100	238.8	4	1.718	IDENTIFIED	13.82	□	
Lead-214	0.7417	0.1392	pCi/g	0.2375	0.100	351.9	4	1.204	IDENTIFIED	18.02	□	
Neptunium-237	4.909	0.6313	pCi/g	1.203	N	0	11	0	NOT_IDENTI	0	□	
Niobium-97 HE	28.16	271	pCi/g	0	N	0	11	0	SHORT_HLIF	0	□	
Polonium-212	0.9169	0.135	pCi/g	0.1872	N	238.8	4	1.718	IDENTIFIED	13.82	□	
Polonium-214	0.7417	0.1392	pCi/g	0.2375	N	351.9	4	1.204	IDENTIFIED	18.02	□	
Polonium-216	0.9169	0.135	pCi/g	0.1872	N	238.8	4	1.718	IDENTIFIED	13.82	□	
Polonium-218	0.7417	0.1392	pCi/g	0.2375	N	351.9	4	1.204	IDENTIFIED	18.02	□	
Radium-224	7.184	0.8948	pCi/g	3.102	Y	0	11	0	NOT_IDENTI	0	□	
Radium-226	0.6969	0.1384	pCi/g	0.3519	Y	0	11	0	FAIL_ABUND	0	□	
Technetium-99m HE	4.90E+08	9.60E+08	pCi/g	0	N	0	11	0	SHORT_HLIF	0	□	
Thallium-208	0.2758	0.06246	pCi/g	0.1254	0.080	583.5	1	1.606	IDENTIFIED	22.19	□	
Thorium-228	0.9251	0.1362	pCi/g	0.1888	N	238.8	4	1.718	IDENTIFIED	13.82	□	
Thorium-230	0.6969	0.1384	pCi/g	0.3519	N	0	11	0	FAIL_ABUND	0	□	
Tin-126	2.887	0.2191	pCi/g	0.2409	N	88.02	2	1.322	IDENTIFIED	5.933	□	
Uranium-234	0.6969	0.1384	pCi/g	0.3519	N	0	11	0	FAIL_ABUND	0	□	
Zirconium-97 HE	4297	3971	pCi/g	0	N	0	11	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
944962	245396004	SAMPLE	05-FEB-10	Protactinium-234m	10.58	2.551	pCi/g	4.861	N
				Radium-224	3.692	0.4972	pCi/g	0.521	Y
				Radium-226	1.127	0.00143	pCi/g	0.05604	Y
				Radium-228	1.541	0.1667	pCi/g	0.1092	0.500
				Sodium-24	1.89E+05	3.86E+05	pCi/g	0	N
				Strontium-85	0.09829	0.02067	pCi/g	0.03533	Y
				Technetium-99m	1.91E+16	0	pCi/g	0	N
				Thallium-208	0.5046	0.04039	pCi/g	0.02808	0.080
				Thorium-234	4.766	0.9702	pCi/g	0.9735	2.00
				Zirconium-97	2.49E+06	1.15E+06	pCi/g	0	N
944962	1202023707	MB	05-FEB-10	Iodine-133	28.69	20.69	pCi/g	0	N
				Polonium-209	5.358	1.82	pCi/g	3.673	N
				Promethium-149	7.792	3.654	pCi/g	6.927	N
944962	1202023708	DUP	06-FEB-10	Bismuth-211	4.701	0.3831	pCi/g	0.173	Y
				Bismuth-214	1.4	0.1236	pCi/g	0.05926	0.200
				Cadmium-109	2.841	0.5216	pCi/g	0.7021	N
				Cadmium-115	28.46	50.58	pCi/g	0	N
				Cerium-143	35720	5676	pCi/g	0	N
				Cesium-134	0.0431	0.02521	pCi/g	0.04253	0.100
				Cesium-137	0.1012	0.03271	pCi/g	0.03426	0.100
				Gross Gamma	10	1.641	pCi/g	1.552	N
				Indium-111	9.232	3.345	pCi/g	5.206	N
				Krypton-85	31.41	5.069	pCi/g	8.109	N
				Lead-212	2.936	0.1495	pCi/g	0.0509	0.100
				Lead-214	1.635	0.1399	pCi/g	0.06027	0.100
				Lutetium-177	5.141	1.729	pCi/g	2.32	N
				Mercury-203	0.1097	0.03918	pCi/g	0.03982	0.100
				Potassium-40	22.68	1.277	pCi/g	0.2664	1.00
				Promethium-149	992.8	467.8	pCi/g	0	N
				Radium-224	5.869	0.7677	pCi/g	0.5787	Y
				Radium-226	1.4	0.1236	pCi/g	0.05926	Y
				Radium-228	1.897	0.2104	pCi/g	0.1123	0.500
				Sodium-24	4.08E+08	9.32E+08	pCi/g	0	N
				Strontium-85	0.1732	0.02796	pCi/g	0.04472	Y
				Thallium-208	0.5974	0.05282	pCi/g	0.03266	0.080
				Thorium-234	1.278	0.871	pCi/g	1.085	2.00
				Zirconium-97	5.08E+09	1.12E+09	pCi/g	0	N

VAX/VMS Nuclide Identification Report Generated 5-FEB-2010 02:53:01.13

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245385005.CNF;1
Sample date        : 15-JAN-2010 12:00:00 Acquisition date : 4-FEB-2010 22:52:40.
Sample ID          : G245385005 Sample quantity : 1.10570E+02 GRAM
Detector name      : GAM11 Detector geometry: CAN
Elapsed live time: 0 04:00:00.00 Elapsed real time: 0 04:00:03.14 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944962 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	46.91*	71	701	0.83	92.68	89	8	4.95E-03	68.7	
2	0	63.57*	209	980	1.03	126.02	122	9	1.45E-02	28.9	
3	3	74.85	999	745	0.98	148.61	142	15	6.94E-02	5.4	2.43E+00
4	3	77.12	1533	622	0.86	153.13	142	15	1.06E-01	3.5	
5	4	84.27*	236	687	1.18	167.45	163	29	1.64E-02	20.0	4.19E+00
6	4	87.27	615	645	1.11	173.45	163	29	4.27E-02	7.9	
7	4	89.89*	414	518	0.94	178.71	163	29	2.88E-02	10.3	
8	4	92.76*	623	559	1.20	184.45	163	29	4.32E-02	8.5	
9	0	128.91*	143	699	0.77	256.80	253	9	9.91E-03	35.1	
10	0	143.93*	110	416	0.83	286.86	284	6	7.61E-03	32.3	
11	0	154.32*	83	580	1.01	307.66	304	8	5.76E-03	53.1	
12	0	185.87*	446	584	1.15	370.80	366	10	3.10E-02	11.8	
13	0	209.42	281	404	1.11	417.94	415	8	1.95E-02	13.7	
14	7	238.69*	2646	338	0.95	476.52	472	16	1.84E-01	2.3	5.57E+00
15	7	241.70	619	504	1.77	482.55	472	16	4.30E-02	10.4	
16	0	270.33	181	382	1.22	539.84	535	10	1.26E-02	21.6	
17	0	277.45	102	279	1.26	554.10	551	7	7.08E-03	28.9	
18	2	295.32*	862	202	1.17	589.85	584	22	5.99E-02	4.5	2.00E+00
19	2	300.16	151	254	1.32	599.54	584	22	1.05E-02	19.4	
20	0	328.28	153	275	1.02	655.82	652	9	1.06E-02	21.2	
21	0	338.51	461	343	1.06	676.31	672	10	3.20E-02	8.8	
22	0	352.07*	1260	320	1.18	703.43	698	11	8.75E-02	4.0	
23	0	409.67	60	228	1.08	818.72	814	9	4.16E-03	47.2	
24	0	463.19	127	203	1.05	925.81	921	10	8.84E-03	22.7	
25	0	510.79*	188	344	1.92	1021.09	1015	17	1.31E-02	26.5	
26	0	583.47*	764	220	1.27	1166.52	1160	14	5.30E-02	5.6	
27	0	609.62*	950	161	1.21	1218.84	1214	12	6.60E-02	4.3	
28	0	662.25	29	144	1.23	1324.17	1319	9	2.01E-03	77.3	
29	0	727.82	153	152	1.44	1455.38	1450	10	1.06E-02	17.2	
30	0	770.10	154	186	4.25	1539.99	1531	20	1.07E-02	23.5	
31	0	795.51	136	79	1.46	1590.82	1585	12	9.42E-03	15.9	
32	0	861.02*	92	116	1.21	1721.91	1716	13	6.39E-03	26.9	
33	0	911.63*	541	115	1.54	1823.17	1816	14	3.76E-02	6.2	
34	0	936.79	113	96	6.53	1873.52	1865	21	7.84E-03	24.4	
35	3	965.44	81	78	2.10	1930.85	1926	19	5.62E-03	25.6	1.22E+00
36	3	969.50*	316	87	1.59	1938.97	1926	19	2.19E-02	8.0	
37	0	1002.13	36	66	0.97	2004.25	1999	9	2.52E-03	43.9	
38	0	1121.42*	206	126	2.17	2242.93	2234	18	1.43E-02	15.1	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1238.76	75	107	1.89	2477.68	2472	11	5.18E-03	29.3	
40	0	1378.86	51	48	1.85	2757.97	2752	12	3.57E-03	30.9	
41	0	1410.52	20	44	0.72	2821.30	2811	12	1.36E-03	72.0	
42	0	1461.61*	1649	19	1.78	2923.51	2914	18	1.15E-01	2.6	
43	0	1496.45	30	16	2.65	2993.20	2988	11	2.05E-03	32.3	
44	1	1588.80	50	35	2.07	3177.94	3173	19	3.47E-03	25.2	4.23E+00
45	1	1593.64*	33	28	2.08	3187.62	3173	19	2.26E-03	35.9	
46	0	1632.29	30	14	1.74	3264.94	3260	11	2.08E-03	31.6	
47	0	1730.98	51	4	0.76	3462.34	3455	15	3.57E-03	16.2	
48	0	1765.55*	200	8	1.89	3531.48	3524	15	1.39E-02	8.1	
49	0	1848.90	27	21	1.76	3698.21	3689	14	1.85E-03	41.4	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 5-FEB-2010 02:53:03

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245385005.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 15-JAN-2010 12:00:00 Acquisition date : 4-FEB-2010 22:52:40
Sample ID         : G245385005 Sample quantity : 110.57 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA11 Detector geometry: CAN
Elapsed live time : 0 04:00:00.00 Elapsed real time: 0 04:00:03.14 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

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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	*	2.141E+01	2.156E+00	3.464E-01	2.995E-02	61.825
CD-109	+	88.03	*	4.262E+00	7.840E-01	6.817E-01	6.464E-02	6.252
SN-126	+	64.28		8.533E-01	5.089E-01	4.453E-01	6.459E-02	1.916
	+	86.94		1.728E+00	7.676E-01	2.785E-01	1.156E-01	6.203
	+	87.57	*	4.155E-01	7.644E-02	6.668E-02	6.290E-03	6.232
BA-137M	+	661.65	*	2.279E-02	3.531E-02	4.351E-02	4.117E-03	0.524
CS-137	+	661.65	*	2.409E-02	3.733E-02	4.599E-02	4.359E-03	0.524
RE-188	+	155.03	*	1.688E-01	1.799E-01	1.899E-01	1.771E-02	0.889
		477.96		-1.364E+00	2.373E+00	3.708E+00	3.996E-01	-0.368
		633.10		1.186E+00	2.116E+00	3.573E+00	3.502E-01	0.332
TL-208	+	277.35		5.446E-01	3.297E-01	4.229E-01	7.497E-02	1.288
	+	510.84		5.013E-01	2.738E-01	1.523E-01	2.065E-02	3.291
	+	583.14	*	5.786E-01	9.010E-02	3.745E-02	4.045E-03	15.449
	+	860.37		6.509E-01	3.568E-01	2.891E-01	3.011E-02	2.251
BI-210	+	46.50	*	1.903E+00	2.622E+00	2.534E+00	2.359E-01	0.751
PB-210	+	46.50	*	1.903E+00	2.622E+00	2.534E+00	2.359E-01	0.751
PO-210	+	46.50	*	1.903E+00	2.621E+00	2.534E+00	2.136E-01	0.751
BI-211		72.87		1.943E+00	1.823E+00	2.956E+00	2.348E-01	0.657
	+	351.07	*	4.215E+00	6.492E-01	2.133E-01	2.814E-02	19.759
PB-212	+	74.81		2.735E+00	4.479E-01	3.186E-01	3.941E-02	8.584
	+	77.11		2.401E+00	2.619E-01	1.826E-01	1.517E-02	13.147
	+	87.30		1.922E+00	4.024E-01	3.090E-01	4.241E-02	6.220
	+	238.63	*	1.934E+00	2.849E-01	6.065E-02	8.494E-03	31.880
	+	300.09		1.708E+00	7.167E-01	7.817E-01	1.253E-01	2.185
PO-212	+	74.81		2.735E+00	4.479E-01	3.186E-01	3.941E-02	8.584
	+	77.11		2.401E+00	2.619E-01	1.826E-01	1.517E-02	13.147
	+	87.30		1.922E+00	4.024E-01	3.090E-01	4.241E-02	6.220
		115.19		6.719E-01	2.212E+00	3.801E+00	3.220E-01	0.177
	+	238.63	*	1.934E+00	2.849E-01	6.065E-02	8.494E-03	31.880
	+	300.09		1.708E+00	7.167E-01	7.817E-01	1.253E-01	2.185
BI-214	+	609.31	*	1.356E+00	1.934E-01	7.708E-02	8.713E-03	17.595
	+	1120.29		1.511E+00	4.834E-01	3.198E-01	3.454E-02	4.725
	+	1764.49		2.004E+00	3.652E-01	2.096E-01	1.727E-02	9.560
PB-214	+	74.81		4.712E+00	7.236E-01	5.489E-01	6.027E-02	8.584

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	77.11		4.115E+00	5.476E-01	3.130E-01	3.529E-02	13.147
	+	87.30		3.292E+00	6.567E-01	5.293E-01	6.435E-02	6.220
	+	241.98		2.715E+00	6.886E-01	3.654E-01	5.323E-02	7.431
	+	295.21		1.707E+00	3.178E-01	1.369E-01	2.232E-02	12.471
	+	351.92	*	1.466E+00	2.384E-01	7.437E-02	1.052E-02	19.717
	+	74.81		4.712E+00	7.236E-01	5.489E-01	6.027E-02	8.584
	+	77.11		4.115E+00	5.476E-01	3.130E-01	3.529E-02	13.147
	+	87.30		3.292E+00	6.567E-01	5.293E-01	6.435E-02	6.220
	+	241.98		2.715E+00	6.886E-01	3.654E-01	5.323E-02	7.431
	+	295.21		1.707E+00	3.178E-01	1.369E-01	2.232E-02	12.471
PO-216	+	351.92	*	1.466E+00	2.384E-01	7.437E-02	1.052E-02	19.717
	+	74.81		2.735E+00	4.479E-01	3.186E-01	3.941E-02	8.584
	+	77.11		2.401E+00	2.619E-01	1.826E-01	1.517E-02	13.147
	+	87.30		1.922E+00	4.024E-01	3.090E-01	4.241E-02	6.220
	+	238.63	*	1.934E+00	2.849E-01	6.065E-02	8.494E-03	31.880
	+	300.09		1.708E+00	7.167E-01	7.817E-01	1.253E-01	2.185
	+	74.81		4.712E+00	7.236E-01	5.489E-01	6.027E-02	8.584
	+	77.11		4.115E+00	5.476E-01	3.130E-01	3.529E-02	13.147
	+	87.30		3.292E+00	6.567E-01	5.293E-01	6.435E-02	6.220
	+	241.98		2.715E+00	6.886E-01	3.654E-01	5.323E-02	7.431
RA-224	+	295.21		1.707E+00	3.178E-01	1.369E-01	2.232E-02	12.471
	+	351.92	*	1.466E+00	2.384E-01	7.437E-02	1.052E-02	19.717
	+	240.98	*	5.149E+00	1.273E+00	6.904E-01	9.247E-02	7.457
	+	609.31	*	1.356E+00	1.934E-01	7.708E-02	8.713E-03	17.595
	+	1120.29		1.511E+00	4.834E-01	3.198E-01	3.454E-02	4.725
	+	1764.49		2.004E+00	3.652E-01	2.096E-01	1.727E-02	9.560
	+	338.32		1.699E+00	7.828E-01	2.521E-01	1.073E-01	6.740
	+	911.07	*	1.810E+00	3.155E-01	1.428E-01	1.738E-02	12.676
	+	969.11		1.859E+00	5.323E-01	2.441E-01	5.786E-02	7.613
	+	338.32		1.699E+00	7.828E-01	2.521E-01	1.073E-01	6.740
RA-228	+	911.07	*	1.810E+00	3.155E-01	1.428E-01	1.738E-02	12.676
	+	969.11		1.859E+00	5.323E-01	2.441E-01	5.786E-02	7.613
	+	74.81		2.791E+00	3.767E-01	3.251E-01	2.660E-02	8.584
	+	77.11		2.450E+00	2.673E-01	1.864E-01	1.549E-02	13.147
	+	87.30		1.962E+00	3.608E-01	3.154E-01	2.964E-02	6.220
	+	238.63	*	1.973E+00	2.907E-01	6.190E-02	8.669E-03	31.881
	+	300.09		1.743E+00	1.253E+00	7.978E-01	4.828E-01	2.185
	+	609.31	*	1.356E+00	1.934E-01	7.708E-02	8.713E-03	17.595
	+	1120.29		1.511E+00	4.834E-01	3.198E-01	3.454E-02	4.725
	+	1764.49		2.004E+00	3.652E-01	2.096E-01	1.727E-02	9.560
TH-232	+	338.32		1.699E+00	3.779E-01	2.521E-01	3.399E-02	6.740
	+	911.07	*	1.810E+00	3.155E-01	1.428E-01	1.738E-02	12.676
	+	969.11		1.859E+00	5.323E-01	2.441E-01	5.786E-02	7.613
	+	63.29	*	2.156E+00	1.302E+00	1.163E+00	2.023E-01	1.854
	+	92.38		2.768E+00	6.923E-01	4.434E-01	8.134E-02	6.244
	+	609.31	*	1.356E+00	1.934E-01	7.708E-02	8.713E-03	17.595
	+	1120.29		1.511E+00	4.834E-01	3.198E-01	3.454E-02	4.725
	+	1764.49		2.004E+00	3.652E-01	2.096E-01	1.727E-02	9.560
	+	89.95		3.758E+00	1.399E+00	8.999E-01	2.795E-01	4.176
	+	89.95		3.758E+00	1.399E+00	8.999E-01	2.795E-01	4.176

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	93.35		3.328E+00	1.096E+00	5.307E-01	1.495E-01	6.271
		105.00		5.444E-01	7.091E-01	1.115E+00	3.327E-01	0.488
	+	143.76	*	2.520E-01	1.690E-01	2.161E-01	3.821E-02	1.166
		163.35		-1.745E-02	3.221E-01	5.037E-01	9.850E-02	-0.035
	+	185.71		2.276E-01	5.900E-02	4.543E-02	4.817E-03	5.009
		205.31		3.824E-01	3.940E-01	5.807E-01	1.195E-01	0.659
NP-237	+	86.50	*	1.220E+00	3.373E-01	1.974E-01	4.467E-02	6.183
		95.87		-5.182E-01	6.393E-01	8.566E-01	2.121E-01	-0.605
U-238	+	63.29	*	2.156E+00	1.302E+00	1.163E+00	2.023E-01	1.854
	+	92.38		2.768E+00	5.344E-01	4.434E-01	4.060E-02	6.244
AM-243	+	74.67	*	4.434E-01	5.964E-02	5.177E-02	4.190E-03	8.564
	+	86.72		4.576E+01	8.417E+00	7.389E+00	6.894E-01	6.193
		117.66		-2.340E+00	2.367E+00	3.890E+00	3.291E-01	-0.602
		142.18		-2.540E+00	1.271E+01	1.855E+01	1.654E+00	-0.137
ANH-511	+	511.00	*	1.083E-01	5.845E-02	3.292E-02	3.520E-03	3.290

---- 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	*	-1.154E-01	2.490E-01	3.915E-01	4.430E-02	-0.295
NA-22		1274.54	*	-1.407E-03	2.952E-02	4.780E-02	3.926E-03	-0.029
NA-24		1368.53	*	-3.313E+01	2.952E-02	Half-Life too short		
AL-26		1129.67		-6.963E-02	1.273E+00	1.889E+00	1.596E-01	-0.037
		1808.65	*	-2.812E-03	2.178E-02	3.520E-02	2.873E-03	-0.080
TI-44		67.85		-3.530E-03	2.933E-02	4.249E-02	3.220E-03	-0.083
	+	78.38	*	4.431E-01	4.833E-02	4.602E-02	3.879E-03	9.629
SC-46		889.25	*	1.729E-02	2.640E-02	4.633E-02	4.564E-03	0.373
	+	1120.51		2.705E-01	8.464E-02	1.047E-01	8.926E-03	2.584
V-48		944.10		-3.812E-01	8.411E-01	1.156E+00	1.119E-01	-0.330
		983.50	*	5.189E-02	5.704E-02	1.013E-01	9.608E-03	0.512
		1312.09		-2.590E-02	6.890E-02	1.075E-01	8.865E-03	-0.241
CR-51		320.08	*	-2.279E-01	2.981E-01	4.545E-01	6.596E-02	-0.501
MN-52		744.21		2.692E-01	3.273E-01	5.564E-01	5.406E-02	0.484
		848.13		-5.129E+00	9.103E+00	1.472E+01	1.451E+00	-0.348
	+	935.52		1.445E+00	7.197E-01	6.694E-01	6.499E-02	2.158
		1246.25		-3.402E+00	9.509E+00	1.458E+01	1.190E+00	-0.233
		1333.61		7.295E-01	6.945E+00	1.119E+01	9.245E-01	0.065
		1434.06	*	8.202E-02	3.286E-01	5.434E-01	4.553E-02	0.151
MN-54		834.83	*	1.708E-02	2.748E-02	4.793E-02	4.720E-03	0.356
CO-56		846.75	*	5.985E-04	2.807E-02	4.735E-02	4.665E-03	0.013
		977.42		-1.150E+00	2.045E+00	3.248E+00	3.091E-01	-0.354
		1037.82		-1.364E-01	2.111E-01	3.299E-01	3.166E-02	-0.413
		1175.09		-5.107E-01	1.513E+00	2.408E+00	1.936E-01	-0.212
	+	1238.25		1.613E-01	9.541E-02	1.333E-01	1.122E-02	1.210
		1360.21		-3.823E-02	6.744E-01	1.083E+00	8.991E-02	-0.035
		1771.40		4.773E-02	1.368E-01	2.135E-01	1.757E-02	0.224
CO-57		122.06	*	-1.170E-02	1.572E-02	2.601E-02	2.200E-03	-0.450
		136.48		3.091E-02	1.302E-01	2.215E-01	2.080E-02	0.140

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-58		810.76	*	-3.932E-02	2.955E-02	4.161E-02	4.097E-03	-0.945
FE-59	+	142.65		3.534E+00	2.308E+00	3.250E+00	2.903E-01	1.088
		192.34		-9.133E-02	6.425E-01	1.058E+00	1.587E-01	-0.086
		1099.22	*	-5.745E-02	6.733E-02	1.029E-01	9.675E-03	-0.558
		1291.56		4.742E-02	8.808E-02	1.500E-01	1.416E-02	0.316
CO-60		1173.22		-2.143E-02	3.031E-02	4.676E-02	3.757E-03	-0.458
		1332.49	*	9.429E-03	2.761E-02	4.549E-02	3.759E-03	0.207
ZN-65		1115.52	*	-4.004E-02	7.539E-02	9.680E-02	8.306E-03	-0.414
GE-68		1077.35	*	5.675E-02	8.542E-01	1.417E+00	1.259E-01	0.040
AS-73		53.44	*	-8.825E-02	4.617E-01	7.142E-01	5.363E-02	-0.124
AS-74		595.88	*	-4.692E-02	7.973E-02	1.258E-01	1.279E-02	-0.373
		634.78		1.917E-01	3.056E-01	5.184E-01	5.071E-02	0.370
SE-75		66.05		-1.501E+00	3.013E+00	4.299E+00	4.085E-01	-0.349
		96.73		-7.014E-01	5.595E-01	7.367E-01	1.018E-01	-0.952
		121.11		4.941E-03	8.573E-02	1.459E-01	1.619E-02	0.034
		136.00		-8.473E-04	2.478E-02	4.181E-02	3.680E-03	-0.020
		198.60		1.298E+00	1.322E+00	2.103E+00	2.515E-01	0.617
		264.65	*	-1.520E-02	3.106E-02	4.654E-02	6.841E-03	-0.327
		279.53		7.520E-02	8.720E-02	1.276E-01	1.998E-02	0.589
		303.91		-2.904E-01	1.643E+00	2.319E+00	3.855E-01	-0.125
		400.65		9.027E-02	1.698E-01	2.938E-01	3.758E-02	0.307
BR-77	+	87.88		4.384E-03	1.698E-01	Half-Life	too short	
		200.40		-8.785E-05	1.698E-01	Half-Life	too short	
	+	239.00		1.490E-03	1.698E-01	Half-Life	too short	
		249.79		1.312E-05	1.698E-01	Half-Life	too short	
		281.68		-3.185E-04	1.698E-01	Half-Life	too short	
		297.23		8.700E-04	1.698E-01	Half-Life	too short	
		303.76		-7.855E-05	1.698E-01	Half-Life	too short	
		439.47		1.281E-05	1.698E-01	Half-Life	too short	
		484.57		-4.612E-04	1.698E-01	Half-Life	too short	
		520.65	*	8.393E-06	1.698E-01	Half-Life	too short	
		574.64		-1.449E-04	1.698E-01	Half-Life	too short	
		578.91		-2.995E-05	1.698E-01	Half-Life	too short	
		585.48		6.215E-03	1.698E-01	Half-Life	too short	
		755.35		4.883E-04	1.698E-01	Half-Life	too short	
		817.79		-1.297E-04	1.698E-01	Half-Life	too short	
SR-82		698.33		-1.696E+01	2.776E+01	4.302E+01	4.126E+00	-0.394
		776.49	*	-7.904E-02	3.239E-01	4.405E-01	4.308E-02	-0.179
		1395.20		3.930E-01	8.127E+00	1.318E+01	1.100E+00	0.030
RB-83		520.41	*	-3.197E-03	4.906E-02	8.105E-02	8.637E-03	-0.039
		529.64		4.637E-03	7.452E-02	1.239E-01	1.315E-02	0.037
		552.65		-4.741E-04	1.405E-01	2.320E-01	2.433E-02	-0.002
RB-84		881.50	*	4.340E-02	5.028E-02	8.942E-02	8.810E-03	0.485
KR-85		513.99	*	7.585E+00	5.096E+00	8.971E+00	9.583E-01	0.845
SR-85		513.99	*	4.115E-02	2.765E-02	4.867E-02	5.199E-03	0.845
RB-86		1076.63	*	-2.031E-01	6.496E-01	1.045E+00	9.287E-02	-0.194
Y-88		898.02		-9.715E-03	2.959E-02	4.503E-02	4.450E-03	-0.216
		1836.01	*	-2.028E-02	2.717E-02	3.979E-02	3.230E-03	-0.510
ZR-88		392.90	*	-9.392E-03	2.120E-02	3.508E-02	3.741E-03	-0.268

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
Y-91	1204.90	*		1.050E+00	1.308E+01	2.152E+01	1.742E+00	0.049
NB-94	702.63	*		9.456E-03	2.346E-02	3.897E-02	3.743E-03	0.243
	871.10			1.058E-04	2.360E-02	3.803E-02	3.748E-03	0.003
NB-95	765.79	*		8.058E-03	3.860E-02	5.512E-02	5.381E-03	0.146
NB-95M	235.69	*		-6.661E-02	9.927E-02	1.393E-01	1.945E-02	-0.478
ZR-95	724.18			-3.041E-02	8.200E-02	1.116E-01	1.153E-02	-0.273
	756.15	*		8.668E-02	5.275E-02	9.341E-02	9.830E-03	0.928
NB-97	657.90	*		-5.739E+00	5.275E-02	Half-Life	too short	
	1024.50			2.987E+02	5.275E-02	Half-Life	too short	
ZR-97	254.15			5.541E+01	5.275E-02	Half-Life	too short	
	355.39			8.943E+01	5.275E-02	Half-Life	too short	
	507.63	*		3.558E+02	5.275E-02	Half-Life	too short	
	602.52			4.713E+02	5.275E-02	Half-Life	too short	
	1021.30			7.621E+00	5.275E-02	Half-Life	too short	
	1147.95			-4.471E+02	5.275E-02	Half-Life	too short	
	1362.66			4.533E+02	5.275E-02	Half-Life	too short	
	1750.46			2.747E+02	5.275E-02	Half-Life	too short	
MO-99	140.51			-3.509E+00	7.397E+01	1.080E+02	2.999E+01	-0.032
	181.06			2.988E+01	4.687E+01	7.137E+01	1.369E+01	0.419
	366.43			4.604E+01	2.297E+02	3.676E+02	4.454E+01	0.125
	739.58	*		4.798E-02	3.111E+01	5.014E+01	7.935E+00	0.001
	778.00			-3.660E+00	1.006E+02	1.403E+02	1.373E+01	-0.026
TC-99M	140.51	*		-3.719E+15	1.006E+02	Half-Life	too short	
RH-101	127.23			-3.761E-03	2.195E-02	3.184E-02	2.719E-03	-0.118
	198.01	*		4.904E-03	2.363E-02	3.683E-02	4.122E-03	0.133
	325.23			1.102E-01	1.757E-01	2.589E-01	3.633E-02	0.425
RH-102	418.52			1.604E-01	2.087E-01	3.628E-01	3.900E-02	0.442
	475.06	*		6.411E-03	1.942E-02	3.300E-02	3.558E-03	0.194
	631.29			6.121E-03	3.894E-02	6.424E-02	6.309E-03	0.095
	697.49			-2.495E-02	5.375E-02	8.422E-02	8.074E-03	-0.296
	766.84			6.516E-02	9.913E-02	1.462E-01	1.427E-02	0.446
	1046.59			-1.852E-02	7.671E-02	1.245E-01	1.133E-02	-0.149
	1112.84			-8.050E-02	1.649E-01	2.336E-01	2.008E-02	-0.345
RU-103	497.08	*		-4.681E-03	2.857E-02	4.705E-02	7.312E-03	-0.099
	610.33			1.610E+01	3.141E+00	2.609E+00	4.554E-01	6.172
RH-106	511.85	+		5.464E-01	2.949E-01	3.312E-01	3.540E-02	1.650
	621.84	*		-7.523E-02	2.177E-01	3.473E-01	4.943E-02	-0.217
	1050.47			1.247E+00	1.530E+00	2.686E+00	2.438E-01	0.464
RU-106	511.85	+		5.464E-01	2.949E-01	3.312E-01	3.540E-02	1.650
	621.84	*		-7.523E-02	2.176E-01	3.473E-01	3.446E-02	-0.217
	1050.47			1.247E+00	1.530E+00	2.686E+00	2.438E-01	0.464
AG-108M	433.93	*		3.124E-03	2.136E-02	3.618E-02	4.000E-03	0.086
	614.37			-8.227E-03	2.958E-02	4.135E-02	4.254E-03	-0.199
	722.95			-1.706E-02	3.605E-02	4.863E-02	4.846E-03	-0.351
AG-110M	657.75	*		-1.014E-02	2.898E-02	3.992E-02	3.890E-03	-0.254
	677.61			5.010E-02	2.279E-01	3.753E-01	3.656E-02	0.133
	706.67			-3.351E-02	1.444E-01	2.297E-01	2.258E-02	-0.146
	763.93			1.141E-01	1.292E-01	1.963E-01	1.958E-02	0.581
	884.67			-1.420E-02	3.240E-02	5.253E-02	5.303E-03	-0.270

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	937.48		3.313E-01	1.652E-01	1.273E-01	1.270E-02	2.603
		1384.27		4.932E-02	1.289E-01	1.899E-01	1.630E-02	0.260
IN-111		171.28		-1.786E+00	2.439E+00	3.950E+00	3.930E-01	-0.452
		245.39	*	-1.633E-01	2.940E+00	4.263E+00	5.810E-01	-0.038
IN-113M		391.69	*	-2.110E-02	3.003E-02	4.893E-02	5.322E-03	-0.431
SN-113		391.69	*	-2.110E-02	3.003E-02	4.893E-02	5.322E-03	-0.431
IN-114M		190.27	*	2.145E-02	1.341E-01	2.005E-01	2.170E-02	0.107
CD-115		260.90		-8.981E-05	1.341E-01	Half-Life	too short	
		492.35		1.436E-05	1.341E-01	Half-Life	too short	
		527.90	*	1.011E-05	1.341E-01	Half-Life	too short	
SN-117M		156.02		4.442E-01	2.096E+00	3.184E+00	2.981E-01	0.140
		158.56	*	-1.506E-03	5.179E-02	7.776E-02	7.349E-03	-0.019
SB-122		563.90	*	4.885E+00	5.602E+00	9.672E+00	1.008E+00	0.505
		692.80		-1.415E+01	1.245E+02	2.003E+02	1.917E+01	-0.071
I-123		159.00	*	3.116E+02	1.245E+02	Half-Life	too short	
		528.96		-7.560E+04	1.245E+02	Half-Life	too short	
TE-123M		159.00	*	1.747E-03	1.968E-02	3.157E-02	3.003E-03	0.055
I-124		602.71	*	6.966E-01	1.179E+00	1.994E+00	2.015E-01	0.349
		722.78		-5.068E+00	9.152E+00	1.224E+01	1.183E+00	-0.414
		1325.50		2.713E+01	5.614E+01	9.534E+01	7.873E+00	0.285
		1376.25		1.068E+02	6.243E+01	1.051E+02	8.744E+00	1.017
		1509.49		1.681E+01	2.954E+01	5.196E+01	4.373E+00	0.323
		1691.02		3.918E+00	6.531E+00	1.167E+01	9.729E-01	0.336
SB-124		602.71		1.766E-02	2.988E-02	5.054E-02	5.109E-03	0.349
		645.85		-1.238E-01	3.561E-01	5.658E-01	5.726E-02	-0.219
		709.31		-1.336E+00	1.994E+00	3.060E+00	2.945E-01	-0.437
		713.82		1.315E+00	1.171E+00	2.024E+00	2.588E-01	0.650
		722.78		-1.862E-01	3.363E-01	4.498E-01	4.421E-02	-0.414
	+	968.20		2.036E+01	3.809E+00	6.031E+00	5.768E-01	3.375
		1045.16		-1.570E+00	1.784E+00	2.733E+00	2.491E-01	-0.575
		1325.50		1.065E+00	2.203E+00	3.742E+00	3.090E-01	0.285
		1368.21		-7.959E-01	1.294E+00	1.937E+00	2.572E-01	-0.411
		1436.60		-1.586E+00	3.026E+00	4.573E+00	3.832E-01	-0.347
		1691.02	*	3.395E-02	5.661E-02	1.011E-01	8.788E-03	0.336
SB-125		427.89	*	1.723E-02	6.009E-02	1.026E-01	1.118E-02	0.168
	+	463.38		6.647E-01	3.112E-01	4.085E-01	4.632E-02	1.627
		600.56		-8.586E-02	1.343E-01	2.116E-01	2.259E-02	-0.406
		635.90		-1.923E-01	1.973E-01	2.996E-01	3.112E-02	-0.642
TE-125M		109.28	*	3.972E+00	6.079E+00	1.056E+01	1.085E+00	0.376
I-126		388.63		1.450E-01	1.809E-01	3.167E-01	3.435E-02	0.458
		666.33	*	2.478E-01	2.052E-01	3.193E-01	3.027E-02	0.776
		753.82		9.790E-02	1.370E+00	2.216E+00	2.158E-01	0.044
SB-126		223.80		3.185E+00	3.559E+00	6.005E+00	7.501E-01	0.530
	+	278.60		4.864E+00	2.912E+00	4.193E+00	6.477E-01	1.160
	+	296.50		2.295E+01	4.026E+00	3.764E+00	5.655E-01	6.097
		414.70		-4.858E-02	7.690E-02	1.157E-01	1.243E-02	-0.420
		415.30		-3.414E-01	6.077E+00	9.888E+00	1.062E+00	-0.035
		555.20		1.592E+00	3.723E+00	6.295E+00	6.593E-01	0.253
		573.80		7.363E-01	9.962E-01	1.705E+00	1.764E-01	0.432

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127		593.00		-9.914E-01	8.854E-01	1.339E+00	1.365E-01	-0.740
		656.30		-2.102E+00	3.484E+00	4.974E+00	4.740E-01	-0.423
		666.33		1.048E-01	8.683E-02	1.351E-01	1.280E-02	0.776
		675.00		5.796E-01	1.977E+00	3.270E+00	3.110E-01	0.177
		695.00		4.762E-02	7.429E-02	1.252E-01	1.199E-02	0.380
		697.00		-1.076E-01	2.507E-01	3.937E-01	3.774E-02	-0.273
		720.50	*	1.259E-01	1.360E-01	2.326E-01	2.246E-02	0.541
		856.80		-8.848E-02	4.812E-01	6.925E-01	6.825E-02	-0.128
		989.30		-9.058E-02	1.090E+00	1.801E+00	1.703E-01	-0.050
		1034.80		-2.840E+00	7.460E+00	1.194E+01	1.097E+00	-0.238
		1213.00		-2.791E+00	4.394E+00	6.825E+00	5.535E-01	-0.409
		61.10		-1.753E+01	8.845E+01	1.284E+02	1.541E+01	-0.137
		252.40		-1.236E+00	7.511E+00	1.209E+01	5.313E+00	-0.102
		290.80		-4.143E+01	4.076E+01	5.331E+01	9.580E+00	-0.777
		411.60		1.071E+01	2.539E+01	3.872E+01	7.035E+00	0.277
		444.90		-2.375E+00	1.712E+01	2.851E+01	4.428E+00	-0.083
		473.00		3.061E-01	2.845E+00	4.781E+00	7.551E-01	0.064
		543.00		1.711E+01	2.898E+01	4.940E+01	8.356E+00	0.346
		603.60		4.071E+00	2.367E+01	3.633E+01	5.463E+00	0.112
		685.20	*	-2.846E+00	2.698E+00	4.021E+00	5.519E-01	-0.708
		698.50		-1.774E+01	2.814E+01	4.333E+01	7.627E+00	-0.409
		722.20		-3.831E+01	6.579E+01	8.743E+01	1.191E+01	-0.438
		783.80		5.789E+00	6.922E+00	1.166E+01	1.721E+00	0.496
XE-127		57.60		-1.256E+00	3.473E+00	5.458E+00	3.929E-01	-0.230
	+	145.22		9.227E-01	6.026E-01	8.310E-01	7.485E-02	1.110
		172.10		1.437E-02	8.573E-02	1.437E-01	1.435E-02	0.100
	*	202.84		-3.252E-02	3.481E-02	5.513E-02	6.300E-03	-0.590
I-131		374.96		1.588E-01	1.587E-01	2.629E-01	3.062E-02	0.604
		80.18		4.773E+00	5.111E+00	6.757E+00	5.884E-01	0.706
		284.30		1.757E+00	1.623E+00	2.714E+00	4.245E-01	0.647
	*	364.48		-6.533E-02	1.306E-01	2.004E-01	2.522E-02	-0.326
TE-132		636.97		-2.164E+00	1.778E+00	2.640E+00	2.700E-01	-0.820
		722.89		-4.834E+00	9.640E+00	1.296E+01	1.264E+00	-0.373
		49.72		-1.450E+01	3.056E+01	4.411E+01	5.275E+00	-0.329
		111.76		-5.773E+01	6.191E+01	9.614E+01	1.186E+01	-0.600
BA-133		116.30		2.208E+01	5.313E+01	9.148E+01	1.126E+01	0.241
	*	228.16		4.699E-01	1.426E+00	2.361E+00	4.547E-01	0.199
		53.15		-1.020E+00	1.906E+00	2.908E+00	2.192E-01	-0.351
		79.62		-1.906E-01	9.510E-01	1.186E+00	1.801E-01	-0.161
		81.00		-5.374E-02	6.313E-02	8.685E-02	1.382E-02	-0.619
	+	276.40		5.387E-01	3.286E-01	4.682E-01	8.997E-02	1.151
		302.84		1.950E-03	1.075E-01	1.538E-01	2.761E-02	0.013
	*	356.01		1.446E-02	3.269E-02	4.749E-02	7.660E-03	0.305
I-133		383.85		-1.118E-01	2.038E-01	3.356E-01	4.846E-02	-0.333
	+	510.53		8.124E+01	2.038E-01	Half-Life	too short	
	*	529.87		3.159E-02	2.038E-01	Half-Life	too short	
		706.58		-3.954E+00	2.038E-01	Half-Life	too short	
		856.28		-4.415E+00	2.038E-01	Half-Life	too short	
		875.33		3.323E+00	2.038E-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
CS-134		1236.41		4.634E+01	2.038E-01	Half-Life	too short	
		1298.22		-1.406E+01	2.038E-01	Half-Life	too short	
		475.35		2.192E-01	1.288E+00	2.170E+00	2.339E-01	0.101
		563.23		2.577E-01	2.460E-01	4.282E-01	4.492E-02	0.602
		569.32		-8.305E-02	1.388E-01	2.198E-01	2.303E-02	-0.378
		604.70		9.950E-03	2.828E-02	4.044E-02	4.087E-03	0.246
	+	795.84	*	1.481E-01	4.941E-02	6.925E-02	6.831E-03	2.138
		801.93		-9.122E-02	2.910E-01	4.159E-01	4.101E-02	-0.219
		1038.57		-6.917E-02	2.528E+00	4.177E+00	3.825E-01	-0.017
		1167.94		-1.692E-01	1.740E+00	2.830E+00	2.289E-01	-0.060
CS-135		1365.15		-1.455E-01	8.437E-01	1.337E+00	1.165E-01	-0.109
		268.24	*	8.257E-02	1.230E-01	1.782E-01	2.796E-02	0.463
		288.45		1.232E+16	1.230E-01	Half-Life	too short	
		417.63		6.907E+15	1.230E-01	Half-Life	too short	
		546.56		5.780E+12	1.230E-01	Half-Life	too short	
		836.80		4.430E+15	1.230E-01	Half-Life	too short	
		1038.76		7.326E+14	1.230E-01	Half-Life	too short	
		1124.00		3.228E+16	1.230E-01	Half-Life	too short	
		1131.51		1.513E+15	1.230E-01	Half-Life	too short	
		1260.41	*	3.414E+14	1.230E-01	Half-Life	too short	
I-135		1457.56		4.158E+16	1.230E-01	Half-Life	too short	
		1678.03		-3.052E+15	1.230E-01	Half-Life	too short	
		1706.46		-5.355E+15	1.230E-01	Half-Life	too short	
		1791.20		6.979E+15	1.230E-01	Half-Life	too short	
		66.91		-7.422E-02	6.414E-01	9.302E-01	1.382E-01	-0.080
	+	86.29		7.198E+00	1.492E+00	1.668E+00	2.219E-01	4.316
	+	153.22		8.156E-01	8.699E-01	9.982E-01	1.020E-01	0.817
		163.89		-1.061E-01	9.851E-01	1.540E+00	1.631E-01	-0.069
		176.55		1.166E-01	3.166E-01	5.331E-01	5.658E-02	0.219
		273.65		1.553E-01	5.373E-01	6.262E-01	9.710E-02	0.248
CS-136		340.57		3.157E-01	1.450E-01	2.148E-01	2.912E-02	1.470
		818.51		-6.011E-03	6.831E-02	1.083E-01	1.067E-02	-0.055
		1048.07	*	2.010E-03	9.631E-02	1.596E-01	1.508E-02	0.013
		1235.34		-4.080E-02	6.230E-01	8.723E-01	1.004E-01	-0.047
		165.85	*	-9.498E-03	1.965E-02	3.223E-02	3.132E-03	-0.295
		162.64		9.264E-02	6.873E-01	1.082E+00	1.088E-01	0.086
		304.84		4.060E-01	1.272E+00	1.848E+00	5.633E-01	0.220
		423.70		-3.487E-01	1.696E+00	2.819E+00	9.317E-01	-0.124
		537.32	*	-1.193E-01	2.351E-01	3.709E-01	1.250E-01	-0.322
		328.77		9.322E-01	4.172E-01	5.415E-01	7.686E-02	1.721
CE-139		432.53		-4.340E-01	1.810E+00	3.003E+00	3.338E-01	-0.145
		487.03		1.783E-02	1.242E-01	2.086E-01	2.335E-02	0.085
		751.79		-1.897E+00	1.612E+00	2.338E+00	2.469E-01	-0.811
		815.85		3.427E-01	2.932E-01	5.086E-01	5.449E-02	0.674
		867.82		-1.058E-01	1.269E+00	1.928E+00	1.978E-01	-0.055
		919.63		-1.176E+00	2.359E+00	3.785E+00	4.390E-01	-0.311
		925.24		3.083E-01	9.931E-01	1.698E+00	1.738E-01	0.182
		1596.49	*	1.975E-02	9.919E-02	1.468E-01	1.234E-02	0.135
		145.44	*	2.995E-02	4.746E-02	7.365E-02	6.751E-03	0.407
BA-140								
LA-140								
CE-141								

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CE-143		57.37		-3.011E-03	4.746E-02	Half-Life	too short	
		231.56		5.163E-03	4.746E-02	Half-Life	too short	
		293.26	*	5.656E-03	4.746E-02	Half-Life	too short	
	+	350.59		5.026E-01	4.746E-02	Half-Life	too short	
		490.36		-2.632E-02	4.746E-02	Half-Life	too short	
		664.57		1.453E-02	4.746E-02	Half-Life	too short	
		721.93		-4.532E-03	4.746E-02	Half-Life	too short	
CE-144		80.11		1.487E+00	1.502E+00	1.990E+00	1.712E-01	0.747
		133.54	*	-4.731E-02	1.419E-01	2.124E-01	3.314E-02	-0.223
PM-144		476.78		-7.265E-03	4.761E-02	7.612E-02	8.705E-03	-0.095
		618.01		6.989E-03	2.196E-02	3.666E-02	3.727E-03	0.191
		696.49	*	-1.158E-02	2.444E-02	3.828E-02	3.671E-03	-0.303
PR-144		778.57		-6.350E-01	1.720E+00	2.454E+00	2.402E-01	-0.259
		696.49	*	-7.871E-01	1.661E+00	2.601E+00	2.493E-01	-0.303
		1489.15		1.590E+00	8.342E+00	1.335E+01	1.122E+00	0.119
PM-146		453.90	*	7.243E-03	3.018E-02	5.117E-02	6.416E-03	0.142
		633.02		5.472E-01	1.013E+00	1.676E+00	6.314E-01	0.326
		735.90		1.441E-02	1.036E-01	1.687E-01	4.882E-02	0.085
		747.13		-2.008E-02	6.359E-02	9.984E-02	1.472E-02	-0.201
ND-147	+	91.11		1.325E+00	3.025E-01	4.345E-01	4.306E-02	3.049
		319.41		-9.022E-01	3.129E+00	4.922E+00	7.017E-01	-0.183
		439.89		1.343E+00	5.490E+00	9.332E+00	1.007E+00	0.144
PM-149		531.02	*	-1.827E-01	5.349E-01	8.659E-01	1.401E-01	-0.211
		285.90	*	-3.033E-05	5.349E-01	Half-Life	too short	
EU-152		121.78		-1.605E-02	4.490E-02	7.535E-02	7.371E-03	-0.213
		244.69		2.739E-02	2.489E-01	3.520E-01	4.784E-02	0.078
		344.27	*	-1.833E-02	7.108E-02	1.057E-01	1.433E-02	-0.173
		443.98		1.575E-01	6.301E-01	1.071E+00	1.156E-01	0.147
		778.89		-6.326E-02	1.958E-01	2.806E-01	2.746E-02	-0.225
		867.32		-2.439E-01	6.044E-01	8.451E-01	8.328E-02	-0.289
	+	964.01		5.485E-01	2.853E-01	3.795E-01	3.636E-02	1.445
		1085.78		-1.585E-01	2.738E-01	4.302E-01	3.792E-02	-0.368
		1112.02		-1.323E-01	2.125E-01	3.212E-01	2.763E-02	-0.412
		1407.95		1.272E-01	1.341E-01	2.360E-01	1.972E-02	0.539
GD-153		69.67		5.208E-01	1.084E+00	1.604E+00	1.235E-01	0.325
	+	83.37		2.927E+01	1.199E+01	1.566E+01	1.401E+00	1.869
		97.43	*	-1.998E-02	5.695E-02	7.973E-02	7.083E-03	-0.251
EU-154		103.18		-8.495E-02	6.216E-02	1.012E-01	8.783E-03	-0.839
		123.07		-1.865E-03	3.145E-02	5.330E-02	5.995E-03	-0.035
		247.94		1.989E-02	2.468E-01	4.032E-01	6.335E-02	0.049
		591.81		3.005E-01	4.036E-01	6.919E-01	8.915E-02	0.434
		723.30		-3.495E-02	1.480E-01	2.042E-01	2.140E-02	-0.171
		756.87		7.480E-01	5.498E-01	9.554E-01	1.224E-01	0.783
		873.19		6.350E-02	1.997E-01	3.429E-01	4.506E-02	0.185
		996.32		-2.448E-02	2.763E-01	3.947E-01	7.169E-02	-0.062
EU-155		1004.76		1.297E-01	1.459E-01	2.313E-01	2.822E-02	0.561
		1274.45	*	-4.550E-03	8.218E-02	1.330E-01	1.462E-02	-0.034
		48.70		9.579E-01	1.204E+00	1.848E+00	1.495E-01	0.518
		60.01		4.008E+00	2.743E+00	4.258E+00	3.038E-01	0.941

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TB-160	+	86.54		5.015E-01	9.246E-02	1.215E-01	1.141E-02	4.127
		105.31	*	5.325E-02	7.109E-02	1.145E-01	9.991E-03	0.465
	+	86.79		1.408E+00	2.589E-01	3.448E-01	3.220E-02	4.082
		197.04		-3.496E-01	4.237E-01	6.322E-01	7.046E-02	-0.553
		215.65		3.620E-01	5.100E-01	8.581E-01	1.036E-01	0.422
		298.57		1.536E-01	8.420E-02	1.412E-01	2.112E-02	1.088
		879.36	*	5.402E-03	9.635E-02	1.625E-01	1.601E-02	0.033
		962.29		1.554E-01	3.889E-01	5.864E-01	5.624E-02	0.265
HO-166M	+	966.15		3.963E-01	2.061E-01	3.092E-01	2.960E-02	1.282
		1177.93		-9.733E-02	2.555E-01	4.057E-01	3.263E-02	-0.240
		1271.85		-2.900E-02	5.040E-01	8.155E-01	6.686E-02	-0.036
		80.57		-4.671E-02	1.970E-01	2.451E-01	2.119E-02	-0.191
	+	184.41		1.707E-01	4.425E-02	4.274E-02	4.507E-03	3.993
		280.46		1.320E-02	6.579E-02	9.325E-02	1.441E-02	0.142
	+	410.95		2.592E-01	2.465E-01	3.146E-01	3.375E-02	0.824
		711.68	*	7.680E-03	4.171E-02	6.831E-02	6.579E-03	0.112
TM-171		752.31		-2.568E-01	1.978E-01	2.845E-01	2.769E-02	-0.903
		810.29		-5.550E-02	4.222E-02	5.959E-02	5.856E-03	-0.931
		51.35		-9.672E+00	1.483E+01	2.312E+01	1.788E+00	-0.418
		52.39		7.931E-01	8.132E+00	1.271E+01	9.680E-01	0.062
		59.40		-7.133E+00	1.527E+01	2.193E+01	1.560E+00	-0.325
		66.72	*	-4.676E+00	1.758E+01	2.534E+01	1.902E+00	-0.185
	+	88.36		9.856E-01	1.813E-01	2.234E-01	2.112E-02	4.412
		201.83		-1.957E-02	1.897E-02	2.990E-02	3.402E-03	-0.655
LU-176		306.84	*	1.095E-02	1.682E-02	2.774E-02	4.078E-03	0.395
		401.10		3.691E+00	4.275E+00	7.501E+00	8.024E-01	0.492
	LU-177	112.95		-7.930E-02	1.883E+00	3.028E+00	2.572E-01	-0.026
	+	208.36	*	6.344E+00	1.894E+00	2.411E+00	2.821E-01	2.632
	LU-177M	52.97		-4.969E-01	8.802E-01	1.341E+00	1.013E-01	-0.370
		54.07		8.487E-02	4.670E-01	7.325E-01	5.457E-02	0.116
		61.30		-1.308E-01	8.898E-01	1.295E+00	9.322E-02	-0.101
		121.62		-6.370E-02	2.361E-01	3.976E-01	3.359E-02	-0.160
HF-181		147.16		5.558E-02	4.544E-01	6.903E-01	6.260E-02	0.081
		171.86		2.819E-02	3.182E-01	5.319E-01	5.306E-02	0.053
		218.09		2.794E-02	5.636E-01	9.273E-01	1.131E-01	0.030
		268.79		1.113E+00	6.769E-01	1.009E+00	1.503E-01	1.104
		319.02		9.688E-03	1.757E-01	2.819E-01	4.022E-02	0.034
		367.43		4.005E-01	6.533E-01	1.067E+00	1.287E-01	0.375
		413.65	*	-6.409E-02	1.391E-01	2.002E-01	2.150E-02	-0.320
		56.28		1.348E-01	5.337E-01	8.593E-01	6.255E-02	0.157
W-181		57.53		-8.676E-02	2.885E-01	4.545E-01	3.273E-02	-0.191
		65.20		-2.902E-01	6.163E-01	8.812E-01	6.532E-02	-0.329
		133.02		-1.351E-02	5.207E-02	7.538E-02	6.536E-03	-0.179
		136.25		7.532E-02	3.055E-01	5.199E-01	4.550E-02	0.145
		345.85		2.059E-02	1.433E-01	2.296E-01	3.018E-02	0.090
		482.03	*	-2.124E-03	3.215E-02	5.344E-02	5.756E-03	-0.040
		56.28		4.963E-02	1.973E-01	3.177E-01	2.312E-02	0.156
		57.53		-3.191E-02	1.067E-01	1.682E-01	1.211E-02	-0.190
	65.20	*	-1.065E-01	2.262E-01	3.234E-01	2.397E-02	-0.329	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TA-182		67.75		-1.039E-02	7.223E-02	1.046E-01	7.917E-03	-0.099
		100.10		2.448E-02	1.115E-01	1.924E-01	1.688E-02	0.127
		152.43		6.041E-03	2.584E-01	3.774E-01	3.487E-02	0.016
		222.10		-2.718E-02	2.315E-01	3.779E-01	4.687E-02	-0.072
	+	1001.68		1.978E+00	1.746E+00	2.591E+00	2.432E-01	0.763
	+	1121.28		7.381E-01	2.310E-01	2.858E-01	2.435E-02	2.583
		1189.05		-2.526E-02	2.308E-01	3.746E-01	3.022E-02	-0.067
		1221.42	*	1.183E-02	1.428E-01	2.345E-01	1.905E-02	0.050
		1230.97		4.964E-03	3.565E-01	5.664E-01	4.610E-02	0.009
		57.98		-1.100E-01	1.096E-01	1.676E-01	1.203E-02	-0.657
RE-183		59.32		-3.384E-02	6.580E-02	9.425E-02	6.708E-03	-0.359
		67.20		3.195E-02	1.300E-01	1.912E-01	1.441E-02	0.167
		162.32	*	-2.249E-03	8.008E-02	1.256E-01	1.204E-02	-0.018
	+	208.81		3.452E+00	1.030E+00	1.346E+00	1.579E-01	2.563
		291.72		-8.892E-01	7.149E-01	9.166E-01	1.390E-01	-0.970
RE-184		57.98		-3.929E-01	3.914E-01	5.985E-01	4.296E-02	-0.657
		59.32		-1.208E-01	2.348E-01	3.364E-01	2.394E-02	-0.359
		67.20		1.141E-01	4.641E-01	6.826E-01	5.144E-02	0.167
		161.27		-5.603E-02	2.329E-01	3.864E-01	3.689E-02	-0.145
		216.55		9.728E-02	1.773E-01	2.968E-01	3.596E-02	0.328
		252.85	*	-7.128E-03	1.556E-01	2.525E-01	3.543E-02	-0.028
		318.01		-1.415E-02	3.088E-01	4.928E-01	7.050E-02	-0.029
		792.07		4.904E-01	7.520E-01	1.122E+00	1.100E-01	0.437
		903.28		5.657E-01	6.838E-01	1.183E+00	1.163E-01	0.478
		920.93		-5.644E-02	2.928E-01	4.824E-01	4.711E-02	-0.117
OS-185		59.72		1.417E-01	1.680E-01	2.553E-01	1.818E-02	0.555
		61.14		-1.784E-02	9.947E-02	1.446E-01	1.040E-02	-0.123
		69.30		1.716E-01	1.942E-01	2.916E-01	2.238E-02	0.589
		592.07		3.885E-01	1.753E+00	2.918E+00	2.977E-01	0.133
		646.12	*	-8.851E-03	2.930E-02	4.671E-02	4.509E-03	-0.189
		717.42		-4.126E-01	6.533E-01	1.006E+00	9.701E-02	-0.410
		874.81		2.674E-01	4.017E-01	7.054E-01	6.951E-02	0.379
		880.27		1.651E-01	5.243E-01	9.002E-01	8.870E-02	0.183
	+	63.58		9.143E+01	5.331E+01	5.827E+01	4.266E+00	1.569
		227.08		-3.803E-01	8.843E+00	1.446E+01	1.830E+00	-0.026
W-188		290.67	*	-7.556E+00	5.824E+00	7.442E+00	1.130E+00	-1.015
	+	295.96		1.369E+00	2.405E-01	2.391E-01	3.604E-02	5.724
		308.46		6.235E-03	6.846E-02	1.103E-01	1.618E-02	0.057
		316.51	*	-1.079E-02	2.521E-02	3.937E-02	5.659E-03	-0.274
		468.07		2.707E-02	5.087E-02	7.786E-02	8.790E-03	0.348
IR-192		604.41		3.289E-01	3.916E-01	5.778E-01	8.111E-02	0.569
		612.46		1.012E+00	5.872E-01	9.421E-01	1.049E-01	1.075
		65.12		-5.034E-02	1.042E-01	1.490E-01	1.104E-02	-0.338
		66.83		-1.054E-02	5.914E-02	8.557E-02	6.427E-03	-0.123
	+	75.70		1.464E+00	1.970E-01	2.810E-01	2.299E-02	5.211
AU-195		98.88	*	4.225E-01	1.468E-01	2.551E-01	2.250E-02	1.656
	+	129.76		4.437E+00	3.139E+00	3.443E+00	2.959E-01	1.289
		367.94	*	1.332E-03	3.139E+00	Half-Life	too short	
TL-200		579.30		-1.135E-02	3.139E+00	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
TL-201		828.27		2.038E-02	3.139E+00	Half-Life	too short	
		1205.75		1.876E-02	3.139E+00	Half-Life	too short	
		68.90		2.305E+00	9.521E+00	1.516E+01	1.159E+00	0.152
		70.82		3.055E+00	5.816E+00	8.614E+00	6.706E-01	0.355
		80.30		9.949E+00	1.188E+01	1.564E+01	1.348E+00	0.636
TL-202		135.34		-8.996E+00	5.268E+01	8.849E+01	7.723E+00	-0.102
		167.43	*	6.104E+00	1.495E+01	2.528E+01	2.473E+00	0.241
		68.90		8.265E-02	3.413E-01	5.434E-01	4.155E-02	0.152
		70.82		1.092E-01	2.079E-01	3.080E-01	2.397E-02	0.355
		80.30		3.558E-01	4.250E-01	5.595E-01	4.823E-02	0.636
HG-203		439.56	*	3.040E-03	6.301E-02	1.061E-01	1.144E-02	0.029
		70.83		3.780E-01	7.208E-01	1.066E+00	1.396E-01	0.355
		72.87		4.186E-01	3.951E-01	6.368E-01	8.133E-02	0.657
		82.60		-1.560E-01	7.985E-01	1.116E+00	1.550E-01	-0.140
		279.20	*	4.319E-02	3.508E-02	5.193E-02	8.112E-03	0.832
BI-207		72.80		1.003E-01	1.060E-01	1.715E-01	1.361E-02	0.585
	+	74.97		7.961E-01	1.071E-01	1.469E-01	1.192E-02	5.420
	+	84.90		3.729E-01	1.527E-01	2.007E-01	1.830E-02	1.858
		569.67		-5.725E-03	2.125E-02	3.441E-02	3.571E-03	-0.166
		1063.62	*	2.587E-03	3.569E-02	5.932E-02	5.329E-03	0.044
TL-207		1770.23		2.074E-01	2.966E-01	4.920E-01	4.049E-02	0.422
		81.07		-1.190E-01	1.383E-01	1.914E-01	1.665E-02	-0.622
	+	83.78		2.458E-01	1.007E-01	1.355E-01	1.218E-02	1.814
		94.90		1.903E-01	1.433E-01	2.316E-01	2.086E-02	0.821
		122.32		-1.051E+00	1.085E+00	1.778E+00	1.618E-01	-0.591
PO-209	+	144.24		8.167E-01	5.346E-01	7.705E-01	7.677E-02	1.060
	+	154.21		3.697E-01	3.942E-01	4.632E-01	4.679E-02	0.798
	+	269.46		4.740E-01	2.168E-01	2.466E-01	3.710E-02	1.922
	+	323.87	*	6.686E-01	5.372E-01	7.989E-01	1.671E-01	0.837
	+	338.28		7.095E+00	1.697E+00	1.883E+00	3.032E-01	3.767
PB-211		445.03		-2.217E-01	1.514E+00	2.520E+00	3.458E-01	-0.088
		260.50		-2.333E+00	6.294E+00	1.002E+01	1.448E+00	-0.233
		262.80		-3.084E+00	1.701E+01	2.733E+01	3.983E+00	-0.113
		896.60	*	3.100E-01	4.627E+00	7.798E+00	7.677E-01	0.040
		404.84	*	-3.740E-01	7.450E-01	1.016E+00	6.398E-01	-0.368
BI-212		427.08		5.432E-01	1.363E+00	2.269E+00	1.417E+00	0.239
		831.96		-8.376E-01	1.094E+00	1.399E+00	8.793E-01	-0.599
	+	727.18	*	9.886E-01	3.576E-01	5.103E-01	5.578E-02	1.937
		785.46		1.919E+00	1.311E+00	2.286E+00	2.239E-01	0.839
		1620.62		1.420E+00	9.460E-01	1.804E+00	1.515E-01	0.787
PO-215		81.07		-1.190E-01	1.383E-01	1.914E-01	1.665E-02	-0.622
	+	83.78		2.458E-01	1.007E-01	1.355E-01	1.218E-02	1.814
		94.90		1.903E-01	1.433E-01	2.316E-01	2.086E-02	0.821
		122.32		-1.051E+00	1.085E+00	1.778E+00	1.618E-01	-0.591
	+	144.24		8.167E-01	5.346E-01	7.705E-01	7.677E-02	1.060
	+	154.21		3.697E-01	3.942E-01	4.632E-01	4.679E-02	0.798
	+	269.46		4.740E-01	2.168E-01	2.466E-01	3.710E-02	1.922
	+	323.87	*	6.686E-01	5.372E-01	7.989E-01	1.671E-01	0.837
	+	338.28		7.095E+00	1.697E+00	1.883E+00	3.032E-01	3.767

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RN-219	+	445.03		-2.217E-01	1.514E+00	2.520E+00	3.458E-01	-0.088
		271.23		6.082E-01	2.801E-01	3.128E-01	5.027E-02	1.944
		401.81	*	1.055E-01	2.679E-01	4.605E-01	7.510E-02	0.229
RN-220		549.76	*	2.632E+00	1.750E+01	2.917E+01	3.065E+00	0.090
RA-223	+	81.07		-1.190E-01	1.383E-01	1.914E-01	1.665E-02	-0.622
		83.78		2.458E-01	1.007E-01	1.355E-01	1.218E-02	1.814
		94.90		1.903E-01	1.433E-01	2.316E-01	2.086E-02	0.821
AC-227	+	122.32		-1.051E+00	1.085E+00	1.778E+00	1.618E-01	-0.591
		144.24		8.167E-01	5.346E-01	7.705E-01	7.677E-02	1.060
		154.21		3.697E-01	3.942E-01	4.632E-01	4.679E-02	0.798
	+	269.46		4.740E-01	2.168E-01	2.466E-01	3.710E-02	1.922
		323.87	*	6.686E-01	5.372E-01	7.989E-01	1.671E-01	0.837
		338.28		7.095E+00	1.697E+00	1.883E+00	3.032E-01	3.767
	+	445.03		-2.217E-01	1.514E+00	2.520E+00	3.458E-01	-0.088
		79.80		-1.391E-01	1.208E+00	1.513E+00	3.251E-01	-0.092
		236.00		-6.219E-02	1.714E-01	2.451E-01	3.860E-02	-0.254
	+	256.20	*	-6.964E-03	2.512E-01	4.076E-01	7.769E-02	-0.017
		286.10		-2.368E-01	1.059E+00	1.688E+00	3.087E-01	-0.140
		299.80		3.165E+00	1.401E+00	1.791E+00	3.817E-01	1.767
TH-227	+	304.40		-3.248E-01	1.422E+00	1.998E+00	4.396E-01	-0.163
		334.20		-8.090E-01	1.745E+00	2.378E+00	5.259E-01	-0.340
		79.80		-1.391E-01	1.208E+00	1.513E+00	3.293E-01	-0.092
	+	94.00		1.070E+01	2.974E+00	2.443E+00	5.364E-01	4.379
		236.00		-6.219E-02	1.714E-01	2.451E-01	3.642E-02	-0.254
		256.20	*	-6.964E-03	2.512E-01	4.076E-01	8.685E-02	-0.017
	+	286.10		-2.368E-01	1.085E+00	1.688E+00	1.708E+00	-0.140
		299.80		3.165E+00	1.401E+00	1.791E+00	3.817E-01	1.767
		304.40		-3.248E-01	1.422E+00	1.998E+00	4.396E-01	-0.163
	+	334.20		-8.090E-01	1.745E+00	2.378E+00	5.259E-01	-0.340
		85.43		3.679E-01	1.507E-01	1.924E-01	1.766E-02	1.912
		88.47		5.673E-01	1.044E-01	1.272E-01	1.201E-02	4.461
TH-229	+	100.00		1.367E-01	1.105E-01	1.951E-01	1.713E-02	0.700
		193.63	*	8.992E-02	3.166E-01	5.292E-01	5.811E-02	0.170
		210.97		1.167E+00	5.555E-01	8.753E-01	1.036E-01	1.333
PA-231	+	283.67	*	4.967E-01	1.037E+00	1.703E+00	3.374E-01	0.292
		301.29		1.266E+00	5.375E-01	7.064E-01	1.217E-01	1.792
TH-231	+	81.07		-1.190E-01	1.383E-01	1.914E-01	1.665E-02	-0.622
		83.78		2.458E-01	1.007E-01	1.355E-01	1.218E-02	1.814
		94.90		1.903E-01	1.433E-01	2.316E-01	2.086E-02	0.821
	+	122.32		-1.051E+00	1.085E+00	1.778E+00	1.618E-01	-0.591
		144.24		8.167E-01	5.346E-01	7.705E-01	7.677E-02	1.060
		154.21		3.697E-01	3.942E-01	4.632E-01	4.679E-02	0.798
	+	269.46		4.740E-01	2.168E-01	2.466E-01	3.710E-02	1.922
		323.87	*	6.686E-01	5.372E-01	7.989E-01	1.671E-01	0.837
		338.28		7.095E+00	1.697E+00	1.883E+00	3.032E-01	3.767
	+	445.03		-2.217E-01	1.514E+00	2.520E+00	3.458E-01	-0.088
		84.21		2.571E+01	1.053E+01	1.421E+01	1.285E+00	1.808
		92.29		2.566E+01	4.954E+00	6.830E+00	6.258E-01	3.757
U-231		95.87	*	-1.426E+00	1.729E+00	2.358E+00	2.112E-01	-0.605

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233		108.00		-5.582E-01	3.089E+00	5.251E+00	4.497E-01	-0.106
	+	75.28		2.322E+01	4.296E+00	4.318E+00	6.514E-01	5.378
	+	86.59		8.135E+00	2.551E+00	1.984E+00	5.368E-01	4.100
	+	300.12		8.823E-01	3.819E-01	4.976E-01	9.564E-02	1.773
		311.98	*	-2.369E-02	4.352E-02	6.749E-02	9.902E-03	-0.351
		340.50		1.369E+00	6.249E-01	8.123E-01	2.107E-01	1.685
PA-234		398.62		-1.236E+00	1.389E+00	2.172E+00	5.944E-01	-0.569
		415.76		2.201E-02	1.164E+00	1.965E+00	4.417E-01	0.011
	+	63.00		2.513E+00	1.501E+00	1.624E+00	2.404E-01	1.548
		94.67		2.452E-01	1.093E-01	1.759E-01	2.231E-02	1.394
		98.44		1.260E-01	9.282E-02	1.010E-01	5.640E-02	1.247
		99.86		4.019E-01	2.822E-01	4.996E-01	4.389E-02	0.804
		111.00		-1.231E-01	1.234E-01	1.912E-01	2.297E-02	-0.644
		131.20		2.250E-02	7.689E-02	1.142E-01	9.853E-03	0.197
		152.70		7.602E-02	2.419E-01	3.574E-01	6.209E-02	0.213
	+	186.00		6.144E+00	2.436E+00	1.904E+00	6.060E-01	3.227
		226.40		-8.355E-02	2.647E-01	4.275E-01	6.885E-02	-0.195
		227.20		4.519E-02	2.813E-01	4.636E-01	5.873E-02	0.097
		248.90		6.996E-02	5.552E-01	9.083E-01	2.260E-01	0.077
		293.70		4.348E+00	1.089E+00	1.108E+00	2.359E-01	3.924
		369.80		-7.486E-02	6.042E-01	9.482E-01	2.208E-01	-0.079
		568.70		-5.733E-01	6.890E-01	1.072E+00	1.113E-01	-0.535
		569.50		-4.693E-02	1.887E-01	3.060E-01	3.176E-02	-0.153
		574.00		4.773E-01	1.076E+00	1.814E+00	1.877E-01	0.263
		699.00		-3.220E-01	4.975E-01	7.632E-01	1.491E-01	-0.422
		706.10		2.262E-01	7.195E-01	1.178E+00	5.276E-01	0.192
		733.00		9.916E-02	2.853E-01	4.152E-01	9.398E-02	0.239
		742.81		6.079E-01	1.034E+00	1.601E+00	1.078E+00	0.380
	+	796.30		2.863E+00	1.205E+00	1.313E+00	3.606E-01	2.180
		805.60		1.074E+00	7.851E-01	1.262E+00	3.914E-01	0.851
		819.60		-3.204E-01	8.582E-01	1.314E+00	5.034E-01	-0.244
		826.30		-5.104E-02	5.872E-01	9.301E-01	4.185E-01	-0.055
		831.60		-4.336E-01	5.134E-01	7.242E-01	2.189E-01	-0.599
		876.40		-3.381E-01	6.577E-01	8.960E-01	9.221E-01	-0.377
		880.51		7.853E-02	1.839E-01	3.181E-01	3.134E-02	0.247
		883.24		-1.415E-01	2.129E-01	3.020E-01	2.035E-01	-0.468
		899.00		-1.998E-01	5.763E-01	8.635E-01	3.797E-01	-0.231
		925.00		2.829E-01	7.654E-01	1.315E+00	1.282E-01	0.215
		926.50		-6.192E-02	1.187E-01	1.888E-01	4.850E-02	-0.328
		946.00	*	6.149E-03	2.309E-01	3.361E-01	6.475E-02	0.018
		949.00		2.029E-01	2.960E-01	5.176E-01	4.996E-02	0.392
		980.50		-1.816E-01	4.725E-01	7.614E-01	7.234E-02	-0.239
PA-234M		1394.10		8.609E-02	7.188E-01	1.173E+00	7.633E-01	0.073
		766.42		6.899E+00	1.039E+01	1.454E+01	7.407E+00	0.474
NP-236	+	1001.03	*	4.347E+00	3.843E+00	5.827E+00	6.199E-01	0.746
		94.67		1.878E-01	8.131E-02	1.336E-01	1.205E-02	1.406
		98.44		9.518E-02	4.655E-02	7.637E-02	6.751E-03	1.246
		111.00		-9.309E-02	9.297E-02	1.446E-01	1.231E-02	-0.644
		160.31	*	1.536E-02	5.128E-02	8.663E-02	8.242E-03	0.177

---- 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		1.754E-01	9.603E-02	1.709E-01	1.503E-02	1.027
		117.00	*	-6.419E-02	1.181E-01	1.975E-01	1.671E-02	-0.325
	+	209.75		2.582E+00	7.706E-01	1.035E+00	1.218E-01	2.495
		228.18		1.333E-02	1.498E-01	2.461E-01	3.129E-02	0.054
	+	277.60		2.627E-01	1.573E-01	2.268E-01	3.491E-02	1.158
AM-241		334.30		-4.460E-01	9.861E-01	1.349E+00	1.843E-01	-0.331
		59.54	*	-5.591E-02	8.961E-02	1.277E-01	1.003E-02	-0.438
CM-243		99.55		1.805E-01	9.886E-02	1.759E-01	1.547E-02	1.027
		103.76	*	-1.533E-02	5.589E-02	9.488E-02	8.216E-03	-0.162
		117.00		-6.607E-02	1.216E-01	2.033E-01	1.720E-02	-0.325
	+	209.75		2.546E+00	7.599E-01	1.020E+00	1.201E-01	2.495
		228.18		1.347E-02	1.514E-01	2.487E-01	3.163E-02	0.054
AM-246	+	277.60		2.649E-01	1.586E-01	2.287E-01	3.521E-02	1.158
		798.80		-1.194E-02	9.504E-02	1.306E-01	1.281E-02	-0.091
		1036.00		-8.775E-02	1.933E-01	3.077E-01	2.823E-02	-0.285
		1062.04		-3.262E-02	1.514E-01	2.459E-01	2.212E-02	-0.133
		1078.86	*	1.513E-02	9.826E-02	1.641E-01	1.455E-02	0.092
CM-247	+	278.00		1.089E+00	6.523E-01	9.503E-01	1.465E-01	1.146
		287.40		-5.320E-03	8.288E-01	1.335E+00	2.040E-01	-0.004
		402.60	*	6.912E-03	2.440E-02	4.178E-02	4.471E-03	0.165
CF-249		252.85		-2.616E-02	5.712E-01	9.269E-01	1.301E-01	-0.028
		333.44		-1.179E-01	1.505E-01	1.802E-01	2.468E-02	-0.654
		387.95	*	3.526E-02	2.653E-02	4.723E-02	5.143E-03	0.746
CF-251		176.60	*	3.120E-02	8.228E-02	1.386E-01	1.412E-02	0.225
		227.00		-1.574E-02	2.513E-01	4.105E-01	5.195E-02	-0.038
		285.00		1.063E+00	1.197E+00	1.993E+00	3.057E-01	0.534

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]G245385005      *
* Acquisition date   : 4-FEB-2010 22:52:40 Detector SN#      :              *
* Detector ID        : GAM11 Sensitivity      : 5.000          *
* Geometry           : CAN Energy tolerance: 1.500          *
* Elapsed live time: 0 04:00:00.00 Abundance limit : 75.000    *
* Elapsed real time: 0 04:00:03.14 Half life ratio : 8.000    *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 15-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245385005 Analyst initials: MXR1          *
* Batch Number       : 944962 Sample Quantity : 1.1057E+02 GRAM      *
* Recovery           : 1.00000 Carrier Weight : 0.00000          *
*****
*
*                                     QC DATA                              *
*
* Standard Weight    : 0.00000                                           *
* CALIB. DATE/TIME   : 18-NOV-2009 15:33:22 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	2.141E+01	2.113E+00	3.445E-01	0.000E+00
CD-109	4.262E+00	7.683E-01	6.925E-01	0.000E+00
SN-126	4.155E-01	7.491E-02	6.774E-02	0.000E+00
BA-137M	2.279E-02	3.461E-02	4.354E-02	0.000E+00
CS-137	2.409E-02	3.658E-02	4.602E-02	0.000E+00
RE-188	1.688E-01	1.763E-01	1.921E-01	0.000E+00
TL-208	5.786E-01	8.830E-02	3.751E-02	0.000E+00
BI-210	1.903E+00	2.570E+00	2.586E+00	0.000E+00
PB-210	1.903E+00	2.570E+00	2.586E+00	0.000E+00
PO-210	1.903E+00	2.569E+00	2.586E+00	0.000E+00
BI-211	4.215E+00	6.362E-01	2.145E-01	0.000E+00
PB-212	1.934E+00	2.792E-01	6.115E-02	0.000E+00
PO-212	1.934E+00	2.792E-01	6.115E-02	0.000E+00
BI-214	1.356E+00	1.895E-01	7.718E-02	0.000E+00
PB-214	1.466E+00	2.337E-01	7.477E-02	0.000E+00
PO-214	1.466E+00	2.337E-01	7.477E-02	0.000E+00
PO-216	1.934E+00	2.792E-01	6.115E-02	0.000E+00
PO-218	1.466E+00	2.337E-01	7.477E-02	0.000E+00
RA-224	5.149E+00	1.248E+00	6.961E-01	0.000E+00
RA-226	1.356E+00	1.895E-01	7.718E-02	0.000E+00
AC-228	1.810E+00	3.092E-01	1.425E-01	0.000E+00
RA-228	1.810E+00	3.092E-01	1.425E-01	0.000E+00
TH-228	1.973E+00	2.849E-01	6.241E-02	0.000E+00
TH-230	1.356E+00	1.895E-01	7.717E-02	0.000E+00
TH-232	1.810E+00	3.092E-01	1.425E-01	0.000E+00
TH-234	2.156E+00	1.276E+00	1.184E+00	0.000E+00
U-234	1.356E+00	1.895E-01	7.717E-02	0.000E+00
U-235	2.520E-01	1.656E-01	2.187E-01	0.000E+00
NP-237	1.220E+00	3.306E-01	2.005E-01	0.000E+00
U-238	2.156E+00	1.276E+00	1.184E+00	0.000E+00
AM-243	4.434E-01	5.845E-02	5.265E-02	0.000E+00
ANH-511	1.083E-01	5.728E-02	3.300E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-1.154E-01	2.440E-01	3.927E-01	0.000E+00	NOT IDENT.
NA-22	-1.407E-03	2.893E-02	4.760E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.854E+08	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-2.812E-03	2.134E-02	3.495E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.737E-02	4.678E-02	0.000E+00	FAIL ABUN
SC-46	1.729E-02	2.587E-02	4.626E-02	0.000E+00	FAIL ABUN
V-48	5.189E-02	5.590E-02	1.011E-01	0.000E+00	NOT IDENT.
CR-51	-2.279E-01	2.921E-01	4.573E-01	0.000E+00	NOT IDENT.
MN-52	8.202E-02	3.221E-01	5.406E-01	0.000E+00	FAIL ABUN
MN-54	1.708E-02	2.693E-02	4.788E-02	0.000E+00	NOT IDENT.
CO-56	5.985E-04	2.751E-02	4.729E-02	0.000E+00	FAIL ABUN
CO-57	-1.170E-02	1.540E-02	2.636E-02	0.000E+00	NOT IDENT.
CO-58	-3.932E-02	2.895E-02	4.157E-02	0.000E+00	NOT IDENT.
FE-59	-5.745E-02	6.599E-02	1.026E-01	0.000E+00	FAIL ABUN
CO-60	9.429E-03	2.706E-02	4.528E-02	0.000E+00	NOT IDENT.
ZN-65	-4.004E-02	7.388E-02	9.647E-02	0.000E+00	NOT IDENT.
GE-68	5.675E-02	8.371E-01	1.413E+00	0.000E+00	NOT IDENT.
AS-73	-8.825E-02	4.524E-01	7.281E-01	0.000E+00	NOT IDENT.
AS-74	-4.692E-02	7.813E-02	1.260E-01	0.000E+00	NOT IDENT.
SE-75	-1.520E-02	3.044E-02	4.689E-02	0.000E+00	NOT IDENT.
BR-77	0.000E+00	3.253E+01	0.000E+00	0.000E+00	SHORT HLIF
SR-82	-7.904E-02	3.174E-01	4.402E-01	0.000E+00	NOT IDENT.
RB-83	-3.197E-03	4.808E-02	8.124E-02	0.000E+00	NOT IDENT.
RB-84	4.340E-02	4.928E-02	8.928E-02	0.000E+00	NOT IDENT.
KR-85	7.585E+00	4.994E+00	8.994E+00	0.000E+00	NOT IDENT.
SR-85	4.115E-02	2.709E-02	4.879E-02	0.000E+00	NOT IDENT.
RB-86	-2.031E-01	6.366E-01	1.042E+00	0.000E+00	NOT IDENT.
Y-88	-2.028E-02	2.662E-02	3.950E-02	0.000E+00	NOT IDENT.
ZR-88	-9.392E-03	2.078E-02	3.524E-02	0.000E+00	NOT IDENT.
Y-91	1.050E+00	1.282E+01	2.144E+01	0.000E+00	NOT IDENT.
NB-94	9.456E-03	2.300E-02	3.898E-02	0.000E+00	NOT IDENT.
NB-95	8.058E-03	3.783E-02	5.509E-02	0.000E+00	NOT IDENT.
NB-95M	-6.661E-02	9.728E-02	1.405E-01	0.000E+00	NOT IDENT.
ZR-95	8.668E-02	5.169E-02	9.338E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.551E+07	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.509E+08	0.000E+00	0.000E+00	SHORT HLIF
MO-99	4.798E-02	3.049E+01	5.013E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.684E+22	0.000E+00	0.000E+00	SHORT HLIF
RH-101	4.904E-03	2.316E-02	3.719E-02	0.000E+00	NOT IDENT.
RH-102	6.411E-03	1.903E-02	3.311E-02	0.000E+00	NOT IDENT.
RU-103	-4.681E-03	2.800E-02	4.718E-02	0.000E+00	FAIL ABUN
RH-106	-7.523E-02	2.134E-01	3.477E-01	0.000E+00	FAIL ABUN
RU-106	-7.523E-02	2.133E-01	3.477E-01	0.000E+00	FAIL ABUN
AG-108M	3.124E-03	2.094E-02	3.632E-02	0.000E+00	NOT IDENT.
AG-110M	-1.014E-02	2.840E-02	3.994E-02	0.000E+00	FAIL ABUN
IN-111	-1.633E-01	2.881E+00	4.298E+00	0.000E+00	NOT IDENT.
IN-113M	-2.110E-02	2.943E-02	4.916E-02	0.000E+00	NOT IDENT.
SN-113	-2.110E-02	2.943E-02	4.916E-02	0.000E+00	NOT IDENT.
IN-114M	2.145E-02	1.314E-01	2.025E-01	0.000E+00	NOT IDENT.
CD-115	0.000E+00	3.822E+01	0.000E+00	0.000E+00	SHORT HLIF
SN-117M	-1.506E-03	5.076E-02	7.864E-02	0.000E+00	NOT IDENT.
SB-122	4.885E+00	5.490E+00	9.689E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.440E+09	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.747E-03	1.928E-02	3.193E-02	0.000E+00	NOT IDENT.
I-124	6.966E-01	1.155E+00	1.997E+00	0.000E+00	NOT IDENT.
SB-124	3.395E-02	5.547E-02	1.005E-01	0.000E+00	FAIL ABUN
SB-125	1.723E-02	5.889E-02	1.030E-01	0.000E+00	FAIL ABUN
TE-125M	3.972E+00	5.957E+00	1.070E+01	0.000E+00	NOT IDENT.
I-126	2.478E-01	2.011E-01	3.195E-01	0.000E+00	NOT IDENT.
SB-126	1.259E-01	1.332E-01	2.326E-01	0.000E+00	FAIL ABUN
SB-127	-2.846E+00	2.644E+00	4.022E+00	0.000E+00	NOT IDENT.
XE-127	-3.252E-02	3.411E-02	5.565E-02	0.000E+00	FAIL ABUN
I-131	-6.533E-02	1.280E-01	2.014E-01	0.000E+00	NOT IDENT.
TE-132	4.699E-01	1.398E+00	2.382E+00	0.000E+00	NOT IDENT.
BA-133	1.446E-02	3.204E-02	4.775E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.962E+05	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	4.842E-02	6.920E-02	0.000E+00	FAIL ABUN
CS-135	8.257E-02	1.205E-01	1.795E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.832E+21	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.010E-03	9.438E-02	1.592E-01	0.000E+00	FAIL ABUN
CE-139	-9.498E-03	1.925E-02	3.259E-02	0.000E+00	NOT IDENT.
BA-140	-1.193E-01	2.304E-01	3.717E-01	0.000E+00	NOT IDENT.
LA-140	1.975E-02	9.720E-02	1.459E-01	0.000E+00	FAIL ABUN

CE-141	2.995E-02	4.651E-02	7.454E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.084E+03	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-4.731E-02	1.391E-01	2.151E-01	0.000E+00	NOT IDENT.
PM-144	-1.158E-02	2.395E-02	3.829E-02	0.000E+00	NOT IDENT.
PR-144	-7.871E-01	1.628E+00	2.602E+00	0.000E+00	NOT IDENT.
PM-146	7.243E-03	2.958E-02	5.135E-02	0.000E+00	NOT IDENT.
ND-147	-1.827E-01	5.242E-01	8.679E-01	0.000E+00	FAIL ABUN
PM-149	0.000E+00	3.337E+02	0.000E+00	0.000E+00	SHORT HLIF
EU-152	-1.833E-02	6.966E-02	1.063E-01	0.000E+00	FAIL ABUN
GD-153	-1.998E-02	5.581E-02	8.093E-02	0.000E+00	FAIL ABUN
EU-154	-4.550E-03	8.054E-02	1.324E-01	0.000E+00	NOT IDENT.
EU-155	5.325E-02	6.966E-02	1.162E-01	0.000E+00	FAIL ABUN
TB-160	5.402E-03	9.442E-02	1.622E-01	0.000E+00	FAIL ABUN
HO-166M	7.680E-03	4.088E-02	6.832E-02	0.000E+00	FAIL ABUN
TM-171	-4.676E+00	1.723E+01	2.579E+01	0.000E+00	NOT IDENT.
LU-176	1.095E-02	1.648E-02	2.792E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.856E+00	2.433E+00	0.000E+00	FAIL ABUN
LU-177M	-6.409E-02	1.363E-01	2.011E-01	0.000E+00	NOT IDENT.
HF-181	-2.124E-03	3.151E-02	5.360E-02	0.000E+00	NOT IDENT.
W-181	-1.065E-01	2.217E-01	3.293E-01	0.000E+00	NOT IDENT.
TA-182	1.183E-02	1.400E-01	2.336E-01	0.000E+00	FAIL ABUN
RE-183	-2.249E-03	7.847E-02	1.270E-01	0.000E+00	FAIL ABUN
RE-184	-7.128E-03	1.525E-01	2.545E-01	0.000E+00	NOT IDENT.
OS-185	-8.851E-03	2.872E-02	4.675E-02	0.000E+00	NOT IDENT.
W-188	-7.556E+00	5.707E+00	7.493E+00	0.000E+00	FAIL ABUN
IR-192	-1.079E-02	2.471E-02	3.961E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	1.439E-01	2.589E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	9.823E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	6.104E+00	1.465E+01	2.556E+01	0.000E+00	NOT IDENT.
TL-202	3.040E-03	6.175E-02	1.065E-01	0.000E+00	NOT IDENT.
HG-203	4.319E-02	3.437E-02	5.230E-02	0.000E+00	NOT IDENT.
BI-207	2.587E-03	3.498E-02	5.914E-02	0.000E+00	FAIL ABUN
TL-207	6.686E-01	5.264E-01	8.037E-01	0.000E+00	FAIL ABUN
PO-209	3.100E-01	4.534E+00	7.785E+00	0.000E+00	NOT IDENT.
PB-211	-3.740E-01	7.301E-01	1.020E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.504E-01	5.103E-01	0.000E+00	FAIL ABUN
PO-215	6.686E-01	5.264E-01	8.037E-01	0.000E+00	FAIL ABUN
RN-219	1.055E-01	2.625E-01	4.625E-01	0.000E+00	FAIL ABUN
RN-220	2.632E+00	1.715E+01	2.923E+01	0.000E+00	NOT IDENT.
RA-223	6.686E-01	5.264E-01	8.037E-01	0.000E+00	FAIL ABUN
AC-227	-6.964E-03	2.462E-01	4.108E-01	0.000E+00	FAIL ABUN
TH-227	-6.964E-03	2.462E-01	4.108E-01	0.000E+00	FAIL ABUN
TH-229	8.992E-02	3.103E-01	5.345E-01	0.000E+00	FAIL ABUN
PA-231	4.967E-01	1.016E+00	1.715E+00	0.000E+00	FAIL ABUN
TH-231	6.686E-01	5.264E-01	8.037E-01	0.000E+00	FAIL ABUN
U-231	-1.426E+00	1.694E+00	2.394E+00	0.000E+00	FAIL ABUN
PA-233	-2.369E-02	4.265E-02	6.791E-02	0.000E+00	FAIL ABUN
PA-234	6.149E-03	2.263E-01	3.354E-01	0.000E+00	FAIL ABUN
PA-234M	4.347E+00	3.767E+00	5.813E+00	0.000E+00	FAIL ABUN
NP-236	1.536E-02	5.026E-02	8.761E-02	0.000E+00	NOT IDENT.
NP-239	-6.419E-02	1.157E-01	2.002E-01	0.000E+00	FAIL ABUN
AM-241	-5.591E-02	8.781E-02	1.300E-01	0.000E+00	NOT IDENT.
CM-243	-1.533E-02	5.477E-02	9.626E-02	0.000E+00	FAIL ABUN
AM-246	1.513E-02	9.630E-02	1.636E-01	0.000E+00	NOT IDENT.
CM-247	6.912E-03	2.391E-02	4.196E-02	0.000E+00	FAIL ABUN
CF-249	3.526E-02	2.600E-02	4.745E-02	0.000E+00	NOT IDENT.
CF-251	3.120E-02	8.063E-02	1.401E-01	0.000E+00	NOT IDENT.


```

*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245385005.CNF;1
Sample date        : 15-JAN-2010 12:00:00 Acquisition date : 4-FEB-2010 22:52:40.
Sample ID          : G245385005 Sample quantity : 1.10570E+02 GRAM
Detector name      : GAM11 Detector geometry: CAN
Elapsed live time  : 0 04:00:00.00 Elapsed real time: 0 04:00:03.14 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944962 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	1649	10.67*	1.225E+00	2.141E+01	2.141E+01	10.07
CD-109	88.03	615	3.72*	6.793E+00	4.133E+00	4.262E+00	18.39
SN-126	64.28	209	9.60	4.325E+00	8.533E-01	8.533E-01	59.63
	86.94	615	8.90	6.793E+00	1.728E+00	1.728E+00	44.44
	87.57	615	37.00*	6.793E+00	4.155E-01	4.155E-01	18.39
BA-137M	661.65	29	89.98*	2.402E+00	2.276E-02	2.279E-02	154.96
CS-137	661.65	29	85.12*	2.402E+00	2.406E-02	2.409E-02	154.96
RE-188	155.03	83	15.00*	6.820E+00	1.375E-01	1.688E-01	106.56
	477.96	-----	1.04	3.110E+00	-----	Line Not Found	-----
	633.10	-----	1.26	2.491E+00	-----	Line Not Found	-----
TL-208	277.35	102	6.80	4.675E+00	5.446E-01	5.446E-01	60.53
	510.84	188	21.60	2.954E+00	5.013E-01	5.013E-01	54.62
	583.14	764	84.20*	2.660E+00	5.786E-01	5.786E-01	15.57
	860.37	92	12.46	1.926E+00	6.509E-01	6.509E-01	54.81
BI-210	46.50	71	4.05*	1.572E+00	1.900E+00	1.903E+00	137.79
PB-210	46.50	71	4.05*	1.572E+00	1.900E+00	1.903E+00	137.79
PO-210	46.50	71	4.05*	1.572E+00	1.900E+00	1.903E+00	137.73
BI-211	72.87	-----	1.27	5.576E+00	-----	Line Not Found	-----
	351.07	1260	12.94*	3.920E+00	4.215E+00	4.215E+00	15.40
PB-212	74.81	999	10.70	5.794E+00	2.735E+00	2.735E+00	16.38
	77.11	1533	18.00	6.023E+00	2.401E+00	2.401E+00	10.91
	87.30	615	8.00	6.793E+00	1.922E+00	1.922E+00	20.94
	238.63	2646	44.60*	5.209E+00	1.934E+00	1.934E+00	14.73
	300.09	151	3.41	4.413E+00	1.708E+00	1.708E+00	41.97
PO-212	74.81	999	10.70	5.794E+00	2.735E+00	2.735E+00	16.38
	77.11	1533	18.00	6.023E+00	2.401E+00	2.401E+00	10.91
	87.30	615	8.00	6.793E+00	1.922E+00	1.922E+00	20.94
	115.19	-----	0.60	7.407E+00	-----	Line Not Found	-----
	238.63	2646	44.60*	5.209E+00	1.934E+00	1.934E+00	14.73
	300.09	151	3.41	4.413E+00	1.708E+00	1.708E+00	41.97
BI-214	609.31	950	46.30*	2.569E+00	1.356E+00	1.356E+00	14.26
	1120.29	206	15.10	1.530E+00	1.511E+00	1.511E+00	31.99

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	1764.49	200	15.80	1.070E+00	2.004E+00	2.004E+00	18.23
	74.81	999	6.21	5.794E+00	4.712E+00	4.712E+00	15.36
	77.11	1533	10.50	6.023E+00	4.115E+00	4.115E+00	13.31
	87.30	615	4.67	6.793E+00	3.292E+00	3.292E+00	19.94
	241.98	619	7.49	5.163E+00	2.715E+00	2.715E+00	25.36
PO-214	295.21	862	19.20	4.466E+00	1.707E+00	1.707E+00	18.62
	351.92	1260	37.20*	3.920E+00	1.466E+00	1.466E+00	16.26
	74.81	999	6.21	5.794E+00	4.712E+00	4.712E+00	15.36
	77.11	1533	10.50	6.023E+00	4.115E+00	4.115E+00	13.31
	87.30	615	4.67	6.793E+00	3.292E+00	3.292E+00	19.94
PO-216	241.98	619	7.49	5.163E+00	2.715E+00	2.715E+00	25.36
	295.21	862	19.20	4.466E+00	1.707E+00	1.707E+00	18.62
	351.92	1260	37.20*	3.920E+00	1.466E+00	1.466E+00	16.26
	74.81	999	10.70	5.794E+00	2.735E+00	2.735E+00	16.38
	77.11	1533	18.00	6.023E+00	2.401E+00	2.401E+00	10.91
PO-218	87.30	615	8.00	6.793E+00	1.922E+00	1.922E+00	20.94
	238.63	2646	44.60*	5.209E+00	1.934E+00	1.934E+00	14.73
	300.09	151	3.41	4.413E+00	1.708E+00	1.708E+00	41.97
	74.81	999	6.21	5.794E+00	4.712E+00	4.712E+00	15.36
	77.11	1533	10.50	6.023E+00	4.115E+00	4.115E+00	13.31
RA-224	87.30	615	4.67	6.793E+00	3.292E+00	3.292E+00	19.94
	241.98	619	7.49	5.163E+00	2.715E+00	2.715E+00	25.36
	295.21	862	19.20	4.466E+00	1.707E+00	1.707E+00	18.62
	351.92	1260	37.20*	3.920E+00	1.466E+00	1.466E+00	16.26
	240.98	619	3.95*	5.163E+00	5.149E+00	5.149E+00	24.73
AC-228	609.31	950	46.30*	2.569E+00	1.356E+00	1.356E+00	14.26
	1120.29	206	15.10	1.530E+00	1.511E+00	1.511E+00	31.99
	1764.49	200	15.80	1.070E+00	2.004E+00	2.004E+00	18.23
	338.32	461	11.40	4.037E+00	1.699E+00	1.699E+00	46.07
	911.07	541	27.70*	1.833E+00	1.810E+00	1.810E+00	17.43
RA-228	969.11	316	16.60	1.737E+00	1.859E+00	1.859E+00	28.64
	338.32	461	11.40	4.037E+00	1.699E+00	1.699E+00	46.07
	911.07	541	27.70*	1.833E+00	1.810E+00	1.810E+00	17.43
	969.11	316	16.60	1.737E+00	1.859E+00	1.859E+00	28.64
	74.81	999	10.70	5.794E+00	2.735E+00	2.735E+00	13.50
TH-228	77.11	1533	18.00	6.023E+00	2.401E+00	2.450E+00	10.91
	87.30	615	8.00	6.793E+00	1.922E+00	1.962E+00	18.39
	238.63	2646	44.60*	5.209E+00	1.934E+00	1.973E+00	14.73
	300.09	151	3.41	4.413E+00	1.708E+00	1.743E+00	71.88
	609.31	950	46.30*	2.569E+00	1.356E+00	1.356E+00	14.26
TH-230	1120.29	206	15.10	1.530E+00	1.511E+00	1.511E+00	31.99
	1764.49	200	15.80	1.070E+00	2.004E+00	2.004E+00	18.23
	338.32	461	11.40	4.037E+00	1.699E+00	1.699E+00	22.24
	911.07	541	27.70*	1.833E+00	1.810E+00	1.810E+00	17.43
	969.11	316	16.60	1.737E+00	1.859E+00	1.859E+00	28.64
TH-234	63.29	209	3.80*	4.325E+00	2.156E+00	2.156E+00	60.41
	92.38	623	5.41	7.058E+00	2.768E+00	2.768E+00	25.01
	609.31	950	46.30*	2.569E+00	1.356E+00	1.356E+00	14.26
U-234	1120.29	206	15.10	1.530E+00	1.511E+00	1.511E+00	31.99

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-235	1764.49	200	15.80	1.070E+00	2.004E+00	2.004E+00	18.23
	89.95	414	2.70	6.932E+00	3.758E+00	3.758E+00	37.24
	93.35	623	4.50	7.058E+00	3.328E+00	3.328E+00	32.92
	105.00	-----	2.10	7.364E+00	-----	Line Not Found	-----
	143.76	110	10.50*	7.031E+00	2.520E-01	2.520E-01	67.07
NP-237	163.35	-----	4.70	6.629E+00	-----	Line Not Found	-----
	185.71	446	54.00	6.156E+00	2.276E-01	2.276E-01	25.92
	205.31	-----	4.70	5.777E+00	-----	Line Not Found	-----
	86.50	615	12.60*	6.793E+00	1.220E+00	1.220E+00	27.64
	95.87	-----	2.60	7.169E+00	-----	Line Not Found	-----
U-238	63.29	209	3.80*	4.325E+00	2.156E+00	2.156E+00	60.41
	92.38	623	5.41	7.058E+00	2.768E+00	2.768E+00	19.30
AM-243	74.67	999	66.00*	5.794E+00	4.434E-01	4.434E-01	13.45
	86.72	615	0.34	6.793E+00	4.576E+01	4.576E+01	18.39
	117.66	-----	0.55	7.397E+00	-----	Line Not Found	-----
ANH-511	142.18	-----	0.13	7.065E+00	-----	Line Not Found	-----
	511.00	188	100.00*	2.954E+00	1.083E-01	1.083E-01	53.98

Flag: "*" = Keyline

Total number of lines in spectrum 49
Number of unidentified lines 9
Number of lines tentatively identified by NID 40 81.63%

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	2.141E+01	2.141E+01	0.216E+01	10.07	
CD-109	464.00D	1.03	4.133E+00	4.262E+00	0.784E+00	18.39	
SN-126	1.00E+05Y	1.00	4.155E-01	4.155E-01	0.764E-01	18.39	
BA-137M	30.17Y	1.00	2.276E-02	2.279E-02	3.531E-02	154.96	
CS-137	30.17Y	1.00	2.406E-02	2.409E-02	3.733E-02	154.96	
RE-188	69.40D	1.23	1.375E-01	1.688E-01	1.799E-01	106.56	
TL-208	1.41E+10Y	1.00	5.786E-01	5.786E-01	0.901E-01	15.57	
BI-210	22.26Y	1.00	1.900E+00	1.903E+00	2.622E+00	137.79	
PB-210	22.26Y	1.00	1.900E+00	1.903E+00	2.622E+00	137.79	
PO-210	22.26Y	1.00	1.900E+00	1.903E+00	2.621E+00	137.73	
BI-211	7.04E+08Y	1.00	4.215E+00	4.215E+00	0.649E+00	15.40	
PB-212	1.41E+10Y	1.00	1.934E+00	1.934E+00	0.285E+00	14.73	
PO-212	1.41E+10Y	1.00	1.934E+00	1.934E+00	0.285E+00	14.73	
BI-214	1600.00Y	1.00	1.356E+00	1.356E+00	0.193E+00	14.26	
PB-214	1600.00Y	1.00	1.466E+00	1.466E+00	0.238E+00	16.26	
PO-214	1600.00Y	1.00	1.466E+00	1.466E+00	0.238E+00	16.26	
PO-216	1.41E+10Y	1.00	1.934E+00	1.934E+00	0.285E+00	14.73	
PO-218	1600.00Y	1.00	1.466E+00	1.466E+00	0.238E+00	16.26	
RA-224	1.41E+10Y	1.00	5.149E+00	5.149E+00	1.273E+00	24.73	
RA-226	1600.00Y	1.00	1.356E+00	1.356E+00	0.193E+00	14.26	
AC-228	1.41E+10Y	1.00	1.810E+00	1.810E+00	0.315E+00	17.43	
RA-228	1.41E+10Y	1.00	1.810E+00	1.810E+00	0.315E+00	17.43	
TH-228	1.91Y	1.02	1.934E+00	1.973E+00	0.291E+00	14.73	
TH-230	4.47E+09Y	1.00	1.356E+00	1.356E+00	0.193E+00	14.26	
TH-232	1.41E+10Y	1.00	1.810E+00	1.810E+00	0.315E+00	17.43	
TH-234	4.47E+09Y	1.00	2.156E+00	2.156E+00	1.302E+00	60.41	
U-234	4.47E+09Y	1.00	1.356E+00	1.356E+00	0.193E+00	14.26	
U-235	7.04E+08Y	1.00	2.520E-01	2.520E-01	1.690E-01	67.07	
NP-237	2.14E+06Y	1.00	1.220E+00	1.220E+00	0.337E+00	27.64	
U-238	4.47E+09Y	1.00	2.156E+00	2.156E+00	1.302E+00	60.41	
AM-243	7380.00Y	1.00	4.434E-01	4.434E-01	0.596E-01	13.45	
ANH-511	1.00E+09Y	1.00	1.083E-01	1.083E-01	0.584E-01	53.98	

Total Activity : 7.111E+01 7.132E+01

Grand Total Activity : 7.111E+01 7.132E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	84.27	236	687	1.18	167.45	163	29	1.64E-02	40.0	6.61E+00	T
0	128.91	143	699	0.77	256.80	253	9	9.91E-03	70.2	7.29E+00	T
0	209.42	281	404	1.11	417.94	415	8	1.95E-02	27.4	5.70E+00	T
0	270.33	181	382	1.22	539.84	535	10	1.26E-02	43.2	4.76E+00	T
0	328.28	153	275	1.02	655.82	652	9	1.06E-02	42.4	4.13E+00	T
0	409.67	60	228	1.08	818.72	814	9	4.16E-03	94.5	3.50E+00	T
0	463.19	127	203	1.05	925.81	921	10	8.84E-03	45.4	3.19E+00	T
0	727.82	153	152	1.44	1455.38	1450	10	1.06E-02	34.5	2.22E+00	T
0	770.10	154	186	4.25	1539.99	1531	20	1.07E-02	46.9	2.12E+00	
0	795.51	136	79	1.46	1590.82	1585	12	9.42E-03	31.9	2.06E+00	T
0	936.79	113	96	6.53	1873.52	1865	21	7.84E-03	48.9	1.79E+00	T
3	965.44	81	78	2.10	1930.85	1926	19	5.62E-03	51.1	1.74E+00	T
0	1002.13	36	66	0.97	2004.25	1999	9	2.52E-03	87.8	1.69E+00	T
0	1238.76	75	107	1.89	2477.68	2472	11	5.18E-03	58.5	1.40E+00	T
0	1378.86	51	48	1.85	2757.97	2752	12	3.57E-03	61.8	1.28E+00	
0	1410.52	20	44	0.72	2821.30	2811	12	1.36E-03	****	1.26E+00	
0	1496.45	30	16	2.65	2993.20	2988	11	2.05E-03	64.7	1.20E+00	
1	1588.80	50	35	2.07	3177.94	3173	19	3.47E-03	50.3	1.15E+00	
1	1593.64	33	28	2.08	3187.62	3173	19	2.26E-03	71.8	1.15E+00	
0	1632.29	30	14	1.74	3264.94	3260	11	2.08E-03	63.2	1.13E+00	
0	1730.98	51	4	0.76	3462.34	3455	15	3.57E-03	32.3	1.08E+00	
0	1848.90	27	21	1.76	3698.21	3689	14	1.85E-03	82.8	1.04E+00	

Flags: "T" = Tentatively associated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245385005.CNF;1
* Acquisition date   : 4-FEB-2010 22:52:40.  Detector SN#      :
* Detector ID        : GAM11                      Sensitivity    : 5.00000
* Geometry           : CAN                      Energy tolerance: 1.50000
* Elapsed live time  : 0 04:00:00.00             Abundance limit : 75.00000
* Elapsed real time  : 0 04:00:03.14             Half life ratio : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 15-JAN-2010 12:00:00  Nuclide Library : SOLID
* Sample ID          : G245385005             Analyst initials: MXR1
* Batch Number       : 944962                 Sample Quantity : 1.10570E+02 GRAM
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 18-NOV-2009 15:33:22.2MS 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	2.141E+01	2.156E+00	3.464E-01	2.995E-02	61.825
CD-109	4.262E+00	7.840E-01	6.817E-01	6.464E-02	6.252
SN-126	4.155E-01	7.644E-02	6.668E-02	6.290E-03	6.232
BA-137M	2.279E-02	3.531E-02	4.351E-02	4.117E-03	0.524
CS-137	2.409E-02	3.733E-02	4.599E-02	4.359E-03	0.524
RE-188	1.688E-01	1.799E-01	1.899E-01	1.771E-02	0.889
TL-208	5.786E-01	9.010E-02	3.745E-02	4.045E-03	15.449
BI-210	1.903E+00	2.622E+00	2.534E+00	2.359E-01	0.751
PB-210	1.903E+00	2.622E+00	2.534E+00	2.359E-01	0.751
PO-210	1.903E+00	2.621E+00	2.534E+00	2.136E-01	0.751
BI-211	4.215E+00	6.492E-01	2.133E-01	2.814E-02	19.759
PB-212	1.934E+00	2.849E-01	6.065E-02	8.494E-03	31.880
PO-212	1.934E+00	2.849E-01	6.065E-02	8.494E-03	31.880
BI-214	1.356E+00	1.934E-01	7.708E-02	8.713E-03	17.595
PB-214	1.466E+00	2.384E-01	7.437E-02	1.052E-02	19.717
PO-214	1.466E+00	2.384E-01	7.437E-02	1.052E-02	19.717
PO-216	1.934E+00	2.849E-01	6.065E-02	8.494E-03	31.880
PO-218	1.466E+00	2.384E-01	7.437E-02	1.052E-02	19.717

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-224	5.149E+00	1.273E+00	6.904E-01	9.247E-02	7.457
RA-226	1.356E+00	1.934E-01	7.708E-02	8.713E-03	17.595
AC-228	1.810E+00	3.155E-01	1.428E-01	1.738E-02	12.676
RA-228	1.810E+00	3.155E-01	1.428E-01	1.738E-02	12.676
TH-228	1.973E+00	2.907E-01	6.190E-02	8.669E-03	31.881
TH-230	1.356E+00	1.934E-01	7.708E-02	8.713E-03	17.595
TH-232	1.810E+00	3.155E-01	1.428E-01	1.738E-02	12.676
TH-234	2.156E+00	1.302E+00	1.163E+00	2.023E-01	1.854
U-234	1.356E+00	1.934E-01	7.708E-02	8.713E-03	17.595
U-235	2.520E-01	1.690E-01	2.161E-01	3.821E-02	1.166
NP-237	1.220E+00	3.373E-01	1.974E-01	4.467E-02	6.183
U-238	2.156E+00	1.302E+00	1.163E+00	2.023E-01	1.854
AM-243	4.434E-01	5.964E-02	5.177E-02	4.190E-03	8.564
ANH-511	1.083E-01	5.845E-02	3.292E-02	3.520E-03	3.290

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.154E-01		2.490E-01	3.915E-01	4.430E-02	-0.295
NA-22	-1.407E-03		2.952E-02	4.780E-02	3.926E-03	-0.029
NA-24	-3.313E+01		9.458E+01	Half-Life	too short	
AL-26	-2.812E-03		2.178E-02	3.520E-02	2.873E-03	-0.080
TI-44	4.431E-01	+	4.833E-02	4.602E-02	3.879E-03	9.629
SC-46	1.729E-02		2.640E-02	4.633E-02	4.564E-03	0.373
V-48	5.189E-02		5.704E-02	1.013E-01	9.608E-03	0.512
CR-51	-2.279E-01		2.981E-01	4.545E-01	6.596E-02	-0.501
MN-52	8.202E-02		3.286E-01	5.434E-01	4.553E-02	0.151
MN-54	1.708E-02		2.748E-02	4.793E-02	4.720E-03	0.356
CO-56	5.985E-04		2.807E-02	4.735E-02	4.665E-03	0.013
CO-57	-1.170E-02		1.572E-02	2.601E-02	2.200E-03	-0.450
CO-58	-3.932E-02		2.955E-02	4.161E-02	4.097E-03	-0.945
FE-59	-5.745E-02		6.733E-02	1.029E-01	9.675E-03	-0.558
CO-60	9.429E-03		2.761E-02	4.549E-02	3.759E-03	0.207
ZN-65	-4.004E-02		7.539E-02	9.680E-02	8.306E-03	-0.414
GE-68	5.675E-02		8.542E-01	1.417E+00	1.259E-01	0.040
AS-73	-8.825E-02		4.617E-01	7.142E-01	5.363E-02	-0.124
AS-74	-4.692E-02		7.973E-02	1.258E-01	1.279E-02	-0.373
SE-75	-1.520E-02		3.106E-02	4.654E-02	6.841E-03	-0.327
BR-77	8.393E-06		1.660E-05	Half-Life	too short	
SR-82	-7.904E-02		3.239E-01	4.405E-01	4.308E-02	-0.179
RB-83	-3.197E-03		4.906E-02	8.105E-02	8.637E-03	-0.039
RB-84	4.340E-02		5.028E-02	8.942E-02	8.810E-03	0.485
KR-85	7.585E+00		5.096E+00	8.971E+00	9.583E-01	0.845
SR-85	4.115E-02		2.765E-02	4.867E-02	5.199E-03	0.845
RB-86	-2.031E-01		6.496E-01	1.045E+00	9.287E-02	-0.194
Y-88	-2.028E-02		2.717E-02	3.979E-02	3.230E-03	-0.510
ZR-88	-9.392E-03		2.120E-02	3.508E-02	3.741E-03	-0.268

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
Y-91	1.050E+00		1.308E+01	2.152E+01	1.742E+00	0.049
NB-94	9.456E-03		2.346E-02	3.897E-02	3.743E-03	0.243
NB-95	8.058E-03		3.860E-02	5.512E-02	5.381E-03	0.146
NB-95M	-6.661E-02		9.927E-02	1.393E-01	1.945E-02	-0.478
ZR-95	8.668E-02		5.275E-02	9.341E-02	9.830E-03	0.928
NB-97	-5.739E+00		7.912E+00	Half-Life	too short	
ZR-97	3.558E+02		1.280E+02	Half-Life	too short	
MO-99	4.798E-02		3.111E+01	5.014E+01	7.935E+00	0.001
TC-99M	-3.719E+15		3.920E+16	Half-Life	too short	
RH-101	4.904E-03		2.363E-02	3.683E-02	4.122E-03	0.133
RH-102	6.411E-03		1.942E-02	3.300E-02	3.558E-03	0.194
RU-103	-4.681E-03		2.857E-02	4.705E-02	7.312E-03	-0.099
RH-106	-7.523E-02		2.177E-01	3.473E-01	4.943E-02	-0.217
RU-106	-7.523E-02		2.176E-01	3.473E-01	3.446E-02	-0.217
AG-108M	3.124E-03		2.136E-02	3.618E-02	4.000E-03	0.086
AG-110M	-1.014E-02		2.898E-02	3.992E-02	3.890E-03	-0.254
IN-111	-1.633E-01		2.940E+00	4.263E+00	5.810E-01	-0.038
IN-113M	-2.110E-02		3.003E-02	4.893E-02	5.322E-03	-0.431
SN-113	-2.110E-02		3.003E-02	4.893E-02	5.322E-03	-0.431
IN-114M	2.145E-02		1.341E-01	2.005E-01	2.170E-02	0.107
CD-115	1.011E-05		1.950E-05	Half-Life	too short	
SN-117M	-1.506E-03		5.179E-02	7.776E-02	7.349E-03	-0.019
SB-122	4.885E+00		5.602E+00	9.672E+00	1.008E+00	0.505
I-123	3.116E+02		1.755E+03	Half-Life	too short	
TE-123M	1.747E-03		1.968E-02	3.157E-02	3.003E-03	0.055
I-124	6.966E-01		1.179E+00	1.994E+00	2.015E-01	0.349
SB-124	3.395E-02		5.661E-02	1.011E-01	8.788E-03	0.336
SB-125	1.723E-02		6.009E-02	1.026E-01	1.118E-02	0.168
TE-125M	3.972E+00		6.079E+00	1.056E+01	1.085E+00	0.376
I-126	2.478E-01		2.052E-01	3.193E-01	3.027E-02	0.776
SB-126	1.259E-01		1.360E-01	2.326E-01	2.246E-02	0.541
SB-127	-2.846E+00		2.698E+00	4.021E+00	5.519E-01	-0.708
XE-127	-3.252E-02		3.481E-02	5.513E-02	6.300E-03	-0.590
I-131	-6.533E-02		1.306E-01	2.004E-01	2.522E-02	-0.326
TE-132	4.699E-01		1.426E+00	2.361E+00	4.547E-01	0.199
BA-133	1.446E-02		3.269E-02	4.749E-02	7.660E-03	0.305
I-133	3.159E-02		1.511E-01	Half-Life	too short	
CS-134	1.481E-01	+	4.941E-02	6.925E-02	6.831E-03	2.138
CS-135	8.257E-02		1.230E-01	1.782E-01	2.796E-02	0.463
I-135	3.414E+14		1.445E+15	Half-Life	too short	
CS-136	2.010E-03		9.631E-02	1.596E-01	1.508E-02	0.013
CE-139	-9.498E-03		1.965E-02	3.223E-02	3.132E-03	-0.295
BA-140	-1.193E-01		2.351E-01	3.709E-01	1.250E-01	-0.322
LA-140	1.975E-02		9.919E-02	1.468E-01	1.234E-02	0.135
CE-141	2.995E-02		4.746E-02	7.365E-02	6.751E-03	0.407
CE-143	5.656E-03		1.063E-03	Half-Life	too short	
CE-144	-4.731E-02		1.419E-01	2.124E-01	3.314E-02	-0.223
PM-144	-1.158E-02		2.444E-02	3.828E-02	3.671E-03	-0.303

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144	-7.871E-01		1.661E+00	2.601E+00	2.493E-01	-0.303
PM-146	-7.243E-03		3.018E-02	5.117E-02	6.416E-03	0.142
ND-147	-1.827E-01		5.349E-01	8.659E-01	1.401E-01	-0.211
PM-149	-3.033E-05		1.703E-04	Half-Life too short		
EU-152	-1.833E-02		7.108E-02	1.057E-01	1.433E-02	-0.173
GD-153	-1.998E-02		5.695E-02	7.973E-02	7.083E-03	-0.251
EU-154	-4.550E-03		8.218E-02	1.330E-01	1.462E-02	-0.034
EU-155	5.325E-02		7.109E-02	1.145E-01	9.991E-03	0.465
TB-160	5.402E-03		9.635E-02	1.625E-01	1.601E-02	0.033
HO-166M	7.680E-03		4.171E-02	6.831E-02	6.579E-03	0.112
TM-171	-4.676E+00		1.758E+01	2.534E+01	1.902E+00	-0.185
LU-176	1.095E-02		1.682E-02	2.774E-02	4.078E-03	0.395
LU-177	6.344E+00	+	1.894E+00	2.411E+00	2.821E-01	2.632
LU-177M	-6.409E-02		1.391E-01	2.002E-01	2.150E-02	-0.320
HF-181	-2.124E-03		3.215E-02	5.344E-02	5.756E-03	-0.040
W-181	-1.065E-01		2.262E-01	3.234E-01	2.397E-02	-0.329
TA-182	1.183E-02		1.428E-01	2.345E-01	1.905E-02	0.050
RE-183	-2.249E-03		8.008E-02	1.256E-01	1.204E-02	-0.018
RE-184	-7.128E-03		1.556E-01	2.525E-01	3.543E-02	-0.028
OS-185	-8.851E-03		2.930E-02	4.671E-02	4.509E-03	-0.189
W-188	-7.556E+00		5.824E+00	7.442E+00	1.130E+00	-1.015
IR-192	-1.079E-02		2.521E-02	3.937E-02	5.659E-03	-0.274
AU-195	4.225E-01		1.468E-01	2.551E-01	2.250E-02	1.656
TL-200	1.332E-03		5.012E-03	Half-Life too short		
TL-201	6.104E+00		1.495E+01	2.528E+01	2.473E+00	0.241
TL-202	3.040E-03		6.301E-02	1.061E-01	1.144E-02	0.029
HG-203	4.319E-02		3.508E-02	5.193E-02	8.112E-03	0.832
BI-207	2.587E-03		3.569E-02	5.932E-02	5.329E-03	0.044
TL-207	6.686E-01		5.372E-01	7.989E-01	1.671E-01	0.837
PO-209	3.100E-01		4.627E+00	7.798E+00	7.677E-01	0.040
PB-211	-3.740E-01		7.450E-01	1.016E+00	6.398E-01	-0.368
BI-212	9.886E-01	+	3.576E-01	5.103E-01	5.578E-02	1.937
PO-215	6.686E-01		5.372E-01	7.989E-01	1.671E-01	0.837
RN-219	1.055E-01		2.679E-01	4.605E-01	7.510E-02	0.229
RN-220	2.632E+00		1.750E+01	2.917E+01	3.065E+00	0.090
RA-223	6.686E-01		5.372E-01	7.989E-01	1.671E-01	0.837
AC-227	-6.964E-03		2.512E-01	4.076E-01	7.769E-02	-0.017
TH-227	-6.964E-03		2.512E-01	4.076E-01	8.685E-02	-0.017
TH-229	8.992E-02		3.166E-01	5.292E-01	5.811E-02	0.170
PA-231	4.967E-01		1.037E+00	1.703E+00	3.374E-01	0.292
TH-231	6.686E-01		5.372E-01	7.989E-01	1.671E-01	0.837
U-231	-1.426E+00		1.729E+00	2.358E+00	2.112E-01	-0.605
PA-233	-2.369E-02		4.352E-02	6.749E-02	9.902E-03	-0.351
PA-234	6.149E-03		2.309E-01	3.361E-01	6.475E-02	0.018
PA-234M	4.347E+00	+	3.843E+00	5.827E+00	6.199E-01	0.746
NP-236	1.536E-02		5.128E-02	8.663E-02	8.242E-03	0.177
NP-239	-6.419E-02		1.181E-01	1.975E-01	1.671E-02	-0.325
AM-241	-5.591E-02		8.961E-02	1.277E-01	1.003E-02	-0.438

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.533E-02		5.589E-02	9.488E-02	8.216E-03	-0.162
AM-246	1.513E-02		9.826E-02	1.641E-01	1.455E-02	0.092
CM-247	6.912E-03		2.440E-02	4.178E-02	4.471E-03	0.165
CF-249	3.526E-02		2.653E-02	4.723E-02	5.143E-03	0.746
CF-251	3.120E-02		8.228E-02	1.386E-01	1.412E-02	0.225

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : SYSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G245385005          *
* Acquisition date   : 4-FEB-2010 22:52:40 Detector SN#      :              *
* Detector ID        : GAM11                      Sensitivity   : 5.000        *
* Geometry           : CAN                        Energy tolerance: 1.500        *
* Elapsed live time  : 0 04:00:00.00              Abundance limit : 75.000        *
* Elapsed real time  : 0 04:00:03.14              Half life ratio : 8.000        *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 15-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245385005              Analyst initials: MXR1          *
* Batch Number       : 944962                  Sample Quantity : 1.1057E+02 GRAM  *
* Recovery           : 1.00000                  Carrier Weight  : 0.00000        *
*****
*
*                                     QC DATA                                *
*
* CALIB. DATE/TIME   : 18-NOV-2009 15:33:22 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	2.141E+01	2.113E+00	1.724E-01	1.078E+00
CD-109	4.262E+00	7.683E-01	3.464E-01	3.920E-01
SN-126	4.155E-01	7.491E-02	3.389E-02	3.822E-02
BA-137M	2.279E-02	3.461E-02	2.178E-02	1.766E-02
CS-137	2.409E-02	3.658E-02	2.303E-02	1.866E-02
RE-188	1.688E-01	1.763E-01	9.609E-02	8.995E-02
TL-208	5.786E-01	8.830E-02	1.877E-02	4.505E-02
BI-210	1.903E+00	2.570E+00	1.294E+00	1.311E+00
PB-210	1.903E+00	2.570E+00	1.294E+00	1.311E+00
PO-210	1.903E+00	2.569E+00	1.294E+00	1.311E+00
BI-211	4.215E+00	6.362E-01	1.073E-01	3.246E-01
PB-212	1.934E+00	2.792E-01	3.059E-02	1.424E-01
PO-212	1.934E+00	2.792E-01	3.059E-02	1.424E-01
BI-214	1.356E+00	1.895E-01	3.861E-02	9.669E-02
PB-214	1.466E+00	2.337E-01	3.741E-02	1.192E-01
PO-214	1.466E+00	2.337E-01	3.741E-02	1.192E-01
PO-216	1.934E+00	2.792E-01	3.059E-02	1.424E-01
PO-218	1.466E+00	2.337E-01	3.741E-02	1.192E-01
RA-224	5.149E+00	1.248E+00	3.483E-01	6.367E-01
RA-226	1.356E+00	1.895E-01	3.861E-02	9.669E-02
AC-228	1.810E+00	3.092E-01	7.130E-02	1.577E-01
RA-228	1.810E+00	3.092E-01	7.130E-02	1.577E-01
TH-228	1.973E+00	2.849E-01	3.123E-02	1.454E-01
TH-230	1.356E+00	1.895E-01	3.861E-02	9.669E-02
TH-232	1.810E+00	3.092E-01	7.130E-02	1.577E-01
TH-234	2.156E+00	1.276E+00	5.924E-01	6.511E-01
U-234	1.356E+00	1.895E-01	3.861E-02	9.669E-02
U-235	2.520E-01	1.656E-01	1.094E-01	8.451E-02
NP-237	1.220E+00	3.306E-01	1.003E-01	1.687E-01
U-238	2.156E+00	1.276E+00	5.924E-01	6.511E-01
AM-243	4.434E-01	5.845E-02	2.634E-02	2.982E-02
ANH-511	1.083E-01	5.728E-02	1.651E-02	2.922E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-1.154E-01	2.440E-01	1.964E-01	1.245E-01	NOT IDENT.
NA-22	-1.407E-03	2.893E-02	2.381E-02	1.476E-02	NOT IDENT.
NA-24	-3.313E+07	1.854E+08	0.000E+00	9.458E+07	SHORT HLIF
AL-26	-2.812E-03	2.134E-02	1.749E-02	1.089E-02	NOT IDENT.
TI-44	4.431E-01	4.737E-02	2.340E-02	2.417E-02	FAIL ABUN
SC-46	1.729E-02	2.587E-02	2.314E-02	1.320E-02	FAIL ABUN
V-48	5.189E-02	5.590E-02	5.056E-02	2.852E-02	NOT IDENT.
CR-51	-2.279E-01	2.921E-01	2.288E-01	1.490E-01	NOT IDENT.
MN-52	8.202E-02	3.221E-01	2.705E-01	1.643E-01	FAIL ABUN
MN-54	1.708E-02	2.693E-02	2.395E-02	1.374E-02	NOT IDENT.
CO-56	5.985E-04	2.751E-02	2.366E-02	1.403E-02	FAIL ABUN
CO-57	-1.170E-02	1.540E-02	1.319E-02	7.859E-03	NOT IDENT.
CO-58	-3.932E-02	2.895E-02	2.080E-02	1.477E-02	NOT IDENT.
FE-59	-5.745E-02	6.599E-02	5.132E-02	3.367E-02	FAIL ABUN
CO-60	9.429E-03	2.706E-02	2.265E-02	1.380E-02	NOT IDENT.
ZN-65	-4.004E-02	7.388E-02	4.827E-02	3.770E-02	NOT IDENT.
GE-68	5.675E-02	8.371E-01	7.070E-01	4.271E-01	NOT IDENT.
AS-73	-8.825E-02	4.524E-01	3.643E-01	2.308E-01	NOT IDENT.
AS-74	-4.692E-02	7.813E-02	6.303E-02	3.986E-02	NOT IDENT.
SE-75	-1.520E-02	3.044E-02	2.346E-02	1.553E-02	NOT IDENT.
BR-77	8.393E+00	3.253E+01	0.000E+00	1.660E+01	SHORT HLIF
SR-82	-7.904E-02	3.174E-01	2.202E-01	1.620E-01	NOT IDENT.
RB-83	-3.197E-03	4.808E-02	4.065E-02	2.453E-02	NOT IDENT.
RB-84	4.340E-02	4.928E-02	4.467E-02	2.514E-02	NOT IDENT.
KR-85	7.585E+00	4.994E+00	4.499E+00	2.548E+00	NOT IDENT.
SR-85	4.115E-02	2.709E-02	2.441E-02	1.382E-02	NOT IDENT.
RB-86	-2.031E-01	6.366E-01	5.213E-01	3.248E-01	NOT IDENT.
Y-88	-2.028E-02	2.662E-02	1.976E-02	1.358E-02	NOT IDENT.
ZR-88	-9.392E-03	2.078E-02	1.763E-02	1.060E-02	NOT IDENT.
Y-91	1.050E+00	1.282E+01	1.072E+01	6.542E+00	NOT IDENT.
NB-94	9.456E-03	2.300E-02	1.950E-02	1.173E-02	NOT IDENT.
NB-95	8.058E-03	3.783E-02	2.756E-02	1.930E-02	NOT IDENT.
NB-95M	-6.661E-02	9.728E-02	7.027E-02	4.964E-02	NOT IDENT.
ZR-95	8.668E-02	5.169E-02	4.672E-02	2.637E-02	NOT IDENT.
NB-97	-5.739E+06	1.551E+07	0.000E+00	7.912E+06	SHORT HLIF
ZR-97	3.558E+08	2.509E+08	0.000E+00	1.280E+08	SHORT HLIF
MO-99	4.798E-02	3.049E+01	2.508E+01	1.555E+01	NOT IDENT.
TC-99M	-3.719E+21	7.684E+22	0.000E+00	0.000E+00	SHORT HLIF
RH-101	4.904E-03	2.316E-02	1.861E-02	1.181E-02	NOT IDENT.
RH-102	6.411E-03	1.903E-02	1.656E-02	9.711E-03	NOT IDENT.
RU-103	-4.681E-03	2.800E-02	2.361E-02	1.428E-02	FAIL ABUN
RH-106	-7.523E-02	2.134E-01	1.739E-01	1.089E-01	FAIL ABUN
RU-106	-7.523E-02	2.133E-01	1.739E-01	1.088E-01	FAIL ABUN
AG-108M	3.124E-03	2.094E-02	1.817E-02	1.068E-02	NOT IDENT.
AG-110M	-1.014E-02	2.840E-02	1.998E-02	1.449E-02	FAIL ABUN
IN-111	-1.633E-01	2.881E+00	2.150E+00	1.470E+00	NOT IDENT.
IN-113M	-2.110E-02	2.943E-02	2.459E-02	1.501E-02	NOT IDENT.
SN-113	-2.110E-02	2.943E-02	2.459E-02	1.501E-02	NOT IDENT.
IN-114M	2.145E-02	1.314E-01	1.013E-01	6.704E-02	NOT IDENT.
CD-115	1.011E+01	3.822E+01	0.000E+00	1.950E+01	SHORT HLIF
SN-117M	-1.506E-03	5.076E-02	3.934E-02	2.590E-02	NOT IDENT.
SB-122	4.885E+00	5.490E+00	4.848E+00	2.801E+00	NOT IDENT.
I-123	3.116E+08	3.440E+09	0.000E+00	1.755E+09	SHORT HLIF
TE-123M	1.747E-03	1.928E-02	1.597E-02	9.838E-03	NOT IDENT.
I-124	6.966E-01	1.155E+00	9.989E-01	5.895E-01	NOT IDENT.
SB-124	3.395E-02	5.547E-02	5.026E-02	2.830E-02	FAIL ABUN
SB-125	1.723E-02	5.889E-02	5.151E-02	3.004E-02	FAIL ABUN
TE-125M	3.972E+00	5.957E+00	5.356E+00	3.039E+00	NOT IDENT.
I-126	2.478E-01	2.011E-01	1.598E-01	1.026E-01	NOT IDENT.
SB-126	1.259E-01	1.332E-01	1.164E-01	6.798E-02	FAIL ABUN
SB-127	-2.846E+00	2.644E+00	2.012E+00	1.349E+00	NOT IDENT.
XE-127	-3.252E-02	3.411E-02	2.784E-02	1.740E-02	FAIL ABUN
I-131	-6.533E-02	1.280E-01	1.008E-01	6.530E-02	NOT IDENT.
TE-132	4.699E-01	1.398E+00	1.192E+00	7.131E-01	NOT IDENT.
BA-133	1.446E-02	3.204E-02	2.389E-02	1.635E-02	FAIL ABUN
I-133	3.159E+04	2.962E+05	0.000E+00	1.511E+05	SHORT HLIF
CS-134	1.481E-01	4.842E-02	3.462E-02	2.471E-02	FAIL ABUN
CS-135	8.257E-02	1.205E-01	8.983E-02	6.149E-02	NOT IDENT.
I-135	3.414E+20	2.832E+21	0.000E+00	0.000E+00	SHORT HLIF
CS-136	2.010E-03	9.438E-02	7.963E-02	4.815E-02	FAIL ABUN
CE-139	-9.498E-03	1.925E-02	1.630E-02	9.824E-03	NOT IDENT.
BA-140	-1.193E-01	2.304E-01	1.860E-01	1.175E-01	NOT IDENT.
LA-140	1.975E-02	9.720E-02	7.298E-02	4.959E-02	FAIL ABUN

CE-141	2.995E-02	4.651E-02	3.729E-02	2.373E-02	NOT IDENT.
CE-143	5.656E+03	2.084E+03	0.000E+00	1.063E+03	SHORT HLIF
CE-144	-4.731E-02	1.391E-01	1.076E-01	7.095E-02	NOT IDENT.
PM-144	-1.158E-02	2.395E-02	1.916E-02	1.222E-02	NOT IDENT.
PR-144	-7.871E-01	1.628E+00	1.302E+00	8.305E-01	NOT IDENT.
PM-146	7.243E-03	2.958E-02	2.569E-02	1.509E-02	NOT IDENT.
ND-147	-1.827E-01	5.242E-01	4.342E-01	2.674E-01	FAIL ABUN
PM-149	-3.033E+01	3.337E+02	0.000E+00	1.703E+02	SHORT HLIF
EU-152	-1.833E-02	6.966E-02	5.316E-02	3.554E-02	FAIL ABUN
GD-153	-1.998E-02	5.581E-02	4.049E-02	2.847E-02	FAIL ABUN
EU-154	-4.550E-03	8.054E-02	6.624E-02	4.109E-02	NOT IDENT.
EU-155	5.325E-02	6.966E-02	5.812E-02	3.554E-02	FAIL ABUN
TB-160	5.402E-03	9.442E-02	8.115E-02	4.817E-02	FAIL ABUN
HO-166M	7.680E-03	4.088E-02	3.418E-02	2.086E-02	FAIL ABUN
TM-171	-4.676E+00	1.723E+01	1.290E+01	8.790E+00	NOT IDENT.
LU-176	1.095E-02	1.648E-02	1.397E-02	8.409E-03	FAIL ABUN
LU-177	6.344E+00	1.856E+00	1.217E+00	9.468E-01	FAIL ABUN
LU-177M	-6.409E-02	1.363E-01	1.006E-01	6.956E-02	NOT IDENT.
HF-181	-2.124E-03	3.151E-02	2.682E-02	1.608E-02	NOT IDENT.
W-181	-1.065E-01	2.217E-01	1.647E-01	1.131E-01	NOT IDENT.
TA-182	1.183E-02	1.400E-01	1.169E-01	7.140E-02	FAIL ABUN
RE-183	-2.249E-03	7.847E-02	6.354E-02	4.004E-02	FAIL ABUN
RE-184	-7.128E-03	1.525E-01	1.273E-01	7.781E-02	NOT IDENT.
OS-185	-8.851E-03	2.872E-02	2.339E-02	1.465E-02	NOT IDENT.
W-188	-7.556E+00	5.707E+00	3.749E+00	2.912E+00	FAIL ABUN
IR-192	-1.079E-02	2.471E-02	1.982E-02	1.261E-02	FAIL ABUN
AU-195	4.225E-01	1.439E-01	1.295E-01	7.341E-02	FAIL ABUN
TL-200	1.332E+03	9.823E+03	0.000E+00	5.012E+03	SHORT HLIF
TL-201	6.104E+00	1.465E+01	1.279E+01	7.473E+00	NOT IDENT.
TL-202	3.040E-03	6.175E-02	5.327E-02	3.150E-02	NOT IDENT.
HG-203	4.319E-02	3.437E-02	2.617E-02	1.754E-02	NOT IDENT.
BI-207	2.587E-03	3.498E-02	2.959E-02	1.785E-02	FAIL ABUN
TL-207	6.686E-01	5.264E-01	4.021E-01	2.686E-01	FAIL ABUN
PO-209	3.100E-01	4.534E+00	3.895E+00	2.313E+00	NOT IDENT.
PB-211	-3.740E-01	7.301E-01	5.104E-01	3.725E-01	NOT IDENT.
BI-212	9.886E-01	3.504E-01	2.553E-01	1.788E-01	FAIL ABUN
PO-215	6.686E-01	5.264E-01	4.021E-01	2.686E-01	FAIL ABUN
RN-219	1.055E-01	2.625E-01	2.314E-01	1.339E-01	FAIL ABUN
RN-220	2.632E+00	1.715E+01	1.462E+01	8.751E+00	NOT IDENT.
RA-223	6.686E-01	5.264E-01	4.021E-01	2.686E-01	FAIL ABUN
AC-227	-6.964E-03	2.462E-01	2.055E-01	1.256E-01	FAIL ABUN
TH-227	-6.964E-03	2.462E-01	2.055E-01	1.256E-01	FAIL ABUN
TH-229	8.992E-02	3.103E-01	2.674E-01	1.583E-01	FAIL ABUN
PA-231	4.967E-01	1.016E+00	8.579E-01	5.183E-01	FAIL ABUN
TH-231	6.686E-01	5.264E-01	4.021E-01	2.686E-01	FAIL ABUN
U-231	-1.426E+00	1.694E+00	1.198E+00	8.643E-01	FAIL ABUN
PA-233	-2.369E-02	4.265E-02	3.398E-02	2.176E-02	FAIL ABUN
PA-234	6.149E-03	2.263E-01	1.678E-01	1.155E-01	FAIL ABUN
PA-234M	4.347E+00	3.767E+00	2.908E+00	1.922E+00	FAIL ABUN
NP-236	1.536E-02	5.026E-02	4.383E-02	2.564E-02	NOT IDENT.
NP-239	-6.419E-02	1.157E-01	1.002E-01	5.906E-02	FAIL ABUN
AM-241	-5.591E-02	8.781E-02	6.506E-02	4.480E-02	NOT IDENT.
CM-243	-1.533E-02	5.477E-02	4.816E-02	2.794E-02	FAIL ABUN
AM-246	1.513E-02	9.630E-02	8.184E-02	4.913E-02	NOT IDENT.
CM-247	6.912E-03	2.391E-02	2.099E-02	1.220E-02	FAIL ABUN
CF-249	3.526E-02	2.600E-02	2.374E-02	1.327E-02	NOT IDENT.
CF-251	3.120E-02	8.063E-02	7.008E-02	4.114E-02	NOT IDENT.

 * GEL Laboratories LLC *
 * 2040 SAVAGE ROAD *
 * CHARLESTON ,SC 29417 *
 * GAMMA SPECTROSCOPY BACKGROUND REPORT *

ENERGY	MDA COUNTS
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46.50	383.8813
46.50	383.8813
46.50	383.8813
48.70	344.8401
49.72	379.7713
51.35	401.3946
52.39	383.9137
52.97	429.1111
53.15	429.3629
53.44	418.6325
54.07	411.6749
56.28	424.6776
56.28	424.6819
57.37	0.0000
57.53	445.5066
57.53	445.5096
57.60	445.6031
57.98	473.2307
57.98	473.2307
59.32	482.3454
59.32	482.3454
59.40	482.4622
59.54	500.8217
59.72	413.2880
60.01	401.5267
61.10	522.9217
61.14	522.9829
61.30	523.2296
63.00	574.3715
63.29	574.8531
63.29	574.8531
63.58	575.3347
64.28	576.4919
65.12	569.0278
65.20	563.0037
65.20	563.0037
66.05	573.6060
66.72	587.0355
66.83	587.2211
66.91	587.3486
67.20	570.8082
67.20	570.8082
67.75	607.3081
67.85	607.4756
68.90	603.7866
68.90	603.7866
69.30	569.4363
69.67	613.6210
70.82	593.6456
70.82	593.6456
70.83	593.6611
72.80	621.8961
72.87	622.0089
72.87	622.0089
74.67	624.9254
74.81	625.1510
74.81	625.1510
74.81	625.1510
74.81	625.1510
74.81	625.1510
74.81	625.1510
74.81	625.1510
74.97	625.4088
75.28	625.9083
75.70	626.5811
77.11	628.8248
77.11	628.8248

77.11	628.8248
77.11	628.8248
77.11	628.8248
77.11	628.8248
77.11	628.8248
78.38	565.5176
79.62	587.2321
79.80	587.4938
79.80	587.4938
80.11	499.1511
80.18	499.2368
80.30	499.3828
80.30	499.3828
80.57	574.1893
81.00	596.4397
81.07	596.5419
81.07	596.5419
81.07	596.5419
81.07	596.5419
82.60	561.7322
83.37	448.6804
83.78	449.1219
83.78	449.1219
83.78	449.1219
83.78	449.1219
84.21	449.5805
84.90	450.3164
85.43	450.8769
86.29	451.7855
86.50	452.0062
86.54	452.0487
86.59	452.1025
86.72	452.2383
86.79	452.3091
86.94	452.4676
87.30	452.8469
87.30	452.8469
87.30	452.8469
87.30	452.8469
87.30	452.8469
87.30	452.8469
87.57	453.1271
87.88	0.0000
88.03	453.6083
88.36	453.9536
88.47	454.0668
89.95	455.6010
91.11	456.7926
92.29	457.9984
92.38	458.0890
92.38	458.0890
93.35	459.0740
94.00	459.7307
94.67	460.4015
94.67	460.4072
94.90	460.6364
94.90	460.6364
94.90	460.6364
94.90	460.6364
95.87	466.1723
95.87	466.1723
96.73	503.6068
97.43	487.7134
98.44	417.8669
98.44	417.8695
98.88	376.6839
99.55	424.7028
99.55	424.7028
99.86	424.9818
100.00	425.1058
100.10	475.4192
103.18	464.9863
103.76	426.7471
105.00	415.1429
105.31	422.1734
108.00	483.1501
109.28	441.7365

111.00	484.3018
111.00	484.3018
111.76	479.0202
112.95	450.9209
115.19	443.3658
116.30	420.9604
117.00	453.5401
117.00	453.5401
117.66	464.5017
121.11	405.5529
121.62	416.4070
121.78	416.5283
122.06	428.9732
122.32	444.0349
122.32	444.0349
122.32	444.0349
122.32	444.0349
123.07	404.3769
127.23	388.8784
129.76	398.5806
131.20	426.2158
133.02	427.5537
133.54	418.5735
135.34	405.0982
136.00	401.0735
136.25	391.3903
136.48	396.0213
140.51	424.8410
140.51	0.0000
142.18	427.3572
142.65	434.4775
143.76	408.9619
144.24	405.6485
144.24	405.6485
144.24	405.6485
144.24	405.6485
145.22	391.2924
145.44	377.7895
147.16	395.2407
152.43	415.0692
152.70	409.7255
153.22	416.9596
154.21	399.1542
154.21	399.1542
154.21	399.1542
154.21	399.1542
155.03	400.1201
156.02	397.9532
158.56	406.4457
159.00	0.0000
159.00	397.7988
160.31	394.4851
161.27	406.2308
162.32	398.4664
162.64	382.7818
163.35	386.9205
163.89	402.1933
165.85	405.2241
167.43	359.1431
171.28	403.6745
171.86	374.6741
172.10	374.8030
176.55	368.5759
176.60	368.6035
181.06	355.0587
184.41	381.2201
185.71	366.4589
186.00	366.5981
190.27	328.8994
192.34	340.4938
193.63	326.4464
197.04	386.6101
198.01	355.7292
198.60	323.6319
200.40	0.0000
201.83	395.8578
202.84	402.2766
205.31	330.8251

208.36	391.6347
208.81	356.0931
209.75	303.2997
209.75	303.2997
210.97	294.2916
215.65	306.4700
216.55	313.8183
218.09	317.4080
222.10	315.8815
223.80	289.2061
226.40	324.5605
227.00	315.6506
227.08	315.6790
227.20	306.5866
228.16	304.8920
228.18	317.0940
228.18	317.0940
231.56	0.0000
235.69	385.9102
236.00	373.7401
236.00	373.7401
238.63	318.7888
238.63	318.7888
238.63	318.7888
238.63	318.7888
239.00	0.0000
240.98	319.6150
241.98	319.9682
241.98	319.9682
241.98	319.9682
244.69	274.8475
245.39	290.5953
247.94	285.6834
248.90	278.6978
249.79	0.0000
252.40	261.9945
252.85	258.9867
252.85	258.9867
254.15	0.0000
256.20	260.9505
256.20	260.9505
260.50	257.9099
260.90	0.0000
262.80	237.4191
264.65	252.4570
268.24	246.6954
268.79	248.4250
269.46	248.5964
269.46	248.5964
269.46	248.5964
269.46	248.5964
271.23	241.0572
273.65	240.0375
276.40	253.5339
277.35	290.1760
277.60	289.1766
277.60	289.1766
278.00	279.6489
278.60	252.4754
279.20	223.6607
279.53	223.7328
280.46	235.2138
281.68	0.0000
283.67	230.5620
284.30	215.6087
285.00	222.2279
285.90	0.0000
286.10	254.8600
286.10	254.8600
287.40	237.8813
288.45	0.0000
290.67	257.0634
290.80	239.1980
291.72	244.2902
293.26	0.0000
293.70	174.5869
295.21	221.1309
295.21	221.1309

295.21	221.1309
295.96	221.2878
296.50	221.3993
297.23	0.0000
298.57	221.8289
299.80	222.0808
299.80	222.0808
300.09	222.1427
300.09	222.1427
300.09	222.1427
300.09	222.1427
300.12	222.1469
301.29	222.3864
302.84	228.7383
303.76	0.0000
303.91	235.5520
304.40	234.0131
304.40	234.0131
304.84	212.6760
306.84	204.8036
308.46	215.0308
311.98	223.4609
316.51	227.7013
318.01	206.8698
319.02	199.2628
319.41	210.4678
320.08	236.2183
323.87	204.5868
323.87	204.5868
323.87	204.5868
323.87	204.5868
325.23	221.6180
328.77	236.8942
333.44	252.5013
334.20	221.6462
334.20	221.6462
334.30	221.6662
338.28	216.1884
338.28	216.1884
338.28	216.1884
338.28	216.1884
338.32	216.1962
338.32	216.1962
338.32	216.1962
340.50	199.0157
340.57	199.0300
344.27	210.2273
345.85	195.9215
350.59	0.0000
351.07	188.7604
351.92	188.8913
351.92	188.8913
351.92	188.8913
355.39	0.0000
356.01	175.7390
364.48	200.0665
366.43	180.6860
367.43	173.8739
367.94	0.0000
369.80	190.4592
374.96	173.7394
383.85	204.2886
387.95	157.2275
388.63	169.6816
391.69	191.3335
391.69	191.3335
392.90	189.7317
398.62	188.7640
400.65	160.5103
401.10	151.6449
401.81	166.8978
402.60	175.0320
404.84	196.0712
410.95	184.0063
411.60	192.7231
413.65	194.4481
414.70	206.6086
415.30	191.5887

415.76	193.8432
417.63	0.0000
418.52	185.1932
423.70	171.3678
427.08	146.3263
427.89	151.8661
432.53	160.5688
433.93	151.5925
439.47	0.0000
439.56	160.4336
439.89	156.8031
443.98	148.0460
444.90	158.2607
445.03	158.2738
445.03	158.2738
445.03	158.2738
445.03	158.2738
453.90	162.0010
463.38	142.5270
468.07	133.0611
473.00	134.9868
475.06	138.9216
475.35	145.5183
476.78	143.7737
477.59	159.8315
477.96	165.5129
482.03	155.5712
484.57	0.0000
487.03	141.8770
490.36	0.0000
492.35	0.0000
497.08	129.4486
507.63	0.0000
510.53	0.0000
510.84	151.6654
511.00	151.6799
511.85	151.7594
511.85	151.7594
513.99	151.9547
513.99	151.9547
520.41	138.0599
520.65	0.0000
527.90	0.0000
528.96	0.0000
529.64	132.0239
529.87	0.0000
531.02	137.9612
537.32	136.5222
543.00	114.4720
546.56	0.0000
549.76	123.7582
552.65	128.8812
555.20	126.1133
563.23	114.8070
563.90	118.8098
568.70	149.9079
569.32	150.9517
569.50	142.0268
569.67	142.0399
573.80	128.4292
574.00	138.3976
574.64	0.0000
578.91	0.0000
579.30	0.0000
583.14	113.0793
585.48	0.0000
591.81	100.5402
592.07	114.6332
593.00	148.8943
595.88	145.0942
600.56	172.7325
602.52	0.0000
602.71	143.6034
602.71	143.6034
603.60	151.0879
604.41	124.7039
604.70	140.9205
609.31	134.9726

609.31	134.9726
609.31	134.9726
609.31	134.9726
610.33	135.0416
612.46	113.8491
614.37	130.2422
618.01	115.1967
621.84	120.5352
621.84	120.5352
631.29	121.1221
633.02	116.0933
633.10	116.0967
634.78	107.9704
635.90	141.9840
636.97	144.1187
645.85	111.6782
646.12	108.5889
656.30	133.0508
657.75	131.4802
657.90	0.0000
661.65	141.7400
661.65	141.7400
664.57	0.0000
666.33	120.3363
666.33	120.3363
675.00	122.7343
677.61	120.7872
685.20	145.4753
692.80	128.0160
695.00	113.3218
696.49	129.2974
696.49	129.2974
697.00	125.0905
697.49	128.3003
698.33	132.5951
698.50	132.6027
699.00	129.4500
702.63	114.7928
706.10	108.5898
706.58	0.0000
706.67	116.0720
709.31	117.2812
711.68	106.7383
713.82	85.4736
717.42	119.8647
720.50	98.5979
721.93	0.0000
722.20	137.2891
722.78	145.9070
722.78	145.9070
722.89	145.9153
722.95	145.9194
723.30	137.3555
724.18	135.6925
727.18	116.0980
733.00	93.1236
735.90	101.4499
739.58	101.6163
742.81	94.1872
744.21	93.1623
747.13	106.2993
751.79	120.6475
752.31	128.2883
753.82	103.3496
755.35	0.0000
756.15	78.4094
756.87	84.9697
763.93	94.4130
765.79	132.9852
766.42	129.5217
766.84	147.0492
776.49	87.8955
778.00	91.4723
778.57	101.1725
778.89	99.7200
783.80	100.2977
785.46	94.8525
792.07	83.1749

795.84	91.9489
796.30	67.3684
798.80	74.5377
801.93	94.7760
805.60	78.9780
810.29	113.6823
810.76	113.7041
815.85	69.2599
817.79	0.0000
818.51	89.4653
819.60	91.7445
826.30	95.3630
828.27	0.0000
831.60	128.1735
831.96	128.1943
834.83	112.5824
836.80	0.0000
846.75	95.0229
848.13	105.0372
856.28	0.0000
856.80	95.4049
860.37	77.3425
867.32	83.6369
867.82	76.9169
871.10	81.3233
873.19	81.3907
874.81	74.1201
875.33	0.0000
876.40	93.3962
879.36	81.5862
880.27	76.1124
880.51	76.1195
881.50	66.9743
883.24	93.6428
884.67	84.5093
889.25	69.9345
896.60	72.9014
898.02	78.4797
899.00	76.6615
903.28	72.9838
911.07	84.4372
911.07	84.4372
911.07	84.4372
919.63	80.0539
920.93	76.3665
925.00	72.7518
925.24	74.6250
926.50	89.5922
935.52	80.5263
937.48	80.5851
944.10	81.4066
946.00	81.4637
949.00	72.4563
962.29	80.3702
964.01	80.4200
966.15	79.5334
968.20	79.5929
969.11	79.6195
969.11	79.6195
969.11	79.6195
977.42	84.6087
980.50	78.0381
983.50	60.0207
989.30	72.5525
996.32	78.1556
1001.03	69.0170
1001.68	80.5383
1004.76	54.3895
1021.30	0.0000
1024.50	0.0000
1034.80	70.7900
1036.00	76.6393
1037.82	79.5977
1038.57	72.8210
1038.76	0.0000
1045.16	90.5024
1046.59	79.8339
1048.07	77.9258

1050.47	64.3403
1050.47	64.3403
1062.04	78.2891
1063.62	79.3072
1076.63	81.6140
1077.35	77.7001
1078.86	79.7067
1085.78	87.7745
1099.22	91.1285
1112.02	85.0919
1112.84	86.6961
1115.52	92.9323
1120.29	87.7551
1120.29	87.7551
1120.29	87.7551
1120.29	87.7551
1120.51	87.7594
1121.28	87.7809
1124.00	0.0000
1129.67	84.2981
1131.51	0.0000
1147.95	0.0000
1167.94	90.0734
1173.22	93.2578
1175.09	81.1406
1177.93	89.3320
1189.05	101.8555
1204.90	82.8945
1205.75	0.0000
1213.00	105.6605
1221.42	99.7518
1230.97	105.4167
1235.34	110.1406
1236.41	0.0000
1238.25	93.0103
1246.25	81.7163
1260.41	0.0000
1271.85	67.8247
1274.45	67.8755
1274.54	67.8755
1291.56	53.5126
1298.22	0.0000
1312.09	61.2059
1325.50	45.5447
1325.50	45.5447
1332.49	41.3861
1333.61	44.5840
1360.21	41.6965
1362.66	0.0000
1365.15	46.0339
1368.21	51.4289
1368.53	0.0000
1376.25	41.1597
1384.27	41.2458
1394.10	32.3628
1395.20	36.6895
1407.95	41.1413
1434.06	40.3296
1436.60	52.3523
1457.56	0.0000
1460.81	32.9224
1489.15	30.6993
1509.49	46.2809
1596.49	40.5012
1620.62	24.7083
1678.03	0.0000
1691.02	21.2409
1691.02	21.2409
1706.46	0.0000
1750.46	0.0000
1764.49	20.1814
1764.49	20.1814
1764.49	20.1814
1764.49	20.1814
1770.23	11.7871
1771.40	10.1057
1791.20	0.0000
1808.65	23.7656

1836.01

31.8672

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245385005

Total Uranium Activity	6.5300E+00	ug/g
Total Uranium Counting Unc.	3.7976E+00	ug/g
Total Uranium Tpu	1.9375E-06	ug/g
Total Uranium Mda	1.7630E+00	ug/g


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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417                *
*               GROSS GAMMA REPORT                  *
*
*****
*
*  BATCH ID      : 944962          SAMPLE ID   : G245385005
*  ANALYST       : MXR1            DETECTOR    : GAM11
*  SAMPLE DATE   : 15-JAN-2010 12:00:00.00  COUNT TIME : 0 04:00:00.00
*  ANALYSIS DATE: 4-FEB-2010 22:52:40.73  SAMPLE ALQT: 110.570 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.014E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.372E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 4.004E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.954E+00

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VAX/VMS Nuclide Identification Report Generated 5-FEB-2010 02:57:09.24

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245396001.CNF;1
Sample date       : 21-JAN-2010 12:00:00 Acquisition date : 4-FEB-2010 22:55:47.
Sample ID        : G245396001 Sample quantity : 1.32960E+02 GRAM
Detector name    : GAM22 Detector geometry: CAN
Elapsed live time: 0 04:00:00.00 Elapsed real time: 0 04:00:04.93 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit  : 75.00000 Sensitivity : 5.00000
Batch ID        : 944962 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*	239	1226	1.10	126.73	123	8	1.66E-02	27.2	
2	2	74.79	1120	1251	1.22	149.81	143	19	7.78E-02	6.1	3.57E+00
3	2	77.08*	1743	1022	1.05	154.39	143	19	1.21E-01	4.0	
4	4	84.38*	314	1072	1.52	168.97	165	27	2.18E-02	18.5	1.83E+00
5	4	87.17*	831	1183	1.40	174.54	165	27	5.77E-02	8.1	
6	4	89.93	552	1134	1.29	180.05	165	27	3.83E-02	11.7	
7	4	92.76*	852	1221	1.46	185.71	165	27	5.92E-02	9.1	
8	0	105.41	114	646	1.36	210.99	209	5	7.88E-03	34.9	
9	0	129.84	247	1438	0.99	259.81	255	11	1.72E-02	30.4	
10	0	185.99*	582	1085	1.14	372.00	367	10	4.04E-02	12.1	
11	0	209.17*	342	874	1.32	418.30	414	9	2.38E-02	17.1	
12	4	238.64*	3927	769	1.28	477.21	470	20	2.73E-01	2.1	3.29E+00
13	4	241.59	940	929	1.80	483.09	470	20	6.53E-02	8.4	
14	0	270.12	262	728	1.50	540.11	536	10	1.82E-02	20.2	
15	0	277.46	147	697	1.89	554.78	550	10	1.02E-02	34.6	
16	0	295.28*	1118	642	1.27	590.38	585	10	7.76E-02	5.3	
17	0	300.29*	181	727	1.25	600.40	596	11	1.25E-02	30.6	
18	0	328.25	305	612	1.24	656.27	650	12	2.12E-02	17.3	
19	0	338.36*	908	670	1.40	676.47	670	14	6.31E-02	7.1	
20	0	351.98*	1997	726	1.47	703.69	697	14	1.39E-01	3.7	
21	0	410.06	123	483	1.57	819.76	813	12	8.56E-03	36.8	
22	0	462.76	296	470	1.25	925.08	918	14	2.06E-02	16.6	
23	0	510.83*	336	533	2.22	1021.16	1014	16	2.33E-02	19.1	
24	0	583.24*	1419	397	1.78	1165.89	1158	18	9.85E-02	4.4	
25	0	609.37*	1478	403	1.63	1218.12	1212	13	1.03E-01	4.0	
26	0	727.60*	329	316	1.84	1454.46	1448	14	2.29E-02	13.2	
27	0	768.08	177	203	2.23	1535.39	1531	10	1.23E-02	16.8	
28	0	795.00	177	231	1.64	1589.20	1583	14	1.23E-02	19.8	
29	0	860.81	211	346	1.31	1720.76	1712	20	1.47E-02	22.7	
30	0	911.25*	973	251	2.08	1821.63	1813	18	6.76E-02	5.2	
31	0	934.57	66	192	2.19	1868.24	1861	11	4.60E-03	42.4	
32	1	964.74*	206	297	2.44	1928.58	1921	22	1.43E-02	19.5	1.45E+00
33	1	969.14*	563	179	2.10	1937.37	1921	22	3.91E-02	6.7	
34	0	1120.06*	440	305	2.38	2239.14	2230	19	3.06E-02	11.1	
35	0	1378.68	95	163	2.54	2756.36	2745	17	6.61E-03	32.6	
36	0	1409.40	56	107	1.99	2817.82	2807	16	3.85E-03	43.9	
37	0	1460.88*	5719	155	2.63	2920.78	2908	27	3.97E-01	1.5	
38	0	1729.56*	98	58	2.39	3458.28	3445	24	6.80E-03	24.4	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1764.71*	319	54	3.55	3528.61	3515	23	2.22E-02	8.8	
40	0	1847.98	68	48	3.42	3695.23	3684	23	4.75E-03	25.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 5-FEB-2010 02:57:11

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245396001.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 21-JAN-2010 12:00:00 Acquisition date : 4-FEB-2010 22:55:47
Sample ID         : G245396001 Sample quantity : 132.96 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA22 Detector geometry: CAN
Elapsed live time: 0 04:00:00.00 Elapsed real time: 0 04:00:04.93 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

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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	*	3.964E+01	3.815E+00	3.365E-01	3.083E-02	117.789
CD-109	+	88.03	*	4.308E+00	8.100E-01	7.282E-01	6.911E-02	5.916
SN-126	+	64.28		8.139E-01	4.588E-01	4.761E-01	6.915E-02	1.709
	+	86.94		1.762E+00	7.860E-01	3.008E-01	1.249E-01	5.858
	+	87.57	*	4.239E-01	7.968E-02	7.194E-02	6.792E-03	5.892
EU-155		48.70		-1.268E+00	1.386E+00	2.270E+00	1.848E-01	-0.559
		60.01		1.240E-01	3.172E+00	4.731E+00	3.360E-01	0.026
	+	86.54		5.104E-01	9.615E-02	8.744E-02	8.224E-03	5.836
	+	105.31	*	9.288E-02	6.532E-02	1.164E-01	9.989E-03	0.798
TL-208	+	277.35		4.950E-01	3.525E-01	3.899E-01	6.430E-02	1.269
	+	510.84		5.104E-01	2.058E-01	1.339E-01	1.745E-02	3.812
	+	583.14	*	6.051E-01	8.427E-02	3.592E-02	3.895E-03	16.845
	+	860.37		8.188E-01	3.844E-01	3.000E-01	3.496E-02	2.729
BI-211		72.87		7.180E+00	2.005E+00	3.379E+00	2.704E-01	2.125
	+	351.07	*	4.034E+00	5.573E-01	2.106E-01	2.458E-02	19.152
PB-212	+	74.81		2.398E+00	4.170E-01	3.319E-01	4.118E-02	7.226
	+	77.11		2.116E+00	2.445E-01	1.890E-01	1.580E-02	11.199
	+	87.30		1.960E+00	4.174E-01	3.335E-01	4.580E-02	5.878
	+	238.63	*	1.852E+00	2.566E-01	6.083E-02	8.037E-03	30.449
	+	300.09		1.265E+00	7.960E-01	7.889E-01	1.150E-01	1.603
PO-212	+	74.81		2.398E+00	4.170E-01	3.319E-01	4.118E-02	7.226
	+	77.11		2.116E+00	2.445E-01	1.890E-01	1.580E-02	11.199
	+	87.30		1.960E+00	4.174E-01	3.335E-01	4.580E-02	5.878
		115.19		1.351E+00	2.527E+00	4.073E+00	3.374E-01	0.332
	+	238.63	*	1.852E+00	2.566E-01	6.083E-02	8.037E-03	30.449
	+	300.09		1.265E+00	7.960E-01	7.889E-01	1.150E-01	1.603
BI-214	+	609.31	*	1.183E+00	1.664E-01	7.383E-02	8.585E-03	16.021
	+	1120.29		1.753E+00	4.337E-01	2.870E-01	3.171E-02	6.109
	+	1764.49		1.662E+00	3.251E-01	1.650E-01	1.374E-02	10.076
PB-214	+	74.81		4.132E+00	6.788E-01	5.718E-01	6.303E-02	7.226
	+	77.11		3.628E+00	5.021E-01	3.239E-01	3.665E-02	11.199
	+	87.30		3.358E+00	6.824E-01	5.713E-01	6.950E-02	5.878
	+	241.98		2.658E+00	5.777E-01	3.658E-01	5.030E-02	7.267
	+	295.21		1.376E+00	2.521E-01	1.363E-01	2.029E-02	10.100

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	351.92	*	1.403E+00	2.072E-01	7.341E-02	9.357E-03	19.117
	+	74.81		4.132E+00	6.788E-01	5.718E-01	6.303E-02	7.226
	+	77.11		3.628E+00	5.021E-01	3.239E-01	3.665E-02	11.199
	+	87.30		3.358E+00	6.824E-01	5.713E-01	6.950E-02	5.878
	+	241.98		2.658E+00	5.777E-01	3.658E-01	5.030E-02	7.267
PO-216	+	295.21		1.376E+00	2.521E-01	1.363E-01	2.029E-02	10.100
	+	351.92	*	1.403E+00	2.072E-01	7.341E-02	9.357E-03	19.117
	+	74.81		2.398E+00	4.170E-01	3.319E-01	4.118E-02	7.226
	+	77.11		2.116E+00	2.445E-01	1.890E-01	1.580E-02	11.199
	+	87.30		1.960E+00	4.174E-01	3.335E-01	4.580E-02	5.878
PO-218	+	238.63	*	1.852E+00	2.566E-01	6.083E-02	8.037E-03	30.449
	+	300.09		1.265E+00	7.960E-01	7.889E-01	1.150E-01	1.603
	+	74.81		4.132E+00	6.788E-01	5.718E-01	6.303E-02	7.226
	+	77.11		3.628E+00	5.021E-01	3.239E-01	3.665E-02	11.199
	+	87.30		3.358E+00	6.824E-01	5.713E-01	6.950E-02	5.878
RA-224	+	241.98		2.658E+00	5.777E-01	3.658E-01	5.030E-02	7.267
	+	295.21		1.376E+00	2.521E-01	1.363E-01	2.029E-02	10.100
	+	351.92	*	1.403E+00	2.072E-01	7.341E-02	9.357E-03	19.117
	+	240.98	*	5.040E+00	1.058E+00	6.916E-01	8.657E-02	7.288
	+	609.31	*	1.183E+00	1.664E-01	7.383E-02	8.585E-03	16.021
RA-226	+	1120.29		1.753E+00	4.337E-01	2.870E-01	3.171E-02	6.109
	+	1764.49		1.662E+00	3.251E-01	1.650E-01	1.374E-02	10.076
	+	338.32		2.036E+00	9.041E-01	2.374E-01	9.986E-02	8.575
	+	911.07	*	1.778E+00	3.004E-01	1.368E-01	1.812E-02	13.000
	+	969.11		1.807E+00	4.986E-01	2.249E-01	5.432E-02	8.033
RA-228	+	338.32		2.036E+00	9.041E-01	2.374E-01	9.986E-02	8.575
	+	911.07	*	1.778E+00	3.004E-01	1.368E-01	1.812E-02	13.000
	+	969.11		1.807E+00	4.986E-01	2.249E-01	5.432E-02	8.033
	+	238.63	*	1.879E+00	2.603E-01	6.172E-02	8.154E-03	30.449
	+	300.09		1.283E+00	1.101E+00	8.003E-01	4.814E-01	1.603
TH-228	+	609.31	*	1.183E+00	1.664E-01	7.383E-02	8.585E-03	16.021
	+	1120.29		1.753E+00	4.337E-01	2.870E-01	3.171E-02	6.109
	+	1764.49		1.662E+00	3.251E-01	1.650E-01	1.374E-02	10.076
	+	338.32		2.036E+00	3.777E-01	2.374E-01	2.823E-02	8.575
	+	911.07	*	1.778E+00	3.004E-01	1.368E-01	1.812E-02	13.000
TH-232	+	969.11		1.807E+00	4.986E-01	2.249E-01	5.432E-02	8.033
	+	63.29	*	2.056E+00	1.176E+00	1.231E+00	2.143E-01	1.670
	+	92.38		2.827E+00	7.281E-01	4.744E-01	8.692E-02	5.958
	+	609.31	*	1.183E+00	1.664E-01	7.383E-02	8.585E-03	16.021
	+	1120.29		1.753E+00	4.337E-01	2.870E-01	3.171E-02	6.109
U-234	+	1764.49		1.662E+00	3.251E-01	1.650E-01	1.374E-02	10.076
	+	89.95		3.756E+00	1.460E+00	9.667E-01	3.002E-01	3.885
	+	93.35		3.398E+00	1.138E+00	5.670E-01	1.597E-01	5.994
	+	105.00		9.104E-01	6.910E-01	1.141E+00	3.401E-01	0.798
	+	143.76	*	6.899E-02	1.488E-01	2.389E-01	4.214E-02	0.289
U-235	+	163.35		3.203E-01	3.165E-01	5.299E-01	1.038E-01	0.605

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	185.71		2.001E-01	5.284E-02	4.785E-02	5.011E-03	4.181
		205.31		-3.665E-02	4.157E-01	5.758E-01	1.172E-01	-0.064
NP-237	+	86.50	*	1.245E+00	3.474E-01	2.133E-01	4.830E-02	5.834
		95.87		-8.762E-01	7.152E-01	9.385E-01	2.321E-01	-0.934
U-238	+	63.29	*	2.056E+00	1.176E+00	1.231E+00	2.143E-01	1.670
	+	92.38		2.827E+00	5.729E-01	4.744E-01	4.323E-02	5.958
AM-243	+	74.67	*	3.887E-01	5.701E-02	5.395E-02	4.398E-03	7.205
	+	86.72		4.667E+01	8.775E+00	7.984E+00	7.460E-01	5.846
		117.66		-1.564E-01	2.658E+00	4.218E+00	3.484E-01	-0.037
		142.18		-4.967E+00	1.242E+01	1.964E+01	1.734E+00	-0.253
ANH-511	+	511.00	*	1.102E-01	4.348E-02	2.893E-02	2.898E-03	3.811

---- 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	*	2.063E-01	2.099E-01	3.497E-01	3.649E-02	0.590
NA-22		1274.54	*	-2.171E-02	2.982E-02	4.764E-02	4.105E-03	-0.456
NA-24		1368.53	*	-3.784E-02	2.982E-02	Half-Life too short		
AL-26		1129.67		5.803E-01	1.206E+00	1.776E+00	1.546E-01	0.327
		1808.65	*	-6.584E-03	1.853E-02	2.948E-02	2.411E-03	-0.223
TI-44		67.85		-1.742E-02	3.047E-02	4.647E-02	3.547E-03	-0.375
	+	78.38	*	3.905E-01	4.512E-02	4.885E-02	4.142E-03	7.993
SC-46		889.25	*	-4.640E-03	2.483E-02	4.085E-02	4.572E-03	-0.114
	+	1120.51		2.986E-01	7.116E-02	8.317E-02	7.353E-03	3.590
V-48		944.10		-1.054E-01	5.909E-01	9.670E-01	1.049E-01	-0.109
		983.50	*	1.244E-02	4.523E-02	7.517E-02	7.884E-03	0.165
		1312.09		1.040E-02	5.265E-02	8.771E-02	7.728E-03	0.119
CR-51		320.08	*	7.250E-02	2.499E-01	4.106E-01	5.317E-02	0.177
MN-52		744.21		4.151E-02	1.380E-01	2.268E-01	2.464E-02	0.183
		848.13		-2.722E+00	3.988E+00	6.434E+00	7.164E-01	-0.423
	+	935.52		2.196E-01	1.877E-01	2.735E-01	2.986E-02	0.803
		1246.25		-4.639E+00	4.888E+00	7.789E+00	6.584E-01	-0.596
		1333.61		1.413E+00	2.868E+00	4.852E+00	4.327E-01	0.291
		1434.06	*	1.675E-01	1.386E-01	2.426E-01	2.168E-02	0.690
MN-54		834.83	*	1.983E-02	2.480E-02	4.243E-02	4.713E-03	0.467
CO-56		846.75	*	-1.675E-02	2.504E-02	4.046E-02	4.503E-03	-0.414
		977.42		4.117E-01	2.002E+00	3.121E+00	3.291E-01	0.132
		1037.82		-1.229E-01	2.058E-01	3.263E-01	3.365E-02	-0.377
		1175.09		1.132E+00	1.498E+00	2.568E+00	2.068E-01	0.441
		1238.25		1.807E-01	6.772E-02	1.153E-01	9.987E-03	1.567
		1360.21		-6.256E-02	6.343E-01	1.037E+00	9.262E-02	-0.060
		1771.40		-6.779E-02	1.491E-01	1.936E-01	1.609E-02	-0.350
CO-57		122.06	*	6.390E-03	1.717E-02	2.747E-02	2.266E-03	0.233
		136.48		-1.861E-01	1.371E-01	2.231E-01	2.070E-02	-0.834
CO-58		810.76	*	-1.267E-02	2.398E-02	3.916E-02	4.336E-03	-0.324
FE-59		142.65		3.535E-01	1.888E+00	3.023E+00	2.675E-01	0.117
		192.34		2.552E-02	6.313E-01	1.042E+00	1.548E-01	0.024
		1099.22	*	-1.757E-02	6.210E-02	9.957E-02	9.757E-03	-0.176

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-60		1291.56		-6.011E-02	8.167E-02	1.299E-01	1.280E-02	-0.463
		1173.22		1.942E-02	2.996E-02	5.119E-02	4.117E-03	0.379
		1332.49	*	7.769E-03	2.415E-02	4.050E-02	3.611E-03	0.192
ZN-65		1115.52	*	4.639E-02	7.331E-02	1.048E-01	9.346E-03	0.443
GE-68		1077.35	*	5.642E-01	8.605E-01	1.438E+00	1.356E-01	0.392
AS-73		53.44	*	-5.164E-02	5.284E-01	8.246E-01	6.231E-02	-0.063
AS-74		595.88	*	-2.162E-02	5.771E-02	9.429E-02	9.773E-03	-0.229
		634.78		9.330E-02	2.256E-01	3.773E-01	3.954E-02	0.247
SE-75		66.05		-5.152E+00	3.313E+00	4.565E+00	4.355E-01	-1.129
		96.73		-4.447E-01	5.578E-01	7.753E-01	1.067E-01	-0.574
		121.11		-2.653E-02	9.248E-02	1.455E-01	1.591E-02	-0.182
		136.00		-2.424E-02	2.664E-02	4.254E-02	3.691E-03	-0.570
		198.60		-1.013E-01	1.308E+00	2.052E+00	2.398E-01	-0.049
		264.65	*	2.604E-02	3.349E-02	4.824E-02	6.493E-03	0.540
		279.53		7.429E-02	8.167E-02	1.174E-01	1.666E-02	0.633
		303.91		1.562E+00	1.521E+00	2.288E+00	3.486E-01	0.683
		400.65		1.474E-02	1.670E-01	2.749E-01	3.217E-02	0.054
BR-77	+	87.88		7.776E+02	1.462E+02	1.830E+02	1.735E+01	4.249
		200.40		2.978E+01	9.363E+01	1.550E+02	1.704E+01	0.192
	+	239.00		2.482E+02	3.253E+01	2.105E+01	2.619E+00	11.795
		249.79		-1.906E+01	3.645E+01	5.782E+01	7.434E+00	-0.330
		281.68		-7.254E+00	5.611E+01	7.772E+01	1.083E+01	-0.093
		297.23		3.081E+02	6.668E+01	6.946E+01	9.341E+00	4.435
		303.76		1.072E+02	1.080E+02	1.629E+02	2.154E+01	0.658
		439.47		1.639E+01	7.866E+01	1.290E+02	1.241E+01	0.127
		484.57		-4.962E+01	1.233E+02	1.957E+02	1.934E+01	-0.254
		520.65	*	1.521E+00	5.387E+00	8.940E+00	8.998E-01	0.170
		574.64		-1.389E+02	1.188E+02	1.721E+02	1.771E+01	-0.808
		578.91		6.714E+01	5.023E+01	7.631E+01	7.864E+00	0.880
		585.48		1.725E+03	2.272E+02	2.784E+02	2.876E+01	6.194
		755.35		4.421E+01	8.987E+01	1.485E+02	1.619E+01	0.298
		817.79		-1.342E+01	6.719E+01	1.113E+02	1.233E+01	-0.121
SR-82		698.33		3.251E+00	2.165E+01	3.557E+01	3.805E+00	0.091
		776.49	*	-3.709E-01	2.643E-01	3.859E-01	4.232E-02	-0.961
		1395.20		-7.198E+00	6.480E+00	9.768E+00	8.734E-01	-0.737
RB-83		520.41	*	1.160E-02	4.245E-02	7.042E-02	7.087E-03	0.165
		529.64		-3.183E-02	6.450E-02	1.060E-01	1.071E-02	-0.300
		552.65		-7.449E-02	1.235E-01	2.012E-01	2.053E-02	-0.370
RB-84		881.50	*	1.183E-02	4.457E-02	7.479E-02	8.365E-03	0.158
KR-85		513.99	*	2.567E+01	5.991E+00	9.121E+00	9.152E-01	2.815
SR-85		513.99	*	1.308E-01	3.052E-02	4.646E-02	4.662E-03	2.815
RB-86		1076.63	*	1.950E-01	5.276E-01	8.725E-01	8.233E-02	0.224
Y-88		898.02		-2.289E-02	2.686E-02	4.266E-02	4.793E-03	-0.537
		1836.01	*	1.326E-02	2.120E-02	3.355E-02	2.713E-03	0.395
ZR-88		392.90	*	-9.990E-03	1.946E-02	3.141E-02	2.925E-03	-0.318
Y-91		1204.90	*	8.766E+00	1.273E+01	2.170E+01	1.784E+00	0.404
NB-94		702.63	*	2.508E-02	2.205E-02	3.728E-02	3.995E-03	0.673
		871.10		-4.408E-03	2.426E-02	3.650E-02	4.077E-03	-0.121
NB-95		765.79	*	6.448E-02	3.318E-02	4.978E-02	5.444E-03	1.295

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M	235.69	*		2.766E-01	1.048E-01	1.520E-01	2.009E-02	1.820
ZR-95	724.18			2.010E-01	7.664E-02	1.163E-01	1.326E-02	1.728
	756.15	*		7.377E-03	4.603E-02	7.511E-02	8.718E-03	0.098
NB-97	657.90	*		2.504E-02	4.603E-02	Half-Life	too short	
	1024.50			1.174E-01	4.603E-02	Half-Life	too short	
ZR-97	254.15			9.254E-01	4.603E-02	Half-Life	too short	
	355.39			2.023E+00	4.603E-02	Half-Life	too short	
	507.63	*		2.462E+00	4.603E-02	Half-Life	too short	
	602.52			-7.369E-01	4.603E-02	Half-Life	too short	
	1021.30			1.960E+00	4.603E-02	Half-Life	too short	
	1147.95			-2.333E+00	4.603E-02	Half-Life	too short	
	1362.66			1.117E-01	4.603E-02	Half-Life	too short	
	1750.46			-9.557E-01	4.603E-02	Half-Life	too short	
MO-99	140.51			-1.086E+01	1.590E+01	2.472E+01	6.856E+00	-0.439
	181.06			1.541E+00	1.131E+01	1.653E+01	3.164E+00	0.093
	366.43			1.208E+01	4.696E+01	7.829E+01	8.304E+00	0.154
	739.58	*		-2.230E+00	6.347E+00	1.014E+01	1.678E+00	-0.220
	778.00			-2.920E+01	2.003E+01	2.992E+01	3.282E+00	-0.976
TC-99M	140.51	*		-3.305E+09	2.003E+01	Half-Life	too short	
RH-101	127.23			3.732E-02	2.525E-02	3.690E-02	3.084E-03	1.012
	198.01	*		-8.999E-04	2.398E-02	3.766E-02	4.108E-03	-0.024
	325.23			2.337E-02	1.708E-01	2.495E-01	3.101E-02	0.094
RH-102	418.52			-4.508E-02	1.830E-01	2.966E-01	2.815E-02	-0.152
	475.06	*		5.428E-03	1.927E-02	3.146E-02	3.093E-03	0.173
	631.29			1.657E-02	3.525E-02	5.910E-02	6.188E-03	0.280
	697.49			2.057E-02	4.909E-02	8.142E-02	8.709E-03	0.253
+	766.84			2.313E-01	8.192E-02	1.288E-01	1.409E-02	1.795
	1046.59			2.840E-02	7.746E-02	1.284E-01	1.260E-02	0.221
	1112.84			2.024E-01	1.652E-01	2.455E-01	2.197E-02	0.824
RU-103	497.08	*		-3.738E-03	2.575E-02	4.120E-02	6.184E-03	-0.091
+	610.33			1.263E+01	2.447E+00	1.736E+00	3.070E-01	7.276
RH-106	511.85	+		5.500E-01	2.169E-01	2.695E-01	2.701E-02	2.041
	621.84	*		-5.237E-02	2.036E-01	3.327E-01	4.859E-02	-0.157
	1050.47			-6.096E-01	1.561E+00	2.500E+00	2.440E-01	-0.244
RU-106	511.85	+		5.500E-01	2.169E-01	2.695E-01	2.701E-02	2.041
	621.84	*		-5.237E-02	2.036E-01	3.327E-01	3.475E-02	-0.157
	1050.47			-6.096E-01	1.561E+00	2.500E+00	2.440E-01	-0.244
AG-108M	433.93	*		-3.525E-03	2.104E-02	3.408E-02	3.374E-03	-0.103
	614.37			2.672E-02	2.753E-02	4.097E-02	4.385E-03	0.652
	722.95			3.232E-02	3.121E-02	4.580E-02	5.067E-03	0.706
AG-110M	657.75	*		1.483E-02	2.193E-02	3.688E-02	3.963E-03	0.402
	677.61			5.039E-02	1.934E-01	3.201E-01	3.461E-02	0.157
	706.67			3.120E-02	1.343E-01	2.211E-01	2.415E-02	0.141
	763.93			7.147E-02	1.199E-01	1.717E-01	1.910E-02	0.416
	884.67			-7.510E-03	3.150E-02	5.172E-02	5.898E-03	-0.145
	937.48			5.380E-03	8.560E-02	1.211E-01	1.350E-02	0.044
	1384.27			-1.049E-01	1.139E-01	1.432E-01	1.314E-02	-0.733
IN-111	171.28			-1.143E-01	5.927E-01	9.816E-01	9.798E-02	-0.116
	245.39	*		-4.958E-02	6.694E-01	9.433E-01	1.197E-01	-0.053

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IN-113M	391.69	*	-2.376E-02	2.846E-02	4.536E-02	4.331E-03	-0.524	
SN-113	391.69	*	-2.376E-02	2.846E-02	4.536E-02	4.331E-03	-0.524	
IN-114M	190.27	*	3.965E-02	1.356E-01	1.983E-01	2.108E-02	0.200	
CD-115	260.90		-6.773E+01	7.397E+01	1.149E+02	1.527E+01	-0.589	
	492.35		6.404E+00	1.921E+01	3.134E+01	3.111E+00	0.204	
	527.90	*	2.754E+00	5.448E+00	9.282E+00	9.374E-01	0.297	
SN-117M	156.02		4.299E-01	1.448E+00	2.441E+00	2.289E-01	0.176	
	158.56	*	-2.520E-02	3.516E-02	5.774E-02	5.476E-03	-0.436	
SB-122	563.90	*	6.682E-01	1.131E+00	1.919E+00	1.967E-01	0.348	
	692.80		1.138E+01	2.327E+01	3.873E+01	4.136E+00	0.294	
I-123	159.00	*	-1.955E+00	2.327E+01	Half-Life	too short		
	528.96		-2.690E+01	2.327E+01	Half-Life	too short		
TE-123M	159.00	*	-2.114E-02	1.899E-02	3.079E-02	2.940E-03	-0.687	
I-124	602.71	*	-1.655E-01	4.605E-01	6.435E-01	6.684E-02	-0.257	
	722.78		2.932E+00	2.936E+00	4.303E+00	4.644E-01	0.681	
	1325.50		-4.709E+00	1.920E+01	3.120E+01	2.770E+00	-0.151	
	1376.25		6.279E+01	2.265E+01	3.687E+01	3.295E+00	1.703	
	1509.49		1.342E+01	9.089E+00	1.605E+01	1.427E+00	0.836	
	1691.02		-1.433E+00	1.889E+00	2.896E+00	2.477E-01	-0.495	
SB-124	602.71		-1.059E-02	2.945E-02	4.115E-02	4.275E-03	-0.257	
	645.85		1.300E-01	3.199E-01	5.342E-01	5.843E-02	0.243	
	709.31		-1.145E+00	1.784E+00	2.826E+00	3.036E-01	-0.405	
	713.82		-4.130E-01	1.057E+00	1.693E+00	2.312E-01	-0.244	
	722.78		2.718E-01	2.722E-01	3.989E-01	4.365E-02	0.681	
+	968.20		1.847E+01	3.152E+00	4.701E+00	4.998E-01	3.929	
	1045.16		1.556E+00	1.614E+00	2.738E+00	2.690E-01	0.568	
	1325.50		-4.663E-01	1.901E+00	3.089E+00	2.743E-01	-0.151	
	1368.21		-5.919E-01	1.296E+00	1.726E+00	2.361E-01	-0.343	
	1436.60		1.917E+00	2.405E+00	4.121E+00	3.682E-01	0.465	
	1691.02	*	-3.135E-02	4.132E-02	6.333E-02	5.634E-03	-0.495	
SB-125	427.89	*	-1.723E-02	6.019E-02	9.721E-02	9.432E-03	-0.177	
+	463.38		8.914E-01	3.093E-01	3.536E-01	3.666E-02	2.521	
	600.56		2.131E-02	1.184E-01	1.931E-01	2.108E-02	0.110	
	635.90		2.029E-02	1.728E-01	2.861E-01	3.165E-02	0.071	
TE-125M	109.28	*	2.985E+00	7.157E+00	1.030E+01	1.043E+00	0.290	
I-126	388.63		1.108E-01	1.249E-01	2.108E-01	1.996E-02	0.525	
	666.33	*	1.114E-02	1.102E-01	1.816E-01	1.919E-02	0.061	
	753.82		6.221E-01	9.172E-01	1.526E+00	1.663E-01	0.408	
SB-126	223.80		-4.480E-02	2.696E+00	4.393E+00	5.212E-01	-0.010	
+	278.60		3.161E+00	2.234E+00	2.701E+00	3.775E-01	1.171	
+	296.50		1.324E+01	2.278E+00	2.284E+00	3.077E-01	5.795	
	414.70		-6.458E-03	5.379E-02	7.570E-02	7.164E-03	-0.085	
	415.30		2.000E+00	4.416E+00	6.386E+00	6.047E-01	0.313	
	555.20		1.490E-01	2.373E+00	3.968E+00	4.053E-01	0.038	
	573.80		-6.978E-01	6.610E-01	9.961E-01	1.025E-01	-0.701	
	593.00		-4.888E-01	6.102E-01	9.296E-01	9.627E-02	-0.526	
	656.30		7.249E-01	2.040E+00	3.397E+00	3.578E-01	0.213	
	666.33		4.648E-03	4.600E-02	7.577E-02	8.006E-03	0.061	
	675.00		3.207E-01	1.218E+00	2.016E+00	2.138E-01	0.159	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127		695.00		-3.373E-02	4.838E-02	7.666E-02	8.192E-03	-0.440
		697.00		4.274E-02	1.658E-01	2.735E-01	2.925E-02	0.156
		720.50	*	5.037E-02	1.058E-01	1.514E-01	1.633E-02	0.333
		856.80		4.408E-01	3.391E-01	5.149E-01	5.740E-02	0.856
		989.30		3.952E-01	7.803E-01	1.309E+00	1.365E-01	0.302
		1034.80		2.022E+00	5.684E+00	9.434E+00	9.381E-01	0.214
		1213.00		-9.722E-01	3.072E+00	5.046E+00	4.172E-01	-0.193
		61.10		8.303E+00	3.272E+01	4.904E+01	4.849E+00	0.169
		252.40		-1.678E+00	2.710E+00	4.134E+00	1.781E+00	-0.406
		290.80		-1.123E+01	1.409E+01	1.991E+01	3.037E+00	-0.564
		411.60		1.128E+01	8.318E+00	1.224E+01	1.967E+00	0.922
		444.90		-1.886E+00	5.744E+00	9.223E+00	1.210E+00	-0.204
		473.00		2.689E-01	9.831E-01	1.605E+00	2.175E-01	0.168
		543.00		4.808E+00	9.867E+00	1.608E+01	2.450E+00	0.299
		603.60		-1.661E+00	7.841E+00	1.104E+01	1.506E+00	-0.150
		685.20	*	-1.952E-01	7.633E-01	1.235E+00	1.585E-01	-0.158
		698.50		1.768E+00	8.795E+00	1.447E+01	2.448E+00	0.122
		722.20		4.967E+00	2.041E+01	2.883E+01	3.677E+00	0.172
		783.80		4.151E+00	2.303E+00	3.859E+00	5.411E-01	1.076
		57.60		2.397E+00	3.505E+00	5.924E+00	4.255E-01	0.405
XE-127		145.22		3.019E-01	4.536E-01	7.730E-01	6.913E-02	0.391
		172.10		-1.538E-02	8.179E-02	1.354E-01	1.355E-02	-0.114
		202.84	*	-1.531E-02	3.312E-02	5.185E-02	5.748E-03	-0.295
		374.96		5.058E-02	1.241E-01	2.074E-01	2.112E-02	0.244
I-131		80.18		2.368E+00	3.542E+00	4.197E+00	3.652E-01	0.564
		284.30		-3.266E-01	9.642E-01	1.522E+00	2.151E-01	-0.215
TE-132		364.48	*	2.380E-02	7.070E-02	1.182E-01	1.309E-02	0.201
		636.97		-2.894E-01	9.480E-01	1.542E+00	1.679E-01	-0.188
		722.89		5.092E+00	4.979E+00	7.304E+00	7.912E-01	0.697
		49.72		5.414E-01	9.769E+00	1.643E+01	1.677E+00	0.033
BA-133		111.76		-3.680E+00	1.819E+01	2.888E+01	3.021E+00	-0.127
		116.30		6.731E+00	1.714E+01	2.751E+01	2.865E+00	0.245
		228.16	*	-7.117E-02	4.218E-01	6.831E-01	1.210E-01	-0.104
		53.15		1.264E-01	2.298E+00	3.602E+00	2.733E-01	0.035
I-133		79.62		5.387E-01	1.084E+00	1.272E+00	1.935E-01	0.423
		81.00		-2.532E-02	8.108E-02	9.167E-02	1.461E-02	-0.276
	+	276.40		4.891E-01	3.503E-01	4.336E-01	7.846E-02	1.128
		302.84		1.537E-01	1.070E-01	1.607E-01	2.680E-02	0.956
CS-134		356.01	*	7.017E-03	3.080E-02	4.476E-02	6.689E-03	0.157
		383.85		-8.295E-02	1.933E-01	3.135E-01	4.195E-02	-0.265
	+	510.53		6.828E-01	1.933E-01	Half-Life too short		
		529.87	*	-1.974E-03	1.933E-01	Half-Life too short		
		706.58		4.431E-02	1.933E-01	Half-Life too short		
		856.28		2.723E-01	1.933E-01	Half-Life too short		
		875.33		-5.198E-03	1.933E-01	Half-Life too short		
		1236.41		8.676E-01	1.933E-01	Half-Life too short		
		1298.22		2.119E-02	1.933E-01	Half-Life too short		
		475.35		5.660E-01	1.257E+00	2.064E+00	2.030E-01	0.274
		563.23		7.906E-02	2.331E-01	3.926E-01	4.051E-02	0.201

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		569.32		1.358E-01	1.250E-01	2.147E-01	2.226E-02	0.632
		604.70		9.254E-03	2.544E-02	3.685E-02	3.837E-03	0.251
	+	795.84	*	1.059E-01	4.348E-02	5.462E-02	6.046E-03	1.938
		801.93		-1.301E-01	3.049E-01	4.075E-01	4.512E-02	-0.319
		1038.57		-1.363E+00	2.583E+00	4.112E+00	4.071E-01	-0.331
		1167.94		-2.603E-01	1.665E+00	2.762E+00	2.244E-01	-0.094
		1365.15		-3.300E-01	7.951E-01	1.251E+00	1.165E-01	-0.264
CS-135		268.24	*	2.119E-01	1.271E-01	1.842E-01	2.664E-02	1.151
I-135		288.45		1.892E+09	1.271E-01	Half-Life too short		
		417.63		1.947E+09	1.271E-01	Half-Life too short		
		546.56		4.085E+08	1.271E-01	Half-Life too short		
		836.80		3.529E+09	1.271E-01	Half-Life too short		
		1038.76		-1.879E+09	1.271E-01	Half-Life too short		
		1124.00		3.308E+10	1.271E-01	Half-Life too short		
		1131.51		2.914E+08	1.271E-01	Half-Life too short		
		1260.41	*	-3.539E+08	1.271E-01	Half-Life too short		
		1457.56		2.827E+11	1.271E-01	Half-Life too short		
		1678.03		-8.095E+08	1.271E-01	Half-Life too short		
		1706.46		-2.207E+09	1.271E-01	Half-Life too short		
		1791.20		-7.764E+08	1.271E-01	Half-Life too short		
CS-136		66.91		-4.529E-02	5.156E-01	7.507E-01	1.117E-01	-0.060
	+	86.29		5.354E+00	1.128E+00	1.273E+00	1.695E-01	4.206
		153.22		1.904E-01	4.192E-01	7.092E-01	7.241E-02	0.268
		163.89		6.596E-01	6.833E-01	1.159E+00	1.234E-01	0.569
		176.55		-1.083E-01	2.458E-01	4.034E-01	4.269E-02	-0.268
		273.65		-3.748E-01	4.969E-01	4.670E-01	6.606E-02	-0.803
		340.57		6.397E-01	1.227E-01	1.698E-01	2.035E-02	3.766
		818.51		2.824E-03	4.423E-02	7.414E-02	8.215E-03	0.038
		1048.07	*	-4.570E-02	7.191E-02	1.138E-01	1.151E-02	-0.402
		1235.34		6.609E-01	4.127E-01	7.091E-01	8.286E-02	0.932
BA-137M		661.65	*	5.618E-03	2.276E-02	3.770E-02	3.976E-03	0.149
CS-137		661.65	*	5.939E-03	2.406E-02	3.986E-02	4.208E-03	0.149
CE-139		165.85	*	-2.398E-02	2.010E-02	3.238E-02	3.176E-03	-0.741
BA-140		162.64		3.387E-01	4.818E-01	8.152E-01	8.244E-02	0.415
		304.84		6.367E-02	9.097E-01	1.334E+00	3.969E-01	0.048
		423.70		9.402E-01	1.215E+00	1.973E+00	6.447E-01	0.476
		537.32	*	-1.122E-01	1.616E-01	2.562E-01	8.602E-02	-0.438
LA-140	+	328.77		8.224E-01	3.024E-01	3.420E-01	4.321E-02	2.405
		432.53		-1.727E-01	1.268E+00	2.056E+00	2.048E-01	-0.084
		487.03		-3.116E-02	8.585E-02	1.364E-01	1.414E-02	-0.228
		751.79		-8.141E-01	1.071E+00	1.672E+00	1.946E-01	-0.487
		815.85		-9.198E-02	1.867E-01	3.050E-01	3.616E-02	-0.302
		867.82		6.738E-01	9.896E-01	1.463E+00	1.686E-01	0.460
		919.63		4.579E-01	2.010E+00	2.880E+00	3.655E-01	0.159
		925.24		4.615E-02	7.529E-01	1.172E+00	1.339E-01	0.039
		1596.49	*	-8.173E-02	5.355E-02	7.915E-02	6.938E-03	-1.033
CE-141		145.44	*	2.644E-02	4.072E-02	6.937E-02	6.315E-03	0.381
CE-143		57.37		3.792E-04	4.072E-02	Half-Life too short		
		231.56		-4.582E-04	4.072E-02	Half-Life too short		

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	293.26	*		6.287E-04	4.072E-02	Half-Life	too short	
	350.59			2.339E-02	4.072E-02	Half-Life	too short	
	490.36			1.055E-03	4.072E-02	Half-Life	too short	
	664.57			-1.742E-04	4.072E-02	Half-Life	too short	
	721.93			1.322E-04	4.072E-02	Half-Life	too short	
CE-144	80.11			1.186E+00	1.718E+00	2.038E+00	1.761E-01	0.582
	133.54	*		1.563E-01	1.502E-01	2.287E-01	3.550E-02	0.684
PM-144	476.78			2.573E-02	4.475E-02	7.370E-02	7.781E-03	0.349
	618.01			-6.271E-03	2.102E-02	3.356E-02	3.568E-03	-0.187
	696.49	*		-4.253E-03	2.198E-02	3.563E-02	3.810E-03	-0.119
	778.57			-2.593E+00	1.592E+00	2.352E+00	2.581E-01	-1.102
PR-144	696.49	*		-2.881E-01	1.489E+00	2.413E+00	2.580E-01	-0.119
	1489.15			-2.338E+00	7.244E+00	1.151E+01	1.025E+00	-0.203
PM-146	453.90	*		4.069E-02	2.890E-02	4.752E-02	5.522E-03	0.856
	633.02			-1.577E-01	8.954E-01	1.463E+00	5.535E-01	-0.108
	735.90			-8.604E-04	1.014E-01	1.523E-01	4.469E-02	-0.006
	747.13			-2.561E-02	5.793E-02	9.196E-02	1.428E-02	-0.279
ND-147	91.11	+		9.068E-01	2.304E-01	3.259E-01	3.220E-02	2.782
	319.41			1.060E+00	2.113E+00	3.578E+00	4.529E-01	0.296
	439.89			-1.631E+00	3.791E+00	5.964E+00	5.743E-01	-0.274
	531.02	*		-2.402E-01	3.412E-01	5.536E-01	8.779E-02	-0.434
PM-149	285.90	*		5.286E+00	5.142E+01	8.234E+01	1.558E+01	0.064
EU-152	121.78			-6.263E-03	5.035E-02	7.957E-02	7.638E-03	-0.079
	244.69			3.539E-01	2.481E-01	3.644E-01	4.613E-02	0.971
	344.27	*		-8.871E-02	8.384E-02	9.860E-02	1.185E-02	-0.900
	443.98			-8.429E-01	6.391E-01	9.816E-01	9.476E-02	-0.859
	778.89			-2.123E-01	1.799E-01	2.735E-01	3.002E-02	-0.776
	867.32			4.737E-01	6.066E-01	9.020E-01	1.007E-01	0.525
	964.01	+		7.623E-01	3.082E-01	3.892E-01	4.154E-02	1.958
	1085.78			-3.934E-01	2.794E-01	4.212E-01	3.924E-02	-0.934
	1112.02			2.750E-01	2.335E-01	3.462E-01	3.103E-02	0.794
	1407.95	+		1.937E-01	1.710E-01	2.053E-01	1.836E-02	0.944
GD-153	69.67			8.004E-01	1.122E+00	1.684E+00	1.307E-01	0.475
	83.37	+		2.898E+01	1.103E+01	1.521E+01	1.365E+00	1.906
	97.43	*		-6.124E-03	5.927E-02	8.302E-02	7.300E-03	-0.074
	103.18			-2.814E-03	7.831E-02	1.117E-01	9.549E-03	-0.025
EU-154	123.07			-1.605E-02	3.579E-02	5.596E-02	6.208E-03	-0.287
	247.94			2.139E-02	2.527E-01	3.783E-01	5.622E-02	0.057
	591.81			-1.134E-02	4.550E-01	6.485E-01	8.431E-02	-0.017
	723.30			1.381E-01	1.331E-01	1.950E-01	2.249E-02	0.708
	756.87			-4.329E-03	5.114E-01	8.285E-01	1.136E-01	-0.005
	873.19			-2.258E-02	1.923E-01	3.179E-01	4.501E-02	-0.071
	996.32			-3.442E-01	2.589E-01	3.866E-01	7.218E-02	-0.890
	1004.76			-4.612E-02	1.473E-01	2.380E-01	3.073E-02	-0.194
	1274.45	*		-6.168E-02	8.339E-02	1.329E-01	1.503E-02	-0.464
TB-160	86.79	+		1.355E+00	2.548E-01	3.206E-01	2.999E-02	4.228
	197.04			4.215E-02	4.018E-01	6.325E-01	6.878E-02	0.067
	215.65			1.308E-01	5.062E-01	8.324E-01	9.622E-02	0.157
	298.57			1.439E-01	1.274E-01	1.328E-01	1.780E-02	1.083

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		879.36	*	-3.105E-02	8.927E-02	1.459E-01	1.632E-02	-0.213
		962.29		1.261E+00	4.420E-01	6.811E-01	7.279E-02	1.852
	+	966.15		5.204E-01	2.104E-01	3.511E-01	3.740E-02	1.482
		1177.93		-8.318E-02	2.403E-01	3.952E-01	3.189E-02	-0.210
		1271.85		7.743E-02	4.700E-01	7.837E-01	6.736E-02	0.099
		80.57		1.166E-01	2.196E-01	2.586E-01	2.247E-02	0.451
		184.41		9.277E-02	3.082E-02	4.566E-02	4.760E-03	2.032
		280.46		-8.136E-04	6.300E-02	8.776E-02	1.226E-02	-0.009
	+	410.95		3.149E-01	2.340E-01	2.765E-01	2.610E-02	1.139
		711.68	*	7.818E-03	3.888E-02	6.389E-02	6.869E-03	0.122
TM-171		752.31		-3.798E-02	1.758E-01	2.823E-01	3.075E-02	-0.135
		810.29		-8.926E-03	3.633E-02	6.015E-02	6.649E-03	-0.148
		51.35		1.321E+01	1.790E+01	3.048E+01	2.378E+00	0.433
		52.39		3.867E+00	1.006E+01	1.587E+01	1.218E+00	0.244
		59.40		2.998E+00	1.701E+01	2.550E+01	1.802E+00	0.118
LU-176		66.72	*	-6.282E+00	1.928E+01	2.787E+01	2.106E+00	-0.225
	+	88.36		1.005E+00	1.890E-01	2.372E-01	2.243E-02	4.238
		201.83		-3.423E-02	2.044E-02	3.169E-02	3.501E-03	-1.080
		306.84	*	-9.356E-03	1.782E-02	2.667E-02	3.498E-03	-0.351
LU-177		401.10		1.494E+00	4.398E+00	7.295E+00	6.835E-01	0.205
		112.95		-3.466E-01	1.076E+00	1.701E+00	1.414E-01	-0.204
	+	208.36	*	2.744E+00	9.865E-01	1.256E+00	1.418E-01	2.184
LU-177M		52.97		5.768E-02	1.042E+00	1.633E+00	1.243E-01	0.035
		54.07		1.085E-01	5.390E-01	8.462E-01	6.338E-02	0.128
		61.30		5.311E-01	9.487E-01	1.434E+00	1.031E-01	0.370
		121.62		-4.240E-02	2.573E-01	4.062E-01	3.346E-02	-0.104
		147.16		-2.282E-01	4.302E-01	7.145E-01	6.443E-02	-0.319
		171.86		-8.880E-02	3.320E-01	5.488E-01	5.488E-02	-0.162
		218.09		1.873E-01	5.819E-01	9.573E-01	1.115E-01	0.196
	+	268.79		1.848E+00	7.870E-01	9.590E-01	1.304E-01	1.927
		319.02		-5.777E-02	1.717E-01	2.844E-01	3.604E-02	-0.203
		367.43		3.476E-01	5.855E-01	9.845E-01	1.039E-01	0.353
HF-181		413.65	*	1.618E-02	1.282E-01	1.827E-01	1.728E-02	0.089
		56.28		-1.567E-01	5.507E-01	9.122E-01	6.645E-02	-0.172
		57.53		2.759E-01	2.932E-01	4.981E-01	3.580E-02	0.554
		65.20		-5.685E-01	6.357E-01	9.030E-01	6.732E-02	-0.630
		133.02		5.560E-02	4.810E-02	7.405E-02	6.312E-03	0.751
		136.25		-3.430E-01	3.078E-01	4.881E-01	4.210E-02	-0.703
		345.85		7.343E-02	1.541E-01	1.997E-01	2.310E-02	0.368
		482.03	*	-1.080E-02	2.735E-02	4.344E-02	4.289E-03	-0.249
W-181		56.28		-6.127E-02	2.170E-01	3.595E-01	2.618E-02	-0.170
		57.53		1.086E-01	1.156E-01	1.964E-01	1.412E-02	0.553
		65.20	*	-2.224E-01	2.487E-01	3.533E-01	2.633E-02	-0.630
TA-182		67.75		-3.913E-02	7.251E-02	1.107E-01	8.442E-03	-0.353
		100.10		3.631E-02	1.186E-01	1.920E-01	1.664E-02	0.189
		152.43		-8.902E-02	2.240E-01	3.723E-01	3.435E-02	-0.239
		222.10		-5.336E-02	2.361E-01	3.826E-01	4.515E-02	-0.139
		1001.68		2.590E+00	1.435E+00	2.406E+00	2.479E-01	1.077
	+	1121.28		8.258E-01	1.968E-01	2.284E-01	2.017E-02	3.616

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-183	1189.05			1.125E-01	2.066E-01	3.512E-01	2.856E-02	0.320
	1221.42	*		-1.094E-01	1.341E-01	2.154E-01	1.791E-02	-0.508
	1230.97			-7.294E-01	3.491E-01	5.275E-01	4.414E-02	-1.383
	57.98			5.717E-02	1.162E-01	1.955E-01	1.399E-02	0.292
	59.32			1.153E-02	6.959E-02	1.043E-01	7.376E-03	0.111
	67.20			-1.005E-02	1.371E-01	1.997E-01	1.516E-02	-0.050
	162.32	*		3.319E-02	7.259E-02	1.224E-01	1.180E-02	0.271
	208.81	+		2.614E+00	9.398E-01	1.209E+00	1.367E-01	2.162
	291.72			-8.230E-01	6.943E-01	9.601E-01	1.308E-01	-0.857
	57.98			2.114E-01	4.296E-01	7.230E-01	5.174E-02	0.292
RE-184	59.32			4.259E-02	2.572E-01	3.853E-01	2.725E-02	0.111
	67.20			-3.714E-02	5.069E-01	7.384E-01	5.603E-02	-0.050
	161.27			-1.085E-01	2.342E-01	3.870E-01	3.715E-02	-0.280
	216.55			1.651E-01	1.799E-01	2.990E-01	3.466E-02	0.552
	252.85	*		-1.807E-01	1.601E-01	2.470E-01	3.205E-02	-0.731
	318.01			-9.459E-02	2.960E-01	4.907E-01	6.237E-02	-0.193
	792.07			-4.921E-01	8.534E-01	1.136E+00	1.251E-01	-0.433
	903.28			2.386E-01	7.395E-01	1.067E+00	1.192E-01	0.224
	920.93			1.054E-01	3.167E-01	4.870E-01	5.374E-02	0.216
	59.72			-4.606E-03	1.880E-01	2.799E-01	1.982E-02	-0.016
OS-185	61.14			2.804E-02	1.036E-01	1.553E-01	1.116E-02	0.181
	69.30			2.540E-01	1.987E-01	3.019E-01	2.335E-02	0.841
	592.07			-3.483E-01	1.781E+00	2.621E+00	2.713E-01	-0.133
	646.12	*		6.417E-03	2.726E-02	4.525E-02	4.755E-03	0.142
	717.42			-1.268E-01	5.873E-01	9.483E-01	1.022E-01	-0.134
	874.81			-1.079E-01	3.791E-01	6.218E-01	6.950E-02	-0.174
	880.27			-9.836E-02	4.970E-01	8.179E-01	9.147E-02	-0.120
	155.03	*		1.214E-01	1.139E-01	1.943E-01	1.813E-02	0.625
	477.96			1.160E+00	2.025E+00	3.336E+00	3.286E-01	0.348
	633.10			-2.741E-01	1.794E+00	2.940E+00	3.080E-01	-0.093
W-188	63.58	+		8.213E+01	4.515E+01	5.561E+01	4.086E+00	1.477
	227.08			6.796E+00	8.804E+00	1.455E+01	1.744E+00	0.467
IR-192	290.67	*		-3.843E+00	5.418E+00	7.708E+00	1.053E+00	-0.499
	295.96	+		1.043E+00	1.799E-01	1.815E-01	2.455E-02	5.750
	308.46			1.236E-02	6.235E-02	1.052E-01	1.377E-02	0.118
	316.51	*		8.435E-03	2.240E-02	3.786E-02	4.839E-03	0.223
AU-195	468.07			-2.876E-02	4.826E-02	6.505E-02	6.729E-03	-0.442
	604.41			-4.153E-02	3.466E-01	4.906E-01	6.993E-02	-0.085
	612.46			5.262E+00	8.846E-01	1.187E+00	1.365E-01	4.431
	65.12			-2.820E-02	1.133E-01	1.644E-01	1.225E-02	-0.172
	66.83			-1.191E-02	6.375E-02	9.256E-02	7.001E-03	-0.129
	75.70	+		1.255E+00	1.840E-01	2.897E-01	2.387E-02	4.332
	98.88	*		2.373E-01	1.545E-01	2.484E-01	2.166E-02	0.955
TL-200	129.76	+		5.345E+00	3.280E+00	3.382E+00	2.850E-01	1.581
	367.94	*		7.528E-05	3.280E+00	Half-Life	too short	
	579.30			4.188E-03	3.280E+00	Half-Life	too short	
TL-201	828.27			3.445E-04	3.280E+00	Half-Life	too short	
	1205.75			6.885E-04	3.280E+00	Half-Life	too short	
	68.90			1.049E+00	2.837E+00	4.225E+00	3.256E-01	0.248

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-202		70.82		-2.855E-01	1.623E+00	2.377E+00	1.865E-01	-0.120
		80.30		2.212E+00	3.532E+00	4.177E+00	3.619E-01	0.530
		135.34		1.135E+01	1.602E+01	2.439E+01	2.097E+00	0.465
		167.43	*	-1.324E+00	4.102E+00	6.783E+00	6.685E-01	-0.195
		68.90		1.049E-01	2.837E-01	4.225E-01	3.256E-02	0.248
		70.82		-2.847E-02	1.619E-01	2.371E-01	1.860E-02	-0.120
HG-203		80.30		2.207E-01	3.523E-01	4.167E-01	3.610E-02	0.530
		439.56	*	-7.197E-03	4.524E-02	7.194E-02	6.925E-03	-0.100
		70.83		-1.204E-01	7.201E-01	1.055E+00	1.385E-01	-0.114
		72.87		1.415E+00	4.196E-01	6.659E-01	8.529E-02	2.125
BI-207		82.60		5.308E-01	9.264E-01	1.079E+00	1.502E-01	0.492
		279.20	*	3.774E-02	3.082E-02	4.454E-02	6.304E-03	0.847
		72.80		3.686E-01	1.150E-01	1.942E-01	1.554E-02	1.898
	+	74.97		6.978E-01	1.023E-01	1.425E-01	1.165E-02	4.895
TL-207	+	84.90		3.755E-01	1.430E-01	2.055E-01	1.878E-02	1.827
		569.67		2.344E-02	1.927E-02	3.319E-02	3.410E-03	0.706
		1063.62	*	2.258E-02	3.869E-02	6.099E-02	5.856E-03	0.370
		1770.23		6.860E-01	3.702E-01	6.120E-01	5.087E-02	1.121
PO-209		81.07		-6.546E-02	1.787E-01	2.016E-01	1.762E-02	-0.325
	+	83.78		2.476E-01	9.427E-02	1.317E-01	1.188E-02	1.880
		94.90		3.612E-01	1.651E-01	2.487E-01	2.223E-02	1.452
		122.32		5.356E-01	1.192E+00	1.910E+00	1.700E-01	0.280
BI-210		144.24		4.793E-01	4.807E-01	7.789E-01	7.711E-02	0.615
		154.21		2.785E-01	2.618E-01	4.465E-01	4.510E-02	0.624
	+	269.46		4.338E-01	1.849E-01	2.292E-01	3.148E-02	1.893
	+	323.87	*	3.231E-01	4.971E-01	7.354E-01	1.462E-01	0.439
PB-210	+	338.28		8.500E+00	1.745E+00	1.613E+00	2.386E-01	5.270
		445.03		-3.380E-01	1.500E+00	2.420E+00	3.109E-01	-0.140
		260.50		-3.660E+00	6.518E+00	1.029E+01	1.365E+00	-0.356
		262.80		-4.337E+00	1.791E+01	2.858E+01	3.818E+00	-0.152
PB-211		896.60	*	-1.175E+00	4.753E+00	7.790E+00	8.726E-01	-0.151
		46.50	*	9.040E-01	2.081E+00	3.362E+00	3.124E-01	0.269
		46.50	*	9.040E-01	2.081E+00	3.362E+00	3.124E-01	0.269
		46.50	*	9.040E-01	2.080E+00	3.362E+00	2.827E-01	0.269
BI-212		404.84	*	-1.746E-01	7.204E-01	9.992E-01	6.273E-01	-0.175
		427.08		7.358E-02	1.353E+00	2.211E+00	1.377E+00	0.033
		831.96		-1.860E-01	8.092E-01	1.324E+00	8.351E-01	-0.140
	+	727.18	*	1.178E+00	3.413E-01	4.182E-01	4.995E-02	2.818
PO-215		785.46		2.514E+00	1.274E+00	2.126E+00	2.337E-01	1.183
		1620.62		7.876E-01	7.776E-01	1.378E+00	1.201E-01	0.572
		81.07		-6.546E-02	1.787E-01	2.016E-01	1.762E-02	-0.325
	+	83.78		2.476E-01	9.427E-02	1.317E-01	1.188E-02	1.880
		94.90		3.612E-01	1.651E-01	2.487E-01	2.223E-02	1.452
		122.32		5.356E-01	1.192E+00	1.910E+00	1.700E-01	0.280
		144.24		4.793E-01	4.807E-01	7.789E-01	7.711E-02	0.615
		154.21		2.785E-01	2.618E-01	4.465E-01	4.510E-02	0.624
	+	269.46		4.338E-01	1.849E-01	2.292E-01	3.148E-02	1.893
		323.87	*	3.231E-01	4.971E-01	7.354E-01	1.462E-01	0.439
	+	338.28		8.500E+00	1.745E+00	1.613E+00	2.386E-01	5.270

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RN-219	+	445.03		-3.380E-01	1.500E+00	2.420E+00	3.109E-01	-0.140
		271.23		5.566E-01	2.391E-01	2.997E-01	4.440E-02	1.857
		401.81	*	7.775E-02	2.784E-01	4.485E-01	6.939E-02	0.173
RN-220		549.76	*	4.774E-01	1.620E+01	2.708E+01	2.761E+00	0.018
RA-223	+	81.07		-6.546E-02	1.787E-01	2.016E-01	1.762E-02	-0.325
		83.78		2.476E-01	9.427E-02	1.317E-01	1.188E-02	1.880
		94.90		3.612E-01	1.651E-01	2.487E-01	2.223E-02	1.452
AC-227	+	122.32		5.356E-01	1.192E+00	1.910E+00	1.700E-01	0.280
		144.24		4.793E-01	4.807E-01	7.789E-01	7.711E-02	0.615
		154.21		2.785E-01	2.618E-01	4.465E-01	4.510E-02	0.624
	+	269.46		4.338E-01	1.849E-01	2.292E-01	3.148E-02	1.893
		323.87	*	3.231E-01	4.971E-01	7.354E-01	1.462E-01	0.439
		338.28		8.500E+00	1.745E+00	1.613E+00	2.386E-01	5.270
	+	445.03		-3.380E-01	1.500E+00	2.420E+00	3.109E-01	-0.140
		79.80		4.105E-01	1.369E+00	1.595E+00	3.428E-01	0.257
		236.00		1.314E+00	2.823E-01	3.374E-01	5.089E-02	3.894
	+	256.20	*	1.395E-01	2.627E-01	4.278E-01	7.806E-02	0.326
		286.10		5.315E-01	1.045E+00	1.688E+00	2.877E-01	0.315
		299.80		2.344E+00	1.511E+00	1.682E+00	3.406E-01	1.393
TH-227	+	304.40		1.306E+00	1.379E+00	2.052E+00	4.304E-01	0.636
		334.20		2.343E+00	2.335E+00	2.417E+00	5.115E-01	0.970
		79.80		4.105E-01	1.369E+00	1.595E+00	3.472E-01	0.257
	+	94.00		1.092E+01	3.110E+00	2.467E+00	5.410E-01	4.428
		236.00		1.314E+00	2.739E-01	3.374E-01	4.775E-02	3.894
		256.20	*	1.395E-01	2.630E-01	4.278E-01	8.805E-02	0.326
	+	286.10		5.315E-01	1.171E+00	1.688E+00	1.704E+00	0.315
		299.80		2.344E+00	1.511E+00	1.682E+00	3.406E-01	1.393
		304.40		1.306E+00	1.379E+00	2.052E+00	4.304E-01	0.636
	+	334.20		2.343E+00	2.335E+00	2.417E+00	5.115E-01	0.970
		85.43		3.706E-01	1.411E-01	2.114E-01	1.945E-02	1.753
		88.47		5.787E-01	1.088E-01	1.359E-01	1.284E-02	4.257
TH-229	+	100.00		6.170E-02	1.235E-01	2.008E-01	1.741E-02	0.307
		193.63	*	4.791E-02	3.428E-01	5.669E-01	6.095E-02	0.085
		210.97		1.477E+00	6.161E-01	9.181E-01	1.045E-01	1.609
	+	283.67	*	-3.522E-01	1.073E+00	1.631E+00	3.045E-01	-0.216
		301.29		9.374E-01	5.931E-01	6.826E-01	1.085E-01	1.373
TH-231	+	81.07		-6.546E-02	1.787E-01	2.016E-01	1.762E-02	-0.325
		83.78		2.476E-01	9.427E-02	1.317E-01	1.188E-02	1.880
		94.90		3.612E-01	1.651E-01	2.487E-01	2.223E-02	1.452
U-231	+	122.32		5.356E-01	1.192E+00	1.910E+00	1.700E-01	0.280
		144.24		4.793E-01	4.807E-01	7.789E-01	7.711E-02	0.615
		154.21		2.785E-01	2.618E-01	4.465E-01	4.510E-02	0.624
	+	269.46		4.338E-01	1.849E-01	2.292E-01	3.148E-02	1.893
		323.87	*	3.231E-01	4.971E-01	7.354E-01	1.462E-01	0.439
		338.28		8.500E+00	1.745E+00	1.613E+00	2.386E-01	5.270
	+	445.03		-3.380E-01	1.500E+00	2.420E+00	3.109E-01	-0.140
		84.21		9.624E+00	3.664E+00	5.185E+00	4.700E-01	1.856
		92.29		9.738E+00	1.974E+00	2.413E+00	2.201E-01	4.035
	+	95.87	*	-8.963E-01	7.018E-01	9.601E-01	8.526E-02	-0.934

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233	+	108.00		6.880E-01	1.405E+00	2.030E+00	1.707E-01	0.339
	+	75.28		2.036E+01	3.950E+00	4.352E+00	6.580E-01	4.679
	+	86.59		8.298E+00	2.622E+00	1.976E+00	5.345E-01	4.200
	+	300.12		6.534E-01	4.171E-01	4.695E-01	8.465E-02	1.392
		311.98	*	2.636E-02	4.161E-02	7.076E-02	9.269E-03	0.373
		340.50		3.403E+00	9.838E-01	8.652E-01	2.177E-01	3.933
PA-234		398.62		-4.841E-01	1.374E+00	2.221E+00	5.969E-01	-0.218
		415.76		1.063E+00	1.209E+00	1.754E+00	3.842E-01	0.606
	+	63.00		2.397E+00	1.353E+00	1.680E+00	2.489E-01	1.427
		94.67		4.105E-01	1.294E-01	1.878E-01	2.373E-02	2.186
		98.44		7.262E-02	7.675E-02	1.004E-01	5.602E-02	0.723
		99.86		1.043E-01	3.246E-01	5.110E-01	4.433E-02	0.204
		111.00		4.677E-02	1.286E-01	2.069E-01	2.461E-02	0.226
	+	131.20		2.009E-01	1.233E-01	1.201E-01	1.017E-02	1.672
		152.70		4.785E-02	2.145E-01	3.614E-01	6.275E-02	0.132
	+	186.00		5.402E+00	2.159E+00	1.727E+00	5.488E-01	3.128
		226.40		4.914E-02	2.794E-01	4.568E-01	7.123E-02	0.108
		227.20		2.248E-01	2.996E-01	4.950E-01	5.936E-02	0.454
		248.90		-2.746E-01	5.599E-01	8.526E-01	2.075E-01	-0.322
		293.70		6.001E+00	1.351E+00	1.104E+00	2.233E-01	5.435
		369.80		-8.305E-02	5.510E-01	9.059E-01	2.044E-01	-0.092
		568.70		4.164E-01	6.423E-01	1.091E+00	1.120E-01	0.382
		569.50		2.233E-01	1.718E-01	2.964E-01	3.044E-02	0.753
		574.00		-1.004E+00	9.804E-01	1.480E+00	1.523E-01	-0.679
		699.00		1.497E-02	4.649E-01	7.603E-01	1.529E-01	0.020
		706.10		2.792E-01	6.910E-01	1.126E+00	5.073E-01	0.248
		733.00		1.013E-01	2.683E-01	3.810E-01	8.818E-02	0.266
		742.81		6.101E-02	8.582E-01	1.396E+00	9.431E-01	0.044
	+	796.30		2.059E+00	9.965E-01	1.054E+00	2.940E-01	1.954
		805.60		1.197E+00	7.276E-01	1.120E+00	3.519E-01	1.069
		819.60		1.768E-01	7.666E-01	1.289E+00	4.982E-01	0.137
		826.30		1.262E-01	5.388E-01	9.032E-01	4.090E-01	0.140
		831.60		-3.849E-01	4.327E-01	6.702E-01	2.054E-01	-0.574
		876.40		6.131E-02	5.371E-01	8.904E-01	9.175E-01	0.069
		880.51		1.335E-02	1.800E-01	2.997E-01	3.352E-02	0.045
		883.24		3.260E-02	1.850E-01	3.071E-01	2.076E-01	0.106
		899.00		-4.313E-01	5.728E-01	8.637E-01	3.826E-01	-0.499
		925.00		-5.810E-03	8.107E-01	1.257E+00	1.383E-01	-0.005
		926.50		-6.241E-02	1.357E-01	1.842E-01	4.823E-02	-0.339
		946.00	*	7.346E-03	2.027E-01	3.347E-01	6.653E-02	0.022
		949.00		1.223E-01	3.047E-01	5.101E-01	5.511E-02	0.240
		980.50		-3.162E-01	4.837E-01	7.693E-01	8.090E-02	-0.411
		1394.10		-7.590E-01	8.630E-01	1.075E+00	7.002E-01	-0.706
PA-234M		766.42		1.692E+01	1.236E+01	1.347E+01	6.893E+00	1.257
NP-236		1001.03	*	6.804E+00	3.318E+00	5.561E+00	6.373E-01	1.223
		94.67		3.144E-01	9.427E-02	1.426E-01	1.277E-02	2.204
		98.44		5.488E-02	4.950E-02	7.588E-02	6.634E-03	0.723
		111.00		3.538E-02	9.722E-02	1.565E-01	1.306E-02	0.226
		160.31	*	-2.930E-02	5.288E-02	8.717E-02	8.333E-03	-0.336

----- 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		1.134E-01	1.079E-01	1.722E-01	1.496E-02	0.659
		117.00	*	1.048E-01	1.324E-01	2.144E-01	1.772E-02	0.489
	+	209.75		2.075E+00	7.459E-01	9.607E-01	1.089E-01	2.160
		228.18		-2.656E-02	1.574E-01	2.549E-01	3.067E-02	-0.104
	+	277.60		2.387E-01	1.687E-01	2.091E-01	2.915E-02	1.142
AM-241		334.30		9.796E-01	1.142E+00	1.372E+00	1.655E-01	0.714
		59.54	*	1.926E-02	9.888E-02	1.482E-01	1.159E-02	0.130
CM-243		99.55		1.167E-01	1.110E-01	1.772E-01	1.540E-02	0.659
		103.76	*	3.659E-02	7.285E-02	1.057E-01	9.009E-03	0.346
		117.00		1.078E-01	1.362E-01	2.205E-01	1.823E-02	0.489
	+	209.75		2.045E+00	7.353E-01	9.470E-01	1.074E-01	2.160
		228.18		-2.684E-02	1.590E-01	2.576E-01	3.099E-02	-0.104
AM-246	+	277.60		2.407E-01	1.701E-01	2.108E-01	2.939E-02	1.142
		798.80		-6.103E-02	1.047E-01	1.382E-01	1.524E-02	-0.442
		1036.00		3.848E-03	2.006E-01	3.282E-01	3.259E-02	0.012
		1062.04		-2.871E-03	1.718E-01	2.645E-01	2.545E-02	-0.011
		1078.86	*	1.194E-01	9.786E-02	1.667E-01	1.568E-02	0.716
CM-247	+	278.00		9.900E-01	6.996E-01	8.591E-01	1.199E-01	1.152
		287.40		6.642E-01	8.474E-01	1.377E+00	1.895E-01	0.482
CF-249		402.60	*	1.682E-02	2.631E-02	4.015E-02	3.766E-03	0.419
		252.85		-6.796E-01	6.022E-01	9.291E-01	1.206E-01	-0.731
		333.44		2.709E-01	1.592E-01	1.756E-01	2.125E-02	1.542
CF-251		387.95	*	2.585E-02	2.499E-02	4.234E-02	4.024E-03	0.611
		176.60	*	-3.990E-02	8.753E-02	1.436E-01	1.459E-02	-0.278
		227.00		2.020E-01	2.657E-01	4.391E-01	5.263E-02	0.460
		285.00		-3.119E-01	1.196E+00	1.894E+00	2.619E-01	-0.165

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]G245396001      *
* Acquisition date   : 4-FEB-2010 22:55:47 Detector SN# :                  *
* Detector ID        : GAM22 Sensitivity      : 5.000                      *
* Geometry           : CAN Energy tolerance : 1.500                      *
* Elapsed live time  : 0 04:00:00.00 Abundance limit : 75.000             *
* Elapsed real time  : 0 04:00:04.93 Half life ratio : 8.000              *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 21-JAN-2010 12:00:00 Nuclide Library : SOLID         *
* Sample ID          : G245396001 Analyst initials: MXR1                  *
* Batch Number       : 944962 Sample Quantity : 1.3296E+02 GRAM          *
* Recovery           : 1.00000 Carrier Weight : 0.00000                  *
*****
*
*                                     QC DATA                               *
*
* Standard Weight    : 0.00000                                             *
* CALIB. DATE/TIME   : 2-DEC-2009 16:47:28 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	3.964E+01	3.739E+00	3.371E-01	0.000E+00
CD-109	4.308E+00	7.938E-01	7.656E-01	0.000E+00
SN-126	4.239E-01	7.809E-02	7.563E-02	0.000E+00
EU-155	9.288E-02	6.401E-02	1.220E-01	0.000E+00
TL-208	6.051E-01	8.258E-02	3.657E-02	0.000E+00
BI-211	4.034E+00	5.462E-01	2.164E-01	0.000E+00
PB-212	1.852E+00	2.514E-01	6.289E-02	0.000E+00
PO-212	1.852E+00	2.514E-01	6.289E-02	0.000E+00
BI-214	1.183E+00	1.630E-01	7.511E-02	0.000E+00
PB-214	1.403E+00	2.031E-01	7.539E-02	0.000E+00
PO-214	1.403E+00	2.031E-01	7.539E-02	0.000E+00
PO-216	1.852E+00	2.514E-01	6.289E-02	0.000E+00
PO-218	1.403E+00	2.031E-01	7.539E-02	0.000E+00
RA-224	5.040E+00	1.037E+00	7.149E-01	0.000E+00
RA-226	1.183E+00	1.630E-01	7.511E-02	0.000E+00
AC-228	1.778E+00	2.944E-01	1.382E-01	0.000E+00
RA-228	1.778E+00	2.944E-01	1.382E-01	0.000E+00
TH-228	1.879E+00	2.551E-01	6.381E-02	0.000E+00
TH-230	1.183E+00	1.630E-01	7.511E-02	0.000E+00
TH-232	1.778E+00	2.944E-01	1.382E-01	0.000E+00
TH-234	2.056E+00	1.152E+00	1.301E+00	0.000E+00
U-234	1.183E+00	1.630E-01	7.511E-02	0.000E+00
U-235	6.899E-02	1.458E-01	2.491E-01	0.000E+00
NP-237	1.245E+00	3.405E-01	2.243E-01	0.000E+00
U-238	2.056E+00	1.152E+00	1.301E+00	0.000E+00
AM-243	3.887E-01	5.587E-02	5.687E-02	0.000E+00
ANH-511	1.102E-01	4.262E-02	2.952E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)
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BE-7	2.063E-01	2.057E-01	3.572E-01	0.000E+00	NOT IDENT.
NA-22	-2.171E-02	2.922E-02	4.783E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.677E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-6.584E-03	1.816E-02	2.941E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.422E-02	5.145E-02	0.000E+00	FAIL ABUN
SC-46	-4.640E-03	2.434E-02	4.128E-02	0.000E+00	FAIL ABUN
V-48	1.244E-02	4.432E-02	7.583E-02	0.000E+00	NOT IDENT.
CR-51	7.250E-02	2.449E-01	4.224E-01	0.000E+00	NOT IDENT.
MN-52	1.675E-01	1.358E-01	2.431E-01	0.000E+00	FAIL ABUN
MN-54	1.983E-02	2.430E-02	4.292E-02	0.000E+00	NOT IDENT.
CO-56	-1.675E-02	2.454E-02	4.092E-02	0.000E+00	NOT IDENT.
CO-57	6.390E-03	1.683E-02	2.873E-02	0.000E+00	NOT IDENT.
CO-58	-1.267E-02	2.350E-02	3.964E-02	0.000E+00	NOT IDENT.
FE-59	-1.757E-02	6.086E-02	1.002E-01	0.000E+00	NOT IDENT.
CO-60	7.769E-03	2.367E-02	4.063E-02	0.000E+00	NOT IDENT.
ZN-65	4.639E-02	7.184E-02	1.054E-01	0.000E+00	NOT IDENT.
GE-68	5.642E-01	8.433E-01	1.448E+00	0.000E+00	NOT IDENT.
AS-73	-5.164E-02	5.179E-01	8.740E-01	0.000E+00	NOT IDENT.
AS-74	-2.162E-02	5.655E-02	9.596E-02	0.000E+00	NOT IDENT.
SE-75	2.604E-02	3.282E-02	4.979E-02	0.000E+00	NOT IDENT.
BR-77	1.521E+00	5.280E+00	9.120E+00	0.000E+00	FAIL ABUN
SR-82	-3.709E-01	2.590E-01	3.909E-01	0.000E+00	NOT IDENT.
RB-83	1.160E-02	4.160E-02	7.183E-02	0.000E+00	NOT IDENT.
RB-84	1.183E-02	4.368E-02	7.559E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	5.871E+00	9.307E+00	0.000E+00	NOT IDENT.
SR-85	0.000E+00	2.991E-02	4.741E-02	0.000E+00	NOT IDENT.
RB-86	1.950E-01	5.171E-01	8.787E-01	0.000E+00	NOT IDENT.
Y-88	1.326E-02	2.078E-02	3.347E-02	0.000E+00	NOT IDENT.
ZR-88	-9.990E-03	1.907E-02	3.220E-02	0.000E+00	NOT IDENT.
Y-91	8.766E+00	1.248E+01	2.181E+01	0.000E+00	NOT IDENT.
NB-94	2.508E-02	2.161E-02	3.783E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	3.252E-02	5.044E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.027E-01	1.572E-01	0.000E+00	NOT IDENT.
ZR-95	7.377E-03	4.511E-02	7.612E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.270E+04	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.770E+05	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-2.230E+00	6.220E+00	1.028E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	4.746E+15	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-8.999E-04	2.351E-02	3.906E-02	0.000E+00	NOT IDENT.
RH-102	5.428E-03	1.888E-02	3.214E-02	0.000E+00	FAIL ABUN
RU-103	-3.738E-03	2.523E-02	4.206E-02	0.000E+00	FAIL ABUN
RH-106	-5.237E-02	1.996E-01	3.384E-01	0.000E+00	FAIL ABUN
RU-106	-5.237E-02	1.995E-01	3.384E-01	0.000E+00	FAIL ABUN
AG-108M	-3.525E-03	2.062E-02	3.488E-02	0.000E+00	NOT IDENT.
AG-110M	1.483E-02	2.149E-02	3.747E-02	0.000E+00	NOT IDENT.
IN-111	-4.958E-02	6.560E-01	9.748E-01	0.000E+00	NOT IDENT.
IN-113M	-2.376E-02	2.789E-02	4.650E-02	0.000E+00	NOT IDENT.
SN-113	-2.376E-02	2.789E-02	4.650E-02	0.000E+00	NOT IDENT.
IN-114M	3.965E-02	1.329E-01	2.058E-01	0.000E+00	NOT IDENT.
CD-115	2.754E+00	5.339E+00	9.467E+00	0.000E+00	NOT IDENT.
SN-117M	-2.520E-02	3.446E-02	6.011E-02	0.000E+00	NOT IDENT.
SB-122	6.682E-01	1.108E+00	1.955E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	1.721E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-2.114E-02	1.861E-02	3.205E-02	0.000E+00	NOT IDENT.
I-124	-1.655E-01	4.513E-01	6.547E-01	0.000E+00	NOT IDENT.
SB-124	-3.135E-02	4.049E-02	6.326E-02	0.000E+00	FAIL ABUN
SB-125	-1.723E-02	5.898E-02	9.951E-02	0.000E+00	FAIL ABUN
TE-125M	2.985E+00	7.014E+00	1.079E+01	0.000E+00	NOT IDENT.
I-126	1.114E-02	1.080E-01	1.844E-01	0.000E+00	NOT IDENT.
SB-126	5.037E-02	1.037E-01	1.536E-01	0.000E+00	FAIL ABUN
SB-127	-1.952E-01	7.481E-01	1.254E+00	0.000E+00	NOT IDENT.
XE-127	-1.531E-02	3.246E-02	5.376E-02	0.000E+00	NOT IDENT.
I-131	2.380E-02	6.928E-02	1.213E-01	0.000E+00	NOT IDENT.
TE-132	-7.117E-02	4.133E-01	7.067E-01	0.000E+00	NOT IDENT.
BA-133	7.017E-03	3.018E-02	4.597E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.248E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	4.261E-02	5.531E-02	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.245E-01	1.900E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	7.712E+14	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-4.570E-02	7.047E-02	1.147E-01	0.000E+00	FAIL ABUN
BA-137M	5.618E-03	2.230E-02	3.830E-02	0.000E+00	NOT IDENT.
CS-137	5.939E-03	2.358E-02	4.049E-02	0.000E+00	NOT IDENT.
CE-139	-2.398E-02	1.970E-02	3.368E-02	0.000E+00	NOT IDENT.
BA-140	-1.122E-01	1.584E-01	2.613E-01	0.000E+00	NOT IDENT.
LA-140	-8.173E-02	5.248E-02	7.915E-02	0.000E+00	FAIL ABUN
CE-141	2.644E-02	3.991E-02	7.232E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.741E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.563E-01	1.472E-01	2.387E-01	0.000E+00	NOT IDENT.

PM-144	-4.253E-03	2.154E-02	3.616E-02	0.000E+00	NOT IDENT.
PR-144	-2.881E-01	1.459E+00	2.449E+00	0.000E+00	NOT IDENT.
PM-146	4.069E-02	2.832E-02	4.859E-02	0.000E+00	NOT IDENT.
ND-147	-2.402E-01	3.344E-01	5.646E-01	0.000E+00	FAIL ABUN
PM-149	5.286E+00	5.039E+01	8.487E+01	0.000E+00	NOT IDENT.
EU-152	-8.871E-02	8.217E-02	1.013E-01	0.000E+00	FAIL ABUN
GD-153	-6.124E-03	5.808E-02	8.713E-02	0.000E+00	FAIL ABUN
EU-154	-6.168E-02	8.172E-02	1.335E-01	0.000E+00	NOT IDENT.
TB-160	-3.105E-02	8.749E-02	1.475E-01	0.000E+00	FAIL ABUN
HO-166M	7.818E-03	3.810E-02	6.482E-02	0.000E+00	FAIL ABUN
TM-171	-6.282E+00	1.889E+01	2.943E+01	0.000E+00	NOT IDENT.
LU-176	-9.356E-03	1.746E-02	2.745E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	9.668E-01	1.302E+00	0.000E+00	FAIL ABUN
LU-177M	1.618E-02	1.257E-01	1.871E-01	0.000E+00	FAIL ABUN
HF-181	-1.080E-02	2.680E-02	4.438E-02	0.000E+00	NOT IDENT.
W-181	-2.224E-01	2.437E-01	3.732E-01	0.000E+00	NOT IDENT.
TA-182	-1.094E-01	1.314E-01	2.165E-01	0.000E+00	FAIL ABUN
RE-183	3.319E-02	7.114E-02	1.273E-01	0.000E+00	FAIL ABUN
RE-184	-1.807E-01	1.569E-01	2.551E-01	0.000E+00	NOT IDENT.
OS-185	6.417E-03	2.671E-02	4.598E-02	0.000E+00	NOT IDENT.
RE-188	1.214E-01	1.116E-01	2.023E-01	0.000E+00	NOT IDENT.
W-188	-3.843E+00	5.309E+00	7.943E+00	0.000E+00	FAIL ABUN
IR-192	8.435E-03	2.195E-02	3.895E-02	0.000E+00	FAIL ABUN
AU-195	2.373E-01	1.514E-01	2.606E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.960E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.324E+00	4.020E+00	7.055E+00	0.000E+00	NOT IDENT.
TL-202	-7.197E-03	4.434E-02	7.360E-02	0.000E+00	NOT IDENT.
HG-203	3.774E-02	3.020E-02	4.593E-02	0.000E+00	NOT IDENT.
BI-207	2.258E-02	3.792E-02	6.144E-02	0.000E+00	FAIL ABUN
TL-207	3.231E-01	4.872E-01	7.564E-01	0.000E+00	FAIL ABUN
PO-209	-1.175E+00	4.658E+00	7.871E+00	0.000E+00	NOT IDENT.
BI-210	9.040E-01	2.039E+00	3.572E+00	0.000E+00	NOT IDENT.
PB-210	9.040E-01	2.039E+00	3.572E+00	0.000E+00	NOT IDENT.
PO-210	9.040E-01	2.039E+00	3.572E+00	0.000E+00	NOT IDENT.
PB-211	-1.746E-01	7.060E-01	1.024E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.345E-01	4.241E-01	0.000E+00	FAIL ABUN
PO-215	3.231E-01	4.872E-01	7.564E-01	0.000E+00	FAIL ABUN
RN-219	7.775E-02	2.728E-01	4.596E-01	0.000E+00	FAIL ABUN
RN-220	4.774E-01	1.588E+01	2.760E+01	0.000E+00	NOT IDENT.
RA-223	3.231E-01	4.872E-01	7.564E-01	0.000E+00	FAIL ABUN
AC-227	1.395E-01	2.574E-01	4.418E-01	0.000E+00	FAIL ABUN
TH-227	1.395E-01	2.578E-01	4.418E-01	0.000E+00	FAIL ABUN
TH-229	4.791E-02	3.359E-01	5.882E-01	0.000E+00	FAIL ABUN
PA-231	-3.522E-01	1.051E+00	1.681E+00	0.000E+00	FAIL ABUN
TH-231	3.231E-01	4.872E-01	7.564E-01	0.000E+00	FAIL ABUN
U-231	-8.963E-01	6.877E-01	1.008E+00	0.000E+00	FAIL ABUN
PA-233	2.636E-02	4.078E-02	7.282E-02	0.000E+00	FAIL ABUN
PA-234	7.346E-03	1.986E-01	3.379E-01	0.000E+00	FAIL ABUN
PA-234M	0.000E+00	3.252E+00	5.608E+00	0.000E+00	NOT IDENT.
NP-236	-2.930E-02	5.182E-02	9.073E-02	0.000E+00	NOT IDENT.
NP-239	1.048E-01	1.298E-01	2.243E-01	0.000E+00	FAIL ABUN
AM-241	1.926E-02	9.690E-02	1.568E-01	0.000E+00	NOT IDENT.
CM-243	3.659E-02	7.139E-02	1.108E-01	0.000E+00	FAIL ABUN
AM-246	1.194E-01	9.591E-02	1.679E-01	0.000E+00	NOT IDENT.
CM-247	1.682E-02	2.578E-02	4.114E-02	0.000E+00	FAIL ABUN
CF-249	2.585E-02	2.449E-02	4.341E-02	0.000E+00	NOT IDENT.
CF-251	-3.990E-02	8.578E-02	1.493E-01	0.000E+00	NOT IDENT.

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                   *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245396001.CNF;1
Sample date        : 21-JAN-2010 12:00:00 Acquisition date : 4-FEB-2010 22:55:47.
Sample ID          : G245396001 Sample quantity : 1.32960E+02 GRAM
Detector name      : GAM22 Detector geometry: CAN
Elapsed live time: 0 04:00:00.00 Elapsed real time: 0 04:00:04.93 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944962 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	5719	10.67*	1.909E+00	3.964E+01	3.964E+01	9.63
CD-109	88.03	831	3.72*	7.476E+00	4.216E+00	4.308E+00	18.80
SN-126	64.28	239	9.60	4.325E+00	8.139E-01	8.139E-01	56.37
	86.94	831	8.90	7.476E+00	1.762E+00	1.762E+00	44.60
	87.57	831	37.00*	7.476E+00	4.239E-01	4.239E-01	18.80
EU-155	48.70	-----	4.60	1.648E+00	-----	Line Not Found	-----
	60.01	-----	1.11	3.728E+00	-----	Line Not Found	-----
	86.54	831	30.90	7.476E+00	5.075E-01	5.104E-01	18.84
	105.31	114	20.70*	8.381E+00	9.236E-02	9.288E-02	70.32
TL-208	277.35	147	6.80	6.181E+00	4.950E-01	4.950E-01	71.22
	510.84	336	21.60	4.299E+00	5.104E-01	5.104E-01	40.32
	583.14	1419	84.20*	3.930E+00	6.051E-01	6.051E-01	13.93
	860.37	211	12.46	2.922E+00	8.188E-01	8.188E-01	46.95
BI-211	72.87	-----	1.27	5.897E+00	-----	Line Not Found	-----
	351.07	1997	12.94*	5.401E+00	4.034E+00	4.034E+00	13.82
PB-212	74.81	1120	10.70	6.163E+00	2.398E+00	2.398E+00	17.39
	77.11	1743	18.00	6.458E+00	2.116E+00	2.116E+00	11.56
	87.30	831	8.00	7.476E+00	1.960E+00	1.960E+00	21.29
	238.63	3927	44.60*	6.710E+00	1.852E+00	1.852E+00	13.85
	300.09	181	3.41	5.913E+00	1.265E+00	1.265E+00	62.95
PO-212	74.81	1120	10.70	6.163E+00	2.398E+00	2.398E+00	17.39
	77.11	1743	18.00	6.458E+00	2.116E+00	2.116E+00	11.56
	87.30	831	8.00	7.476E+00	1.960E+00	1.960E+00	21.29
	115.19	-----	0.60	8.535E+00	-----	Line Not Found	-----
	238.63	3927	44.60*	6.710E+00	1.852E+00	1.852E+00	13.85
	300.09	181	3.41	5.913E+00	1.265E+00	1.265E+00	62.95
BI-214	609.31	1478	46.30*	3.811E+00	1.183E+00	1.183E+00	14.07
	1120.29	440	15.10	2.346E+00	1.753E+00	1.753E+00	24.74
	1764.49	319	15.80	1.716E+00	1.662E+00	1.662E+00	19.56
PB-214	74.81	1120	6.21	6.163E+00	4.132E+00	4.132E+00	16.43
	77.11	1743	10.50	6.458E+00	3.628E+00	3.628E+00	13.84
	87.30	831	4.67	7.476E+00	3.358E+00	3.358E+00	20.32

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	241.98	940	7.49	6.666E+00	2.658E+00	2.658E+00	21.73
	295.21	1118	19.20	5.970E+00	1.376E+00	1.376E+00	18.31
	351.92	1997	37.20*	5.401E+00	1.403E+00	1.403E+00	14.77
	74.81	1120	6.21	6.163E+00	4.132E+00	4.132E+00	16.43
	77.11	1743	10.50	6.458E+00	3.628E+00	3.628E+00	13.84
	87.30	831	4.67	7.476E+00	3.358E+00	3.358E+00	20.32
PO-216	241.98	940	7.49	6.666E+00	2.658E+00	2.658E+00	21.73
	295.21	1118	19.20	5.970E+00	1.376E+00	1.376E+00	18.31
	351.92	1997	37.20*	5.401E+00	1.403E+00	1.403E+00	14.77
	74.81	1120	10.70	6.163E+00	2.398E+00	2.398E+00	17.39
	77.11	1743	18.00	6.458E+00	2.116E+00	2.116E+00	11.56
	87.30	831	8.00	7.476E+00	1.960E+00	1.960E+00	21.29
PO-218	238.63	3927	44.60*	6.710E+00	1.852E+00	1.852E+00	13.85
	300.09	181	3.41	5.913E+00	1.265E+00	1.265E+00	62.95
	74.81	1120	6.21	6.163E+00	4.132E+00	4.132E+00	16.43
	77.11	1743	10.50	6.458E+00	3.628E+00	3.628E+00	13.84
	87.30	831	4.67	7.476E+00	3.358E+00	3.358E+00	20.32
	241.98	940	7.49	6.666E+00	2.658E+00	2.658E+00	21.73
RA-224	295.21	1118	19.20	5.970E+00	1.376E+00	1.376E+00	18.31
	351.92	1997	37.20*	5.401E+00	1.403E+00	1.403E+00	14.77
RA-226	240.98	940	3.95*	6.666E+00	5.040E+00	5.040E+00	21.00
	609.31	1478	46.30*	3.811E+00	1.183E+00	1.183E+00	14.07
AC-228	1120.29	440	15.10	2.346E+00	1.753E+00	1.753E+00	24.74
	1764.49	319	15.80	1.716E+00	1.662E+00	1.662E+00	19.56
	338.32	908	11.40	5.525E+00	2.036E+00	2.036E+00	44.41
	911.07	973	27.70*	2.788E+00	1.778E+00	1.778E+00	16.90
	969.11	563	16.60	2.649E+00	1.807E+00	1.807E+00	27.60
	338.32	908	11.40	5.525E+00	2.036E+00	2.036E+00	44.41
RA-228	911.07	973	27.70*	2.788E+00	1.778E+00	1.778E+00	16.90
	969.11	563	16.60	2.649E+00	1.807E+00	1.807E+00	27.60
	74.81	1120	10.70	6.163E+00	2.398E+00	2.433E+00	14.71
TH-228	77.11	1743	18.00	6.458E+00	2.116E+00	2.147E+00	11.56
	87.30	831	8.00	7.476E+00	1.960E+00	1.989E+00	18.80
	238.63	3927	44.60*	6.710E+00	1.852E+00	1.879E+00	13.85
TH-230	300.09	181	3.41	5.913E+00	1.265E+00	1.283E+00	85.84
	609.31	1478	46.30*	3.811E+00	1.183E+00	1.183E+00	14.07
	1120.29	440	15.10	2.346E+00	1.753E+00	1.753E+00	24.74
TH-232	1764.49	319	15.80	1.716E+00	1.662E+00	1.662E+00	19.56
	338.32	908	11.40	5.525E+00	2.036E+00	2.036E+00	18.56
	911.07	973	27.70*	2.788E+00	1.778E+00	1.778E+00	16.90
TH-234	969.11	563	16.60	2.649E+00	1.807E+00	1.807E+00	27.60
	63.29	239	3.80*	4.325E+00	2.056E+00	2.056E+00	57.19
	92.38	852	5.41	7.863E+00	2.827E+00	2.827E+00	25.76
U-234	609.31	1478	46.30*	3.811E+00	1.183E+00	1.183E+00	14.07
	1120.29	440	15.10	2.346E+00	1.753E+00	1.753E+00	24.74
	1764.49	319	15.80	1.716E+00	1.662E+00	1.662E+00	19.56
U-235	89.95	552	2.70	7.681E+00	3.756E+00	3.756E+00	38.87
	93.35	852	4.50	7.863E+00	3.398E+00	3.398E+00	33.49
	105.00	114	2.10	8.381E+00	9.104E-01	9.104E-01	75.89

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	143.76	-----	10.50*	8.364E+00	-----	Line Not Found	-----
	163.35	-----	4.70	8.031E+00	-----	Line Not Found	-----
	185.71	582	54.00	7.605E+00	2.001E-01	2.001E-01	26.41
	205.31	-----	4.70	7.253E+00	-----	Line Not Found	-----
NP-237	86.50	831	12.60*	7.476E+00	1.245E+00	1.245E+00	27.91
	95.87	-----	2.60	8.032E+00	-----	Line Not Found	-----
U-238	63.29	239	3.80*	4.325E+00	2.056E+00	2.056E+00	57.19
	92.38	852	5.41	7.863E+00	2.827E+00	2.827E+00	20.27
AM-243	74.67	1120	66.00*	6.163E+00	3.887E-01	3.887E-01	14.66
	86.72	831	0.34	7.476E+00	4.667E+01	4.667E+01	18.80
	117.66	-----	0.55	8.550E+00	-----	Line Not Found	-----
	142.18	-----	0.13	8.387E+00	-----	Line Not Found	-----
ANH-511	511.00	336	100.00*	4.299E+00	1.102E-01	1.102E-01	39.45

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G245396001

Page : 4
Acquisition date : 4-FEB-2010 22:55:47

Total number of lines in spectrum 40
Number of unidentified lines 3
Number of lines tentatively identified by NID 37 92.50%

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	3.964E+01	3.964E+01	0.382E+01	9.63	
CD-109	464.00D	1.02	4.216E+00	4.308E+00	0.810E+00	18.80	
SN-126	1.00E+05Y	1.00	4.239E-01	4.239E-01	0.797E-01	18.80	
EU-155	4.96Y	1.01	9.236E-02	9.288E-02	6.532E-02	70.32	
TL-208	1.41E+10Y	1.00	6.051E-01	6.051E-01	0.843E-01	13.93	
BI-211	7.04E+08Y	1.00	4.034E+00	4.034E+00	0.557E+00	13.82	
PB-212	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.257E+00	13.85	
PO-212	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.257E+00	13.85	
BI-214	1600.00Y	1.00	1.183E+00	1.183E+00	0.166E+00	14.07	
PB-214	1600.00Y	1.00	1.403E+00	1.403E+00	0.207E+00	14.77	
PO-214	1600.00Y	1.00	1.403E+00	1.403E+00	0.207E+00	14.77	
PO-216	1.41E+10Y	1.00	1.852E+00	1.852E+00	0.257E+00	13.85	
PO-218	1600.00Y	1.00	1.403E+00	1.403E+00	0.207E+00	14.77	
RA-224	1.41E+10Y	1.00	5.040E+00	5.040E+00	1.058E+00	21.00	
RA-226	1600.00Y	1.00	1.183E+00	1.183E+00	0.166E+00	14.07	
AC-228	1.41E+10Y	1.00	1.778E+00	1.778E+00	0.300E+00	16.90	
RA-228	1.41E+10Y	1.00	1.778E+00	1.778E+00	0.300E+00	16.90	
TH-228	1.91Y	1.01	1.852E+00	1.879E+00	0.260E+00	13.85	
TH-230	4.47E+09Y	1.00	1.183E+00	1.183E+00	0.166E+00	14.07	
TH-232	1.41E+10Y	1.00	1.778E+00	1.778E+00	0.300E+00	16.90	
TH-234	4.47E+09Y	1.00	2.056E+00	2.056E+00	1.176E+00	57.19	
U-234	4.47E+09Y	1.00	1.183E+00	1.183E+00	0.166E+00	14.07	
U-235	7.04E+08Y	1.00	2.001E-01	2.001E-01	0.528E-01	26.41	K
NP-237	2.14E+06Y	1.00	1.245E+00	1.245E+00	0.347E+00	27.91	
U-238	4.47E+09Y	1.00	2.056E+00	2.056E+00	1.176E+00	57.19	
AM-243	7380.00Y	1.00	3.887E-01	3.887E-01	0.570E-01	14.66	
ANH-511	1.00E+09Y	1.00	1.102E-01	1.102E-01	0.435E-01	39.45	
Total Activity :			8.179E+01	8.191E+01			

Grand Total Activity : 8.179E+01 8.191E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	84.38	314	1072	1.52	168.97	165	27	2.18E-02	37.0	7.24E+00	T
0	129.84	247	1438	0.99	259.81	255	11	1.72E-02	60.8	8.52E+00	T
0	209.17	342	874	1.32	418.30	414	9	2.38E-02	34.1	7.19E+00	T
0	270.12	262	728	1.50	540.11	536	10	1.82E-02	40.3	6.27E+00	T
0	328.25	305	612	1.24	656.27	650	12	2.12E-02	34.5	5.62E+00	T
0	410.06	123	483	1.57	819.76	813	12	8.56E-03	73.7	4.93E+00	T
0	462.76	296	470	1.25	925.08	918	14	2.06E-02	33.1	4.58E+00	T
0	727.60	329	316	1.84	1454.46	1448	14	2.29E-02	26.4	3.34E+00	T
0	768.08	177	203	2.23	1535.39	1531	10	1.23E-02	33.7	3.20E+00	T
0	795.00	177	231	1.64	1589.20	1583	14	1.23E-02	39.5	3.12E+00	T
0	934.57	66	192	2.19	1868.24	1861	11	4.60E-03	84.8	2.73E+00	T
1	964.74	206	297	2.44	1928.58	1921	22	1.43E-02	39.0	2.66E+00	T
0	1378.68	95	163	2.54	2756.36	2745	17	6.61E-03	65.2	1.99E+00	
0	1409.40	56	107	1.99	2817.82	2807	16	3.85E-03	87.8	1.96E+00	T
0	1729.56	98	58	2.39	3458.28	3445	24	6.80E-03	48.9	1.73E+00	
0	1847.98	68	48	3.42	3695.23	3684	23	4.75E-03	51.2	1.69E+00	

Flags: "T" = Tentatively associated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245396001.CNF;1  *
* Acquisition date   : 4-FEB-2010 22:55:47.  Detector SN#      :             *
* Detector ID        : GAM22                      Sensitivity    : 5.00000      *
* Geometry           : CAN                      Energy tolerance: 1.50000      *
* Elapsed live time  : 0 04:00:00.00             Abundance limit : 75.00000      *
* Elapsed real time  : 0 04:00:04.93             Half life ratio : 8.00000      *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 21-JAN-2010 12:00:00  Nuclide Library : SOLID          *
* Sample ID          : G245396001             Analyst initials: MXR1          *
* Batch Number       : 944962                 Sample Quantity : 1.32960E+02 GRAM  *
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 2-DEC-2009 16:47:28.08MS 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	3.964E+01	3.815E+00	3.365E-01	3.083E-02	117.789
CD-109	4.308E+00	8.100E-01	7.282E-01	6.911E-02	5.916
SN-126	4.239E-01	7.968E-02	7.194E-02	6.792E-03	5.892
EU-155	9.288E-02	6.532E-02	1.164E-01	9.989E-03	0.798
TL-208	6.051E-01	8.427E-02	3.592E-02	3.895E-03	16.845
BI-211	4.034E+00	5.573E-01	2.106E-01	2.458E-02	19.152
PB-212	1.852E+00	2.566E-01	6.083E-02	8.037E-03	30.449
PO-212	1.852E+00	2.566E-01	6.083E-02	8.037E-03	30.449
BI-214	1.183E+00	1.664E-01	7.383E-02	8.585E-03	16.021
PB-214	1.403E+00	2.072E-01	7.341E-02	9.357E-03	19.117
PO-214	1.403E+00	2.072E-01	7.341E-02	9.357E-03	19.117
PO-216	1.852E+00	2.566E-01	6.083E-02	8.037E-03	30.449
PO-218	1.403E+00	2.072E-01	7.341E-02	9.357E-03	19.117
RA-224	5.040E+00	1.058E+00	6.916E-01	8.657E-02	7.288
RA-226	1.183E+00	1.664E-01	7.383E-02	8.585E-03	16.021
AC-228	1.778E+00	3.004E-01	1.368E-01	1.812E-02	13.000
RA-228	1.778E+00	3.004E-01	1.368E-01	1.812E-02	13.000
TH-228	1.879E+00	2.603E-01	6.172E-02	8.154E-03	30.449

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	1.183E+00	1.664E-01	7.383E-02	8.585E-03	16.021
TH-232	1.778E+00	3.004E-01	1.368E-01	1.812E-02	13.000
TH-234	2.056E+00	1.176E+00	1.231E+00	2.143E-01	1.670
U-234	1.183E+00	1.664E-01	7.383E-02	8.585E-03	16.021
U-235	2.001E-01	5.284E-02	2.389E-01	4.214E-02	0.838
NP-237	1.245E+00	3.474E-01	2.133E-01	4.830E-02	5.834
U-238	2.056E+00	1.176E+00	1.231E+00	2.143E-01	1.670
AM-243	3.887E-01	5.701E-02	5.395E-02	4.398E-03	7.205
ANH-511	1.102E-01	4.348E-02	2.893E-02	2.898E-03	3.811

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.063E-01		2.099E-01	3.497E-01	3.649E-02	0.590
NA-22	-2.171E-02		2.982E-02	4.764E-02	4.105E-03	-0.456
NA-24	-3.784E-02		1.366E-01	Half-Life too short		
AL-26	-6.584E-03		1.853E-02	2.948E-02	2.411E-03	-0.223
TI-44	3.905E-01	+	4.512E-02	4.885E-02	4.142E-03	7.993
SC-46	-4.640E-03		2.483E-02	4.085E-02	4.572E-03	-0.114
V-48	1.244E-02		4.523E-02	7.517E-02	7.884E-03	0.165
CR-51	7.250E-02		2.499E-01	4.106E-01	5.317E-02	0.177
MN-52	1.675E-01		1.386E-01	2.426E-01	2.168E-02	0.690
MN-54	1.983E-02		2.480E-02	4.243E-02	4.713E-03	0.467
CO-56	-1.675E-02		2.504E-02	4.046E-02	4.503E-03	-0.414
CO-57	6.390E-03		1.717E-02	2.747E-02	2.266E-03	0.233
CO-58	-1.267E-02		2.398E-02	3.916E-02	4.336E-03	-0.324
FE-59	-1.757E-02		6.210E-02	9.957E-02	9.757E-03	-0.176
CO-60	7.769E-03		2.415E-02	4.050E-02	3.611E-03	0.192
ZN-65	4.639E-02		7.331E-02	1.048E-01	9.346E-03	0.443
GE-68	5.642E-01		8.605E-01	1.438E+00	1.356E-01	0.392
AS-73	-5.164E-02		5.284E-01	8.246E-01	6.231E-02	-0.063
AS-74	-2.162E-02		5.771E-02	9.429E-02	9.773E-03	-0.229
SE-75	2.604E-02		3.349E-02	4.824E-02	6.493E-03	0.540
BR-77	1.521E+00		5.387E+00	8.940E+00	8.998E-01	0.170
SR-82	-3.709E-01		2.643E-01	3.859E-01	4.232E-02	-0.961
RB-83	1.160E-02		4.245E-02	7.042E-02	7.087E-03	0.165
RB-84	1.183E-02		4.457E-02	7.479E-02	8.365E-03	0.158
KR-85	2.567E+01		5.991E+00	9.121E+00	9.152E-01	2.815
SR-85	1.308E-01		3.052E-02	4.646E-02	4.662E-03	2.815
RB-86	1.950E-01		5.276E-01	8.725E-01	8.233E-02	0.224
Y-88	1.326E-02		2.120E-02	3.355E-02	2.713E-03	0.395
ZR-88	-9.990E-03		1.946E-02	3.141E-02	2.925E-03	-0.318
Y-91	8.766E+00		1.273E+01	2.170E+01	1.784E+00	0.404
NB-94	2.508E-02		2.205E-02	3.728E-02	3.995E-03	0.673
NB-95	6.448E-02		3.318E-02	4.978E-02	5.444E-03	1.295
NB-95M	2.766E-01		1.048E-01	1.520E-01	2.009E-02	1.820
ZR-95	7.377E-03		4.603E-02	7.511E-02	8.718E-03	0.098

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	2.504E-02		1.668E-02	Half-Life too short		
ZR-97	2.462E+00		3.964E-01	Half-Life too short		
MO-99	-2.230E+00		6.347E+00	1.014E+01	1.678E+00	-0.220
TC-99M	-3.305E+09		2.421E+09	Half-Life too short		
RH-101	-8.999E-04		2.398E-02	3.766E-02	4.108E-03	-0.024
RH-102	5.428E-03		1.927E-02	3.146E-02	3.093E-03	0.173
RU-103	-3.738E-03		2.575E-02	4.120E-02	6.184E-03	-0.091
RH-106	-5.237E-02		2.036E-01	3.327E-01	4.859E-02	-0.157
RU-106	-5.237E-02		2.036E-01	3.327E-01	3.475E-02	-0.157
AG-108M	-3.525E-03		2.104E-02	3.408E-02	3.374E-03	-0.103
AG-110M	1.483E-02		2.193E-02	3.688E-02	3.963E-03	0.402
IN-111	-4.958E-02		6.694E-01	9.433E-01	1.197E-01	-0.053
IN-113M	-2.376E-02		2.846E-02	4.536E-02	4.331E-03	-0.524
SN-113	-2.376E-02		2.846E-02	4.536E-02	4.331E-03	-0.524
IN-114M	3.965E-02		1.356E-01	1.983E-01	2.108E-02	0.200
CD-115	2.754E+00		5.448E+00	9.282E+00	9.374E-01	0.297
SN-117M	-2.520E-02		3.516E-02	5.774E-02	5.476E-03	-0.436
SB-122	6.682E-01		1.131E+00	1.919E+00	1.967E-01	0.348
I-123	-1.955E+00		8.783E-01	Half-Life too short		
TE-123M	-2.114E-02		1.899E-02	3.079E-02	2.940E-03	-0.687
I-124	-1.655E-01		4.605E-01	6.435E-01	6.684E-02	-0.257
SB-124	-3.135E-02		4.132E-02	6.333E-02	5.634E-03	-0.495
SB-125	-1.723E-02		6.019E-02	9.721E-02	9.432E-03	-0.177
TE-125M	2.985E+00		7.157E+00	1.030E+01	1.043E+00	0.290
I-126	1.114E-02		1.102E-01	1.816E-01	1.919E-02	0.061
SB-126	5.037E-02		1.058E-01	1.514E-01	1.633E-02	0.333
SB-127	-1.952E-01		7.633E-01	1.235E+00	1.585E-01	-0.158
XE-127	-1.531E-02		3.312E-02	5.185E-02	5.748E-03	-0.295
I-131	2.380E-02		7.070E-02	1.182E-01	1.309E-02	0.201
TE-132	-7.117E-02		4.218E-01	6.831E-01	1.210E-01	-0.104
BA-133	7.017E-03		3.080E-02	4.476E-02	6.689E-03	0.157
I-133	-1.974E-03		1.147E-03	Half-Life too short		
CS-134	1.059E-01	+	4.348E-02	5.462E-02	6.046E-03	1.938
CS-135	2.119E-01		1.271E-01	1.842E-01	2.664E-02	1.151
I-135	-3.539E+08		3.935E+08	Half-Life too short		
CS-136	-4.570E-02		7.191E-02	1.138E-01	1.151E-02	-0.402
BA-137M	5.618E-03		2.276E-02	3.770E-02	3.976E-03	0.149
CS-137	5.939E-03		2.406E-02	3.986E-02	4.208E-03	0.149
CE-139	-2.398E-02		2.010E-02	3.238E-02	3.176E-03	-0.741
BA-140	-1.122E-01		1.616E-01	2.562E-01	8.602E-02	-0.438
LA-140	-8.173E-02		5.355E-02	7.915E-02	6.938E-03	-1.033
CE-141	2.644E-02		4.072E-02	6.937E-02	6.315E-03	0.381
CE-143	6.287E-04		8.881E-05	Half-Life too short		
CE-144	1.563E-01		1.502E-01	2.287E-01	3.550E-02	0.684
PM-144	-4.253E-03		2.198E-02	3.563E-02	3.810E-03	-0.119
PR-144	-2.881E-01		1.489E+00	2.413E+00	2.580E-01	-0.119
PM-146	4.069E-02		2.890E-02	4.752E-02	5.522E-03	0.856
ND-147	-2.402E-01		3.412E-01	5.536E-01	8.779E-02	-0.434

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-149	5.286E+00		5.142E+01	8.234E+01	1.558E+01	0.064
EU-152	-8.871E-02		8.384E-02	9.860E-02	1.185E-02	-0.900
GD-153	-6.124E-03		5.927E-02	8.302E-02	7.300E-03	-0.074
EU-154	-6.168E-02		8.339E-02	1.329E-01	1.503E-02	-0.464
TB-160	-3.105E-02		8.927E-02	1.459E-01	1.632E-02	-0.213
HO-166M	7.818E-03		3.888E-02	6.389E-02	6.869E-03	0.122
TM-171	-6.282E+00		1.928E+01	2.787E+01	2.106E+00	-0.225
LU-176	-9.356E-03		1.782E-02	2.667E-02	3.498E-03	-0.351
LU-177	2.744E+00	+	9.865E-01	1.256E+00	1.418E-01	2.184
LU-177M	1.618E-02		1.282E-01	1.827E-01	1.728E-02	0.089
HF-181	-1.080E-02		2.735E-02	4.344E-02	4.289E-03	-0.249
W-181	-2.224E-01		2.487E-01	3.533E-01	2.633E-02	-0.630
TA-182	-1.094E-01		1.341E-01	2.154E-01	1.791E-02	-0.508
RE-183	3.319E-02		7.259E-02	1.224E-01	1.180E-02	0.271
RE-184	-1.807E-01		1.601E-01	2.470E-01	3.205E-02	-0.731
OS-185	6.417E-03		2.726E-02	4.525E-02	4.755E-03	0.142
RE-188	1.214E-01		1.139E-01	1.943E-01	1.813E-02	0.625
W-188	-3.843E+00		5.418E+00	7.708E+00	1.053E+00	-0.499
IR-192	8.435E-03		2.240E-02	3.786E-02	4.839E-03	0.223
AU-195	2.373E-01		1.545E-01	2.484E-01	2.166E-02	0.955
TL-200	7.528E-05		9.999E-05	Half-Life too short		
TL-201	-1.324E+00		4.102E+00	6.783E+00	6.685E-01	-0.195
TL-202	-7.197E-03		4.524E-02	7.194E-02	6.925E-03	-0.100
HG-203	3.774E-02		3.082E-02	4.454E-02	6.304E-03	0.847
BI-207	2.258E-02		3.869E-02	6.099E-02	5.856E-03	0.370
TL-207	3.231E-01		4.971E-01	7.354E-01	1.462E-01	0.439
PO-209	-1.175E+00		4.753E+00	7.790E+00	8.726E-01	-0.151
BI-210	9.040E-01		2.081E+00	3.362E+00	3.124E-01	0.269
PB-210	9.040E-01		2.081E+00	3.362E+00	3.124E-01	0.269
PO-210	9.040E-01		2.080E+00	3.362E+00	2.827E-01	0.269
PB-211	-1.746E-01		7.204E-01	9.992E-01	6.273E-01	-0.175
BI-212	1.178E+00	+	3.413E-01	4.182E-01	4.995E-02	2.818
PO-215	3.231E-01		4.971E-01	7.354E-01	1.462E-01	0.439
RN-219	7.775E-02		2.784E-01	4.485E-01	6.939E-02	0.173
RN-220	4.774E-01		1.620E+01	2.708E+01	2.761E+00	0.018
RA-223	3.231E-01		4.971E-01	7.354E-01	1.462E-01	0.439
AC-227	1.395E-01		2.627E-01	4.278E-01	7.806E-02	0.326
TH-227	1.395E-01		2.630E-01	4.278E-01	8.805E-02	0.326
TH-229	4.791E-02		3.428E-01	5.669E-01	6.095E-02	0.085
PA-231	-3.522E-01		1.073E+00	1.631E+00	3.045E-01	-0.216
TH-231	3.231E-01		4.971E-01	7.354E-01	1.462E-01	0.439
U-231	-8.963E-01		7.018E-01	9.601E-01	8.526E-02	-0.934
PA-233	2.636E-02		4.161E-02	7.076E-02	9.269E-03	0.373
PA-234	7.346E-03		2.027E-01	3.347E-01	6.653E-02	0.022
PA-234M	6.804E+00		3.318E+00	5.561E+00	6.373E-01	1.223
NP-236	-2.930E-02		5.288E-02	8.717E-02	8.333E-03	-0.336
NP-239	1.048E-01		1.324E-01	2.144E-01	1.772E-02	0.489
AM-241	1.926E-02		9.888E-02	1.482E-01	1.159E-02	0.130

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	3.659E-02		7.285E-02	1.057E-01	9.009E-03	0.346
AM-246	1.194E-01		9.786E-02	1.667E-01	1.568E-02	0.716
CM-247	1.682E-02		2.631E-02	4.015E-02	3.766E-03	0.419
CF-249	2.585E-02		2.499E-02	4.234E-02	4.024E-03	0.611
CF-251	-3.990E-02		8.753E-02	1.436E-01	1.459E-02	-0.278

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : SYSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G245396001            *
* Acquisition date   : 4-FEB-2010 22:55:47 Detector SN#      :              *
* Detector ID        : GAM22                      Sensitivity   : 5.000        *
* Geometry           : CAN                          Energy tolerance: 1.500      *
* Elapsed live time  : 0 04:00:00.00              Abundance limit : 75.000      *
* Elapsed real time  : 0 04:00:04.93              Half life ratio : 8.000      *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 21-JAN-2010 12:00:00 Nuclide Library : SOLID           *
* Sample ID          : G245396001              Analyst initials: MXR1         *
* Batch Number       : 944962                  Sample Quantity : 1.3296E+02 GRAM  *
* Recovery           : 1.00000                  Carrier Weight  : 0.00000        *
*****
*
*                                     QC DATA                                *
*
* CALIB. DATE/TIME   : 2-DEC-2009 16:47:28 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	3.964E+01	3.739E+00	1.686E-01	1.908E+00
CD-109	4.308E+00	7.938E-01	3.830E-01	4.050E-01
SN-126	4.239E-01	7.809E-02	3.784E-02	3.984E-02
EU-155	9.288E-02	6.401E-02	6.102E-02	3.266E-02
TL-208	6.051E-01	8.258E-02	1.830E-02	4.213E-02
BI-211	4.034E+00	5.462E-01	1.082E-01	2.787E-01
PB-212	1.852E+00	2.514E-01	3.147E-02	1.283E-01
PO-212	1.852E+00	2.514E-01	3.147E-02	1.283E-01
BI-214	1.183E+00	1.630E-01	3.758E-02	8.319E-02
PB-214	1.403E+00	2.031E-01	3.772E-02	1.036E-01
PO-214	1.403E+00	2.031E-01	3.772E-02	1.036E-01
PO-216	1.852E+00	2.514E-01	3.147E-02	1.283E-01
PO-218	1.403E+00	2.031E-01	3.772E-02	1.036E-01
RA-224	5.040E+00	1.037E+00	3.577E-01	5.291E-01
RA-226	1.183E+00	1.630E-01	3.758E-02	8.319E-02
AC-228	1.778E+00	2.944E-01	6.912E-02	1.502E-01
RA-228	1.778E+00	2.944E-01	6.912E-02	1.502E-01
TH-228	1.879E+00	2.551E-01	3.192E-02	1.301E-01
TH-230	1.183E+00	1.630E-01	3.758E-02	8.319E-02
TH-232	1.778E+00	2.944E-01	6.912E-02	1.502E-01
TH-234	2.056E+00	1.152E+00	6.510E-01	5.880E-01
U-234	1.183E+00	1.630E-01	3.758E-02	8.319E-02
U-235	6.899E-02	1.458E-01	1.246E-01	7.438E-02
NP-237	1.245E+00	3.405E-01	1.122E-01	1.737E-01
U-238	2.056E+00	1.152E+00	6.510E-01	5.880E-01
AM-243	3.887E-01	5.587E-02	2.845E-02	2.850E-02
ANH-511	1.102E-01	4.262E-02	1.477E-02	2.174E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	2.063E-01	2.057E-01	1.787E-01	1.050E-01	NOT IDENT.
NA-22	-2.171E-02	2.922E-02	2.393E-02	1.491E-02	NOT IDENT.
NA-24	-3.784E+04	2.677E+05	0.000E+00	1.366E+05	SHORT HLIF
AL-26	-6.584E-03	1.816E-02	1.471E-02	9.266E-03	NOT IDENT.
TI-44	3.905E-01	4.422E-02	2.574E-02	2.256E-02	FAIL ABUN
SC-46	-4.640E-03	2.434E-02	2.065E-02	1.242E-02	FAIL ABUN
V-48	1.244E-02	4.432E-02	3.794E-02	2.261E-02	NOT IDENT.
CR-51	7.250E-02	2.449E-01	2.113E-01	1.250E-01	NOT IDENT.
MN-52	1.675E-01	1.358E-01	1.216E-01	6.929E-02	FAIL ABUN
MN-54	1.983E-02	2.430E-02	2.147E-02	1.240E-02	NOT IDENT.
CO-56	-1.675E-02	2.454E-02	2.047E-02	1.252E-02	NOT IDENT.
CO-57	6.390E-03	1.683E-02	1.437E-02	8.584E-03	NOT IDENT.
CO-58	-1.267E-02	2.350E-02	1.983E-02	1.199E-02	NOT IDENT.
FE-59	-1.757E-02	6.086E-02	5.015E-02	3.105E-02	NOT IDENT.
CO-60	7.769E-03	2.367E-02	2.033E-02	1.207E-02	NOT IDENT.
ZN-65	4.639E-02	7.184E-02	5.276E-02	3.665E-02	NOT IDENT.
GE-68	5.642E-01	8.433E-01	7.247E-01	4.303E-01	NOT IDENT.
AS-73	-5.164E-02	5.179E-01	4.372E-01	2.642E-01	NOT IDENT.
AS-74	-2.162E-02	5.655E-02	4.801E-02	2.885E-02	NOT IDENT.
SE-75	2.604E-02	3.282E-02	2.491E-02	1.675E-02	NOT IDENT.
BR-77	1.521E+00	5.280E+00	4.563E+00	2.694E+00	FAIL ABUN
SR-82	-3.709E-01	2.590E-01	1.956E-01	1.321E-01	NOT IDENT.
RB-83	1.160E-02	4.160E-02	3.594E-02	2.122E-02	NOT IDENT.
RB-84	1.183E-02	4.368E-02	3.782E-02	2.228E-02	NOT IDENT.
KR-85	2.567E+01	5.871E+00	4.656E+00	2.995E+00	NOT IDENT.
SR-85	1.308E-01	2.991E-02	2.372E-02	1.526E-02	NOT IDENT.
RB-86	1.950E-01	5.171E-01	4.396E-01	2.638E-01	NOT IDENT.
Y-88	1.326E-02	2.078E-02	1.674E-02	1.060E-02	NOT IDENT.
ZR-88	-9.990E-03	1.907E-02	1.611E-02	9.730E-03	NOT IDENT.
Y-91	8.766E+00	1.248E+01	1.091E+01	6.365E+00	NOT IDENT.
NB-94	2.508E-02	2.161E-02	1.892E-02	1.102E-02	NOT IDENT.
NB-95	6.448E-02	3.252E-02	2.523E-02	1.659E-02	NOT IDENT.
NB-95M	2.766E-01	1.027E-01	7.864E-02	5.241E-02	NOT IDENT.
ZR-95	7.377E-03	4.511E-02	3.808E-02	2.302E-02	NOT IDENT.
NB-97	2.504E+04	3.270E+04	0.000E+00	1.668E+04	SHORT HLIF
ZR-97	2.462E+06	7.770E+05	0.000E+00	3.964E+05	SHORT HLIF
MO-99	-2.230E+00	6.220E+00	5.141E+00	3.174E+00	NOT IDENT.
TC-99M	-3.305E+15	4.746E+15	0.000E+00	2.421E+15	SHORT HLIF
RH-101	-8.999E-04	2.351E-02	1.954E-02	1.199E-02	NOT IDENT.
RH-102	5.428E-03	1.888E-02	1.608E-02	9.633E-03	FAIL ABUN
RU-103	-3.738E-03	2.523E-02	2.104E-02	1.287E-02	FAIL ABUN
RH-106	-5.237E-02	1.996E-01	1.693E-01	1.018E-01	FAIL ABUN
RU-106	-5.237E-02	1.995E-01	1.693E-01	1.018E-01	FAIL ABUN
AG-108M	-3.525E-03	2.062E-02	1.745E-02	1.052E-02	NOT IDENT.
AG-110M	1.483E-02	2.149E-02	1.874E-02	1.096E-02	NOT IDENT.
IN-111	-4.958E-02	6.560E-01	4.877E-01	3.347E-01	NOT IDENT.
IN-113M	-2.376E-02	2.789E-02	2.326E-02	1.423E-02	NOT IDENT.
SN-113	-2.376E-02	2.789E-02	2.326E-02	1.423E-02	NOT IDENT.
IN-114M	3.965E-02	1.329E-01	1.030E-01	6.779E-02	NOT IDENT.
CD-115	2.754E+00	5.339E+00	4.736E+00	2.724E+00	NOT IDENT.
SN-117M	-2.520E-02	3.446E-02	3.007E-02	1.758E-02	NOT IDENT.
SB-122	6.682E-01	1.108E+00	9.781E-01	5.655E-01	NOT IDENT.
I-123	-1.955E+06	1.721E+06	0.000E+00	8.783E+05	SHORT HLIF
TE-123M	-2.114E-02	1.861E-02	1.604E-02	9.495E-03	NOT IDENT.
I-124	-1.655E-01	4.513E-01	3.276E-01	2.302E-01	NOT IDENT.
SB-124	-3.135E-02	4.049E-02	3.165E-02	2.066E-02	FAIL ABUN
SB-125	-1.723E-02	5.898E-02	4.978E-02	3.009E-02	FAIL ABUN
TE-125M	2.985E+00	7.014E+00	5.400E+00	3.578E+00	NOT IDENT.
I-126	1.114E-02	1.080E-01	9.227E-02	5.512E-02	NOT IDENT.
SB-126	5.037E-02	1.037E-01	7.685E-02	5.290E-02	FAIL ABUN
SB-127	-1.952E-01	7.481E-01	6.273E-01	3.817E-01	NOT IDENT.
XE-127	-1.531E-02	3.246E-02	2.690E-02	1.656E-02	NOT IDENT.
I-131	2.380E-02	6.928E-02	6.068E-02	3.535E-02	NOT IDENT.
TE-132	-7.117E-02	4.133E-01	3.536E-01	2.109E-01	NOT IDENT.
BA-133	7.017E-03	3.018E-02	2.300E-02	1.540E-02	FAIL ABUN
I-133	-1.974E+03	2.248E+03	0.000E+00	1.147E+03	SHORT HLIF
CS-134	1.059E-01	4.261E-02	2.767E-02	2.174E-02	FAIL ABUN
CS-135	2.119E-01	1.245E-01	9.508E-02	6.354E-02	NOT IDENT.
I-135	-3.539E+14	7.712E+14	0.000E+00	3.935E+14	SHORT HLIF
CS-136	-4.570E-02	7.047E-02	5.736E-02	3.595E-02	FAIL ABUN
BA-137M	5.618E-03	2.230E-02	1.916E-02	1.138E-02	NOT IDENT.
CS-137	5.939E-03	2.358E-02	2.026E-02	1.203E-02	NOT IDENT.
CE-139	-2.398E-02	1.970E-02	1.685E-02	1.005E-02	NOT IDENT.
BA-140	-1.122E-01	1.584E-01	1.307E-01	8.081E-02	NOT IDENT.
LA-140	-8.173E-02	5.248E-02	3.960E-02	2.678E-02	FAIL ABUN
CE-141	2.644E-02	3.991E-02	3.618E-02	2.036E-02	NOT IDENT.
CE-143	6.287E+02	1.741E+02	0.000E+00	8.881E+01	SHORT HLIF
CE-144	1.563E-01	1.472E-01	1.194E-01	7.509E-02	NOT IDENT.

PM-144	-4.253E-03	2.154E-02	1.809E-02	1.099E-02	NOT IDENT.
PR-144	-2.881E-01	1.459E+00	1.225E+00	7.445E-01	NOT IDENT.
PM-146	4.069E-02	2.832E-02	2.431E-02	1.445E-02	NOT IDENT.
ND-147	-2.402E-01	3.344E-01	2.824E-01	1.706E-01	FAIL ABUN
PM-149	5.286E+00	5.039E+01	4.246E+01	2.571E+01	NOT IDENT.
EU-152	-8.871E-02	8.217E-02	5.068E-02	4.192E-02	FAIL ABUN
GD-153	-6.124E-03	5.808E-02	4.359E-02	2.963E-02	FAIL ABUN
EU-154	-6.168E-02	8.172E-02	6.678E-02	4.169E-02	NOT IDENT.
TB-160	-3.105E-02	8.749E-02	7.378E-02	4.464E-02	FAIL ABUN
HO-166M	7.818E-03	3.810E-02	3.243E-02	1.944E-02	FAIL ABUN
TM-171	-6.282E+00	1.889E+01	1.472E+01	9.638E+00	NOT IDENT.
LU-176	-9.356E-03	1.746E-02	1.373E-02	8.908E-03	FAIL ABUN
LU-177	2.744E+00	9.668E-01	6.513E-01	4.933E-01	FAIL ABUN
LU-177M	1.618E-02	1.257E-01	9.362E-02	6.411E-02	FAIL ABUN
HF-181	-1.080E-02	2.680E-02	2.220E-02	1.367E-02	NOT IDENT.
W-181	-2.224E-01	2.437E-01	1.867E-01	1.243E-01	NOT IDENT.
TA-182	-1.094E-01	1.314E-01	1.083E-01	6.703E-02	FAIL ABUN
RE-183	3.319E-02	7.114E-02	6.370E-02	3.629E-02	FAIL ABUN
RE-184	-1.807E-01	1.569E-01	1.276E-01	8.004E-02	NOT IDENT.
OS-185	6.417E-03	2.671E-02	2.301E-02	1.363E-02	NOT IDENT.
RE-188	1.214E-01	1.116E-01	1.012E-01	5.694E-02	NOT IDENT.
W-188	-3.843E+00	5.309E+00	3.974E+00	2.709E+00	FAIL ABUN
IR-192	8.435E-03	2.195E-02	1.949E-02	1.120E-02	FAIL ABUN
AU-195	2.373E-01	1.514E-01	1.304E-01	7.725E-02	FAIL ABUN
TL-200	7.528E+01	1.960E+02	0.000E+00	9.999E+01	SHORT HLIF
TL-201	-1.324E+00	4.020E+00	3.529E+00	2.051E+00	NOT IDENT.
TL-202	-7.197E-03	4.434E-02	3.682E-02	2.262E-02	NOT IDENT.
HG-203	3.774E-02	3.020E-02	2.298E-02	1.541E-02	NOT IDENT.
BI-207	2.258E-02	3.792E-02	3.074E-02	1.935E-02	FAIL ABUN
TL-207	3.231E-01	4.872E-01	3.784E-01	2.486E-01	FAIL ABUN
PO-209	-1.175E+00	4.658E+00	3.938E+00	2.377E+00	NOT IDENT.
BI-210	9.040E-01	2.039E+00	1.787E+00	1.040E+00	NOT IDENT.
PB-210	9.040E-01	2.039E+00	1.787E+00	1.040E+00	NOT IDENT.
PO-210	9.040E-01	2.039E+00	1.787E+00	1.040E+00	NOT IDENT.
PB-211	-1.746E-01	7.060E-01	5.122E-01	3.602E-01	NOT IDENT.
BI-212	1.178E+00	3.345E-01	2.122E-01	1.707E-01	FAIL ABUN
PO-215	3.231E-01	4.872E-01	3.784E-01	2.486E-01	FAIL ABUN
RN-219	7.775E-02	2.728E-01	2.299E-01	1.392E-01	FAIL ABUN
RN-220	4.774E-01	1.588E+01	1.381E+01	8.101E+00	NOT IDENT.
RA-223	3.231E-01	4.872E-01	3.784E-01	2.486E-01	FAIL ABUN
AC-227	1.395E-01	2.574E-01	2.210E-01	1.313E-01	FAIL ABUN
TH-227	1.395E-01	2.578E-01	2.210E-01	1.315E-01	FAIL ABUN
TH-229	4.791E-02	3.359E-01	2.943E-01	1.714E-01	FAIL ABUN
PA-231	-3.522E-01	1.051E+00	8.410E-01	5.364E-01	FAIL ABUN
TH-231	3.231E-01	4.872E-01	3.784E-01	2.486E-01	FAIL ABUN
U-231	-8.963E-01	6.877E-01	5.042E-01	3.509E-01	FAIL ABUN
PA-233	2.636E-02	4.078E-02	3.643E-02	2.081E-02	FAIL ABUN
PA-234	7.346E-03	1.986E-01	1.690E-01	1.013E-01	FAIL ABUN
PA-234M	6.804E+00	3.252E+00	2.806E+00	1.659E+00	NOT IDENT.
NP-236	-2.930E-02	5.182E-02	4.539E-02	2.644E-02	NOT IDENT.
NP-239	1.048E-01	1.298E-01	1.122E-01	6.621E-02	FAIL ABUN
AM-241	1.926E-02	9.690E-02	7.847E-02	4.944E-02	NOT IDENT.
CM-243	3.659E-02	7.139E-02	5.543E-02	3.642E-02	FAIL ABUN
AM-246	1.194E-01	9.591E-02	8.400E-02	4.893E-02	NOT IDENT.
CM-247	1.682E-02	2.578E-02	2.058E-02	1.315E-02	FAIL ABUN
CF-249	2.585E-02	2.449E-02	2.172E-02	1.249E-02	NOT IDENT.
CF-251	-3.990E-02	8.578E-02	7.468E-02	4.376E-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	677.3796
46.50	677.3796
46.50	677.3796
48.70	747.3508
49.72	728.8390
51.35	724.9455
52.39	755.1696
52.97	792.4188
53.15	786.5207
53.44	793.0945
54.07	767.2029
56.28	832.8292
56.28	832.8381
57.37	0.0000
57.53	780.2422
57.53	780.2485
57.60	805.1224
57.98	830.1107
57.98	830.1107
59.32	852.2574
59.32	852.2574
59.40	852.5275
59.54	853.0019
59.72	875.1321
60.01	876.1373
61.10	902.9722
61.14	903.1119
61.30	903.6743
63.00	953.1987
63.29	954.2523
63.29	954.2523
63.58	955.3008
64.28	987.0264
65.12	1004.7769
65.20	1066.6118
65.20	1066.6118
66.05	1106.7098
66.72	1051.9668
66.83	1052.3917
66.91	1052.7023
67.20	1078.9043
67.20	1078.9043
67.75	1121.5724
67.85	1121.9803
68.90	1122.6489
68.90	1122.6489
69.30	1042.4562
69.67	1097.4368
70.82	1202.0436
70.82	1202.0436
70.83	1202.0865
72.80	1104.9255
72.87	1105.1943
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74.81	1112.4744
74.97	1113.0736
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75.70	1115.7839
77.11	1120.9863
77.11	1120.9863

77.11	1120.9863
77.11	1120.9863
77.11	1120.9863
77.11	1120.9863
77.11	1120.9863
78.38	1125.6343
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79.80	1044.5138
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81.07	1048.7347
81.07	1048.7347
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83.78	916.1937
84.21	917.4081
84.90	919.3439
85.43	920.8271
86.29	923.2199
86.50	923.8024
86.54	923.9145
86.59	924.0534
86.72	924.4164
86.79	924.6046
86.94	925.0258
87.30	926.0206
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87.30	926.0206
87.57	926.7644
87.88	927.6202
88.03	928.0325
88.36	928.9377
88.47	929.2424
89.95	933.2842
91.11	936.4344
92.29	939.6159
92.38	939.8578
92.38	939.8578
93.35	942.4524
94.00	944.1865
94.67	918.0396
94.67	918.0526
94.90	918.6440
94.90	918.6440
94.90	918.6440
94.90	918.6440
95.87	1021.3248
95.87	1021.3248
96.73	973.5483
97.43	933.2213
98.44	871.0230
98.44	871.0271
98.88	850.5599
99.55	877.1349
99.55	877.1349
99.86	925.7879
100.00	926.1381
100.10	936.2064
103.18	913.1160
103.76	901.3007
105.00	934.0217
105.31	934.7704
108.00	914.5277
109.28	955.9911

111.00	964.0269
111.00	964.0269
111.76	1004.0267
112.95	1019.3586
115.19	967.1612
116.30	957.2549
117.00	889.4709
117.00	889.4709
117.66	931.8787
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121.78	875.3389
122.06	839.0723
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122.32	839.5729
122.32	839.5729
122.32	839.5729
123.07	906.7816
127.23	896.1277
129.76	977.5773
131.20	929.0275
133.02	883.1596
133.54	852.9778
135.34	861.9521
136.00	970.5949
136.25	971.1106
136.48	976.6769
140.51	995.7054
140.51	0.0000
142.18	985.6030
142.65	954.0515
143.76	943.5397
144.24	905.5176
144.24	905.5176
144.24	905.5176
144.24	905.5176
145.22	939.9737
145.44	923.1460
147.16	980.9696
152.43	972.7526
152.70	928.1426
153.22	908.7957
154.21	877.2816
154.21	877.2816
154.21	877.2816
154.21	877.2816
155.03	895.3069
156.02	907.1913
158.56	924.5888
159.00	0.0000
159.00	958.8937
160.31	924.8092
161.27	913.3544
162.32	886.0529
162.64	867.8156
163.35	842.6415
163.89	841.5890
165.85	966.3281
167.43	927.4456
171.28	929.0514
171.86	939.5345
172.10	939.9328
176.55	947.2299
176.60	947.3125
181.06	936.5023
184.41	902.7863
185.71	897.5030
186.00	897.9377
190.27	842.2332
192.34	866.7664
193.63	863.6154
197.04	862.3300
198.01	891.5313
198.60	898.3329
200.40	885.8648
201.83	1013.0903
202.84	926.7751
205.31	878.4732

208.36	931.1182
208.81	880.0985
209.75	798.3769
209.75	798.3769
210.97	822.5897
215.65	817.4462
216.55	771.3953
218.09	809.0599
222.10	817.8739
223.80	821.9262
226.40	815.5982
227.00	780.9318
227.08	781.0178
227.20	784.2700
228.16	829.0675
228.18	829.0918
228.18	829.0918
231.56	0.0000
235.69	833.5058
236.00	869.2383
236.00	869.2383
238.63	769.2066
238.63	769.2066
238.63	769.2066
238.63	769.2066
239.00	769.5898
240.98	771.6338
241.98	772.6669
241.98	772.6669
241.98	772.6669
244.69	630.5808
245.39	649.9277
247.94	614.7354
248.90	647.5323
249.79	650.8838
252.40	677.8297
252.85	716.9744
252.85	716.9744
254.15	0.0000
256.20	662.7496
256.20	662.7496
260.50	669.6143
260.90	693.8795
262.80	639.9264
264.65	592.6624
268.24	647.9572
268.79	665.9704
269.46	666.5163
269.46	666.5163
269.46	666.5163
269.46	666.5163
271.23	734.3344
273.65	777.7236
276.40	709.3555
277.35	623.6060
277.60	623.7861
277.60	623.7861
278.00	557.9019
278.60	561.8566
279.20	574.7129
279.53	574.9337
280.46	582.6923
281.68	583.5306
283.67	613.2505
284.30	620.8944
285.00	623.6418
285.90	608.6048
286.10	588.5662
286.10	588.5662
287.40	589.4474
288.45	0.0000
290.67	652.1479
290.80	652.2450
291.72	678.5095
293.26	0.0000
293.70	604.6410
295.21	566.4063
295.21	566.4063

295.21	566.4063
295.96	643.9835
296.50	644.3735
297.23	644.9022
298.57	645.8729
299.80	587.5468
299.80	587.5468
300.09	587.7437
300.09	587.7437
300.09	587.7437
300.09	587.7437
300.12	587.7594
301.29	593.0853
302.84	540.7914
303.76	538.2905
303.91	538.3767
304.40	540.1971
304.40	540.1971
304.84	589.3113
306.84	601.9732
308.46	571.1123
311.98	538.2075
316.51	548.2477
318.01	587.2231
319.02	596.2192
319.41	560.1790
320.08	574.2257
323.87	556.2654
323.87	556.2654
323.87	556.2654
323.87	556.2654
325.23	621.0248
328.77	566.9286
333.44	368.2291
334.20	448.8321
334.20	448.8321
334.30	478.8037
338.28	519.0023
338.28	519.0023
338.28	519.0023
338.28	519.0023
338.32	519.0291
338.32	519.0291
338.32	519.0291
340.50	469.1304
340.57	469.1605
344.27	563.1648
345.85	468.4489
350.59	0.0000
351.07	504.4922
351.92	504.9088
351.92	504.9088
351.92	504.9088
355.39	0.0000
356.01	463.4648
364.48	467.2324
366.43	472.9697
367.43	458.7721
367.94	0.0000
369.80	481.3096
374.96	446.2745
383.85	478.6546
387.95	409.8022
388.63	423.9875
391.69	485.0270
391.69	485.0270
392.90	467.5658
398.62	487.0011
400.65	476.8005
401.10	472.9662
401.81	474.3776
402.60	447.6753
404.84	499.7433
410.95	426.2600
411.60	429.8807
413.65	434.0208
414.70	444.5930
415.30	415.9547

415.76	388.9441
417.63	0.0000
418.52	435.1315
423.70	401.1186
427.08	441.3380
427.89	444.7195
432.53	408.1827
433.93	416.9269
439.47	424.0022
439.56	426.1107
439.89	433.5029
443.98	467.2609
444.90	430.0300
445.03	430.0753
445.03	430.0753
445.03	430.0753
445.03	430.0753
453.90	355.0790
463.38	365.3580
468.07	396.7897
473.00	390.4566
475.06	396.4066
475.35	390.0848
476.78	391.5735
477.59	369.3294
477.96	387.6387
482.03	394.1890
484.57	387.4043
487.03	383.7951
490.36	0.0000
492.35	357.1630
497.08	365.9980
507.63	0.0000
510.53	0.0000
510.84	358.6622
511.00	358.7021
511.85	358.9156
511.85	358.9156
513.99	326.1160
513.99	326.1160
520.41	333.2748
520.65	333.3337
527.90	326.5207
528.96	0.0000
529.64	359.3215
529.87	0.0000
531.02	379.1355
537.32	377.9735
543.00	336.4380
546.56	0.0000
549.76	343.5941
552.65	364.0093
555.20	336.3580
563.23	377.9103
563.90	362.9196
568.70	362.1484
569.32	337.5649
569.50	324.2941
569.67	324.3288
573.80	379.9276
574.00	377.6873
574.64	385.4817
578.91	303.4318
579.30	0.0000
583.14	328.0909
585.48	331.0485
591.81	343.9414
592.07	350.1940
593.00	379.9387
595.88	377.1381
600.56	388.2840
602.52	0.0000
602.71	421.1843
602.71	421.1843
603.60	414.7511
604.41	428.2915
604.70	405.0283
609.31	393.9148

609.31	393.9148
609.31	393.9148
609.31	393.9148
610.33	369.6308
612.46	365.0846
614.37	316.8809
618.01	358.2127
621.84	342.8723
621.84	342.8723
631.29	320.0977
633.02	336.2508
633.10	335.2756
634.78	323.7268
635.90	319.9771
636.97	339.0150
645.85	312.8693
646.12	316.9066
656.30	311.7466
657.75	302.9769
657.90	0.0000
661.65	330.7939
661.65	330.7939
664.57	0.0000
666.33	326.6301
666.33	326.6301
675.00	304.9193
677.61	298.2588
685.20	306.6462
692.80	303.8280
695.00	355.4011
696.49	339.2898
696.49	339.2898
697.00	329.1308
697.49	326.1389
698.33	342.7047
698.50	342.7387
699.00	350.0120
702.63	318.8171
706.10	330.7439
706.58	0.0000
706.67	327.7563
709.31	343.6976
711.68	310.0281
713.82	330.0396
717.42	330.6692
720.50	315.0405
721.93	0.0000
722.20	340.2587
722.78	306.5070
722.78	306.5070
722.89	306.5250
722.95	306.5310
723.30	319.0685
724.18	313.8622
727.18	359.0057
733.00	266.9341
735.90	283.2881
739.58	296.7550
742.81	278.3438
744.21	269.0781
747.13	292.6375
751.79	313.3812
752.31	297.6342
753.82	278.8457
755.35	287.5169
756.15	299.2654
756.87	312.0691
763.93	289.3687
765.79	306.0293
766.42	320.7003
766.84	317.1228
776.49	358.9312
778.00	353.8492
778.57	363.5742
778.89	342.2396
783.80	295.8948
785.46	292.6247
792.07	407.8002

795.84	244.0149
796.30	251.4662
798.80	296.1998
801.93	298.5002
805.60	231.2317
810.29	267.1156
810.76	272.7612
815.85	251.0194
817.79	248.4473
818.51	251.3337
819.60	249.5908
826.30	279.4478
828.27	0.0000
831.60	341.2367
831.96	320.6092
834.83	310.6813
836.80	0.0000
846.75	288.7192
848.13	283.2168
856.28	0.0000
856.80	251.2873
860.37	277.1666
867.32	234.0839
867.82	239.1523
871.10	267.9736
873.19	262.4750
874.81	270.3303
875.33	0.0000
876.40	251.3361
879.36	266.0734
880.27	261.3750
880.51	253.7151
881.50	252.8642
883.24	250.1702
884.67	257.0685
889.25	254.6911
896.60	259.3773
898.02	281.8098
899.00	279.0201
903.28	253.0881
911.07	259.0466
911.07	259.0466
911.07	259.0466
919.63	241.1776
920.93	240.9688
925.00	250.6076
925.24	248.1405
926.50	267.6108
935.52	232.4638
937.48	268.8439
944.10	279.4566
946.00	271.7726
949.00	273.0977
962.29	254.1945
964.01	283.9865
966.15	253.0964
968.20	253.3046
969.11	226.9644
969.11	226.9644
969.11	226.9644
977.42	234.4105
980.50	265.5869
983.50	241.8237
989.30	223.2737
996.32	309.6233
1001.03	217.2383
1001.68	221.3373
1004.76	291.4252
1021.30	0.0000
1024.50	0.0000
1034.80	239.5497
1036.00	251.9458
1037.82	262.3661
1038.57	262.4464
1038.76	0.0000
1045.16	223.0168
1046.59	250.9017
1048.07	282.9415

1050.47	269.8037
1050.47	269.8037
1062.04	274.0761
1063.62	248.3705
1076.63	254.7668
1077.35	253.7951
1078.86	235.2065
1085.78	304.6589
1099.22	278.8955
1112.02	211.9751
1112.84	212.0383
1115.52	297.1385
1120.29	239.8020
1120.29	239.8020
1120.29	239.8020
1120.29	239.8020
1120.51	239.8257
1121.28	238.5681
1124.00	0.0000
1129.67	224.2318
1131.51	0.0000
1147.95	0.0000
1167.94	294.1730
1173.22	275.8678
1175.09	276.9888
1177.93	304.6065
1189.05	291.5510
1204.90	305.4731
1205.75	0.0000
1213.00	336.8302
1221.42	358.8181
1230.97	455.9235
1235.34	366.2218
1236.41	0.0000
1238.25	330.9719
1246.25	362.6895
1260.41	0.0000
1271.85	229.5181
1274.45	261.8251
1274.54	261.8333
1291.56	233.8798
1298.22	0.0000
1312.09	196.9666
1325.50	158.2227
1325.50	158.2227
1332.49	145.6766
1333.61	141.7606
1360.21	146.8968
1362.66	0.0000
1365.15	145.1773
1368.21	142.4609
1368.53	0.0000
1376.25	135.6595
1384.27	135.9811
1394.10	133.2327
1395.20	134.2826
1407.95	127.6880
1434.06	101.0786
1436.60	111.3717
1457.56	0.0000
1460.81	109.0472
1489.15	100.5730
1509.49	95.9194
1596.49	134.6619
1620.62	79.1994
1678.03	0.0000
1691.02	65.0644
1691.02	65.0644
1706.46	0.0000
1750.46	0.0000
1764.49	46.4530
1764.49	46.4530
1764.49	46.4530
1764.49	46.4530
1770.23	62.3506
1771.40	58.8038
1791.20	0.0000
1808.65	65.9051

1836.01

46.7245

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245396001

Total Uranium Activity	6.1491E+00	ug/g
Total Uranium Counting Unc.	3.4291E+00	ug/g
Total Uranium Tpu	1.7495E-06	ug/g
Total Uranium Mda	1.9376E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON , SC 29417              *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 944962          SAMPLE ID   : G245396001
*  ANALYST       : MXR1           DETECTOR    : GAM22
*  SAMPLE DATE   : 21-JAN-2010 12:00:00.00  COUNT TIME : 0 04:00:00.00
*  ANALYSIS DATE: 4-FEB-2010 22:55:47.58  SAMPLE ALQT: 132.960 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.131E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.170E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 2.148E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.054E+00

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VAX/VMS Nuclide Identification Report Generated 5-FEB-2010 21:00:09.33

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                          *
*                               Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245396002.CNF;1
Sample date        : 21-JAN-2010 12:00:00 Acquisition date : 5-FEB-2010 18:59:38.
Sample ID          : G245396002 Sample quantity : 1.00510E+02 GRAM
Detector name      : GAM01 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:01.09 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944962 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	63.39*	385	481	1.16	127.51	123	9	5.35E-02	11.8	
2	3	74.90*	312	435	1.19	150.52	143	18	4.33E-02	12.7	9.28E-01
3	3	77.18*	490	422	1.10	155.08	143	18	6.81E-02	8.6	
4	0	87.21	131	533	1.46	175.13	172	7	1.82E-02	30.5	
5	2	92.76*	1002	548	1.31	186.22	182	19	1.39E-01	5.2	2.80E+00
6	2	98.49*	80	317	1.14	197.67	182	19	1.12E-02	42.5	
7	0	144.75*	44	363	1.45	290.14	284	10	6.05E-03	86.4	
8	0	186.18*	276	451	1.04	372.95	367	12	3.84E-02	17.0	
9	0	209.95	81	241	1.28	420.46	416	9	1.12E-02	36.8	
10	3	239.05*	970	181	1.18	478.64	471	20	1.35E-01	4.0	1.16E+00
11	3	241.90*	210	237	1.52	484.32	471	20	2.92E-02	16.3	
12	0	270.20	130	216	1.97	540.90	535	13	1.81E-02	24.8	
13	0	295.66*	266	193	1.26	591.79	587	11	3.70E-02	11.9	
14	0	300.55	77	124	1.59	601.56	597	9	1.07E-02	28.7	
15	0	339.24*	211	202	1.45	678.90	671	16	2.94E-02	16.8	
16	0	352.51*	490	184	1.38	705.42	698	15	6.81E-02	7.6	
17	0	463.89	95	121	1.55	928.06	921	16	1.32E-02	27.8	
18	0	511.40*	86	173	1.97	1023.01	1015	19	1.20E-02	41.5	
19	0	583.69*	219	126	1.44	1167.51	1162	14	3.04E-02	13.3	
20	0	609.71*	344	91	1.49	1219.52	1214	14	4.77E-02	8.4	
21	0	662.27	190	107	1.62	1324.57	1317	17	2.64E-02	14.4	
22	0	727.91	35	56	0.85	1455.75	1454	7	4.90E-03	43.2	
23	0	861.65	37	73	1.84	1723.06	1715	14	5.19E-03	51.3	
24	0	911.62*	193	42	1.55	1822.93	1817	15	2.68E-02	10.6	
25	0	965.06*	29	45	1.97	1929.73	1925	9	3.99E-03	46.9	
26	0	969.27*	106	37	1.69	1938.16	1934	10	1.48E-02	15.1	
27	0	1001.56*	94	18	2.06	2002.69	1995	16	1.31E-02	15.0	
28	0	1120.75*	79	41	1.74	2240.89	2233	15	1.10E-02	21.3	
29	0	1461.21*	692	11	1.78	2921.31	2915	14	9.60E-02	4.0	
30	0	1730.26	22	8	1.75	3458.97	3454	11	3.08E-03	32.7	
31	0	1765.19*	53	12	2.15	3528.77	3521	16	7.43E-03	21.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 5-FEB-2010 21:00:13

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245396002.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 21-JAN-2010 12:00:00 Acquisition date : 5-FEB-2010 18:59:38
Sample ID         : G245396002 Sample quantity : 100.51 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA1 Detector geometry: CAN
Elapsed live time : 0 02:00:00.00 Elapsed real time: 0 02:00:01.09 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

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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	*	2.560E+01	3.056E+00	7.217E-01	6.416E-02	35.471
CD-109	+	88.03	*	2.593E+00	1.599E+00	2.153E+00	2.037E-01	1.204
SN-126	+	64.28		5.371E+00	1.491E+00	1.137E+00	1.673E-01	4.723
	+	86.94		1.059E+00	7.810E-01	9.407E-01	3.906E-01	1.126
	+	87.57	*	2.548E-01	1.571E-01	2.290E-01	2.157E-02	1.113
BA-137M	+	661.65	*	4.111E-01	1.230E-01	7.581E-02	6.210E-03	5.423
CS-137	+	661.65	*	4.346E-01	1.300E-01	8.014E-02	6.578E-03	5.423
CE-141	+	145.44	*	7.969E-02	1.379E-01	1.344E-01	1.169E-02	0.593
TL-208		277.35		4.719E-02	5.297E-01	8.489E-01	1.079E-01	0.056
	+	510.84		6.253E-01	5.239E-01	3.138E-01	3.729E-02	1.993
	+	583.14	*	4.531E-01	1.272E-01	7.563E-02	6.869E-03	5.991
	+	860.37		7.369E-01	7.590E-01	6.585E-01	6.311E-02	1.119
BI-211		72.87		6.395E+00	4.713E+00	7.906E+00	6.484E-01	0.809
	+	351.07	*	4.391E+00	7.798E-01	4.482E-01	4.077E-02	9.796
PB-212	+	74.81		2.617E+00	7.402E-01	8.160E-01	1.021E-01	3.207
	+	77.11		2.319E+00	4.440E-01	4.605E-01	3.907E-02	5.037
	+	87.30		1.178E+00	7.360E-01	1.044E+00	1.432E-01	1.129
	+	238.63	*	1.870E+00	2.420E-01	1.143E-01	1.157E-02	16.363
	+	300.09		2.310E+00	1.350E+00	1.485E+00	1.606E-01	1.555
PO-212	+	74.81		2.617E+00	7.402E-01	8.160E-01	1.021E-01	3.207
	+	77.11		2.319E+00	4.440E-01	4.605E-01	3.907E-02	5.037
	+	87.30		1.178E+00	7.360E-01	1.044E+00	1.432E-01	1.129
		115.19		-8.398E-01	5.419E+00	8.554E+00	7.433E-01	-0.098
	+	238.63	*	1.870E+00	2.420E-01	1.143E-01	1.157E-02	16.363
	+	300.09		2.310E+00	1.350E+00	1.485E+00	1.606E-01	1.555
BI-214	+	609.31	*	1.343E+00	2.616E-01	1.578E-01	1.556E-02	8.512
	+	1120.29		1.646E+00	7.220E-01	5.597E-01	5.988E-02	2.941
	+	1764.49		1.531E+00	6.650E-01	5.412E-01	4.539E-02	2.829
PB-214	+	74.81		4.509E+00	1.249E+00	1.406E+00	1.567E-01	3.207
	+	77.11		3.976E+00	8.192E-01	7.894E-01	9.002E-02	5.037
	+	87.30		2.018E+00	1.254E+00	1.788E+00	2.172E-01	1.129
	+	241.98		2.436E+00	8.344E-01	6.886E-01	7.355E-02	3.538
	+	295.21		1.401E+00	3.681E-01	2.896E-01	3.198E-02	4.838
	+	351.92	*	1.527E+00	2.827E-01	1.563E-01	1.637E-02	9.775

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		4.509E+00	1.249E+00	1.406E+00	1.567E-01	3.207
	+	77.11		3.976E+00	8.192E-01	7.894E-01	9.002E-02	5.037
	+	87.30		2.018E+00	1.254E+00	1.788E+00	2.172E-01	1.129
	+	241.98		2.436E+00	8.344E-01	6.886E-01	7.355E-02	3.538
	+	295.21		1.401E+00	3.681E-01	2.896E-01	3.198E-02	4.838
PO-216	+	351.92	*	1.527E+00	2.827E-01	1.563E-01	1.637E-02	9.775
	+	74.81		2.617E+00	7.402E-01	8.160E-01	1.021E-01	3.207
	+	77.11		2.319E+00	4.440E-01	4.605E-01	3.907E-02	5.037
	+	87.30		1.178E+00	7.360E-01	1.044E+00	1.432E-01	1.129
	+	238.63	*	1.870E+00	2.420E-01	1.143E-01	1.157E-02	16.363
PO-218	+	300.09		2.310E+00	1.350E+00	1.485E+00	1.606E-01	1.555
	+	74.81		4.509E+00	1.249E+00	1.406E+00	1.567E-01	3.207
	+	77.11		3.976E+00	8.192E-01	7.894E-01	9.002E-02	5.037
	+	87.30		2.018E+00	1.254E+00	1.788E+00	2.172E-01	1.129
	+	241.98		2.436E+00	8.344E-01	6.886E-01	7.355E-02	3.538
RA-224	+	295.21		1.401E+00	3.681E-01	2.896E-01	3.198E-02	4.838
	+	351.92	*	1.527E+00	2.827E-01	1.563E-01	1.637E-02	9.775
	+	240.98	*	4.620E+00	1.561E+00	1.301E+00	1.182E-01	3.550
	+	609.31	*	1.343E+00	2.616E-01	1.578E-01	1.556E-02	8.512
	+	1120.29		1.646E+00	7.220E-01	5.597E-01	5.988E-02	2.941
AC-228	+	1764.49		1.531E+00	6.650E-01	5.412E-01	4.539E-02	2.829
	+	338.32		2.084E+00	1.110E+00	4.746E-01	1.960E-01	4.391
	+	911.07	*	1.802E+00	4.354E-01	2.679E-01	3.101E-02	6.728
	+	969.11		1.753E+00	6.714E-01	5.817E-01	1.365E-01	3.013
	+	338.32		2.084E+00	1.110E+00	4.746E-01	1.960E-01	4.391
RA-228	+	911.07	*	1.802E+00	4.354E-01	2.679E-01	3.101E-02	6.728
	+	969.11		1.753E+00	6.714E-01	5.817E-01	1.365E-01	3.013
	+	74.81		2.657E+00	7.100E-01	8.285E-01	6.960E-02	3.207
	+	77.11		2.355E+00	4.508E-01	4.675E-01	3.967E-02	5.037
	+	87.30		1.196E+00	7.377E-01	1.060E+00	9.951E-02	1.129
TH-228	+	238.63	*	1.899E+00	2.457E-01	1.161E-01	1.175E-02	16.363
	+	300.09		2.345E+00	1.937E+00	1.508E+00	8.952E-01	1.555
	+	609.31	*	1.343E+00	2.616E-01	1.578E-01	1.556E-02	8.512
	+	1120.29		1.646E+00	7.220E-01	5.597E-01	5.988E-02	2.941
	+	1764.49		1.531E+00	6.650E-01	5.412E-01	4.539E-02	2.829
TH-232	+	338.32		2.084E+00	7.245E-01	4.746E-01	4.178E-02	4.391
	+	911.07	*	1.802E+00	4.354E-01	2.679E-01	3.101E-02	6.728
	+	969.11		1.753E+00	6.714E-01	5.817E-01	1.365E-01	3.013
	+	63.29	*	1.357E+01	3.987E+00	3.070E+00	5.396E-01	4.420
	+	92.38		1.257E+01	2.652E+00	1.264E+00	2.318E-01	9.947
U-234	+	609.31	*	1.343E+00	2.616E-01	1.578E-01	1.556E-02	8.512
	+	1120.29		1.646E+00	7.220E-01	5.597E-01	5.988E-02	2.941
	+	1764.49		1.531E+00	6.650E-01	5.412E-01	4.539E-02	2.829
	+	89.95		6.112E-01	2.556E+00	2.901E+00	9.008E-01	0.211
	+	93.35		1.512E+01	4.543E+00	1.508E+00	4.248E-01	10.024
U-235	+	105.00		1.150E+00	1.482E+00	2.383E+00	7.117E-01	0.483
	+	143.76	*	2.649E-01	4.600E-01	4.679E-01	8.175E-02	0.566
	+	163.35		1.026E+00	6.767E-01	1.142E+00	2.173E-01	0.899
	+	185.71		3.704E-01	1.300E-01	9.824E-02	8.536E-03	3.770

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-237	+	205.31	*	7.788E-01	8.571E-01	1.297E+00	2.489E-01	0.600
		86.50		7.481E-01	4.864E-01	6.190E-01	1.401E-01	1.209
		95.87		-3.503E+00	1.721E+00	2.155E+00	5.333E-01	-1.626
U-238	+	63.29	*	1.357E+01	3.987E+00	3.070E+00	5.396E-01	4.420
		92.38		1.257E+01	1.743E+00	1.264E+00	1.154E-01	9.947
AM-243	+	74.67	*	4.243E-01	1.133E-01	1.327E-01	1.104E-02	3.196
		86.72		2.805E+01	1.730E+01	2.399E+01	2.239E+00	1.169
		117.66		2.006E+00	5.583E+00	9.008E+00	7.853E-01	0.223
ANH-511	+	142.18	*	1.802E+00	2.718E+01	4.085E+01	3.494E+00	0.044
		511.00		1.351E-01	1.126E-01	6.779E-02	5.745E-03	1.992

---- 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	*	2.927E-01	4.840E-01	8.111E-01	7.379E-02	0.361
NA-22		1274.54	*	-2.984E-03	5.646E-02	9.367E-02	7.866E-03	-0.032
NA-24		1368.53	*	2.673E-01	5.646E-02	Half-Life too short		
AL-26		1129.67	*	1.091E+00	2.343E+00	3.966E+00	3.313E-01	0.275
		1808.65		-2.336E-02	3.939E-02	5.399E-02	4.473E-03	-0.433
TI-44	+	67.85	*	-5.972E-02	8.535E-02	1.071E-01	8.493E-03	-0.558
		78.38		4.280E-01	8.193E-02	1.111E-01	9.533E-03	3.853
SC-46	+	889.25	*	-2.764E-02	5.444E-02	8.388E-02	7.583E-03	-0.329
		1120.51		2.822E-01	1.224E-01	1.741E-01	1.463E-02	1.621
V-48		944.10	*	3.405E-01	1.177E+00	1.980E+00	1.783E-01	0.172
		983.50		-1.306E-02	1.013E-01	1.621E-01	1.447E-02	-0.081
CR-51		1312.09	*	-7.961E-03	1.060E-01	1.749E-01	1.483E-02	-0.046
		320.08		3.559E-02	5.166E-01	8.500E-01	7.996E-02	0.042
MN-52		744.21	*	5.877E-02	3.299E-01	5.544E-01	4.756E-02	0.106
		848.13		-8.822E+00	8.282E+00	1.166E+01	1.042E+00	-0.757
		935.52	*	2.963E-01	3.687E-01	6.481E-01	5.846E-02	0.457
		1246.25		6.852E+00	9.887E+00	1.765E+01	1.467E+00	0.388
		1333.61	*	-2.046E+00	7.298E+00	1.171E+01	9.980E-01	-0.175
		1434.06		-1.867E-01	2.726E-01	3.889E-01	3.358E-02	-0.480
MN-54		834.83	*	-5.390E-03	5.010E-02	8.135E-02	7.241E-03	-0.066
CO-56		846.75	*	-7.813E-02	4.920E-02	6.346E-02	5.670E-03	-1.231
		977.42		-2.440E-01	4.199E+00	6.776E+00	6.059E-01	-0.036
		1037.82	*	-1.001E-01	3.675E-01	5.715E-01	5.269E-02	-0.175
		1175.09		9.331E-02	2.834E+00	4.774E+00	3.867E-01	0.020
		1238.25	*	1.557E-01	1.310E-01	2.388E-01	2.041E-02	0.652
		1360.21		2.284E-01	1.222E+00	2.090E+00	1.789E-01	0.109
CO-57		1771.40	*	-8.116E-02	4.575E-01	6.086E-01	5.095E-02	-0.133
		122.06		-3.360E-02	3.737E-02	5.657E-02	4.980E-03	-0.594
		136.48	*	-1.639E-01	2.806E-01	4.649E-01	4.294E-02	-0.352
		810.76		-4.115E-02	5.245E-02	7.871E-02	6.963E-03	-0.523
FE-59		142.65	*	2.399E+00	4.256E+00	6.549E+00	5.600E-01	0.366
		192.34	*	-5.561E-02	1.282E+00	2.075E+00	2.802E-01	-0.027
		1099.22		-7.262E-02	1.398E-01	2.121E-01	1.955E-02	-0.342
		1291.56	*	8.871E-02	1.594E-01	2.832E-01	2.724E-02	0.313

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-60	1173.22			-6.377E-02	5.800E-02	8.508E-02	6.886E-03	-0.749
	1332.49	*		1.316E-02	5.390E-02	9.249E-02	7.884E-03	0.142
ZN-65	1115.52	*		1.661E-02	1.211E-01	1.723E-01	1.454E-02	0.096
GE-68	1077.35	*		3.702E-01	1.654E+00	2.741E+00	2.360E-01	0.135
AS-73	53.44	*		3.819E-01	1.383E+00	2.278E+00	1.844E-01	0.168
AS-74	595.88	*		1.024E-02	1.170E-01	1.975E-01	1.664E-02	0.052
	634.78			1.815E-02	4.570E-01	7.654E-01	6.358E-02	0.024
SE-75	66.05			-2.688E+00	7.740E+00	1.096E+01	1.075E+00	-0.245
	96.73			-3.091E+00	1.298E+00	1.761E+00	2.433E-01	-1.755
	121.11			-3.428E-02	1.940E-01	3.052E-01	3.461E-02	-0.112
	136.00			-2.953E-02	5.260E-02	8.725E-02	7.551E-03	-0.338
	198.60			-1.589E+00	2.553E+00	3.963E+00	3.856E-01	-0.401
	264.65	*		7.445E-03	6.827E-02	9.995E-02	9.182E-03	0.074
	279.53			1.210E-01	1.471E-01	2.528E-01	2.389E-02	0.478
	303.91			9.368E-01	2.938E+00	4.353E+00	5.143E-01	0.215
	400.65			2.830E-01	3.851E-01	6.521E-01	6.988E-02	0.434
BR-77	87.88	+		5.892E+02	3.633E+02	5.320E+02	5.029E+01	1.108
	200.40			2.263E+01	2.329E+02	3.913E+02	3.452E+01	0.058
	239.00	+		3.160E+02	3.835E+01	5.266E+01	4.781E+00	6.001
	249.79			-2.682E+01	9.347E+01	1.525E+02	1.390E+01	-0.176
	281.68			7.876E+00	1.269E+02	2.100E+02	1.919E+01	0.038
	297.23			3.918E+02	1.384E+02	1.839E+02	1.672E+01	2.131
	303.76			7.011E+01	2.622E+02	3.869E+02	3.508E+01	0.181
	439.47			3.997E+01	2.097E+02	3.429E+02	2.843E+01	0.117
	484.57			1.639E+02	3.327E+02	5.550E+02	4.679E+01	0.295
	520.65	*		9.458E+00	1.647E+01	2.669E+01	2.264E+00	0.354
	574.64			8.923E+00	2.900E+02	4.878E+02	4.129E+01	0.018
	578.91			3.450E+01	1.336E+02	2.009E+02	1.699E+01	0.172
	585.48			1.987E+03	3.950E+02	7.253E+02	6.126E+01	2.739
	755.35			-1.604E+02	2.041E+02	3.057E+02	2.636E+01	-0.525
	817.79			-1.253E+02	1.847E+02	2.801E+02	2.479E+01	-0.447
SR-82	698.33			3.232E-01	4.234E+01	7.031E+01	5.888E+00	0.005
	776.49	*		-7.007E-01	5.299E-01	7.500E-01	6.529E-02	-0.934
	1395.20			-1.065E+00	1.456E+01	2.388E+01	2.054E+00	-0.045
RB-83	520.41	*		7.073E-02	1.045E-01	1.707E-01	1.448E-02	0.414
	529.64			-2.106E-02	1.483E-01	2.395E-01	2.033E-02	-0.088
	552.65			1.437E-01	2.542E-01	4.466E-01	3.790E-02	0.322
RB-84	881.50	*		3.174E-02	9.645E-02	1.632E-01	1.473E-02	0.194
KR-85	513.99	*		2.020E+01	1.138E+01	2.016E+01	1.709E+00	1.002
SR-85	513.99	*		1.038E-01	5.845E-02	1.035E-01	8.779E-03	1.002
RB-86	1076.63	*		1.713E-01	1.094E+00	1.797E+00	1.548E-01	0.095
Y-88	898.02			-5.416E-02	5.751E-02	8.349E-02	7.597E-03	-0.649
	1836.01	*		-6.880E-03	4.355E-02	6.798E-02	5.591E-03	-0.101
ZR-88	392.90	*		-3.429E-03	4.027E-02	6.485E-02	5.222E-03	-0.053
Y-91	1204.90	*		2.442E+00	2.523E+01	4.268E+01	3.497E+00	0.057
NB-94	702.63	*		5.566E-03	4.484E-02	7.520E-02	6.312E-03	0.074
	871.10			1.608E-02	4.937E-02	8.342E-02	7.506E-03	0.193
NB-95	765.79	*		1.334E-02	6.476E-02	1.086E-01	9.410E-03	0.123
NB-95M	235.69	*		1.684E-01	1.755E-01	2.720E-01	2.789E-02	0.619

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95		724.18		-1.610E-01	1.664E-01	2.110E-01	1.951E-02	-0.763
		756.15	*	-6.635E-02	8.518E-02	1.279E-01	1.215E-02	-0.519
NB-97		657.90	*	-5.775E-02	8.518E-02	Half-Life too short		
		1024.50		2.394E+00	8.518E-02	Half-Life too short		
ZR-97		254.15		-1.508E+00	8.518E-02	Half-Life too short		
		355.39		3.579E+00	8.518E-02	Half-Life too short		
		507.63	*	3.362E+00	8.518E-02	Half-Life too short		
		602.52		5.088E+00	8.518E-02	Half-Life too short		
		1021.30		-3.491E+00	8.518E-02	Half-Life too short		
		1147.95		-2.527E+00	8.518E-02	Half-Life too short		
		1362.66		8.924E-01	8.518E-02	Half-Life too short		
		1750.46		1.177E+01	8.518E-02	Half-Life too short		
MO-99		140.51		-8.130E+00	4.229E+01	6.180E+01	1.710E+01	-0.132
		181.06		-1.128E+00	2.776E+01	4.101E+01	7.505E+00	-0.028
		366.43		3.344E+00	1.237E+02	2.017E+02	1.706E+01	0.017
		739.58	*	9.119E-01	1.665E+01	2.767E+01	4.193E+00	0.033
		778.00		-4.608E+01	4.677E+01	6.875E+01	5.990E+00	-0.670
TC-99M		140.51	*	-1.832E+10	4.677E+01	Half-Life too short		
RH-101		127.23		-1.738E-02	4.741E-02	7.379E-02	6.419E-03	-0.236
		198.01	*	-1.883E-02	4.661E-02	7.321E-02	6.442E-03	-0.257
		325.23		-5.156E-01	3.173E-01	4.603E-01	4.108E-02	-1.120
RH-102		418.52		-3.143E-02	4.206E-01	6.759E-01	5.539E-02	-0.047
		475.06	*	-2.364E-03	4.469E-02	7.139E-02	6.003E-03	-0.033
		631.29		1.514E-02	7.233E-02	1.229E-01	1.023E-02	0.123
		697.49		-6.679E-03	9.703E-02	1.600E-01	1.339E-02	-0.042
		766.84		1.870E-01	1.667E-01	2.968E-01	2.573E-02	0.630
		1046.59		6.133E-02	1.666E-01	2.802E-01	2.447E-02	0.219
		1112.84		-4.507E-01	3.490E-01	3.575E-01	3.018E-02	-1.261
RU-103		497.08	*	2.794E-02	5.985E-02	9.922E-02	1.395E-02	0.282
	+	610.33		1.455E+01	3.432E+00	4.080E+00	6.759E-01	3.566
RH-106		511.85	+	6.748E-01	5.626E-01	6.042E-01	5.121E-02	1.117
		621.84	*	-3.267E-01	4.271E-01	6.619E-01	8.729E-02	-0.494
		1050.47		8.202E-01	3.428E+00	5.683E+00	4.956E-01	0.144
RU-106		511.85	+	6.748E-01	5.626E-01	6.042E-01	5.121E-02	1.117
		621.84	*	-3.267E-01	4.258E-01	6.619E-01	5.529E-02	-0.494
		1050.47		8.202E-01	3.428E+00	5.683E+00	4.956E-01	0.144
AG-108M		433.93	*	-1.699E-02	4.699E-02	7.360E-02	6.347E-03	-0.231
		614.37		-3.687E-02	5.941E-02	7.978E-02	6.961E-03	-0.462
		722.95		-2.592E-02	6.578E-02	9.463E-02	8.356E-03	-0.274
AG-110M		657.75	*	-1.735E-02	5.320E-02	7.370E-02	6.249E-03	-0.235
		677.61		7.805E-02	3.896E-01	6.599E-01	5.626E-02	0.118
		706.67		8.776E-02	2.923E-01	4.795E-01	4.151E-02	0.183
		763.93		-2.337E-01	2.412E-01	3.625E-01	3.227E-02	-0.645
		884.67		6.609E-03	6.888E-02	1.138E-01	1.058E-02	0.058
		937.48		-6.449E-02	1.585E-01	2.466E-01	2.297E-02	-0.262
		1384.27		-2.828E-02	2.236E-01	3.644E-01	3.219E-02	-0.078
IN-111		171.28		2.622E-01	1.422E+00	2.412E+00	2.065E-01	0.109
		245.39	*	1.014E-01	1.654E+00	2.422E+00	2.205E-01	0.042
IN-113M		391.69	*	-6.352E-03	5.904E-02	9.494E-02	7.908E-03	-0.067

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-113	391.69	*		-6.352E-03	5.904E-02	9.494E-02	7.908E-03	-0.067
IN-114M	190.27	*		1.625E-01	2.717E-01	4.155E-01	3.628E-02	0.391
CD-115	260.90			-4.960E+01	2.008E+02	3.279E+02	2.998E+01	-0.151
	492.35			-2.383E+01	5.392E+01	8.290E+01	7.003E+00	-0.287
	527.90	*		1.467E+01	1.511E+01	2.725E+01	2.313E+00	0.538
SN-117M	156.02			7.666E-01	3.053E+00	5.208E+00	4.435E-01	0.147
	158.56	*		-4.014E-02	7.407E-02	1.221E-01	1.040E-02	-0.329
SB-122	563.90	*		-6.151E-01	2.914E+00	4.814E+00	4.081E-01	-0.128
	692.80			-5.578E+01	6.277E+01	9.016E+01	7.526E+00	-0.619
I-123	159.00	*		-5.521E+00	6.277E+01	Half-Life	too short	
	528.96			2.006E+02	6.277E+01	Half-Life	too short	
TE-123M	159.00	*		-2.189E-02	3.768E-02	6.199E-02	5.311E-03	-0.353
I-124	602.71	*		6.473E-02	1.057E+00	1.681E+00	1.413E-01	0.039
	722.78			-1.315E+00	6.696E+00	1.026E+01	8.704E-01	-0.128
	1325.50			-6.842E+01	4.696E+01	6.031E+01	5.132E+00	-1.134
	1376.25			1.756E+01	3.982E+01	7.010E+01	6.015E+00	0.250
	1509.49			9.589E+00	2.091E+01	3.702E+01	3.205E+00	0.259
	1691.02			5.543E-01	4.900E+00	8.221E+00	7.004E-01	0.067
SB-124	602.71			3.662E-03	5.982E-02	9.508E-02	7.997E-03	0.039
	645.85			6.254E-02	6.171E-01	1.039E+00	9.141E-02	0.060
	709.31			-6.748E-01	3.669E+00	5.980E+00	5.038E-01	-0.113
	713.82			5.620E-01	1.986E+00	3.383E+00	4.031E-01	0.166
	722.78			-1.079E-01	5.492E-01	8.411E-01	7.297E-02	-0.128
	968.20	+		1.808E+01	5.709E+00	1.017E+01	9.114E-01	1.778
	1045.16			1.687E+00	3.316E+00	5.678E+00	4.963E-01	0.297
	1325.50			-5.993E+00	4.114E+00	5.283E+00	4.495E-01	-1.134
	1368.21			8.155E-01	1.979E+00	3.508E+00	4.717E-01	0.232
	1436.60			-1.020E+00	4.615E+00	7.343E+00	6.340E-01	-0.139
	1691.02	*		1.072E-02	9.478E-02	1.590E-01	1.410E-02	0.067
SB-125	427.89	*		-7.355E-02	1.364E-01	2.110E-01	1.776E-02	-0.348
	463.38	+		1.334E+00	7.528E-01	7.807E-01	7.081E-02	1.709
	600.56			6.463E-02	2.511E-01	4.284E-01	3.883E-02	0.151
	635.90			-7.106E-02	3.438E-01	5.627E-01	5.078E-02	-0.126
TE-125M	109.28	*		-4.548E+00	1.359E+01	2.131E+01	2.209E+00	-0.213
I-126	388.63			5.930E-02	2.789E-01	4.595E-01	3.721E-02	0.129
	666.33	*		-1.538E-01	2.821E-01	3.787E-01	3.111E-02	-0.406
	753.82			-1.033E+00	1.789E+00	2.763E+00	2.381E-01	-0.374
SB-126	223.80			4.541E+00	5.380E+00	9.298E+00	8.365E-01	0.488
	278.60			2.786E+00	3.355E+00	5.768E+00	5.275E-01	0.483
	296.50	+		1.408E+01	3.595E+00	5.001E+00	4.551E-01	2.816
	414.70			-6.045E-02	1.074E-01	1.660E-01	1.357E-02	-0.364
	415.30			-6.426E+00	8.965E+00	1.367E+01	1.118E+00	-0.470
	555.20			6.866E-01	5.284E+00	8.978E+00	7.618E-01	0.076
	573.80			-1.039E+00	1.414E+00	2.226E+00	1.885E-01	-0.467
	593.00			-4.335E-01	1.155E+00	1.868E+00	1.575E-01	-0.232
	656.30			3.818E-01	5.194E+00	7.587E+00	6.234E-01	0.050
	666.33			-6.429E-02	1.179E-01	1.583E-01	1.301E-02	-0.406
	675.00			1.320E-01	2.740E+00	4.576E+00	3.779E-01	0.029
	695.00			-3.212E-03	9.643E-02	1.596E-01	1.334E-02	-0.020

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV) Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127		697.00	-5.837E-02	3.458E-01	5.650E-01	4.728E-02	-0.103
		720.50 *	2.365E-01	1.931E-01	3.525E-01	2.988E-02	0.671
		856.80	-4.634E-02	7.338E-01	1.030E+00	9.235E-02	-0.045
		989.30	4.702E-02	1.686E+00	2.746E+00	2.448E-01	0.017
		1034.80	8.979E+00	1.097E+01	1.954E+01	1.715E+00	0.460
		1213.00	9.971E-01	6.122E+00	1.042E+01	8.563E-01	0.096
		61.10	7.250E+01	1.037E+02	1.549E+02	1.621E+01	0.468
		252.40	3.559E+00	6.206E+00	1.029E+01	4.339E+00	0.346
		290.80	7.052E+00	3.282E+01	4.823E+01	5.595E+00	0.146
		411.60	1.799E+01	1.802E+01	3.082E+01	4.781E+00	0.584
		444.90	-9.994E+00	1.375E+01	2.067E+01	2.556E+00	-0.484
		473.00	2.652E-01	2.538E+00	4.106E+00	5.242E-01	0.065
		543.00	-2.597E+01	2.324E+01	3.506E+01	5.033E+00	-0.741
		603.60	-7.337E+00	2.026E+01	2.836E+01	3.519E+00	-0.259
		685.20 *	1.083E-01	1.778E+00	2.972E+00	3.329E-01	0.036
		698.50	-3.334E+00	1.956E+01	3.192E+01	5.019E+00	-0.104
		722.20	1.993E+01	4.386E+01	7.357E+01	8.172E+00	0.271
XE-127		783.80	3.756E+00	5.711E+00	9.887E+00	1.240E+00	0.380
		57.60	-4.045E+00	9.529E+00	1.520E+01	1.168E+00	-0.266
	+	145.22	8.783E-01	1.520E+00	1.642E+00	1.402E-01	0.535
		172.10	2.440E-02	1.635E-01	2.769E-01	2.372E-02	0.088
I-131		202.84 *	3.252E-02	6.608E-02	1.127E-01	9.964E-03	0.289
		374.96	-1.663E-01	2.993E-01	4.595E-01	3.827E-02	-0.362
		80.18	-1.898E-01	7.536E+00	1.079E+01	9.475E-01	-0.018
		284.30	-5.016E-01	2.032E+00	3.298E+00	3.154E-01	-0.152
TE-132		364.48 *	-5.311E-02	1.597E-01	2.536E-01	2.272E-02	-0.209
		636.97	9.704E-01	1.956E+00	3.409E+00	3.000E-01	0.285
		722.89	-4.274E+00	1.126E+01	1.622E+01	1.386E+00	-0.263
		49.72	-1.167E+01	3.495E+01	5.618E+01	6.063E+00	-0.208
BA-133		111.76	2.742E+01	4.722E+01	7.681E+01	8.402E+00	0.357
		116.30	-3.050E+01	4.357E+01	6.688E+01	7.334E+00	-0.456
		228.16 *	4.559E-01	9.806E-01	1.663E+00	2.657E-01	0.274
		53.15	-1.227E-01	6.082E+00	9.898E+00	8.042E-01	-0.012
I-133		79.62	8.587E-01	2.085E+00	3.045E+00	4.646E-01	0.282
		81.00	-2.063E-01	1.720E-01	2.278E-01	3.638E-02	-0.906
		276.40	3.115E-01	5.651E-01	8.502E-01	1.256E-01	0.366
		302.84	3.567E-02	2.126E-01	3.107E-01	4.221E-02	0.115
CS-134		356.01 *	2.985E-02	6.586E-02	9.788E-02	1.291E-02	0.305
		383.85	6.599E-02	4.262E-01	6.992E-01	8.606E-02	0.094
	+	510.53	1.580E+00	4.262E-01	Half-Life too short		
		529.87 *	-1.203E-03	4.262E-01	Half-Life too short		
		706.58	1.993E-01	4.262E-01	Half-Life too short		
		856.28	6.703E-02	4.262E-01	Half-Life too short		
		875.33	3.651E-02	4.262E-01	Half-Life too short		
		1236.41	1.409E+00	4.262E-01	Half-Life too short		
		1298.22	5.724E-02	4.262E-01	Half-Life too short		
		475.35	1.558E-01	2.893E+00	4.661E+00	3.919E-01	0.033
		563.23	2.671E-01	4.776E-01	8.361E-01	7.159E-02	0.319
		569.32	1.234E-01	2.633E-01	4.553E-01	3.911E-02	0.271

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CS-135 I-135		604.70		-5.541E-02	6.026E-02	7.933E-02	6.684E-03	-0.698
		795.84	*	1.498E-01	6.496E-02	1.258E-01	1.112E-02	1.191
		801.93		-5.271E-01	5.328E-01	7.769E-01	6.871E-02	-0.679
		1038.57		-3.896E+00	4.744E+00	6.762E+00	5.927E-01	-0.576
		1167.94		3.619E+00	3.421E+00	6.294E+00	5.115E-01	0.575
		1365.15		1.448E-01	1.549E+00	2.611E+00	2.340E-01	0.055
		268.24	*	2.312E-01	2.384E-01	3.692E-01	3.849E-02	0.626
		288.45		9.967E+09	2.384E-01	Half-Life	too short	
		417.63		7.818E+09	2.384E-01	Half-Life	too short	
		546.56		2.773E+10	2.384E-01	Half-Life	too short	
		836.80		2.129E+09	2.384E-01	Half-Life	too short	
		1038.76		-2.611E+10	2.384E-01	Half-Life	too short	
		1124.00		4.847E+10	2.384E-01	Half-Life	too short	
		1131.51		-1.206E+10	2.384E-01	Half-Life	too short	
		1260.41	*	-1.318E+10	2.384E-01	Half-Life	too short	
CS-136		1457.56		3.455E+11	2.384E-01	Half-Life	too short	
		1678.03		-5.099E+09	2.384E-01	Half-Life	too short	
		1706.46		-1.259E+10	2.384E-01	Half-Life	too short	
		1791.20		-1.346E+10	2.384E-01	Half-Life	too short	
		66.91		-4.252E-01	1.281E+00	1.814E+00	2.727E-01	-0.234
	+	86.29		3.355E+00	2.093E+00	3.014E+00	4.011E-01	1.113
		153.22		3.216E-02	8.851E-01	1.499E+00	1.430E-01	0.021
		163.89		1.365E+00	1.501E+00	2.569E+00	2.457E-01	0.531
		176.55		-2.084E-02	5.096E-01	8.555E-01	7.789E-02	-0.024
		273.65		-3.250E-01	7.001E-01	9.771E-01	9.465E-02	-0.333
	+	340.57		1.098E+00	3.826E-01	3.820E-01	3.448E-02	2.876
		818.51		-3.507E-02	9.646E-02	1.520E-01	1.346E-02	-0.231
		1048.07	*	3.773E-02	1.580E-01	2.621E-01	2.383E-02	0.144
		1235.34		1.899E-01	8.339E-01	1.422E+00	1.650E-01	0.134
CE-139 BA-140		165.85	*	-2.788E-02	4.003E-02	6.540E-02	5.569E-03	-0.426
		162.64		1.089E+00	1.062E+00	1.825E+00	1.647E-01	0.597
		304.84		1.808E+00	1.829E+00	2.769E+00	7.799E-01	0.653
		423.70		1.325E+00	2.847E+00	4.699E+00	1.518E+00	0.282
LA-140		537.32	*	2.111E-01	3.603E-01	6.221E-01	2.060E-01	0.339
		328.77		5.250E-01	4.239E-01	7.382E-01	6.912E-02	0.711
		432.53		2.748E-02	2.974E+00	4.800E+00	4.175E-01	0.006
		487.03		4.038E-02	1.979E-01	3.224E-01	2.896E-02	0.125
		751.79		2.026E-01	2.140E+00	3.570E+00	3.403E-01	0.057
		815.85		3.415E-01	4.224E-01	7.506E-01	7.366E-02	0.455
		867.82		1.065E-01	2.248E+00	3.207E+00	3.024E-01	0.033
		919.63		2.283E-01	3.914E+00	5.838E+00	6.416E-01	0.039
		925.24		-6.517E-01	1.526E+00	2.360E+00	2.254E-01	-0.276
		1596.49	*	-1.335E-01	1.175E-01	1.490E-01	1.285E-02	-0.897
CE-143		57.37		-8.398E-04	1.175E-01	Half-Life	too short	
		231.56		-2.360E-03	1.175E-01	Half-Life	too short	
		293.26	*	4.426E-04	1.175E-01	Half-Life	too short	
		350.59		2.480E-02	1.175E-01	Half-Life	too short	
		490.36		2.758E-04	1.175E-01	Half-Life	too short	
		664.57		7.771E-03	1.175E-01	Half-Life	too short	

---- Non-Identified Nuclides ----

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	721.93			1.085E-03	1.175E-01	Half-Life too short		
CE-144	80.11			-5.796E-03	3.422E+00	4.906E+00	4.278E-01	-0.001
	133.54	*		3.988E-02	2.995E-01	4.762E-01	7.413E-02	0.084
PM-144	476.78			4.290E-02	1.022E-01	1.690E-01	1.562E-02	0.254
	618.01			2.296E-02	4.507E-02	7.460E-02	6.424E-03	0.308
	696.49	*		-6.376E-03	4.219E-02	6.900E-02	5.774E-03	-0.092
	778.57			-2.228E+00	2.963E+00	4.484E+00	3.908E-01	-0.497
PR-144	696.49	*		-4.321E-01	2.859E+00	4.676E+00	3.911E-01	-0.092
	1489.15			-1.363E+00	1.369E+01	2.216E+01	1.918E+00	-0.062
PM-146	453.90	*		4.251E-02	6.844E-02	1.147E-01	1.205E-02	0.371
	633.02			5.539E-01	1.747E+00	2.979E+00	1.111E+00	0.186
	735.90			1.125E-01	2.152E-01	3.683E-01	1.053E-01	0.305
	747.13			-2.694E-02	1.261E-01	2.041E-01	2.862E-02	-0.132
ND-147	91.11			3.630E+00	7.931E-01	1.009E+00	9.973E-02	3.598
	319.41			-2.224E+00	4.667E+00	7.408E+00	6.646E-01	-0.300
	439.89			-9.491E-03	8.139E+00	1.311E+01	1.088E+00	-0.001
	531.02	*		-1.622E-01	8.013E-01	1.287E+00	1.915E-01	-0.126
PM-149	285.90	*		-4.733E+01	1.263E+02	2.029E+02	3.213E+01	-0.233
EU-152	121.78			-9.622E-02	1.085E-01	1.643E-01	1.655E-02	-0.586
	244.69			4.725E-01	5.037E-01	7.797E-01	7.097E-02	0.606
	344.27	*		-4.845E-03	1.488E-01	2.120E-01	1.960E-02	-0.023
	443.98			-1.926E+00	1.352E+00	1.896E+00	1.575E-01	-1.016
	778.89			-2.407E-01	3.471E-01	5.297E-01	4.617E-02	-0.454
	867.32			-4.229E-01	1.381E+00	1.866E+00	1.677E-01	-0.227
+	964.01			5.454E-01	5.141E-01	8.135E-01	7.297E-02	0.670
	1085.78			7.772E-02	5.332E-01	8.751E-01	7.503E-02	0.089
	1112.02			-4.364E-01	4.383E-01	5.569E-01	4.704E-02	-0.784
	1407.95			9.960E-02	2.336E-01	4.116E-01	3.545E-02	0.242
GD-153	69.67			1.154E+00	2.674E+00	3.934E+00	3.156E-01	0.293
	83.37			1.164E+01	2.573E+01	3.741E+01	3.368E+00	0.311
+	97.43	*		1.750E-01	1.495E-01	1.903E-01	1.690E-02	0.919
	103.18			-8.733E-02	1.480E-01	2.295E-01	2.002E-02	-0.381
EU-154	123.07			-5.595E-03	7.424E-02	1.173E-01	1.347E-02	-0.048
	247.94			-7.100E-02	5.159E-01	7.855E-01	9.309E-02	-0.090
	591.81			2.533E-01	7.837E-01	1.283E+00	1.479E-01	0.198
	723.30			-1.308E-01	2.734E-01	3.891E-01	3.661E-02	-0.336
	756.87			-5.219E-01	8.923E-01	1.370E+00	1.642E-01	-0.381
	873.19			1.228E-01	4.301E-01	7.239E-01	9.060E-02	0.170
	996.32			4.609E-01	4.957E-01	8.013E-01	1.434E-01	0.575
	1004.76			-7.852E-02	3.336E-01	4.497E-01	5.319E-02	-0.175
	1274.45	*		-1.277E-02	1.594E-01	2.636E-01	2.935E-02	-0.048
EU-155	48.70			-8.269E-01	4.246E+00	6.873E+00	5.882E-01	-0.120
	60.01			5.229E+00	8.490E+00	1.268E+01	9.588E-01	0.412
+	86.54			3.068E-01	1.892E-01	2.752E-01	2.586E-02	1.115
	105.31	*		8.280E-03	1.509E-01	2.413E-01	2.122E-02	0.034
TB-160	86.79			8.210E-01	5.062E-01	7.371E-01	6.883E-02	1.114
	197.04			-1.652E-01	7.722E-01	1.221E+00	1.073E-01	-0.135
	215.65			4.876E-01	1.047E+00	1.727E+00	1.544E-01	0.282
	298.57			9.379E-02	2.495E-01	2.725E-01	2.477E-02	0.344

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		879.36	*	-5.306E-02	1.948E-01	3.092E-01	2.788E-02	-0.172
		962.29		1.171E+00	7.409E-01	1.274E+00	1.144E-01	0.919
	+	966.15		3.751E-01	3.536E-01	6.469E-01	5.801E-02	0.580
		1177.93		4.047E-01	4.424E-01	8.115E-01	6.581E-02	0.499
		1271.85		-1.126E-01	9.397E-01	1.547E+00	1.297E-01	-0.073
		80.57		-1.747E-01	4.468E-01	6.278E-01	5.499E-02	-0.278
		184.41		2.018E-01	6.078E-02	1.001E-01	8.683E-03	2.017
		280.46		-4.731E-02	1.149E-01	1.848E-01	1.689E-02	-0.256
		410.95		4.361E-01	3.486E-01	6.094E-01	4.970E-02	0.716
		711.68	*	-5.819E-03	7.695E-02	1.266E-01	1.068E-02	-0.046
TM-171		752.31		-3.338E-02	3.360E-01	5.492E-01	4.730E-02	-0.061
		810.29		-7.307E-02	7.940E-02	1.171E-01	1.033E-02	-0.624
		51.35		3.143E+01	5.157E+01	8.611E+01	7.167E+00	0.365
		52.39		1.351E+01	2.703E+01	4.491E+01	3.687E+00	0.301
		59.40		1.669E+01	4.622E+01	6.823E+01	5.143E+00	0.245
LU-176		66.72	*	6.387E+00	4.473E+01	6.503E+01	5.122E+00	0.098
	+	88.36		6.042E-01	3.726E-01	5.492E-01	5.181E-02	1.100
		201.83		-6.160E-02	4.108E-02	6.365E-02	5.622E-03	-0.968
		306.84	*	4.145E-03	3.192E-02	5.285E-02	4.784E-03	0.078
LU-177		401.10		7.215E+00	9.983E+00	1.692E+01	1.371E+00	0.426
		112.95		1.612E+00	2.595E+00	4.189E+00	3.632E-01	0.385
LU-177M		208.36	*	-5.984E-01	1.874E+00	2.706E+00	2.405E-01	-0.221
		52.97		-1.582E-02	2.763E+00	4.499E+00	3.664E-01	-0.004
		54.07		-1.533E-01	1.418E+00	2.299E+00	1.845E-01	-0.067
		61.30		3.119E+00	2.638E+00	4.023E+00	3.068E-01	0.775
HF-181		121.62		-3.960E-01	5.521E-01	8.442E-01	7.416E-02	-0.469
		147.16		1.450E-01	9.260E-01	1.397E+00	1.192E-01	0.104
		171.86		6.210E-02	6.554E-01	1.108E+00	9.487E-02	0.056
		218.09		2.968E-01	1.164E+00	1.964E+00	1.759E-01	0.151
	+	268.79		3.859E+00	1.945E+00	1.993E+00	1.824E-01	1.937
		319.02		-6.441E-02	3.566E-01	5.776E-01	5.182E-02	-0.112
		367.43		2.403E-01	1.309E+00	2.155E+00	1.820E-01	0.111
		413.65	*	-1.741E-01	2.523E-01	3.863E-01	3.156E-02	-0.451
		56.28		-1.380E+00	1.518E+00	2.367E+00	1.846E-01	-0.583
		57.53		-3.276E-01	8.026E-01	1.282E+00	9.849E-02	-0.256
		65.20		2.075E+00	1.622E+00	2.475E+00	1.932E-01	0.838
		133.02		-1.029E-02	9.766E-02	1.536E-01	1.325E-02	-0.067
W-181		136.25		-4.096E-01	6.142E-01	1.014E+00	8.711E-02	-0.404
		345.85		3.692E-03	4.217E-01	4.340E-01	3.785E-02	0.009
		482.03	*	-7.140E-02	6.233E-02	8.954E-02	7.545E-03	-0.797
		56.28		-5.394E-01	5.930E-01	9.247E-01	7.212E-02	-0.583
		57.53		-1.280E-01	3.138E-01	5.011E-01	3.851E-02	-0.255
TA-182		65.20	*	8.049E-01	6.292E-01	9.602E-01	7.496E-02	0.838
		67.75		-9.081E-02	1.827E-01	2.566E-01	2.034E-02	-0.354
		100.10		2.083E-01	2.871E-01	4.242E-01	3.729E-02	0.491
		152.43		-5.455E-02	4.424E-01	7.443E-01	6.341E-02	-0.073
		222.10		-2.859E-02	4.605E-01	7.650E-01	6.874E-02	-0.037
	+	1001.68		1.397E+01	4.377E+00	7.028E+00	6.241E-01	1.987
	+	1121.28		7.790E-01	3.378E-01	4.760E-01	3.998E-02	1.637

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-183		1189.05		1.748E-01	3.948E-01	6.916E-01	5.632E-02	0.253
		1221.42	*	1.182E-01	2.538E-01	4.441E-01	3.660E-02	0.266
		1230.97		-3.548E-01	5.719E-01	8.907E-01	7.366E-02	-0.398
		57.98		-2.626E-01	3.305E-01	4.912E-01	3.756E-02	-0.535
		59.32		6.051E-02	1.903E-01	2.803E-01	2.114E-02	0.216
		67.20		-7.755E-02	3.241E-01	4.617E-01	3.647E-02	-0.168
RE-184		162.32	*	1.345E-01	1.527E-01	2.615E-01	2.226E-02	0.514
	+	208.81		2.474E+00	1.834E+00	2.423E+00	2.154E-01	1.021
		291.72		-1.063E-01	1.418E+00	2.034E+00	1.854E-01	-0.052
		57.98		-9.666E-01	1.217E+00	1.808E+00	1.383E-01	-0.535
		59.32		2.226E-01	6.998E-01	1.031E+00	7.776E-02	0.216
		67.20		-2.854E-01	1.193E+00	1.699E+00	1.342E-01	-0.168
OS-185		161.27		-3.872E-01	4.830E-01	7.865E-01	6.696E-02	-0.492
		216.55		-1.301E-01	3.616E-01	5.927E-01	5.303E-02	-0.220
		252.85	*	1.133E-01	3.182E-01	5.369E-01	4.900E-02	0.211
		318.01		2.088E-01	6.167E-01	1.032E+00	9.265E-02	0.202
		792.07		-1.872E+00	1.437E+00	2.057E+00	1.803E-01	-0.910
		903.28		-1.474E-01	1.354E+00	2.184E+00	1.978E-01	-0.067
RE-188		920.93		1.259E-01	5.906E-01	9.626E-01	8.699E-02	0.131
		59.72		5.265E-01	4.957E-01	7.568E-01	5.708E-02	0.696
		61.14		2.289E-01	2.867E-01	4.308E-01	3.282E-02	0.531
		69.30		2.130E-01	4.842E-01	7.128E-01	5.704E-02	0.299
		592.07		1.046E+00	3.161E+00	5.322E+00	4.489E-01	0.196
		646.12	*	-2.835E-02	5.451E-02	8.633E-02	7.132E-03	-0.328
W-188		717.42		-6.043E-01	1.178E+00	1.854E+00	1.569E-01	-0.326
		874.81		3.087E-01	8.529E-01	1.445E+00	1.302E-01	0.214
		880.27		-1.717E-01	1.087E+00	1.747E+00	1.576E-01	-0.098
		155.03	*	1.016E-01	2.300E-01	3.951E-01	3.365E-02	0.257
		477.96		4.625E+00	4.527E+00	7.810E+00	6.573E-01	0.592
		633.10		5.784E-01	3.582E+00	6.065E+00	5.042E-01	0.095
IR-192	+	63.58		5.463E+02	1.354E+02	1.822E+02	1.409E+01	2.999
		227.08		2.473E+00	1.757E+01	2.943E+01	2.654E+00	0.084
		290.67	*	3.132E+00	1.107E+01	1.636E+01	1.492E+00	0.191
	+	295.96		1.070E+00	2.733E-01	3.809E-01	3.489E-02	2.809
		308.46		-1.288E-01	1.286E-01	1.963E-01	1.783E-02	-0.656
		316.51	*	6.223E-03	4.827E-02	7.975E-02	7.185E-03	0.078
AU-195		468.07		2.517E-02	1.079E-01	1.551E-01	1.400E-02	0.162
		604.41		-3.277E-01	7.909E-01	1.102E+00	1.418E-01	-0.297
		612.46		2.559E+00	1.211E+00	2.073E+00	2.010E-01	1.234
		65.12		4.908E-01	2.963E-01	4.578E-01	3.572E-02	1.072
		66.83		-5.304E-02	1.525E-01	2.159E-01	1.702E-02	-0.246
	+	75.70		1.374E+00	3.668E-01	6.362E-01	5.335E-02	2.160
TL-200	+	98.88	*	5.096E-01	4.354E-01	5.665E-01	5.002E-02	0.900
		129.76		5.102E+00	4.220E+00	6.994E+00	6.058E-01	0.730
		367.94	*	2.283E-04	4.220E+00	Half-Life	too short	
		579.30		-3.406E-03	4.220E+00	Half-Life	too short	
		828.27		1.279E-03	4.220E+00	Half-Life	too short	
		1205.75		4.173E-04	4.220E+00	Half-Life	too short	
TL-201		68.90		6.860E+00	7.875E+00	1.183E+01	9.442E-01	0.580

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-202	70.82			2.261E+00	4.677E+00	6.887E+00	5.567E-01	0.328
	80.30			-3.928E+00	8.589E+00	1.203E+01	1.051E+00	-0.327
	135.34			-7.093E+00	3.813E+01	5.968E+01	5.133E+00	-0.119
	167.43	*		-1.377E+01	9.765E+00	1.534E+01	1.308E+00	-0.898
	68.90			5.988E-01	6.874E-01	1.033E+00	8.243E-02	0.580
	70.82			1.969E-01	4.071E-01	5.996E-01	4.846E-02	0.328
HG-203	80.30			-3.420E-01	7.480E-01	1.047E+00	9.148E-02	-0.327
	439.56	*		1.598E-02	9.722E-02	1.587E-01	1.316E-02	0.101
	70.83			8.548E-01	1.754E+00	2.580E+00	3.424E-01	0.331
	72.87			1.275E+00	9.485E-01	1.577E+00	2.039E-01	0.809
BI-207	82.60			5.182E-01	1.900E+00	2.753E+00	3.838E-01	0.188
	279.20	*		4.606E-02	5.528E-02	9.507E-02	8.914E-03	0.485
	72.80			3.034E-01	2.725E-01	4.546E-01	3.727E-02	0.667
	74.97		+	7.616E-01	2.033E-01	3.164E-01	2.638E-02	2.407
TL-207	84.90			4.697E-01	3.290E-01	4.946E-01	4.526E-02	0.950
	569.67			1.591E-02	4.128E-02	7.095E-02	6.010E-03	0.224
	1063.62	*		3.015E-02	7.654E-02	1.289E-01	1.117E-02	0.234
	1770.23			-2.458E-01	9.863E-01	1.292E+00	1.082E-01	-0.190
	81.07			-4.531E-01	3.746E-01	5.027E-01	4.424E-02	-0.901
	83.78			1.424E-01	2.187E-01	3.204E-01	2.898E-02	0.444
PO-209	94.90			7.521E-01	4.032E-01	6.751E-01	6.070E-02	1.114
	122.32			-1.106E+00	2.517E+00	3.905E+00	3.674E-01	-0.283
	144.24		+	8.583E-01	1.486E+00	1.665E+00	1.594E-01	0.516
	154.21			1.672E-01	5.231E-01	8.951E-01	8.401E-02	0.187
	269.46		+	9.028E-01	4.554E-01	5.108E-01	4.760E-02	1.767
	323.87	*		-2.234E-02	8.855E-01	1.448E+00	2.585E-01	-0.015
BI-210	338.28		+	8.702E+00	3.121E+00	3.243E+00	4.035E-01	2.683
	445.03			-6.317E-01	2.989E+00	4.723E+00	5.607E-01	-0.134
	260.50			1.833E-02	1.410E+01	2.333E+01	2.133E+00	0.001
	262.80			9.374E+00	3.799E+01	6.363E+01	5.819E+00	0.147
	896.60	*		-4.067E+00	9.814E+00	1.525E+01	1.381E+00	-0.267
	46.50	*		3.540E+00	6.297E+00	1.042E+01	9.840E-01	0.340
PB-210	46.50	*		3.540E+00	6.297E+00	1.042E+01	9.840E-01	0.340
PO-210	46.50	*		3.540E+00	6.296E+00	1.042E+01	8.937E-01	0.340
PB-211	404.84	*		5.070E-02	1.376E+00	2.232E+00	1.397E+00	0.023
BI-212	427.08			-7.452E-01	3.070E+00	4.809E+00	2.986E+00	-0.155
	831.96			-3.070E-01	1.595E+00	2.546E+00	1.596E+00	-0.121
	727.18	*	+	6.311E-01	5.483E-01	8.881E-01	8.801E-02	0.711
	785.46			2.972E+00	2.729E+00	4.869E+00	4.255E-01	0.610
	1620.62			4.014E-01	1.685E+00	2.831E+00	2.437E-01	0.142
	81.07			-4.531E-01	3.746E-01	5.027E-01	4.424E-02	-0.901
PO-215	83.78			1.424E-01	2.187E-01	3.204E-01	2.898E-02	0.444
	94.90			7.521E-01	4.032E-01	6.751E-01	6.070E-02	1.114
	122.32			-1.106E+00	2.517E+00	3.905E+00	3.674E-01	-0.283
	144.24		+	8.583E-01	1.486E+00	1.665E+00	1.594E-01	0.516
	154.21			1.672E-01	5.231E-01	8.951E-01	8.401E-02	0.187
	269.46		+	9.028E-01	4.554E-01	5.108E-01	4.760E-02	1.767
PO-215	323.87	*		-2.234E-02	8.855E-01	1.448E+00	2.585E-01	-0.015
	338.28		+	8.702E+00	3.121E+00	3.243E+00	4.035E-01	2.683

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RN-219	+	445.03		-6.317E-01	2.989E+00	4.723E+00	5.607E-01	-0.134
		271.23		1.158E+00	5.876E-01	6.497E-01	6.990E-02	1.783
		401.81	*	2.984E-02	6.210E-01	1.009E+00	1.487E-01	0.030
RN-220		549.76	*	-3.631E+01	3.530E+01	5.370E+01	4.558E+00	-0.676
RA-223		81.07		-4.531E-01	3.746E-01	5.027E-01	4.424E-02	-0.901
		83.78		1.424E-01	2.187E-01	3.204E-01	2.898E-02	0.444
		94.90		7.521E-01	4.032E-01	6.751E-01	6.070E-02	1.114
AC-227		122.32		-1.106E+00	2.517E+00	3.905E+00	3.674E-01	-0.283
		144.24	+	8.583E-01	1.486E+00	1.665E+00	1.594E-01	0.516
		154.21		1.672E-01	5.231E-01	8.951E-01	8.401E-02	0.187
	+	269.46		9.028E-01	4.554E-01	5.108E-01	4.760E-02	1.767
		323.87	*	-2.234E-02	8.855E-01	1.448E+00	2.585E-01	-0.015
	+	338.28		8.702E+00	3.121E+00	3.243E+00	4.035E-01	2.683
		445.03		-6.317E-01	2.989E+00	4.723E+00	5.607E-01	-0.134
		79.80		5.430E-01	2.671E+00	3.864E+00	8.321E-01	0.141
		236.00		4.360E-01	3.257E-01	5.122E-01	6.434E-02	0.851
		256.20	*	-3.550E-01	5.426E-01	8.627E-01	1.349E-01	-0.411
	+	286.10		-1.491E+00	2.048E+00	3.206E+00	4.342E-01	-0.465
		299.80		4.281E+00	2.574E+00	3.602E+00	6.384E-01	1.189
TH-227		304.40		1.396E+00	2.657E+00	3.991E+00	7.442E-01	0.350
		334.20		9.129E-01	3.366E+00	4.935E+00	9.628E-01	0.185
		79.80		5.430E-01	2.671E+00	3.864E+00	8.427E-01	0.141
	+	94.00		4.859E+01	1.182E+01	7.953E+00	1.745E+00	6.110
		236.00		4.360E-01	3.249E-01	5.122E-01	5.853E-02	0.851
		256.20	*	-3.550E-01	5.436E-01	8.627E-01	1.580E-01	-0.411
TH-229		286.10		-1.491E+00	2.529E+00	3.206E+00	3.219E+00	-0.465
		299.80	+	4.281E+00	2.574E+00	3.602E+00	6.384E-01	1.189
		304.40		1.396E+00	2.657E+00	3.991E+00	7.442E-01	0.350
		334.20		9.129E-01	3.366E+00	4.935E+00	9.628E-01	0.185
		85.43		5.625E-01	3.315E-01	5.013E-01	4.612E-02	1.122
		88.47	+	3.478E-01	2.145E-01	3.146E-01	2.964E-02	1.106
PA-231	+	100.00		2.159E-01	3.028E-01	4.438E-01	3.904E-02	0.487
		193.63	*	-8.535E-02	6.604E-01	1.100E+00	9.638E-02	-0.078
		210.97		1.934E+00	1.434E+00	1.799E+00	1.603E-01	1.075
TH-231	+	283.67	*	-8.388E-01	2.050E+00	3.289E+00	5.092E-01	-0.255
		301.29		1.712E+00	1.007E+00	1.388E+00	1.745E-01	1.233
U-231		81.07		-4.531E-01	3.746E-01	5.027E-01	4.424E-02	-0.901
		83.78		1.424E-01	2.187E-01	3.204E-01	2.898E-02	0.444
		94.90		7.521E-01	4.032E-01	6.751E-01	6.070E-02	1.114
	+	122.32		-1.106E+00	2.517E+00	3.905E+00	3.674E-01	-0.283
		144.24		8.583E-01	1.486E+00	1.665E+00	1.594E-01	0.516
		154.21		1.672E-01	5.231E-01	8.951E-01	8.401E-02	0.187
	+	269.46		9.028E-01	4.554E-01	5.108E-01	4.760E-02	1.767
		323.87	*	-2.234E-02	8.855E-01	1.448E+00	2.585E-01	-0.015
	+	338.28		8.702E+00	3.121E+00	3.243E+00	4.035E-01	2.683
		445.03		-6.317E-01	2.989E+00	4.723E+00	5.607E-01	-0.134
	+	84.21		3.879E+00	9.754E+00	1.414E+01	1.284E+00	0.274
		92.29		4.939E+01	6.845E+00	9.061E+00	8.279E-01	5.450
		95.87	*	-4.085E+00	1.772E+00	2.513E+00	2.248E-01	-1.626

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233		108.00		-1.786E+00	3.020E+00	4.676E+00	4.053E-01	-0.382
	+	75.28		2.222E+01	6.570E+00	9.520E+00	1.447E+00	2.334
	+	86.59		4.987E+00	3.326E+00	4.475E+00	1.211E+00	1.115
	+	300.12		1.194E+00	7.091E-01	9.960E-01	1.509E-01	1.198
		311.98	*	-1.956E-02	8.524E-02	1.377E-01	1.275E-02	-0.142
PA-234	+	340.50		5.279E+00	2.178E+00	1.867E+00	4.461E-01	2.828
		398.62		2.767E-01	3.020E+00	4.923E+00	1.303E+00	0.056
		415.76		-2.042E+00	2.400E+00	3.562E+00	7.615E-01	-0.573
	+	63.00		1.582E+01	4.417E+00	5.408E+00	8.119E-01	2.925
		94.67		1.164E+00	3.363E-01	5.388E-01	6.828E-02	2.160
	+	98.44		2.063E-01	2.098E-01	2.279E-01	2.279E-01	0.905
	+	99.86		1.070E+00	9.138E-01	1.136E+00	9.996E-02	0.942
		111.00		9.143E-02	2.794E-01	4.505E-01	5.460E-02	0.203
		131.20		-4.319E-02	1.599E-01	2.498E-01	2.159E-02	-0.173
		152.70		6.515E-02	4.281E-01	7.280E-01	1.237E-01	0.089
	+	186.00		1.000E+01	4.618E+00	4.230E+00	1.321E+00	2.364
		226.40		-1.966E-01	5.496E-01	8.981E-01	1.209E-01	-0.219
		227.20		8.336E-02	5.924E-01	9.925E-01	8.950E-02	0.084
		248.90		-5.691E-01	1.156E+00	1.786E+00	4.038E-01	-0.319
		293.70		3.887E+00	1.317E+00	1.985E+00	3.483E-01	1.959
		369.80		1.820E-01	1.263E+00	2.072E+00	4.496E-01	0.088
		568.70		2.021E-01	1.339E+00	2.263E+00	1.917E-01	0.089
		569.50		1.412E-01	3.663E-01	6.295E-01	5.333E-02	0.224
		574.00		-1.085E+00	1.977E+00	3.166E+00	2.680E-01	-0.343
		699.00		-4.056E-01	9.264E-01	1.470E+00	2.789E-01	-0.276
		706.10		9.809E-01	1.507E+00	2.442E+00	1.088E+00	0.402
		733.00		-1.796E-01	6.332E-01	8.746E-01	1.938E-01	-0.205
		742.81		1.937E-01	1.853E+00	3.086E+00	2.074E+00	0.063
		796.30		2.980E+00	1.454E+00	2.418E+00	6.554E-01	1.232
		805.60		1.322E+00	1.373E+00	2.373E+00	7.285E-01	0.557
		819.60		-8.291E-02	1.568E+00	2.561E+00	9.751E-01	-0.032
		826.30		-2.641E-01	1.063E+00	1.688E+00	7.559E-01	-0.157
		831.60		-3.423E-01	8.246E-01	1.283E+00	3.840E-01	-0.267
		876.40		1.180E-03	1.184E+00	1.938E+00	1.993E+00	0.001
		880.51		6.936E-02	3.840E-01	6.402E-01	5.775E-02	0.108
		883.24		-1.974E-01	4.268E-01	6.284E-01	4.227E-01	-0.314
		899.00		-5.899E-01	1.130E+00	1.683E+00	7.374E-01	-0.350
		925.00		-5.031E-01	1.589E+00	2.494E+00	2.253E-01	-0.202
		926.50		-3.485E-02	2.348E-01	3.760E-01	9.557E-02	-0.093
		946.00	*	-3.504E-01	3.986E-01	5.685E-01	1.077E-01	-0.616
		949.00		-2.492E-01	6.159E-01	9.618E-01	8.655E-02	-0.259
		980.50		-7.055E-02	1.019E+00	1.642E+00	1.467E-01	-0.043
PA-234M		1394.10		1.132E-01	1.636E+00	2.739E+00	1.783E+00	0.041
		766.42		1.677E+01	1.900E+01	3.017E+01	1.531E+01	0.556
NP-236	+	1001.03	*	3.168E+01	1.005E+01	1.606E+01	1.637E+00	1.973
		94.67		8.929E-01	2.432E-01	4.096E-01	3.687E-02	2.180
	+	98.44		1.560E-01	1.333E-01	1.723E-01	1.524E-02	0.905
		111.00		6.916E-02	2.112E-01	3.407E-01	2.952E-02	0.203
		160.31	*	-1.174E-01	1.084E-01	1.740E-01	1.481E-02	-0.675

----- 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		3.565E-01	3.046E-01	3.871E-01	3.410E-02	0.921
		117.00	*	-1.849E-04	2.810E-01	4.463E-01	3.887E-02	0.000
	+	209.75		1.949E+00	1.444E+00	1.886E+00	1.678E-01	1.033
		228.18		1.452E-01	3.086E-01	5.245E-01	4.733E-02	0.277
		277.60		7.024E-03	2.465E-01	4.072E-01	3.725E-02	0.017
AM-241		334.30		3.204E-01	1.894E+00	2.754E+00	2.436E-01	0.116
		59.54	*	2.630E-01	2.611E-01	3.974E-01	3.275E-02	0.662
CM-243	+	99.55		3.669E-01	3.135E-01	3.984E-01	3.509E-02	0.921
		103.76	*	7.652E-02	1.314E-01	2.151E-01	1.874E-02	0.356
		117.00		-1.903E-04	2.891E-01	4.592E-01	3.999E-02	0.000
	+	209.75		1.921E+00	1.424E+00	1.859E+00	1.654E-01	1.033
		228.18		1.468E-01	3.118E-01	5.300E-01	4.782E-02	0.277
AM-246		277.60		7.082E-03	2.485E-01	4.106E-01	3.755E-02	0.017
		798.80		-3.019E-01	1.978E-01	2.720E-01	2.390E-02	-1.110
		1036.00		3.518E-01	3.545E-01	6.454E-01	5.662E-02	0.545
		1062.04		1.132E-01	3.283E-01	5.505E-01	4.775E-02	0.206
		1078.86	*	7.211E-02	1.978E-01	3.325E-01	2.861E-02	0.217
CM-247		278.00		6.749E-02	1.016E+00	1.683E+00	1.539E-01	0.040
		287.40		3.992E-01	1.645E+00	2.748E+00	2.508E-01	0.145
CF-249		402.60	*	8.493E-03	5.558E-02	9.091E-02	7.373E-03	0.093
		252.85		4.248E-01	1.193E+00	2.013E+00	1.837E-01	0.211
		333.44		-1.499E-02	2.598E-01	3.702E-01	3.277E-02	-0.040
CF-251		387.95	*	2.225E-02	5.389E-02	9.001E-02	7.301E-03	0.247
		176.60	*	-1.108E-02	1.739E-01	2.917E-01	2.511E-02	-0.038
		227.00		8.927E-02	5.245E-01	8.801E-01	7.935E-02	0.101
		285.00		-4.680E-01	2.345E+00	3.817E+00	3.487E-01	-0.123

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]G245396002      *
* Acquisition date   : 5-FEB-2010 18:59:38 Detector SN# :                  *
* Detector ID        : GAM01                      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 02:00:01.09              Half life ratio : 8.000      *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 21-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245396002              Analyst initials: MXR1         *
* Batch Number       : 944962                  Sample Quantity : 1.0051E+02 GRAM *
* Recovery           : 1.00000                 Carrier Weight  : 0.00000        *
*****
*                                     QC DATA                               *
*
* Standard Weight    : 0.00000
* CALIB. DATE/TIME   : 12-JAN-2010 15:15:52 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	2.560E+01	2.994E+00	7.156E-01	0.000E+00
CD-109	2.593E+00	1.567E+00	2.151E+00	0.000E+00
SN-126	2.548E-01	1.539E-01	2.288E-01	0.000E+00
BA-137M	4.111E-01	1.205E-01	7.534E-02	0.000E+00
CS-137	4.346E-01	1.274E-01	7.964E-02	0.000E+00
CE-141	7.969E-02	1.351E-01	1.341E-01	0.000E+00
TL-208	4.531E-01	1.247E-01	7.519E-02	0.000E+00
BI-211	4.391E+00	7.642E-01	4.462E-01	0.000E+00
PB-212	1.870E+00	2.371E-01	1.139E-01	0.000E+00
PO-212	1.870E+00	2.371E-01	1.139E-01	0.000E+00
BI-214	1.343E+00	2.564E-01	1.568E-01	0.000E+00
PB-214	1.527E+00	2.771E-01	1.556E-01	0.000E+00
PO-214	1.527E+00	2.771E-01	1.556E-01	0.000E+00
PO-216	1.870E+00	2.371E-01	1.139E-01	0.000E+00
PO-218	1.527E+00	2.771E-01	1.556E-01	0.000E+00
RA-224	4.620E+00	1.530E+00	1.297E+00	0.000E+00
RA-226	1.343E+00	2.564E-01	1.568E-01	0.000E+00
AC-228	1.802E+00	4.267E-01	2.660E-01	0.000E+00
RA-228	1.802E+00	4.267E-01	2.660E-01	0.000E+00
TH-228	1.899E+00	2.408E-01	1.157E-01	0.000E+00
TH-230	1.343E+00	2.564E-01	1.568E-01	0.000E+00
TH-232	1.802E+00	4.267E-01	2.660E-01	0.000E+00
TH-234	1.357E+01	3.907E+00	3.071E+00	0.000E+00
U-234	1.343E+00	2.564E-01	1.568E-01	0.000E+00
U-235	2.649E-01	4.508E-01	4.670E-01	0.000E+00
NP-237	7.481E-01	4.767E-01	6.187E-01	0.000E+00
U-238	1.357E+01	3.907E+00	3.071E+00	0.000E+00
AM-243	4.243E-01	1.110E-01	1.327E-01	0.000E+00
ANH-511	1.351E-01	1.103E-01	6.741E-02	0.000E+00

---- Non-Identified Nuclides ----

Key-Line Activity	K.L. Act error	MDA
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Nuclide	(pCi/GRAM) Ided	(pCi/GRAM)	
BE-7	2.927E-01	4.743E-01	8.068E-01	0.000E+00	NOT IDENT.
NA-22	-2.984E-03	5.534E-02	9.291E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	9.930E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-2.336E-02	3.860E-02	5.350E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	8.029E-02	1.111E-01	0.000E+00	FAIL ABUN
SC-46	-2.764E-02	5.335E-02	8.328E-02	0.000E+00	FAIL ABUN
V-48	-1.306E-02	9.929E-02	1.609E-01	0.000E+00	NOT IDENT.
CR-51	3.559E-02	5.063E-01	8.464E-01	0.000E+00	NOT IDENT.
MN-52	-1.867E-01	2.672E-01	3.856E-01	0.000E+00	NOT IDENT.
MN-54	-5.390E-03	4.910E-02	8.078E-02	0.000E+00	NOT IDENT.
CO-56	-7.813E-02	4.822E-02	6.302E-02	0.000E+00	NOT IDENT.
CO-57	-3.360E-02	3.663E-02	5.649E-02	0.000E+00	NOT IDENT.
CO-58	-4.115E-02	5.140E-02	7.817E-02	0.000E+00	NOT IDENT.
FE-59	-7.262E-02	1.370E-01	2.104E-01	0.000E+00	NOT IDENT.
CO-60	1.316E-02	5.282E-02	9.173E-02	0.000E+00	NOT IDENT.
ZN-65	1.661E-02	1.187E-01	1.710E-01	0.000E+00	NOT IDENT.
GE-68	3.702E-01	1.621E+00	2.720E+00	0.000E+00	NOT IDENT.
AS-73	3.819E-01	1.356E+00	2.280E+00	0.000E+00	NOT IDENT.
AS-74	1.024E-02	1.147E-01	1.963E-01	0.000E+00	NOT IDENT.
SE-75	7.445E-03	6.690E-02	9.958E-02	0.000E+00	NOT IDENT.
BR-77	9.458E+00	1.614E+01	2.654E+01	0.000E+00	FAIL ABUN
SR-82	-7.007E-01	5.193E-01	7.449E-01	0.000E+00	NOT IDENT.
RB-83	7.073E-02	1.024E-01	1.697E-01	0.000E+00	NOT IDENT.
RB-84	3.174E-02	9.452E-02	1.621E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.115E+01	2.004E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.728E-02	1.030E-01	0.000E+00	NOT IDENT.
RB-86	1.713E-01	1.072E+00	1.783E+00	0.000E+00	NOT IDENT.
Y-88	-6.880E-03	4.268E-02	6.735E-02	0.000E+00	NOT IDENT.
ZR-88	-3.429E-03	3.946E-02	6.454E-02	0.000E+00	NOT IDENT.
Y-91	2.442E+00	2.473E+01	4.234E+01	0.000E+00	NOT IDENT.
NB-94	5.566E-03	4.395E-02	7.471E-02	0.000E+00	NOT IDENT.
NB-95	1.334E-02	6.347E-02	1.079E-01	0.000E+00	NOT IDENT.
NB-95M	1.684E-01	1.720E-01	2.710E-01	0.000E+00	NOT IDENT.
ZR-95	-6.635E-02	8.347E-02	1.271E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.725E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	3.275E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	9.119E-01	1.632E+01	2.749E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	9.338E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.883E-02	4.568E-02	7.300E-02	0.000E+00	NOT IDENT.
RH-102	-2.364E-03	4.379E-02	7.101E-02	0.000E+00	NOT IDENT.
RU-103	-2.794E-02	5.865E-02	9.868E-02	0.000E+00	FAIL ABUN
RH-106	-3.267E-01	4.186E-01	6.579E-01	0.000E+00	FAIL ABUN
RU-106	-3.267E-01	4.173E-01	6.579E-01	0.000E+00	FAIL ABUN
AG-108M	-1.699E-02	4.605E-02	7.323E-02	0.000E+00	NOT IDENT.
AG-110M	-1.735E-02	5.214E-02	7.324E-02	0.000E+00	NOT IDENT.
IN-111	1.014E-01	1.620E+00	2.413E+00	0.000E+00	NOT IDENT.
IN-113M	-6.352E-03	5.786E-02	9.448E-02	0.000E+00	NOT IDENT.
SN-113	-6.352E-03	5.786E-02	9.448E-02	0.000E+00	NOT IDENT.
IN-114M	1.625E-01	2.662E-01	4.144E-01	0.000E+00	NOT IDENT.
CD-115	1.467E+01	1.481E+01	2.710E+01	0.000E+00	NOT IDENT.
SN-117M	-4.014E-02	7.259E-02	1.219E-01	0.000E+00	NOT IDENT.
SB-122	-6.151E-01	2.855E+00	4.786E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	9.314E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-2.189E-02	3.692E-02	6.185E-02	0.000E+00	NOT IDENT.
I-124	6.473E-02	1.036E+00	1.670E+00	0.000E+00	NOT IDENT.
SB-124	1.072E-02	9.288E-02	1.576E-01	0.000E+00	FAIL ABUN
SB-125	-7.355E-02	1.337E-01	2.100E-01	0.000E+00	FAIL ABUN
TE-125M	-4.548E+00	1.332E+01	2.128E+01	0.000E+00	NOT IDENT.
I-126	-1.538E-01	2.764E-01	3.763E-01	0.000E+00	NOT IDENT.
SB-126	2.365E-01	1.892E-01	3.502E-01	0.000E+00	FAIL ABUN
SB-127	1.083E-01	1.743E+00	2.953E+00	0.000E+00	NOT IDENT.
XE-127	3.252E-02	6.476E-02	1.124E-01	0.000E+00	FAIL ABUN
I-131	-5.311E-02	1.565E-01	2.524E-01	0.000E+00	NOT IDENT.
TE-132	4.559E-01	9.610E-01	1.658E+00	0.000E+00	NOT IDENT.
BA-133	2.985E-02	6.454E-02	9.743E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	9.572E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.366E-02	1.250E-01	0.000E+00	NOT IDENT.
CS-135	2.312E-01	2.336E-01	3.678E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.160E+16	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.773E-02	1.548E-01	2.601E-01	0.000E+00	FAIL ABUN
CE-139	-2.788E-02	3.923E-02	6.524E-02	0.000E+00	NOT IDENT.
BA-140	2.111E-01	3.531E-01	6.185E-01	0.000E+00	NOT IDENT.
LA-140	-1.335E-01	1.151E-01	1.476E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.403E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	3.988E-02	2.935E-01	4.754E-01	0.000E+00	NOT IDENT.
PM-144	-6.376E-03	4.134E-02	6.855E-02	0.000E+00	NOT IDENT.

PR-144	-4.321E-01	2.802E+00	4.646E+00	0.000E+00	NOT IDENT.
PM-146	4.251E-02	6.708E-02	1.141E-01	0.000E+00	NOT IDENT.
ND-147	-1.622E-01	7.853E-01	1.280E+00	0.000E+00	NOT IDENT.
PM-149	-4.733E+01	1.238E+02	2.021E+02	0.000E+00	NOT IDENT.
EU-152	-4.845E-03	1.458E-01	2.111E-01	0.000E+00	FAIL ABUN
GD-153	1.750E-01	1.465E-01	1.901E-01	0.000E+00	FAIL ABUN
EU-154	-1.277E-02	1.562E-01	2.615E-01	0.000E+00	NOT IDENT.
EU-155	8.280E-03	1.479E-01	2.410E-01	0.000E+00	FAIL ABUN
TB-160	-5.306E-02	1.909E-01	3.070E-01	0.000E+00	FAIL ABUN
HO-166M	-5.819E-03	7.541E-02	1.258E-01	0.000E+00	NOT IDENT.
TM-171	6.387E+00	4.383E+01	6.505E+01	0.000E+00	NOT IDENT.
LU-176	4.145E-03	3.129E-02	5.264E-02	0.000E+00	FAIL ABUN
LU-177	-5.984E-01	1.837E+00	2.698E+00	0.000E+00	NOT IDENT.
LU-177M	-1.741E-01	2.473E-01	3.844E-01	0.000E+00	FAIL ABUN
HF-181	-7.140E-02	6.109E-02	8.906E-02	0.000E+00	NOT IDENT.
W-181	8.049E-01	6.166E-01	9.605E-01	0.000E+00	NOT IDENT.
TA-182	1.182E-01	2.487E-01	4.405E-01	0.000E+00	FAIL ABUN
RE-183	1.345E-01	1.497E-01	2.609E-01	0.000E+00	FAIL ABUN
RE-184	1.133E-01	3.119E-01	5.350E-01	0.000E+00	NOT IDENT.
OS-185	-2.835E-02	5.342E-02	8.579E-02	0.000E+00	NOT IDENT.
RE-188	1.016E-01	2.254E-01	3.943E-01	0.000E+00	NOT IDENT.
W-188	3.132E+00	1.085E+01	1.630E+01	0.000E+00	FAIL ABUN
IR-192	6.223E-03	4.730E-02	7.942E-02	0.000E+00	FAIL ABUN
AU-195	5.096E-01	4.267E-01	5.660E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	7.144E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.377E+01	9.569E+00	1.530E+01	0.000E+00	NOT IDENT.
TL-202	1.598E-02	9.528E-02	1.579E-01	0.000E+00	NOT IDENT.
HG-203	4.606E-02	5.418E-02	9.471E-02	0.000E+00	NOT IDENT.
BI-207	3.015E-02	7.501E-02	1.279E-01	0.000E+00	FAIL ABUN
TL-207	-2.234E-02	8.678E-01	1.441E+00	0.000E+00	FAIL ABUN
PO-209	-4.067E+00	9.618E+00	1.514E+01	0.000E+00	NOT IDENT.
BI-210	3.540E+00	6.171E+00	1.044E+01	0.000E+00	NOT IDENT.
PB-210	3.540E+00	6.171E+00	1.044E+01	0.000E+00	NOT IDENT.
PO-210	3.540E+00	6.170E+00	1.044E+01	0.000E+00	NOT IDENT.
PB-211	5.070E-02	1.349E+00	2.221E+00	0.000E+00	NOT IDENT.
BI-212	6.311E-01	5.373E-01	8.823E-01	0.000E+00	FAIL ABUN
PO-215	-2.234E-02	8.678E-01	1.441E+00	0.000E+00	FAIL ABUN
RN-219	2.984E-02	6.086E-01	1.004E+00	0.000E+00	FAIL ABUN
RN-220	-3.631E+01	3.459E+01	5.339E+01	0.000E+00	NOT IDENT.
RA-223	-2.234E-02	8.678E-01	1.441E+00	0.000E+00	FAIL ABUN
AC-227	-3.550E-01	5.317E-01	8.596E-01	0.000E+00	FAIL ABUN
TH-227	-3.550E-01	5.327E-01	8.596E-01	0.000E+00	FAIL ABUN
TH-229	-8.535E-02	6.472E-01	1.097E+00	0.000E+00	FAIL ABUN
PA-231	-8.388E-01	2.009E+00	3.276E+00	0.000E+00	FAIL ABUN
TH-231	-2.234E-02	8.678E-01	1.441E+00	0.000E+00	FAIL ABUN
U-231	-4.085E+00	1.737E+00	2.511E+00	0.000E+00	FAIL ABUN
PA-233	-1.956E-02	8.353E-02	1.371E-01	0.000E+00	FAIL ABUN
PA-234	-3.504E-01	3.906E-01	5.644E-01	0.000E+00	FAIL ABUN
PA-234M	0.000E+00	9.852E+00	1.594E+01	0.000E+00	FAIL ABUN
NP-236	-1.174E-01	1.062E-01	1.736E-01	0.000E+00	FAIL ABUN
NP-239	-1.849E-04	2.753E-01	4.457E-01	0.000E+00	FAIL ABUN
AM-241	2.630E-01	2.559E-01	3.976E-01	0.000E+00	NOT IDENT.
CM-243	7.652E-02	1.288E-01	2.149E-01	0.000E+00	FAIL ABUN
AM-246	7.211E-02	1.939E-01	3.299E-01	0.000E+00	NOT IDENT.
CM-247	8.493E-03	5.447E-02	9.047E-02	0.000E+00	NOT IDENT.
CF-249	2.225E-02	5.281E-02	8.958E-02	0.000E+00	NOT IDENT.
CF-251	-1.108E-02	1.705E-01	2.910E-01	0.000E+00	NOT IDENT.

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245396002.CNF;1
Sample date        : 21-JAN-2010 12:00:00 Acquisition date : 5-FEB-2010 18:59:38.
Sample ID          : G245396002 Sample quantity : 1.00510E+02 GRAM
Detector name      : GAM01 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:01.09 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944962 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	692	10.67*	9.454E-01	2.560E+01	2.560E+01	11.94
CD-109	88.03	131	3.72*	5.188E+00	2.534E+00	2.593E+00	61.66
SN-126	64.28	385	9.60	2.790E+00	5.371E+00	5.371E+00	27.75
	86.94	131	8.90	5.188E+00	1.059E+00	1.059E+00	73.74
	87.57	131	37.00*	5.188E+00	2.548E-01	2.548E-01	61.66
BA-137M	661.65	190	89.98*	1.922E+00	4.107E-01	4.111E-01	29.91
CS-137	661.65	190	85.12*	1.922E+00	4.342E-01	4.346E-01	29.91
CE-141	145.44	44	48.40*	5.851E+00	5.746E-02	7.969E-02	173.02
TL-208	277.35	-----	6.80	3.885E+00	-----	Line Not Found	-----
	510.84	86	21.60	2.391E+00	6.253E-01	6.253E-01	83.78
	583.14	219	84.20*	2.142E+00	4.531E-01	4.531E-01	28.07
	860.37	37	12.46	1.520E+00	7.369E-01	7.369E-01	103.00
BI-211	72.87	-----	1.27	3.944E+00	-----	Line Not Found	-----
	351.07	490	12.94*	3.224E+00	4.391E+00	4.391E+00	17.76
PB-212	74.81	312	10.70	4.160E+00	2.617E+00	2.617E+00	28.29
	77.11	490	18.00	4.388E+00	2.319E+00	2.319E+00	19.14
	87.30	131	8.00	5.188E+00	1.178E+00	1.178E+00	62.47
	238.63	970	44.60*	4.345E+00	1.870E+00	1.870E+00	12.94
	300.09	77	3.41	3.652E+00	2.310E+00	2.310E+00	58.46
PO-212	74.81	312	10.70	4.160E+00	2.617E+00	2.617E+00	28.29
	77.11	490	18.00	4.388E+00	2.319E+00	2.319E+00	19.14
	87.30	131	8.00	5.188E+00	1.178E+00	1.178E+00	62.47
	115.19	-----	0.60	6.043E+00	-----	Line Not Found	-----
	238.63	970	44.60*	4.345E+00	1.870E+00	1.870E+00	12.94
	300.09	77	3.41	3.652E+00	2.310E+00	2.310E+00	58.46
BI-214	609.31	344	46.30*	2.064E+00	1.343E+00	1.343E+00	19.48
	1120.29	79	15.10	1.193E+00	1.646E+00	1.646E+00	43.86
	1764.49	53	15.80	8.255E-01	1.531E+00	1.531E+00	43.44
PB-214	74.81	312	6.21	4.160E+00	4.509E+00	4.509E+00	27.71
	77.11	490	10.50	4.388E+00	3.976E+00	3.976E+00	20.60
	87.30	131	4.67	5.188E+00	2.018E+00	2.018E+00	62.14
	241.98	210	7.49	4.307E+00	2.436E+00	2.436E+00	34.25

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	295.21	266	19.20	3.698E+00	1.401E+00	1.401E+00	26.28
	351.92	490	37.20*	3.224E+00	1.527E+00	1.527E+00	18.51
	74.81	312	6.21	4.160E+00	4.509E+00	4.509E+00	27.71
	77.11	490	10.50	4.388E+00	3.976E+00	3.976E+00	20.60
	87.30	131	4.67	5.188E+00	2.018E+00	2.018E+00	62.14
PO-216	241.98	210	7.49	4.307E+00	2.436E+00	2.436E+00	34.25
	295.21	266	19.20	3.698E+00	1.401E+00	1.401E+00	26.28
	351.92	490	37.20*	3.224E+00	1.527E+00	1.527E+00	18.51
	74.81	312	10.70	4.160E+00	2.617E+00	2.617E+00	28.29
	77.11	490	18.00	4.388E+00	2.319E+00	2.319E+00	19.14
PO-218	87.30	131	8.00	5.188E+00	1.178E+00	1.178E+00	62.47
	238.63	970	44.60*	4.345E+00	1.870E+00	1.870E+00	12.94
	300.09	77	3.41	3.652E+00	2.310E+00	2.310E+00	58.46
	74.81	312	6.21	4.160E+00	4.509E+00	4.509E+00	27.71
	77.11	490	10.50	4.388E+00	3.976E+00	3.976E+00	20.60
RA-224	87.30	131	4.67	5.188E+00	2.018E+00	2.018E+00	62.14
	241.98	210	7.49	4.307E+00	2.436E+00	2.436E+00	34.25
	295.21	266	19.20	3.698E+00	1.401E+00	1.401E+00	26.28
	351.92	490	37.20*	3.224E+00	1.527E+00	1.527E+00	18.51
	240.98	210	3.95*	4.307E+00	4.620E+00	4.620E+00	33.79
AC-228	609.31	344	46.30*	2.064E+00	1.343E+00	1.343E+00	19.48
	1120.29	79	15.10	1.193E+00	1.646E+00	1.646E+00	43.86
	1764.49	53	15.80	8.255E-01	1.531E+00	1.531E+00	43.44
	338.32	211	11.40	3.322E+00	2.084E+00	2.084E+00	53.26
	911.07	193	27.70*	1.444E+00	1.802E+00	1.802E+00	24.15
RA-228	969.11	106	16.60	1.364E+00	1.753E+00	1.753E+00	38.31
	338.32	211	11.40	3.322E+00	2.084E+00	2.084E+00	53.26
	911.07	193	27.70*	1.444E+00	1.802E+00	1.802E+00	24.15
	969.11	106	16.60	1.364E+00	1.753E+00	1.753E+00	38.31
	74.81	312	10.70	4.160E+00	2.617E+00	2.617E+00	26.72
TH-228	77.11	490	18.00	4.388E+00	2.319E+00	2.355E+00	19.14
	87.30	131	8.00	5.188E+00	1.178E+00	1.196E+00	61.66
	238.63	970	44.60*	4.345E+00	1.870E+00	1.899E+00	12.94
	300.09	77	3.41	3.652E+00	2.310E+00	2.345E+00	82.60
	609.31	344	46.30*	2.064E+00	1.343E+00	1.343E+00	19.48
TH-230	1120.29	79	15.10	1.193E+00	1.646E+00	1.646E+00	43.86
	1764.49	53	15.80	8.255E-01	1.531E+00	1.531E+00	43.44
	338.32	211	11.40	3.322E+00	2.084E+00	2.084E+00	34.77
	911.07	193	27.70*	1.444E+00	1.802E+00	1.802E+00	24.15
	969.11	106	16.60	1.364E+00	1.753E+00	1.753E+00	38.31
TH-234	63.29	385	3.80*	2.790E+00	1.357E+01	1.357E+01	29.38
	92.38	1002	5.41	5.499E+00	1.257E+01	1.257E+01	21.09
	609.31	344	46.30*	2.064E+00	1.343E+00	1.343E+00	19.48
	1120.29	79	15.10	1.193E+00	1.646E+00	1.646E+00	43.86
	1764.49	53	15.80	8.255E-01	1.531E+00	1.531E+00	43.44
U-235	89.95	-----	2.70	5.352E+00	-----	Line Not Found	-----
	93.35	1002	4.50	5.499E+00	1.512E+01	1.512E+01	30.05
	105.00	-----	2.10	5.912E+00	-----	Line Not Found	-----
	143.76	44	10.50*	5.851E+00	2.649E-01	2.649E-01	173.68

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	163.35	-----	4.70	5.554E+00	-----	Line Not Found	-----
	185.71	276	54.00	5.158E+00	3.704E-01	3.704E-01	35.11
	205.31	-----	4.70	4.840E+00	-----	Line Not Found	-----
NP-237	86.50	131	12.60*	5.188E+00	7.481E-01	7.481E-01	65.02
	95.87	-----	2.60	5.636E+00	-----	Line Not Found	-----
U-238	63.29	385	3.80*	2.790E+00	1.357E+01	1.357E+01	29.38
	92.38	1002	5.41	5.499E+00	1.257E+01	1.257E+01	13.86
AM-243	74.67	312	66.00*	4.160E+00	4.243E-01	4.243E-01	26.70
	86.72	131	0.34	5.188E+00	2.805E+01	2.805E+01	61.66
	117.66	-----	0.55	6.054E+00	-----	Line Not Found	-----
	142.18	-----	0.13	5.887E+00	-----	Line Not Found	-----
ANH-511	511.00	86	100.00*	2.391E+00	1.351E-01	1.351E-01	83.37

Flag: "*" = Keyline

Total number of lines in spectrum 31
Number of unidentified lines 1
Number of lines tentatively identified by NID 30 96.77%

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	2.560E+01	2.560E+01	0.306E+01	11.94	
CD-109	464.00D	1.02	2.534E+00	2.593E+00	1.599E+00	61.66	
SN-126	1.00E+05Y	1.00	2.548E-01	2.548E-01	1.571E-01	61.66	
BA-137M	30.17Y	1.00	4.107E-01	4.111E-01	1.230E-01	29.91	
CS-137	30.17Y	1.00	4.342E-01	4.346E-01	1.300E-01	29.91	
CE-141	32.50D	1.39	5.746E-02	7.969E-02	13.79E-02	173.02	
TL-208	1.41E+10Y	1.00	4.531E-01	4.531E-01	1.272E-01	28.07	
BI-211	7.04E+08Y	1.00	4.391E+00	4.391E+00	0.780E+00	17.76	
PB-212	1.41E+10Y	1.00	1.870E+00	1.870E+00	0.242E+00	12.94	
PO-212	1.41E+10Y	1.00	1.870E+00	1.870E+00	0.242E+00	12.94	
BI-214	1600.00Y	1.00	1.343E+00	1.343E+00	0.262E+00	19.48	
PB-214	1600.00Y	1.00	1.527E+00	1.527E+00	0.283E+00	18.51	
PO-214	1600.00Y	1.00	1.527E+00	1.527E+00	0.283E+00	18.51	
PO-216	1.41E+10Y	1.00	1.870E+00	1.870E+00	0.242E+00	12.94	
PO-218	1600.00Y	1.00	1.527E+00	1.527E+00	0.283E+00	18.51	
RA-224	1.41E+10Y	1.00	4.620E+00	4.620E+00	1.561E+00	33.79	
RA-226	1600.00Y	1.00	1.343E+00	1.343E+00	0.262E+00	19.48	
AC-228	1.41E+10Y	1.00	1.802E+00	1.802E+00	0.435E+00	24.15	
RA-228	1.41E+10Y	1.00	1.802E+00	1.802E+00	0.435E+00	24.15	
TH-228	1.91Y	1.02	1.870E+00	1.899E+00	0.246E+00	12.94	
TH-230	4.47E+09Y	1.00	1.343E+00	1.343E+00	0.262E+00	19.48	
TH-232	1.41E+10Y	1.00	1.802E+00	1.802E+00	0.435E+00	24.15	
TH-234	4.47E+09Y	1.00	1.357E+01	1.357E+01	0.399E+01	29.38	
U-234	4.47E+09Y	1.00	1.343E+00	1.343E+00	0.262E+00	19.48	
U-235	7.04E+08Y	1.00	2.649E-01	2.649E-01	4.600E-01	173.68	
NP-237	2.14E+06Y	1.00	7.481E-01	7.481E-01	4.864E-01	65.02	
U-238	4.47E+09Y	1.00	1.357E+01	1.357E+01	0.399E+01	29.38	
AM-243	7380.00Y	1.00	4.243E-01	4.243E-01	1.133E-01	26.70	
ANH-511	1.00E+09Y	1.00	1.351E-01	1.351E-01	1.126E-01	83.37	

Total Activity : 9.031E+01 9.042E+01

Grand Total Activity : 9.031E+01 9.042E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G245396002

Page : 5
Acquisition date : 5-FEB-2010 18:59:38

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	98.49	80	317	1.14	197.67	182	19	1.12E-02	85.0	5.73E+00	T
0	209.95	81	241	1.28	420.46	416	9	1.12E-02	73.6	4.77E+00	T
0	270.20	130	216	1.97	540.90	535	13	1.81E-02	49.6	3.96E+00	T
0	463.89	95	121	1.55	928.06	921	16	1.32E-02	55.7	2.59E+00	T
0	727.91	35	56	0.85	1455.75	1454	7	4.90E-03	86.3	1.77E+00	T
0	965.06	29	45	1.97	1929.73	1925	9	3.99E-03	93.8	1.37E+00	T
0	1001.56	94	18	2.06	2002.69	1995	16	1.31E-02	30.1	1.32E+00	T
0	1730.26	22	8	1.75	3458.97	3454	11	3.08E-03	65.4	8.36E-01	

Flags: "T" = Tentatively associated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245396002.CNF;1
* Acquisition date   : 5-FEB-2010 18:59:38.  Detector SN#      :
* Detector ID        : GAM01                      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 02:00:01.09           Half life ratio : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 21-JAN-2010 12:00:00  Nuclide Library : SOLID
* Sample ID          : G245396002           Analyst initials: MXR1
* Batch Number       : 944962              Sample Quantity : 1.00510E+02 GRAM
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 12-JAN-2010 15:15:52.7MS 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	2.560E+01	3.056E+00	7.217E-01	6.416E-02	35.471
CD-109	2.593E+00	1.599E+00	2.153E+00	2.037E-01	1.204
SN-126	2.548E-01	1.571E-01	2.290E-01	2.157E-02	1.113
BA-137M	4.111E-01	1.230E-01	7.581E-02	6.210E-03	5.423
CS-137	4.346E-01	1.300E-01	8.014E-02	6.578E-03	5.423
CE-141	7.969E-02	1.379E-01	1.344E-01	1.169E-02	0.593
TL-208	4.531E-01	1.272E-01	7.563E-02	6.869E-03	5.991
BI-211	4.391E+00	7.798E-01	4.482E-01	4.077E-02	9.796
PB-212	1.870E+00	2.420E-01	1.143E-01	1.157E-02	16.363
PO-212	1.870E+00	2.420E-01	1.143E-01	1.157E-02	16.363
BI-214	1.343E+00	2.616E-01	1.578E-01	1.556E-02	8.512
PB-214	1.527E+00	2.827E-01	1.563E-01	1.637E-02	9.775
PO-214	1.527E+00	2.827E-01	1.563E-01	1.637E-02	9.775
PO-216	1.870E+00	2.420E-01	1.143E-01	1.157E-02	16.363
PO-218	1.527E+00	2.827E-01	1.563E-01	1.637E-02	9.775
RA-224	4.620E+00	1.561E+00	1.301E+00	1.182E-01	3.550
RA-226	1.343E+00	2.616E-01	1.578E-01	1.556E-02	8.512
AC-228	1.802E+00	4.354E-01	2.679E-01	3.101E-02	6.728

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.802E+00	4.354E-01	2.679E-01	3.101E-02	6.728
TH-228	1.899E+00	2.457E-01	1.161E-01	1.175E-02	16.363
TH-230	1.343E+00	2.616E-01	1.578E-01	1.556E-02	8.512
TH-232	1.802E+00	4.354E-01	2.679E-01	3.101E-02	6.728
TH-234	1.357E+01	3.987E+00	3.070E+00	5.396E-01	4.420
U-234	1.343E+00	2.616E-01	1.578E-01	1.556E-02	8.512
U-235	2.649E-01	4.600E-01	4.679E-01	8.175E-02	0.566
NP-237	7.481E-01	4.864E-01	6.190E-01	1.401E-01	1.209
U-238	1.357E+01	3.987E+00	3.070E+00	5.396E-01	4.420
AM-243	4.243E-01	1.133E-01	1.327E-01	1.104E-02	3.196
ANH-511	1.351E-01	1.126E-01	6.779E-02	5.745E-03	1.992

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.927E-01		4.840E-01	8.111E-01	7.379E-02	0.361
NA-22	-2.984E-03		5.646E-02	9.367E-02	7.866E-03	-0.032
NA-24	2.673E-01		5.066E-01	Half-Life too short		
AL-26	-2.336E-02		3.939E-02	5.399E-02	4.473E-03	-0.433
TI-44	4.280E-01	+	8.193E-02	1.111E-01	9.533E-03	3.853
SC-46	-2.764E-02		5.444E-02	8.388E-02	7.583E-03	-0.329
V-48	-1.306E-02		1.013E-01	1.621E-01	1.447E-02	-0.081
CR-51	3.559E-02		5.166E-01	8.500E-01	7.996E-02	0.042
MN-52	-1.867E-01		2.726E-01	3.889E-01	3.358E-02	-0.480
MN-54	-5.390E-03		5.010E-02	8.135E-02	7.241E-03	-0.066
CO-56	-7.813E-02		4.920E-02	6.346E-02	5.670E-03	-1.231
CO-57	-3.360E-02		3.737E-02	5.657E-02	4.980E-03	-0.594
CO-58	-4.115E-02		5.245E-02	7.871E-02	6.963E-03	-0.523
FE-59	-7.262E-02		1.398E-01	2.121E-01	1.955E-02	-0.342
CO-60	1.316E-02		5.390E-02	9.249E-02	7.884E-03	0.142
ZN-65	1.661E-02		1.211E-01	1.723E-01	1.454E-02	0.096
GE-68	3.702E-01		1.654E+00	2.741E+00	2.360E-01	0.135
AS-73	3.819E-01		1.383E+00	2.278E+00	1.844E-01	0.168
AS-74	1.024E-02		1.170E-01	1.975E-01	1.664E-02	0.052
SE-75	7.445E-03		6.827E-02	9.995E-02	9.182E-03	0.074
BR-77	9.458E+00		1.647E+01	2.669E+01	2.264E+00	0.354
SR-82	-7.007E-01		5.299E-01	7.500E-01	6.529E-02	-0.934
RB-83	7.073E-02		1.045E-01	1.707E-01	1.448E-02	0.414
RB-84	3.174E-02		9.645E-02	1.632E-01	1.473E-02	0.194
KR-85	2.020E+01		1.138E+01	2.016E+01	1.709E+00	1.002
SR-85	1.038E-01		5.845E-02	1.035E-01	8.779E-03	1.002
RB-86	1.713E-01		1.094E+00	1.797E+00	1.548E-01	0.095
Y-88	-6.880E-03		4.355E-02	6.798E-02	5.591E-03	-0.101
ZR-88	-3.429E-03		4.027E-02	6.485E-02	5.222E-03	-0.053
Y-91	2.442E+00		2.523E+01	4.268E+01	3.497E+00	0.057
NB-94	5.566E-03		4.484E-02	7.520E-02	6.312E-03	0.074
NB-95	1.334E-02		6.476E-02	1.086E-01	9.410E-03	0.123

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M	1.684E-01		1.755E-01	2.720E-01	2.789E-02	0.619
ZR-95	-6.635E-02		8.518E-02	1.279E-01	1.215E-02	-0.519
NB-97	-5.775E-02		8.801E-02	Half-Life too short		
ZR-97	3.362E+00		1.671E+00	Half-Life too short		
MO-99	9.119E-01		1.665E+01	2.767E+01	4.193E+00	0.033
TC-99M	-1.832E+10		4.764E+10	Half-Life too short		
RH-101	-1.883E-02		4.661E-02	7.321E-02	6.442E-03	-0.257
RH-102	-2.364E-03		4.469E-02	7.139E-02	6.003E-03	-0.033
RU-103	2.794E-02		5.985E-02	9.922E-02	1.395E-02	0.282
RH-106	-3.267E-01		4.271E-01	6.619E-01	8.729E-02	-0.494
RU-106	-3.267E-01		4.258E-01	6.619E-01	5.529E-02	-0.494
AG-108M	-1.699E-02		4.699E-02	7.360E-02	6.347E-03	-0.231
AG-110M	-1.735E-02		5.320E-02	7.370E-02	6.249E-03	-0.235
IN-111	1.014E-01		1.654E+00	2.422E+00	2.205E-01	0.042
IN-113M	-6.352E-03		5.904E-02	9.494E-02	7.908E-03	-0.067
SN-113	-6.352E-03		5.904E-02	9.494E-02	7.908E-03	-0.067
IN-114M	1.625E-01		2.717E-01	4.155E-01	3.628E-02	0.391
CD-115	1.467E+01		1.511E+01	2.725E+01	2.313E+00	0.538
SN-117M	-4.014E-02		7.407E-02	1.221E-01	1.040E-02	-0.329
SB-122	-6.151E-01		2.914E+00	4.814E+00	4.081E-01	-0.128
I-123	-5.521E+00		4.752E+00	Half-Life too short		
TE-123M	-2.189E-02		3.768E-02	6.199E-02	5.311E-03	-0.353
I-124	6.473E-02		1.057E+00	1.681E+00	1.413E-01	0.039
SB-124	1.072E-02		9.478E-02	1.590E-01	1.410E-02	0.067
SB-125	-7.355E-02		1.364E-01	2.110E-01	1.776E-02	-0.348
TE-125M	-4.548E+00		1.359E+01	2.131E+01	2.209E+00	-0.213
I-126	-1.538E-01		2.821E-01	3.787E-01	3.111E-02	-0.406
SB-126	2.365E-01		1.931E-01	3.525E-01	2.988E-02	0.671
SB-127	1.083E-01		1.778E+00	2.972E+00	3.329E-01	0.036
XE-127	3.252E-02		6.608E-02	1.127E-01	9.964E-03	0.289
I-131	-5.311E-02		1.597E-01	2.536E-01	2.272E-02	-0.209
TE-132	4.559E-01		9.806E-01	1.663E+00	2.657E-01	0.274
BA-133	2.985E-02		6.586E-02	9.788E-02	1.291E-02	0.305
I-133	-1.203E-03		4.883E-03	Half-Life too short		
CS-134	1.498E-01		6.496E-02	1.258E-01	1.112E-02	1.191
CS-135	2.312E-01		2.384E-01	3.692E-01	3.849E-02	0.626
I-135	-1.318E+10		5.917E+09	Half-Life too short		
CS-136	3.773E-02		1.580E-01	2.621E-01	2.383E-02	0.144
CE-139	-2.788E-02		4.003E-02	6.540E-02	5.569E-03	-0.426
BA-140	2.111E-01		3.603E-01	6.221E-01	2.060E-01	0.339
LA-140	-1.335E-01		1.175E-01	1.490E-01	1.285E-02	-0.897
CE-143	4.426E-04		1.226E-04	Half-Life too short		
CE-144	3.988E-02		2.995E-01	4.762E-01	7.413E-02	0.084
PM-144	-6.376E-03		4.219E-02	6.900E-02	5.774E-03	-0.092
PR-144	-4.321E-01		2.859E+00	4.676E+00	3.911E-01	-0.092
PM-146	4.251E-02		6.844E-02	1.147E-01	1.205E-02	0.371
ND-147	-1.622E-01		8.013E-01	1.287E+00	1.915E-01	-0.126
PM-149	-4.733E+01		1.263E+02	2.029E+02	3.213E+01	-0.233

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-152	-4.845E-03		1.488E-01	2.120E-01	1.960E-02	-0.023
GD-153	1.750E-01	+	1.495E-01	1.903E-01	1.690E-02	0.919
EU-154	-1.277E-02		1.594E-01	2.636E-01	2.935E-02	-0.048
EU-155	8.280E-03		1.509E-01	2.413E-01	2.122E-02	0.034
TB-160	-5.306E-02		1.948E-01	3.092E-01	2.788E-02	-0.172
HO-166M	-5.819E-03		7.695E-02	1.266E-01	1.068E-02	-0.046
TM-171	6.387E+00		4.473E+01	6.503E+01	5.122E+00	0.098
LU-176	4.145E-03		3.192E-02	5.285E-02	4.784E-03	0.078
LU-177	-5.984E-01		1.874E+00	2.706E+00	2.405E-01	-0.221
LU-177M	-1.741E-01		2.523E-01	3.863E-01	3.156E-02	-0.451
HF-181	-7.140E-02		6.233E-02	8.954E-02	7.545E-03	-0.797
W-181	8.049E-01		6.292E-01	9.602E-01	7.496E-02	0.838
TA-182	1.182E-01		2.538E-01	4.441E-01	3.660E-02	0.266
RE-183	1.345E-01		1.527E-01	2.615E-01	2.226E-02	0.514
RE-184	1.133E-01		3.182E-01	5.369E-01	4.900E-02	0.211
OS-185	-2.835E-02		5.451E-02	8.633E-02	7.132E-03	-0.328
RE-188	1.016E-01		2.300E-01	3.951E-01	3.365E-02	0.257
W-188	3.132E+00		1.107E+01	1.636E+01	1.492E+00	0.191
IR-192	6.223E-03		4.827E-02	7.975E-02	7.185E-03	0.078
AU-195	5.096E-01	+	4.354E-01	5.665E-01	5.002E-02	0.900
TL-200	2.283E-04		3.645E-04	Half-Life	too short	
TL-201	-1.377E+01		9.765E+00	1.534E+01	1.308E+00	-0.898
TL-202	1.598E-02		9.722E-02	1.587E-01	1.316E-02	0.101
HG-203	4.606E-02		5.528E-02	9.507E-02	8.914E-03	0.485
BI-207	3.015E-02		7.654E-02	1.289E-01	1.117E-02	0.234
TL-207	-2.234E-02		8.855E-01	1.448E+00	2.585E-01	-0.015
PO-209	-4.067E+00		9.814E+00	1.525E+01	1.381E+00	-0.267
BI-210	3.540E+00		6.297E+00	1.042E+01	9.840E-01	0.340
PB-210	3.540E+00		6.297E+00	1.042E+01	9.840E-01	0.340
PO-210	3.540E+00		6.296E+00	1.042E+01	8.937E-01	0.340
PB-211	5.070E-02		1.376E+00	2.232E+00	1.397E+00	0.023
BI-212	6.311E-01	+	5.483E-01	8.881E-01	8.801E-02	0.711
PO-215	-2.234E-02		8.855E-01	1.448E+00	2.585E-01	-0.015
RN-219	2.984E-02		6.210E-01	1.009E+00	1.487E-01	0.030
RN-220	-3.631E+01		3.530E+01	5.370E+01	4.558E+00	-0.676
RA-223	-2.234E-02		8.855E-01	1.448E+00	2.585E-01	-0.015
AC-227	-3.550E-01		5.426E-01	8.627E-01	1.349E-01	-0.411
TH-227	-3.550E-01		5.436E-01	8.627E-01	1.580E-01	-0.411
TH-229	-8.535E-02		6.604E-01	1.100E+00	9.638E-02	-0.078
PA-231	-8.388E-01		2.050E+00	3.289E+00	5.092E-01	-0.255
TH-231	-2.234E-02		8.855E-01	1.448E+00	2.585E-01	-0.015
U-231	-4.085E+00		1.772E+00	2.513E+00	2.248E-01	-1.626
PA-233	-1.956E-02		8.524E-02	1.377E-01	1.275E-02	-0.142
PA-234	-3.504E-01		3.986E-01	5.685E-01	1.077E-01	-0.616
PA-234M	3.168E+01	+	1.005E+01	1.606E+01	1.637E+00	1.973
NP-236	-1.174E-01		1.084E-01	1.740E-01	1.481E-02	-0.675
NP-239	-1.849E-04		2.810E-01	4.463E-01	3.887E-02	0.000
AM-241	2.630E-01		2.611E-01	3.974E-01	3.275E-02	0.662

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	7.652E-02		1.314E-01	2.151E-01	1.874E-02	0.356
AM-246	7.211E-02		1.978E-01	3.325E-01	2.861E-02	0.217
CM-247	8.493E-03		5.558E-02	9.091E-02	7.373E-03	0.093
CF-249	2.225E-02		5.389E-02	9.001E-02	7.301E-03	0.247
CF-251	-1.108E-02		1.739E-01	2.917E-01	2.511E-02	-0.038

VAX/VMS Nuclide Identification Report Generated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*                                     *                                       *
* Configuration      : SYSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G245396002           *
* Acquisition date   : 5-FEB-2010 18:59:38 Detector SN#                   *
* Detector ID        : GAM01 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 02:00:01.09 Half life ratio : 8.000              *
*****
*                                     SAMPLE DATA                            *
*                                     *                                       *
* Sample date        : 21-JAN-2010 12:00:00 Nuclide Library : SOLID         *
* Sample ID           : G245396002 Analyst initials: MXR1                 *
* Batch Number        : 944962 Sample Quantity : 1.0051E+02 GRAM          *
* Recovery             : 1.00000 Carrier Weight : 0.00000                 *
*****
*                                     QC DATA                                *
*                                     *                                       *
* CALIB. DATE/TIME   : 12-JAN-2010 15:15:52 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	2.560E+01	2.994E+00	3.580E-01	1.528E+00
CD-109	2.593E+00	1.567E+00	1.076E+00	7.993E-01
SN-126	2.548E-01	1.539E-01	1.145E-01	7.854E-02
BA-137M	4.111E-01	1.205E-01	3.769E-02	6.148E-02
CS-137	4.346E-01	1.274E-01	3.984E-02	6.500E-02
CE-141	7.969E-02	1.351E-01	6.711E-02	6.894E-02
TL-208	4.531E-01	1.247E-01	3.762E-02	6.360E-02
BI-211	4.391E+00	7.642E-01	2.232E-01	3.899E-01
PB-212	1.870E+00	2.371E-01	5.699E-02	1.210E-01
PO-212	1.870E+00	2.371E-01	5.699E-02	1.210E-01
BI-214	1.343E+00	2.564E-01	7.846E-02	1.308E-01
PB-214	1.527E+00	2.771E-01	7.782E-02	1.414E-01
PO-214	1.527E+00	2.771E-01	7.782E-02	1.414E-01
PO-216	1.870E+00	2.371E-01	5.699E-02	1.210E-01
PO-218	1.527E+00	2.771E-01	7.782E-02	1.414E-01
RA-224	4.620E+00	1.530E+00	6.487E-01	7.804E-01
RA-226	1.343E+00	2.564E-01	7.846E-02	1.308E-01
AC-228	1.802E+00	4.267E-01	1.331E-01	2.177E-01
RA-228	1.802E+00	4.267E-01	1.331E-01	2.177E-01
TH-228	1.899E+00	2.408E-01	5.787E-02	1.228E-01
TH-230	1.343E+00	2.564E-01	7.846E-02	1.308E-01
TH-232	1.802E+00	4.267E-01	1.331E-01	2.177E-01
TH-234	1.357E+01	3.907E+00	1.536E+00	1.993E+00
U-234	1.343E+00	2.564E-01	7.846E-02	1.308E-01
U-235	2.649E-01	4.508E-01	2.336E-01	2.300E-01
NP-237	7.481E-01	4.767E-01	3.095E-01	2.432E-01
U-238	1.357E+01	3.907E+00	1.536E+00	1.993E+00
AM-243	4.243E-01	1.110E-01	6.640E-02	5.663E-02
ANH-511	1.351E-01	1.103E-01	3.373E-02	5.630E-02

---- Non-Identified Nuclides ----

Key-Line Activity	K.L Act error	DLC	TPU
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Nuclide	(pCi/GRAM)		(pCi/GRAM)		
BE-7	2.927E-01	4.743E-01	4.036E-01	2.420E-01	NOT IDENT.
NA-22	-2.984E-03	5.534E-02	4.648E-02	2.823E-02	NOT IDENT.
NA-24	2.673E+05	9.930E+05	0.000E+00	5.066E+05	SHORT HLIF
AL-26	-2.336E-02	3.860E-02	2.677E-02	1.970E-02	NOT IDENT.
TI-44	4.280E-01	8.029E-02	5.556E-02	4.097E-02	FAIL ABUN
SC-46	-2.764E-02	5.335E-02	4.167E-02	2.722E-02	FAIL ABUN
V-48	-1.306E-02	9.929E-02	8.050E-02	5.066E-02	NOT IDENT.
CR-51	3.559E-02	5.063E-01	4.235E-01	2.583E-01	NOT IDENT.
MN-52	-1.867E-01	2.672E-01	1.929E-01	1.363E-01	NOT IDENT.
MN-54	-5.390E-03	4.910E-02	4.042E-02	2.505E-02	NOT IDENT.
CO-56	-7.813E-02	4.822E-02	3.153E-02	2.460E-02	NOT IDENT.
CO-57	-3.360E-02	3.663E-02	2.826E-02	1.869E-02	NOT IDENT.
CO-58	-4.115E-02	5.140E-02	3.911E-02	2.623E-02	NOT IDENT.
FE-59	-7.262E-02	1.370E-01	1.053E-01	6.989E-02	NOT IDENT.
CO-60	1.316E-02	5.282E-02	4.589E-02	2.695E-02	NOT IDENT.
ZN-65	1.661E-02	1.187E-01	8.555E-02	6.057E-02	NOT IDENT.
GE-68	3.702E-01	1.621E+00	1.361E+00	8.269E-01	NOT IDENT.
AS-73	3.819E-01	1.356E+00	1.141E+00	6.917E-01	NOT IDENT.
AS-74	1.024E-02	1.147E-01	9.821E-02	5.852E-02	NOT IDENT.
SE-75	7.445E-03	6.690E-02	4.982E-02	3.413E-02	NOT IDENT.
BR-77	9.458E+00	1.614E+01	1.328E+01	8.237E+00	FAIL ABUN
SR-82	-7.007E-01	5.193E-01	3.727E-01	2.649E-01	NOT IDENT.
RB-83	7.073E-02	1.024E-01	8.492E-02	5.227E-02	NOT IDENT.
RB-84	3.174E-02	9.452E-02	8.108E-02	4.823E-02	NOT IDENT.
KR-85	2.020E+01	1.115E+01	1.003E+01	5.689E+00	NOT IDENT.
SR-85	1.038E-01	5.728E-02	5.151E-02	2.922E-02	NOT IDENT.
RB-86	1.713E-01	1.072E+00	8.922E-01	5.468E-01	NOT IDENT.
Y-88	-6.880E-03	4.268E-02	3.370E-02	2.178E-02	NOT IDENT.
ZR-88	-3.429E-03	3.946E-02	3.229E-02	2.013E-02	NOT IDENT.
Y-91	2.442E+00	2.473E+01	2.118E+01	1.262E+01	NOT IDENT.
NB-94	5.566E-03	4.395E-02	3.738E-02	2.242E-02	NOT IDENT.
NB-95	1.334E-02	6.347E-02	5.397E-02	3.238E-02	NOT IDENT.
NB-95M	1.684E-01	1.720E-01	1.356E-01	8.774E-02	NOT IDENT.
ZR-95	-6.635E-02	8.347E-02	6.358E-02	4.259E-02	NOT IDENT.
NB-97	-5.775E+04	1.725E+05	0.000E+00	8.801E+04	SHORT HLIF
ZR-97	3.362E+06	3.275E+06	0.000E+00	1.671E+06	SHORT HLIF
MO-99	9.119E-01	1.632E+01	1.375E+01	8.325E+00	NOT IDENT.
TC-99M	-1.832E+16	9.338E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.883E-02	4.568E-02	3.652E-02	2.331E-02	NOT IDENT.
RH-102	-2.364E-03	4.379E-02	3.553E-02	2.234E-02	NOT IDENT.
RU-103	2.794E-02	5.865E-02	4.937E-02	2.992E-02	FAIL ABUN
RH-106	-3.267E-01	4.186E-01	3.291E-01	2.136E-01	FAIL ABUN
RU-106	-3.267E-01	4.173E-01	3.291E-01	2.129E-01	FAIL ABUN
AG-108M	-1.699E-02	4.605E-02	3.663E-02	2.350E-02	NOT IDENT.
AG-110M	-1.735E-02	5.214E-02	3.664E-02	2.660E-02	NOT IDENT.
IN-111	1.014E-01	1.620E+00	1.207E+00	8.268E-01	NOT IDENT.
IN-113M	-6.352E-03	5.786E-02	4.727E-02	2.952E-02	NOT IDENT.
SN-113	-6.352E-03	5.786E-02	4.727E-02	2.952E-02	NOT IDENT.
IN-114M	1.625E-01	2.662E-01	2.073E-01	1.358E-01	NOT IDENT.
CD-115	1.467E+01	1.481E+01	1.356E+01	7.555E+00	NOT IDENT.
SN-117M	-4.014E-02	7.259E-02	6.097E-02	3.703E-02	NOT IDENT.
SB-122	-6.151E-01	2.855E+00	2.394E+00	1.457E+00	NOT IDENT.
I-123	-5.521E+06	9.314E+06	0.000E+00	4.752E+06	SHORT HLIF
TE-123M	-2.189E-02	3.692E-02	3.095E-02	1.884E-02	NOT IDENT.
I-124	6.473E-02	1.036E+00	8.357E-01	5.286E-01	NOT IDENT.
SB-124	1.072E-02	9.288E-02	7.886E-02	4.739E-02	FAIL ABUN
SB-125	-7.355E-02	1.337E-01	1.051E-01	6.822E-02	FAIL ABUN
TE-125M	-4.548E+00	1.332E+01	1.065E+01	6.796E+00	NOT IDENT.
I-126	-1.538E-01	2.764E-01	1.883E-01	1.410E-01	NOT IDENT.
SB-126	2.365E-01	1.892E-01	1.752E-01	9.655E-02	FAIL ABUN
SB-127	1.083E-01	1.743E+00	1.477E+00	8.891E-01	NOT IDENT.
XE-127	3.252E-02	6.476E-02	5.622E-02	3.304E-02	FAIL ABUN
I-131	-5.311E-02	1.565E-01	1.263E-01	7.986E-02	NOT IDENT.
TE-132	4.559E-01	9.610E-01	8.294E-01	4.903E-01	NOT IDENT.
BA-133	2.985E-02	6.454E-02	4.875E-02	3.293E-02	NOT IDENT.
I-133	-1.203E+03	9.572E+03	0.000E+00	4.883E+03	SHORT HLIF
CS-134	1.498E-01	6.366E-02	6.253E-02	3.248E-02	NOT IDENT.
CS-135	2.312E-01	2.336E-01	1.840E-01	1.192E-01	NOT IDENT.
I-135	-1.318E+16	1.160E+16	0.000E+00	5.917E+15	SHORT HLIF
CS-136	3.773E-02	1.548E-01	1.301E-01	7.900E-02	FAIL ABUN
CE-139	-2.788E-02	3.923E-02	3.264E-02	2.001E-02	NOT IDENT.
BA-140	2.111E-01	3.531E-01	3.095E-01	1.802E-01	NOT IDENT.
LA-140	-1.335E-01	1.151E-01	7.387E-02	5.873E-02	NOT IDENT.
CE-143	4.426E+02	2.403E+02	0.000E+00	1.226E+02	SHORT HLIF
CE-144	3.988E-02	2.935E-01	2.378E-01	1.498E-01	NOT IDENT.
PM-144	-6.376E-03	4.134E-02	3.430E-02	2.109E-02	NOT IDENT.

PR-144	-4.321E-01	2.802E+00	2.324E+00	1.430E+00	NOT IDENT.
PM-146	4.251E-02	6.708E-02	5.709E-02	3.422E-02	NOT IDENT.
ND-147	-1.622E-01	7.853E-01	6.403E-01	4.007E-01	NOT IDENT.
PM-149	-4.733E+01	1.238E+02	1.011E+02	6.317E+01	NOT IDENT.
EU-152	-4.845E-03	1.458E-01	1.056E-01	7.439E-02	FAIL ABUN
GD-153	1.750E-01	1.465E-01	9.512E-02	7.475E-02	FAIL ABUN
EU-154	-1.277E-02	1.562E-01	1.308E-01	7.971E-02	NOT IDENT.
EU-155	8.280E-03	1.479E-01	1.206E-01	7.546E-02	FAIL ABUN
TB-160	-5.306E-02	1.909E-01	1.536E-01	9.741E-02	FAIL ABUN
HO-166M	-5.819E-03	7.541E-02	6.294E-02	3.847E-02	NOT IDENT.
TM-171	6.387E+00	4.383E+01	3.254E+01	2.236E+01	NOT IDENT.
LU-176	4.145E-03	3.129E-02	2.633E-02	1.596E-02	FAIL ABUN
LU-177	-5.984E-01	1.837E+00	1.350E+00	9.370E-01	NOT IDENT.
LU-177M	-1.741E-01	2.473E-01	1.923E-01	1.262E-01	FAIL ABUN
HF-181	-7.140E-02	6.109E-02	4.456E-02	3.117E-02	NOT IDENT.
W-181	8.049E-01	6.166E-01	4.805E-01	3.146E-01	NOT IDENT.
TA-182	1.182E-01	2.487E-01	2.204E-01	1.269E-01	FAIL ABUN
RE-183	1.345E-01	1.497E-01	1.305E-01	7.637E-02	FAIL ABUN
RE-184	1.133E-01	3.119E-01	2.676E-01	1.591E-01	NOT IDENT.
OS-185	-2.835E-02	5.342E-02	4.292E-02	2.725E-02	NOT IDENT.
RE-188	1.016E-01	2.254E-01	1.972E-01	1.150E-01	NOT IDENT.
W-188	3.132E+00	1.085E+01	8.153E+00	5.537E+00	FAIL ABUN
IR-192	6.223E-03	4.730E-02	3.973E-02	2.413E-02	FAIL ABUN
AU-195	5.096E-01	4.267E-01	2.832E-01	2.177E-01	FAIL ABUN
TL-200	2.283E+02	7.144E+02	0.000E+00	3.645E+02	SHORT HLIF
TL-201	-1.377E+01	9.569E+00	7.655E+00	4.882E+00	NOT IDENT.
TL-202	1.598E-02	9.528E-02	7.898E-02	4.861E-02	NOT IDENT.
HG-203	4.606E-02	5.418E-02	4.738E-02	2.764E-02	NOT IDENT.
BI-207	3.015E-02	7.501E-02	6.398E-02	3.827E-02	FAIL ABUN
TL-207	-2.234E-02	8.678E-01	7.212E-01	4.428E-01	FAIL ABUN
PO-209	-4.067E+00	9.618E+00	7.576E+00	4.907E+00	NOT IDENT.
BI-210	3.540E+00	6.171E+00	5.222E+00	3.149E+00	NOT IDENT.
PB-210	3.540E+00	6.171E+00	5.222E+00	3.149E+00	NOT IDENT.
PO-210	3.540E+00	6.170E+00	5.222E+00	3.148E+00	NOT IDENT.
PB-211	5.070E-02	1.349E+00	1.111E+00	6.880E-01	NOT IDENT.
BI-212	6.311E-01	5.373E-01	4.414E-01	2.741E-01	FAIL ABUN
PO-215	-2.234E-02	8.678E-01	7.212E-01	4.428E-01	FAIL ABUN
RN-219	2.984E-02	6.086E-01	5.022E-01	3.105E-01	FAIL ABUN
RN-220	-3.631E+01	3.459E+01	2.671E+01	1.765E+01	NOT IDENT.
RA-223	-2.234E-02	8.678E-01	7.212E-01	4.428E-01	FAIL ABUN
AC-227	-3.550E-01	5.317E-01	4.300E-01	2.713E-01	FAIL ABUN
TH-227	-3.550E-01	5.327E-01	4.300E-01	2.718E-01	FAIL ABUN
TH-229	-8.535E-02	6.472E-01	5.488E-01	3.302E-01	FAIL ABUN
PA-231	-8.388E-01	2.009E+00	1.639E+00	1.025E+00	FAIL ABUN
TH-231	-2.234E-02	8.678E-01	7.212E-01	4.428E-01	FAIL ABUN
U-231	-4.085E+00	1.737E+00	1.256E+00	8.860E-01	FAIL ABUN
PA-233	-1.956E-02	8.353E-02	6.861E-02	4.262E-02	FAIL ABUN
PA-234	-3.504E-01	3.906E-01	2.824E-01	1.993E-01	FAIL ABUN
PA-234M	3.168E+01	9.852E+00	7.974E+00	5.027E+00	FAIL ABUN
NP-236	-1.174E-01	1.062E-01	8.686E-02	5.419E-02	FAIL ABUN
NP-239	-1.849E-04	2.753E-01	2.230E-01	1.405E-01	FAIL ABUN
AM-241	2.630E-01	2.559E-01	1.989E-01	1.305E-01	NOT IDENT.
CM-243	7.652E-02	1.288E-01	1.075E-01	6.570E-02	FAIL ABUN
AM-246	7.211E-02	1.939E-01	1.651E-01	9.891E-02	NOT IDENT.
CM-247	8.493E-03	5.447E-02	4.526E-02	2.779E-02	NOT IDENT.
CF-249	2.225E-02	5.281E-02	4.482E-02	2.694E-02	NOT IDENT.
CF-251	-1.108E-02	1.705E-01	1.456E-01	8.697E-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	270.2379
46.50	270.2379
46.50	270.2379
48.70	299.2508
49.72	307.0905
51.35	276.0520
52.39	298.3799
52.97	312.2051
53.15	312.3146
53.44	295.8813
54.07	309.7566
56.28	329.8578
56.28	329.8594
57.37	0.0000
57.53	321.2185
57.53	321.2197
57.60	321.2603
57.98	339.2897
57.98	339.2897
59.32	325.9580
59.32	325.9580
59.40	326.0054
59.54	293.0076
59.72	293.1041
60.01	320.0620
61.10	353.8691
61.14	353.8943
61.30	353.9965
63.00	347.6720
63.29	347.8498
63.29	347.8498
63.58	348.0276
64.28	333.6265
65.12	364.3428
65.20	364.3935
65.20	364.3935
66.05	361.7397
66.72	343.0089
66.83	376.5841
66.91	376.6346
67.20	373.6266
67.20	373.6266
67.75	394.7511
67.85	411.3364
68.90	339.4714
68.90	339.4714
69.30	374.9495
69.67	370.3716
70.82	403.2025
70.82	403.2025
70.83	403.2082
72.80	434.0501
72.87	434.0995
72.87	434.0995
74.67	435.3529
74.81	435.4516
74.81	435.4516
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74.81	435.4516
74.81	435.4516
74.81	435.4516
74.81	435.4516
74.97	435.5605
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77.11	437.0297

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78.38	416.2148
79.62	395.8316
79.80	410.6055
79.80	410.6055
80.11	410.7997
80.18	410.8420
80.30	438.6375
80.30	438.6375
80.57	438.8181
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81.07	502.8193
81.07	502.8193
81.07	502.8193
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83.78	445.8516
83.78	445.8516
83.78	445.8516
83.78	445.8516
84.21	465.8183
84.90	425.2440
85.43	440.3643
86.29	533.0482
86.50	533.2113
86.54	533.2410
86.59	572.7828
86.72	572.8916
86.79	621.2418
86.94	621.3771
87.30	623.4598
87.30	623.4598
87.30	623.4598
87.30	623.4598
87.30	623.4598
87.30	623.4598
87.30	623.4598
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87.88	557.3601
88.03	557.4813
88.36	541.2430
88.47	541.3281
89.95	559.0105
91.11	559.9260
92.29	465.7150
92.38	465.7749
92.38	465.7749
93.35	466.4023
94.00	466.8199
94.67	467.2481
94.67	467.2503
94.90	467.3980
94.90	467.3980
94.90	467.3980
94.90	467.3980
95.87	468.0169
95.87	468.0169
96.73	468.5651
97.43	469.0062
98.44	277.7693
98.44	277.7706
98.88	279.6083
99.55	274.8306
99.55	274.8306
99.86	288.3551
100.00	288.4089
100.10	288.4483
103.18	300.8389
103.76	252.7611
105.00	252.0399
105.31	283.6577
108.00	310.6087
109.28	316.7645

111.00	320.8465
111.00	320.8465
111.76	324.5517
112.95	322.7545
115.19	329.3349
116.30	336.6239
117.00	298.0762
117.00	298.0762
117.66	284.5970
121.11	273.1369
121.62	299.7117
121.78	307.8078
122.06	307.9080
122.32	283.8676
122.32	283.8676
122.32	283.8676
122.32	283.8676
123.07	276.0632
127.23	317.8380
129.76	280.4969
131.20	325.0659
133.02	301.2920
133.54	285.1704
135.34	283.4011
136.00	288.8557
136.25	290.6862
136.48	290.7584
140.51	284.2820
140.51	0.0000
142.18	296.0636
142.65	293.3912
143.76	275.3756
144.24	275.5137
144.24	275.5137
144.24	275.5137
144.24	275.5137
145.22	248.9244
145.44	248.9803
147.16	240.9219
152.43	263.5956
152.70	260.1048
153.22	268.2618
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154.21	255.1486
154.21	255.1486
155.03	258.0367
156.02	259.1840
158.56	269.6925
159.00	0.0000
159.00	264.4314
160.31	289.0045
161.27	282.0878
162.32	232.0154
162.64	232.0882
163.35	210.6432
163.89	230.5664
165.85	268.9007
167.43	279.2462
171.28	243.9824
171.86	245.9287
172.10	245.9845
176.55	253.3798
176.60	253.3904
181.06	262.1087
184.41	261.4288
185.71	249.0487
186.00	249.1127
190.27	215.5407
192.34	220.7887
193.63	219.3161
197.04	206.0366
198.01	224.7850
198.60	230.4736
200.40	230.8255
201.83	290.7409
202.84	237.8271
205.31	231.7753

208.36	301.3160
208.81	301.4289
209.75	225.1190
209.75	225.1190
210.97	207.3167
215.65	202.5006
216.55	220.7032
218.09	206.8096
222.10	197.9945
223.80	174.5425
226.40	211.0162
227.00	200.6538
227.08	202.5687
227.20	202.5882
228.16	192.2677
228.18	192.2708
228.18	192.2708
231.56	0.0000
235.69	170.0189
236.00	162.3992
236.00	162.3992
238.63	163.1039
238.63	163.1039
238.63	163.1039
238.63	163.1039
239.00	163.1493
240.98	163.3905
241.98	163.5124
241.98	163.5124
241.98	163.5124
244.69	164.9971
245.39	168.1676
247.94	163.5882
248.90	176.7760
249.79	168.3222
252.40	151.1952
252.85	160.9391
252.85	160.9391
254.15	0.0000
256.20	191.4540
256.20	191.4540
260.50	187.1660
260.90	189.1689
262.80	168.9163
264.65	156.4258
268.24	144.2711
268.79	144.3272
269.46	151.0650
269.46	151.0650
269.46	151.0650
269.46	151.0650
271.23	151.2483
273.65	174.7166
276.40	149.8105
277.35	163.4335
277.60	163.7431
277.60	163.7431
278.00	160.8262
278.60	142.1389
279.20	140.2211
279.53	139.2637
280.46	159.1182
281.68	145.4007
283.67	147.5745
284.30	144.6633
285.00	143.7389
285.90	138.8657
286.10	149.7973
286.10	149.7973
287.40	135.0309
288.45	0.0000
290.67	135.3214
290.80	135.3339
291.72	144.9735
293.26	0.0000
293.70	133.9960
295.21	140.5143
295.21	140.5143

295.21	140.5143
295.96	140.5809
296.50	140.6303
297.23	159.8828
298.57	160.0220
299.80	160.1465
299.80	160.1465
300.09	113.7265
300.09	113.7265
300.09	113.7265
300.09	113.7265
300.12	113.7283
301.29	131.4462
302.84	126.7626
303.76	109.1752
303.91	109.1868
304.40	107.6138
304.40	107.6138
304.84	93.1837
306.84	115.6229
308.46	139.8951
311.98	125.0728
316.51	129.4727
318.01	121.4923
319.02	130.6849
319.41	137.8096
320.08	127.7284
323.87	124.9763
323.87	124.9763
323.87	124.9763
323.87	124.9763
325.23	168.8065
328.77	124.3270
333.44	125.9014
334.20	111.2371
334.20	111.2371
334.30	111.2438
338.28	107.6115
338.28	107.6115
338.28	107.6115
338.28	107.6115
338.32	107.6131
338.32	107.6131
338.32	107.6131
340.50	107.7509
340.57	107.7557
344.27	113.5434
345.85	119.4126
350.59	0.0000
351.07	116.6744
351.92	116.7313
351.92	116.7313
351.92	116.7313
355.39	0.0000
356.01	101.0581
364.48	108.2006
366.43	108.3196
367.43	112.5483
367.94	0.0000
369.80	118.9576
374.96	124.5273
383.85	106.2044
387.95	92.7373
388.63	95.9349
391.69	95.0345
391.69	95.0345
392.90	91.9264
398.62	108.1011
400.65	107.1553
401.10	106.1203
401.81	118.8975
402.60	116.8230
404.84	114.8324
410.95	88.5294
411.60	90.6938
413.65	114.2867
414.70	107.9367
415.30	110.1070

415.76	113.3415
417.63	0.0000
418.52	106.0047
423.70	96.6206
427.08	106.4625
427.89	110.8096
432.53	93.8128
433.93	99.2717
439.47	85.4781
439.56	85.4817
439.89	86.5771
443.98	106.2693
444.90	91.1290
445.03	79.1999
445.03	79.1999
445.03	79.1999
445.03	79.1999
453.90	99.1522
463.38	74.4258
468.07	84.2426
473.00	87.9553
475.06	97.9440
475.35	94.6543
476.78	89.2105
477.59	84.8368
477.96	74.9332
482.03	100.4657
484.57	70.7402
487.03	78.5652
490.36	0.0000
492.35	83.1917
497.08	77.8111
507.63	0.0000
510.53	0.0000
510.84	87.2352
511.00	87.2412
511.85	87.2733
511.85	87.2733
513.99	87.3549
513.99	87.3549
520.41	70.5934
520.65	70.6011
527.90	58.5889
528.96	0.0000
529.64	71.2620
529.87	0.0000
531.02	72.2051
537.32	66.0654
543.00	85.2747
546.56	0.0000
549.76	75.5085
552.65	57.3829
555.20	65.6490
563.23	64.0374
563.90	75.9503
568.70	65.0960
569.32	60.5279
569.50	62.3671
569.67	62.3704
573.80	79.9313
574.00	75.3435
574.64	68.0110
578.91	64.4458
579.30	0.0000
583.14	61.7869
585.48	52.3074
591.81	49.7397
592.07	51.4160
593.00	60.1774
595.88	60.2456
600.56	76.1423
602.52	0.0000
602.71	85.9645
602.71	85.9645
603.60	94.5157
604.41	100.7452
604.70	113.1595
609.31	75.4708

609.31	75.4708
609.31	75.4708
609.31	75.4708
610.33	75.5005
612.46	63.7455
614.37	76.2395
618.01	58.4290
621.84	71.1526
621.84	71.1526
631.29	57.3141
633.02	49.8298
633.10	53.5920
634.78	54.5662
635.90	56.4727
636.97	47.0789
645.85	49.1245
646.12	59.5224
656.30	60.0615
657.75	63.2552
657.90	0.0000
661.65	57.0117
661.65	57.0117
664.57	0.0000
666.33	68.2128
666.33	68.2128
675.00	60.1515
677.61	49.6945
685.20	50.7874
692.80	61.4922
695.00	51.9249
696.49	52.9133
696.49	52.9133
697.00	57.7339
697.49	55.8193
698.33	52.9482
698.50	55.8392
699.00	62.5895
702.63	59.7764
706.10	48.2642
706.58	0.0000
706.67	54.0668
709.31	58.9478
711.68	52.2268
713.82	43.5542
717.42	59.1131
720.50	42.6841
721.93	0.0000
722.20	59.3178
722.78	69.1730
722.78	69.1730
722.89	73.5090
722.95	73.5109
723.30	73.5201
724.18	92.2748
727.18	85.8856
733.00	68.1953
735.90	54.6096
739.58	54.6766
742.81	52.7805
744.21	51.8277
747.13	57.7511
751.79	44.1156
752.31	45.1038
753.82	48.0693
755.35	47.1117
756.15	49.0869
756.87	44.1892
763.93	79.7245
765.79	74.8496
766.42	64.0288
766.84	66.0071
776.49	68.1914
778.00	58.3374
778.57	54.3917
778.89	55.3861
783.80	61.4172
785.46	57.4860
792.07	76.4774

795.84	30.8267
796.30	27.8476
798.80	72.6596
801.93	53.8022
805.60	36.9070
810.29	55.9412
810.76	53.9512
815.85	35.0239
817.79	50.0635
818.51	45.0681
819.60	41.0751
826.30	44.1719
828.27	0.0000
831.60	50.2777
831.96	48.2719
834.83	52.3402
836.80	0.0000
846.75	52.5307
848.13	44.4673
856.28	0.0000
856.80	47.2853
860.37	51.7321
867.32	52.5168
867.82	45.7471
871.10	45.7910
873.19	45.8196
874.81	45.8416
875.33	0.0000
876.40	46.8827
879.36	47.9432
880.27	46.9355
880.51	41.8368
881.50	40.8281
883.24	51.0620
884.67	43.9312
889.25	49.1051
896.60	44.0844
898.02	53.3330
899.00	45.1408
903.28	45.1967
911.07	38.0912
911.07	38.0912
911.07	38.0912
919.63	35.3831
920.93	34.4124
925.00	43.4099
925.24	43.4130
926.50	41.3604
935.52	39.3925
937.48	50.8231
944.10	35.3306
946.00	45.7456
949.00	42.6626
962.29	27.8496
964.01	33.0869
966.15	57.5002
968.20	57.5325
969.11	57.5472
969.11	57.5472
969.11	57.5472
977.42	44.0446
980.50	41.9824
983.50	44.1174
989.30	36.8218
996.32	22.8373
1001.03	36.9371
1001.68	36.9440
1004.76	36.9739
1021.30	0.0000
1024.50	0.0000
1034.80	24.4892
1036.00	21.3018
1037.82	30.9017
1038.57	37.3037
1038.76	0.0000
1045.16	33.0964
1046.59	40.5847
1048.07	41.6679

1050.47	43.8328
1050.47	43.8328
1062.04	39.6720
1063.62	40.7609
1076.63	37.6677
1077.35	34.4453
1078.86	36.6114
1085.78	35.5958
1099.22	54.1138
1112.02	44.7849
1112.84	48.8672
1115.52	30.7876
1120.29	33.7246
1120.29	33.7246
1120.29	33.7246
1120.29	33.7246
1120.51	33.7276
1121.28	33.7337
1124.00	0.0000
1129.67	37.0729
1131.51	0.0000
1147.95	0.0000
1167.94	34.8473
1173.22	50.4995
1175.09	38.5803
1177.93	28.4949
1189.05	36.8636
1204.90	45.3234
1205.75	0.0000
1213.00	42.6290
1221.42	39.9241
1230.97	45.5946
1235.34	56.8177
1236.41	0.0000
1238.25	50.3306
1246.25	35.4812
1260.41	0.0000
1271.85	34.7447
1274.45	33.8262
1274.54	32.8866
1291.56	25.4652
1298.22	0.0000
1312.09	28.4204
1325.50	36.1028
1325.50	36.1028
1332.49	25.6904
1333.61	31.4075
1360.21	18.1851
1362.66	0.0000
1365.15	19.1618
1368.21	13.4218
1368.53	0.0000
1376.25	20.1669
1384.27	25.0098
1394.10	22.1689
1395.20	21.2096
1407.95	17.3987
1434.06	17.4917
1436.60	17.5005
1457.56	0.0000
1460.81	17.5847
1489.15	12.7715
1509.49	14.7943
1596.49	23.0608
1620.62	10.0712
1678.03	0.0000
1691.02	9.1794
1691.02	9.1794
1706.46	0.0000
1750.46	0.0000
1764.49	16.5280
1764.49	16.5280
1764.49	16.5280
1764.49	16.5280
1770.23	21.2712
1771.40	17.7295
1791.20	0.0000
1808.65	11.4485

1836.01

9.4094

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245396002

Total Uranium Activity	4.0488E+01	ug/g
Total Uranium Counting Unc.	1.1625E+01	ug/g
Total Uranium Tpu	5.9311E-06	ug/g
Total Uranium Mda	4.5721E+00	ug/g

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*****
*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                           *
*                               GROSS GAMMA REPORT                             *
*
*****
*
*  BATCH ID      : 944962                SAMPLE ID   : G245396002                *
*  ANALYST       : MXR1                  DETECTOR    : GAM01                  *
*  SAMPLE DATE   : 21-JAN-2010 12:00:00.00  COUNT TIME : 0 02:00:00.00        *
*  ANALYSIS DATE: 5-FEB-2010 18:59:38.92  SAMPLE ALQT: 100.510 GRAM          *
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.089E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.788E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 4.623E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 2.239E+00

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VAX/VMS Nuclide Identification Report Generated 5-FEB-2010 21:01:10.80

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245396003.CNF;1
Sample date       : 21-JAN-2010 12:00:00 Acquisition date : 5-FEB-2010 19:00:13.
Sample ID        : G245396003 Sample quantity : 1.44550E+02 GRAM
Detector name    : GAM22 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.74 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit  : 75.00000 Sensitivity : 5.00000
Batch ID        : 944962 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	63.18*	2161	1517	1.00	126.61	121	10	3.00E-01	4.0	
2	3	74.82	529	1246	1.17	149.87	146	13	7.35E-02	11.7	1.26E+00
3	3	77.06*	747	1006	1.08	154.35	146	13	1.04E-01	7.9	
4	0	83.97*	166	1202	1.44	168.15	165	7	2.30E-02	35.9	
5	0	86.19*	132	1449	1.36	172.58	172	7	1.84E-02	48.4	
6	3	92.59*	5436	1316	1.15	185.38	181	14	7.55E-01	1.8	2.45E+00
7	3	94.43	284	1035	1.26	189.05	181	14	3.94E-02	33.4	
8	0	98.49*	394	913	1.14	197.16	194	9	5.48E-02	14.9	
9	0	105.30	118	744	1.38	210.77	207	8	1.64E-02	41.1	
10	0	112.81	539	1158	1.46	225.77	220	13	7.49E-02	13.7	
11	0	143.87*	313	813	1.42	287.84	283	11	4.35E-02	18.8	
12	0	163.33	146	621	1.20	326.71	323	9	2.03E-02	32.0	
13	0	185.79*	1306	707	1.34	371.59	367	10	1.81E-01	4.8	
14	0	209.33*	127	520	1.13	418.64	415	9	1.76E-02	34.1	
15	4	238.68*	1761	355	1.23	477.29	470	18	2.45E-01	3.0	2.16E+00
16	4	241.66	384	460	1.71	483.24	470	18	5.33E-02	13.9	
17	0	270.51	125	423	1.45	540.89	534	11	1.73E-02	33.1	
18	0	295.19*	507	408	1.18	590.19	585	11	7.05E-02	9.0	
19	0	299.68*	78	295	1.25	599.17	596	8	1.08E-02	40.1	
20	0	328.14	109	349	2.00	656.05	651	11	1.51E-02	34.6	
21	0	338.21*	398	301	1.50	676.17	671	11	5.53E-02	10.1	
22	0	351.92*	894	334	1.35	703.57	697	13	1.24E-01	5.5	
23	0	463.11	111	210	1.40	925.78	921	11	1.55E-02	26.9	
24	0	510.61*	250	291	1.96	1020.73	1011	20	3.47E-02	19.7	
25	0	583.17*	565	248	1.63	1165.76	1157	18	7.84E-02	7.9	
26	0	609.30*	648	267	1.71	1217.99	1210	13	9.00E-02	6.2	
27	0	661.69	614	195	1.62	1322.70	1315	14	8.53E-02	6.3	
28	0	727.49*	191	115	1.81	1454.25	1447	15	2.65E-02	14.5	
29	0	767.99	296	237	3.41	1535.20	1527	22	4.12E-02	14.8	
30	0	785.49	134	139	1.67	1570.19	1561	18	1.86E-02	22.4	
31	0	795.41	98	91	1.61	1590.02	1584	14	1.37E-02	23.2	
32	0	860.67	83	95	1.25	1720.49	1715	11	1.15E-02	25.4	
33	0	911.45*	411	175	1.91	1822.02	1811	18	5.70E-02	9.2	
34	3	964.71*	124	98	3.10	1928.52	1917	30	1.72E-02	24.7	1.62E+00
35	3	969.23*	252	87	2.32	1937.55	1917	30	3.50E-02	10.6	
36	0	1001.00*	398	99	1.94	2001.06	1994	18	5.52E-02	7.7	
37	0	1120.47*	229	109	2.52	2239.96	2230	24	3.19E-02	14.0	
38	0	1238.73*	90	118	1.52	2476.46	2470	15	1.25E-02	28.9	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1383.82	7	111	0.67	2766.65	2753	20	9.22E-04	396.7	
40	0	1460.89*	1939	72	2.59	2920.80	2908	27	2.69E-01	2.6	
41	0	1729.97*	39	24	3.30	3459.12	3448	19	5.37E-03	36.0	
42	0	1764.52*	172	10	3.00	3528.23	3517	20	2.39E-02	9.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 5-FEB-2010 21:01:14

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245396003.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 21-JAN-2010 12:00:00 Acquisition date : 5-FEB-2010 19:00:13
Sample ID         : G245396003 Sample quantity : 144.55 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA22 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.74 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

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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	*	2.472E+01	2.609E+00	4.378E-01	4.010E-02	56.478
SN-126	+	64.28		1.355E+01	2.246E+00	8.197E-01	1.190E-01	16.533
	+	86.94		5.222E-01	5.501E-01	6.049E-01	2.512E-01	0.863
	+	87.57	*	1.256E-01	1.222E-01	1.691E-01	1.596E-02	0.743
BA-137M	+	661.65	*	4.945E-01	8.119E-02	5.580E-02	5.884E-03	8.862
CS-137	+	661.65	*	5.227E-01	8.587E-02	5.898E-02	6.228E-03	8.862
EU-155		48.70		-1.698E+00	2.455E+00	4.046E+00	3.295E-01	-0.420
		60.01		7.221E+00	5.999E+00	9.224E+00	6.550E-01	0.783
	+	86.54		1.513E-01	1.472E-01	1.880E-01	1.768E-02	0.805
	+	105.31	*	1.780E-01	1.472E-01	1.767E-01	1.517E-02	1.007
LU-177	+	112.95		1.253E+01	3.600E+00	2.782E+00	2.313E-01	4.504
	+	208.36	*	2.035E+00	1.407E+00	1.814E+00	2.048E-01	1.122
TL-208		277.35		2.714E-01	3.508E-01	5.738E-01	9.461E-02	0.473
	+	510.84		6.983E-01	2.892E-01	1.771E-01	2.307E-02	3.944
	+	583.14	*	4.431E-01	8.512E-02	5.041E-02	5.466E-03	8.789
	+	860.37		5.913E-01	3.079E-01	3.717E-01	4.331E-02	1.591
BI-211		72.87		6.465E+00	3.652E+00	5.578E+00	4.464E-01	1.159
	+	351.07	*	3.322E+00	5.308E-01	2.845E-01	3.319E-02	11.678
BI-212	+	727.18	*	1.259E+00	3.955E-01	3.853E-01	4.602E-02	3.267
	+	785.46		5.618E+00	2.589E+00	2.230E+00	2.452E-01	2.519
		1620.62		1.073E+00	1.043E+00	1.892E+00	1.650E-01	0.567
PB-212	+	74.81		2.082E+00	5.532E-01	6.013E-01	7.461E-02	3.462
	+	77.11		1.670E+00	2.979E-01	3.424E-01	2.863E-02	4.877
	+	87.30		5.809E-01	5.681E-01	7.839E-01	1.076E-01	0.741
	+	238.63	*	1.528E+00	2.223E-01	8.540E-02	1.128E-02	17.892
	+	300.09		1.003E+00	8.172E-01	1.041E+00	1.518E-01	0.963
PO-212	+	74.81		2.082E+00	5.532E-01	6.013E-01	7.461E-02	3.462
	+	77.11		1.670E+00	2.979E-01	3.424E-01	2.863E-02	4.877
	+	87.30		5.809E-01	5.681E-01	7.839E-01	1.076E-01	0.741
		115.19		3.802E+00	4.160E+00	6.090E+00	5.045E-01	0.624
	+	238.63	*	1.528E+00	2.223E-01	8.540E-02	1.128E-02	17.892
	+	300.09		1.003E+00	8.172E-01	1.041E+00	1.518E-01	0.963
BI-214	+	609.31	*	9.535E-01	1.624E-01	9.813E-02	1.141E-02	9.717
	+	1120.29		1.683E+00	5.079E-01	3.231E-01	3.570E-02	5.208

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PB-214	+	1764.49		1.649E+00	3.492E-01	2.222E-01	1.852E-02	7.419
	+	74.81		3.587E+00	9.310E-01	1.036E+00	1.142E-01	3.462
	+	77.11		2.862E+00	5.554E-01	5.869E-01	6.640E-02	4.877
	+	87.30		9.952E-01	9.711E-01	1.343E+00	1.634E-01	0.741
	+	241.98		1.996E+00	6.184E-01	4.948E-01	6.804E-02	4.035
PO-214	+	295.21		1.149E+00	2.685E-01	2.043E-01	3.042E-02	5.625
	+	351.92	*	1.156E+00	1.943E-01	9.915E-02	1.264E-02	11.657
	+	74.81		3.587E+00	9.310E-01	1.036E+00	1.142E-01	3.462
	+	77.11		2.862E+00	5.554E-01	5.869E-01	6.640E-02	4.877
	+	87.30		9.952E-01	9.711E-01	1.343E+00	1.634E-01	0.741
PO-216	+	241.98		1.996E+00	6.184E-01	4.948E-01	6.804E-02	4.035
	+	295.21		1.149E+00	2.685E-01	2.043E-01	3.042E-02	5.625
	+	351.92	*	1.156E+00	1.943E-01	9.915E-02	1.264E-02	11.657
	+	74.81		2.082E+00	5.532E-01	6.013E-01	7.461E-02	3.462
	+	77.11		1.670E+00	2.979E-01	3.424E-01	2.863E-02	4.877
PO-218	+	87.30		5.809E-01	5.681E-01	7.839E-01	1.076E-01	0.741
	+	238.63	*	1.528E+00	2.223E-01	8.540E-02	1.128E-02	17.892
	+	300.09		1.003E+00	8.172E-01	1.041E+00	1.518E-01	0.963
	+	74.81		3.587E+00	9.310E-01	1.036E+00	1.142E-01	3.462
	+	77.11		2.862E+00	5.554E-01	5.869E-01	6.640E-02	4.877
RA-224	+	87.30		9.952E-01	9.711E-01	1.343E+00	1.634E-01	0.741
	+	241.98		1.996E+00	6.184E-01	4.948E-01	6.804E-02	4.035
	+	295.21		1.149E+00	2.685E-01	2.043E-01	3.042E-02	5.625
	+	351.92	*	1.156E+00	1.943E-01	9.915E-02	1.264E-02	11.657
	+	240.98	*	3.785E+00	1.153E+00	9.709E-01	1.215E-01	3.898
RA-226	+	609.31	*	9.535E-01	1.624E-01	9.813E-02	1.141E-02	9.717
	+	1120.29		1.683E+00	5.079E-01	3.231E-01	3.570E-02	5.208
	+	1764.49		1.649E+00	3.492E-01	2.222E-01	1.852E-02	7.419
	+	338.32		1.640E+00	7.646E-01	3.261E-01	1.372E-01	5.029
	+	911.07	*	1.381E+00	3.134E-01	1.838E-01	2.436E-02	7.511
AC-228	+	969.11		1.487E+00	4.781E-01	2.771E-01	6.691E-02	5.368
	+	338.32		1.640E+00	7.646E-01	3.261E-01	1.372E-01	5.029
	+	911.07	*	1.381E+00	3.134E-01	1.838E-01	2.436E-02	7.511
	+	969.11		1.487E+00	4.781E-01	2.771E-01	6.691E-02	5.368
	+	74.81		2.114E+00	5.263E-01	6.105E-01	5.030E-02	3.462
TH-228	+	77.11		1.695E+00	3.025E-01	3.476E-01	2.907E-02	4.877
	+	87.30		5.898E-01	5.738E-01	7.959E-01	7.490E-02	0.741
	+	238.63	*	1.552E+00	2.257E-01	8.672E-02	1.146E-02	17.892
	+	300.09		1.018E+00	1.020E+00	1.057E+00	6.356E-01	0.963
	+	609.31	*	9.535E-01	1.624E-01	9.813E-02	1.141E-02	9.717
TH-230	+	1120.29		1.682E+00	5.079E-01	3.231E-01	3.570E-02	5.208
	+	1764.49		1.649E+00	3.492E-01	2.222E-01	1.851E-02	7.419
	+	84.21		1.073E+01	7.766E+00	9.777E+00	8.863E-01	1.098
	+	92.29		1.305E+02	1.275E+01	4.240E+00	3.866E-01	30.782
	+	95.87	*	4.152E+00	2.798E+00	1.740E+00	1.545E-01	2.386
U-231	+	108.00		-1.902E-01	3.196E+00	3.554E+00	2.988E-01	-0.054
	+	338.32		1.640E+00	3.831E-01	3.261E-01	3.878E-02	5.029
	+	911.07	*	1.381E+00	3.134E-01	1.838E-01	2.436E-02	7.511
	+	969.11		1.487E+00	4.781E-01	2.771E-01	6.691E-02	5.368
	+	969.11		1.487E+00	4.781E-01	2.771E-01	6.691E-02	5.368

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-234	+	63.29	*	3.424E+01	6.566E+00	2.211E+00	3.849E-01	15.483
	+	92.38		3.323E+01	6.199E+00	1.079E+00	1.977E-01	30.800
U-234	+	609.31	*	9.535E-01	1.624E-01	9.813E-02	1.141E-02	9.717
	+	1120.29		1.682E+00	5.079E-01	3.231E-01	3.570E-02	5.208
	+	1764.49		1.649E+00	3.492E-01	2.222E-01	1.851E-02	7.419
U-235		89.95		-2.200E+00	2.247E+00	2.341E+00	7.269E-01	-0.940
	+	93.35		3.994E+01	1.134E+01	1.289E+00	3.630E-01	30.982
	+	105.00		1.744E+00	1.526E+00	1.732E+00	5.163E-01	1.007
	+	143.76	*	9.269E-01	3.848E-01	3.365E-01	5.936E-02	2.755
	+	163.35		1.003E+00	6.710E-01	7.397E-01	1.449E-01	1.356
	+	185.71		8.254E-01	1.176E-01	6.896E-02	7.221E-03	11.968
		205.31		2.227E-01	5.835E-01	8.411E-01	1.713E-01	0.265
NP-237	+	86.50	*	3.688E-01	3.668E-01	4.586E-01	1.038E-01	0.804
	+	95.87		3.560E+00	2.536E+00	1.492E+00	3.689E-01	2.386
U-238	+	63.29	*	3.424E+01	6.566E+00	2.211E+00	3.849E-01	15.483
	+	92.38		3.323E+01	3.245E+00	1.079E+00	9.829E-02	30.800
AM-243	+	74.67	*	3.375E-01	8.396E-02	9.775E-02	7.968E-03	3.453
	+	86.72		1.383E+01	1.345E+01	1.716E+01	1.604E+00	0.806
		117.66		8.455E-01	4.275E+00	6.090E+00	5.031E-01	0.139
		142.18		2.995E+01	2.095E+01	3.209E+01	2.834E+00	0.933
ANH-511	+	511.00	*	1.508E-01	6.120E-02	3.826E-02	3.833E-03	3.943

---- 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	*	-2.644E-01	2.993E-01	4.602E-01	4.803E-02	-0.574
NA-22		1274.54	*	-1.807E-02	3.283E-02	5.202E-02	4.483E-03	-0.347
NA-24		1368.53	*	-2.799E-01	3.283E-02	Half-Life too short		
AL-26		1129.67		-1.855E-02	1.479E+00	2.032E+00	1.770E-01	-0.009
		1808.65	*	-1.998E-02	2.273E-02	3.256E-02	2.663E-03	-0.614
TI-44		67.85		-3.928E-02	4.956E-02	7.606E-02	5.805E-03	-0.517
	+	78.38	*	3.081E-01	5.498E-02	7.239E-02	6.137E-03	4.257
SC-46		889.25	*	-1.931E-02	3.174E-02	5.046E-02	5.649E-03	-0.383
	+	1120.51		2.884E-01	8.495E-02	9.980E-02	8.824E-03	2.890
V-48		944.10		2.961E-01	7.335E-01	1.240E+00	1.345E-01	0.239
		983.50	*	9.206E-03	6.059E-02	1.005E-01	1.054E-02	0.092
		1312.09		-2.971E-02	6.319E-02	1.003E-01	8.835E-03	-0.296
CR-51		320.08	*	-4.252E-02	3.259E-01	5.425E-01	7.024E-02	-0.078
MN-52		744.21		1.167E-01	2.064E-01	3.456E-01	3.755E-02	0.338
		848.13		-1.788E+00	5.579E+00	9.108E+00	1.014E+00	-0.196
		935.52		3.198E-01	2.243E-01	3.961E-01	4.324E-02	0.808
		1246.25		-8.818E-01	6.630E+00	9.230E+00	7.803E-01	-0.096
		1333.61		-1.489E+00	3.912E+00	6.229E+00	5.555E-01	-0.239
		1434.06	*	-8.854E-02	1.738E-01	2.683E-01	2.397E-02	-0.330
MN-54		834.83	*	-1.084E-02	3.093E-02	5.057E-02	5.618E-03	-0.214
CO-56		846.75	*	-1.005E-02	3.256E-02	5.324E-02	5.927E-03	-0.189
		977.42		-2.711E-01	2.867E+00	3.981E+00	4.199E-01	-0.068
		1037.82		-8.038E-02	2.601E-01	4.159E-01	4.288E-02	-0.193

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1175.09		1.129E+00	1.763E+00	3.051E+00	2.457E-01	0.370
	+	1238.25		1.848E-01	1.081E-01	1.396E-01	1.210E-02	1.323
		1360.21		-1.002E-01	7.067E-01	1.146E+00	1.023E-01	-0.087
		1771.40		1.198E-01	1.876E-01	2.946E-01	2.447E-02	0.407
CO-57		122.06	*	1.243E-02	2.613E-02	4.203E-02	3.466E-03	0.296
		136.48		-2.151E-02	2.055E-01	3.465E-01	3.215E-02	-0.062
CO-58		810.76	*	-2.309E-02	3.128E-02	4.982E-02	5.516E-03	-0.464
FE-59	+	142.65		1.199E+01	4.630E+00	5.056E+00	4.474E-01	2.371
		192.34		-3.702E-01	8.905E-01	1.447E+00	2.148E-01	-0.256
		1099.22	*	-2.964E-02	7.609E-02	1.202E-01	1.178E-02	-0.246
		1291.56		7.693E-03	9.313E-02	1.549E-01	1.527E-02	0.050
CO-60		1173.22		8.135E-03	3.439E-02	5.822E-02	4.682E-03	0.140
		1332.49	*	-1.688E-02	2.997E-02	4.690E-02	4.182E-03	-0.360
ZN-65		1115.52	*	6.613E-02	7.916E-02	1.181E-01	1.053E-02	0.560
GE-68		1077.35	*	7.968E-02	9.901E-01	1.621E+00	1.528E-01	0.049
AS-73		53.44	*	5.536E-02	8.884E-01	1.462E+00	1.105E-01	0.038
AS-74		595.88	*	-1.974E-02	7.723E-02	1.263E-01	1.309E-02	-0.156
		634.78		4.681E-02	2.951E-01	4.906E-01	5.142E-02	0.095
SE-75		66.05		-2.411E+00	5.366E+00	7.818E+00	7.459E-01	-0.308
		96.73		2.502E+00	1.193E+00	1.446E+00	1.990E-01	1.730
		121.11		-6.513E-02	1.424E-01	2.222E-01	2.429E-02	-0.293
		136.00		-5.745E-03	3.865E-02	6.509E-02	5.648E-03	-0.088
		198.60		-5.275E-01	1.739E+00	2.790E+00	3.260E-01	-0.189
		264.65	*	1.994E-03	4.562E-02	6.415E-02	8.634E-03	0.031
		279.53		5.347E-02	1.026E-01	1.670E-01	2.370E-02	0.320
		303.91		-4.227E-01	2.038E+00	2.946E+00	4.489E-01	-0.143
		400.65		1.547E-01	2.318E-01	3.902E-01	4.567E-02	0.396
BR-77		87.88		-6.146E+02	3.698E+02	3.893E+02	3.690E+01	-1.579
		200.40		-1.316E+02	1.668E+02	2.665E+02	2.930E+01	-0.494
	+	239.00		2.582E+02	3.574E+01	3.302E+01	4.108E+00	7.821
		249.79		-8.431E+00	6.533E+01	1.050E+02	1.350E+01	-0.080
		281.68		-8.525E+00	8.855E+01	1.410E+02	1.964E+01	-0.060
		297.23		3.455E+02	9.942E+01	1.147E+02	1.543E+01	3.011
		303.76		-5.357E+01	1.820E+02	2.617E+02	3.462E+01	-0.205
		439.47		1.597E+02	1.340E+02	2.290E+02	2.204E+01	0.698
		484.57		9.963E+00	2.154E+02	3.484E+02	3.444E+01	0.029
		520.65	*	-7.287E+00	9.611E+00	1.470E+01	1.480E+00	-0.496
		574.64		-1.383E+02	2.149E+02	3.062E+02	3.150E+01	-0.452
		578.91		3.489E+01	8.948E+01	1.314E+02	1.355E+01	0.265
		585.48		1.684E+03	2.855E+02	4.340E+02	4.483E+01	3.879
		755.35		1.313E+02	1.493E+02	2.533E+02	2.762E+01	0.518
		817.79		-6.063E+00	1.108E+02	1.846E+02	2.044E+01	-0.033
SR-82		698.33		-2.251E+01	2.973E+01	4.640E+01	4.964E+00	-0.485
		776.49	*	1.950E-01	5.339E-01	4.913E-01	5.388E-02	0.397
		1395.20		-4.337E+00	8.623E+00	1.345E+01	1.203E+00	-0.322
RB-83		520.41	*	-4.512E-02	6.049E-02	9.261E-02	9.321E-03	-0.487
		529.64		-5.168E-02	8.902E-02	1.447E-01	1.462E-02	-0.357
		552.65		-1.275E-01	1.620E-01	2.583E-01	2.636E-02	-0.494
RB-84		881.50	*	3.801E-02	6.000E-02	1.030E-01	1.152E-02	0.369

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
KR-85	513.99	*		2.329E+01	7.620E+00	1.209E+01	1.213E+00	1.927
SR-85	513.99	*		1.197E-01	3.914E-02	6.208E-02	6.229E-03	1.927
RB-86	1076.63	*		-8.860E-02	6.468E-01	1.043E+00	9.840E-02	-0.085
Y-88	898.02			-8.839E-03	3.592E-02	5.864E-02	6.589E-03	-0.151
	1836.01	*		-1.461E-03	2.403E-02	3.911E-02	3.162E-03	-0.037
ZR-88	392.90	*		3.655E-03	2.622E-02	4.339E-02	4.040E-03	0.084
Y-91	1204.90	*		2.886E-01	1.479E+01	2.464E+01	2.026E+00	0.012
NB-94	702.63	*		1.251E-02	2.960E-02	4.933E-02	5.286E-03	0.254
	871.10			-1.913E-02	2.804E-02	4.448E-02	4.969E-03	-0.430
NB-95	765.79	*		2.269E-01	5.587E-02	8.849E-02	9.677E-03	2.564
NB-95M	235.69	*		8.367E-02	1.335E-01	1.942E-01	2.568E-02	0.431
ZR-95	724.18			1.151E-01	9.555E-02	1.440E-01	1.642E-02	0.799
	756.15	*		3.166E-02	6.053E-02	1.010E-01	1.172E-02	0.314
NB-97	657.90	*		1.820E-01	6.053E-02	Half-Life	too short	
	1024.50			-3.356E-01	6.053E-02	Half-Life	too short	
ZR-97	254.15			-4.801E+00	6.053E-02	Half-Life	too short	
	355.39			5.960E+00	6.053E-02	Half-Life	too short	
	507.63	*		6.500E+00	6.053E-02	Half-Life	too short	
	602.52			2.087E+00	6.053E-02	Half-Life	too short	
	1021.30			3.097E+00	6.053E-02	Half-Life	too short	
	1147.95			-8.600E-01	6.053E-02	Half-Life	too short	
	1362.66			-4.532E+00	6.053E-02	Half-Life	too short	
	1750.46			2.676E+00	6.053E-02	Half-Life	too short	
MO-99	140.51			4.884E+00	3.078E+01	4.552E+01	1.263E+01	0.107
	181.06			3.816E+00	1.946E+01	2.854E+01	5.463E+00	0.134
	366.43			-4.826E+01	7.815E+01	1.255E+02	1.332E+01	-0.384
	739.58	*		-1.618E-01	1.030E+01	1.671E+01	2.766E+00	-0.010
	778.00			1.355E+01	4.980E+01	4.502E+01	4.939E+00	0.301
TC-99M	140.51	*		1.101E+10	4.980E+01	Half-Life	too short	
RH-101	127.23			-1.417E-02	3.423E-02	5.337E-02	4.461E-03	-0.266
	198.01	*		6.447E-03	3.175E-02	5.176E-02	5.647E-03	0.125
	325.23			8.370E-02	2.263E-01	3.351E-01	4.165E-02	0.250
RH-102	418.52			5.513E-03	2.503E-01	4.098E-01	3.889E-02	0.013
	475.06	*		2.703E-02	2.591E-02	4.382E-02	4.310E-03	0.617
	631.29			1.192E-02	4.579E-02	7.655E-02	8.015E-03	0.156
	697.49			-6.759E-02	6.797E-02	1.045E-01	1.117E-02	-0.647
	766.84	+		7.139E-01	2.253E-01	2.242E-01	2.452E-02	3.185
	1046.59			-1.130E-01	9.956E-02	1.491E-01	1.463E-02	-0.758
	1112.84			2.776E-02	1.875E-01	2.628E-01	2.352E-02	0.106
RU-103	497.08	*		6.211E-03	3.491E-02	5.672E-02	8.514E-03	0.109
	610.33	+		1.033E+01	2.233E+00	2.241E+00	3.962E-01	4.608
RH-106	511.85	+		7.537E-01	3.058E-01	3.552E-01	3.561E-02	2.122
	621.84	*		5.018E-04	2.801E-01	4.626E-01	6.755E-02	0.001
	1050.47			2.000E+00	1.880E+00	3.268E+00	3.190E-01	0.612
RU-106	511.85	+		7.537E-01	3.058E-01	3.552E-01	3.561E-02	2.122
	621.84	*		5.018E-04	2.801E-01	4.626E-01	4.832E-02	0.001
	1050.47			2.000E+00	1.880E+00	3.268E+00	3.190E-01	0.612
AG-108M	433.93	*		-1.930E-02	2.871E-02	4.515E-02	4.469E-03	-0.428
	614.37			-2.034E-03	3.856E-02	5.459E-02	5.843E-03	-0.037

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CD-109	722.95			-1.302E-02	4.098E-02	5.558E-02	6.149E-03	-0.234
	88.03	*		-2.581E+00	1.625E+00	1.718E+00	1.630E-01	-1.503
AG-110M	657.75	*		3.656E-02	3.774E-02	5.655E-02	6.078E-03	0.646
	677.61			-2.312E-02	2.581E-01	4.206E-01	4.548E-02	-0.055
	706.67			-1.472E-01	1.874E-01	2.918E-01	3.187E-02	-0.504
	763.93			6.103E-01	1.947E-01	3.099E-01	3.447E-02	1.969
	884.67			-2.790E-03	4.155E-02	6.868E-02	7.832E-03	-0.041
	937.48			3.529E-02	9.468E-02	1.596E-01	1.780E-02	0.221
	1384.27	+		3.736E-02	2.965E-01	2.222E-01	2.039E-02	0.168
IN-111	171.28			2.146E-01	1.001E+00	1.675E+00	1.672E-01	0.128
	245.39	*		1.307E-01	1.161E+00	1.651E+00	2.094E-01	0.079
IN-113M	391.69	*		1.957E-03	3.810E-02	6.282E-02	5.999E-03	0.031
SN-113	391.69	*		1.957E-03	3.810E-02	6.282E-02	5.999E-03	0.031
IN-114M	190.27	*		1.258E-01	1.904E-01	2.832E-01	3.011E-02	0.444
CD-115	260.90			4.387E+00	1.309E+02	2.108E+02	2.802E+01	0.021
	492.35			-2.245E+00	3.317E+01	5.325E+01	5.286E+00	-0.042
	527.90	*		-2.059E+00	9.677E+00	1.605E+01	1.620E+00	-0.128
SN-117M	156.02			-5.527E-01	2.282E+00	3.796E+00	3.559E-01	-0.146
	158.56	*		-9.063E-02	6.411E-02	8.840E-02	8.384E-03	-1.025
SB-122	563.90	*		-7.135E-01	1.853E+00	3.028E+00	3.104E-01	-0.236
	692.80			2.450E+01	3.845E+01	6.489E+01	6.928E+00	0.378
I-123	159.00	*		-8.738E+00	3.845E+01	Half-Life too short		
	528.96			-2.187E+02	3.845E+01	Half-Life too short		
TE-123M	159.00	*		-3.462E-02	3.263E-02	4.582E-02	4.376E-03	-0.756
I-124	602.71	*		1.888E-01	6.808E-01	9.882E-01	1.026E-01	0.191
	722.78			-1.745E+00	4.392E+00	5.913E+00	6.381E-01	-0.295
	1325.50			-6.463E+00	2.818E+01	4.558E+01	4.048E+00	-0.142
	1376.25			5.904E+01	2.847E+01	4.855E+01	4.339E+00	1.216
	1509.49			1.774E+00	1.283E+01	2.116E+01	1.880E+00	0.084
	1691.02			-2.196E+00	2.878E+00	4.271E+00	3.653E-01	-0.514
SB-124	602.71			1.068E-02	3.851E-02	5.590E-02	5.807E-03	0.191
	645.85			1.062E-01	4.228E-01	7.050E-01	7.710E-02	0.151
	709.31			6.856E-01	2.413E+00	3.995E+00	4.291E-01	0.172
	713.82			1.628E-01	1.449E+00	2.375E+00	3.243E-01	0.069
	722.78			-1.431E-01	3.602E-01	4.849E-01	5.306E-02	-0.295
	968.20	+		1.534E+01	3.640E+00	6.009E+00	6.389E-01	2.553
	1045.16			-1.524E+00	2.081E+00	3.219E+00	3.163E-01	-0.473
	1325.50			-5.661E-01	2.468E+00	3.992E+00	3.545E-01	-0.142
	1368.21			-8.759E-01	1.289E+00	1.965E+00	2.688E-01	-0.446
	1436.60			-2.692E-01	2.655E+00	4.293E+00	3.837E-01	-0.063
	1691.02	*		-4.248E-02	5.568E-02	8.262E-02	7.349E-03	-0.514
SB-125	427.89	*		3.615E-02	7.864E-02	1.311E-01	1.272E-02	0.276
	463.38	+		6.173E-01	3.376E-01	4.569E-01	4.738E-02	1.351
	600.56			9.632E-02	1.616E-01	2.565E-01	2.799E-02	0.376
	635.90			-1.154E-01	2.237E-01	3.572E-01	3.952E-02	-0.323
TE-125M	109.28	*		6.047E+00	1.415E+01	1.617E+01	1.637E+00	0.374
I-126	388.63			-1.555E-01	1.797E-01	2.832E-01	2.681E-02	-0.549
	666.33	*		7.550E-02	1.875E-01	2.717E-01	2.870E-02	0.278
	753.82			8.331E-01	1.267E+00	2.128E+00	2.319E-01	0.391

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-126		223.80		-3.226E+00	3.769E+00	5.925E+00	7.029E-01	-0.545
		278.60		5.394E-01	2.346E+00	3.785E+00	5.291E-01	0.143
	+	296.50		1.155E+01	2.601E+00	3.081E+00	4.151E-01	3.749
		414.70		-1.425E-02	6.814E-02	1.104E-01	1.045E-02	-0.129
		415.30		1.275E+00	5.610E+00	9.273E+00	8.780E-01	0.137
		555.20		3.771E-01	3.181E+00	5.340E+00	5.455E-01	0.071
		573.80		-7.576E-01	9.927E-01	1.456E+00	1.498E-01	-0.520
		593.00		-6.394E-01	8.101E-01	1.252E+00	1.296E-01	-0.511
		656.30		2.265E+00	3.169E+00	4.717E+00	4.969E-01	0.480
		666.33		3.156E-02	7.839E-02	1.136E-01	1.200E-02	0.278
		675.00		-5.066E-01	1.662E+00	2.674E+00	2.835E-01	-0.189
		695.00		8.147E-02	6.529E-02	1.130E-01	1.207E-02	0.721
		697.00		-2.465E-01	2.395E-01	3.670E-01	3.925E-02	-0.672
		720.50	*	2.375E-02	1.429E-01	2.021E-01	2.179E-02	0.118
		856.80		2.481E-01	4.521E-01	6.729E-01	7.502E-02	0.369
		989.30		4.734E-01	1.030E+00	1.741E+00	1.816E-01	0.272
		1034.80		-1.623E+00	7.398E+00	1.191E+01	1.184E+00	-0.136
		1213.00		5.378E-01	3.663E+00	6.146E+00	5.082E-01	0.087
SB-127		61.10		1.402E+02	7.369E+01	1.135E+02	1.152E+01	1.235
		252.40		-2.917E-01	4.128E+00	6.639E+00	2.865E+00	-0.044
		290.80		1.965E+01	2.201E+01	3.349E+01	5.165E+00	0.587
		411.60		6.293E+00	1.110E+01	1.856E+01	3.012E+00	0.339
		444.90		-9.153E+00	9.069E+00	1.388E+01	1.848E+00	-0.660
		473.00		-3.593E-01	1.578E+00	2.522E+00	3.467E-01	-0.142
		543.00		-6.471E+00	1.444E+01	2.317E+01	3.570E+00	-0.279
		603.60		2.694E+00	1.189E+01	1.719E+01	2.377E+00	0.157
		685.20	*	2.995E-01	1.157E+00	1.921E+00	2.503E-01	0.156
		698.50		-1.053E+01	1.366E+01	2.118E+01	3.616E+00	-0.497
		722.20		-3.735E+00	2.915E+01	4.018E+01	5.205E+00	-0.093
		783.80		7.176E+00	3.900E+00	5.992E+00	8.511E-01	1.198
XE-127		57.60		-1.818E+00	6.894E+00	1.088E+01	7.816E-01	-0.167
	+	145.22		3.073E+00	1.187E+00	1.245E+00	1.113E-01	2.469
		172.10		-4.584E-02	1.154E-01	1.894E-01	1.896E-02	-0.242
		202.84	*	2.021E-02	4.537E-02	7.545E-02	8.364E-03	0.268
I-131		374.96		-1.012E-01	1.727E-01	2.772E-01	2.822E-02	-0.365
		80.18		3.203E+00	6.991E+00	8.212E+00	7.150E-01	0.390
		284.30		-1.041E+00	1.428E+00	2.199E+00	3.109E-01	-0.473
		364.48	*	-2.881E-03	1.021E-01	1.689E-01	1.871E-02	-0.017
TE-132		636.97		-6.442E-01	1.290E+00	2.062E+00	2.245E-01	-0.312
		722.89		-2.420E+00	6.998E+00	9.467E+00	1.026E+00	-0.256
		49.72		-1.294E+00	2.047E+01	3.432E+01	3.578E+00	-0.038
	+	111.76		2.321E+02	6.846E+01	6.529E+01	6.970E+00	3.555
BA-133		116.30		2.122E+01	3.264E+01	4.731E+01	5.029E+00	0.448
		228.16	*	6.124E-01	6.863E-01	1.136E+00	2.028E-01	0.539
		53.15		-2.511E-01	3.851E+00	6.321E+00	4.797E-01	-0.040
		79.62		1.081E-01	1.974E+00	2.279E+00	3.466E-01	0.047
		81.00		9.399E-03	1.512E-01	1.742E-01	2.777E-02	0.054
		276.40		3.229E-01	3.573E-01	5.658E-01	1.024E-01	0.571
		302.84		3.737E-02	1.407E-01	2.086E-01	3.479E-02	0.179

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-133	+	356.01	*	3.519E-02	4.018E-02	6.055E-02	9.048E-03	0.581
		383.85		-2.436E-02	2.615E-01	4.291E-01	5.743E-02	-0.057
		510.53		1.765E+00	2.615E-01	Half-Life	too short	
		529.87	*	-1.168E-03	2.615E-01	Half-Life	too short	
		706.58		-3.343E-01	2.615E-01	Half-Life	too short	
		856.28		2.514E-01	2.615E-01	Half-Life	too short	
		875.33		-6.146E-02	2.615E-01	Half-Life	too short	
CS-134		1236.41		1.357E+00	2.615E-01	Half-Life	too short	
		1298.22		1.465E-02	2.615E-01	Half-Life	too short	
		475.35		1.584E+00	1.700E+00	2.863E+00	2.816E-01	0.553
		563.23		-7.112E-03	3.039E-01	5.058E-01	5.218E-02	-0.014
		569.32		2.681E-02	1.684E-01	2.824E-01	2.928E-02	0.095
		604.70		2.117E-02	3.311E-02	4.913E-02	5.115E-03	0.431
		795.84	*	1.081E-01	5.156E-02	6.901E-02	7.639E-03	1.567
I-135	+	801.93		-4.469E-01	4.050E-01	4.948E-01	5.479E-02	-0.903
		1038.57		-3.396E-01	3.221E+00	5.224E+00	5.173E-01	-0.065
		1167.94		-1.688E-01	1.915E+00	3.178E+00	2.583E-01	-0.053
		1365.15		-8.040E-01	8.746E-01	1.294E+00	1.206E-01	-0.621
		268.24	*	2.287E-01	1.666E-01	2.458E-01	3.555E-02	0.930
		288.45		1.047E+10	1.666E-01	Half-Life	too short	
		417.63		7.180E+09	1.666E-01	Half-Life	too short	
CS-136		546.56		2.451E+10	1.666E-01	Half-Life	too short	
		836.80		6.608E+09	1.666E-01	Half-Life	too short	
		1038.76		-5.135E+08	1.666E-01	Half-Life	too short	
		1124.00		1.553E+11	1.666E-01	Half-Life	too short	
		1131.51		-4.308E+08	1.666E-01	Half-Life	too short	
		1260.41	*	-2.025E+09	1.666E-01	Half-Life	too short	
		1457.56		1.310E+12	1.666E-01	Half-Life	too short	
CE-139	+	1678.03		-6.182E+09	1.666E-01	Half-Life	too short	
		1706.46		1.595E+10	1.666E-01	Half-Life	too short	
		1791.20		-4.400E+09	1.666E-01	Half-Life	too short	
		66.91		-3.621E-01	8.809E-01	1.283E+00	1.908E-01	-0.282
		86.29		1.654E+00	1.617E+00	2.167E+00	2.885E-01	0.763
		153.22		9.183E-01	6.672E-01	1.148E+00	1.172E-01	0.800
		163.89		2.294E+00	1.487E+00	1.878E+00	1.999E-01	1.222
BA-140	+	176.55		1.706E-01	3.571E-01	6.003E-01	6.353E-02	0.284
		273.65		-5.724E-01	4.937E-01	6.362E-01	9.001E-02	-0.900
		340.57		5.449E-01	1.479E-01	2.294E-01	2.748E-02	2.376
		818.51		1.473E-02	6.001E-02	1.017E-01	1.127E-02	0.145
		1048.07	*	-1.886E-02	9.181E-02	1.478E-01	1.494E-02	-0.128
		1235.34		1.171E+00	5.755E-01	9.174E-01	1.072E-01	1.276
		165.85	*	-7.130E-03	3.243E-02	4.716E-02	4.625E-03	-0.151
LA-140	+	162.64		1.616E+00	1.046E+00	1.332E+00	1.347E-01	1.213
		304.84		-3.025E-01	1.263E+00	1.818E+00	5.410E-01	-0.166
		423.70		-4.718E-01	1.654E+00	2.654E+00	8.669E-01	-0.178
		537.32	*	1.362E-01	2.181E-01	3.680E-01	1.235E-01	0.370
		328.77		5.637E-01	3.960E-01	4.840E-01	6.115E-02	1.164
		432.53		-1.599E+00	1.803E+00	2.799E+00	2.788E-01	-0.571
		487.03		1.644E-02	1.240E-01	2.013E-01	2.087E-02	0.082

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		751.79		4.157E-01	1.453E+00	2.396E+00	2.788E-01	0.173
		815.85		1.357E-01	2.511E-01	4.329E-01	5.134E-02	0.314
		867.82		-3.042E-01	1.245E+00	1.796E+00	2.069E-01	-0.169
		919.63		-2.733E-01	2.392E+00	3.578E+00	4.541E-01	-0.076
		925.24		2.821E-01	8.918E-01	1.504E+00	1.719E-01	0.188
		1596.49	*	-1.401E-01	7.629E-02	1.031E-01	9.036E-03	-1.359
CE-141		145.44	*	1.486E-01	6.991E-02	1.099E-01	1.000E-02	1.353
CE-143		57.37		-2.385E-04	6.991E-02	Half-Life	too short	
		231.56		-1.445E-03	6.991E-02	Half-Life	too short	
		293.26	*	7.382E-04	6.991E-02	Half-Life	too short	
	+	350.59		2.876E-02	6.991E-02	Half-Life	too short	
		490.36		1.337E-04	6.991E-02	Half-Life	too short	
		664.57		1.275E-02	6.991E-02	Half-Life	too short	
		721.93		-1.193E-04	6.991E-02	Half-Life	too short	
CE-144		80.11		1.408E+00	3.171E+00	3.722E+00	3.217E-01	0.378
		133.54	*	-5.521E-02	2.021E-01	3.395E-01	5.270E-02	-0.163
PM-144		476.78		-4.972E-02	6.163E-02	9.519E-02	1.005E-02	-0.522
		618.01		2.284E-02	2.846E-02	4.868E-02	5.176E-03	0.469
		696.49	*	-1.195E-02	2.982E-02	4.762E-02	5.093E-03	-0.251
		778.57		1.399E+00	3.231E+00	3.009E+00	3.303E-01	0.465
PR-144		696.49	*	-8.095E-01	2.021E+00	3.227E+00	3.450E-01	-0.251
		1489.15		-1.208E+01	9.256E+00	1.268E+01	1.130E+00	-0.953
PM-146		453.90	*	3.381E-02	3.980E-02	6.685E-02	7.769E-03	0.506
		633.02		8.757E-01	1.179E+00	1.945E+00	7.359E-01	0.450
		735.90		-1.258E-01	1.414E-01	1.906E-01	5.595E-02	-0.660
		747.13		-8.070E-02	8.003E-02	1.203E-01	1.868E-02	-0.671
ND-147	+	91.11		1.690E+01	1.758E+00	1.016E+00	1.003E-01	16.641
		319.41		-8.429E-01	2.951E+00	4.879E+00	6.176E-01	-0.173
		439.89		2.438E+00	5.319E+00	8.803E+00	8.477E-01	0.277
		531.02	*	-2.686E-01	4.774E-01	7.742E-01	1.228E-01	-0.347
PM-149		285.90	*	-7.623E+01	9.196E+01	1.399E+02	2.646E+01	-0.545
EU-152		121.78		-1.760E-02	7.699E-02	1.211E-01	1.163E-02	-0.145
		244.69		1.172E-01	3.543E-01	5.089E-01	6.443E-02	0.230
		344.27	*	-6.648E-02	1.040E-01	1.353E-01	1.626E-02	-0.491
		443.98		-9.641E-01	8.506E-01	1.297E+00	1.252E-01	-0.743
		778.89		2.093E-01	3.159E-01	3.540E-01	3.885E-02	0.591
		867.32		-1.820E-01	7.735E-01	1.075E+00	1.201E-01	-0.169
	+	964.01		8.403E-01	4.254E-01	4.823E-01	5.147E-02	1.742
		1085.78		-9.250E-02	3.326E-01	5.306E-01	4.944E-02	-0.174
		1112.02		8.914E-03	2.690E-01	3.723E-01	3.336E-02	0.024
		1407.95		9.675E-02	1.594E-01	2.735E-01	2.445E-02	0.354
GD-153		69.67		-7.079E-01	1.792E+00	2.785E+00	2.162E-01	-0.254
	+	83.37		2.841E+01	2.056E+01	2.861E+01	2.568E+00	0.993
	+	97.43	*	4.193E-01	1.299E-01	1.598E-01	1.405E-02	2.623
		103.18		4.525E-02	1.538E-01	1.756E-01	1.500E-02	0.258
EU-154		123.07		4.533E-02	5.351E-02	8.671E-02	9.618E-03	0.523
		247.94		-1.953E-02	3.394E-01	5.472E-01	8.133E-02	-0.036
		591.81		4.494E-02	5.690E-01	8.504E-01	1.106E-01	0.053
		723.30		3.606E-02	1.701E-01	2.411E-01	2.780E-02	0.150

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TB-160	+	756.87		1.446E-01	6.615E-01	1.085E+00	1.489E-01	0.133
		873.19		-6.694E-02	2.475E-01	4.041E-01	5.721E-02	-0.166
		996.32		3.713E-01	3.492E-01	5.282E-01	9.863E-02	0.703
		1004.76		8.672E-01	2.573E-01	4.154E-01	5.364E-02	2.088
		1274.45	*	-5.045E-02	9.177E-02	1.453E-01	1.642E-02	-0.347
		86.79		4.048E-01	3.937E-01	5.324E-01	4.979E-02	0.760
		197.04		1.747E-01	5.384E-01	8.809E-01	9.579E-02	0.198
		215.65		5.900E-01	7.197E-01	1.165E+00	1.347E-01	0.506
		298.57		1.461E-01	1.188E-01	1.818E-01	2.437E-02	0.804
		879.36	*	1.256E-01	1.190E-01	2.083E-01	2.329E-02	0.603
		962.29		1.090E+00	4.619E-01	8.298E-01	8.868E-02	1.314
		966.15		5.779E-01	2.926E-01	4.409E-01	4.697E-02	1.311
		1177.93		6.045E-02	2.805E-01	4.741E-01	3.825E-02	0.128
		1271.85		-1.720E-01	5.298E-01	8.552E-01	7.350E-02	-0.201
HO-166M	+	80.57		2.377E-01	4.069E-01	4.803E-01	4.173E-02	0.495
		184.41		6.191E-01	8.822E-02	9.195E-02	9.586E-03	6.733
		280.46		-2.793E-02	8.104E-02	1.277E-01	1.783E-02	-0.219
		410.95		9.235E-02	2.186E-01	3.644E-01	3.440E-02	0.253
		711.68	*	2.497E-02	5.258E-02	8.785E-02	9.445E-03	0.284
TM-171		752.31		1.043E-01	2.327E-01	3.870E-01	4.215E-02	0.270
		810.29		-2.621E-02	4.644E-02	7.490E-02	8.280E-03	-0.350
		51.35		-4.062E+00	3.166E+01	5.291E+01	4.127E+00	-0.077
		52.39		1.121E+00	1.679E+01	2.767E+01	2.123E+00	0.041
		59.40		3.721E+01	3.163E+01	4.868E+01	3.441E+00	0.764
LU-176	*	66.72		-1.214E+01	3.172E+01	4.630E+01	3.498E+00	-0.262
		88.36		-2.213E-01	3.626E-01	4.027E-01	3.808E-02	-0.549
		201.83		-1.870E-02	2.795E-02	4.485E-02	4.955E-03	-0.417
		306.84	*	-1.680E-02	2.169E-02	3.514E-02	4.610E-03	-0.478
LU-177M		401.10		3.188E+00	6.060E+00	1.016E+01	9.519E-01	0.314
		52.97		6.465E-02	1.741E+00	2.866E+00	2.180E-01	0.023
		54.07		6.793E-02	9.209E-01	1.516E+00	1.135E-01	0.045
		61.30		6.765E+00	1.937E+00	3.061E+00	2.202E-01	2.210
		121.62		-1.254E-01	3.941E-01	6.183E-01	5.093E-02	-0.203
HF-181		147.16		1.155E-01	6.883E-01	1.027E+00	9.265E-02	0.112
		171.86		-1.636E-01	4.643E-01	7.636E-01	7.637E-02	-0.214
		218.09		6.260E-02	7.952E-01	1.302E+00	1.517E-01	0.048
		268.79		1.469E+00	8.693E-01	1.291E+00	1.755E-01	1.138
		319.02		-5.759E-02	2.258E-01	3.740E-01	4.739E-02	-0.154
		367.43		-1.893E-01	8.113E-01	1.328E+00	1.402E-01	-0.143
		413.65	*	-1.198E-01	1.606E-01	2.535E-01	2.397E-02	-0.473
		56.28		-4.084E-01	1.021E+00	1.686E+00	1.228E-01	-0.242
		57.53		-7.607E-02	5.762E-01	9.129E-01	6.562E-02	-0.083
		65.20		2.767E+00	1.134E+00	1.770E+00	1.319E-01	1.564
		133.02		-1.001E-02	6.497E-02	1.096E-01	9.341E-03	-0.091
		136.25		-6.720E-02	4.517E-01	7.607E-01	6.562E-02	-0.088
		345.85		-1.033E-01	1.921E-01	2.679E-01	3.098E-02	-0.386
		482.03	*	2.438E-03	3.861E-02	6.253E-02	6.173E-03	0.039
W-181		56.28		-1.589E-01	3.988E-01	6.586E-01	4.797E-02	-0.241
		57.53		-2.988E-02	2.253E-01	3.570E-01	2.566E-02	-0.084

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TA-182		65.20	*	1.073E+00	4.400E-01	6.864E-01	5.117E-02	1.564
		67.75		-9.975E-02	1.183E-01	1.813E-01	1.383E-02	-0.550
		100.10		4.888E-01	2.382E-01	3.335E-01	2.890E-02	1.466
		152.43		3.799E-02	3.350E-01	5.638E-01	5.202E-02	0.067
		222.10		1.232E-01	3.147E-01	5.198E-01	6.134E-02	0.237
	+	1001.68		2.103E+01	3.906E+00	5.408E+00	5.573E-01	3.889
	+	1121.28		7.963E-01	2.345E-01	2.744E-01	2.423E-02	2.902
		1189.05		-3.229E-01	2.470E-01	3.754E-01	3.053E-02	-0.860
		1221.42	*	-5.645E-02	1.540E-01	2.502E-01	2.081E-02	-0.226
		1230.97		-3.685E-01	4.637E-01	6.084E-01	5.092E-02	-0.606
RE-183		57.98		1.596E-01	2.384E-01	3.630E-01	2.598E-02	0.440
		59.32		1.474E-01	1.302E-01	2.001E-01	1.416E-02	0.736
		67.20		-2.001E-01	2.270E-01	3.254E-01	2.470E-02	-0.615
	+	162.32	*	2.346E-01	1.517E-01	1.922E-01	1.854E-02	1.220
	+	208.81		1.800E+00	1.244E+00	1.611E+00	1.821E-01	1.118
		291.72		5.736E-01	9.526E-01	1.436E+00	1.957E-01	0.399
	RE-184	57.98		5.876E-01	8.775E-01	1.336E+00	9.562E-02	0.440
		59.32		5.422E-01	4.787E-01	7.362E-01	5.207E-02	0.736
		67.20		-7.365E-01	8.355E-01	1.198E+00	9.088E-02	-0.615
		161.27		5.664E-02	3.971E-01	5.874E-01	5.640E-02	0.096
		216.55		2.132E-01	2.483E-01	4.154E-01	4.816E-02	0.513
		252.85	*	-1.338E-01	2.176E-01	3.414E-01	4.430E-02	-0.392
		318.01		-3.853E-02	3.924E-01	6.543E-01	8.317E-02	-0.059
		792.07		1.010E+00	1.420E+00	1.377E+00	1.516E-01	0.734
		903.28		-1.817E-01	1.044E+00	1.456E+00	1.625E-01	-0.125
		920.93		-7.671E-02	3.623E-01	5.662E-01	6.248E-02	-0.135
OS-185		59.72		3.263E-01	3.553E-01	5.429E-01	3.844E-02	0.601
		61.14		4.081E-01	2.021E-01	3.147E-01	2.260E-02	1.297
		69.30		-2.654E-01	3.064E-01	4.936E-01	3.818E-02	-0.538
		592.07		-8.379E-03	2.266E+00	3.484E+00	3.606E-01	-0.002
		646.12	*	2.847E-02	3.571E-02	6.111E-02	6.422E-03	0.466
		717.42		-4.604E-02	7.903E-01	1.283E+00	1.383E-01	-0.036
		874.81		6.526E-02	4.862E-01	8.142E-01	9.099E-02	0.080
		880.27		2.071E-01	6.738E-01	1.138E+00	1.273E-01	0.182
	RE-188	155.03	*	1.340E-01	1.725E-01	2.943E-01	2.747E-02	0.455
		477.96		-1.312E+00	2.814E+00	4.436E+00	4.370E-01	-0.296
W-188		633.10		1.695E+00	2.293E+00	3.923E+00	4.110E-01	0.432
	+	63.58		1.378E+03	1.501E+02	1.600E+02	1.176E+01	8.616
		227.08		2.874E+00	1.205E+01	1.977E+01	2.370E+00	0.145
IR-192		290.67	*	6.769E+00	7.390E+00	1.128E+01	1.540E+00	0.600
	+	295.96		8.777E-01	1.978E-01	2.349E-01	3.178E-02	3.736
		308.46		1.756E-02	8.371E-02	1.415E-01	1.853E-02	0.124
		316.51	*	-6.427E-03	2.995E-02	4.971E-02	6.353E-03	-0.129
		468.07		-1.042E-02	6.884E-02	9.510E-02	9.838E-03	-0.110
AU-195		604.41		3.139E-01	4.453E-01	6.622E-01	9.439E-02	0.474
		612.46		4.682E+00	1.014E+00	1.559E+00	1.793E-01	3.003
		65.12		5.962E-01	2.080E-01	3.258E-01	2.427E-02	1.830
		66.83		-4.190E-02	1.048E-01	1.530E-01	1.157E-02	-0.274
	+	75.70		1.093E+00	2.719E-01	4.209E-01	3.468E-02	2.597

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-200	+	98.88	*	1.221E+00	3.783E-01	4.722E-01	4.118E-02	2.586
		129.76		2.889E+00	2.851E+00	4.939E+00	4.162E-01	0.585
		367.94	*	-7.314E-05	2.851E+00	Half-Life too short		
		579.30		3.051E-03	2.851E+00	Half-Life too short		
		828.27		8.655E-04	2.851E+00	Half-Life too short		
TL-201		1205.75		6.615E-05	2.851E+00	Half-Life too short		
		68.90		-4.725E+00	5.104E+00	8.210E+00	6.327E-01	-0.576
		70.82		3.209E+00	3.240E+00	4.896E+00	3.842E-01	0.655
		80.30		3.882E+00	7.815E+00	9.192E+00	7.963E-01	0.422
		135.34		-2.540E+01	2.611E+01	4.289E+01	3.687E+00	-0.592
TL-202		167.43	*	-9.868E-01	7.910E+00	1.154E+01	1.137E+00	-0.086
		68.90		-4.124E-01	4.455E-01	7.167E-01	5.523E-02	-0.576
		70.82		2.793E-01	2.821E-01	4.262E-01	3.344E-02	0.655
		80.30		3.380E-01	6.805E-01	8.004E-01	6.934E-02	0.422
		439.56	*	4.003E-02	6.357E-02	1.059E-01	1.020E-02	0.378
HG-203		70.83		1.206E+00	1.220E+00	1.834E+00	2.408E-01	0.658
		72.87		1.289E+00	7.396E-01	1.112E+00	1.425E-01	1.159
	+	82.60		2.117E+00	1.548E+00	2.081E+00	2.896E-01	1.017
		279.20	*	2.224E-02	3.850E-02	6.278E-02	8.886E-03	0.354
		72.80		3.419E-01	2.122E-01	3.233E-01	2.586E-02	1.058
BI-207	+	74.97		6.058E-01	1.507E-01	2.149E-01	1.757E-02	2.819
	+	84.90		3.673E-01	2.657E-01	3.647E-01	3.333E-02	1.007
		569.67		8.325E-03	2.628E-02	4.439E-02	4.560E-03	0.188
		1063.62	*	-2.334E-02	4.393E-02	6.671E-02	6.405E-03	-0.350
		1770.23		5.761E-01	4.466E-01	7.484E-01	6.221E-02	0.770
TL-207		81.07		2.387E-02	3.336E-01	3.847E-01	3.361E-02	0.062
	+	83.78		2.422E-01	1.752E-01	2.424E-01	2.186E-02	0.999
	+	94.90		8.264E-01	5.568E-01	5.322E-01	4.757E-02	1.553
		122.32		9.785E-01	1.811E+00	2.916E+00	2.595E-01	0.336
	+	144.24		3.004E+00	1.167E+00	1.294E+00	1.281E-01	2.320
PO-209		154.21		5.966E-01	3.973E-01	6.846E-01	6.915E-02	0.872
	+	269.46		3.805E-01	2.575E-01	3.061E-01	4.205E-02	1.243
	+	323.87	*	3.729E-01	6.610E-01	9.848E-01	1.957E-01	0.379
	+	338.28		6.848E+00	1.709E+00	2.085E+00	3.084E-01	3.284
		445.03		-2.066E+00	2.046E+00	3.133E+00	4.026E-01	-0.660
BI-210		260.50		3.259E+00	9.185E+00	1.497E+01	1.986E+00	0.218
		262.80		-4.273E+01	2.710E+01	3.817E+01	5.100E+00	-1.119
		896.60	*	1.440E+00	6.271E+00	1.053E+01	1.180E+00	0.137
		46.50	*	1.266E+00	3.508E+00	5.882E+00	5.465E-01	0.215
		46.50	*	1.266E+00	3.508E+00	5.882E+00	5.465E-01	0.215
PB-210		46.50	*	1.266E+00	3.507E+00	5.882E+00	4.946E-01	0.215
		404.84	*	-4.453E-01	8.966E-01	1.366E+00	8.573E-01	-0.326
		427.08		1.534E+00	1.982E+00	2.955E+00	1.840E+00	0.519
		831.96		-4.130E-01	1.040E+00	1.642E+00	1.035E+00	-0.252
		81.07		2.387E-02	3.336E-01	3.847E-01	3.361E-02	0.062
PO-215	+	83.78		2.422E-01	1.752E-01	2.424E-01	2.186E-02	0.999
	+	94.90		8.264E-01	5.568E-01	5.322E-01	4.757E-02	1.553
		122.32		9.785E-01	1.811E+00	2.916E+00	2.595E-01	0.336
	+	144.24		3.004E+00	1.167E+00	1.294E+00	1.281E-01	2.320

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RN-219		154.21		5.966E-01	3.973E-01	6.846E-01	6.915E-02	0.872
	+	269.46		3.805E-01	2.575E-01	3.061E-01	4.205E-02	1.243
		323.87	*	3.729E-01	6.610E-01	9.848E-01	1.957E-01	0.379
	+	338.28		6.848E+00	1.709E+00	2.085E+00	3.084E-01	3.284
		445.03		-2.066E+00	2.046E+00	3.133E+00	4.026E-01	-0.660
	+	271.23		4.881E-01	3.315E-01	4.003E-01	5.930E-02	1.219
		401.81	*	1.604E-01	3.737E-01	6.232E-01	9.643E-02	0.257
	RN-220	549.76	*	-6.487E+00	2.134E+01	3.506E+01	3.573E+00	-0.185
	RA-223	81.07		2.387E-02	3.336E-01	3.847E-01	3.361E-02	0.062
	+	83.78		2.422E-01	1.752E-01	2.424E-01	2.186E-02	0.999
AC-227	+	94.90		8.264E-01	5.568E-01	5.322E-01	4.757E-02	1.553
		122.32		9.785E-01	1.811E+00	2.916E+00	2.595E-01	0.336
	+	144.24		3.004E+00	1.167E+00	1.294E+00	1.281E-01	2.320
		154.21		5.966E-01	3.973E-01	6.846E-01	6.915E-02	0.872
	+	269.46		3.805E-01	2.575E-01	3.061E-01	4.205E-02	1.243
		323.87	*	3.729E-01	6.610E-01	9.848E-01	1.957E-01	0.379
	+	338.28		6.848E+00	1.709E+00	2.085E+00	3.084E-01	3.284
		445.03		-2.066E+00	2.046E+00	3.133E+00	4.026E-01	-0.660
		79.80		9.237E-03	2.502E+00	2.880E+00	6.193E-01	0.003
		236.00		9.447E-01	2.980E-01	4.253E-01	6.416E-02	2.221
TH-227		256.20	*	-3.315E-01	3.708E-01	5.691E-01	1.038E-01	-0.582
		286.10		-1.072E+00	1.446E+00	2.217E+00	3.778E-01	-0.484
	+	299.80		1.858E+00	1.537E+00	2.277E+00	4.611E-01	0.816
		304.40		8.150E-01	1.780E+00	2.658E+00	5.575E-01	0.307
		334.20		1.727E+00	3.139E+00	3.230E+00	6.836E-01	0.535
	TH-227	79.80		9.237E-03	2.502E+00	2.880E+00	6.272E-01	0.003
	+	94.00		6.611E+00	4.647E+00	7.484E+00	1.641E+00	0.883
		236.00		9.447E-01	2.939E-01	4.253E-01	6.020E-02	2.221
		256.20	*	-3.315E-01	3.721E-01	5.691E-01	1.171E-01	-0.582
		286.10		-1.072E+00	1.797E+00	2.217E+00	2.238E+00	-0.484
TH-229	+	299.80		1.858E+00	1.537E+00	2.277E+00	4.611E-01	0.816
		304.40		8.150E-01	1.780E+00	2.658E+00	5.575E-01	0.307
		334.20		1.727E+00	3.139E+00	3.230E+00	6.836E-01	0.535
	TH-229	85.43		2.817E-01	2.740E-01	3.642E-01	3.350E-02	0.773
		88.47		-1.065E-01	2.079E-01	2.319E-01	2.191E-02	-0.459
		100.00		6.145E-01	2.310E-01	3.531E-01	3.061E-02	1.740
		193.63	*	-4.049E-01	4.789E-01	7.649E-01	8.224E-02	-0.529
		210.97		1.298E+00	8.189E-01	1.237E+00	1.408E-01	1.050
	PA-231	283.67	*	7.136E-02	1.413E+00	2.262E+00	4.223E-01	0.032
		301.29		1.095E+00	5.933E-01	8.969E-01	1.426E-01	1.221
TH-231	TH-231	81.07		2.387E-02	3.336E-01	3.847E-01	3.361E-02	0.062
	+	83.78		2.422E-01	1.752E-01	2.424E-01	2.186E-02	0.999
	+	94.90		8.264E-01	5.568E-01	5.322E-01	4.757E-02	1.553
		122.32		9.785E-01	1.811E+00	2.916E+00	2.595E-01	0.336
	+	144.24		3.004E+00	1.167E+00	1.294E+00	1.281E-01	2.320
		154.21		5.966E-01	3.973E-01	6.846E-01	6.915E-02	0.872
	+	269.46		3.805E-01	2.575E-01	3.061E-01	4.205E-02	1.243
		323.87	*	3.729E-01	6.610E-01	9.848E-01	1.957E-01	0.379
	+	338.28		6.848E+00	1.709E+00	2.085E+00	3.084E-01	3.284

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-233		445.03		-2.066E+00	2.046E+00	3.133E+00	4.026E-01	-0.660
	+	75.28		1.768E+01	4.938E+00	6.456E+00	9.760E-01	2.738
	+	86.59		2.459E+00	2.472E+00	3.232E+00	8.745E-01	0.761
	+	300.12		5.180E-01	4.258E-01	6.374E-01	1.149E-01	0.813
		311.98	*	1.661E-02	5.589E-02	9.470E-02	1.241E-02	0.175
PA-234		340.50		2.793E+00	9.529E-01	1.120E+00	2.818E-01	2.494
		398.62		3.322E-01	1.866E+00	3.085E+00	8.291E-01	0.108
		415.76		8.621E-01	1.458E+00	2.430E+00	5.324E-01	0.355
	+	63.00		3.991E+01	6.731E+00	4.783E+00	7.085E-01	8.343
	+	94.67		5.895E-01	4.007E-01	4.399E-01	5.559E-02	1.340
	+	98.44		4.944E-01	3.126E-01	1.921E-01	1.072E-01	2.574
	+	99.86		2.563E+00	7.940E-01	9.174E-01	7.959E-02	2.794
		111.00		4.173E-01	2.439E-01	3.601E-01	4.283E-02	1.159
		131.20		2.387E-02	1.060E-01	1.806E-01	1.530E-02	0.132
		152.70		9.616E-02	3.240E-01	5.470E-01	9.500E-02	0.176
	+	186.00		2.229E+01	7.402E+00	3.509E+00	1.115E+00	6.350
		226.40		-1.127E-01	3.762E-01	6.055E-01	9.441E-02	-0.186
		227.20		7.825E-02	4.100E-01	6.715E-01	8.053E-02	0.117
		248.90		2.714E-02	7.736E-01	1.251E+00	3.046E-01	0.022
	+	293.70		5.516E+00	1.492E+00	1.438E+00	2.907E-01	3.837
		369.80		7.963E-01	7.670E-01	1.288E+00	2.907E-01	0.618
		568.70		-1.629E-01	8.582E-01	1.415E+00	1.453E-01	-0.115
		569.50		6.186E-02	2.326E-01	3.919E-01	4.026E-02	0.158
		574.00		-8.475E-01	1.408E+00	2.089E+00	2.149E-01	-0.406
		699.00		-5.142E-01	6.403E-01	9.873E-01	1.985E-01	-0.521
		706.10		-5.102E-01	9.513E-01	1.461E+00	6.583E-01	-0.349
		733.00		2.577E-01	3.396E-01	4.982E-01	1.153E-01	0.517
		742.81		1.772E+00	1.655E+00	2.022E+00	1.366E+00	0.876
	+	796.30		2.101E+00	1.137E+00	1.310E+00	3.656E-01	1.604
		805.60		1.206E+00	8.794E-01	1.423E+00	4.471E-01	0.847
		819.60		-4.652E-01	1.046E+00	1.678E+00	6.486E-01	-0.277
		826.30		1.587E-01	7.032E-01	1.183E+00	5.357E-01	0.134
		831.60		-6.373E-02	5.204E-01	8.621E-01	2.643E-01	-0.074
		876.40		-4.523E-02	7.149E-01	1.180E+00	1.216E+00	-0.038
		880.51		1.124E-01	2.415E-01	4.113E-01	4.600E-02	0.273
		883.24		1.003E-01	2.534E-01	4.151E-01	2.806E-01	0.242
		899.00		-2.201E-01	7.539E-01	1.194E+00	5.288E-01	-0.184
		925.00		1.286E-01	9.230E-01	1.539E+00	1.693E-01	0.084
		926.50		-7.441E-02	1.427E-01	2.255E-01	5.903E-02	-0.330
		946.00	*	1.017E-01	2.421E-01	4.086E-01	8.121E-02	0.249
		949.00		3.073E-01	3.572E-01	6.186E-01	6.684E-02	0.497
		980.50		2.881E-01	6.215E-01	1.032E+00	1.086E-01	0.279
		1394.10		-3.344E-01	9.969E-01	1.487E+00	9.685E-01	-0.225
PA-234M		766.42		6.178E+01	3.432E+01	2.366E+01	1.211E+01	2.611
NP-236	+	1001.03	*	4.770E+01	9.174E+00	1.228E+01	1.408E+00	3.884
	+	94.67		4.471E-01	3.013E-01	3.351E-01	3.001E-02	1.334
	+	98.44		3.738E-01	1.158E-01	1.452E-01	1.270E-02	2.574
		111.00		3.156E-01	1.826E-01	2.724E-01	2.273E-02	1.159
		160.31	*	2.803E-02	8.618E-02	1.285E-01	1.228E-02	0.218

---- 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		8.543E-01	2.647E-01	3.179E-01	2.762E-02	2.688
		117.00	*	7.708E-02	2.157E-01	3.095E-01	2.558E-02	0.249
	+	209.75		1.418E+00	9.798E-01	1.291E+00	1.464E-01	1.098
		228.18		1.927E-01	2.148E-01	3.581E-01	4.308E-02	0.538
		277.60		8.501E-02	1.684E-01	2.742E-01	3.823E-02	0.310
AM-241	+	334.30		3.988E-01	1.563E+00	1.825E+00	2.201E-01	0.218
		59.54	*	2.305E-01	1.841E-01	2.836E-01	2.217E-02	0.813
CM-243	+	99.55		8.791E-01	2.724E-01	3.271E-01	2.842E-02	2.688
		103.76	*	4.119E-02	1.471E-01	1.676E-01	1.429E-02	0.246
		117.00		7.930E-02	2.220E-01	3.184E-01	2.632E-02	0.249
	+	209.75		1.398E+00	9.659E-01	1.273E+00	1.443E-01	1.098
		228.18		1.947E-01	2.170E-01	3.618E-01	4.353E-02	0.538
		277.60		8.570E-02	1.698E-01	2.765E-01	3.854E-02	0.310
AM-246		798.80		9.786E-03	1.274E-01	1.767E-01	1.948E-02	0.055
		1036.00		-1.739E-01	2.491E-01	3.865E-01	3.838E-02	-0.450
	*	1062.04		-1.180E-01	1.867E-01	2.802E-01	2.696E-02	-0.421
		1078.86		8.520E-03	1.114E-01	1.823E-01	1.715E-02	0.047
CM-247		278.00		6.681E-01	7.016E-01	1.154E+00	1.611E-01	0.579
		287.40		-5.349E-01	1.162E+00	1.815E+00	2.498E-01	-0.295
	*	402.60		1.466E-02	3.336E-02	5.572E-02	5.227E-03	0.263
CF-249		252.85		-5.017E-01	8.158E-01	1.280E+00	1.661E-01	-0.392
		333.44		3.685E-02	2.431E-01	2.404E-01	2.908E-02	0.153
	*	387.95		-3.874E-02	3.494E-02	5.431E-02	5.162E-03	-0.713
CF-251	*	176.60		6.037E-02	1.221E-01	2.053E-01	2.086E-02	0.294
		227.00		5.868E-02	3.600E-01	5.893E-01	7.063E-02	0.100
		285.00		-9.296E-01	1.634E+00	2.538E+00	3.511E-01	-0.366

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]G245396003      *
* Acquisition date   : 5-FEB-2010 19:00:13 Detector SN#      :              *
* Detector ID        : GAM22                      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 02:00:02.74             Half life ratio : 8.000        *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 21-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245396003              Analyst initials: MXR1         *
* Batch Number       : 944962                  Sample Quantity : 1.4455E+02 GRAM  *
* Recovery           : 1.00000                 Carrier Weight  : 0.00000        *
*****
*
*                                     QC DATA                                *
*
* Standard Weight    : 0.00000                                                         *
* CALIB. DATE/TIME   : 2-DEC-2009 16:47:28 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	2.472E+01	2.556E+00	4.400E-01	0.000E+00
SN-126	1.256E-01	1.197E-01	1.808E-01	0.000E+00
BA-137M	4.945E-01	7.957E-02	5.712E-02	0.000E+00
CS-137	5.227E-01	8.415E-02	6.038E-02	0.000E+00
EU-155	1.780E-01	1.443E-01	1.882E-01	0.000E+00
LU-177	2.035E+00	1.379E+00	1.905E+00	0.000E+00
TL-208	4.431E-01	8.341E-02	5.175E-02	0.000E+00
BI-211	3.322E+00	5.202E-01	2.954E-01	0.000E+00
BI-212	1.259E+00	3.876E-01	3.935E-01	0.000E+00
PB-212	1.528E+00	2.179E-01	8.941E-02	0.000E+00
PO-212	1.528E+00	2.179E-01	8.941E-02	0.000E+00
BI-214	9.535E-01	1.592E-01	1.006E-01	0.000E+00
PB-214	1.156E+00	1.904E-01	1.029E-01	0.000E+00
PO-214	1.156E+00	1.904E-01	1.029E-01	0.000E+00
PO-216	1.528E+00	2.179E-01	8.941E-02	0.000E+00
PO-218	1.156E+00	1.904E-01	1.029E-01	0.000E+00
RA-224	3.785E+00	1.130E+00	1.016E+00	0.000E+00
RA-226	9.535E-01	1.592E-01	1.006E-01	0.000E+00
AC-228	1.381E+00	3.072E-01	1.868E-01	0.000E+00
RA-228	1.381E+00	3.072E-01	1.868E-01	0.000E+00
TH-228	1.552E+00	2.212E-01	9.078E-02	0.000E+00
TH-230	9.535E-01	1.592E-01	1.006E-01	0.000E+00
U-231	4.152E+00	2.742E+00	1.857E+00	0.000E+00
TH-232	1.381E+00	3.072E-01	1.868E-01	0.000E+00
TH-234	3.424E+01	6.435E+00	2.380E+00	0.000E+00
U-234	9.535E-01	1.592E-01	1.006E-01	0.000E+00
U-235	9.269E-01	3.771E-01	3.561E-01	0.000E+00
NP-237	3.688E-01	3.594E-01	4.905E-01	0.000E+00
U-238	3.424E+01	6.435E+00	2.380E+00	0.000E+00
AM-243	3.375E-01	8.228E-02	1.049E-01	0.000E+00
ANH-511	1.508E-01	5.997E-02	3.939E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-2.644E-01	2.933E-01	4.746E-01	0.000E+00	NOT IDENT.
NA-22	-1.807E-02	3.218E-02	5.246E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	6.353E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.998E-02	2.228E-02	3.256E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.388E-02	7.758E-02	0.000E+00	FAIL ABUN
SC-46	-1.931E-02	3.111E-02	5.131E-02	0.000E+00	FAIL ABUN
V-48	9.206E-03	5.938E-02	1.019E-01	0.000E+00	NOT IDENT.
CR-51	-4.252E-02	3.194E-01	5.643E-01	0.000E+00	NOT IDENT.
MN-52	-8.854E-02	1.704E-01	2.698E-01	0.000E+00	NOT IDENT.
MN-54	-1.084E-02	3.031E-02	5.149E-02	0.000E+00	NOT IDENT.
CO-56	-1.005E-02	3.191E-02	5.419E-02	0.000E+00	FAIL ABUN
CO-57	1.243E-02	2.561E-02	4.464E-02	0.000E+00	NOT IDENT.
CO-58	-2.309E-02	3.065E-02	5.076E-02	0.000E+00	NOT IDENT.
FE-59	-2.964E-02	7.457E-02	1.217E-01	0.000E+00	FAIL ABUN
CO-60	-1.688E-02	2.937E-02	4.724E-02	0.000E+00	NOT IDENT.
ZN-65	6.613E-02	7.758E-02	1.194E-01	0.000E+00	NOT IDENT.
GE-68	7.968E-02	9.703E-01	1.641E+00	0.000E+00	NOT IDENT.
AS-73	5.536E-02	8.707E-01	1.580E+00	0.000E+00	NOT IDENT.
AS-74	-1.974E-02	7.569E-02	1.296E-01	0.000E+00	NOT IDENT.
SE-75	1.994E-03	4.471E-02	6.700E-02	0.000E+00	NOT IDENT.
BR-77	-7.287E+00	9.419E+00	1.513E+01	0.000E+00	FAIL ABUN
SR-82	1.950E-01	5.232E-01	5.011E-01	0.000E+00	NOT IDENT.
RB-83	-4.512E-02	5.928E-02	9.531E-02	0.000E+00	NOT IDENT.
RB-84	3.801E-02	5.880E-02	1.048E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.467E+00	1.244E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.836E-02	6.390E-02	0.000E+00	NOT IDENT.
RB-86	-8.860E-02	6.339E-01	1.056E+00	0.000E+00	NOT IDENT.
Y-88	-1.461E-03	2.354E-02	3.910E-02	0.000E+00	NOT IDENT.
ZR-88	3.655E-03	2.570E-02	4.493E-02	0.000E+00	NOT IDENT.
Y-91	2.886E-01	1.449E+01	2.488E+01	0.000E+00	NOT IDENT.
NB-94	1.251E-02	2.900E-02	5.042E-02	0.000E+00	NOT IDENT.
NB-95	0.000E+00	5.475E-02	9.028E-02	0.000E+00	NOT IDENT.
NB-95M	8.367E-02	1.309E-01	2.034E-01	0.000E+00	NOT IDENT.
ZR-95	3.166E-02	5.932E-02	1.030E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.257E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.169E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.618E-01	1.009E+01	1.706E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	6.804E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	6.447E-03	3.111E-02	5.441E-02	0.000E+00	NOT IDENT.
RH-102	2.703E-02	2.539E-02	4.519E-02	0.000E+00	FAIL ABUN
RU-103	6.211E-03	3.422E-02	5.844E-02	0.000E+00	FAIL ABUN
RH-106	5.018E-04	2.745E-01	4.742E-01	0.000E+00	FAIL ABUN
RU-106	5.018E-04	2.745E-01	4.742E-01	0.000E+00	FAIL ABUN
AG-108M	-1.930E-02	2.813E-02	4.665E-02	0.000E+00	NOT IDENT.
CD-109	-2.581E+00	1.592E+00	1.837E+00	0.000E+00	NOT IDENT.
AG-110M	3.656E-02	3.699E-02	5.790E-02	0.000E+00	FAIL ABUN
IN-111	1.307E-01	1.138E+00	1.727E+00	0.000E+00	NOT IDENT.
IN-113M	1.957E-03	3.734E-02	6.505E-02	0.000E+00	NOT IDENT.
SN-113	1.957E-03	3.734E-02	6.505E-02	0.000E+00	NOT IDENT.
IN-114M	1.258E-01	1.866E-01	2.980E-01	0.000E+00	NOT IDENT.
CD-115	-2.059E+00	9.483E+00	1.651E+01	0.000E+00	NOT IDENT.
SN-117M	-9.063E-02	6.283E-02	9.336E-02	0.000E+00	NOT IDENT.
SB-122	-7.135E-01	1.816E+00	3.111E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	8.069E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-3.462E-02	3.197E-02	4.839E-02	0.000E+00	NOT IDENT.
I-124	1.888E-01	6.671E-01	1.014E+00	0.000E+00	NOT IDENT.
SB-124	-4.248E-02	5.456E-02	8.277E-02	0.000E+00	FAIL ABUN
SB-125	3.615E-02	7.706E-02	1.355E-01	0.000E+00	FAIL ABUN
TE-125M	6.047E+00	1.386E+01	1.721E+01	0.000E+00	NOT IDENT.
I-126	7.550E-02	1.838E-01	2.780E-01	0.000E+00	NOT IDENT.
SB-126	2.375E-02	1.401E-01	2.064E-01	0.000E+00	FAIL ABUN
SB-127	2.995E-01	1.134E+00	1.965E+00	0.000E+00	NOT IDENT.
XE-127	2.021E-02	4.446E-02	7.927E-02	0.000E+00	FAIL ABUN
I-131	-2.881E-03	1.001E-01	1.752E-01	0.000E+00	NOT IDENT.
TE-132	6.124E-01	6.726E-01	1.191E+00	0.000E+00	FAIL ABUN
BA-133	3.519E-02	3.937E-02	6.284E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	5.636E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	5.053E-02	7.035E-02	0.000E+00	FAIL ABUN
CS-135	2.287E-01	1.633E-01	2.567E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	6.514E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.886E-02	8.997E-02	1.497E-01	0.000E+00	FAIL ABUN
CE-139	-7.130E-03	3.178E-02	4.975E-02	0.000E+00	NOT IDENT.
BA-140	1.362E-01	2.137E-01	3.785E-01	0.000E+00	FAIL ABUN
LA-140	-1.401E-01	7.476E-02	1.034E-01	0.000E+00	FAIL ABUN

CE-141	0.000E+00	6.852E-02	1.162E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.460E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-5.521E-02	1.981E-01	3.599E-01	0.000E+00	NOT IDENT.
PM-144	-1.195E-02	2.922E-02	4.869E-02	0.000E+00	NOT IDENT.
PR-144	-8.095E-01	1.980E+00	3.300E+00	0.000E+00	NOT IDENT.
PM-146	3.381E-02	3.900E-02	6.901E-02	0.000E+00	NOT IDENT.
ND-147	-2.686E-01	4.678E-01	7.964E-01	0.000E+00	FAIL ABUN
PM-149	-7.623E+01	9.012E+01	1.458E+02	0.000E+00	NOT IDENT.
EU-152	-6.648E-02	1.020E-01	1.405E-01	0.000E+00	FAIL ABUN
GD-153	0.000E+00	1.273E-01	1.705E-01	0.000E+00	FAIL ABUN
EU-154	-5.045E-02	8.994E-02	1.465E-01	0.000E+00	NOT IDENT.
TB-160	1.256E-01	1.166E-01	2.118E-01	0.000E+00	FAIL ABUN
HO-166M	2.497E-02	5.153E-02	8.978E-02	0.000E+00	FAIL ABUN
TM-171	-1.214E+01	3.108E+01	4.979E+01	0.000E+00	NOT IDENT.
LU-176	-1.680E-02	2.126E-02	3.659E-02	0.000E+00	NOT IDENT.
LU-177M	-1.198E-01	1.574E-01	2.622E-01	0.000E+00	NOT IDENT.
HF-181	2.438E-03	3.784E-02	6.446E-02	0.000E+00	NOT IDENT.
W-181	0.000E+00	4.312E-01	7.385E-01	0.000E+00	NOT IDENT.
TA-182	-5.645E-02	1.510E-01	2.526E-01	0.000E+00	FAIL ABUN
RE-183	0.000E+00	1.487E-01	2.029E-01	0.000E+00	FAIL ABUN
RE-184	-1.338E-01	2.132E-01	3.570E-01	0.000E+00	NOT IDENT.
OS-185	2.847E-02	3.500E-02	6.259E-02	0.000E+00	NOT IDENT.
RE-188	1.340E-01	1.691E-01	3.109E-01	0.000E+00	NOT IDENT.
W-188	6.769E+00	7.242E+00	1.176E+01	0.000E+00	FAIL ABUN
IR-192	-6.427E-03	2.935E-02	5.172E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	3.707E-01	5.037E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.466E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-9.868E-01	7.751E+00	1.217E+01	0.000E+00	NOT IDENT.
TL-202	4.003E-02	6.229E-02	1.094E-01	0.000E+00	NOT IDENT.
HG-203	2.224E-02	3.773E-02	6.550E-02	0.000E+00	FAIL ABUN
BI-207	-2.334E-02	4.305E-02	6.755E-02	0.000E+00	FAIL ABUN
TL-207	3.729E-01	6.478E-01	1.024E+00	0.000E+00	FAIL ABUN
PO-209	1.440E+00	6.146E+00	1.071E+01	0.000E+00	NOT IDENT.
BI-210	1.266E+00	3.437E+00	6.372E+00	0.000E+00	NOT IDENT.
PB-210	1.266E+00	3.437E+00	6.372E+00	0.000E+00	NOT IDENT.
PO-210	1.266E+00	3.437E+00	6.372E+00	0.000E+00	NOT IDENT.
PB-211	-4.453E-01	8.787E-01	1.413E+00	0.000E+00	NOT IDENT.
PO-215	3.729E-01	6.478E-01	1.024E+00	0.000E+00	FAIL ABUN
RN-219	1.604E-01	3.662E-01	6.451E-01	0.000E+00	FAIL ABUN
RN-220	-6.487E+00	2.091E+01	3.604E+01	0.000E+00	NOT IDENT.
RA-223	3.729E-01	6.478E-01	1.024E+00	0.000E+00	FAIL ABUN
AC-227	-3.315E-01	3.634E-01	5.948E-01	0.000E+00	FAIL ABUN
TH-227	-3.315E-01	3.647E-01	5.948E-01	0.000E+00	FAIL ABUN
TH-229	-4.049E-01	4.693E-01	8.044E-01	0.000E+00	FAIL ABUN
PA-231	7.136E-02	1.384E+00	2.359E+00	0.000E+00	NOT IDENT.
TH-231	3.729E-01	6.478E-01	1.024E+00	0.000E+00	FAIL ABUN
PA-233	1.661E-02	5.478E-02	9.857E-02	0.000E+00	FAIL ABUN
PA-234	1.017E-01	2.372E-01	4.148E-01	0.000E+00	FAIL ABUN
PA-234M	0.000E+00	8.990E+00	1.246E+01	0.000E+00	FAIL ABUN
NP-236	2.803E-02	8.446E-02	1.356E-01	0.000E+00	FAIL ABUN
NP-239	7.708E-02	2.114E-01	3.289E-01	0.000E+00	FAIL ABUN
AM-241	2.305E-01	1.805E-01	3.057E-01	0.000E+00	NOT IDENT.
CM-243	4.119E-02	1.442E-01	1.786E-01	0.000E+00	FAIL ABUN
AM-246	8.520E-03	1.091E-01	1.845E-01	0.000E+00	NOT IDENT.
CM-247	1.466E-02	3.269E-02	5.767E-02	0.000E+00	NOT IDENT.
CF-249	-3.874E-02	3.424E-02	5.626E-02	0.000E+00	NOT IDENT.
CF-251	6.037E-02	1.196E-01	2.163E-01	0.000E+00	NOT IDENT.

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245396003.CNF;1
Sample date        : 21-JAN-2010 12:00:00 Acquisition date : 5-FEB-2010 19:00:13.
Sample ID          : G245396003 Sample quantity : 1.44550E+02 GRAM
Detector name      : GAM22 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:02.74 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944962 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	1939	10.67*	1.909E+00	2.472E+01	2.472E+01	10.55
SN-126	64.28	2161	9.60	4.314E+00	1.355E+01	1.355E+01	16.58
	86.94	132	8.90	7.396E+00	5.222E-01	5.222E-01	105.35
	87.57	132	37.00*	7.396E+00	1.256E-01	1.256E-01	97.28
BA-137M	661.65	614	89.98*	3.590E+00	4.940E-01	4.945E-01	16.42
CS-137	661.65	614	85.12*	3.590E+00	5.222E-01	5.227E-01	16.43
EU-155	48.70	-----	4.60	1.648E+00	-----	Line Not Found	-----
	60.01	-----	1.11	3.728E+00	-----	Line Not Found	-----
	86.54	132	30.90	7.396E+00	1.504E-01	1.513E-01	97.29
	105.31	118	20.70*	8.378E+00	1.770E-01	1.780E-01	82.70
LU-177	112.95	539	6.40	8.513E+00	2.571E+00	1.253E+01	28.73
	208.36	127	11.00*	7.183E+00	4.176E-01	2.035E+00	69.11
TL-208	277.35	-----	6.80	6.182E+00	-----	Line Not Found	-----
	510.84	250	21.60	4.300E+00	6.983E-01	6.983E-01	41.42
	583.14	565	84.20*	3.931E+00	4.431E-01	4.431E-01	19.21
	860.37	83	12.46	2.923E+00	5.913E-01	5.913E-01	52.07
BI-211	72.87	-----	1.27	5.897E+00	-----	Line Not Found	-----
	351.07	894	12.94*	5.401E+00	3.322E+00	3.322E+00	15.98
BI-212	727.18	191	11.80*	3.342E+00	1.259E+00	1.259E+00	31.43
	785.46	134	1.97	3.147E+00	5.618E+00	5.618E+00	46.09
	1620.62	-----	2.75	1.789E+00	-----	Line Not Found	-----
PB-212	74.81	529	10.70	6.167E+00	2.082E+00	2.082E+00	26.57
	77.11	747	18.00	6.455E+00	1.670E+00	1.670E+00	17.84
	87.30	132	8.00	7.396E+00	5.809E-01	5.809E-01	97.79
	238.63	1761	44.60*	6.709E+00	1.528E+00	1.528E+00	14.55
	300.09	78	3.41	5.920E+00	1.003E+00	1.003E+00	81.50
PO-212	74.81	529	10.70	6.167E+00	2.082E+00	2.082E+00	26.57
	77.11	747	18.00	6.455E+00	1.670E+00	1.670E+00	17.84
	87.30	132	8.00	7.396E+00	5.809E-01	5.809E-01	97.79
	115.19	-----	0.60	8.535E+00	-----	Line Not Found	-----
	238.63	1761	44.60*	6.709E+00	1.528E+00	1.528E+00	14.55
	300.09	78	3.41	5.920E+00	1.003E+00	1.003E+00	81.50

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
BI-214	609.31	648	46.30*	3.811E+00	9.535E-01	9.535E-01	17.03
	1120.29	229	15.10	2.345E+00	1.682E+00	1.683E+00	30.19
	1764.49	172	15.80	1.716E+00	1.649E+00	1.649E+00	21.18
PB-214	74.81	529	6.21	6.167E+00	3.587E+00	3.587E+00	25.95
	77.11	747	10.50	6.455E+00	2.862E+00	2.862E+00	19.40
	87.30	132	4.67	7.396E+00	9.951E-01	9.952E-01	97.58
	241.98	384	7.49	6.665E+00	1.996E+00	1.996E+00	30.98
	295.21	507	19.20	5.971E+00	1.149E+00	1.149E+00	23.37
	351.92	894	37.20*	5.401E+00	1.156E+00	1.156E+00	16.81
PO-214	74.81	529	6.21	6.167E+00	3.587E+00	3.587E+00	25.95
	77.11	747	10.50	6.455E+00	2.862E+00	2.862E+00	19.40
	87.30	132	4.67	7.396E+00	9.951E-01	9.952E-01	97.58
	241.98	384	7.49	6.665E+00	1.996E+00	1.996E+00	30.98
	295.21	507	19.20	5.971E+00	1.149E+00	1.149E+00	23.37
	351.92	894	37.20*	5.401E+00	1.156E+00	1.156E+00	16.81
PO-216	74.81	529	10.70	6.167E+00	2.082E+00	2.082E+00	26.57
	77.11	747	18.00	6.455E+00	1.670E+00	1.670E+00	17.84
	87.30	132	8.00	7.396E+00	5.809E-01	5.809E-01	97.79
	238.63	1761	44.60*	6.709E+00	1.528E+00	1.528E+00	14.55
	300.09	78	3.41	5.920E+00	1.003E+00	1.003E+00	81.50
PO-218	74.81	529	6.21	6.167E+00	3.587E+00	3.587E+00	25.95
	77.11	747	10.50	6.455E+00	2.862E+00	2.862E+00	19.40
	87.30	132	4.67	7.396E+00	9.951E-01	9.952E-01	97.58
	241.98	384	7.49	6.665E+00	1.996E+00	1.996E+00	30.98
	295.21	507	19.20	5.971E+00	1.149E+00	1.149E+00	23.37
	351.92	894	37.20*	5.401E+00	1.156E+00	1.156E+00	16.81
RA-224	240.98	384	3.95*	6.665E+00	3.785E+00	3.785E+00	30.47
RA-226	609.31	648	46.30*	3.811E+00	9.535E-01	9.535E-01	17.03
	1120.29	229	15.10	2.345E+00	1.682E+00	1.683E+00	30.19
	1764.49	172	15.80	1.716E+00	1.649E+00	1.649E+00	21.18
AC-228	338.32	398	11.40	5.527E+00	1.640E+00	1.640E+00	46.63
	911.07	411	27.70*	2.788E+00	1.381E+00	1.381E+00	22.70
	969.11	252	16.60	2.648E+00	1.487E+00	1.487E+00	32.14
RA-228	338.32	398	11.40	5.527E+00	1.640E+00	1.640E+00	46.63
	911.07	411	27.70*	2.788E+00	1.381E+00	1.381E+00	22.70
	969.11	252	16.60	2.648E+00	1.487E+00	1.487E+00	32.14
TH-228	74.81	529	10.70	6.167E+00	2.082E+00	2.114E+00	24.90
	77.11	747	18.00	6.455E+00	1.670E+00	1.695E+00	17.84
	87.30	132	8.00	7.396E+00	5.809E-01	5.898E-01	97.28
	238.63	1761	44.60*	6.709E+00	1.528E+00	1.552E+00	14.55
	300.09	78	3.41	5.920E+00	1.003E+00	1.018E+00	100.24
TH-230	609.31	648	46.30*	3.811E+00	9.535E-01	9.535E-01	17.03
	1120.29	229	15.10	2.345E+00	1.682E+00	1.682E+00	30.19
	1764.49	172	15.80	1.716E+00	1.649E+00	1.649E+00	21.18
U-231	84.21	166	7.00	7.201E+00	8.545E-01	1.073E+01	72.35
	92.29	5436	17.30	7.854E+00	1.039E+01	1.305E+02	9.77
	95.87	284	28.00*	7.958E+00	3.306E-01	4.152E+00	67.38
	108.00	-----	13.10	8.439E+00	-----	Line Not Found	-----
TH-232	338.32	398	11.40	5.527E+00	1.640E+00	1.640E+00	23.36

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	911.07	411	27.70*	2.788E+00	1.381E+00	1.381E+00	22.70
	969.11	252	16.60	2.648E+00	1.487E+00	1.487E+00	32.14
TH-234	63.29	2161	3.80*	4.314E+00	3.424E+01	3.424E+01	19.18
	92.38	5436	5.41	7.854E+00	3.323E+01	3.323E+01	18.66
U-234	609.31	648	46.30*	3.811E+00	9.535E-01	9.535E-01	17.03
	1120.29	229	15.10	2.345E+00	1.682E+00	1.682E+00	30.19
	1764.49	172	15.80	1.716E+00	1.649E+00	1.649E+00	21.18
U-235	89.95	-----	2.70	7.683E+00	-----	Line Not Found	-----
	93.35	5436	4.50	7.854E+00	3.994E+01	3.994E+01	28.40
	105.00	118	2.10	8.378E+00	1.744E+00	1.744E+00	87.48
	143.76	313	10.50*	8.362E+00	9.269E-01	9.269E-01	41.52
	163.35	146	4.70	8.031E+00	1.003E+00	1.003E+00	66.88
	185.71	1306	54.00	7.609E+00	8.254E-01	8.254E-01	14.25
	205.31	-----	4.70	7.253E+00	-----	Line Not Found	-----
NP-237	86.50	132	12.60*	7.396E+00	3.688E-01	3.688E-01	99.44
	95.87	284	2.60	7.958E+00	3.560E+00	3.560E+00	71.22
U-238	63.29	2161	3.80*	4.314E+00	3.424E+01	3.424E+01	19.18
	92.38	5436	5.41	7.854E+00	3.323E+01	3.323E+01	9.77
AM-243	74.67	529	66.00*	6.167E+00	3.375E-01	3.375E-01	24.88
	86.72	132	0.34	7.396E+00	1.383E+01	1.383E+01	97.28
	117.66	-----	0.55	8.550E+00	-----	Line Not Found	-----
	142.18	-----	0.13	8.387E+00	-----	Line Not Found	-----
ANH-511	511.00	250	100.00*	4.300E+00	1.508E-01	1.508E-01	40.57

Flag: "*" = Keyline

Total number of lines in spectrum 42
Number of unidentified lines 1
Number of lines tentatively identified by NID 41 97.62%

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	2.472E+01	2.472E+01	0.261E+01	10.55	
SN-126	1.00E+05Y	1.00	1.256E-01	1.256E-01	1.222E-01	97.28	
BA-137M	30.17Y	1.00	4.940E-01	4.945E-01	0.812E-01	16.42	
CS-137	30.17Y	1.00	5.222E-01	5.227E-01	0.859E-01	16.43	
EU-155	4.96Y	1.01	1.770E-01	1.780E-01	1.472E-01	82.70	
LU-177	6.71D	4.87	4.176E-01	2.035E+00	1.407E+00	69.11	
TL-208	1.41E+10Y	1.00	4.431E-01	4.431E-01	0.851E-01	19.21	
BI-211	7.04E+08Y	1.00	3.322E+00	3.322E+00	0.531E+00	15.98	
BI-212	1.41E+10Y	1.00	1.259E+00	1.259E+00	0.396E+00	31.43	
PB-212	1.41E+10Y	1.00	1.528E+00	1.528E+00	0.222E+00	14.55	
PO-212	1.41E+10Y	1.00	1.528E+00	1.528E+00	0.222E+00	14.55	
BI-214	1600.00Y	1.00	9.535E-01	9.535E-01	1.624E-01	17.03	
PB-214	1600.00Y	1.00	1.156E+00	1.156E+00	0.194E+00	16.81	
PO-214	1600.00Y	1.00	1.156E+00	1.156E+00	0.194E+00	16.81	
PO-216	1.41E+10Y	1.00	1.528E+00	1.528E+00	0.222E+00	14.55	
PO-218	1600.00Y	1.00	1.156E+00	1.156E+00	0.194E+00	16.81	
RA-224	1.41E+10Y	1.00	3.785E+00	3.785E+00	1.153E+00	30.47	
RA-226	1600.00Y	1.00	9.535E-01	9.535E-01	1.624E-01	17.03	
AC-228	1.41E+10Y	1.00	1.381E+00	1.381E+00	0.313E+00	22.70	
RA-228	1.41E+10Y	1.00	1.381E+00	1.381E+00	0.313E+00	22.70	
TH-228	1.91Y	1.02	1.528E+00	1.552E+00	0.226E+00	14.55	
TH-230	4.47E+09Y	1.00	9.535E-01	9.535E-01	1.624E-01	17.03	
U-231	4.20D	12.6	3.306E-01	4.152E+00	2.798E+00	67.38	
TH-232	1.41E+10Y	1.00	1.381E+00	1.381E+00	0.313E+00	22.70	
TH-234	4.47E+09Y	1.00	3.424E+01	3.424E+01	0.657E+01	19.18	
U-234	4.47E+09Y	1.00	9.535E-01	9.535E-01	1.624E-01	17.03	
U-235	7.04E+08Y	1.00	9.269E-01	9.269E-01	3.848E-01	41.52	
NP-237	2.14E+06Y	1.00	3.688E-01	3.688E-01	3.668E-01	99.44	
U-238	4.47E+09Y	1.00	3.424E+01	3.424E+01	0.657E+01	19.18	
AM-243	7380.00Y	1.00	3.375E-01	3.375E-01	0.840E-01	24.88	
ANH-511	1.00E+09Y	1.00	1.508E-01	1.508E-01	0.612E-01	40.57	

Total Activity : 1.234E+02 1.289E+02

Grand Total Activity : 1.234E+02 1.289E+02

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G245396003

Page : 5
Acquisition date : 5-FEB-2010 19:00:13

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	98.49	394	913	1.14	197.16	194	9	5.48E-02	29.7	8.15E+00	T
0	270.51	125	423	1.45	540.89	534	11	1.73E-02	66.3	6.27E+00	T
0	328.14	109	349	2.00	656.05	651	11	1.51E-02	69.1	5.62E+00	T
0	463.11	111	210	1.40	925.78	921	11	1.55E-02	53.7	4.58E+00	T
0	767.99	296	237	3.41	1535.20	1527	22	4.12E-02	29.6	3.20E+00	T
0	795.41	98	91	1.61	1590.02	1584	14	1.37E-02	46.4	3.12E+00	T
3	964.71	124	98	3.10	1928.52	1917	30	1.72E-02	49.5	2.66E+00	T
0	1001.00	398	99	1.94	2001.06	1994	18	5.52E-02	15.4	2.58E+00	T
0	1238.73	90	118	1.52	2476.46	2470	15	1.25E-02	57.8	2.16E+00	T
0	1383.82	7	111	0.67	2766.65	2753	20	9.22E-04	****	1.98E+00	T
0	1729.97	39	24	3.30	3459.12	3448	19	5.37E-03	72.0	1.73E+00	

Flags: "T" = Tentatively associated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245396003.CNF;1  *
* Acquisition date   : 5-FEB-2010 19:00:13.  Detector SN#      :             *
* Detector ID        : GAM22                      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 02:00:02.74             Half life ratio : 8.00000     *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 21-JAN-2010 12:00:00  Nuclide Library : SOLID          *
* Sample ID          : G245396003             Analyst initials: MXR1          *
* Batch Number       : 944962                 Sample Quantity : 1.44550E+02 GRAM *
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 2-DEC-2009 16:47:28.08MS 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	2.472E+01	2.609E+00	4.378E-01	4.010E-02	56.478
SN-126	1.256E-01	1.222E-01	1.691E-01	1.596E-02	0.743
BA-137M	4.945E-01	8.119E-02	5.580E-02	5.884E-03	8.862
CS-137	5.227E-01	8.587E-02	5.898E-02	6.228E-03	8.862
EU-155	1.780E-01	1.472E-01	1.767E-01	1.517E-02	1.007
LU-177	2.035E+00	1.407E+00	1.814E+00	2.048E-01	1.122
TL-208	4.431E-01	8.512E-02	5.041E-02	5.466E-03	8.789
BI-211	3.322E+00	5.308E-01	2.845E-01	3.319E-02	11.678
BI-212	1.259E+00	3.955E-01	3.853E-01	4.602E-02	3.267
PB-212	1.528E+00	2.223E-01	8.540E-02	1.128E-02	17.892
PO-212	1.528E+00	2.223E-01	8.540E-02	1.128E-02	17.892
BI-214	9.535E-01	1.624E-01	9.813E-02	1.141E-02	9.717
PB-214	1.156E+00	1.943E-01	9.915E-02	1.264E-02	11.657
PO-214	1.156E+00	1.943E-01	9.915E-02	1.264E-02	11.657
PO-216	1.528E+00	2.223E-01	8.540E-02	1.128E-02	17.892
PO-218	1.156E+00	1.943E-01	9.915E-02	1.264E-02	11.657
RA-224	3.785E+00	1.153E+00	9.709E-01	1.215E-01	3.898
RA-226	9.535E-01	1.624E-01	9.813E-02	1.141E-02	9.717

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-228	1.381E+00	3.134E-01	1.838E-01	2.436E-02	7.511
RA-228	1.381E+00	3.134E-01	1.838E-01	2.436E-02	7.511
TH-228	1.552E+00	2.257E-01	8.672E-02	1.146E-02	17.892
TH-230	9.535E-01	1.624E-01	9.813E-02	1.141E-02	9.717
U-231	4.152E+00	2.798E+00	1.740E+00	1.545E-01	2.386
TH-232	1.381E+00	3.134E-01	1.838E-01	2.436E-02	7.511
TH-234	3.424E+01	6.566E+00	2.211E+00	3.849E-01	15.483
U-234	9.535E-01	1.624E-01	9.813E-02	1.141E-02	9.717
U-235	9.269E-01	3.848E-01	3.365E-01	5.936E-02	2.755
NP-237	3.688E-01	3.668E-01	4.586E-01	1.038E-01	0.804
U-238	3.424E+01	6.566E+00	2.211E+00	3.849E-01	15.483
AM-243	3.375E-01	8.396E-02	9.775E-02	7.968E-03	3.453
ANH-511	1.508E-01	6.120E-02	3.826E-02	3.833E-03	3.943

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.644E-01		2.993E-01	4.602E-01	4.803E-02	-0.574
NA-22	-1.807E-02		3.283E-02	5.202E-02	4.483E-03	-0.347
NA-24	-2.799E-01		3.241E-01	Half-Life too short		
AL-26	-1.998E-02		2.273E-02	3.256E-02	2.663E-03	-0.614
TI-44	3.081E-01	+	5.498E-02	7.239E-02	6.137E-03	4.257
SC-46	-1.931E-02		3.174E-02	5.046E-02	5.649E-03	-0.383
V-48	9.206E-03		6.059E-02	1.005E-01	1.054E-02	0.092
CR-51	-4.252E-02		3.259E-01	5.425E-01	7.024E-02	-0.078
MN-52	-8.854E-02		1.738E-01	2.683E-01	2.397E-02	-0.330
MN-54	-1.084E-02		3.093E-02	5.057E-02	5.618E-03	-0.214
CO-56	-1.005E-02		3.256E-02	5.324E-02	5.927E-03	-0.189
CO-57	1.243E-02		2.613E-02	4.203E-02	3.466E-03	0.296
CO-58	-2.309E-02		3.128E-02	4.982E-02	5.516E-03	-0.464
FE-59	-2.964E-02		7.609E-02	1.202E-01	1.178E-02	-0.246
CO-60	-1.688E-02		2.997E-02	4.690E-02	4.182E-03	-0.360
ZN-65	6.613E-02		7.916E-02	1.181E-01	1.053E-02	0.560
GE-68	7.968E-02		9.901E-01	1.621E+00	1.528E-01	0.049
AS-73	5.536E-02		8.884E-01	1.462E+00	1.105E-01	0.038
AS-74	-1.974E-02		7.723E-02	1.263E-01	1.309E-02	-0.156
SE-75	1.994E-03		4.562E-02	6.415E-02	8.634E-03	0.031
BR-77	-7.287E+00		9.611E+00	1.470E+01	1.480E+00	-0.496
SR-82	1.950E-01		5.339E-01	4.913E-01	5.388E-02	0.397
RB-83	-4.512E-02		6.049E-02	9.261E-02	9.321E-03	-0.487
RB-84	3.801E-02		6.000E-02	1.030E-01	1.152E-02	0.369
KR-85	2.329E+01		7.620E+00	1.209E+01	1.213E+00	1.927
SR-85	1.197E-01		3.914E-02	6.208E-02	6.229E-03	1.927
RB-86	-8.860E-02		6.468E-01	1.043E+00	9.840E-02	-0.085
Y-88	-1.461E-03		2.403E-02	3.911E-02	3.162E-03	-0.037
ZR-88	3.655E-03		2.622E-02	4.339E-02	4.040E-03	0.084
Y-91	2.886E-01		1.479E+01	2.464E+01	2.026E+00	0.012

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94	1.251E-02		2.960E-02	4.933E-02	5.286E-03	0.254
NB-95	2.269E-01		5.587E-02	8.849E-02	9.677E-03	2.564
NB-95M	8.367E-02		1.335E-01	1.942E-01	2.568E-02	0.431
ZR-95	3.166E-02		6.053E-02	1.010E-01	1.172E-02	0.314
NB-97	1.820E-01		6.413E-02	Half-Life too short		
ZR-97	6.500E+00		1.107E+00	Half-Life too short		
MO-99	-1.618E-01		1.030E+01	1.671E+01	2.766E+00	-0.010
TC-99M	1.101E+10		3.471E+10	Half-Life too short		
RH-101	6.447E-03		3.175E-02	5.176E-02	5.647E-03	0.125
RH-102	2.703E-02		2.591E-02	4.382E-02	4.310E-03	0.617
RU-103	6.211E-03		3.491E-02	5.672E-02	8.514E-03	0.109
RH-106	5.018E-04		2.801E-01	4.626E-01	6.755E-02	0.001
RU-106	5.018E-04		2.801E-01	4.626E-01	4.832E-02	0.001
AG-108M	-1.930E-02		2.871E-02	4.515E-02	4.469E-03	-0.428
CD-109	-2.581E+00		1.625E+00	1.718E+00	1.630E-01	-1.503
AG-110M	3.656E-02		3.774E-02	5.655E-02	6.078E-03	0.646
IN-111	1.307E-01		1.161E+00	1.651E+00	2.094E-01	0.079
IN-113M	1.957E-03		3.810E-02	6.282E-02	5.999E-03	0.031
SN-113	1.957E-03		3.810E-02	6.282E-02	5.999E-03	0.031
IN-114M	1.258E-01		1.904E-01	2.832E-01	3.011E-02	0.444
CD-115	-2.059E+00		9.677E+00	1.605E+01	1.620E+00	-0.128
SN-117M	-9.063E-02		6.411E-02	8.840E-02	8.384E-03	-1.025
SB-122	-7.135E-01		1.853E+00	3.028E+00	3.104E-01	-0.236
I-123	-8.738E+00		4.117E+00	Half-Life too short		
TE-123M	-3.462E-02		3.263E-02	4.582E-02	4.376E-03	-0.756
I-124	1.888E-01		6.808E-01	9.882E-01	1.026E-01	0.191
SB-124	-4.248E-02		5.568E-02	8.262E-02	7.349E-03	-0.514
SB-125	3.615E-02		7.864E-02	1.311E-01	1.272E-02	0.276
TE-125M	6.047E+00		1.415E+01	1.617E+01	1.637E+00	0.374
I-126	7.550E-02		1.875E-01	2.717E-01	2.870E-02	0.278
SB-126	2.375E-02		1.429E-01	2.021E-01	2.179E-02	0.118
SB-127	2.995E-01		1.157E+00	1.921E+00	2.503E-01	0.156
XE-127	2.021E-02		4.537E-02	7.545E-02	8.364E-03	0.268
I-131	-2.881E-03		1.021E-01	1.689E-01	1.871E-02	-0.017
TE-132	6.124E-01		6.863E-01	1.136E+00	2.028E-01	0.539
BA-133	3.519E-02		4.018E-02	6.055E-02	9.048E-03	0.581
I-133	-1.168E-03		2.875E-03	Half-Life too short		
CS-134	1.081E-01	+	5.156E-02	6.901E-02	7.639E-03	1.567
CS-135	2.287E-01		1.666E-01	2.458E-01	3.555E-02	0.930
I-135	-2.025E+09		3.324E+09	Half-Life too short		
CS-136	-1.886E-02		9.181E-02	1.478E-01	1.494E-02	-0.128
CE-139	-7.130E-03		3.243E-02	4.716E-02	4.625E-03	-0.151
BA-140	1.362E-01		2.181E-01	3.680E-01	1.235E-01	0.370
LA-140	-1.401E-01		7.629E-02	1.031E-01	9.036E-03	-1.359
CE-141	1.486E-01		6.991E-02	1.099E-01	1.000E-02	1.353
CE-143	7.382E-04		1.255E-04	Half-Life too short		
CE-144	-5.521E-02		2.021E-01	3.395E-01	5.270E-02	-0.163
PM-144	-1.195E-02		2.982E-02	4.762E-02	5.093E-03	-0.251

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144	-8.095E-01		2.021E+00	3.227E+00	3.450E-01	-0.251
PM-146	3.381E-02		3.980E-02	6.685E-02	7.769E-03	0.506
ND-147	-2.686E-01		4.774E-01	7.742E-01	1.228E-01	-0.347
PM-149	-7.623E+01		9.196E+01	1.399E+02	2.646E+01	-0.545
EU-152	-6.648E-02		1.040E-01	1.353E-01	1.626E-02	-0.491
GD-153	4.193E-01	+	1.299E-01	1.598E-01	1.405E-02	2.623
EU-154	-5.045E-02		9.177E-02	1.453E-01	1.642E-02	-0.347
TB-160	1.256E-01		1.190E-01	2.083E-01	2.329E-02	0.603
HO-166M	2.497E-02		5.258E-02	8.785E-02	9.445E-03	0.284
TM-171	-1.214E+01		3.172E+01	4.630E+01	3.498E+00	-0.262
LU-176	-1.680E-02		2.169E-02	3.514E-02	4.610E-03	-0.478
LU-177M	-1.198E-01		1.606E-01	2.535E-01	2.397E-02	-0.473
HF-181	2.438E-03		3.861E-02	6.253E-02	6.173E-03	0.039
W-181	1.073E+00		4.400E-01	6.864E-01	5.117E-02	1.564
TA-182	-5.645E-02		1.540E-01	2.502E-01	2.081E-02	-0.226
RE-183	2.346E-01	+	1.517E-01	1.922E-01	1.854E-02	1.220
RE-184	-1.338E-01		2.176E-01	3.414E-01	4.430E-02	-0.392
OS-185	2.847E-02		3.571E-02	6.111E-02	6.422E-03	0.466
RE-188	1.340E-01		1.725E-01	2.943E-01	2.747E-02	0.455
W-188	6.769E+00		7.390E+00	1.128E+01	1.540E+00	0.600
IR-192	-6.427E-03		2.995E-02	4.971E-02	6.353E-03	-0.129
AU-195	1.221E+00	+	3.783E-01	4.722E-01	4.118E-02	2.586
TL-200	-7.314E-05		2.279E-04	Half-Life too short		
TL-201	-9.868E-01		7.910E+00	1.154E+01	1.137E+00	-0.086
TL-202	4.003E-02		6.357E-02	1.059E-01	1.020E-02	0.378
HG-203	2.224E-02		3.850E-02	6.278E-02	8.886E-03	0.354
BI-207	-2.334E-02		4.393E-02	6.671E-02	6.405E-03	-0.350
TL-207	3.729E-01		6.610E-01	9.848E-01	1.957E-01	0.379
PO-209	1.440E+00		6.271E+00	1.053E+01	1.180E+00	0.137
BI-210	1.266E+00		3.508E+00	5.882E+00	5.465E-01	0.215
PB-210	1.266E+00		3.508E+00	5.882E+00	5.465E-01	0.215
PO-210	1.266E+00		3.507E+00	5.882E+00	4.946E-01	0.215
PB-211	-4.453E-01		8.966E-01	1.366E+00	8.573E-01	-0.326
PO-215	3.729E-01		6.610E-01	9.848E-01	1.957E-01	0.379
RN-219	1.604E-01		3.737E-01	6.232E-01	9.643E-02	0.257
RN-220	-6.487E+00		2.134E+01	3.506E+01	3.573E+00	-0.185
RA-223	3.729E-01		6.610E-01	9.848E-01	1.957E-01	0.379
AC-227	-3.315E-01		3.708E-01	5.691E-01	1.038E-01	-0.582
TH-227	-3.315E-01		3.721E-01	5.691E-01	1.171E-01	-0.582
TH-229	-4.049E-01		4.789E-01	7.649E-01	8.224E-02	-0.529
PA-231	7.136E-02		1.413E+00	2.262E+00	4.223E-01	0.032
TH-231	3.729E-01		6.610E-01	9.848E-01	1.957E-01	0.379
PA-233	1.661E-02		5.589E-02	9.470E-02	1.241E-02	0.175
PA-234	1.017E-01		2.421E-01	4.086E-01	8.121E-02	0.249
PA-234M	4.770E+01	+	9.174E+00	1.228E+01	1.408E+00	3.884
NP-236	2.803E-02		8.618E-02	1.285E-01	1.228E-02	0.218
NP-239	7.708E-02		2.157E-01	3.095E-01	2.558E-02	0.249
AM-241	2.305E-01		1.841E-01	2.836E-01	2.217E-02	0.813

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	4.119E-02		1.471E-01	1.676E-01	1.429E-02	0.246
AM-246	8.520E-03		1.114E-01	1.823E-01	1.715E-02	0.047
CM-247	1.466E-02		3.336E-02	5.572E-02	5.227E-03	0.263
CF-249	-3.874E-02		3.494E-02	5.431E-02	5.162E-03	-0.713
CF-251	6.037E-02		1.221E-01	2.053E-01	2.086E-02	0.294

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : SYSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G245396003           *
* Acquisition date   : 5-FEB-2010 19:00:13 Detector SN#      :              *
* Detector ID        : GAM22 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 02:00:02.74 Half life ratio : 8.000      *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 21-JAN-2010 12:00:00 Nuclide Library : SOLID        *
* Sample ID          : G245396003 Analyst initials: MXR1          *
* Batch Number       : 944962 Sample Quantity : 1.4455E+02 GRAM      *
* Recovery           : 1.00000 Carrier Weight : 0.00000           *
*****
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 2-DEC-2009 16:47:28 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	2.472E+01	2.556E+00	2.201E-01	1.304E+00
SN-126	1.256E-01	1.197E-01	9.045E-02	6.109E-02
BA-137M	4.945E-01	7.957E-02	2.857E-02	4.060E-02
CS-137	5.227E-01	8.415E-02	3.021E-02	4.294E-02
EU-155	1.780E-01	1.443E-01	9.416E-02	7.360E-02
LU-177	2.035E+00	1.379E+00	9.529E-01	7.033E-01
TL-208	4.431E-01	8.341E-02	2.589E-02	4.256E-02
BI-211	3.322E+00	5.202E-01	1.478E-01	2.654E-01
BI-212	1.259E+00	3.876E-01	1.969E-01	1.978E-01
PB-212	1.528E+00	2.179E-01	4.473E-02	1.112E-01
PO-212	1.528E+00	2.179E-01	4.473E-02	1.112E-01
BI-214	9.535E-01	1.592E-01	5.035E-02	8.121E-02
PB-214	1.156E+00	1.904E-01	5.149E-02	9.713E-02
PO-214	1.156E+00	1.904E-01	5.149E-02	9.713E-02
PO-216	1.528E+00	2.179E-01	4.473E-02	1.112E-01
PO-218	1.156E+00	1.904E-01	5.149E-02	9.713E-02
RA-224	3.785E+00	1.130E+00	5.084E-01	5.767E-01
RA-226	9.535E-01	1.592E-01	5.035E-02	8.121E-02
AC-228	1.381E+00	3.072E-01	9.346E-02	1.567E-01
RA-228	1.381E+00	3.072E-01	9.346E-02	1.567E-01
TH-228	1.552E+00	2.212E-01	4.542E-02	1.129E-01
TH-230	9.535E-01	1.592E-01	5.034E-02	8.121E-02
U-231	4.152E+00	2.742E+00	9.291E-01	1.399E+00
TH-232	1.381E+00	3.072E-01	9.346E-02	1.567E-01
TH-234	3.424E+01	6.435E+00	1.191E+00	3.283E+00
U-234	9.535E-01	1.592E-01	5.034E-02	8.121E-02
U-235	9.269E-01	3.771E-01	1.782E-01	1.924E-01
NP-237	3.688E-01	3.594E-01	2.454E-01	1.834E-01
U-238	3.424E+01	6.435E+00	1.191E+00	3.283E+00
AM-243	3.375E-01	8.228E-02	5.247E-02	4.198E-02
ANH-511	1.508E-01	5.997E-02	1.971E-02	3.060E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-2.644E-01	2.933E-01	2.374E-01	1.496E-01 NOT IDENT.
NA-22	-1.807E-02	3.218E-02	2.625E-02	1.642E-02 NOT IDENT.
NA-24	-2.799E+05	6.353E+05	0.000E+00	3.241E+05 SHORT HLIF
AL-26	-1.998E-02	2.228E-02	1.629E-02	1.137E-02 NOT IDENT.
TI-44	3.081E-01	5.388E-02	3.881E-02	2.749E-02 FAIL ABUN
SC-46	-1.931E-02	3.111E-02	2.567E-02	1.587E-02 FAIL ABUN
V-48	9.206E-03	5.938E-02	5.099E-02	3.029E-02 NOT IDENT.
CR-51	-4.252E-02	3.194E-01	2.823E-01	1.630E-01 NOT IDENT.
MN-52	-8.854E-02	1.704E-01	1.350E-01	8.692E-02 NOT IDENT.
MN-54	-1.084E-02	3.031E-02	2.576E-02	1.546E-02 NOT IDENT.
CO-56	-1.005E-02	3.191E-02	2.711E-02	1.628E-02 FAIL ABUN
CO-57	1.243E-02	2.561E-02	2.233E-02	1.307E-02 NOT IDENT.
CO-58	-2.309E-02	3.065E-02	2.540E-02	1.564E-02 NOT IDENT.
FE-59	-2.964E-02	7.457E-02	6.086E-02	3.805E-02 FAIL ABUN
CO-60	-1.688E-02	2.937E-02	2.364E-02	1.498E-02 NOT IDENT.
ZN-65	6.613E-02	7.758E-02	5.975E-02	3.958E-02 NOT IDENT.
GE-68	7.968E-02	9.703E-01	8.209E-01	4.950E-01 NOT IDENT.
AS-73	5.536E-02	8.707E-01	7.902E-01	4.442E-01 NOT IDENT.
AS-74	-1.974E-02	7.569E-02	6.484E-02	3.862E-02 NOT IDENT.
SE-75	1.994E-03	4.471E-02	3.352E-02	2.281E-02 NOT IDENT.
BR-77	-7.287E+00	9.419E+00	7.569E+00	4.805E+00 FAIL ABUN
SR-82	1.950E-01	5.232E-01	2.507E-01	2.669E-01 NOT IDENT.
RB-83	-4.512E-02	5.928E-02	4.768E-02	3.025E-02 NOT IDENT.
RB-84	3.801E-02	5.880E-02	5.242E-02	3.000E-02 NOT IDENT.
KR-85	2.329E+01	7.467E+00	6.224E+00	3.810E+00 NOT IDENT.
SR-85	1.197E-01	3.836E-02	3.197E-02	1.957E-02 NOT IDENT.
RB-86	-8.860E-02	6.339E-01	5.282E-01	3.234E-01 NOT IDENT.
Y-88	-1.461E-03	2.354E-02	1.956E-02	1.201E-02 NOT IDENT.
ZR-88	3.655E-03	2.570E-02	2.248E-02	1.311E-02 NOT IDENT.
Y-91	2.886E-01	1.449E+01	1.245E+01	7.394E+00 NOT IDENT.
NB-94	1.251E-02	2.900E-02	2.523E-02	1.480E-02 NOT IDENT.
NB-95	2.269E-01	5.475E-02	4.517E-02	2.793E-02 NOT IDENT.
NB-95M	8.367E-02	1.309E-01	1.018E-01	6.677E-02 NOT IDENT.
ZR-95	3.166E-02	5.932E-02	5.155E-02	3.027E-02 NOT IDENT.
NB-97	1.820E+05	1.257E+05	0.000E+00	6.413E+04 SHORT HLIF
ZR-97	6.500E+06	2.169E+06	0.000E+00	1.107E+06 SHORT HLIF
MO-99	-1.618E-01	1.009E+01	8.535E+00	5.148E+00 NOT IDENT.
TC-99M	1.101E+16	6.804E+16	0.000E+00	0.000E+00 SHORT HLIF
RH-101	6.447E-03	3.111E-02	2.722E-02	1.587E-02 NOT IDENT.
RH-102	2.703E-02	2.539E-02	2.261E-02	1.295E-02 FAIL ABUN
RU-103	6.211E-03	3.422E-02	2.924E-02	1.746E-02 FAIL ABUN
RH-106	5.018E-04	2.745E-01	2.373E-01	1.401E-01 FAIL ABUN
RU-106	5.018E-04	2.745E-01	2.373E-01	1.401E-01 FAIL ABUN
AG-108M	-1.930E-02	2.813E-02	2.334E-02	1.435E-02 NOT IDENT.
CD-109	-2.581E+00	1.592E+00	9.188E-01	8.123E-01 NOT IDENT.
AG-110M	3.656E-02	3.699E-02	2.897E-02	1.887E-02 FAIL ABUN
IN-111	1.307E-01	1.138E+00	8.640E-01	5.805E-01 NOT IDENT.
IN-113M	1.957E-03	3.734E-02	3.255E-02	1.905E-02 NOT IDENT.
SN-113	1.957E-03	3.734E-02	3.255E-02	1.905E-02 NOT IDENT.
IN-114M	1.258E-01	1.866E-01	1.491E-01	9.520E-02 NOT IDENT.
CD-115	-2.059E+00	9.483E+00	8.259E+00	4.838E+00 NOT IDENT.
SN-117M	-9.063E-02	6.283E-02	4.671E-02	3.206E-02 NOT IDENT.
SB-122	-7.135E-01	1.816E+00	1.556E+00	9.267E-01 NOT IDENT.
I-123	-8.738E+06	8.069E+06	0.000E+00	4.117E+06 SHORT HLIF
TE-123M	-3.462E-02	3.197E-02	2.421E-02	1.631E-02 NOT IDENT.
I-124	1.888E-01	6.671E-01	5.071E-01	3.404E-01 NOT IDENT.
SB-124	-4.248E-02	5.456E-02	4.141E-02	2.784E-02 FAIL ABUN
SB-125	3.615E-02	7.706E-02	6.777E-02	3.932E-02 FAIL ABUN
TE-125M	6.047E+00	1.386E+01	8.610E+00	7.073E+00 NOT IDENT.
I-126	7.550E-02	1.838E-01	1.391E-01	9.376E-02 NOT IDENT.
SB-126	2.375E-02	1.401E-01	1.033E-01	7.147E-02 FAIL ABUN
SB-127	2.995E-01	1.134E+00	9.830E-01	5.787E-01 NOT IDENT.
XE-127	2.021E-02	4.446E-02	3.966E-02	2.268E-02 FAIL ABUN
I-131	-2.881E-03	1.001E-01	8.763E-02	5.107E-02 NOT IDENT.
TE-132	6.124E-01	6.726E-01	5.958E-01	3.432E-01 FAIL ABUN
BA-133	3.519E-02	3.937E-02	3.144E-02	2.009E-02 NOT IDENT.
I-133	-1.168E+03	5.636E+03	0.000E+00	2.875E+03 SHORT HLIF
CS-134	1.081E-01	5.053E-02	3.519E-02	2.578E-02 FAIL ABUN
CS-135	2.287E-01	1.633E-01	1.284E-01	8.330E-02 NOT IDENT.
I-135	-2.025E+15	6.514E+15	0.000E+00	3.324E+15 SHORT HLIF
CS-136	-1.886E-02	8.997E-02	7.489E-02	4.590E-02 FAIL ABUN
CE-139	-7.130E-03	3.178E-02	2.489E-02	1.622E-02 NOT IDENT.
BA-140	1.362E-01	2.137E-01	1.894E-01	1.090E-01 FAIL ABUN
LA-140	-1.401E-01	7.476E-02	5.173E-02	3.814E-02 FAIL ABUN

CE-141	1.486E-01	6.852E-02	5.815E-02	3.496E-02	NOT IDENT.
CE-143	7.382E+02	2.460E+02	0.000E+00	1.255E+02	SHORT HLIF
CE-144	-5.521E-02	1.981E-01	1.800E-01	1.011E-01	NOT IDENT.
PM-144	-1.195E-02	2.922E-02	2.436E-02	1.491E-02	NOT IDENT.
PR-144	-8.095E-01	1.980E+00	1.651E+00	1.010E+00	NOT IDENT.
PM-146	3.381E-02	3.900E-02	3.453E-02	1.990E-02	NOT IDENT.
ND-147	-2.686E-01	4.678E-01	3.984E-01	2.387E-01	FAIL ABUN
PM-149	-7.623E+01	9.012E+01	7.296E+01	4.598E+01	NOT IDENT.
EU-152	-6.648E-02	1.020E-01	7.030E-02	5.202E-02	FAIL ABUN
GD-153	4.193E-01	1.273E-01	8.531E-02	6.495E-02	FAIL ABUN
EU-154	-5.045E-02	8.994E-02	7.330E-02	4.589E-02	NOT IDENT.
TB-160	1.256E-01	1.166E-01	1.060E-01	5.948E-02	FAIL ABUN
HO-166M	2.497E-02	5.153E-02	4.492E-02	2.629E-02	FAIL ABUN
TM-171	-1.214E+01	3.108E+01	2.491E+01	1.586E+01	NOT IDENT.
LU-176	-1.680E-02	2.126E-02	1.831E-02	1.084E-02	NOT IDENT.
LU-177M	-1.198E-01	1.574E-01	1.312E-01	8.029E-02	NOT IDENT.
HF-181	2.438E-03	3.784E-02	3.225E-02	1.931E-02	NOT IDENT.
W-181	1.073E+00	4.312E-01	3.694E-01	2.200E-01	NOT IDENT.
TA-182	-5.645E-02	1.510E-01	1.264E-01	7.702E-02	FAIL ABUN
RE-183	2.346E-01	1.487E-01	1.015E-01	7.586E-02	FAIL ABUN
RE-184	-1.338E-01	2.132E-01	1.786E-01	1.088E-01	NOT IDENT.
OS-185	2.847E-02	3.500E-02	3.131E-02	1.786E-02	NOT IDENT.
RE-188	1.340E-01	1.691E-01	1.556E-01	8.627E-02	NOT IDENT.
W-188	6.769E+00	7.242E+00	5.882E+00	3.695E+00	FAIL ABUN
IR-192	-6.427E-03	2.935E-02	2.588E-02	1.497E-02	FAIL ABUN
AU-195	1.221E+00	3.707E-01	2.520E-01	1.891E-01	FAIL ABUN
TL-200	-7.314E+01	4.466E+02	0.000E+00	2.279E+02	SHORT HLIF
TL-201	-9.868E-01	7.751E+00	6.089E+00	3.955E+00	NOT IDENT.
TL-202	4.003E-02	6.229E-02	5.474E-02	3.178E-02	NOT IDENT.
HG-203	2.224E-02	3.773E-02	3.277E-02	1.925E-02	FAIL ABUN
BI-207	-2.334E-02	4.305E-02	3.380E-02	2.197E-02	FAIL ABUN
TL-207	3.729E-01	6.478E-01	5.124E-01	3.305E-01	FAIL ABUN
PO-209	1.440E+00	6.146E+00	5.357E+00	3.135E+00	NOT IDENT.
BI-210	1.266E+00	3.437E+00	3.188E+00	1.754E+00	NOT IDENT.
PB-210	1.266E+00	3.437E+00	3.188E+00	1.754E+00	NOT IDENT.
PO-210	1.266E+00	3.437E+00	3.188E+00	1.754E+00	NOT IDENT.
PB-211	-4.453E-01	8.787E-01	7.071E-01	4.483E-01	NOT IDENT.
PO-215	3.729E-01	6.478E-01	5.124E-01	3.305E-01	FAIL ABUN
RN-219	1.604E-01	3.662E-01	3.227E-01	1.869E-01	FAIL ABUN
RN-220	-6.487E+00	2.091E+01	1.803E+01	1.067E+01	NOT IDENT.
RA-223	3.729E-01	6.478E-01	5.124E-01	3.305E-01	FAIL ABUN
AC-227	-3.315E-01	3.634E-01	2.976E-01	1.854E-01	FAIL ABUN
TH-227	-3.315E-01	3.647E-01	2.976E-01	1.861E-01	FAIL ABUN
TH-229	-4.049E-01	4.693E-01	4.024E-01	2.395E-01	FAIL ABUN
PA-231	7.136E-02	1.384E+00	1.180E+00	7.064E-01	NOT IDENT.
TH-231	3.729E-01	6.478E-01	5.124E-01	3.305E-01	FAIL ABUN
PA-233	1.661E-02	5.478E-02	4.931E-02	2.795E-02	FAIL ABUN
PA-234	1.017E-01	2.372E-01	2.075E-01	1.210E-01	FAIL ABUN
PA-234M	4.770E+01	8.990E+00	6.231E+00	4.587E+00	FAIL ABUN
NP-236	2.803E-02	8.446E-02	6.785E-02	4.309E-02	FAIL ABUN
NP-239	7.708E-02	2.114E-01	1.646E-01	1.079E-01	FAIL ABUN
AM-241	2.305E-01	1.805E-01	1.529E-01	9.207E-02	NOT IDENT.
CM-243	4.119E-02	1.442E-01	8.937E-02	7.355E-02	FAIL ABUN
AM-246	8.520E-03	1.091E-01	9.230E-02	5.569E-02	NOT IDENT.
CM-247	1.466E-02	3.269E-02	2.885E-02	1.668E-02	NOT IDENT.
CF-249	-3.874E-02	3.424E-02	2.815E-02	1.747E-02	NOT IDENT.
CF-251	6.037E-02	1.196E-01	1.082E-01	6.103E-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
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46.50	623.1893
46.50	623.1893
46.50	623.1893
48.70	687.1248
49.72	678.4161
51.35	703.7051
52.39	708.7833
52.97	725.4538
53.15	733.4655
53.44	723.1978
54.07	741.9720
56.28	828.1132
56.28	828.1221
57.37	0.0000
57.53	838.4521
57.53	838.4589
57.60	854.6246
57.98	812.0648
57.98	812.0648
59.32	825.0425
59.32	825.0425
59.40	825.3040
59.54	825.7632
59.72	872.2628
60.01	873.2648
61.10	911.6270
61.14	911.7679
61.30	912.3358
63.00	908.6385
63.29	909.6428
63.29	909.6428
63.58	910.6423
64.28	864.3782
65.12	867.0961
65.20	860.0290
65.20	860.0290
66.05	867.1432
66.72	879.5857
66.83	879.9410
66.91	880.2006
67.20	923.9317
67.20	923.9317
67.75	926.3621
67.85	926.6990
68.90	983.0603
68.90	983.0603
69.30	994.3734
69.67	980.3968
70.82	934.4244
70.82	934.4244
70.83	934.4578
72.80	1010.0886
72.87	1010.3344
72.87	1010.3344
74.67	1078.6252
74.81	1079.1305
74.81	1079.1305
74.81	1079.1305
74.81	1079.1305
74.81	1079.1305
74.81	1079.1305
74.81	1079.1305
74.97	1079.7117
75.28	1080.8307
75.70	1082.3408
77.11	1087.3873
77.11	1087.3873

77.11	1087.3873
77.11	1087.3873
77.11	1087.3873
77.11	1087.3873
77.11	1087.3873
78.38	1087.2953
79.62	1043.9137
79.80	1044.5138
79.80	1044.5138
80.11	990.0325
80.18	990.2529
80.30	990.6300
80.30	990.6300
80.57	991.4774
81.00	1067.0594
81.07	1067.2964
81.07	1067.2964
81.07	1067.2964
81.07	1067.2964
82.60	1072.4238
83.37	1146.6421
83.78	1118.4635
83.78	1118.4635
83.78	1118.4635
83.78	1118.4635
84.21	1062.1525
84.90	1064.3937
85.43	1066.1108
86.29	1260.6511
86.50	1261.4465
86.54	1261.5995
86.59	1261.7892
86.72	1262.2848
86.79	1105.1177
86.94	1105.6211
87.30	1511.4843
87.30	1511.4843
87.30	1511.4843
87.30	1511.4843
87.30	1511.4843
87.30	1511.4843
87.30	1511.4843
87.57	1512.6984
87.88	1781.5364
88.03	1782.3281
88.36	1638.5576
88.47	1639.0951
89.95	1792.4143
91.11	1543.3630
92.29	1435.5540
92.38	1435.9236
92.38	1435.9236
93.35	1439.8876
94.00	1442.5370
94.67	1445.2412
94.67	1445.2617
94.90	1446.1927
94.90	1446.1927
94.90	1446.1927
94.90	1446.1927
95.87	665.8004
95.87	665.8004
96.73	667.3909
97.43	668.6733
98.44	655.8712
98.44	655.8743
98.88	663.1760
99.55	644.7922
99.55	644.7922
99.86	645.3286
100.00	645.5727
100.10	651.7479
103.18	629.6215
103.76	676.8009
105.00	635.9297
105.31	636.4395
108.00	677.5515
109.28	666.3476

111.00	731.4274
111.00	731.4274
111.76	661.4896
112.95	663.4279
115.19	596.2651
116.30	567.1990
117.00	563.0283
117.00	563.0283
117.66	555.3679
121.11	612.1335
121.62	608.2579
121.78	608.4813
122.06	566.2875
122.32	566.6253
122.32	566.6253
122.32	566.6253
122.32	566.6253
123.07	554.9134
127.23	678.9376
129.76	637.6650
131.20	659.0598
133.02	636.8939
133.54	635.8369
135.34	656.9540
136.00	621.3740
136.25	621.7042
136.48	619.3344
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140.51	0.0000
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142.65	646.9859
143.76	598.8718
144.24	599.4526
144.24	599.4526
144.24	599.4526
144.24	599.4526
145.22	550.1931
145.44	534.4625
147.16	555.2452
152.43	622.1199
152.70	620.6033
153.22	577.9056
154.21	567.0009
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154.21	567.0009
154.21	567.0009
155.03	603.9622
156.02	631.0493
158.56	664.4376
159.00	0.0000
159.00	644.1082
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161.27	580.9532
162.32	589.5767
162.64	564.4084
163.35	534.5184
163.89	514.5447
165.85	554.1288
167.43	545.1108
171.28	518.3630
171.86	543.6901
172.10	543.9205
176.55	516.4086
176.60	516.4536
181.06	545.7762
184.41	562.8771
185.71	550.8071
186.00	551.0739
190.27	465.9832
192.34	509.3980
193.63	524.3026
197.04	474.4307
198.01	485.1125
198.60	504.5021
200.40	552.9156
201.83	556.1475
202.84	508.8373
205.31	522.2483

208.36	595.9156
208.81	575.2543
209.75	485.8010
209.75	485.8010
210.97	455.1880
215.65	426.7733
216.55	427.1870
218.09	448.6792
222.10	408.9370
223.80	454.4403
226.40	448.8387
227.00	438.8192
227.08	438.8675
227.20	448.3029
228.16	420.7830
228.18	420.7953
228.18	420.7953
231.56	0.0000
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236.00	464.9414
238.63	447.9995
238.63	447.9995
238.63	447.9995
238.63	447.9995
239.00	448.2227
240.98	449.4131
241.98	417.7496
241.98	417.7496
241.98	417.7496
244.69	412.4340
245.39	387.2273
247.94	387.2405
248.90	386.6527
249.79	382.8097
252.40	364.7369
252.85	388.6302
252.85	388.6302
254.15	0.0000
256.20	419.4892
256.20	419.4892
260.50	372.8534
260.90	377.3922
262.80	422.3607
264.65	337.4154
268.24	331.8805
268.79	344.4068
269.46	346.2280
269.46	346.2280
269.46	346.2280
269.46	346.2280
271.23	338.3813
273.65	420.6778
276.40	345.8108
277.35	355.0781
277.60	362.9503
277.60	362.9503
278.00	348.6887
278.60	374.4970
279.20	355.8594
279.53	355.9961
280.46	383.1157
281.68	355.7841
283.67	332.0177
284.30	360.2306
285.00	351.5683
285.90	364.2662
286.10	358.7451
286.10	358.7451
287.40	357.0367
288.45	0.0000
290.67	317.0581
290.80	317.1053
291.72	343.0159
293.26	0.0000
293.70	378.4660
295.21	376.0938
295.21	376.0938

295.21	376.0938
295.96	344.6672
296.50	344.8760
297.23	345.1589
298.57	345.6785
299.80	314.2692
299.80	314.2692
300.09	302.2248
300.09	302.2248
300.09	302.2248
300.12	302.2329
301.29	285.8976
302.84	310.7646
303.76	311.0801
303.91	311.1299
304.40	279.2545
304.40	279.2545
304.84	312.9762
306.84	326.8229
308.46	297.9716
311.98	292.6446
316.51	297.7792
318.01	300.1156
319.02	303.2253
319.41	308.9359
320.08	300.7701
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323.87	289.8190
323.87	289.8190
323.87	289.8190
325.23	315.1935
328.77	316.3524
333.44	283.2532
334.20	250.4011
334.20	250.4011
334.30	274.0521
338.28	289.3889
338.28	289.3889
338.28	289.3889
338.28	289.3889
338.32	289.4037
338.32	289.4037
338.32	289.4037
340.50	261.5085
340.57	261.5253
344.27	299.7182
345.85	291.5855
350.59	0.0000
351.07	271.9453
351.92	272.1699
351.92	272.1699
351.92	272.1699
355.39	0.0000
356.01	215.6399
364.48	257.9512
366.43	276.9555
367.43	275.2633
367.94	0.0000
369.80	233.8069
374.96	267.3715
383.85	254.6879
387.95	279.5010
388.63	272.7056
391.69	241.5155
391.69	241.5155
392.90	236.7801
398.62	257.0562
400.65	253.4889
401.10	258.6219
401.81	260.7958
402.60	258.9608
404.84	290.7598
410.95	257.7858
411.60	243.7119
413.65	284.8262
414.70	260.6469
415.30	244.4795

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417.63	0.0000
418.52	235.9516
423.70	231.8486
427.08	197.5219
427.89	210.0064
432.53	238.7094
433.93	240.0175
439.47	203.6874
439.56	217.2125
439.89	218.3108
443.98	249.2754
444.90	250.5029
445.03	250.5293
445.03	250.5293
445.03	250.5293
445.03	250.5293
453.90	218.6539
463.38	220.2738
468.07	230.2797
473.00	232.5670
475.06	192.3267
475.35	196.6455
476.78	243.9310
477.59	252.6427
477.96	236.6524
482.03	219.1132
484.57	213.0724
487.03	209.1468
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492.35	198.0631
497.08	187.8862
507.63	0.0000
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511.00	185.3842
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511.85	185.4946
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513.99	177.7149
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520.65	205.4219
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531.02	200.2280
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543.00	184.1063
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555.20	162.0548
563.23	195.1116
563.90	208.4656
568.70	205.3125
569.32	195.8827
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569.67	193.0755
573.80	218.7000
574.00	214.9130
574.64	216.1178
578.91	193.5403
579.30	0.0000
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591.81	170.7305
592.07	174.9362
593.00	194.8133
595.88	187.6020
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602.71	199.7712
603.60	204.8770
604.41	189.9815
604.70	195.0136
609.31	205.5934

609.31	205.5934
609.31	205.5934
609.31	205.5934
610.33	214.0848
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614.37	199.5176
618.01	180.3538
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621.84	187.6465
631.29	161.0368
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636.97	166.5337
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661.65	222.3486
664.57	0.0000
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666.33	183.1894
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677.61	161.3032
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696.49	188.6082
697.00	207.1166
697.49	208.1956
698.33	198.0300
698.50	198.0496
699.00	207.3385
702.63	179.9774
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706.67	205.1054
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717.42	173.1089
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722.78	174.6377
722.78	174.6377
722.89	174.6479
722.95	174.6514
723.30	163.9905
724.18	164.0643
727.18	158.3674
733.00	116.4478
735.90	166.0654
739.58	150.9990
742.81	120.7907
744.21	139.7945
747.13	173.6877
751.79	143.5011
752.31	143.5399
753.82	141.5353
755.35	137.4162
756.15	142.7591
756.87	150.2163
763.93	149.2342
765.79	158.4795
766.42	160.3502
766.84	148.8412
776.49	108.9612
778.00	109.0411
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778.89	106.9499
783.80	130.4878
785.46	131.0959
792.07	116.2507

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798.80	124.0337
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805.60	104.0078
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818.51	122.3967
819.60	144.8935
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828.27	0.0000
831.60	148.5273
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834.83	159.1065
836.80	0.0000
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860.37	125.7250
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867.82	120.4124
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873.19	131.2375
874.81	124.6204
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876.40	135.2610
879.36	114.3059
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880.51	127.8186
881.50	123.0670
883.24	126.0473
884.67	129.9785
889.25	128.3103
896.60	126.7852
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911.07	138.2881
911.07	138.2881
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920.93	108.3903
925.00	106.7799
925.24	102.8723
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937.48	127.0361
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968.20	101.7207
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969.11	101.7599
969.11	101.7599
977.42	119.1162
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983.50	120.4101
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1001.03	95.9890
1001.68	96.0139
1004.76	95.6239
1021.30	0.0000
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1036.00	124.9487
1037.82	120.9344
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1038.76	0.0000
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1046.59	142.9317
1048.07	122.4365

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1050.47	94.7402
1062.04	107.5619
1063.62	112.8016
1076.63	112.3054
1077.35	104.0144
1078.86	100.9514
1085.78	119.9855
1099.22	123.7206
1112.02	92.1631
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1120.29	89.7937
1120.29	89.7937
1120.29	89.7937
1120.51	89.8026
1121.28	89.8263
1124.00	0.0000
1129.67	96.4526
1131.51	0.0000
1147.95	0.0000
1167.94	114.6617
1173.22	110.1588
1175.09	109.2881
1177.93	114.1096
1189.05	147.6687
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1205.75	0.0000
1213.00	124.0451
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1230.97	163.8125
1235.34	123.0352
1236.41	0.0000
1238.25	133.4150
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1260.41	0.0000
1271.85	90.4457
1274.45	95.3861
1274.54	95.3891
1291.56	81.2219
1298.22	0.0000
1312.09	85.6805
1325.50	78.1224
1325.50	78.1224
1332.49	75.3158
1333.61	72.3673
1360.21	53.9621
1362.66	0.0000
1365.15	60.0458
1368.21	61.1024
1368.53	0.0000
1376.25	46.4098
1384.27	53.6768
1394.10	64.5977
1395.20	64.6172
1407.95	68.9110
1434.06	51.0498
1436.60	44.9574
1457.56	0.0000
1460.81	54.5236
1489.15	58.0627
1509.49	53.1727
1596.49	81.5558
1620.62	39.1226
1678.03	0.0000
1691.02	35.9311
1691.02	35.9311
1706.46	0.0000
1750.46	0.0000
1764.49	24.9067
1764.49	24.9067
1764.49	24.9067
1764.49	24.9067
1770.23	26.7217
1771.40	21.3832
1791.20	0.0000
1808.65	33.9511

1836.01

25.1207

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245396003

Total Uranium Activity	1.0228E+02	ug/g
Total Uranium Counting Unc.	1.9145E+01	ug/g
Total Uranium Tpu	9.7676E-06	ug/g
Total Uranium Mda	3.5438E+00	ug/g

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*****
*
*                               GEL Laboratories LLC                               *
*                               2040 SAVAGE ROAD                               *
*                               CHARLESTON ,SC 29417                           *
*                               GROSS GAMMA REPORT                             *
*
*****
*
*  BATCH ID      : 944962                SAMPLE ID   : G245396003                *
*  ANALYST       : MXR1                  DETECTOR    : GAM22                  *
*  SAMPLE DATE   : 21-JAN-2010 12:00:00.00  COUNT TIME : 0 02:00:00.00        *
*  ANALYSIS DATE: 5-FEB-2010 19:00:13.07  SAMPLE ALQT: 144.550 GRAM          *
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.319E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.808E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 3.790E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.858E+00

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VAX/VMS Nuclide Identification Report Generated 5-FEB-2010 21:15:08.40

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245396004.CNF;1
Sample date        : 21-JAN-2010 12:00:00 Acquisition date : 5-FEB-2010 19:14:38.
Sample ID          : G245396004 Sample quantity : 1.39850E+02 GRAM
Detector name      : GAM14 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:01.63 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944962 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	63.25*	312	783	1.14	126.05	121	11	4.33E-02	18.5	
2	3	74.93	571	752	1.54	149.39	143	17	7.93E-02	9.9	1.89E+00
3	3	77.27	724	530	1.16	154.07	143	17	1.01E-01	6.7	
4	1	87.39	240	573	1.52	174.28	171	20	3.33E-02	17.1	2.99E+00
5	1	89.89	189	680	1.52	179.28	171	20	2.62E-02	26.6	
6	1	92.74*	650	605	1.56	184.98	171	20	9.02E-02	8.5	
7	0	186.08*	276	563	1.30	371.47	365	13	3.83E-02	19.1	
8	0	209.06	92	518	1.23	417.39	411	13	1.27E-02	52.4	
9	1	238.54*	1581	293	1.59	476.31	468	21	2.20E-01	3.3	5.91E+00
10	1	241.74	300	279	1.70	482.69	468	21	4.16E-02	13.2	
11	0	269.66	215	248	2.32	538.50	533	13	2.99E-02	16.4	
12	0	277.58	33	244	0.93	554.32	549	10	4.65E-03	89.0	
13	0	295.15	397	175	1.31	589.43	585	9	5.51E-02	7.8	
14	0	300.63	151	266	1.51	600.39	595	14	2.10E-02	24.6	
15	0	327.73	108	203	1.01	654.54	650	11	1.50E-02	27.3	
16	0	338.13	302	259	1.35	675.32	670	13	4.19E-02	12.3	
17	0	351.80*	703	255	1.45	702.65	696	15	9.76E-02	6.2	
18	0	463.01	75	126	0.87	924.94	920	10	1.05E-02	30.3	
19	0	510.77*	176	156	2.40	1020.40	1011	18	2.44E-02	20.3	
20	0	569.86*	158	226	2.23	1138.53	1127	24	2.19E-02	27.0	
21	0	583.36*	436	119	1.42	1165.51	1158	14	6.06E-02	7.2	
22	0	609.47*	516	145	1.62	1217.71	1209	18	7.16E-02	7.1	
23	0	662.34	72	174	1.58	1323.41	1314	17	9.96E-03	43.8	
24	0	727.45	142	71	1.78	1453.60	1446	15	1.97E-02	15.5	
25	0	795.57	54	75	1.33	1589.80	1585	12	7.43E-03	34.7	
26	0	860.92	97	77	1.90	1720.50	1713	17	1.34E-02	23.1	
27	0	911.72	293	88	1.73	1822.10	1814	16	4.07E-02	9.2	
28	0	969.60*	154	69	1.67	1937.85	1932	11	2.14E-02	13.3	
29	0	1121.03	70	85	1.66	2240.75	2235	12	9.68E-03	28.9	
30	0	1239.63	36	71	1.57	2478.01	2474	9	4.96E-03	46.3	
31	0	1379.99	31	54	1.52	2758.87	2750	18	4.31E-03	58.4	
32	0	1461.59	1841	35	2.01	2922.16	2913	17	2.56E-01	2.4	
33	0	1510.12	14	30	3.54	3019.28	3010	20	1.91E-03	101.5	
34	0	1765.20*	98	0	2.07	3529.87	3521	16	1.36E-02	10.8	

Flag: "*" = Peak area was modified by background subtraction


```

Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245396004.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 21-JAN-2010 12:00:00 Acquisition date : 5-FEB-2010 19:14:38
Sample ID        : G245396004 Sample quantity : 139.85 GRAM
Sample type      : SOLID Sample geometry :
Detector name    : GAMMA14 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.63 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

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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	*	3.825E+01	3.347E+00	5.262E-01	3.821E-02	72.686
CD-109	+	88.03	*	2.509E+00	8.857E-01	1.270E+00	1.111E-01	1.975
SN-126	+	64.28		1.887E+00	7.462E-01	7.169E-01	1.022E-01	2.632
	+	86.94		1.025E+00	5.503E-01	5.653E-01	2.338E-01	1.813
	+	87.57	*	2.466E-01	8.703E-02	1.383E-01	1.203E-02	1.783
CS-135	+	268.24	*	7.078E-01	2.391E-01	2.205E-01	1.691E-02	3.210
BA-137M	+	661.65	*	8.684E-02	7.622E-02	5.856E-02	3.482E-03	1.483
CS-137	+	661.65	*	9.180E-02	8.058E-02	6.191E-02	3.696E-03	1.483
TL-208	+	277.35		2.645E-01	4.719E-01	5.564E-01	5.884E-02	0.475
	+	510.84		7.061E-01	2.960E-01	2.037E-01	2.077E-02	3.467
	+	583.14	*	5.046E-01	8.079E-02	5.486E-02	3.752E-03	9.198
	+	860.37		1.073E+00	5.055E-01	4.488E-01	4.222E-02	2.391
BI-211		72.87		1.132E+01	3.547E+00	5.437E+00	4.007E-01	2.081
	+	351.07	*	3.488E+00	4.876E-01	3.046E-01	1.930E-02	11.450
PB-212	+	74.81		2.352E+00	5.441E-01	5.098E-01	6.113E-02	4.613
	+	77.11		1.709E+00	2.646E-01	2.926E-01	2.253E-02	5.841
	+	87.30		1.140E+00	4.183E-01	6.409E-01	8.483E-02	1.779
	+	238.63	*	1.709E+00	1.674E-01	8.792E-02	6.404E-03	19.438
	+	300.09		2.525E+00	1.261E+00	1.093E+00	9.035E-02	2.311
PO-212	+	74.81		2.352E+00	5.441E-01	5.098E-01	6.113E-02	4.613
	+	77.11		1.709E+00	2.646E-01	2.926E-01	2.253E-02	5.841
	+	87.30		1.140E+00	4.183E-01	6.409E-01	8.483E-02	1.779
		115.19		-1.982E+00	3.650E+00	5.768E+00	4.197E-01	-0.344
	+	238.63	*	1.709E+00	1.674E-01	8.792E-02	6.404E-03	19.438
	+	300.09		2.525E+00	1.261E+00	1.093E+00	9.035E-02	2.311
BI-214	+	609.31	*	1.127E+00	1.829E-01	1.096E-01	8.674E-03	10.280
	+	1120.29		8.137E-01	4.770E-01	4.372E-01	4.050E-02	1.861
	+	1764.49		1.575E+00	3.519E-01	2.554E-01	1.532E-02	6.168
PB-214	+	74.81		4.052E+00	9.086E-01	8.784E-01	9.269E-02	4.613
	+	77.11		2.930E+00	5.055E-01	5.016E-01	5.433E-02	5.841
	+	87.30		1.953E+00	7.058E-01	1.098E+00	1.274E-01	1.779
	+	241.98		1.947E+00	5.356E-01	5.290E-01	4.250E-02	3.681
	+	295.21		1.161E+00	2.073E-01	1.960E-01	1.676E-02	5.923
	+	351.92	*	1.213E+00	1.811E-01	1.062E-01	8.713E-03	11.427

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		4.052E+00	9.086E-01	8.784E-01	9.269E-02	4.613
	+	77.11		2.930E+00	5.055E-01	5.016E-01	5.433E-02	5.841
	+	87.30		1.953E+00	7.058E-01	1.098E+00	1.274E-01	1.779
	+	241.98		1.947E+00	5.356E-01	5.290E-01	4.250E-02	3.681
	+	295.21		1.161E+00	2.073E-01	1.960E-01	1.676E-02	5.923
	+	351.92	*	1.213E+00	1.811E-01	1.062E-01	8.713E-03	11.427
PO-216	+	74.81		2.352E+00	5.441E-01	5.098E-01	6.113E-02	4.613
	+	77.11		1.709E+00	2.646E-01	2.926E-01	2.253E-02	5.841
	+	87.30		1.140E+00	4.183E-01	6.409E-01	8.483E-02	1.779
	+	238.63	*	1.709E+00	1.674E-01	8.792E-02	6.404E-03	19.438
	+	300.09		2.525E+00	1.261E+00	1.093E+00	9.035E-02	2.311
	+	74.81		4.052E+00	9.086E-01	8.784E-01	9.269E-02	4.613
PO-218	+	77.11		2.930E+00	5.055E-01	5.016E-01	5.433E-02	5.841
	+	87.30		1.953E+00	7.058E-01	1.098E+00	1.274E-01	1.779
	+	241.98		1.947E+00	5.356E-01	5.290E-01	4.250E-02	3.681
	+	295.21		1.161E+00	2.073E-01	1.960E-01	1.676E-02	5.923
	+	351.92	*	1.213E+00	1.811E-01	1.062E-01	8.713E-03	11.427
	+	240.98	*	3.692E+00	9.943E-01	1.000E+00	5.748E-02	3.692
RA-224	+	609.31	*	1.127E+00	1.829E-01	1.096E-01	8.674E-03	10.280
RA-226	+	1120.29		8.137E-01	4.770E-01	4.372E-01	4.050E-02	1.861
	+	1764.49		1.575E+00	3.519E-01	2.554E-01	1.532E-02	6.168
	+	338.32		1.650E+00	7.860E-01	3.453E-01	1.408E-01	4.778
AC-228	+	911.07	*	1.541E+00	3.373E-01	2.153E-01	2.528E-02	7.157
	+	969.11		1.432E+00	5.079E-01	4.302E-01	1.005E-01	3.329
	+	338.32		1.650E+00	7.860E-01	3.453E-01	1.408E-01	4.778
RA-228	+	911.07	*	1.541E+00	3.373E-01	2.153E-01	2.528E-02	7.157
	+	969.11		1.432E+00	5.079E-01	4.302E-01	1.005E-01	3.329
	+	74.81		2.388E+00	5.060E-01	5.176E-01	3.933E-02	4.613
TH-228	+	77.11		1.735E+00	2.686E-01	2.971E-01	2.287E-02	5.841
	+	87.30		1.158E+00	4.087E-01	6.507E-01	5.643E-02	1.779
	+	238.63	*	1.735E+00	1.700E-01	8.927E-02	6.502E-03	19.438
TH-230	+	300.09		2.563E+00	1.969E+00	1.109E+00	6.538E-01	2.311
	+	609.31	*	1.127E+00	1.828E-01	1.096E-01	8.674E-03	10.280
	+	1120.29		8.136E-01	4.770E-01	4.371E-01	4.050E-02	1.861
TH-232	+	1764.49		1.575E+00	3.519E-01	2.554E-01	1.532E-02	6.168
	+	338.32		1.650E+00	4.176E-01	3.453E-01	1.984E-02	4.778
	+	911.07	*	1.541E+00	3.373E-01	2.153E-01	2.528E-02	7.157
TH-234	+	969.11		1.432E+00	5.079E-01	4.302E-01	1.005E-01	3.329
	+	63.29	*	4.766E+00	1.940E+00	1.821E+00	3.130E-01	2.617
	+	92.38		4.408E+00	1.088E+00	8.313E-01	1.493E-01	5.302
U-234	+	609.31	*	1.127E+00	1.828E-01	1.096E-01	8.674E-03	10.280
	+	1120.29		8.136E-01	4.770E-01	4.371E-01	4.050E-02	1.861
	+	1764.49		1.575E+00	3.519E-01	2.554E-01	1.532E-02	6.168
NP-237	+	86.50	*	7.240E-01	2.960E-01	3.790E-01	8.470E-02	1.910
	+	95.87		3.777E-01	1.103E+00	1.577E+00	3.857E-01	0.240
U-238	+	63.29	*	4.766E+00	1.940E+00	1.821E+00	3.130E-01	2.617
	+	92.38		4.408E+00	8.322E-01	8.313E-01	6.955E-02	5.302
AM-243	+	74.67	*	3.813E-01	8.069E-02	8.283E-02	6.216E-03	4.603
	+	86.72		2.715E+01	9.584E+00	1.500E+01	1.291E+00	1.810

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		117.66		5.937E-01	3.783E+00	6.129E+00	4.419E-01	0.097
		142.18		5.576E+00	1.790E+01	2.893E+01	1.819E+00	0.193
ANH-511	+	511.00	*	1.525E-01	6.267E-02	4.401E-02	2.585E-03	3.466

---- 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	*	1.091E-01	3.065E-01	5.134E-01	3.461E-02	0.213
NA-22		1274.54	*	1.801E-03	4.528E-02	7.478E-02	4.885E-03	0.024
NA-24		1368.53	*	1.885E-01	4.528E-02	Half-Life too short		
AL-26		1129.67		-1.110E+00	1.854E+00	2.851E+00	1.800E-01	-0.389
		1808.65	*	-7.736E-03	2.507E-02	3.764E-02	2.182E-03	-0.206
TI-44		67.85		-4.544E-02	5.335E-02	6.791E-02	4.779E-03	-0.669
	+	78.38	*	3.154E-01	4.882E-02	7.351E-02	5.740E-03	4.290
SC-46		889.25	*	-4.703E-02	3.673E-02	5.414E-02	5.002E-03	-0.869
	+	1120.51		1.395E-01	8.125E-02	1.147E-01	7.425E-03	1.216
V-48		944.10		-2.150E-01	9.061E-01	1.483E+00	1.326E-01	-0.145
		983.50	*	-2.039E-02	6.736E-02	1.092E-01	9.275E-03	-0.187
		1312.09		-2.657E-02	7.920E-02	1.256E-01	8.677E-03	-0.212
CR-51		320.08	*	-7.798E-03	3.591E-01	5.959E-01	3.850E-02	-0.013
MN-52		744.21		2.458E-01	2.303E-01	4.020E-01	2.837E-02	0.611
		848.13		-1.634E+00	6.205E+00	1.017E+01	8.741E-01	-0.161
		935.52		1.332E-01	2.556E-01	4.431E-01	4.000E-02	0.301
		1246.25		-4.592E-01	8.525E+00	1.249E+01	7.785E-01	-0.037
		1333.61		-2.717E+00	5.064E+00	7.812E+00	5.567E-01	-0.348
		1434.06	*	1.173E-01	2.180E-01	3.817E-01	2.675E-02	0.307
MN-54		834.83	*	-2.663E-02	4.040E-02	6.478E-02	5.434E-03	-0.411
CO-56		846.75	*	-1.683E-02	3.522E-02	5.665E-02	4.856E-03	-0.297
		977.42		-3.062E-01	2.808E+00	4.532E+00	3.881E-01	-0.068
		1037.82		1.150E-01	3.017E-01	5.171E-01	4.284E-02	0.222
		1175.09		-1.491E+00	2.588E+00	4.091E+00	2.261E-01	-0.364
	+	1238.25		1.178E-01	1.094E-01	1.790E-01	1.163E-02	0.658
		1360.21		-1.862E-01	9.963E-01	1.599E+00	1.136E-01	-0.116
		1771.40		-7.441E-02	1.951E-01	2.307E-01	1.377E-02	-0.323
CO-57		122.06	*	-1.324E-02	2.516E-02	3.968E-02	2.823E-03	-0.334
		136.48		-1.338E-01	2.062E-01	3.226E-01	2.368E-02	-0.415
CO-58		810.76	*	7.157E-03	3.715E-02	6.064E-02	4.879E-03	0.118
FE-59		142.65		6.389E-01	2.777E+00	4.475E+00	2.806E-01	0.143
		192.34		5.710E-01	1.030E+00	1.549E+00	1.809E-01	0.368
		1099.22	*	8.002E-03	9.362E-02	1.562E-01	1.203E-02	0.051
		1291.56		3.236E-02	1.305E-01	2.193E-01	1.785E-02	0.148
CO-60		1173.22		-9.194E-03	5.010E-02	8.155E-02	4.492E-03	-0.113
		1332.49	*	-3.327E-03	3.854E-02	6.269E-02	4.468E-03	-0.053
ZN-65		1115.52	*	-6.054E-02	1.034E-01	1.369E-01	8.996E-03	-0.442
GE-68		1077.35	*	3.261E-01	1.228E+00	2.081E+00	1.496E-01	0.157
AS-73		53.44	*	2.236E-01	6.419E-01	1.060E+00	6.911E-02	0.211
AS-74		595.88	*	1.885E-02	8.851E-02	1.460E-01	8.734E-03	0.129
		634.78		-2.012E-01	3.587E-01	5.570E-01	3.327E-02	-0.361

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SE-75		66.05		9.002E-01	4.957E+00	7.114E+00	6.469E-01	0.127
		96.73		-4.929E-01	8.975E-01	1.234E+00	1.640E-01	-0.399
		121.11		-2.335E-02	1.343E-01	2.148E-01	2.173E-02	-0.109
		136.00		-1.836E-02	3.854E-02	6.074E-02	4.012E-03	-0.302
		198.60		3.592E-01	1.697E+00	2.876E+00	1.991E-01	0.125
		264.65	*	2.023E-02	4.250E-02	6.371E-02	3.741E-03	0.318
		279.53		1.033E-02	1.165E-01	1.699E-01	1.070E-02	0.061
		303.91		3.527E-03	2.182E+00	3.154E+00	3.014E-01	0.001
		400.65		1.477E-01	2.519E-01	4.277E-01	3.809E-02	0.345
BR-77	+	87.88		5.720E+02	2.019E+02	3.502E+02	3.059E+01	1.633
		200.40		5.974E+01	1.663E+02	2.832E+02	1.575E+01	0.211
	+	239.00		2.897E+02	2.522E+01	3.709E+01	2.130E+00	7.809
		249.79		-3.268E+01	6.558E+01	1.074E+02	6.201E+00	-0.304
		281.68		-2.593E+01	1.005E+02	1.432E+02	8.350E+00	-0.181
		297.23		3.414E+02	9.739E+01	1.257E+02	7.333E+00	2.715
		303.76		2.590E+01	1.956E+02	2.852E+02	1.662E+01	0.091
		439.47		7.234E+01	1.373E+02	2.330E+02	1.317E+01	0.310
		484.57		-1.262E+02	2.320E+02	3.664E+02	2.128E+01	-0.344
		520.65	*	4.666E+00	1.072E+01	1.800E+01	1.061E+00	0.259
		574.64		1.848E+02	2.591E+02	3.698E+02	2.208E+01	0.500
		578.91		9.302E+01	1.305E+02	1.402E+02	8.374E+00	0.664
		585.48		1.791E+03	2.958E+02	5.332E+02	3.187E+01	3.360
		755.35		-4.099E+00	1.676E+02	2.692E+02	1.942E+01	-0.015
		817.79		2.642E+01	1.223E+02	2.089E+02	1.698E+01	0.126
SR-82		698.33		-2.195E+01	3.377E+01	5.180E+01	3.329E+00	-0.424
		776.49	*	-3.312E-01	3.654E-01	5.388E-01	4.051E-02	-0.615
		1395.20		8.883E-01	9.634E+00	1.598E+01	1.129E+00	0.056
RB-83		520.41	*	3.030E-02	6.730E-02	1.132E-01	6.670E-03	0.268
		529.64		-3.383E-02	1.004E-01	1.601E-01	9.468E-03	-0.211
		552.65		3.427E-02	1.845E-01	3.048E-01	1.813E-02	0.112
RB-84		881.50	*	-1.018E-01	6.891E-02	1.000E-01	9.120E-03	-1.018
KR-85		513.99	*	1.913E+01	8.049E+00	1.340E+01	7.881E-01	1.428
SR-85		513.99	*	9.829E-02	4.135E-02	6.884E-02	4.049E-03	1.428
RB-86		1076.63	*	7.440E-01	7.695E-01	1.375E+00	9.903E-02	0.541
Y-88		898.02		-1.774E-02	4.064E-02	6.555E-02	6.175E-03	-0.271
		1836.01	*	-6.201E-03	3.111E-02	4.817E-02	2.736E-03	-0.129
ZR-88		392.90	*	1.343E-02	2.797E-02	4.741E-02	2.581E-03	0.283
Y-91		1204.90	*	-8.191E+00	1.978E+01	3.161E+01	1.839E+00	-0.259
NB-94		702.63	*	-4.921E-03	3.338E-02	5.330E-02	3.457E-03	-0.092
		871.10		7.857E-03	3.604E-02	6.006E-02	5.377E-03	0.131
NB-95		765.79	*	5.270E-02	4.304E-02	7.500E-02	5.523E-03	0.703
NB-95M		235.69	*	6.085E-01	1.540E-01	2.531E-01	1.892E-02	2.404
ZR-95		724.18		6.148E-02	9.686E-02	1.442E-01	1.111E-02	0.426
		756.15	*	-1.260E-02	6.913E-02	1.096E-01	9.039E-03	-0.115
NB-97		657.90	*	-3.646E-02	6.913E-02	Half-Life	too short	
		1024.50		2.842E-01	6.913E-02	Half-Life	too short	
ZR-97		254.15		-7.457E-02	6.913E-02	Half-Life	too short	
		355.39		2.149E+00	6.913E-02	Half-Life	too short	
		507.63	*	2.488E+00	6.913E-02	Half-Life	too short	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		602.52		-1.831E+00	6.913E-02	Half-Life	too short	
		1021.30		4.092E+00	6.913E-02	Half-Life	too short	
		1147.95		3.033E+00	6.913E-02	Half-Life	too short	
		1362.66		-4.116E-01	6.913E-02	Half-Life	too short	
		1750.46		2.858E+00	6.913E-02	Half-Life	too short	
MO-99		140.51		8.258E+00	2.764E+01	4.407E+01	1.193E+01	0.187
		181.06		-3.420E+00	1.901E+01	2.769E+01	4.714E+00	-0.124
		366.43		7.916E+00	8.343E+01	1.387E+02	7.784E+00	0.057
		739.58	*	-1.234E+01	1.252E+01	1.835E+01	2.629E+00	-0.672
		778.00		-3.156E+01	3.542E+01	5.246E+01	3.956E+00	-0.602
TC-99M		140.51	*	1.910E+10	3.542E+01	Half-Life	too short	
RH-101		127.23		2.459E-02	3.280E-02	5.404E-02	3.718E-03	0.455
		198.01	*	-5.771E-04	3.136E-02	5.274E-02	2.926E-03	-0.011
		325.23		2.244E-01	2.414E-01	3.690E-01	2.136E-02	0.608
RH-102		418.52		-1.313E-02	2.873E-01	4.634E-01	2.580E-02	-0.028
		475.06	*	-1.375E-02	2.743E-02	4.348E-02	2.513E-03	-0.316
		631.29		3.828E-02	5.472E-02	9.307E-02	5.561E-03	0.411
		697.49		-1.028E-02	7.409E-02	1.184E-01	7.597E-03	-0.087
		766.84		1.920E-01	1.121E-01	2.000E-01	1.476E-02	0.960
		1046.59		1.165E-02	1.122E-01	1.879E-01	1.438E-02	0.062
		1112.84		9.989E-03	2.335E-01	3.704E-01	2.448E-02	0.027
RU-103		497.08	*	2.020E-02	3.816E-02	6.449E-02	8.167E-03	0.313
	+	610.33		1.220E+01	2.562E+00	2.690E+00	4.167E-01	4.536
RH-106		511.85		7.620E-01	3.131E-01	4.017E-01	2.361E-02	1.897
		621.84	*	1.743E-01	2.996E-01	5.062E-01	5.986E-02	0.344
		1050.47		1.681E+00	2.304E+00	4.044E+00	3.072E-01	0.416
RU-106		511.85		7.620E-01	3.131E-01	4.017E-01	2.361E-02	1.897
		621.84	*	1.743E-01	2.991E-01	5.062E-01	3.027E-02	0.344
		1050.47		1.681E+00	2.304E+00	4.044E+00	3.072E-01	0.416
AG-108M		433.93	*	-1.018E-02	2.853E-02	4.580E-02	2.814E-03	-0.222
		614.37		2.608E-02	4.098E-02	6.115E-02	3.950E-03	0.426
		722.95		-2.305E-02	4.543E-02	5.936E-02	4.267E-03	-0.388
AG-110M		657.75	*	-1.342E-02	3.917E-02	5.264E-02	3.325E-03	-0.255
		677.61		-6.335E-02	2.817E-01	4.470E-01	2.900E-02	-0.142
		706.67		-8.981E-02	2.116E-01	3.306E-01	2.265E-02	-0.272
		763.93		-3.003E-01	1.773E-01	2.458E-01	1.873E-02	-1.222
		884.67		4.734E-02	4.283E-02	7.801E-02	7.355E-03	0.607
		937.48		-4.114E-02	1.109E-01	1.797E-01	1.672E-02	-0.229
		1384.27		9.510E-02	1.650E-01	2.562E-01	1.889E-02	0.371
IN-111		171.28		1.023E+00	1.026E+00	1.702E+00	9.180E-02	0.601
		245.39	*	1.454E+00	1.153E+00	1.797E+00	1.036E-01	0.809
IN-113M		391.69	*	1.057E-02	4.040E-02	6.767E-02	3.960E-03	0.156
SN-113		391.69	*	1.057E-02	4.040E-02	6.767E-02	3.960E-03	0.156
IN-114M		190.27	*	-8.761E-03	1.996E-01	2.923E-01	1.609E-02	-0.030
CD-115		260.90		-4.977E+01	1.282E+02	2.104E+02	1.221E+01	-0.236
		492.35		-2.891E+01	3.609E+01	5.580E+01	3.253E+00	-0.518
		527.90	*	-1.187E+01	1.099E+01	1.654E+01	9.777E-01	-0.718
SN-117M		156.02		2.629E+00	2.319E+00	3.858E+00	2.221E-01	0.682
		158.56	*	-1.665E-02	5.765E-02	9.124E-02	5.161E-03	-0.182

---- 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	*	-1.233E+00	2.574E+00	3.457E+00	2.061E-01	-0.357
		692.80		1.222E+01	4.530E+01	7.464E+01	4.742E+00	0.164
I-123		159.00	*	-1.831E+00	4.530E+01	Half-Life too short		
		528.96		-2.803E+02	4.530E+01	Half-Life too short		
TE-123M		159.00	*	-7.164E-03	2.962E-02	4.696E-02	2.686E-03	-0.153
I-124		602.71	*	-1.598E-01	7.481E-01	1.027E+00	6.142E-02	-0.156
		722.78		-2.535E+00	4.890E+00	6.380E+00	4.313E-01	-0.397
		1325.50		-1.072E+01	3.699E+01	5.894E+01	4.157E+00	-0.182
		1376.25		5.133E+01	3.213E+01	5.642E+01	3.999E+00	0.910
	+	1509.49		1.366E+01	2.774E+01	2.303E+01	1.580E+00	0.593
		1691.02		2.764E-01	3.479E+00	5.726E+00	3.608E-01	0.048
SB-124		602.71		-9.027E-03	4.226E-02	5.799E-02	3.471E-03	-0.156
		645.85		2.492E-02	4.836E-01	7.867E-01	5.262E-02	0.032
		709.31		4.783E-01	2.713E+00	4.437E+00	2.918E-01	0.108
		713.82		3.421E-02	1.563E+00	2.526E+00	2.705E-01	0.014
		722.78		-2.075E-01	4.004E-01	5.224E-01	3.655E-02	-0.397
	+	968.20		1.477E+01	4.146E+00	6.948E+00	6.025E-01	2.126
		1045.16		7.834E-01	2.414E+00	4.117E+00	3.159E-01	0.190
		1325.50		-9.371E-01	3.235E+00	5.154E+00	3.635E-01	-0.182
		1368.21		5.472E-01	1.416E+00	2.444E+00	3.069E-01	0.224
		1436.60		-1.813E+00	3.299E+00	4.954E+00	3.470E-01	-0.366
		1691.02	*	5.339E-03	6.720E-02	1.106E-01	7.476E-03	0.048
SB-125		427.89	*	5.566E-02	8.540E-02	1.458E-01	8.547E-03	0.382
	+	463.38		5.883E-01	3.586E-01	5.219E-01	3.504E-02	1.127
		600.56		6.871E-02	1.796E-01	2.833E-01	1.945E-02	0.243
		635.90		-1.424E-01	2.708E-01	4.216E-01	2.925E-02	-0.338
TE-125M		109.28	*	-8.076E+00	9.693E+00	1.516E+01	1.423E+00	-0.533
I-126		388.63		-3.573E-02	1.857E-01	3.032E-01	1.656E-02	-0.118
		666.33	*	2.119E-01	2.149E-01	3.284E-01	1.973E-02	0.645
		753.82		6.143E-01	1.394E+00	2.326E+00	1.673E-01	0.264
SB-126		223.80		-5.774E+00	3.938E+00	6.218E+00	3.532E-01	-0.929
	+	278.60		1.767E+00	3.148E+00	3.954E+00	2.305E-01	0.447
	+	296.50		1.168E+01	1.954E+00	3.343E+00	1.950E-01	3.494
		414.70		-2.425E-02	7.347E-02	1.188E-01	6.590E-03	-0.204
		415.30		-2.653E+00	6.151E+00	9.883E+00	5.487E-01	-0.268
		555.20		-4.531E+00	3.831E+00	5.686E+00	3.384E-01	-0.797
		573.80		5.889E-01	1.182E+00	1.742E+00	1.040E-01	0.338
		593.00		-8.850E-02	9.195E-01	1.485E+00	8.879E-02	-0.060
		656.30		-3.930E+00	3.929E+00	4.869E+00	2.898E-01	-0.807
		666.33		8.860E-02	8.986E-02	1.373E-01	8.247E-03	0.645
		675.00		-6.828E-01	1.845E+00	2.892E+00	1.770E-01	-0.236
		695.00		5.200E-03	7.597E-02	1.234E-01	7.874E-03	0.042
		697.00		-7.402E-02	2.625E-01	4.148E-01	2.658E-02	-0.178
		720.50	*	2.842E-02	1.514E-01	2.152E-01	1.448E-02	0.132
		856.80		7.588E-02	5.328E-01	7.823E-01	6.827E-02	0.097
		989.30		-1.971E-02	1.193E+00	1.984E+00	1.670E-01	-0.010
		1034.80		-4.028E-01	8.870E+00	1.469E+01	1.149E+00	-0.027
		1213.00		5.301E-01	5.133E+00	8.530E+00	5.030E-01	0.062
SB-127		61.10		7.337E+01	5.838E+01	8.629E+01	8.468E+00	0.850

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	252.40			6.117E-01	4.150E+00	6.971E+00	2.897E+00	0.088
	290.80			-1.453E+01	2.353E+01	3.260E+01	3.015E+00	-0.446
	411.60			1.709E+00	1.211E+01	2.010E+01	2.877E+00	0.085
	444.90			3.988E+00	9.944E+00	1.671E+01	1.801E+00	0.239
	473.00			2.553E-01	1.609E+00	2.664E+00	2.988E-01	0.096
	543.00			-4.876E+00	1.588E+01	2.532E+01	3.295E+00	-0.193
	603.60			5.332E-01	1.271E+01	1.791E+01	1.955E+00	0.030
	685.20	*		-8.943E-01	1.275E+00	1.932E+00	1.889E-01	-0.463
	698.50			-9.512E+00	1.556E+01	2.386E+01	3.527E+00	-0.399
	722.20			-4.533E+00	3.243E+01	4.432E+01	4.367E+00	-0.102
	783.80			3.088E+00	4.067E+00	6.739E+00	7.951E-01	0.458
XE-127	57.60			5.723E+00	5.694E+00	8.462E+00	5.573E-01	0.676
	145.22			-9.965E-02	7.120E-01	1.136E+00	7.010E-02	-0.088
	172.10			1.281E-01	1.168E-01	1.943E-01	1.049E-02	0.659
	202.84	*		-1.631E-02	5.342E-02	7.708E-02	4.297E-03	-0.212
	374.96			2.387E-02	1.894E-01	3.152E-01	1.752E-02	0.076
I-131	80.18			-5.653E+00	5.192E+00	7.030E+00	5.644E-01	-0.804
	284.30			-8.900E-05	1.470E+00	2.387E+00	1.547E-01	0.000
	364.48	*		-2.214E-02	1.122E-01	1.837E-01	1.161E-02	-0.121
	636.97			-2.782E-01	1.526E+00	2.439E+00	1.622E-01	-0.114
	722.89			-3.973E+00	7.772E+00	1.015E+01	6.936E-01	-0.391
TE-132	49.72			-1.544E+01	1.464E+01	2.294E+01	2.129E+00	-0.673
	111.76			1.470E+01	3.154E+01	5.162E+01	5.138E+00	0.285
	116.30			1.258E+01	2.894E+01	4.730E+01	4.661E+00	0.266
	228.16	*		8.003E-02	6.889E-01	1.160E+00	1.666E-01	0.069
BA-133	53.15			4.415E-01	2.764E+00	4.540E+00	2.958E-01	0.097
	79.62			2.945E+00	1.513E+00	2.208E+00	3.276E-01	1.334
	81.00			-2.367E-01	1.172E-01	1.449E-01	2.256E-02	-1.634
	276.40	+		2.614E-01	4.667E-01	5.947E-01	7.718E-02	0.439
	302.84			1.235E-01	1.484E-01	2.254E-01	2.631E-02	0.548
	356.01	*		1.359E-03	4.669E-02	6.721E-02	7.726E-03	0.020
	383.85			-7.377E-02	2.749E-01	4.468E-01	4.787E-02	-0.165
I-133	510.53	+		1.799E+00	2.749E-01	Half-Life	too short	
	529.87	*		-6.880E-04	2.749E-01	Half-Life	too short	
	706.58			-1.462E-01	2.749E-01	Half-Life	too short	
	856.28			8.642E-02	2.749E-01	Half-Life	too short	
	875.33			1.612E-01	2.749E-01	Half-Life	too short	
	1236.41			6.843E-01	2.749E-01	Half-Life	too short	
	1298.22			1.016E-01	2.749E-01	Half-Life	too short	
CS-134	475.35			-1.578E+00	1.810E+00	2.795E+00	1.615E-01	-0.565
	563.23			-1.688E-01	4.267E-01	5.780E-01	3.513E-02	-0.292
	569.32	+		9.901E-01	5.386E-01	4.632E-01	2.841E-02	2.137
	604.70			2.129E-02	3.492E-02	5.198E-02	3.126E-03	0.410
	795.84	*		9.067E-02	6.327E-02	8.749E-02	6.886E-03	1.036
	801.93			-7.099E-02	4.583E-01	6.279E-01	4.989E-02	-0.113
	1038.57			9.791E-01	3.712E+00	6.306E+00	4.899E-01	0.155
	1167.94			-1.372E+00	2.844E+00	4.534E+00	2.543E-01	-0.303
	1365.15			-1.226E-01	1.130E+00	1.828E+00	1.384E-01	-0.067
I-135	288.45			4.622E+10	1.130E+00	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
	417.63			-7.985E+08	1.130E+00	Half-Life	too short	
	546.56			-1.292E+10	1.130E+00	Half-Life	too short	
	836.80			4.566E+10	1.130E+00	Half-Life	too short	
	1038.76			4.865E+09	1.130E+00	Half-Life	too short	
	1124.00			8.174E+10	1.130E+00	Half-Life	too short	
	1131.51			-1.278E+10	1.130E+00	Half-Life	too short	
	1260.41	*		4.603E+09	1.130E+00	Half-Life	too short	
	1457.56			4.089E+11	1.130E+00	Half-Life	too short	
	1678.03			1.088E+10	1.130E+00	Half-Life	too short	
	1706.46			-1.672E+10	1.130E+00	Half-Life	too short	
	1791.20			1.150E+10	1.130E+00	Half-Life	too short	
CS-136	66.91			-6.950E-01	8.301E-01	1.136E+00	1.657E-01	-0.612
+	86.29			3.249E+00	1.188E+00	1.985E+00	2.543E-01	1.637
	153.22			1.659E-01	6.743E-01	1.089E+00	7.925E-02	0.152
	163.89			9.189E-01	1.086E+00	1.789E+00	1.247E-01	0.514
	176.55			-1.976E-01	3.633E-01	5.664E-01	3.503E-02	-0.349
	273.65			2.983E-02	6.981E-01	6.831E-01	4.534E-02	0.044
	340.57			4.974E-01	1.574E-01	2.620E-01	1.600E-02	1.899
	818.51			3.267E-02	6.556E-02	1.145E-01	9.326E-03	0.285
	1048.07	*		5.759E-02	1.077E-01	1.865E-01	1.500E-02	0.309
CE-139	1235.34			2.288E-01	7.097E-01	1.038E+00	1.056E-01	0.220
BA-140	165.85	*		-2.206E-03	2.957E-02	4.712E-02	2.530E-03	-0.047
	162.64			3.665E-01	7.799E-01	1.268E+00	7.932E-02	0.289
	304.84			-6.628E-01	1.379E+00	1.909E+00	5.211E-01	-0.347
	423.70			-1.048E+00	1.881E+00	2.947E+00	9.355E-01	-0.356
	537.32	*		9.580E-02	2.482E-01	4.127E-01	1.343E-01	0.232
LA-140	328.77			7.340E-01	4.032E-01	5.379E-01	3.484E-02	1.365
+	432.53			-7.682E-01	1.834E+00	2.934E+00	1.834E-01	-0.262
	487.03			1.542E-01	1.285E-01	2.260E-01	1.487E-02	0.682
	751.79			-1.082E+00	1.678E+00	2.550E+00	2.104E-01	-0.424
	815.85			-9.020E-02	2.892E-01	4.730E-01	4.327E-02	-0.191
	867.82			-6.659E-01	1.599E+00	2.198E+00	2.053E-01	-0.303
	919.63			1.513E+00	2.919E+00	4.618E+00	5.129E-01	0.328
	925.24			-8.553E-01	1.157E+00	1.814E+00	1.749E-01	-0.472
	1596.49	*		-6.935E-03	7.707E-02	1.236E-01	8.194E-03	-0.056
CE-141	145.44	*		1.378E-02	6.372E-02	1.030E-01	6.570E-03	0.134
CE-143	57.37			1.075E-03	6.372E-02	Half-Life	too short	
	231.56			-2.460E-04	6.372E-02	Half-Life	too short	
	293.26	*		8.461E-04	6.372E-02	Half-Life	too short	
+	350.59			3.035E-02	6.372E-02	Half-Life	too short	
	490.36			-9.390E-04	6.372E-02	Half-Life	too short	
	664.57			2.241E-03	6.372E-02	Half-Life	too short	
	721.93			-7.742E-04	6.372E-02	Half-Life	too short	
CE-144	80.11			-2.391E+00	2.355E+00	3.201E+00	2.549E-01	-0.747
	133.54	*		-6.861E-02	2.110E-01	3.346E-01	4.871E-02	-0.205
PM-144	476.78			-1.049E-02	6.401E-02	1.038E-01	7.195E-03	-0.101
	618.01			-2.155E-02	3.309E-02	4.788E-02	3.026E-03	-0.450
	696.49	*		-7.689E-03	3.388E-02	5.378E-02	3.446E-03	-0.143
	778.57			-7.875E-01	2.233E+00	3.481E+00	2.629E-01	-0.226

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PR-144	696.49	*		-5.211E-01	2.296E+00	3.645E+00	2.334E-01	-0.143
	1489.15			-6.106E+00	8.785E+00	1.238E+01	8.547E-01	-0.493
PM-146	453.90	*		1.996E-02	4.196E-02	7.081E-02	6.062E-03	0.282
	633.02			3.641E-02	1.382E+00	2.245E+00	8.272E-01	0.016
	735.90			1.857E-01	1.535E-01	2.512E-01	7.069E-02	0.739
	747.13			-7.306E-02	8.872E-02	1.319E-01	1.736E-02	-0.554
ND-147	91.11	+		6.628E-01	3.576E-01	6.047E-01	5.558E-02	1.096
	319.41			8.748E-02	3.286E+00	5.465E+00	3.172E-01	0.016
	439.89			2.955E+00	5.412E+00	9.191E+00	5.201E-01	0.322
	531.02	*		2.934E-02	5.362E-01	8.787E-01	1.193E-01	0.033
PM-149	285.90	*		1.669E+01	9.150E+01	1.537E+02	2.181E+01	0.109
EU-152	121.78			-5.684E-02	7.293E-02	1.137E-01	9.837E-03	-0.500
	244.69			7.052E-01	3.487E-01	5.614E-01	3.234E-02	1.256
	344.27	*		-6.021E-02	1.297E-01	1.561E-01	1.010E-02	-0.386
	443.98			2.493E-01	9.326E-01	1.557E+00	8.828E-02	0.160
	778.89			-2.677E-02	2.538E-01	4.044E-01	3.054E-02	-0.066
	867.32			-7.727E-01	9.767E-01	1.280E+00	1.138E-01	-0.604
	964.01			3.375E-01	3.287E-01	5.190E-01	4.526E-02	0.650
	1085.78			1.711E-01	3.702E-01	6.384E-01	4.504E-02	0.268
	1112.02			2.005E-01	3.115E-01	5.327E-01	3.527E-02	0.376
	1407.95			1.146E-01	1.617E-01	2.881E-01	2.030E-02	0.398
GD-153	69.67			1.923E-02	1.889E+00	2.503E+00	1.790E-01	0.008
	83.37			1.313E+01	1.923E+01	2.378E+01	1.967E+00	0.552
	97.43	*		-8.330E-03	9.171E-02	1.291E-01	1.035E-02	-0.065
	103.18			-1.800E-01	1.077E-01	1.626E-01	1.254E-02	-1.107
EU-154	123.07			-1.489E-02	5.099E-02	8.114E-02	8.302E-03	-0.184
	247.94			1.076E-01	3.880E-01	5.738E-01	5.465E-02	0.187
	591.81			-2.058E-02	6.060E-01	9.829E-01	9.713E-02	-0.021
	723.30			1.206E-02	1.772E-01	2.484E-01	1.960E-02	0.049
	756.87			3.544E-01	7.302E-01	1.221E+00	1.346E-01	0.290
	873.19			1.263E-01	3.167E-01	5.446E-01	6.809E-02	0.232
	996.32			-7.679E-01	4.056E-01	5.297E-01	9.337E-02	-1.450
	1004.76			3.836E-03	2.287E-01	3.811E-01	4.326E-02	0.010
	1274.45	*		8.051E-03	1.267E-01	2.097E-01	2.057E-02	0.038
EU-155	48.70			-1.805E+00	1.730E+00	2.720E+00	1.743E-01	-0.664
	60.01			2.120E+00	4.694E+00	6.782E+00	4.508E-01	0.313
	86.54	+		2.970E-01	1.049E-01	1.799E-01	1.562E-02	1.650
	105.31	*		8.404E-02	1.063E-01	1.759E-01	1.362E-02	0.478
TB-160	86.79	+		7.946E-01	2.805E-01	4.761E-01	4.103E-02	1.669
	197.04			1.547E-01	5.258E-01	8.938E-01	4.953E-02	0.173
	215.65			-9.650E-01	8.122E-01	1.171E+00	6.604E-02	-0.824
	298.57			2.045E-01	1.816E-01	1.992E-01	1.162E-02	1.026
	879.36	*		1.520E-02	1.358E-01	2.293E-01	2.083E-02	0.066
	962.29			1.879E-01	5.642E-01	8.708E-01	7.609E-02	0.216
	966.15			5.713E-01	2.499E-01	4.243E-01	3.689E-02	1.347
	1177.93			-4.299E-02	4.068E-01	6.703E-01	3.723E-02	-0.064
	1271.85			4.235E-01	7.167E-01	1.240E+00	8.053E-02	0.341
HO-166M	80.57			-5.450E-01	3.057E-01	3.992E-01	3.195E-02	-1.365
	184.41			1.598E-01	4.159E-02	6.962E-02	3.808E-03	2.296

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TM-171		280.46		7.904E-03	8.779E-02	1.280E-01	7.463E-03	0.062
		410.95		1.197E-01	2.351E-01	3.979E-01	2.201E-02	0.301
		711.68	*	-2.234E-02	5.924E-02	9.272E-02	6.127E-03	-0.241
		752.31		4.563E-02	2.522E-01	4.123E-01	2.957E-02	0.111
		810.29		1.315E-02	5.514E-02	9.038E-02	7.245E-03	0.145
		51.35		-7.538E+00	2.264E+01	3.661E+01	2.374E+00	-0.206
		52.39		-4.669E-01	1.195E+01	1.951E+01	1.269E+00	-0.024
		59.40		7.646E+00	2.511E+01	3.608E+01	2.390E+00	0.212
		66.72	*	-1.867E+01	2.944E+01	4.089E+01	2.851E+00	-0.457
		88.36		5.848E-01	2.064E-01	3.637E-01	3.169E-02	1.608
LU-176	+	201.83		-1.737E-02	3.060E-02	4.569E-02	2.545E-03	-0.380
		306.84	*	1.395E-02	2.519E-02	3.781E-02	2.202E-03	0.369
		401.10		7.142E+00	6.490E+00	1.130E+01	6.201E-01	0.632
LU-177		112.95		4.952E-01	1.693E+00	2.755E+00	2.024E-01	0.180
	+	208.36	*	1.793E+00	1.881E+00	1.953E+00	1.094E-01	0.918
LU-177M		52.97		1.127E-01	1.249E+00	2.047E+00	1.333E-01	0.055
		54.07		3.856E-02	6.787E-01	1.111E+00	7.251E-02	0.035
		61.30		2.676E+00	1.481E+00	2.232E+00	1.496E-01	1.199
		121.62		-2.413E-01	3.726E-01	5.847E-01	4.158E-02	-0.413
		147.16		1.215E-01	6.509E-01	1.050E+00	6.405E-02	0.116
		171.86		4.982E-01	4.686E-01	7.791E-01	4.204E-02	0.639
		218.09		1.116E+00	8.098E-01	1.423E+00	8.042E-02	0.785
	+	268.79		3.559E+00	1.189E+00	1.446E+00	8.411E-02	2.462
		319.02		-3.067E-02	2.555E-01	4.221E-01	2.449E-02	-0.073
		367.43		-2.804E-02	8.561E-01	1.413E+00	7.922E-02	-0.020
HF-181		413.65	*	-1.067E-01	1.759E-01	2.800E-01	1.552E-02	-0.381
		56.28		1.114E-01	7.800E-01	1.279E+00	8.394E-02	0.087
		57.53		4.869E-01	4.788E-01	7.119E-01	4.688E-02	0.684
		65.20		1.865E+00	1.010E+00	1.524E+00	1.050E-01	1.224
		133.02		-3.525E-02	6.895E-02	1.087E-01	7.224E-03	-0.324
		136.25		-1.930E-01	4.481E-01	7.075E-01	4.611E-02	-0.273
		345.85		4.968E-02	2.444E-01	3.129E-01	1.788E-02	0.159
W-181		482.03	*	-3.166E-02	4.122E-02	6.412E-02	3.719E-03	-0.494
		56.28		4.385E-02	3.048E-01	4.998E-01	3.280E-02	0.088
		57.53		1.904E-01	1.872E-01	2.783E-01	1.833E-02	0.684
TA-182		65.20	*	7.235E-01	3.919E-01	5.911E-01	4.072E-02	1.224
		67.75		-1.099E-01	1.274E-01	1.621E-01	1.140E-02	-0.678
		100.10		2.553E-01	1.797E-01	3.020E-01	2.376E-02	0.846
		152.43		8.034E-02	3.407E-01	5.503E-01	3.244E-02	0.146
		222.10		-9.606E-02	3.315E-01	5.501E-01	3.120E-02	-0.175
RE-183		1001.68		4.579E+00	2.254E+00	4.225E+00	3.493E-01	1.084
	+	1121.28		3.851E-01	2.243E-01	3.211E-01	2.075E-02	1.199
		1189.05		-2.650E-01	3.207E-01	4.943E-01	2.799E-02	-0.536
		1221.42	*	-6.711E-02	2.045E-01	3.288E-01	1.967E-02	-0.204
		1230.97		1.486E-01	5.161E-01	8.677E-01	5.273E-02	0.171
		57.98		1.430E-01	1.870E-01	2.755E-01	1.817E-02	0.519
		59.32		3.169E-02	1.034E-01	1.486E-01	9.840E-03	0.213
		67.20		-1.623E-01	2.103E-01	2.903E-01	2.032E-02	-0.559
		162.32	*	4.728E-02	1.130E-01	1.834E-01	1.010E-02	0.258

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Nuclide	Line Ided	Energy (keV)	Activity Key (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-184	+	208.81	1.584E+00	1.662E+00	1.727E+00	9.681E-02	0.917
		291.72	-7.224E-01	1.001E+00	1.378E+00	8.038E-02	-0.524
		57.98	5.264E-01	6.885E-01	1.014E+00	6.687E-02	0.519
		59.32	1.166E-01	3.804E-01	5.465E-01	3.619E-02	0.213
		67.20	-5.973E-01	7.737E-01	1.068E+00	7.478E-02	-0.559
		161.27	-3.098E-02	3.687E-01	5.878E-01	3.262E-02	-0.053
		216.55	-7.042E-02	2.632E-01	4.261E-01	2.406E-02	-0.165
		252.85	* -1.962E-02	2.168E-01	3.612E-01	2.089E-02	-0.054
		318.01	1.017E-01	4.401E-01	7.390E-01	4.290E-02	0.138
		792.07	-1.981E-01	1.088E+00	1.471E+00	1.139E-01	-0.135
		903.28	6.252E-01	1.031E+00	1.644E+00	1.535E-01	0.380
		920.93	8.170E-02	4.309E-01	7.162E-01	6.568E-02	0.114
	OS-185	59.72	9.793E-02	2.787E-01	4.011E-01	2.662E-02	0.244
		61.14	2.207E-01	1.608E-01	2.394E-01	1.603E-02	0.922
		69.30	2.820E-01	3.614E-01	4.499E-01	3.206E-02	0.627
		592.07	-1.619E-01	2.484E+00	4.020E+00	2.404E-01	-0.040
		646.12	* 6.150E-03	4.118E-02	6.748E-02	4.024E-03	0.091
		717.42	5.786E-01	8.438E-01	1.434E+00	9.590E-02	0.403
		874.81	4.237E-01	6.137E-01	1.076E+00	9.695E-02	0.394
		880.27	-5.468E-01	7.585E-01	1.193E+00	1.085E-01	-0.458
		155.03	* 1.335E-01	1.741E-01	2.862E-01	1.658E-02	0.466
		477.96	1.679E+00	2.869E+00	4.876E+00	2.822E-01	0.344
RE-188		633.10	5.831E-02	2.796E+00	4.541E+00	2.713E-01	0.013
	+	63.58	1.919E+02	7.202E+01	8.719E+01	5.936E+00	2.201
W-188		227.08	-4.058E+00	1.212E+01	2.007E+01	1.143E+00	-0.202
	*	290.67	-4.323E+00	7.910E+00	1.103E+01	6.435E-01	-0.392
IR-192	+	295.96	8.868E-01	1.486E-01	2.541E-01	1.505E-02	3.491
		308.46	7.505E-02	9.520E-02	1.510E-01	8.888E-03	0.497
	*	316.51	3.106E-02	3.313E-02	5.737E-02	3.349E-03	0.541
		468.07	2.996E-02	7.060E-02	1.041E-01	6.918E-03	0.288
		604.41	3.255E-01	4.681E-01	7.013E-01	8.026E-02	0.464
AU-195		612.46	3.456E+00	9.652E-01	1.654E+00	1.276E-01	2.089
		65.12	3.701E-01	1.825E-01	2.764E-01	1.903E-02	1.339
		66.83	-6.230E-02	9.740E-02	1.352E-01	9.438E-03	-0.461
	+	75.70	1.235E+00	2.613E-01	4.263E-01	3.234E-02	2.896
	*	98.88	4.715E-01	2.425E-01	3.857E-01	3.061E-02	1.222
TL-200		129.76	4.668E+00	2.995E+00	5.036E+00	3.412E-01	0.927
	*	367.94	-7.559E-05	2.995E+00	Half-Life	too short	
		579.30	7.561E-04	2.995E+00	Half-Life	too short	
		828.27	3.182E-03	2.995E+00	Half-Life	too short	
TL-201		1205.75	-1.555E-04	2.995E+00	Half-Life	too short	
		68.90	4.082E+00	7.026E+00	7.473E+00	5.307E-01	0.546
		70.82	1.214E+00	3.012E+00	4.350E+00	3.143E-01	0.279
		80.30	-7.046E+00	5.797E+00	7.799E+00	6.222E-01	-0.903
TL-202		135.34	-8.199E+00	2.629E+01	4.173E+01	2.734E+00	-0.196
	*	167.43	-6.084E+00	7.227E+00	1.114E+01	5.986E-01	-0.546
		68.90	3.557E-01	6.122E-01	6.512E-01	4.625E-02	0.546
		70.82	1.055E-01	2.617E-01	3.780E-01	2.731E-02	0.279
		80.30	-6.125E-01	5.039E-01	6.779E-01	5.409E-02	-0.903

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HG-203		439.56	*	3.425E-02	6.369E-02	1.081E-01	6.115E-03	0.317
		70.83		4.640E-01	1.127E+00	1.626E+00	2.076E-01	0.285
		72.87		2.257E+00	7.426E-01	1.084E+00	1.347E-01	2.081
		82.60		5.083E-01	1.688E+00	1.753E+00	2.364E-01	0.290
BI-207		279.20	*	4.039E-03	4.449E-02	6.484E-02	4.012E-03	0.062
		72.80		6.157E-01	2.054E-01	3.142E-01	2.314E-02	1.960
	+	74.97		6.844E-01	1.448E-01	2.175E-01	1.637E-02	3.147
		84.90		4.011E-01	2.149E-01	3.218E-01	2.710E-02	1.247
TL-207	+	569.67		1.543E-01	8.390E-02	7.275E-02	4.340E-03	2.121
		1063.62	*	1.770E-02	5.524E-02	9.393E-02	6.951E-03	0.188
		1770.23		-1.452E-02	3.750E-01	5.112E-01	3.053E-02	-0.028
		81.07		-5.235E-01	2.491E-01	3.196E-01	2.573E-02	-1.638
		83.78		4.749E-02	1.513E-01	2.025E-01	1.682E-02	0.235
		94.90		1.100E+00	2.963E-01	4.560E-01	3.731E-02	2.412
		122.32		1.460E-02	1.720E+00	2.769E+00	2.173E-01	0.005
		144.24		-1.850E-01	6.960E-01	1.101E+00	8.332E-02	-0.168
		154.21		1.937E-01	4.032E-01	6.566E-01	4.619E-02	0.295
	+	269.46		8.327E-01	2.786E-01	3.519E-01	2.140E-02	2.366
		323.87	*	4.884E-02	7.111E-01	1.030E+00	1.701E-01	0.047
	+	338.28		6.891E+00	1.846E+00	2.362E+00	2.480E-01	2.918
PO-209		445.03		7.266E-01	2.230E+00	3.732E+00	3.806E-01	0.195
		260.50		-1.820E+00	8.980E+00	1.487E+01	8.631E-01	-0.122
		262.80		-3.055E+01	2.632E+01	3.889E+01	2.259E+00	-0.785
		896.60	*	1.816E+00	7.206E+00	1.229E+01	1.150E+00	0.148
BI-210		46.50	*	1.040E+00	2.316E+00	3.871E+00	2.871E-01	0.269
PB-210		46.50	*	1.040E+00	2.316E+00	3.871E+00	2.871E-01	0.269
PO-210		46.50	*	1.040E+00	2.316E+00	3.871E+00	2.429E-01	0.269
PB-211		404.84	*	-1.222E+00	1.209E+00	1.439E+00	8.968E-01	-0.849
		427.08		7.453E-01	2.008E+00	3.288E+00	2.032E+00	0.227
		831.96		-4.746E-01	1.258E+00	1.994E+00	1.249E+00	-0.238
	+	727.18	*	1.421E+00	4.560E-01	6.299E-01	5.359E-02	2.257
		785.46		1.180E+00	1.876E+00	3.088E+00	2.362E-01	0.382
PO-215		1620.62		-2.289E-01	1.190E+00	1.876E+00	1.229E-01	-0.122
		81.07		-5.235E-01	2.491E-01	3.196E-01	2.573E-02	-1.638
		83.78		4.749E-02	1.513E-01	2.025E-01	1.682E-02	0.235
		94.90		1.100E+00	2.963E-01	4.560E-01	3.731E-02	2.412
		122.32		1.460E-02	1.720E+00	2.769E+00	2.173E-01	0.005
		144.24		-1.850E-01	6.960E-01	1.101E+00	8.332E-02	-0.168
		154.21		1.937E-01	4.032E-01	6.566E-01	4.619E-02	0.295
	+	269.46		8.327E-01	2.786E-01	3.519E-01	2.140E-02	2.366
		323.87	*	4.884E-02	7.111E-01	1.030E+00	1.701E-01	0.047
	+	338.28		6.891E+00	1.846E+00	2.362E+00	2.480E-01	2.918
		445.03		7.266E-01	2.230E+00	3.732E+00	3.806E-01	0.195
		271.23		5.603E-01	3.389E-01	4.396E-01	3.569E-02	1.275
RN-219		401.81	*	2.388E-01	4.141E-01	7.012E-01	9.450E-02	0.341
RN-220		549.76	*	1.428E+01	2.440E+01	4.138E+01	2.460E+00	0.345
RA-223		81.07		-5.235E-01	2.491E-01	3.196E-01	2.573E-02	-1.638
		83.78		4.749E-02	1.513E-01	2.025E-01	1.682E-02	0.235
		94.90		1.100E+00	2.963E-01	4.560E-01	3.731E-02	2.412

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA	
AC-227		122.32		1.460E-02	1.720E+00	2.769E+00	2.173E-01	0.005	
		144.24		-1.850E-01	6.960E-01	1.101E+00	8.332E-02	-0.168	
		154.21		1.937E-01	4.032E-01	6.566E-01	4.619E-02	0.295	
	+	269.46		8.327E-01	2.786E-01	3.519E-01	2.140E-02	2.366	
		323.87	*	4.884E-02	7.111E-01	1.030E+00	1.701E-01	0.047	
	+	338.28		6.891E+00	1.846E+00	2.362E+00	2.480E-01	2.918	
		445.03		7.266E-01	2.230E+00	3.732E+00	3.806E-01	0.195	
		79.80		2.269E+00	1.868E+00	2.682E+00	5.696E-01	0.846	
		236.00		2.082E+00	3.714E-01	5.540E-01	5.769E-02	3.759	
		256.20	*	-4.739E-02	3.605E-01	5.993E-01	8.364E-02	-0.079	
		286.10		3.317E-01	1.456E+00	2.451E+00	2.837E-01	0.135	
	+	299.80		4.679E+00	2.427E+00	2.584E+00	4.210E-01	1.811	
		304.40		-7.453E-03	1.924E+00	2.779E+00	4.810E-01	-0.003	
		334.20		-7.474E-01	3.090E+00	3.399E+00	6.228E-01	-0.220	
TH-227		79.80		2.269E+00	1.869E+00	2.682E+00	5.771E-01	0.846	
	+	94.00		1.703E+01	4.685E+00	4.325E+00	9.356E-01	3.938	
		236.00		2.082E+00	3.551E-01	5.540E-01	4.993E-02	3.759	
		256.20	*	-4.739E-02	3.606E-01	5.993E-01	1.013E-01	-0.079	
		286.10		3.317E-01	1.493E+00	2.451E+00	2.455E+00	0.135	
	+	299.80		4.679E+00	2.427E+00	2.584E+00	4.210E-01	1.811	
		304.40		-7.453E-03	1.924E+00	2.779E+00	4.810E-01	-0.003	
		334.20		-7.474E-01	3.090E+00	3.399E+00	6.228E-01	-0.220	
	+	85.43		5.728E-01	2.189E-01	3.313E-01	2.808E-02	1.729	
		88.47		3.366E-01	1.188E-01	2.097E-01	1.825E-02	1.605	
100.00			2.874E-01	1.872E-01	3.153E-01	2.483E-02	0.911		
TH-229		193.63	*	9.357E-02	4.958E-01	8.192E-01	4.524E-02	0.114	
		210.97		1.696E+00	8.501E-01	1.352E+00	7.598E-02	1.254	
	+	283.67	*	-5.979E-01	1.540E+00	2.371E+00	3.271E-01	-0.252	
		301.29		1.872E+00	9.423E-01	1.016E+00	1.063E-01	1.843	
PA-231		81.07		-5.235E-01	2.491E-01	3.196E-01	2.573E-02	-1.638	
		83.78		4.749E-02	1.513E-01	2.025E-01	1.682E-02	0.235	
		94.90		1.100E+00	2.963E-01	4.560E-01	3.731E-02	2.412	
		122.32		1.460E-02	1.720E+00	2.769E+00	2.173E-01	0.005	
U-231		144.24		-1.850E-01	6.960E-01	1.101E+00	8.332E-02	-0.168	
		154.21		1.937E-01	4.032E-01	6.566E-01	4.619E-02	0.295	
	+	269.46		8.327E-01	2.786E-01	3.519E-01	2.140E-02	2.366	
		323.87	*	4.884E-02	7.111E-01	1.030E+00	1.701E-01	0.047	
	+	338.28		6.891E+00	1.846E+00	2.362E+00	2.480E-01	2.918	
		445.03		7.266E-01	2.230E+00	3.732E+00	3.806E-01	0.195	
		84.21		6.367E+00	6.208E+00	9.109E+00	7.608E-01	0.699	
	+	92.29		1.734E+01	3.274E+00	4.735E+00	3.965E-01	3.662	
		95.87	*	4.412E-01	1.284E+00	1.842E+00	1.495E-01	0.240	
		108.00		3.805E-01	2.156E+00	3.500E+00	2.630E-01	0.109	
	PA-233	+	75.28		1.997E+01	4.929E+00	6.641E+00	9.812E-01	3.007
		+	86.59		4.827E+00	2.099E+00	2.917E+00	7.821E-01	1.655
		+	300.12		1.304E+00	6.659E-01	7.209E-01	9.697E-02	1.809
			311.98	*	-2.331E-02	6.030E-02	9.832E-02	6.070E-03	-0.237
		340.50		2.582E+00	9.551E-01	1.281E+00	2.940E-01	2.015	
		398.62		-6.559E-02	2.065E+00	3.400E+00	8.766E-01	-0.019	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234	+	415.76		-1.765E-01	1.601E+00	2.620E+00	5.376E-01	-0.067
		63.00		5.556E+00	2.204E+00	2.553E+00	3.717E-01	2.176
		94.67		1.077E+00	2.439E-01	3.448E-01	4.176E-02	3.125
		98.44		1.490E-01	1.316E-01	1.539E-01	8.569E-02	0.968
		99.86		9.639E-01	4.733E-01	8.054E-01	6.347E-02	1.197
		111.00		1.810E-01	1.892E-01	3.131E-01	3.524E-02	0.578
		131.20		1.252E-01	1.098E-01	1.828E-01	1.228E-02	0.685
		152.70		5.065E-02	3.269E-01	5.264E-01	8.337E-02	0.096
	+	186.00		5.670E+00	2.773E+00	2.578E+00	7.862E-01	2.199
		226.40		9.629E-02	3.829E-01	6.479E-01	7.455E-02	0.149
		227.20		-1.172E-01	4.095E-01	6.792E-01	3.868E-02	-0.173
		248.90		-4.716E-01	8.253E-01	1.258E+00	2.701E-01	-0.375
	+	293.70		5.573E+00	1.252E+00	1.547E+00	2.491E-01	3.601
		369.80		1.962E-01	7.927E-01	1.327E+00	2.755E-01	0.148
	+	568.70		5.021E+00	2.730E+00	2.363E+00	1.410E-01	2.125
	+	569.50		1.369E+00	7.447E-01	6.434E-01	3.839E-02	2.128
		574.00		8.144E-01	1.679E+00	2.472E+00	1.476E-01	0.329
		699.00		-2.493E-01	6.865E-01	1.075E+00	1.956E-01	-0.232
		706.10		-2.363E-01	1.053E+00	1.664E+00	7.360E-01	-0.142
		733.00		-1.404E-01	4.225E-01	5.623E-01	1.214E-01	-0.250
		742.81		2.430E-01	1.328E+00	2.155E+00	1.445E+00	0.113
	+	796.30		1.762E+00	1.310E+00	1.710E+00	4.582E-01	1.031
		805.60		1.111E+00	9.989E-01	1.660E+00	5.058E-01	0.669
		819.60		-3.406E-01	1.086E+00	1.761E+00	6.680E-01	-0.193
		826.30		-2.242E-01	7.823E-01	1.273E+00	5.686E-01	-0.176
		831.60		-3.076E-01	6.344E-01	1.017E+00	3.026E-01	-0.303
		876.40		6.056E-01	1.073E+00	1.535E+00	1.579E+00	0.395
		880.51		-2.030E-01	2.735E-01	4.292E-01	3.906E-02	-0.473
		883.24		-1.503E-01	2.792E-01	4.137E-01	2.784E-01	-0.363
		899.00		-9.085E-01	9.333E-01	1.291E+00	5.665E-01	-0.704
		925.00		-8.471E-01	1.163E+00	1.822E+00	1.664E-01	-0.465
		926.50		7.228E-02	1.712E-01	2.939E-01	7.480E-02	0.246
		946.00	*	-3.409E-01	3.199E-01	4.781E-01	9.036E-02	-0.713
		949.00		2.867E-01	4.639E-01	8.081E-01	7.179E-02	0.355
		980.50		3.804E-01	6.866E-01	1.196E+00	1.020E-01	0.318
		1394.10		-3.354E-01	1.038E+00	1.585E+00	1.029E+00	-0.212
PA-234M		766.42		2.147E+01	1.580E+01	2.086E+01	1.054E+01	1.029
		1001.03	*	1.058E+01	5.103E+00	9.543E+00	9.226E-01	1.109
U-235	+	89.95		2.609E+00	1.603E+00	2.026E+00	6.249E-01	1.288
	+	93.35		5.299E+00	1.731E+00	1.382E+00	3.859E-01	3.835
		105.00		2.049E-01	1.058E+00	1.717E+00	5.076E-01	0.119
		143.76	*	-4.636E-02	2.147E-01	3.402E-01	5.600E-02	-0.136
		163.35		3.545E-01	4.804E-01	7.827E-01	1.399E-01	0.453
	+	185.71		2.100E-01	8.113E-02	9.551E-02	5.231E-03	2.199
		205.31		2.815E-01	5.665E-01	8.468E-01	1.517E-01	0.332
NP-236		94.67		8.215E-01	1.702E-01	2.618E-01	2.146E-02	3.138
		98.44		1.126E-01	7.771E-02	1.163E-01	9.259E-03	0.968
		111.00		1.369E-01	1.426E-01	2.368E-01	1.754E-02	0.578
		160.31	*	-1.268E-02	8.308E-02	1.321E-01	7.384E-03	-0.096

---- 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		3.646E-01	1.630E-01	2.705E-01	2.137E-02	1.348
		117.00	*	8.430E-02	1.887E-01	3.088E-01	2.232E-02	0.273
	+	209.75		1.247E+00	1.309E+00	1.348E+00	7.564E-02	0.925
		228.18		2.744E-02	2.167E-01	3.651E-01	2.080E-02	0.075
	+	277.60		1.276E-01	2.273E-01	2.890E-01	1.685E-02	0.441
AM-241		334.30		-4.175E-01	1.749E+00	1.927E+00	1.110E-01	-0.217
		59.54	*	4.417E-02	1.464E-01	2.102E-01	1.561E-02	0.210
		99.55		3.752E-01	1.678E-01	2.784E-01	2.199E-02	1.348
CM-243		103.76	*	-1.435E-01	9.884E-02	1.507E-01	1.159E-02	-0.953
		117.00		8.673E-02	1.942E-01	3.177E-01	2.296E-02	0.273
	+	209.75		1.230E+00	1.290E+00	1.329E+00	7.457E-02	0.925
		228.18		2.772E-02	2.190E-01	3.689E-01	2.102E-02	0.075
	+	277.60		1.286E-01	2.291E-01	2.914E-01	1.699E-02	0.441
		798.80		-6.794E-02	1.697E-01	2.237E-01	1.755E-02	-0.304
		1036.00		1.466E-01	2.960E-01	5.115E-01	3.992E-02	0.287
AM-246		1062.04		9.976E-02	2.476E-01	4.233E-01	3.143E-02	0.236
		1078.86	*	-9.734E-02	1.438E-01	2.245E-01	1.609E-02	-0.433
	+	278.00		5.290E-01	9.426E-01	1.201E+00	6.999E-02	0.441
		287.40		4.044E-01	1.154E+00	1.953E+00	1.139E-01	0.207
		402.60	*	1.701E-02	3.597E-02	6.079E-02	3.339E-03	0.280
CF-249		252.85		-7.357E-02	8.129E-01	1.354E+00	7.833E-02	-0.054
		333.44		8.430E-02	2.520E-01	2.549E-01	1.469E-02	0.331
		387.95	*	-2.743E-03	3.580E-02	5.884E-02	3.217E-03	-0.047
CF-251		176.60	*	-6.679E-02	1.241E-01	1.935E-01	1.049E-02	-0.345
		227.00		-1.337E-01	3.626E-01	5.994E-01	3.413E-02	-0.223
		285.00		-1.165E-01	1.649E+00	2.739E+00	1.598E-01	-0.043

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]G245396004      *
* Acquisition date   : 5-FEB-2010 19:14:38 Detector SN#                   *
* Detector ID        : GAM14 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 02:00:01.63 Half life ratio : 8.000              *
*****
*                                     SAMPLE DATA                            *
*
* Sample date       : 21-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G245396004 Analyst initials: MXR1                  *
* Batch Number      : 944962 Sample Quantity : 1.3985E+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)	
K-40	3.825E+01	3.280E+00	5.282E-01	0.000E+00
CD-109	2.509E+00	8.680E-01	1.349E+00	0.000E+00
SN-126	2.466E-01	8.529E-02	1.469E-01	0.000E+00
CS-135	7.078E-01	2.343E-01	2.291E-01	0.000E+00
BA-137M	8.684E-02	7.470E-02	5.976E-02	0.000E+00
CS-137	9.180E-02	7.897E-02	6.318E-02	0.000E+00
TL-208	5.046E-01	7.917E-02	5.613E-02	0.000E+00
BI-211	3.488E+00	4.779E-01	3.149E-01	0.000E+00
PB-212	1.709E+00	1.640E-01	9.158E-02	0.000E+00
PO-212	1.709E+00	1.640E-01	9.158E-02	0.000E+00
BI-214	1.127E+00	1.792E-01	1.120E-01	0.000E+00
PB-214	1.213E+00	1.774E-01	1.098E-01	0.000E+00
PO-214	1.213E+00	1.774E-01	1.098E-01	0.000E+00
PO-216	1.709E+00	1.640E-01	9.158E-02	0.000E+00
PO-218	1.213E+00	1.774E-01	1.098E-01	0.000E+00
RA-224	3.692E+00	9.744E-01	1.041E+00	0.000E+00
RA-226	1.127E+00	1.792E-01	1.120E-01	0.000E+00
AC-228	1.541E+00	3.306E-01	2.182E-01	0.000E+00
RA-228	1.541E+00	3.306E-01	2.182E-01	0.000E+00
TH-228	1.735E+00	1.666E-01	9.299E-02	0.000E+00
TH-230	1.127E+00	1.792E-01	1.120E-01	0.000E+00
TH-232	1.541E+00	3.306E-01	2.182E-01	0.000E+00
TH-234	4.766E+00	1.902E+00	1.946E+00	0.000E+00
U-234	1.127E+00	1.792E-01	1.120E-01	0.000E+00
NP-237	7.240E-01	2.901E-01	4.026E-01	0.000E+00
U-238	4.766E+00	1.902E+00	1.946E+00	0.000E+00
AM-243	3.813E-01	7.907E-02	8.824E-02	0.000E+00
ANH-511	1.525E-01	6.142E-02	4.515E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)
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BE-7	1.091E-01	3.003E-01	5.275E-01	0.000E+00	NOT IDENT.
NA-22	1.801E-03	4.438E-02	7.528E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	7.177E+05	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-7.736E-03	2.457E-02	3.761E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	4.785E-02	7.824E-02	0.000E+00	FAIL ABUN
SC-46	-4.703E-02	3.599E-02	5.491E-02	0.000E+00	FAIL ABUN
V-48	-2.039E-02	6.602E-02	1.106E-01	0.000E+00	NOT IDENT.
CR-51	-7.798E-03	3.519E-01	6.171E-01	0.000E+00	NOT IDENT.
MN-52	1.173E-01	2.136E-01	3.833E-01	0.000E+00	NOT IDENT.
MN-54	-2.663E-02	3.960E-02	6.579E-02	0.000E+00	NOT IDENT.
CO-56	-1.683E-02	3.452E-02	5.752E-02	0.000E+00	FAIL ABUN
CO-57	-1.324E-02	2.466E-02	4.188E-02	0.000E+00	NOT IDENT.
CO-58	7.157E-03	3.641E-02	6.162E-02	0.000E+00	NOT IDENT.
FE-59	8.002E-03	9.175E-02	1.578E-01	0.000E+00	NOT IDENT.
CO-60	-3.327E-03	3.777E-02	6.304E-02	0.000E+00	NOT IDENT.
ZN-65	-6.054E-02	1.014E-01	1.382E-01	0.000E+00	NOT IDENT.
GE-68	3.261E-01	1.203E+00	2.103E+00	0.000E+00	NOT IDENT.
AS-73	2.236E-01	6.291E-01	1.137E+00	0.000E+00	NOT IDENT.
AS-74	1.885E-02	8.674E-02	1.493E-01	0.000E+00	NOT IDENT.
SE-75	2.023E-02	4.165E-02	6.623E-02	0.000E+00	NOT IDENT.
BR-77	4.666E+00	1.050E+01	1.846E+01	0.000E+00	FAIL ABUN
SR-82	-3.312E-01	3.581E-01	5.481E-01	0.000E+00	NOT IDENT.
RB-83	3.030E-02	6.595E-02	1.160E-01	0.000E+00	NOT IDENT.
RB-84	-1.018E-01	6.754E-02	1.015E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.888E+00	1.375E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.052E-02	7.061E-02	0.000E+00	NOT IDENT.
RB-86	7.440E-01	7.541E-01	1.390E+00	0.000E+00	NOT IDENT.
Y-88	-6.201E-03	3.049E-02	4.812E-02	0.000E+00	NOT IDENT.
ZR-88	1.343E-02	2.741E-02	4.889E-02	0.000E+00	NOT IDENT.
Y-91	-8.191E+00	1.939E+01	3.186E+01	0.000E+00	NOT IDENT.
NB-94	-4.921E-03	3.271E-02	5.433E-02	0.000E+00	NOT IDENT.
NB-95	5.270E-02	4.218E-02	7.631E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.509E-01	2.637E-01	0.000E+00	NOT IDENT.
ZR-95	-1.260E-02	6.775E-02	1.115E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.288E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.256E+06	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.234E+01	1.227E+01	1.869E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	6.266E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-5.771E-04	3.073E-02	5.514E-02	0.000E+00	NOT IDENT.
RH-102	-1.375E-02	2.688E-02	4.467E-02	0.000E+00	NOT IDENT.
RU-103	2.020E-02	3.740E-02	6.620E-02	0.000E+00	FAIL ABUN
RH-106	1.743E-01	2.936E-01	5.172E-01	0.000E+00	FAIL ABUN
RU-106	1.743E-01	2.931E-01	5.172E-01	0.000E+00	FAIL ABUN
AG-108M	-1.018E-02	2.796E-02	4.714E-02	0.000E+00	NOT IDENT.
AG-110M	-1.342E-02	3.839E-02	5.373E-02	0.000E+00	NOT IDENT.
IN-111	1.454E+00	1.130E+00	1.871E+00	0.000E+00	NOT IDENT.
IN-113M	1.057E-02	3.960E-02	6.980E-02	0.000E+00	NOT IDENT.
SN-113	1.057E-02	3.960E-02	6.980E-02	0.000E+00	NOT IDENT.
IN-114M	-8.761E-03	1.956E-01	3.058E-01	0.000E+00	NOT IDENT.
CD-115	-1.187E+01	1.077E+01	1.696E+01	0.000E+00	NOT IDENT.
SN-117M	-1.665E-02	5.650E-02	9.580E-02	0.000E+00	NOT IDENT.
SB-122	-1.233E+00	2.522E+00	3.540E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	7.420E+06	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-7.164E-03	2.903E-02	4.931E-02	0.000E+00	NOT IDENT.
I-124	-1.598E-01	7.332E-01	1.050E+00	0.000E+00	FAIL ABUN
SB-124	5.339E-03	6.586E-02	1.107E-01	0.000E+00	FAIL ABUN
SB-125	5.566E-02	8.369E-02	1.502E-01	0.000E+00	FAIL ABUN
TE-125M	-8.076E+00	9.499E+00	1.603E+01	0.000E+00	NOT IDENT.
I-126	2.119E-01	2.106E-01	3.351E-01	0.000E+00	NOT IDENT.
SB-126	2.842E-02	1.483E-01	2.192E-01	0.000E+00	FAIL ABUN
SB-127	-8.943E-01	1.250E+00	1.970E+00	0.000E+00	NOT IDENT.
XE-127	-1.631E-02	5.235E-02	8.055E-02	0.000E+00	NOT IDENT.
I-131	-2.214E-02	1.100E-01	1.897E-01	0.000E+00	NOT IDENT.
TE-132	8.003E-02	6.751E-01	1.209E+00	0.000E+00	NOT IDENT.
BA-133	1.359E-03	4.576E-02	6.946E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	6.443E+03	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.201E-02	8.894E-02	0.000E+00	FAIL ABUN
I-135	0.000E+00	8.847E+15	0.000E+00	0.000E+00	SHORT HLIF
CS-136	5.759E-02	1.055E-01	1.885E-01	0.000E+00	FAIL ABUN
CE-139	-2.206E-03	2.898E-02	4.944E-02	0.000E+00	NOT IDENT.
BA-140	9.580E-02	2.433E-01	4.229E-01	0.000E+00	NOT IDENT.
LA-140	-6.935E-03	7.553E-02	1.238E-01	0.000E+00	FAIL ABUN
CE-141	1.378E-02	6.245E-02	1.083E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	2.553E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-6.861E-02	2.067E-01	3.525E-01	0.000E+00	NOT IDENT.
PM-144	-7.689E-03	3.320E-02	5.482E-02	0.000E+00	NOT IDENT.
PR-144	-5.211E-01	2.250E+00	3.715E+00	0.000E+00	NOT IDENT.

PM-146	1.996E-02	4.113E-02	7.282E-02	0.000E+00	NOT IDENT.
ND-147	2.934E-02	5.254E-01	9.008E-01	0.000E+00	FAIL ABUN
PM-149	1.669E+01	8.967E+01	1.595E+02	0.000E+00	NOT IDENT.
EU-152	-6.021E-02	1.271E-01	1.614E-01	0.000E+00	NOT IDENT.
GD-153	-8.330E-03	8.988E-02	1.368E-01	0.000E+00	NOT IDENT.
EU-154	8.051E-03	1.242E-01	2.111E-01	0.000E+00	NOT IDENT.
EU-155	8.404E-02	1.042E-01	1.862E-01	0.000E+00	FAIL ABUN
TB-160	1.520E-02	1.331E-01	2.327E-01	0.000E+00	FAIL ABUN
HO-166M	-2.234E-02	5.806E-02	9.448E-02	0.000E+00	NOT IDENT.
TM-171	-1.867E+01	2.885E+01	4.365E+01	0.000E+00	NOT IDENT.
LU-176	1.395E-02	2.468E-02	3.919E-02	0.000E+00	FAIL ABUN
LU-177	1.793E+00	1.843E+00	2.040E+00	0.000E+00	FAIL ABUN
LU-177M	-1.067E-01	1.724E-01	2.885E-01	0.000E+00	FAIL ABUN
HF-181	-3.166E-02	4.040E-02	6.586E-02	0.000E+00	NOT IDENT.
W-181	0.000E+00	3.840E-01	6.312E-01	0.000E+00	NOT IDENT.
TA-182	-6.711E-02	2.004E-01	3.313E-01	0.000E+00	FAIL ABUN
RE-183	4.728E-02	1.107E-01	1.925E-01	0.000E+00	FAIL ABUN
RE-184	-1.962E-02	2.125E-01	3.758E-01	0.000E+00	NOT IDENT.
OS-185	6.150E-03	4.035E-02	6.889E-02	0.000E+00	NOT IDENT.
RE-188	1.335E-01	1.706E-01	3.006E-01	0.000E+00	NOT IDENT.
W-188	-4.323E+00	7.752E+00	1.144E+01	0.000E+00	FAIL ABUN
IR-192	3.106E-02	3.246E-02	5.943E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	2.376E-01	4.087E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.824E+02	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-6.084E+00	7.082E+00	1.169E+01	0.000E+00	NOT IDENT.
TL-202	3.425E-02	6.242E-02	1.113E-01	0.000E+00	NOT IDENT.
HG-203	4.039E-03	4.360E-02	6.734E-02	0.000E+00	NOT IDENT.
BI-207	1.770E-02	5.413E-02	9.491E-02	0.000E+00	FAIL ABUN
TL-207	4.884E-02	6.969E-01	1.066E+00	0.000E+00	FAIL ABUN
PO-209	1.816E+00	7.062E+00	1.246E+01	0.000E+00	NOT IDENT.
BI-210	1.040E+00	2.270E+00	4.160E+00	0.000E+00	NOT IDENT.
PB-210	1.040E+00	2.270E+00	4.160E+00	0.000E+00	NOT IDENT.
PO-210	1.040E+00	2.269E+00	4.160E+00	0.000E+00	NOT IDENT.
PB-211	-1.222E+00	1.185E+00	1.483E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	4.469E-01	6.415E-01	0.000E+00	FAIL ABUN
PO-215	4.884E-02	6.969E-01	1.066E+00	0.000E+00	FAIL ABUN
RN-219	2.388E-01	4.058E-01	7.229E-01	0.000E+00	NOT IDENT.
RN-220	1.428E+01	2.391E+01	4.239E+01	0.000E+00	NOT IDENT.
RA-223	4.884E-02	6.969E-01	1.066E+00	0.000E+00	FAIL ABUN
AC-227	-4.739E-02	3.533E-01	6.234E-01	0.000E+00	FAIL ABUN
TH-227	-4.739E-02	3.534E-01	6.234E-01	0.000E+00	FAIL ABUN
TH-229	9.357E-02	4.858E-01	8.568E-01	0.000E+00	FAIL ABUN
PA-231	-5.979E-01	1.509E+00	2.461E+00	0.000E+00	FAIL ABUN
TH-231	4.884E-02	6.969E-01	1.066E+00	0.000E+00	FAIL ABUN
U-231	4.412E-01	1.259E+00	1.953E+00	0.000E+00	FAIL ABUN
PA-233	-2.331E-02	5.909E-02	1.019E-01	0.000E+00	FAIL ABUN
PA-234	-3.409E-01	3.135E-01	4.842E-01	0.000E+00	FAIL ABUN
PA-234M	0.000E+00	5.001E+00	9.655E+00	0.000E+00	NOT IDENT.
U-235	-4.636E-02	2.104E-01	3.579E-01	0.000E+00	FAIL ABUN
NP-236	-1.268E-02	8.142E-02	1.387E-01	0.000E+00	NOT IDENT.
NP-239	8.430E-02	1.850E-01	3.262E-01	0.000E+00	FAIL ABUN
AM-241	4.417E-02	1.434E-01	2.249E-01	0.000E+00	NOT IDENT.
CM-243	-1.435E-01	9.686E-02	1.595E-01	0.000E+00	FAIL ABUN
AM-246	-9.734E-02	1.409E-01	2.268E-01	0.000E+00	NOT IDENT.
CM-247	1.701E-02	3.525E-02	6.267E-02	0.000E+00	FAIL ABUN
CF-249	-2.743E-03	3.509E-02	6.070E-02	0.000E+00	NOT IDENT.
CF-251	-6.679E-02	1.216E-01	2.027E-01	0.000E+00	NOT IDENT.

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245396004.CNF;1
Sample date        : 21-JAN-2010 12:00:00 Acquisition date : 5-FEB-2010 19:14:38.
Sample ID          : G245396004          Sample quantity  : 1.39850E+02 GRAM
Detector name      : GAM14              Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00      Elapsed real time: 0 02:00:01.63  0.0%
Energy tolerance   : 1.50000 keV        Analyst Initials  : MXR1
Abundance limit    : 75.00000           Sensitivity       : 5.00000
Batch ID           : 944962             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	1841	10.67*	1.211E+00	3.825E+01	3.825E+01	8.75
CD-109	88.03	240	3.72*	7.058E+00	2.452E+00	2.509E+00	35.30
SN-126	64.28	312	9.60	4.621E+00	1.887E+00	1.887E+00	39.55
	86.94	240	8.90	7.058E+00	1.025E+00	1.025E+00	53.68
	87.57	240	37.00*	7.058E+00	2.466E-01	2.466E-01	35.30
CS-135	268.24	215	16.00*	5.105E+00	7.078E-01	7.078E-01	33.78
BA-137M	661.65	72	89.98*	2.466E+00	8.676E-02	8.684E-02	87.77
CS-137	661.65	72	85.12*	2.466E+00	9.171E-02	9.180E-02	87.78
TL-208	277.35	33	6.80	4.999E+00	2.645E-01	2.645E-01	178.40
	510.84	176	21.60	3.089E+00	7.061E-01	7.061E-01	41.93
	583.14	436	84.20*	2.757E+00	5.046E-01	5.046E-01	16.01
	860.37	97	12.46	1.943E+00	1.073E+00	1.073E+00	47.11
BI-211	72.87	-----	1.27	5.875E+00	-----	Line Not Found	-----
	351.07	703	12.94*	4.178E+00	3.488E+00	3.488E+00	13.98
PB-212	74.81	571	10.70	6.094E+00	2.352E+00	2.352E+00	23.13
	77.11	724	18.00	6.320E+00	1.709E+00	1.709E+00	15.48
	87.30	240	8.00	7.058E+00	1.140E+00	1.140E+00	36.69
	238.63	1581	44.60*	5.569E+00	1.709E+00	1.709E+00	9.79
	300.09	151	3.41	4.712E+00	2.525E+00	2.525E+00	49.94
PO-212	74.81	571	10.70	6.094E+00	2.352E+00	2.352E+00	23.13
	77.11	724	18.00	6.320E+00	1.709E+00	1.709E+00	15.48
	87.30	240	8.00	7.058E+00	1.140E+00	1.140E+00	36.69
	115.19	-----	0.60	7.689E+00	-----	Line Not Found	-----
	238.63	1581	44.60*	5.569E+00	1.709E+00	1.709E+00	9.79
	300.09	151	3.41	4.712E+00	2.525E+00	2.525E+00	49.94
BI-214	609.31	516	46.30*	2.654E+00	1.127E+00	1.127E+00	16.23
	1120.29	70	15.10	1.523E+00	8.136E-01	8.137E-01	58.62
	1764.49	98	15.80	1.059E+00	1.575E+00	1.575E+00	22.34
PB-214	74.81	571	6.21	6.094E+00	4.052E+00	4.052E+00	22.42
	77.11	724	10.50	6.320E+00	2.930E+00	2.930E+00	17.25
	87.30	240	4.67	7.058E+00	1.953E+00	1.953E+00	36.13
	241.98	300	7.49	5.518E+00	1.947E+00	1.947E+00	27.51

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	295.21	397	19.20	4.777E+00	1.161E+00	1.161E+00	17.86
	351.92	703	37.20*	4.178E+00	1.213E+00	1.213E+00	14.92
	74.81	571	6.21	6.094E+00	4.052E+00	4.052E+00	22.42
	77.11	724	10.50	6.320E+00	2.930E+00	2.930E+00	17.25
	87.30	240	4.67	7.058E+00	1.953E+00	1.953E+00	36.13
PO-216	241.98	300	7.49	5.518E+00	1.947E+00	1.947E+00	27.51
	295.21	397	19.20	4.777E+00	1.161E+00	1.161E+00	17.86
	351.92	703	37.20*	4.178E+00	1.213E+00	1.213E+00	14.92
	74.81	571	10.70	6.094E+00	2.352E+00	2.352E+00	23.13
	77.11	724	18.00	6.320E+00	1.709E+00	1.709E+00	15.48
PO-218	87.30	240	8.00	7.058E+00	1.140E+00	1.140E+00	36.69
	238.63	1581	44.60*	5.569E+00	1.709E+00	1.709E+00	9.79
	300.09	151	3.41	4.712E+00	2.525E+00	2.525E+00	49.94
	74.81	571	6.21	6.094E+00	4.052E+00	4.052E+00	22.42
	77.11	724	10.50	6.320E+00	2.930E+00	2.930E+00	17.25
RA-224	87.30	240	4.67	7.058E+00	1.953E+00	1.953E+00	36.13
	241.98	300	7.49	5.518E+00	1.947E+00	1.947E+00	27.51
	295.21	397	19.20	4.777E+00	1.161E+00	1.161E+00	17.86
	351.92	703	37.20*	4.178E+00	1.213E+00	1.213E+00	14.92
	240.98	300	3.95*	5.518E+00	3.692E+00	3.692E+00	26.93
RA-226	609.31	516	46.30*	2.654E+00	1.127E+00	1.127E+00	16.23
	1120.29	70	15.10	1.523E+00	8.136E-01	8.137E-01	58.62
	1764.49	98	15.80	1.059E+00	1.575E+00	1.575E+00	22.34
	338.32	302	11.40	4.308E+00	1.650E+00	1.650E+00	47.63
	911.07	293	27.70*	1.843E+00	1.541E+00	1.541E+00	21.89
AC-228	969.11	154	16.60	1.741E+00	1.432E+00	1.432E+00	35.47
	338.32	302	11.40	4.308E+00	1.650E+00	1.650E+00	47.63
	911.07	293	27.70*	1.843E+00	1.541E+00	1.541E+00	21.89
	969.11	154	16.60	1.741E+00	1.432E+00	1.432E+00	35.47
	74.81	571	10.70	6.094E+00	2.352E+00	2.352E+00	21.19
TH-228	77.11	724	18.00	6.320E+00	1.709E+00	1.735E+00	15.48
	87.30	240	8.00	7.058E+00	1.140E+00	1.158E+00	35.30
	238.63	1581	44.60*	5.569E+00	1.709E+00	1.735E+00	9.79
	300.09	151	3.41	4.712E+00	2.525E+00	2.563E+00	76.81
	609.31	516	46.30*	2.654E+00	1.127E+00	1.127E+00	16.23
TH-230	1120.29	70	15.10	1.523E+00	8.136E-01	8.136E-01	58.62
	1764.49	98	15.80	1.059E+00	1.575E+00	1.575E+00	22.34
	338.32	302	11.40	4.308E+00	1.650E+00	1.650E+00	25.31
	911.07	293	27.70*	1.843E+00	1.541E+00	1.541E+00	21.89
	969.11	154	16.60	1.741E+00	1.432E+00	1.432E+00	35.47
TH-232	63.29	312	3.80*	4.621E+00	4.766E+00	4.766E+00	40.71
	92.38	650	5.41	7.313E+00	4.408E+00	4.408E+00	24.68
	609.31	516	46.30*	2.654E+00	1.127E+00	1.127E+00	16.23
	1120.29	70	15.10	1.523E+00	8.136E-01	8.136E-01	58.62
	1764.49	98	15.80	1.059E+00	1.575E+00	1.575E+00	22.34
TH-234	86.50	240	12.60*	7.058E+00	7.240E-01	7.240E-01	40.89
	95.87	---	2.60	7.425E+00	----- Line Not Found -----		---
	63.29	312	3.80*	4.621E+00	4.766E+00	4.766E+00	40.71
	92.38	650	5.41	7.313E+00	4.408E+00	4.408E+00	18.88

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
AM-243	74.67	571	66.00*	6.094E+00	3.813E-01	3.813E-01	21.16
	86.72	240	0.34	7.058E+00	2.715E+01	2.715E+01	35.30
	117.66	-----	0.55	7.685E+00	-----	Line Not Found	-----
	142.18	-----	0.13	7.399E+00	-----	Line Not Found	-----
ANH-511	511.00	176	100.00*	3.089E+00	1.525E-01	1.525E-01	41.09

Flag: "*" = Keyline

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	3.825E+01	3.825E+01	0.335E+01	8.75	
CD-109	464.00D	1.02	2.452E+00	2.509E+00	0.886E+00	35.30	
SN-126	1.00E+05Y	1.00	2.466E-01	2.466E-01	0.870E-01	35.30	
CS-135	2.30E+06Y	1.00	7.078E-01	7.078E-01	2.391E-01	33.78	
BA-137M	30.17Y	1.00	8.676E-02	8.684E-02	7.622E-02	87.77	
CS-137	30.17Y	1.00	9.171E-02	9.180E-02	8.058E-02	87.78	
TL-208	1.41E+10Y	1.00	5.046E-01	5.046E-01	0.808E-01	16.01	
BI-211	7.04E+08Y	1.00	3.488E+00	3.488E+00	0.488E+00	13.98	
PB-212	1.41E+10Y	1.00	1.709E+00	1.709E+00	0.167E+00	9.79	
PO-212	1.41E+10Y	1.00	1.709E+00	1.709E+00	0.167E+00	9.79	
BI-214	1600.00Y	1.00	1.127E+00	1.127E+00	0.183E+00	16.23	
PB-214	1600.00Y	1.00	1.213E+00	1.213E+00	0.181E+00	14.92	
PO-214	1600.00Y	1.00	1.213E+00	1.213E+00	0.181E+00	14.92	
PO-216	1.41E+10Y	1.00	1.709E+00	1.709E+00	0.167E+00	9.79	
PO-218	1600.00Y	1.00	1.213E+00	1.213E+00	0.181E+00	14.92	
RA-224	1.41E+10Y	1.00	3.692E+00	3.692E+00	0.994E+00	26.93	
RA-226	1600.00Y	1.00	1.127E+00	1.127E+00	0.183E+00	16.23	
AC-228	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.337E+00	21.89	
RA-228	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.337E+00	21.89	
TH-228	1.91Y	1.02	1.709E+00	1.735E+00	0.170E+00	9.79	
TH-230	4.47E+09Y	1.00	1.127E+00	1.127E+00	0.183E+00	16.23	
TH-232	1.41E+10Y	1.00	1.541E+00	1.541E+00	0.337E+00	21.89	
TH-234	4.47E+09Y	1.00	4.766E+00	4.766E+00	1.940E+00	40.71	
U-234	4.47E+09Y	1.00	1.127E+00	1.127E+00	0.183E+00	16.23	
NP-237	2.14E+06Y	1.00	7.240E-01	7.240E-01	2.960E-01	40.89	
U-238	4.47E+09Y	1.00	4.766E+00	4.766E+00	1.940E+00	40.71	
AM-243	7380.00Y	1.00	3.813E-01	3.813E-01	0.807E-01	21.16	
ANH-511	1.00E+09Y	1.00	1.525E-01	1.525E-01	0.627E-01	41.09	

Total Activity : 7.991E+01 8.000E+01

Grand Total Activity : 7.991E+01 8.000E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G245396004

Page : 5
Acquisition date : 5-FEB-2010 19:14:38

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	89.89	189	680	1.52	179.28	171	20	2.62E-02	53.1	7.19E+00	T
0	186.08	276	563	1.30	371.47	365	13	3.83E-02	38.2	6.53E+00	T
0	209.06	92	518	1.23	417.39	411	13	1.27E-02	****	6.08E+00	T
0	327.73	108	203	1.01	654.54	650	11	1.50E-02	54.5	4.41E+00	T
0	463.01	75	126	0.87	924.94	920	10	1.05E-02	60.6	3.35E+00	T
0	569.86	158	226	2.23	1138.53	1127	24	2.19E-02	54.1	2.81E+00	T
0	727.45	142	71	1.78	1453.60	1446	15	1.97E-02	30.9	2.27E+00	T
0	795.57	54	75	1.33	1589.80	1585	12	7.43E-03	69.3	2.09E+00	T
0	1239.63	36	71	1.57	2478.01	2474	9	4.96E-03	92.6	1.39E+00	T
0	1379.99	31	54	1.52	2758.87	2750	18	4.31E-03	****	1.27E+00	
0	1510.12	14	30	3.54	3019.28	3010	20	1.91E-03	****	1.18E+00	T

Flags: "T" = Tentatively associated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G245396004.CNF;1
* Acquisition date   : 5-FEB-2010 19:14:38.  Detector SN#      :
* Detector ID        : GAM14                      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 02:00:01.63             Half life ratio : 8.00000
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 21-JAN-2010 12:00:00  Nuclide Library : SOLID
* Sample ID          : G245396004             Analyst initials: MXR1
* Batch Number       : 944962                 Sample Quantity : 1.39850E+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
K-40	3.825E+01	3.347E+00	5.262E-01	3.821E-02	72.686
CD-109	2.509E+00	8.857E-01	1.270E+00	1.111E-01	1.975
SN-126	2.466E-01	8.703E-02	1.383E-01	1.203E-02	1.783
CS-135	7.078E-01	2.391E-01	2.205E-01	1.691E-02	3.210
BA-137M	8.684E-02	7.622E-02	5.856E-02	3.482E-03	1.483
CS-137	9.180E-02	8.058E-02	6.191E-02	3.696E-03	1.483
TL-208	5.046E-01	8.079E-02	5.486E-02	3.752E-03	9.198
BI-211	3.488E+00	4.876E-01	3.046E-01	1.930E-02	11.450
PB-212	1.709E+00	1.674E-01	8.792E-02	6.404E-03	19.438
PO-212	1.709E+00	1.674E-01	8.792E-02	6.404E-03	19.438
BI-214	1.127E+00	1.829E-01	1.096E-01	8.674E-03	10.280
PB-214	1.213E+00	1.811E-01	1.062E-01	8.713E-03	11.427
PO-214	1.213E+00	1.811E-01	1.062E-01	8.713E-03	11.427
PO-216	1.709E+00	1.674E-01	8.792E-02	6.404E-03	19.438
PO-218	1.213E+00	1.811E-01	1.062E-01	8.713E-03	11.427
RA-224	3.692E+00	9.943E-01	1.000E+00	5.748E-02	3.692
RA-226	1.127E+00	1.829E-01	1.096E-01	8.674E-03	10.280
AC-228	1.541E+00	3.373E-01	2.153E-01	2.528E-02	7.157

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.541E+00	3.373E-01	2.153E-01	2.528E-02	7.157
TH-228	1.735E+00	1.700E-01	8.927E-02	6.502E-03	19.438
TH-230	1.127E+00	1.828E-01	1.096E-01	8.674E-03	10.280
TH-232	1.541E+00	3.373E-01	2.153E-01	2.528E-02	7.157
TH-234	4.766E+00	1.940E+00	1.821E+00	3.130E-01	2.617
U-234	1.127E+00	1.828E-01	1.096E-01	8.674E-03	10.280
NP-237	7.240E-01	2.960E-01	3.790E-01	8.470E-02	1.910
U-238	4.766E+00	1.940E+00	1.821E+00	3.130E-01	2.617
AM-243	3.813E-01	8.069E-02	8.283E-02	6.216E-03	4.603
ANH-511	1.525E-01	6.267E-02	4.401E-02	2.585E-03	3.466

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.091E-01		3.065E-01	5.134E-01	3.461E-02	0.213
NA-22	1.801E-03		4.528E-02	7.478E-02	4.885E-03	0.024
NA-24	1.885E-01		3.662E-01	Half-Life too short		
AL-26	-7.736E-03		2.507E-02	3.764E-02	2.182E-03	-0.206
TI-44	3.154E-01	+	4.882E-02	7.351E-02	5.740E-03	4.290
SC-46	-4.703E-02		3.673E-02	5.414E-02	5.002E-03	-0.869
V-48	-2.039E-02		6.736E-02	1.092E-01	9.275E-03	-0.187
CR-51	-7.798E-03		3.591E-01	5.959E-01	3.850E-02	-0.013
MN-52	1.173E-01		2.180E-01	3.817E-01	2.675E-02	0.307
MN-54	-2.663E-02		4.040E-02	6.478E-02	5.434E-03	-0.411
CO-56	-1.683E-02		3.522E-02	5.665E-02	4.856E-03	-0.297
CO-57	-1.324E-02		2.516E-02	3.968E-02	2.823E-03	-0.334
CO-58	7.157E-03		3.715E-02	6.064E-02	4.879E-03	0.118
FE-59	8.002E-03		9.362E-02	1.562E-01	1.203E-02	0.051
CO-60	-3.327E-03		3.854E-02	6.269E-02	4.468E-03	-0.053
ZN-65	-6.054E-02		1.034E-01	1.369E-01	8.996E-03	-0.442
GE-68	3.261E-01		1.228E+00	2.081E+00	1.496E-01	0.157
AS-73	2.236E-01		6.419E-01	1.060E+00	6.911E-02	0.211
AS-74	1.885E-02		8.851E-02	1.460E-01	8.734E-03	0.129
SE-75	2.023E-02		4.250E-02	6.371E-02	3.741E-03	0.318
BR-77	4.666E+00		1.072E+01	1.800E+01	1.061E+00	0.259
SR-82	-3.312E-01		3.654E-01	5.388E-01	4.051E-02	-0.615
RB-83	3.030E-02		6.730E-02	1.132E-01	6.670E-03	0.268
RB-84	-1.018E-01		6.891E-02	1.000E-01	9.120E-03	-1.018
KR-85	1.913E+01		8.049E+00	1.340E+01	7.881E-01	1.428
SR-85	9.829E-02		4.135E-02	6.884E-02	4.049E-03	1.428
RB-86	7.440E-01		7.695E-01	1.375E+00	9.903E-02	0.541
Y-88	-6.201E-03		3.111E-02	4.817E-02	2.736E-03	-0.129
ZR-88	1.343E-02		2.797E-02	4.741E-02	2.581E-03	0.283
Y-91	-8.191E+00		1.978E+01	3.161E+01	1.839E+00	-0.259
NB-94	-4.921E-03		3.338E-02	5.330E-02	3.457E-03	-0.092
NB-95	5.270E-02		4.304E-02	7.500E-02	5.523E-03	0.703
NB-95M	6.085E-01		1.540E-01	2.531E-01	1.892E-02	2.404

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	-1.260E-02		6.913E-02	1.096E-01	9.039E-03	-0.115
NB-97	-3.646E-02		6.573E-02	Half-Life too short		
ZR-97	2.488E+00		1.151E+00	Half-Life too short		
MO-99	-1.234E+01		1.252E+01	1.835E+01	2.629E+00	-0.672
TC-99M	1.910E+10		3.197E+10	Half-Life too short		
RH-101	-5.771E-04		3.136E-02	5.274E-02	2.926E-03	-0.011
RH-102	-1.375E-02		2.743E-02	4.348E-02	2.513E-03	-0.316
RU-103	2.020E-02		3.816E-02	6.449E-02	8.167E-03	0.313
RH-106	1.743E-01		2.996E-01	5.062E-01	5.986E-02	0.344
RU-106	1.743E-01		2.991E-01	5.062E-01	3.027E-02	0.344
AG-108M	-1.018E-02		2.853E-02	4.580E-02	2.814E-03	-0.222
AG-110M	-1.342E-02		3.917E-02	5.264E-02	3.325E-03	-0.255
IN-111	1.454E+00		1.153E+00	1.797E+00	1.036E-01	0.809
IN-113M	1.057E-02		4.040E-02	6.767E-02	3.960E-03	0.156
SN-113	1.057E-02		4.040E-02	6.767E-02	3.960E-03	0.156
IN-114M	-8.761E-03		1.996E-01	2.923E-01	1.609E-02	-0.030
CD-115	-1.187E+01		1.099E+01	1.654E+01	9.777E-01	-0.718
SN-117M	-1.665E-02		5.765E-02	9.124E-02	5.161E-03	-0.182
SB-122	-1.233E+00		2.574E+00	3.457E+00	2.061E-01	-0.357
I-123	-1.831E+00		3.786E+00	Half-Life too short		
TE-123M	-7.164E-03		2.962E-02	4.696E-02	2.686E-03	-0.153
I-124	-1.598E-01		7.481E-01	1.027E+00	6.142E-02	-0.156
SB-124	5.339E-03		6.720E-02	1.106E-01	7.476E-03	0.048
SB-125	5.566E-02		8.540E-02	1.458E-01	8.547E-03	0.382
TE-125M	-8.076E+00		9.693E+00	1.516E+01	1.423E+00	-0.533
I-126	2.119E-01		2.149E-01	3.284E-01	1.973E-02	0.645
SB-126	2.842E-02		1.514E-01	2.152E-01	1.448E-02	0.132
SB-127	-8.943E-01		1.275E+00	1.932E+00	1.889E-01	-0.463
XE-127	-1.631E-02		5.342E-02	7.708E-02	4.297E-03	-0.212
I-131	-2.214E-02		1.122E-01	1.837E-01	1.161E-02	-0.121
TE-132	8.003E-02		6.889E-01	1.160E+00	1.666E-01	0.069
BA-133	1.359E-03		4.669E-02	6.721E-02	7.726E-03	0.020
I-133	-6.880E-04		3.287E-03	Half-Life too short		
CS-134	9.067E-02	+	6.327E-02	8.749E-02	6.886E-03	1.036
I-135	4.603E+09		4.514E+09	Half-Life too short		
CS-136	5.759E-02		1.077E-01	1.865E-01	1.500E-02	0.309
CE-139	-2.206E-03		2.957E-02	4.712E-02	2.530E-03	-0.047
BA-140	9.580E-02		2.482E-01	4.127E-01	1.343E-01	0.232
LA-140	-6.935E-03		7.707E-02	1.236E-01	8.194E-03	-0.056
CE-141	1.378E-02		6.372E-02	1.030E-01	6.570E-03	0.134
CE-143	8.461E-04		1.303E-04	Half-Life too short		
CE-144	-6.861E-02		2.110E-01	3.346E-01	4.871E-02	-0.205
PM-144	-7.689E-03		3.388E-02	5.378E-02	3.446E-03	-0.143
PR-144	-5.211E-01		2.296E+00	3.645E+00	2.334E-01	-0.143
PM-146	1.996E-02		4.196E-02	7.081E-02	6.062E-03	0.282
ND-147	2.934E-02		5.362E-01	8.787E-01	1.193E-01	0.033
PM-149	1.669E+01		9.150E+01	1.537E+02	2.181E+01	0.109
EU-152	-6.021E-02		1.297E-01	1.561E-01	1.010E-02	-0.386

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-8.330E-03		9.171E-02	1.291E-01	1.035E-02	-0.065
EU-154	8.051E-03		1.267E-01	2.097E-01	2.057E-02	0.038
EU-155	8.404E-02		1.063E-01	1.759E-01	1.362E-02	0.478
TB-160	1.520E-02		1.358E-01	2.293E-01	2.083E-02	0.066
HO-166M	-2.234E-02		5.924E-02	9.272E-02	6.127E-03	-0.241
TM-171	-1.867E+01		2.944E+01	4.089E+01	2.851E+00	-0.457
LU-176	1.395E-02		2.519E-02	3.781E-02	2.202E-03	0.369
LU-177	1.793E+00	+	1.881E+00	1.953E+00	1.094E-01	0.918
LU-177M	-1.067E-01		1.759E-01	2.800E-01	1.552E-02	-0.381
HF-181	-3.166E-02		4.122E-02	6.412E-02	3.719E-03	-0.494
W-181	7.235E-01		3.919E-01	5.911E-01	4.072E-02	1.224
TA-182	-6.711E-02		2.045E-01	3.288E-01	1.967E-02	-0.204
RE-183	4.728E-02		1.130E-01	1.834E-01	1.010E-02	0.258
RE-184	-1.962E-02		2.168E-01	3.612E-01	2.089E-02	-0.054
OS-185	6.150E-03		4.118E-02	6.748E-02	4.024E-03	0.091
RE-188	1.335E-01		1.741E-01	2.862E-01	1.658E-02	0.466
W-188	-4.323E+00		7.910E+00	1.103E+01	6.435E-01	-0.392
IR-192	3.106E-02		3.313E-02	5.737E-02	3.349E-03	0.541
AU-195	4.715E-01		2.425E-01	3.857E-01	3.061E-02	1.222
TL-200	-7.559E-05		2.461E-04	Half-Life too short		
TL-201	-6.084E+00		7.227E+00	1.114E+01	5.986E-01	-0.546
TL-202	3.425E-02		6.369E-02	1.081E-01	6.115E-03	0.317
HG-203	4.039E-03		4.449E-02	6.484E-02	4.012E-03	0.062
BI-207	1.770E-02		5.524E-02	9.393E-02	6.951E-03	0.188
TL-207	4.884E-02		7.111E-01	1.030E+00	1.701E-01	0.047
PO-209	1.816E+00		7.206E+00	1.229E+01	1.150E+00	0.148
BI-210	1.040E+00		2.316E+00	3.871E+00	2.871E-01	0.269
PB-210	1.040E+00		2.316E+00	3.871E+00	2.871E-01	0.269
PO-210	1.040E+00		2.316E+00	3.871E+00	2.429E-01	0.269
PB-211	-1.222E+00		1.209E+00	1.439E+00	8.968E-01	-0.849
BI-212	1.421E+00	+	4.560E-01	6.299E-01	5.359E-02	2.257
PO-215	4.884E-02		7.111E-01	1.030E+00	1.701E-01	0.047
RN-219	2.388E-01		4.141E-01	7.012E-01	9.450E-02	0.341
RN-220	1.428E+01		2.440E+01	4.138E+01	2.460E+00	0.345
RA-223	4.884E-02		7.111E-01	1.030E+00	1.701E-01	0.047
AC-227	-4.739E-02		3.605E-01	5.993E-01	8.364E-02	-0.079
TH-227	-4.739E-02		3.606E-01	5.993E-01	1.013E-01	-0.079
TH-229	9.357E-02		4.958E-01	8.192E-01	4.524E-02	0.114
PA-231	-5.979E-01		1.540E+00	2.371E+00	3.271E-01	-0.252
TH-231	4.884E-02		7.111E-01	1.030E+00	1.701E-01	0.047
U-231	4.412E-01		1.284E+00	1.842E+00	1.495E-01	0.240
PA-233	-2.331E-02		6.030E-02	9.832E-02	6.070E-03	-0.237
PA-234	-3.409E-01		3.199E-01	4.781E-01	9.036E-02	-0.713
PA-234M	1.058E+01		5.103E+00	9.543E+00	9.226E-01	1.109
U-235	-4.636E-02		2.147E-01	3.402E-01	5.600E-02	-0.136
NP-236	-1.268E-02		8.308E-02	1.321E-01	7.384E-03	-0.096
NP-239	8.430E-02		1.887E-01	3.088E-01	2.232E-02	0.273
AM-241	4.417E-02		1.464E-01	2.102E-01	1.561E-02	0.210

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-1.435E-01		9.884E-02	1.507E-01	1.159E-02	-0.953
AM-246	-9.734E-02		1.438E-01	2.245E-01	1.609E-02	-0.433
CM-247	1.701E-02		3.597E-02	6.079E-02	3.339E-03	0.280
CF-249	-2.743E-03		3.580E-02	5.884E-02	3.217E-03	-0.047
CF-251	-6.679E-02		1.241E-01	1.935E-01	1.049E-02	-0.345

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]G245396004          *
* Acquisition date   : 5-FEB-2010 19:14:38 Detector SN#      :              *
* Detector ID        : GAM14 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 02:00:01.63 Half life ratio : 8.000   *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 21-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID          : G245396004 Analyst initials: MXR1         *
* Batch Number       : 944962 Sample Quantity : 1.3985E+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
K-40	3.825E+01	3.280E+00	2.642E-01	1.673E+00
CD-109	2.509E+00	8.680E-01	6.750E-01	4.428E-01
SN-126	2.466E-01	8.529E-02	7.348E-02	4.351E-02
CS-135	7.078E-01	2.343E-01	1.146E-01	1.195E-01
BA-137M	8.684E-02	7.470E-02	2.990E-02	3.811E-02
CS-137	9.180E-02	7.897E-02	3.161E-02	4.029E-02
TL-208	5.046E-01	7.917E-02	2.808E-02	4.039E-02
BI-211	3.488E+00	4.779E-01	1.575E-01	2.438E-01
PB-212	1.709E+00	1.640E-01	4.582E-02	8.370E-02
PO-212	1.709E+00	1.640E-01	4.582E-02	8.370E-02
BI-214	1.127E+00	1.792E-01	5.604E-02	9.143E-02
PB-214	1.213E+00	1.774E-01	5.491E-02	9.053E-02
PO-214	1.213E+00	1.774E-01	5.491E-02	9.053E-02
PO-216	1.709E+00	1.640E-01	4.582E-02	8.370E-02
PO-218	1.213E+00	1.774E-01	5.491E-02	9.053E-02
RA-224	3.692E+00	9.744E-01	5.210E-01	4.972E-01
RA-226	1.127E+00	1.792E-01	5.604E-02	9.143E-02
AC-228	1.541E+00	3.306E-01	1.092E-01	1.687E-01
RA-228	1.541E+00	3.306E-01	1.092E-01	1.687E-01
TH-228	1.735E+00	1.666E-01	4.652E-02	8.498E-02
TH-230	1.127E+00	1.792E-01	5.604E-02	9.142E-02
TH-232	1.541E+00	3.306E-01	1.092E-01	1.687E-01
TH-234	4.766E+00	1.902E+00	9.735E-01	9.702E-01
U-234	1.127E+00	1.792E-01	5.604E-02	9.142E-02
NP-237	7.240E-01	2.901E-01	2.014E-01	1.480E-01
U-238	4.766E+00	1.902E+00	9.735E-01	9.702E-01
AM-243	3.813E-01	7.907E-02	4.415E-02	4.034E-02
ANH-511	1.525E-01	6.142E-02	2.259E-02	3.133E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	1.091E-01	3.003E-01	2.639E-01	1.532E-01	NOT IDENT.
NA-22	1.801E-03	4.438E-02	3.766E-02	2.264E-02	NOT IDENT.
NA-24	1.885E+05	7.177E+05	0.000E+00	3.662E+05	SHORT HLIF
AL-26	-7.736E-03	2.457E-02	1.882E-02	1.254E-02	NOT IDENT.
TI-44	3.154E-01	4.785E-02	3.914E-02	2.441E-02	FAIL ABUN
SC-46	-4.703E-02	3.599E-02	2.747E-02	1.836E-02	FAIL ABUN
V-48	-2.039E-02	6.602E-02	5.531E-02	3.368E-02	NOT IDENT.
CR-51	-7.798E-03	3.519E-01	3.087E-01	1.796E-01	NOT IDENT.
MN-52	1.173E-01	2.136E-01	1.917E-01	1.090E-01	NOT IDENT.
MN-54	-2.663E-02	3.960E-02	3.292E-02	2.020E-02	NOT IDENT.
CO-56	-1.683E-02	3.452E-02	2.878E-02	1.761E-02	FAIL ABUN
CO-57	-1.324E-02	2.466E-02	2.095E-02	1.258E-02	NOT IDENT.
CO-58	7.157E-03	3.641E-02	3.083E-02	1.858E-02	NOT IDENT.
FE-59	8.002E-03	9.175E-02	7.893E-02	4.681E-02	NOT IDENT.
CO-60	-3.327E-03	3.777E-02	3.154E-02	1.927E-02	NOT IDENT.
ZN-65	-6.054E-02	1.014E-01	6.912E-02	5.172E-02	NOT IDENT.
GE-68	3.261E-01	1.203E+00	1.052E+00	6.138E-01	NOT IDENT.
AS-73	2.236E-01	6.291E-01	5.686E-01	3.210E-01	NOT IDENT.
AS-74	1.885E-02	8.674E-02	7.472E-02	4.426E-02	NOT IDENT.
SE-75	2.023E-02	4.165E-02	3.313E-02	2.125E-02	NOT IDENT.
BR-77	4.666E+00	1.050E+01	9.237E+00	5.359E+00	FAIL ABUN
SR-82	-3.312E-01	3.581E-01	2.742E-01	1.827E-01	NOT IDENT.
RB-83	3.030E-02	6.595E-02	5.805E-02	3.365E-02	NOT IDENT.
RB-84	-1.018E-01	6.754E-02	5.077E-02	3.446E-02	NOT IDENT.
KR-85	1.913E+01	7.888E+00	6.877E+00	4.024E+00	NOT IDENT.
SR-85	9.829E-02	4.052E-02	3.533E-02	2.067E-02	NOT IDENT.
RB-86	7.440E-01	7.541E-01	6.952E-01	3.848E-01	NOT IDENT.
Y-88	-6.201E-03	3.049E-02	2.407E-02	1.555E-02	NOT IDENT.
ZR-88	1.343E-02	2.741E-02	2.446E-02	1.399E-02	NOT IDENT.
Y-91	-8.191E+00	1.939E+01	1.594E+01	9.892E+00	NOT IDENT.
NB-94	-4.921E-03	3.271E-02	2.718E-02	1.669E-02	NOT IDENT.
NB-95	5.270E-02	4.218E-02	3.818E-02	2.152E-02	NOT IDENT.
NB-95M	6.085E-01	1.509E-01	1.319E-01	7.701E-02	NOT IDENT.
ZR-95	-1.260E-02	6.775E-02	5.579E-02	3.456E-02	NOT IDENT.
NB-97	-3.646E+04	1.288E+05	0.000E+00	6.573E+04	SHORT HLIF
ZR-97	2.488E+06	2.256E+06	0.000E+00	1.151E+06	SHORT HLIF
MO-99	-1.234E+01	1.227E+01	9.349E+00	6.262E+00	NOT IDENT.
TC-99M	1.910E+16	6.266E+16	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-5.771E-04	3.073E-02	2.758E-02	1.568E-02	NOT IDENT.
RH-102	-1.375E-02	2.688E-02	2.235E-02	1.371E-02	NOT IDENT.
RU-103	2.020E-02	3.740E-02	3.312E-02	1.908E-02	FAIL ABUN
RH-106	1.743E-01	2.936E-01	2.587E-01	1.498E-01	FAIL ABUN
RU-106	1.743E-01	2.931E-01	2.587E-01	1.495E-01	FAIL ABUN
AG-108M	-1.018E-02	2.796E-02	2.359E-02	1.426E-02	NOT IDENT.
AG-110M	-1.342E-02	3.839E-02	2.688E-02	1.959E-02	NOT IDENT.
IN-111	1.454E+00	1.130E+00	9.362E-01	5.764E-01	NOT IDENT.
IN-113M	1.057E-02	3.960E-02	3.492E-02	2.020E-02	NOT IDENT.
SN-113	1.057E-02	3.960E-02	3.492E-02	2.020E-02	NOT IDENT.
IN-114M	-8.761E-03	1.956E-01	1.530E-01	9.978E-02	NOT IDENT.
CD-115	-1.187E+01	1.077E+01	8.486E+00	5.497E+00	NOT IDENT.
SN-117M	-1.665E-02	5.650E-02	4.793E-02	2.882E-02	NOT IDENT.
SB-122	-1.233E+00	2.522E+00	1.771E+00	1.287E+00	NOT IDENT.
I-123	-1.831E+06	7.420E+06	0.000E+00	3.786E+06	SHORT HLIF
TE-123M	-7.164E-03	2.903E-02	2.467E-02	1.481E-02	NOT IDENT.
I-124	-1.598E-01	7.332E-01	5.252E-01	3.741E-01	FAIL ABUN
SB-124	5.339E-03	6.586E-02	5.536E-02	3.360E-02	FAIL ABUN
SB-125	5.566E-02	8.369E-02	7.512E-02	4.270E-02	FAIL ABUN
TE-125M	-8.076E+00	9.499E+00	8.019E+00	4.847E+00	NOT IDENT.
I-126	2.119E-01	2.106E-01	1.677E-01	1.075E-01	NOT IDENT.
SB-126	2.842E-02	1.483E-01	1.097E-01	7.568E-02	FAIL ABUN
SB-127	-8.943E-01	1.250E+00	9.855E-01	6.376E-01	NOT IDENT.
XE-127	-1.631E-02	5.235E-02	4.030E-02	2.671E-02	NOT IDENT.
I-131	-2.214E-02	1.100E-01	9.491E-02	5.610E-02	NOT IDENT.
TE-132	8.003E-02	6.751E-01	6.050E-01	3.444E-01	NOT IDENT.
BA-133	1.359E-03	4.576E-02	3.475E-02	2.335E-02	FAIL ABUN
I-133	-6.880E+02	6.443E+03	0.000E+00	3.287E+03	SHORT HLIF
CS-134	9.067E-02	6.201E-02	4.450E-02	3.164E-02	FAIL ABUN
I-135	4.603E+15	8.847E+15	0.000E+00	4.514E+15	SHORT HLIF
CS-136	5.759E-02	1.055E-01	9.431E-02	5.384E-02	FAIL ABUN
CE-139	-2.206E-03	2.898E-02	2.473E-02	1.479E-02	NOT IDENT.
BA-140	9.580E-02	2.433E-01	2.116E-01	1.241E-01	NOT IDENT.
LA-140	-6.935E-03	7.553E-02	6.195E-02	3.853E-02	FAIL ABUN
CE-141	1.378E-02	6.245E-02	5.418E-02	3.186E-02	NOT IDENT.
CE-143	8.461E+02	2.553E+02	0.000E+00	1.303E+02	SHORT HLIF
CE-144	-6.861E-02	2.067E-01	1.764E-01	1.055E-01	NOT IDENT.
PM-144	-7.689E-03	3.320E-02	2.743E-02	1.694E-02	NOT IDENT.
PR-144	-5.211E-01	2.250E+00	1.859E+00	1.148E+00	NOT IDENT.

PM-146	1.996E-02	4.113E-02	3.643E-02	2.098E-02	NOT IDENT.
ND-147	2.934E-02	5.254E-01	4.507E-01	2.681E-01	FAIL ABUN
PM-149	1.669E+01	8.967E+01	7.980E+01	4.575E+01	NOT IDENT.
EU-152	-6.021E-02	1.271E-01	8.076E-02	6.486E-02	NOT IDENT.
GD-153	-8.330E-03	8.988E-02	6.845E-02	4.586E-02	NOT IDENT.
EU-154	8.051E-03	1.242E-01	1.056E-01	6.337E-02	NOT IDENT.
EU-155	8.404E-02	1.042E-01	9.316E-02	5.315E-02	FAIL ABUN
TB-160	1.520E-02	1.331E-01	1.164E-01	6.792E-02	FAIL ABUN
HO-166M	-2.234E-02	5.806E-02	4.727E-02	2.962E-02	NOT IDENT.
TM-171	-1.867E+01	2.885E+01	2.184E+01	1.472E+01	NOT IDENT.
LU-176	1.395E-02	2.468E-02	1.960E-02	1.259E-02	FAIL ABUN
LU-177	1.793E+00	1.843E+00	1.021E+00	9.405E-01	FAIL ABUN
LU-177M	-1.067E-01	1.724E-01	1.443E-01	8.794E-02	FAIL ABUN
HF-181	-3.166E-02	4.040E-02	3.295E-02	2.061E-02	NOT IDENT.
W-181	7.235E-01	3.840E-01	3.158E-01	1.959E-01	NOT IDENT.
TA-182	-6.711E-02	2.004E-01	1.657E-01	1.022E-01	FAIL ABUN
RE-183	4.728E-02	1.107E-01	9.632E-02	5.649E-02	FAIL ABUN
RE-184	-1.962E-02	2.125E-01	1.880E-01	1.084E-01	NOT IDENT.
OS-185	6.150E-03	4.035E-02	3.447E-02	2.059E-02	NOT IDENT.
RE-188	1.335E-01	1.706E-01	1.504E-01	8.703E-02	NOT IDENT.
W-188	-4.323E+00	7.752E+00	5.725E+00	3.955E+00	FAIL ABUN
IR-192	3.106E-02	3.246E-02	2.973E-02	1.656E-02	FAIL ABUN
AU-195	4.715E-01	2.376E-01	2.045E-01	1.212E-01	FAIL ABUN
TL-200	-7.559E+01	4.824E+02	0.000E+00	2.461E+02	SHORT HLIF
TL-201	-6.084E+00	7.082E+00	5.848E+00	3.613E+00	NOT IDENT.
TL-202	3.425E-02	6.242E-02	5.567E-02	3.185E-02	NOT IDENT.
HG-203	4.039E-03	4.360E-02	3.369E-02	2.224E-02	NOT IDENT.
BI-207	1.770E-02	5.413E-02	4.748E-02	2.762E-02	FAIL ABUN
TL-207	4.884E-02	6.969E-01	5.335E-01	3.556E-01	FAIL ABUN
PO-209	1.816E+00	7.062E+00	6.234E+00	3.603E+00	NOT IDENT.
BI-210	1.040E+00	2.270E+00	2.081E+00	1.158E+00	NOT IDENT.
PB-210	1.040E+00	2.270E+00	2.081E+00	1.158E+00	NOT IDENT.
PO-210	1.040E+00	2.269E+00	2.081E+00	1.158E+00	NOT IDENT.
PB-211	-1.222E+00	1.185E+00	7.421E-01	6.044E-01	NOT IDENT.
BI-212	1.421E+00	4.469E-01	3.210E-01	2.280E-01	FAIL ABUN
PO-215	4.884E-02	6.969E-01	5.335E-01	3.556E-01	FAIL ABUN
RN-219	2.388E-01	4.058E-01	3.616E-01	2.071E-01	NOT IDENT.
RN-220	1.428E+01	2.391E+01	2.121E+01	1.220E+01	NOT IDENT.
RA-223	4.884E-02	6.969E-01	5.335E-01	3.556E-01	FAIL ABUN
AC-227	-4.739E-02	3.533E-01	3.119E-01	1.803E-01	FAIL ABUN
TH-227	-4.739E-02	3.534E-01	3.119E-01	1.803E-01	FAIL ABUN
TH-229	9.357E-02	4.858E-01	4.287E-01	2.479E-01	FAIL ABUN
PA-231	-5.979E-01	1.509E+00	1.231E+00	7.701E-01	FAIL ABUN
TH-231	4.884E-02	6.969E-01	5.335E-01	3.556E-01	FAIL ABUN
U-231	4.412E-01	1.259E+00	9.771E-01	6.422E-01	FAIL ABUN
PA-233	-2.331E-02	5.909E-02	5.096E-02	3.015E-02	FAIL ABUN
PA-234	-3.409E-01	3.135E-01	2.423E-01	1.600E-01	FAIL ABUN
PA-234M	1.058E+01	5.001E+00	4.831E+00	2.551E+00	NOT IDENT.
U-235	-4.636E-02	2.104E-01	1.790E-01	1.073E-01	FAIL ABUN
NP-236	-1.268E-02	8.142E-02	6.940E-02	4.154E-02	NOT IDENT.
NP-239	8.430E-02	1.850E-01	1.632E-01	9.437E-02	FAIL ABUN
AM-241	4.417E-02	1.434E-01	1.125E-01	7.319E-02	NOT IDENT.
CM-243	-1.435E-01	9.686E-02	7.981E-02	4.942E-02	FAIL ABUN
AM-246	-9.734E-02	1.409E-01	1.135E-01	7.189E-02	NOT IDENT.
CM-247	1.701E-02	3.525E-02	3.135E-02	1.799E-02	FAIL ABUN
CF-249	-2.743E-03	3.509E-02	3.037E-02	1.790E-02	NOT IDENT.
CF-251	-6.679E-02	1.216E-01	1.014E-01	6.204E-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	446.0562
46.50	446.0562
46.50	446.0562
48.70	536.8607
49.72	534.4352
51.35	513.9707
52.39	515.5943
52.97	520.0225
53.15	518.0784
53.44	510.0509
54.07	543.2023
56.28	566.0801
56.28	566.0817
57.37	0.0000
57.53	531.6537
57.53	531.6547
57.60	531.6932
57.98	543.4345
57.98	543.4345
59.32	562.3388
59.32	562.3388
59.40	562.3856
59.54	565.7668
59.72	565.8725
60.01	566.0421
61.10	594.7646
61.14	594.7888
61.30	594.8866
63.00	657.9875
63.29	658.1799
63.29	658.1799
63.58	658.3709
64.28	692.8100
65.12	695.0461
65.20	695.1017
65.20	695.1017
66.05	699.0035
66.72	736.0116
66.83	736.0927
66.91	754.4286
67.20	754.6420
67.20	754.6420
67.75	775.4167
67.85	775.4907
68.90	657.6495
68.90	657.6495
69.30	660.6761
69.67	735.1940
70.82	735.5769
70.82	735.5769
70.83	735.5823
72.80	741.9534
72.87	742.0009
72.87	742.0009
74.67	706.1978
74.81	706.2878
74.81	706.2878
74.81	706.2878
74.81	706.2878
74.81	706.2878
74.81	706.2878
74.81	706.2878
74.97	706.3909
75.28	706.5904
75.70	706.8595
77.11	707.7607
77.11	707.7607

77.11	707.7607
77.11	707.7607
77.11	707.7607
77.11	707.7607
77.11	707.7607
78.38	616.3983
79.62	679.2891
79.80	679.3976
79.80	679.3976
80.11	763.6893
80.18	763.7365
80.30	763.8168
80.30	763.8168
80.57	799.3359
81.00	834.9898
81.07	835.0413
81.07	835.0413
81.07	835.0413
81.07	835.0413
82.60	682.7454
83.37	657.8917
83.78	702.4219
83.78	702.4219
83.78	702.4219
83.78	702.4219
84.21	668.4965
84.90	655.3776
85.43	662.4307
86.29	718.7180
86.50	718.8451
86.54	718.8710
86.59	718.8995
86.72	803.5659
86.79	803.6093
86.94	803.7137
87.30	839.4976
87.30	839.4976
87.30	839.4976
87.30	839.4976
87.30	839.4976
87.30	839.4976
87.57	839.6882
87.88	688.9856
88.03	689.0700
88.36	689.2612
88.47	689.3234
89.95	690.1677
91.11	690.8233
92.29	691.4863
92.38	691.5385
92.38	691.5385
93.35	692.0799
94.00	532.6807
94.67	560.2076
94.67	560.2097
94.90	575.6397
94.90	575.6397
94.90	575.6397
94.90	575.6397
95.87	567.5634
95.87	567.5634
96.73	571.3627
97.43	542.6651
98.44	445.7470
98.44	445.7470
98.88	434.2257
99.55	424.8882
99.55	424.8882
99.86	434.9123
100.00	457.4031
100.10	457.4391
103.18	550.6524
103.76	539.1059
105.00	473.0979
105.31	441.0163
108.00	489.2104
109.28	535.9507

111.00	455.8081
111.00	455.8081
111.76	475.4666
112.95	476.9553
115.19	491.7723
116.30	440.2408
117.00	418.8155
117.00	418.8155
117.66	427.6721
121.11	416.7642
121.62	431.0263
121.78	437.5882
122.06	432.2426
122.32	408.4229
122.32	408.4229
122.32	408.4229
122.32	408.4229
123.07	420.5885
127.23	446.8453
129.76	446.5106
131.20	439.2888
133.02	486.8614
133.54	461.8523
135.34	427.3332
136.00	418.7451
136.25	413.3303
136.48	427.6486
140.51	408.9639
140.51	0.0000
142.18	423.7021
142.65	431.5344
143.76	441.7510
144.24	442.9846
144.24	442.9846
144.24	442.9846
144.24	442.9846
145.22	456.4859
145.44	433.3908
147.16	418.3972
152.43	417.5326
152.70	417.6016
153.22	421.0551
154.21	414.6552
154.21	414.6552
154.21	414.6552
154.21	414.6552
155.03	400.4403
156.02	386.2484
158.56	436.8509
159.00	0.0000
159.00	434.7411
160.31	433.9625
161.27	426.4160
162.32	404.3953
162.64	403.3558
163.35	381.2301
163.89	373.5422
165.85	384.0133
167.43	398.8877
171.28	329.2135
171.86	322.6003
172.10	322.6443
176.55	369.4950
176.60	369.5050
181.06	375.2899
184.41	357.9273
185.71	370.2187
186.00	370.2762
190.27	377.1541
192.34	345.8505
193.63	358.6799
197.04	349.7310
198.01	370.8096
198.60	357.2860
200.40	362.1669
201.83	392.8728
202.84	397.8480
205.31	354.2570

208.36	372.7707
208.81	372.8553
209.75	373.0296
209.75	373.0296
210.97	332.3932
215.65	389.0563
216.55	348.6008
218.09	289.1890
222.10	332.9874
223.80	365.4804
226.40	310.6307
227.00	321.7834
227.08	321.7962
227.20	321.8132
228.16	316.4250
228.18	316.4292
228.18	316.4292
231.56	0.0000
235.69	311.6838
236.00	319.4451
236.00	319.4451
238.63	305.9288
238.63	305.9288
238.63	305.9288
238.63	305.9288
239.00	305.9811
240.98	306.2611
241.98	306.4021
241.98	306.4021
241.98	306.4021
244.69	230.8603
245.39	232.4844
247.94	254.4766
248.90	277.0959
249.79	270.2183
252.40	244.4129
252.85	254.7261
252.85	254.7261
254.15	0.0000
256.20	262.5808
256.20	262.5808
260.50	251.8427
260.90	251.8887
262.80	265.9186
264.65	187.5830
268.24	209.7921
268.79	209.8439
269.46	227.9180
269.46	227.9180
269.46	227.9180
269.46	227.9180
271.23	247.6851
273.65	240.0959
276.40	240.3761
277.35	229.8605
277.60	227.9225
277.60	227.9225
278.00	237.3937
278.60	240.5971
279.20	248.5240
279.53	239.1174
280.46	218.7514
281.68	231.4610
283.67	241.1076
284.30	229.0851
285.00	229.8889
285.90	224.2966
286.10	226.2068
286.10	226.2068
287.40	217.8065
288.45	0.0000
290.67	240.2245
290.80	240.2368
291.72	245.0698
293.26	0.0000
293.70	216.7857
295.21	207.4193
295.21	207.4193

295.21	207.4193
295.96	228.0703
296.50	228.1201
297.23	228.1875
298.57	228.3135
299.80	180.8363
299.80	180.8363
300.09	198.3083
300.09	198.3083
300.09	198.3083
300.09	198.3083
300.12	198.3109
301.29	198.4050
302.84	187.4095
303.76	200.1896
303.91	203.3776
304.40	197.0624
304.40	197.0624
304.84	217.7584
306.84	173.3905
308.46	173.2740
311.98	209.4482
316.51	185.8654
318.01	209.9400
319.02	220.5692
319.41	213.8889
320.08	207.2276
323.87	200.1648
323.87	200.1648
323.87	200.1648
323.87	200.1648
325.23	192.2583
328.77	202.1429
333.44	168.7494
334.20	199.3430
334.20	199.3430
334.30	199.3506
338.28	184.5113
338.28	184.5113
338.28	184.5113
338.28	184.5113
338.32	184.5160
338.32	184.5160
338.32	184.5160
340.50	206.2578
340.57	206.2630
344.27	222.6805
345.85	191.3257
350.59	0.0000
351.07	174.7068
351.92	174.7617
351.92	174.7617
351.92	174.7617
355.39	0.0000
356.01	176.6393
364.48	174.5753
366.43	162.9861
367.43	165.9720
367.94	0.0000
369.80	155.3627
374.96	165.4331
383.85	156.1236
387.95	147.4933
388.63	150.4786
391.69	142.7592
391.69	142.7592
392.90	138.8778
398.62	172.6993
400.65	159.9790
401.10	146.1753
401.81	166.9556
402.60	159.0956
404.84	205.6920
410.95	155.5722
411.60	160.5623
413.65	182.4884
414.70	163.7009
415.30	166.7101

415.76	158.7969
417.63	0.0000
418.52	155.9593
423.70	160.2021
427.08	137.4643
427.89	125.5447
432.53	126.7287
433.93	122.7913
439.47	118.0072
439.56	118.0115
439.89	120.0234
443.98	138.2055
444.90	138.2443
445.03	138.2510
445.03	138.2510
445.03	138.2510
445.03	138.2510
453.90	129.5905
463.38	120.9009
468.07	117.7106
473.00	118.2226
475.06	131.4409
475.35	139.5414
476.78	128.4728
477.59	120.4090
477.96	111.3159
482.03	139.8193
484.57	133.8418
487.03	96.3951
490.36	0.0000
492.35	129.0681
497.08	106.8572
507.63	0.0000
510.53	0.0000
510.84	118.5226
511.00	118.5283
511.85	118.5566
511.85	118.5566
513.99	109.0840
513.99	109.0840
520.41	111.6744
520.65	111.6824
527.90	128.3386
528.96	0.0000
529.64	116.0733
529.87	0.0000
531.02	107.8967
537.32	101.9101
543.00	107.2246
546.56	0.0000
549.76	95.0300
552.65	99.2391
555.20	123.1022
563.23	133.0456
563.90	134.7957
568.70	116.2820
569.32	116.3012
569.50	116.3066
569.67	116.3121
573.80	105.6976
574.00	105.7026
574.64	99.8273
578.91	78.0798
579.30	0.0000
583.14	104.2212
585.48	112.9751
591.81	107.5918
592.07	108.6439
593.00	108.6693
595.88	102.4765
600.56	103.3861
602.52	0.0000
602.71	111.7370
602.71	111.7370
603.60	104.7778
604.41	90.8265
604.70	94.3264
609.31	116.4741

609.31	116.4741
609.31	116.4741
609.31	116.4741
610.33	116.5039
612.46	105.0146
614.37	91.0571
618.01	107.7927
621.84	85.2656
621.84	85.2656
631.29	92.8533
633.02	101.3367
633.10	101.3391
634.78	109.8297
635.90	108.8038
636.97	98.2676
645.85	92.1295
646.12	91.0769
656.30	115.0142
657.75	100.8934
657.90	0.0000
661.65	108.4323
661.65	108.4323
664.57	0.0000
666.33	95.7832
666.33	95.7832
675.00	87.4493
677.61	84.3040
685.20	87.6635
692.80	96.3875
695.00	95.3664
696.49	102.9024
696.49	102.9024
697.00	100.7700
697.49	98.6372
698.33	110.4534
698.50	110.4585
699.00	100.8182
702.63	104.1234
706.10	105.2806
706.58	0.0000
706.67	109.5927
709.31	91.3833
711.68	96.8115
713.82	86.0977
717.42	74.3199
720.50	75.4500
721.93	0.0000
722.20	84.4665
722.78	95.2603
722.78	95.2603
722.89	95.2646
722.95	95.2646
723.30	77.2971
724.18	75.5149
727.18	68.0095
733.00	90.0777
735.90	63.6966
739.58	105.0068
742.81	80.1661
744.21	65.0200
747.13	92.1719
751.79	91.1818
752.31	72.7365
753.82	72.7611
755.35	81.4764
756.15	85.8373
756.87	72.8102
763.93	134.9650
765.79	84.9316
766.42	78.4090
766.84	83.8616
776.49	89.4953
778.00	94.9842
778.57	85.1678
778.89	79.7154
783.80	87.4512
785.46	85.2954
792.07	82.1320

795.84	75.6220
796.30	69.4193
798.80	98.7012
801.93	71.3318
805.60	58.2081
810.29	65.9619
810.76	68.1667
815.85	69.7069
817.79	60.5604
818.51	57.8167
819.60	67.0088
826.30	78.1328
828.27	0.0000
831.60	96.6238
831.96	96.6324
834.83	119.7089
836.80	0.0000
846.75	72.0031
848.13	69.2535
856.28	0.0000
856.80	79.2864
860.37	75.9057
867.32	90.5794
867.82	81.0536
871.10	79.9503
873.19	81.6711
874.81	75.1992
875.33	0.0000
876.40	75.2239
879.36	71.5515
880.27	81.7874
880.51	81.7910
881.50	91.1034
883.24	69.7464
884.67	44.6504
889.25	81.0032
896.60	69.0001
898.02	79.2776
899.00	92.3533
903.28	61.6212
911.07	77.6115
911.07	77.6115
911.07	77.6115
919.63	59.0087
920.93	62.3444
925.00	80.6355
925.24	84.3896
926.50	64.7142
935.52	68.5845
937.48	80.8297
944.10	77.1670
946.00	94.1406
949.00	72.5290
962.29	80.7390
964.01	77.7288
966.15	76.1390
968.20	98.8569
969.11	99.2792
969.11	99.2792
969.11	99.2792
977.42	63.0173
980.50	55.9043
983.50	66.3641
989.30	61.6900
996.32	104.5349
1001.03	53.2633
1001.68	55.1721
1004.76	83.7568
1021.30	0.0000
1024.50	0.0000
1034.80	67.9434
1036.00	61.2578
1037.82	60.3212
1038.57	60.3289
1038.76	0.0000
1045.16	62.3181
1046.59	65.2109
1048.07	61.3906

1050.47	60.4570
1050.47	60.4570
1062.04	75.9655
1063.62	73.1024
1076.63	53.0239
1077.35	63.6367
1078.86	78.1194
1085.78	54.0745
1099.22	72.5891
1112.02	60.3145
1112.84	72.1749
1115.52	83.1892
1120.29	64.9392
1120.29	64.9392
1120.29	64.9392
1120.29	64.9392
1120.51	84.5078
1121.28	80.6325
1124.00	0.0000
1129.67	90.2106
1131.51	0.0000
1147.95	0.0000
1167.94	102.8040
1173.22	90.1545
1175.09	101.9476
1177.93	93.1677
1189.05	93.3378
1204.90	92.5925
1205.75	0.0000
1213.00	93.6973
1221.42	92.8372
1230.97	95.9462
1235.34	93.3266
1236.41	0.0000
1238.25	113.7402
1246.25	77.3398
1260.41	0.0000
1271.85	53.7583
1274.45	63.7396
1274.54	63.7396
1291.56	58.9136
1298.22	0.0000
1312.09	51.0851
1325.50	52.1925
1325.50	52.1925
1332.49	44.2095
1333.61	48.2383
1360.21	41.3670
1362.66	0.0000
1365.15	33.3196
1368.21	22.2229
1368.53	0.0000
1376.25	22.5387
1384.27	26.0366
1394.10	29.4059
1395.20	27.3823
1407.95	24.3848
1434.06	23.4567
1436.60	29.5865
1457.56	0.0000
1460.81	29.6879
1489.15	19.5280
1509.49	16.4909
1596.49	22.9426
1620.62	24.0622
1678.03	0.0000
1691.02	14.7799
1691.02	14.7799
1706.46	0.0000
1750.46	0.0000
1764.49	11.7202
1764.49	11.7202
1764.49	11.7202
1764.49	11.7202
1770.23	9.1389
1771.40	10.9683
1791.20	0.0000
1808.65	12.8550

1836.01

15.0465

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G245396004

Total Uranium Activity	1.4159E+01	ug/g
Total Uranium Counting Unc.	5.6582E+00	ug/g
Total Uranium Tpu	2.8868E-06	ug/g
Total Uranium Mda	2.8974E+00	ug/g

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*****
*
*               GEL Laboratories LLC               *
*               2040 SAVAGE ROAD                   *
*               CHARLESTON ,SC 29417               *
*               GROSS GAMMA REPORT                 *
*
*****
*
*  BATCH ID      : 944962                          SAMPLE ID   : G245396004
*  ANALYST       : MXR1                             DETECTOR    : GAM14
*  SAMPLE DATE   : 21-JAN-2010 12:00:00.00          COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 5-FEB-2010 19:14:38.86          SAMPLE ALQT  : 139.850 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.039E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.562E+00
GROSS GAMMA MDA      (pCi/GRAM ) : 3.867E+00
GROSS GAMMA DLC      (pCi/GRAM ) : 1.889E+00

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VAX/VMS Nuclide Identification Report Generated 5-FEB-2010 21:16:34.27

```
*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                          *
*                               Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023707.CNF;1
Sample date        : 27-JAN-2010 00:00:00 Acquisition date : 5-FEB-2010 19:15:18.
Sample ID          : G1202023707 Sample quantity   : 1.44550E+02 GRAM
Detector name      : GAM20 Detector geometry: CAN
Elapsed live time  : 0 02:00:00.00 Elapsed real time: 0 02:00:32.56 0.5%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity        : 5.00000
Batch ID           : 944962 Detector SN#         :
Matrix Spike ID    : LCS ID                       : 1032-A
*****
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	185.71*	14	94	1.34	371.06	364	14	1.89E-03	174.0	

Flag: "*" = Peak area was modified by background subtraction

```

Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023707.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 27-JAN-2010 00:00:00 Acquisition date : 5-FEB-2010 19:15:18
Sample ID        : G1202023707 Sample quantity : 144.55 GRAM
Sample type      : SOLID Sample geometry :
Detector name    : GAMMA20 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:32.56 0.5%
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

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Full Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Line Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	477.59	*	8.986E-02	1.260E-01	2.248E-01	2.185E-02	0.400
NA-22	1274.54	*	-2.527E-03	1.898E-02	2.970E-02	2.461E-03	-0.085
NA-24	1368.53	*	-5.521E-04	1.898E-02	Half-Life too short		
AL-26	1129.67		-9.144E-02	6.908E-01	1.092E+00	9.251E-02	-0.084
	1808.65	*	1.448E-04	1.799E-02	2.965E-02	2.409E-03	0.005
K-40	1460.81	*	-8.045E-03	2.140E-01	3.859E-01	3.365E-02	-0.021
TI-44	67.85		-8.436E-03	1.378E-02	2.124E-02	1.598E-03	-0.397
	78.38	*	9.949E-03	1.053E-02	1.810E-02	1.519E-03	0.550
SC-46	889.25	*	1.677E-02	1.306E-02	2.691E-02	2.683E-03	0.623
	1120.51		-1.047E-02	1.854E-02	2.642E-02	2.260E-03	-0.396
V-48	944.10		-4.612E-02	3.019E-01	4.824E-01	4.707E-02	-0.096
	983.50	*	5.510E-03	2.920E-02	4.932E-02	4.714E-03	0.112
	1312.09		-2.892E-02	3.109E-02	3.883E-02	3.240E-03	-0.745
CR-51	320.08	*	-1.855E-01	1.510E-01	2.145E-01	2.150E-02	-0.865
MN-52	744.21		-7.357E-03	5.341E-02	8.731E-02	8.869E-03	-0.084
	848.13		-4.804E-01	1.531E+00	2.397E+00	2.416E-01	-0.200
	935.52		-1.711E-02	5.641E-02	8.762E-02	8.583E-03	-0.195
	1246.25		-4.006E-01	1.300E+00	1.934E+00	1.589E-01	-0.207
	1333.61		5.773E-01	1.031E+00	1.892E+00	1.585E-01	0.305
	1434.06	*	2.583E-03	7.006E-02	1.180E-01	9.983E-03	0.022
MN-54	834.83	*	4.136E-03	1.442E-02	2.510E-02	2.536E-03	0.165
CO-56	846.75	*	3.322E-03	1.590E-02	2.729E-02	2.750E-03	0.122
	977.42		2.232E-01	1.408E+00	2.371E+00	2.274E-01	0.094
	1037.82		-7.305E-02	1.110E-01	1.520E-01	1.467E-02	-0.480
	1175.09		-2.134E-01	7.275E-01	1.092E+00	8.788E-02	-0.195
	1238.25		2.879E-02	3.350E-02	6.215E-02	5.258E-03	0.463
	1360.21		-3.415E-01	4.214E-01	5.675E-01	4.771E-02	-0.602
	1771.40		-4.122E-02	1.216E-01	1.809E-01	1.483E-02	-0.228
CO-57	122.06	*	2.327E-03	9.933E-03	1.630E-02	1.361E-03	0.143
	136.48		6.978E-02	7.952E-02	1.373E-01	1.243E-02	0.508
CO-58	810.76	*	1.187E-02	1.562E-02	2.908E-02	2.953E-03	0.408
FE-59	142.65		1.862E-01	1.141E+00	1.830E+00	1.545E-01	0.102
	192.34		-1.681E-01	3.395E-01	5.288E-01	7.261E-02	-0.318
	1099.22	*	4.567E-03	3.764E-02	6.268E-02	5.912E-03	0.073

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-60	1291.56			1.248E-03	4.067E-02	6.602E-02	6.278E-03	0.019
	1173.22			-3.980E-03	1.252E-02	1.829E-02	1.471E-03	-0.218
	1332.49	*		2.088E-04	1.763E-02	2.840E-02	2.379E-03	0.007
ZN-65	1115.52	*		2.219E-02	3.277E-02	6.048E-02	5.206E-03	0.367
GE-68	1077.35	*		-1.084E-01	5.433E-01	8.517E-01	7.599E-02	-0.127
AS-73	53.44	*		-1.344E-01	2.024E-01	2.933E-01	2.177E-02	-0.458
AS-74	595.88	*		-1.202E-02	3.807E-02	5.818E-02	5.694E-03	-0.207
SE-75	634.78			5.836E-02	1.324E-01	2.359E-01	2.347E-02	0.247
	66.05			-2.371E+00	1.548E+00	2.202E+00	2.083E-01	-1.077
	96.73			-3.740E-01	2.857E-01	3.898E-01	5.383E-02	-0.960
	121.11			2.717E-02	5.200E-02	8.743E-02	9.627E-03	0.311
	136.00			1.227E-02	1.488E-02	2.558E-02	2.161E-03	0.480
	198.60			-3.019E-02	8.033E-01	1.264E+00	1.272E-01	-0.024
	264.65	*		-9.286E-03	1.818E-02	2.882E-02	2.853E-03	-0.322
	279.53			3.520E-02	4.517E-02	8.062E-02	8.253E-03	0.437
	303.91			-3.548E-01	8.474E-01	1.342E+00	1.660E-01	-0.264
	400.65			6.628E-02	1.147E-01	2.001E-01	2.195E-02	0.331
BR-77	87.88			-8.568E+00	1.204E+01	1.802E+01	1.702E+00	-0.475
	200.40			4.410E+00	1.374E+01	2.385E+01	2.193E+00	0.185
	239.00			-3.005E-01	9.635E-01	1.554E+00	1.499E-01	-0.193
	249.79			-3.753E+00	5.656E+00	8.818E+00	8.595E-01	-0.426
	281.68			3.455E+00	8.416E+00	1.457E+01	1.448E+00	0.237
	297.23			-1.033E-01	4.726E+00	7.844E+00	7.718E-01	-0.013
	303.76			-6.354E+00	1.582E+01	2.512E+01	2.457E+00	-0.253
	439.47			-3.510E+00	1.345E+01	2.114E+01	1.857E+00	-0.166
	484.57			-3.002E+00	2.256E+01	3.589E+01	3.279E+00	-0.084
	520.65	*		-5.424E-01	1.047E+00	1.559E+00	1.462E-01	-0.348
	574.64			3.305E+00	1.871E+01	3.088E+01	2.992E+00	0.107
	578.91			2.745E+00	8.527E+00	1.431E+01	1.389E+00	0.192
	585.48			2.341E+00	1.478E+01	2.429E+01	2.366E+00	0.096
	755.35			8.425E-01	1.570E+01	2.643E+01	2.685E+00	0.032
SR-82	817.79			2.738E+00	1.303E+01	2.235E+01	2.263E+00	0.123
	698.33			-1.498E+01	2.222E+01	2.613E+01	2.642E+00	-0.573
	776.49	*		-8.952E-02	1.286E-01	1.859E-01	1.889E-02	-0.482
RB-83	1395.20			5.571E+00	4.389E+00	9.126E+00	7.702E-01	0.610
	520.41	*		-1.536E-02	3.136E-02	4.692E-02	4.401E-03	-0.327
	529.64			3.954E-02	4.931E-02	8.777E-02	8.282E-03	0.451
RB-84	552.65			-1.979E-02	7.920E-02	1.219E-01	1.167E-02	-0.162
	881.50	*		-1.287E-02	2.205E-02	3.139E-02	3.137E-03	-0.410
KR-85	513.99	*		-7.769E+00	5.935E+00	8.550E+00	7.983E-01	-0.909
SR-85	513.99	*		-3.767E-02	2.878E-02	4.145E-02	3.871E-03	-0.909
RB-86	1076.63	*		-5.801E-02	2.862E-01	4.484E-01	4.003E-02	-0.129
Y-88	898.02			7.070E-03	2.122E-02	3.668E-02	3.660E-03	0.193
	1836.01	*		7.011E-05	1.646E-02	2.707E-02	2.184E-03	0.003
ZR-88	392.90	*		3.220E-03	1.373E-02	2.312E-02	1.933E-03	0.139
Y-91	1204.90	*		2.674E+00	5.153E+00	9.445E+00	7.669E-01	0.283
NB-94	702.63	*		-7.624E-03	1.558E-02	2.433E-02	2.462E-03	-0.313
	871.10			4.747E-04	1.404E-02	2.337E-02	2.342E-03	0.020
NB-95	765.79	*		3.143E-03	1.510E-02	2.605E-02	2.647E-03	0.121

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M	235.69	*		-2.294E-02	5.167E-02	8.372E-02	8.996E-03	-0.274
ZR-95	724.18			-2.350E-04	3.321E-02	5.551E-02	5.986E-03	-0.004
	756.15	*		-1.748E-03	2.937E-02	4.858E-02	5.302E-03	-0.036
NB-97	657.90	*		-5.207E-05	2.937E-02	Half-Life too short		
	1024.50			-1.541E-03	2.937E-02	Half-Life too short		
ZR-97	254.15			2.642E-03	2.937E-02	Half-Life too short		
	355.39			-2.880E-03	2.937E-02	Half-Life too short		
	507.63	*		-2.122E-02	2.937E-02	Half-Life too short		
	602.52			-1.863E-03	2.937E-02	Half-Life too short		
	1021.30			6.349E-05	2.937E-02	Half-Life too short		
	1147.95			2.750E-03	2.937E-02	Half-Life too short		
	1362.66			3.450E-03	2.937E-02	Half-Life too short		
	1750.46			-1.372E-02	2.937E-02	Half-Life too short		
MO-99	140.51			-3.615E+00	3.347E+00	4.386E+00	1.212E+00	-0.824
	181.06			9.347E-01	1.997E+00	2.969E+00	5.475E-01	0.315
	366.43			4.519E+00	1.135E+01	1.942E+01	1.726E+00	0.233
	739.58	*		1.732E-01	1.309E+00	2.232E+00	3.595E-01	0.078
	778.00			-1.663E+00	3.653E+00	5.596E+00	5.686E-01	-0.297
TC-99M	140.51	*		-8.396E+03	3.653E+00	Half-Life too short		
RH-101	127.23			-1.053E-02	1.233E-02	1.807E-02	1.507E-03	-0.583
	198.01	*		-8.890E-03	1.505E-02	2.251E-02	2.063E-03	-0.395
	325.23			6.415E-02	1.014E-01	1.781E-01	1.700E-02	0.360
RH-102	418.52			4.779E-02	1.317E-01	2.246E-01	1.932E-02	0.213
	475.06	*		2.243E-03	1.356E-02	2.249E-02	2.039E-03	0.100
	631.29			1.639E-02	2.266E-02	4.058E-02	4.031E-03	0.404
	697.49			-4.290E-02	5.806E-02	6.759E-02	6.832E-03	-0.635
	766.84			7.854E-03	4.123E-02	7.085E-02	7.201E-03	0.111
	1046.59			4.766E-03	4.130E-02	6.927E-02	6.342E-03	0.069
	1112.84			-1.594E-02	8.549E-02	1.334E-01	1.151E-02	-0.119
RU-103	497.08	*		8.467E-03	1.665E-02	2.880E-02	4.187E-03	0.294
	610.33			2.880E-02	3.785E-01	5.892E-01	1.022E-01	0.049
RH-106	511.85			-1.691E-01	1.417E-01	2.605E-01	2.429E-02	-0.649
	621.84	*		-1.340E-01	1.488E-01	1.985E-01	2.822E-02	-0.675
	1050.47			-9.224E-02	8.683E-01	1.385E+00	1.264E-01	-0.067
RU-106	511.85			-1.691E-01	1.417E-01	2.605E-01	2.429E-02	-0.649
	621.84	*		-1.340E-01	1.482E-01	1.985E-01	1.965E-02	-0.675
	1050.47			-9.224E-02	8.683E-01	1.385E+00	1.264E-01	-0.067
AG-108M	433.93	*		-5.345E-03	1.255E-02	1.906E-02	1.730E-03	-0.280
	614.37			-6.553E-03	1.874E-02	2.836E-02	2.883E-03	-0.231
	722.95			-6.772E-04	1.705E-02	2.836E-02	2.958E-03	-0.024
CD-109	88.03	*		-1.699E-01	2.614E-01	3.938E-01	3.724E-02	-0.432
AG-110M	657.75	*		-3.094E-03	1.535E-02	2.511E-02	2.572E-03	-0.123
	677.61			-1.473E-02	1.149E-01	1.888E-01	1.941E-02	-0.078
	706.67			-3.945E-02	9.587E-02	1.514E-01	1.564E-02	-0.261
	763.93			-1.366E-02	5.935E-02	9.488E-02	9.840E-03	-0.144
	884.67			-8.133E-04	1.589E-02	2.594E-02	2.652E-03	-0.031
	937.48			-1.070E-04	4.839E-02	7.964E-02	8.014E-03	-0.001
	1384.27			2.776E-02	6.292E-02	1.164E-01	1.010E-02	0.239
IN-111	171.28			3.583E-02	1.059E-01	1.737E-01	1.529E-02	0.206

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	245.39	*		6.887E-02	1.086E-01	1.933E-01	1.877E-02	0.356
IN-113M	391.69	*		1.300E-03	1.939E-02	3.206E-02	2.766E-03	0.041
SN-113	391.69	*		1.300E-03	1.939E-02	3.206E-02	2.766E-03	0.041
IN-114M	190.27	*		4.987E-02	6.506E-02	1.068E-01	9.675E-03	0.467
CD-115	260.90			-1.428E+00	9.676E+00	1.594E+01	1.568E+00	-0.090
	492.35			-4.885E-01	3.135E+00	4.962E+00	4.561E-01	-0.098
	527.90	*		4.384E-01	9.800E-01	1.678E+00	1.582E-01	0.261
SN-117M	156.02			1.995E-01	7.025E-01	1.148E+00	9.867E-02	0.174
	158.56	*		1.794E-03	1.721E-02	2.763E-02	2.385E-03	0.065
SB-122	563.90	*		2.758E-02	2.119E-01	3.480E-01	3.351E-02	0.079
	692.80			-2.727E-01	5.324E+00	8.875E+00	8.965E-01	-0.031
I-123	159.00	*		-3.689E-04	5.324E+00	Half-Life too short		
	528.96			9.972E-02	5.324E+00	Half-Life too short		
TE-123M	159.00	*		-1.485E-03	1.143E-02	1.793E-02	1.558E-03	-0.083
I-124	602.71	*		3.273E-03	1.467E-01	2.353E-01	2.311E-02	0.014
	722.78			1.185E-02	7.445E-01	1.249E+00	1.267E-01	0.009
	1325.50			7.199E+00	7.218E+00	1.381E+01	1.155E+00	0.521
	1376.25			-1.678E+00	4.235E+00	6.287E+00	5.296E-01	-0.267
	1509.49			9.117E-01	2.926E+00	5.229E+00	4.432E-01	0.174
	1691.02			-6.743E-01	8.603E-01	1.083E+00	9.030E-02	-0.623
SB-124	602.71			4.320E-04	1.935E-02	3.106E-02	3.050E-03	0.014
	645.85			9.202E-02	2.132E-01	3.795E-01	3.960E-02	0.242
	709.31			-1.940E-01	1.207E+00	1.978E+00	2.003E-01	-0.098
	713.82			-4.826E-02	7.486E-01	1.243E+00	1.636E-01	-0.039
	722.78			2.267E-03	1.424E-01	2.390E-01	2.462E-02	0.009
	968.20			5.871E-02	9.827E-01	1.631E+00	1.573E-01	0.036
	1045.16			5.544E-01	8.106E-01	1.524E+00	1.397E-01	0.364
	1325.50			1.471E+00	1.475E+00	2.821E+00	2.360E-01	0.521
	1368.21			-2.648E-01	7.499E-01	1.157E+00	1.544E-01	-0.229
	1436.60			2.518E-01	1.846E+00	3.172E+00	2.684E-01	0.079
	1691.02	*		-3.043E-02	3.883E-02	4.887E-02	4.247E-03	-0.623
SB-125	427.89	*		5.662E-02	4.173E-02	7.866E-02	6.962E-03	0.720
	463.38			2.519E-02	1.157E-01	1.937E-01	1.865E-02	0.130
	600.56			2.721E-03	1.013E-01	1.627E-01	1.687E-02	0.017
	635.90			3.120E-02	1.225E-01	2.136E-01	2.255E-02	0.146
TE-125M	109.28	*		2.092E+00	3.347E+00	5.683E+00	5.803E-01	0.368
I-126	388.63			-3.692E-02	6.765E-02	1.032E-01	8.695E-03	-0.358
	666.33	*		2.208E-02	6.409E-02	1.124E-01	1.129E-02	0.196
	753.82			4.069E-01	4.862E-01	9.069E-01	9.215E-02	0.449
SB-126	223.80			-8.134E-01	1.132E+00	1.768E+00	1.677E-01	-0.460
	278.60			-3.602E-01	7.937E-01	1.265E+00	1.259E-01	-0.285
	296.50			9.078E-02	4.214E-01	7.159E-01	7.048E-02	0.127
	414.70			-2.146E-02	2.399E-02	3.420E-02	2.930E-03	-0.627
	415.30			-4.565E-01	1.997E+00	3.165E+00	2.713E-01	-0.144
	555.20			7.474E-01	1.267E+00	2.223E+00	2.130E-01	0.336
	573.80			-2.468E-01	3.641E-01	5.208E-01	5.043E-02	-0.474
	593.00			-2.713E-02	3.268E-01	5.168E-01	5.051E-02	-0.052
	656.30			-3.940E-01	1.088E+00	1.736E+00	1.739E-01	-0.227
	666.33			9.116E-03	2.646E-02	4.640E-02	4.662E-03	0.196

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Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	675.00		-3.539E-01		5.714E-01	8.562E-01	8.619E-02	-0.413
	695.00		2.306E-02		2.860E-02	5.243E-02	5.298E-03	0.440
	697.00		-1.234E-01		1.497E-01	1.693E-01	1.711E-02	-0.729
	720.50	*	-3.956E-03		4.671E-02	7.722E-02	7.830E-03	-0.051
	856.80		1.096E-01		1.749E-01	3.143E-01	3.161E-02	0.349
	989.30		3.050E-01		4.351E-01	7.961E-01	7.583E-02	0.383
	1034.80		3.464E+00		2.500E+00	5.164E+00	4.770E-01	0.671
	1213.00		9.682E-01		1.241E+00	2.326E+00	1.894E-01	0.416
SN-126	64.28		-1.252E-01		1.656E-01	2.655E-01	3.845E-02	-0.471
	86.94		-1.375E-01		1.263E-01	1.618E-01	6.717E-02	-0.850
	87.57	*	-3.246E-02		2.705E-02	3.860E-02	3.631E-03	-0.841
SB-127	61.10		-9.127E+00		6.290E+00	8.976E+00	7.628E-01	-1.017
	252.40		7.527E-01		7.548E-01	1.266E+00	5.309E-01	0.595
	290.80		-3.578E+00		3.363E+00	4.900E+00	5.344E-01	-0.730
	411.60		-4.280E-02		1.910E+00	3.116E+00	4.589E-01	-0.014
	444.90		-1.278E+00		1.971E+00	2.952E+00	3.387E-01	-0.433
	473.00		-7.336E-03		3.034E-01	4.909E-01	5.892E-02	-0.015
	543.00		5.964E-01		3.189E+00	5.264E+00	7.339E-01	0.113
	603.60		7.016E-01		2.385E+00	3.953E+00	4.835E-01	0.177
	685.20	*	1.604E-01		2.455E-01	4.461E-01	5.047E-02	0.360
	698.50		-3.036E+00		4.415E+00	5.154E+00	8.134E-01	-0.589
	722.20		3.855E-01		4.680E+00	7.932E+00	8.835E-01	0.049
	783.80		7.705E-03		6.280E-01	1.048E+00	1.300E-01	0.007
XE-127	57.60		-7.500E-01		1.362E+00	2.121E+00	1.516E-01	-0.354
	145.22		-1.864E-01		2.912E-01	4.346E-01	3.682E-02	-0.429
	172.10		-7.210E-03		4.178E-02	6.494E-02	5.723E-03	-0.111
	202.84	*	-1.808E-03		1.639E-02	2.746E-02	2.534E-03	-0.066
	374.96		6.512E-03		8.454E-02	1.277E-01	1.114E-02	0.051
I-131	80.18		-5.916E-01		9.029E-01	1.389E+00	1.194E-01	-0.426
	284.30		-2.716E-01		4.327E-01	6.755E-01	6.954E-02	-0.402
	364.48	*	1.804E-02		3.761E-02	6.483E-02	6.062E-03	0.278
	636.97		1.163E-01		4.531E-01	7.893E-01	8.168E-02	0.147
	722.89		-3.639E-02		1.822E+00	3.040E+00	3.090E-01	-0.012
TE-132	49.72		-9.161E-01		1.529E+00	2.388E+00	2.136E-01	-0.384
	111.76		-2.853E+00		3.926E+00	5.912E+00	5.600E-01	-0.483
	116.30		-7.088E-01		3.523E+00	5.565E+00	5.241E-01	-0.127
	228.16	*	2.504E-04		8.876E-02	1.494E-01	2.307E-02	0.002
BA-133	53.15		-3.044E-01		9.014E-01	1.353E+00	1.008E-01	-0.225
	79.62		2.756E-01		3.835E-01	6.590E-01	9.994E-02	0.418
	81.00		-2.012E-02		2.999E-02	4.578E-02	7.278E-03	-0.439
	276.40		-2.501E-02		1.586E-01	2.607E-01	3.982E-02	-0.096
	302.84		-4.901E-03		5.867E-02	9.661E-02	1.360E-02	-0.051
	356.01	*	-2.671E-03		1.874E-02	3.038E-02	4.104E-03	-0.088
	383.85		-2.099E-02		1.264E-01	2.031E-01	2.547E-02	-0.103
I-133	510.53		-7.430E-03		1.264E-01	Half-Life	too short	
	529.87	*	2.869E-05		1.264E-01	Half-Life	too short	
	706.58		-1.092E-03		1.264E-01	Half-Life	too short	
	856.28		1.163E-03		1.264E-01	Half-Life	too short	
	875.33		7.520E-05		1.264E-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
CS-134	1236.41			2.074E-03	1.264E-01	Half-Life	too short	
	1298.22			-8.305E-05	1.264E-01	Half-Life	too short	
	475.35			1.909E-01	8.593E-01	1.437E+00	1.303E-01	0.133
	563.23			-8.460E-03	1.435E-01	2.283E-01	2.215E-02	-0.037
	569.32			4.885E-02	8.889E-02	1.540E-01	1.504E-02	0.317
	604.70			3.296E-03	1.732E-02	2.839E-02	2.795E-03	0.116
	795.84	*		-1.858E-02	1.839E-02	2.463E-02	2.513E-03	-0.754
	801.93			4.463E-02	2.067E-01	3.524E-01	3.590E-02	0.127
	1038.57			-7.441E-01	1.340E+00	1.872E+00	1.724E-01	-0.398
	1167.94			3.967E-01	6.315E-01	1.214E+00	9.823E-02	0.327
CS-135	1365.15			2.740E-01	5.313E-01	9.893E-01	8.720E-02	0.277
	268.24	*		-1.295E-02	6.185E-02	1.011E-01	1.121E-02	-0.128
	288.45			3.397E+03	6.185E-02	Half-Life	too short	
	417.63			-5.719E+02	6.185E-02	Half-Life	too short	
	546.56			0.000E+00	6.185E-02	Half-Life	too short	
	836.80			5.068E+03	6.185E-02	Half-Life	too short	
	1038.76			-6.221E+03	6.185E-02	Half-Life	too short	
	1124.00			-8.465E+03	6.185E-02	Half-Life	too short	
	1131.51			-1.374E+03	6.185E-02	Half-Life	too short	
	1260.41	*		-1.309E+03	6.185E-02	Half-Life	too short	
I-135	1457.56			-1.371E+04	6.185E-02	Half-Life	too short	
	1678.03			4.976E+03	6.185E-02	Half-Life	too short	
	1706.46			-8.633E+03	6.185E-02	Half-Life	too short	
	1791.20			-1.742E+03	6.185E-02	Half-Life	too short	
	66.91			-7.027E-02	1.779E-01	2.798E-01	4.145E-02	-0.251
	86.29			-1.458E-01	2.619E-01	3.982E-01	5.289E-02	-0.366
	153.22			-2.690E-02	1.998E-01	3.139E-01	3.007E-02	-0.086
	163.89			-1.038E-01	3.452E-01	5.007E-01	4.869E-02	-0.207
	176.55			-3.627E-02	9.746E-02	1.471E-01	1.376E-02	-0.247
	273.65			1.630E-01	1.422E-01	2.605E-01	2.714E-02	0.626
CS-136	340.57			-1.530E-02	4.246E-02	6.748E-02	6.454E-03	-0.227
	818.51			3.748E-02	2.405E-02	4.906E-02	4.969E-03	0.764
	1048.07	*		-9.522E-03	3.119E-02	4.743E-02	4.499E-03	-0.201
	1235.34			2.120E-03	1.726E-01	2.794E-01	3.224E-02	0.008
	661.65	*		-6.317E-03	1.739E-02	2.790E-02	2.800E-03	-0.226
	661.65	*		-6.678E-03	1.839E-02	2.949E-02	2.964E-03	-0.226
	165.85	*		-1.403E-03	1.143E-02	1.791E-02	1.563E-03	-0.078
	162.64			-3.319E-02	2.411E-01	3.565E-01	3.274E-02	-0.093
	304.84			-1.309E-01	3.879E-01	6.168E-01	1.752E-01	-0.212
	423.70			-3.949E-01	6.480E-01	9.504E-01	3.082E-01	-0.416
BA-137M	537.32	*		-1.236E-02	9.082E-02	1.432E-01	4.780E-02	-0.086
	328.77			-7.535E-03	9.753E-02	1.601E-01	1.592E-02	-0.047
	432.53			-6.521E-01	6.428E-01	8.796E-01	8.040E-02	-0.741
	487.03			3.210E-02	4.698E-02	8.301E-02	8.016E-03	0.387
	751.79			-2.316E-01	5.715E-01	8.931E-01	9.783E-02	-0.259
	815.85			-1.109E-01	1.152E-01	1.594E-01	1.752E-02	-0.695
	867.82			-1.396E-01	4.386E-01	6.825E-01	7.115E-02	-0.205
	919.63			6.190E-01	9.596E-01	1.744E+00	2.037E-01	0.355
	925.24			7.616E-02	3.591E-01	6.148E-01	6.343E-02	0.124
CS-137								
CE-139								
BA-140								
LA-140								

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	1596.49	*		1.020E-03	3.096E-02	5.179E-02	4.372E-03	0.020
CE-141	145.44	*		-5.409E-03	2.435E-02	3.809E-02	3.289E-03	-0.142
CE-143	57.37			-9.581E+00	1.814E+01	2.832E+01	2.647E+00	-0.338
	231.56			1.382E+01	7.395E+01	1.261E+02	4.044E+01	0.110
	293.26	*		-9.705E-01	3.461E+00	5.573E+00	1.242E+00	-0.174
	350.59			2.296E+01	5.215E+01	8.909E+01	2.797E+01	0.258
	490.36			-5.613E+01	9.005E+01	1.292E+02	4.126E+01	-0.435
	664.57			2.476E+01	4.316E+01	7.639E+01	2.515E+01	0.324
	721.93			4.058E+00	3.915E+01	6.654E+01	1.988E+01	0.061
CE-144	80.11			-3.856E-01	6.515E-01	1.008E+00	8.638E-02	-0.382
	133.54	*		-6.997E-02	8.031E-02	1.163E-01	1.794E-02	-0.602
PM-144	476.78			3.291E-03	2.979E-02	4.908E-02	4.833E-03	0.067
	618.01			1.896E-03	1.390E-02	2.271E-02	2.292E-03	0.083
	696.49	*		-1.098E-02	2.539E-02	3.057E-02	3.090E-03	-0.359
	778.57			-5.586E-01	9.851E-01	1.484E+00	1.508E-01	-0.376
PR-144	696.49	*		-7.417E-01	1.716E+00	2.066E+00	2.088E-01	-0.359
	1489.15			1.261E+00	4.329E+00	7.849E+00	6.654E-01	0.161
PM-146	453.90	*		3.184E-03	2.097E-02	3.477E-02	3.808E-03	0.092
	633.02			2.286E-01	6.387E-01	1.069E+00	4.028E-01	0.214
	735.90			6.742E-03	6.338E-02	1.077E-01	3.133E-02	0.063
	747.13			2.175E-02	3.930E-02	7.089E-02	1.066E-02	0.307
ND-147	91.11			7.170E-03	7.494E-02	1.225E-01	1.211E-02	0.059
	319.41			4.894E-01	1.053E+00	1.829E+00	1.759E-01	0.268
	439.89			-2.894E-01	1.837E+00	2.930E+00	2.575E-01	-0.099
	531.02	*		2.019E-01	1.932E-01	3.512E-01	5.422E-02	0.575
PM-149	285.90	*		7.792E+00	7.307E+00	1.328E+01	2.162E+00	0.587
EU-152	121.78			2.675E-03	3.002E-02	4.862E-02	4.710E-03	0.055
	244.69			3.116E-02	1.260E-01	2.165E-01	2.100E-02	0.144
	344.27	*		-1.233E-02	4.369E-02	6.986E-02	6.816E-03	-0.177
	443.98			7.086E-02	4.786E-01	7.934E-01	7.000E-02	0.089
	778.89			-3.783E-02	1.102E-01	1.729E-01	1.756E-02	-0.219
	867.32			1.434E-01	3.262E-01	5.832E-01	5.850E-02	0.246
	964.01			1.100E-01	1.137E-01	2.161E-01	2.088E-02	0.509
	1085.78			-8.352E-02	1.672E-01	2.434E-01	2.155E-02	-0.343
	1112.02			-1.017E-01	1.271E-01	1.691E-01	1.460E-02	-0.601
	1407.95			-4.922E-02	8.320E-02	1.199E-01	1.013E-02	-0.411
GD-153	69.67			-2.394E-01	4.537E-01	7.082E-01	5.418E-02	-0.338
	83.37			1.541E+00	4.612E+00	7.601E+00	6.776E-01	0.203
	97.43	*		-1.183E-02	2.782E-02	4.207E-02	3.731E-03	-0.281
	103.18			1.522E-02	3.597E-02	6.045E-02	5.229E-03	0.252
EU-154	123.07			6.646E-03	2.019E-02	3.341E-02	3.726E-03	0.199
	247.94			-2.609E-02	1.454E-01	2.394E-01	2.953E-02	-0.109
	591.81			1.645E-01	2.861E-01	5.037E-01	6.318E-02	0.327
	723.30			-1.801E-02	7.217E-02	1.161E-01	1.269E-02	-0.155
	756.87			5.365E-02	3.339E-01	5.710E-01	7.497E-02	0.094
	873.19			9.032E-02	1.266E-01	2.341E-01	3.105E-02	0.386
	996.32			-5.897E-02	1.327E-01	1.941E-01	3.533E-02	-0.304
	1004.76			-1.086E-02	1.012E-01	1.627E-01	1.994E-02	-0.067
	1274.45	*		-1.403E-03	5.193E-02	8.320E-02	9.193E-03	-0.017

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155	48.70			-1.847E-01	6.019E-01	9.693E-01	7.757E-02	-0.191
	60.01			5.420E-01	1.283E+00	2.187E+00	1.551E-01	0.248
	86.54			-2.314E-02	3.183E-02	4.766E-02	4.462E-03	-0.485
TB-160	105.31	*		-4.703E-02	4.136E-02	5.737E-02	4.988E-03	-0.820
	86.79			-9.615E-02	8.332E-02	1.196E-01	1.114E-02	-0.804
	197.04			6.884E-02	2.056E-01	3.576E-01	3.274E-02	0.192
	215.65			-9.539E-03	2.806E-01	4.721E-01	4.433E-02	-0.020
	298.57			6.126E-03	4.563E-02	7.686E-02	7.554E-03	0.080
	879.36	*		6.453E-03	4.952E-02	8.405E-02	8.403E-03	0.077
	962.29			-1.115E-01	2.018E-01	2.969E-01	2.871E-02	-0.376
	966.15			3.985E-02	7.558E-02	1.351E-01	1.304E-02	0.295
HO-166M	1177.93			7.433E-02	1.214E-01	2.227E-01	1.793E-02	0.334
	1271.85			-5.826E-02	2.638E-01	4.020E-01	3.324E-02	-0.145
	80.57			-4.899E-02	8.249E-02	1.274E-01	1.098E-02	-0.384
	184.41			7.954E-03	2.769E-02	2.879E-02	2.586E-03	0.276
	280.46			9.618E-03	3.681E-02	6.290E-02	6.259E-03	0.153
	410.95			-3.482E-02	1.021E-01	1.594E-01	1.360E-02	-0.218
	711.68	*		1.467E-02	2.958E-02	5.262E-02	5.331E-03	0.279
	752.31			5.096E-02	1.180E-01	2.097E-01	2.131E-02	0.243
TM-171	810.29			9.587E-03	2.299E-02	4.102E-02	4.158E-03	0.234
	51.35			-4.000E+00	7.147E+00	1.116E+01	8.524E-01	-0.359
	52.39			5.663E-01	3.827E+00	6.028E+00	4.536E-01	0.094
LU-176	59.40			3.669E+00	6.736E+00	1.161E+01	8.212E-01	0.316
	66.72	*		-1.216E+01	9.151E+00	1.330E+01	9.909E-01	-0.914
	88.36			-9.537E-03	6.038E-02	9.519E-02	8.976E-03	-0.100
	201.83			-8.300E-03	1.152E-02	1.825E-02	1.682E-03	-0.455
LU-177	306.84	*		-3.460E-03	1.063E-02	1.703E-02	1.661E-03	-0.203
	401.10			2.121E+00	2.770E+00	4.967E+00	4.193E-01	0.427
	112.95			6.180E-03	3.711E-01	5.988E-01	5.048E-02	0.010
LU-177M	208.36	*		-1.075E-01	2.316E-01	3.747E-01	3.485E-02	-0.287
	52.97			-8.256E-02	4.027E-01	6.143E-01	4.587E-02	-0.134
	54.07			-9.398E-02	2.136E-01	3.173E-01	2.338E-02	-0.296
	61.30			-7.828E-01	4.236E-01	5.804E-01	4.152E-02	-1.349
	121.62			6.270E-02	1.464E-01	2.443E-01	2.037E-02	0.257
	147.16			-5.762E-03	2.667E-01	4.246E-01	3.605E-02	-0.014
	171.86			-2.731E-02	1.824E-01	2.843E-01	2.505E-02	-0.096
	218.09			6.782E-02	3.531E-01	6.048E-01	5.697E-02	0.112
	268.79			-1.050E-01	3.031E-01	4.880E-01	4.828E-02	-0.215
	319.02			9.923E-02	1.176E-01	2.104E-01	2.025E-02	0.472
	367.43			6.715E-02	4.465E-01	7.463E-01	6.620E-02	0.090
	413.65	*		-1.767E-02	7.035E-02	1.110E-01	9.502E-03	-0.159
	56.28			-1.197E-01	2.234E-01	3.495E-01	2.522E-02	-0.343
	57.53			-6.324E-02	1.162E-01	1.812E-01	1.295E-02	-0.349
HF-181	65.20			-6.746E-02	2.648E-01	4.226E-01	3.109E-02	-0.160
	133.02			-2.496E-02	2.373E-02	3.386E-02	2.833E-03	-0.737
	136.25			1.420E-01	1.618E-01	2.796E-01	2.346E-02	0.508
	345.85			2.509E-02	7.979E-02	1.361E-01	1.259E-02	0.184
	482.03	*		-1.046E-03	1.684E-02	2.705E-02	2.467E-03	-0.039
W-181	56.28			-4.962E-02	9.251E-02	1.448E-01	1.044E-02	-0.343

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TA-182	57.53			-2.620E-02	4.817E-02	7.510E-02	5.369E-03	-0.349
	65.20	*		-2.774E-02	1.089E-01	1.738E-01	1.279E-02	-0.160
	67.75			-1.059E-02	3.132E-02	4.944E-02	3.717E-03	-0.214
	100.10			1.874E-02	6.167E-02	1.025E-01	8.977E-03	0.183
	152.43			-2.551E-02	1.268E-01	1.977E-01	1.691E-02	-0.129
	222.10			1.316E-02	1.305E-01	2.219E-01	2.100E-02	0.059
	1001.68			4.091E-01	9.575E-01	1.719E+00	1.625E-01	0.238
RE-183	1121.28			-3.145E-02	5.143E-02	7.226E-02	6.176E-03	-0.435
	1189.05			2.727E-02	1.018E-01	1.751E-01	1.415E-02	0.156
	1221.42	*		6.055E-03	6.734E-02	1.110E-01	9.059E-03	0.055
	1230.97			-6.784E-02	1.504E-01	2.152E-01	1.760E-02	-0.315
	57.98			-3.611E-03	4.691E-02	7.664E-02	5.463E-03	-0.047
	59.32			1.439E-02	2.641E-02	4.550E-02	3.221E-03	0.316
	67.20			-1.884E-02	5.750E-02	9.106E-02	6.813E-03	-0.207
RE-184	162.32	*		1.085E-02	4.083E-02	6.659E-02	5.780E-03	0.163
	208.81			-4.324E-02	3.370E-01	5.627E-01	5.236E-02	-0.077
	291.72			-9.412E-02	3.436E-01	5.543E-01	5.477E-02	-0.170
	57.98			-1.372E-02	1.782E-01	2.913E-01	2.076E-02	-0.047
	59.32			5.463E-02	1.003E-01	1.728E-01	1.223E-02	0.316
	67.20			-7.157E-02	2.185E-01	3.460E-01	2.588E-02	-0.207
	161.27			-3.344E-02	1.380E-01	2.137E-01	1.852E-02	-0.156
OS-185	216.55			2.262E-02	1.048E-01	1.800E-01	1.692E-02	0.126
	252.85	*		1.131E-01	9.705E-02	1.786E-01	1.745E-02	0.633
	318.01			2.804E-01	2.017E-01	3.766E-01	3.629E-02	0.745
	792.07			-5.839E-02	3.620E-01	5.847E-01	5.937E-02	-0.100
	903.28			-2.434E-01	4.690E-01	7.065E-01	7.011E-02	-0.344
	920.93			-1.575E-02	2.077E-01	3.379E-01	3.331E-02	-0.047
	59.72			3.912E-02	7.189E-02	1.238E-01	8.771E-03	0.316
RE-188	61.14			-6.613E-02	4.461E-02	6.357E-02	4.543E-03	-1.040
	69.30			-3.443E-02	7.986E-02	1.259E-01	9.596E-03	-0.274
	592.07			5.635E-01	1.137E+00	1.981E+00	1.936E-01	0.284
	646.12	*		7.270E-03	1.879E-02	3.325E-02	3.320E-03	0.219
	717.42			1.454E-01	3.998E-01	7.022E-01	7.118E-02	0.207
	874.81			7.056E-02	2.437E-01	4.231E-01	4.236E-02	0.167
	880.27			9.281E-02	2.671E-01	4.733E-01	4.731E-02	0.196
W-188	155.03	*		1.165E-02	6.457E-02	1.046E-01	8.976E-03	0.111
	477.96			1.553E-01	1.255E+00	2.073E+00	1.884E-01	0.075
	633.10			3.340E-02	1.281E+00	2.052E+00	2.040E-01	0.016
IR-192	290.67	*		-3.059E+00	2.872E+00	4.189E+00	4.142E-01	-0.730
	295.96			5.430E-03	4.089E-02	6.893E-02	6.827E-03	0.079
	308.46			-8.869E-03	4.211E-02	6.842E-02	6.690E-03	-0.130
AU-195	316.51	*		1.191E-02	1.609E-02	2.845E-02	2.751E-03	0.419
	468.07			1.745E-02	2.570E-02	4.574E-02	4.395E-03	0.381
	604.41			7.323E-02	2.277E-01	3.788E-01	5.245E-02	0.193
	612.46			1.129E-01	3.183E-01	5.338E-01	5.870E-02	0.212
	65.12			-6.632E-03	5.141E-02	8.289E-02	6.095E-03	-0.080
	66.83			-1.145E-02	2.764E-02	4.344E-02	3.239E-03	-0.264

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	75.70			-2.973E-02	4.993E-02	7.726E-02	6.290E-03	-0.385
	98.88	*		-5.891E-02	8.626E-02	1.279E-01	1.126E-02	-0.461
	129.76			8.525E-01	1.036E+00	1.785E+00	1.491E-01	0.478
TL-200	367.94	*		2.644E-06	1.036E+00	Half-Life too short		
	579.30			1.957E-06	1.036E+00	Half-Life too short		
	828.27			1.565E-07	1.036E+00	Half-Life too short		
	1205.75			-5.143E-06	1.036E+00	Half-Life too short		
TL-201	68.90			-2.782E-01	3.984E-01	6.120E-01	4.648E-02	-0.455
	70.82			2.554E-02	2.133E-01	3.528E-01	2.729E-02	0.072
	80.30			-3.141E-01	4.602E-01	7.055E-01	6.057E-02	-0.445
	135.34			1.524E+00	2.863E+00	4.814E+00	4.036E-01	0.317
	167.43	*		-6.989E-03	8.439E-01	1.338E+00	1.170E-01	-0.005
TL-202	68.90			-6.209E-02	8.892E-02	1.366E-01	1.037E-02	-0.455
	70.82			5.686E-03	4.748E-02	7.852E-02	6.074E-03	0.072
	80.30			-6.994E-02	1.025E-01	1.571E-01	1.349E-02	-0.445
	439.56	*		-5.656E-03	2.273E-02	3.579E-02	3.144E-03	-0.158
HG-203	70.83			3.190E-02	2.571E-01	4.253E-01	5.555E-02	0.075
	72.87			-4.114E-02	1.524E-01	2.432E-01	3.098E-02	-0.169
	82.60			-1.478E-01	3.107E-01	4.841E-01	6.718E-02	-0.305
	279.20	*		1.223E-02	1.590E-02	2.838E-02	2.886E-03	0.431
BI-207	72.80			-1.377E-02	4.867E-02	7.761E-02	6.124E-03	-0.177
	74.97			-2.377E-02	2.842E-02	4.292E-02	3.466E-03	-0.554
	84.90			-4.725E-02	6.240E-02	9.365E-02	8.512E-03	-0.505
	569.67			1.087E-03	1.453E-02	2.358E-02	2.278E-03	0.046
	1063.62	*		2.947E-03	1.913E-02	3.231E-02	2.917E-03	0.091
	1770.23			-1.047E-01	2.996E-01	4.520E-01	3.708E-02	-0.232
TL-207	81.07			-4.445E-02	6.599E-02	1.011E-01	8.765E-03	-0.439
	83.78			4.596E-03	4.039E-02	6.542E-02	5.863E-03	0.070
	94.90			-2.393E-01	1.013E-01	1.312E-01	1.180E-02	-1.824
	122.32			2.340E-01	6.793E-01	1.126E+00	1.012E-01	0.208
	144.24			-5.014E-02	3.214E-01	5.020E-01	4.769E-02	-0.100
	154.21			-2.845E-02	1.562E-01	2.441E-01	2.304E-02	-0.117
	269.46			-8.001E-02	7.650E-02	1.133E-01	1.139E-02	-0.706
	323.87	*		1.826E-01	2.962E-01	5.181E-01	9.422E-02	0.352
	338.28			-7.714E-04	4.671E-01	7.719E-01	9.917E-02	-0.001
	445.03			-9.136E-01	1.182E+00	1.734E+00	2.123E-01	-0.527
TL-208	277.35			-1.904E-01	1.686E-01	2.475E-01	3.290E-02	-0.770
	510.84			-1.508E-01	1.334E-01	2.448E-01	3.060E-02	-0.616
	583.14	*		-1.970E-02	1.979E-02	2.705E-02	2.781E-03	-0.728
	860.37			-5.897E-02	1.428E-01	2.199E-01	2.331E-02	-0.268
PO-209	260.50			-6.809E-01	3.707E+00	6.082E+00	5.981E-01	-0.112
	262.80			6.778E+00	1.089E+01	1.929E+01	1.900E+00	0.351
	896.60	*		5.356E+00	3.639E+00	7.222E+00	7.183E-01	0.742
BI-210	46.50	*		3.327E-01	9.376E-01	1.554E+00	1.441E-01	0.214
PB-210	46.50	*		3.327E-01	9.376E-01	1.554E+00	1.441E-01	0.214
PO-210	46.50	*		3.327E-01	9.375E-01	1.554E+00	1.304E-01	0.214
BI-211	72.87			-2.239E-01	8.289E-01	1.323E+00	1.045E-01	-0.169
	351.07	*		1.400E-02	1.022E-01	1.623E-01	1.555E-02	0.086
PB-211	404.84	*		-1.086E-01	3.846E-01	5.955E-01	3.730E-01	-0.182

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BI-212		427.08		3.393E-01	9.847E-01	1.638E+00	1.018E+00	0.207
		831.96		-1.238E-01	4.733E-01	7.359E-01	4.628E-01	-0.168
		727.18	*	-5.727E-02	1.136E-01	1.737E-01	1.971E-02	-0.330
		785.46		-1.017E-01	7.427E-01	1.209E+00	1.228E-01	-0.084
PB-212		1620.62		1.627E-02	5.537E-01	9.256E-01	7.794E-02	0.018
		74.81		-7.866E-02	9.978E-02	1.512E-01	1.866E-02	-0.520
		77.11		-4.572E-02	6.062E-02	9.081E-02	7.510E-03	-0.504
		87.30		-1.667E-01	1.283E-01	1.798E-01	2.464E-02	-0.927
PO-212		238.63	*	-4.792E-03	2.839E-02	4.632E-02	4.926E-03	-0.103
		300.09		2.008E-01	3.115E-01	5.504E-01	6.294E-02	0.365
		74.81		-7.866E-02	9.978E-02	1.512E-01	1.866E-02	-0.520
		77.11		-4.572E-02	6.062E-02	9.081E-02	7.510E-03	-0.504
BI-214		87.30		-1.667E-01	1.283E-01	1.798E-01	2.464E-02	-0.927
		115.19		-9.829E-02	1.400E+00	2.240E+00	1.881E-01	-0.044
		238.63	*	-4.792E-03	2.839E-02	4.632E-02	4.926E-03	-0.103
		300.09		2.008E-01	3.115E-01	5.504E-01	6.294E-02	0.365
PB-214		609.31	*	-7.027E-03	4.067E-02	6.153E-02	6.847E-03	-0.114
		1120.29		-1.066E-01	1.189E-01	1.551E-01	1.678E-02	-0.688
		1764.49		5.325E-02	1.174E-01	2.143E-01	1.760E-02	0.248
		74.81		-1.355E-01	1.717E-01	2.605E-01	2.852E-02	-0.520
PO-214		77.11		-7.838E-02	1.041E-01	1.557E-01	1.751E-02	-0.504
		87.30		-2.855E-01	2.191E-01	3.080E-01	3.737E-02	-0.927
		241.98		-1.668E-01	1.403E-01	2.074E-01	2.320E-02	-0.804
		295.21		2.397E-02	5.447E-02	9.460E-02	1.104E-02	0.253
PO-215		351.92	*	-1.151E-02	3.503E-02	5.266E-02	5.739E-03	-0.219
		74.81		-1.355E-01	1.717E-01	2.605E-01	2.852E-02	-0.520
		77.11		-7.838E-02	1.041E-01	1.557E-01	1.751E-02	-0.504
		87.30		-2.855E-01	2.191E-01	3.080E-01	3.737E-02	-0.927
PO-216		241.98		-1.668E-01	1.403E-01	2.074E-01	2.320E-02	-0.804
		295.21		2.397E-02	5.447E-02	9.460E-02	1.104E-02	0.253
		351.92	*	-1.151E-02	3.503E-02	5.266E-02	5.739E-03	-0.219
		81.07		-4.445E-02	6.599E-02	1.011E-01	8.765E-03	-0.439
PO-218		83.78		4.596E-03	4.039E-02	6.542E-02	5.863E-03	0.070
		94.90		-2.393E-01	1.013E-01	1.312E-01	1.180E-02	-1.824
		122.32		2.340E-01	6.793E-01	1.126E+00	1.012E-01	0.208
		144.24		-5.014E-02	3.214E-01	5.020E-01	4.769E-02	-0.100
PO-216		154.21		-2.845E-02	1.562E-01	2.441E-01	2.304E-02	-0.117
		269.46		-8.001E-02	7.650E-02	1.133E-01	1.139E-02	-0.706
		323.87	*	1.826E-01	2.962E-01	5.181E-01	9.422E-02	0.352
		338.28		-7.714E-04	4.671E-01	7.719E-01	9.917E-02	-0.001
PO-216		445.03		-9.136E-01	1.182E+00	1.734E+00	2.123E-01	-0.527
		74.81		-7.866E-02	9.978E-02	1.512E-01	1.866E-02	-0.520
		77.11		-4.572E-02	6.062E-02	9.081E-02	7.510E-03	-0.504
		87.30		-1.667E-01	1.283E-01	1.798E-01	2.464E-02	-0.927
PO-218		238.63	*	-4.792E-03	2.839E-02	4.632E-02	4.926E-03	-0.103
		300.09		2.008E-01	3.115E-01	5.504E-01	6.294E-02	0.365
		74.81		-1.355E-01	1.717E-01	2.605E-01	2.852E-02	-0.520
		77.11		-7.838E-02	1.041E-01	1.557E-01	1.751E-02	-0.504
		87.30		-2.855E-01	2.191E-01	3.080E-01	3.737E-02	-0.927

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	241.98			-1.668E-01	1.403E-01	2.074E-01	2.320E-02	-0.804
	295.21			2.397E-02	5.447E-02	9.460E-02	1.104E-02	0.253
	351.92	*		-1.151E-02	3.503E-02	5.266E-02	5.739E-03	-0.219
RN-219	271.23			-2.310E-02	9.687E-02	1.579E-01	1.802E-02	-0.146
	401.81	*		-1.001E-01	1.820E-01	2.759E-01	4.119E-02	-0.363
RN-220	549.76	*		-4.009E+00	1.124E+01	1.699E+01	1.623E+00	-0.236
RA-223	81.07			-4.445E-02	6.599E-02	1.011E-01	8.765E-03	-0.439
	83.78			4.596E-03	4.039E-02	6.542E-02	5.863E-03	0.070
	94.90			-2.393E-01	1.013E-01	1.312E-01	1.180E-02	-1.824
	122.32			2.340E-01	6.793E-01	1.126E+00	1.012E-01	0.208
	144.24			-5.014E-02	3.214E-01	5.020E-01	4.769E-02	-0.100
	154.21			-2.845E-02	1.562E-01	2.441E-01	2.304E-02	-0.117
	269.46			-8.001E-02	7.650E-02	1.133E-01	1.139E-02	-0.706
	323.87	*		1.826E-01	2.962E-01	5.181E-01	9.422E-02	0.352
	338.28			-7.714E-04	4.671E-01	7.719E-01	9.917E-02	-0.001
	445.03			-9.136E-01	1.182E+00	1.734E+00	2.123E-01	-0.527
RA-224	240.98	*		-4.414E-01	2.711E-01	3.801E-01	3.674E-02	-1.161
RA-226	609.31	*		-7.027E-03	4.067E-02	6.153E-02	6.847E-03	-0.114
	1120.29			-1.066E-01	1.189E-01	1.551E-01	1.678E-02	-0.688
	1764.49			5.325E-02	1.174E-01	2.143E-01	1.760E-02	0.248
AC-227	79.80			6.136E-02	5.021E-01	8.266E-01	1.775E-01	0.074
	236.00			-3.533E-02	1.006E-01	1.643E-01	2.130E-02	-0.215
	256.20	*		2.247E-02	1.473E-01	2.504E-01	4.017E-02	0.090
	286.10			6.765E-01	6.574E-01	1.194E+00	1.681E-01	0.567
	299.80			2.866E-01	5.876E-01	1.021E+00	1.849E-01	0.281
	304.40			-3.137E-01	7.683E-01	1.214E+00	2.308E-01	-0.258
	334.20			3.208E-01	1.110E+00	1.883E+00	3.725E-01	0.170
TH-227	79.80			6.136E-02	5.021E-01	8.266E-01	1.797E-01	0.074
	94.00			-1.167E+00	9.029E-01	1.457E+00	3.198E-01	-0.801
	236.00			-3.533E-02	1.006E-01	1.643E-01	1.950E-02	-0.215
	256.20	*		2.247E-02	1.473E-01	2.504E-01	4.672E-02	0.090
	286.10			6.765E-01	9.409E-01	1.194E+00	1.200E+00	0.567
	299.80			2.866E-01	5.876E-01	1.021E+00	1.849E-01	0.281
	304.40			-3.137E-01	7.683E-01	1.214E+00	2.308E-01	-0.258
	334.20			3.208E-01	1.110E+00	1.883E+00	3.725E-01	0.170
AC-228	338.32			-1.968E-03	1.117E-01	1.843E-01	7.634E-02	-0.011
	911.07	*		-4.578E-02	5.947E-02	8.448E-02	1.035E-02	-0.542
	969.11			-9.849E-02	1.143E-01	1.510E-01	3.584E-02	-0.652
RA-228	338.32			-1.968E-03	1.117E-01	1.843E-01	7.634E-02	-0.011
	911.07	*		-4.578E-02	5.947E-02	8.448E-02	1.035E-02	-0.542
	969.11			-9.849E-02	1.143E-01	1.510E-01	3.584E-02	-0.652
TH-228	74.81			-7.943E-02	1.005E-01	1.527E-01	1.243E-02	-0.520
	77.11			-4.617E-02	6.122E-02	9.170E-02	7.584E-03	-0.504
	87.30			-1.683E-01	1.285E-01	1.815E-01	1.702E-02	-0.927
	238.63	*		-4.839E-03	2.867E-02	4.678E-02	4.974E-03	-0.103
	300.09			2.027E-01	3.361E-01	5.558E-01	3.305E-01	0.365
TH-229	85.43			-3.362E-02	6.005E-02	9.168E-02	8.388E-03	-0.367
	88.47			4.113E-04	3.450E-02	5.519E-02	5.199E-03	0.007
	100.00			2.007E-02	6.609E-02	1.099E-01	9.624E-03	0.183

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-230	193.63	*		3.716E-02	1.912E-01	3.295E-01	3.000E-02	0.113
	210.97			3.013E-01	2.776E-01	5.104E-01	4.763E-02	0.590
	609.31	*		-7.027E-03	4.067E-02	6.153E-02	6.847E-03	-0.114
	1120.29			-1.066E-01	1.189E-01	1.551E-01	1.678E-02	-0.688
PA-231	1764.49			5.325E-02	1.174E-01	2.143E-01	1.760E-02	0.248
	283.67	*		-7.014E-01	7.184E-01	1.068E+00	1.706E-01	-0.656
	301.29			-3.224E-02	2.346E-01	3.844E-01	5.037E-02	-0.084
TH-231	81.07			-4.445E-02	6.599E-02	1.011E-01	8.765E-03	-0.439
	83.78			4.596E-03	4.039E-02	6.542E-02	5.863E-03	0.070
	94.90			-2.393E-01	1.013E-01	1.312E-01	1.180E-02	-1.824
	122.32			2.340E-01	6.793E-01	1.126E+00	1.012E-01	0.208
U-231	144.24			-5.014E-02	3.214E-01	5.020E-01	4.769E-02	-0.100
	154.21			-2.845E-02	1.562E-01	2.441E-01	2.304E-02	-0.117
	269.46			-8.001E-02	7.650E-02	1.133E-01	1.139E-02	-0.706
	323.87	*		1.826E-01	2.962E-01	5.181E-01	9.422E-02	0.352
	338.28			-7.714E-04	4.671E-01	7.719E-01	9.917E-02	-0.001
	445.03			-9.136E-01	1.182E+00	1.734E+00	2.123E-01	-0.527
	84.21			5.526E-02	7.142E-01	1.153E+00	1.039E-01	0.048
	92.29			-3.801E-01	3.752E-01	6.367E-01	5.823E-02	-0.597
	95.87	*		-7.115E-01	2.093E-01	2.306E-01	2.063E-02	-3.085
	108.00			1.303E-01	3.220E-01	5.381E-01	4.586E-02	0.242
TH-232	338.32			-1.968E-03	1.117E-01	1.843E-01	1.727E-02	-0.011
	911.07	*		-4.578E-02	5.947E-02	8.448E-02	1.035E-02	-0.542
	969.11			-9.849E-02	1.143E-01	1.510E-01	3.584E-02	-0.652
PA-233	75.28			-7.336E-01	8.103E-01	1.203E+00	1.812E-01	-0.610
	86.59			-3.827E-01	5.269E-01	7.743E-01	2.094E-01	-0.494
	300.12			1.043E-01	1.614E-01	2.846E-01	4.439E-02	0.366
	311.98	*		8.048E-03	2.980E-02	5.075E-02	5.035E-03	0.159
PA-234	340.50			-9.616E-02	2.735E-01	4.337E-01	1.045E-01	-0.222
	398.62			6.099E-01	9.858E-01	1.707E+00	4.535E-01	0.357
	415.76			1.064E-01	6.977E-01	1.163E+00	2.505E-01	0.091
	63.00			-3.105E-01	4.987E-01	8.098E-01	1.197E-01	-0.383
	94.67			-4.449E-02	6.737E-02	1.035E-01	1.312E-02	-0.430
	98.44			-5.661E-03	3.409E-02	5.277E-02	2.946E-02	-0.107
	99.86			4.567E-02	1.668E-01	2.766E-01	2.425E-02	0.165
	111.00			-6.039E-03	7.420E-02	1.188E-01	1.423E-02	-0.051
	131.20			2.746E-02	3.966E-02	6.761E-02	5.651E-03	0.406
	152.70			-2.547E-02	1.273E-01	1.985E-01	3.378E-02	-0.128
	186.00			2.863E-01	1.000E+00	1.097E+00	3.435E-01	0.261
	226.40			-6.295E-02	1.546E-01	2.497E-01	3.447E-02	-0.252
	227.20			-8.112E-02	1.691E-01	2.716E-01	2.587E-02	-0.299
	248.90			-2.913E-01	3.428E-01	5.146E-01	1.177E-01	-0.566
	293.70			-5.763E-02	2.528E-01	4.099E-01	7.360E-02	-0.141
	369.80			-1.548E-01	4.080E-01	6.401E-01	1.399E-01	-0.242
+	568.70			3.704E-01	4.399E-01	7.922E-01	7.649E-02	0.468
	569.50			6.173E-02	1.227E-01	2.115E-01	2.043E-02	0.292
	574.00			-4.391E-01	7.087E-01	1.026E+00	9.934E-02	-0.428
	699.00			-4.383E-01	5.432E-01	6.140E-01	1.216E-01	-0.714
	706.10			-4.442E-02	4.625E-01	7.640E-01	3.431E-01	-0.058

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	733.00			3.849E-02	1.531E-01	2.657E-01	6.068E-02	0.145
	742.81			-1.528E-01	6.158E-01	9.753E-01	6.577E-01	-0.157
	796.30			-2.376E-01	3.541E-01	5.053E-01	1.393E-01	-0.470
	805.60			2.929E-01	4.744E-01	8.447E-01	2.628E-01	0.347
	819.60			2.371E-01	5.519E-01	9.675E-01	3.715E-01	0.245
	826.30			-1.088E-01	2.914E-01	4.375E-01	1.971E-01	-0.249
	831.60			5.483E-02	2.314E-01	4.001E-01	1.213E-01	0.137
	876.40			1.783E-01	4.073E-01	6.515E-01	6.706E-01	0.274
	880.51			3.792E-02	9.633E-02	1.727E-01	1.726E-02	0.220
	883.24			-1.142E-01	1.328E-01	1.347E-01	9.082E-02	-0.848
	899.00			1.533E-02	4.516E-01	7.493E-01	3.296E-01	0.020
	925.00			6.027E-02	4.890E-01	8.245E-01	8.114E-02	0.073
	926.50			5.365E-02	7.464E-02	1.366E-01	3.513E-02	0.393
	946.00	*		-4.732E-02	1.272E-01	1.935E-01	3.737E-02	-0.245
	949.00			-7.681E-02	1.860E-01	2.808E-01	2.733E-02	-0.274
	980.50			-1.256E-01	3.771E-01	5.851E-01	5.602E-02	-0.215
PA-234M	1394.10			4.804E-01	6.318E-01	1.081E+00	7.033E-01	0.444
	766.42			-1.155E-01	4.305E+00	7.148E+00	3.647E+00	-0.016
	1001.03	*		1.256E+00	2.113E+00	3.906E+00	4.178E-01	0.322
TH-234	63.29	*		-2.827E-01	4.279E-01	6.909E-01	1.201E-01	-0.409
	92.38			-2.369E-01	2.393E-01	4.013E-01	7.359E-02	-0.590
U-234	609.31	*		-7.027E-03	4.067E-02	6.153E-02	6.847E-03	-0.114
	1120.29			-1.066E-01	1.189E-01	1.551E-01	1.678E-02	-0.688
	1764.49			5.325E-02	1.174E-01	2.143E-01	1.760E-02	0.248
U-235	89.95			-1.274E+00	5.824E-01	5.384E-01	1.672E-01	-2.366
	93.35			-2.393E-01	2.874E-01	4.808E-01	1.354E-01	-0.498
	105.00			-4.575E-01	4.241E-01	5.591E-01	1.668E-01	-0.818
	143.76	*		2.945E-02	9.575E-02	1.550E-01	2.702E-02	0.190
	163.35			-5.232E-02	2.004E-01	2.914E-01	5.570E-02	-0.180
+	185.71			1.061E-02	3.691E-02	4.048E-02	3.643E-03	0.262
	205.31			7.052E-02	2.054E-01	3.432E-01	6.651E-02	0.205
NP-236	94.67			-3.307E-02	5.105E-02	7.868E-02	7.087E-03	-0.420
	98.44			-4.286E-03	2.566E-02	3.989E-02	3.520E-03	-0.107
	111.00			-4.568E-03	5.613E-02	8.986E-02	7.604E-03	-0.051
	160.31	*		1.099E-02	3.202E-02	5.258E-02	4.549E-03	0.209
NP-237	86.50	*		-5.583E-02	7.868E-02	1.167E-01	2.640E-02	-0.479
	95.87			-1.509E+00	5.644E-01	4.893E-01	1.211E-01	-3.085
U-238	63.29	*		-2.827E-01	4.279E-01	6.909E-01	1.201E-01	-0.409
	92.38			-2.369E-01	2.363E-01	4.013E-01	3.668E-02	-0.590
NP-239	99.55			-2.958E-02	6.040E-02	9.116E-02	8.002E-03	-0.324
	117.00	*		-1.370E-02	7.426E-02	1.174E-01	9.838E-03	-0.117
	209.75			2.280E-01	2.846E-01	5.123E-01	4.773E-02	0.445
	228.18			2.547E-02	8.780E-02	1.517E-01	1.446E-02	0.168
	277.60			-6.924E-02	7.878E-02	1.196E-01	1.190E-02	-0.579
	334.30			1.818E-01	6.281E-01	1.067E+00	1.006E-01	0.170
AM-241	59.54	*		2.143E-02	3.938E-02	6.782E-02	5.307E-03	0.316
AM-243	74.67	*		-4.772E-03	1.557E-02	2.475E-02	1.992E-03	-0.193
	86.72			-2.238E+00	2.904E+00	4.327E+00	4.026E-01	-0.517
	117.66			-3.122E-03	1.488E+00	2.394E+00	2.004E-01	-0.001

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	142.18			3.148E+00	7.608E+00	1.257E+01	1.061E+00	0.250
	99.55			-3.043E-02	6.213E-02	9.377E-02	8.231E-03	-0.324
	103.76	*		-2.297E-02	3.607E-02	5.296E-02	4.572E-03	-0.434
	117.00			-1.409E-02	7.637E-02	1.208E-01	1.012E-02	-0.117
	209.75			2.247E-01	2.805E-01	5.048E-01	4.704E-02	0.445
	228.18			2.573E-02	8.869E-02	1.532E-01	1.460E-02	0.168
AM-246	277.60			-6.978E-02	7.940E-02	1.206E-01	1.200E-02	-0.579
	798.80			-1.449E-02	6.210E-02	9.948E-02	1.010E-02	-0.146
	1036.00			1.971E-02	1.103E-01	1.875E-01	1.731E-02	0.105
	1062.04			6.034E-02	8.568E-02	1.602E-01	1.448E-02	0.377
	1078.86	*		-1.564E-02	6.000E-02	9.260E-02	8.250E-03	-0.169
CM-247	278.00			-1.332E-01	3.208E-01	5.132E-01	5.107E-02	-0.260
	287.40			1.260E-01	5.225E-01	8.914E-01	8.833E-02	0.141
	402.60	*		-1.383E-02	1.621E-02	2.348E-02	1.986E-03	-0.589
CF-249	252.85			4.337E-01	3.722E-01	6.848E-01	6.693E-02	0.633
	333.44			6.721E-03	8.035E-02	1.340E-01	1.265E-02	0.050
	387.95	*		-6.127E-03	1.772E-02	2.782E-02	2.348E-03	-0.220
CF-251	176.60	*		-1.516E-02	4.460E-02	6.761E-02	6.000E-03	-0.224
	227.00			-8.185E-02	1.493E-01	2.379E-01	2.265E-02	-0.344
	285.00			-1.634E-01	7.596E-01	1.238E+00	1.229E-01	-0.132
ANH-511	511.00	*		-3.234E-02	2.904E-02	5.342E-02	4.978E-03	-0.605

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]G1202023707      *
* Acquisition date   : 5-FEB-2010 19:15:18 Detector SN# :                   *
* Detector ID        : GAM20 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 02:00:32.56 Half life ratio : 8.000                *
*****
*                                     SAMPLE DATA                            *
*
* Sample date        : 27-JAN-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID          : G1202023707 Analyst initials: MXR1                  *
* Batch Number       : 944962 Sample Quantity : 1.4455E+02 GRAM            *
* Recovery           : 1.00000 Carrier Weight : 0.00000                   *
*****
*                                     QC DATA                               *
*
* Standard Weight    : 0.00000                                              *
* CALIB. DATE/TIME   : 26-AUG-2009 06:32:11 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

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
---- Non-Identified Nuclides ----				
BE-7	8.986E-02	1.234E-01	2.317E-01	0.000E+00 NOT IDENT.
NA-22	-2.527E-03	1.860E-02	2.995E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	9.010E+02	0.000E+00	0.000E+00 SHORT HLIF
AL-26	1.448E-04	1.764E-02	2.966E-02	0.000E+00 NOT IDENT.
K-40	-8.045E-03	2.098E-01	3.879E-01	0.000E+00 NOT IDENT.
TI-44	9.949E-03	1.032E-02	1.940E-02	0.000E+00 NOT IDENT.
SC-46	1.677E-02	1.280E-02	2.736E-02	0.000E+00 NOT IDENT.
V-48	5.510E-03	2.861E-02	5.003E-02	0.000E+00 NOT IDENT.
CR-51	-1.855E-01	1.480E-01	2.231E-01	0.000E+00 NOT IDENT.
MN-52	2.583E-03	6.866E-02	1.186E-01	0.000E+00 NOT IDENT.
MN-54	4.136E-03	1.413E-02	2.556E-02	0.000E+00 NOT IDENT.
CO-56	3.322E-03	1.558E-02	2.778E-02	0.000E+00 NOT IDENT.
CO-57	2.327E-03	9.734E-03	1.731E-02	0.000E+00 NOT IDENT.
CO-58	1.187E-02	1.531E-02	2.963E-02	0.000E+00 NOT IDENT.
FE-59	4.567E-03	3.689E-02	6.343E-02	0.000E+00 NOT IDENT.
CO-60	2.088E-04	1.728E-02	2.860E-02	0.000E+00 NOT IDENT.
ZN-65	2.219E-02	3.211E-02	6.117E-02	0.000E+00 NOT IDENT.
GE-68	-1.084E-01	5.324E-01	8.622E-01	0.000E+00 NOT IDENT.
AS-73	-1.344E-01	1.983E-01	3.168E-01	0.000E+00 NOT IDENT.
AS-74	-1.202E-02	3.731E-02	5.969E-02	0.000E+00 NOT IDENT.
SE-75	-9.286E-03	1.782E-02	3.010E-02	0.000E+00 NOT IDENT.
BR-77	-5.424E-01	1.026E+00	1.604E+00	0.000E+00 NOT IDENT.
SR-82	-8.952E-02	1.261E-01	1.896E-01	0.000E+00 NOT IDENT.
RB-83	-1.536E-02	3.073E-02	4.829E-02	0.000E+00 NOT IDENT.
RB-84	-1.287E-02	2.161E-02	3.192E-02	0.000E+00 NOT IDENT.
KR-85	-7.769E+00	5.817E+00	8.801E+00	0.000E+00 NOT IDENT.

SR-85	-3.767E-02	2.820E-02	4.267E-02	0.000E+00	NOT IDENT.
RB-86	-5.801E-02	2.805E-01	4.539E-01	0.000E+00	NOT IDENT.
Y-88	7.011E-05	1.613E-02	2.706E-02	0.000E+00	NOT IDENT.
ZR-88	3.220E-03	1.345E-02	2.394E-02	0.000E+00	NOT IDENT.
Y-91	2.674E+00	5.050E+00	9.536E+00	0.000E+00	NOT IDENT.
NB-94	-7.624E-03	1.527E-02	2.487E-02	0.000E+00	NOT IDENT.
NB-95	3.143E-03	1.480E-02	2.658E-02	0.000E+00	NOT IDENT.
NB-95M	-2.294E-02	5.064E-02	8.767E-02	0.000E+00	NOT IDENT.
ZR-95	-1.748E-03	2.879E-02	4.958E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.268E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.018E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.732E-01	1.283E+00	2.279E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.453E+09	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-8.890E-03	1.474E-02	2.366E-02	0.000E+00	NOT IDENT.
RH-102	2.243E-03	1.329E-02	2.320E-02	0.000E+00	NOT IDENT.
RU-103	8.467E-03	1.632E-02	2.967E-02	0.000E+00	NOT IDENT.
RH-106	-1.340E-01	1.458E-01	2.035E-01	0.000E+00	NOT IDENT.
RU-106	-1.340E-01	1.452E-01	2.035E-01	0.000E+00	NOT IDENT.
AG-108M	-5.345E-03	1.230E-02	1.969E-02	0.000E+00	NOT IDENT.
CD-109	-1.699E-01	2.562E-01	4.210E-01	0.000E+00	NOT IDENT.
AG-110M	-3.094E-03	1.504E-02	2.570E-02	0.000E+00	NOT IDENT.
IN-111	6.887E-02	1.065E-01	2.023E-01	0.000E+00	NOT IDENT.
IN-113M	1.300E-03	1.900E-02	3.320E-02	0.000E+00	NOT IDENT.
SN-113	1.300E-03	1.900E-02	3.320E-02	0.000E+00	NOT IDENT.
IN-114M	4.987E-02	6.376E-02	1.123E-01	0.000E+00	NOT IDENT.
CD-115	4.384E-01	9.604E-01	1.727E+00	0.000E+00	NOT IDENT.
SN-117M	1.794E-03	1.686E-02	2.918E-02	0.000E+00	NOT IDENT.
SB-122	2.758E-02	2.077E-01	3.575E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	2.783E+03	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.485E-03	1.120E-02	1.894E-02	0.000E+00	NOT IDENT.
I-124	3.273E-03	1.437E-01	2.414E-01	0.000E+00	NOT IDENT.
SB-124	-3.043E-02	3.805E-02	4.895E-02	0.000E+00	NOT IDENT.
SB-125	5.662E-02	4.089E-02	8.131E-02	0.000E+00	NOT IDENT.
TE-125M	2.092E+00	3.280E+00	6.049E+00	0.000E+00	NOT IDENT.
I-126	2.208E-02	6.281E-02	1.150E-01	0.000E+00	NOT IDENT.
SB-126	-3.956E-03	4.578E-02	7.889E-02	0.000E+00	NOT IDENT.
SN-126	-3.246E-02	2.651E-02	4.128E-02	0.000E+00	NOT IDENT.
SB-127	1.604E-01	2.406E-01	4.563E-01	0.000E+00	NOT IDENT.
XE-127	-1.808E-03	1.606E-02	2.885E-02	0.000E+00	NOT IDENT.
I-131	1.804E-02	3.686E-02	6.725E-02	0.000E+00	NOT IDENT.
TE-132	2.504E-04	8.699E-02	1.566E-01	0.000E+00	NOT IDENT.
BA-133	-2.671E-03	1.837E-02	3.153E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	4.056E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	-1.858E-02	1.802E-02	2.511E-02	0.000E+00	NOT IDENT.
CS-135	-1.295E-02	6.061E-02	1.056E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	2.749E+09	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-9.522E-03	3.056E-02	4.804E-02	0.000E+00	NOT IDENT.
BA-137M	-6.317E-03	1.705E-02	2.856E-02	0.000E+00	NOT IDENT.
CS-137	-6.678E-03	1.802E-02	3.019E-02	0.000E+00	NOT IDENT.
CE-139	-1.403E-03	1.120E-02	1.889E-02	0.000E+00	NOT IDENT.
BA-140	-1.236E-02	8.900E-02	1.473E-01	0.000E+00	NOT IDENT.
LA-140	1.020E-03	3.034E-02	5.195E-02	0.000E+00	NOT IDENT.
CE-141	-5.409E-03	2.386E-02	4.030E-02	0.000E+00	NOT IDENT.
CE-143	-9.705E-01	3.392E+00	5.808E+00	0.000E+00	NOT IDENT.
CE-144	-6.997E-02	7.871E-02	1.233E-01	0.000E+00	NOT IDENT.
PM-144	-1.098E-02	2.488E-02	3.126E-02	0.000E+00	NOT IDENT.
PR-144	-7.417E-01	1.681E+00	2.112E+00	0.000E+00	NOT IDENT.
PM-146	3.184E-03	2.055E-02	3.589E-02	0.000E+00	NOT IDENT.
ND-147	2.019E-01	1.893E-01	3.612E-01	0.000E+00	NOT IDENT.
PM-149	7.792E+00	7.161E+00	1.385E+01	0.000E+00	NOT IDENT.
EU-152	-1.233E-02	4.282E-02	7.256E-02	0.000E+00	NOT IDENT.
GD-153	-1.183E-02	2.726E-02	4.489E-02	0.000E+00	NOT IDENT.
EU-154	-1.403E-03	5.090E-02	8.390E-02	0.000E+00	NOT IDENT.
EU-155	-4.703E-02	4.054E-02	6.111E-02	0.000E+00	NOT IDENT.
TB-160	6.453E-03	4.853E-02	8.548E-02	0.000E+00	NOT IDENT.
HO-166M	1.467E-02	2.899E-02	5.378E-02	0.000E+00	FAIL ABUN
TM-171	-1.216E+01	8.968E+00	1.430E+01	0.000E+00	NOT IDENT.
LU-176	-3.460E-03	1.042E-02	1.773E-02	0.000E+00	NOT IDENT.
LU-177	-1.075E-01	2.270E-01	3.935E-01	0.000E+00	NOT IDENT.
LU-177M	-1.767E-02	6.894E-02	1.148E-01	0.000E+00	NOT IDENT.
HF-181	-1.046E-03	1.650E-02	2.789E-02	0.000E+00	NOT IDENT.
W-181	-2.774E-02	1.067E-01	1.869E-01	0.000E+00	NOT IDENT.
TA-182	6.055E-03	6.599E-02	1.121E-01	0.000E+00	NOT IDENT.
RE-183	1.085E-02	4.002E-02	7.029E-02	0.000E+00	NOT IDENT.
RE-184	1.131E-01	9.511E-02	1.867E-01	0.000E+00	NOT IDENT.
OS-185	7.270E-03	1.841E-02	3.405E-02	0.000E+00	NOT IDENT.
RE-188	1.165E-02	6.328E-02	1.105E-01	0.000E+00	NOT IDENT.
W-188	-3.059E+00	2.815E+00	4.367E+00	0.000E+00	NOT IDENT.

IR-192	1.191E-02	1.576E-02	2.960E-02	0.000E+00	NOT IDENT.
AU-195	-5.891E-02	8.454E-02	1.364E-01	0.000E+00	NOT IDENT.
TL-200	0.000E+00	7.386E+00	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-6.989E-03	8.271E-01	1.411E+00	0.000E+00	NOT IDENT.
TL-202	-5.656E-03	2.228E-02	3.697E-02	0.000E+00	NOT IDENT.
HG-203	1.223E-02	1.558E-02	2.961E-02	0.000E+00	NOT IDENT.
BI-207	2.947E-03	1.875E-02	3.272E-02	0.000E+00	NOT IDENT.
TL-207	1.826E-01	2.902E-01	5.389E-01	0.000E+00	NOT IDENT.
TL-208	-1.970E-02	1.939E-02	2.777E-02	0.000E+00	NOT IDENT.
PO-209	5.356E+00	3.566E+00	7.342E+00	0.000E+00	NOT IDENT.
BI-210	3.327E-01	9.189E-01	1.683E+00	0.000E+00	NOT IDENT.
PB-210	3.327E-01	9.189E-01	1.683E+00	0.000E+00	NOT IDENT.
PO-210	3.327E-01	9.188E-01	1.683E+00	0.000E+00	NOT IDENT.
BI-211	1.400E-02	1.001E-01	1.685E-01	0.000E+00	NOT IDENT.
PB-211	-1.086E-01	3.769E-01	6.163E-01	0.000E+00	NOT IDENT.
BI-212	-5.727E-02	1.113E-01	1.774E-01	0.000E+00	NOT IDENT.
PB-212	-4.792E-03	2.782E-02	4.849E-02	0.000E+00	NOT IDENT.
PO-212	-4.792E-03	2.782E-02	4.849E-02	0.000E+00	NOT IDENT.
BI-214	-7.027E-03	3.985E-02	6.311E-02	0.000E+00	NOT IDENT.
PB-214	-1.151E-02	3.433E-02	5.467E-02	0.000E+00	NOT IDENT.
PO-214	-1.151E-02	3.433E-02	5.467E-02	0.000E+00	NOT IDENT.
PO-215	1.826E-01	2.902E-01	5.389E-01	0.000E+00	NOT IDENT.
PO-216	-4.792E-03	2.782E-02	4.849E-02	0.000E+00	NOT IDENT.
PO-218	-1.151E-02	3.433E-02	5.467E-02	0.000E+00	NOT IDENT.
RN-219	-1.001E-01	1.783E-01	2.856E-01	0.000E+00	NOT IDENT.
RN-220	-4.009E+00	1.101E+01	1.747E+01	0.000E+00	NOT IDENT.
RA-223	1.826E-01	2.902E-01	5.389E-01	0.000E+00	NOT IDENT.
RA-224	-4.414E-01	2.656E-01	3.978E-01	0.000E+00	NOT IDENT.
RA-226	-7.027E-03	3.985E-02	6.311E-02	0.000E+00	NOT IDENT.
AC-227	2.247E-02	1.443E-01	2.618E-01	0.000E+00	NOT IDENT.
TH-227	2.247E-02	1.443E-01	2.618E-01	0.000E+00	NOT IDENT.
AC-228	-4.578E-02	5.828E-02	8.585E-02	0.000E+00	NOT IDENT.
RA-228	-4.578E-02	5.828E-02	8.585E-02	0.000E+00	NOT IDENT.
TH-228	-4.839E-03	2.809E-02	4.897E-02	0.000E+00	NOT IDENT.
TH-229	3.716E-02	1.874E-01	3.465E-01	0.000E+00	NOT IDENT.
TH-230	-7.027E-03	3.985E-02	6.310E-02	0.000E+00	NOT IDENT.
PA-231	-7.014E-01	7.040E-01	1.114E+00	0.000E+00	NOT IDENT.
TH-231	1.826E-01	2.902E-01	5.389E-01	0.000E+00	NOT IDENT.
U-231	-7.115E-01	2.052E-01	2.462E-01	0.000E+00	NOT IDENT.
TH-232	-4.578E-02	5.828E-02	8.585E-02	0.000E+00	NOT IDENT.
PA-233	8.048E-03	2.920E-02	5.282E-02	0.000E+00	NOT IDENT.
PA-234	-4.732E-02	1.246E-01	1.965E-01	0.000E+00	FAIL ABUN
PA-234M	1.256E+00	2.071E+00	3.961E+00	0.000E+00	NOT IDENT.
TH-234	-2.827E-01	4.193E-01	7.438E-01	0.000E+00	NOT IDENT.
U-234	-7.027E-03	3.985E-02	6.310E-02	0.000E+00	NOT IDENT.
U-235	2.945E-02	9.384E-02	1.641E-01	0.000E+00	FAIL ABUN
NP-236	1.099E-02	3.138E-02	5.551E-02	0.000E+00	NOT IDENT.
NP-237	-5.583E-02	7.711E-02	1.248E-01	0.000E+00	NOT IDENT.
U-238	-2.827E-01	4.193E-01	7.438E-01	0.000E+00	NOT IDENT.
NP-239	-1.370E-02	7.277E-02	1.248E-01	0.000E+00	NOT IDENT.
AM-241	2.143E-02	3.859E-02	7.309E-02	0.000E+00	NOT IDENT.
AM-243	-4.772E-03	1.526E-02	2.655E-02	0.000E+00	NOT IDENT.
CM-243	-2.297E-02	3.535E-02	5.643E-02	0.000E+00	NOT IDENT.
AM-246	-1.564E-02	5.880E-02	9.373E-02	0.000E+00	NOT IDENT.
CM-247	-1.383E-02	1.589E-02	2.431E-02	0.000E+00	NOT IDENT.
CF-249	-6.127E-03	1.736E-02	2.882E-02	0.000E+00	NOT IDENT.
CF-251	-1.516E-02	4.371E-02	7.124E-02	0.000E+00	NOT IDENT.
ANH-511	-3.234E-02	2.846E-02	5.500E-02	0.000E+00	NOT IDENT.

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023707.CNF;1
Sample date        : 27-JAN-2010 00:00:00 Acquisition date : 5-FEB-2010 19:15:18.
Sample ID          : G1202023707      Sample quantity  : 1.44550E+02 GRAM
Detector name      : GAM20             Detector geometry: CAN
Elapsed live time: 0 02:00:00.00      Elapsed real time: 0 02:00:32.56 0.5%
Energy tolerance  : 1.50000 keV       Analyst Initials : MXR1
Abundance limit   : 75.00000          Sensitivity      : 5.00000
Batch ID          : 944962            Detector SN#     :
Matrix Spike ID   :                   LCS ID           : 1032-A
*****

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Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G1202023707

Page : 2
Acquisition date : 5-FEB-2010 19:15:18

Total number of lines in spectrum 1
Number of unidentified lines 0
Number of lines tentatively identified by NID 1 100.00%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1202023707

Page : 3
Acquisition date : 5-FEB-2010 19:15:18

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	185.71	14	94	1.34	371.06	364	14	1.89E-03	****	6.18E+00	T

Flags: "T" = Tentatively associated

```

*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023707.CNF;1 *
* Acquisition date   : 5-FEB-2010 19:15:18.  Detector SN#      :             *
* Detector ID        : GAM20                      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 02:00:32.56           Half life ratio : 8.00000      *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 27-JAN-2010 00:00:00  Nuclide Library : SOLID          *
* Sample ID          : G1202023707           Analyst initials: MXR1          *
* Batch Number       : 944962                Sample Quantity : 1.44550E+02 GRAM *
*****
*
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 26-AUG-2009 06:32:11.7MS Isotope         :             *
* MSD ID             :                      MSD Isotope         :             *
* LCS ID             : 1032-A                LCS Isotope         :             *
*****

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Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	8.986E-02		1.260E-01	2.248E-01	2.185E-02	0.400
NA-22	-2.527E-03		1.898E-02	2.970E-02	2.461E-03	-0.085
NA-24	-5.521E-04		4.597E-04	Half-Life too short		
AL-26	1.448E-04		1.799E-02	2.965E-02	2.409E-03	0.005
K-40	-8.045E-03		2.140E-01	3.859E-01	3.365E-02	-0.021
TI-44	9.949E-03		1.053E-02	1.810E-02	1.519E-03	0.550
SC-46	1.677E-02		1.306E-02	2.691E-02	2.683E-03	0.623
V-48	5.510E-03		2.920E-02	4.932E-02	4.714E-03	0.112
CR-51	-1.855E-01		1.510E-01	2.145E-01	2.150E-02	-0.865
MN-52	2.583E-03		7.006E-02	1.180E-01	9.983E-03	0.022
MN-54	4.136E-03		1.442E-02	2.510E-02	2.536E-03	0.165
CO-56	3.322E-03		1.590E-02	2.729E-02	2.750E-03	0.122
CO-57	2.327E-03		9.933E-03	1.630E-02	1.361E-03	0.143
CO-58	1.187E-02		1.562E-02	2.908E-02	2.953E-03	0.408
FE-59	4.567E-03		3.764E-02	6.268E-02	5.912E-03	0.073
CO-60	2.088E-04		1.763E-02	2.840E-02	2.379E-03	0.007
ZN-65	2.219E-02		3.277E-02	6.048E-02	5.206E-03	0.367

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GE-68	-1.084E-01		5.433E-01	8.517E-01	7.599E-02	-0.127
AS-73	-1.344E-01		2.024E-01	2.933E-01	2.177E-02	-0.458
AS-74	-1.202E-02		3.807E-02	5.818E-02	5.694E-03	-0.207
SE-75	-9.286E-03		1.818E-02	2.882E-02	2.853E-03	-0.322
BR-77	-5.424E-01		1.047E+00	1.559E+00	1.462E-01	-0.348
SR-82	-8.952E-02		1.286E-01	1.859E-01	1.889E-02	-0.482
RB-83	-1.536E-02		3.136E-02	4.692E-02	4.401E-03	-0.327
RB-84	-1.287E-02		2.205E-02	3.139E-02	3.137E-03	-0.410
KR-85	-7.769E+00		5.935E+00	8.550E+00	7.983E-01	-0.909
SR-85	-3.767E-02		2.878E-02	4.145E-02	3.871E-03	-0.909
RB-86	-5.801E-02		2.862E-01	4.484E-01	4.003E-02	-0.129
Y-88	7.011E-05		1.646E-02	2.707E-02	2.184E-03	0.003
ZR-88	3.220E-03		1.373E-02	2.312E-02	1.933E-03	0.139
Y-91	2.674E+00		5.153E+00	9.445E+00	7.669E-01	0.283
NB-94	-7.624E-03		1.558E-02	2.433E-02	2.462E-03	-0.313
NB-95	3.143E-03		1.510E-02	2.605E-02	2.647E-03	0.121
NB-95M	-2.294E-02		5.167E-02	8.372E-02	8.996E-03	-0.274
ZR-95	-1.748E-03		2.937E-02	4.858E-02	5.302E-03	-0.036
NB-97	-5.207E-05		1.157E-04	Half-Life	too short	
ZR-97	-2.122E-02		3.580E-03	Half-Life	too short	
MO-99	1.732E-01		1.309E+00	2.232E+00	3.595E-01	0.078
TC-99M	-8.396E+03		3.803E+03	Half-Life	too short	
RH-101	-8.890E-03		1.505E-02	2.251E-02	2.063E-03	-0.395
RH-102	2.243E-03		1.356E-02	2.249E-02	2.039E-03	0.100
RU-103	8.467E-03		1.665E-02	2.880E-02	4.187E-03	0.294
RH-106	-1.340E-01		1.488E-01	1.985E-01	2.822E-02	-0.675
RU-106	-1.340E-01		1.482E-01	1.985E-01	1.965E-02	-0.675
AG-108M	-5.345E-03		1.255E-02	1.906E-02	1.730E-03	-0.280
CD-109	-1.699E-01		2.614E-01	3.938E-01	3.724E-02	-0.432
AG-110M	-3.094E-03		1.535E-02	2.511E-02	2.572E-03	-0.123
IN-111	6.887E-02		1.086E-01	1.933E-01	1.877E-02	0.356
IN-113M	1.300E-03		1.939E-02	3.206E-02	2.766E-03	0.041
SN-113	1.300E-03		1.939E-02	3.206E-02	2.766E-03	0.041
IN-114M	4.987E-02		6.506E-02	1.068E-01	9.675E-03	0.467
CD-115	4.384E-01		9.800E-01	1.678E+00	1.582E-01	0.261
SN-117M	1.794E-03		1.721E-02	2.763E-02	2.385E-03	0.065
SB-122	2.758E-02		2.119E-01	3.480E-01	3.351E-02	0.079
I-123	-3.689E-04		1.420E-03	Half-Life	too short	
TE-123M	-1.485E-03		1.143E-02	1.793E-02	1.558E-03	-0.083
I-124	3.273E-03		1.467E-01	2.353E-01	2.311E-02	0.014
SB-124	-3.043E-02		3.883E-02	4.887E-02	4.247E-03	-0.623
SB-125	5.662E-02		4.173E-02	7.866E-02	6.962E-03	0.720
TE-125M	2.092E+00		3.347E+00	5.683E+00	5.803E-01	0.368
I-126	2.208E-02		6.409E-02	1.124E-01	1.129E-02	0.196
SB-126	-3.956E-03		4.671E-02	7.722E-02	7.830E-03	-0.051
SN-126	-3.246E-02		2.705E-02	3.860E-02	3.631E-03	-0.841
SB-127	1.604E-01		2.455E-01	4.461E-01	5.047E-02	0.360
XE-127	-1.808E-03		1.639E-02	2.746E-02	2.534E-03	-0.066

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-131	1.804E-02		3.761E-02	6.483E-02	6.062E-03	0.278
TE-132	2.504E-04		8.876E-02	1.494E-01	2.307E-02	0.002
BA-133	-2.671E-03		1.874E-02	3.038E-02	4.104E-03	-0.088
I-133	2.869E-05		2.069E-05	Half-Life	too short	
CS-134	-1.858E-02		1.839E-02	2.463E-02	2.513E-03	-0.754
CS-135	-1.295E-02		6.185E-02	1.011E-01	1.121E-02	-0.128
I-135	-1.309E+03		1.403E+03	Half-Life	too short	
CS-136	-9.522E-03		3.119E-02	4.743E-02	4.499E-03	-0.201
BA-137M	-6.317E-03		1.739E-02	2.790E-02	2.800E-03	-0.226
CS-137	-6.678E-03		1.839E-02	2.949E-02	2.964E-03	-0.226
CE-139	-1.403E-03		1.143E-02	1.791E-02	1.563E-03	-0.078
BA-140	-1.236E-02		9.082E-02	1.432E-01	4.780E-02	-0.086
LA-140	1.020E-03		3.096E-02	5.179E-02	4.372E-03	0.020
CE-141	-5.409E-03		2.435E-02	3.809E-02	3.289E-03	-0.142
CE-143	-9.705E-01		3.461E+00	5.573E+00	1.242E+00	-0.174
CE-144	-6.997E-02		8.031E-02	1.163E-01	1.794E-02	-0.602
PM-144	-1.098E-02		2.539E-02	3.057E-02	3.090E-03	-0.359
PR-144	-7.417E-01		1.716E+00	2.066E+00	2.088E-01	-0.359
PM-146	3.184E-03		2.097E-02	3.477E-02	3.808E-03	0.092
ND-147	2.019E-01		1.932E-01	3.512E-01	5.422E-02	0.575
PM-149	7.792E+00		7.307E+00	1.328E+01	2.162E+00	0.587
EU-152	-1.233E-02		4.369E-02	6.986E-02	6.816E-03	-0.177
GD-153	-1.183E-02		2.782E-02	4.207E-02	3.731E-03	-0.281
EU-154	-1.403E-03		5.193E-02	8.320E-02	9.193E-03	-0.017
EU-155	-4.703E-02		4.136E-02	5.737E-02	4.988E-03	-0.820
TB-160	6.453E-03		4.952E-02	8.405E-02	8.403E-03	0.077
HO-166M	1.467E-02		2.958E-02	5.262E-02	5.331E-03	0.279
TM-171	-1.216E+01		9.151E+00	1.330E+01	9.909E-01	-0.914
LU-176	-3.460E-03		1.063E-02	1.703E-02	1.661E-03	-0.203
LU-177	-1.075E-01		2.316E-01	3.747E-01	3.485E-02	-0.287
LU-177M	-1.767E-02		7.035E-02	1.110E-01	9.502E-03	-0.159
HF-181	-1.046E-03		1.684E-02	2.705E-02	2.467E-03	-0.039
W-181	-2.774E-02		1.089E-01	1.738E-01	1.279E-02	-0.160
TA-182	6.055E-03		6.734E-02	1.110E-01	9.059E-03	0.055
RE-183	1.085E-02		4.083E-02	6.659E-02	5.780E-03	0.163
RE-184	1.131E-01		9.705E-02	1.786E-01	1.745E-02	0.633
OS-185	7.270E-03		1.879E-02	3.325E-02	3.320E-03	0.219
RE-188	1.165E-02		6.457E-02	1.046E-01	8.976E-03	0.111
W-188	-3.059E+00		2.872E+00	4.189E+00	4.142E-01	-0.730
IR-192	1.191E-02		1.609E-02	2.845E-02	2.751E-03	0.419
AU-195	-5.891E-02		8.626E-02	1.279E-01	1.126E-02	-0.461
TL-200	2.644E-06		3.768E-06	Half-Life	too short	
TL-201	-6.989E-03		8.439E-01	1.338E+00	1.170E-01	-0.005
TL-202	-5.656E-03		2.273E-02	3.579E-02	3.144E-03	-0.158
HG-203	1.223E-02		1.590E-02	2.838E-02	2.886E-03	0.431
BI-207	2.947E-03		1.913E-02	3.231E-02	2.917E-03	0.091
TL-207	1.826E-01		2.962E-01	5.181E-01	9.422E-02	0.352
TL-208	-1.970E-02		1.979E-02	2.705E-02	2.781E-03	-0.728

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-209	5.356E+00		3.639E+00	7.222E+00	7.183E-01	0.742
BI-210	3.327E-01		9.376E-01	1.554E+00	1.441E-01	0.214
PB-210	3.327E-01		9.376E-01	1.554E+00	1.441E-01	0.214
PO-210	3.327E-01		9.375E-01	1.554E+00	1.304E-01	0.214
BI-211	1.400E-02		1.022E-01	1.623E-01	1.555E-02	0.086
PB-211	-1.086E-01		3.846E-01	5.955E-01	3.730E-01	-0.182
BI-212	-5.727E-02		1.136E-01	1.737E-01	1.971E-02	-0.330
PB-212	-4.792E-03		2.839E-02	4.632E-02	4.926E-03	-0.103
PO-212	-4.792E-03		2.839E-02	4.632E-02	4.926E-03	-0.103
BI-214	-7.027E-03		4.067E-02	6.153E-02	6.847E-03	-0.114
PB-214	-1.151E-02		3.503E-02	5.266E-02	5.739E-03	-0.219
PO-214	-1.151E-02		3.503E-02	5.266E-02	5.739E-03	-0.219
PO-215	1.826E-01		2.962E-01	5.181E-01	9.422E-02	0.352
PO-216	-4.792E-03		2.839E-02	4.632E-02	4.926E-03	-0.103
PO-218	-1.151E-02		3.503E-02	5.266E-02	5.739E-03	-0.219
RN-219	-1.001E-01		1.820E-01	2.759E-01	4.119E-02	-0.363
RN-220	-4.009E+00		1.124E+01	1.699E+01	1.623E+00	-0.236
RA-223	1.826E-01		2.962E-01	5.181E-01	9.422E-02	0.352
RA-224	-4.414E-01		2.711E-01	3.801E-01	3.674E-02	-1.161
RA-226	-7.027E-03		4.067E-02	6.153E-02	6.847E-03	-0.114
AC-227	2.247E-02		1.473E-01	2.504E-01	4.017E-02	0.090
TH-227	2.247E-02		1.473E-01	2.504E-01	4.672E-02	0.090
AC-228	-4.578E-02		5.947E-02	8.448E-02	1.035E-02	-0.542
RA-228	-4.578E-02		5.947E-02	8.448E-02	1.035E-02	-0.542
TH-228	-4.839E-03		2.867E-02	4.678E-02	4.974E-03	-0.103
TH-229	3.716E-02		1.912E-01	3.295E-01	3.000E-02	0.113
TH-230	-7.027E-03		4.067E-02	6.153E-02	6.847E-03	-0.114
PA-231	-7.014E-01		7.184E-01	1.068E+00	1.706E-01	-0.656
TH-231	1.826E-01		2.962E-01	5.181E-01	9.422E-02	0.352
U-231	-7.115E-01		2.093E-01	2.306E-01	2.063E-02	-3.085
TH-232	-4.578E-02		5.947E-02	8.448E-02	1.035E-02	-0.542
PA-233	8.048E-03		2.980E-02	5.075E-02	5.035E-03	0.159
PA-234	-4.732E-02		1.272E-01	1.935E-01	3.737E-02	-0.245
PA-234M	1.256E+00		2.113E+00	3.906E+00	4.178E-01	0.322
TH-234	-2.827E-01		4.279E-01	6.909E-01	1.201E-01	-0.409
U-234	-7.027E-03		4.067E-02	6.153E-02	6.847E-03	-0.114
U-235	2.945E-02		9.575E-02	1.550E-01	2.702E-02	0.190
NP-236	1.099E-02		3.202E-02	5.258E-02	4.549E-03	0.209
NP-237	-5.583E-02		7.868E-02	1.167E-01	2.640E-02	-0.479
U-238	-2.827E-01		4.279E-01	6.909E-01	1.201E-01	-0.409
NP-239	-1.370E-02		7.426E-02	1.174E-01	9.838E-03	-0.117
AM-241	2.143E-02		3.938E-02	6.782E-02	5.307E-03	0.316
AM-243	-4.772E-03		1.557E-02	2.475E-02	1.992E-03	-0.193
CM-243	-2.297E-02		3.607E-02	5.296E-02	4.572E-03	-0.434
AM-246	-1.564E-02		6.000E-02	9.260E-02	8.250E-03	-0.169
CM-247	-1.383E-02		1.621E-02	2.348E-02	1.986E-03	-0.589
CF-249	-6.127E-03		1.772E-02	2.782E-02	2.348E-03	-0.220
CF-251	-1.516E-02		4.460E-02	6.761E-02	6.000E-03	-0.224

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ANH-511	-3.234E-02		2.904E-02	5.342E-02	4.978E-03	-0.605

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                     *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : SYSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202023707          *
* Acquisition date   : 5-FEB-2010 19:15:18 Detector SN# :                  *
* Detector ID        : GAM20 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 02:00:32.56 Half life ratio : 8.000              *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 27-JAN-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID          : G1202023707 Analyst initials: MXR1                 *
* Batch Number       : 944962 Sample Quantity : 1.4455E+02 GRAM           *
* Recovery           : 1.00000 Carrier Weight : 0.00000                  *
*****
*
*                                     QC DATA                               *
*
* CALIB. DATE/TIME   : 26-AUG-2009 06:32:11 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

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act Error	DLC (pCi/GRAM)	TPU
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---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	8.986E-02	1.234E-01	1.159E-01	6.298E-02 NOT IDENT.
NA-22	-2.527E-03	1.860E-02	1.499E-02	9.490E-03 NOT IDENT.
NA-24	-5.521E+02	9.010E+02	0.000E+00	4.597E+02 SHORT HLIF
AL-26	1.448E-04	1.764E-02	1.484E-02	8.997E-03 NOT IDENT.
K-40	-8.045E-03	2.098E-01	1.941E-01	1.070E-01 NOT IDENT.
TI-44	9.949E-03	1.032E-02	9.705E-03	5.266E-03 NOT IDENT.
SC-46	1.677E-02	1.280E-02	1.369E-02	6.531E-03 NOT IDENT.
V-48	5.510E-03	2.861E-02	2.503E-02	1.460E-02 NOT IDENT.
CR-51	-1.855E-01	1.480E-01	1.116E-01	7.550E-02 NOT IDENT.
MN-52	2.583E-03	6.866E-02	5.935E-02	3.503E-02 NOT IDENT.
MN-54	4.136E-03	1.413E-02	1.279E-02	7.211E-03 NOT IDENT.
CO-56	3.322E-03	1.558E-02	1.390E-02	7.949E-03 NOT IDENT.
CO-57	2.327E-03	9.734E-03	8.660E-03	4.966E-03 NOT IDENT.
CO-58	1.187E-02	1.531E-02	1.482E-02	7.809E-03 NOT IDENT.
FE-59	4.567E-03	3.689E-02	3.173E-02	1.882E-02 NOT IDENT.
CO-60	2.088E-04	1.728E-02	1.431E-02	8.814E-03 NOT IDENT.
ZN-65	2.219E-02	3.211E-02	3.060E-02	1.638E-02 NOT IDENT.
GE-68	-1.084E-01	5.324E-01	4.313E-01	2.716E-01 NOT IDENT.
AS-73	-1.344E-01	1.983E-01	1.585E-01	1.012E-01 NOT IDENT.
AS-74	-1.202E-02	3.731E-02	2.986E-02	1.904E-02 NOT IDENT.
SE-75	-9.286E-03	1.782E-02	1.506E-02	9.089E-03 NOT IDENT.
BR-77	-5.424E-01	1.026E+00	8.027E-01	5.237E-01 NOT IDENT.
SR-82	-8.952E-02	1.261E-01	9.486E-02	6.431E-02 NOT IDENT.
RB-83	-1.536E-02	3.073E-02	2.416E-02	1.568E-02 NOT IDENT.
RB-84	-1.287E-02	2.161E-02	1.597E-02	1.103E-02 NOT IDENT.
KR-85	-7.769E+00	5.817E+00	4.403E+00	2.968E+00 NOT IDENT.

SR-85	-3.767E-02	2.820E-02	2.135E-02	1.439E-02	NOT IDENT.
RB-86	-5.801E-02	2.805E-01	2.271E-01	1.431E-01	NOT IDENT.
Y-88	7.011E-05	1.613E-02	1.354E-02	8.228E-03	NOT IDENT.
ZR-88	3.220E-03	1.345E-02	1.198E-02	6.863E-03	NOT IDENT.
Y-91	2.674E+00	5.050E+00	4.771E+00	2.576E+00	NOT IDENT.
NB-94	-7.624E-03	1.527E-02	1.244E-02	7.790E-03	NOT IDENT.
NB-95	3.143E-03	1.480E-02	1.330E-02	7.552E-03	NOT IDENT.
NB-95M	-2.294E-02	5.064E-02	4.386E-02	2.584E-02	NOT IDENT.
ZR-95	-1.748E-03	2.879E-02	2.481E-02	1.469E-02	NOT IDENT.
NB-97	-5.207E+01	2.268E+02	0.000E+00	1.157E+02	SHORT HLIF
ZR-97	-2.122E+04	7.018E+03	0.000E+00	3.580E+03	SHORT HLIF
MO-99	1.732E-01	1.283E+00	1.140E+00	6.545E-01	NOT IDENT.
TC-99M	-8.396E+09	7.453E+09	0.000E+00	3.803E+09	SHORT HLIF
RH-101	-8.890E-03	1.474E-02	1.184E-02	7.523E-03	NOT IDENT.
RH-102	2.243E-03	1.329E-02	1.161E-02	6.781E-03	NOT IDENT.
RU-103	8.467E-03	1.632E-02	1.485E-02	8.326E-03	NOT IDENT.
RH-106	-1.340E-01	1.458E-01	1.018E-01	7.440E-02	NOT IDENT.
RU-106	-1.340E-01	1.452E-01	1.018E-01	7.408E-02	NOT IDENT.
AG-108M	-5.345E-03	1.230E-02	9.852E-03	6.273E-03	NOT IDENT.
CD-109	-1.699E-01	2.562E-01	2.106E-01	1.307E-01	NOT IDENT.
AG-110M	-3.094E-03	1.504E-02	1.286E-02	7.675E-03	NOT IDENT.
IN-111	6.887E-02	1.065E-01	1.012E-01	5.432E-02	NOT IDENT.
IN-113M	1.300E-03	1.900E-02	1.661E-02	9.694E-03	NOT IDENT.
SN-113	1.300E-03	1.900E-02	1.661E-02	9.694E-03	NOT IDENT.
IN-114M	4.987E-02	6.376E-02	5.619E-02	3.253E-02	NOT IDENT.
CD-115	4.384E-01	9.604E-01	8.638E-01	4.900E-01	NOT IDENT.
SN-117M	1.794E-03	1.686E-02	1.460E-02	8.603E-03	NOT IDENT.
SB-122	2.758E-02	2.077E-01	1.788E-01	1.060E-01	NOT IDENT.
I-123	-3.689E+02	2.783E+03	0.000E+00	1.420E+03	SHORT HLIF
TE-123M	-1.485E-03	1.120E-02	9.474E-03	5.713E-03	NOT IDENT.
I-124	3.273E-03	1.437E-01	1.208E-01	7.333E-02	NOT IDENT.
SB-124	-3.043E-02	3.805E-02	2.449E-02	1.941E-02	NOT IDENT.
SB-125	5.662E-02	4.089E-02	4.068E-02	2.086E-02	NOT IDENT.
TE-125M	2.092E+00	3.280E+00	3.026E+00	1.673E+00	NOT IDENT.
I-126	2.208E-02	6.281E-02	5.756E-02	3.205E-02	NOT IDENT.
SB-126	-3.956E-03	4.578E-02	3.947E-02	2.335E-02	NOT IDENT.
SN-126	-3.246E-02	2.651E-02	2.065E-02	1.353E-02	NOT IDENT.
SB-127	1.604E-01	2.406E-01	2.283E-01	1.228E-01	NOT IDENT.
XE-127	-1.808E-03	1.606E-02	1.443E-02	8.194E-03	NOT IDENT.
I-131	1.804E-02	3.686E-02	3.365E-02	1.881E-02	NOT IDENT.
TE-132	2.504E-04	8.699E-02	7.835E-02	4.438E-02	NOT IDENT.
BA-133	-2.671E-03	1.837E-02	1.577E-02	9.372E-03	NOT IDENT.
I-133	2.869E+01	4.056E+01	0.000E+00	2.069E+01	SHORT HLIF
CS-134	-1.858E-02	1.802E-02	1.256E-02	9.195E-03	NOT IDENT.
CS-135	-1.295E-02	6.061E-02	5.283E-02	3.093E-02	NOT IDENT.
I-135	-1.309E+09	2.749E+09	0.000E+00	1.403E+09	SHORT HLIF
CS-136	-9.522E-03	3.056E-02	2.404E-02	1.559E-02	NOT IDENT.
BA-137M	-6.317E-03	1.705E-02	1.429E-02	8.697E-03	NOT IDENT.
CS-137	-6.678E-03	1.802E-02	1.510E-02	9.194E-03	NOT IDENT.
CE-139	-1.403E-03	1.120E-02	9.452E-03	5.715E-03	NOT IDENT.
BA-140	-1.236E-02	8.900E-02	7.369E-02	4.541E-02	NOT IDENT.
LA-140	1.020E-03	3.034E-02	2.599E-02	1.548E-02	NOT IDENT.
CE-141	-5.409E-03	2.386E-02	2.016E-02	1.218E-02	NOT IDENT.
CE-143	-9.705E-01	3.392E+00	2.906E+00	1.731E+00	NOT IDENT.
CE-144	-6.997E-02	7.871E-02	6.167E-02	4.016E-02	NOT IDENT.
PM-144	-1.098E-02	2.488E-02	1.564E-02	1.269E-02	NOT IDENT.
PR-144	-7.417E-01	1.681E+00	1.057E+00	8.578E-01	NOT IDENT.
PM-146	3.184E-03	2.055E-02	1.796E-02	1.049E-02	NOT IDENT.
ND-147	2.019E-01	1.893E-01	1.807E-01	9.660E-02	NOT IDENT.
PM-149	7.792E+00	7.161E+00	6.927E+00	3.654E+00	NOT IDENT.
EU-152	-1.233E-02	4.282E-02	3.630E-02	2.185E-02	NOT IDENT.
GD-153	-1.183E-02	2.726E-02	2.246E-02	1.391E-02	NOT IDENT.
EU-154	-1.403E-03	5.090E-02	4.197E-02	2.597E-02	NOT IDENT.
EU-155	-4.703E-02	4.054E-02	3.057E-02	2.068E-02	NOT IDENT.
TB-160	6.453E-03	4.853E-02	4.276E-02	2.476E-02	NOT IDENT.
HO-166M	1.467E-02	2.899E-02	2.690E-02	1.479E-02	FAIL ABUN
TM-171	-1.216E+01	8.968E+00	7.155E+00	4.575E+00	NOT IDENT.
LU-176	-3.460E-03	1.042E-02	8.870E-03	5.317E-03	NOT IDENT.
LU-177	-1.075E-01	2.270E-01	1.969E-01	1.158E-01	NOT IDENT.
LU-177M	-1.767E-02	6.894E-02	5.746E-02	3.517E-02	NOT IDENT.
HF-181	-1.046E-03	1.650E-02	1.395E-02	8.419E-03	NOT IDENT.
W-181	-2.774E-02	1.067E-01	9.352E-02	5.445E-02	NOT IDENT.
TA-182	6.055E-03	6.599E-02	5.606E-02	3.367E-02	NOT IDENT.
RE-183	1.085E-02	4.002E-02	3.516E-02	2.042E-02	NOT IDENT.
RE-184	1.131E-01	9.511E-02	9.341E-02	4.852E-02	NOT IDENT.
OS-185	7.270E-03	1.841E-02	1.704E-02	9.395E-03	NOT IDENT.
RE-188	1.165E-02	6.328E-02	5.527E-02	3.228E-02	NOT IDENT.
W-188	-3.059E+00	2.815E+00	2.185E+00	1.436E+00	NOT IDENT.

IR-192	1.191E-02	1.576E-02	1.481E-02	8.043E-03	NOT IDENT.
AU-195	-5.891E-02	8.454E-02	6.825E-02	4.313E-02	NOT IDENT.
TL-200	2.644E+00	7.386E+00	0.000E+00	3.768E+00	SHORT HLIF
TL-201	-6.989E-03	8.271E-01	7.059E-01	4.220E-01	NOT IDENT.
TL-202	-5.656E-03	2.228E-02	1.849E-02	1.137E-02	NOT IDENT.
HG-203	1.223E-02	1.558E-02	1.481E-02	7.949E-03	NOT IDENT.
BI-207	2.947E-03	1.875E-02	1.637E-02	9.565E-03	NOT IDENT.
TL-207	1.826E-01	2.902E-01	2.696E-01	1.481E-01	NOT IDENT.
TL-208	-1.970E-02	1.939E-02	1.389E-02	9.894E-03	NOT IDENT.
PO-209	5.356E+00	3.566E+00	3.673E+00	1.820E+00	NOT IDENT.
BI-210	3.327E-01	9.189E-01	8.420E-01	4.688E-01	NOT IDENT.
PB-210	3.327E-01	9.189E-01	8.420E-01	4.688E-01	NOT IDENT.
PO-210	3.327E-01	9.188E-01	8.420E-01	4.688E-01	NOT IDENT.
BI-211	1.400E-02	1.001E-01	8.428E-02	5.109E-02	NOT IDENT.
PB-211	-1.086E-01	3.769E-01	3.083E-01	1.923E-01	NOT IDENT.
BI-212	-5.727E-02	1.113E-01	8.876E-02	5.679E-02	NOT IDENT.
PB-212	-4.792E-03	2.782E-02	2.426E-02	1.419E-02	NOT IDENT.
PO-212	-4.792E-03	2.782E-02	2.426E-02	1.419E-02	NOT IDENT.
BI-214	-7.027E-03	3.985E-02	3.157E-02	2.033E-02	NOT IDENT.
PB-214	-1.151E-02	3.433E-02	2.735E-02	1.752E-02	NOT IDENT.
PO-214	-1.151E-02	3.433E-02	2.735E-02	1.752E-02	NOT IDENT.
PO-215	1.826E-01	2.902E-01	2.696E-01	1.481E-01	NOT IDENT.
PO-216	-4.792E-03	2.782E-02	2.426E-02	1.419E-02	NOT IDENT.
PO-218	-1.151E-02	3.433E-02	2.735E-02	1.752E-02	NOT IDENT.
RN-219	-1.001E-01	1.783E-01	1.429E-01	9.098E-02	NOT IDENT.
RN-220	-4.009E+00	1.101E+01	8.739E+00	5.618E+00	NOT IDENT.
RA-223	1.826E-01	2.902E-01	2.696E-01	1.481E-01	NOT IDENT.
RA-224	-4.414E-01	2.656E-01	1.990E-01	1.355E-01	NOT IDENT.
RA-226	-7.027E-03	3.985E-02	3.157E-02	2.033E-02	NOT IDENT.
AC-227	2.247E-02	1.443E-01	1.310E-01	7.363E-02	NOT IDENT.
TH-227	2.247E-02	1.443E-01	1.310E-01	7.364E-02	NOT IDENT.
AC-228	-4.578E-02	5.828E-02	4.295E-02	2.974E-02	NOT IDENT.
RA-228	-4.578E-02	5.828E-02	4.295E-02	2.974E-02	NOT IDENT.
TH-228	-4.839E-03	2.809E-02	2.450E-02	1.433E-02	NOT IDENT.
TH-229	3.716E-02	1.874E-01	1.733E-01	9.562E-02	NOT IDENT.
TH-230	-7.027E-03	3.985E-02	3.157E-02	2.033E-02	NOT IDENT.
PA-231	-7.014E-01	7.040E-01	5.575E-01	3.592E-01	NOT IDENT.
TH-231	1.826E-01	2.902E-01	2.696E-01	1.481E-01	NOT IDENT.
U-231	-7.115E-01	2.052E-01	1.232E-01	1.047E-01	NOT IDENT.
TH-232	-4.578E-02	5.828E-02	4.295E-02	2.974E-02	NOT IDENT.
PA-233	8.048E-03	2.920E-02	2.643E-02	1.490E-02	NOT IDENT.
PA-234	-4.732E-02	1.246E-01	9.830E-02	6.360E-02	FAIL ABUN
PA-234M	1.256E+00	2.071E+00	1.982E+00	1.057E+00	NOT IDENT.
TH-234	-2.827E-01	4.193E-01	3.721E-01	2.139E-01	NOT IDENT.
U-234	-7.027E-03	3.985E-02	3.157E-02	2.033E-02	NOT IDENT.
U-235	2.945E-02	9.384E-02	8.208E-02	4.788E-02	FAIL ABUN
NP-236	1.099E-02	3.138E-02	2.777E-02	1.601E-02	NOT IDENT.
NP-237	-5.583E-02	7.711E-02	6.243E-02	3.934E-02	NOT IDENT.
U-238	-2.827E-01	4.193E-01	3.721E-01	2.139E-01	NOT IDENT.
NP-239	-1.370E-02	7.277E-02	6.244E-02	3.713E-02	NOT IDENT.
AM-241	2.143E-02	3.859E-02	3.657E-02	1.969E-02	NOT IDENT.
AM-243	-4.772E-03	1.526E-02	1.328E-02	7.785E-03	NOT IDENT.
CM-243	-2.297E-02	3.535E-02	2.823E-02	1.804E-02	NOT IDENT.
AM-246	-1.564E-02	5.880E-02	4.689E-02	3.000E-02	NOT IDENT.
CM-247	-1.383E-02	1.589E-02	1.216E-02	8.106E-03	NOT IDENT.
CF-249	-6.127E-03	1.736E-02	1.442E-02	8.859E-03	NOT IDENT.
CF-251	-1.516E-02	4.371E-02	3.564E-02	2.230E-02	NOT IDENT.
ANH-511	-3.234E-02	2.846E-02	2.752E-02	1.452E-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	59.3238
46.50	59.3238
46.50	59.3238
48.70	73.2826
49.72	71.4808
51.35	61.8966
52.39	46.2742
52.97	54.2139
53.15	54.2334
53.44	59.1980
54.07	56.3084
56.28	67.4653
56.28	67.4656
57.37	62.6358
57.53	62.6549
57.53	62.6551
57.60	62.6632
57.98	57.7315
57.98	57.7315
59.32	54.8838
59.32	54.8838
59.40	54.8919
59.54	54.9063
59.72	54.9248
60.01	58.9509
61.10	96.1135
61.14	96.1204
61.30	105.1626
63.00	64.2974
63.29	66.3412
63.29	66.3412
63.58	66.3757
64.28	69.4798
65.12	73.6170
65.20	73.6274
65.20	73.6274
66.05	104.0404
66.72	97.0830
66.83	70.8032
66.91	70.8132
67.20	70.8488
67.20	70.8488
67.75	63.8245
67.85	69.9149
68.90	80.1918
68.90	80.1918
69.30	77.1991
69.67	77.2478
70.82	63.1400
70.82	63.1400
70.83	63.1409
72.80	73.5656
72.87	72.5521
72.87	72.5521
74.67	73.7908
74.81	85.0838
74.81	85.0838
74.81	85.0838
74.81	85.0838
74.81	85.0838
74.81	85.0838
74.81	85.0838
74.97	83.0550
75.28	80.0190
75.70	81.0995
77.11	77.1671
77.11	77.1671

77.11	77.1671
77.11	77.1671
77.11	77.1671
77.11	77.1671
77.11	77.1671
78.38	48.4554
79.62	63.0111
79.80	75.4279
79.80	75.4279
80.11	86.8356
80.18	86.8450
80.30	85.8272
80.30	85.8272
80.57	82.7596
81.00	83.8497
81.07	83.8588
81.07	83.8588
81.07	83.8588
81.07	83.8588
82.60	78.8671
83.37	58.1801
83.78	63.4145
83.78	63.4145
83.78	63.4145
83.78	63.4145
84.21	62.4152
84.90	79.1412
85.43	72.9512
86.29	73.0445
86.50	75.1549
86.54	75.1593
86.59	75.1648
86.72	75.1791
86.79	85.6294
86.94	86.6931
87.30	89.8742
87.30	89.8742
87.30	89.8742
87.30	89.8742
87.30	89.8742
87.30	89.8742
87.57	85.7278
87.88	72.1698
88.03	72.1856
88.36	63.8470
88.47	60.7167
89.95	165.7566
91.11	114.5418
92.29	75.7881
92.38	75.7980
92.38	75.7980
93.35	70.6310
94.00	68.5854
94.67	114.0634
94.67	114.0645
94.90	152.1343
94.90	152.1343
94.90	152.1343
94.90	152.1343
95.87	168.2088
95.87	168.2088
96.73	81.5568
97.43	60.4312
98.44	60.5147
98.44	60.5147
98.88	74.3608
99.55	69.1121
99.55	69.1121
99.86	61.6952
100.00	61.7070
100.10	61.7156
103.18	54.4907
103.76	59.8788
105.00	68.5446
105.31	69.6437
108.00	63.4359
109.28	62.4631

111.00	76.6305
111.00	76.6305
111.76	87.5073
112.95	72.4906
115.19	70.5225
116.30	71.7054
117.00	68.5047
117.00	68.5047
117.66	66.3834
121.11	59.0106
121.62	61.2332
121.78	68.9005
122.06	63.4534
122.32	59.0955
122.32	59.0955
122.32	59.0955
122.32	59.0955
123.07	60.2435
127.23	74.8461
129.76	51.8824
131.20	53.0732
133.02	76.4500
133.54	74.2770
135.34	53.3208
136.00	53.3599
136.25	51.1506
136.48	51.1637
140.51	88.2562
140.51	0.0000
142.18	73.8666
142.65	69.4246
143.76	66.1439
144.24	78.5164
144.24	78.5164
144.24	78.5164
144.24	78.5164
145.22	80.8440
145.44	80.8630
147.16	72.0091
152.43	62.2230
152.70	63.3717
153.22	65.6701
154.21	63.4700
154.21	63.4700
154.21	63.4700
154.21	63.4700
155.03	60.1199
156.02	61.3158
158.56	62.6113
159.00	0.0000
159.00	66.0554
160.31	57.0190
161.27	61.6393
162.32	54.8472
162.64	58.2938
163.35	58.3343
163.89	59.5098
165.85	58.4769
167.43	59.7150
171.28	49.5626
171.86	54.2027
172.10	54.2151
176.55	46.3342
176.60	46.3367
181.06	52.3444
184.41	57.7550
185.71	57.8230
186.00	57.8381
190.27	39.4099
192.34	60.4321
193.63	52.9381
197.04	54.8654
198.01	65.5398
198.60	59.3698
200.40	56.7998
201.83	70.1978
202.84	58.6972
205.31	47.2343

208.36	59.8641
208.81	54.5236
209.75	45.6211
209.75	45.6211
210.97	40.2948
215.65	55.7310
216.55	54.8726
218.09	60.3451
222.10	50.6009
223.80	55.1938
226.40	53.4944
227.00	56.2410
227.08	56.2443
227.20	56.2499
228.16	52.6603
228.18	47.2135
228.18	47.2135
231.56	57.3523
235.69	78.5411
236.00	76.7325
236.00	76.7325
238.63	54.9193
238.63	54.9193
238.63	54.9193
238.63	54.9193
239.00	55.8504
240.98	77.0248
241.98	69.7413
241.98	69.7413
241.98	69.7413
244.69	43.2177
245.39	36.8002
247.94	47.9312
248.90	56.2670
249.79	51.6891
252.40	36.0668
252.85	37.9289
252.85	37.9289
254.15	0.0000
256.20	39.8763
256.20	39.8763
260.50	41.8607
260.90	41.8730
262.80	38.2029
264.65	53.1809
268.24	45.8336
268.79	46.7865
269.46	58.0427
269.46	58.0427
269.46	58.0427
269.46	58.0427
271.23	48.7413
273.65	37.5568
276.40	52.6794
277.35	66.8333
277.60	61.1964
277.60	61.1964
278.00	54.6210
278.60	55.5853
279.20	39.5852
279.53	40.5369
280.46	46.2227
281.68	45.3171
283.67	63.3400
284.30	57.6929
285.00	48.2576
285.90	32.1915
286.10	34.0895
286.10	34.0895
287.40	41.7012
288.45	0.0000
290.67	52.2406
290.80	52.2456
291.72	40.8715
293.26	42.8158
293.70	41.8764
295.21	38.1073
295.21	38.1073

295.21	38.1073
295.96	43.8452
296.50	43.8606
297.23	47.6974
298.57	46.7846
299.80	39.1776
299.80	39.1776
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300.09	36.3179
300.09	36.3179
300.12	36.3185
301.29	44.9547
302.84	41.1701
303.76	45.0264
303.91	45.0307
304.40	43.1282
304.40	43.1282
304.84	41.2232
306.84	44.1561
308.46	49.0063
311.98	44.3007
316.51	43.4619
318.01	30.9351
319.02	37.7259
319.41	37.7348
320.08	57.1103
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323.87	37.8396
323.87	37.8396
323.87	37.8396
325.23	40.7843
328.77	45.7392
333.44	48.7968
334.20	48.8190
334.20	48.8190
334.30	48.8220
338.28	50.8963
338.28	50.8963
338.28	50.8963
338.28	50.8963
338.32	50.8979
338.32	50.8979
338.32	50.8979
340.50	49.9837
340.57	49.9860
344.27	43.2198
345.85	38.3442
350.59	40.4232
351.07	38.4620
351.92	41.4412
351.92	41.4412
351.92	41.4412
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356.01	37.5831
364.48	42.7349
366.43	42.7822
367.43	43.8019
367.94	0.0000
369.80	43.8604
374.96	28.9916
383.85	32.1479
387.95	37.2546
388.63	38.2754
391.69	34.3035
391.69	34.3035
392.90	35.3354
398.62	31.3931
400.65	31.4267
401.10	23.3222
401.81	37.5324
402.60	39.5778
404.84	30.4807
410.95	32.6167
411.60	28.5494
413.65	29.6005
414.70	36.7657
415.30	31.6693

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423.70	35.9100
427.08	30.8331
427.89	20.5640
432.53	32.9795
433.93	24.7518
439.47	31.0254
439.56	31.0268
439.89	29.9974
443.98	35.2410
444.90	45.6268
445.03	45.6295
445.03	45.6295
445.03	45.6295
445.03	45.6295
453.90	32.2876
463.38	25.1115
468.07	18.8756
473.00	30.4819
475.06	28.4073
475.35	26.3065
476.78	26.3241
477.59	18.9605
477.96	24.2315
482.03	25.3334
484.57	29.5902
487.03	22.2180
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492.35	27.5754
497.08	22.3205
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510.53	0.0000
510.84	33.1541
511.00	36.3649
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511.85	33.1690
513.99	122.0922
513.99	122.0922
520.41	31.1470
520.65	31.1497
527.90	23.7060
528.96	0.0000
529.64	22.6458
529.87	0.0000
531.02	19.4222
537.32	27.0485
543.00	28.1995
546.56	0.0000
549.76	23.9296
552.65	21.7804
555.20	17.4429
563.23	19.6891
563.90	18.6005
568.70	17.5410
569.32	20.8358
569.50	20.8369
569.67	26.3225
573.80	30.7617
574.00	30.7643
574.64	19.7820
578.91	24.2203
579.30	0.0000
583.14	26.4675
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591.81	14.3866
592.07	15.4949
593.00	25.4651
595.88	32.1453
600.56	38.8687
602.52	0.0000
602.71	34.4559
602.71	34.4559
603.60	33.3554
604.41	32.2542
604.70	32.2577
609.31	35.6592

609.31	35.6592
609.31	35.6592
609.31	35.6592
610.33	28.9850
612.46	25.6616
614.37	30.1476
618.01	20.1264
621.84	29.1151
621.84	29.1151
631.29	13.4865
633.02	19.1183
633.10	23.6173
634.78	20.7067
635.90	21.6164
636.97	22.5262
645.85	19.8892
646.12	20.7955
656.30	24.5050
657.75	24.5182
657.90	0.0000
661.65	30.9188
661.65	30.9188
664.57	22.7591
666.33	23.6850
666.33	23.6850
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677.61	16.4646
685.20	19.2614
692.80	26.6714
695.00	22.0904
696.49	23.0231
696.49	23.0231
697.00	28.5531
697.49	29.4797
698.33	28.5668
698.50	28.5683
699.00	29.4953
702.63	28.6099
706.10	23.1012
706.58	0.0000
706.67	27.7266
709.31	24.9770
711.68	22.2205
713.82	25.9431
717.42	20.4091
720.50	21.3598
721.93	18.5830
722.20	18.5845
722.78	19.5178
722.78	19.5178
722.89	19.5183
722.95	19.5188
723.30	21.3806
724.18	16.7375
727.18	20.4784
733.00	15.8557
735.90	17.7383
739.58	17.7605
742.81	21.5232
744.21	19.6608
747.13	14.9945
751.79	22.5270
752.31	15.9595
753.82	14.0889
755.35	19.7347
756.15	19.7398
756.87	17.8640
763.93	16.0213
765.79	15.0883
766.42	16.9778
766.84	16.0367
776.49	18.9268
778.00	18.9360
778.57	21.7804
778.89	18.9414
783.80	20.8688
785.46	18.9819
792.07	15.2180

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796.30	19.0483
798.80	20.9698
801.93	15.2660
805.60	16.2392
810.29	11.4800
810.76	11.4817
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826.30	12.4995
828.27	0.0000
831.60	11.5570
831.96	15.4109
834.83	13.4965
836.80	0.0000
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848.13	18.3919
856.28	0.0000
856.80	18.4406
860.37	20.4037
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867.82	16.5547
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876.40	12.6918
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880.27	8.7968
880.51	7.8199
881.50	12.7112
883.24	16.6310
884.67	8.8084
889.25	3.9201
896.60	9.8215
898.02	20.6334
899.00	23.5881
903.28	22.6333
911.07	14.7946
911.07	14.7946
911.07	14.7946
919.63	12.8537
920.93	17.8040
925.00	12.8734
925.24	12.8743
926.50	9.9067
935.52	16.8850
937.48	15.9004
944.10	14.9348
946.00	15.9387
949.00	15.9523
962.29	19.0139
964.01	10.0120
966.15	13.0232
968.20	16.0379
969.11	20.0522
969.11	20.0522
969.11	20.0522
977.42	18.0883
980.50	22.1268
983.50	19.1252
989.30	12.0981
996.32	12.1213
1001.03	6.0683
1001.68	9.1039
1004.76	18.2232
1021.30	0.0000
1024.50	0.0000
1034.80	4.0820
1036.00	9.1874
1037.82	13.2768
1038.57	11.2369
1038.76	0.0000
1045.16	6.1397
1046.59	9.2127
1048.07	12.2889

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1050.47	11.2718
1062.04	7.1941
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1077.35	15.4768
1078.86	14.4505
1085.78	15.5098
1099.22	14.5250
1112.02	16.6531
1112.84	12.4922
1115.52	8.3340
1120.29	18.7734
1120.29	18.7734
1120.29	18.7734
1120.29	18.7734
1120.51	15.6453
1121.28	15.6482
1124.00	0.0000
1129.67	13.5897
1131.51	0.0000
1147.95	0.0000
1167.94	3.1652
1173.22	7.3951
1175.09	10.5688
1177.93	7.4033
1189.05	8.4832
1204.90	5.3218
1205.75	0.0000
1213.00	7.4645
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1230.97	11.7788
1235.34	15.0062
1236.41	0.0000
1238.25	10.7256
1246.25	10.7451
1260.41	0.0000
1271.85	10.8076
1274.45	11.8954
1274.54	12.9768
1291.56	7.5985
1298.22	0.0000
1312.09	17.4461
1325.50	7.6552
1325.50	7.6552
1332.49	9.8569
1333.61	5.4775
1360.21	12.8538
1362.66	0.0000
1365.15	6.4335
1368.21	11.0361
1368.53	0.0000
1376.25	7.3698
1384.27	5.5366
1394.10	5.5481
1395.20	3.6995
1407.95	12.0553
1434.06	13.0527
1436.60	10.2606
1457.56	0.0000
1460.81	8.4364
1489.15	3.7707
1509.49	6.6252
1596.49	7.6982
1620.62	5.7998
1678.03	0.0000
1691.02	9.7904
1691.02	9.7904
1706.46	0.0000
1750.46	0.0000
1764.49	5.9504
1764.49	5.9504
1764.49	5.9504
1764.49	5.9504
1770.23	10.9199
1771.40	7.9434
1791.20	0.0000
1808.65	6.9949

1836.01

5.0193

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202023707

Total Uranium Activity	-8.2728E-01	ug/g
Total Uranium Counting Unc.	1.2482E+00	ug/g
Total Uranium Tpu	6.3684E-07	ug/g
Total Uranium Mda	1.1076E+00	ug/g

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*****
*
*               GEL Laboratories LLC
*               2040 SAVAGE ROAD
*               CHARLESTON , SC 29417
*               GROSS GAMMA REPORT
*
*****
*
*  BATCH ID      : 944962          SAMPLE ID   : G1202023707
*  ANALYST       : MXR1           DETECTOR    : GAM20
*  SAMPLE DATE   : 27-JAN-2010 00:00:00.00  COUNT TIME : 0 02:00:00.00
*  ANALYSIS DATE : 5-FEB-2010 19:15:18.07  SAMPLE ALQT: 144.550 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 5.727E-03
GROSS GAMMA ERROR   (pCi/GRAM ) : 9.963E-03
GROSS GAMMA MDA     (pCi/GRAM ) : 1.619E-02
GROSS GAMMA DLC     (pCi/GRAM ) : 7.531E-03

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VAX/VMS Nuclide Identification Report Generated 6-FEB-2010 15:03:40.70

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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                           *
*****
Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023708.CNF;1
Sample date   : 15-JAN-2010 12:00:00 Acquisition date : 6-FEB-2010 13:03:11.
Sample ID     : G1202023708 Sample quantity : 1.01100E+02 GRAM
Detector name : GAM22 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.00 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID       : 944962 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	62.94*	56	459	1.00	126.13	123	7	7.76E-03	67.6	
2	2	74.75	510	446	1.08	149.72	146	15	7.08E-02	7.7	2.13E+00
3	2	77.07*	767	402	1.06	154.37	146	15	1.06E-01	5.7	
4	0	87.23*	206	435	1.15	174.67	172	6	2.86E-02	17.7	
5	3	90.00	167	371	1.10	180.20	178	14	2.32E-02	18.6	2.34E+00
6	3	92.72*	285	480	1.23	185.64	178	14	3.96E-02	15.3	
7	0	128.86	103	375	1.23	257.84	254	8	1.43E-02	34.2	
8	0	185.81*	304	415	1.51	371.64	368	9	4.23E-02	14.1	
9	0	209.36*	112	365	0.95	418.69	415	9	1.55E-02	33.1	
10	3	238.64*	1657	229	1.26	477.20	469	23	2.30E-01	3.0	2.85E+00
11	3	241.62	416	298	1.89	483.16	469	23	5.78E-02	11.5	
12	0	269.99	114	337	1.39	539.85	536	12	1.59E-02	33.3	
13	0	278.59	101	286	1.22	557.02	552	12	1.41E-02	35.0	
14	0	295.14*	490	324	1.16	590.10	583	13	6.81E-02	8.9	
15	0	299.46*	69	331	0.89	598.73	596	12	9.55E-03	55.1	
16	0	328.09	47	292	1.58	655.95	650	11	6.46E-03	72.6	
17	0	338.23*	356	220	1.61	676.22	671	10	4.95E-02	9.7	
18	0	351.87*	885	331	1.43	703.48	695	15	1.23E-01	5.7	
19	0	410.25	82	244	1.56	820.14	813	15	1.14E-02	43.8	
20	0	462.99	94	178	1.44	925.55	921	10	1.30E-02	28.5	
21	0	511.02*	174	221	1.79	1021.54	1012	18	2.41E-02	24.5	
22	0	583.30*	532	156	1.82	1166.02	1158	16	7.39E-02	7.0	
23	0	609.26*	665	220	1.68	1217.90	1209	18	9.24E-02	6.6	
24	0	661.81	83	124	3.09	1322.95	1313	16	1.16E-02	31.9	
25	0	727.09*	127	192	2.20	1453.44	1446	19	1.76E-02	27.4	
26	0	768.98	41	93	0.89	1537.18	1532	9	5.70E-03	45.4	
27	0	861.02	116	108	2.35	1721.18	1711	18	1.62E-02	22.9	
28	0	911.44*	394	128	2.09	1821.99	1814	19	5.48E-02	8.9	
29	0	968.39*	315	127	2.07	1935.87	1925	22	4.37E-02	11.1	
30	0	1120.46*	173	90	2.23	2239.94	2230	21	2.41E-02	16.1	
31	2	1374.49	39	11	2.43	2748.00	2745	24	5.37E-03	18.9	3.45E+00
32	2	1378.00	63	28	2.68	2755.00	2745	24	8.78E-03	23.4	
33	0	1460.81*	1244	54	2.38	2920.66	2908	23	1.73E-01	3.3	
34	0	1593.82	33	82	10.28	3186.72	3171	32	4.52E-03	91.3	
35	0	1731.39*	19	26	2.42	3461.96	3449	17	2.69E-03	67.8	
36	0	1764.47*	146	21	1.91	3528.13	3517	21	2.03E-02	12.4	

Flag: "*" = Peak area was modified by background subtraction

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Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023708.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 15-JAN-2010 12:00:00 Acquisition date : 6-FEB-2010 13:03:11
Sample ID         : G1202023708 Sample quantity : 101.10 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA22 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.00 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

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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	*	2.268E+01	2.554E+00	5.369E-01	4.918E-02	42.244
CD-109	+	88.03	*	2.841E+00	1.043E+00	1.403E+00	1.331E-01	2.025
SN-126	+	64.28		5.058E-01	6.878E-01	8.060E-01	1.171E-01	0.628
	+	86.94		1.149E+00	6.276E-01	6.177E-01	2.565E-01	1.860
	+	87.57	*	2.763E-01	1.015E-01	1.372E-01	1.296E-02	2.014
BA-137M	+	661.65	*	9.577E-02	6.188E-02	6.517E-02	6.872E-03	1.470
CS-137	+	661.65	*	1.012E-01	6.541E-02	6.889E-02	7.274E-03	1.470
HG-203		70.83		5.976E-01	1.277E+00	1.916E+00	2.515E-01	0.312
		72.87		1.634E+00	7.909E-01	1.219E+00	1.562E-01	1.340
		82.60		9.885E-01	1.539E+00	2.099E+00	2.922E-01	0.471
	+	279.20	*	1.097E-01	7.835E-02	7.985E-02	1.130E-02	1.374
TL-208	+	277.35		8.979E-01	6.459E-01	6.994E-01	1.153E-01	1.284
	+	510.84		6.950E-01	3.519E-01	2.279E-01	2.970E-02	3.049
	+	583.14	*	5.974E-01	1.058E-01	6.563E-02	7.117E-03	9.102
	+	860.37		1.187E+00	5.608E-01	4.413E-01	5.142E-02	2.690
BI-211		72.87		7.410E+00	3.510E+00	5.531E+00	4.427E-01	1.340
	+	351.07	*	4.701E+00	7.661E-01	3.471E-01	4.049E-02	13.547
PB-212	+	74.81		2.873E+00	5.690E-01	5.555E-01	6.893E-02	5.171
	+	77.11		2.449E+00	3.472E-01	3.163E-01	2.645E-02	7.741
	+	87.30		1.278E+00	4.864E-01	6.363E-01	8.737E-02	2.009
	+	238.63	*	2.056E+00	2.990E-01	1.020E-01	1.348E-02	20.155
	+	300.09		1.264E+00	1.404E+00	1.330E+00	1.940E-01	0.950
PO-212	+	74.81		2.873E+00	5.690E-01	5.555E-01	6.893E-02	5.171
	+	77.11		2.449E+00	3.472E-01	3.163E-01	2.645E-02	7.741
	+	87.30		1.278E+00	4.864E-01	6.363E-01	8.737E-02	2.009
	+	115.19		2.074E+00	4.014E+00	6.519E+00	5.400E-01	0.318
	+	238.63	*	2.056E+00	2.990E-01	1.020E-01	1.348E-02	20.155
	+	300.09		1.264E+00	1.404E+00	1.330E+00	1.940E-01	0.950
BI-214	+	609.31	*	1.400E+00	2.472E-01	1.191E-01	1.385E-02	11.750
	+	1120.29		1.817E+00	6.203E-01	4.070E-01	4.497E-02	4.465
	+	1764.49		1.998E+00	5.218E-01	3.101E-01	2.583E-02	6.444
PB-214	+	74.81		4.950E+00	9.390E-01	9.572E-01	1.055E-01	5.171
	+	77.11		4.198E+00	6.757E-01	5.423E-01	6.135E-02	7.741
	+	87.30		2.189E+00	8.215E-01	1.090E+00	1.326E-01	2.009

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	241.98		3.095E+00	8.282E-01	6.135E-01	8.436E-02	5.045
	+	295.21		1.587E+00	3.695E-01	2.190E-01	3.261E-02	7.246
	+	351.92	*	1.635E+00	2.798E-01	1.209E-01	1.542E-02	13.522
	+	74.81		4.950E+00	9.390E-01	9.572E-01	1.055E-01	5.171
	+	77.11		4.198E+00	6.757E-01	5.423E-01	6.135E-02	7.741
	+	87.30		2.189E+00	8.215E-01	1.090E+00	1.326E-01	2.009
PO-216	+	241.98		3.095E+00	8.282E-01	6.135E-01	8.436E-02	5.045
	+	295.21		1.587E+00	3.695E-01	2.190E-01	3.261E-02	7.246
	+	351.92	*	1.635E+00	2.798E-01	1.209E-01	1.542E-02	13.522
	+	74.81		2.873E+00	5.690E-01	5.555E-01	6.893E-02	5.171
	+	77.11		2.449E+00	3.472E-01	3.163E-01	2.645E-02	7.741
	+	87.30		1.278E+00	4.864E-01	6.363E-01	8.737E-02	2.009
PO-218	+	238.63	*	2.056E+00	2.990E-01	1.020E-01	1.348E-02	20.155
	+	300.09		1.264E+00	1.404E+00	1.330E+00	1.940E-01	0.950
	+	74.81		4.950E+00	9.390E-01	9.572E-01	1.055E-01	5.171
	+	77.11		4.198E+00	6.757E-01	5.423E-01	6.135E-02	7.741
	+	87.30		2.189E+00	8.215E-01	1.090E+00	1.326E-01	2.009
	+	241.98		3.095E+00	8.282E-01	6.135E-01	8.436E-02	5.045
RA-224	+	295.21		1.587E+00	3.695E-01	2.190E-01	3.261E-02	7.246
	+	351.92	*	1.635E+00	2.798E-01	1.209E-01	1.542E-02	13.522
	+	240.98	*	5.869E+00	1.535E+00	1.160E+00	1.452E-01	5.060
RA-226	+	609.31	*	1.400E+00	2.472E-01	1.191E-01	1.385E-02	11.750
	+	1120.29		1.817E+00	6.203E-01	4.070E-01	4.497E-02	4.465
	+	1764.49		1.998E+00	5.218E-01	3.101E-01	2.583E-02	6.444
AC-228	+	338.32		2.101E+00	9.738E-01	4.319E-01	1.817E-01	4.865
	+	911.07	*	1.897E+00	4.207E-01	2.260E-01	2.994E-02	8.391
	+	969.11		2.655E+00	8.695E-01	3.595E-01	8.681E-02	7.384
RA-228	+	338.32		2.101E+00	9.738E-01	4.319E-01	1.817E-01	4.865
	+	911.07	*	1.897E+00	4.207E-01	2.260E-01	2.994E-02	8.391
	+	969.11		2.655E+00	8.695E-01	3.595E-01	8.681E-02	7.384
TH-228	+	74.81		2.937E+00	5.139E-01	5.679E-01	4.679E-02	5.171
	+	77.11		2.503E+00	3.549E-01	3.233E-01	2.704E-02	7.741
	+	87.30		1.306E+00	4.797E-01	6.504E-01	6.121E-02	2.009
TH-230	+	238.63	*	2.102E+00	3.056E-01	1.043E-01	1.378E-02	20.155
	+	300.09		1.292E+00	1.621E+00	1.359E+00	8.177E-01	0.950
	+	609.31	*	1.400E+00	2.472E-01	1.191E-01	1.385E-02	11.750
TH-232	+	1120.29		1.817E+00	6.202E-01	4.070E-01	4.497E-02	4.465
	+	1764.49		1.998E+00	5.218E-01	3.101E-01	2.583E-02	6.444
	+	338.32		2.101E+00	4.792E-01	4.319E-01	5.136E-02	4.865
TH-234	+	911.07	*	1.897E+00	4.207E-01	2.260E-01	2.994E-02	8.391
	+	969.11		2.655E+00	8.695E-01	3.595E-01	8.681E-02	7.384
	+	63.29	*	1.278E+00	1.742E+00	2.186E+00	3.806E-01	0.585
U-234	+	92.38		2.487E+00	8.860E-01	8.076E-01	1.480E-01	3.079
	+	609.31	*	1.400E+00	2.472E-01	1.191E-01	1.385E-02	11.750
	+	1120.29		1.817E+00	6.202E-01	4.070E-01	4.497E-02	4.465
NP-237	+	1764.49		1.998E+00	5.218E-01	3.101E-01	2.583E-02	6.444
	+	86.50	*	8.115E-01	3.418E-01	4.276E-01	9.681E-02	1.898
	+	95.87		1.764E-02	1.131E+00	1.627E+00	4.022E-01	0.011
U-238	+	63.29	*	1.278E+00	1.742E+00	2.186E+00	3.806E-01	0.585

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-243	+	92.38		2.487E+00	7.929E-01	8.076E-01	7.358E-02	3.079
	+	74.67	*	4.658E-01	8.134E-02	9.032E-02	7.362E-03	5.157
	+	86.72		3.043E+01	1.117E+01	1.642E+01	1.534E+00	1.854
		117.66		-7.870E+00	4.397E+00	6.379E+00	5.269E-01	-1.234
ANH-511		142.18		-2.764E+00	2.029E+01	3.305E+01	2.919E+00	-0.084
	+	511.00	*	1.501E-01	7.497E-02	4.925E-02	4.934E-03	3.048

---- 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	*	1.750E-01	3.813E-01	6.320E-01	6.596E-02	0.277
NA-22		1274.54	*	-1.046E-02	4.621E-02	7.516E-02	6.477E-03	-0.139
NA-24		1368.53	*	4.079E+02	4.621E-02	Half-Life too short		
AL-26		1129.67		3.476E-02	1.811E+00	2.499E+00	2.176E-01	0.014
		1808.65	*	2.291E-03	2.870E-02	4.777E-02	3.907E-03	0.048
TI-44		67.85		-2.457E-02	4.635E-02	7.451E-02	5.688E-03	-0.330
	+	78.38	*	4.520E-01	6.409E-02	8.230E-02	6.978E-03	5.492
SC-46		889.25	*	3.964E-02	4.323E-02	7.580E-02	8.485E-03	0.523
	+	1120.51		3.294E-01	1.103E-01	1.358E-01	1.201E-02	2.425
V-48		944.10		-4.374E-01	1.267E+00	2.036E+00	2.209E-01	-0.215
		983.50	*	-5.150E-02	9.640E-02	1.514E-01	1.588E-02	-0.340
		1312.09		4.720E-02	1.126E-01	1.922E-01	1.693E-02	0.246
CR-51		320.08	*	2.898E-01	4.922E-01	8.225E-01	1.065E-01	0.352
MN-52		744.21		5.983E-02	6.128E-01	1.001E+00	1.088E-01	0.060
		848.13		8.781E+00	1.599E+01	2.760E+01	3.072E+00	0.318
		935.52		4.549E-01	6.468E-01	1.114E+00	1.217E-01	0.408
		1246.25		2.687E-01	1.849E+01	3.071E+01	2.596E+00	0.009
MN-54		1333.61		5.753E+00	1.161E+01	1.998E+01	1.782E+00	0.288
		1434.06	*	-1.684E-01	6.166E-01	9.806E-01	8.764E-02	-0.172
		834.83	*	1.967E-02	3.961E-02	6.800E-02	7.554E-03	0.289
		846.75	*	2.314E-02	4.210E-02	7.262E-02	8.084E-03	0.319
CO-56		977.42		-5.958E-01	3.635E+00	4.996E+00	5.269E-01	-0.119
		1037.82		1.092E-01	3.232E-01	5.422E-01	5.591E-02	0.201
		1175.09		-5.785E-01	2.366E+00	3.879E+00	3.124E-01	-0.149
		1238.25		1.858E-01	1.025E-01	1.816E-01	1.573E-02	1.023
CO-57		1360.21		-4.112E-01	1.037E+00	1.634E+00	1.459E-01	-0.252
		1771.40		-6.897E-02	2.944E-01	3.901E-01	3.241E-02	-0.177
		122.06	*	-1.716E-03	2.935E-02	4.641E-02	3.827E-03	-0.037
		136.48		-5.395E-02	2.375E-01	3.984E-01	3.696E-02	-0.135
CO-58		810.76	*	-3.369E-02	4.181E-02	6.576E-02	7.282E-03	-0.512
FE-59		142.65		-1.438E+00	3.483E+00	5.618E+00	4.971E-01	-0.256
		192.34		-1.660E+00	1.197E+00	1.825E+00	2.711E-01	-0.909
		1099.22	*	-6.691E-02	1.033E-01	1.587E-01	1.555E-02	-0.422
CO-60		1291.56		1.084E-02	1.368E-01	2.276E-01	2.243E-02	0.048
		1173.22		3.210E-02	4.481E-02	7.829E-02	6.296E-03	0.410
		1332.49	*	9.771E-03	3.777E-02	6.375E-02	5.684E-03	0.153
ZN-65		1115.52	*	6.837E-02	1.063E-01	1.567E-01	1.398E-02	0.436
GE-68		1077.35	*	-2.077E-01	1.239E+00	1.989E+00	1.875E-01	-0.104

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AS-73		53.44	*	4.596E-01	9.050E-01	1.482E+00	1.120E-01	0.310
AS-74		595.88	*	-2.773E-02	1.224E-01	2.001E-01	2.074E-02	-0.139
		634.78		-4.085E-01	4.772E-01	7.388E-01	7.743E-02	-0.553
SE-75		66.05		-1.994E+00	5.623E+00	8.181E+00	7.805E-01	-0.244
		96.73		-4.140E-01	9.729E-01	1.364E+00	1.878E-01	-0.303
		121.11		1.667E-01	1.584E-01	2.607E-01	2.851E-02	0.640
		136.00		8.543E-03	4.556E-02	7.751E-02	6.726E-03	0.110
		198.60		9.042E-01	2.277E+00	3.720E+00	4.348E-01	0.243
		264.65	*	4.357E-02	5.843E-02	8.552E-02	1.151E-02	0.510
	+	279.53		2.753E-01	1.967E-01	2.160E-01	3.066E-02	1.275
		303.91		5.247E-01	2.673E+00	3.957E+00	6.029E-01	0.133
		400.65		-7.370E-02	2.890E-01	4.680E-01	5.478E-02	-0.157
BR-77	+	87.88		4.580E-03	2.890E-01	Half-Life	too short	
		200.40		2.660E-04	2.890E-01	Half-Life	too short	
	+	239.00		2.490E-03	2.890E-01	Half-Life	too short	
		249.79		-8.424E-05	2.890E-01	Half-Life	too short	
		281.68		-2.027E-04	2.890E-01	Half-Life	too short	
		297.23		3.426E-03	2.890E-01	Half-Life	too short	
		303.76		3.440E-04	2.890E-01	Half-Life	too short	
		439.47		1.605E-04	2.890E-01	Half-Life	too short	
		484.57		4.888E-04	2.890E-01	Half-Life	too short	
		520.65	*	-4.553E-05	2.890E-01	Half-Life	too short	
		574.64		9.359E-04	2.890E-01	Half-Life	too short	
		578.91		4.226E-04	2.890E-01	Half-Life	too short	
		585.48		1.719E-02	2.890E-01	Half-Life	too short	
		755.35		-3.230E-04	2.890E-01	Half-Life	too short	
		817.79		-1.147E-04	2.890E-01	Half-Life	too short	
SR-82		698.33		-1.190E+01	4.418E+01	7.092E+01	7.588E+00	-0.168
		776.49	*	-6.826E-01	5.543E-01	7.913E-01	8.678E-02	-0.863
		1395.20		-1.588E+01	1.413E+01	2.035E+01	1.820E+00	-0.780
RB-83		520.41	*	-4.003E-02	7.851E-02	1.249E-01	1.257E-02	-0.321
		529.64		-8.240E-02	1.184E-01	1.901E-01	1.922E-02	-0.433
		552.65		5.415E-02	2.101E-01	3.559E-01	3.632E-02	0.152
RB-84		881.50	*	-9.116E-03	8.635E-02	1.423E-01	1.592E-02	-0.064
KR-85		513.99	*	3.141E+01	1.014E+01	1.629E+01	1.635E+00	1.928
SR-85		513.99	*	1.732E-01	5.591E-02	8.984E-02	9.014E-03	1.928
RB-86		1076.63	*	3.444E-01	1.000E+00	1.673E+00	1.579E-01	0.206
Y-88		898.02		-2.027E-02	4.529E-02	7.258E-02	8.154E-03	-0.279
		1836.01	*	2.485E-02	3.311E-02	6.027E-02	4.873E-03	0.412
ZR-88		392.90	*	1.546E-02	3.581E-02	6.012E-02	5.598E-03	0.257
Y-91		1204.90	*	-7.254E+00	2.010E+01	3.260E+01	2.681E+00	-0.223
NB-94		702.63	*	2.093E-02	3.655E-02	6.161E-02	6.602E-03	0.340
		871.10		-8.362E-03	3.598E-02	5.767E-02	6.443E-03	-0.145
NB-95		765.79	*	6.426E-02	5.802E-02	8.761E-02	9.580E-03	0.733
NB-95M		235.69	*	2.375E-01	1.800E-01	2.688E-01	3.553E-02	0.883
ZR-95		724.18		1.501E-01	1.328E-01	2.010E-01	2.291E-02	0.747
		756.15	*	-1.209E-02	8.171E-02	1.311E-01	1.522E-02	-0.092
NB-97		657.90	*	-5.067E+01	8.171E-02	Half-Life	too short	
		1024.50		4.278E+03	8.171E-02	Half-Life	too short	

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-97	254.15			-9.402E+03	8.171E-02	Half-Life	too short	
	355.39			3.839E+03	8.171E-02	Half-Life	too short	
	507.63	*		5.082E+03	8.171E-02	Half-Life	too short	
	602.52			-7.937E+02	8.171E-02	Half-Life	too short	
	1021.30			-4.428E+03	8.171E-02	Half-Life	too short	
	1147.95			-7.355E+02	8.171E-02	Half-Life	too short	
	1362.66			-1.070E+03	8.171E-02	Half-Life	too short	
	1750.46			-6.470E+03	8.171E-02	Half-Life	too short	
MO-99	140.51			-1.712E-05	8.171E-02	Half-Life	too short	
	181.06			1.086E-04	8.171E-02	Half-Life	too short	
	366.43			1.406E-04	8.171E-02	Half-Life	too short	
	739.58	*		-2.671E-05	8.171E-02	Half-Life	too short	
	778.00			-3.045E-04	8.171E-02	Half-Life	too short	
TC-99M	140.51	*		-8.931E+17	8.171E-02	Half-Life	too short	
RH-101	127.23			2.854E-02	4.206E-02	6.102E-02	5.101E-03	0.468
	198.01	*		2.942E-02	3.966E-02	6.545E-02	7.140E-03	0.449
	325.23			-1.121E-01	2.819E-01	3.988E-01	4.957E-02	-0.281
RH-102	418.52			3.226E-01	3.110E-01	5.225E-01	4.959E-02	0.617
	475.06	*		9.393E-03	3.247E-02	5.334E-02	5.246E-03	0.176
	631.29			-1.917E-03	5.752E-02	9.465E-02	9.911E-03	-0.020
	697.49			5.127E-02	8.202E-02	1.388E-01	1.485E-02	0.369
	766.84			1.955E-01	1.409E-01	2.158E-01	2.361E-02	0.906
	1046.59			-9.936E-02	1.173E-01	1.777E-01	1.743E-02	-0.559
	1112.84			5.510E-02	2.532E-01	3.582E-01	3.206E-02	0.154
RU-103	497.08	*		-5.105E-02	5.015E-02	7.455E-02	1.119E-02	-0.685
+	610.33			1.707E+01	3.777E+00	3.464E+00	6.124E-01	4.929
RH-106	511.85	+		7.597E-01	3.794E-01	4.845E-01	4.856E-02	1.568
	621.84	*		-2.281E-01	3.387E-01	5.329E-01	7.782E-02	-0.428
	1050.47			1.448E+00	2.409E+00	4.103E+00	4.005E-01	0.353
RU-106	511.85	+		7.597E-01	3.794E-01	4.845E-01	4.856E-02	1.568
	621.84	*		-2.281E-01	3.379E-01	5.329E-01	5.567E-02	-0.428
	1050.47			1.448E+00	2.409E+00	4.103E+00	4.005E-01	0.353
AG-108M	433.93	*		-1.068E-02	3.549E-02	5.684E-02	5.627E-03	-0.188
	614.37			2.509E-02	4.778E-02	7.073E-02	7.571E-03	0.355
	722.95			-2.705E-02	5.170E-02	6.834E-02	7.562E-03	-0.396
AG-110M	657.75	*		-2.478E-02	4.098E-02	5.413E-02	5.818E-03	-0.458
	677.61			-4.635E-02	3.267E-01	5.301E-01	5.732E-02	-0.087
	706.67			6.250E-02	2.358E-01	3.907E-01	4.268E-02	0.160
	763.93			4.603E-02	2.127E-01	3.004E-01	3.341E-02	0.153
	884.67			-2.006E-02	5.427E-02	8.771E-02	1.000E-02	-0.229
	937.48			6.924E-02	1.230E-01	2.103E-01	2.345E-02	0.329
	1384.27			2.812E-02	2.031E-01	2.883E-01	2.645E-02	0.098
IN-111	171.28			-2.816E+00	6.148E+00	1.005E+01	1.003E+00	-0.280
	245.39	*		9.232E+00	6.889E+00	1.043E+01	1.324E+00	0.885
IN-113M	391.69	*		3.262E-02	5.074E-02	8.598E-02	8.211E-03	0.379
SN-113	391.69	*		3.262E-02	5.074E-02	8.598E-02	8.211E-03	0.379
IN-114M	190.27	*		5.635E-02	2.469E-01	3.621E-01	3.849E-02	0.156
CD-115	260.90			-1.173E-03	2.469E-01	Half-Life	too short	
	492.35			2.048E-04	2.469E-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
	527.90	*		2.846E-05	2.469E-01	Half-Life	too short	
SN-117M	156.02			5.291E+00	3.679E+00	6.399E+00	5.999E-01	0.827
	158.56	*		-6.471E-02	9.009E-02	1.467E-01	1.391E-02	-0.441
SB-122	563.90	*		-1.124E-06	9.009E-02	Half-Life	too short	
	692.80			1.329E-05	9.009E-02	Half-Life	too short	
I-123	159.00	*		-1.631E+04	9.009E-02	Half-Life	too short	
	528.96			-5.570E+05	9.009E-02	Half-Life	too short	
TE-123M	159.00	*		-1.295E-02	3.357E-02	5.537E-02	5.288E-03	-0.234
I-124	602.71	*		-9.877E-02	2.517E+00	3.573E+00	3.711E-01	-0.028
	722.78			-9.365E+00	1.701E+01	2.242E+01	2.419E+00	-0.418
	1325.50			-8.031E+01	1.124E+02	1.727E+02	1.534E+01	-0.465
	1376.25			2.812E+02	1.186E+02	2.087E+02	1.865E+01	1.348
	1509.49			3.255E+01	5.701E+01	9.765E+01	8.679E+00	0.333
	1691.02			-1.626E+00	1.240E+01	2.018E+01	1.726E+00	-0.081
SB-124	602.71			-1.971E-03	5.024E-02	7.131E-02	7.408E-03	-0.028
	645.85			-1.520E-01	5.550E-01	8.966E-01	9.806E-02	-0.170
	709.31			-2.013E+00	3.329E+00	5.212E+00	5.599E-01	-0.386
	713.82			-1.324E+00	1.967E+00	3.054E+00	4.169E-01	-0.433
	722.78			-2.709E-01	4.921E-01	6.485E-01	7.096E-02	-0.418
+	968.20			2.960E+01	7.264E+00	8.444E+00	8.979E-01	3.505
	1045.16			-2.365E+00	2.718E+00	4.107E+00	4.035E-01	-0.576
	1325.50			-2.482E+00	3.473E+00	5.338E+00	4.740E-01	-0.465
	1368.21			4.711E-01	2.247E+00	3.229E+00	4.417E-01	0.146
	1436.60			6.586E-01	4.529E+00	7.509E+00	6.710E-01	0.088
	1691.02	*		-1.110E-02	8.459E-02	1.377E-01	1.225E-02	-0.081
SB-125	427.89	*		9.357E-03	9.915E-02	1.627E-01	1.578E-02	0.058
+	463.38			7.465E-01	4.326E-01	6.266E-01	6.498E-02	1.191
	600.56			2.675E-01	2.000E-01	3.242E-01	3.538E-02	0.825
	635.90			-2.343E-01	2.816E-01	4.368E-01	4.833E-02	-0.536
TE-125M	109.28	*		2.376E+00	1.134E+01	1.827E+01	1.854E+00	0.130
I-126	388.63			1.255E-01	3.301E-01	5.531E-01	5.237E-02	0.227
	666.33	*		3.689E-01	3.122E-01	4.825E-01	5.098E-02	0.764
	753.82			-8.017E-01	2.284E+00	3.611E+00	3.935E-01	-0.222
SB-126	223.80			3.102E+00	6.739E+00	1.117E+01	1.325E+00	0.278
+	278.60			8.744E+00	6.242E+00	7.015E+00	9.806E-01	1.246
+	296.50			2.327E+01	5.219E+00	5.855E+00	7.888E-01	3.974
	414.70			-8.220E-02	1.374E-01	1.850E-01	1.751E-02	-0.444
	415.30			-5.938E-01	1.096E+01	1.544E+01	1.462E+00	-0.038
	555.20			2.666E+00	6.156E+00	1.051E+01	1.074E+00	0.254
	573.80			-9.924E-01	1.802E+00	2.758E+00	2.837E-01	-0.360
	593.00			-1.308E+00	1.415E+00	2.202E+00	2.280E-01	-0.594
	656.30			-2.453E+00	5.661E+00	7.628E+00	8.035E-01	-0.322
	666.33			1.566E-01	1.326E-01	2.049E-01	2.165E-02	0.764
	675.00			-1.243E+00	3.038E+00	4.839E+00	5.130E-01	-0.257
	695.00			-1.883E-03	1.210E-01	1.975E-01	2.111E-02	-0.010
	697.00			1.011E-01	4.235E-01	7.017E-01	7.504E-02	0.144
	720.50	*		1.598E-02	2.574E-01	3.612E-01	3.895E-02	0.044
	856.80			6.803E-01	8.310E-01	1.271E+00	1.418E-01	0.535
	989.30			4.861E-01	1.730E+00	2.906E+00	3.031E-01	0.167

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127		1034.80		-2.004E+00	1.287E+01	2.076E+01	2.065E+00	-0.097
		1213.00		2.515E+00	6.757E+00	1.152E+01	9.521E-01	0.218
		61.10		1.903E+02	2.081E+02	3.212E+02	4.040E+01	0.592
		252.40		2.337E+01	1.923E+01	2.802E+01	1.227E+01	0.834
		290.80		-6.258E+01	8.922E+01	1.244E+02	2.130E+01	-0.503
	+	411.60		9.566E+01	8.550E+01	7.931E+01	1.416E+01	1.206
		444.90		3.632E+00	3.721E+01	6.084E+01	9.276E+00	0.060
		473.00		4.571E+00	6.219E+00	1.043E+01	1.629E+00	0.438
		543.00		-5.787E+00	6.218E+01	1.014E+02	1.734E+01	-0.057
		603.60		-9.176E-01	4.956E+01	7.047E+01	1.106E+01	-0.013
	*	685.20		8.603E-01	4.976E+00	8.230E+00	1.235E+00	0.105
		698.50		-2.040E+01	5.630E+01	8.966E+01	1.670E+01	-0.228
		722.20		-5.440E+01	1.281E+02	1.709E+02	2.553E+01	-0.318
		783.80		2.355E+01	1.416E+01	2.446E+01	3.922E+00	0.963
XE-127		57.60		-2.159E-01	6.642E+00	1.105E+01	7.937E-01	-0.020
		145.22		1.236E+00	8.583E-01	1.502E+00	1.343E-01	0.823
		172.10		-5.379E-02	1.509E-01	2.475E-01	2.477E-02	-0.217
	*	202.84		-4.978E-02	6.267E-02	9.949E-02	1.103E-02	-0.500
I-131		374.96		1.086E-01	2.461E-01	4.148E-01	4.223E-02	0.262
		80.18		-3.980E-01	9.252E+00	1.346E+01	1.180E+00	-0.030
		284.30		-1.232E+00	3.543E+00	4.808E+00	6.815E-01	-0.256
	*	364.48		-1.203E-02	2.262E-01	3.734E-01	4.155E-02	-0.032
TE-132		636.97		-7.789E-01	2.861E+00	4.629E+00	5.061E-01	-0.168
		722.89		-8.426E+00	1.581E+01	2.088E+01	2.273E+00	-0.404
		49.72		1.523E+01	7.982E+01	1.350E+02	1.689E+01	0.113
		111.76		-1.057E+01	1.485E+02	2.363E+02	3.006E+01	-0.045
BA-133		116.30		8.613E+01	1.336E+02	2.176E+02	2.759E+01	0.396
	*	228.16		8.815E-02	3.503E+00	5.705E+00	1.092E+00	0.015
		53.15		1.036E+00	3.692E+00	5.998E+00	4.551E-01	0.173
		79.62		5.692E-01	1.418E+00	2.104E+00	3.201E-01	0.271
I-133		81.00		-1.489E-01	1.151E-01	1.540E-01	2.455E-02	-0.967
		276.40		7.345E-01	6.515E-01	7.196E-01	1.302E-01	1.021
		302.84		1.605E-01	1.773E-01	2.706E-01	4.513E-02	0.593
	*	356.01		1.124E-02	5.165E-02	7.546E-02	1.128E-02	0.149
I-133	+	383.85		2.106E-01	3.367E-01	5.698E-01	7.625E-02	0.370
		510.53		3.890E+02	3.367E-01	Half-Life	too short	
	*	529.87		-1.318E+00	3.367E-01	Half-Life	too short	
		706.58		3.271E+01	3.367E-01	Half-Life	too short	
CS-134		856.28		4.343E+01	3.367E-01	Half-Life	too short	
		875.33		6.721E+00	3.367E-01	Half-Life	too short	
		1236.41		1.739E+02	3.367E-01	Half-Life	too short	
		1298.22		-3.859E+01	3.367E-01	Half-Life	too short	
CS-134		475.35		5.531E-01	2.123E+00	3.482E+00	3.425E-01	0.159
		563.23		6.765E-02	3.898E-01	6.555E-01	6.763E-02	0.103
		569.32		3.236E-03	2.132E-01	3.552E-01	3.683E-02	0.009
		604.70		1.916E-02	4.041E-02	5.971E-02	6.216E-03	0.321
	*	795.84		4.310E-02	5.043E-02	8.556E-02	9.470E-03	0.504
		801.93		3.145E-02	4.434E-01	7.180E-01	7.950E-02	0.044
		1038.57		-7.495E-01	3.775E+00	6.065E+00	6.005E-01	-0.124

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CS-135 I-135		1167.94		2.008E-01	2.585E+00	4.338E+00	3.525E-01	0.046
		1365.15		3.601E-01	1.235E+00	2.058E+00	1.917E-01	0.175
		268.24	*	1.250E-01	2.097E-01	3.032E-01	4.386E-02	0.412
		288.45		-4.854E+17	2.097E-01	Half-Life	too short	
		417.63		4.985E+17	2.097E-01	Half-Life	too short	
		546.56		1.865E+17	2.097E-01	Half-Life	too short	
		836.80		6.454E+17	2.097E-01	Half-Life	too short	
		1038.76		3.052E+16	2.097E-01	Half-Life	too short	
		1124.00		5.146E+18	2.097E-01	Half-Life	too short	
		1131.51		-9.111E+16	2.097E-01	Half-Life	too short	
		1260.41	*	-2.351E+17	2.097E-01	Half-Life	too short	
		1457.56		3.052E+19	2.097E-01	Half-Life	too short	
		1678.03		1.755E+17	2.097E-01	Half-Life	too short	
		1706.46		-4.068E+17	2.097E-01	Half-Life	too short	
CS-136		1791.20		6.540E+16	2.097E-01	Half-Life	too short	
		66.91		-1.067E+00	1.271E+00	1.792E+00	2.667E-01	-0.595
	+	86.29		5.194E+00	1.971E+00	3.008E+00	4.006E-01	1.727
		153.22		3.789E-01	1.079E+00	1.829E+00	1.869E-01	0.207
		163.89		1.369E+00	1.713E+00	2.928E+00	3.120E-01	0.467
		176.55		-9.169E-02	5.859E-01	9.668E-01	1.024E-01	-0.095
		273.65		-8.965E-02	1.178E+00	1.166E+00	1.650E-01	-0.077
		340.57		1.030E+00	2.782E-01	4.368E-01	5.236E-02	2.359
		818.51		-4.081E-04	1.068E-01	1.785E-01	1.979E-02	-0.002
		1048.07	*	-7.359E-02	1.578E-01	2.477E-01	2.507E-02	-0.297
		1235.34		7.815E-01	8.833E-01	1.536E+00	1.795E-01	0.509
		165.85	*	-2.442E-02	3.488E-02	5.658E-02	5.549E-03	-0.432
		162.64		8.965E-01	1.211E+00	2.069E+00	2.093E-01	0.433
		304.84		-1.506E-01	2.279E+00	3.320E+00	9.876E-01	-0.045
LA-140		423.70		5.035E-01	2.945E+00	4.849E+00	1.584E+00	0.104
		537.32	*	1.782E-02	4.059E-01	6.807E-01	2.285E-01	0.026
	+	328.77		4.961E-01	7.227E-01	8.748E-01	1.105E-01	0.567
		432.53		1.827E+00	3.253E+00	5.459E+00	5.438E-01	0.335
		487.03		8.371E-02	2.280E-01	3.752E-01	3.889E-02	0.223
		751.79		-3.874E-01	2.636E+00	4.231E+00	4.923E-01	-0.092
		815.85		8.745E-02	4.576E-01	7.752E-01	9.192E-02	0.113
		867.82		-4.494E-01	2.373E+00	3.305E+00	3.808E-01	-0.136
		919.63		1.098E+00	4.815E+00	6.966E+00	8.839E-01	0.158
		925.24		3.778E-01	1.637E+00	2.751E+00	3.144E-01	0.137
		1596.49	*	3.703E-02	1.341E-01	2.295E-01	2.011E-02	0.161
		145.44	*	9.222E-02	7.870E-02	1.369E-01	1.246E-02	0.674
		57.37		-1.934E-02	7.870E-02	Half-Life	too short	
		231.56		4.647E-02	7.870E-02	Half-Life	too short	
CE-141 CE-143		293.26	*	3.572E-02	7.870E-02	Half-Life	too short	
		350.59		1.224E+00	7.870E-02	Half-Life	too short	
	+	490.36		3.889E-02	7.870E-02	Half-Life	too short	
		664.57		5.819E-02	7.870E-02	Half-Life	too short	
		721.93		-2.518E-02	7.870E-02	Half-Life	too short	
		80.11		-7.744E-02	2.385E+00	3.472E+00	3.001E-01	-0.022
		133.54	*	-2.160E-01	2.511E-01	3.777E-01	5.863E-02	-0.572
CE-144								

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-144		476.78		2.596E-03	7.443E-02	1.205E-01	1.273E-02	0.022
		618.01		-8.718E-03	3.675E-02	5.523E-02	5.874E-03	-0.158
		696.49	*	2.889E-05	3.731E-02	6.095E-02	6.520E-03	0.000
		778.57		-4.180E+00	2.749E+00	3.925E+00	4.309E-01	-1.065
PR-144		696.49	*	1.965E-03	2.537E+00	4.146E+00	4.432E-01	0.000
		1489.15		-1.076E+00	1.310E+01	2.114E+01	1.883E+00	-0.051
PM-146		453.90	*	2.970E-04	4.827E-02	7.839E-02	9.110E-03	0.004
		633.02		-3.391E-01	1.457E+00	2.357E+00	8.920E-01	-0.144
		735.90		6.722E-02	1.859E-01	2.662E-01	7.813E-02	0.252
		747.13		5.114E-02	9.903E-02	1.657E-01	2.573E-02	0.309
ND-147	+	91.11		1.162E+00	4.479E-01	9.026E-01	8.920E-01	1.287
		319.41		4.327E+00	5.604E+00	9.651E+00	1.222E+00	0.448
		439.89		-9.590E-01	9.691E+00	1.560E+01	1.502E+00	-0.061
		531.02	*	-1.298E-01	9.320E-01	1.549E+00	2.456E-01	-0.084
PM-149		285.90	*	9.928E-04	9.320E-01	Half-Life	too short	
EU-152		121.78		2.741E-02	8.299E-02	1.334E-01	1.280E-02	0.206
		244.69		5.244E-01	4.135E-01	6.218E-01	7.872E-02	0.843
		344.27	*	-1.186E-01	1.498E-01	1.757E-01	2.112E-02	-0.675
		443.98		-7.036E-02	1.066E+00	1.728E+00	1.668E-01	-0.041
		778.89		-3.903E-01	3.074E-01	4.492E-01	4.929E-02	-0.869
		867.32		-4.737E-01	9.728E-01	1.308E+00	1.461E-01	-0.362
		964.01		9.740E-01	3.756E-01	6.269E-01	6.690E-02	1.554
		1085.78		-2.675E-01	4.242E-01	6.548E-01	6.101E-02	-0.409
		1112.02		4.701E-02	3.594E-01	5.033E-01	4.510E-02	0.093
		1407.95		6.431E-02	2.057E-01	3.464E-01	3.097E-02	0.186
GD-153		69.67		-4.952E-01	1.748E+00	2.715E+00	2.107E-01	-0.182
		83.37		2.226E+01	1.748E+01	2.648E+01	2.377E+00	0.840
		97.43	*	-3.379E-02	9.856E-02	1.377E-01	1.211E-02	-0.245
		103.18		-3.150E-02	1.181E-01	1.875E-01	1.602E-02	-0.168
EU-154		123.07		-3.871E-02	6.015E-02	9.247E-02	1.026E-02	-0.419
		247.94		-2.677E-01	4.649E-01	6.295E-01	9.356E-02	-0.425
		591.81		-3.798E-01	6.877E-01	1.010E+00	1.314E-01	-0.376
		723.30		-5.478E-02	2.207E-01	3.004E-01	3.464E-02	-0.182
		756.87		1.244E-01	8.199E-01	1.342E+00	1.841E-01	0.093
		873.19		4.233E-02	3.123E-01	5.236E-01	7.414E-02	0.081
		996.32		-5.275E-01	3.853E-01	5.415E-01	1.011E-01	-0.974
		1004.76		1.644E-01	2.324E-01	3.980E-01	5.138E-02	0.413
		1274.45	*	-3.090E-02	1.285E-01	2.087E-01	2.359E-02	-0.148
EU-155		48.70		-3.017E-01	2.311E+00	3.865E+00	3.147E-01	-0.078
		60.01		-1.308E-01	5.151E+00	7.663E+00	5.442E-01	-0.017
	+	86.54		3.337E-01	1.226E-01	1.953E-01	1.837E-02	1.709
		105.31	*	1.290E-01	1.201E-01	1.997E-01	1.714E-02	0.646
TB-160	+	86.79		9.500E-01	3.489E-01	5.555E-01	5.195E-02	1.710
		197.04		3.254E-01	7.142E-01	1.169E+00	1.272E-01	0.278
		215.65		3.470E-01	9.188E-01	1.473E+00	1.703E-01	0.236
	+	298.57		1.966E-01	2.181E-01	2.434E-01	3.263E-02	0.807
		879.36	*	1.120E-01	1.549E-01	2.690E-01	3.008E-02	0.416
		962.29		1.276E+00	7.020E-01	1.140E+00	1.219E-01	1.119
		966.15		1.757E+00	3.781E-01	6.232E-01	6.638E-02	2.820

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M		1177.93		-3.476E-01	3.836E-01	5.963E-01	4.812E-02	-0.583
		1271.85		-2.958E-01	7.778E-01	1.248E+00	1.073E-01	-0.237
		80.57		-4.094E-02	2.993E-01	4.334E-01	3.766E-02	-0.094
	+	184.41		2.064E-01	6.201E-02	8.232E-02	8.583E-03	2.507
		280.46		6.502E-02	1.026E-01	1.489E-01	2.079E-02	0.437
	+	410.95		5.495E-01	4.841E-01	4.796E-01	4.527E-02	1.146
		711.68	*	-3.114E-02	6.650E-02	1.050E-01	1.129E-02	-0.296
TM-171		752.31		-7.959E-02	2.928E-01	4.658E-01	5.074E-02	-0.171
		810.29		-4.678E-02	6.021E-02	9.507E-02	1.051E-02	-0.492
		51.35		-1.199E+01	2.989E+01	4.930E+01	3.846E+00	-0.243
		52.39		-1.367E+01	1.660E+01	2.581E+01	1.981E+00	-0.530
		59.40		2.512E+00	2.795E+01	4.185E+01	2.958E+00	0.060
LU-176		66.72	*	-2.304E+01	3.222E+01	4.603E+01	3.478E+00	-0.501
	+	88.36		6.554E-01	2.407E-01	3.971E-01	3.755E-02	1.651
		201.83		-1.523E-02	3.393E-02	5.478E-02	6.052E-03	-0.278
		306.84	*	-2.344E-02	3.203E-02	4.446E-02	5.833E-03	-0.527
LU-177		401.10		-3.974E+00	7.326E+00	1.167E+01	1.094E+00	-0.340
		112.95		-2.843E+00	3.877E+00	5.991E+00	4.980E-01	-0.475
	+	208.36	*	5.141E+00	3.458E+00	4.648E+00	5.246E-01	1.106
LU-177M		52.97		1.216E-01	1.720E+00	2.773E+00	2.110E-01	0.044
		54.07		7.567E-01	9.064E-01	1.500E+00	1.124E-01	0.504
		61.30		1.896E+00	1.601E+00	2.507E+00	1.804E-01	0.756
		121.62		1.706E-01	4.391E-01	7.072E-01	5.826E-02	0.241
		147.16		-6.824E-01	7.428E-01	1.206E+00	1.087E-01	-0.566
		171.86		-1.858E-01	5.495E-01	9.020E-01	9.021E-02	-0.206
		218.09		-1.812E-01	9.796E-01	1.587E+00	1.849E-01	-0.114
	+	268.79		2.192E+00	1.489E+00	1.647E+00	2.239E-01	1.331
		319.02		1.009E-01	2.927E-01	4.967E-01	6.294E-02	0.203
		367.43		3.056E-02	1.010E+00	1.672E+00	1.765E-01	0.018
		413.65	*	-1.300E-01	2.199E-01	2.962E-01	2.801E-02	-0.439
		56.28		-2.239E-01	1.027E+00	1.699E+00	1.238E-01	-0.132
		57.53		-2.814E-01	5.593E-01	9.135E-01	6.566E-02	-0.308
		65.20		-3.635E-01	1.182E+00	1.726E+00	1.287E-01	-0.211
HF-181		133.02		-5.504E-02	9.254E-02	1.344E-01	1.146E-02	-0.409
		136.25		4.350E-02	5.694E-01	9.653E-01	8.327E-02	0.045
		345.85		-1.712E-01	2.812E-01	3.887E-01	4.496E-02	-0.440
		482.03	*	-3.686E-02	5.222E-02	8.048E-02	7.945E-03	-0.458
		56.28		-8.177E-02	3.735E-01	6.178E-01	4.500E-02	-0.132
W-181		57.53		-1.026E-01	2.035E-01	3.325E-01	2.390E-02	-0.309
		65.20	*	-1.312E-01	4.269E-01	6.233E-01	4.646E-02	-0.211
		67.75		-6.755E-02	1.151E-01	1.847E-01	1.409E-02	-0.366
TA-182		100.10		3.176E-02	1.962E-01	3.175E-01	2.751E-02	0.100
		152.43		1.753E-01	3.918E-01	6.666E-01	6.150E-02	0.263
		222.10		7.738E-03	4.110E-01	6.707E-01	7.915E-02	0.012
		1001.68		3.303E+00	2.350E+00	4.116E+00	4.241E-01	0.803
	+	1121.28		8.959E-01	3.000E-01	3.714E-01	3.280E-02	2.412
		1189.05		-5.766E-02	3.074E-01	5.052E-01	4.108E-02	-0.114
		1221.42	*	-1.144E-01	2.016E-01	3.215E-01	2.673E-02	-0.356
		1230.97		-8.592E-01	5.222E-01	7.636E-01	6.391E-02	-1.125

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RE-183		57.98		-7.660E-02	2.048E-01	3.361E-01	2.405E-02	-0.228
		59.32		8.574E-03	1.222E-01	1.828E-01	1.293E-02	0.047
		67.20		-3.006E-01	2.284E-01	3.382E-01	2.566E-02	-0.889
		162.32	*	5.958E-02	1.313E-01	2.225E-01	2.147E-02	0.268
	+	208.81		2.420E+00	1.628E+00	2.198E+00	2.484E-01	1.101
		291.72		-7.617E-02	1.203E+00	1.760E+00	2.398E-01	-0.043
RE-184		57.98		-2.711E-01	7.250E-01	1.190E+00	8.514E-02	-0.228
		59.32		3.032E-02	4.323E-01	6.467E-01	4.574E-02	0.047
		67.20		-1.064E+00	8.084E-01	1.197E+00	9.081E-02	-0.889
		161.27		-1.693E-01	4.111E-01	6.766E-01	6.496E-02	-0.250
		216.55		-7.724E-02	3.071E-01	4.965E-01	5.756E-02	-0.156
		252.85	*	8.914E-02	2.636E-01	4.316E-01	5.601E-02	0.207
		318.01		-1.892E-01	5.134E-01	8.445E-01	1.073E-01	-0.224
		792.07		-3.082E-01	1.116E+00	1.767E+00	1.945E-01	-0.174
		903.28		-4.083E-01	1.264E+00	1.728E+00	1.930E-01	-0.236
		920.93		4.939E-01	5.372E-01	8.300E-01	9.158E-02	0.595
OS-185		59.72		1.140E-02	3.231E-01	4.823E-01	3.414E-02	0.024
		61.14		1.681E-01	1.784E-01	2.768E-01	1.988E-02	0.607
		69.30		-1.218E-01	3.106E-01	5.047E-01	3.904E-02	-0.241
		592.07		-1.688E+00	2.843E+00	4.301E+00	4.453E-01	-0.392
		646.12	*	-6.405E-03	4.591E-02	7.484E-02	7.865E-03	-0.086
		717.42		4.247E-01	1.023E+00	1.674E+00	1.803E-01	0.254
		874.81		2.013E-01	6.377E-01	1.082E+00	1.209E-01	0.186
		880.27		4.130E-01	8.638E-01	1.478E+00	1.653E-01	0.279
RE-188		155.03	*	1.630E-01	2.120E-01	3.633E-01	3.391E-02	0.449
		477.96		1.045E+00	3.580E+00	5.881E+00	5.793E-01	0.178
		633.10		-1.085E+00	3.140E+00	5.060E+00	5.301E-01	-0.214
W-188	+	63.58		5.504E+01	7.453E+01	1.022E+02	7.507E+00	0.539
		227.08		6.311E+00	1.585E+01	2.619E+01	3.140E+00	0.241
		290.67	*	-6.775E+00	9.486E+00	1.325E+01	1.810E+00	-0.511
IR-192	+	295.96		1.291E+00	2.899E-01	3.277E-01	4.433E-02	3.941
		308.46		-7.153E-02	1.170E-01	1.852E-01	2.424E-02	-0.386
		316.51	*	-1.204E-02	4.047E-02	6.682E-02	8.540E-03	-0.180
		468.07		1.574E-02	8.705E-02	1.234E-01	1.277E-02	0.128
		604.41		2.819E-01	5.739E-01	8.484E-01	1.209E-01	0.332
		612.46		7.436E+00	1.465E+00	2.264E+00	2.604E-01	3.284
AU-195		65.12		-4.203E-02	1.944E-01	2.850E-01	2.123E-02	-0.147
		66.83		-8.567E-02	1.084E-01	1.542E-01	1.166E-02	-0.556
	+	75.70		1.547E+00	2.702E-01	5.123E-01	4.221E-02	3.020
		98.88	*	6.661E-02	2.515E-01	4.027E-01	3.512E-02	0.165
	+	129.76		6.005E+00	4.142E+00	5.597E+00	4.717E-01	1.073
TL-200		367.94	*	-1.541E-02	4.142E+00	Half-Life	too short	
		579.30		4.902E-01	4.142E+00	Half-Life	too short	
		828.27		-5.072E-02	4.142E+00	Half-Life	too short	
		1205.75		-9.367E-02	4.142E+00	Half-Life	too short	
TL-201		68.90		3.151E-01	2.274E+01	3.750E+01	2.890E+00	0.008
		70.82		6.741E+00	1.433E+01	2.153E+01	1.689E+00	0.313
		80.30		-1.923E+00	2.684E+01	3.900E+01	3.378E+00	-0.049
		135.34		9.760E+01	1.343E+02	2.321E+02	1.996E+01	0.420

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-202		167.43	*	-7.355E+00	3.820E+01	6.321E+01	6.230E+00	-0.116
		68.90		8.667E-03	6.256E-01	1.031E+00	7.949E-02	0.008
		70.82		1.849E-01	3.932E-01	5.906E-01	4.634E-02	0.313
		80.30		-5.277E-02	7.365E-01	1.070E+00	9.270E-02	-0.049
BI-207		439.56	*	-6.726E-03	1.090E-01	1.758E-01	1.692E-02	-0.038
		72.80		3.686E-01	2.024E-01	3.168E-01	2.534E-02	1.163
	+	74.97		8.364E-01	1.461E-01	2.432E-01	1.989E-02	3.438
		84.90		2.046E-01	2.201E-01	3.292E-01	3.009E-02	0.622
TL-207		569.67		9.495E-03	3.318E-02	5.606E-02	5.758E-03	0.169
		1063.62	*	-1.463E-02	5.772E-02	8.892E-02	8.536E-03	-0.165
		1770.23		6.740E-01	6.063E-01	1.002E+00	8.330E-02	0.673
		81.07		-3.382E-01	2.496E-01	3.383E-01	2.956E-02	-1.000
PO-209		83.78		1.288E-01	1.481E-01	2.212E-01	1.995E-02	0.582
		94.90		5.543E-01	2.738E-01	4.252E-01	3.801E-02	1.304
		122.32		-2.487E-01	1.989E+00	3.136E+00	2.791E-01	-0.079
		144.24		1.353E-01	7.847E-01	1.290E+00	1.277E-01	0.105
BI-210		154.21		3.413E-01	4.582E-01	7.845E-01	7.924E-02	0.435
	+	269.46		4.980E-01	3.384E-01	3.792E-01	5.208E-02	1.313
		323.87	*	-1.115E-01	8.134E-01	1.171E+00	2.328E-01	-0.095
	+	338.28		8.773E+00	2.145E+00	2.760E+00	4.082E-01	3.179
PB-210		445.03		2.435E-01	2.491E+00	4.072E+00	5.233E-01	0.060
		260.50		-5.819E+00	1.100E+01	1.722E+01	2.285E+00	-0.338
		262.80		-1.312E+01	3.068E+01	4.828E+01	6.451E+00	-0.272
		896.60	*	2.718E+00	7.374E+00	1.254E+01	1.404E+00	0.217
PB-211		46.50	*	1.463E+00	3.393E+00	5.637E+00	5.237E-01	0.260
		46.50	*	1.463E+00	3.393E+00	5.637E+00	5.237E-01	0.260
		46.50	*	1.463E+00	3.392E+00	5.637E+00	4.740E-01	0.260
		404.84	*	8.030E-01	1.267E+00	1.733E+00	1.088E+00	0.463
BI-212		427.08		4.640E-01	2.219E+00	3.633E+00	2.263E+00	0.128
		831.96		-1.136E-01	1.245E+00	2.062E+00	1.300E+00	-0.055
	+	727.18	*	1.191E+00	6.688E-01	7.174E-01	8.569E-02	1.660
		785.46		2.171E+00	1.974E+00	3.386E+00	3.722E-01	0.641
PO-215		1620.62		7.838E-01	1.378E+00	2.421E+00	2.111E-01	0.324
		81.07		-3.382E-01	2.496E-01	3.383E-01	2.956E-02	-1.000
		83.78		1.288E-01	1.481E-01	2.212E-01	1.995E-02	0.582
		94.90		5.543E-01	2.738E-01	4.252E-01	3.801E-02	1.304
RN-219		122.32		-2.487E-01	1.989E+00	3.136E+00	2.791E-01	-0.079
		144.24		1.353E-01	7.847E-01	1.290E+00	1.277E-01	0.105
		154.21		3.413E-01	4.582E-01	7.845E-01	7.924E-02	0.435
	+	269.46		4.980E-01	3.384E-01	3.792E-01	5.208E-02	1.313
RA-223		323.87	*	-1.115E-01	8.134E-01	1.171E+00	2.328E-01	-0.095
	+	338.28		8.773E+00	2.145E+00	2.760E+00	4.082E-01	3.179
		445.03		2.435E-01	2.491E+00	4.072E+00	5.233E-01	0.060
	+	271.23		6.389E-01	4.355E-01	4.941E-01	7.320E-02	1.293
RN-220		401.81	*	-1.987E-01	4.651E-01	7.235E-01	1.119E-01	-0.275
		549.76	*	-2.975E+01	2.642E+01	4.080E+01	4.158E+00	-0.729
		81.07		-3.382E-01	2.496E-01	3.383E-01	2.956E-02	-1.000
		83.78		1.288E-01	1.481E-01	2.212E-01	1.995E-02	0.582
RA-223		94.90		5.543E-01	2.738E-01	4.252E-01	3.801E-02	1.304

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-227		122.32		-2.487E-01	1.989E+00	3.136E+00	2.791E-01	-0.079
		144.24		1.353E-01	7.847E-01	1.290E+00	1.277E-01	0.105
		154.21		3.413E-01	4.582E-01	7.845E-01	7.924E-02	0.435
	+	269.46		4.980E-01	3.384E-01	3.792E-01	5.208E-02	1.313
		323.87	*	-1.115E-01	8.134E-01	1.171E+00	2.328E-01	-0.095
	+	338.28		8.773E+00	2.145E+00	2.760E+00	4.082E-01	3.179
		445.03		2.435E-01	2.491E+00	4.072E+00	5.233E-01	0.060
		79.80		5.839E-01	1.794E+00	2.650E+00	5.697E-01	0.220
		236.00		1.351E+00	3.870E-01	5.528E-01	8.340E-02	2.445
		256.20	*	5.569E-04	4.153E-01	6.693E-01	1.221E-01	0.001
		286.10		2.391E+00	1.732E+00	2.875E+00	4.900E-01	0.831
	+	299.80		2.343E+00	2.623E+00	2.913E+00	5.899E-01	0.804
TH-227		304.40		-3.565E-02	2.304E+00	3.368E+00	7.064E-01	-0.011
		334.20		1.068E+00	3.527E+00	4.142E+00	8.768E-01	0.258
		79.80		5.839E-01	1.794E+00	2.650E+00	5.770E-01	0.220
	+	94.00		9.610E+00	3.617E+00	4.246E+00	9.312E-01	2.263
		236.00		1.351E+00	3.805E-01	5.528E-01	7.825E-02	2.445
		256.20	*	5.569E-04	4.153E-01	6.693E-01	1.378E-01	0.001
		286.10		2.391E+00	2.943E+00	2.875E+00	2.903E+00	0.831
	+	299.80		2.343E+00	2.623E+00	2.913E+00	5.899E-01	0.804
		304.40		-3.565E-02	2.304E+00	3.368E+00	7.064E-01	-0.011
		334.20		1.068E+00	3.527E+00	4.142E+00	8.768E-01	0.258
		85.43		2.466E-01	2.225E-01	3.344E-01	3.076E-02	0.738
	+	88.47		3.773E-01	1.386E-01	2.284E-01	2.157E-02	1.652
TH-229		100.00		8.876E-02	1.938E-01	3.173E-01	2.750E-02	0.280
		193.63	*	-4.241E-01	5.676E-01	9.057E-01	9.738E-02	-0.468
		210.97		1.583E+00	1.005E+00	1.532E+00	1.744E-01	1.033
		283.67	*	-9.534E-01	1.995E+00	2.674E+00	4.993E-01	-0.357
PA-231		301.29		8.910E-01	7.600E-01	1.144E+00	1.820E-01	0.779
TH-231		81.07		-3.382E-01	2.496E-01	3.383E-01	2.956E-02	-1.000
		83.78		1.288E-01	1.481E-01	2.212E-01	1.995E-02	0.582
		94.90		5.543E-01	2.738E-01	4.252E-01	3.801E-02	1.304
		122.32		-2.487E-01	1.989E+00	3.136E+00	2.791E-01	-0.079
U-231		144.24		1.353E-01	7.847E-01	1.290E+00	1.277E-01	0.105
		154.21		3.413E-01	4.582E-01	7.845E-01	7.924E-02	0.435
	+	269.46		4.980E-01	3.384E-01	3.792E-01	5.208E-02	1.313
		323.87	*	-1.115E-01	8.134E-01	1.171E+00	2.328E-01	-0.095
	+	338.28		8.773E+00	2.145E+00	2.760E+00	4.082E-01	3.179
		445.03		2.435E-01	2.491E+00	4.072E+00	5.233E-01	0.060
		84.21		2.535E+01	1.967E+01	2.979E+01	2.701E+00	0.851
	+	92.29		2.977E+01	9.491E+00	1.447E+01	1.319E+00	2.058
		95.87	*	6.268E-02	4.019E+00	5.782E+00	5.135E-01	0.011
		108.00		-8.168E+00	7.364E+00	1.121E+01	9.421E-01	-0.729
	+	75.28		2.440E+01	5.268E+00	7.458E+00	1.127E+00	3.271
	+	86.59		5.410E+00	2.415E+00	3.170E+00	8.576E-01	1.707
	+	300.12		6.531E-01	7.289E-01	8.159E-01	1.471E-01	0.800
PA-233		311.98	*	5.296E-02	7.051E-02	1.215E-01	1.591E-02	0.436
		340.50		3.685E+00	1.256E+00	1.494E+00	3.760E-01	2.466
		398.62		-8.981E-01	2.263E+00	3.617E+00	9.722E-01	-0.248

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PA-234	+	415.76	-2.993E-02	1.974E+00	2.790E+00	6.112E-01	-0.011
		63.00	1.490E+00	2.026E+00	2.816E+00	4.172E-01	0.529
		94.67	5.575E-01	2.094E-01	3.203E-01	4.048E-02	1.740
		98.44	1.629E-02	1.048E-01	1.591E-01	8.878E-02	0.102
		99.86	1.318E-01	5.038E-01	8.058E-01	6.991E-02	0.164
		111.00	4.767E-02	2.100E-01	3.382E-01	4.022E-02	0.141
		131.20	9.450E-03	1.269E-01	1.907E-01	1.615E-02	0.050
		152.70	1.474E-01	3.666E-01	6.217E-01	1.080E-01	0.237
		186.00	7.429E+00	3.155E+00	3.138E+00	9.973E-01	2.367
		226.40	-3.935E-02	4.663E-01	7.566E-01	1.180E-01	-0.052
		227.20	8.743E-02	5.029E-01	8.240E-01	9.883E-02	0.106
		248.90	-1.886E-02	1.030E+00	1.452E+00	3.535E-01	-0.013
		293.70	7.618E+00	2.055E+00	1.879E+00	3.799E-01	4.055
		369.80	2.303E-05	9.187E-01	1.519E+00	3.426E-01	0.000
		568.70	-5.049E-01	1.101E+00	1.785E+00	1.832E-01	-0.283
		569.50	5.554E-02	2.926E-01	4.919E-01	5.053E-02	0.113
		574.00	-6.843E-01	1.752E+00	2.712E+00	2.790E-01	-0.252
		699.00	-4.791E-01	7.828E-01	1.220E+00	2.454E-01	-0.393
		706.10	7.292E-01	1.188E+00	1.935E+00	8.715E-01	0.377
		733.00	-7.048E-02	4.886E-01	6.703E-01	1.551E-01	-0.105
		742.81	-6.488E-01	1.542E+00	2.329E+00	1.573E+00	-0.279
		796.30	1.039E+00	1.012E+00	1.674E+00	4.673E-01	0.620
		805.60	6.739E-01	1.083E+00	1.847E+00	5.803E-01	0.365
		819.60	9.346E-02	1.236E+00	2.075E+00	8.022E-01	0.045
		826.30	-1.876E-01	8.306E-01	1.359E+00	6.152E-01	-0.138
		831.60	-3.184E-01	6.628E-01	1.060E+00	3.250E-01	-0.300
		876.40	4.970E-01	1.030E+00	1.539E+00	1.586E+00	0.323
		880.51	9.106E-02	2.999E-01	5.078E-01	5.679E-02	0.179
		883.24	-4.117E-01	4.187E-01	4.717E-01	3.188E-01	-0.873
		899.00	9.508E-02	8.566E-01	1.429E+00	6.329E-01	0.067
		925.00	1.599E-01	1.180E+00	1.969E+00	2.167E-01	0.081
		926.50	-1.355E-01	1.836E-01	2.809E-01	7.354E-02	-0.482
		946.00	* -7.495E-02	3.175E-01	5.141E-01	1.022E-01	-0.146
		949.00	2.553E-01	4.593E-01	7.858E-01	8.490E-02	0.325
		980.50	7.155E-01	7.200E-01	1.249E+00	1.314E-01	0.573
		1394.10	-8.501E-01	1.354E+00	1.884E+00	1.227E+00	-0.451
PA-234M	+	766.42	1.989E+01	1.768E+01	2.238E+01	1.145E+01	0.889
		1001.03	* 4.269E+00	5.051E+00	8.596E+00	9.851E-01	0.497
U-235	+	89.95	2.988E+00	1.449E+00	2.062E+00	6.405E-01	1.449
		93.35	2.990E+00	1.243E+00	1.433E+00	4.035E-01	2.087
		105.00	1.557E+00	1.258E+00	1.971E+00	5.875E-01	0.790
		143.76	* -4.944E-02	2.425E-01	3.937E-01	6.946E-02	-0.126
NP-236	+	163.35	3.732E-01	5.267E-01	8.926E-01	1.748E-01	0.418
		185.71	2.752E-01	8.268E-02	1.159E-01	1.213E-02	2.375
		205.31	3.943E-02	6.840E-01	9.707E-01	1.977E-01	0.041
		94.67	4.266E-01	1.545E-01	2.433E-01	2.179E-02	1.753
		98.44	1.228E-02	7.891E-02	1.203E-01	1.051E-02	0.102
NP-236	+	111.00	3.606E-02	1.588E-01	2.558E-01	2.134E-02	0.141
		160.31	* -6.754E-02	8.940E-02	1.451E-01	1.387E-02	-0.466

---- 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		5.770E-02	1.686E-01	2.706E-01	2.351E-02	0.213
		117.00	*	-2.121E-01	2.169E-01	3.296E-01	2.724E-02	-0.644
	+	209.75		1.783E+00	1.199E+00	1.584E+00	1.796E-01	1.126
		228.18		5.207E-03	2.624E-01	4.274E-01	5.141E-02	0.012
	+	277.60		4.330E-01	3.091E-01	3.430E-01	4.782E-02	1.262
AM-241		334.30		3.058E-01	1.827E+00	2.349E+00	2.833E-01	0.130
		59.54	*	2.005E-02	1.614E-01	2.420E-01	1.892E-02	0.083
CM-243		99.55		5.940E-02	1.736E-01	2.785E-01	2.420E-02	0.213
		103.76	*	7.920E-02	1.061E-01	1.750E-01	1.492E-02	0.453
		117.00		-2.183E-01	2.232E-01	3.392E-01	2.804E-02	-0.644
	+	209.75		1.758E+00	1.182E+00	1.562E+00	1.771E-01	1.126
		228.18		5.264E-03	2.653E-01	4.320E-01	5.198E-02	0.012
AM-246	+	277.60		4.368E-01	3.118E-01	3.460E-01	4.823E-02	1.262
		798.80		-1.129E-01	1.585E-01	2.425E-01	2.674E-02	-0.466
		1036.00		-1.640E-01	3.034E-01	4.735E-01	4.702E-02	-0.346
		1062.04		3.385E-02	2.549E-01	4.053E-01	3.899E-02	0.084
		1078.86	*	2.685E-02	1.405E-01	2.322E-01	2.184E-02	0.116
CM-247	+	278.00		1.796E+00	1.282E+00	1.433E+00	2.000E-01	1.253
		287.40		1.346E+00	1.415E+00	2.272E+00	3.126E-01	0.593
		402.60	*	3.131E-03	4.511E-02	6.745E-02	6.327E-03	0.046
CF-249		252.85		3.251E-01	9.616E-01	1.574E+00	2.043E-01	0.207
		333.44		3.372E-02	3.106E-01	3.061E-01	3.703E-02	0.110
		387.95	*	1.666E-02	4.426E-02	7.416E-02	7.048E-03	0.225
CF-251		176.60	*	-2.114E-02	1.403E-01	2.316E-01	2.352E-02	-0.091
		227.00		1.837E-01	4.443E-01	7.342E-01	8.800E-02	0.250
		285.00		9.011E-01	2.234E+00	3.191E+00	4.414E-01	0.282

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]G1202023708      *
* Acquisition date   : 6-FEB-2010 13:03:11 Detector SN#      :              *
* Detector ID        : GAM22                      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 02:00:02.00             Half life ratio : 8.000        *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date        : 15-JAN-2010 12:00:00 Nuclide Library : SOLID           *
* Sample ID          : G1202023708             Analyst initials: MXR1          *
* Batch Number       : 944962                  Sample Quantity : 1.0110E+02 GRAM  *
* Recovery           : 1.00000                 Carrier Weight  : 0.00000        *
*****
*
*                                     QC DATA                                *
*
* Standard Weight    : 0.00000                                                         *
* CALIB. DATE/TIME   : 2-DEC-2009 16:47:28 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	2.268E+01	2.503E+00	5.324E-01	0.000E+00
CD-109	2.841E+00	1.022E+00	1.403E+00	0.000E+00
SN-126	2.763E-01	9.945E-02	1.373E-01	0.000E+00
BA-137M	9.577E-02	6.064E-02	6.478E-02	0.000E+00
CS-137	1.012E-01	6.411E-02	6.848E-02	0.000E+00
HG-203	1.097E-01	7.678E-02	7.959E-02	0.000E+00
TL-208	5.974E-01	1.037E-01	6.527E-02	0.000E+00
BI-211	4.701E+00	7.508E-01	3.457E-01	0.000E+00
PB-212	2.056E+00	2.930E-01	1.017E-01	0.000E+00
PO-212	2.056E+00	2.930E-01	1.017E-01	0.000E+00
BI-214	1.400E+00	2.423E-01	1.185E-01	0.000E+00
PB-214	1.635E+00	2.742E-01	1.205E-01	0.000E+00
PO-214	1.635E+00	2.742E-01	1.205E-01	0.000E+00
PO-216	2.056E+00	2.930E-01	1.017E-01	0.000E+00
PO-218	1.635E+00	2.742E-01	1.205E-01	0.000E+00
RA-224	5.869E+00	1.505E+00	1.157E+00	0.000E+00
RA-226	1.400E+00	2.423E-01	1.185E-01	0.000E+00
AC-228	1.897E+00	4.123E-01	2.245E-01	0.000E+00
RA-228	1.897E+00	4.123E-01	2.245E-01	0.000E+00
TH-228	2.102E+00	2.995E-01	1.040E-01	0.000E+00
TH-230	1.400E+00	2.423E-01	1.184E-01	0.000E+00
TH-232	1.897E+00	4.123E-01	2.245E-01	0.000E+00
TH-234	1.278E+00	1.707E+00	2.189E+00	0.000E+00
U-234	1.400E+00	2.423E-01	1.184E-01	0.000E+00
NP-237	8.115E-01	3.350E-01	4.278E-01	0.000E+00
U-238	1.278E+00	1.707E+00	2.189E+00	0.000E+00
AM-243	4.658E-01	7.971E-02	9.040E-02	0.000E+00
ANH-511	1.501E-01	7.347E-02	4.900E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)
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BE-7	1.750E-01	3.737E-01	6.289E-01	0.000E+00	NOT IDENT.
NA-22	-1.046E-02	4.529E-02	7.456E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.827E+09	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.291E-03	2.813E-02	4.734E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	6.281E-02	8.236E-02	0.000E+00	FAIL ABUN
SC-46	3.964E-02	4.236E-02	7.529E-02	0.000E+00	FAIL ABUN
V-48	-5.150E-02	9.447E-02	1.503E-01	0.000E+00	NOT IDENT.
CR-51	2.898E-01	4.824E-01	8.196E-01	0.000E+00	NOT IDENT.
MN-52	-1.684E-01	6.042E-01	9.725E-01	0.000E+00	NOT IDENT.
MN-54	1.967E-02	3.882E-02	6.755E-02	0.000E+00	NOT IDENT.
CO-56	2.314E-02	4.125E-02	7.213E-02	0.000E+00	NOT IDENT.
CO-57	-1.716E-03	2.876E-02	4.638E-02	0.000E+00	NOT IDENT.
CO-58	-3.369E-02	4.098E-02	6.534E-02	0.000E+00	NOT IDENT.
FE-59	-6.691E-02	1.013E-01	1.575E-01	0.000E+00	NOT IDENT.
CO-60	9.771E-03	3.701E-02	6.323E-02	0.000E+00	NOT IDENT.
ZN-65	6.837E-02	1.041E-01	1.555E-01	0.000E+00	NOT IDENT.
GE-68	-2.077E-01	1.215E+00	1.974E+00	0.000E+00	NOT IDENT.
AS-73	4.596E-01	8.869E-01	1.485E+00	0.000E+00	NOT IDENT.
AS-74	-2.773E-02	1.200E-01	1.990E-01	0.000E+00	NOT IDENT.
SE-75	4.357E-02	5.726E-02	8.526E-02	0.000E+00	FAIL ABUN
BR-77	0.000E+00	8.288E+01	0.000E+00	0.000E+00	SHORT HLIF
SR-82	-6.826E-01	5.432E-01	7.862E-01	0.000E+00	NOT IDENT.
RB-83	-4.003E-02	7.694E-02	1.243E-01	0.000E+00	NOT IDENT.
RB-84	-9.116E-03	8.463E-02	1.413E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	9.936E+00	1.621E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.479E-02	8.938E-02	0.000E+00	NOT IDENT.
RB-86	3.444E-01	9.805E-01	1.661E+00	0.000E+00	NOT IDENT.
Y-88	2.485E-02	3.245E-02	5.972E-02	0.000E+00	NOT IDENT.
ZR-88	1.546E-02	3.510E-02	5.986E-02	0.000E+00	NOT IDENT.
Y-91	-7.254E+00	1.970E+01	3.235E+01	0.000E+00	NOT IDENT.
NB-94	2.093E-02	3.582E-02	6.124E-02	0.000E+00	NOT IDENT.
NB-95	6.426E-02	5.686E-02	8.705E-02	0.000E+00	NOT IDENT.
NB-95M	2.375E-01	1.764E-01	2.681E-01	0.000E+00	NOT IDENT.
ZR-95	-1.209E-02	8.008E-02	1.303E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.010E+08	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	2.187E+09	0.000E+00	0.000E+00	SHORT HLIF
MO-99	0.000E+00	7.135E+01	0.000E+00	0.000E+00	SHORT HLIF
TC-99M	0.000E+00	8.876E+24	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.942E-02	3.887E-02	6.531E-02	0.000E+00	NOT IDENT.
RH-102	9.393E-03	3.182E-02	5.309E-02	0.000E+00	NOT IDENT.
RU-103	-5.105E-02	4.915E-02	7.418E-02	0.000E+00	FAIL ABUN
RH-106	-2.281E-01	3.319E-01	5.299E-01	0.000E+00	FAIL ABUN
RU-106	-2.281E-01	3.311E-01	5.299E-01	0.000E+00	FAIL ABUN
AG-108M	-1.068E-02	3.478E-02	5.658E-02	0.000E+00	NOT IDENT.
AG-110M	-2.478E-02	4.016E-02	5.381E-02	0.000E+00	NOT IDENT.
IN-111	9.232E+00	6.752E+00	1.041E+01	0.000E+00	NOT IDENT.
IN-113M	3.262E-02	4.972E-02	8.561E-02	0.000E+00	NOT IDENT.
SN-113	3.262E-02	4.972E-02	8.561E-02	0.000E+00	NOT IDENT.
IN-114M	5.635E-02	2.420E-01	3.613E-01	0.000E+00	NOT IDENT.
CD-115	0.000E+00	9.915E+01	0.000E+00	0.000E+00	SHORT HLIF
SN-117M	-6.471E-02	8.829E-02	1.465E-01	0.000E+00	NOT IDENT.
SB-122	0.000E+00	1.310E+01	0.000E+00	0.000E+00	SHORT HLIF
I-123	0.000E+00	4.145E+10	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.295E-02	3.290E-02	5.529E-02	0.000E+00	NOT IDENT.
I-124	-9.877E-02	2.467E+00	3.553E+00	0.000E+00	NOT IDENT.
SB-124	-1.110E-02	8.290E-02	1.365E-01	0.000E+00	FAIL ABUN
SB-125	9.357E-03	9.717E-02	1.619E-01	0.000E+00	FAIL ABUN
TE-125M	2.376E+00	1.112E+01	1.827E+01	0.000E+00	NOT IDENT.
I-126	3.689E-01	3.060E-01	4.797E-01	0.000E+00	NOT IDENT.
SB-126	1.598E-02	2.523E-01	3.589E-01	0.000E+00	FAIL ABUN
SB-127	8.603E-01	4.876E+00	8.181E+00	0.000E+00	FAIL ABUN
XE-127	-4.978E-02	6.141E-02	9.928E-02	0.000E+00	NOT IDENT.
I-131	-1.203E-02	2.217E-01	3.719E-01	0.000E+00	NOT IDENT.
TE-132	8.815E-02	3.433E+00	5.691E+00	0.000E+00	NOT IDENT.
BA-133	1.124E-02	5.061E-02	7.516E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.621E+06	0.000E+00	0.000E+00	SHORT HLIF
CS-134	4.310E-02	4.942E-02	8.500E-02	0.000E+00	NOT IDENT.
CS-135	1.250E-01	2.055E-01	3.023E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.993E+23	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-7.359E-02	1.547E-01	2.459E-01	0.000E+00	FAIL ABUN
CE-139	-2.442E-02	3.418E-02	5.649E-02	0.000E+00	NOT IDENT.
BA-140	1.782E-02	3.978E-01	6.772E-01	0.000E+00	NOT IDENT.
LA-140	3.703E-02	1.314E-01	2.275E-01	0.000E+00	FAIL ABUN
CE-141	9.222E-02	7.712E-02	1.368E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.113E+04	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-2.160E-01	2.461E-01	3.774E-01	0.000E+00	NOT IDENT.
PM-144	2.889E-05	3.656E-02	6.059E-02	0.000E+00	NOT IDENT.

PR-144	1.965E-03	2.487E+00	4.121E+00	0.000E+00	NOT IDENT.
PM-146	2.970E-04	4.731E-02	7.802E-02	0.000E+00	NOT IDENT.
ND-147	-1.298E-01	9.133E-01	1.541E+00	0.000E+00	FAIL ABUN
PM-149	0.000E+00	9.168E+02	0.000E+00	0.000E+00	SHORT HLIF
EU-152	-1.186E-01	1.468E-01	1.750E-01	0.000E+00	NOT IDENT.
GD-153	-3.379E-02	9.659E-02	1.377E-01	0.000E+00	NOT IDENT.
EU-154	-3.090E-02	1.259E-01	2.071E-01	0.000E+00	NOT IDENT.
EU-155	1.290E-01	1.177E-01	1.997E-01	0.000E+00	FAIL ABUN
TB-160	1.120E-01	1.518E-01	2.671E-01	0.000E+00	FAIL ABUN
HO-166M	-3.114E-02	6.517E-02	1.044E-01	0.000E+00	FAIL ABUN
TM-171	-2.304E+01	3.158E+01	4.609E+01	0.000E+00	NOT IDENT.
LU-176	-2.344E-02	3.139E-02	4.430E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	3.388E+00	4.637E+00	0.000E+00	FAIL ABUN
LU-177M	-1.300E-01	2.155E-01	2.948E-01	0.000E+00	FAIL ABUN
HF-181	-3.686E-02	5.118E-02	8.009E-02	0.000E+00	NOT IDENT.
W-181	-1.312E-01	4.184E-01	6.241E-01	0.000E+00	NOT IDENT.
TA-182	-1.144E-01	1.976E-01	3.190E-01	0.000E+00	FAIL ABUN
RE-183	5.958E-02	1.287E-01	2.222E-01	0.000E+00	FAIL ABUN
RE-184	8.914E-02	2.584E-01	4.304E-01	0.000E+00	NOT IDENT.
OS-185	-6.405E-03	4.499E-02	7.441E-02	0.000E+00	NOT IDENT.
RE-188	1.630E-01	2.078E-01	3.628E-01	0.000E+00	NOT IDENT.
W-188	-6.775E+00	9.296E+00	1.321E+01	0.000E+00	FAIL ABUN
IR-192	-1.204E-02	3.966E-02	6.658E-02	0.000E+00	FAIL ABUN
AU-195	6.661E-02	2.465E-01	4.027E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	4.028E+04	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-7.355E+00	3.743E+01	6.311E+01	0.000E+00	NOT IDENT.
TL-202	-6.726E-03	1.068E-01	1.749E-01	0.000E+00	NOT IDENT.
BI-207	-1.463E-02	5.656E-02	8.826E-02	0.000E+00	FAIL ABUN
TL-207	-1.115E-01	7.971E-01	1.167E+00	0.000E+00	FAIL ABUN
PO-209	2.718E+00	7.226E+00	1.245E+01	0.000E+00	NOT IDENT.
BI-210	1.463E+00	3.325E+00	5.650E+00	0.000E+00	NOT IDENT.
PB-210	1.463E+00	3.325E+00	5.650E+00	0.000E+00	NOT IDENT.
PO-210	1.463E+00	3.325E+00	5.650E+00	0.000E+00	NOT IDENT.
PB-211	8.030E-01	1.242E+00	1.726E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.554E-01	7.130E-01	0.000E+00	FAIL ABUN
PO-215	-1.115E-01	7.971E-01	1.167E+00	0.000E+00	FAIL ABUN
RN-219	-1.987E-01	4.558E-01	7.203E-01	0.000E+00	FAIL ABUN
RN-220	-2.975E+01	2.590E+01	4.058E+01	0.000E+00	NOT IDENT.
RA-223	-1.115E-01	7.971E-01	1.167E+00	0.000E+00	FAIL ABUN
AC-227	5.569E-04	4.070E-01	6.673E-01	0.000E+00	FAIL ABUN
TH-227	5.569E-04	4.070E-01	6.673E-01	0.000E+00	FAIL ABUN
TH-229	-4.241E-01	5.562E-01	9.038E-01	0.000E+00	FAIL ABUN
PA-231	-9.534E-01	1.955E+00	2.665E+00	0.000E+00	NOT IDENT.
TH-231	-1.115E-01	7.971E-01	1.167E+00	0.000E+00	FAIL ABUN
U-231	6.268E-02	3.939E+00	5.783E+00	0.000E+00	FAIL ABUN
PA-233	5.296E-02	6.910E-02	1.210E-01	0.000E+00	FAIL ABUN
PA-234	-7.495E-02	3.112E-01	5.105E-01	0.000E+00	FAIL ABUN
PA-234M	4.269E+00	4.950E+00	8.534E+00	0.000E+00	NOT IDENT.
U-235	-4.944E-02	2.377E-01	3.933E-01	0.000E+00	FAIL ABUN
NP-236	-6.754E-02	8.762E-02	1.449E-01	0.000E+00	NOT IDENT.
NP-239	-2.121E-01	2.125E-01	3.294E-01	0.000E+00	FAIL ABUN
AM-241	2.005E-02	1.581E-01	2.424E-01	0.000E+00	NOT IDENT.
CM-243	7.920E-02	1.040E-01	1.749E-01	0.000E+00	FAIL ABUN
AM-246	2.685E-02	1.377E-01	2.305E-01	0.000E+00	NOT IDENT.
CM-247	3.131E-03	4.421E-02	6.716E-02	0.000E+00	FAIL ABUN
CF-249	1.666E-02	4.337E-02	7.384E-02	0.000E+00	NOT IDENT.
CF-251	-2.114E-02	1.375E-01	2.312E-01	0.000E+00	NOT IDENT.


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*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                          *
*****
Configuration   : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023708.CNF;1
Sample date     : 15-JAN-2010 12:00:00 Acquisition date : 6-FEB-2010 13:03:11.
Sample ID      : G1202023708           Sample quantity : 1.01100E+02 GRAM
Detector name   : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00       Elapsed real time: 0 02:00:02.00 0.0%
Energy tolerance: 1.50000 keV          Analyst Initials : MXR1
Abundance limit : 75.00000             Sensitivity     : 5.00000
Batch ID        : 944962               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	1244	10.67*	1.909E+00	2.268E+01	2.268E+01	11.26
CD-109	88.03	206	3.72*	7.481E+00	2.749E+00	2.841E+00	36.72
SN-126	64.28	56	9.60	4.271E+00	5.058E-01	5.058E-01	135.98
	86.94	206	8.90	7.481E+00	1.149E+00	1.149E+00	54.63
	87.57	206	37.00*	7.481E+00	2.763E-01	2.763E-01	36.72
BA-137M	661.65	83	89.98*	3.589E+00	9.564E-02	9.577E-02	64.61
CS-137	661.65	83	85.12*	3.589E+00	1.011E-01	1.012E-01	64.61
HG-203	70.83	-----	4.75	5.596E+00	-----	Line Not Found	-----
	72.87	-----	8.00	5.897E+00	-----	Line Not Found	-----
	82.60	-----	3.55	7.070E+00	-----	Line Not Found	-----
	279.20	101	77.30*	6.167E+00	7.899E-02	1.097E-01	71.42
TL-208	277.35	101	6.80	6.167E+00	8.979E-01	8.979E-01	71.93
	510.84	174	21.60	4.298E+00	6.950E-01	6.950E-01	50.62
	583.14	532	84.20*	3.930E+00	5.974E-01	5.974E-01	17.72
	860.37	116	12.46	2.922E+00	1.187E+00	1.187E+00	47.26
BI-211	72.87	-----	1.27	5.897E+00	-----	Line Not Found	-----
	351.07	885	12.94*	5.402E+00	4.701E+00	4.701E+00	16.30
PB-212	74.81	510	10.70	6.157E+00	2.873E+00	2.873E+00	19.81
	77.11	767	18.00	6.457E+00	2.449E+00	2.449E+00	14.18
	87.30	206	8.00	7.481E+00	1.278E+00	1.278E+00	38.06
	238.63	1657	44.60*	6.710E+00	2.056E+00	2.056E+00	14.54
	300.09	69	3.41	5.923E+00	1.264E+00	1.264E+00	111.10
PO-212	74.81	510	10.70	6.157E+00	2.873E+00	2.873E+00	19.81
	77.11	767	18.00	6.457E+00	2.449E+00	2.449E+00	14.18
	87.30	206	8.00	7.481E+00	1.278E+00	1.278E+00	38.06
	115.19	-----	0.60	8.535E+00	-----	Line Not Found	-----
	238.63	1657	44.60*	6.710E+00	2.056E+00	2.056E+00	14.54
	300.09	69	3.41	5.923E+00	1.264E+00	1.264E+00	111.10
BI-214	609.31	665	46.30*	3.811E+00	1.400E+00	1.400E+00	17.66
	1120.29	173	15.10	2.345E+00	1.817E+00	1.817E+00	34.13
	1764.49	146	15.80	1.716E+00	1.998E+00	1.998E+00	26.11
PB-214	74.81	510	6.21	6.157E+00	4.950E+00	4.950E+00	18.97

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PO-214	77.11	767	10.50	6.457E+00	4.198E+00	4.198E+00	16.10
	87.30	206	4.67	7.481E+00	2.189E+00	2.189E+00	37.52
	241.98	416	7.49	6.665E+00	3.095E+00	3.095E+00	26.76
	295.21	490	19.20	5.971E+00	1.587E+00	1.587E+00	23.28
	351.92	885	37.20*	5.402E+00	1.635E+00	1.635E+00	17.11
	74.81	510	6.21	6.157E+00	4.950E+00	4.950E+00	18.97
	77.11	767	10.50	6.457E+00	4.198E+00	4.198E+00	16.10
	87.30	206	4.67	7.481E+00	2.189E+00	2.189E+00	37.52
	241.98	416	7.49	6.665E+00	3.095E+00	3.095E+00	26.76
	295.21	490	19.20	5.971E+00	1.587E+00	1.587E+00	23.28
PO-216	351.92	885	37.20*	5.402E+00	1.635E+00	1.635E+00	17.11
	74.81	510	10.70	6.157E+00	2.873E+00	2.873E+00	19.81
	77.11	767	18.00	6.457E+00	2.449E+00	2.449E+00	14.18
	87.30	206	8.00	7.481E+00	1.278E+00	1.278E+00	38.06
	238.63	1657	44.60*	6.710E+00	2.056E+00	2.056E+00	14.54
PO-218	300.09	69	3.41	5.923E+00	1.264E+00	1.264E+00	111.10
	74.81	510	6.21	6.157E+00	4.950E+00	4.950E+00	18.97
	77.11	767	10.50	6.457E+00	4.198E+00	4.198E+00	16.10
	87.30	206	4.67	7.481E+00	2.189E+00	2.189E+00	37.52
	241.98	416	7.49	6.665E+00	3.095E+00	3.095E+00	26.76
RA-224	295.21	490	19.20	5.971E+00	1.587E+00	1.587E+00	23.28
	351.92	885	37.20*	5.402E+00	1.635E+00	1.635E+00	17.11
	240.98	416	3.95*	6.665E+00	5.869E+00	5.869E+00	26.16
	609.31	665	46.30*	3.811E+00	1.400E+00	1.400E+00	17.66
	1120.29	173	15.10	2.345E+00	1.817E+00	1.817E+00	34.13
AC-228	1764.49	146	15.80	1.716E+00	1.998E+00	1.998E+00	26.11
	338.32	356	11.40	5.527E+00	2.101E+00	2.101E+00	46.35
	911.07	394	27.70*	2.788E+00	1.897E+00	1.897E+00	22.18
	969.11	315	16.60	2.650E+00	2.655E+00	2.655E+00	32.75
	338.32	356	11.40	5.527E+00	2.101E+00	2.101E+00	46.35
RA-228	911.07	394	27.70*	2.788E+00	1.897E+00	1.897E+00	22.18
	969.11	315	16.60	2.650E+00	2.655E+00	2.655E+00	32.75
	74.81	510	10.70	6.157E+00	2.873E+00	2.937E+00	17.50
	77.11	767	18.00	6.457E+00	2.449E+00	2.503E+00	14.18
	87.30	206	8.00	7.481E+00	1.278E+00	1.306E+00	36.72
TH-228	238.63	1657	44.60*	6.710E+00	2.056E+00	2.102E+00	14.54
	300.09	69	3.41	5.923E+00	1.264E+00	1.292E+00	125.49
	609.31	665	46.30*	3.811E+00	1.400E+00	1.400E+00	17.66
	1120.29	173	15.10	2.345E+00	1.817E+00	1.817E+00	34.13
	1764.49	146	15.80	1.716E+00	1.998E+00	1.998E+00	26.11
TH-232	338.32	356	11.40	5.527E+00	2.101E+00	2.101E+00	22.81
	911.07	394	27.70*	2.788E+00	1.897E+00	1.897E+00	22.18
	969.11	315	16.60	2.650E+00	2.655E+00	2.655E+00	32.75
	63.29	56	3.80*	4.271E+00	1.278E+00	1.278E+00	136.32
	92.38	285	5.41	7.861E+00	2.487E+00	2.487E+00	35.63
U-234	609.31	665	46.30*	3.811E+00	1.400E+00	1.400E+00	17.66
	1120.29	173	15.10	2.345E+00	1.817E+00	1.817E+00	34.13
	1764.49	146	15.80	1.716E+00	1.998E+00	1.998E+00	26.11
	86.50	206	12.60*	7.481E+00	8.115E-01	8.115E-01	42.12

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	95.87	-----	2.60	8.032E+00	-----	Line Not Found	-----
U-238	63.29	56	3.80*	4.271E+00	1.278E+00	1.278E+00	136.32
	92.38	285	5.41	7.861E+00	2.487E+00	2.487E+00	31.88
AM-243	74.67	510	66.00*	6.157E+00	4.658E-01	4.658E-01	17.46
	86.72	206	0.34	7.481E+00	3.043E+01	3.043E+01	36.72
	117.66	-----	0.55	8.550E+00	-----	Line Not Found	-----
	142.18	-----	0.13	8.387E+00	-----	Line Not Found	-----
ANH-511	511.00	174	100.00*	4.298E+00	1.501E-01	1.501E-01	49.93

Flag: "*" = Keyline

Total number of lines in spectrum 36
Number of unidentified lines 5
Number of lines tentatively identified by NID 31 86.11%

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	2.268E+01	2.268E+01	0.255E+01	11.26	
CD-109	464.00D	1.03	2.749E+00	2.841E+00	1.043E+00	36.72	
SN-126	1.00E+05Y	1.00	2.763E-01	2.763E-01	1.015E-01	36.72	
BA-137M	30.17Y	1.00	9.564E-02	9.577E-02	6.188E-02	64.61	
CS-137	30.17Y	1.00	1.011E-01	1.012E-01	0.654E-01	64.61	
HG-203	46.60D	1.39	7.899E-02	1.097E-01	0.784E-01	71.42	
TL-208	1.41E+10Y	1.00	5.974E-01	5.974E-01	1.058E-01	17.72	
BI-211	7.04E+08Y	1.00	4.701E+00	4.701E+00	0.766E+00	16.30	
PB-212	1.41E+10Y	1.00	2.056E+00	2.056E+00	0.299E+00	14.54	
PO-212	1.41E+10Y	1.00	2.056E+00	2.056E+00	0.299E+00	14.54	
BI-214	1600.00Y	1.00	1.400E+00	1.400E+00	0.247E+00	17.66	
PB-214	1600.00Y	1.00	1.635E+00	1.635E+00	0.280E+00	17.11	
PO-214	1600.00Y	1.00	1.635E+00	1.635E+00	0.280E+00	17.11	
PO-216	1.41E+10Y	1.00	2.056E+00	2.056E+00	0.299E+00	14.54	
PO-218	1600.00Y	1.00	1.635E+00	1.635E+00	0.280E+00	17.11	
RA-224	1.41E+10Y	1.00	5.869E+00	5.869E+00	1.535E+00	26.16	
RA-226	1600.00Y	1.00	1.400E+00	1.400E+00	0.247E+00	17.66	
AC-228	1.41E+10Y	1.00	1.897E+00	1.897E+00	0.421E+00	22.18	
RA-228	1.41E+10Y	1.00	1.897E+00	1.897E+00	0.421E+00	22.18	
TH-228	1.91Y	1.02	2.056E+00	2.102E+00	0.306E+00	14.54	
TH-230	4.47E+09Y	1.00	1.400E+00	1.400E+00	0.247E+00	17.66	
TH-232	1.41E+10Y	1.00	1.897E+00	1.897E+00	0.421E+00	22.18	
TH-234	4.47E+09Y	1.00	1.278E+00	1.278E+00	1.742E+00	136.32	
U-234	4.47E+09Y	1.00	1.400E+00	1.400E+00	0.247E+00	17.66	
NP-237	2.14E+06Y	1.00	8.115E-01	8.115E-01	3.418E-01	42.12	
U-238	4.47E+09Y	1.00	1.278E+00	1.278E+00	1.742E+00	136.32	
AM-243	7380.00Y	1.00	4.658E-01	4.658E-01	0.813E-01	17.46	
ANH-511	1.00E+09Y	1.00	1.501E-01	1.501E-01	0.750E-01	49.93	
Total Activity :			6.555E+01	6.572E+01			

Grand Total Activity : 6.555E+01 6.572E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	90.00	167	371	1.10	180.20	178	14	2.32E-02	37.2	7.69E+00	T
0	128.86	103	375	1.23	257.84	254	8	1.43E-02	68.5	8.53E+00	T
0	185.81	304	415	1.51	371.64	368	9	4.23E-02	28.2	7.61E+00	T
0	209.36	112	365	0.95	418.69	415	9	1.55E-02	66.3	7.18E+00	T
0	269.99	114	337	1.39	539.85	536	12	1.59E-02	66.5	6.27E+00	T
0	328.09	47	292	1.58	655.95	650	11	6.46E-03	****	5.62E+00	T
0	410.25	82	244	1.56	820.14	813	15	1.14E-02	87.6	4.93E+00	T
0	462.99	94	178	1.44	925.55	921	10	1.30E-02	57.0	4.58E+00	T
0	727.09	127	192	2.20	1453.44	1446	19	1.76E-02	54.9	3.34E+00	T
0	768.98	41	93	0.89	1537.18	1532	9	5.70E-03	90.7	3.20E+00	
2	1374.49	39	11	2.43	2748.00	2745	24	5.37E-03	37.8	1.99E+00	
2	1378.00	63	28	2.68	2755.00	2745	24	8.78E-03	46.7	1.99E+00	
0	1593.82	33	82	10.28	3186.72	3171	32	4.52E-03	****	1.81E+00	
0	1731.39	19	26	2.42	3461.96	3449	17	2.69E-03	****	1.73E+00	

Flags: "T" = Tentatively associated

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*****
*                                     GEL Laboratories LLC
*                                     2040 Savage Road
*                                     Charleston, SC 29414
*****
*
*                               DETECTOR DATA
*
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023708.CNF;1
* Acquisition date   : 6-FEB-2010 13:03:11. Detector SN#      :
* Detector ID        : GAM22                               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 02:00:02.00                      Half life ratio  : 8.00000
*****
*
*                               SAMPLE DATA
*
* Sample date        : 15-JAN-2010 12:00:00 Nuclide Library : SOLID
* Sample ID          : G1202023708          Analyst initials: MXR1
* Batch Number       : 944962              Sample Quantity : 1.01100E+02 GRAM
*****
*
*                               QC DATA
*
* CALIB. DATE/TIME   : 2-DEC-2009 16:47:28.08MS 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	2.268E+01	2.554E+00	5.369E-01	4.918E-02	42.244
CD-109	2.841E+00	1.043E+00	1.403E+00	1.331E-01	2.025
SN-126	2.763E-01	1.015E-01	1.372E-01	1.296E-02	2.014
BA-137M	9.577E-02	6.188E-02	6.517E-02	6.872E-03	1.470
CS-137	1.012E-01	6.541E-02	6.889E-02	7.274E-03	1.470
HG-203	1.097E-01	7.835E-02	7.985E-02	1.130E-02	1.374
TL-208	5.974E-01	1.058E-01	6.563E-02	7.117E-03	9.102
BI-211	4.701E+00	7.661E-01	3.471E-01	4.049E-02	13.547
PB-212	2.056E+00	2.990E-01	1.020E-01	1.348E-02	20.155
PO-212	2.056E+00	2.990E-01	1.020E-01	1.348E-02	20.155
BI-214	1.400E+00	2.472E-01	1.191E-01	1.385E-02	11.750
PB-214	1.635E+00	2.798E-01	1.209E-01	1.542E-02	13.522
PO-214	1.635E+00	2.798E-01	1.209E-01	1.542E-02	13.522
PO-216	2.056E+00	2.990E-01	1.020E-01	1.348E-02	20.155
PO-218	1.635E+00	2.798E-01	1.209E-01	1.542E-02	13.522
RA-224	5.869E+00	1.535E+00	1.160E+00	1.452E-01	5.060
RA-226	1.400E+00	2.472E-01	1.191E-01	1.385E-02	11.750
AC-228	1.897E+00	4.207E-01	2.260E-01	2.994E-02	8.391

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.897E+00	4.207E-01	2.260E-01	2.994E-02	8.391
TH-228	2.102E+00	3.056E-01	1.043E-01	1.378E-02	20.155
TH-230	1.400E+00	2.472E-01	1.191E-01	1.385E-02	11.750
TH-232	1.897E+00	4.207E-01	2.260E-01	2.994E-02	8.391
TH-234	1.278E+00	1.742E+00	2.186E+00	3.806E-01	0.585
U-234	1.400E+00	2.472E-01	1.191E-01	1.385E-02	11.750
NP-237	8.115E-01	3.418E-01	4.276E-01	9.681E-02	1.898
U-238	1.278E+00	1.742E+00	2.186E+00	3.806E-01	0.585
AM-243	4.658E-01	8.134E-02	9.032E-02	7.362E-03	5.157
ANH-511	1.501E-01	7.497E-02	4.925E-02	4.934E-03	3.048

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.750E-01		3.813E-01	6.320E-01	6.596E-02	0.277
NA-22	-1.046E-02		4.621E-02	7.516E-02	6.477E-03	-0.139
NA-24	4.079E+02		9.322E+02	Half-Life	too short	
AL-26	2.291E-03		2.870E-02	4.777E-02	3.907E-03	0.048
TI-44	4.520E-01	+	6.409E-02	8.230E-02	6.978E-03	5.492
SC-46	3.964E-02		4.323E-02	7.580E-02	8.485E-03	0.523
V-48	-5.150E-02		9.640E-02	1.514E-01	1.588E-02	-0.340
CR-51	2.898E-01		4.922E-01	8.225E-01	1.065E-01	0.352
MN-52	-1.684E-01		6.166E-01	9.806E-01	8.764E-02	-0.172
MN-54	1.967E-02		3.961E-02	6.800E-02	7.554E-03	0.289
CO-56	2.314E-02		4.210E-02	7.262E-02	8.084E-03	0.319
CO-57	-1.716E-03		2.935E-02	4.641E-02	3.827E-03	-0.037
CO-58	-3.369E-02		4.181E-02	6.576E-02	7.282E-03	-0.512
FE-59	-6.691E-02		1.033E-01	1.587E-01	1.555E-02	-0.422
CO-60	9.771E-03		3.777E-02	6.375E-02	5.684E-03	0.153
ZN-65	6.837E-02		1.063E-01	1.567E-01	1.398E-02	0.436
GE-68	-2.077E-01		1.239E+00	1.989E+00	1.875E-01	-0.104
AS-73	4.596E-01		9.050E-01	1.482E+00	1.120E-01	0.310
AS-74	-2.773E-02		1.224E-01	2.001E-01	2.074E-02	-0.139
SE-75	4.357E-02		5.843E-02	8.552E-02	1.151E-02	0.510
BR-77	-4.553E-05		4.228E-05	Half-Life	too short	
SR-82	-6.826E-01		5.543E-01	7.913E-01	8.678E-02	-0.863
RB-83	-4.003E-02		7.851E-02	1.249E-01	1.257E-02	-0.321
RB-84	-9.116E-03		8.635E-02	1.423E-01	1.592E-02	-0.064
KR-85	3.141E+01		1.014E+01	1.629E+01	1.635E+00	1.928
SR-85	1.732E-01		5.591E-02	8.984E-02	9.014E-03	1.928
RB-86	3.444E-01		1.000E+00	1.673E+00	1.579E-01	0.206
Y-88	2.485E-02		3.311E-02	6.027E-02	4.873E-03	0.412
ZR-88	1.546E-02		3.581E-02	6.012E-02	5.598E-03	0.257
Y-91	-7.254E+00		2.010E+01	3.260E+01	2.681E+00	-0.223
NB-94	2.093E-02		3.655E-02	6.161E-02	6.602E-03	0.340
NB-95	6.426E-02		5.802E-02	8.761E-02	9.580E-03	0.733
NB-95M	2.375E-01		1.800E-01	2.688E-01	3.553E-02	0.883

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	-1.209E-02		8.171E-02	1.311E-01	1.522E-02	-0.092
NB-97	-5.067E+01		5.154E+01	Half-Life too short		
ZR-97	5.082E+03		1.116E+03	Half-Life too short		
MO-99	-2.671E-05		3.640E-05	Half-Life too short		
TC-99M	-8.931E+17		4.529E+18	Half-Life too short		
RH-101	2.942E-02		3.966E-02	6.545E-02	7.140E-03	0.449
RH-102	9.393E-03		3.247E-02	5.334E-02	5.246E-03	0.176
RU-103	-5.105E-02		5.015E-02	7.455E-02	1.119E-02	-0.685
RH-106	-2.281E-01		3.387E-01	5.329E-01	7.782E-02	-0.428
RU-106	-2.281E-01		3.379E-01	5.329E-01	5.567E-02	-0.428
AG-108M	-1.068E-02		3.549E-02	5.684E-02	5.627E-03	-0.188
AG-110M	-2.478E-02		4.098E-02	5.413E-02	5.818E-03	-0.458
IN-111	9.232E+00		6.889E+00	1.043E+01	1.324E+00	0.885
IN-113M	3.262E-02		5.074E-02	8.598E-02	8.211E-03	0.379
SN-113	3.262E-02		5.074E-02	8.598E-02	8.211E-03	0.379
IN-114M	5.635E-02		2.469E-01	3.621E-01	3.849E-02	0.156
CD-115	2.846E-05		5.058E-05	Half-Life too short		
SN-117M	-6.471E-02		9.009E-02	1.467E-01	1.391E-02	-0.441
SB-122	-1.124E-06		6.683E-06	Half-Life too short		
I-123	-1.631E+04		2.115E+04	Half-Life too short		
TE-123M	-1.295E-02		3.357E-02	5.537E-02	5.288E-03	-0.234
I-124	-9.877E-02		2.517E+00	3.573E+00	3.711E-01	-0.028
SB-124	-1.110E-02		8.459E-02	1.377E-01	1.225E-02	-0.081
SB-125	9.357E-03		9.915E-02	1.627E-01	1.578E-02	0.058
TE-125M	2.376E+00		1.134E+01	1.827E+01	1.854E+00	0.130
I-126	3.689E-01		3.122E-01	4.825E-01	5.098E-02	0.764
SB-126	1.598E-02		2.574E-01	3.612E-01	3.895E-02	0.044
SB-127	8.603E-01		4.976E+00	8.230E+00	1.235E+00	0.105
XE-127	-4.978E-02		6.267E-02	9.949E-02	1.103E-02	-0.500
I-131	-1.203E-02		2.262E-01	3.734E-01	4.155E-02	-0.032
TE-132	8.815E-02		3.503E+00	5.705E+00	1.092E+00	0.015
BA-133	1.124E-02		5.165E-02	7.546E-02	1.128E-02	0.149
I-133	-1.318E+00		8.270E-01	Half-Life too short		
CS-134	4.310E-02		5.043E-02	8.556E-02	9.470E-03	0.504
CS-135	1.250E-01		2.097E-01	3.032E-01	4.386E-02	0.412
I-135	-2.351E+17		1.017E+17	Half-Life too short		
CS-136	-7.359E-02		1.578E-01	2.477E-01	2.507E-02	-0.297
CE-139	-2.442E-02		3.488E-02	5.658E-02	5.549E-03	-0.432
BA-140	1.782E-02		4.059E-01	6.807E-01	2.285E-01	0.026
LA-140	3.703E-02		1.341E-01	2.295E-01	2.011E-02	0.161
CE-141	9.222E-02		7.870E-02	1.369E-01	1.246E-02	0.674
CE-143	3.572E-02		5.676E-03	Half-Life too short		
CE-144	-2.160E-01		2.511E-01	3.777E-01	5.863E-02	-0.572
PM-144	2.889E-05		3.731E-02	6.095E-02	6.520E-03	0.000
PR-144	1.965E-03		2.537E+00	4.146E+00	4.432E-01	0.000
PM-146	2.970E-04		4.827E-02	7.839E-02	9.110E-03	0.004
ND-147	-1.298E-01		9.320E-01	1.549E+00	2.456E-01	-0.084
PM-149	9.928E-04		4.678E-04	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
EU-152	-1.186E-01		1.498E-01	1.757E-01	2.112E-02	-0.675
GD-153	-3.379E-02		9.856E-02	1.377E-01	1.211E-02	-0.245
EU-154	-3.090E-02		1.285E-01	2.087E-01	2.359E-02	-0.148
EU-155	1.290E-01		1.201E-01	1.997E-01	1.714E-02	0.646
TB-160	1.120E-01		1.549E-01	2.690E-01	3.008E-02	0.416
HO-166M	-3.114E-02		6.650E-02	1.050E-01	1.129E-02	-0.296
TM-171	-2.304E+01		3.222E+01	4.603E+01	3.478E+00	-0.501
LU-176	-2.344E-02		3.203E-02	4.446E-02	5.833E-03	-0.527
LU-177	5.141E+00	+	3.458E+00	4.648E+00	5.246E-01	1.106
LU-177M	-1.300E-01		2.199E-01	2.962E-01	2.801E-02	-0.439
HF-181	-3.686E-02		5.222E-02	8.048E-02	7.945E-03	-0.458
W-181	-1.312E-01		4.269E-01	6.233E-01	4.646E-02	-0.211
TA-182	-1.144E-01		2.016E-01	3.215E-01	2.673E-02	-0.356
RE-183	5.958E-02		1.313E-01	2.225E-01	2.147E-02	0.268
RE-184	8.914E-02		2.636E-01	4.316E-01	5.601E-02	0.207
OS-185	-6.405E-03		4.591E-02	7.484E-02	7.865E-03	-0.086
RE-188	1.630E-01		2.120E-01	3.633E-01	3.391E-02	0.449
W-188	-6.775E+00		9.486E+00	1.325E+01	1.810E+00	-0.511
IR-192	-1.204E-02		4.047E-02	6.682E-02	8.540E-03	-0.180
AU-195	6.661E-02		2.515E-01	4.027E-01	3.512E-02	0.165
TL-200	-1.541E-02		2.055E-02	Half-Life	too short	
TL-201	-7.355E+00		3.820E+01	6.321E+01	6.230E+00	-0.116
TL-202	-6.726E-03		1.090E-01	1.758E-01	1.692E-02	-0.038
BI-207	-1.463E-02		5.772E-02	8.892E-02	8.536E-03	-0.165
TL-207	-1.115E-01		8.134E-01	1.171E+00	2.328E-01	-0.095
PO-209	2.718E+00		7.374E+00	1.254E+01	1.404E+00	0.217
BI-210	1.463E+00		3.393E+00	5.637E+00	5.237E-01	0.260
PB-210	1.463E+00		3.393E+00	5.637E+00	5.237E-01	0.260
PO-210	1.463E+00		3.392E+00	5.637E+00	4.740E-01	0.260
PB-211	8.030E-01		1.267E+00	1.733E+00	1.088E+00	0.463
BI-212	1.191E+00	+	6.688E-01	7.174E-01	8.569E-02	1.660
PO-215	-1.115E-01		8.134E-01	1.171E+00	2.328E-01	-0.095
RN-219	-1.987E-01		4.651E-01	7.235E-01	1.119E-01	-0.275
RN-220	-2.975E+01		2.642E+01	4.080E+01	4.158E+00	-0.729
RA-223	-1.115E-01		8.134E-01	1.171E+00	2.328E-01	-0.095
AC-227	5.569E-04		4.153E-01	6.693E-01	1.221E-01	0.001
TH-227	5.569E-04		4.153E-01	6.693E-01	1.378E-01	0.001
TH-229	-4.241E-01		5.676E-01	9.057E-01	9.738E-02	-0.468
PA-231	-9.534E-01		1.995E+00	2.674E+00	4.993E-01	-0.357
TH-231	-1.115E-01		8.134E-01	1.171E+00	2.328E-01	-0.095
U-231	6.268E-02		4.019E+00	5.782E+00	5.135E-01	0.011
PA-233	5.296E-02		7.051E-02	1.215E-01	1.591E-02	0.436
PA-234	-7.495E-02		3.175E-01	5.141E-01	1.022E-01	-0.146
PA-234M	4.269E+00		5.051E+00	8.596E+00	9.851E-01	0.497
U-235	-4.944E-02		2.425E-01	3.937E-01	6.946E-02	-0.126
NP-236	-6.754E-02		8.940E-02	1.451E-01	1.387E-02	-0.466
NP-239	-2.121E-01		2.169E-01	3.296E-01	2.724E-02	-0.644
AM-241	2.005E-02		1.614E-01	2.420E-01	1.892E-02	0.083

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	7.920E-02		1.061E-01	1.750E-01	1.492E-02	0.453
AM-246	2.685E-02		1.405E-01	2.322E-01	2.184E-02	0.116
CM-247	3.131E-03		4.511E-02	6.745E-02	6.327E-03	0.046
CF-249	1.666E-02		4.426E-02	7.416E-02	7.048E-03	0.225
CF-251	-2.114E-02		1.403E-01	2.316E-01	2.352E-02	-0.091

VAX/VMS Nuclide Identification Report Generated

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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*
*                                     DETECTOR DATA                          *
*
* Configuration      : SYSSYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202023708          *
* Acquisition date   : 6-FEB-2010 13:03:11 Detector SN#      :              *
* Detector ID        : GAM22 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 02:00:02.00 Half life ratio : 8.000   *
*****
*
*                                     SAMPLE DATA                            *
*
* Sample date       : 15-JAN-2010 12:00:00 Nuclide Library : SOLID          *
* Sample ID         : G1202023708 Analyst initials: MXR1          *
* Batch Number      : 944962 Sample Quantity : 1.0110E+02 GRAM  *
* Recovery          : 1.00000 Carrier Weight : 0.00000          *
*****
*
*                                     QC DATA                               *
*
* CALIB. DATE/TIME  : 2-DEC-2009 16:47:28 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	2.268E+01	2.503E+00	2.664E-01	1.277E+00
CD-109	2.841E+00	1.022E+00	7.021E-01	5.216E-01
SN-126	2.763E-01	9.945E-02	6.869E-02	5.074E-02
BA-137M	9.577E-02	6.064E-02	3.241E-02	3.094E-02
CS-137	1.012E-01	6.411E-02	3.426E-02	3.271E-02
HG-203	1.097E-01	7.678E-02	3.982E-02	3.918E-02
TL-208	5.974E-01	1.037E-01	3.266E-02	5.292E-02
BI-211	4.701E+00	7.508E-01	1.730E-01	3.831E-01
PB-212	2.056E+00	2.930E-01	5.090E-02	1.495E-01
PO-212	2.056E+00	2.930E-01	5.090E-02	1.495E-01
BI-214	1.400E+00	2.423E-01	5.926E-02	1.236E-01
PB-214	1.635E+00	2.742E-01	6.027E-02	1.399E-01
PO-214	1.635E+00	2.742E-01	6.027E-02	1.399E-01
PO-216	2.056E+00	2.930E-01	5.090E-02	1.495E-01
PO-218	1.635E+00	2.742E-01	6.027E-02	1.399E-01
RA-224	5.869E+00	1.505E+00	5.787E-01	7.677E-01
RA-226	1.400E+00	2.423E-01	5.926E-02	1.236E-01
AC-228	1.897E+00	4.123E-01	1.123E-01	2.104E-01
RA-228	1.897E+00	4.123E-01	1.123E-01	2.104E-01
TH-228	2.102E+00	2.995E-01	5.203E-02	1.528E-01
TH-230	1.400E+00	2.423E-01	5.926E-02	1.236E-01
TH-232	1.897E+00	4.123E-01	1.123E-01	2.104E-01
TH-234	1.278E+00	1.707E+00	1.095E+00	8.710E-01
U-234	1.400E+00	2.423E-01	5.926E-02	1.236E-01
NP-237	8.115E-01	3.350E-01	2.140E-01	1.709E-01
U-238	1.278E+00	1.707E+00	1.095E+00	8.710E-01
AM-243	4.658E-01	7.971E-02	4.523E-02	4.067E-02
ANH-511	1.501E-01	7.347E-02	2.451E-02	3.748E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
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BE-7	1.750E-01	3.737E-01	3.146E-01	1.907E-01	NOT IDENT.
NA-22	-1.046E-02	4.529E-02	3.730E-02	2.311E-02	NOT IDENT.
NA-24	4.079E+08	1.827E+09	0.000E+00	9.322E+08	SHORT HLIF
AL-26	2.291E-03	2.813E-02	2.368E-02	1.435E-02	NOT IDENT.
TI-44	4.520E-01	6.281E-02	4.121E-02	3.204E-02	FAIL ABUN
SC-46	3.964E-02	4.236E-02	3.767E-02	2.161E-02	FAIL ABUN
V-48	-5.150E-02	9.447E-02	7.522E-02	4.820E-02	NOT IDENT.
CR-51	2.898E-01	4.824E-01	4.100E-01	2.461E-01	NOT IDENT.
MN-52	-1.684E-01	6.042E-01	4.865E-01	3.083E-01	NOT IDENT.
MN-54	1.967E-02	3.882E-02	3.380E-02	1.981E-02	NOT IDENT.
CO-56	2.314E-02	4.125E-02	3.609E-02	2.105E-02	NOT IDENT.
CO-57	-1.716E-03	2.876E-02	2.320E-02	1.467E-02	NOT IDENT.
CO-58	-3.369E-02	4.098E-02	3.269E-02	2.091E-02	NOT IDENT.
FE-59	-6.691E-02	1.013E-01	7.881E-02	5.167E-02	NOT IDENT.
CO-60	9.771E-03	3.701E-02	3.164E-02	1.888E-02	NOT IDENT.
ZN-65	6.837E-02	1.041E-01	7.781E-02	5.313E-02	NOT IDENT.
GE-68	-2.077E-01	1.215E+00	9.878E-01	6.197E-01	NOT IDENT.
AS-73	4.596E-01	8.869E-01	7.429E-01	4.525E-01	NOT IDENT.
AS-74	-2.773E-02	1.200E-01	9.957E-02	6.122E-02	NOT IDENT.
SE-75	4.357E-02	5.726E-02	4.265E-02	2.921E-02	FAIL ABUN
BR-77	-4.553E+01	8.288E+01	0.000E+00	4.228E+01	SHORT HLIF
SR-82	-6.826E-01	5.432E-01	3.934E-01	2.772E-01	NOT IDENT.
RB-83	-4.003E-02	7.694E-02	6.216E-02	3.925E-02	NOT IDENT.
RB-84	-9.116E-03	8.463E-02	7.072E-02	4.318E-02	NOT IDENT.
KR-85	3.141E+01	9.936E+00	8.109E+00	5.069E+00	NOT IDENT.
SR-85	1.732E-01	5.479E-02	4.472E-02	2.796E-02	NOT IDENT.
RB-86	3.444E-01	9.805E-01	8.310E-01	5.002E-01	NOT IDENT.
Y-88	2.485E-02	3.245E-02	2.988E-02	1.656E-02	NOT IDENT.
ZR-88	1.546E-02	3.510E-02	2.995E-02	1.791E-02	NOT IDENT.
Y-91	-7.254E+00	1.970E+01	1.618E+01	1.005E+01	NOT IDENT.
NB-94	2.093E-02	3.582E-02	3.064E-02	1.828E-02	NOT IDENT.
NB-95	6.426E-02	5.686E-02	4.355E-02	2.901E-02	NOT IDENT.
NB-95M	2.375E-01	1.764E-01	1.341E-01	9.000E-02	NOT IDENT.
ZR-95	-1.209E-02	8.008E-02	6.517E-02	4.086E-02	NOT IDENT.
NB-97	-5.067E+07	1.010E+08	0.000E+00	5.154E+07	SHORT HLIF
ZR-97	5.082E+09	2.187E+09	0.000E+00	1.116E+09	SHORT HLIF
MO-99	-2.671E+01	7.135E+01	0.000E+00	3.640E+01	SHORT HLIF
TC-99M	-8.931E+23	8.876E+24	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.942E-02	3.887E-02	3.267E-02	1.983E-02	NOT IDENT.
RH-102	9.393E-03	3.182E-02	2.656E-02	1.624E-02	NOT IDENT.
RU-103	-5.105E-02	4.915E-02	3.711E-02	2.508E-02	FAIL ABUN
RH-106	-2.281E-01	3.319E-01	2.651E-01	1.693E-01	FAIL ABUN
RU-106	-2.281E-01	3.311E-01	2.651E-01	1.689E-01	FAIL ABUN
AG-108M	-1.068E-02	3.478E-02	2.831E-02	1.774E-02	NOT IDENT.
AG-110M	-2.478E-02	4.016E-02	2.692E-02	2.049E-02	NOT IDENT.
IN-111	9.232E+00	6.752E+00	5.206E+00	3.445E+00	NOT IDENT.
IN-113M	3.262E-02	4.972E-02	4.283E-02	2.537E-02	NOT IDENT.
SN-113	3.262E-02	4.972E-02	4.283E-02	2.537E-02	NOT IDENT.
IN-114M	5.635E-02	2.420E-01	1.808E-01	1.235E-01	NOT IDENT.
CD-115	2.846E+01	9.915E+01	0.000E+00	5.058E+01	SHORT HLIF
SN-117M	-6.471E-02	8.829E-02	7.327E-02	4.504E-02	NOT IDENT.
SB-122	-1.124E+00	1.310E+01	0.000E+00	6.683E+00	SHORT HLIF
I-123	-1.631E+10	4.145E+10	0.000E+00	2.115E+10	SHORT HLIF
TE-123M	-1.295E-02	3.290E-02	2.766E-02	1.679E-02	NOT IDENT.
I-124	-9.877E-02	2.467E+00	1.778E+00	1.259E+00	NOT IDENT.
SB-124	-1.110E-02	8.290E-02	6.828E-02	4.230E-02	FAIL ABUN
SB-125	9.357E-03	9.717E-02	8.101E-02	4.958E-02	FAIL ABUN
TE-125M	2.376E+00	1.112E+01	9.140E+00	5.671E+00	NOT IDENT.
I-126	3.689E-01	3.060E-01	2.400E-01	1.561E-01	NOT IDENT.
SB-126	1.598E-02	2.523E-01	1.796E-01	1.287E-01	FAIL ABUN
SB-127	8.603E-01	4.876E+00	4.093E+00	2.488E+00	FAIL ABUN
XE-127	-4.978E-02	6.141E-02	4.967E-02	3.133E-02	NOT IDENT.
I-131	-1.203E-02	2.217E-01	1.860E-01	1.131E-01	NOT IDENT.
TE-132	8.815E-02	3.433E+00	2.847E+00	1.751E+00	NOT IDENT.
BA-133	1.124E-02	5.061E-02	3.760E-02	2.582E-02	NOT IDENT.
I-133	-1.318E+06	1.621E+06	0.000E+00	8.270E+05	SHORT HLIF
CS-134	4.310E-02	4.942E-02	4.253E-02	2.521E-02	NOT IDENT.
CS-135	1.250E-01	2.055E-01	1.512E-01	1.048E-01	NOT IDENT.
I-135	-2.351E+23	1.993E+23	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-7.359E-02	1.547E-01	1.230E-01	7.891E-02	FAIL ABUN
CE-139	-2.442E-02	3.418E-02	2.826E-02	1.744E-02	NOT IDENT.
BA-140	1.782E-02	3.978E-01	3.388E-01	2.030E-01	NOT IDENT.
LA-140	3.703E-02	1.314E-01	1.138E-01	6.705E-02	FAIL ABUN
CE-141	9.222E-02	7.712E-02	6.842E-02	3.935E-02	NOT IDENT.
CE-143	3.572E+04	1.113E+04	0.000E+00	5.676E+03	SHORT HLIF
CE-144	-2.160E-01	2.461E-01	1.888E-01	1.255E-01	NOT IDENT.
PM-144	2.889E-05	3.656E-02	3.031E-02	1.865E-02	NOT IDENT.

PR-144	1.965E-03	2.487E+00	2.062E+00	1.269E+00	NOT IDENT.
PM-146	2.970E-04	4.731E-02	3.903E-02	2.414E-02	NOT IDENT.
ND-147	-1.298E-01	9.133E-01	7.708E-01	4.660E-01	FAIL ABUN
PM-149	9.928E+02	9.168E+02	0.000E+00	4.678E+02	SHORT HLIF
EU-152	-1.186E-01	1.468E-01	8.757E-02	7.492E-02	NOT IDENT.
GD-153	-3.379E-02	9.659E-02	6.889E-02	4.928E-02	NOT IDENT.
EU-154	-3.090E-02	1.259E-01	1.036E-01	6.425E-02	NOT IDENT.
EU-155	1.290E-01	1.177E-01	9.989E-02	6.004E-02	FAIL ABUN
TB-160	1.120E-01	1.518E-01	1.337E-01	7.743E-02	FAIL ABUN
HO-166M	-3.114E-02	6.517E-02	5.224E-02	3.325E-02	FAIL ABUN
TM-171	-2.304E+01	3.158E+01	2.306E+01	1.611E+01	NOT IDENT.
LU-176	-2.344E-02	3.139E-02	2.216E-02	1.601E-02	FAIL ABUN
LU-177	5.141E+00	3.388E+00	2.320E+00	1.729E+00	FAIL ABUN
LU-177M	-1.300E-01	2.155E-01	1.475E-01	1.100E-01	FAIL ABUN
HF-181	-3.686E-02	5.118E-02	4.007E-02	2.611E-02	NOT IDENT.
W-181	-1.312E-01	4.184E-01	3.122E-01	2.135E-01	NOT IDENT.
TA-182	-1.144E-01	1.976E-01	1.596E-01	1.008E-01	FAIL ABUN
RE-183	5.958E-02	1.287E-01	1.112E-01	6.564E-02	FAIL ABUN
RE-184	8.914E-02	2.584E-01	2.153E-01	1.318E-01	NOT IDENT.
OS-185	-6.405E-03	4.499E-02	3.723E-02	2.295E-02	NOT IDENT.
RE-188	1.630E-01	2.078E-01	1.815E-01	1.060E-01	NOT IDENT.
W-188	-6.775E+00	9.296E+00	6.607E+00	4.743E+00	FAIL ABUN
IR-192	-1.204E-02	3.966E-02	3.331E-02	2.023E-02	FAIL ABUN
AU-195	6.661E-02	2.465E-01	2.015E-01	1.257E-01	FAIL ABUN
TL-200	-1.541E+04	4.028E+04	0.000E+00	2.055E+04	SHORT HLIF
TL-201	-7.355E+00	3.743E+01	3.157E+01	1.910E+01	NOT IDENT.
TL-202	-6.726E-03	1.068E-01	8.752E-02	5.449E-02	NOT IDENT.
BI-207	-1.463E-02	5.656E-02	4.416E-02	2.886E-02	FAIL ABUN
TL-207	-1.115E-01	7.971E-01	5.839E-01	4.067E-01	FAIL ABUN
PO-209	2.718E+00	7.226E+00	6.230E+00	3.687E+00	NOT IDENT.
BI-210	1.463E+00	3.325E+00	2.827E+00	1.696E+00	NOT IDENT.
PB-210	1.463E+00	3.325E+00	2.827E+00	1.696E+00	NOT IDENT.
PO-210	1.463E+00	3.325E+00	2.827E+00	1.696E+00	NOT IDENT.
PB-211	8.030E-01	1.242E+00	8.633E-01	6.335E-01	NOT IDENT.
BI-212	1.191E+00	6.554E-01	3.567E-01	3.344E-01	FAIL ABUN
PO-215	-1.115E-01	7.971E-01	5.839E-01	4.067E-01	FAIL ABUN
RN-219	-1.987E-01	4.558E-01	3.604E-01	2.325E-01	FAIL ABUN
RN-220	-2.975E+01	2.590E+01	2.030E+01	1.321E+01	NOT IDENT.
RA-223	-1.115E-01	7.971E-01	5.839E-01	4.067E-01	FAIL ABUN
AC-227	5.569E-04	4.070E-01	3.339E-01	2.076E-01	FAIL ABUN
TH-227	5.569E-04	4.070E-01	3.339E-01	2.076E-01	FAIL ABUN
TH-229	-4.241E-01	5.562E-01	4.522E-01	2.838E-01	FAIL ABUN
PA-231	-9.534E-01	1.955E+00	1.334E+00	9.975E-01	NOT IDENT.
TH-231	-1.115E-01	7.971E-01	5.839E-01	4.067E-01	FAIL ABUN
U-231	6.268E-02	3.939E+00	2.893E+00	2.010E+00	FAIL ABUN
PA-233	5.296E-02	6.910E-02	6.055E-02	3.525E-02	FAIL ABUN
PA-234	-7.495E-02	3.112E-01	2.554E-01	1.588E-01	FAIL ABUN
PA-234M	4.269E+00	4.950E+00	4.270E+00	2.526E+00	NOT IDENT.
U-235	-4.944E-02	2.377E-01	1.968E-01	1.213E-01	FAIL ABUN
NP-236	-6.754E-02	8.762E-02	7.248E-02	4.470E-02	NOT IDENT.
NP-239	-2.121E-01	2.125E-01	1.648E-01	1.084E-01	FAIL ABUN
AM-241	2.005E-02	1.581E-01	1.213E-01	8.068E-02	NOT IDENT.
CM-243	7.920E-02	1.040E-01	8.753E-02	5.307E-02	FAIL ABUN
AM-246	2.685E-02	1.377E-01	1.153E-01	7.025E-02	NOT IDENT.
CM-247	3.131E-03	4.421E-02	3.360E-02	2.255E-02	FAIL ABUN
CF-249	1.666E-02	4.337E-02	3.694E-02	2.213E-02	NOT IDENT.
CF-251	-2.114E-02	1.375E-01	1.157E-01	7.015E-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	266.4360
46.50	266.4360
46.50	266.4360
48.70	289.2676
49.72	279.6175
51.35	310.2952
52.39	336.7648
52.97	305.0626
53.15	299.7156
53.44	293.5661
54.07	288.7524
56.28	328.2271
56.28	328.2307
57.37	0.0000
57.53	350.7772
57.53	350.7800
57.60	326.2216
57.98	339.0727
57.98	339.0727
59.32	328.0117
59.32	328.0117
59.40	328.1156
59.54	328.2982
59.72	332.8371
60.01	333.2195
61.10	325.9932
61.14	326.0436
61.30	326.2466
63.00	401.0409
63.29	434.9412
63.29	434.9412
63.58	435.4191
64.28	408.8275
65.12	411.5777
65.20	417.5609
65.20	417.5609
66.05	420.3440
66.72	437.5829
66.83	437.7596
66.91	437.8887
67.20	458.1284
67.20	458.1284
67.75	419.9981
67.85	420.1509
68.90	424.7058
68.90	424.7058
69.30	448.1124
69.67	439.5704
70.82	420.1172
70.82	420.1172
70.83	420.1322
72.80	426.0135
72.87	426.1172
72.87	426.1172
74.67	450.4372
74.81	450.6481
74.81	450.6481
74.81	450.6481
74.81	450.6481
74.81	450.6481
74.81	450.6481
74.81	450.6481
74.97	450.8908
75.28	451.3582
75.70	451.9888
77.11	454.0962
77.11	454.0962

77.11	454.0962
77.11	454.0962
77.11	454.0962
77.11	454.0962
77.11	454.0962
78.38	455.9790
79.62	411.0988
79.80	411.3351
79.80	411.3351
80.11	433.3320
80.18	433.4284
80.30	433.5935
80.30	433.5935
80.57	433.9644
81.00	501.0540
81.07	501.1653
81.07	501.1653
81.07	501.1653
81.07	501.1653
82.60	414.4633
83.37	403.5059
83.78	435.2180
83.78	435.2180
83.78	435.2180
83.78	435.2180
84.21	409.2411
84.90	425.7574
85.43	448.3937
86.29	536.0125
86.50	536.3507
86.54	536.4158
86.59	564.8159
86.72	565.0377
86.79	563.5785
86.94	563.8353
87.30	487.1856
87.30	487.1856
87.30	487.1856
87.30	487.1856
87.30	487.1856
87.30	487.1856
87.57	487.5770
87.88	0.0000
88.03	486.6641
88.36	487.1387
88.47	487.2985
89.95	489.4181
91.11	392.2183
92.29	393.5508
92.38	393.6522
92.38	393.6522
93.35	394.7389
94.00	395.4652
94.67	351.1099
94.67	351.1149
94.90	351.3411
94.90	351.3411
94.90	351.3411
94.90	351.3411
95.87	386.2288
95.87	386.2288
96.73	393.6310
97.43	370.0425
98.44	342.4201
98.44	342.4217
98.88	337.8341
99.55	325.3888
99.55	325.3888
99.86	325.6595
100.00	325.7827
100.10	338.9525
103.18	369.2021
103.76	335.6492
105.00	329.0053
105.31	335.8986
108.00	414.9864
109.28	367.2166

111.00	372.1592
111.00	372.1592
111.76	388.5830
112.95	415.6280
115.19	347.6797
116.30	327.0337
117.00	382.1768
117.00	382.1768
117.66	406.7002
121.11	304.3440
121.62	332.2997
121.78	332.4218
122.06	348.7502
122.32	348.9583
122.32	348.9583
122.32	348.9583
122.32	348.9583
123.07	377.2488
127.23	366.8359
129.76	362.5731
131.20	363.7164
133.02	406.1968
133.54	412.0837
135.34	352.0349
136.00	381.9047
136.25	382.1076
136.48	394.7700
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140.51	0.0000
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142.65	403.4636
143.76	395.3278
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144.24	382.1284
144.24	382.1284
144.24	382.1284
145.22	331.1683
145.44	336.7622
147.16	410.7867
152.43	372.7198
152.70	383.0430
153.22	391.7223
154.21	389.6977
154.21	389.6977
154.21	389.6977
154.21	389.6977
155.03	385.6849
156.02	349.3474
158.56	413.4113
159.00	0.0000
159.00	391.3852
160.31	392.3433
161.27	385.5553
162.32	356.2964
162.64	341.4972
163.35	342.8809
163.89	341.3372
165.85	391.6271
167.43	373.8173
171.28	366.8562
171.86	352.9216
172.10	353.0712
176.55	349.0807
176.60	349.1111
181.06	0.0000
184.41	408.5147
185.71	391.6199
186.00	391.8096
190.27	325.8734
192.34	379.0869
193.63	362.0656
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198.60	361.9254
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201.83	398.8229
202.84	397.4351
205.31	351.3893

208.36	383.7826
208.81	377.5612
209.75	346.8558
209.75	346.8558
210.97	330.0113
215.65	308.6798
216.55	329.8662
218.09	320.3384
222.10	323.2254
223.80	306.4108
226.40	333.5121
227.00	319.2358
227.08	319.2709
227.20	329.7263
228.16	330.1688
228.18	330.1785
228.18	330.1785
231.56	0.0000
235.69	343.5054
236.00	335.2295
236.00	335.2295
238.63	312.7543
238.63	312.7543
238.63	312.7543
238.63	312.7543
239.00	0.0000
240.98	313.7412
241.98	314.1613
241.98	314.1613
241.98	314.1613
244.69	247.1195
245.39	213.2309
247.94	278.9843
248.90	257.0544
249.79	0.0000
252.40	211.9563
252.85	246.5272
252.85	246.5272
254.15	0.0000
256.20	248.6663
256.20	248.6663
260.50	279.3683
260.90	0.0000
262.80	276.9017
264.65	234.2677
268.24	279.2010
268.79	281.1484
269.46	269.0686
269.46	269.0686
269.46	269.0686
269.46	269.0686
271.23	274.2739
273.65	282.8086
276.40	230.5405
277.35	289.9805
277.60	301.9036
277.60	301.9036
278.00	302.0488
278.60	251.1464
279.20	251.3257
279.53	251.4222
280.46	210.2682
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283.67	253.9879
284.30	252.3852
285.00	227.5117
285.90	0.0000
286.10	199.5520
286.10	199.5520
287.40	210.4367
288.45	0.0000
290.67	253.9470
290.80	253.9848
291.72	246.7307
293.26	0.0000
293.70	211.0966
295.21	211.4583
295.21	211.4583

295.21	211.4583
295.96	244.8951
296.50	245.0435
297.23	0.0000
298.57	245.6136
299.80	241.3952
299.80	241.3952
300.09	241.4761
300.09	241.4761
300.09	241.4761
300.09	241.4761
300.12	241.4825
301.29	252.4414
302.84	222.4100
303.76	0.0000
303.91	234.8726
304.40	239.5789
304.40	239.5789
304.84	238.1672
306.84	263.1720
308.46	254.4408
311.98	215.0984
316.51	236.5536
318.01	243.4374
319.02	222.3033
319.41	208.4387
320.08	211.0667
323.87	229.0505
323.87	229.0505
323.87	229.0505
323.87	229.0505
325.23	251.2186
328.77	238.0474
333.44	226.6025
334.20	217.3292
334.20	217.3292
334.30	226.8018
338.28	248.2735
338.28	248.2735
338.28	248.2735
338.28	248.2735
338.32	248.2863
338.32	248.2863
338.32	248.2863
340.50	213.9615
340.57	213.9752
344.27	262.4921
345.85	246.9713
350.59	0.0000
351.07	197.9531
351.92	198.1166
351.92	198.1166
351.92	198.1166
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364.48	193.7068
366.43	0.0000
367.43	192.2938
367.94	0.0000
369.80	191.7412
374.96	186.7668
383.85	190.2727
387.95	193.9598
388.63	196.0694
391.69	180.6376
391.69	180.6376
392.90	186.8265
398.62	193.7963
400.65	195.1462
401.10	204.2811
401.81	202.5055
402.60	197.2075
404.84	178.3596
410.95	190.8021
411.60	164.1671
413.65	183.1025
414.70	188.3581
415.30	164.6841

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417.63	0.0000
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423.70	166.1924
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427.89	167.7993
432.53	159.1396
433.93	174.8403
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439.56	152.7763
439.89	156.9759
443.98	176.2658
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445.03	167.0195
445.03	167.0195
445.03	167.0195
445.03	167.0195
453.90	171.3490
463.38	162.0284
468.07	154.1103
473.00	137.6199
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475.35	159.2401
476.78	158.3412
477.59	148.8023
477.96	152.0572
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484.57	0.0000
487.03	161.7114
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492.35	0.0000
497.08	166.1653
507.63	0.0000
510.53	0.0000
510.84	150.2652
511.00	150.2819
511.85	150.3714
511.85	150.3714
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513.99	148.4011
520.41	157.6028
520.65	0.0000
527.90	0.0000
528.96	0.0000
529.64	161.1390
529.87	0.0000
531.02	153.8789
537.32	151.7480
543.00	139.2480
546.56	0.0000
549.76	149.2663
552.65	125.0988
555.20	133.7895
563.23	151.5430
563.90	0.0000
568.70	170.1432
569.32	154.0437
569.50	150.2594
569.67	150.2755
573.80	173.9428
574.00	170.5315
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578.91	0.0000
579.30	0.0000
583.14	158.2895
585.48	0.0000
591.81	138.8994
592.07	137.7623
593.00	146.7243
595.88	136.3499
600.56	112.0152
602.52	0.0000
602.71	146.4989
602.71	146.4989
603.60	156.5727
604.41	138.3198
604.70	141.6766
609.31	148.2056

609.31	148.2056
609.31	148.2056
609.31	148.2056
610.33	148.2983
612.46	137.3254
614.37	140.8359
618.01	138.5327
621.84	140.4892
621.84	140.4892
631.29	127.4463
633.02	129.5555
633.10	131.5388
634.78	132.6587
635.90	134.7272
636.97	122.9177
645.85	122.5571
646.12	120.5840
656.30	118.5697
657.75	122.1080
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661.65	148.2324
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666.33	107.1485
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677.61	122.7528
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692.80	0.0000
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696.49	135.3059
697.00	132.2675
697.49	124.0969
698.33	141.5966
698.50	141.6106
699.00	151.9114
702.63	130.6122
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706.58	0.0000
706.67	138.1112
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711.68	140.5461
713.82	144.8450
717.42	115.3431
720.50	119.2526
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722.20	135.3909
722.78	138.9974
722.78	138.9974
722.89	139.0055
722.95	139.0082
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727.18	122.9431
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739.58	0.0000
742.81	127.0928
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747.13	110.5286
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753.82	123.5793
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756.15	119.4947
756.87	113.1912
763.93	129.2150
765.79	120.2258
766.42	122.0848
766.84	123.9330
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778.89	151.8688
783.80	96.4874
785.46	111.5876
792.07	130.2439

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810.76	109.8492
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828.27	0.0000
831.60	121.2659
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834.83	111.0921
836.80	0.0000
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867.82	95.3264
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873.19	96.7517
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880.27	93.2109
880.51	98.0263
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884.67	108.7968
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896.60	83.2330
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903.28	107.0104
911.07	102.2552
911.07	102.2552
911.07	102.2552
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920.93	73.5913
925.00	85.2280
925.24	82.2979
926.50	101.9470
935.52	95.4455
937.48	97.4928
944.10	99.7354
946.00	99.8146
949.00	85.0957
962.29	83.5708
964.01	83.6279
966.15	97.6514
968.20	83.7700
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969.11	83.8022
969.11	83.8022
977.42	84.0820
980.50	64.7585
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989.30	68.3901
996.32	106.9058
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1001.68	76.8111
1004.76	91.0704
1021.30	0.0000
1024.50	0.0000
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1036.00	90.1270
1037.82	73.7905
1038.57	78.9390
1038.76	0.0000
1045.16	95.5786
1046.59	95.6305
1048.07	90.5413

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1050.47	79.2935
1062.04	86.8770
1063.62	90.0343
1076.63	73.8304
1077.35	80.0911
1078.86	77.0145
1085.78	100.1618
1099.22	94.3631
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1112.84	77.4401
1115.52	83.0511
1120.29	69.7222
1120.29	69.7222
1120.29	69.7222
1120.29	69.7222
1120.51	69.7291
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1124.00	0.0000
1129.67	70.4846
1131.51	0.0000
1147.95	0.0000
1167.94	98.6842
1173.22	83.7960
1175.09	97.0403
1177.93	106.5651
1189.05	91.8196
1204.90	102.7760
1205.75	0.0000
1213.00	93.5109
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1236.41	0.0000
1238.25	94.2885
1246.25	108.0352
1260.41	0.0000
1271.85	84.6105
1274.45	87.5995
1274.54	87.6022
1291.56	69.4789
1298.22	0.0000
1312.09	64.0141
1325.50	70.2113
1325.50	70.2113
1332.49	50.5409
1333.61	49.5667
1360.21	52.9628
1362.66	0.0000
1365.15	44.8342
1368.21	48.0806
1368.53	0.0000
1376.25	37.4849
1384.27	53.6768
1394.10	58.5416
1395.20	64.6172
1407.95	58.7770
1434.06	56.1548
1436.60	52.1097
1457.56	0.0000
1460.81	40.1212
1489.15	44.5839
1509.49	50.0449
1596.49	42.6746
1620.62	37.2142
1678.03	0.0000
1691.02	30.1044
1691.02	30.1044
1706.46	0.0000
1750.46	0.0000
1764.49	23.7207
1764.49	23.7207
1764.49	23.7207
1764.49	23.7207
1770.23	24.9402
1771.40	28.5109
1791.20	0.0000
1808.65	20.9698

1836.01

16.0773

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202023708

Total Uranium Activity	3.7789E+00	ug/g
Total Uranium Counting Unc.	5.0802E+00	ug/g
Total Uranium Tpu	2.5919E-06	ug/g
Total Uranium Mda	3.2598E+00	ug/g


```

*****
*
*               GEL Laboratories LLC
*               2040 SAVAGE ROAD
*               CHARLESTON ,SC 29417
*               GROSS GAMMA REPORT
*
*****
*
*  BATCH ID      : 944962                SAMPLE ID   : G1202023708
*  ANALYST       : MXR1                  DETECTOR    : GAM22
*  SAMPLE DATE   : 15-JAN-2010 12:00:00.00  COUNT TIME   : 0 02:00:00.00
*  ANALYSIS DATE : 6-FEB-2010 13:03:11.01  SAMPLE ALQT  : 101.100 GRAM
*
*****

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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 1.000E+01
GROSS GAMMA ERROR   (pCi/GRAM ) : 1.641E+00
GROSS GAMMA MDA     (pCi/GRAM ) : 3.199E+00
GROSS GAMMA DLC     (pCi/GRAM ) : 1.552E+00

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VAX/VMS Nuclide Identification Report Generated 4-FEB-2010 22:14:30.36

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*****
*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023709.CNF;1
Sample date        : 27-JAN-2010 00:00:00 Acquisition date : 4-FEB-2010 21:14:00.
Sample ID          : G1202023709 Sample quantity : 1.55440E+02 GRAM
Detector name      : GAM01 Detector geometry: CAN
Elapsed live time  : 0 01:00:00.00 Elapsed real time: 0 01:00:01.14 0.0%
Energy tolerance   : 1.50000 keV Analyst Initials : MXR1
Abundance limit    : 75.00000 Sensitivity : 5.00000
Batch ID           : 944962 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	59.52	2272	798	1.30	119.78	114	12	6.31E-01	3.3	
2	0	78.04*	53	498	1.10	156.80	152	8	1.48E-02	75.3	
3	0	88.02	1159	739	1.32	176.74	170	15	3.22E-01	5.9	
4	4	92.54*	9	94	0.91	185.77	184	10	2.46E-03	174.2	1.61E+00
5	4	93.54*	20	210	1.22	187.78	184	10	5.66E-03	133.8	
6	0	122.15	267	373	1.31	244.97	240	13	7.41E-02	16.1	
7	0	186.81*	93	340	1.20	374.22	369	12	2.59E-02	41.6	
8	0	238.83*	368	483	1.72	478.20	471	14	1.02E-01	13.8	
9	0	295.83*	161	146	2.17	592.12	587	11	4.48E-02	16.7	
10	0	339.27*	67	223	2.26	678.96	672	12	1.85E-02	46.9	
11	0	351.90*	184	215	1.20	704.21	698	13	5.12E-02	18.0	
12	0	511.07*	67	175	1.77	1022.35	1014	17	1.86E-02	48.7	
13	0	583.53*	103	107	1.61	1167.17	1162	11	2.86E-02	22.2	
14	0	609.50*	138	114	1.79	1219.08	1211	15	3.83E-02	19.2	
15	0	661.97	1904	151	1.72	1323.97	1316	18	5.29E-01	2.8	
16	0	911.01*	46	201	1.71	1821.71	1816	19	1.28E-02	75.4	
17	0	1173.55	1447	91	2.10	2346.42	2336	19	4.02E-01	3.1	
18	0	1332.85	1370	12	2.11	2664.79	2657	20	3.81E-01	2.8	

Flag: "*" = Peak area was modified by background subtraction

```

Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023709.CNF;1
Analyses by       : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title      : MXR1
Sample date       : 27-JAN-2010 00:00:00 Acquisition date : 4-FEB-2010 21:14:00
Sample ID         : G1202023709 Sample quantity : 155.44 GRAM
Sample type       : SOLID Sample geometry :
Detector name     : GAMMA1 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.14 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

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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	*	2.547E-01	8.496E-02	6.071E-02	5.345E-03	4.195
		136.48		-1.932E-01	3.337E-01	5.521E-01	5.100E-02	-0.350
CO-60	+	1173.22		6.132E+00	6.225E-01	1.348E-01	1.091E-02	45.498
	+	1332.49	*	6.499E+00	6.602E-01	7.136E-02	6.083E-03	91.079
CD-109	+	88.03	*	2.910E+01	4.416E+00	2.224E+00	2.105E-01	13.081
SN-126		64.28		4.290E-02	9.462E-01	1.396E+00	2.055E-01	0.031
	+	86.94		1.200E+01	5.185E+00	9.290E-01	3.857E-01	12.919
	+	87.57	*	2.887E+00	4.381E-01	2.218E-01	2.089E-02	13.014
BA-137M	+	661.65	*	5.317E+00	5.247E-01	1.160E-01	9.499E-03	45.854
CS-137	+	661.65	*	5.621E+00	5.555E-01	1.226E-01	1.006E-02	45.854
TL-208		277.35		1.610E-01	7.085E-01	1.182E+00	1.502E-01	0.136
	+	510.84		6.255E-01	6.140E-01	4.359E-01	5.180E-02	1.435
	+	583.14	*	2.758E-01	1.249E-01	1.213E-01	1.101E-02	2.274
		860.37		2.982E-01	7.128E-01	1.202E+00	1.152E-01	0.248
BI-211		72.87		-8.639E+00	6.052E+00	7.979E+00	6.544E-01	-1.083
	+	351.07	*	2.132E+00	7.923E-01	6.498E-01	5.911E-02	3.281
PB-212		74.81		6.696E-01	7.073E-01	1.056E+00	1.321E-01	0.634
	+	77.11		3.205E-01	4.833E-01	5.768E-01	4.894E-02	0.556
	+	87.30		1.335E+01	2.427E+00	1.029E+00	1.412E-01	12.973
	+	238.63	*	9.169E-01	2.699E-01	1.767E-01	1.789E-02	5.188
		300.09		-5.970E-01	1.577E+00	2.203E+00	2.382E-01	-0.271
PO-212		74.81		6.696E-01	7.073E-01	1.056E+00	1.321E-01	0.634
	+	77.11		3.205E-01	4.833E-01	5.768E-01	4.894E-02	0.556
	+	87.30		1.335E+01	2.427E+00	1.029E+00	1.412E-01	12.973
		115.19		-7.195E-01	6.062E+00	9.578E+00	8.322E-01	-0.075
	+	238.63	*	9.169E-01	2.699E-01	1.767E-01	1.789E-02	5.188
		300.09		-5.970E-01	1.577E+00	2.203E+00	2.382E-01	-0.271
PB-214		74.81		1.154E+00	1.217E+00	1.819E+00	2.027E-01	0.634
	+	77.11		5.495E-01	8.297E-01	9.887E-01	1.128E-01	0.556
	+	87.30		2.287E+01	3.893E+00	1.763E+00	2.142E-01	12.973
		241.98		1.476E+00	7.724E-01	1.228E+00	1.312E-01	1.202
	+	295.21		1.097E+00	3.854E-01	3.826E-01	4.225E-02	2.868
	+	351.92	*	7.417E-01	2.783E-01	2.265E-01	2.374E-02	3.274
PO-214		74.81		1.154E+00	1.217E+00	1.819E+00	2.027E-01	0.634

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	77.11		5.495E-01	8.297E-01	9.887E-01	1.128E-01	0.556
	+	87.30		2.287E+01	3.893E+00	1.763E+00	2.142E-01	12.973
		241.98		1.476E+00	7.724E-01	1.228E+00	1.312E-01	1.202
	+	295.21		1.097E+00	3.854E-01	3.826E-01	4.225E-02	2.868
	+	351.92	*	7.417E-01	2.783E-01	2.265E-01	2.374E-02	3.274
PO-216		74.81		6.696E-01	7.073E-01	1.056E+00	1.321E-01	0.634
	+	77.11		3.205E-01	4.833E-01	5.768E-01	4.894E-02	0.556
	+	87.30		1.335E+01	2.427E+00	1.029E+00	1.412E-01	12.973
	+	238.63	*	9.169E-01	2.699E-01	1.767E-01	1.789E-02	5.188
		300.09		-5.970E-01	1.577E+00	2.203E+00	2.382E-01	-0.271
PO-218		74.81		1.154E+00	1.217E+00	1.819E+00	2.027E-01	0.634
	+	77.11		5.495E-01	8.297E-01	9.887E-01	1.128E-01	0.556
	+	87.30		2.287E+01	3.893E+00	1.763E+00	2.142E-01	12.973
		241.98		1.476E+00	7.724E-01	1.228E+00	1.312E-01	1.202
	+	295.21		1.097E+00	3.854E-01	3.826E-01	4.225E-02	2.868
	+	351.92	*	7.417E-01	2.783E-01	2.265E-01	2.374E-02	3.274
TH-228		74.81		6.756E-01	7.108E-01	1.065E+00	8.947E-02	0.634
	+	77.11		3.234E-01	4.876E-01	5.819E-01	4.938E-02	0.556
	+	87.30		1.347E+01	2.044E+00	1.038E+00	9.750E-02	12.973
	+	238.63	*	9.251E-01	2.723E-01	1.783E-01	1.805E-02	5.188
		300.09		-6.023E-01	1.630E+00	2.223E+00	1.319E+00	-0.271
AM-241	+	59.54	*	1.342E+01	1.413E+00	5.710E-01	4.705E-02	23.513
ANH-511	+	511.00	*	1.351E-01	1.322E-01	9.417E-02	7.981E-03	1.435

---- 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	*	-1.133E-01	6.586E-01	1.044E+00	9.493E-02	-0.109
NA-22		1274.54	*	-2.140E-02	5.455E-02	8.519E-02	7.154E-03	-0.251
NA-24		1368.53	*	-2.091E-04	5.455E-02	Half-Life	too short	
AL-26		1129.67		-2.268E+00	3.485E+00	5.209E+00	4.351E-01	-0.435
		1808.65	*	2.574E-02	4.266E-02	8.061E-02	6.678E-03	0.319
K-40		1460.81	*	7.197E-01	6.517E-01	1.270E+00	1.129E-01	0.567
TI-44		67.85		5.809E-02	7.487E-02	1.250E-01	9.912E-03	0.465
	+	78.38	*	5.914E-02	8.917E-02	1.053E-01	9.040E-03	0.561
SC-46		889.25	*	2.393E-02	9.942E-02	1.653E-01	1.494E-02	0.145
		1120.51		2.506E-02	1.125E-01	1.853E-01	1.557E-02	0.135
V-48		944.10		1.315E+00	1.916E+00	3.263E+00	2.939E-01	0.403
		983.50	*	1.320E-02	1.326E-01	2.171E-01	1.938E-02	0.061
		1312.09		-7.787E-03	8.427E-02	1.383E-01	1.173E-02	-0.056
CR-51		320.08	*	-1.940E-01	6.091E-01	9.787E-01	9.206E-02	-0.198
MN-52		744.21		2.821E-02	2.285E-01	3.815E-01	3.273E-02	0.074
		848.13		-5.241E+00	7.664E+00	1.188E+01	1.062E+00	-0.441
		935.52		2.439E-01	3.049E-01	5.243E-01	4.729E-02	0.465
		1246.25		-2.468E+00	3.619E+00	5.317E+00	4.420E-01	-0.464
	+	1333.61		3.855E+02	3.916E+01	4.814E+01	4.104E+00	8.008
		1434.06	*	2.801E-02	1.391E-01	2.400E-01	2.072E-02	0.117
MN-54		834.83	*	-2.518E-02	8.354E-02	1.339E-01	1.192E-02	-0.188

---- 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	*		-2.922E-02	8.984E-02	1.436E-01	1.283E-02	-0.203
	977.42			-2.538E+00	6.933E+00	1.091E+01	9.757E-01	-0.233
	1037.82			2.234E-02	7.132E-01	1.157E+00	1.067E-01	0.019
	1175.09			2.655E+02	2.633E+01	3.447E+01	2.792E+00	7.702
	1238.25			1.327E-01	1.063E-01	2.029E-01	1.735E-02	0.654
	1360.21			9.551E-01	1.210E+00	2.291E+00	1.961E-01	0.417
	1771.40			-4.340E-01	4.284E-01	5.377E-01	4.502E-02	-0.807
CO-58	810.76	*		-2.459E-02	8.254E-02	1.324E-01	1.171E-02	-0.186
FE-59	142.65			-1.005E+00	3.851E+00	6.453E+00	5.518E-01	-0.156
	192.34			4.080E-02	1.673E+00	2.475E+00	3.343E-01	0.016
	1099.22	*		-9.895E-02	2.012E-01	3.096E-01	2.854E-02	-0.320
	1291.56			-6.210E-02	1.376E-01	2.112E-01	2.031E-02	-0.294
ZN-65	1115.52	*		-6.835E-02	2.072E-01	3.239E-01	2.733E-02	-0.211
GE-68	1077.35	*		3.275E+00	3.133E+00	5.459E+00	4.700E-01	0.600
AS-73	53.44	*		1.196E-01	2.108E+00	3.279E+00	2.654E-01	0.036
AS-74	595.88	*		-7.460E-02	1.453E-01	2.343E-01	1.974E-02	-0.318
	634.78			3.781E-01	6.003E-01	1.044E+00	8.670E-02	0.362
SE-75	66.05			-1.448E+01	8.030E+00	1.175E+01	1.152E+00	-1.233
	96.73			-1.843E+00	1.358E+00	1.717E+00	2.371E-01	-1.074
	+	121.11		1.342E+00	4.579E-01	4.720E-01	5.353E-02	2.844
		136.00		-2.785E-02	6.229E-02	1.037E-01	8.978E-03	-0.269
		198.60		-8.578E-01	2.948E+00	4.837E+00	4.706E-01	-0.177
		264.65	*	-4.142E-03	8.053E-02	1.328E-01	1.220E-02	-0.031
		279.53		9.595E-02	1.974E-01	3.334E-01	3.150E-02	0.288
		303.91		1.030E-02	3.993E+00	6.559E+00	7.749E-01	0.002
		400.65		-1.905E-01	5.330E-01	8.436E-01	9.040E-02	-0.226
	BR-77	+	87.88	1.024E+03	1.555E+02	1.583E+02	1.496E+01	6.471
		+	200.40	7.046E+00	4.378E+01	7.379E+01	6.508E+00	0.095
		+	239.00	2.377E+01	6.916E+00	7.664E+00	6.958E-01	3.102
			249.79	-9.019E+00	1.953E+01	3.157E+01	2.879E+00	-0.286
			281.68	-1.809E+01	2.762E+01	4.385E+01	4.008E+00	-0.413
		+	297.23	6.801E+01	2.350E+01	2.905E+01	2.642E+00	2.341
			303.76	6.075E-01	5.696E+01	9.361E+01	8.488E+00	0.006
			439.47	-1.544E+01	5.353E+01	8.466E+01	7.019E+00	-0.182
			484.57	-4.584E+01	8.060E+01	1.237E+02	1.043E+01	-0.371
			520.65	* 2.698E+00	3.592E+00	6.042E+00	5.126E-01	0.447
			574.64	-3.647E+01	6.735E+01	1.086E+02	9.196E+00	-0.336
SR-82			578.91	-9.403E+00	3.042E+01	4.298E+01	3.636E+00	-0.219
			585.48	1.962E+02	6.907E+01	1.206E+02	1.019E+01	1.627
			755.35	1.791E+01	5.591E+01	9.463E+01	8.161E+00	0.189
			817.79	-4.876E+00	5.216E+01	8.512E+01	7.532E+00	-0.057
			698.33	4.736E+01	5.507E+01	9.714E+01	8.135E+00	0.488
		*	776.49	1.649E-02	6.714E-01	1.109E+00	9.657E-02	0.015
			1395.20	4.106E+00	1.260E+01	2.215E+01	1.905E+00	0.185
RB-83		*	520.41	1.005E-01	1.395E-01	2.343E-01	1.987E-02	0.429
			529.64	1.056E-01	2.084E-01	3.613E-01	3.067E-02	0.292
			552.65	7.548E-02	3.592E-01	6.131E-01	5.203E-02	0.123
RB-84	881.50	*		1.189E-02	1.558E-01	2.562E-01	2.312E-02	0.046
KR-85	513.99	*		1.527E+01	1.700E+01	2.560E+01	2.171E+00	0.597

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SR-85		513.99	*	7.332E-02	8.161E-02	1.229E-01	1.042E-02	0.597
RB-86		1076.63	*	3.501E-01	1.629E+00	2.674E+00	2.303E-01	0.131
Y-88		898.02		-7.020E-03	1.069E-01	1.738E-01	1.581E-02	-0.040
		1836.01	*	1.404E-02	4.950E-02	8.638E-02	7.105E-03	0.163
ZR-88		392.90	*	-9.312E-04	6.408E-02	1.038E-01	8.358E-03	-0.009
Y-91		1204.90	*	4.444E+00	2.402E+01	4.116E+01	3.372E+00	0.108
NB-94		702.63	*	2.684E-02	6.886E-02	1.174E-01	9.858E-03	0.229
		871.10		4.917E-02	8.312E-02	1.420E-01	1.278E-02	0.346
NB-95		765.79	*	-2.340E-02	8.134E-02	1.312E-01	1.137E-02	-0.178
NB-95M		235.69	*	1.535E-01	2.208E-01	3.366E-01	3.452E-02	0.456
ZR-95		724.18		-2.056E-01	1.879E-01	2.843E-01	2.629E-02	-0.723
		756.15	*	-7.844E-03	1.414E-01	2.325E-01	2.209E-02	-0.034
NB-97		657.90	*	2.816E-05	1.414E-01	Half-Life	too short	
		1024.50		-4.460E-02	1.414E-01	Half-Life	too short	
ZR-97		254.15		4.511E-03	1.414E-01	Half-Life	too short	
		355.39		-5.965E-03	1.414E-01	Half-Life	too short	
		507.63	*	4.297E-03	1.414E-01	Half-Life	too short	
		602.52		-2.232E-03	1.414E-01	Half-Life	too short	
		1021.30		6.066E-02	1.414E-01	Half-Life	too short	
		1147.95		6.611E-03	1.414E-01	Half-Life	too short	
		1362.66		2.160E-02	1.414E-01	Half-Life	too short	
		1750.46		-5.915E-04	1.414E-01	Half-Life	too short	
MO-99		140.51		2.222E+00	8.723E+00	1.485E+01	4.109E+00	0.150
		181.06		3.508E+00	6.136E+00	9.823E+00	1.798E+00	0.357
		366.43		3.606E+01	3.822E+01	6.532E+01	5.524E+00	0.552
		739.58	*	1.109E+00	4.969E+00	8.359E+00	1.266E+00	0.133
		778.00		-2.823E+00	1.500E+01	2.435E+01	2.122E+00	-0.116
TC-99M		140.51	*	4.895E+02	1.500E+01	Half-Life	too short	
RH-101		127.23		-3.197E-02	5.816E-02	7.845E-02	6.825E-03	-0.408
		198.01	*	3.956E-03	5.534E-02	9.234E-02	8.126E-03	0.043
		325.23		-1.691E-01	4.151E-01	6.626E-01	5.913E-02	-0.255
RH-102		418.52		6.511E-01	6.261E-01	1.072E+00	8.786E-02	0.607
		475.06	*	-3.821E-03	6.513E-02	1.041E-01	8.751E-03	-0.037
		631.29		9.147E-03	1.122E-01	1.885E-01	1.568E-02	0.049
		697.49		3.943E-02	1.445E-01	2.449E-01	2.050E-02	0.161
		766.84		-1.453E-01	2.225E-01	3.482E-01	3.019E-02	-0.417
		1046.59		7.547E-02	2.696E-01	4.465E-01	3.901E-02	0.169
		1112.84		-5.937E-02	5.393E-01	8.598E-01	7.259E-02	-0.069
RU-103		497.08	*	-4.642E-03	8.114E-02	1.293E-01	1.818E-02	-0.036
	+	610.33		6.741E+00	2.824E+00	3.177E+00	5.263E-01	2.122
RH-106	+	511.85		6.670E-01	6.524E-01	6.695E-01	5.675E-02	0.996
		621.84	*	-4.804E-01	6.279E-01	9.825E-01	1.296E-01	-0.489
		1050.47		-3.902E+00	5.475E+00	8.260E+00	7.203E-01	-0.472
RU-106	+	511.85		6.670E-01	6.524E-01	6.695E-01	5.675E-02	0.996
		621.84	*	-4.804E-01	6.260E-01	9.825E-01	8.207E-02	-0.489
		1050.47		-3.902E+00	5.475E+00	8.260E+00	7.203E-01	-0.472
AG-108M		433.93	*	-3.088E-02	7.596E-02	1.193E-01	1.029E-02	-0.259
		614.37		3.794E-02	8.373E-02	1.274E-01	1.112E-02	0.298
		722.95		-1.020E-01	8.812E-02	1.322E-01	1.167E-02	-0.772

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AG-110M	657.75	*		-1.599E-02	8.873E-02	1.261E-01	1.069E-02	-0.127
	677.61			-2.377E-01	6.012E-01	9.676E-01	8.249E-02	-0.246
	706.67			2.052E-01	4.182E-01	7.151E-01	6.191E-02	0.287
	763.93			-1.619E-01	3.354E-01	5.322E-01	4.737E-02	-0.304
	884.67			-7.516E-02	1.262E-01	1.968E-01	1.829E-02	-0.382
	937.48			2.290E-01	2.901E-01	4.980E-01	4.639E-02	0.460
	1384.27			2.521E-02	2.095E-01	3.556E-01	3.141E-02	0.071
IN-111	171.28			2.304E-01	3.384E-01	5.867E-01	5.022E-02	0.393
	245.39	*		-5.447E-01	4.667E-01	6.622E-01	6.029E-02	-0.823
IN-113M	391.69	*		-1.456E-02	9.214E-02	1.480E-01	1.232E-02	-0.098
SN-113	391.69	*		-1.456E-02	9.214E-02	1.480E-01	1.232E-02	-0.098
IN-114M	190.27	*		8.511E-02	3.266E-01	4.901E-01	4.279E-02	0.174
CD-115	260.90			-1.225E+01	3.458E+01	5.612E+01	5.132E+00	-0.218
	492.35			-2.509E+00	1.098E+01	1.727E+01	1.459E+00	-0.145
	527.90	*		1.031E+00	3.202E+00	5.507E+00	4.674E-01	0.187
SN-117M	156.02			8.017E-01	2.588E+00	4.431E+00	3.773E-01	0.181
	158.56	*		4.231E-02	6.197E-02	1.076E-01	9.165E-03	0.393
SB-122	563.90	*		5.410E-01	7.557E-01	1.333E+00	1.130E-01	0.406
	692.80			-2.143E+01	1.659E+01	2.417E+01	2.018E+00	-0.886
I-123	159.00	*		8.434E-04	1.659E+01	Half-Life	too short	
	528.96			3.838E-01	1.659E+01	Half-Life	too short	
TE-123M	159.00	*		1.108E-02	4.232E-02	7.228E-02	6.192E-03	0.153
I-124	602.71	*		-1.217E-01	5.215E-01	7.409E-01	6.230E-02	-0.164
	722.78			-2.592E+00	3.184E+00	4.929E+00	4.183E-01	-0.526
	1325.50			1.081E+01	1.996E+01	3.211E+01	2.732E+00	0.337
	1376.25			7.547E+00	1.400E+01	2.539E+01	2.179E+00	0.297
	1509.49			3.617E+00	7.443E+00	1.346E+01	1.165E+00	0.269
	1691.02			-4.789E-01	2.012E+00	3.088E+00	2.631E-01	-0.155
SB-124	602.71			-1.856E-02	7.955E-02	1.130E-01	9.506E-03	-0.164
	645.85			3.533E-01	9.498E-01	1.626E+00	1.431E-01	0.217
	709.31			-2.126E+00	5.282E+00	8.480E+00	7.145E-01	-0.251
	713.82			6.638E-01	3.002E+00	5.061E+00	6.030E-01	0.131
	722.78			-5.730E-01	7.041E-01	1.090E+00	9.455E-02	-0.526
	968.20			5.672E+00	6.413E+00	1.102E+01	9.872E-01	0.515
	1045.16			2.403E+00	5.414E+00	9.087E+00	7.943E-01	0.264
	1325.50			2.553E+00	4.715E+00	7.583E+00	6.452E-01	0.337
	1368.21			-1.871E-01	1.807E+00	2.930E+00	3.940E-01	-0.064
	1436.60			2.231E+00	4.373E+00	7.997E+00	6.905E-01	0.279
	1691.02	*		-2.498E-02	1.049E-01	1.611E-01	1.428E-02	-0.155
SB-125	427.89	*		2.884E-02	2.144E-01	3.487E-01	2.935E-02	0.083
	463.38			1.197E+00	6.911E-01	1.203E+00	1.091E-01	0.995
	600.56			-6.435E-02	3.438E-01	5.524E-01	5.007E-02	-0.117
	635.90			1.165E-01	5.710E-01	9.665E-01	8.721E-02	0.121
TE-125M	109.28	*		-6.107E+00	1.428E+01	2.223E+01	2.302E+00	-0.275
I-126	388.63			1.049E-01	3.105E-01	5.138E-01	4.162E-02	0.204
	666.33	*		1.378E-01	2.854E-01	4.341E-01	3.566E-02	0.317
	753.82			6.029E-01	2.185E+00	3.686E+00	3.177E-01	0.164
SB-126	223.80			2.309E+00	5.276E+00	8.952E+00	8.054E-01	0.258
	278.60			2.181E+00	3.290E+00	5.599E+00	5.120E-01	0.390

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Activity Key	(pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-127	+	296.50		7.703E+00	2.662E+00	3.569E+00	3.247E-01	2.158
		414.70		-6.877E-02	1.146E-01	1.779E-01	1.454E-02	-0.387
		415.30		-9.093E+00	9.634E+00	1.458E+01	1.192E+00	-0.624
		555.20		-5.985E-01	5.313E+00	8.860E+00	7.518E-01	-0.068
		573.80		3.800E-02	1.467E+00	2.466E+00	2.088E-01	0.015
		593.00		7.429E-01	1.322E+00	2.298E+00	1.938E-01	0.323
		656.30		-1.232E+00	5.975E+00	8.468E+00	6.957E-01	-0.146
		666.33		5.676E-02	1.176E-01	1.788E-01	1.469E-02	0.317
		675.00		-1.277E-01	2.817E+00	4.668E+00	3.855E-01	-0.027
		695.00		-8.098E-02	1.032E-01	1.598E-01	1.335E-02	-0.507
		697.00		-6.707E-02	3.562E-01	5.820E-01	4.870E-02	-0.115
		720.50	*	-2.566E-02	2.025E-01	3.320E-01	2.814E-02	-0.077
		856.80		-6.564E-01	8.506E-01	1.312E+00	1.176E-01	-0.500
		989.30		1.014E+00	2.273E+00	3.817E+00	3.402E-01	0.266
		1034.80		-1.139E+01	1.534E+01	2.314E+01	2.031E+00	-0.492
		1213.00		1.720E+00	4.329E+00	7.607E+00	6.251E-01	0.226
		61.10		7.956E+02	9.289E+01	1.235E+02	1.072E+01	6.444
		252.40		2.375E+00	2.839E+00	4.599E+00	1.920E+00	0.516
		290.80		1.317E+01	1.408E+01	2.171E+01	2.177E+00	0.606
		411.60		-2.936E-02	8.406E+00	1.359E+01	1.954E+00	-0.002
		444.90		2.779E+00	7.384E+00	1.216E+01	1.326E+00	0.229
		473.00		9.944E-02	1.228E+00	1.981E+00	2.250E-01	0.050
		543.00		-3.611E+00	1.067E+01	1.752E+01	2.298E+00	-0.206
		603.60		-1.926E-01	8.270E+00	1.201E+01	1.316E+00	-0.016
		685.20	*	-2.204E-01	9.300E-01	1.517E+00	1.451E-01	-0.145
		698.50		7.957E+00	9.553E+00	1.674E+01	2.444E+00	0.475
		722.20		2.379E+00	1.924E+01	3.216E+01	3.039E+00	0.074
XE-127		783.80		7.830E-01	2.462E+00	4.156E+00	4.614E-01	0.188
		57.60		1.395E+02	2.163E+01	3.378E+01	2.594E+00	4.128
		145.22		1.519E-01	9.777E-01	1.666E+00	1.423E-01	0.091
		172.10		7.225E-02	1.678E-01	2.878E-01	2.466E-02	0.251
I-131		202.84	*	-5.965E-03	6.890E-02	1.148E-01	1.015E-02	-0.052
		374.96		1.216E-01	3.723E-01	6.158E-01	5.128E-02	0.197
		80.18		1.373E+00	4.852E+00	7.065E+00	6.178E-01	0.194
		284.30		6.759E-01	1.608E+00	2.708E+00	2.581E-01	0.250
TE-132		364.48	*	-4.346E-02	1.486E-01	2.377E-01	2.122E-02	-0.183
		636.97		7.889E-01	1.902E+00	3.264E+00	2.860E-01	0.242
		722.89		-9.947E+00	8.659E+00	1.301E+01	1.107E+00	-0.765
		49.72		-3.620E+00	1.249E+01	2.014E+01	1.879E+00	-0.180
BA-133		111.76		-2.989E+00	1.310E+01	2.061E+01	1.956E+00	-0.145
		116.30		9.360E+00	1.252E+01	1.970E+01	1.876E+00	0.475
		228.16	*	1.182E-01	3.374E-01	5.697E-01	8.557E-02	0.207
		53.15		3.906E+00	9.090E+00	1.502E+01	1.221E+00	0.260
		79.62		1.234E+00	2.361E+00	3.473E+00	5.300E-01	0.355
		81.00		-7.420E-02	1.823E-01	2.547E-01	4.068E-02	-0.291
		276.40		-1.416E-01	7.195E-01	1.175E+00	1.735E-01	-0.120
		302.84		3.468E-02	2.745E-01	4.540E-01	6.168E-02	0.076
		356.01	*	-5.850E-02	9.823E-02	1.324E-01	1.746E-02	-0.442
		383.85		-5.045E-01	6.541E-01	1.007E+00	1.239E-01	-0.501

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-133	+	510.53		9.253E-03	6.541E-01	Half-Life	too short	
		529.87	*	2.770E-05	6.541E-01	Half-Life	too short	
		706.58		2.858E-03	6.541E-01	Half-Life	too short	
		856.28		-2.362E-03	6.541E-01	Half-Life	too short	
		875.33		-9.663E-04	6.541E-01	Half-Life	too short	
		1236.41		3.005E-03	6.541E-01	Half-Life	too short	
		1298.22		3.316E-04	6.541E-01	Half-Life	too short	
		1298.22		3.316E-04	6.541E-01	Half-Life	too short	
CS-134		475.35		-1.518E+00	4.305E+00	6.738E+00	5.666E-01	-0.225
		563.23		4.723E-01	6.485E-01	1.145E+00	9.803E-02	0.412
		569.32		5.443E-02	3.774E-01	6.413E-01	5.509E-02	0.085
		604.70		6.172E-02	7.194E-02	1.134E-01	9.555E-03	0.544
		795.84	*	4.210E-02	1.034E-01	1.752E-01	1.548E-02	0.240
		801.93		-2.099E-01	9.448E-01	1.533E+00	1.356E-01	-0.137
		1038.57		6.047E+00	9.205E+00	1.570E+01	1.376E+00	0.385
		1167.94		1.445E+00	5.402E+00	8.112E+00	6.592E-01	0.178
		1365.15		-2.539E-01	1.591E+00	2.561E+00	2.295E-01	-0.099
		1365.15		-2.539E-01	1.591E+00	2.561E+00	2.295E-01	-0.099
CS-135		268.24	*	-1.254E-01	3.028E-01	4.895E-01	5.104E-02	-0.256
I-135		288.45		3.353E+03	3.028E-01	Half-Life	too short	
		417.63		-8.331E+02	3.028E-01	Half-Life	too short	
		546.56		-2.554E+03	3.028E-01	Half-Life	too short	
		836.80		4.282E+02	3.028E-01	Half-Life	too short	
		1038.76		4.538E+03	3.028E-01	Half-Life	too short	
		1124.00		2.140E+03	3.028E-01	Half-Life	too short	
		1131.51		3.686E+02	3.028E-01	Half-Life	too short	
		1260.41	*	-1.397E+02	3.028E-01	Half-Life	too short	
		1457.56		-7.244E+02	3.028E-01	Half-Life	too short	
		1678.03		-1.848E+03	3.028E-01	Half-Life	too short	
		1706.46		-2.262E+03	3.028E-01	Half-Life	too short	
		1791.20		1.582E+03	3.028E-01	Half-Life	too short	
		1791.20		1.582E+03	3.028E-01	Half-Life	too short	
CS-136		66.91		-9.435E-01	9.613E-01	1.472E+00	2.213E-01	-0.641
		86.29		1.179E+01	2.404E+00	3.250E+00	4.324E-01	3.628
		153.22		-2.548E-02	7.307E-01	1.233E+00	1.177E-01	-0.021
		163.89		8.240E-01	1.256E+00	2.170E+00	2.074E-01	0.380
		176.55		-1.328E-01	4.100E-01	6.786E-01	6.175E-02	-0.196
		273.65		-1.397E-01	6.313E-01	1.031E+00	9.978E-02	-0.136
	+	340.57		3.187E-01	3.005E-01	3.021E-01	2.726E-02	1.055
		818.51		2.283E-02	1.257E-01	2.094E-01	1.854E-02	0.109
		1048.07	*	3.787E-02	1.836E-01	3.021E-01	2.745E-02	0.125
		1235.34		-1.121E-01	5.719E-01	9.343E-01	1.084E-01	-0.120
CE-139		165.85	*	3.703E-02	4.801E-02	8.340E-02	7.103E-03	0.444
BA-140		162.64		-3.654E-01	8.690E-01	1.435E+00	1.295E-01	-0.255
		304.84		6.949E-01	1.793E+00	2.988E+00	8.416E-01	0.233
		423.70		-2.191E+00	3.177E+00	4.781E+00	1.545E+00	-0.458
LA-140		537.32	*	8.662E-03	3.728E-01	6.290E-01	2.082E-01	0.014
		328.77		3.957E-01	4.125E-01	7.073E-01	6.623E-02	0.559
		432.53		-9.802E-02	3.424E+00	5.512E+00	4.794E-01	-0.018
		487.03		-4.947E-03	2.086E-01	3.335E-01	2.995E-02	-0.015
		751.79		-4.906E-01	2.539E+00	4.129E+00	3.936E-01	-0.119
		815.85		2.911E-01	5.445E-01	9.297E-01	9.124E-02	0.313

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		867.82		3.689E-01	2.372E+00	3.930E+00	3.705E-01	0.094
		919.63		8.809E-01	6.412E+00	9.163E+00	1.007E+00	0.096
		925.24		7.892E-01	2.179E+00	3.643E+00	3.480E-01	0.217
CE-141		1596.49	*	6.759E-03	8.866E-02	1.480E-01	1.277E-02	0.046
CE-143		145.44	*	9.043E-03	8.725E-02	1.484E-01	1.290E-02	0.061
		57.37		7.316E+02	1.632E+02	2.525E+02	2.380E+01	2.898
		231.56		-6.516E+01	2.092E+02	3.294E+02	1.047E+02	-0.198
		293.26	*	-3.095E+00	1.209E+01	1.710E+01	3.728E+00	-0.181
	+	350.59		7.227E+02	3.442E+02	3.095E+02	9.638E+01	2.335
		490.36		-4.597E+00	2.627E+02	4.201E+02	1.329E+02	-0.011
		664.57		3.078E+03	1.028E+03	5.633E+02	1.820E+02	5.465
		721.93		6.956E+00	1.176E+02	1.957E+02	5.723E+01	0.036
CE-144		80.11		1.076E+00	3.773E+00	5.494E+00	4.791E-01	0.196
		133.54	*	2.382E-01	3.534E-01	5.741E-01	8.937E-02	0.415
PM-144		476.78		4.202E-02	1.514E-01	2.472E-01	2.283E-02	0.170
		618.01		1.367E-02	6.339E-02	1.076E-01	9.260E-03	0.127
		696.49	*	-3.066E-02	6.432E-02	1.025E-01	8.576E-03	-0.299
		778.57		-3.013E+00	4.879E+00	7.628E+00	6.647E-01	-0.395
PR-144		696.49	*	-2.071E+00	4.344E+00	6.923E+00	5.792E-01	-0.299
		1489.15		-6.157E+00	1.793E+01	2.756E+01	2.385E+00	-0.223
PM-146		453.90	*	1.429E-01	1.106E-01	1.892E-01	1.987E-02	0.755
		633.02		9.773E-01	2.936E+00	4.978E+00	1.857E+00	0.196
		735.90		-6.297E-03	3.035E-01	5.013E-01	1.433E-01	-0.013
		747.13		1.164E-03	1.884E-01	3.116E-01	4.369E-02	0.004
ND-147	+	91.11		4.879E-02	1.700E-01	4.697E-01	4.643E-02	0.104
		319.41		7.791E-01	4.330E+00	7.168E+00	6.430E-01	0.109
		439.89		-9.231E-01	9.095E+00	1.456E+01	1.207E+00	-0.063
		531.02	*	-8.472E-02	7.949E-01	1.327E+00	1.974E-01	-0.064
PM-149		285.90	*	-5.006E+00	2.455E+01	3.997E+01	6.322E+00	-0.125
EU-152	+	121.78		7.505E-01	2.531E-01	2.737E-01	2.758E-02	2.742
		244.69		-9.833E-01	7.225E-01	9.476E-01	8.625E-02	-1.038
		344.27	*	-8.810E-02	2.254E-01	3.116E-01	2.881E-02	-0.283
		443.98		6.806E-01	2.223E+00	3.646E+00	3.029E-01	0.187
		778.89		-3.839E-01	5.598E-01	8.686E-01	7.570E-02	-0.442
		867.32		6.600E-01	2.010E+00	3.372E+00	3.031E-01	0.196
		964.01		-5.128E-01	7.840E-01	1.221E+00	1.095E-01	-0.420
		1085.78		-5.752E-01	1.032E+00	1.585E+00	1.359E-01	-0.363
		1112.02		-5.127E-01	7.821E-01	1.186E+00	1.001E-01	-0.432
		1407.95		2.236E-01	2.472E-01	4.732E-01	4.076E-02	0.473
GD-153		69.67		2.225E+00	2.666E+00	4.453E+00	3.572E-01	0.500
		83.37		-1.009E+01	2.780E+01	3.907E+01	3.518E+00	-0.258
		97.43	*	3.870E-02	1.324E-01	1.920E-01	1.705E-02	0.202
		103.18		5.189E-02	1.676E-01	2.715E-01	2.368E-02	0.191
EU-154	+	123.07		5.266E-01	1.799E-01	1.885E-01	2.164E-02	2.794
		247.94		2.533E-01	6.502E-01	1.098E+00	1.302E-01	0.231
		591.81		-5.845E-01	1.284E+00	2.081E+00	2.401E-01	-0.281
		723.30		-4.939E-01	3.718E-01	5.483E-01	5.159E-02	-0.901
		756.87		-1.241E-01	1.632E+00	2.679E+00	3.210E-01	-0.046
		873.19		-2.231E-01	7.373E-01	1.177E+00	1.473E-01	-0.190

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-155		996.32		-3.257E-01	9.588E-01	1.511E+00	2.705E-01	-0.216
		1004.76		-2.468E-01	5.429E-01	8.481E-01	1.003E-01	-0.291
		1274.45	*	-1.082E-01	1.607E-01	2.387E-01	2.658E-02	-0.453
		48.70		7.406E-01	5.942E+00	9.747E+00	8.341E-01	0.076
	+	60.01		4.357E+02	4.347E+01	4.375E+01	3.307E+00	9.959
TB-160	+	86.54		3.468E+00	5.281E-01	4.598E-01	4.319E-02	7.543
		105.31	*	-4.252E-02	1.767E-01	2.783E-01	2.448E-02	-0.153
	+	86.79		8.747E+00	1.327E+00	1.249E+00	1.166E-01	7.004
		197.04		1.333E-01	8.934E-01	1.496E+00	1.315E-01	0.089
		215.65		2.847E-01	1.279E+00	2.154E+00	1.926E-01	0.132
HO-166M		298.57		1.697E-02	2.089E-01	3.032E-01	2.756E-02	0.056
		879.36	*	1.671E-01	3.250E-01	5.519E-01	4.977E-02	0.303
		962.29		-3.264E-01	1.289E+00	2.059E+00	1.848E-01	-0.158
		966.15		-1.711E-01	5.054E-01	8.053E-01	7.221E-02	-0.212
		1177.93		1.463E+00	8.176E-01	1.412E+00	1.145E-01	1.036
TM-171		1271.85		-7.349E-01	8.607E-01	1.229E+00	1.030E-01	-0.598
		80.57		1.674E-01	4.880E-01	7.128E-01	6.243E-02	0.235
		184.41		8.316E-03	6.453E-02	9.621E-02	8.349E-03	0.086
		280.46		-4.501E-02	1.614E-01	2.622E-01	2.397E-02	-0.172
		410.95		-1.580E-01	5.295E-01	8.405E-01	6.855E-02	-0.188
LU-176		711.68	*	1.737E-03	1.214E-01	2.015E-01	1.700E-02	0.009
		752.31		-1.097E-01	5.628E-01	9.149E-01	7.879E-02	-0.120
		810.29		-1.191E-01	1.361E-01	2.074E-01	1.830E-02	-0.574
		51.35		-7.275E+01	7.643E+01	1.197E+02	9.966E+00	-0.608
		52.39		2.844E+00	3.973E+01	6.491E+01	5.328E+00	0.044
LU-177	+	59.40		2.283E+03	2.277E+02	2.426E+02	1.828E+01	9.411
		66.72	*	-5.695E+01	4.790E+01	7.313E+01	5.760E+00	-0.779
	+	88.36		6.847E+00	1.039E+00	1.043E+00	9.840E-02	6.563
		201.83		-1.991E-02	4.702E-02	7.702E-02	6.803E-03	-0.258
		306.84	*	3.314E-03	4.936E-02	8.133E-02	7.361E-03	0.041
LU-177M		401.10		-1.177E+01	1.466E+01	2.251E+01	1.824E+00	-0.523
		112.95		1.950E-01	1.417E+00	2.266E+00	1.965E-01	0.086
		208.36	*	1.188E+00	9.879E-01	1.726E+00	1.534E-01	0.688
		52.97		1.949E+00	4.026E+00	6.665E+00	5.429E-01	0.292
		54.07		1.204E+00	2.374E+00	3.528E+00	2.831E-01	0.341
HF-181	+	61.30		4.421E+01	5.550E+00	8.454E+00	6.448E-01	5.229
		121.62		3.750E+00	1.251E+00	1.362E+00	1.197E-01	2.753
		147.16		-1.942E-01	9.995E-01	1.678E+00	1.432E-01	-0.116
		171.86		3.012E-01	7.402E-01	1.269E+00	1.087E-01	0.237
		218.09		5.722E-01	1.544E+00	2.615E+00	2.343E-01	0.219
		268.79		6.675E-02	1.502E+00	2.486E+00	2.275E-01	0.027
		319.02		2.267E-01	4.893E-01	8.224E-01	7.379E-02	0.276
		367.43		1.404E-01	1.918E+00	3.134E+00	2.645E-01	0.045
		413.65	*	7.727E-02	3.586E-01	5.877E-01	4.802E-02	0.131
		56.28		1.842E+00	2.525E+00	3.774E+00	2.944E-01	0.488
		57.53		1.058E+01	1.775E+00	2.798E+00	2.150E-01	3.783
		65.20		-1.196E+00	1.519E+00	2.245E+00	1.752E-01	-0.533
		133.02		5.011E-02	1.046E-01	1.690E-01	1.458E-02	0.296
		136.25		-3.520E-01	6.721E-01	1.115E+00	9.582E-02	-0.316

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W-181		345.85		3.985E-01	3.820E-01	5.905E-01	5.150E-02	0.675
		482.03	*	3.290E-02	8.332E-02	1.372E-01	1.156E-02	0.240
		56.28		7.729E-01	1.056E+00	1.579E+00	1.231E-01	0.490
		57.53		4.414E+00	7.423E-01	1.170E+00	8.992E-02	3.773
TA-182		65.20	*	-4.969E-01	6.307E-01	9.323E-01	7.278E-02	-0.533
		67.75		4.415E-02	1.748E-01	2.859E-01	2.265E-02	0.154
		100.10		1.426E-01	2.767E-01	4.529E-01	3.982E-02	0.315
		152.43		-5.513E-01	5.031E-01	8.049E-01	6.858E-02	-0.685
RE-183		222.10		3.370E-01	6.211E-01	1.058E+00	9.510E-02	0.318
		1001.68		-2.039E+00	5.027E+00	7.942E+00	7.053E-01	-0.257
		1121.28		9.419E-03	3.060E-01	4.967E-01	4.171E-02	0.019
		1189.05		2.232E-01	4.576E-01	8.075E-01	6.577E-02	0.276
RE-184		1221.42	*	3.434E-02	2.194E-01	3.756E-01	3.095E-02	0.091
		1230.97		1.251E-01	5.501E-01	9.486E-01	7.845E-02	0.132
		57.98		8.896E+00	9.610E-01	1.396E+00	1.068E-01	6.372
	+	59.32		8.846E+00	8.826E-01	9.452E-01	7.129E-02	9.360
RE-184		67.20		-8.043E-02	3.101E-01	4.960E-01	3.917E-02	-0.162
		162.32	*	-1.300E-01	1.649E-01	2.670E-01	2.273E-02	-0.487
		208.81		2.350E+00	1.595E+00	2.809E+00	2.497E-01	0.837
		291.72		-1.621E-01	1.775E+00	2.544E+00	2.319E-01	-0.064
OS-185		57.98		3.399E+01	3.672E+00	5.334E+00	4.079E-01	6.372
	+	59.32		3.377E+01	3.370E+00	3.609E+00	2.722E-01	9.360
		67.20		-3.072E-01	1.185E+00	1.894E+00	1.496E-01	-0.162
		161.27		-5.459E-01	5.438E-01	8.719E-01	7.422E-02	-0.626
RE-188		216.55		-1.097E-01	4.728E-01	7.802E-01	6.981E-02	-0.141
		252.85	*	4.152E-01	4.292E-01	7.418E-01	6.771E-02	0.560
		318.01		9.747E-01	8.446E-01	1.467E+00	1.318E-01	0.664
		792.07		-1.435E+00	2.154E+00	3.360E+00	2.944E-01	-0.427
W-188		903.28		-1.183E+00	2.562E+00	3.914E+00	3.544E-01	-0.302
		920.93		-3.960E-01	1.484E+00	2.036E+00	1.840E-01	-0.195
	+	59.72		2.451E+01	2.446E+00	2.536E+00	1.913E-01	9.666
		61.14		6.282E+00	7.005E-01	1.010E+00	7.699E-02	6.217
IR-192		69.30		3.916E-01	4.677E-01	7.813E-01	6.251E-02	0.501
		592.07		-1.307E+00	4.933E+00	8.110E+00	6.840E-01	-0.161
		646.12	*	3.172E-02	8.300E-02	1.422E-01	1.175E-02	0.223
		717.42		-3.973E-01	1.689E+00	2.744E+00	2.322E-01	-0.145
W-188		874.81		-4.302E-01	1.376E+00	2.194E+00	1.977E-01	-0.196
		880.27		1.205E-01	1.903E+00	3.127E+00	2.821E-01	0.039
		155.03	*	1.634E-01	2.492E-01	4.325E-01	3.683E-02	0.378
		477.96		-3.609E+00	6.484E+00	9.983E+00	8.402E-01	-0.362
IR-192		633.10		9.735E-01	5.593E+00	9.449E+00	7.855E-01	0.103
		63.58		9.926E+00	9.458E+01	1.400E+02	1.083E+01	0.071
		227.08		-1.032E+01	2.231E+01	3.632E+01	3.275E+00	-0.284
		290.67	*	1.357E+01	1.413E+01	2.184E+01	1.992E+00	0.622
IR-192	+	295.96		7.892E-01	2.729E-01	3.747E-01	3.432E-02	2.106
		308.46		-1.501E-01	1.847E-01	2.887E-01	2.623E-02	-0.520
		316.51	*	-2.009E-02	6.593E-02	1.062E-01	9.567E-03	-0.189
		468.07		-1.485E-01	1.550E-01	2.331E-01	2.104E-02	-0.637
		604.41		9.825E-02	9.625E-01	1.415E+00	1.823E-01	0.069

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AU-195	612.46			9.786E-01	1.529E+00	2.355E+00	2.283E-01	0.416
	65.12			-2.168E-01	2.965E-01	4.398E-01	3.432E-02	-0.493
	66.83			-1.619E-01	1.554E-01	2.392E-01	1.885E-02	-0.677
	75.70			6.183E-01	3.703E-01	5.676E-01	4.759E-02	1.089
	98.88	*		1.504E-01	3.940E-01	5.739E-01	5.067E-02	0.262
TL-200	129.76			1.467E+00	4.582E+00	7.367E+00	6.382E-01	0.199
	367.94	*		-4.833E-07	4.582E+00	Half-Life	too short	
	579.30			-5.192E-05	4.582E+00	Half-Life	too short	
	828.27			1.154E-04	4.582E+00	Half-Life	too short	
	1205.75			-1.929E-05	4.582E+00	Half-Life	too short	
TL-201	68.90			1.359E+00	1.896E+00	3.154E+00	2.518E-01	0.431
	70.82			-2.963E-01	1.085E+00	1.733E+00	1.400E-01	-0.171
	80.30			7.384E-01	2.174E+00	3.176E+00	2.774E-01	0.232
	135.34			8.062E-01	1.070E+01	1.696E+01	1.459E+00	0.048
	167.43	*		-3.961E-01	2.762E+00	4.624E+00	3.943E-01	-0.086
TL-202	68.90			3.561E-01	4.968E-01	8.266E-01	6.597E-02	0.431
	70.82			-7.744E-02	2.836E-01	4.527E-01	3.659E-02	-0.171
	80.30			1.930E-01	5.684E-01	8.302E-01	7.253E-02	0.232
	439.56	*		-3.074E-02	1.127E-01	1.785E-01	1.480E-02	-0.172
	70.83			-4.439E-01	1.596E+00	2.547E+00	3.380E-01	-0.174
HG-203	72.87			-1.566E+00	1.108E+00	1.446E+00	1.870E-01	-1.083
	82.60			-1.773E-01	1.867E+00	2.659E+00	3.707E-01	-0.067
	279.20	*		3.583E-02	7.077E-02	1.196E-01	1.121E-02	0.300
	72.80			-5.273E-01	3.529E-01	4.629E-01	3.795E-02	-1.139
	74.97			2.283E-01	2.055E-01	3.097E-01	2.582E-02	0.737
BI-207	84.90			2.322E-01	3.648E-01	5.393E-01	4.935E-02	0.431
	569.67			3.904E-02	5.916E-02	1.039E-01	8.799E-03	0.376
	1063.62	*		-6.746E-02	1.183E-01	1.803E-01	1.563E-02	-0.374
	1770.23			-1.017E+00	9.783E-01	1.251E+00	1.048E-01	-0.812
	81.07			-2.795E-01	4.085E-01	5.620E-01	4.946E-02	-0.497
TL-207	83.78			-6.217E-02	2.424E-01	3.428E-01	3.100E-02	-0.181
	94.90			1.588E-01	4.252E-01	5.829E-01	5.241E-02	0.272
	122.32			1.789E+01	5.997E+00	6.538E+00	6.152E-01	2.736
	144.24			-2.928E-01	1.057E+00	1.768E+00	1.693E-01	-0.166
	154.21			1.391E-01	6.074E-01	1.037E+00	9.731E-02	0.134
+ 269.46	269.46			1.018E-01	3.613E-01	6.047E-01	5.635E-02	0.168
	323.87	*		-1.027E-01	1.222E+00	1.991E+00	3.556E-01	-0.052
	338.28			3.542E+00	3.354E+00	3.701E+00	4.605E-01	0.957
	445.03			2.522E+00	5.257E+00	8.704E+00	1.033E+00	0.290
	260.50			-6.068E+00	1.758E+01	2.854E+01	2.610E+00	-0.213
PO-209	262.80			4.039E+00	4.896E+01	8.131E+01	7.437E+00	0.050
	896.60	*		2.040E+01	1.978E+01	3.453E+01	3.126E+00	0.591
	46.50	*		-1.892E+00	8.467E+00	1.371E+01	1.294E+00	-0.138
	46.50	*		-1.892E+00	8.467E+00	1.371E+01	1.294E+00	-0.138
	46.50	*		-1.892E+00	8.467E+00	1.371E+01	1.175E+00	-0.138
PB-210	404.84	*		9.315E-01	2.126E+00	3.399E+00	2.128E+00	0.274
	427.08			-7.040E-02	4.792E+00	7.727E+00	4.797E+00	-0.009
	831.96			1.785E+00	2.970E+00	4.739E+00	2.971E+00	0.377
	727.18	*		1.107E+00	6.398E-01	1.167E+00	1.156E-01	0.949
BI-212								

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BI-214	+	785.46	*	1.638E+00	3.673E+00	6.259E+00	5.470E-01	0.262
		1620.62		2.204E-01	1.869E+00	3.171E+00	2.729E-01	0.070
		609.31		6.969E-01	2.768E-01	3.406E-01	3.359E-02	2.046
		1120.29		4.144E-01	6.703E-01	1.139E+00	1.219E-01	0.364
PO-215		1764.49		4.914E-01	4.118E-01	8.447E-01	7.084E-02	0.582
		81.07		-2.795E-01	4.085E-01	5.620E-01	4.946E-02	-0.497
		83.78		-6.217E-02	2.424E-01	3.428E-01	3.100E-02	-0.181
		94.90		1.588E-01	4.252E-01	5.829E-01	5.241E-02	0.272
	+	122.32		1.789E+01	5.997E+00	6.538E+00	6.152E-01	2.736
		144.24		-2.928E-01	1.057E+00	1.768E+00	1.693E-01	-0.166
		154.21		1.391E-01	6.074E-01	1.037E+00	9.731E-02	0.134
		269.46		1.018E-01	3.613E-01	6.047E-01	5.635E-02	0.168
	+	323.87	*	-1.027E-01	1.222E+00	1.991E+00	3.556E-01	-0.052
		338.28		3.542E+00	3.354E+00	3.701E+00	4.605E-01	0.957
		445.03		2.522E+00	5.257E+00	8.704E+00	1.033E+00	0.290
		271.23		3.324E-01	4.696E-01	7.994E-01	8.601E-02	0.416
RN-219		401.81	*	-9.716E-01	9.148E-01	1.365E+00	2.012E-01	-0.712
RN-220		549.76	*	-1.033E+00	5.036E+01	8.490E+01	7.206E+00	-0.012
RA-223		81.07		-2.795E-01	4.085E-01	5.620E-01	4.946E-02	-0.497
		83.78		-6.217E-02	2.424E-01	3.428E-01	3.100E-02	-0.181
		94.90		1.588E-01	4.252E-01	5.829E-01	5.241E-02	0.272
		122.32		1.789E+01	5.997E+00	6.538E+00	6.152E-01	2.736
	+	144.24		-2.928E-01	1.057E+00	1.768E+00	1.693E-01	-0.166
		154.21		1.391E-01	6.074E-01	1.037E+00	9.731E-02	0.134
		269.46		1.018E-01	3.613E-01	6.047E-01	5.635E-02	0.168
		323.87		-1.027E-01	1.222E+00	1.991E+00	3.556E-01	-0.052
	+	338.28		3.542E+00	3.354E+00	3.701E+00	4.605E-01	0.957
		445.03		2.522E+00	5.257E+00	8.704E+00	1.033E+00	0.290
RA-224		240.98	*	7.184E+00	1.790E+00	2.930E+00	2.662E-01	2.452
RA-226	+	609.31	*	6.969E-01	2.768E-01	3.406E-01	3.359E-02	2.046
		1120.29		4.144E-01	6.703E-01	1.139E+00	1.219E-01	0.364
		1764.49		4.914E-01	4.118E-01	8.447E-01	7.084E-02	0.582
		79.80		1.161E+00	2.990E+00	4.366E+00	9.401E-01	0.266
AC-227		236.00	*	4.325E-01	4.394E-01	6.783E-01	8.521E-02	0.638
		256.20		2.789E-01	7.156E-01	1.206E+00	1.886E-01	0.231
		286.10		-2.131E+00	2.969E+00	4.676E+00	6.333E-01	-0.456
		299.80		-9.654E-01	2.916E+00	4.084E+00	7.239E-01	-0.236
		304.40		9.222E-01	3.692E+00	6.138E+00	1.145E+00	0.150
		334.20		1.917E+00	5.164E+00	7.591E+00	1.481E+00	0.253
		79.80		1.161E+00	2.990E+00	4.366E+00	9.521E-01	0.266
		94.00		1.271E+00	3.411E+00	5.278E+00	1.158E+00	0.241
TH-227	+	236.00	*	4.325E-01	4.389E-01	6.783E-01	7.751E-02	0.638
		256.20		2.789E-01	7.161E-01	1.206E+00	2.208E-01	0.231
		286.10		-2.131E+00	3.648E+00	4.676E+00	4.696E+00	-0.456
		299.80		-9.654E-01	2.916E+00	4.084E+00	7.239E-01	-0.236
		304.40		9.222E-01	3.692E+00	6.138E+00	1.145E+00	0.150
		334.20		1.917E+00	5.164E+00	7.591E+00	1.481E+00	0.253
		338.32		8.481E-01	8.699E-01	8.874E-01	3.665E-01	0.956
AC-228	+	911.07	*	5.555E-01	8.407E-01	7.149E-01	8.275E-02	0.777

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	+	969.11		3.858E-01	6.726E-01	1.127E+00	2.645E-01	0.342
		338.32		8.481E-01	8.699E-01	8.874E-01	3.665E-01	0.956
		911.07	*	5.555E-01	8.407E-01	7.149E-01	8.275E-02	0.777
TH-229	+	969.11		3.858E-01	6.726E-01	1.127E+00	2.645E-01	0.342
		85.43		6.729E-01	3.771E-01	5.800E-01	5.337E-02	1.160
		88.47		3.941E+00	5.982E-01	5.973E-01	5.628E-02	6.599
		100.00		1.154E-01	3.004E-01	4.878E-01	4.290E-02	0.237
TH-230	+	193.63	*	2.814E-01	8.841E-01	1.455E+00	1.275E-01	0.193
		210.97		-7.433E-02	1.360E+00	2.265E+00	2.017E-01	-0.033
		609.31	*	6.969E-01	2.768E-01	3.406E-01	3.359E-02	2.046
		1120.29		4.144E-01	6.703E-01	1.139E+00	1.219E-01	0.364
		1764.49		4.914E-01	4.118E-01	8.447E-01	7.084E-02	0.582
PA-231	+	283.67	*	7.426E-01	2.886E+00	4.819E+00	7.461E-01	0.154
		301.29		3.076E-01	1.198E+00	1.760E+00	2.212E-01	0.175
TH-231	+	81.07		-2.795E-01	4.085E-01	5.620E-01	4.946E-02	-0.497
		83.78		-6.217E-02	2.424E-01	3.428E-01	3.100E-02	-0.181
		94.90		1.588E-01	4.252E-01	5.829E-01	5.241E-02	0.272
		122.32		1.789E+01	5.997E+00	6.538E+00	6.152E-01	2.736
		144.24		-2.928E-01	1.057E+00	1.768E+00	1.693E-01	-0.166
		154.21		1.391E-01	6.074E-01	1.037E+00	9.731E-02	0.134
		269.46		1.018E-01	3.613E-01	6.047E-01	5.635E-02	0.168
		323.87	*	-1.027E-01	1.222E+00	1.991E+00	3.556E-01	-0.052
		338.28		3.542E+00	3.354E+00	3.701E+00	4.605E-01	0.957
		445.03		2.522E+00	5.257E+00	8.704E+00	1.033E+00	0.290
U-231	+	84.21		5.994E-01	3.662E+00	5.296E+00	4.811E-01	0.113
		92.29		1.957E-01	6.820E-01	1.933E+00	1.767E-01	0.101
		95.87	*	-5.518E-01	6.746E-01	9.044E-01	8.091E-02	-0.610
		108.00		1.653E-01	1.192E+00	1.912E+00	1.658E-01	0.086
TH-232	+	338.32		8.481E-01	7.997E-01	8.874E-01	7.812E-02	0.956
		911.07	*	5.555E-01	8.407E-01	7.149E-01	8.275E-02	0.777
		969.11		3.858E-01	6.726E-01	1.127E+00	2.645E-01	0.342
PA-233	+	75.28		7.721E+00	6.124E+00	9.159E+00	1.392E+00	0.843
		86.59		5.651E+01	1.672E+01	7.622E+00	2.062E+00	7.415
		300.12		-2.965E-01	8.163E-01	1.141E+00	1.728E-01	-0.260
		311.98	*	8.096E-02	1.301E-01	2.202E-01	2.038E-02	0.368
		340.50		2.149E+00	2.081E+00	2.057E+00	4.915E-01	1.045
PA-234	+	398.62		1.999E+00	4.578E+00	7.560E+00	2.001E+00	0.264
		415.76		-4.683E+00	3.778E+00	5.399E+00	1.154E+00	-0.867
		63.00		2.092E+00	2.983E+00	4.537E+00	6.812E-01	0.461
		94.67		1.133E-01	3.035E-01	4.296E-01	5.444E-02	0.264
		98.44		1.480E-01	1.783E-01	2.390E-01	1.334E-01	0.619
		99.86		2.589E-01	7.591E-01	1.230E+00	1.083E-01	0.210
		111.00		3.986E-02	3.038E-01	4.867E-01	5.898E-02	0.082
		131.20		7.566E-02	1.830E-01	2.952E-01	2.551E-02	0.256
		152.70		-4.754E-01	5.081E-01	8.121E-01	1.380E-01	-0.585
		186.00		4.367E+00	3.884E+00	3.872E+00	1.209E+00	1.128
		226.40		-5.660E-01	7.518E-01	1.202E+00	1.618E-01	-0.471
		227.20		-3.487E-01	8.033E-01	1.309E+00	1.181E-01	-0.266
		248.90		-8.805E-01	1.508E+00	2.402E+00	5.431E-01	-0.367

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	293.70			8.125E-01	1.425E+00	2.130E+00	3.738E-01	0.381
	369.80			1.030E+00	1.833E+00	3.057E+00	6.633E-01	0.337
	568.70			-2.763E-01	1.880E+00	3.130E+00	2.652E-01	-0.088
	569.50			2.783E-01	5.196E-01	9.057E-01	7.673E-02	0.307
	574.00			3.798E-01	2.952E+00	4.998E+00	4.231E-01	0.076
	699.00			8.396E-01	1.387E+00	2.392E+00	4.539E-01	0.351
	706.10			6.969E-01	2.192E+00	3.667E+00	1.634E+00	0.190
	733.00			-1.351E+00	8.589E-01	1.151E+00	2.551E-01	-1.173
	742.81			-4.285E-01	2.859E+00	4.647E+00	3.123E+00	-0.092
	796.30			8.234E-01	2.033E+00	3.426E+00	9.285E-01	0.240
	805.60			6.411E-03	2.342E+00	3.853E+00	1.183E+00	0.002
	819.60			-1.299E+00	2.964E+00	4.635E+00	1.765E+00	-0.280
	826.30			-1.006E+00	2.071E+00	3.196E+00	1.431E+00	-0.315
	831.60			2.434E-01	1.483E+00	2.462E+00	7.367E-01	0.099
	876.40			-8.021E-01	2.251E+00	3.325E+00	3.419E+00	-0.241
	880.51			-3.665E-02	7.266E-01	1.184E+00	1.068E-01	-0.031
	883.24			1.164E-01	7.345E-01	1.209E+00	8.132E-01	0.096
	899.00			-1.243E+00	2.292E+00	3.486E+00	1.527E+00	-0.356
	925.00			1.097E+00	3.173E+00	5.300E+00	4.788E-01	0.207
	926.50			4.436E-02	4.659E-01	7.648E-01	1.944E-01	0.058
	946.00	*		-1.062E-01	8.785E-01	1.418E+00	2.686E-01	-0.075
	949.00			-2.281E-01	1.306E+00	2.107E+00	1.896E-01	-0.108
	980.50			1.915E-02	1.807E+00	2.938E+00	2.625E-01	0.007
	1394.10			5.161E-01	1.531E+00	2.647E+00	1.723E+00	0.195
PA-234M	766.42			-9.071E+00	2.385E+01	3.748E+01	1.902E+01	-0.242
	1001.03	*		-6.661E+00	1.172E+01	1.824E+01	1.859E+00	-0.365
TH-234	63.29	*		1.478E+00	2.514E+00	3.802E+00	6.683E-01	0.389
	92.38			1.439E-01	5.021E-01	1.417E+00	2.597E-01	0.102
U-234	609.31	*		6.969E-01	2.768E-01	3.406E-01	3.359E-02	2.046
	1120.29			4.144E-01	6.703E-01	1.139E+00	1.219E-01	0.364
	1764.49			4.914E-01	4.118E-01	8.447E-01	7.084E-02	0.582
U-235	89.95			1.068E+01	4.092E+00	4.063E+00	1.262E+00	2.629
	93.35			3.953E-01	1.064E+00	1.697E+00	4.781E-01	0.233
	105.00			1.265E-01	1.733E+00	2.773E+00	8.282E-01	0.046
	143.76	*		-1.534E-01	3.286E-01	5.437E-01	9.498E-02	-0.282
	163.35			2.602E-02	7.737E-01	1.304E+00	2.482E-01	0.020
	185.71			1.617E-01	1.354E-01	1.419E-01	1.233E-02	1.140
	205.31			-7.695E-01	9.023E-01	1.426E+00	2.737E-01	-0.540
NP-236	94.67			8.594E-02	2.301E-01	3.261E-01	2.936E-02	0.264
	98.44			1.119E-01	1.199E-01	1.807E-01	1.598E-02	0.619
	111.00			3.015E-02	2.298E-01	3.681E-01	3.189E-02	0.082
	160.31	*		-1.343E-01	1.272E-01	2.035E-01	1.733E-02	-0.660
NP-237	86.50	*		4.909E+00	1.263E+00	1.107E+00	2.507E-01	4.432
	95.87			-1.367E+00	1.700E+00	2.240E+00	5.544E-01	-0.610
U-238	63.29	*		1.478E+00	2.514E+00	3.802E+00	6.683E-01	0.389
	92.38			1.439E-01	5.016E-01	1.417E+00	1.294E-01	0.102
NP-239	99.55			9.753E-02	2.634E-01	4.080E-01	3.594E-02	0.239
	117.00	*		2.430E-01	3.531E-01	5.209E-01	4.537E-02	0.466
	209.75			1.724E+00	1.374E+00	2.400E+00	2.135E-01	0.718

----- Non-Identified Nuclides -----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-243		228.18		1.514E-01	4.173E-01	7.056E-01	6.367E-02	0.215
		277.60		1.861E-01	3.371E-01	5.710E-01	5.223E-02	0.326
		334.30		9.025E-01	2.911E+00	4.269E+00	3.775E-01	0.211
		74.67	*	9.995E-02	1.143E-01	1.707E-01	1.420E-02	0.585
	+	86.72		3.179E+02	4.825E+01	4.470E+01	4.171E+00	7.111
CM-243		117.66		-2.778E+00	7.299E+00	1.003E+01	8.740E-01	-0.277
		142.18		-1.294E+01	2.723E+01	4.517E+01	3.864E+00	-0.287
		99.55		1.003E-01	2.709E-01	4.196E-01	3.696E-02	0.239
		103.76	*	4.999E-02	1.575E-01	2.553E-01	2.224E-02	0.196
		117.00		2.499E-01	3.631E-01	5.357E-01	4.666E-02	0.466
AM-246		209.75		1.699E+00	1.353E+00	2.365E+00	2.104E-01	0.718
		228.18		1.530E-01	4.215E-01	7.127E-01	6.430E-02	0.215
		277.60		1.875E-01	3.397E-01	5.754E-01	5.263E-02	0.326
		798.80		-2.768E-01	3.317E-01	5.107E-01	4.487E-02	-0.542
		1036.00		-5.453E-01	7.302E-01	1.100E+00	9.648E-02	-0.496
CM-247		1062.04		6.836E-02	4.998E-01	8.178E-01	7.095E-02	0.084
		1078.86	*	3.031E-01	3.739E-01	6.402E-01	5.508E-02	0.473
		278.00		1.176E+00	1.408E+00	2.414E+00	2.208E-01	0.487
		287.40		-9.013E-01	2.323E+00	3.742E+00	3.416E-01	-0.241
		402.60	*	-9.154E-02	8.226E-02	1.235E-01	1.002E-02	-0.741
CF-249		252.85		1.598E+00	1.652E+00	2.856E+00	2.607E-01	0.560
		333.44		-8.119E-03	3.876E-01	5.542E-01	4.905E-02	-0.015
		387.95	*	9.099E-02	8.254E-02	1.423E-01	1.155E-02	0.639
CF-251		176.60	*	-6.418E-02	1.965E-01	3.252E-01	2.799E-02	-0.197
		227.00		-4.118E-01	7.165E-01	1.160E+00	1.046E-01	-0.355
		285.00		1.355E+00	3.211E+00	5.410E+00	4.942E-01	0.250

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]G1202023709      *
* Acquisition date   : 4-FEB-2010 21:14:00 Detector SN#      :              *
* Detector ID        : GAM01                      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 01:00:01.14              Half life ratio  : 8.000      *
*****
*                               SAMPLE DATA                               *
*
* Sample date       : 27-JAN-2010 00:00:00 Nuclide Library : SOLID             *
* Sample ID         : G1202023709              Analyst initials: MXR1          *
* Batch Number      : 944962                   Sample Quantity : 1.5544E+02 GRAM   *
* Recovery          : 1.00000                  Carrier Weight  : 0.00000        *
*****
*                               QC DATA                               *
*
* Standard Weight   : 0.00000                  MS Isotope       :              *
* CALIB. DATE/TIME  : 12-JAN-2010 15:15:52      MSD Isotope      :              *
* MSD DPM           : 0.000                      LCS Isotope      :              *
* LCS DPM           : 0.000                      LCSD Isotope     :              *
* LCSD DPM          : 0.000
*****

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Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
CO-57	2.547E-01	8.326E-02	6.539E-02	0.000E+00
CO-60	6.499E+00	6.470E-01	7.216E-02	0.000E+00
CD-109	2.910E+01	4.328E+00	2.415E+00	0.000E+00
SN-126	2.887E+00	4.294E-01	2.409E-01	0.000E+00
BA-137M	5.317E+00	5.142E-01	1.195E-01	0.000E+00
CS-137	5.621E+00	5.444E-01	1.264E-01	0.000E+00
TL-208	2.758E-01	1.224E-01	1.254E-01	0.000E+00
BI-211	2.132E+00	7.765E-01	6.813E-01	0.000E+00
PB-212	9.169E-01	2.645E-01	1.872E-01	0.000E+00
PO-212	9.169E-01	2.645E-01	1.872E-01	0.000E+00
PB-214	7.417E-01	2.728E-01	2.375E-01	0.000E+00
PO-214	7.417E-01	2.728E-01	2.375E-01	0.000E+00
PO-216	9.169E-01	2.645E-01	1.872E-01	0.000E+00
PO-218	7.417E-01	2.728E-01	2.375E-01	0.000E+00
TH-228	9.251E-01	2.669E-01	1.888E-01	0.000E+00
AM-241	1.342E+01	1.384E+00	6.258E-01	0.000E+00
ANH-511	1.351E-01	1.295E-01	9.776E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error) Ided	MDA (pCi/GRAM)	
BE-7	-1.133E-01	6.455E-01	1.085E+00	0.000E+00 NOT IDENT.
NA-22	-2.140E-02	5.346E-02	8.625E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	7.929E+02	0.000E+00	0.000E+00 SHORT HLIF
AL-26	2.574E-02	4.181E-02	8.080E-02	0.000E+00 NOT IDENT.
K-40	7.197E-01	6.387E-01	1.281E+00	0.000E+00 NOT IDENT.
TI-44	5.914E-02	8.739E-02	1.147E-01	0.000E+00 FAIL ABUN
SC-46	2.393E-02	9.743E-02	1.690E-01	0.000E+00 NOT IDENT.
V-48	1.320E-02	1.300E-01	2.214E-01	0.000E+00 NOT IDENT.
CR-51	-1.940E-01	5.970E-01	1.029E+00	0.000E+00 NOT IDENT.
MN-52	2.801E-02	1.363E-01	2.421E-01	0.000E+00 FAIL ABUN

MN-54	-2.518E-02	8.187E-02	1.372E-01	0.000E+00	NOT IDENT.
CO-56	-2.922E-02	8.805E-02	1.470E-01	0.000E+00	NOT IDENT.
CO-58	-2.459E-02	8.089E-02	1.357E-01	0.000E+00	NOT IDENT.
FE-59	-9.895E-02	1.971E-01	3.147E-01	0.000E+00	NOT IDENT.
ZN-65	-6.835E-02	2.031E-01	3.292E-01	0.000E+00	NOT IDENT.
GE-68	3.275E+00	3.070E+00	5.552E+00	0.000E+00	NOT IDENT.
AS-73	1.196E-01	2.066E+00	3.603E+00	0.000E+00	NOT IDENT.
AS-74	-7.460E-02	1.424E-01	2.422E-01	0.000E+00	NOT IDENT.
SE-75	-4.142E-03	7.892E-02	1.402E-01	0.000E+00	FAIL ABUN
BR-77	2.698E+00	3.520E+00	6.269E+00	0.000E+00	FAIL ABUN
SR-82	1.649E-02	6.579E-01	1.138E+00	0.000E+00	NOT IDENT.
RB-83	1.005E-01	1.367E-01	2.431E-01	0.000E+00	NOT IDENT.
RB-84	1.189E-02	1.526E-01	2.621E-01	0.000E+00	NOT IDENT.
KR-85	1.527E+01	1.666E+01	2.657E+01	0.000E+00	NOT IDENT.
SR-85	7.332E-02	7.998E-02	1.276E-01	0.000E+00	NOT IDENT.
RB-86	3.501E-01	1.596E+00	2.719E+00	0.000E+00	NOT IDENT.
Y-88	1.404E-02	4.851E-02	8.655E-02	0.000E+00	NOT IDENT.
ZR-88	-9.312E-04	6.279E-02	1.085E-01	0.000E+00	NOT IDENT.
Y-91	4.444E+00	2.354E+01	4.173E+01	0.000E+00	NOT IDENT.
NB-94	2.684E-02	6.749E-02	1.209E-01	0.000E+00	NOT IDENT.
NB-95	-2.340E-02	7.971E-02	1.347E-01	0.000E+00	NOT IDENT.
NB-95M	1.535E-01	2.164E-01	3.566E-01	0.000E+00	NOT IDENT.
ZR-95	-7.844E-03	1.386E-01	2.388E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	5.311E+02	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.784E+03	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.109E+00	4.870E+00	8.591E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.881E+09	0.000E+00	0.000E+00	SHORT HLIF
RH-101	3.956E-03	5.424E-02	9.825E-02	0.000E+00	NOT IDENT.
RH-102	-3.821E-03	6.383E-02	1.082E-01	0.000E+00	NOT IDENT.
RU-103	-4.642E-03	7.952E-02	1.343E-01	0.000E+00	FAIL ABUN
RH-106	-4.804E-01	6.153E-01	1.015E+00	0.000E+00	FAIL ABUN
RU-106	-4.804E-01	6.134E-01	1.015E+00	0.000E+00	FAIL ABUN
AG-108M	-3.088E-02	7.444E-02	1.244E-01	0.000E+00	NOT IDENT.
AG-110M	-1.599E-02	8.696E-02	1.300E-01	0.000E+00	NOT IDENT.
IN-111	-5.447E-01	4.574E-01	7.008E-01	0.000E+00	NOT IDENT.
IN-113M	-1.456E-02	9.030E-02	1.547E-01	0.000E+00	NOT IDENT.
SN-113	-1.456E-02	9.030E-02	1.547E-01	0.000E+00	NOT IDENT.
IN-114M	8.511E-02	3.201E-01	5.220E-01	0.000E+00	NOT IDENT.
CD-115	1.031E+00	3.138E+00	5.711E+00	0.000E+00	NOT IDENT.
SN-117M	4.231E-02	6.073E-02	1.152E-01	0.000E+00	NOT IDENT.
SB-122	5.410E-01	7.406E-01	1.380E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	3.156E+03	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.108E-02	4.147E-02	7.733E-02	0.000E+00	NOT IDENT.
I-124	-1.217E-01	5.110E-01	7.657E-01	0.000E+00	NOT IDENT.
SB-124	-2.498E-02	1.028E-01	1.618E-01	0.000E+00	NOT IDENT.
SB-125	2.884E-02	2.101E-01	3.637E-01	0.000E+00	NOT IDENT.
TE-125M	-6.107E+00	1.400E+01	2.401E+01	0.000E+00	NOT IDENT.
I-126	1.378E-01	2.797E-01	4.475E-01	0.000E+00	NOT IDENT.
SB-126	-2.566E-02	1.984E-01	3.414E-01	0.000E+00	FAIL ABUN
SB-127	-2.204E-01	9.114E-01	1.563E+00	0.000E+00	NOT IDENT.
XE-127	-5.965E-03	6.752E-02	1.220E-01	0.000E+00	NOT IDENT.
I-131	-4.346E-02	1.456E-01	2.490E-01	0.000E+00	NOT IDENT.
TE-132	1.182E-01	3.307E-01	6.040E-01	0.000E+00	NOT IDENT.
BA-133	-5.850E-02	9.626E-02	1.387E-01	0.000E+00	NOT IDENT.
I-133	0.000E+00	8.168E+01	0.000E+00	0.000E+00	SHORT HLIF
CS-134	4.210E-02	1.013E-01	1.797E-01	0.000E+00	NOT IDENT.
CS-135	-1.254E-01	2.967E-01	5.168E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	8.746E+08	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.787E-02	1.799E-01	3.075E-01	0.000E+00	FAIL ABUN
CE-139	3.703E-02	4.705E-02	8.914E-02	0.000E+00	NOT IDENT.
BA-140	8.662E-03	3.654E-01	6.520E-01	0.000E+00	NOT IDENT.
LA-140	6.759E-03	8.689E-02	1.489E-01	0.000E+00	NOT IDENT.
CE-141	9.043E-03	8.551E-02	1.591E-01	0.000E+00	NOT IDENT.
CE-143	-3.095E+00	1.185E+01	1.801E+01	0.000E+00	FAIL ABUN
CE-144	2.382E-01	3.463E-01	6.170E-01	0.000E+00	NOT IDENT.
PM-144	-3.066E-02	6.304E-02	1.055E-01	0.000E+00	NOT IDENT.
PR-144	-2.071E+00	4.257E+00	7.127E+00	0.000E+00	NOT IDENT.
PM-146	1.429E-01	1.084E-01	1.970E-01	0.000E+00	NOT IDENT.
ND-147	-8.472E-02	7.790E-01	1.376E+00	0.000E+00	FAIL ABUN
PM-149	-5.006E+00	2.406E+01	4.213E+01	0.000E+00	NOT IDENT.
EU-152	-8.810E-02	2.209E-01	3.268E-01	0.000E+00	FAIL ABUN
GD-153	3.870E-02	1.297E-01	2.080E-01	0.000E+00	NOT IDENT.
EU-154	-1.082E-01	1.575E-01	2.417E-01	0.000E+00	FAIL ABUN
EU-155	-4.252E-02	1.732E-01	3.009E-01	0.000E+00	FAIL ABUN
TB-160	1.671E-01	3.185E-01	5.645E-01	0.000E+00	FAIL ABUN
HO-166M	1.737E-03	1.190E-01	2.073E-01	0.000E+00	NOT IDENT.
TM-171	-5.695E+01	4.694E+01	7.994E+01	0.000E+00	FAIL ABUN
LU-176	3.314E-03	4.837E-02	8.557E-02	0.000E+00	FAIL ABUN

LU-177	1.188E+00	9.682E-01	1.834E+00	0.000E+00	NOT IDENT.
LU-177M	7.727E-02	3.515E-01	6.135E-01	0.000E+00	FAIL ABUN
HF-181	3.290E-02	8.165E-02	1.426E-01	0.000E+00	NOT IDENT.
W-181	-4.969E-01	6.181E-01	1.020E+00	0.000E+00	NOT IDENT.
TA-182	3.434E-02	2.150E-01	3.807E-01	0.000E+00	NOT IDENT.
RE-183	-1.300E-01	1.616E-01	2.856E-01	0.000E+00	FAIL ABUN
RE-184	4.152E-01	4.206E-01	7.844E-01	0.000E+00	FAIL ABUN
OS-185	3.172E-02	8.134E-02	1.467E-01	0.000E+00	FAIL ABUN
RE-188	1.634E-01	2.442E-01	4.631E-01	0.000E+00	NOT IDENT.
W-188	1.357E+01	1.385E+01	2.301E+01	0.000E+00	NOT IDENT.
IR-192	-2.009E-02	6.461E-02	1.116E-01	0.000E+00	FAIL ABUN
AU-195	1.504E-01	3.861E-01	6.213E-01	0.000E+00	NOT IDENT.
TL-200	0.000E+00	1.842E+01	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-3.961E-01	2.707E+00	4.941E+00	0.000E+00	NOT IDENT.
TL-202	-3.074E-02	1.105E-01	1.860E-01	0.000E+00	NOT IDENT.
HG-203	3.583E-02	6.935E-02	1.261E-01	0.000E+00	NOT IDENT.
BI-207	-6.746E-02	1.159E-01	1.835E-01	0.000E+00	NOT IDENT.
TL-207	-1.027E-01	1.198E+00	2.092E+00	0.000E+00	FAIL ABUN
PO-209	2.040E+01	1.939E+01	3.530E+01	0.000E+00	NOT IDENT.
BI-210	-1.892E+00	8.298E+00	1.512E+01	0.000E+00	NOT IDENT.
PB-210	-1.892E+00	8.298E+00	1.512E+01	0.000E+00	NOT IDENT.
PO-210	-1.892E+00	8.298E+00	1.512E+01	0.000E+00	NOT IDENT.
PB-211	9.315E-01	2.084E+00	3.550E+00	0.000E+00	NOT IDENT.
BI-212	1.107E+00	6.270E-01	1.200E+00	0.000E+00	NOT IDENT.
BI-214	0.000E+00	2.713E-01	3.519E-01	0.000E+00	FAIL ABUN
PO-215	-1.027E-01	1.198E+00	2.092E+00	0.000E+00	FAIL ABUN
RN-219	-9.716E-01	8.965E-01	1.426E+00	0.000E+00	NOT IDENT.
RN-220	-1.033E+00	4.936E+01	8.796E+01	0.000E+00	NOT IDENT.
RA-223	-1.027E-01	1.198E+00	2.092E+00	0.000E+00	FAIL ABUN
RA-224	0.000E+00	1.754E+00	3.102E+00	0.000E+00	NOT IDENT.
RA-226	0.000E+00	2.713E-01	3.519E-01	0.000E+00	FAIL ABUN
AC-227	2.789E-01	7.013E-01	1.275E+00	0.000E+00	NOT IDENT.
TH-227	2.789E-01	7.018E-01	1.275E+00	0.000E+00	FAIL ABUN
AC-228	5.555E-01	8.239E-01	7.306E-01	0.000E+00	FAIL ABUN
RA-228	5.555E-01	8.239E-01	7.306E-01	0.000E+00	FAIL ABUN
TH-229	2.814E-01	8.664E-01	1.549E+00	0.000E+00	FAIL ABUN
TH-230	0.000E+00	2.713E-01	3.519E-01	0.000E+00	FAIL ABUN
PA-231	7.426E-01	2.828E+00	5.080E+00	0.000E+00	NOT IDENT.
TH-231	-1.027E-01	1.198E+00	2.092E+00	0.000E+00	FAIL ABUN
U-231	-5.518E-01	6.611E-01	9.799E-01	0.000E+00	FAIL ABUN
TH-232	5.555E-01	8.239E-01	7.306E-01	0.000E+00	FAIL ABUN
PA-233	8.096E-02	1.275E-01	2.316E-01	0.000E+00	FAIL ABUN
PA-234	-1.062E-01	8.609E-01	1.447E+00	0.000E+00	FAIL ABUN
PA-234M	-6.661E+00	1.148E+01	1.859E+01	0.000E+00	NOT IDENT.
TH-234	1.478E+00	2.463E+00	4.161E+00	0.000E+00	FAIL ABUN
U-234	0.000E+00	2.713E-01	3.519E-01	0.000E+00	FAIL ABUN
U-235	-1.534E-01	3.220E-01	5.832E-01	0.000E+00	FAIL ABUN
NP-236	-1.343E-01	1.246E-01	2.177E-01	0.000E+00	FAIL ABUN
NP-237	0.000E+00	1.237E+00	1.203E+00	0.000E+00	NOT IDENT.
U-238	1.478E+00	2.463E+00	4.161E+00	0.000E+00	FAIL ABUN
NP-239	2.430E-01	3.460E-01	5.617E-01	0.000E+00	NOT IDENT.
AM-243	9.995E-02	1.120E-01	1.861E-01	0.000E+00	FAIL ABUN
CM-243	4.999E-02	1.544E-01	2.761E-01	0.000E+00	NOT IDENT.
AM-246	3.031E-01	3.664E-01	6.511E-01	0.000E+00	NOT IDENT.
CM-247	-9.154E-02	8.062E-02	1.290E-01	0.000E+00	NOT IDENT.
CF-249	9.099E-02	8.089E-02	1.488E-01	0.000E+00	NOT IDENT.
CF-251	-6.418E-02	1.926E-01	3.470E-01	0.000E+00	NOT IDENT.

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*                               GEL Laboratories LLC                      *
*                               2040 Savage Road                        *
*                               Charleston, SC 29414                    *
*****
Configuration   : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023709.CNF;1
Sample date     : 27-JAN-2010 00:00:00 Acquisition date : 4-FEB-2010 21:14:00.
Sample ID      : G1202023709 Sample quantity : 1.55440E+02 GRAM
Detector name   : GAM01 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.14 0.0%
Energy tolerance: 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID       : 944962 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	267	85.51*	6.056E+00	2.489E-01	2.547E-01	33.36
	136.48	-----	10.60	5.957E+00	-----	Line Not Found	-----
CO-60	1173.22	1447	100.00	1.144E+00	6.112E+00	6.132E+00	10.15
	1332.49	1370	100.00*	1.021E+00	6.479E+00	6.499E+00	10.16
CD-109	88.03	1159	3.72*	5.239E+00	2.871E+01	2.910E+01	15.18
SN-126	64.28	-----	9.60	2.906E+00	-----	Line Not Found	-----
	86.94	1159	8.90	5.239E+00	1.200E+01	1.200E+01	43.20
	87.57	1159	37.00*	5.239E+00	2.887E+00	2.887E+00	15.18
BA-137M	661.65	1904	89.98*	1.923E+00	5.314E+00	5.317E+00	9.87
CS-137	661.65	1904	85.12*	1.923E+00	5.618E+00	5.621E+00	9.88
TL-208	277.35	-----	6.80	3.885E+00	-----	Line Not Found	-----
	510.84	67	21.60	2.393E+00	6.255E-01	6.255E-01	98.16
	583.14	103	84.20*	2.142E+00	2.758E-01	2.758E-01	45.29
	860.37	-----	12.46	1.522E+00	-----	Line Not Found	-----
BI-211	72.87	-----	1.27	3.944E+00	-----	Line Not Found	-----
	351.07	184	12.94*	3.228E+00	2.132E+00	2.132E+00	37.16
PB-212	74.81	-----	10.70	4.150E+00	-----	Line Not Found	-----
	77.11	53	18.00	4.469E+00	3.205E-01	3.205E-01	150.79
	87.30	1159	8.00	5.239E+00	1.335E+01	1.335E+01	18.18
	238.63	368	44.60*	4.348E+00	9.169E-01	9.169E-01	29.44
	300.09	-----	3.41	3.656E+00	-----	Line Not Found	-----
PO-212	74.81	-----	10.70	4.150E+00	-----	Line Not Found	-----
	77.11	53	18.00	4.469E+00	3.205E-01	3.205E-01	150.79
	87.30	1159	8.00	5.239E+00	1.335E+01	1.335E+01	18.18
	115.19	-----	0.60	6.043E+00	-----	Line Not Found	-----
	238.63	368	44.60*	4.348E+00	9.169E-01	9.169E-01	29.44
	300.09	-----	3.41	3.656E+00	-----	Line Not Found	-----
PB-214	74.81	-----	6.21	4.150E+00	-----	Line Not Found	-----
	77.11	53	10.50	4.469E+00	5.495E-01	5.495E-01	150.98
	87.30	1159	4.67	5.239E+00	2.287E+01	2.287E+01	17.02
	241.98	-----	7.49	4.306E+00	-----	Line Not Found	-----
	295.21	161	19.20	3.697E+00	1.097E+00	1.097E+00	35.12

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	351.92	184	37.20*	3.228E+00	7.417E-01	7.417E-01	37.53
PO-214	74.81	-----	6.21	4.150E+00	-----	Line Not Found	-----
	77.11	53	10.50	4.469E+00	5.495E-01	5.495E-01	150.98
	87.30	1159	4.67	5.239E+00	2.287E+01	2.287E+01	17.02
	241.98	-----	7.49	4.306E+00	-----	Line Not Found	-----
	295.21	161	19.20	3.697E+00	1.097E+00	1.097E+00	35.12
	351.92	184	37.20*	3.228E+00	7.417E-01	7.417E-01	37.53
PO-216	74.81	-----	10.70	4.150E+00	-----	Line Not Found	-----
	77.11	53	18.00	4.469E+00	3.205E-01	3.205E-01	150.79
	87.30	1159	8.00	5.239E+00	1.335E+01	1.335E+01	18.18
	238.63	368	44.60*	4.348E+00	9.169E-01	9.169E-01	29.44
	300.09	-----	3.41	3.656E+00	-----	Line Not Found	-----
PO-218	74.81	-----	6.21	4.150E+00	-----	Line Not Found	-----
	77.11	53	10.50	4.469E+00	5.495E-01	5.495E-01	150.98
	87.30	1159	4.67	5.239E+00	2.287E+01	2.287E+01	17.02
	241.98	-----	7.49	4.306E+00	-----	Line Not Found	-----
	295.21	161	19.20	3.697E+00	1.097E+00	1.097E+00	35.12
	351.92	184	37.20*	3.228E+00	7.417E-01	7.417E-01	37.53
TH-228	74.81	-----	10.70	4.150E+00	-----	Line Not Found	-----
	77.11	53	18.00	4.469E+00	3.205E-01	3.234E-01	150.79
	87.30	1159	8.00	5.239E+00	1.335E+01	1.347E+01	15.18
	238.63	368	44.60*	4.348E+00	9.169E-01	9.251E-01	29.44
	300.09	-----	3.41	3.656E+00	-----	Line Not Found	-----
AM-241	59.54	2272	35.90*	2.277E+00	1.342E+01	1.342E+01	10.52
ANH-511	511.00	67	100.00*	2.393E+00	1.351E-01	1.351E-01	97.81

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : G1202023709

Page : 3
Acquisition date : 4-FEB-2010 21:14:00

Total number of lines in spectrum 18
Number of unidentified lines 0
Number of lines tentatively identified by NID 18 100.00%

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	2.547E-01	0.850E-01	33.36	
CO-60	5.27Y	1.00	6.479E+00	6.499E+00	0.660E+00	10.16	
CD-109	464.00D	1.01	2.871E+01	2.910E+01	0.442E+01	15.18	
SN-126	1.00E+05Y	1.00	2.887E+00	2.887E+00	0.438E+00	15.18	
BA-137M	30.17Y	1.00	5.314E+00	5.317E+00	0.525E+00	9.87	
CS-137	30.17Y	1.00	5.618E+00	5.621E+00	0.555E+00	9.88	
TL-208	1.41E+10Y	1.00	2.758E-01	2.758E-01	1.249E-01	45.29	
BI-211	7.04E+08Y	1.00	2.132E+00	2.132E+00	0.792E+00	37.16	
PB-212	1.41E+10Y	1.00	9.169E-01	9.169E-01	2.699E-01	29.44	
PO-212	1.41E+10Y	1.00	9.169E-01	9.169E-01	2.699E-01	29.44	
PB-214	1600.00Y	1.00	7.417E-01	7.417E-01	2.783E-01	37.53	
PO-214	1600.00Y	1.00	7.417E-01	7.417E-01	2.783E-01	37.53	
PO-216	1.41E+10Y	1.00	9.169E-01	9.169E-01	2.699E-01	29.44	
PO-218	1600.00Y	1.00	7.417E-01	7.417E-01	2.783E-01	37.53	
TH-228	1.91Y	1.01	9.169E-01	9.251E-01	2.723E-01	29.44	
AM-241	432.20Y	1.00	1.342E+01	1.342E+01	0.141E+01	10.52	
ANH-511	1.00E+09Y	1.00	1.351E-01	1.351E-01	1.322E-01	97.81	

Total Activity : 7.112E+01 7.154E+01

Grand Total Activity : 7.112E+01 7.154E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : G1202023709

Page : 4
Acquisition date : 4-FEB-2010 21:14:00

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	92.54	9	94	0.91	185.77	184	10	2.46E-03	****	5.49E+00	T
4	93.54	20	210	1.22	187.78	184	10	5.66E-03	****	5.54E+00	T
0	186.81	93	340	1.20	374.22	369	12	2.59E-02	83.3	5.15E+00	T
0	339.27	67	223	2.26	678.96	672	12	1.85E-02	93.9	3.32E+00	T
0	609.50	138	114	1.79	1219.08	1211	15	3.83E-02	38.5	2.06E+00	T
0	911.01	46	201	1.71	1821.71	1816	19	1.28E-02	****	1.44E+00	T

Flags: "T" = Tentatively associated


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*****
*                                     GEL Laboratories LLC                      *
*                                     2040 Savage Road                        *
*                                     Charleston, SC 29414                    *
*****
*                                     DETECTOR DATA                          *
* Configuration      : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202023709.CNF;1 *
* Acquisition date   : 4-FEB-2010 21:14:00.  Detector SN#      :              *
* Detector ID        : GAM01                      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 01:00:01.14             Half life ratio : 8.00000      *
*****
*                                     SAMPLE DATA                            *
* Sample date        : 27-JAN-2010 00:00:00  Nuclide Library : SOLID          *
* Sample ID          : G1202023709           Analyst initials: MXR1          *
* Batch Number       : 944962                Sample Quantity : 1.55440E+02 GRAM *
*****
*                                     QC DATA                               *
* CALIB. DATE/TIME   : 12-JAN-2010 15:15:52.7MS 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	2.547E-01	8.496E-02	6.071E-02	5.345E-03	4.195
CO-60	6.499E+00	6.602E-01	7.136E-02	6.083E-03	91.079
CD-109	2.910E+01	4.416E+00	2.224E+00	2.105E-01	13.081
SN-126	2.887E+00	4.381E-01	2.218E-01	2.089E-02	13.014
BA-137M	5.317E+00	5.247E-01	1.160E-01	9.499E-03	45.854
CS-137	5.621E+00	5.555E-01	1.226E-01	1.006E-02	45.854
TL-208	2.758E-01	1.249E-01	1.213E-01	1.101E-02	2.274
BI-211	2.132E+00	7.923E-01	6.498E-01	5.911E-02	3.281
PB-212	9.169E-01	2.699E-01	1.767E-01	1.789E-02	5.188
PO-212	9.169E-01	2.699E-01	1.767E-01	1.789E-02	5.188
PB-214	7.417E-01	2.783E-01	2.265E-01	2.374E-02	3.274
PO-214	7.417E-01	2.783E-01	2.265E-01	2.374E-02	3.274
PO-216	9.169E-01	2.699E-01	1.767E-01	1.789E-02	5.188
PO-218	7.417E-01	2.783E-01	2.265E-01	2.374E-02	3.274
TH-228	9.251E-01	2.723E-01	1.783E-01	1.805E-02	5.188
AM-241	1.342E+01	1.413E+00	5.710E-01	4.705E-02	23.513
ANH-511	1.351E-01	1.322E-01	9.417E-02	7.981E-03	1.435

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.133E-01		6.586E-01	1.044E+00	9.493E-02	-0.109

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22	-2.140E-02		5.455E-02	8.519E-02	7.154E-03	-0.251
NA-24	-2.091E-04		4.046E-04	Half-Life too short		
AL-26	2.574E-02		4.266E-02	8.061E-02	6.678E-03	0.319
K-40	7.197E-01		6.517E-01	1.270E+00	1.129E-01	0.567
TI-44	5.914E-02	+	8.917E-02	1.053E-01	9.040E-03	0.561
SC-46	2.393E-02		9.942E-02	1.653E-01	1.494E-02	0.145
V-48	1.320E-02		1.326E-01	2.171E-01	1.938E-02	0.061
CR-51	-1.940E-01		6.091E-01	9.787E-01	9.206E-02	-0.198
MN-52	2.801E-02		1.391E-01	2.400E-01	2.072E-02	0.117
MN-54	-2.518E-02		8.354E-02	1.339E-01	1.192E-02	-0.188
CO-56	-2.922E-02		8.984E-02	1.436E-01	1.283E-02	-0.203
CO-58	-2.459E-02		8.254E-02	1.324E-01	1.171E-02	-0.186
FE-59	-9.895E-02		2.012E-01	3.096E-01	2.854E-02	-0.320
ZN-65	-6.835E-02		2.072E-01	3.239E-01	2.733E-02	-0.211
GE-68	3.275E+00		3.133E+00	5.459E+00	4.700E-01	0.600
AS-73	1.196E-01		2.108E+00	3.279E+00	2.654E-01	0.036
AS-74	-7.460E-02		1.453E-01	2.343E-01	1.974E-02	-0.318
SE-75	-4.142E-03		8.053E-02	1.328E-01	1.220E-02	-0.031
BR-77	2.698E+00		3.592E+00	6.042E+00	5.126E-01	0.447
SR-82	1.649E-02		6.714E-01	1.109E+00	9.657E-02	0.015
RB-83	1.005E-01		1.395E-01	2.343E-01	1.987E-02	0.429
RB-84	1.189E-02		1.558E-01	2.562E-01	2.312E-02	0.046
KR-85	1.527E+01		1.700E+01	2.560E+01	2.171E+00	0.597
SR-85	7.332E-02		8.161E-02	1.229E-01	1.042E-02	0.597
RB-86	3.501E-01		1.629E+00	2.674E+00	2.303E-01	0.131
Y-88	1.404E-02		4.950E-02	8.638E-02	7.105E-03	0.163
ZR-88	-9.312E-04		6.408E-02	1.038E-01	8.358E-03	-0.009
Y-91	4.444E+00		2.402E+01	4.116E+01	3.372E+00	0.108
NB-94	2.684E-02		6.886E-02	1.174E-01	9.858E-03	0.229
NB-95	-2.340E-02		8.134E-02	1.312E-01	1.137E-02	-0.178
NB-95M	1.535E-01		2.208E-01	3.366E-01	3.452E-02	0.456
ZR-95	-7.844E-03		1.414E-01	2.325E-01	2.209E-02	-0.034
NB-97	2.816E-05		2.710E-04	Half-Life too short		
ZR-97	4.297E-03		3.971E-03	Half-Life too short		
MO-99	1.109E+00		4.969E+00	8.359E+00	1.266E+00	0.133
TC-99M	4.895E+02		9.595E+02	Half-Life too short		
RH-101	3.956E-03		5.534E-02	9.234E-02	8.126E-03	0.043
RH-102	-3.821E-03		6.513E-02	1.041E-01	8.751E-03	-0.037
RU-103	-4.642E-03		8.114E-02	1.293E-01	1.818E-02	-0.036
RH-106	-4.804E-01		6.279E-01	9.825E-01	1.296E-01	-0.489
RU-106	-4.804E-01		6.260E-01	9.825E-01	8.207E-02	-0.489
AG-108M	-3.088E-02		7.596E-02	1.193E-01	1.029E-02	-0.259
AG-110M	-1.599E-02		8.873E-02	1.261E-01	1.069E-02	-0.127
IN-111	-5.447E-01		4.667E-01	6.622E-01	6.029E-02	-0.823
IN-113M	-1.456E-02		9.214E-02	1.480E-01	1.232E-02	-0.098
SN-113	-1.456E-02		9.214E-02	1.480E-01	1.232E-02	-0.098
IN-114M	8.511E-02		3.266E-01	4.901E-01	4.279E-02	0.174
CD-115	1.031E+00		3.202E+00	5.507E+00	4.674E-01	0.187

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-117M	4.231E-02		6.197E-02	1.076E-01	9.165E-03	0.393
SB-122	5.410E-01		7.557E-01	1.333E+00	1.130E-01	0.406
I-123	8.434E-04		1.610E-03	Half-Life	too short	
TE-123M	1.108E-02		4.232E-02	7.228E-02	6.192E-03	0.153
I-124	-1.217E-01		5.215E-01	7.409E-01	6.230E-02	-0.164
SB-124	-2.498E-02		1.049E-01	1.611E-01	1.428E-02	-0.155
SB-125	2.884E-02		2.144E-01	3.487E-01	2.935E-02	0.083
TE-125M	-6.107E+00		1.428E+01	2.223E+01	2.302E+00	-0.275
I-126	1.378E-01		2.854E-01	4.341E-01	3.566E-02	0.317
SB-126	-2.566E-02		2.025E-01	3.320E-01	2.814E-02	-0.077
SB-127	-2.204E-01		9.300E-01	1.517E+00	1.451E-01	-0.145
XE-127	-5.965E-03		6.890E-02	1.148E-01	1.015E-02	-0.052
I-131	-4.346E-02		1.486E-01	2.377E-01	2.122E-02	-0.183
TE-132	1.182E-01		3.374E-01	5.697E-01	8.557E-02	0.207
BA-133	-5.850E-02		9.823E-02	1.324E-01	1.746E-02	-0.442
I-133	2.770E-05		4.168E-05	Half-Life	too short	
CS-134	4.210E-02		1.034E-01	1.752E-01	1.548E-02	0.240
CS-135	-1.254E-01		3.028E-01	4.895E-01	5.104E-02	-0.256
I-135	-1.397E+02		4.462E+02	Half-Life	too short	
CS-136	3.787E-02		1.836E-01	3.021E-01	2.745E-02	0.125
CE-139	3.703E-02		4.801E-02	8.340E-02	7.103E-03	0.444
BA-140	8.662E-03		3.728E-01	6.290E-01	2.082E-01	0.014
LA-140	6.759E-03		8.866E-02	1.480E-01	1.277E-02	0.046
CE-141	9.043E-03		8.725E-02	1.484E-01	1.290E-02	0.061
CE-143	-3.095E+00		1.209E+01	1.710E+01	3.728E+00	-0.181
CE-144	2.382E-01		3.534E-01	5.741E-01	8.937E-02	0.415
PM-144	-3.066E-02		6.432E-02	1.025E-01	8.576E-03	-0.299
PR-144	-2.071E+00		4.344E+00	6.923E+00	5.792E-01	-0.299
PM-146	1.429E-01		1.106E-01	1.892E-01	1.987E-02	0.755
ND-147	-8.472E-02		7.949E-01	1.327E+00	1.974E-01	-0.064
PM-149	-5.006E+00		2.455E+01	3.997E+01	6.322E+00	-0.125
EU-152	-8.810E-02		2.254E-01	3.116E-01	2.881E-02	-0.283
GD-153	3.870E-02		1.324E-01	1.920E-01	1.705E-02	0.202
EU-154	-1.082E-01		1.607E-01	2.387E-01	2.658E-02	-0.453
EU-155	-4.252E-02		1.767E-01	2.783E-01	2.448E-02	-0.153
TB-160	1.671E-01		3.250E-01	5.519E-01	4.977E-02	0.303
HO-166M	1.737E-03		1.214E-01	2.015E-01	1.700E-02	0.009
TM-171	-5.695E+01		4.790E+01	7.313E+01	5.760E+00	-0.779
LU-176	3.314E-03		4.936E-02	8.133E-02	7.361E-03	0.041
LU-177	1.188E+00		9.879E-01	1.726E+00	1.534E-01	0.688
LU-177M	7.727E-02		3.586E-01	5.877E-01	4.802E-02	0.131
HF-181	3.290E-02		8.332E-02	1.372E-01	1.156E-02	0.240
W-181	-4.969E-01		6.307E-01	9.323E-01	7.278E-02	-0.533
TA-182	3.434E-02		2.194E-01	3.756E-01	3.095E-02	0.091
RE-183	-1.300E-01		1.649E-01	2.670E-01	2.273E-02	-0.487
RE-184	4.152E-01		4.292E-01	7.418E-01	6.771E-02	0.560
OS-185	3.172E-02		8.300E-02	1.422E-01	1.175E-02	0.223
RE-188	1.634E-01		2.492E-01	4.325E-01	3.683E-02	0.378

----- Non-Identified Nuclides -----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
W-188	1.357E+01		1.413E+01	2.184E+01	1.992E+00	0.622
IR-192	-2.009E-02		6.593E-02	1.062E-01	9.567E-03	-0.189
AU-195	1.504E-01		3.940E-01	5.739E-01	5.067E-02	0.262
TL-200	-4.833E-07		9.398E-06	Half-Life too short		
TL-201	-3.961E-01		2.762E+00	4.624E+00	3.943E-01	-0.086
TL-202	-3.074E-02		1.127E-01	1.785E-01	1.480E-02	-0.172
HG-203	3.583E-02		7.077E-02	1.196E-01	1.121E-02	0.300
BI-207	-6.746E-02		1.183E-01	1.803E-01	1.563E-02	-0.374
TL-207	-1.027E-01		1.222E+00	1.991E+00	3.556E-01	-0.052
PO-209	2.040E+01		1.978E+01	3.453E+01	3.126E+00	0.591
BI-210	-1.892E+00		8.467E+00	1.371E+01	1.294E+00	-0.138
PB-210	-1.892E+00		8.467E+00	1.371E+01	1.294E+00	-0.138
PO-210	-1.892E+00		8.467E+00	1.371E+01	1.175E+00	-0.138
PB-211	9.315E-01		2.126E+00	3.399E+00	2.128E+00	0.274
BI-212	1.107E+00		6.398E-01	1.167E+00	1.156E-01	0.949
BI-214	6.969E-01	+	2.768E-01	3.406E-01	3.359E-02	2.046
PO-215	-1.027E-01		1.222E+00	1.991E+00	3.556E-01	-0.052
RN-219	-9.716E-01		9.148E-01	1.365E+00	2.012E-01	-0.712
RN-220	-1.033E+00		5.036E+01	8.490E+01	7.206E+00	-0.012
RA-223	-1.027E-01		1.222E+00	1.991E+00	3.556E-01	-0.052
RA-224	7.184E+00		1.790E+00	2.930E+00	2.662E-01	2.452
RA-226	6.969E-01	+	2.768E-01	3.406E-01	3.359E-02	2.046
AC-227	2.789E-01		7.156E-01	1.206E+00	1.886E-01	0.231
TH-227	2.789E-01		7.161E-01	1.206E+00	2.208E-01	0.231
AC-228	5.555E-01	+	8.407E-01	7.149E-01	8.275E-02	0.777
RA-228	5.555E-01	+	8.407E-01	7.149E-01	8.275E-02	0.777
TH-229	2.814E-01		8.841E-01	1.455E+00	1.275E-01	0.193
TH-230	6.969E-01	+	2.768E-01	3.406E-01	3.359E-02	2.046
PA-231	7.426E-01		2.886E+00	4.819E+00	7.461E-01	0.154
TH-231	-1.027E-01		1.222E+00	1.991E+00	3.556E-01	-0.052
U-231	-5.518E-01		6.746E-01	9.044E-01	8.091E-02	-0.610
TH-232	5.555E-01	+	8.407E-01	7.149E-01	8.275E-02	0.777
PA-233	8.096E-02		1.301E-01	2.202E-01	2.038E-02	0.368
PA-234	-1.062E-01		8.785E-01	1.418E+00	2.686E-01	-0.075
PA-234M	-6.661E+00		1.172E+01	1.824E+01	1.859E+00	-0.365
TH-234	1.478E+00		2.514E+00	3.802E+00	6.683E-01	0.389
U-234	6.969E-01	+	2.768E-01	3.406E-01	3.359E-02	2.046
U-235	-1.534E-01		3.286E-01	5.437E-01	9.498E-02	-0.282
NP-236	-1.343E-01		1.272E-01	2.035E-01	1.733E-02	-0.660
NP-237	4.909E+00		1.263E+00	1.107E+00	2.507E-01	4.432
U-238	1.478E+00		2.514E+00	3.802E+00	6.683E-01	0.389
NP-239	2.430E-01		3.531E-01	5.209E-01	4.537E-02	0.466
AM-243	9.995E-02		1.143E-01	1.707E-01	1.420E-02	0.585
CM-243	4.999E-02		1.575E-01	2.553E-01	2.224E-02	0.196
AM-246	3.031E-01		3.739E-01	6.402E-01	5.508E-02	0.473
CM-247	-9.154E-02		8.226E-02	1.235E-01	1.002E-02	-0.741
CF-249	9.099E-02		8.254E-02	1.423E-01	1.155E-02	0.639
CF-251	-6.418E-02		1.965E-01	3.252E-01	2.799E-02	-0.197

VAX/VMS Nuclide Identification Report Generated

```

*****
*                               GEL Laboratories LLC                               *
*                               2040 Savage Road                               *
*                               Charleston, SC 29414                          *
*****
*                               DETECTOR DATA                               *
*
* Configuration      : SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202023709          *
* Acquisition date   : 4-FEB-2010 21:14:00 Detector SN#      :              *
* Detector ID        : GAM01                      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 01:00:01.14              Half life ratio : 8.000       *
*****
*                               SAMPLE DATA                               *
*
* Sample date        : 27-JAN-2010 00:00:00 Nuclide Library : SOLID          *
* Sample ID          : G1202023709              Analyst initials: MXR1        *
* Batch Number       : 944962                    Sample Quantity : 1.5544E+02 GRAM *
* Recovery           : 1.00000                   Carrier Weight  : 0.00000       *
*****
*                               QC DATA                               *
*
* CALIB. DATE/TIME   : 12-JAN-2010 15:15:52 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	2.547E-01	8.326E-02	3.272E-02	4.248E-02
CO-60	6.499E+00	6.470E-01	3.610E-02	3.301E-01
CD-109	2.910E+01	4.328E+00	1.208E+00	2.208E+00
SN-126	2.887E+00	4.294E-01	1.205E-01	2.191E-01
BA-137M	5.317E+00	5.142E-01	5.981E-02	2.624E-01
CS-137	5.621E+00	5.444E-01	6.322E-02	2.777E-01
TL-208	2.758E-01	1.224E-01	6.276E-02	6.246E-02
BI-211	2.132E+00	7.765E-01	3.408E-01	3.962E-01
PB-212	9.169E-01	2.645E-01	9.364E-02	1.350E-01
PO-212	9.169E-01	2.645E-01	9.364E-02	1.350E-01
PB-214	7.417E-01	2.728E-01	1.188E-01	1.392E-01
PO-214	7.417E-01	2.728E-01	1.188E-01	1.392E-01
PO-216	9.169E-01	2.645E-01	9.364E-02	1.350E-01
PO-218	7.417E-01	2.728E-01	1.188E-01	1.392E-01
TH-228	9.251E-01	2.669E-01	9.447E-02	1.362E-01
AM-241	1.342E+01	1.384E+00	3.131E-01	7.063E-01
ANH-511	1.351E-01	1.295E-01	4.891E-02	6.608E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-1.133E-01	6.455E-01	5.429E-01	3.293E-01 NOT IDENT.
NA-22	-2.140E-02	5.346E-02	4.315E-02	2.728E-02 NOT IDENT.
NA-24	-2.091E+02	7.929E+02	0.000E+00	4.046E+02 SHORT HLIF
AL-26	2.574E-02	4.181E-02	4.042E-02	2.133E-02 NOT IDENT.
K-40	7.197E-01	6.387E-01	6.410E-01	3.259E-01 NOT IDENT.
TI-44	5.914E-02	8.739E-02	5.738E-02	4.459E-02 FAIL ABUN
SC-46	2.393E-02	9.743E-02	8.456E-02	4.971E-02 NOT IDENT.
V-48	1.320E-02	1.300E-01	1.108E-01	6.630E-02 NOT IDENT.
CR-51	-1.940E-01	5.970E-01	5.146E-01	3.046E-01 NOT IDENT.
MN-52	2.801E-02	1.363E-01	1.211E-01	6.957E-02 FAIL ABUN

MN-54	-2.518E-02	8.187E-02	6.862E-02	4.177E-02	NOT IDENT.
CO-56	-2.922E-02	8.805E-02	7.355E-02	4.492E-02	NOT IDENT.
CO-58	-2.459E-02	8.089E-02	6.791E-02	4.127E-02	NOT IDENT.
FE-59	-9.895E-02	1.971E-01	1.575E-01	1.006E-01	NOT IDENT.
ZN-65	-6.835E-02	2.031E-01	1.647E-01	1.036E-01	NOT IDENT.
GE-68	3.275E+00	3.070E+00	2.778E+00	1.566E+00	NOT IDENT.
AS-73	1.196E-01	2.066E+00	1.802E+00	1.054E+00	NOT IDENT.
AS-74	-7.460E-02	1.424E-01	1.212E-01	7.264E-02	NOT IDENT.
SE-75	-4.142E-03	7.892E-02	7.016E-02	4.027E-02	FAIL ABUN
BR-77	2.698E+00	3.520E+00	3.136E+00	1.796E+00	FAIL ABUN
SR-82	1.649E-02	6.579E-01	5.696E-01	3.357E-01	NOT IDENT.
RB-83	1.005E-01	1.367E-01	1.216E-01	6.976E-02	NOT IDENT.
RB-84	1.189E-02	1.526E-01	1.311E-01	7.788E-02	NOT IDENT.
KR-85	1.527E+01	1.666E+01	1.329E+01	8.499E+00	NOT IDENT.
SR-85	7.332E-02	7.998E-02	6.382E-02	4.080E-02	NOT IDENT.
RB-86	3.501E-01	1.596E+00	1.361E+00	8.144E-01	NOT IDENT.
Y-88	1.404E-02	4.851E-02	4.330E-02	2.475E-02	NOT IDENT.
ZR-88	-9.312E-04	6.279E-02	5.428E-02	3.204E-02	NOT IDENT.
Y-91	4.444E+00	2.354E+01	2.088E+01	1.201E+01	NOT IDENT.
NB-94	2.684E-02	6.749E-02	6.047E-02	3.443E-02	NOT IDENT.
NB-95	-2.340E-02	7.971E-02	6.741E-02	4.067E-02	NOT IDENT.
NB-95M	1.535E-01	2.164E-01	1.784E-01	1.104E-01	NOT IDENT.
ZR-95	-7.844E-03	1.386E-01	1.195E-01	7.070E-02	NOT IDENT.
NB-97	2.816E+01	5.311E+02	0.000E+00	2.710E+02	SHORT HLIF
ZR-97	4.297E+03	7.784E+03	0.000E+00	3.971E+03	SHORT HLIF
MO-99	1.109E+00	4.870E+00	4.298E+00	2.485E+00	NOT IDENT.
TC-99M	4.895E+08	1.881E+09	0.000E+00	9.595E+08	SHORT HLIF
RH-101	3.956E-03	5.424E-02	4.916E-02	2.767E-02	NOT IDENT.
RH-102	-3.821E-03	6.383E-02	5.415E-02	3.257E-02	NOT IDENT.
RU-103	-4.642E-03	7.952E-02	6.720E-02	4.057E-02	FAIL ABUN
RH-106	-4.804E-01	6.153E-01	5.076E-01	3.139E-01	FAIL ABUN
RU-106	-4.804E-01	6.134E-01	5.076E-01	3.130E-01	FAIL ABUN
AG-108M	-3.088E-02	7.444E-02	6.223E-02	3.798E-02	NOT IDENT.
AG-110M	-1.599E-02	8.696E-02	6.506E-02	4.437E-02	NOT IDENT.
IN-111	-5.447E-01	4.574E-01	3.506E-01	2.334E-01	NOT IDENT.
IN-113M	-1.456E-02	9.030E-02	7.739E-02	4.607E-02	NOT IDENT.
SN-113	-1.456E-02	9.030E-02	7.739E-02	4.607E-02	NOT IDENT.
IN-114M	8.511E-02	3.201E-01	2.611E-01	1.633E-01	NOT IDENT.
CD-115	1.031E+00	3.138E+00	2.857E+00	1.601E+00	NOT IDENT.
SN-117M	4.231E-02	6.073E-02	5.763E-02	3.099E-02	NOT IDENT.
SB-122	5.410E-01	7.406E-01	6.904E-01	3.778E-01	NOT IDENT.
I-123	8.434E+02	3.156E+03	0.000E+00	1.610E+03	SHORT HLIF
TE-123M	1.108E-02	4.147E-02	3.869E-02	2.116E-02	NOT IDENT.
I-124	-1.217E-01	5.110E-01	3.831E-01	2.607E-01	NOT IDENT.
SB-124	-2.498E-02	1.028E-01	8.093E-02	5.247E-02	NOT IDENT.
SB-125	2.884E-02	2.101E-01	1.820E-01	1.072E-01	NOT IDENT.
TE-125M	-6.107E+00	1.400E+01	1.201E+01	7.142E+00	NOT IDENT.
I-126	1.378E-01	2.797E-01	2.239E-01	1.427E-01	NOT IDENT.
SB-126	-2.566E-02	1.984E-01	1.708E-01	1.012E-01	FAIL ABUN
SB-127	-2.204E-01	9.114E-01	7.818E-01	4.650E-01	NOT IDENT.
XE-127	-5.965E-03	6.752E-02	6.105E-02	3.445E-02	NOT IDENT.
I-131	-4.346E-02	1.456E-01	1.246E-01	7.431E-02	NOT IDENT.
TE-132	1.182E-01	3.307E-01	3.022E-01	1.687E-01	NOT IDENT.
BA-133	-5.850E-02	9.626E-02	6.941E-02	4.911E-02	NOT IDENT.
I-133	2.770E+01	8.168E+01	0.000E+00	4.168E+01	SHORT HLIF
CS-134	4.210E-02	1.013E-01	8.989E-02	5.169E-02	NOT IDENT.
CS-135	-1.254E-01	2.967E-01	2.586E-01	1.514E-01	NOT IDENT.
I-135	-1.397E+08	8.746E+08	0.000E+00	4.462E+08	SHORT HLIF
CS-136	3.787E-02	1.799E-01	1.539E-01	9.179E-02	FAIL ABUN
CE-139	3.703E-02	4.705E-02	4.460E-02	2.401E-02	NOT IDENT.
BA-140	8.662E-03	3.654E-01	3.262E-01	1.864E-01	NOT IDENT.
LA-140	6.759E-03	8.689E-02	7.448E-02	4.433E-02	NOT IDENT.
CE-141	9.043E-03	8.551E-02	7.960E-02	4.363E-02	NOT IDENT.
CE-143	-3.095E+00	1.185E+01	9.010E+00	6.046E+00	FAIL ABUN
CE-144	2.382E-01	3.463E-01	3.087E-01	1.767E-01	NOT IDENT.
PM-144	-3.066E-02	6.304E-02	5.279E-02	3.216E-02	NOT IDENT.
PR-144	-2.071E+00	4.257E+00	3.566E+00	2.172E+00	NOT IDENT.
PM-146	1.429E-01	1.084E-01	9.856E-02	5.530E-02	NOT IDENT.
ND-147	-8.472E-02	7.790E-01	6.885E-01	3.974E-01	FAIL ABUN
PM-149	-5.006E+00	2.406E+01	2.108E+01	1.227E+01	NOT IDENT.
EU-152	-8.810E-02	2.209E-01	1.635E-01	1.127E-01	FAIL ABUN
GD-153	3.870E-02	1.297E-01	1.040E-01	6.619E-02	NOT IDENT.
EU-154	-1.082E-01	1.575E-01	1.209E-01	8.033E-02	FAIL ABUN
EU-155	-4.252E-02	1.732E-01	1.505E-01	8.837E-02	FAIL ABUN
TB-160	1.671E-01	3.185E-01	2.824E-01	1.625E-01	FAIL ABUN
HO-166M	1.737E-03	1.190E-01	1.037E-01	6.070E-02	NOT IDENT.
TM-171	-5.695E+01	4.694E+01	3.999E+01	2.395E+01	FAIL ABUN
LU-176	3.314E-03	4.837E-02	4.281E-02	2.468E-02	FAIL ABUN

LU-177	1.188E+00	9.682E-01	9.175E-01	4.940E-01	NOT IDENT.
LU-177M	7.727E-02	3.515E-01	3.069E-01	1.793E-01	FAIL ABUN
HF-181	3.290E-02	8.165E-02	7.136E-02	4.166E-02	NOT IDENT.
W-181	-4.969E-01	6.181E-01	5.101E-01	3.154E-01	NOT IDENT.
TA-182	3.434E-02	2.150E-01	1.904E-01	1.097E-01	NOT IDENT.
RE-183	-1.300E-01	1.616E-01	1.429E-01	8.243E-02	FAIL ABUN
RE-184	4.152E-01	4.206E-01	3.924E-01	2.146E-01	FAIL ABUN
OS-185	3.172E-02	8.134E-02	7.338E-02	4.150E-02	FAIL ABUN
RE-188	1.634E-01	2.442E-01	2.317E-01	1.246E-01	NOT IDENT.
W-188	1.357E+01	1.385E+01	1.151E+01	7.066E+00	NOT IDENT.
IR-192	-2.009E-02	6.461E-02	5.585E-02	3.296E-02	FAIL ABUN
AU-195	1.504E-01	3.861E-01	3.108E-01	1.970E-01	NOT IDENT.
TL-200	-4.833E-01	1.842E+01	0.000E+00	9.398E+00	SHORT HLIF
TL-201	-3.961E-01	2.707E+00	2.472E+00	1.381E+00	NOT IDENT.
TL-202	-3.074E-02	1.105E-01	9.305E-02	5.635E-02	NOT IDENT.
HG-203	3.583E-02	6.935E-02	6.310E-02	3.538E-02	NOT IDENT.
BI-207	-6.746E-02	1.159E-01	9.181E-02	5.915E-02	NOT IDENT.
TL-207	-1.027E-01	1.198E+00	1.046E+00	6.111E-01	FAIL ABUN
PO-209	2.040E+01	1.939E+01	1.766E+01	9.891E+00	NOT IDENT.
BI-210	-1.892E+00	8.298E+00	7.563E+00	4.234E+00	NOT IDENT.
PB-210	-1.892E+00	8.298E+00	7.563E+00	4.234E+00	NOT IDENT.
PO-210	-1.892E+00	8.298E+00	7.563E+00	4.233E+00	NOT IDENT.
PB-211	9.315E-01	2.084E+00	1.776E+00	1.063E+00	NOT IDENT.
BI-212	1.107E+00	6.270E-01	6.002E-01	3.199E-01	NOT IDENT.
BI-214	6.969E-01	2.713E-01	1.760E-01	1.384E-01	FAIL ABUN
PO-215	-1.027E-01	1.198E+00	1.046E+00	6.111E-01	FAIL ABUN
RN-219	-9.716E-01	8.965E-01	7.135E-01	4.574E-01	NOT IDENT.
RN-220	-1.033E+00	4.936E+01	4.401E+01	2.518E+01	NOT IDENT.
RA-223	-1.027E-01	1.198E+00	1.046E+00	6.111E-01	FAIL ABUN
RA-224	7.184E+00	1.754E+00	1.552E+00	8.948E-01	NOT IDENT.
RA-226	6.969E-01	2.713E-01	1.760E-01	1.384E-01	FAIL ABUN
AC-227	2.789E-01	7.013E-01	6.377E-01	3.578E-01	NOT IDENT.
TH-227	2.789E-01	7.018E-01	6.377E-01	3.581E-01	FAIL ABUN
AC-228	5.555E-01	8.239E-01	3.655E-01	4.204E-01	FAIL ABUN
RA-228	5.555E-01	8.239E-01	3.655E-01	4.204E-01	FAIL ABUN
TH-229	2.814E-01	8.664E-01	7.750E-01	4.420E-01	FAIL ABUN
TH-230	6.969E-01	2.713E-01	1.760E-01	1.384E-01	FAIL ABUN
PA-231	7.426E-01	2.828E+00	2.542E+00	1.443E+00	NOT IDENT.
TH-231	-1.027E-01	1.198E+00	1.046E+00	6.111E-01	FAIL ABUN
U-231	-5.518E-01	6.611E-01	4.903E-01	3.373E-01	FAIL ABUN
TH-232	5.555E-01	8.239E-01	3.655E-01	4.204E-01	FAIL ABUN
PA-233	8.096E-02	1.275E-01	1.159E-01	6.505E-02	FAIL ABUN
PA-234	-1.062E-01	8.609E-01	7.242E-01	4.392E-01	FAIL ABUN
PA-234M	-6.661E+00	1.148E+01	9.301E+00	5.859E+00	NOT IDENT.
TH-234	1.478E+00	2.463E+00	2.082E+00	1.257E+00	FAIL ABUN
U-234	6.969E-01	2.713E-01	1.760E-01	1.384E-01	FAIL ABUN
U-235	-1.534E-01	3.220E-01	2.918E-01	1.643E-01	FAIL ABUN
NP-236	-1.343E-01	1.246E-01	1.089E-01	6.359E-02	FAIL ABUN
NP-237	4.909E+00	1.237E+00	6.018E-01	6.313E-01	NOT IDENT.
U-238	1.478E+00	2.463E+00	2.082E+00	1.257E+00	FAIL ABUN
NP-239	2.430E-01	3.460E-01	2.810E-01	1.766E-01	NOT IDENT.
AM-243	9.995E-02	1.120E-01	9.311E-02	5.713E-02	FAIL ABUN
CM-243	4.999E-02	1.544E-01	1.381E-01	7.877E-02	NOT IDENT.
AM-246	3.031E-01	3.664E-01	3.258E-01	1.869E-01	NOT IDENT.
CM-247	-9.154E-02	8.062E-02	6.456E-02	4.113E-02	NOT IDENT.
CF-249	9.099E-02	8.089E-02	7.446E-02	4.127E-02	NOT IDENT.
CF-251	-6.418E-02	1.926E-01	1.736E-01	9.826E-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	325.5138
46.50	325.5138
46.50	325.5138
48.70	343.4700
49.72	359.6462
51.35	411.4932
52.39	405.0921
52.97	404.5183
53.15	404.6601
53.44	424.8232
54.07	419.4187
56.28	480.6947
56.28	480.6970
57.37	480.1152
57.53	484.9666
57.53	484.9684
57.60	485.0297
57.98	431.4424
57.98	431.4424
59.32	432.5111
59.32	432.5111
59.40	432.5740
59.54	432.6851
59.72	432.8275
60.01	433.0560
61.10	355.4489
61.14	355.4742
61.30	355.5768
63.00	261.5466
63.29	261.6803
63.29	261.6803
63.58	280.8551
64.28	273.2560
65.12	311.8393
65.20	311.8827
65.20	311.8827
66.05	343.1481
66.72	328.6504
66.83	325.5219
66.91	325.5655
67.20	293.7919
67.20	293.7919
67.75	279.1493
67.85	257.8844
68.90	276.4877
68.90	276.4877
69.30	276.6721
69.67	274.7056
70.82	321.2769
70.82	321.2769
70.83	321.2814
72.80	406.1162
72.87	406.1624
72.87	406.1624
74.67	370.1577
74.81	370.2416
74.81	370.2416
74.81	370.2416
74.81	370.2416
74.81	370.2416
74.81	370.2416
74.97	370.3342
75.28	376.9896
75.70	383.7146
77.11	409.9857
77.11	409.9857

77.11	409.9857
77.11	409.9857
77.11	409.9857
77.11	409.9857
77.11	409.9857
78.38	315.4128
79.62	299.7244
79.80	301.4366
79.80	301.4366
80.11	301.5791
80.18	301.6102
80.30	298.4040
80.30	298.4040
80.57	298.5269
81.00	336.2651
81.07	352.6265
81.07	352.6265
81.07	352.6265
81.07	352.6265
82.60	325.6212
83.37	350.5664
83.78	355.6978
83.78	355.6978
83.78	355.6978
83.78	355.6978
84.21	339.5225
84.90	339.8668
85.43	341.7753
86.29	361.9463
86.50	362.0570
86.54	362.0772
86.59	362.1040
86.72	362.1729
86.79	362.2081
86.94	362.2870
87.30	362.4767
87.30	362.4767
87.30	362.4767
87.30	362.4767
87.30	362.4767
87.30	362.4767
87.57	362.6176
87.88	362.7788
88.03	362.8577
88.36	363.0289
88.47	363.0859
89.95	363.8530
91.11	178.9113
92.29	179.2062
92.38	179.2293
92.38	179.2293
93.35	212.7061
94.00	212.8965
94.67	213.0918
94.67	213.0928
94.90	196.5070
94.90	196.5070
94.90	196.5070
94.90	196.5070
95.87	255.1304
95.87	255.1304
96.73	267.1155
97.43	203.8673
98.44	192.4306
98.44	192.4315
98.88	217.6591
99.55	217.1832
99.55	217.1832
99.86	222.4134
100.00	222.4549
100.10	220.2493
103.18	222.2616
103.76	222.4297
105.00	231.7867
105.31	239.7583
108.00	228.1562
109.28	246.6238

111.00	230.1478
111.00	230.1478
111.76	246.2508
112.95	230.7012
115.19	246.1465
116.30	205.3976
117.00	208.9959
117.00	208.9959
117.66	243.4504
121.11	220.3457
121.62	187.1762
121.78	187.2115
122.06	187.2724
122.32	187.3296
122.32	187.3296
122.32	187.3296
122.32	187.3296
123.07	187.4929
127.23	230.5770
129.76	224.8611
131.20	240.3166
133.02	241.9642
133.54	230.4642
135.34	243.7483
136.00	259.0948
136.25	254.7882
136.48	254.8515
140.51	233.0901
140.51	0.0000
142.18	238.7894
142.65	240.6725
143.76	227.7144
144.24	220.7642
144.24	220.7642
144.24	220.7642
144.24	220.7642
145.22	220.1072
145.44	220.1566
147.16	234.7217
152.43	239.5515
152.70	236.9448
153.22	216.5702
154.21	206.9737
154.21	206.9737
154.21	206.9737
154.21	206.9737
155.03	200.0007
156.02	212.7096
158.56	192.6375
159.00	0.0000
159.00	198.9958
160.31	239.6404
161.27	230.8808
162.32	227.5190
162.64	227.5904
163.35	222.3456
163.89	205.3482
165.85	214.7596
167.43	226.8311
171.28	181.3995
171.86	191.4795
172.10	191.5230
176.55	198.6935
176.60	198.7018
181.06	202.5607
184.41	249.6792
185.71	239.6749
186.00	234.4050
190.27	230.3038
192.34	226.2820
193.63	210.4589
197.04	205.1086
198.01	205.2788
198.60	216.5336
200.40	205.6953
201.83	212.4645
202.84	208.9148
205.31	240.1865

208.36	208.9349
208.81	201.5149
209.75	217.6151
209.75	217.6151
210.97	246.9397
215.65	224.3125
216.55	234.8509
218.09	227.5850
222.10	218.8360
223.80	217.2296
226.40	242.3835
227.00	239.6434
227.08	234.9037
227.20	234.9263
228.16	213.2078
228.18	213.2112
228.18	213.2112
231.56	227.9450
235.69	191.4627
236.00	186.9123
236.00	186.9123
238.63	233.1426
238.63	233.1426
238.63	233.1426
238.63	233.1426
239.00	233.2075
240.98	238.3579
241.98	209.2959
241.98	209.2959
241.98	209.2959
244.69	246.7246
245.39	228.8520
247.94	170.9948
248.90	193.3487
249.79	189.6043
252.40	173.4868
252.85	171.6038
252.85	171.6038
254.15	0.0000
256.20	179.7918
256.20	179.7918
260.50	180.3423
260.90	185.2686
262.80	170.8691
264.65	184.7780
268.24	209.7419
268.79	205.9016
269.46	200.1121
269.46	200.1121
269.46	200.1121
269.46	200.1121
271.23	193.4800
273.65	212.4932
276.40	205.0039
277.35	184.4262
277.60	172.6208
277.60	172.6208
278.00	168.7195
278.60	172.7383
279.20	174.7826
279.53	169.8820
280.46	184.8143
281.68	187.9329
283.67	162.4310
284.30	151.5992
285.00	149.6867
285.90	172.5902
286.10	186.5026
286.10	186.5026
287.40	172.7601
288.45	0.0000
290.67	138.5054
290.80	138.5182
291.72	154.5322
293.26	189.7725
293.70	173.8757
295.21	146.7017
295.21	146.7017

295.21	146.7017
295.96	146.7712
296.50	146.8228
297.23	159.8828
298.57	148.8204
299.80	163.3494
299.80	163.3494
300.09	164.9836
300.09	164.9836
300.09	164.9836
300.09	164.9836
300.12	164.9861
301.29	161.9033
302.84	165.4733
303.76	175.6035
303.91	175.6222
304.40	168.6486
304.40	168.6486
304.84	163.6740
306.84	166.8992
308.46	188.2041
311.98	157.3497
316.51	170.9444
318.01	128.5794
319.02	143.8547
319.41	147.9426
320.08	153.0714
323.87	143.2655
323.87	143.2655
323.87	143.2655
323.87	143.2655
325.23	155.5867
328.77	148.7847
333.44	166.7785
334.20	155.4048
334.20	155.4048
334.30	155.4141
338.28	139.3826
338.28	139.3826
338.28	139.3826
338.28	139.3826
338.32	139.3846
338.32	139.3846
338.32	139.3846
340.50	159.2661
340.57	159.2732
344.27	161.2646
345.85	123.5303
350.59	150.2944
351.07	146.6173
351.92	146.6888
351.92	146.6888
351.92	146.6888
355.39	0.0000
356.01	150.7587
364.48	167.5028
366.43	140.6071
367.43	155.2750
367.94	0.0000
369.80	140.8708
374.96	139.1776
383.85	165.0900
387.95	119.0831
388.63	140.2126
391.69	149.9433
391.69	149.9433
392.90	153.2107
398.62	140.9553
400.65	152.7759
401.10	164.4865
401.81	169.8535
402.60	174.1724
404.84	144.6038
410.95	153.5933
411.60	141.9091
413.65	130.3082
414.70	149.6152
415.30	157.1430

415.76	165.7352
417.63	0.0000
418.52	122.0661
423.70	162.1080
427.08	153.7791
427.89	151.6908
432.53	149.8848
433.93	154.3028
439.47	150.3981
439.56	150.4045
439.89	147.1812
443.98	138.8008
444.90	137.7784
445.03	133.4464
445.03	133.4464
445.03	133.4464
445.03	133.4464
453.90	143.8251
463.38	137.9067
468.07	174.4085
473.00	125.3363
475.06	125.4564
475.35	133.1764
476.78	123.3528
477.59	124.5007
477.96	132.2351
482.03	108.1939
484.57	122.6901
487.03	108.4421
490.36	108.6066
492.35	108.7038
497.08	116.7167
507.63	0.0000
510.53	0.0000
510.84	100.6561
511.00	100.6629
511.85	100.7000
511.85	100.7000
513.99	105.7218
513.99	105.7218
520.41	89.8462
520.65	89.8560
527.90	99.1504
528.96	0.0000
529.64	93.8133
529.87	0.0000
531.02	104.6974
537.32	97.7405
543.00	97.9752
546.56	0.0000
549.76	84.6059
552.65	81.9756
555.20	84.7967
563.23	69.5263
563.90	70.4599
568.70	85.2667
569.32	85.2894
569.50	77.9589
569.67	77.9630
573.80	93.7125
574.00	90.0447
574.64	101.0974
578.91	92.0654
579.30	0.0000
583.14	94.9858
585.48	78.4611
591.81	101.7930
592.07	96.2508
593.00	82.3967
595.88	100.1004
600.56	87.6978
602.52	0.0000
602.71	92.9346
602.71	92.9346
603.60	91.4169
604.41	94.5455
604.70	77.5065
609.31	97.8325

609.31	97.8325
609.31	97.8325
609.31	97.8325
610.33	97.8710
612.46	91.7314
614.37	77.7954
618.01	84.1377
621.84	92.6856
621.84	92.6856
631.29	85.5013
633.02	85.5569
633.10	89.3199
634.78	84.6716
635.90	87.5326
636.97	83.8004
645.85	77.4656
646.12	77.4736
656.30	101.1563
657.75	105.9525
657.90	0.0000
661.65	79.8164
661.65	79.8164
664.57	74.5104
666.33	71.3855
666.33	71.3855
675.00	79.2472
677.61	81.2314
685.20	88.1592
692.80	83.5909
695.00	81.7336
696.49	78.8890
696.49	78.8890
697.00	75.0541
697.49	70.2554
698.33	65.4633
698.50	66.4293
699.00	69.3299
702.63	80.9874
706.10	80.1185
706.58	0.0000
706.67	74.3418
709.31	86.9722
711.68	76.4059
713.82	70.6546
717.42	75.5873
720.50	77.6074
721.93	77.6445
722.20	77.6523
722.78	96.1141
722.78	96.1141
722.89	104.8544
722.95	104.8570
723.30	108.7543
724.18	109.7584
727.18	70.0049
733.00	106.1898
735.90	74.1130
739.58	72.2512
742.81	78.1934
744.21	74.3189
747.13	74.3913
751.79	78.4277
752.31	76.4804
753.82	72.5944
755.35	72.6306
756.15	80.5025
756.87	79.5406
763.93	88.5828
765.79	87.6528
766.42	91.6105
766.84	95.5625
776.49	75.1094
778.00	79.1016
778.57	86.0378
778.89	84.0682
783.80	74.2950
785.46	71.3619
792.07	97.3349

795.84	83.5304
796.30	83.5427
798.80	107.4964
801.93	95.6484
805.60	88.7762
810.29	93.9013
810.76	81.9259
815.85	78.0533
817.79	90.1143
818.51	81.1226
819.60	90.1648
826.30	98.3828
828.27	0.0000
831.60	88.4888
831.96	75.4248
834.83	91.5954
836.80	0.0000
846.75	91.9287
848.13	99.0408
856.28	0.0000
856.80	113.4848
860.37	91.2920
867.32	80.2999
867.82	80.3115
871.10	75.3008
873.19	89.6027
874.81	88.6270
875.33	0.0000
876.40	92.7462
879.36	78.5453
880.27	90.8100
880.51	93.8777
881.50	88.8012
883.24	87.8267
884.67	101.1439
889.25	95.1411
896.60	83.0428
898.02	101.5378
899.00	106.6965
903.28	100.4371
911.07	95.7428
911.07	95.7428
911.07	95.7428
919.63	103.2007
920.93	117.0023
925.00	91.9877
925.24	91.9942
926.50	93.0608
935.52	83.9683
937.48	86.0882
944.10	94.5614
946.00	115.4037
949.00	116.5418
962.29	115.9240
964.01	133.7406
966.15	127.5460
968.20	103.5584
969.11	107.7703
969.11	107.7703
969.11	107.7703
977.42	83.8945
980.50	77.6675
983.50	75.6299
989.30	76.7997
996.32	93.8085
1001.03	93.9258
1001.68	93.9432
1004.76	88.7373
1021.30	0.0000
1024.50	0.0000
1034.80	83.0502
1036.00	82.0118
1037.82	72.4592
1038.57	62.8834
1038.76	0.0000
1045.16	64.0576
1046.59	66.2171
1048.07	67.3097

1050.47	80.1819
1050.47	80.1819
1062.04	57.8997
1063.62	69.7227
1076.63	80.7166
1077.35	66.7378
1078.86	74.2997
1085.78	89.5290
1099.22	80.0884
1112.02	87.9412
1112.84	78.1875
1115.52	81.4966
1120.29	65.2734
1120.29	65.2734
1120.29	65.2734
1120.29	65.2734
1120.51	75.0712
1121.28	72.9083
1124.00	0.0000
1129.67	61.0613
1131.51	0.0000
1147.95	0.0000
1167.94	48.7337
1173.22	46.8268
1175.09	42.5171
1177.93	44.1211
1189.05	31.3341
1204.90	27.7490
1205.75	0.0000
1213.00	24.0946
1221.42	20.4263
1230.97	22.3320
1235.34	34.4632
1236.41	0.0000
1238.25	18.6409
1246.25	20.5417
1260.41	0.0000
1271.85	24.4152
1274.45	24.4300
1274.54	20.6716
1291.56	18.8631
1298.22	0.0000
1312.09	18.9469
1325.50	14.6583
1325.50	14.6583
1332.49	10.4665
1333.61	10.4692
1360.21	8.6140
1362.66	0.0000
1365.15	13.4132
1368.21	9.5870
1368.53	0.0000
1376.25	11.5239
1384.27	12.5049
1394.10	9.6387
1395.20	11.5688
1407.95	8.6993
1434.06	9.7176
1436.60	7.7780
1457.56	0.0000
1460.81	11.7231
1489.15	14.7363
1509.49	8.8766
1596.49	11.0291
1620.62	9.0641
1678.03	0.0000
1691.02	9.1794
1691.02	9.1794
1706.46	0.0000
1750.46	0.0000
1764.49	5.1650
1764.49	5.1650
1764.49	5.1650
1764.49	5.1650
1770.23	21.7144
1771.40	18.6160
1791.20	0.0000
1808.65	4.1631

1836.01

6.2729

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202023709

Total Uranium Activity	4.3255E+00	ug/g
Total Uranium Counting Unc.	7.3298E+00	ug/g
Total Uranium Tpu	3.7397E-06	ug/g
Total Uranium Mda	6.1950E+00	ug/g

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*****
*
*               GEL Laboratories LLC
*               2040 SAVAGE ROAD
*               CHARLESTON , SC 29417
*               GROSS GAMMA REPORT
*
*****
*
*  BATCH ID      : 944962                SAMPLE ID   : G1202023709
*  ANALYST       : MXR1                  DETECTOR    : GAM01
*  SAMPLE DATE   : 27-JAN-2010 00:00:00.00  COUNT TIME   : 0 01:00:00.00
*  ANALYSIS DATE : 4-FEB-2010 21:14:00.89  SAMPLE ALQT  : 155.440 GRAM
*
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GROSS GAMMA ACTIVITY (pCi/GRAM ) : 2.548E+01
GROSS GAMMA ERROR (pCi/GRAM )   : 3.756E+00
GROSS GAMMA MDA (pCi/GRAM )     : 3.426E+00
GROSS GAMMA DLC (pCi/GRAM )     : 1.667E+00

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Radiochemistry Batch Checklist, Rev10

Batch# 948401 Product: H³ Date: 2-9-10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to 100 mg for GAB.			NA
Samples have been blank corrected (if required)			NA
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%.			NA
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.			
Smears Taken for Radioactive batches.			
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.			NA
Aux data is correct.			NA
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)			NA
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			NA
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
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: JM hr

Secondary Review Performed By: Lyette Y 2/9/10

LANL 2-20-10

Tritium Que Sheet

03-FEB-10

Batch #: 948401

Analyst: KKK2

First Client Due Date 20-FEB-10

Internal Due Date: 09-FEB-10

Spike Isotope: Hydrogen-3

LCS Isotope: Hydrogen-3

Spike Code: _____

LCS Code: OPA-K

Expiration Date: _____

Expiration Date: 3/27/10

Vol: _____

Vol: 0.1

Prep Date: 2/3/10

Initials: YJW

Pipet ID: 2970968

Witness: pz 2/4/10

Sample ID	Client Samp ID	Type	Hazard Code	Min. CRDL	Matrix	Client	Sample Date	Allquot In Vial (g/mL)	LSC Rack #	Dist Rig #	Vol added for Dist (mL)	Initial Sample Allquot (g/mL)	Final Wt (g)	Dist Rig #
245396001-1	RE15-16-7928	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	21-JAN-10	10	62-2	1	10	21.85	310.26	11.59
245396002-1	RE15-16-7929	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	21-JAN-10	10	62-3	2	10	108.11	165.62	62.50
245396003-1	RE15-16-7927	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	21-JAN-10	10	62-4	3	10	210.3	199.35	64.34
245396004-1	RE15-16-7930	SAMPLE		.25 pCi/mL SOIL	LANL010	LANL010	21-JAN-10	10	62-5	4	10	234.6	218.36	28.10
1202031679-1	MB for batch 948401	MB		.25 pCi/mL SOIL	QC ACCOUNT	QC ACCOUNT		10	62-6	5	10	20.00	0	20.00
1202031680-1	DUP	DUP		.25 pCi/mL SOIL	QC ACCOUNT	QC ACCOUNT	21-JAN-10	10	62-7	2	10	228.12	165.62	62.50
1202031681-1	LCS for batch 948401	LCS		.25 pCi/mL SOIL	QC ACCOUNT	QC ACCOUNT		10	24-1	6	10	20.00	0	20.00

Bkg Rack #: 62-1

#8 2-8-10

dailies ✓

Comments: _____

Bkg prepared with dead water? Yes No

Instrument Used (circle as appropriate): LS6000 (Red) 7065155, LS6500 (Blue) 7067083, LS6500 (Gold) 7070506, LS6500 (Green) 7067404, Wallac (Yellow) 4140127, LS6000 (Brown) 7060655, Wallac (Pink) 2200082, Wallac (White) 4140299, Purple 7069123, Silver 7060656, Orange DG06095168

Calibration Used: Ecogint Ultra (10 mL sample/13 mL Econscint Ultra)
Data Reviewed By: YJW 2-9-10

GEL Laboratories LLC, Radiochemistry Division

Page 1 of 1

Tritium Solid

Filename : H3VAC.XLS
File type : Excel
Version # : 1.2.5

Spike S/N :
Spike Exp Date :
Spike Activity (dpm/ml):
Spike Volume Added:

LCS S/N : 0134-K
LCS Exp Date : 3/27/2010
LCS Activity (dpm/ml): 2471.24
LCS Volume Added: 0.10

Batch : 948401
Analyst : KXK2
Prep Date : 2/3/2010

Procedure Code : LSC_VH3S
Paramname : Tritium
Required MDC : 250 pCi/L
Half-life of Tritium : 12.28 years

H-3 Abundance : 1
Method Uncertainty : 0.0691
Geometry: 10mL DW/13mL
Eosint Ultra

Pipet, 0.1 ml Stdev : +/- 0.000701 ml
Pipet, 0.5 ml Stdev : +/- 0.002564 ml
Pipet, 1.0 ml Stdev : +/- 0.005460 ml
Pipet, 5.0 ml Stdev : +/- 0.025729 ml

Sample Characteristics									
Pos.	Sample ID	Wet Sample Weight (g)	Total Moisture L	Sample Aliquot in Vial L	Sample Aliquot Stdev. L	Dry Sample Weight (g)	% Moisture of Sample	Rig number	Sample Date/Time
1	245396001.1	321.85	0.0116	0.0100	2.5729E-05	310.26	3.60%	1	1/21/2010 12:00
2	245396002.1	228.12	0.0625	0.0100	2.5729E-05	165.62	27.40%	2	1/21/2010 12:00
3	245396003.1	263.69	0.0643	0.0100	2.5729E-05	199.35	24.40%	3	1/21/2010 12:00
4	245396004.1	246.46	0.0281	0.0100	2.5729E-05	218.36	11.40%	4	1/21/2010 12:00
5	1202031679.1	20.00	0.0200	0.0100	2.5729E-05	0.00	100.00%	5	2/3/2010 0:00
6	1202031690.1	228.12	0.0625	0.0100	2.5729E-05	165.62	27.40%	2	1/21/2010 12:00
7	1202031681.1	20.00	0.0200	0.0100	2.5729E-05	0.00	100.00%	6	2/3/2010 0:00

Count raw Data				Background				Calibration Data				Detector Efficiency				Backgrounds			
Pos.	Rack	Position #	Counting Time (min.)	Quench#	Gross cpm	Count Time (min.)	Count Start Date/Time	Sample Decay	Counted on	Calibration Date	Calibration Due Date	Detector Efficiency (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Detector Efficiency Error (cpm/dpm)	Rack	Position #	Count Start Date/Time	Count Start Date/Time
1	62-2	95	95	119.1	15.05	95	2/6/2010 11:38	0.998	LSCGREEN	8/20/2009	8/31/2010	0.1832	0.00792	0.00792	0.00792	62-1	62-1	2/6/2010 10:00	2/6/2010 10:00
2	62-3	95	95	118.8	6.99	95	2/6/2010 13:16	0.998	LSCGREEN	8/20/2009	8/31/2010	0.1835	0.00792	0.00792	0.00792	62-1	62-1	2/6/2010 10:00	2/6/2010 10:00
3	62-4	95	95	118.2	10.73	95	2/6/2010 14:54	0.998	LSCGREEN	8/20/2009	8/31/2010	0.1839	0.00792	0.00792	0.00792	62-1	62-1	2/6/2010 10:00	2/6/2010 10:00
4	62-5	95	95	118.2	14.04	95	2/6/2010 16:32	0.997	LSCGREEN	8/20/2009	8/31/2010	0.1839	0.00792	0.00792	0.00792	62-1	62-1	2/6/2010 10:00	2/6/2010 10:00
5	62-6	95	95	117.7	3.19	95	2/6/2010 18:10	0.999	LSCGREEN	8/20/2009	8/31/2010	0.1843	0.00792	0.00792	0.00792	62-1	62-1	2/6/2010 10:00	2/6/2010 10:00
6	62-7	95	95	117.9	6.76	95	2/6/2010 19:48	0.997	LSCGREEN	8/20/2009	8/31/2010	0.1841	0.00792	0.00792	0.00792	62-1	62-1	2/6/2010 10:00	2/6/2010 10:00
7	24-1	120	120	117.5	28.43	95	2/6/2010 21:27	0.999	LSCGREEN	8/20/2009	8/31/2010	0.1844	0.00792	0.00792	0.00792	62-1	62-1	2/6/2010 10:00	2/6/2010 10:00

END OF PRINT LUM

6 FEB 2010 10:03

```

USER: 4 COMMENT: GRN-N
PRESET TIME : 95.00
DATA CALL : CPM H# : 0000 SAMPLE REPEATS : 1 PRINTER : STD
COUNT BLANK : NO IC# : NO REPLICATES : 1 RS232 : EDIT
TWO PHASE : NO ADC : NO CYCLE REPEATS : 1 DISK : OFF
SCINTILLATOR: LIQUID LUMEX+YEN LOW SAMPLE RE : 1 RWM LIST : OFF
LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

```

```

CHAN: 10.0 - 230.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0
CHAN: 0.0 - 900.0 %ERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0

```

ALPHA-BETA DISCRIMINATION: NO

SAM NO	POS	TIME MIN	H#	WIND1		WIND2		LUMEX %	ELAPSED TIME
				CPM	%ERROR	CPM	%ERROR		
1	62-1	95.00	118.6	3.02	12.06	35.87	3.43	0.31	77.56
2	62-2	95.00	119.1	15.05	5.53	51.22	2.87	0.27	195.51
3	62-3	95.00	118.8	6.99	7.84	40.22	3.24	0.32	293.53
4	62-4	95.00	118.2	10.73	6.31	45.97	3.03	0.26	391.50
5	62-5	95.00	114.2	14.04	5.50	50.89	2.88	0.23	489.51
6	62-6	95.00	117.7	3.19	11.64	35.94	3.43	0.26	567.47
7	62-7	95.00	117.7	6.76	7.95	40.69	3.22	0.27	565.46

LID = TFR1 : TUM

6 FEB 2010 21:29

```

USER: 1 COMMENT: GREEN
PRESET TIME : 120.00
DATA CALC : CPM H# : YES SAMPLE REPEATS: 1 PRINTER : STD
COUNT BLANK : NO JCR# : NO REPLICATES : 1 R5232 : EDIT
TWO PHASE : NO AQC : NO CYCLE REPEATS : 1 DISK : OFF
SCINTILLATOR: LIQUID LUNCY: YES LOW SAMPLE REP: 0 RWM LIST : OFF
LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

```

```

CHAN: 10.0 - 230.0 ZERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0
CHAN: 0.0 - 900.0 ZERROR: 2.00 FACTOR: 1.000000 BKG. SUB: 0

```

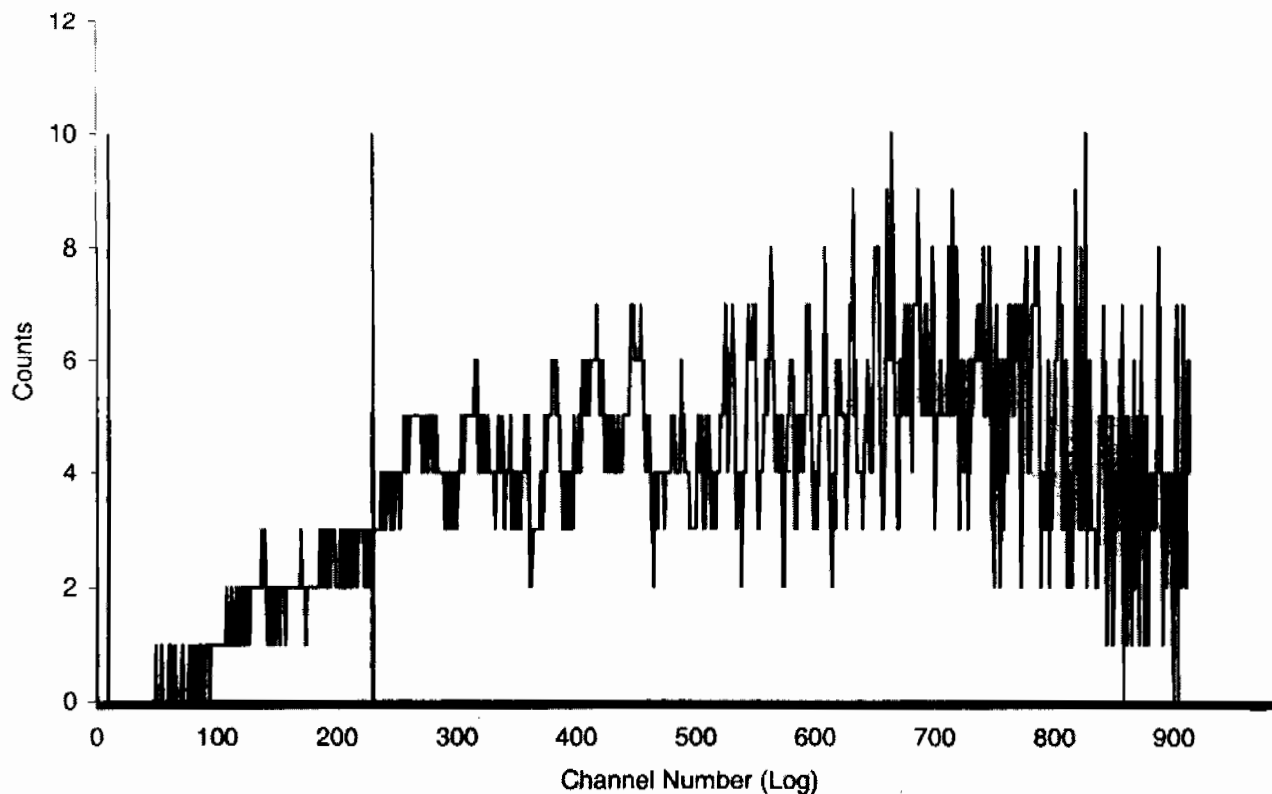
ALPHA-BETA DISCRIMINATION: NO

SAM NO	POS	TIME MIN	H#	WIND1		WIND2		LUMEX %	ELAPSED TIME
				CPM	ZERROR	CPM	ZERROR		
1	24-1	120.00	117.5	28.43	3.43	70.72	4.17	0.14	122.99

Sample Count Start Time:	6 Feb 2010 10:00:07		
Data Capture Date	06 Feb 2010 11:35:29		
User Filename	S04020662-1A.XLS		
	U04020662-1A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	¹⁴ C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	62-1	95.00
H#, Total Counts:	118.6	3465	
Win1: Tritium - Start, End, Counts:	10	230	287
Win2: - Start, End, Counts:	0	990	3465

SPECTRUM PLOT

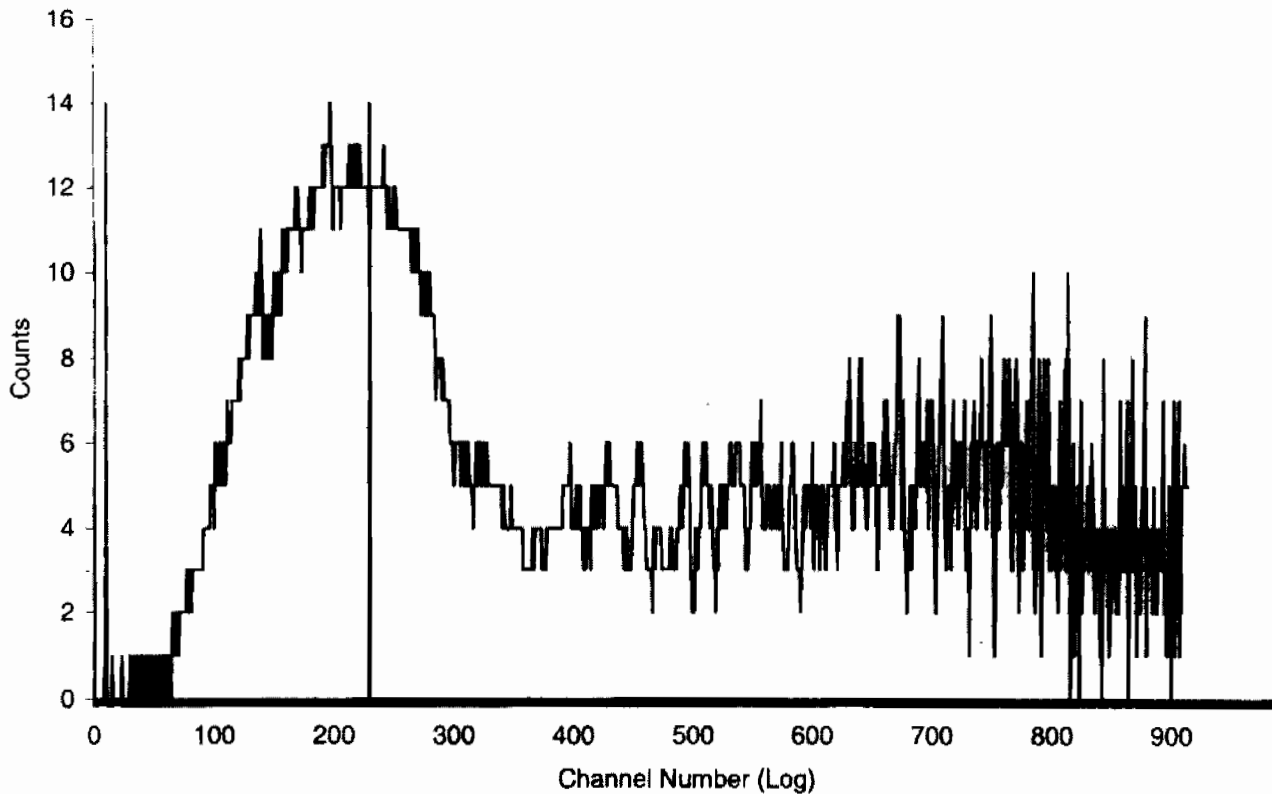
USER 04 - TRITIUM



Sample Count Start Time:	6 Feb 2010 11:38:08		
Data Capture Date	06 Feb 2010 13:13:30		
User Filename	S04020662-2A.XLS		
	U04020662-1A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	2	62-2	95.00
H#, Total Counts:	119.1	4928	
Win1: Tritium - Start, End, Counts:	10	230	1430
Win2: - Start, End, Counts:	0	990	4928

SPECTRUM PLOT

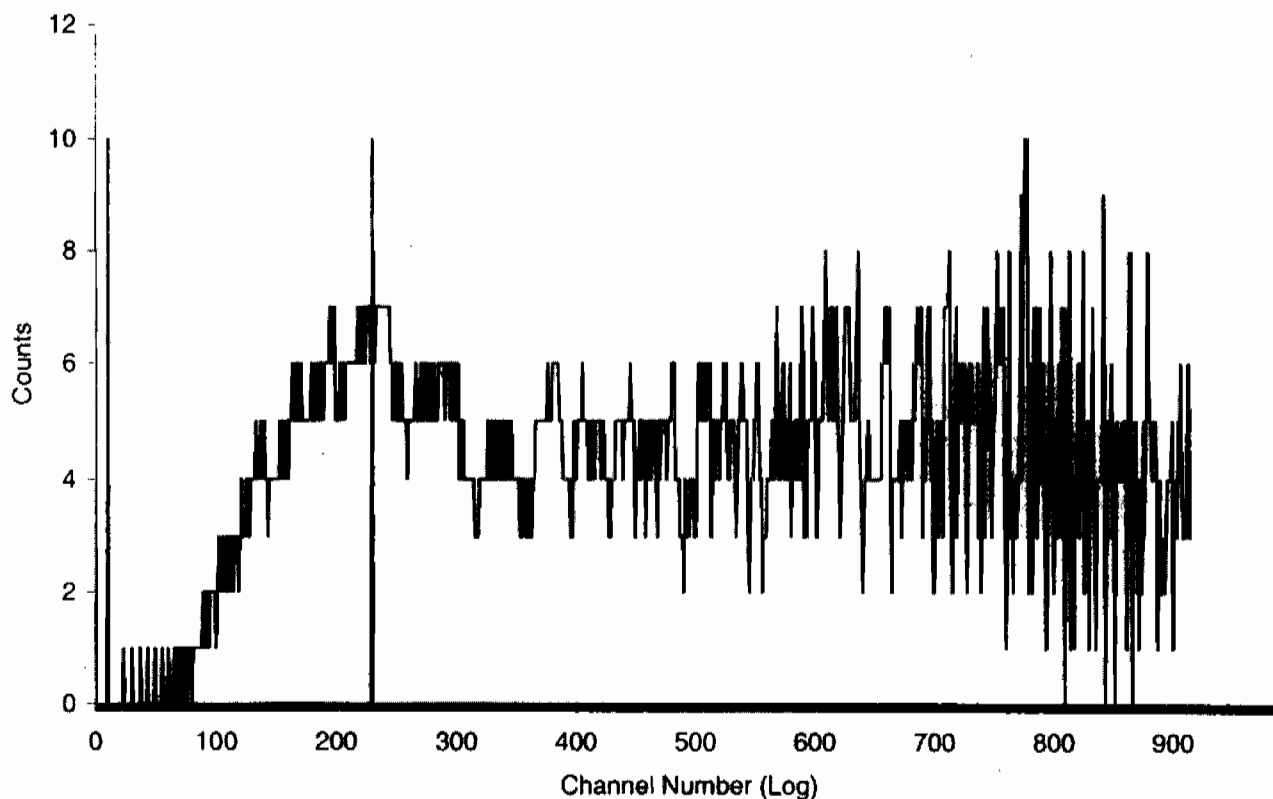
USER 04 - TRITIUM



Sample Count Start Time:	6 Feb 2010 13:16:09		
Data Capture Date	06 Feb 2010 14:51:31		
User Filename	S04020662-3A.XLS		
	U04020662-1A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	3	62-3	95.00
H#, Total Counts:	118.8	3878	
Win1: Tritium - Start, End, Counts:	10	230	664
Win2: - Start, End, Counts:	0	990	3878

SPECTRUM PLOT

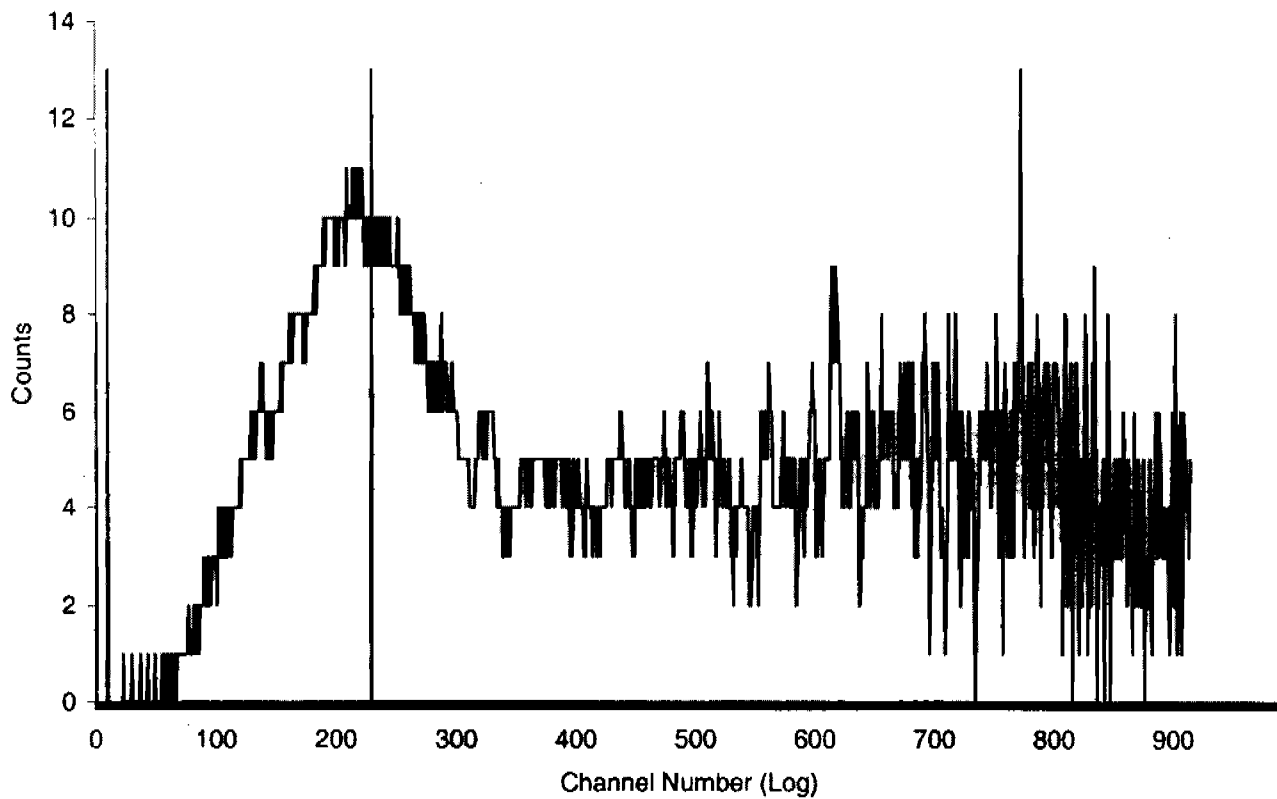
USER 04 - TRITIUM



Sample Count Start Time:	6 Feb 2010 14:54:08		
Data Capture Date	06 Feb 2010 16:29:31		
User Filename	S04020662-4A.XLS		
	U04020662-1A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	4	62-4	95.00
H#, Total Counts:	118.2	4425	
Win1: Tritium - Start, End, Counts:	10	230	1019
Win2: - Start, End, Counts:	0	990	4425

SPECTRUM PLOT

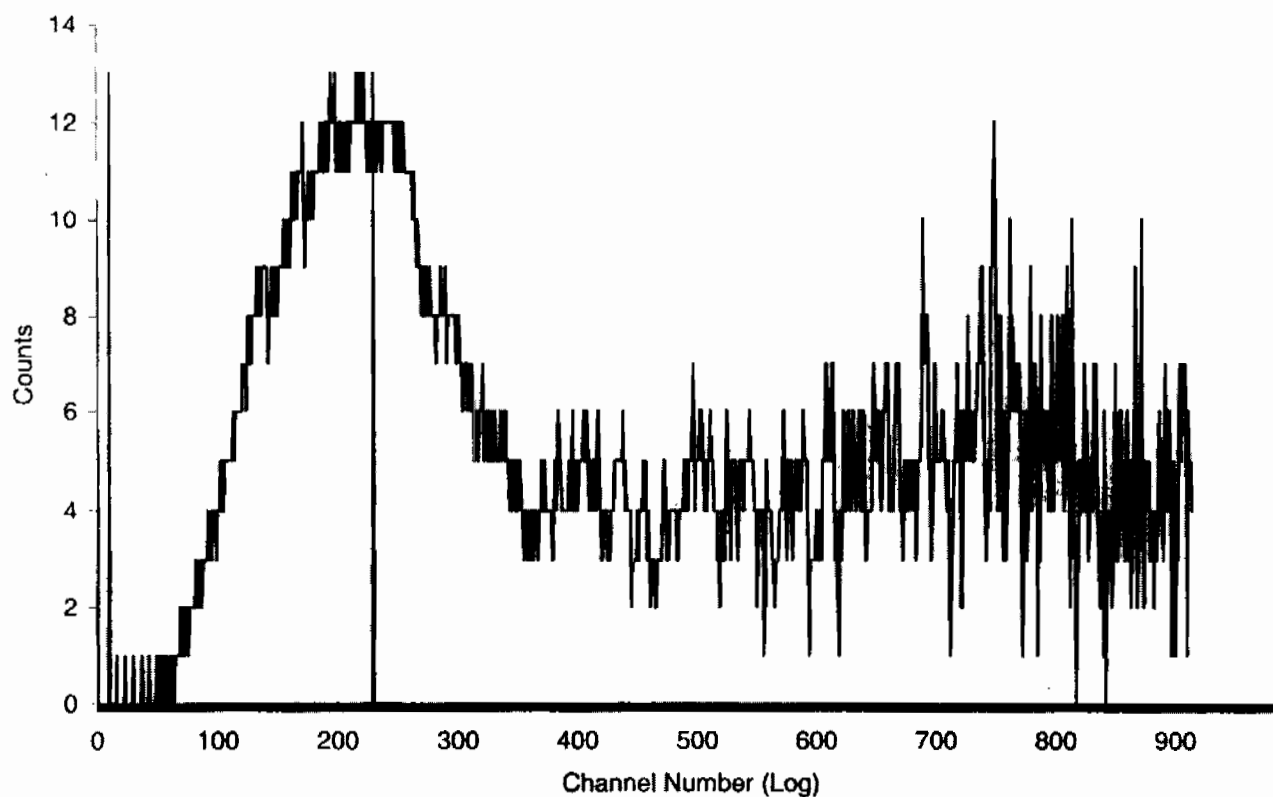
USER 04 - TRITIUM



Sample Count Start Time:	6 Feb 2010 16:32:08		
Data Capture Date	06 Feb 2010 18:07:31		
User Filename	S04020662-5A.XLS		
	U04020662-1A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	5	62-5	95.00
H#, Total Counts:	118.2	4906	
Win1: Tritium - Start, End, Counts:	10	230	1334
Win2: - Start, End, Counts:	0	990	4906

SPECTRUM PLOT

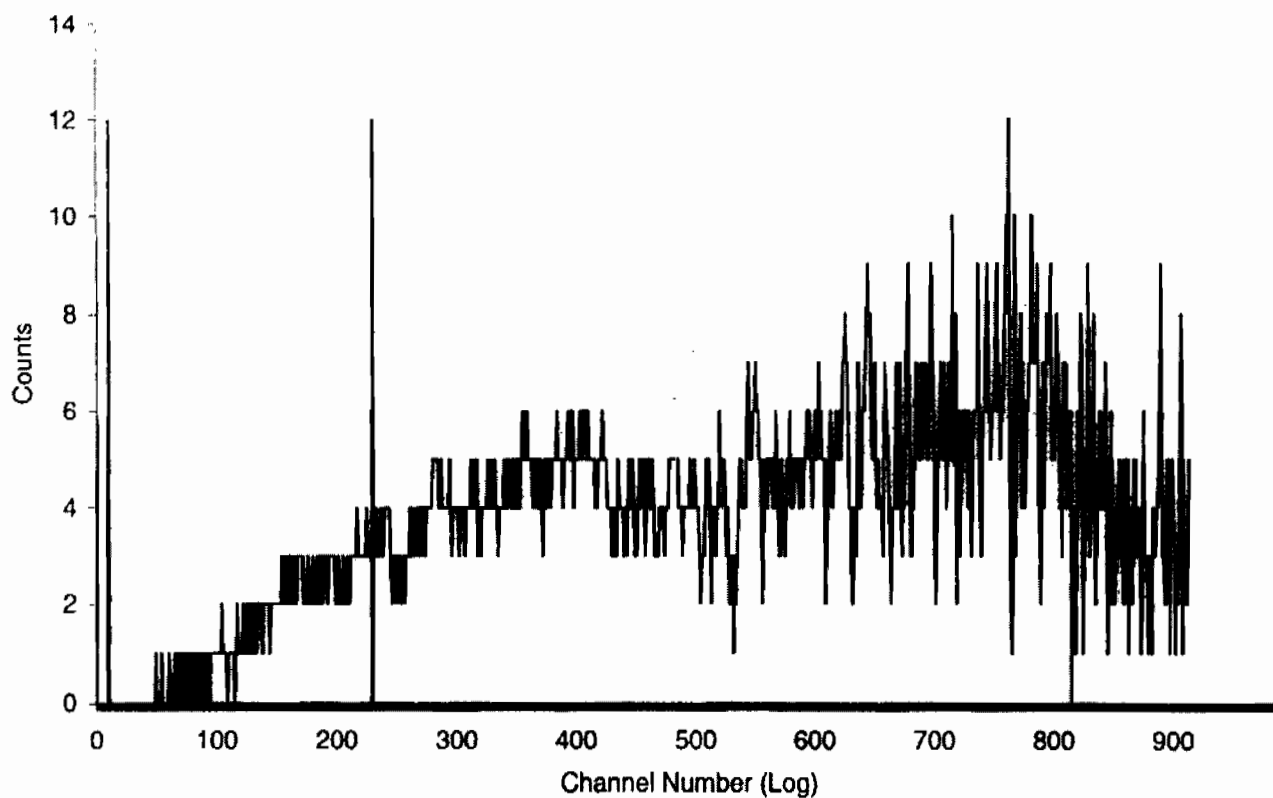
USER 04 - TRITIUM



Sample Count Start Time:	6 Feb 2010 18:10:05		
Data Capture Date	06 Feb 2010 19:45:43		
User Filename	S04020662-6A.XLS		
	U04020662-1A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	6	62-6	95.00
H#, Total Counts:	117.7	3464	
Win1: Tritium - Start, End, Counts:	10	230	303
Win2: - Start, End, Counts:	0	990	3464

SPECTRUM PLOT

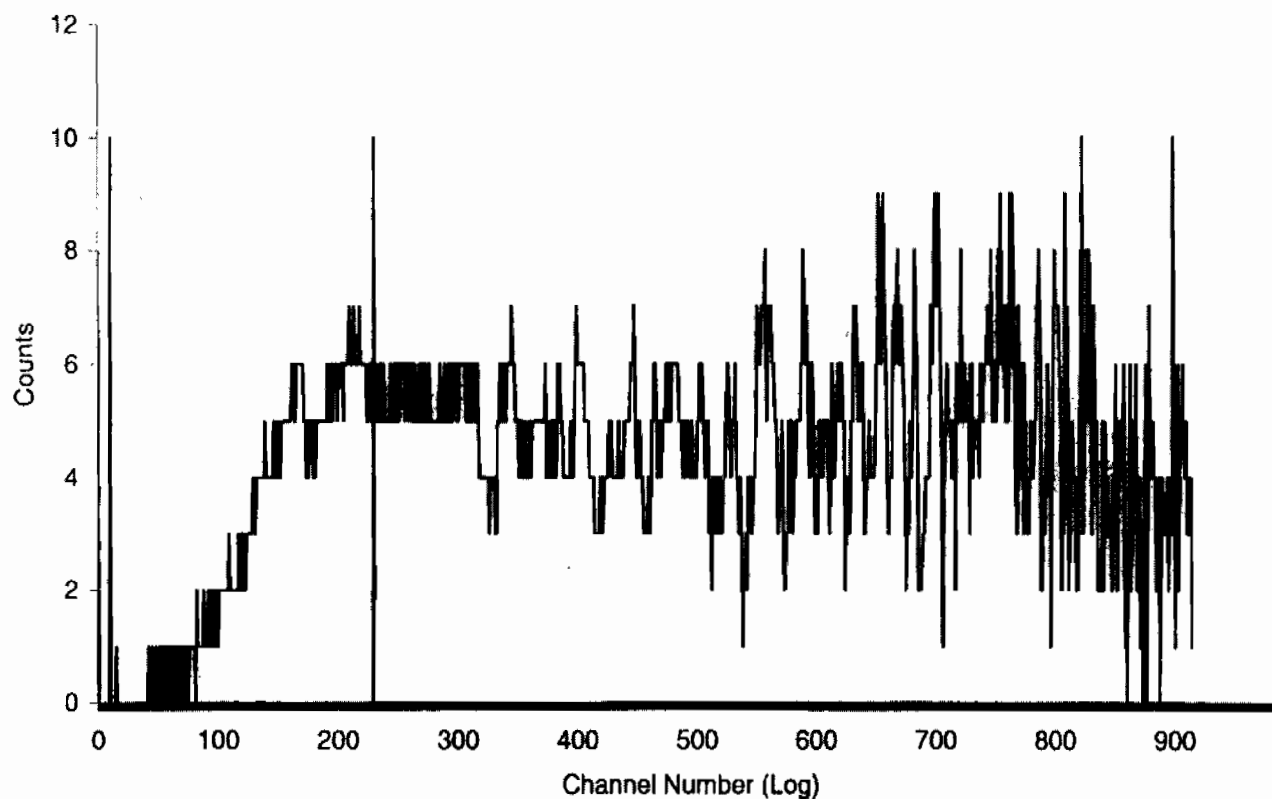
USER 04 - TRITIUM



Sample Count Start Time:	6 Feb 2010 19:48:05		
Data Capture Date	06 Feb 2010 21:23:27		
User Filename	S04020662-7A.XLS		
	U04020662-1A.XLS		
Spectrum Type	Log Counts		
User Number	04		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	7	62-7	95.00
H#, Total Counts:	117.9	3922	
Win1: Tritium - Start, End, Counts:	10	230	642
Win2: - Start, End, Counts:	0	990	3922

SPECTRUM PLOT

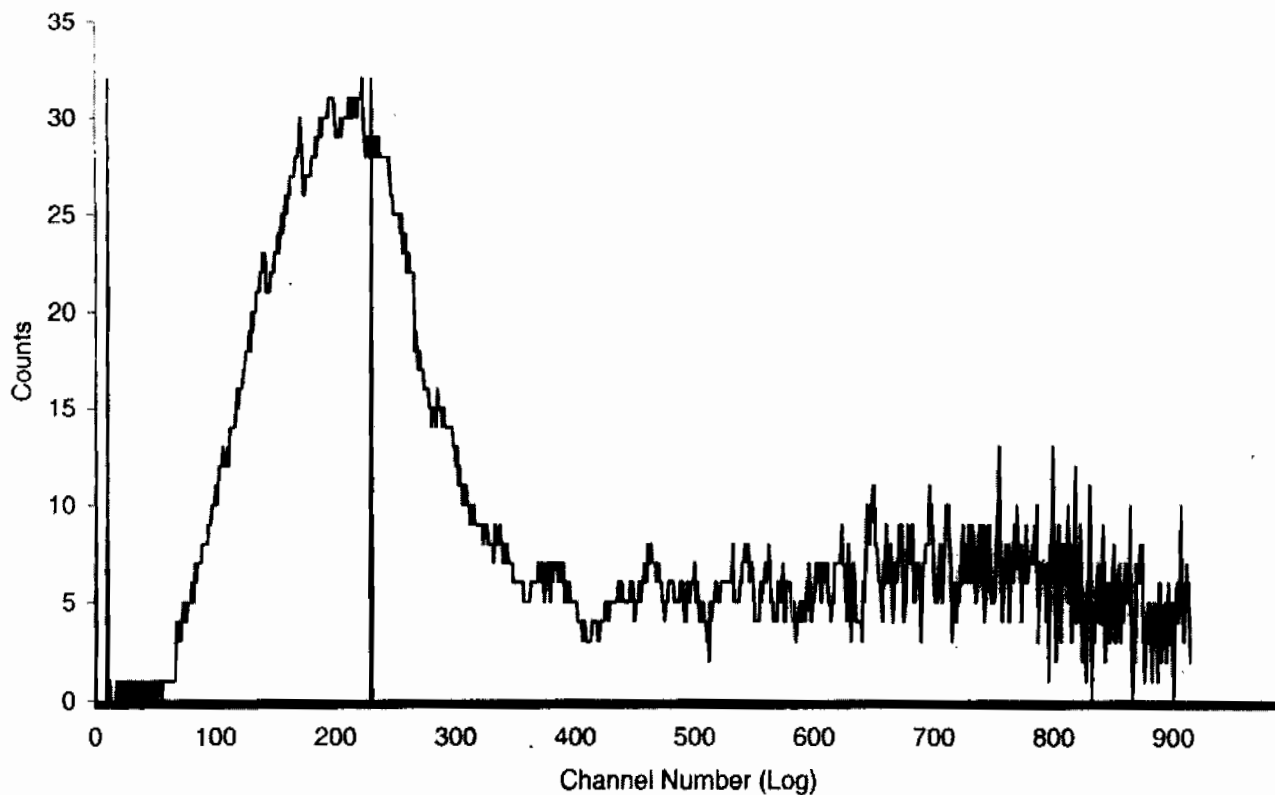
USER 04 - TRITIUM



Sample Count Start Time:	6 Feb 2010 21:27:41		
Data Capture Date	06 Feb 2010 23:27:10		
User Filename	S02020624-1A.XLS		
	U02020624-1A.XLS		
Spectrum Type	Log Counts		
User Number	02		
User Id	TRITIUM		
User Comment	GREEN		
Isotope Name	14C		
Scintillator	LIQUID		
Sample, Rack-Pos, Time:	1	24-1	120.00
H#, Total Counts:	117.5	8557	
Win1: Tritium - Start, End, Counts:	10	230	3412
Win2: - Start, End, Counts:	0	990	8557

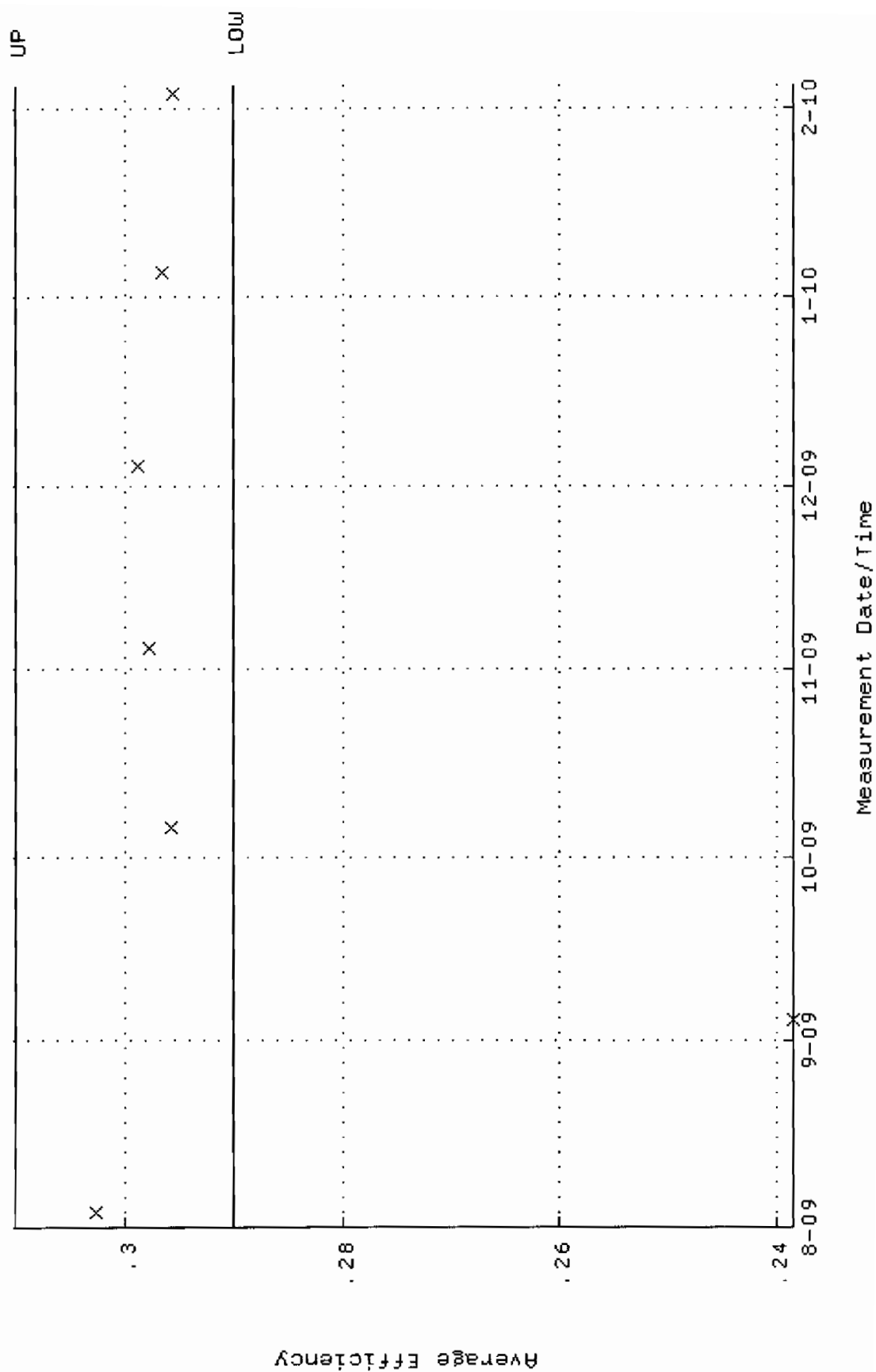
SPECTRUM PLOT

USER 02 - TRITIUM

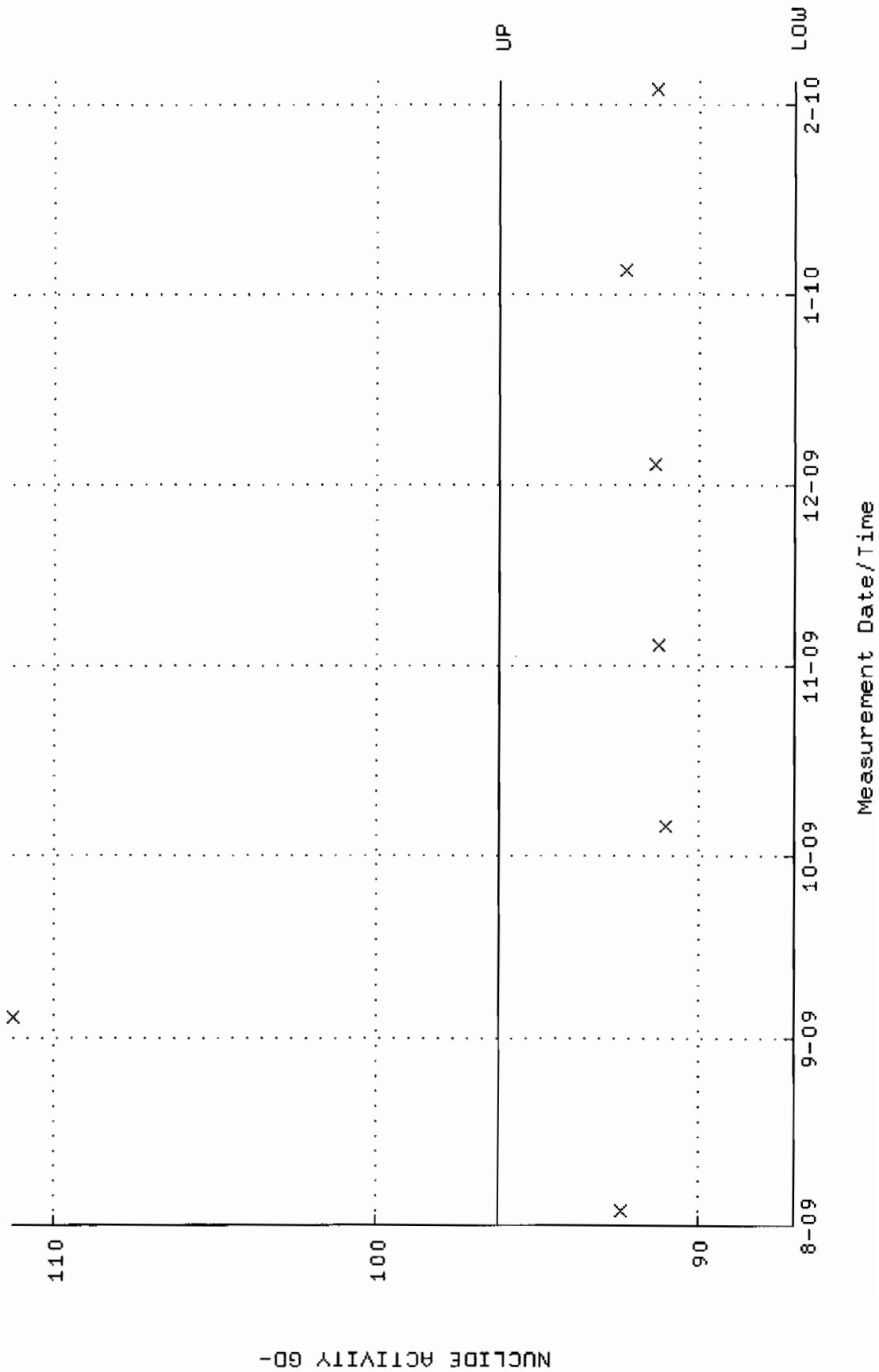


BACKGROUND AND EFFICIENCY DATA

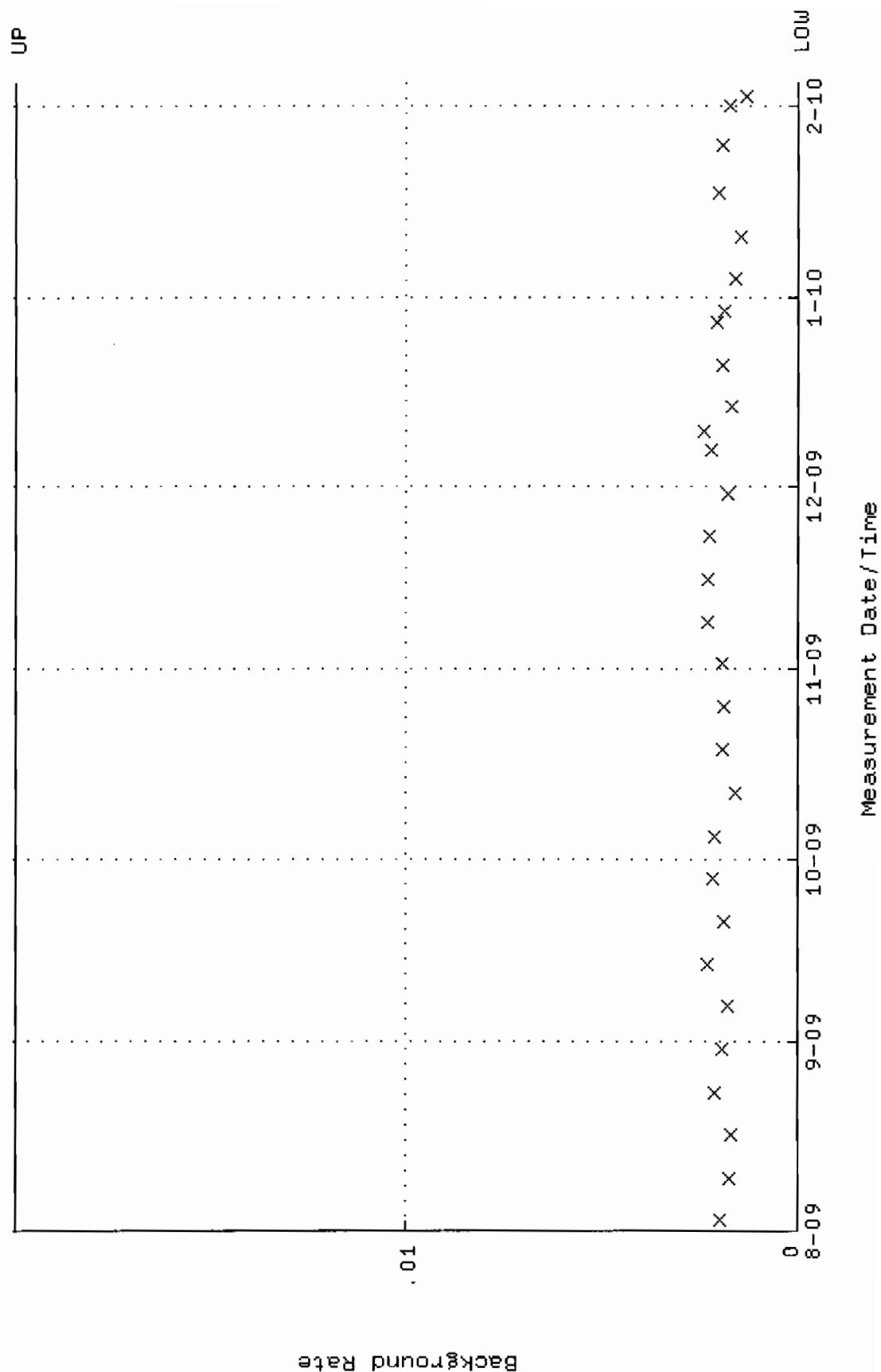
QA filename : DKA100:[ENV_ALPHA.QA.W]W007.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 3-AUG-2009 10:53:33 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.290108 through 0.310108



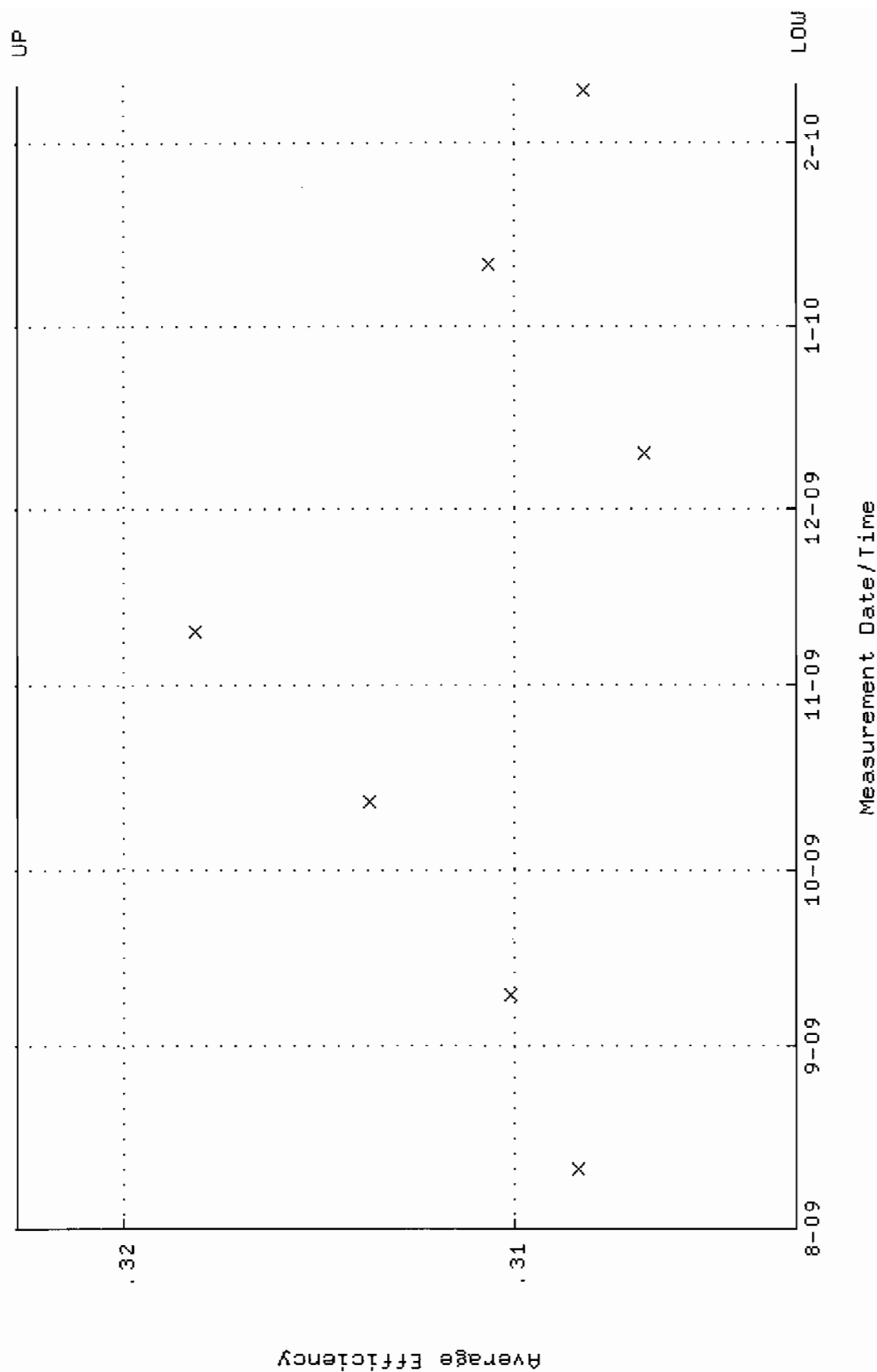
QA filename : DKA100:[ENV_ALPHA.QA.W]W007.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY 60-148)
 Start/End Dates : 3-AUG-2009 10:53:33 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.0687 through 96.2339



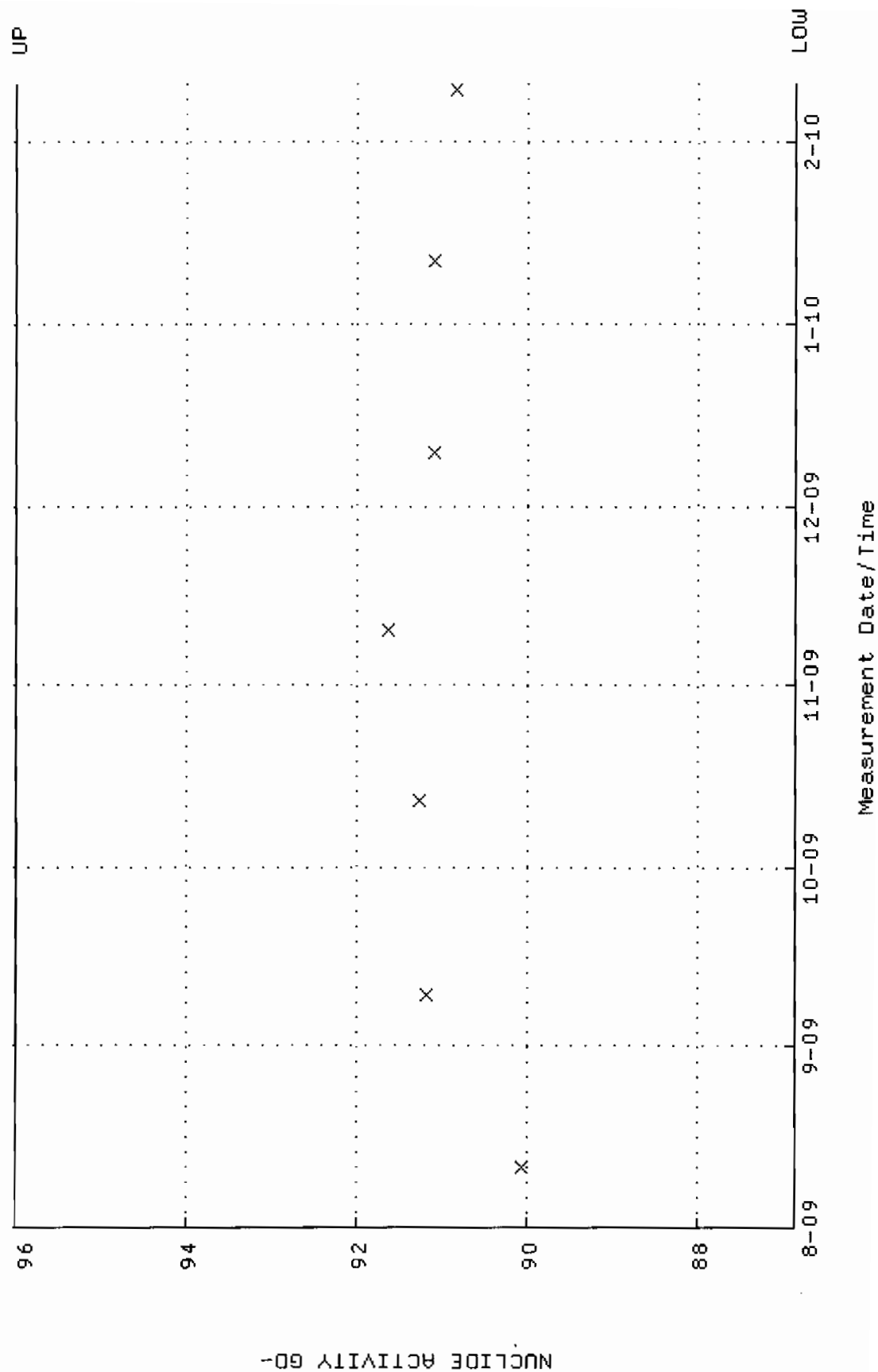
QA filename : DKA100:[ENV_ALPHA.QA.B]B007.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:32 through 4-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



QA filename : DKA100:[ENV-ALPHA.QA.W]W065.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.302750 through 0.322750



QA filename : DKA100:[ENV_ALPHA.QA.W]W065.QAF;3
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.8638 through 96.0074

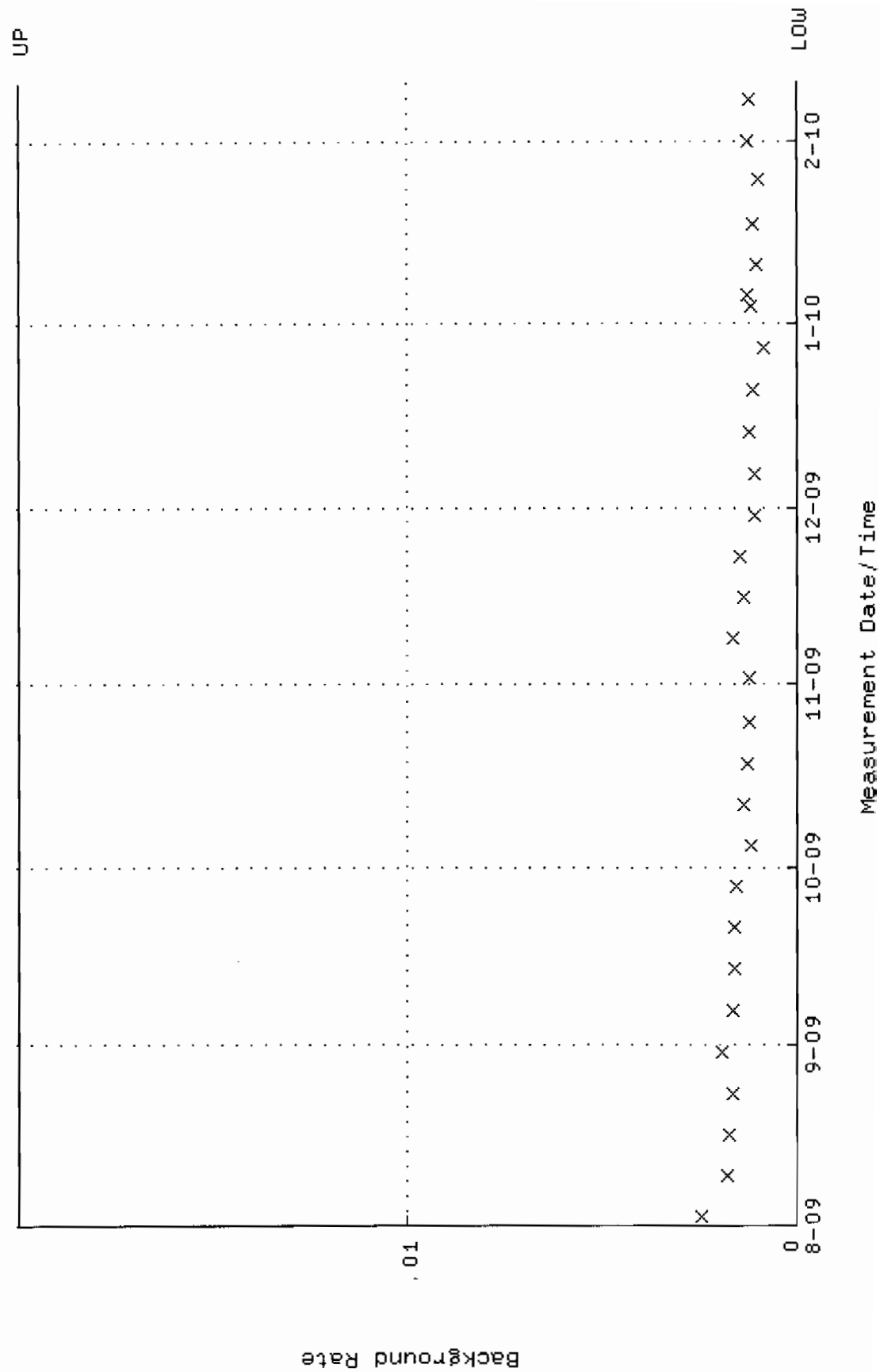


QA filename : DKA100:[ENV_ALPHA.QA.B]B065.QAF;1

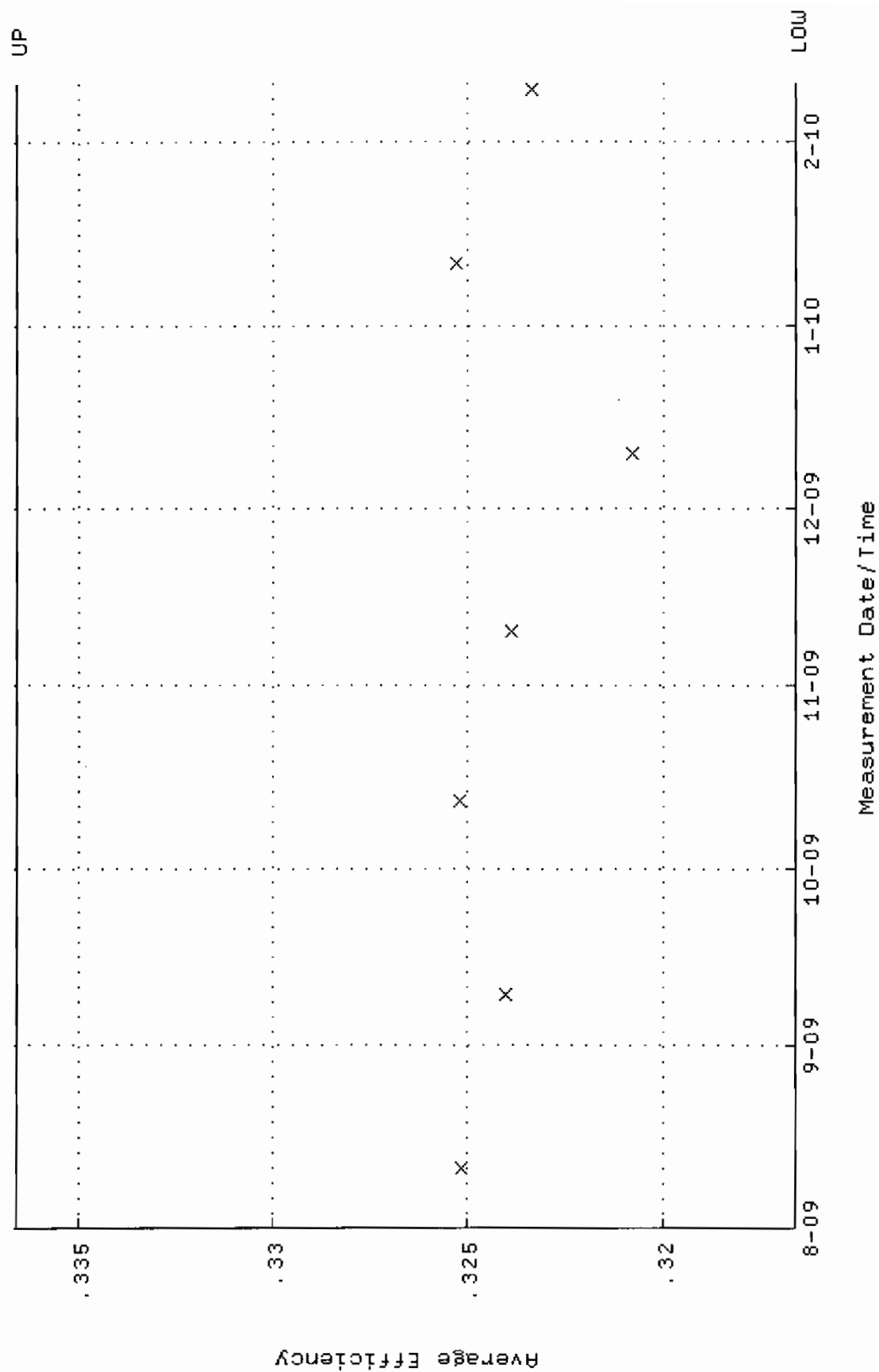
Parameter Name : BACKRATE (Background Rate)

Start/End Dates : 2-AUG-2009 17:38:38 through 10-FEB-2010 12:00:00

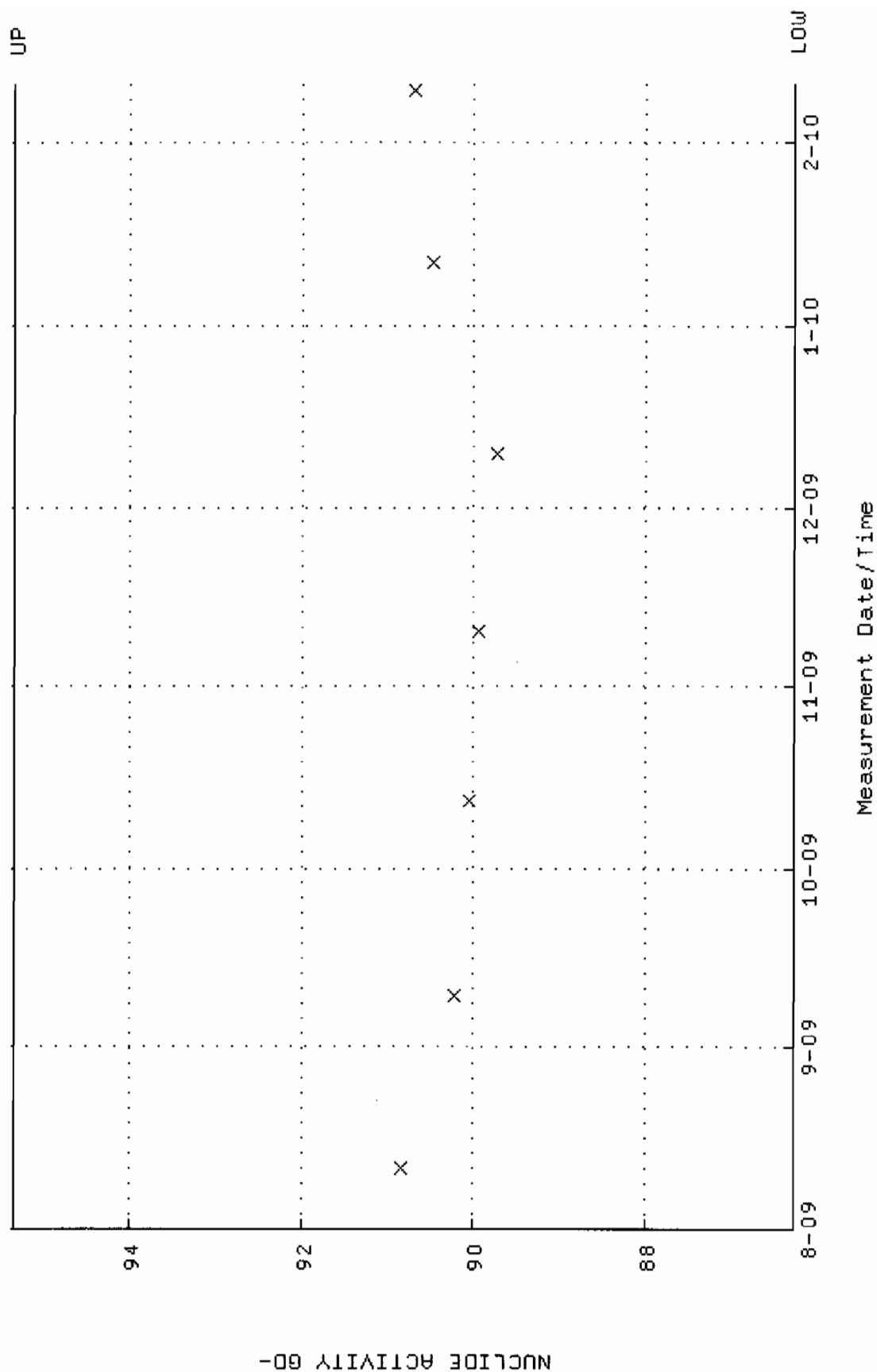
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



QA filename : DKA100:[ENV_ALPHA.QA.W]W067.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.316597 through 0.336597



QA filename : DKA100:[ENV_ALPHA.QA.W]W067.QAF;2
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.2683 through 95.3491

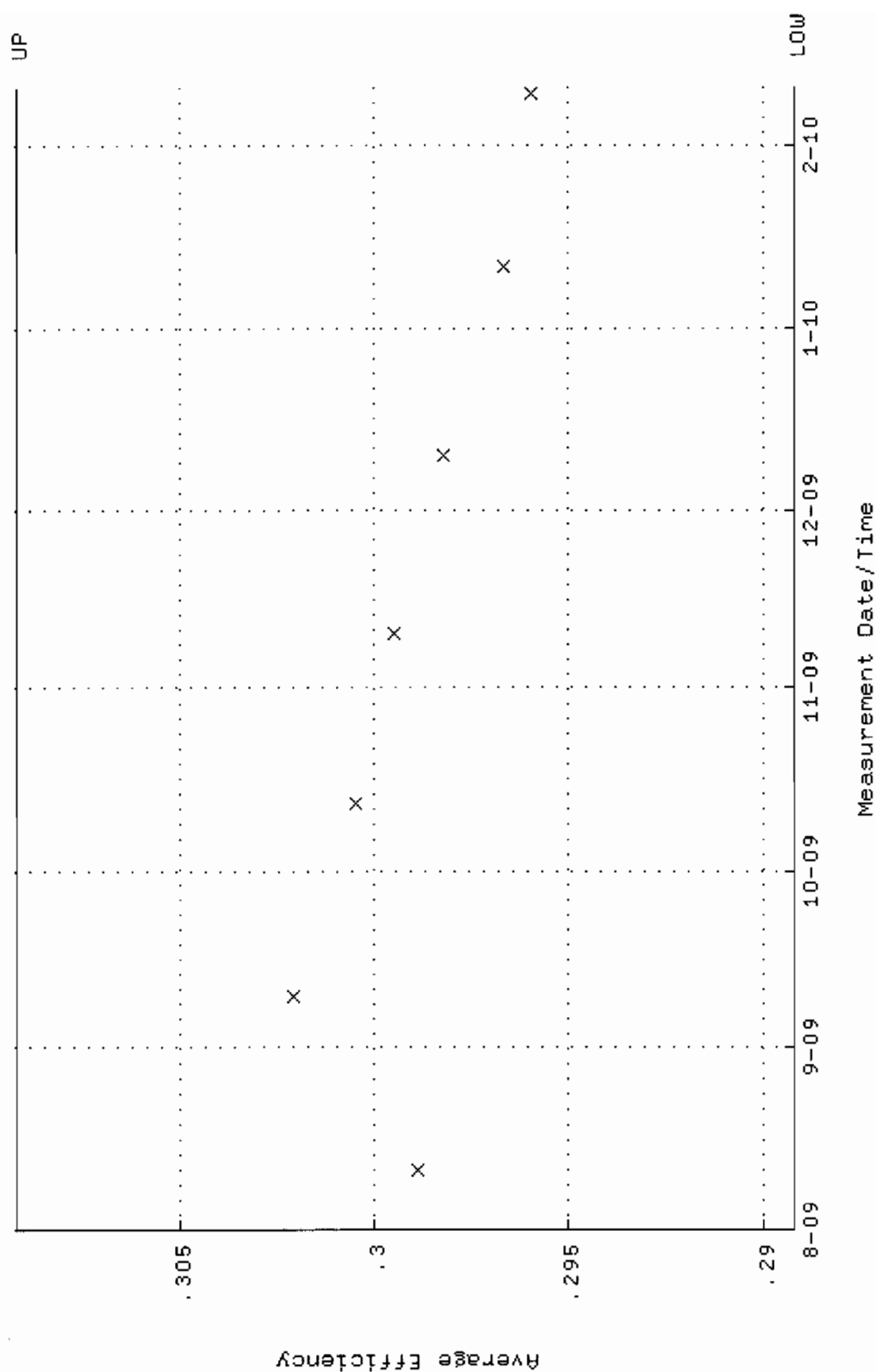


QA filename : DKA100:[ENV_ALPHA.QA.W]W068.QAF;2

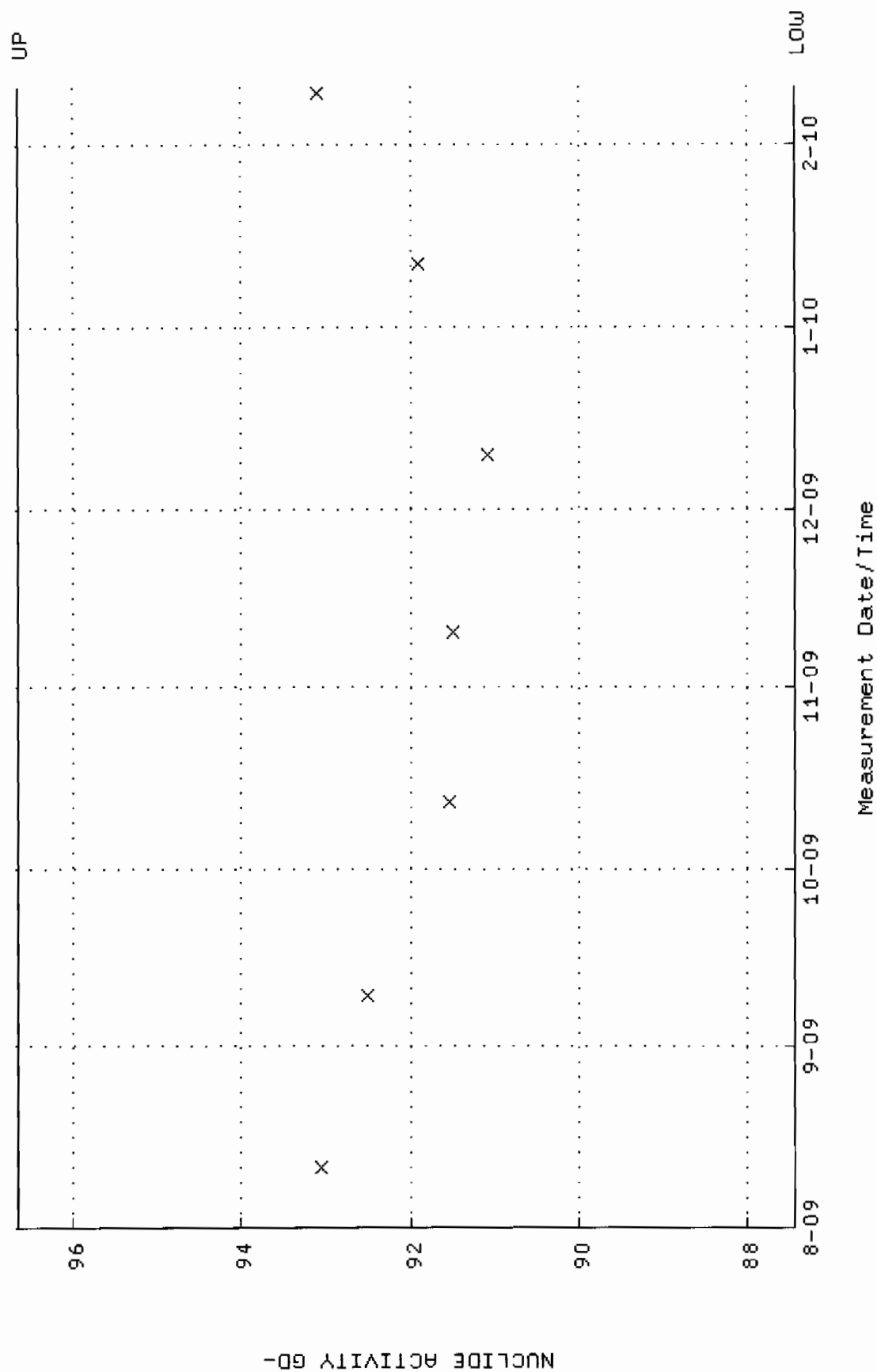
Parameter Name : AVRGEFF (Average Efficiency)

Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00

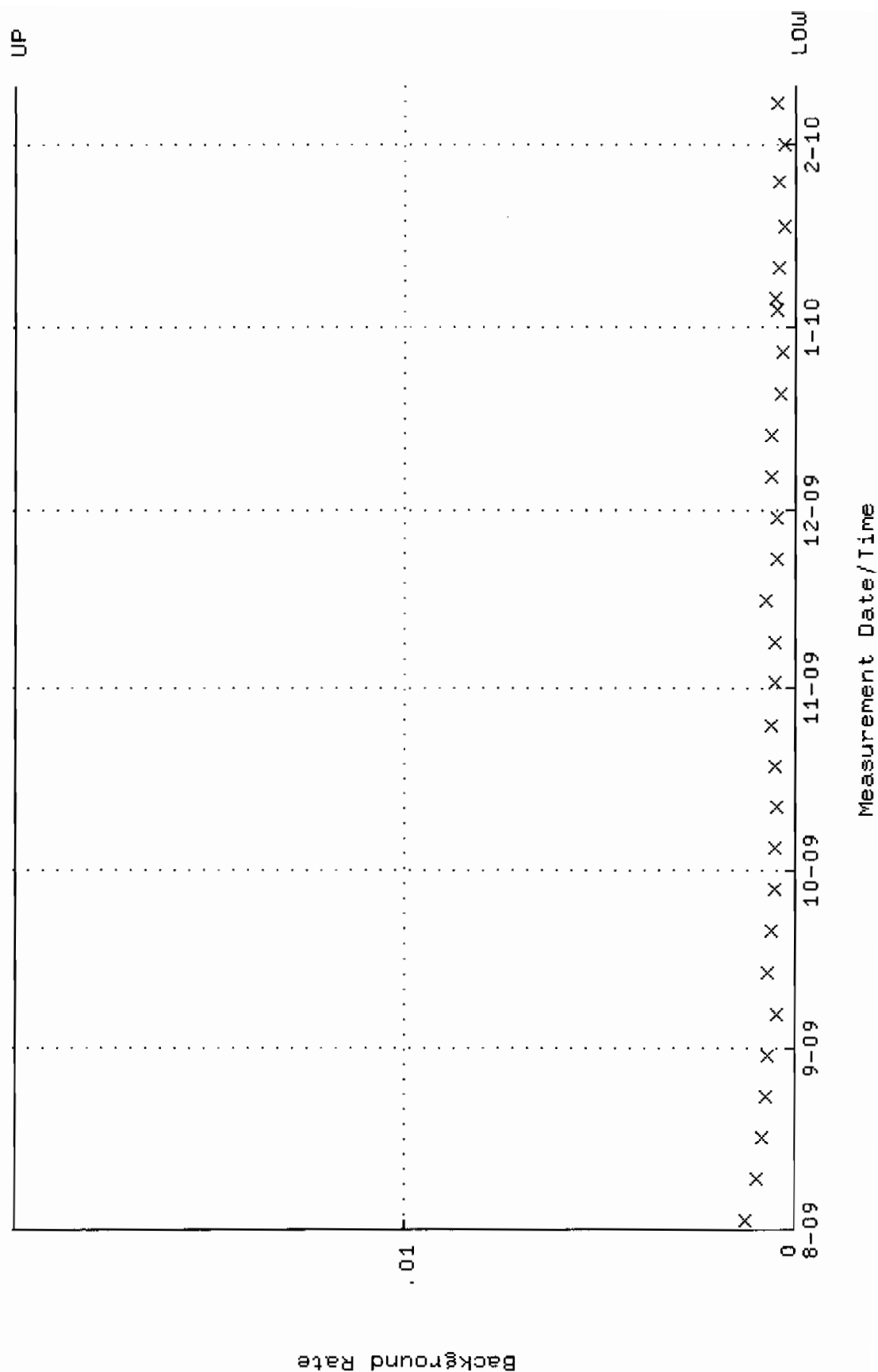
Lower/Upper Lmts: 0.289178 through 0.309178



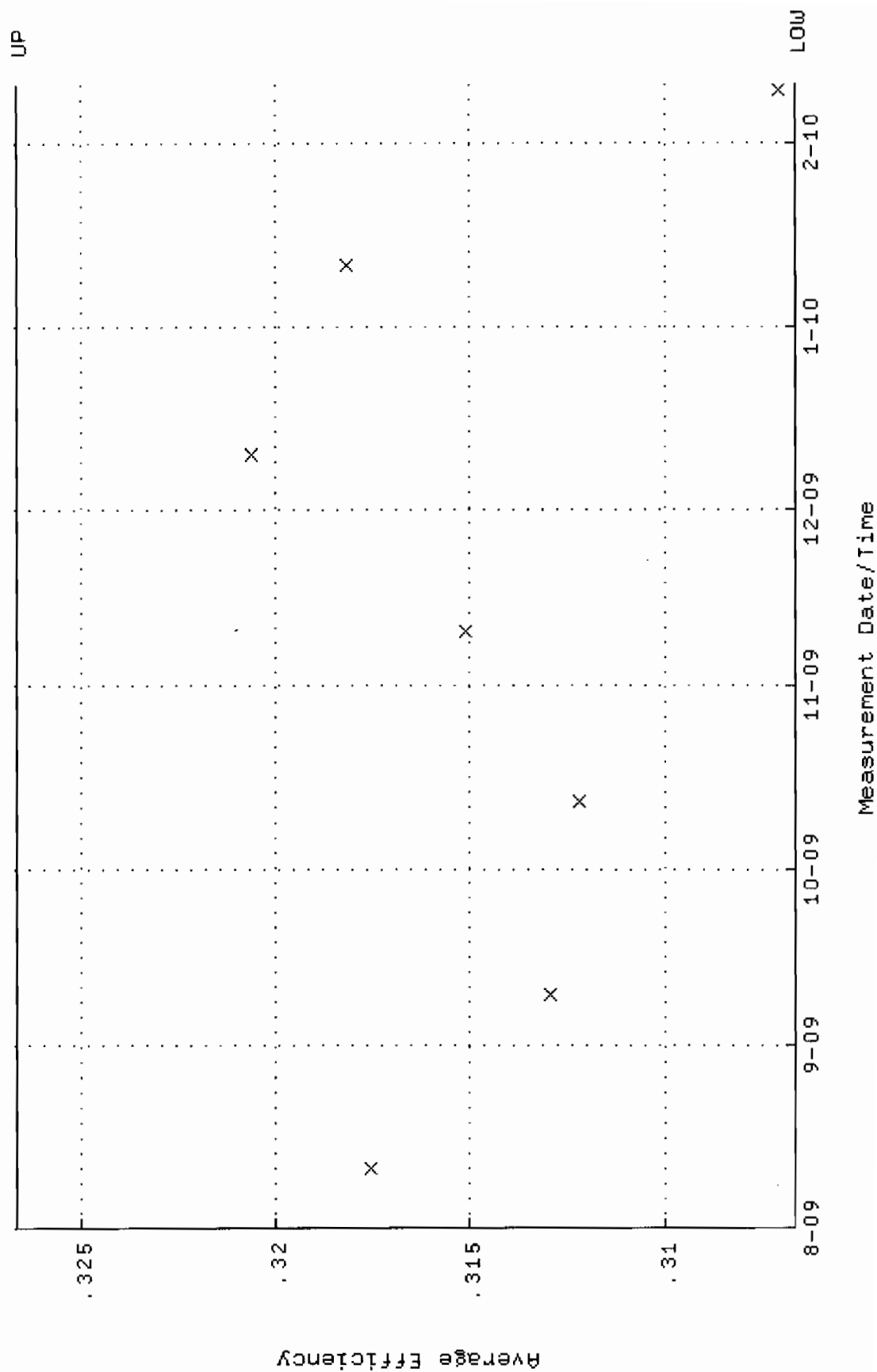
QA filename : DKA100:[ENV_ALPHA.QA.W]W068.QAF;2
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.4419 through 96.6463



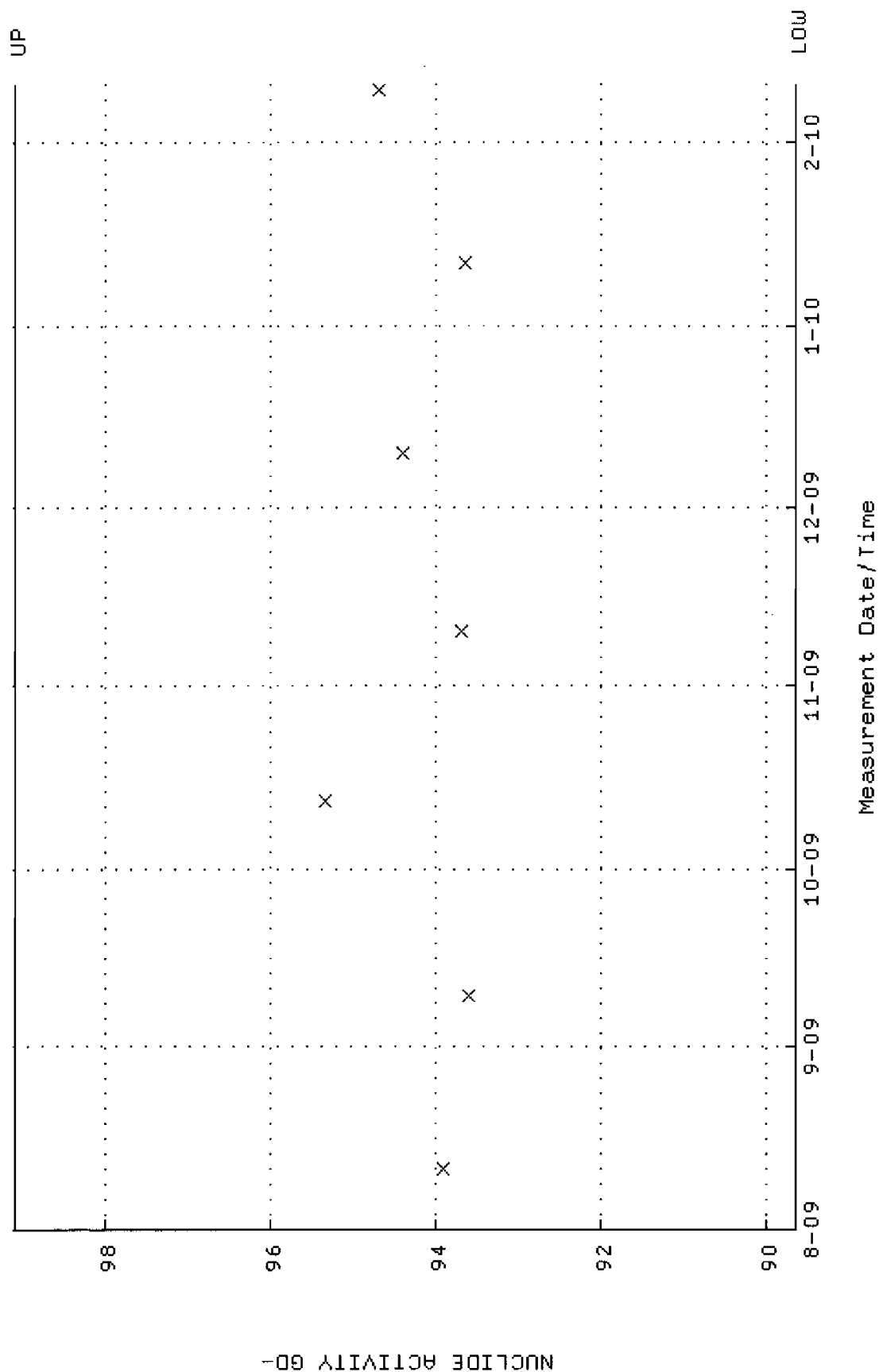
QA filename : DKA100:[ENV-ALPHA.QA.B]B068.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 2-AUG-2009 17:38:38 through 10-FEB-2010 17:38:38
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



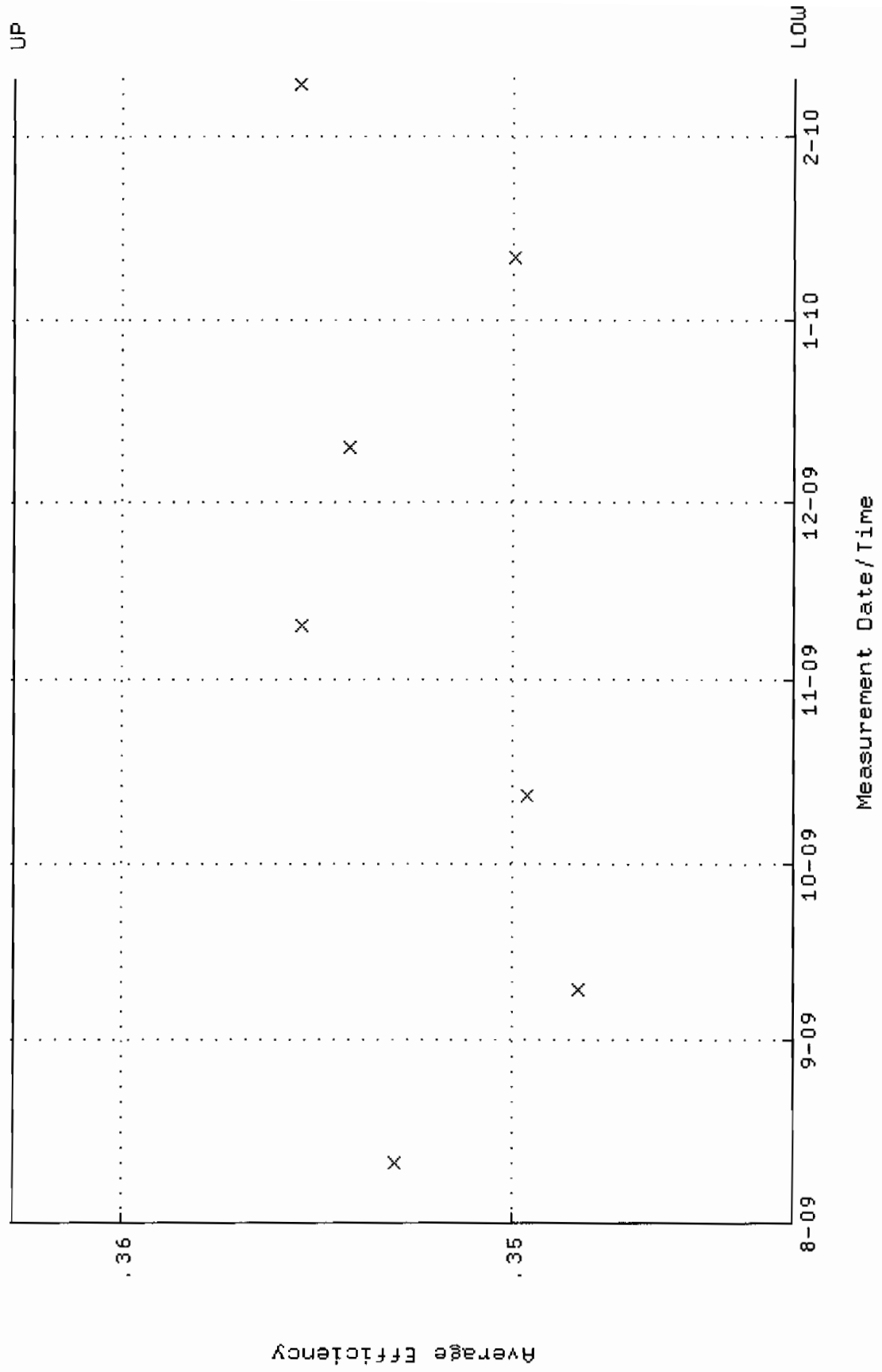
QA filename : DKA100:[ENV_ALPHA.QA.W]W069.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.306636 through 0.326636



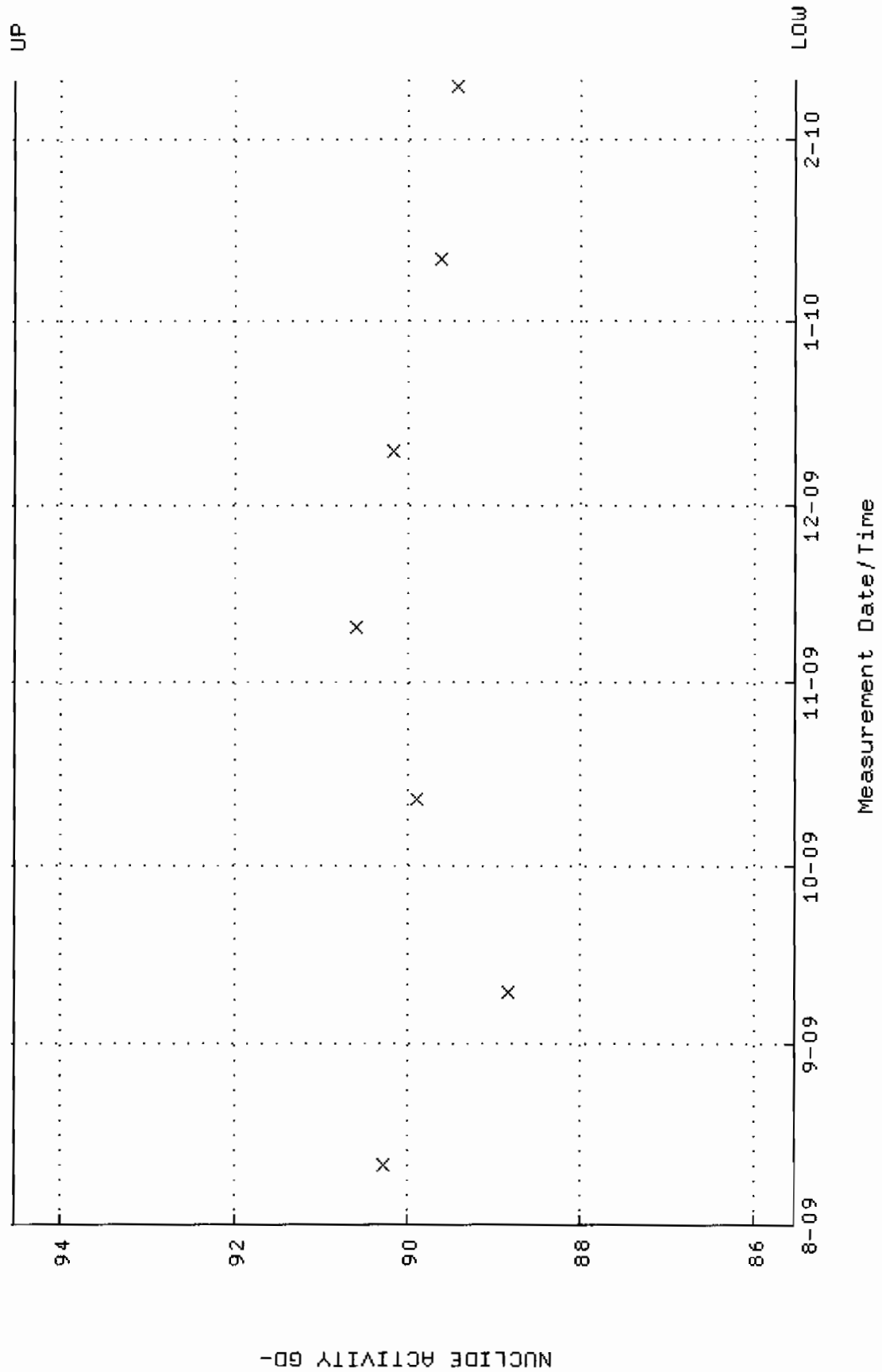
QA filename : DKA100:[ENV-ALPHA.QA.W]W069.QAF;3
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 89.6479 through 99.0845



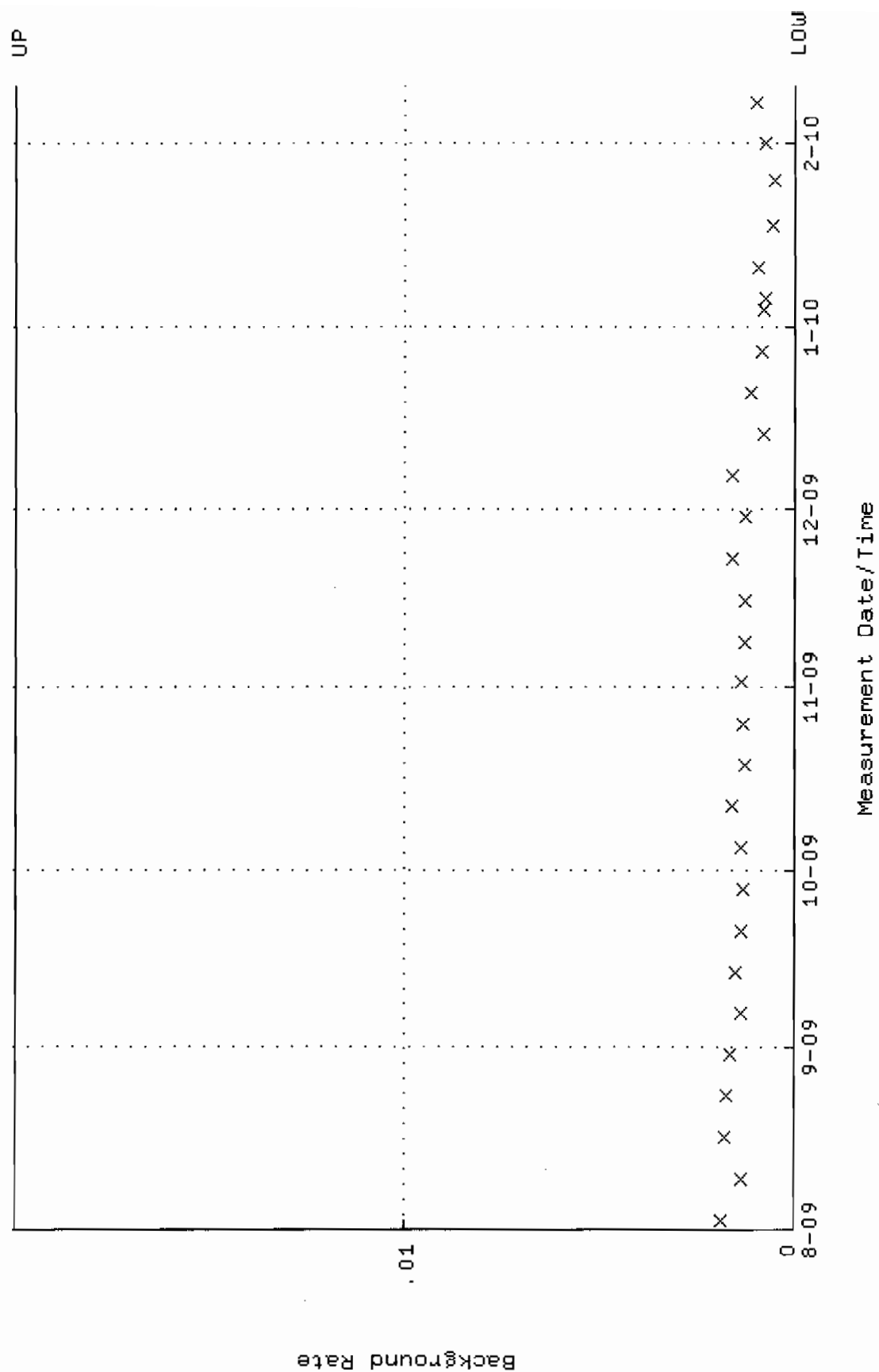
QA filename : DKA100:[ENV_ALPHA.QA.W]U070.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.342785 through 0.362785



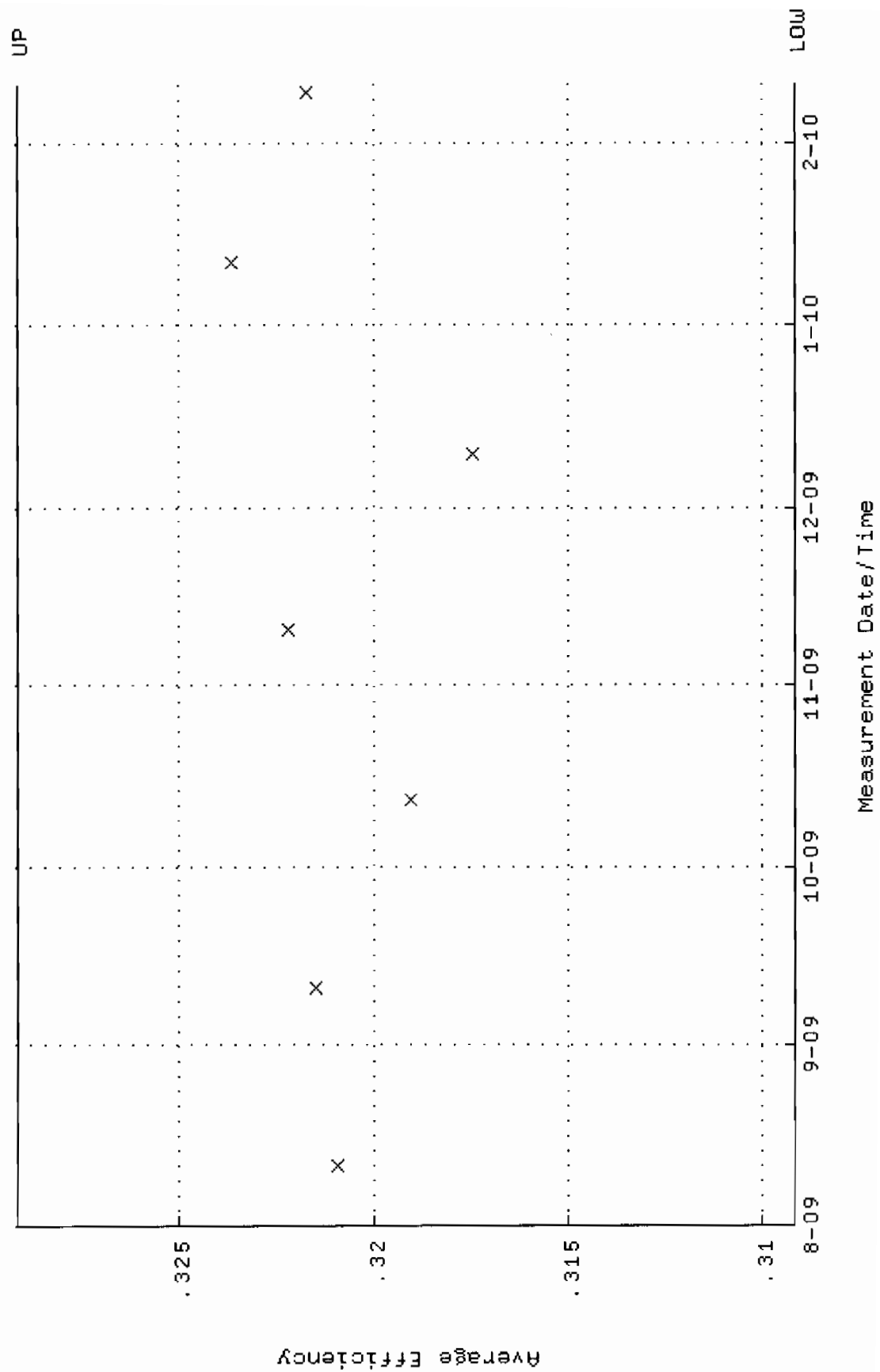
QA filename : DKA100:[ENV_ALPHA.QA.W]W070.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:10 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 85.5293 through 94.5323



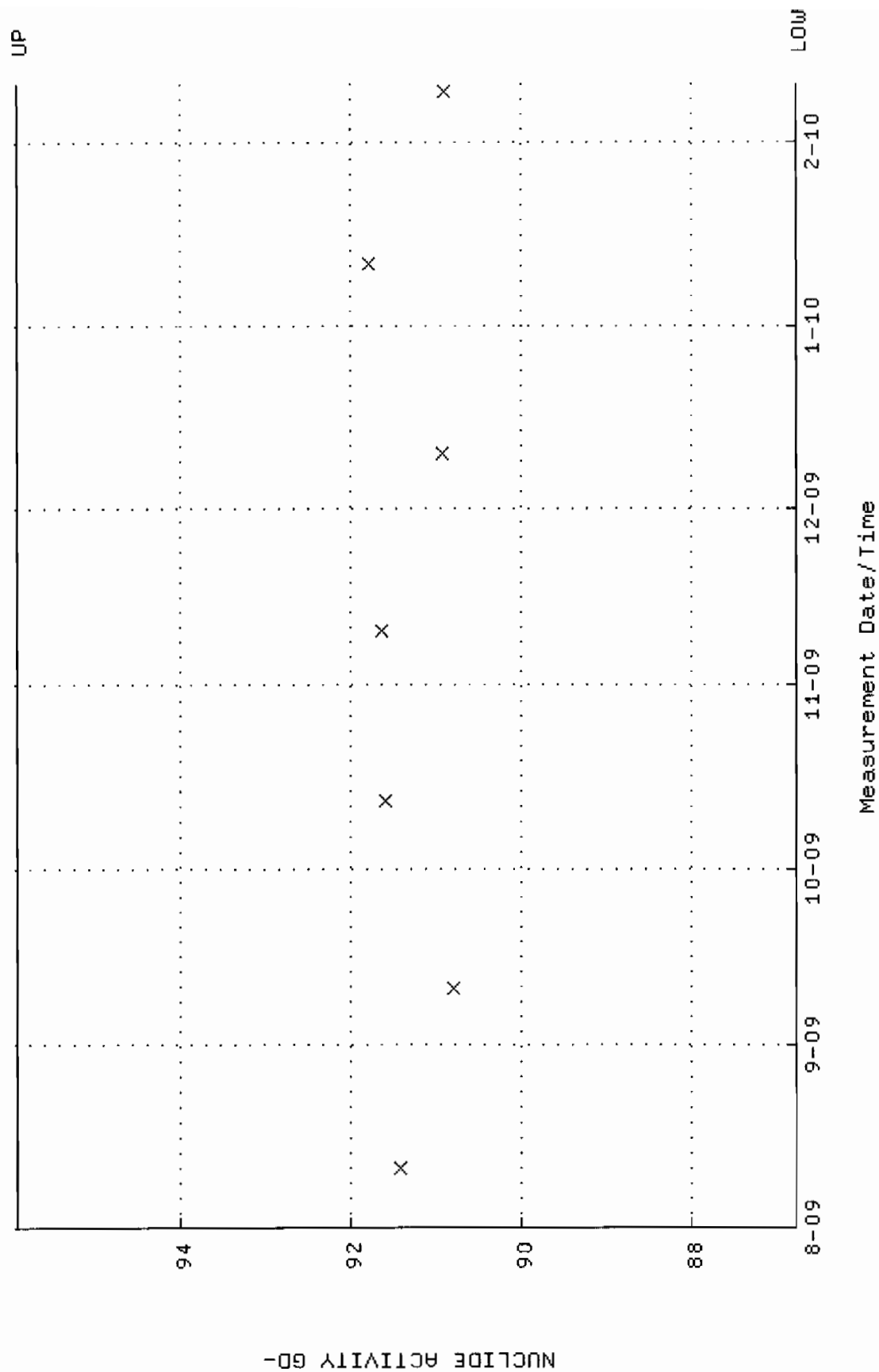
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



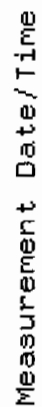
QA filename : DKA100:[ENV_ALPHA.QA.W]W071.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:11 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.309161 through 0.329161



QA filename : DKA100:[ENV_ALPHA.QA.W]W071.QAF;3
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:11 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.7769 through 95.9113



Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

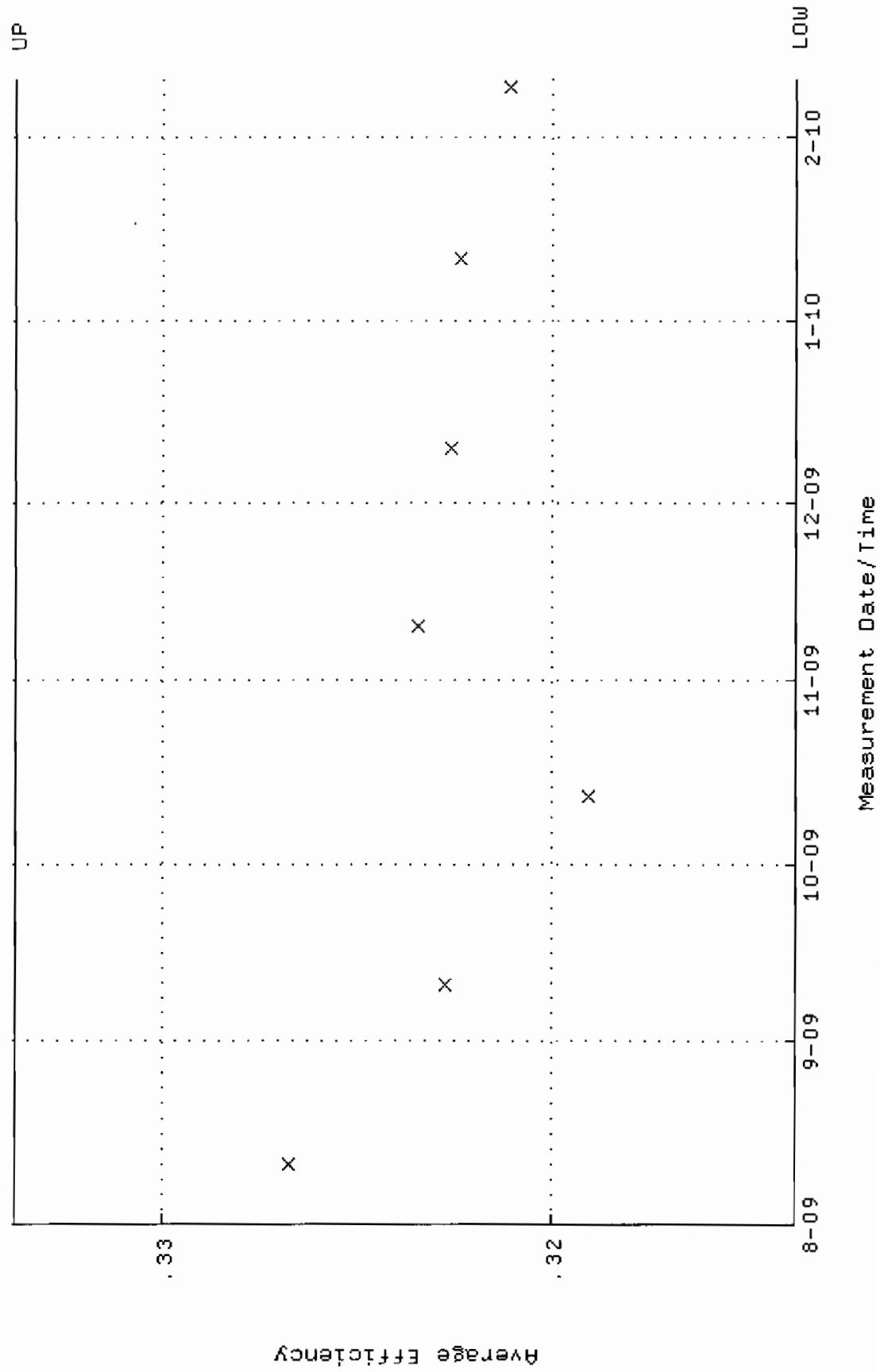


QA filename : DKA100:[ENV_ALPHA.QA.W]W072.QAF;2

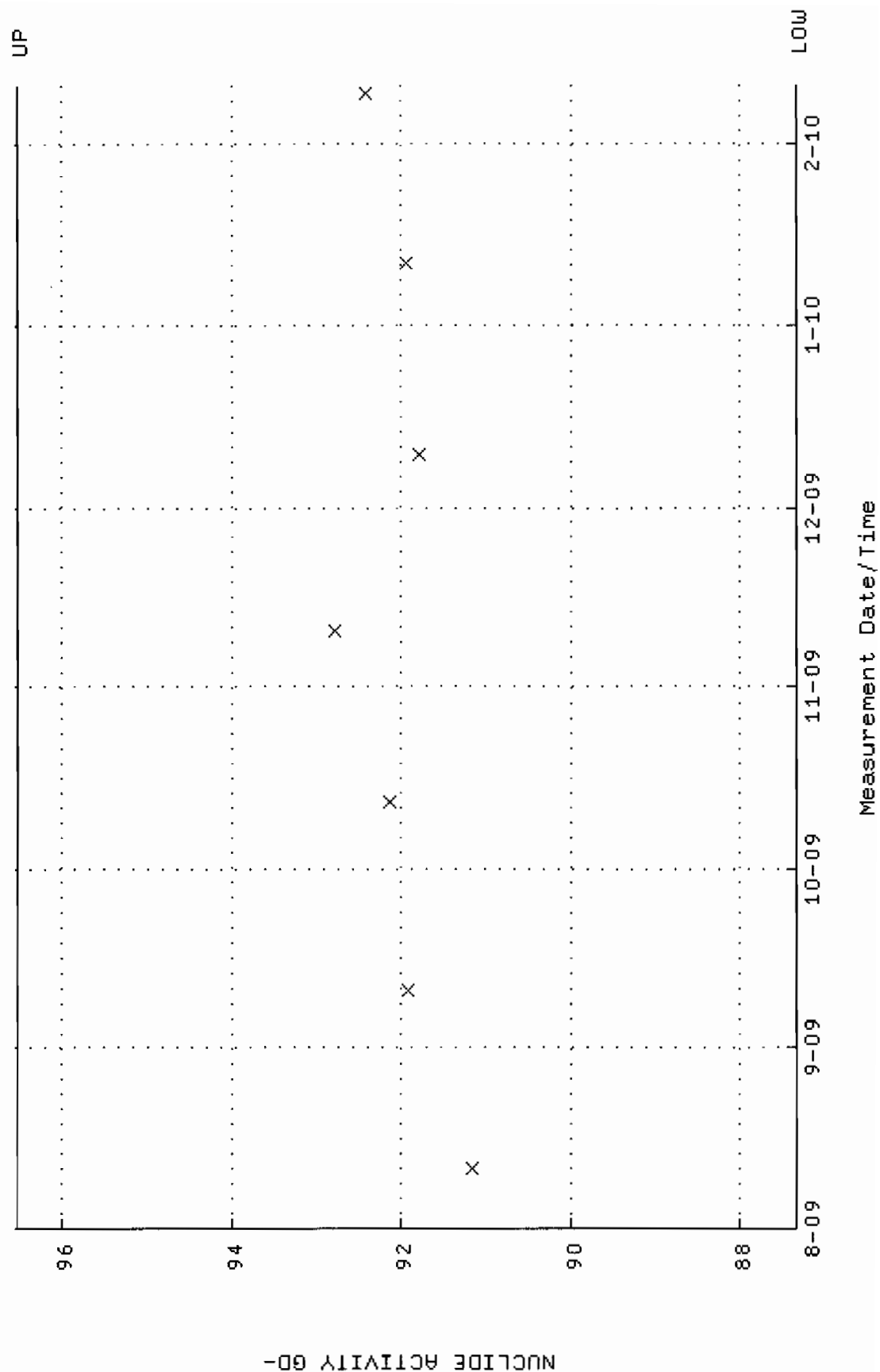
Parameter Name : AVRGEFF (Average Efficiency)

Start/End Dates : 11-AUG-2009 07:20:11 through 10-FEB-2010 12:00:00

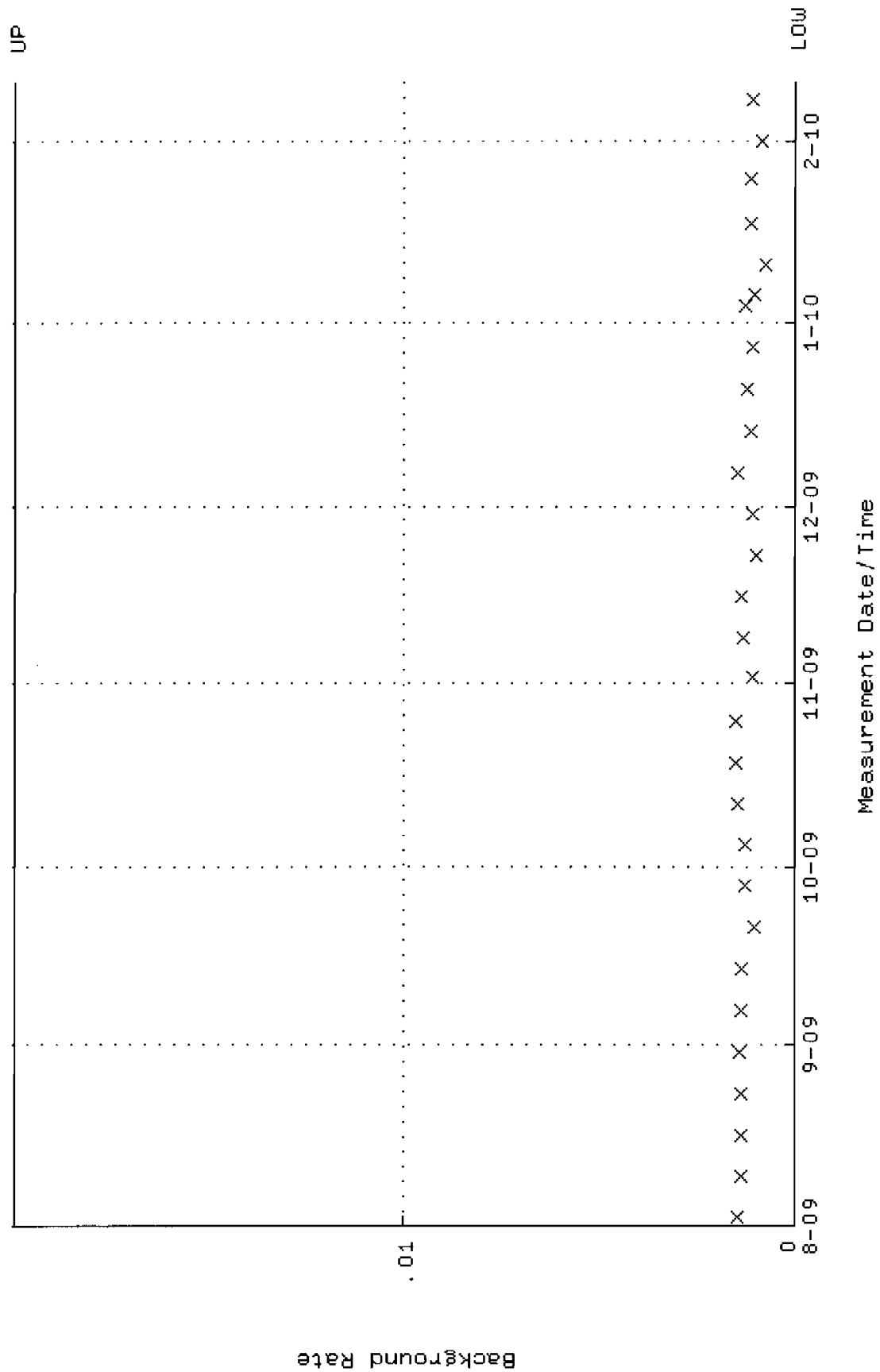
Lower/Upper Lmts: 0.313761 through 0.333761



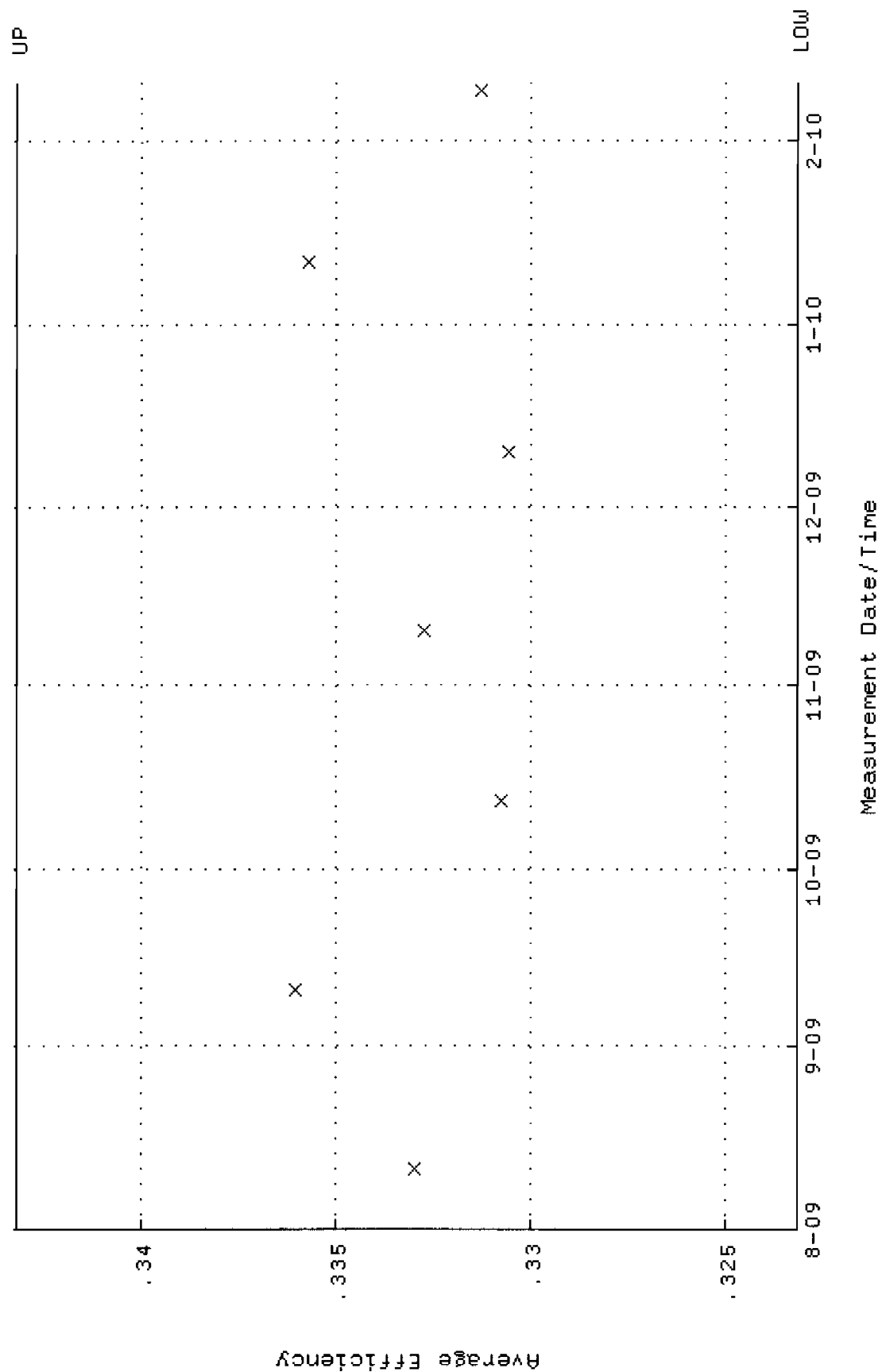
QA filename : DKA100:[ENV_ALPHA.QA.W]W072.QAF;2
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:11 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.3348 through 96.5280



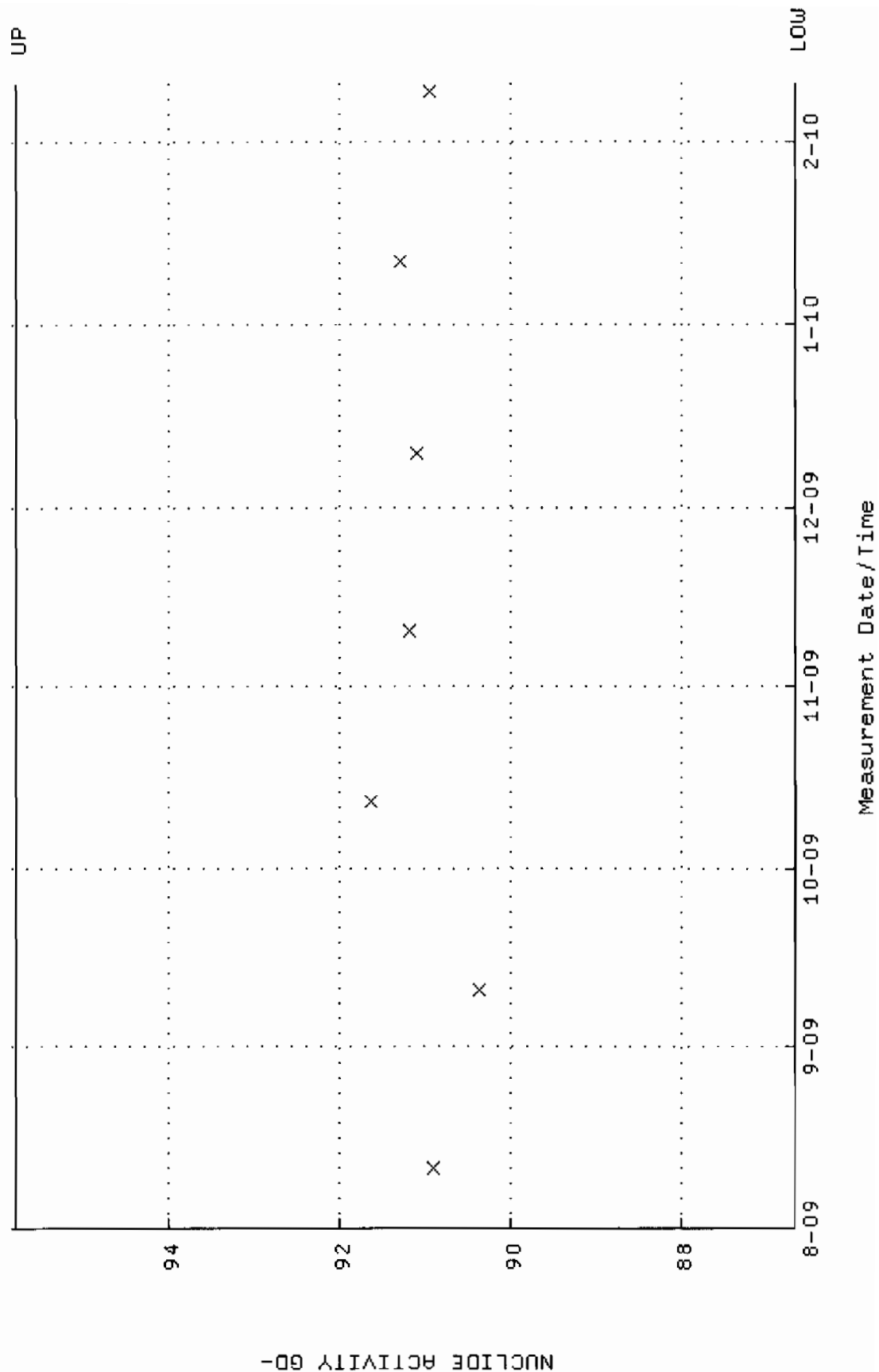
QA filename : DKA100:[ENV_ALPHA.QA.B]B072.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:39 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



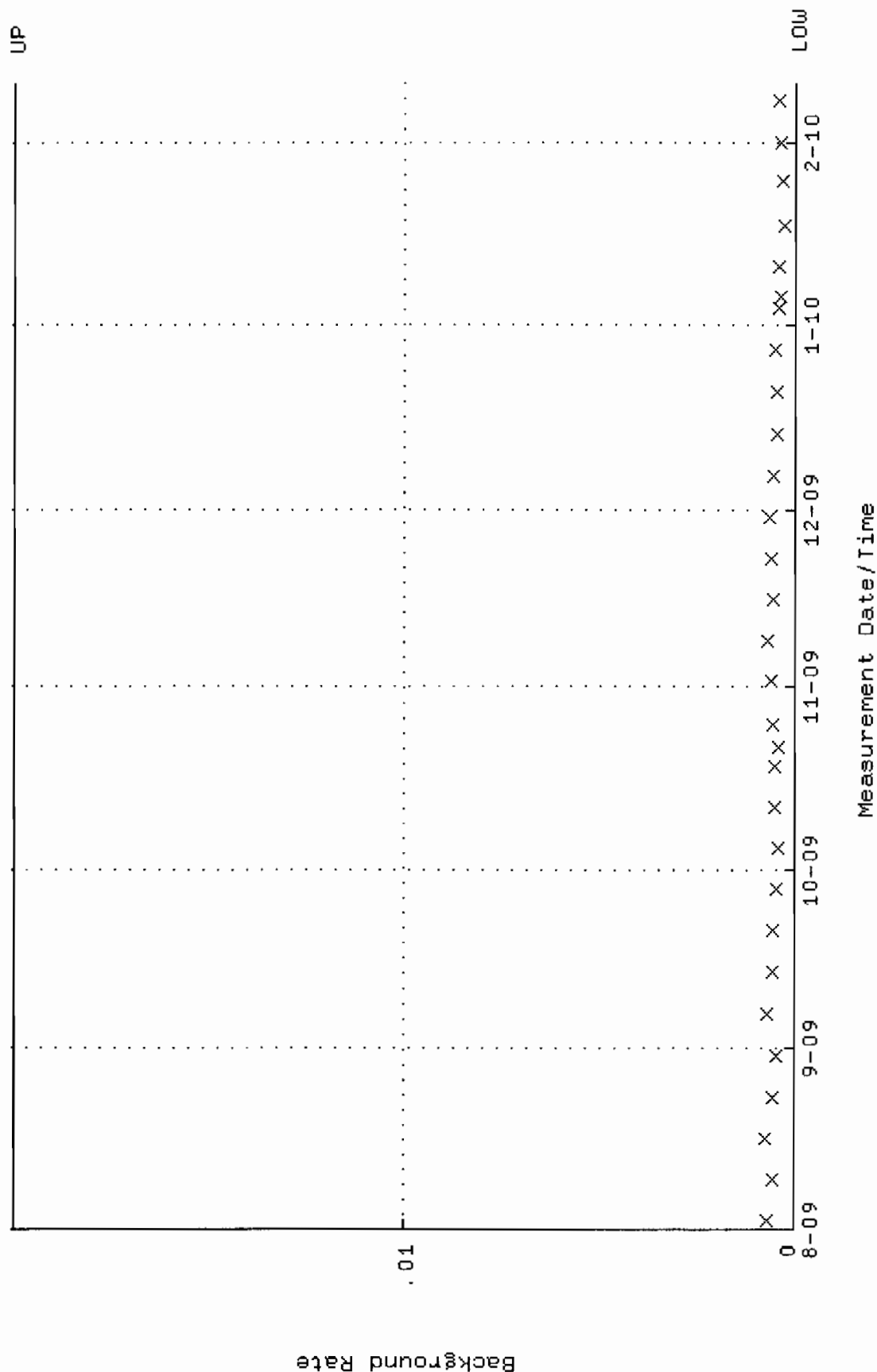
QA filename : DKA100:[ENV_ALPHA.QA.W]W073.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:11 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.323184 through 0.343184



QA filename : DKA100:[ENV_ALPHA.QA.W]W073.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:11 through 10-FEB-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 : 2-AUG-2009 17:38:39 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02

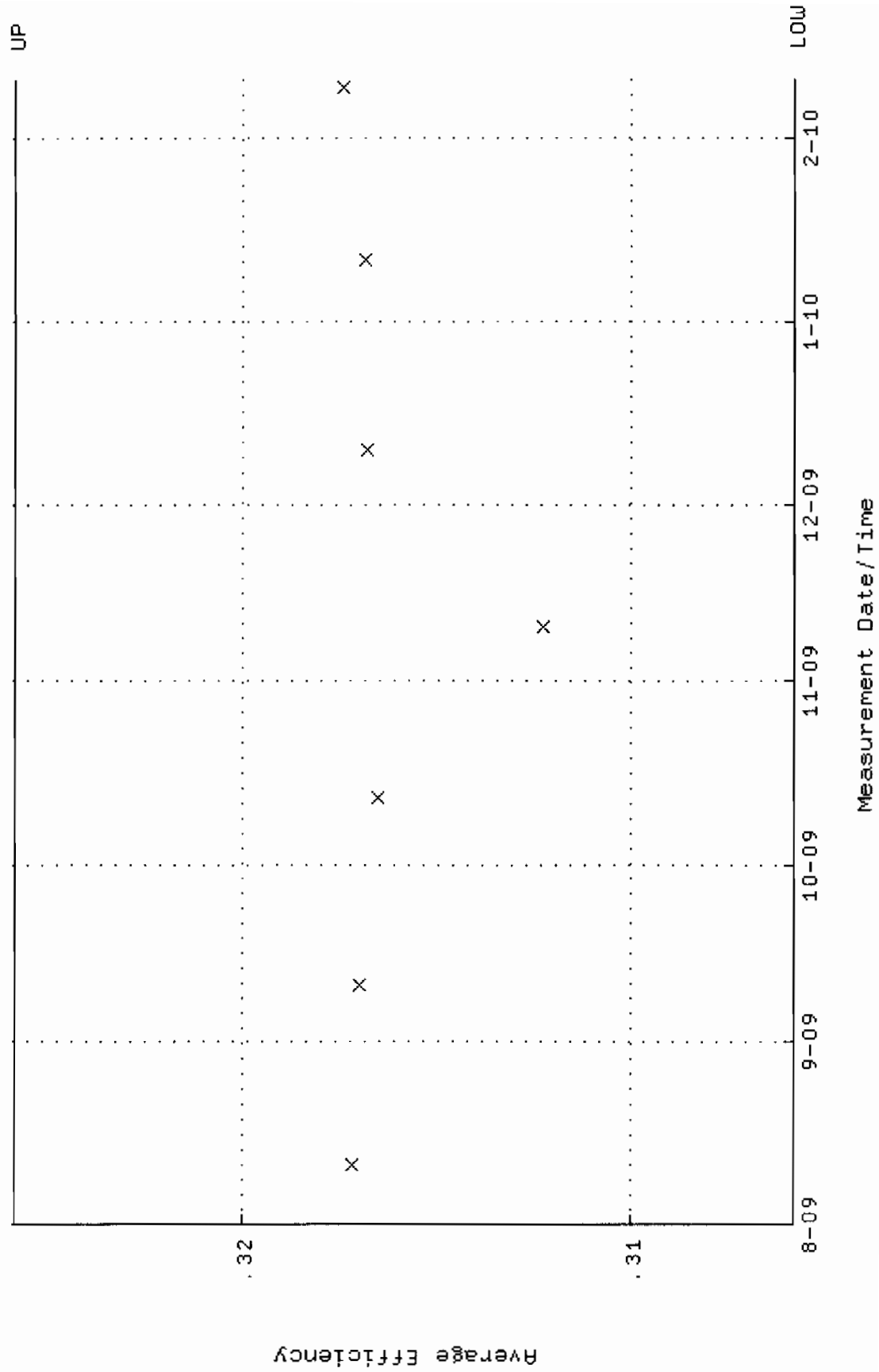


QA filename : DKA100:[ENV_ALPHA.QA.W]W074.QAF;4

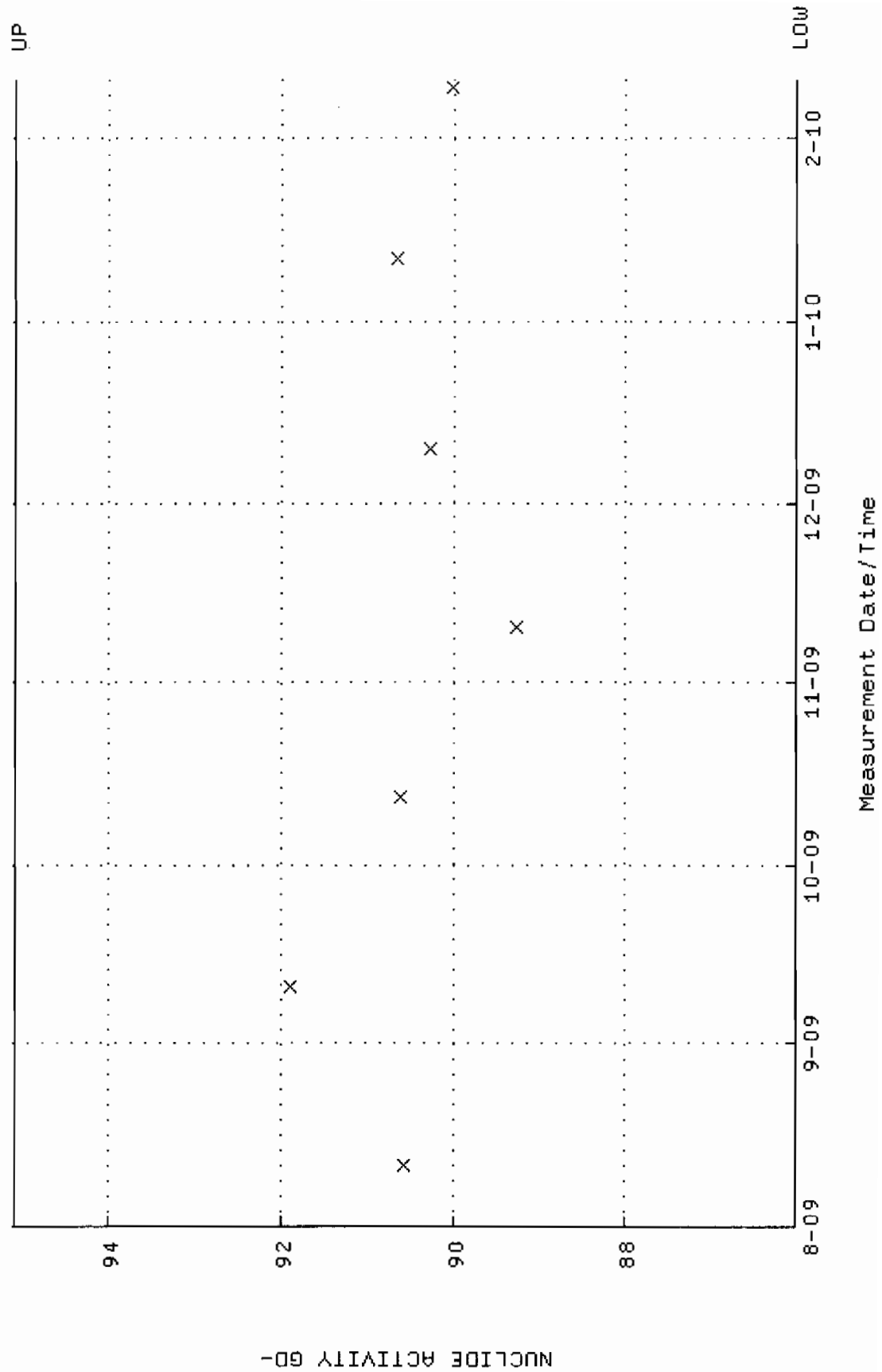
Parameter Name : AVRGEFF (Average Efficiency)

Start/End Dates : 11-AUG-2009 07:20:11 through 10-FEB-2010 12:00:00

Lower/Upper Lmts: 0.305830 through 0.325830



QA filename : DKA100:[ENV_ALPHA.QA.W]W074.QAF;4
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:11 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 86.0289 through 95.0845

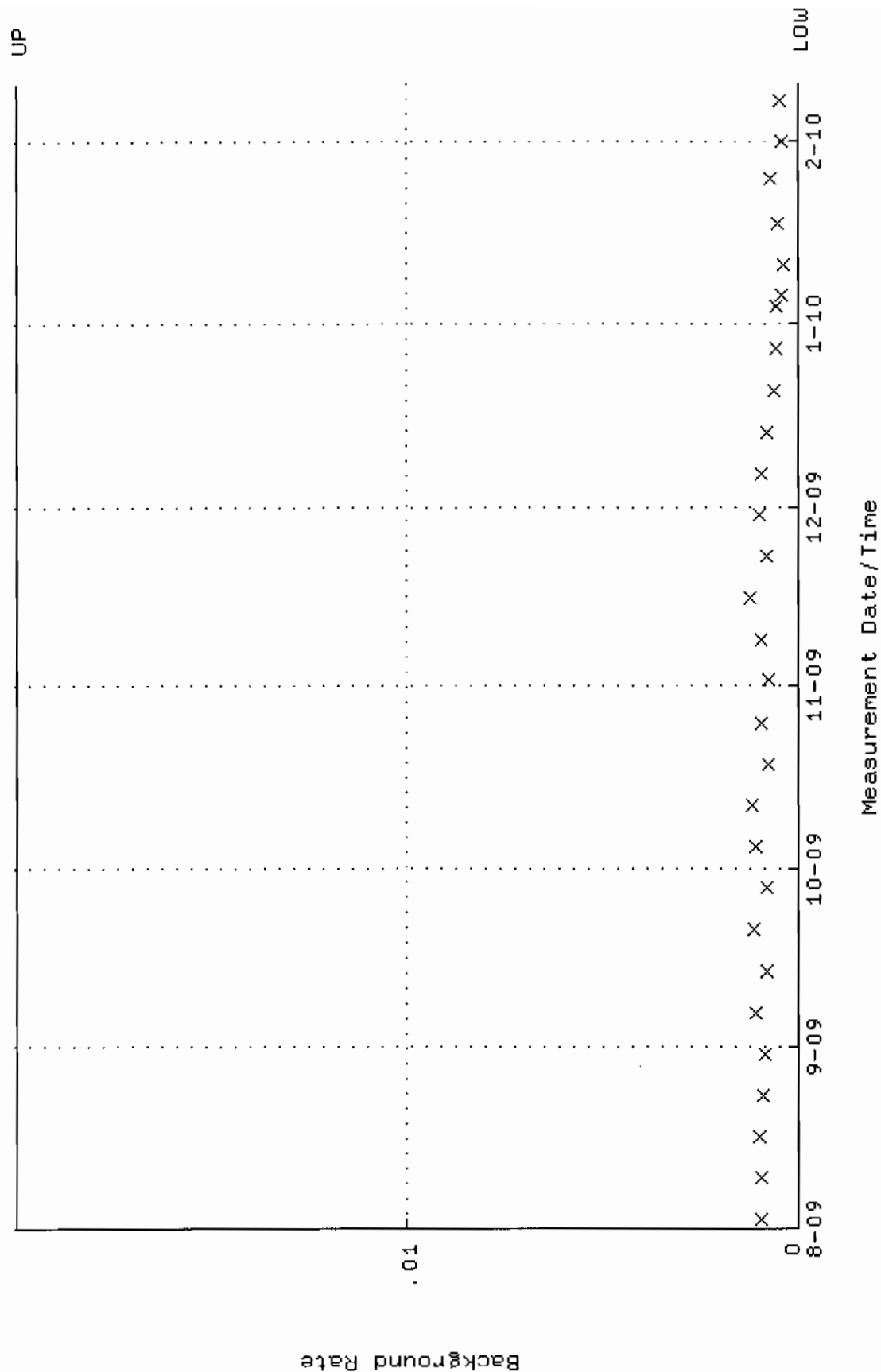


QA filename : DKA100:[ENV_ALPHA.QA.B]B074.QAF;2

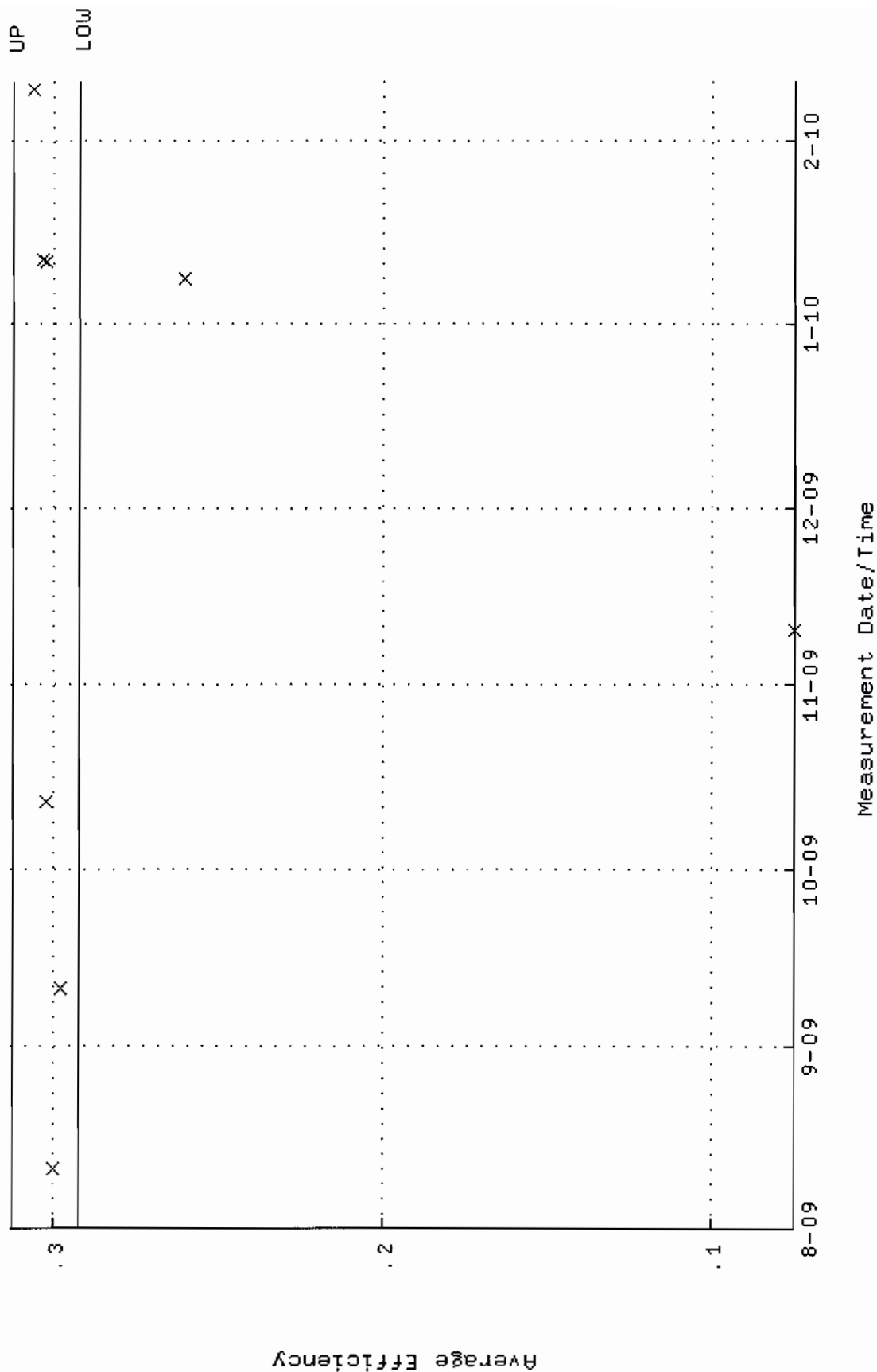
Parameter Name : BACKRATE (Background Rate)

Start/End Dates : 2-AUG-2009 17:38:39 through 10-FEB-2010 12:00:00

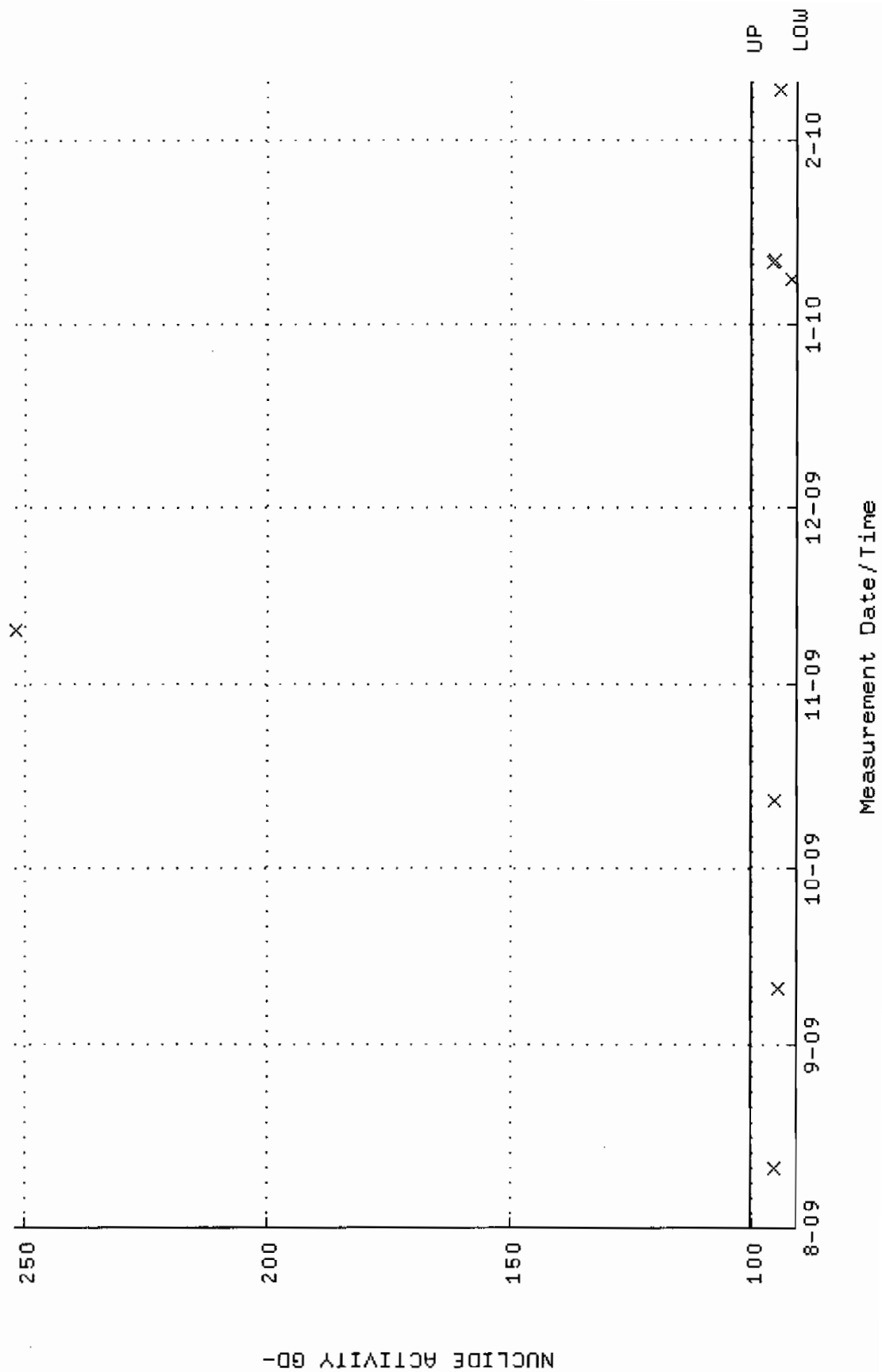
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



QA filename : DKA100:[ENV_ALPHA.QA.W]W075.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:11 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.292134 through 0.312134



QA filename : DKA100:[ENV_ALPHA.QA.W]W075.QAF;3
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:11 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 91.1212 through 100.713

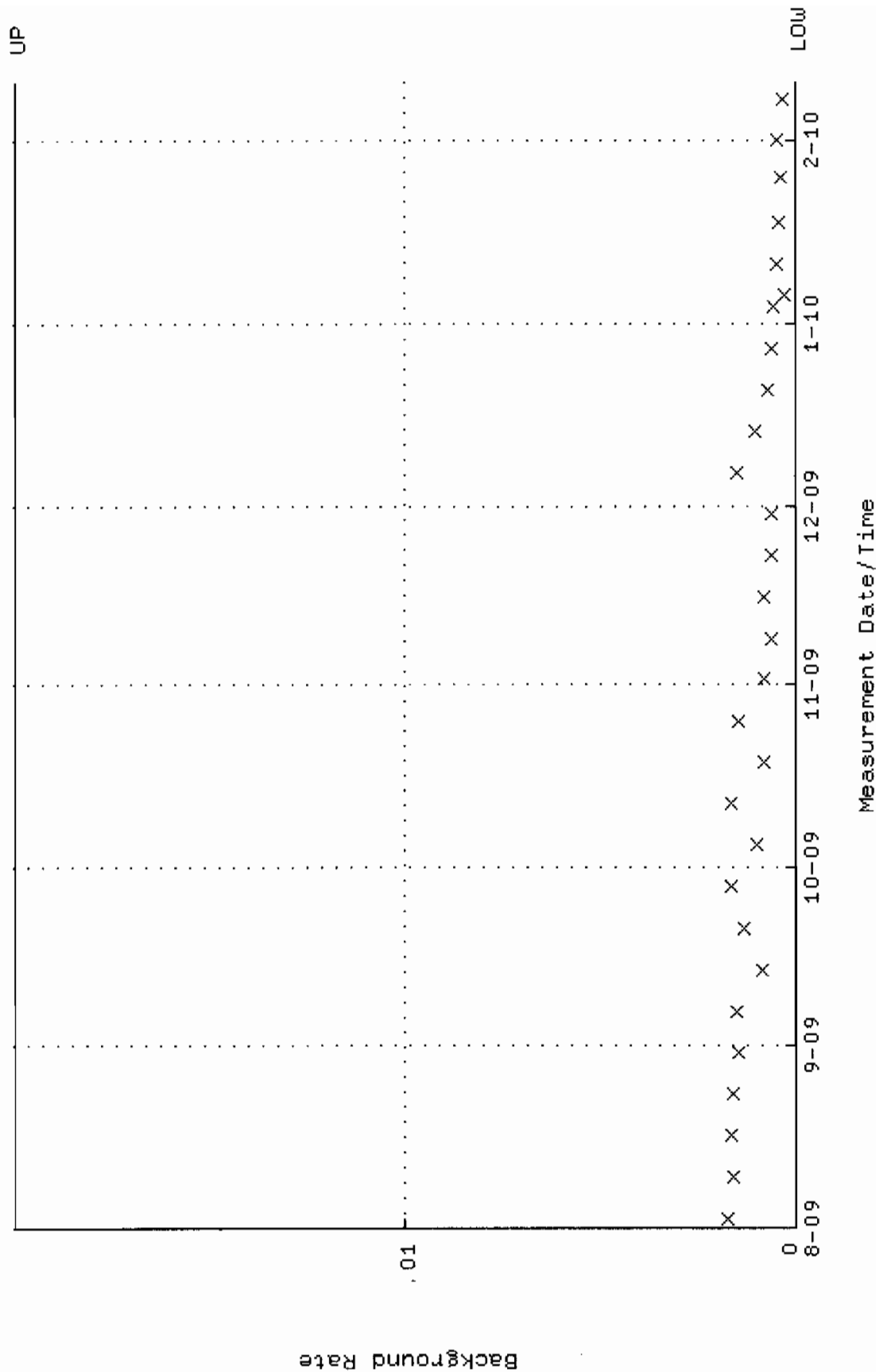


QA filename : DKA100:[ENV_ALPHA.QA.B]B075.QAF;1

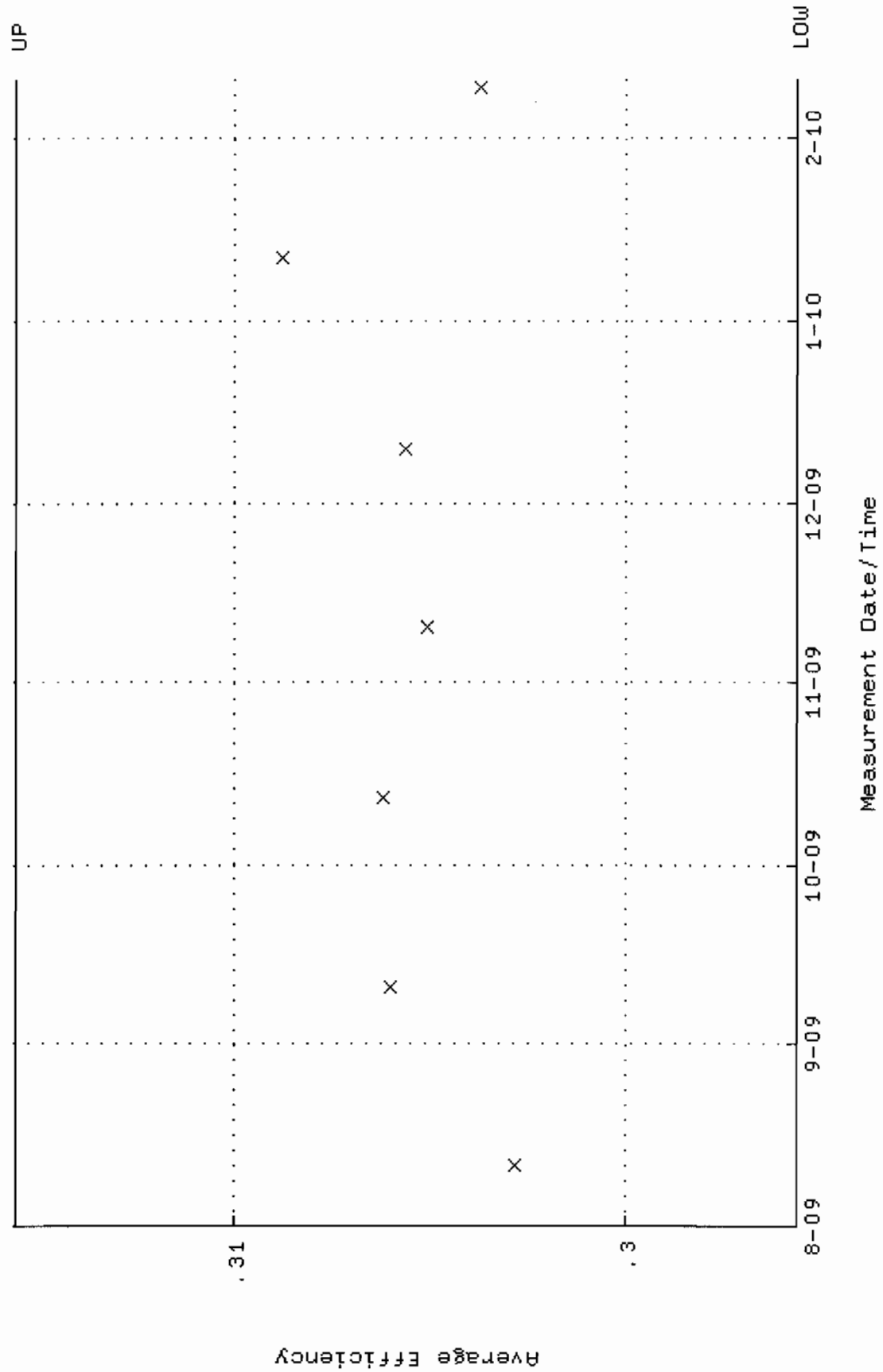
Parameter Name : BACKRATE (Background Rate)

Start/End Dates : 2-AUG-2009 17:38:39 through 10-FEB-2010 12:00:00

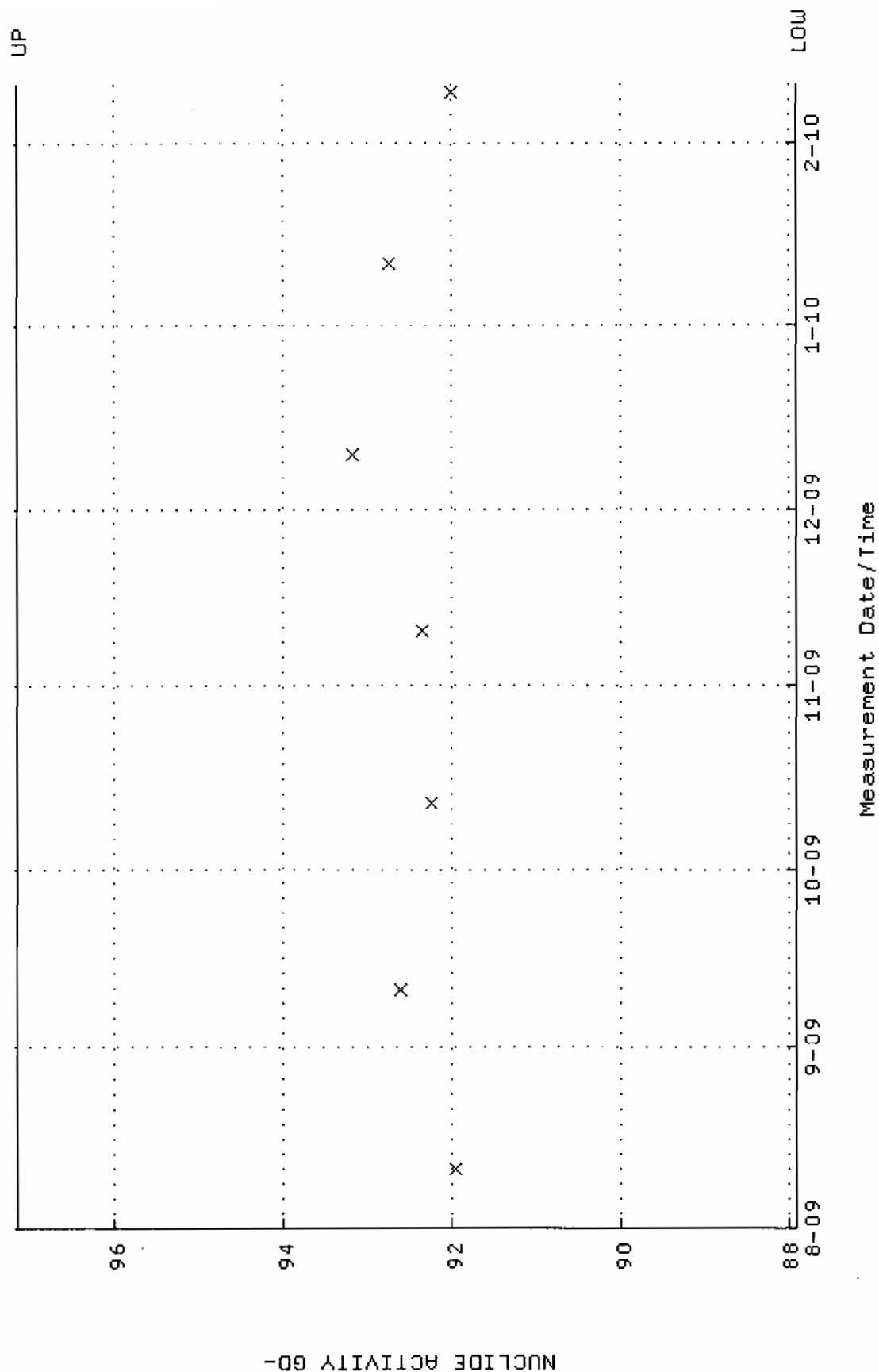
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



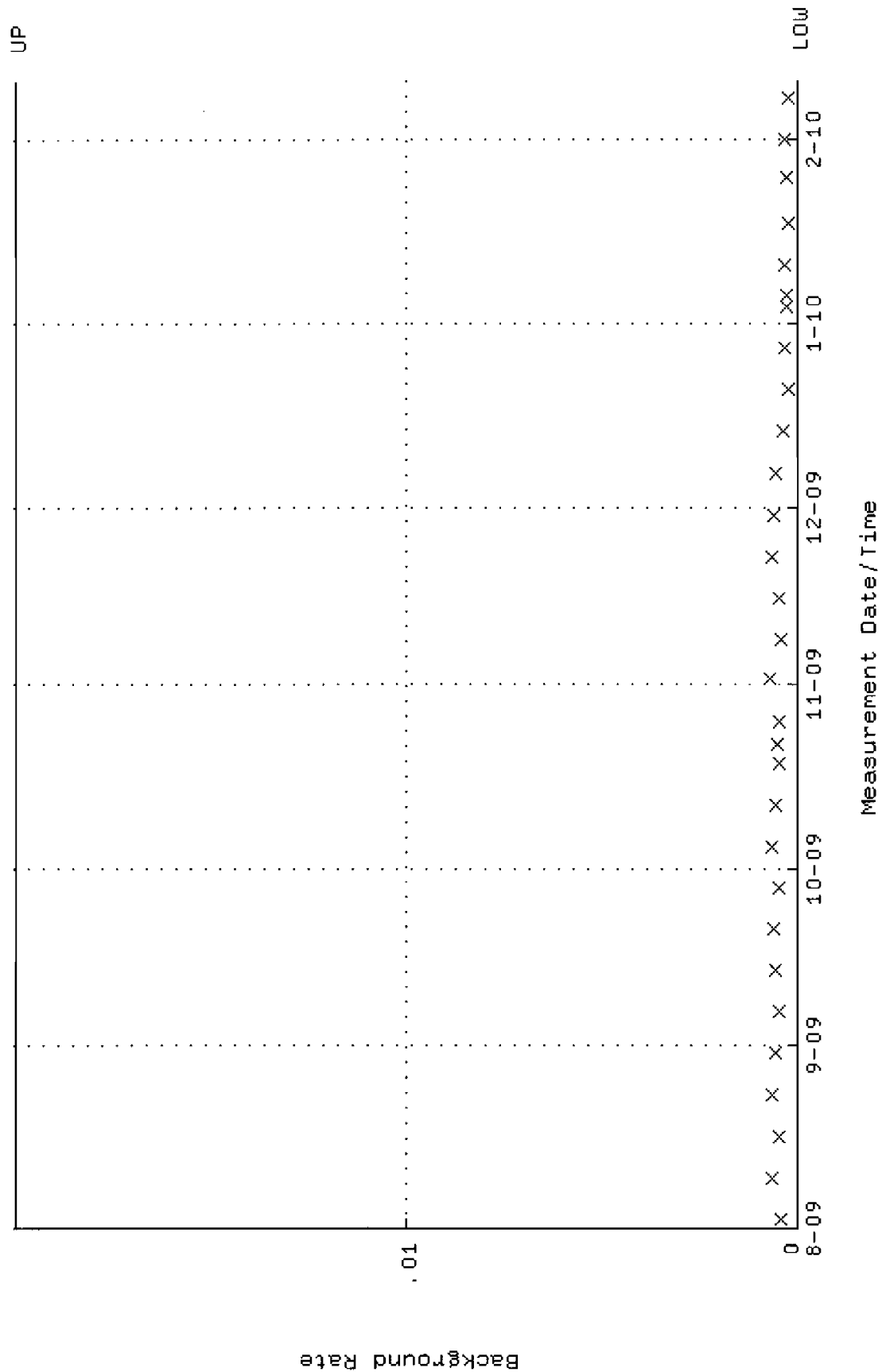
QA filename : DKA100:[ENV_ALPHA.QA.W]W076.QAF;2
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:11 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.295613 through 0.315613



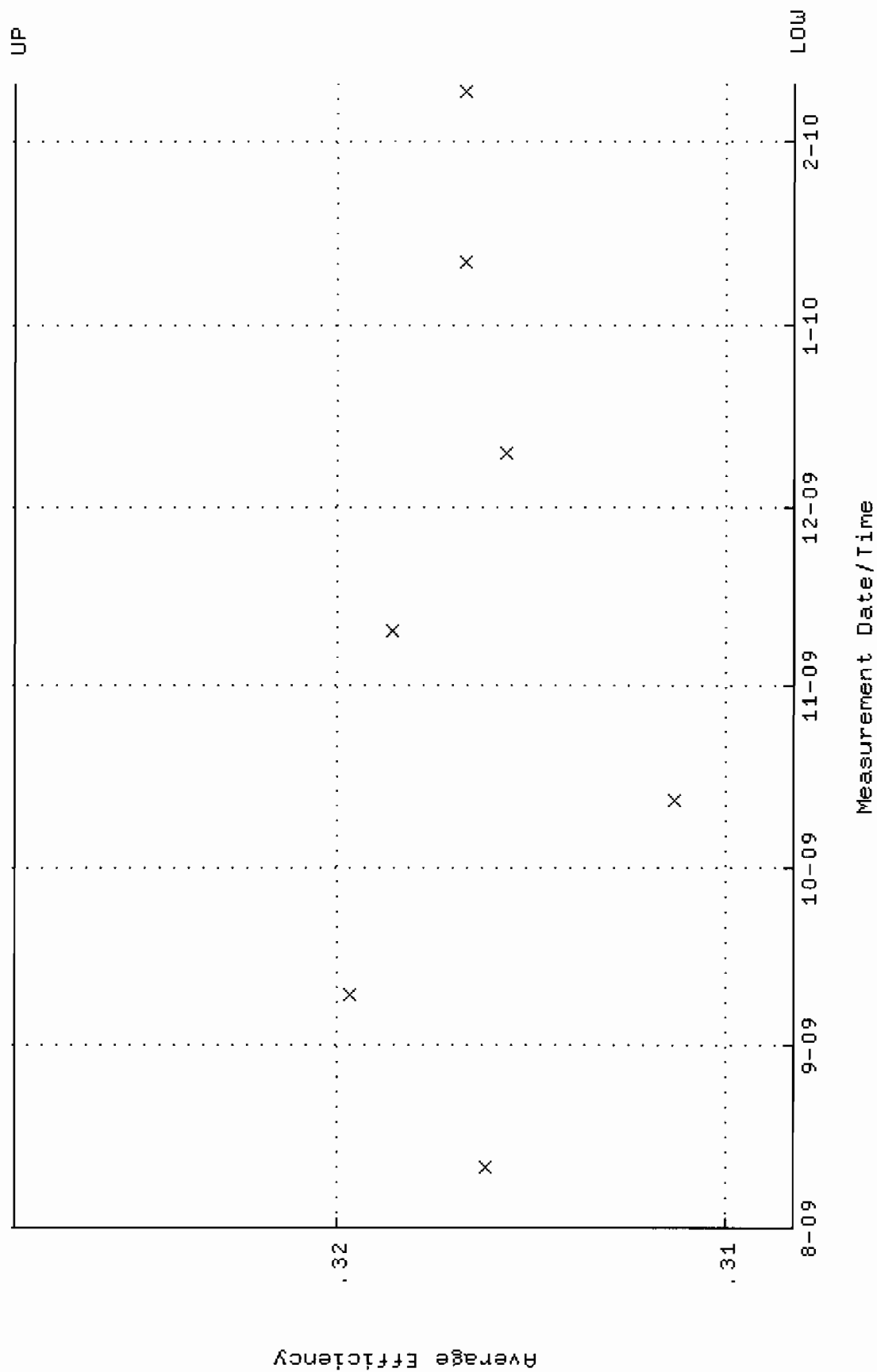
QA filename : DKA100:[ENV-ALPHA.QA.W]W076.QAF;2
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:11 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 87.9031 through 97.1561



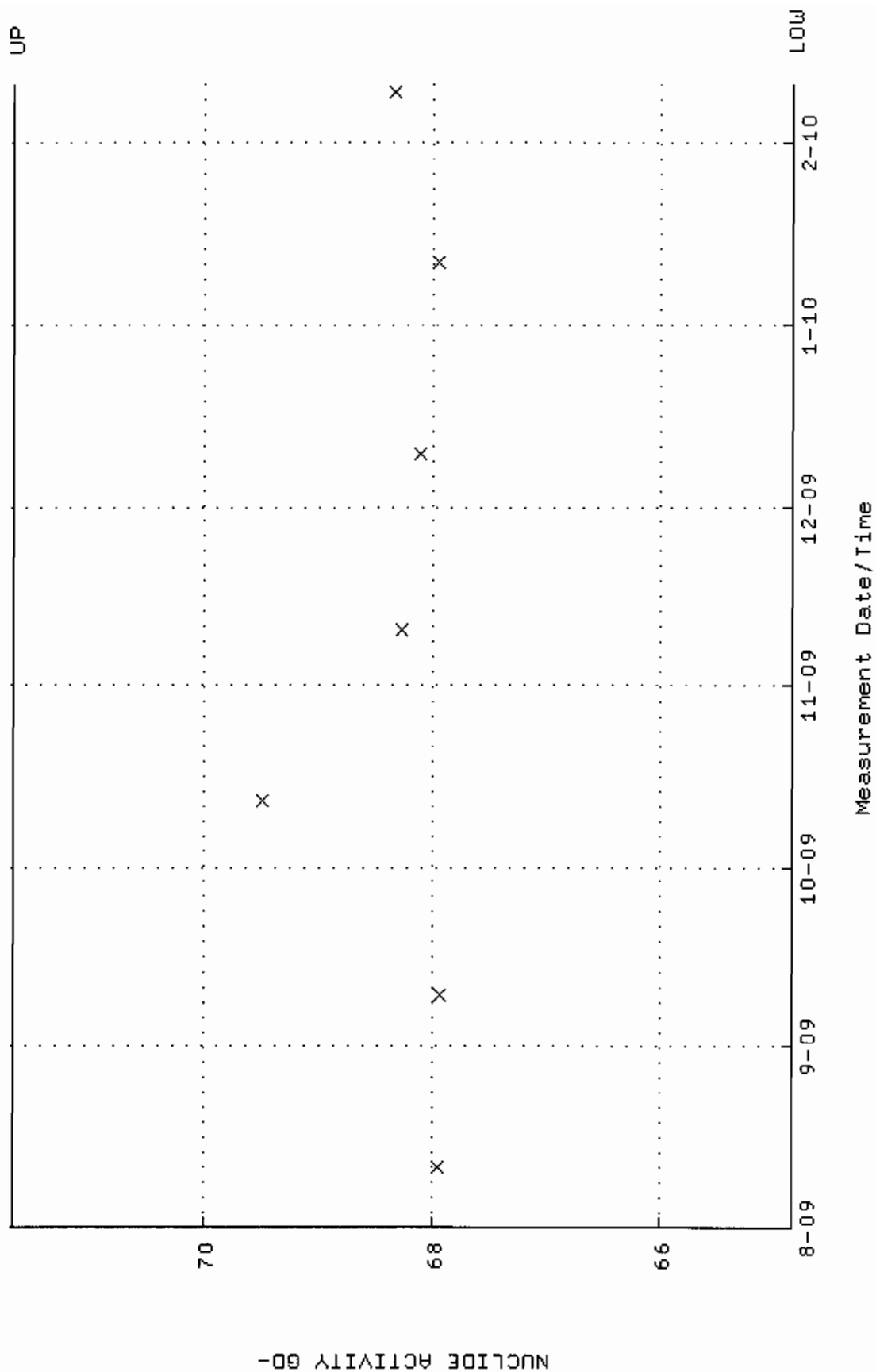
QA filename : DKA100:[ENV_ALPHA,QA,B]B076.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:39 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



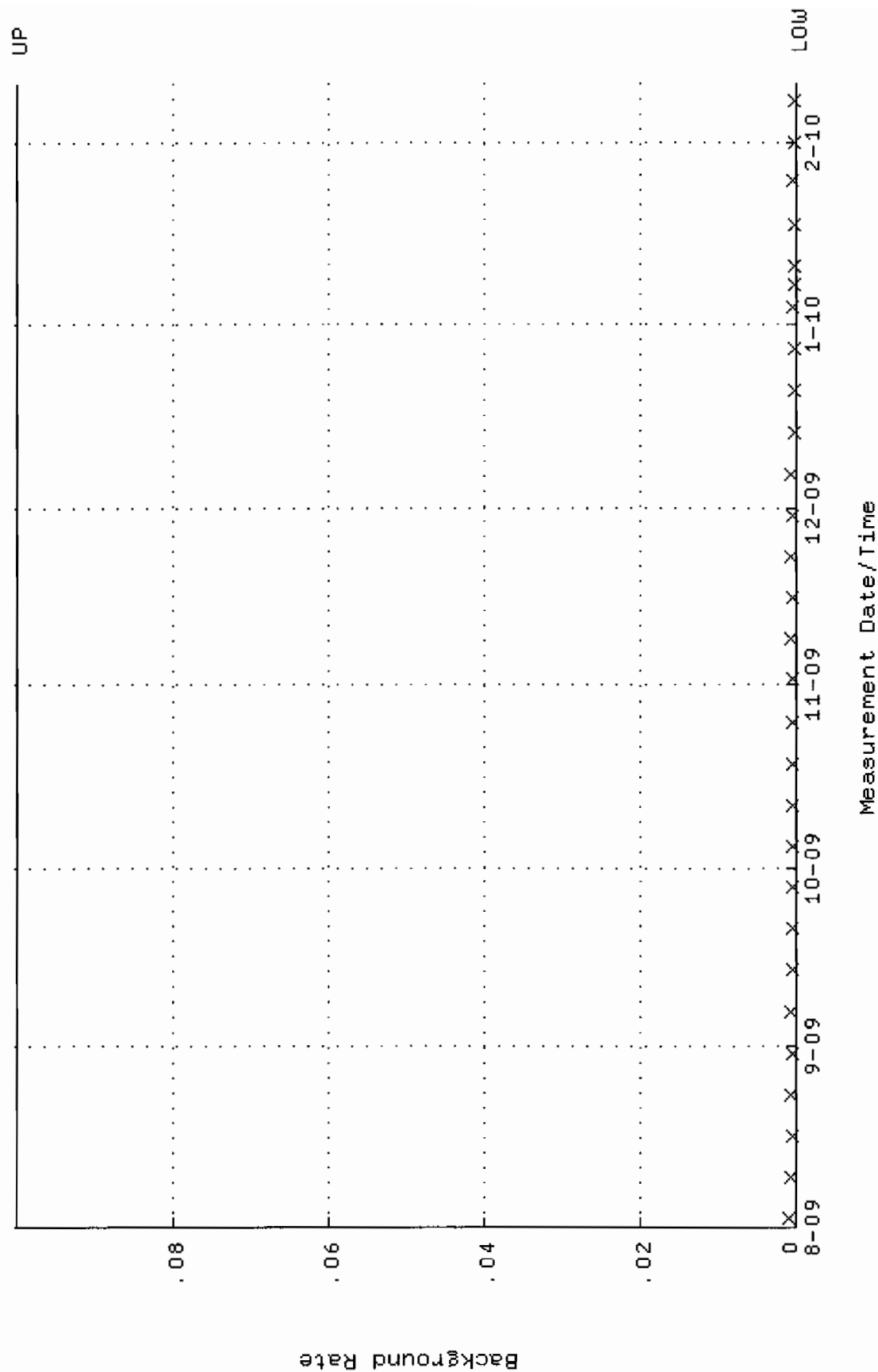
QA filename : DKA100:[ENV_ALPHA.QA.W]W112.QAF;3
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 11-AUG-2009 07:20:19 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.308263 through 0.328263



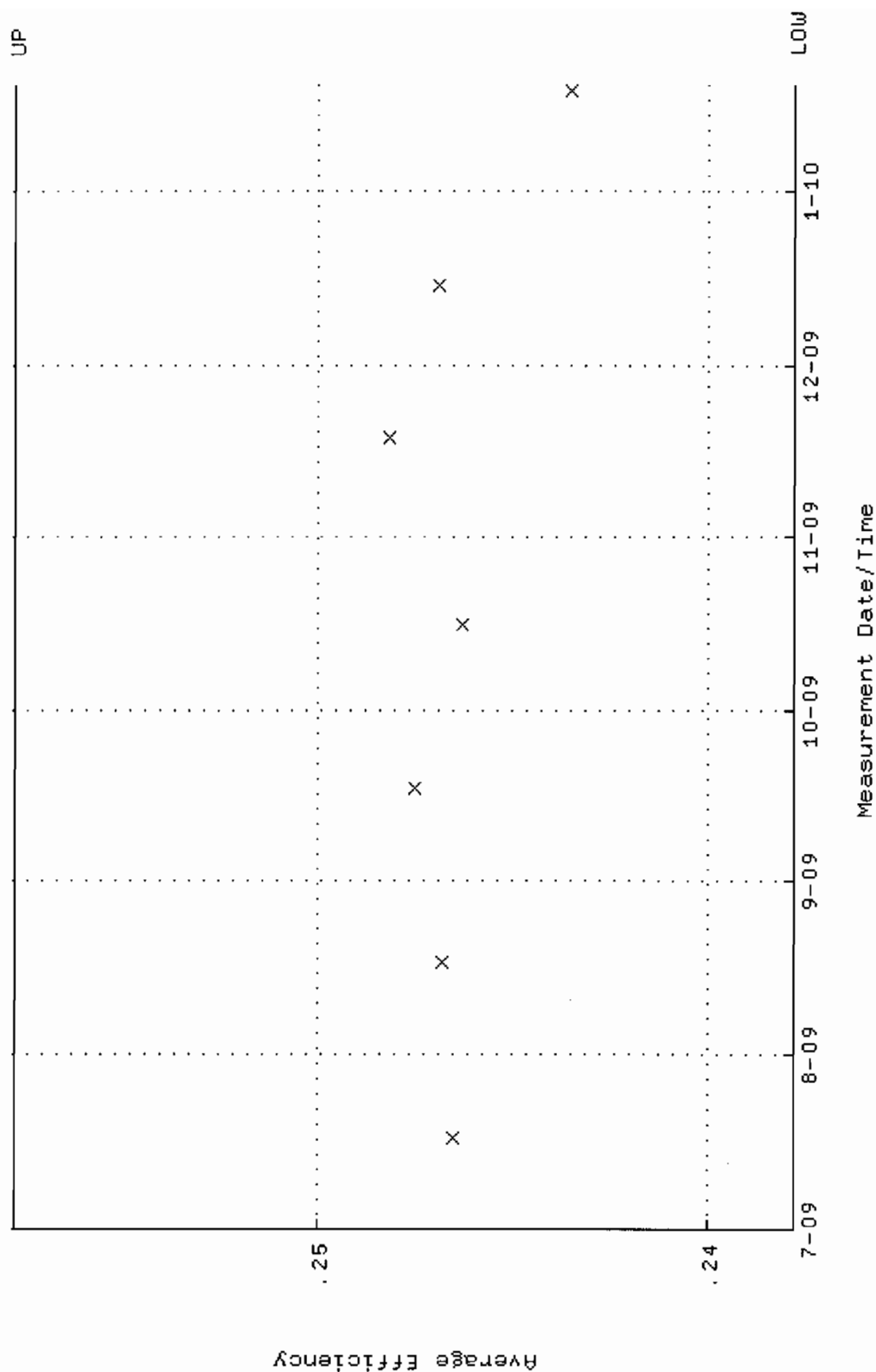
QA filename : DKA100:[ENV_ALPHA.QA.W]W112.QAF;3
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 11-AUG-2009 07:20:19 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 64.8451 through 71.6709



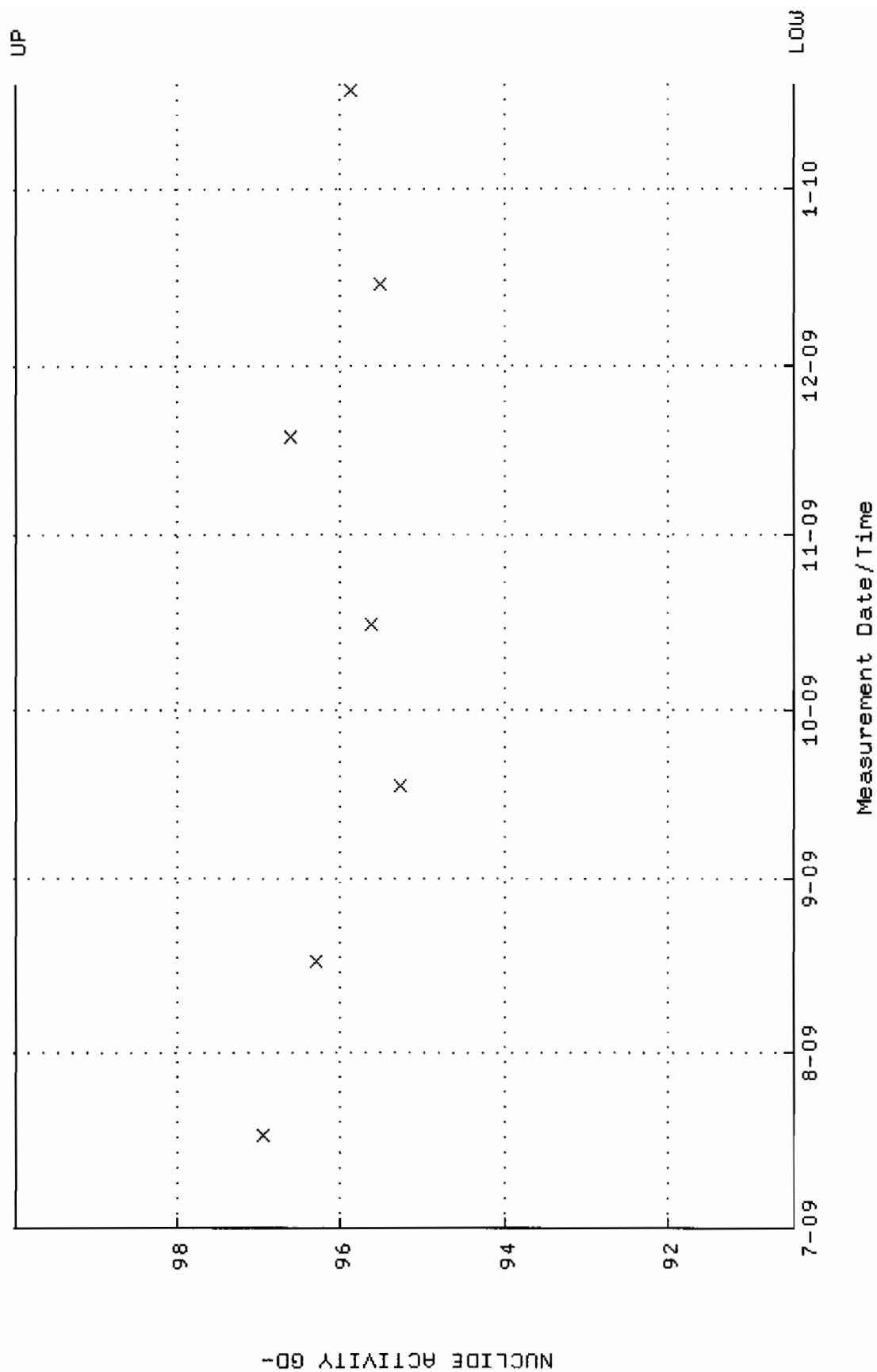
QA filename : DKA100:[ENV_ALPHA.QA.B]B112.QAF;2
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 2-AUG-2009 17:38:44 through 10-FEB-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



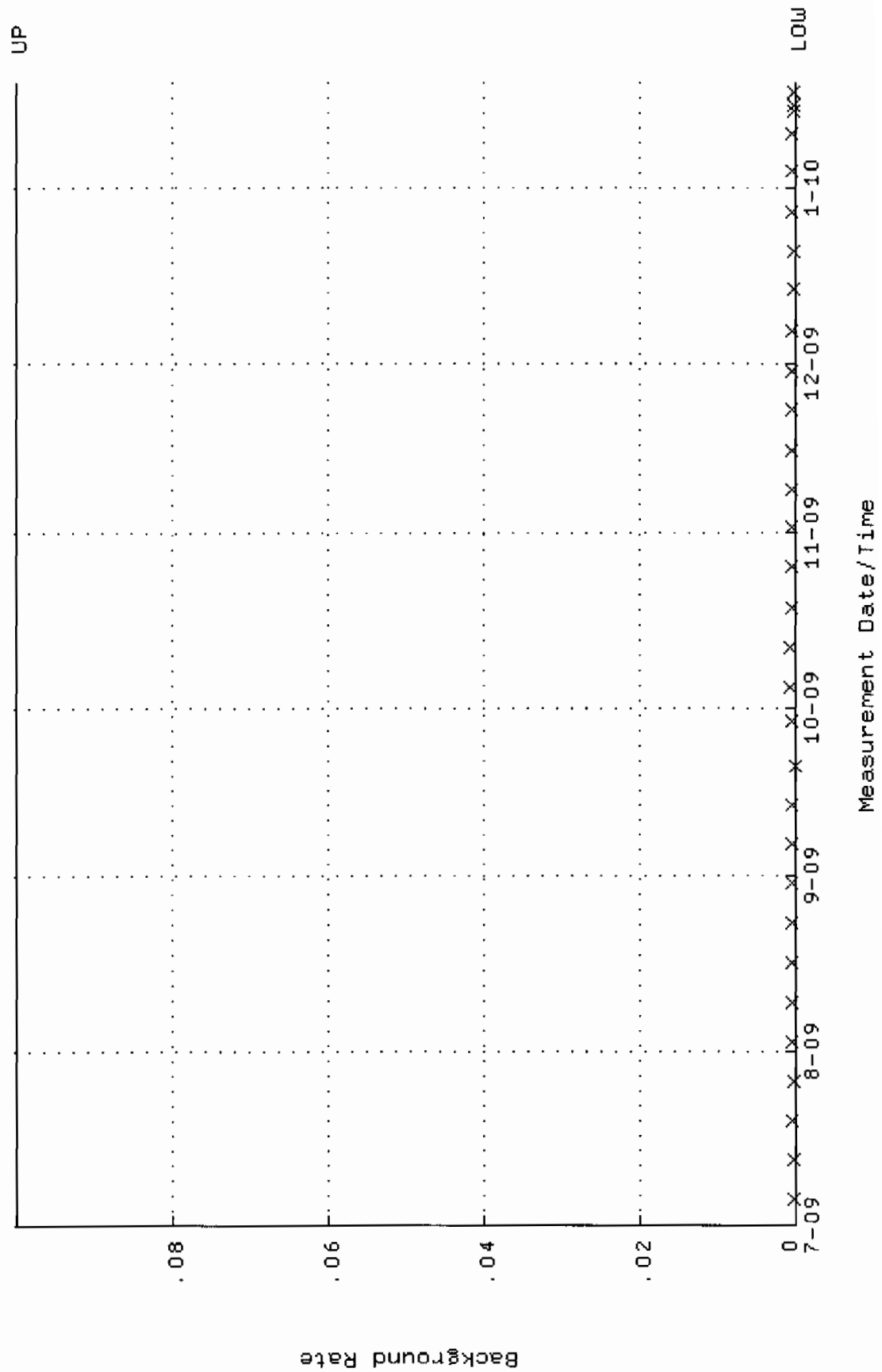
QA filename : DKA100:[ENV_ALPHA.QA.W]W127.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-JUL-2009 09:11:52 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.237773 through 0.257773



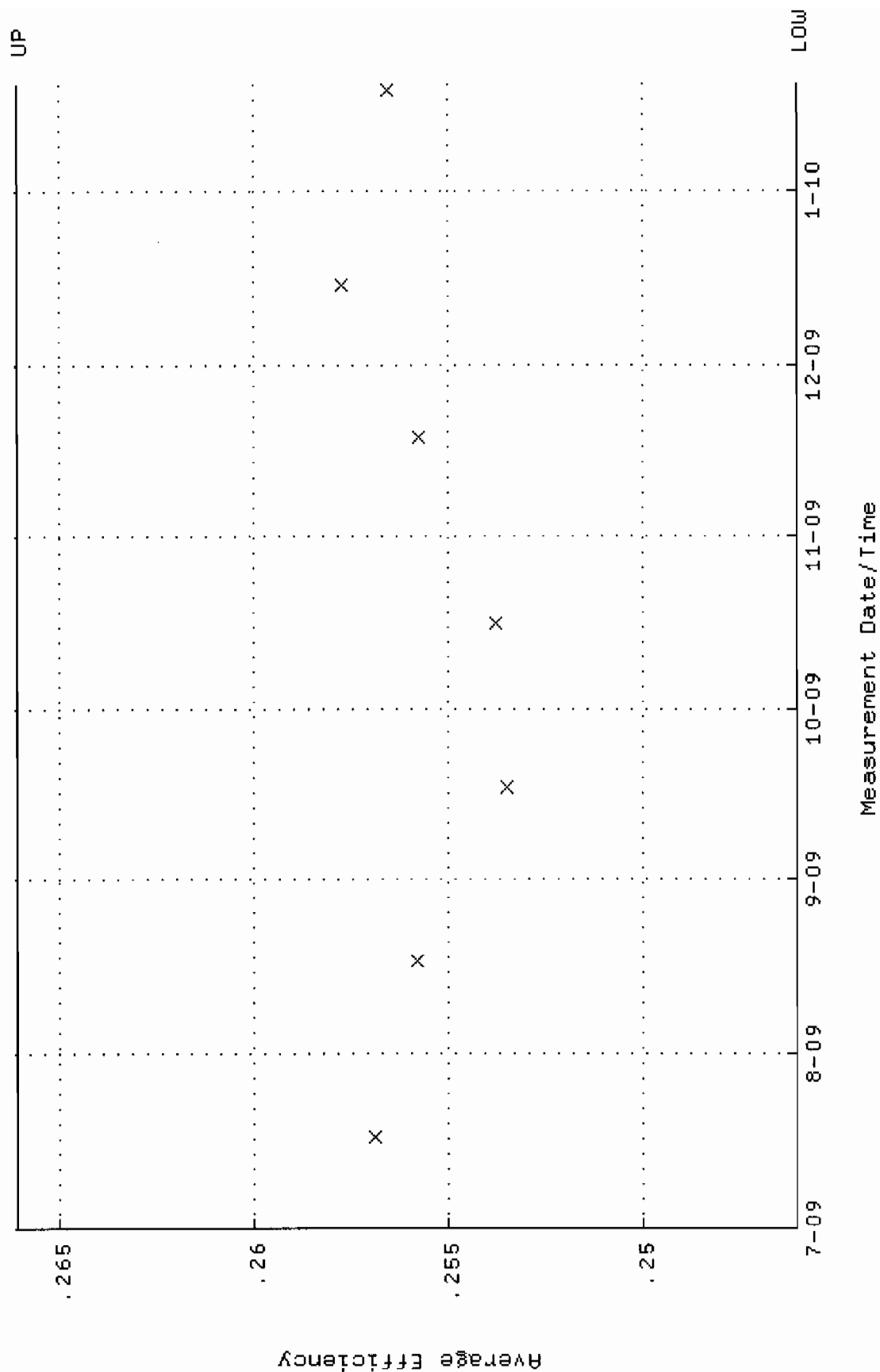
QA filename : DKA100:[ENV_ALPHA.QA.W]W127.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-JUL-2009 09:11:52 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 90.4503 through 99.9713



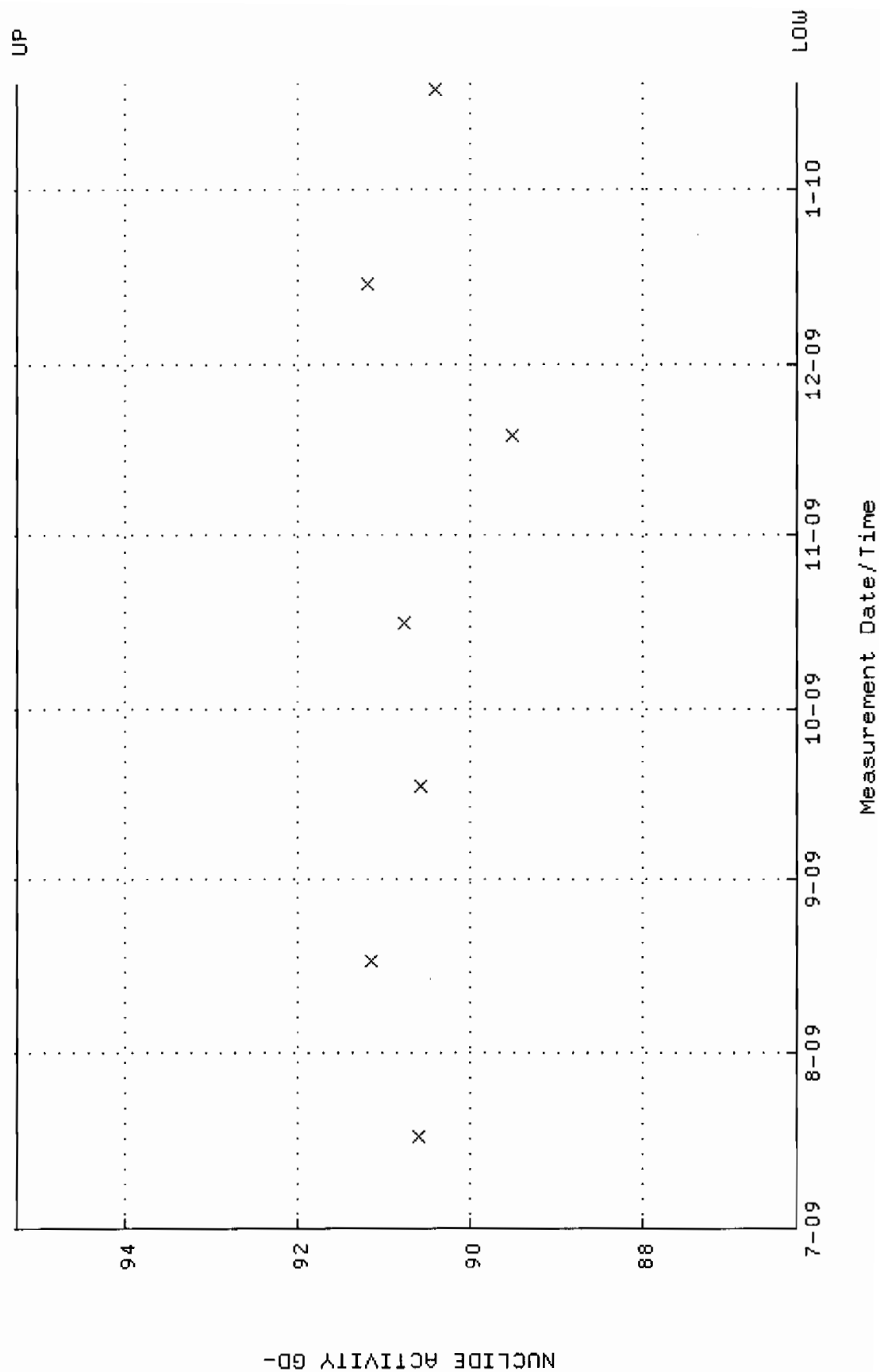
QA filename : DKA100:[ENV_ALPHA.QA.B]B127.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 14:55:55 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



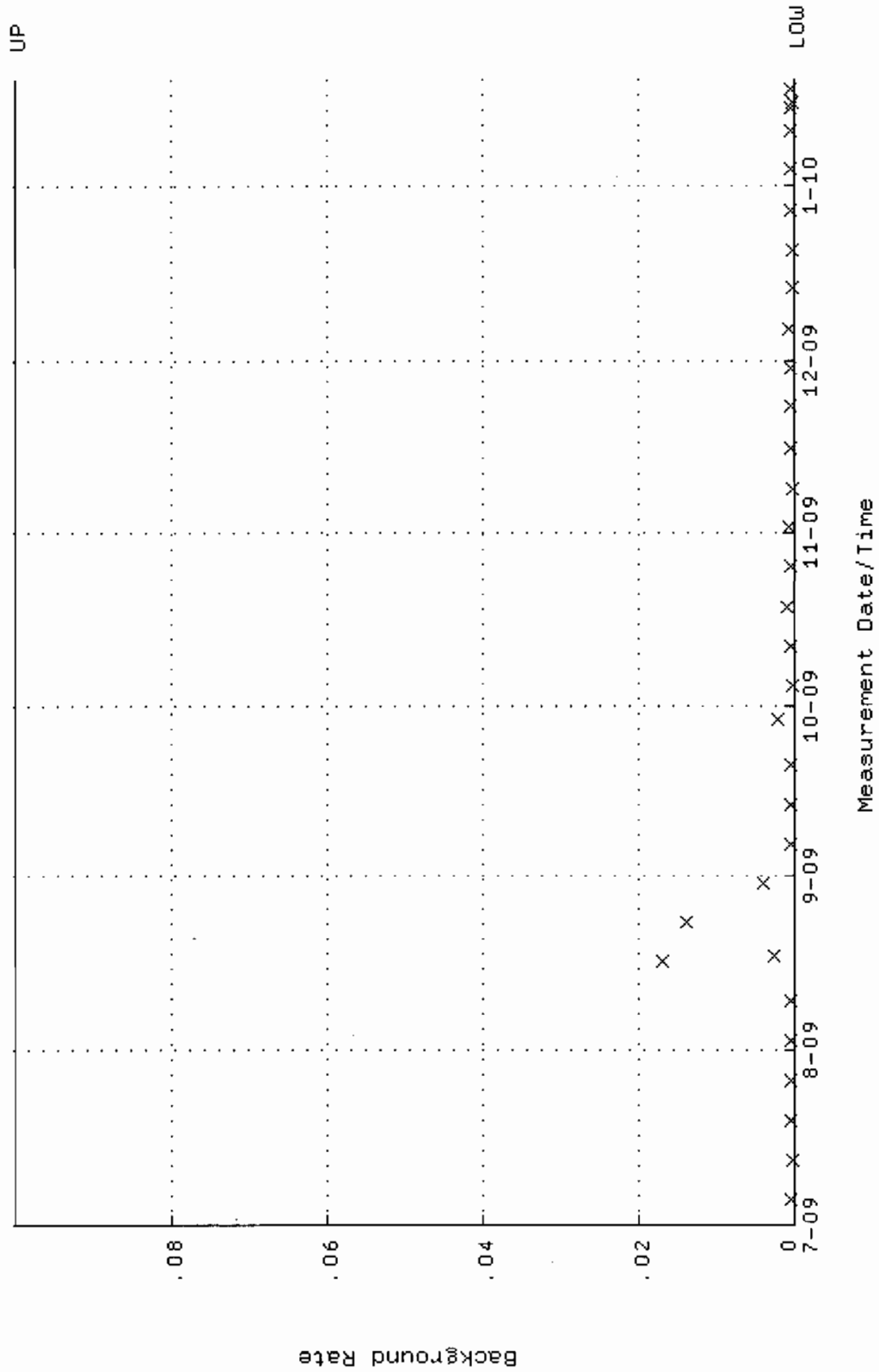
QA filename : DKA100: [ENV_ALPHA.QA.W]W128.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 17-JUL-2009 09:11:58 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.246062 through 0.266062



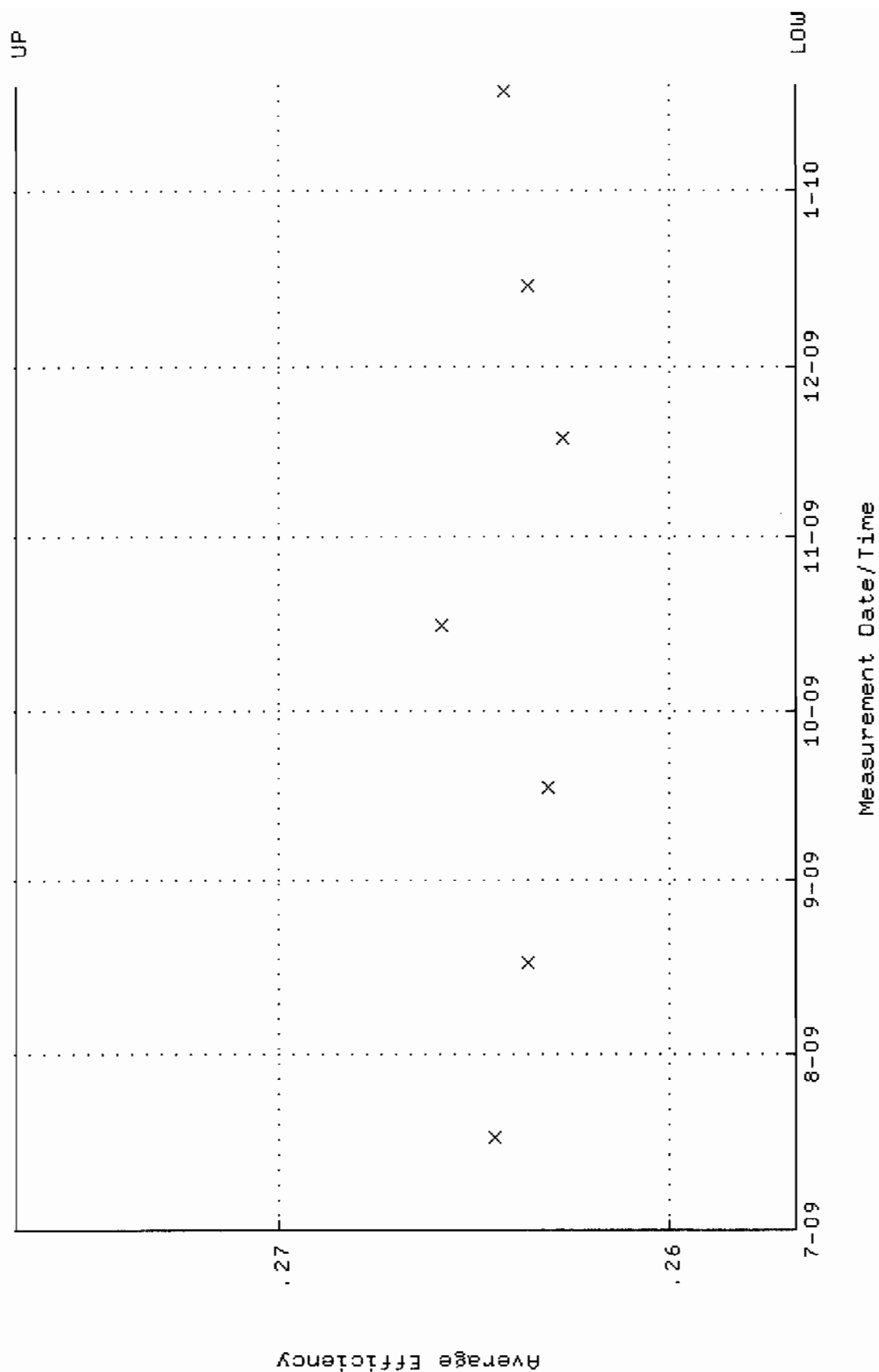
QA filename : DKA100:[ENV_ALPHA.QA.W]W128.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-JUL-2009 09:11:58 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 86.1964 through 95.2697



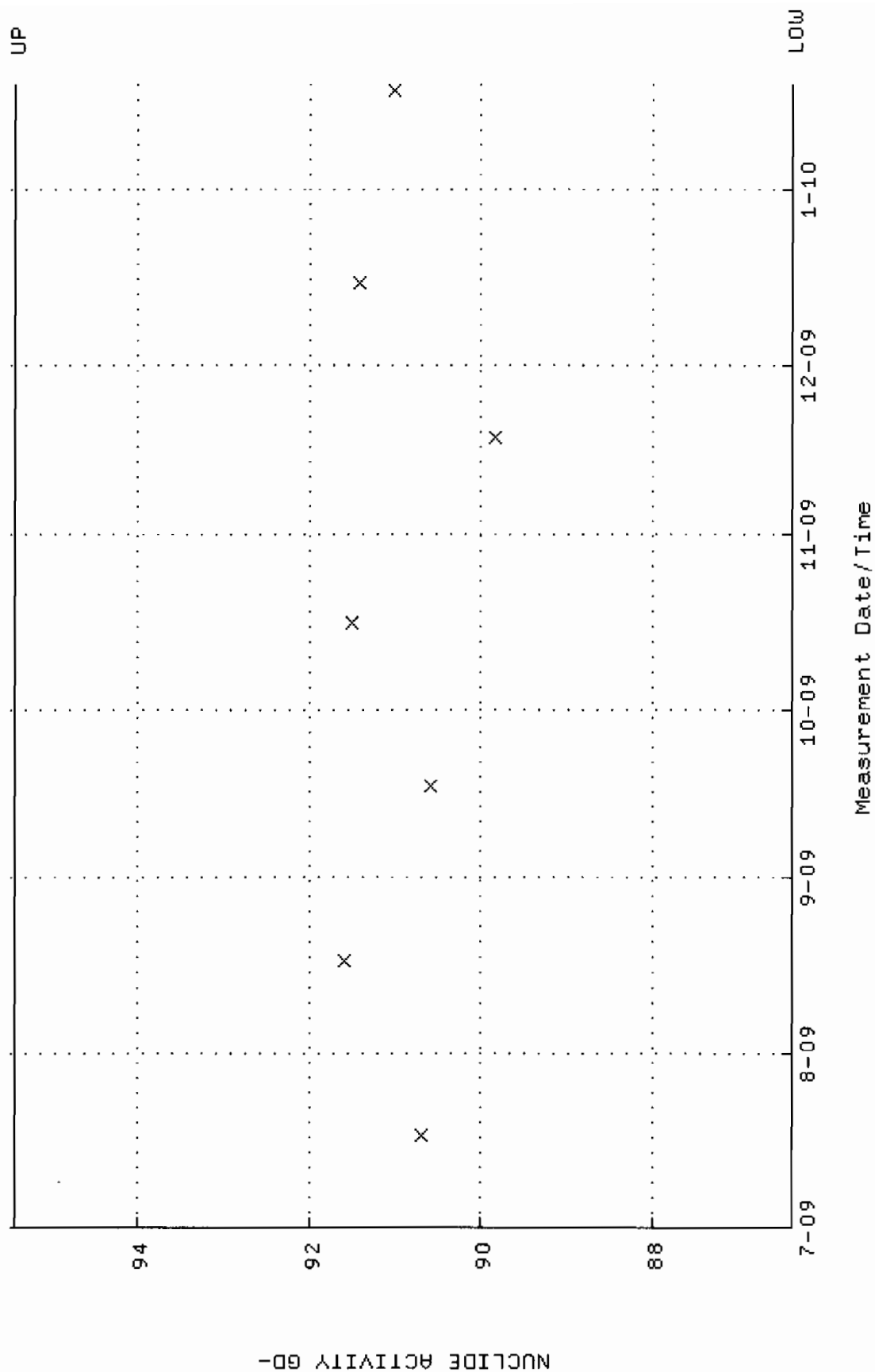
QA filename : DKA100:[ENV_ALPHA.QA.B]B128.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 14:56:00 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



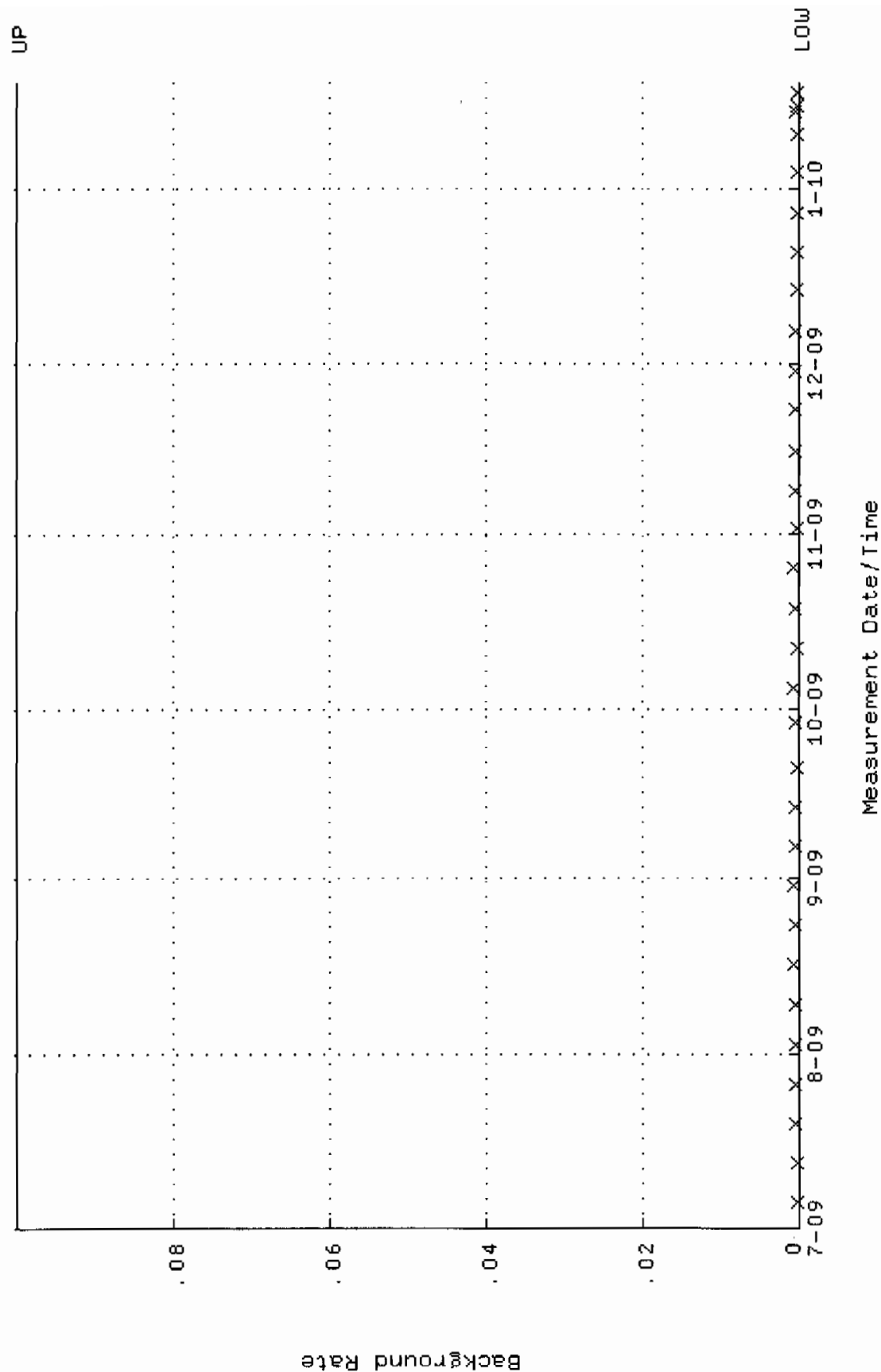
QA filename : DKA100:[ENV_ALPHA.QA.W]W129.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-JUL-2009 09:12:03 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.256741 through 0.276741



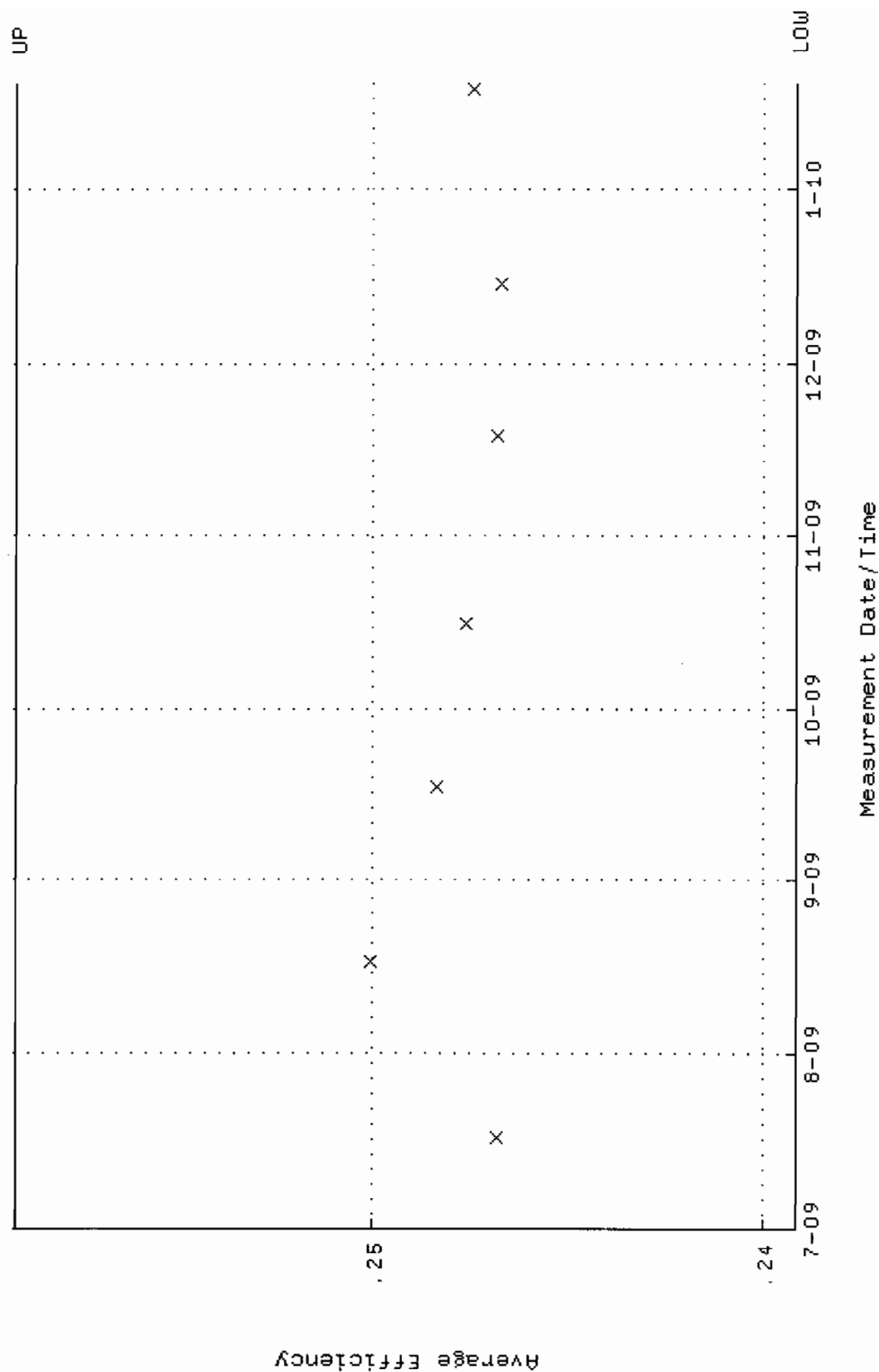
QA filename : DKA100:[ENV_ALPHA.QA.W]W129.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-JUL-2009 09:12:03 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 86.3646 through 95.4556



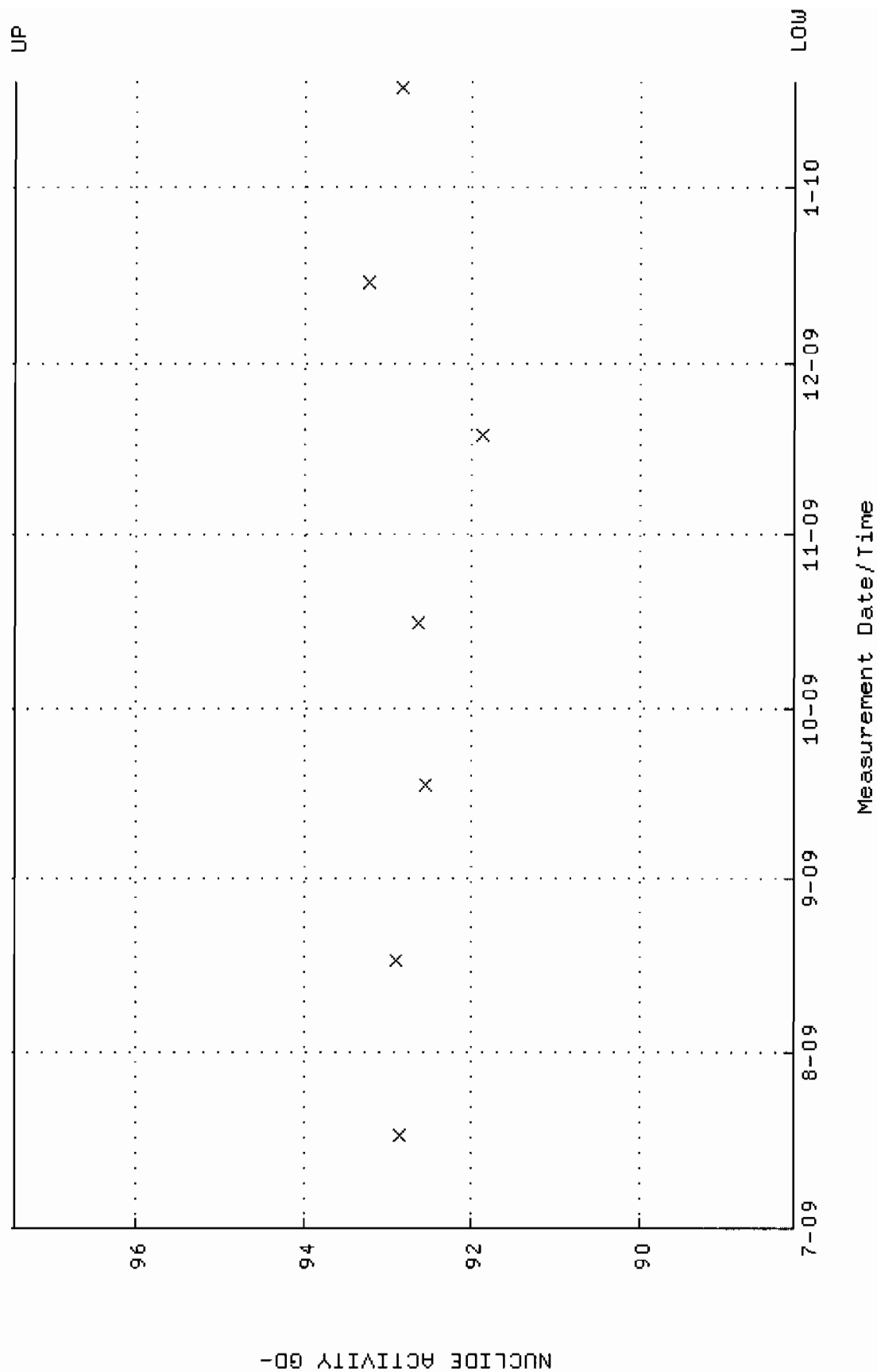
QA filename : DKA100:[ENV_ALPHA.QA,B]B129.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 14:56:05 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



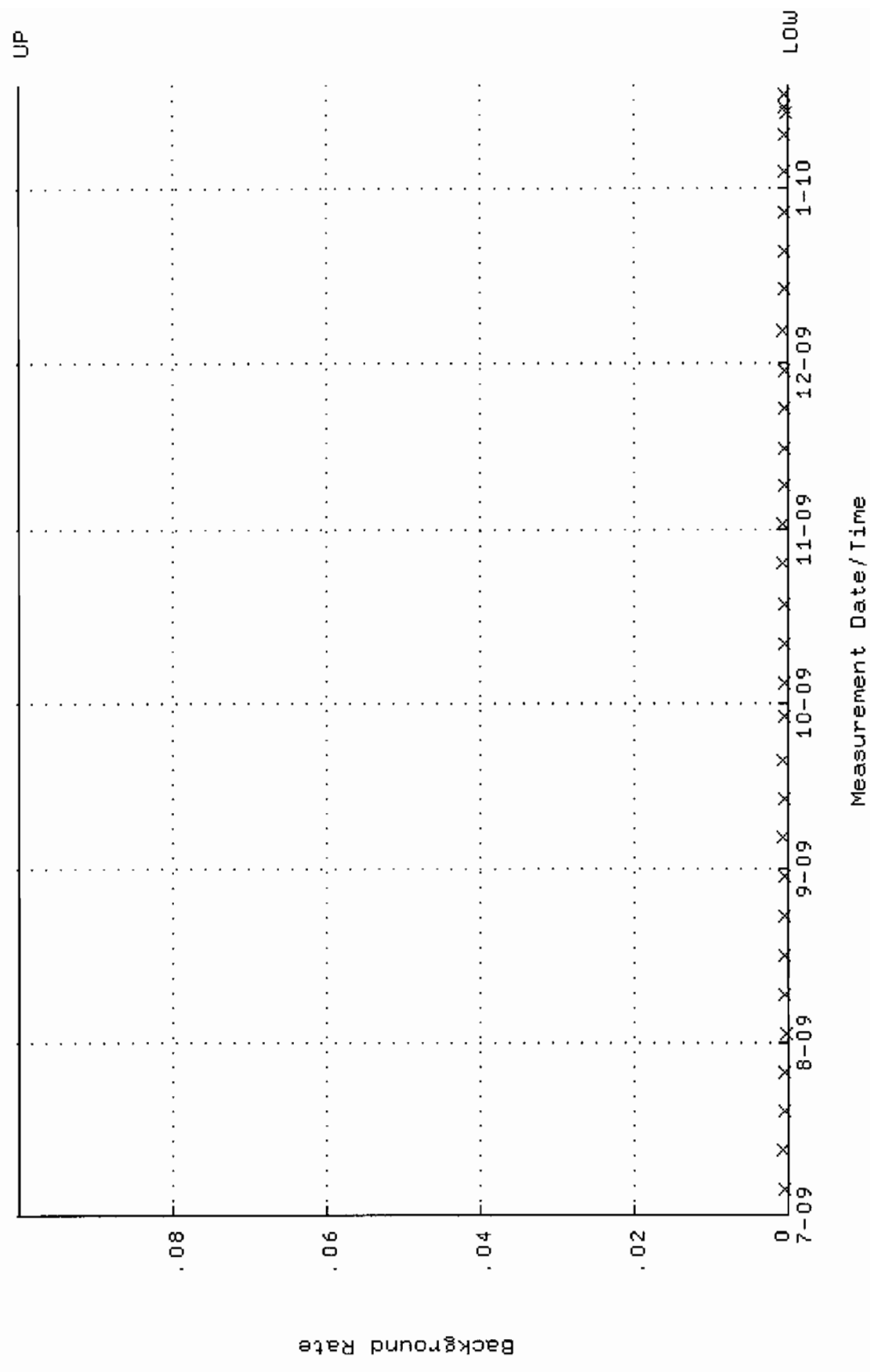
QA filename : DKA100:[ENV-ALPHA.QA.W]W130.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-JUL-2009 09:12:07 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.239131 through 0.259131



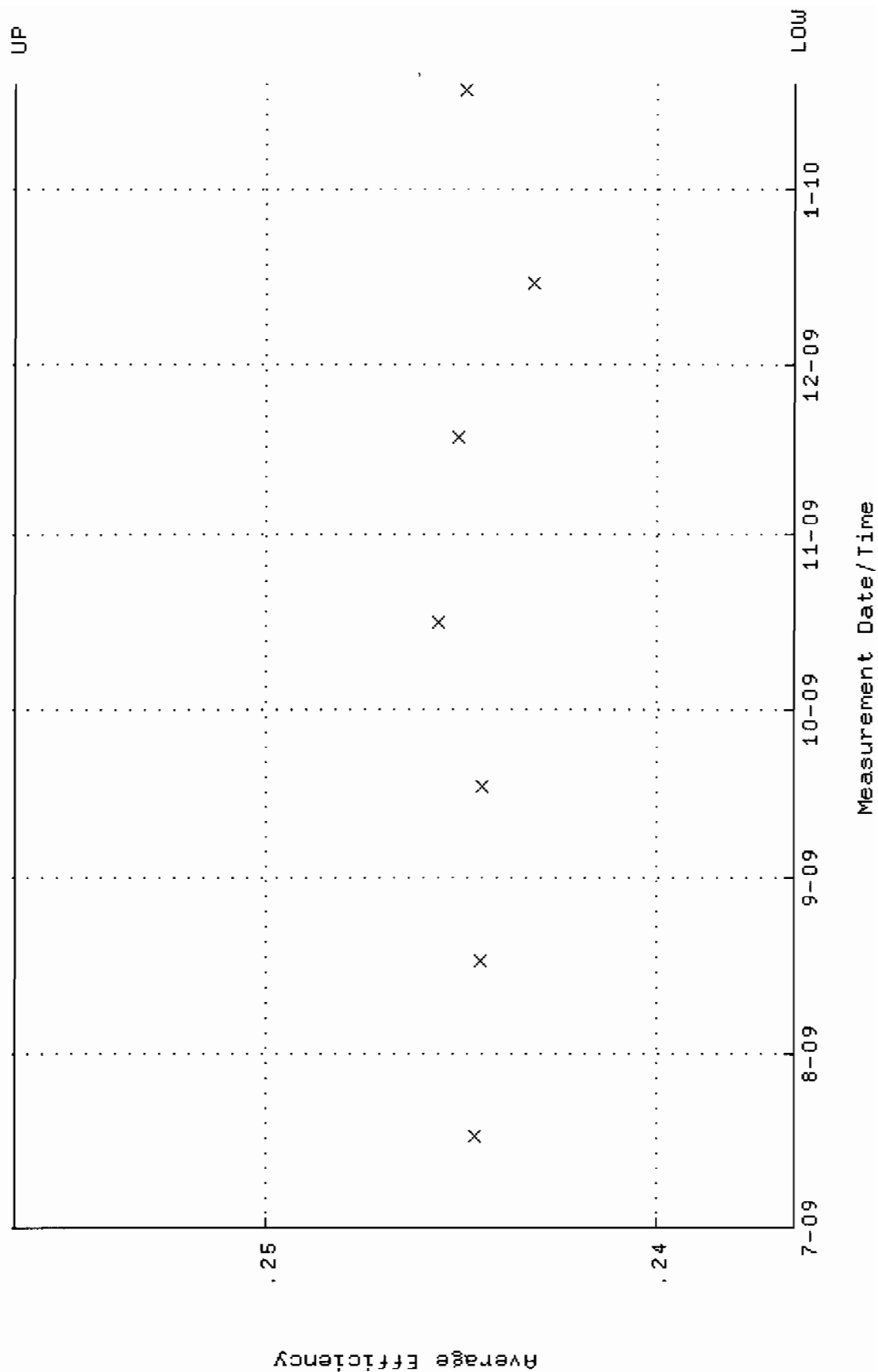
QA filename : DKA100:[ENV_ALPHA.QA.W]W130.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-JUL-2009 09:12:07 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 88.1614 through 97.4416



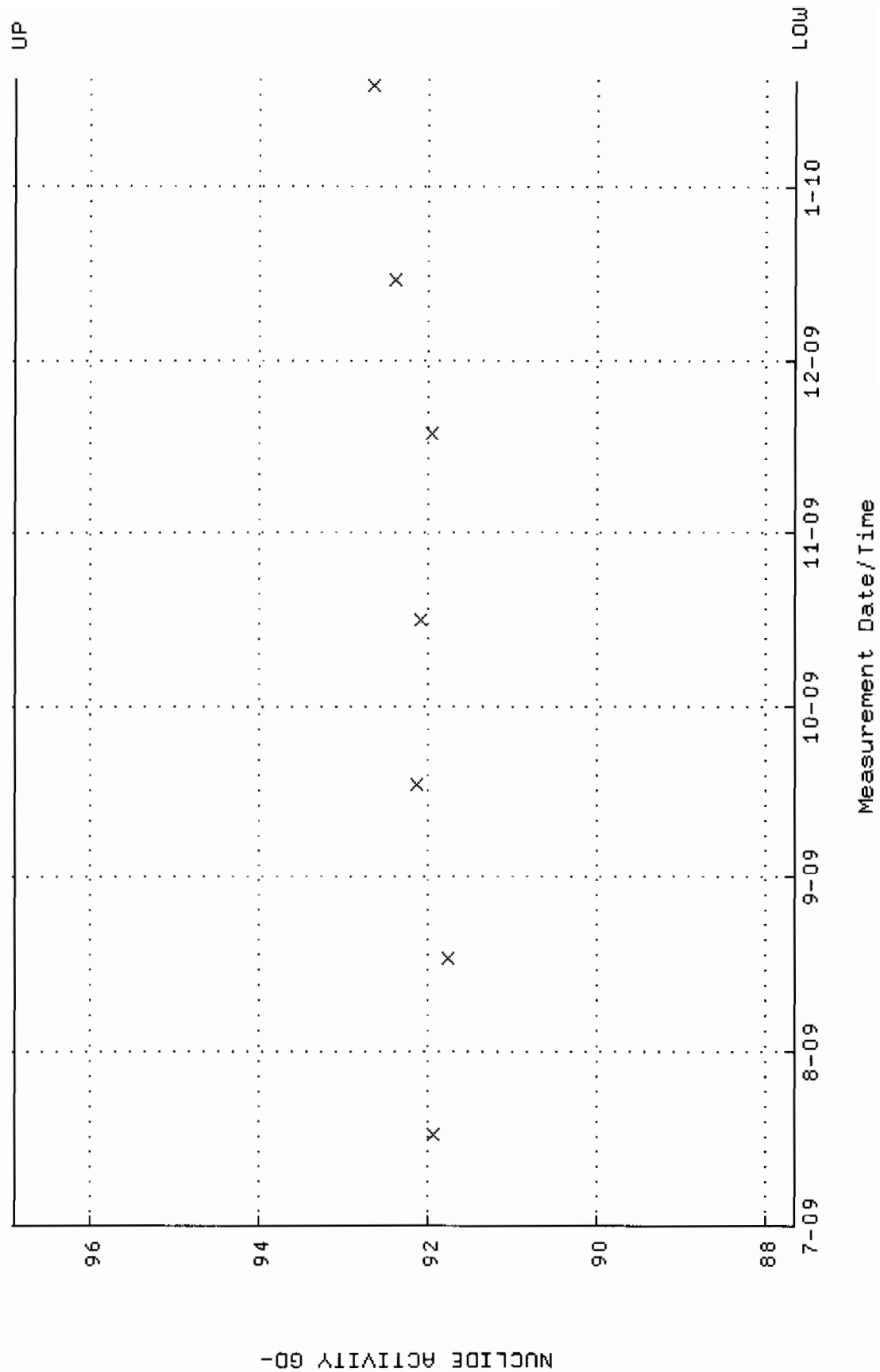
QA filename : DKA100:[ENV_ALPHA.QA.B]B130.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 14:56:11 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



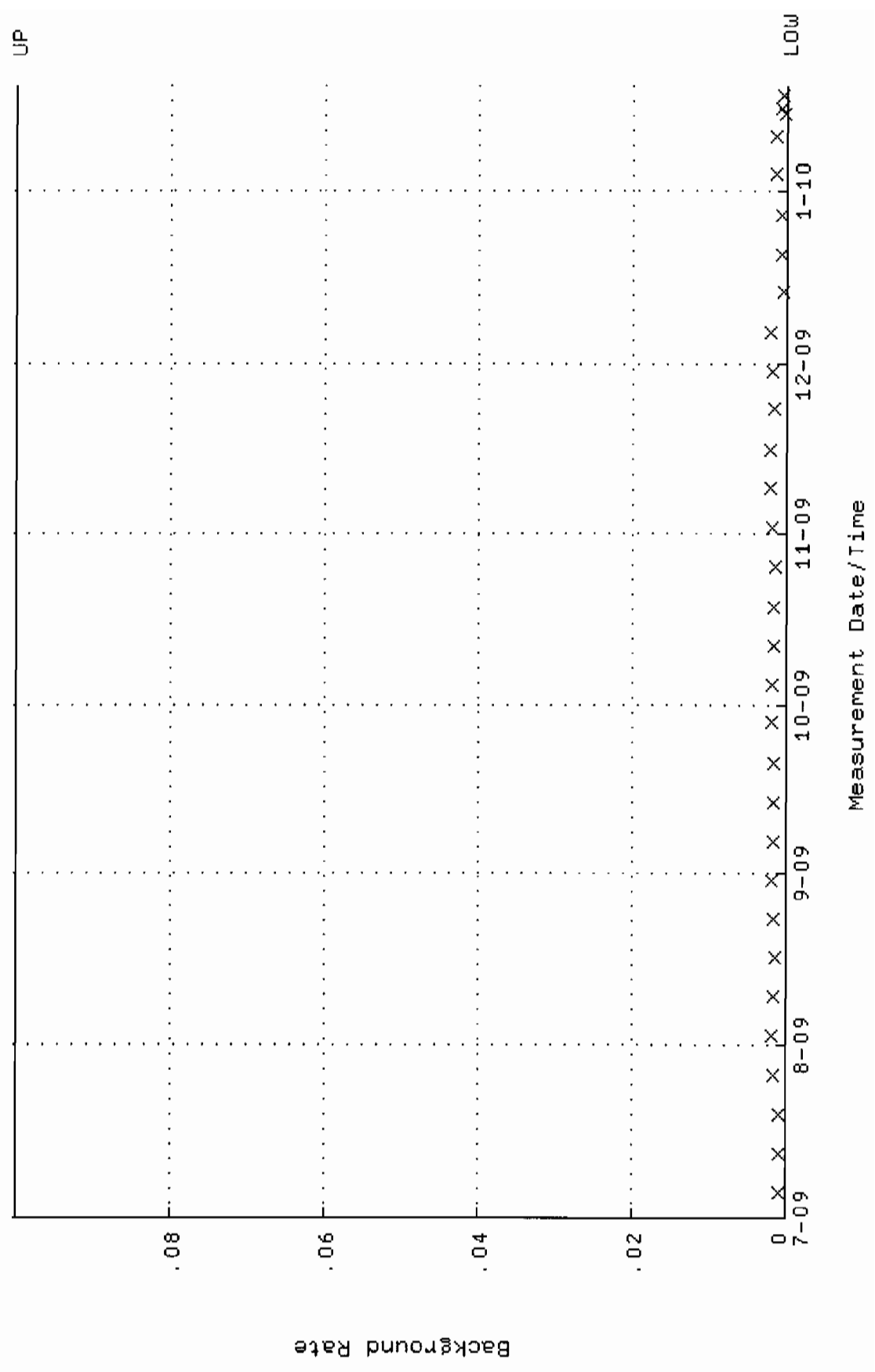
QA filename : DKA100:[ENV_ALPHA.QA.W]W134.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-JUL-2009 09:12:25 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.236455 through 0.256455



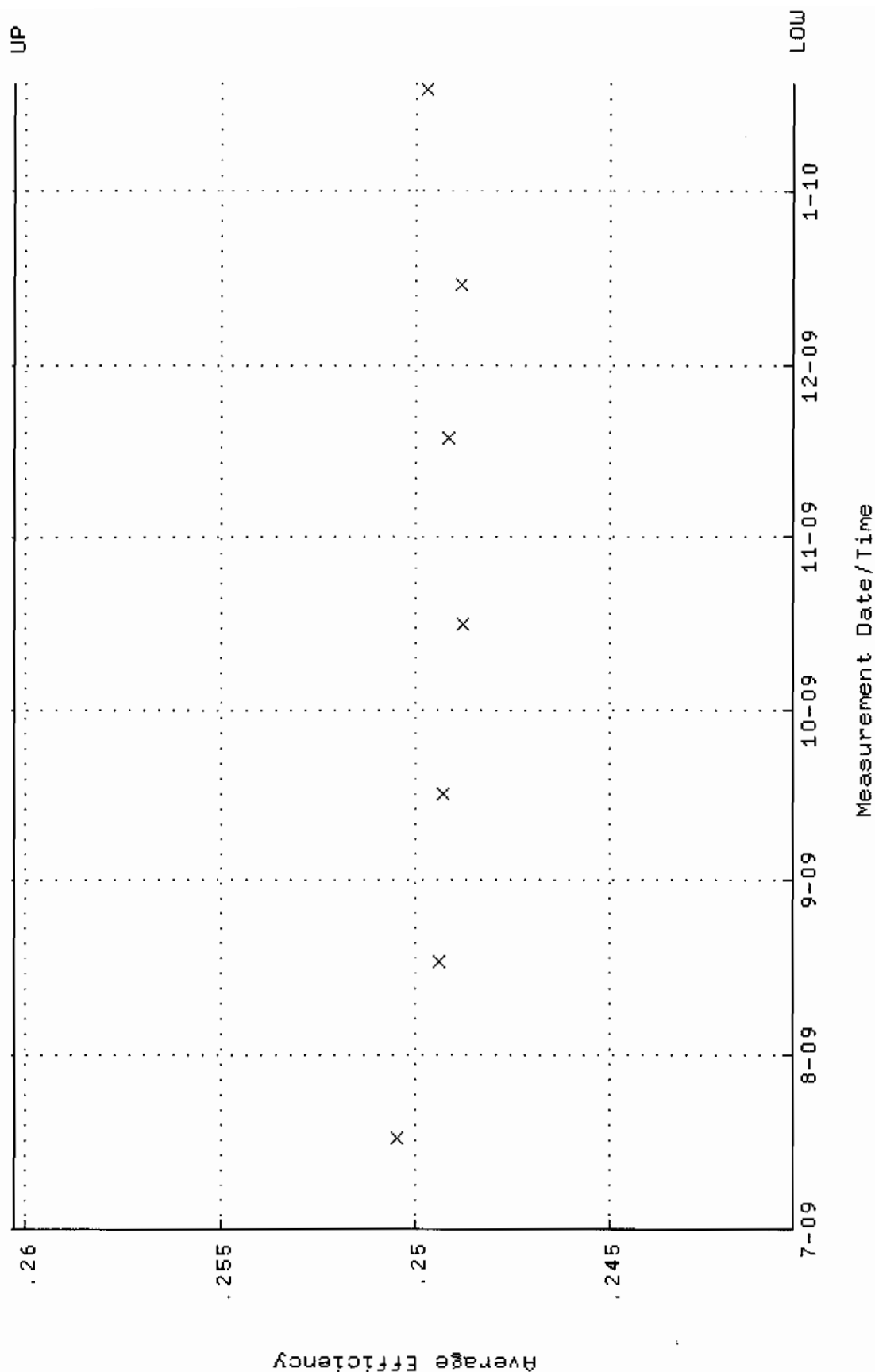
QA filename : DKA100:[ENV_ALPHA.QA.W]W134.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-JUL-2009 09:12:25 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 87.6576 through 96.8848



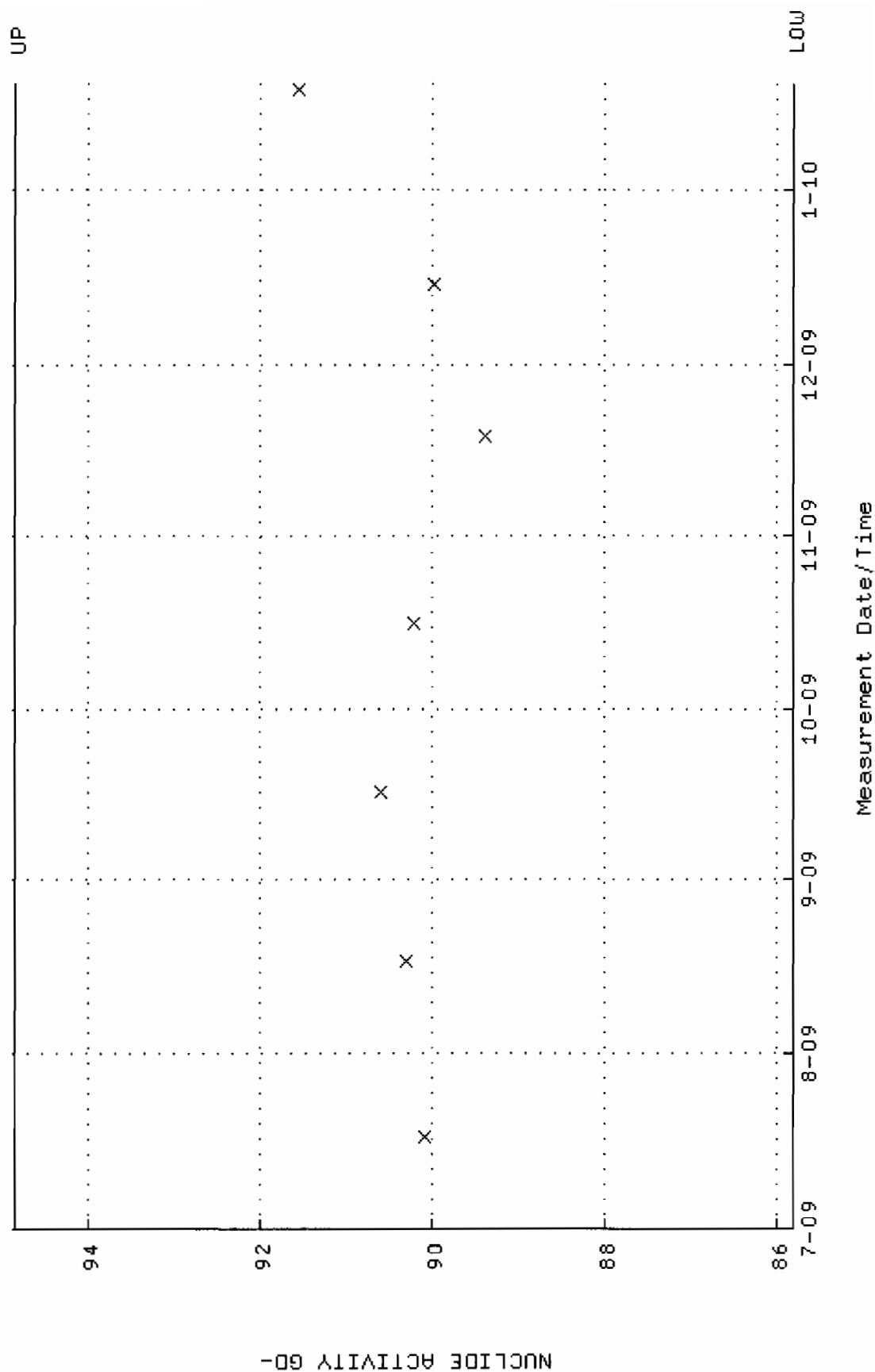
QA filename : DKA100:[ENV-ALPHA.QA.B]B134.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 14:56:30 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



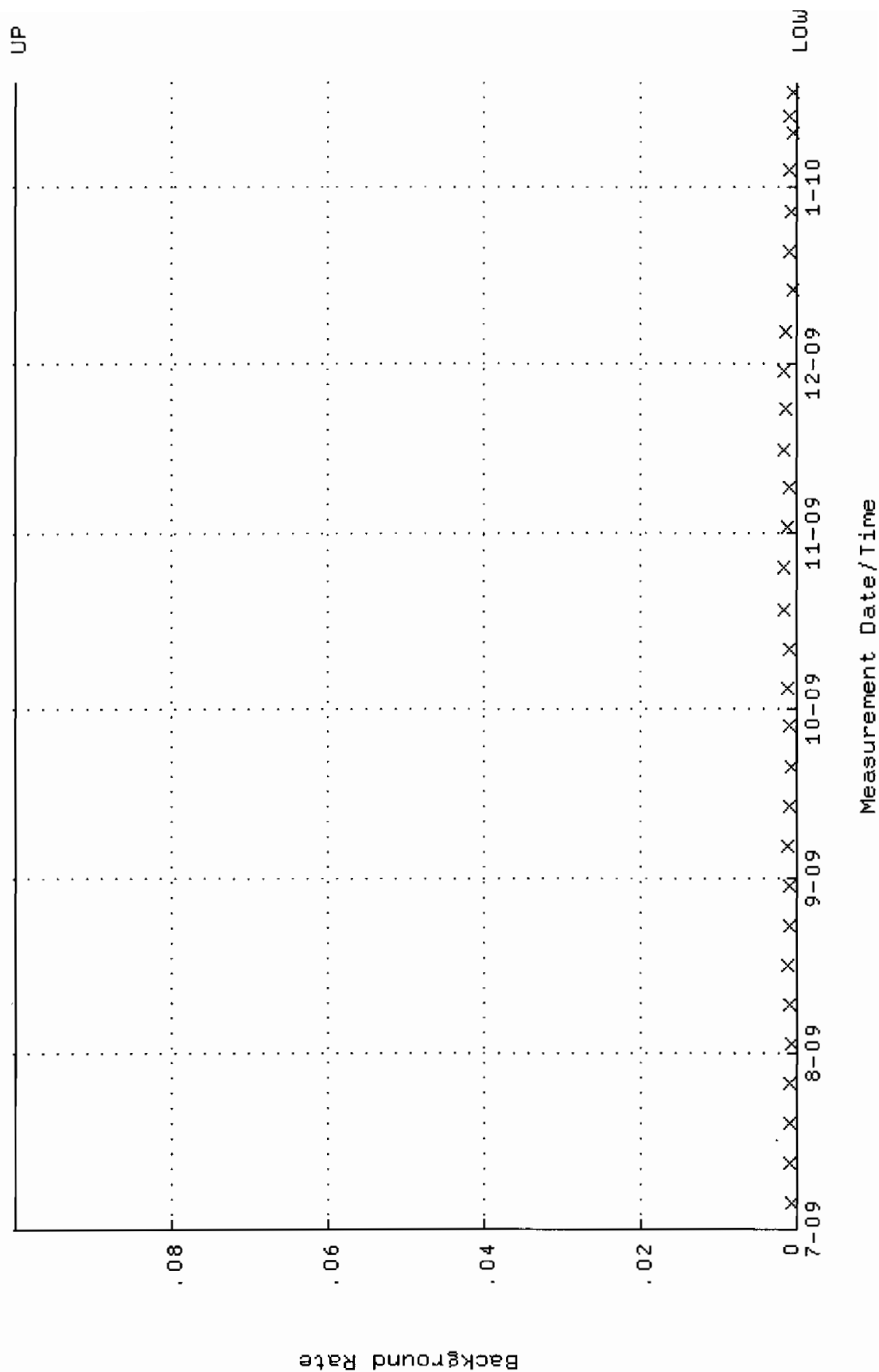
QA filename : DKA100:[ENV_ALPHA.QA.W]W139.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 17-JUL-2009 09:12:48 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.240299 through 0.260299



QA filename : DKA100:[ENV_ALPHA.QA.W]W139.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-JUL-2009 09:12:48 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 85.8145 through 94.8477



QA filename : DKA100:[ENV_ALPHA.QA.B]B139.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 14:56:55 through 19-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000

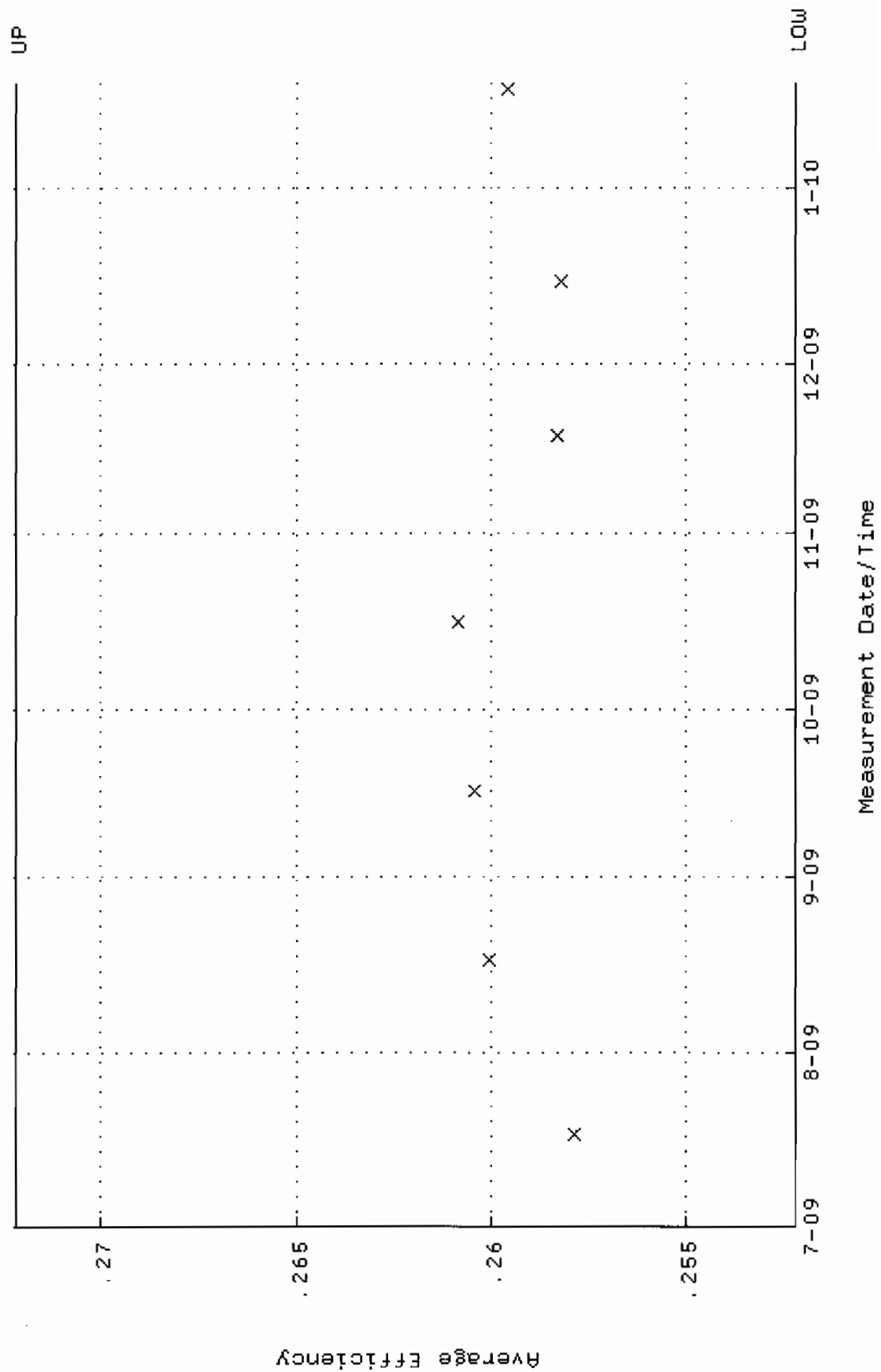


QA filename : DKA100:[ENV_ALPHA.QA.W]W142.QAF;2

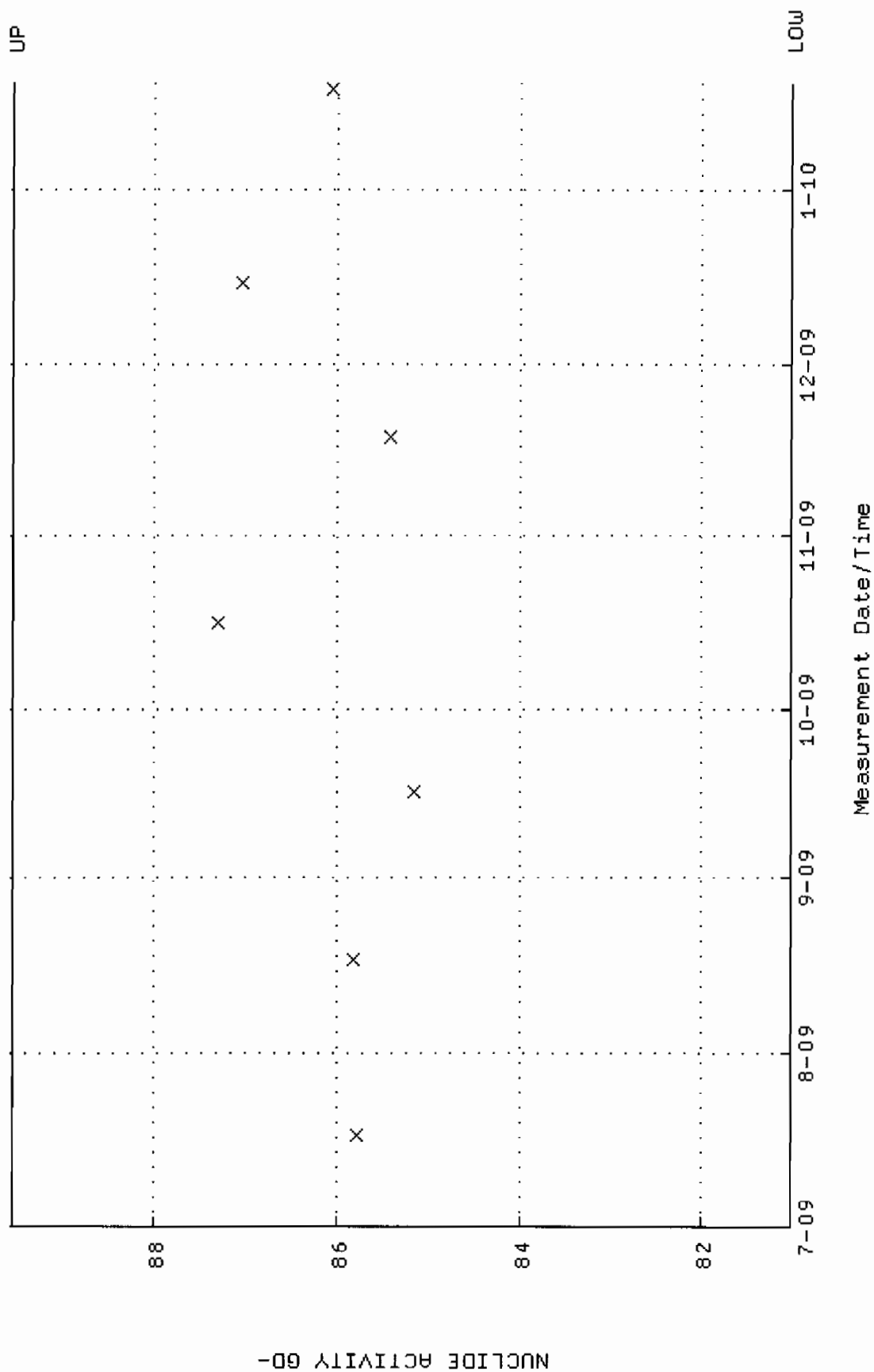
Parameter Name : AVRGEFF (Average Efficiency)

Start/End Dates : 17-JUL-2009 09:13:03 through 19-JAN-2010 12:00:00

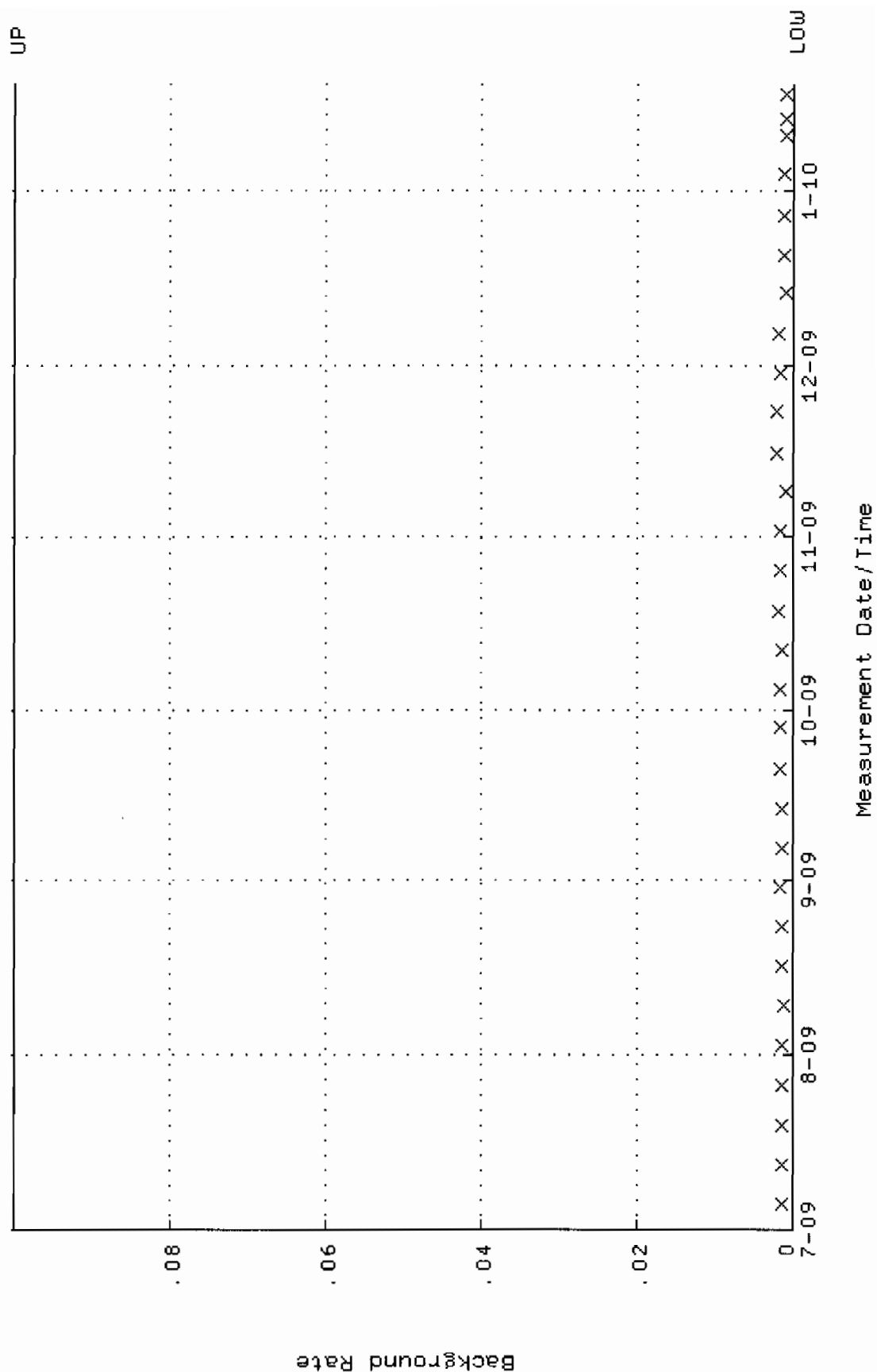
Lower/Upper Lmts: 0.252182 through 0.272182



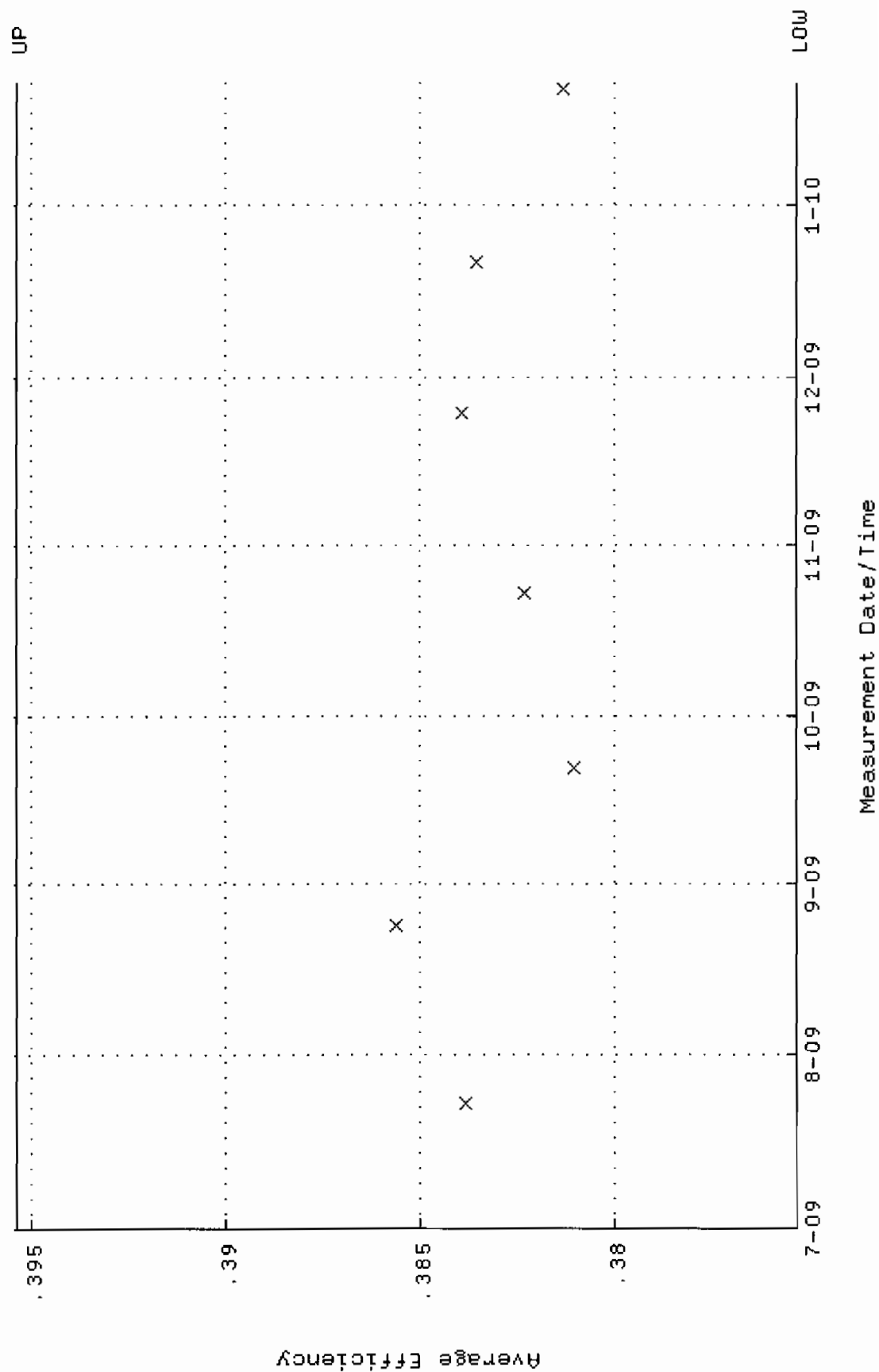
QA filename : DKA100:[ENV_ALPHA.QA.W]W142.QAF;2
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 17-JUL-2009 09:13:03 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 81.0245 through 89.5533



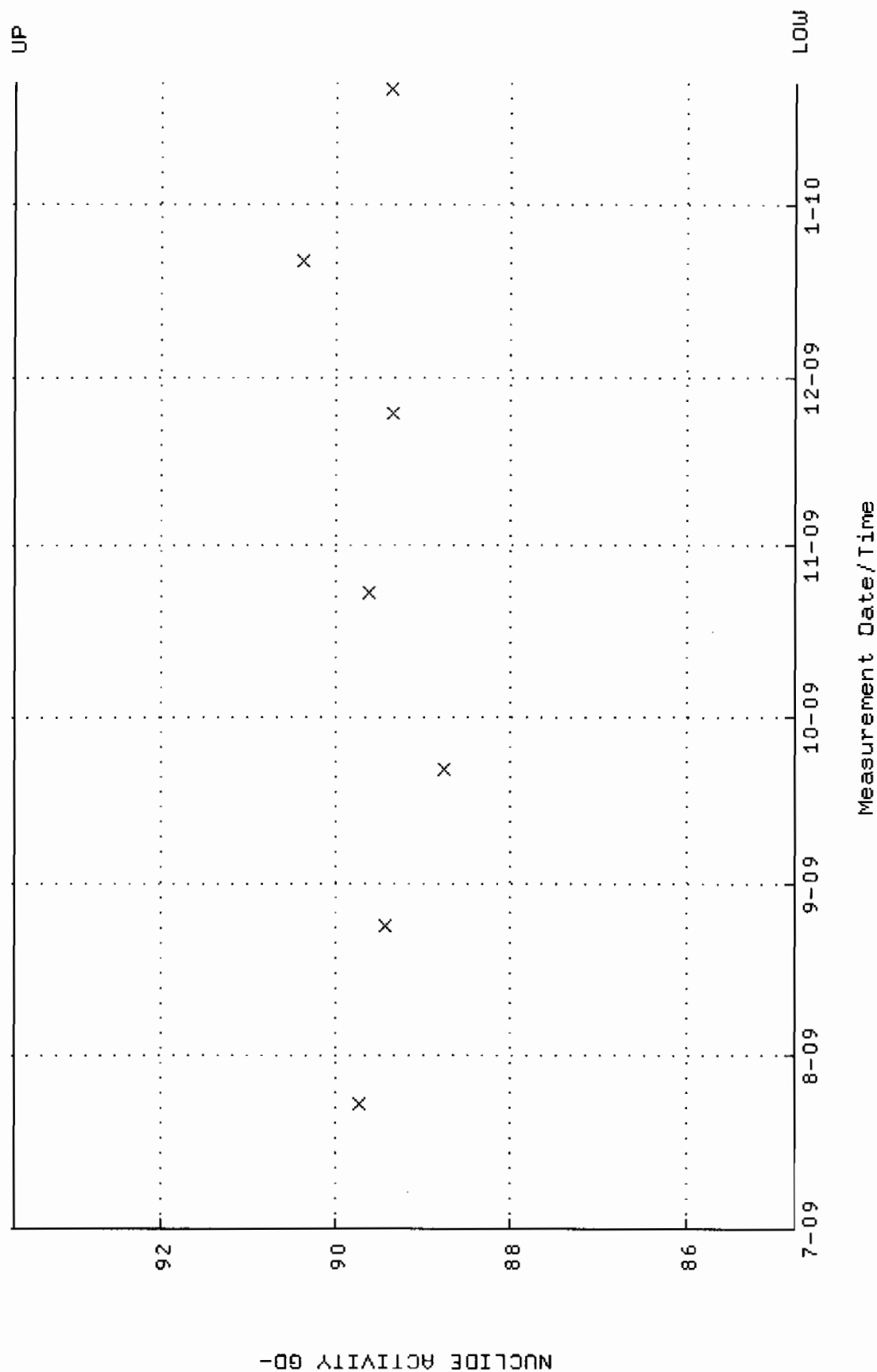
QA filename : OKA100:[ENV_ALPHA.QA.B]B142.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 14:57:09 through 19-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



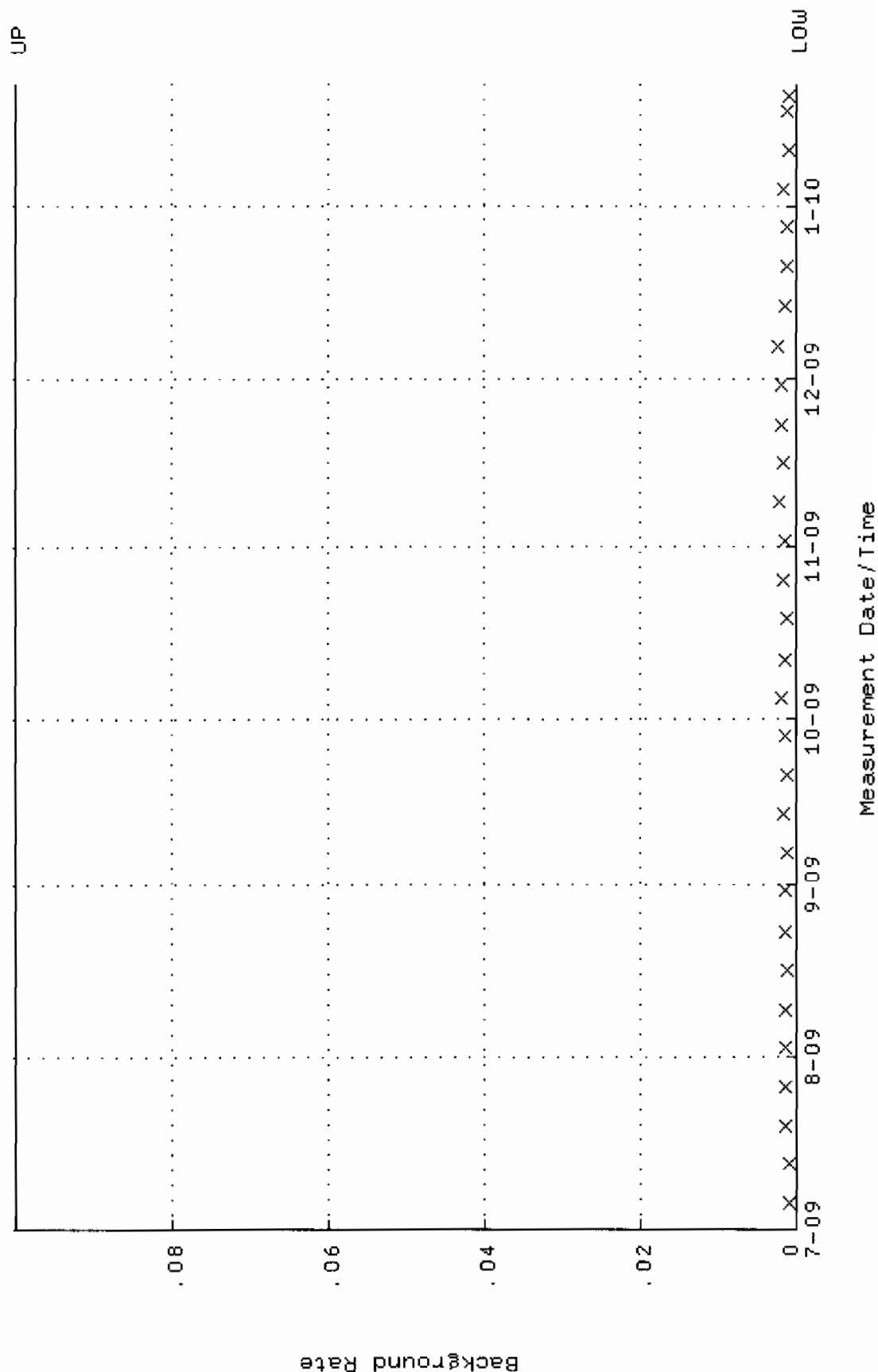
QA filename : DKA100:[ENV_ALPHA.QA.W]w171.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 23-JUL-2009 08:07:41 through 22-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.375364 through 0.395364



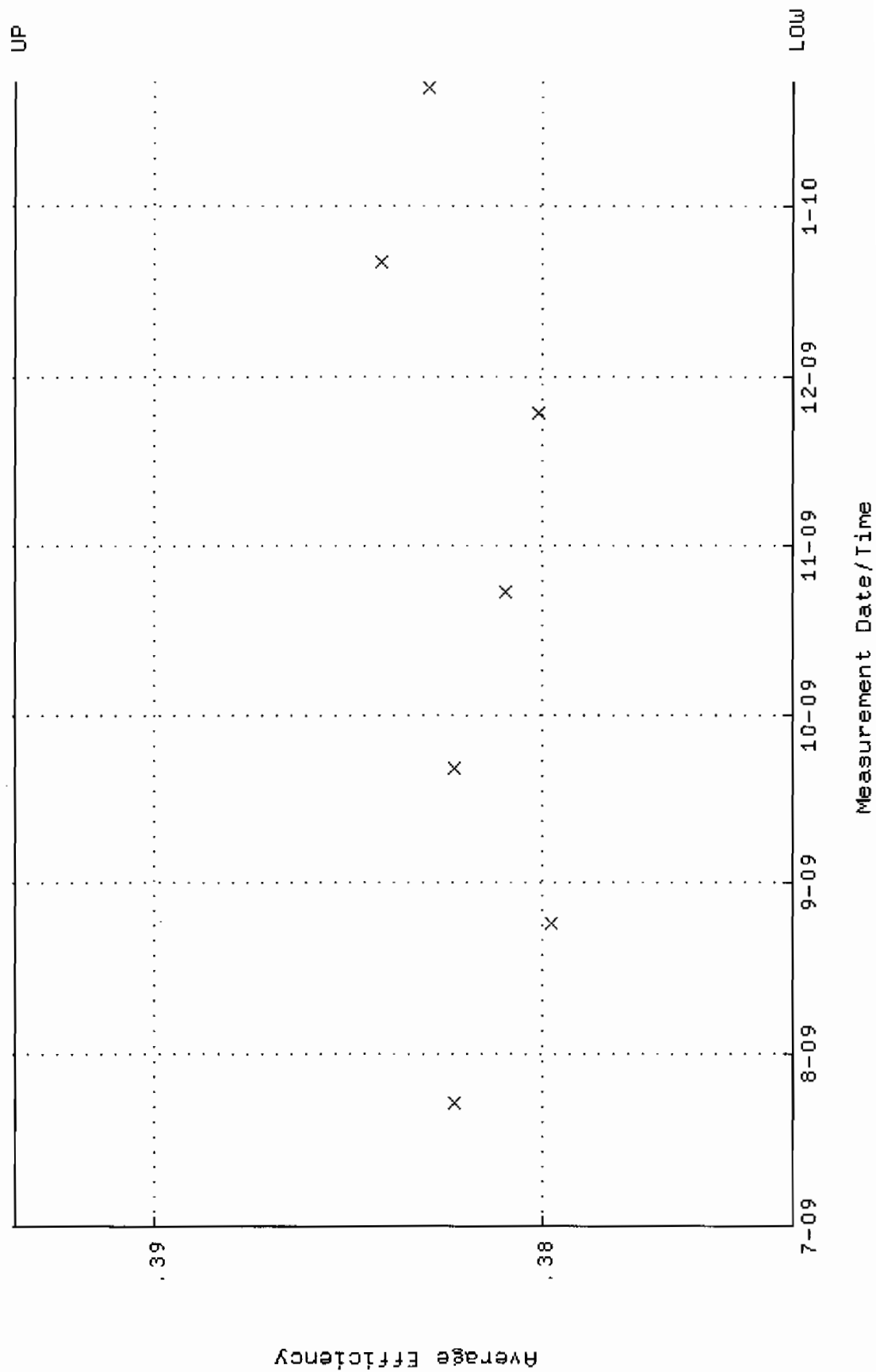
QA filename : DKA100:[ENV_ALPHA.QA.w]w171.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 23-JUL-2009 08:07:41 through 22-JAN-2010 12:00:00
 Lower/Upper Lmts: 84.7539 through 93.6753



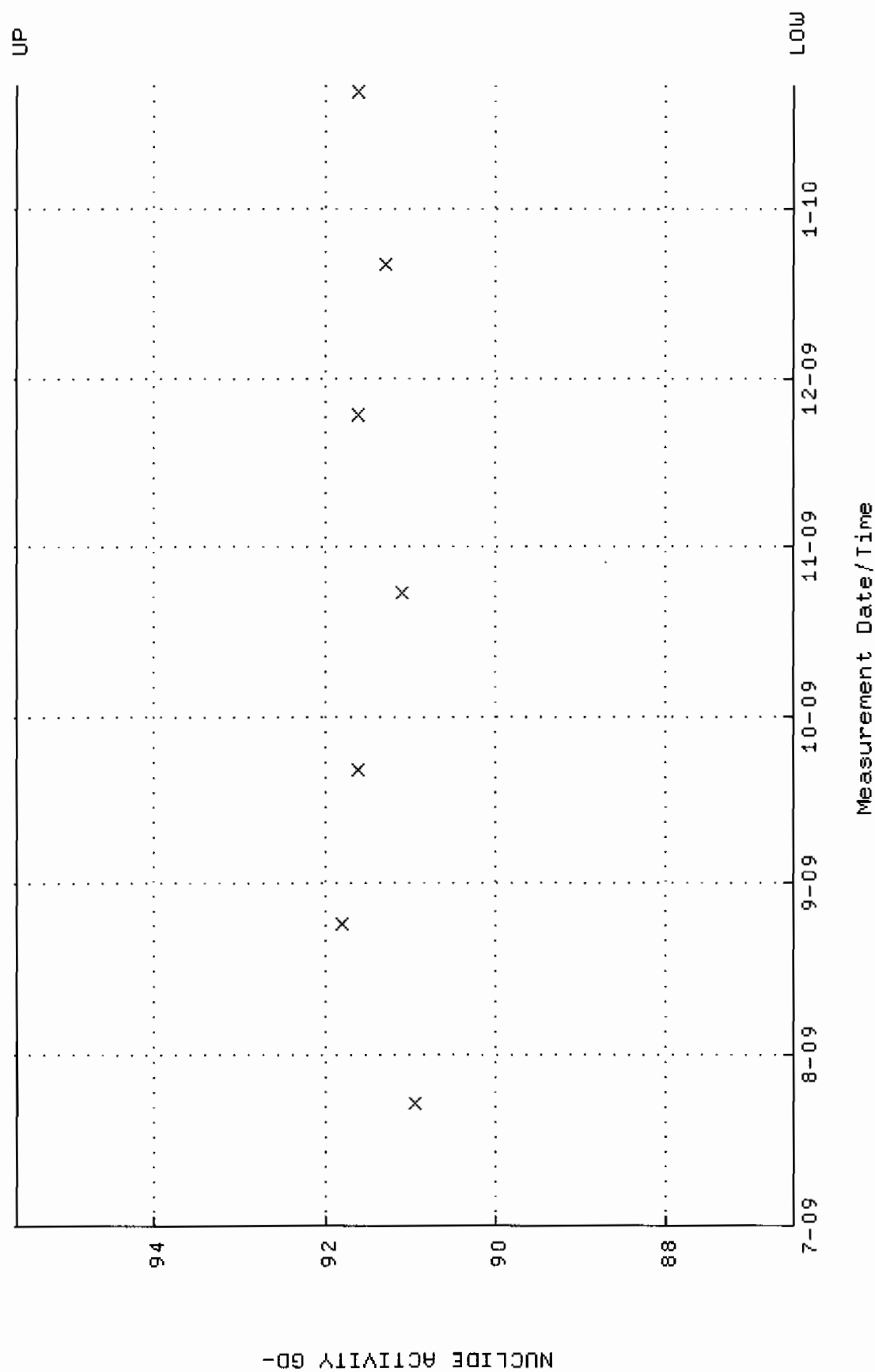
QA filename : DKA100:[ENV_ALPHA.QA,B]B171.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:00:19 through 22-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



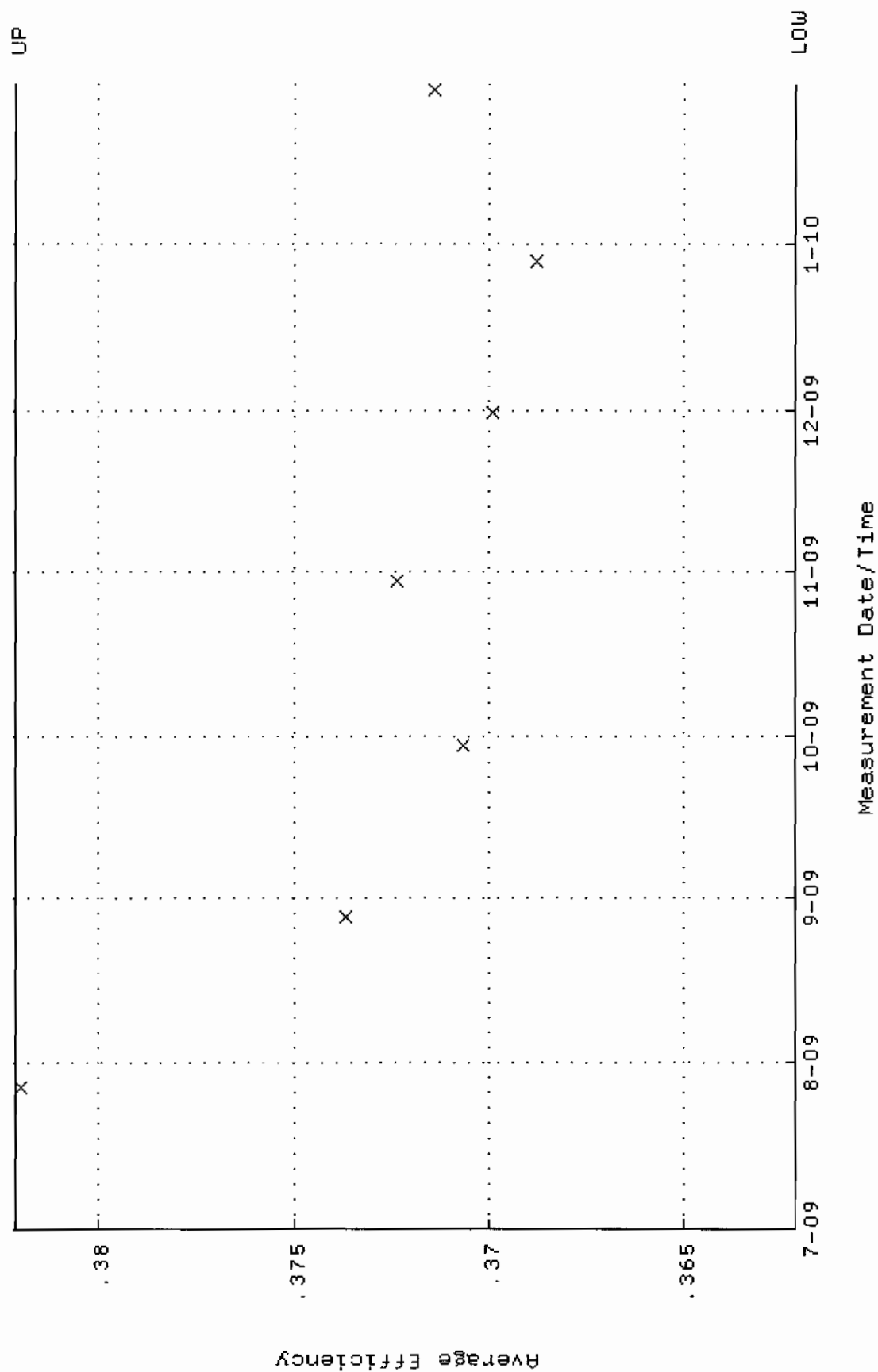
QA filename : DKA100:[ENV_ALPHA.QA.W]W172.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 23-JUL-2009 08:07:46 through 22-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.373575 through 0.393575



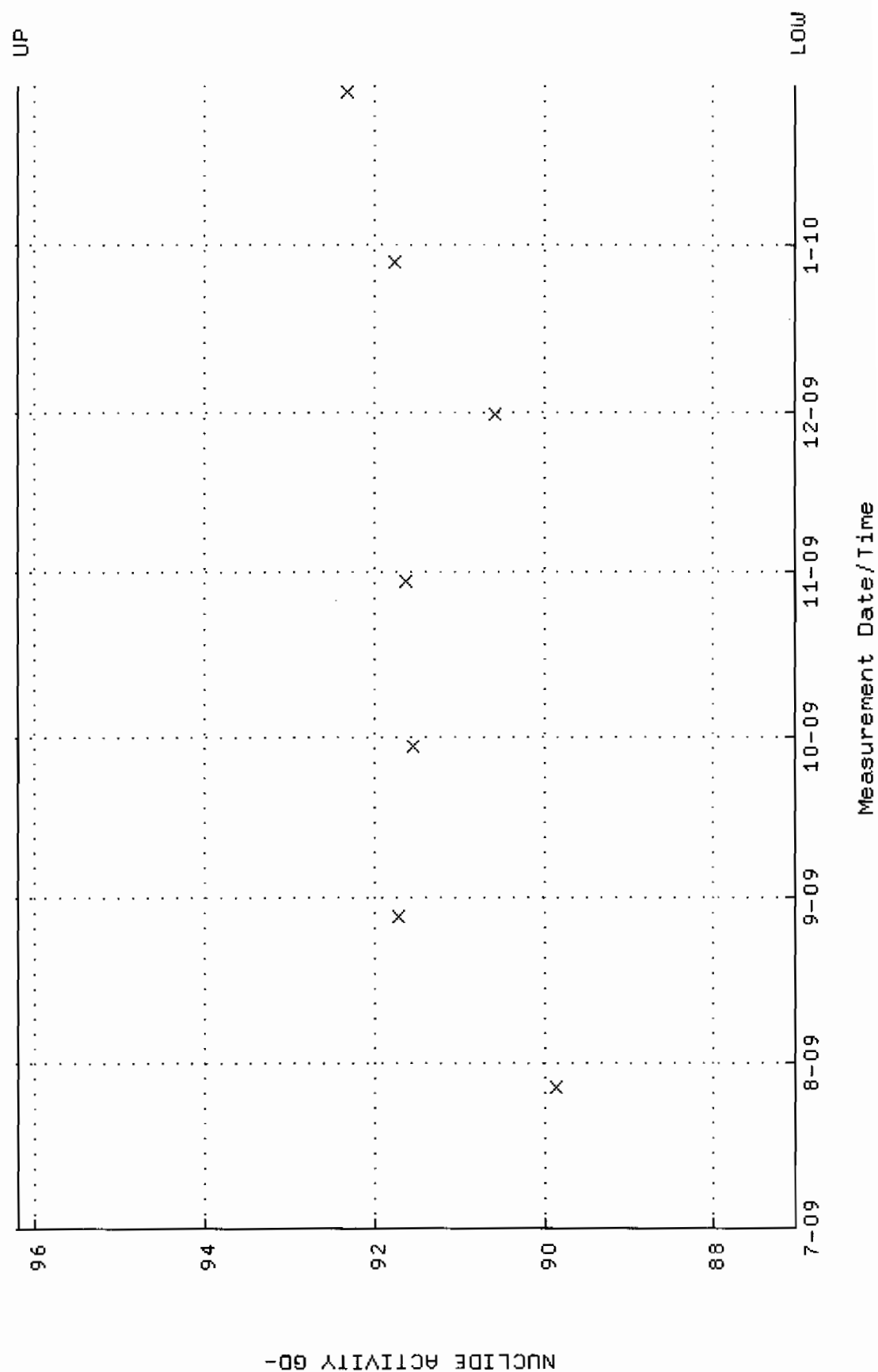
QA filename : DKA100:[ENV_ALPHA.QA.W]W172.QAF;1
 Parameter Name : NLAIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 23-JUL-2009 08:07:46 through 22-JAN-2010 12:00:00
 Lower/Upper Lmts: 86.5089 through 95.6151



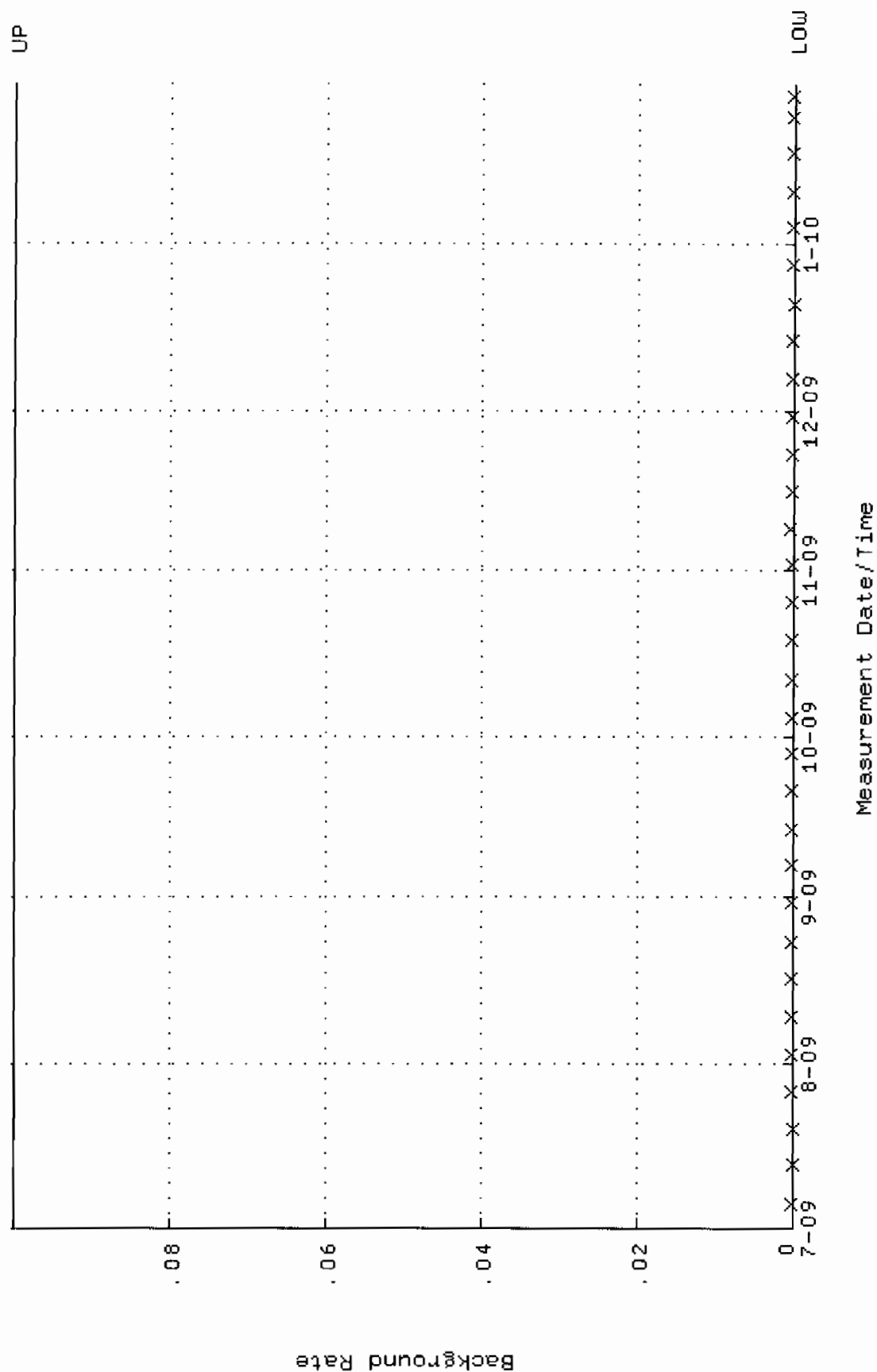
QA filename : DKA100:[ENV_ALPHA.QA.W]W228.QAF;1
 Parameter Name : AVRGEFF (Average Efficiency)
 Start/End Dates : 27-JUL-2009 11:49:16 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.362134 through 0.382134



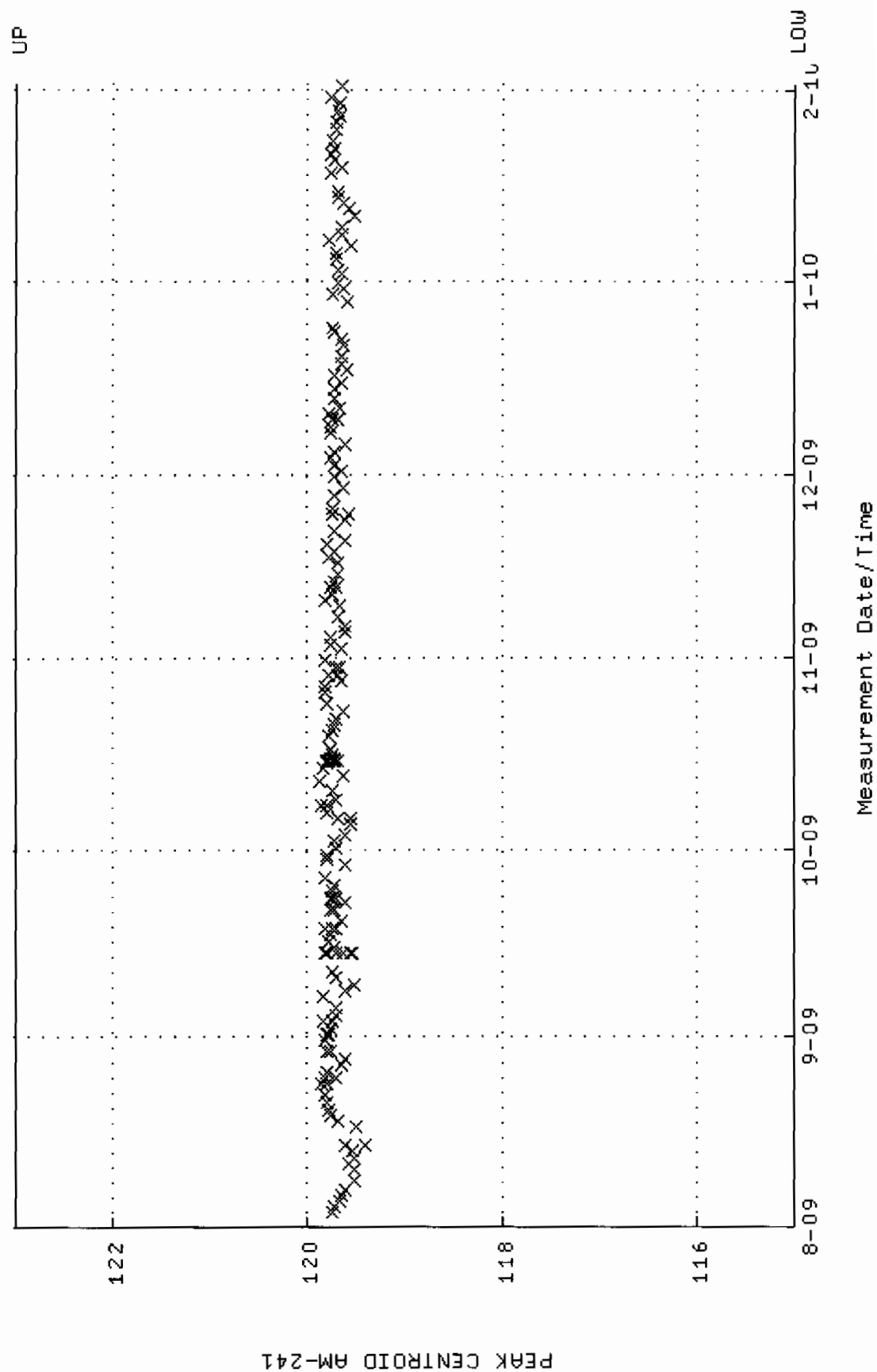
QA filename : DKA100:[ENV_ALPHA.QA.W]w228.QAF;1
 Parameter Name : NLACTIVITY-GD148 (NUCLIDE ACTIVITY GD-148)
 Start/End Dates : 27-JUL-2009 11:49:16 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 87.0370 through 96.1988



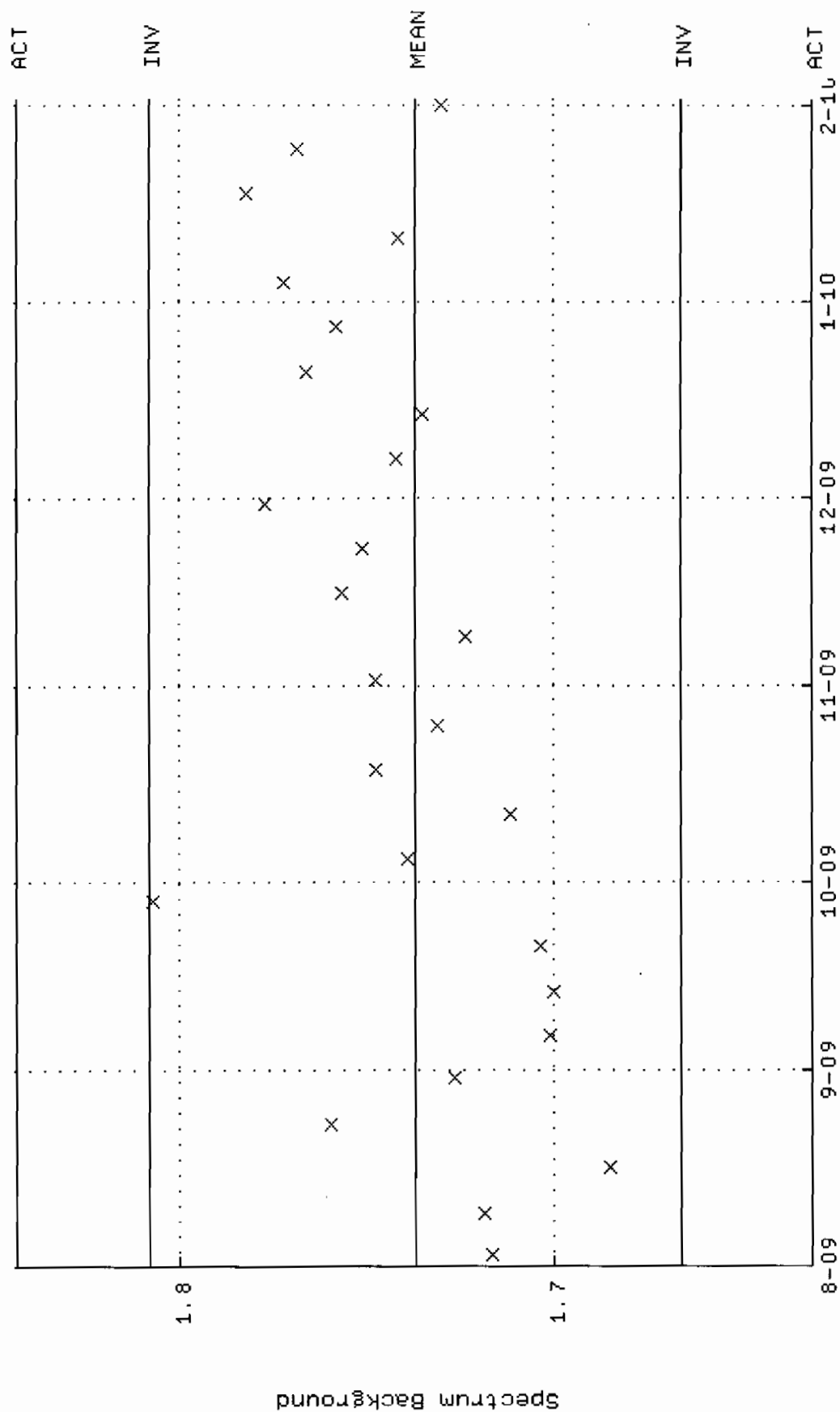
QA filename : DKA100:[ENV_ALPHA.QA.B]B228.QAF;1
 Parameter Name : BACKRATE (Background Rate)
 Start/End Dates : 5-JUL-2009 15:04:48 through 30-JAN-2010 12:00:00
 Lower/Upper Lmts: 0.000000E+00 through 0.100000



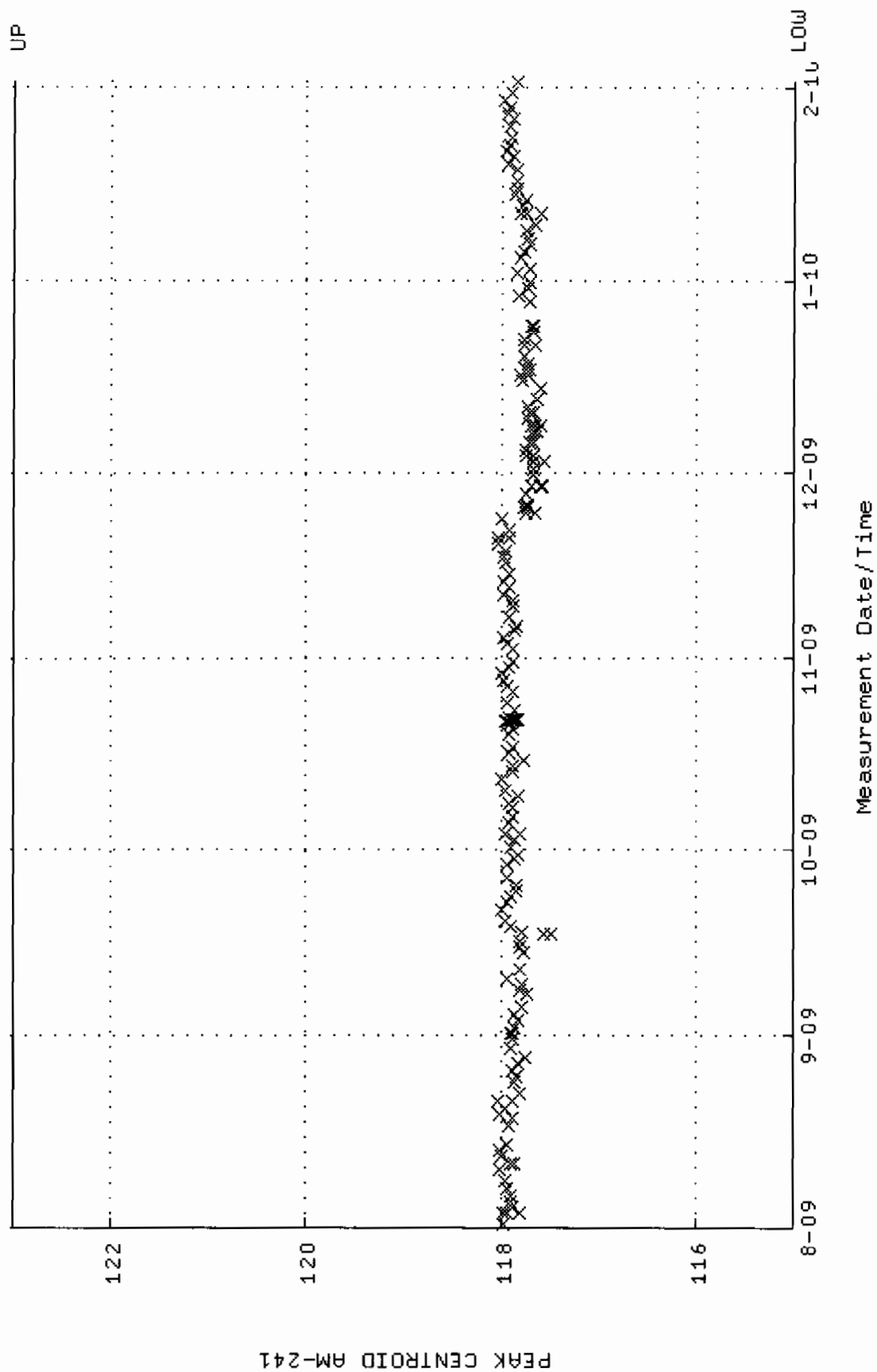
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM01-500MLMB.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:08:48 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



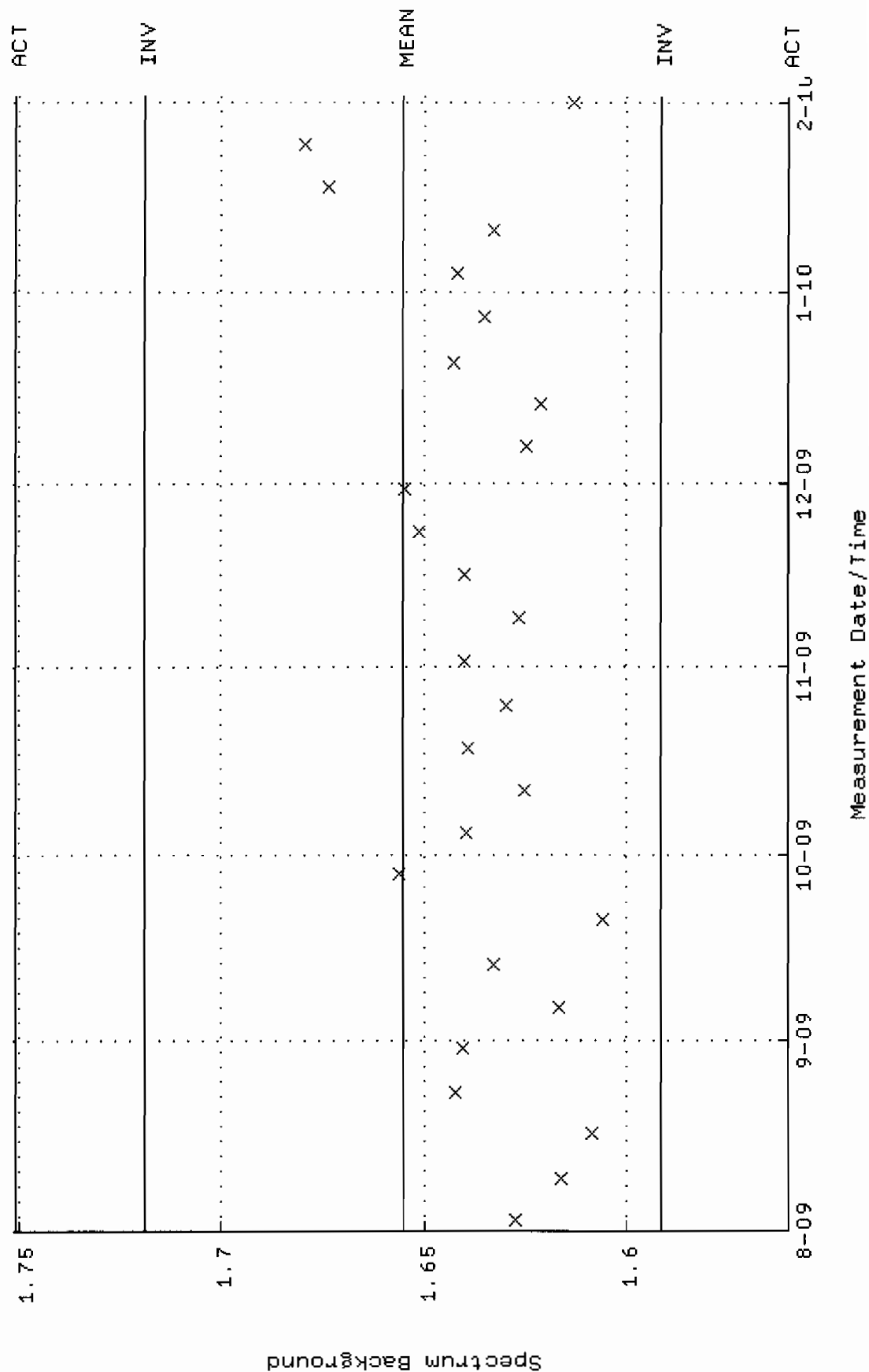
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM01.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:21:01 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.73723 +- 3.552524E-02 (2.04 %)



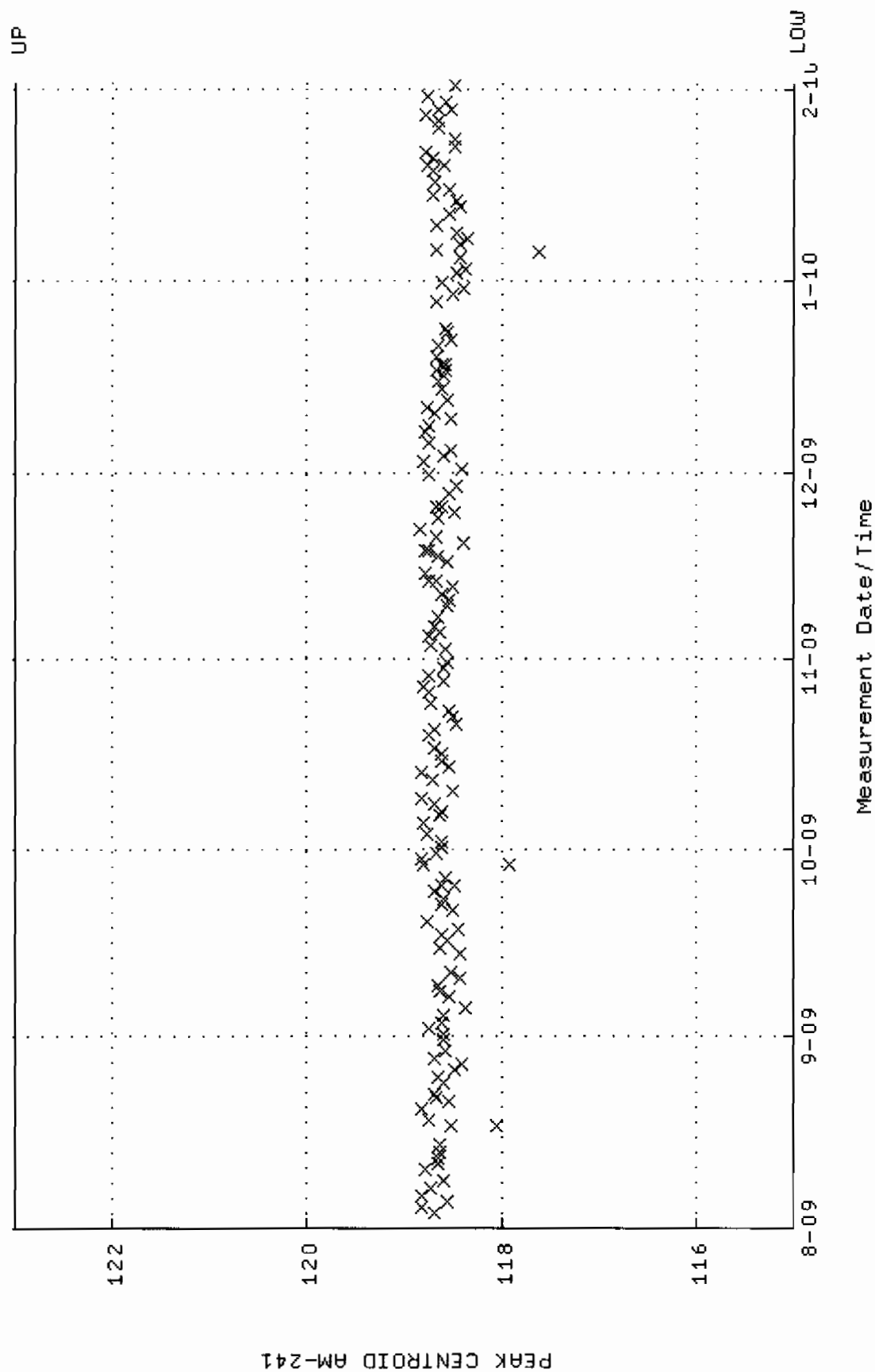
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC-GAM11-JAR.QAF;1
Parameter Name : PSCENTRO-241 (PEAK CENTROID AM-241)
Start/End Dates : 1-AUG-2009 13:27:21 through 1-FEB-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



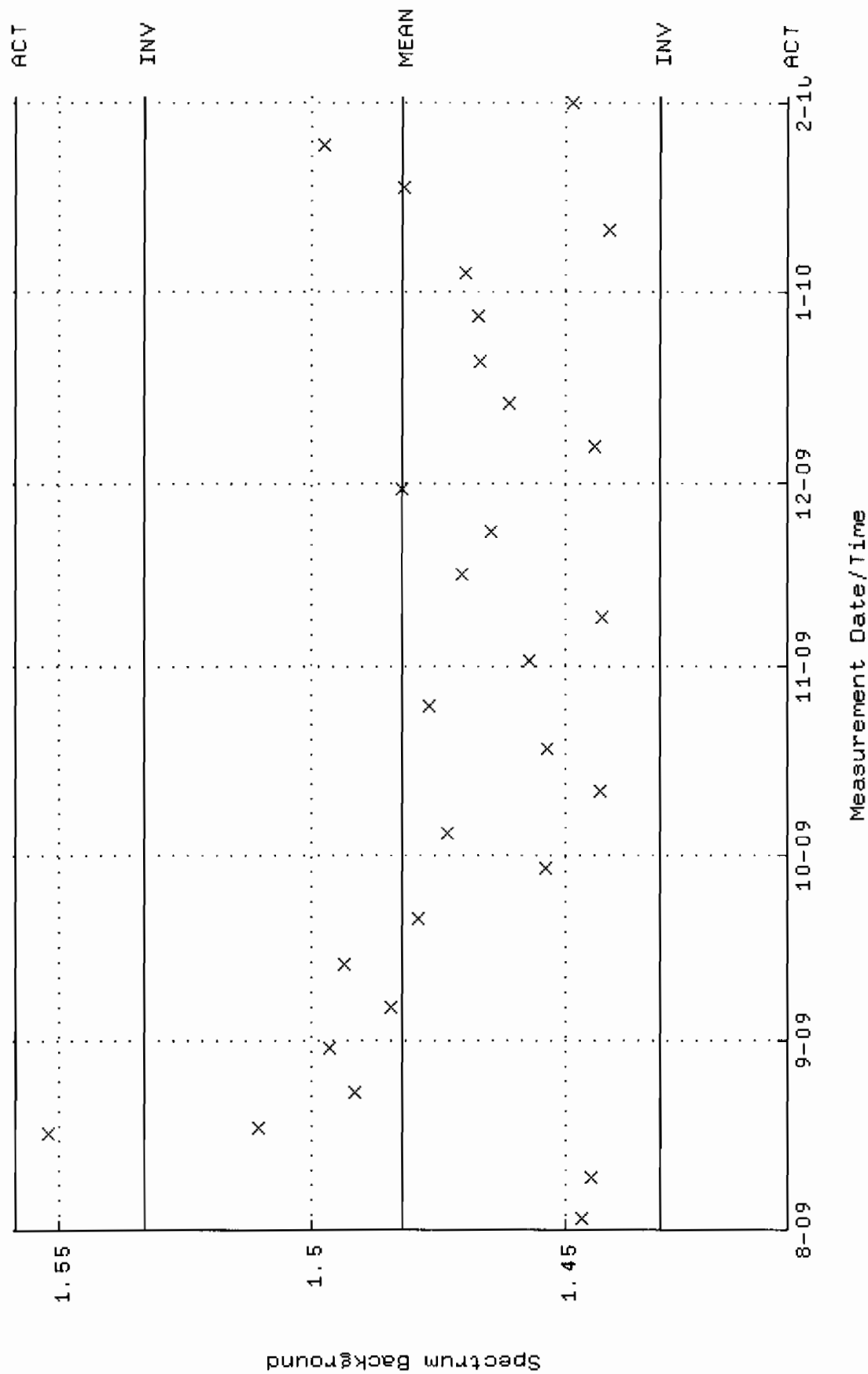
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC-GAM11.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:23:55 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.65552 +- 3.175806E-02 (1.92 %)



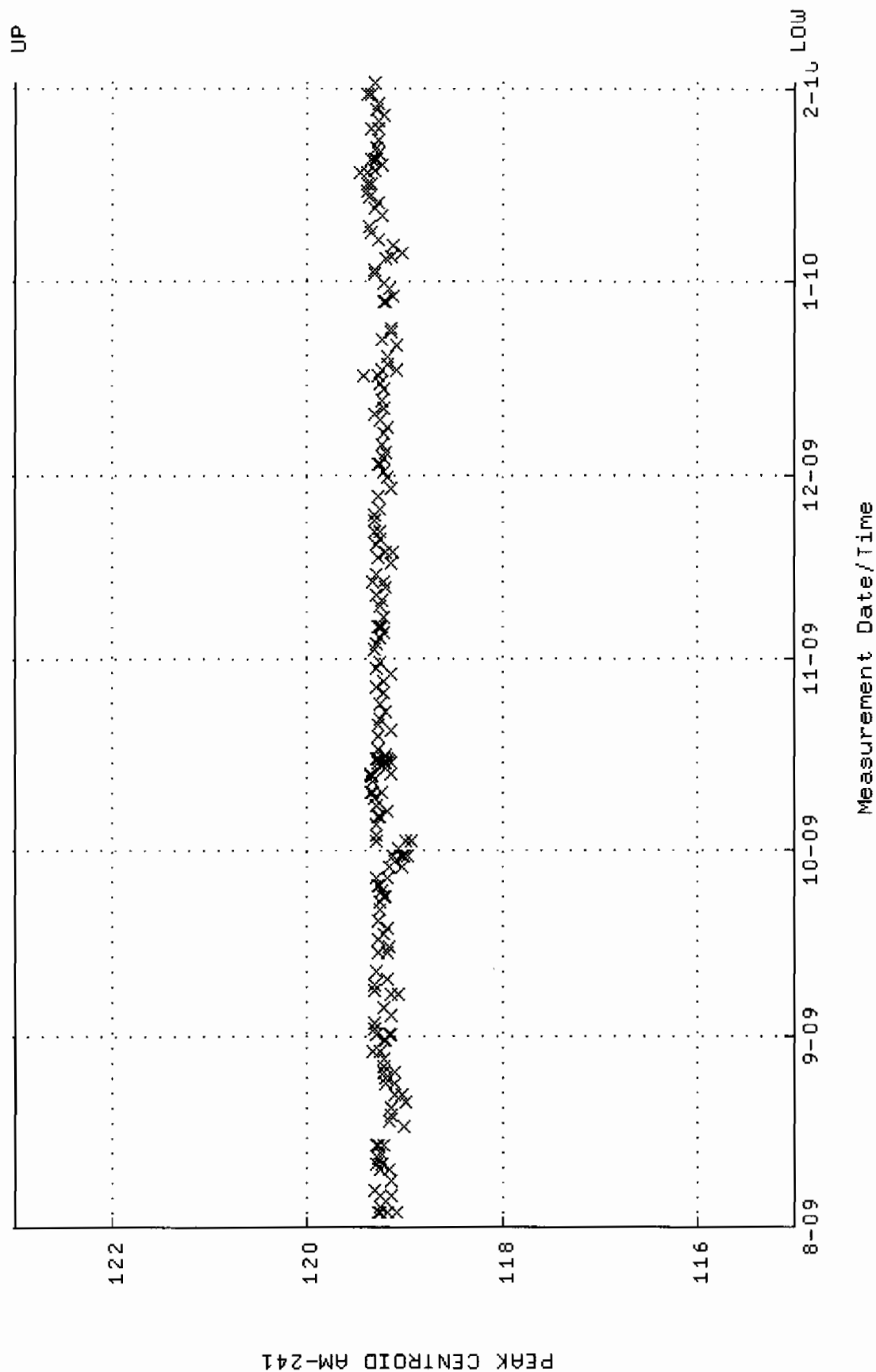
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC-GAM14-2LMB.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:15:54 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



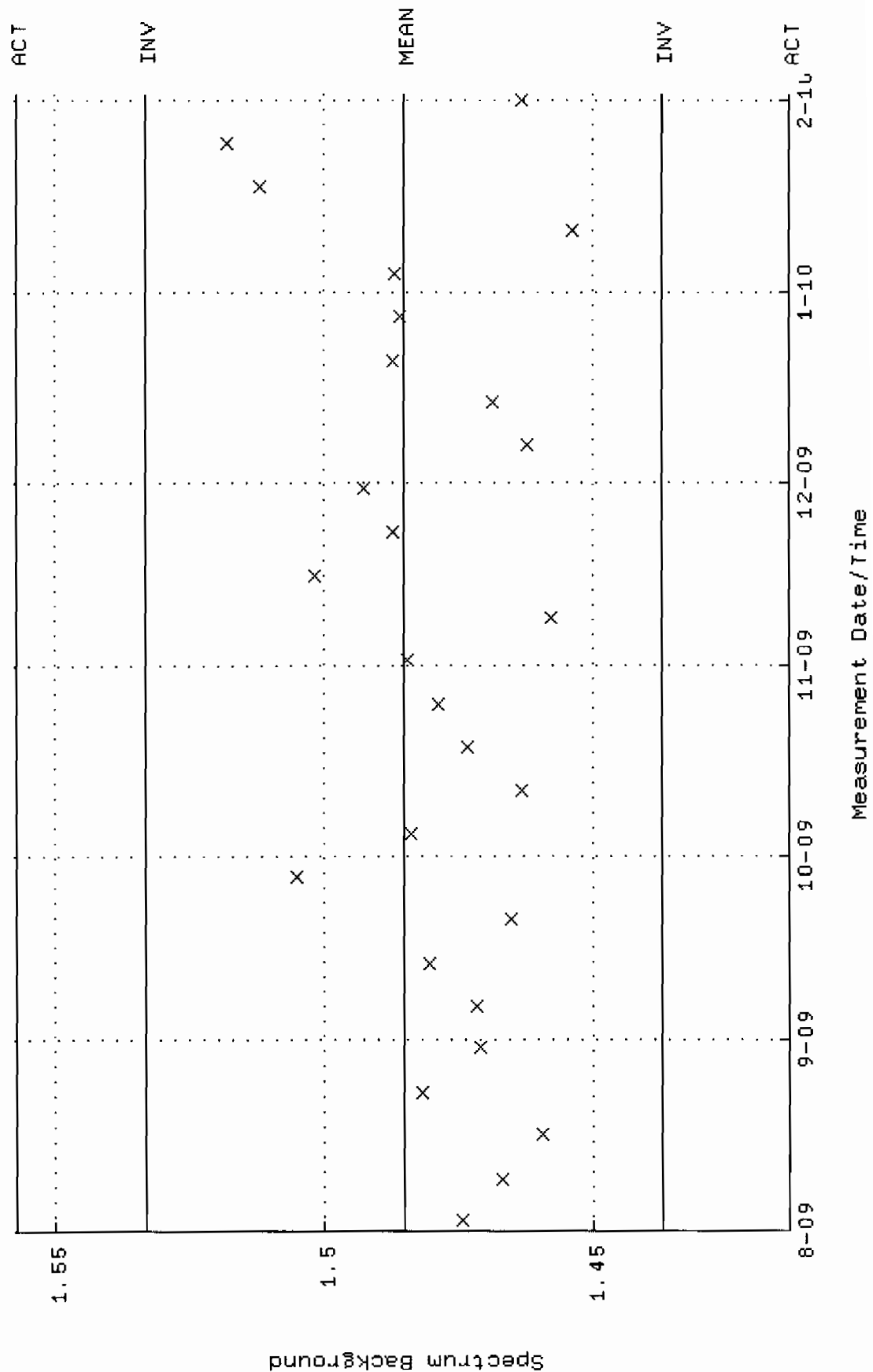
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC-GAM14.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:24:33 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.48240 +- 2.535500E-02 (1.71 %)



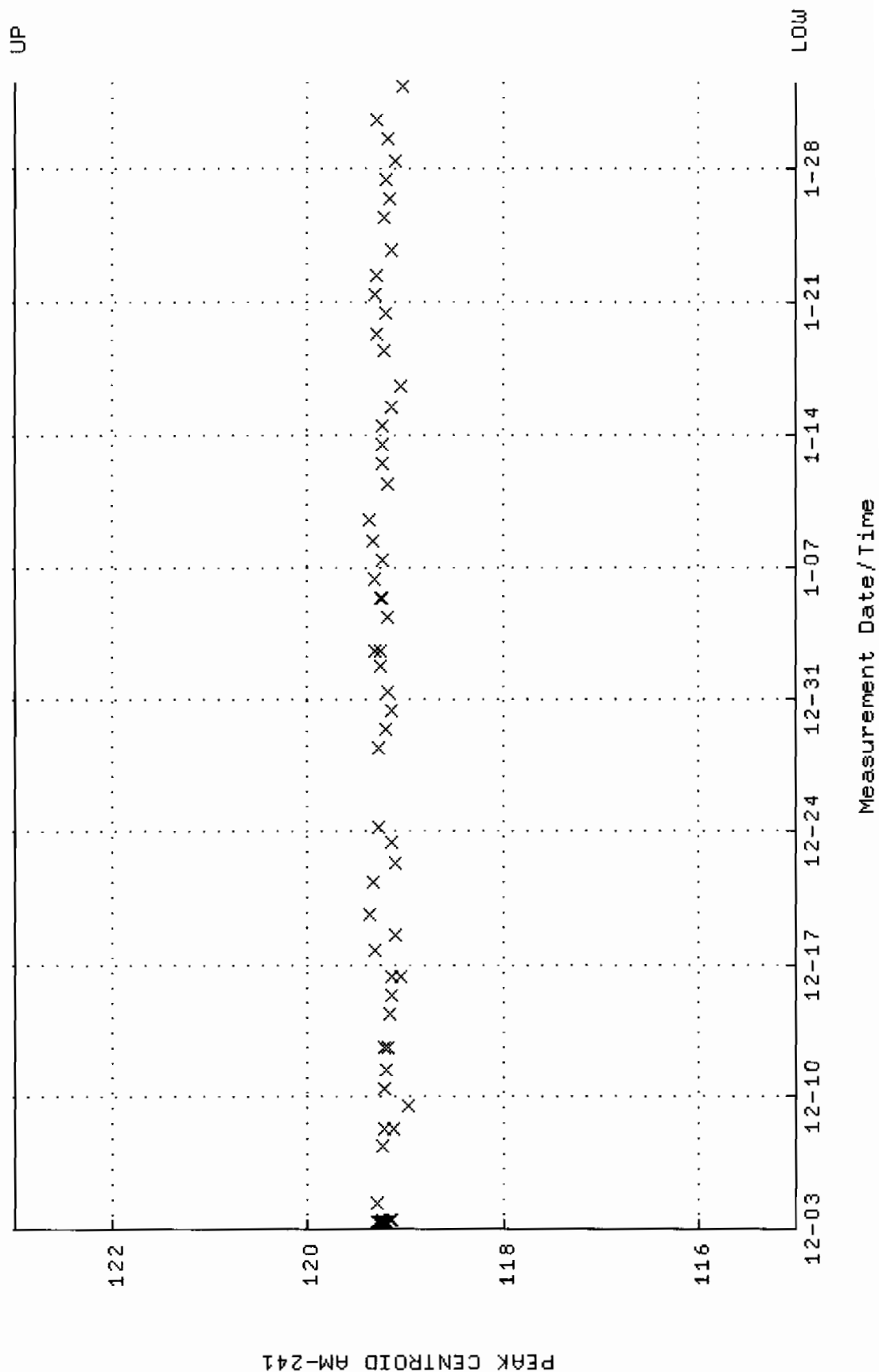
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM20_500MLMB.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-AUG-2009 09:19:21 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



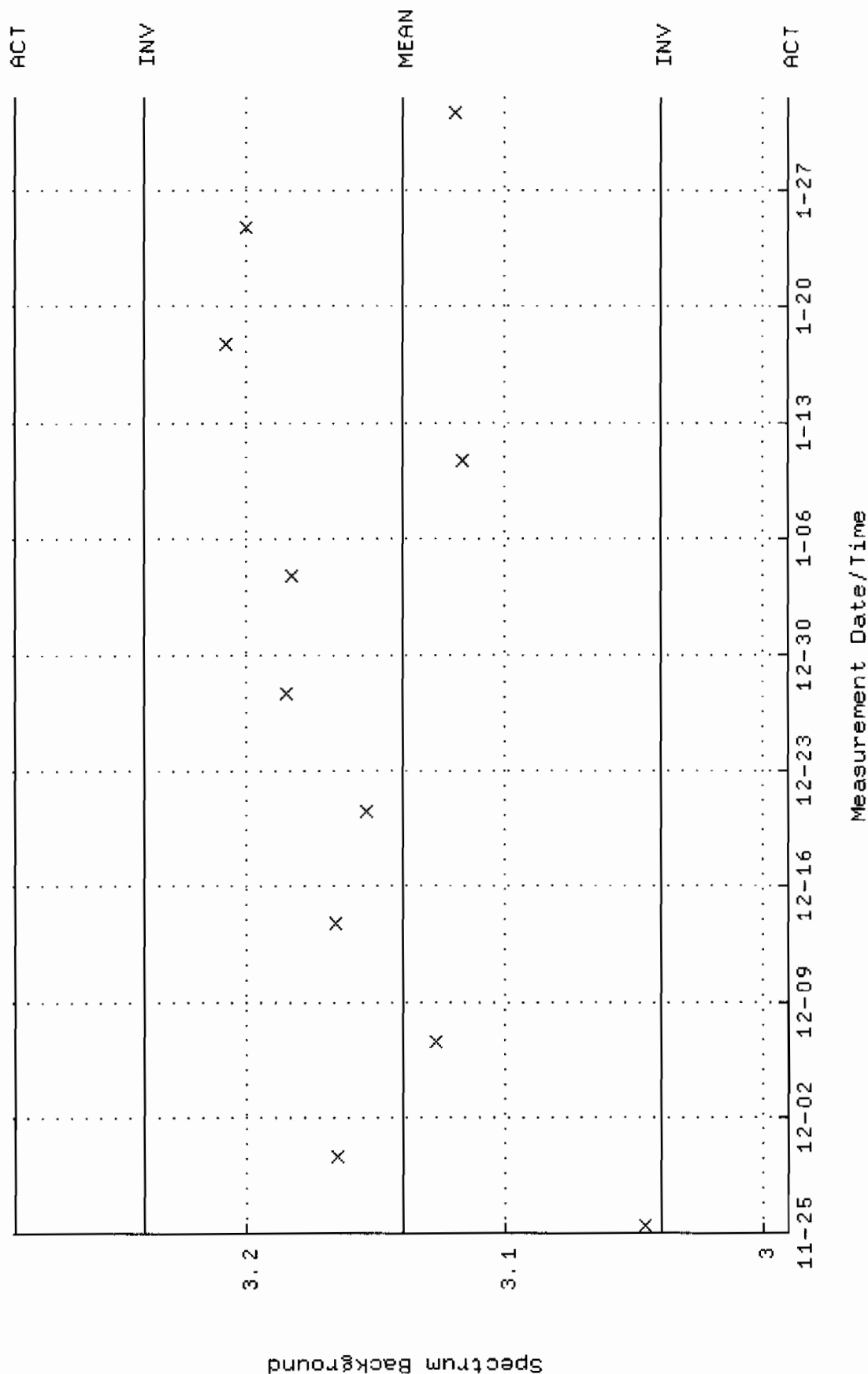
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM20.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 2-AUG-2009 16:25:55 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 1.48527 +- 2.388665E-02 (1.61 %)

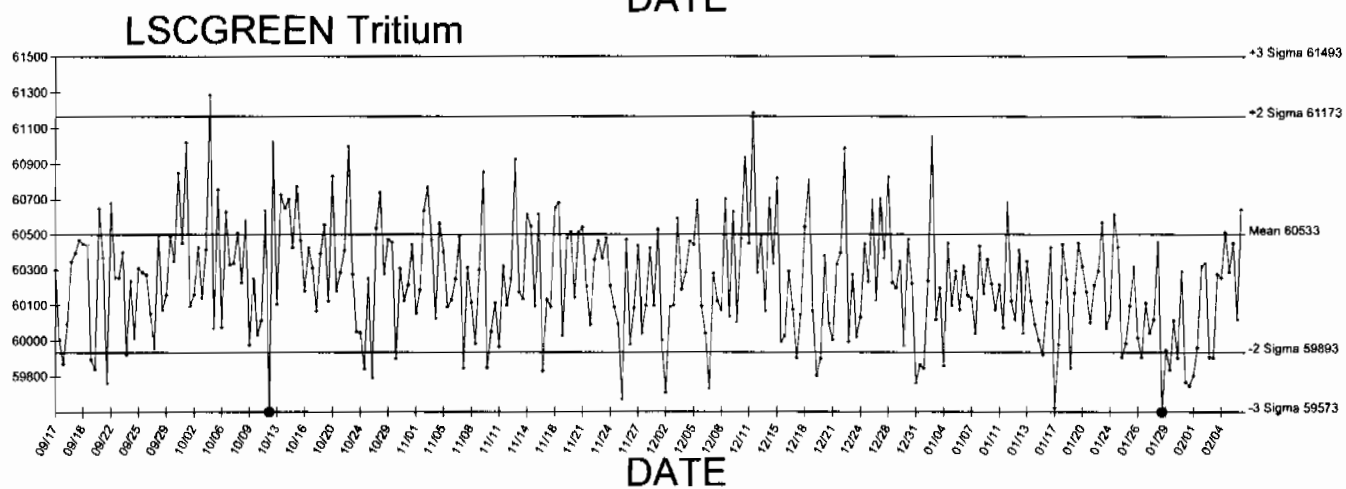
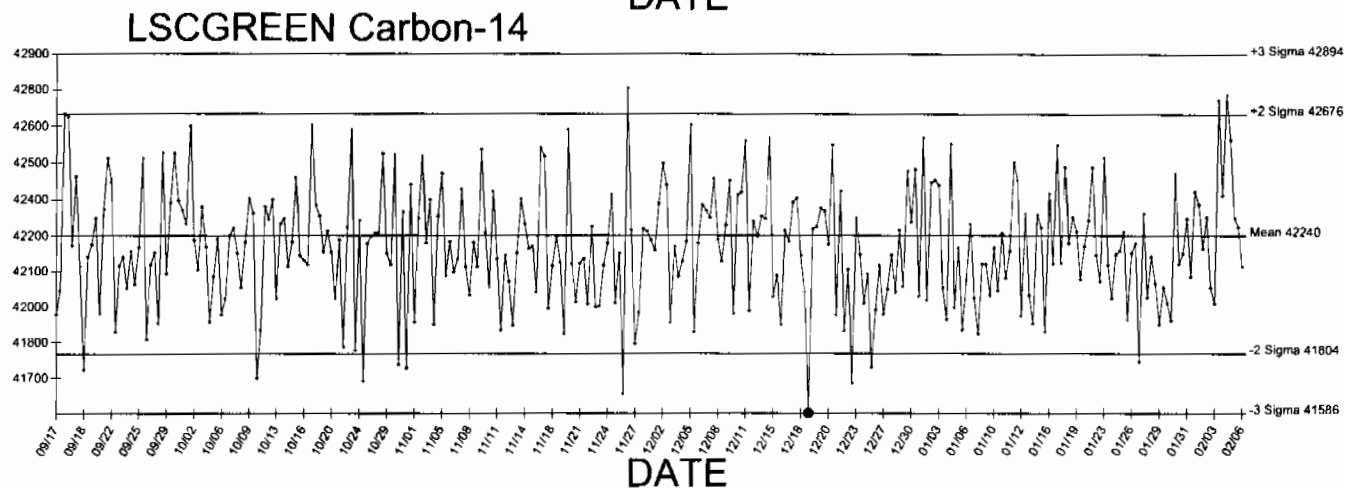
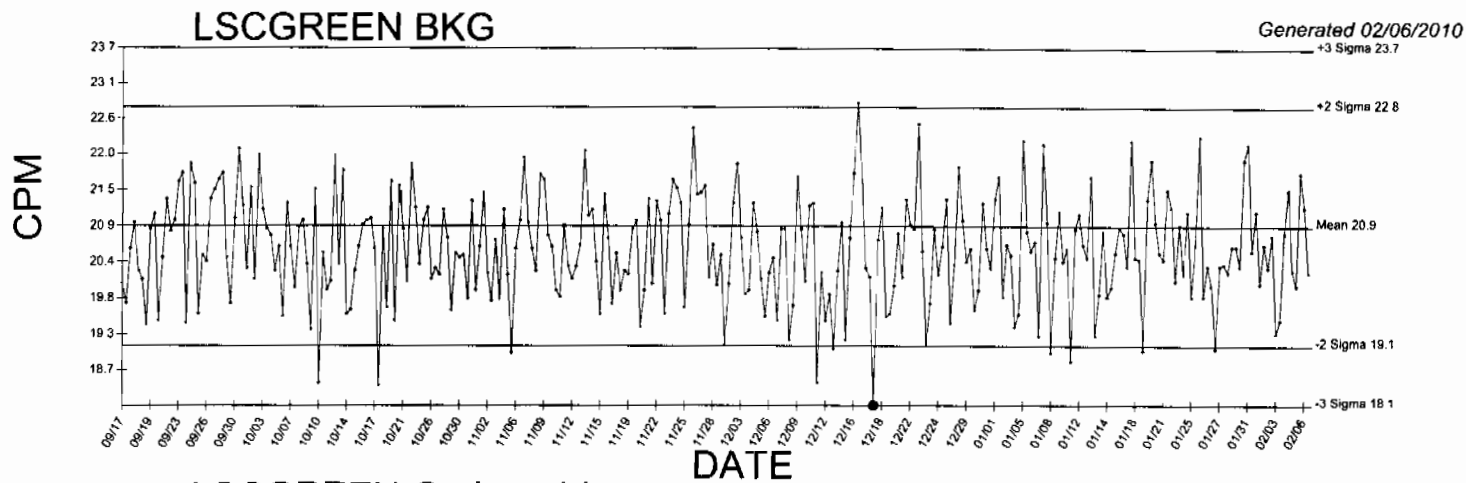


QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM22_CAN.QAF;1
 Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
 Start/End Dates : 3-DEC-2009 09:11:39 through 1-FEB-2010 12:00:00
 Lower/Upper Lmts: 115.000 through 123.000



QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM22.QAF;1
 Parameter Name : BACKRATE (Spectrum Background Rate)
 Start/End Dates : 25-NOV-2009 10:28:37 through 1-FEB-2010 12:00:00
 Mean +- Std Dev : 3.13961 +- 4.985064E-02 (1.59 %)





● Denotes Outlier

STANDARDS DATA

0134



CALIBRATION
No. 0146

Description Radionuclide: TRITIUM (HYDROGEN-3) Product code: TRY 64

Chemical form: water Batch: 111

Measurement Reference time: 1200 GMT on 1 March 1996

Radioactive concentration of tritium: 488.0 kilobecquerels per gram of water

which is equivalent to: 13.19 microcuries per gram of water

or: 2.93×10^7 disintegrations per minute
per gram of water

Method of Measurement

This reference material was calibrated by direct comparison with a standard of tritium-labelled water obtained from the National Institute of Standards and Technology, USA.

Accuracy The OVERALL UNCERTAINTY of the result quoted above is estimated to be less than $\pm 2.5\%$

This estimate of uncertainty was calculated in accordance with the recommendations of the International Commission on Radiation Units and Measurements (ICRU Report 12). The limits of uncertainty were taken as the arithmetic sum of the uncertainty due to random variations, calculated at the 99.7% confidence level, and the estimated systematic uncertainties.

Purity No radioactive impurities were detected. (Impurities with total activity greater than 0.001% of the activity of the tritium would have been detected).

Physical Data Half-life of tritium: 12.43 ± 0.11 years

Maximum beta energy of tritium: 18.6 keV

Remarks: The S.I. unit of radioactivity is the becquerel.

1 becquerel (Bq) = 1 nuclear transformation per second, therefore
1 curie (Ci) = 3.7×10^{10} becquerels exactly.

Useful conversion factors are:

1 microcurie (μCi) = 3.7×10^4 Bq = 37 kilobecquerels (kBq)

1 kilobecquerel (kBq) = 27.027 nanocuries (nCi)

This product meets the quality assurance requirements of NRC Regulatory Guide 4.15 for achieving implicit NIST (NBS) traceability as defined in NCRP58 (1985).

Approved
signatory

W. F. Case

Page 1658 of 1698
W.F. Case

2C-5-023-061a

Standard Traceability Log Rad

Source Material Info		A Solution Material Info	
Parent Code:	0134	Isotope:	Tritium
Prepared By:	Angela Johnson	Prepared By:	Angela Johnson
Carrier Conc:	DI WATER	Prep Date:	02/21/2001
Reference Date:	03/01/1996	Verification Date:	09/10/2008
Ampoule Mass (g):	5 g	Expiration Date:	03/27/2010
Uncertainty:	+/- 2.5 %	Primary Code:	0134-A
LogBook No:	RC S 023 061	Dilution(mL):	100 mL
		Mass of Parent(g):	3.3659 g
		Density(g/mL):	1.0004
		Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

$(\text{Mass of parent(g)}) * (\text{Parm Activity (kBq/g)}) * (\text{conversion dpm to kBq}) / (\text{Dilution Vol}) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (kBq/g)}) * (\text{conversion dpm to kBq}) / \text{Density (g/mL)} / (\text{Dilution Vol}) = \text{Parent Activity (dpm/g)}$
$(3.3659 \text{ g}) * (488 \text{ kBq/g}) * (60000 \text{ dpm/kBq}) / (100 \text{ mL}) = 985535.5200 \text{ dpm/mL}$
$(3.3659 \text{ g}) * (488 \text{ kBq/g}) * (60000 \text{ dpm/kBq}) / (1.0004 \text{ g/mL}) / (100 \text{ mL}) = 985180.3116 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/20/2004	Amanda Fehr	5.86	1000	0134-H	5773.1566 dpm/mL	07/25/2006	07/25/2007
12/20/2005	Amanda Fehr	5.5451	1000	0134-I	5462.92 dpm/mL	12/20/2006	12/20/2007
07/11/2007	Daniel Roy	5.5863	1000	0134-J	5503.5128 dpm/ml	07/29/2008	07/29/2009
03/25/2009	Mary Aders	5.4917	1000	0134-K	5410.3147 dpm/ml	03/27/2009	03/27/2010

GEL Laboratories LLC

Version 1.0 9/18/2000

Verification for H-3 Standard 0134-K

M. Aders	Isotope	Detector CPM	BKG CPM	NET CPM	Detector Eff Mass. Used (mL)	Source DPM/mL
4/9/2009	0134-K N1	1097.2000	54.0000	1043.2000	0.380548	2741.3099
	0134-K N2	1073.2000	54.0000	1019.2000	0.380548	2678.242955
	0134-K N3	1085.2000	54.0000	1031.2000	0.380548	2709.776428
Mean Value (Counting) =	2709.776428					
Stdev =	31.53347278					

Certificate Value =	2581.86	dpm/mL
Lower Limit =	2646.709482	dpm/mL
Upper Limit =	2772.843373	dpm/mL
Rule 1 Pass/Fail	Fail	*exception taken due to full recovery of standard
Two sigma =	63.06694556	dpm/mL
10 % of Mean =	270.9776428	dpm/mL
Rule 2 (Pass/Fail)	Pass	

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 10% of the certificate value.

The analyst prepared three standard verification sources for H-3 source 0134-K by transferring 0.1 mL portions of the standard into glass liquid scintillation vials. Ten mL of Ecosint Ultra liquid scintillation cocktail was added to each vial and the vials were shaken to mix. A Blank vial was prepared in a similar fashion using 1 mL of DI water and 10 mL of Ecosint Ultra liquid scintillation cocktail. The standard verification vials and Background source were dark adapted for two hours and counted on Silver for H-3 source standard verification. The H-3 efficiency calibration which was used for verification calculations was performed on 4/9/09 using 0020-A (H-3). Calibration data is recorded in this logbook under H-3 0020. Each verification source calculation was performed as follows:

$$\text{Source dpm/g} = (A - B)/(C)(D)$$

where:

- A = Ver. source cpm,
- B = BKG cpm,
- C = System efficiency, (cpm/dpm), and
- D = mass used for standard verification.

Reference RAD SOP M-001

Handwritten signature: Amanda J. Feltz 4/9/09

1032

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404-352-8677
Fax 404-352-2837
www.analyticsinc.com

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:

W.M. [Signature] 11-28-06

This standard will expire one year after the calibration date.

rec'd 11/3/06
RC-S-045-073-0

1380 Seaboard Industrial Blvd.
 Atlanta, Georgia 30318

Tel 404-352-8677

Fax 404-352-2837

www.analytiscinc.com

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 Uncertainty (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

Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)

HPGe (High Purity Germanium Gamma Ray Spectrometer)

IC (Gamma Ray Ionization Chamber)

²As 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.

Standard Traceability Log Rad

Source Material Info		A Solution Material Info	
Parent Code:	1032	Isotope:	Mixed Gamma
Prepared By:	Daniel Roy	Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL	Prep Date:	11/30/2006
Reference Date:	10/01/2006	Verification Date:	12/02/2009
Ampoule Mass (g):	5.31725 g	Expiration Date:	12/02/2010
Uncertainty:	+/- 2.81 %	Primary Code:	1032-A
LogBook No:	RC-S-045-073	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

$(\text{Mass of parent(g)}) * (\text{Parm Activity (dpm)}) * (\text{conversion dpm to dpm}) / (\text{Ampoule Mass(g)} * (\text{Dilution Vol})) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (dpm)}) * (\text{conversion dpm to dpm}) / \text{Density} / (\text{Ampoule Mass (g)} * (\text{Dilution Vol})) = \text{Parent Activity (dpm/g)}$
$(5.2579 \text{ g}) * (218817 \text{ dpm}) * (1 \text{ dpm/dpm}) / (5.31725 \text{ g} * 100 \text{ mL}) = 2163.7461 \text{ dpm/mL}$
$(5.2579 \text{ g}) * (218817 \text{ dpm}) * (1 \text{ dpm/dpm}) / (1.0611 \text{ g/mL}) / (5.31725 \text{ g} * 100 \text{ mL}) = 2039.2400 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
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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	pCi/L - Ver. 1A2-1
Mixed Gamma N1	2534	pCi/L
Mixed Gamma N2	2510	pCi/L - Ver. 1A2-3
Mixed Gamma N3	2413	pCi/L - Ver. 1A2-5

Mean Value (Counting) = 2485.67 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
independent
12/2/09

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

Isotope	Result	pCi/L - Ver. IAE-1
Mixed Gamma N1	854.2	pCi/L
Mixed Gamma N2	907.6	pCi/L
Mixed Gamma N3	898.9	pCi/L

Mean Value (Counting) = 886.90
Stdev = 28.651
Rule 3 (Pass/Fail) Pass

Certificate Value = 933.44144
Lower Limit = 829.597644
Upper Limit = 944.202356
Rule 1 (Pass/Fail) Pass
Two sigma = 57.30235597
10 % of Mean = 88.69000000
Rule 2 (Pass/Fail) Pass

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.

Handwritten: 12/2/09
12/2/09
12/2/09

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Co-60 (1332.5)

Isotope	Result	pCi/L - Ver-1Ae-5
Mixed Gamma N1	1572	pCi/L
Mixed Gamma N2	1495	pCi/L
Mixed Gamma N3	1501	pCi/L

Mean Value (Counting) = 1522.67
Stdev = 42.829
Rule 3 (Pass/Fail) 98.50 Pass

Certificate Value = 1545.8378
Lower Limit = 1437.008431
Upper Limit = 1608.324902
Rule 1 (Pass/Fail) Pass
Two sigma = 85.65823564
10 % of Mean = 152.26666667
Rule 2 (Pass/Fail) Pass

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.

U.S. Stamp issued 12/2/09

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 DATA 4/11/2000 *lett c held 12/1/04*

angela d. 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	25 ± 2.4	22.1 ± 1.2	56.0 ± 2.1	38.9 ± 2.0

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. Lehn 4/30/04
Lett & Stahl 5/1/04

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 Lab In

9911627-01-20;

SF 2001-COC (10-97)

Supplies (5-97) none

Internal Lab

Batch No.

SARWR No. N/A

Press F1 for Instructions for each field.

AR/COC-

602945

Page 1 of 1

Dept. No./Mail Stop: 7132 / 1042		Contract No.: AJ-2480A	
Project/Task Manager: RAM PUISSANT		Case No.: 10204 13	
Project Name:		SMO Authorization: <i>[Signature]</i>	
Record Center Code: N/A		Bill to: Sandia National Laboratories	
Logbook Ref. No.: N/A		Supplier Services, Dept.	
Service Order No.:		P.O. Box 5800 MS 0154	
Location		Reference LOV (available at SMO)	
Building N/A	Tech Area VI	Container	Sample Type
Sample No. - Fraction	Room N/A	Type	Volume
050484 - 001	PEM-1	P	1 L
050485 - 001	TRM-2	G	1 L
050486 - 001	NRMT-2 NBHD	G	1 L
Date Samples Shipped: 11-16-99		Date/Time Collected	
Carrier/Weibull No.: 7132-6494		S	
Lab Contact: EDIE KENT		S	
Lab Destination: G.E.L.		S	
SMO Contact/Phone: Doug Salim / 844-3110		S	
Send Report to SMO: Suzi Jensen/844-3184		S	
RMMA <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ref. No.		Special Instructions/QC Requirements	
Sample Disposal <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by lab		EDD <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Turnaround Time <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Required Report Delay		Raw data package <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Name Douglas E. Perry		These samples are with the character and materials being sent to GEL for the A Mark History	
Signature <i>[Signature]</i>		Please list as separate report.	
1. Relinquished by <i>[Signature]</i> Date 11-16-99 Time 0900		Orig Date	
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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 \pm 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 μ Ci
		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(NO ₃) ₃ in 2N HNO ₃
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 μ Ci/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:	$\pm 3.0\%$
b. Random uncertainty in assay:	$\pm 0.4\%$
c. Random uncertainty in weighing(s):	$\pm 0.0\%$
d. Total uncertainty at the 99% confidence level:	$\pm 3.0\%$

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).



ISOTOPE PRODUCTS LABORATORIES
1800 North Keystone Street
Burbank, California 91504
(818) 843 - 7000

Anna A. Khan
QUALITY CONTROL

Jan 3, 1994
Date Signed

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 $50 \pm 10^\circ \text{C}$ 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 $50 \pm 10^\circ \text{C}$ 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

$(\text{Mass of parent(g)}) * (\text{Parm Activity (uCi/g)}) * (\text{conversion dpm to uCi}) / (\text{Dilution Vol}) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (uCi/g)}) * (\text{conversion dpm to uCi}) / \text{Density (g/mL)} / (\text{Dilution Vol}) = \text{Parent Activity (dpm/g)}$
$(5.3419 \text{ g}) * (18.84 \text{ uCi/g}) * (2220000 \text{ dpm/uCi}) / (100 \text{ mL}) = 2234238.9912 \text{ dpm/mL}$
$(5.3419 \text{ g}) * (18.84 \text{ uCi/g}) * (2220000 \text{ dpm/uCi}) / (1.0785 \text{ g/mL}) / (100 \text{ mL}) = 2071617.0528 \text{ dpm/g}$

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	Joc 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 5/15/2009	Isotope	Value	Uncertainty
	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-241 certified 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.

Mary G. Aders 5/15/09
Taheri
 007509



Eckert & Ziegler

Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404-352-8677
Fax 404-352-2837
www.analytiscinc.com

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

78747-278

1283

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 HNO₃ solution.

Source Prepared By: WMS
W. Mao, Radiochemist

QA Approved: DM Montgomery
D. M. Montgomery, QA Manager

Date: 12-11-08

Standard Traceability Log Rad

Source Material Info		A Solution Material Info	
Parent Code:	1283	Isotope:	Uranium-232
Prepared By:	Daniel Roy	Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3	Prep Date:	12/16/2008
Reference Date:	12/09/2008	Verification Date:	12/30/2008
Ampoule Mass (g):	5.20453 g	Expiration Date:	12/30/2009
Uncertainty:	+/- 5 %	Primary Code:	1283-A
LogBook No:	RC-S-051-002	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

$(\text{Mass of parent(g)}) * (\text{Parm Activity (Bq)}) * (\text{conversion dpm to Bq}) / (\text{Ampoule Mass(g)} * (\text{Dilution Vol})) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (Bq)}) * (\text{conversion dpm to Bq}) / \text{Density} / (\text{Ampoule Mass (g)} * (\text{Dilution Vol})) = \text{Parent Activity (dpm/g)}$
$(5.0245 \text{ g}) * (3754 \text{ Bq}) * (60 \text{ dpm/Bq}) / (5.20453 \text{ g} * 100 \text{ mL}) = 2174.4872 \text{ dpm/mL}$
$(5.0245 \text{ g}) * (3754 \text{ Bq}) * (60 \text{ dpm/Bq}) / (1.0285 \text{ g/mL}) / (5.20453 \text{ g} * 100 \text{ mL}) = 2114.1700 \text{ dpm/g}$

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	12/02/2009	12/02/2010
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	01/08/2010	12/02/2010
12/09/2009	Ashley Drochter	21.56	1000	1283-H	45.58 dpm/mL	12/09/2009	12/09/2010

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

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. Unterwieser, 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.

REGISTERED

Lisa R. Karam, Acting Chief
Ionizing Radiation Division

Gaithersburg, Maryland 20899
January 2005

Robert L. Watters, Jr., Chief
Measurement Services Division

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]*.

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·g ⁻¹
Relative expanded uncertainty (k=2)	0.72% [d] [e]
Solution density	(1.105 ± 0.002) g·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	(16.5 ± 0.5) mm	
	Wall thickness	(0.60 ± 0.04) mm	
	Barium content	Less than 2.5%	
	Lead-oxide content	Less than 0.02%	
	Other heavy elements	Trace quantities	
Solution mass	Approximately 5.5 g		
Chemical Properties:			
Solution composition	Chemical Formula	Concentration (mol·L ⁻¹)	Mass Fraction (g·g ⁻¹)
	H ₂ O	50	0.81
	HNO ₃	3.2	0.19
	²⁴² Pu ⁺⁶	8 × 10 ⁻⁷	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·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 4π α liquid-scintillation counters, a calibrated germanium detector system, and a silicon surface-barrier detector		

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, $|\partial y/\partial x_i| \cdot$ (x_i/y) [m]	Relative Uncertainty Of Output Quantity, $u_c(y)/y$, (%) [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				<u>x 2</u>
Relative Expanded Uncertainty of the Output Quantity, U/y , (%)				0.72

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 ($\mu\text{Sv/h}$): <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 $y = f(x_1, x_2, x_3, \dots, x_n)$, 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 , $u_i(y) = |\partial y / \partial x_i| \cdot u(x_i)$, 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:
 $0.003 \text{ s}^{-1}\cdot\text{g}^{-1}$ for energies less than 3.1 MeV,
 $0.03 \text{ s}^{-1}\cdot\text{g}^{-1}$ for energies between 3.1 and 4.4 MeV, and
 $0.003 \text{ s}^{-1}\cdot\text{g}^{-1}$ 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:
 $5 \times 10^{-5} \text{ s}^{-1}\cdot\text{g}^{-1}$ for energies between 19 and 39 keV,
 $7 \times 10^{-5} \text{ s}^{-1}\cdot\text{g}^{-1}$ for energies between 49 and 92 keV,
 $2 \times 10^{-5} \text{ s}^{-1}\cdot\text{g}^{-1}$ for energies between 106 and 507 keV,
 $1 \times 10^{-5} \text{ s}^{-1}\cdot\text{g}^{-1}$ for energies between 515 and 1456 keV, and
 $5 \times 10^{-6} \text{ s}^{-1}\cdot\text{g}^{-1}$ 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. $u(x_i) / x_i = 100\%$. $|\partial y / \partial x_i| \cdot (x_i / y) = \{(\text{response per Bq of impurity}) / (\text{response per Bq of Pu-242})\} \cdot \{(\text{Bq of impurity}) / (\text{Bq of Pu-242})\}$. Thus $u(y) / y$ 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

$(\text{Mass of parent(g)}) * (\text{Parm Activity (Bq/g)}) * (\text{conversion dpm to Bq}) / (\text{Dilution Vol}) = \text{Parent Activity (dpm/mL)}$
$(\text{Mass of parent(g)}) * (\text{Parm Activity (Bq/g)}) * (\text{conversion dpm to Bq}) / \text{Density (g/mL)} / (\text{Dilution Vol}) = \text{Parent Activity (dpm/g)}$
$(5.3616 \text{ g}) * (26.31 \text{ Bq/g}) * (60 \text{ dpm/Bq}) / (250 \text{ mL}) = 33.8553 \text{ dpm/mL}$
$(5.3616 \text{ g}) * (26.31 \text{ Bq/g}) * (60 \text{ dpm/Bq}) / (1.0136 \text{ g/mL}) / (250 \text{ mL}) = 33.4010 \text{ dpm/g}$

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
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GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Pu-242 Standard 1374-A

A.Drochter 12/8/2009	Isotope	Value	Uncertainty
	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.

Handwritten:
 JAC call
 12/8/09
 12/9/09
 12/9/09

RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER

Batch ID: 944962

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
245385001	SAMPLE	MXR1	GAM07	04-FEB-10 20:27	DONE	CAN	20-JUL-09 00:00
245385002	SAMPLE	MXR1	GAM14	04-FEB-10 20:27	DONE	CAN	06-MAR-09 00:00
245385003	SAMPLE	MXR1	GAM20	04-FEB-10 20:28	DONE	CAN	26-AUG-09 00:00
245385004	SAMPLE	MXR1	GAM19	04-FEB-10 20:48	DONE	CAN	12-MAR-09 00:00
1202023709	LCS	MXR1	GAM01	04-FEB-10 21:14	DONE	CAN	12-JAN-10 00:00
245385005	SAMPLE	MXR1	GAM11	04-FEB-10 22:52	DONE	CAN	18-NOV-09 00:00
245385006	SAMPLE	MXR1	GAM14	04-FEB-10 22:53	DONE	CAN	06-MAR-09 00:00
245385007	SAMPLE	MXR1	GAM16	04-FEB-10 22:53	DONE	CAN	16-NOV-09 00:00
245385008	SAMPLE	MXR1	GAM17	04-FEB-10 22:54	DONE	CAN	06-JAN-10 00:00
245385009	SAMPLE	MXR1	GAM19	04-FEB-10 22:54	DONE	CAN	12-MAR-09 00:00
245385010	SAMPLE	MXR1	GAM20	04-FEB-10 22:54	DONE	CAN	26-AUG-09 00:00
245385011	SAMPLE	MXR1	GAM21	04-FEB-10 22:55	DONE	CAN	28-JUL-09 00:00
245396001	SAMPLE	MXR1	GAM22	04-FEB-10 22:55	DONE	CAN	02-DEC-09 00:00
245396002	SAMPLE	MXR1	GAM01	05-FEB-10 18:59	DONE	CAN	12-JAN-10 00:00
245396003	SAMPLE	MXR1	GAM22	05-FEB-10 19:00	DONE	CAN	02-DEC-09 00:00
245396004	SAMPLE	MXR1	GAM14	05-FEB-10 19:14	DONE	CAN	06-MAR-09 00:00
1202023707	MB	MXR1	GAM20	05-FEB-10 19:15	DONE	CAN	26-AUG-09 00:00
1202023708	DUP	MXR1	GAM22	06-FEB-10 13:03	DONE	CAN	02-DEC-09 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 944974

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
245396002	SAMPLE	CXM2	1065	04-FEB-10 14:50	DONE		
245396004	SAMPLE	CXM2	1067	04-FEB-10 14:50	DONE		
1202023746	MB	CXM2	1068	04-FEB-10 14:50	DONE		
1202023747	DUP	CXM2	1069	04-FEB-10 14:50	DONE		
1202023748	LCS	CXM2	1070	04-FEB-10 14:50	DONE		
245385001	SAMPLE	CXM2	1211	11-FEB-10 21:02	DONE		
245385002	SAMPLE	CXM2	1212	11-FEB-10 21:02	DONE		
245385003	SAMPLE	CXM2	1213	11-FEB-10 21:02	DONE		
245385004	SAMPLE	CXM2	1214	11-FEB-10 21:02	DONE		
245385005	SAMPLE	CXM2	1215	11-FEB-10 21:02	DONE		
245385006	SAMPLE	CXM2	1216	11-FEB-10 21:02	DONE		
245385007	SAMPLE	CXM2	1217	11-FEB-10 21:03	DONE		
245385008	SAMPLE	CXM2	1218	11-FEB-10 21:03	DONE		
245385009	SAMPLE	CXM2	1219	11-FEB-10 21:03	DONE		
245385010	SAMPLE	CXM2	1220	11-FEB-10 21:03	DONE		
245385011	SAMPLE	CXM2	1227	11-FEB-10 21:03	DONE		
245396001	SAMPLE	CXM2	1228	11-FEB-10 21:03	DONE		
245396003	SAMPLE	CXM2	1112	16-FEB-10 14:33	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 944976

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
1202023752	DUP	CXM2	1071	04-FEB-10 14:50	DONE		
1202023753	LCS	CXM2	1072	04-FEB-10 14:50	DONE		
245396002	SAMPLE	CXM2	1073	04-FEB-10 14:50	DONE		
245396003	SAMPLE	CXM2	1074	04-FEB-10 14:50	DONE		
245396004	SAMPLE	CXM2	1075	04-FEB-10 14:50	DONE		
1202023751	MB	CXM2	1076	04-FEB-10 14:50	DONE		
245385011	SAMPLE	CXM2	1111	12-FEB-10 12:51	DONE		
245396001	SAMPLE	CXM2	1112	12-FEB-10 12:51	DONE		
245385006	SAMPLE	CXM2	1241	12-FEB-10 14:28	DONE		
245385007	SAMPLE	CXM2	1242	12-FEB-10 14:28	DONE		
245385008	SAMPLE	CXM2	1243	12-FEB-10 14:28	DONE		
245385009	SAMPLE	CXM2	1244	12-FEB-10 14:28	DONE		
245385010	SAMPLE	CXM2	1252	12-FEB-10 14:28	DONE		
245385001	SAMPLE	CXM2	1221	12-FEB-10 18:04	DONE		
245385002	SAMPLE	CXM2	1222	12-FEB-10 18:04	DONE		
245385003	SAMPLE	CXM2	1223	12-FEB-10 18:04	DONE		
245385004	SAMPLE	CXM2	1224	12-FEB-10 18:04	DONE		
245385005	SAMPLE	CXM2	1225	12-FEB-10 18:04	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 944978

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
1202023754	MB	CXM2	1007	30-JAN-10 12:24	DONE		
245385001	SAMPLE	CXM2	1123	01-FEB-10 13:08	DUSE		
245385002	SAMPLE	CXM2	1124	01-FEB-10 13:08	DONE		
245385003	SAMPLE	CXM2	1125	01-FEB-10 13:08	DONE		
245385004	SAMPLE	CXM2	1126	01-FEB-10 13:08	DONE		
245385005	SAMPLE	CXM2	1127	01-FEB-10 13:08	DONE		
245385006	SAMPLE	CXM2	1128	01-FEB-10 13:08	DONE		
245385007	SAMPLE	CXM2	1129	01-FEB-10 13:08	DONE		
245385008	SAMPLE	CXM2	1130	01-FEB-10 13:08	DONE		
245385009	SAMPLE	CXM2	1131	01-FEB-10 13:08	DONE		
245385010	SAMPLE	CXM2	1132	01-FEB-10 13:09	DONE		
245385011	SAMPLE	CXM2	1133	01-FEB-10 13:09	DONE		
245396001	SAMPLE	CXM2	1134	01-FEB-10 13:09	DONE		
245396002	SAMPLE	CXM2	1137	01-FEB-10 13:09	DUSE		
245396003	SAMPLE	CXM2	1138	01-FEB-10 13:09	DUSE		
245396004	SAMPLE	CXM2	1139	01-FEB-10 13:09	DONE		
1202023755	DUP	CXM2	1171	01-FEB-10 13:09	DONE		
1202023756	LCS	CXM2	1172	01-FEB-10 13:09	DONE		
245385001	SAMPLE	CXM2	1171	04-FEB-10 08:09	DONE		
245396002	SAMPLE	CXM2	1172	04-FEB-10 08:09	DUSE		

Instrument Run Log

Instrument Type: LSC

Batch ID: 948401

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
245396001	SAMPLE	KXK2	LSCGREEN	06-FEB-10 11:38	DONE	10mL DW/13mL Ecoscint Ultra	20-AUG-09 00:00
245396002	SAMPLE	KXK2	LSCGREEN	06-FEB-10 13:16	DONE	10mL DW/13mL Ecoscint Ultra	20-AUG-09 00:00
245396003	SAMPLE	KXK2	LSCGREEN	06-FEB-10 14:54	DONE	10mL DW/13mL Ecoscint Ultra	20-AUG-09 00:00
245396004	SAMPLE	KXK2	LSCGREEN	06-FEB-10 16:32	DONE	10mL DW/13mL Ecoscint Ultra	20-AUG-09 00:00
1202031679 MB		KXK2	LSCGREEN	06-FEB-10 18:10	DONE	10mL DW/13mL Ecoscint Ultra	20-AUG-09 00:00
1202031680 DUP		KXK2	LSCGREEN	06-FEB-10 19:48	DONE	10mL DW/13mL Ecoscint Ultra	20-AUG-09 00:00
1202031681 LCS		KXK2	LSCGREEN	06-FEB-10 21:27	DONE	10mL DW/13mL Ecoscint Ultra	20-AUG-09 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER

Batch ID: 949620

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
245396002	SAMPLE	CXM2	1127	10-FEB-10 10:57	DONE		
245396003	SAMPLE	CXM2	1128	10-FEB-10 10:57	DONE		
1202034526	DUP	CXM2	1129	10-FEB-10 10:57	DONE		
1202034527	LCS	CXM2	1130	10-FEB-10 10:57	DONE		
1202034525	MB	CXM2	1142	10-FEB-10 12:57	DONE		